

# **Research Study on the Canadian Retirement Income System**

**Prepared for the Ministry of Finance, Government of Ontario**

**By**

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## Acronyms

BC	British Columbia
CIA	Canadian Institute of Actuaries
CPI	Consumer Price Index
CPP	Canada Pension Plan
CPPIB	Canada Pension Plan Investment Board
C/QPP	Canada and Quebec Pension Plans
DB	Defined Benefit (pension plan)
DBS	Dominion Bureau of Statistics
DC	Defined Contribution (pension plan)
DPSP	Deferred Profit Sharing Plan
EPP	Employment Pension Plan
ERPM	Elderly Relative Poverty Measure
FAMEX	Family Expenditure Survey
GIS	Guaranteed Income Supplement
GRRSP	Group Registered Retirement Savings Plan
GSS	General Social Survey
HRSDC	Human Resources and Skills Development Canada
IRC	Industrial Relations Centre (Queen's University)
ITA	Income Tax Act
JEP	Joint Expert Panel (to advise the governments of Alberta and BC on EPP issues)
LAD	Longitudinal Administrative Database
LICO	Low Income Cut Off
LIM	Low Income Measure
LIS	Luxemburg Income Study
MEPP	Multi Employer Pension Plan
OAS	Old Age Security
OCA	Office of the Chief Actuary
OECD	Organization for Economic Cooperation and Development
OECP	Ontario Expert Commission on Pensions
PPIC	Pension Plans in Canada
PRP	Pension Review Panel (to advise the government of Nova Scotia on EPP issues)
QPP	Quebec Pension Plan
PIT	Personal income tax
RIS	Retirement Income System
RR	Replacement rate
RRSP	Registered Retirement Savings Plan
SCF	Survey of Consumer Finance
SFS	Survey of Financial Security
SHS	Survey of Household Spending
SLID	Survey of Labour and Income Dynamics
TFSA	Tax Free Savings Account
U of W	University of Waterloo
UK	United Kingdom
US	United States
YBE	Year's Basic Exemption (under the C/QPP)
YMPE	Year's Maximum Pensionable Earnings (under the C/QPP)

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Errors of both omission and commission remain the responsibility of the author.

Bob Baldwin

## Executive Summary

### *Purpose of the Report*

This research study was prepared for the Ministry of Finance of the Province of Ontario to “... assess the capacity of Canada’s retirement income system to provide retirement incomes in the future”.

The paper includes six sections, which, together, provide an analysis of the elements of Canada’s retirement income and their efficacy in providing retirement income. Gaps in data and questions for future research are identified as well as the resources used in developing the paper. This executive summary highlights key findings of the research study.

### *Structure of Canada’s Retirement Income System (RIS)*

Canada’s RIS is composed of three pillars. Two programs administered by the federal government and financed out of general tax revenues comprise the first pillar: Old Age Security (OAS) and the Guaranteed Income Supplement (GIS). OAS and GIS combine to provide a minimum income guarantee for older Canadians. Most provinces provide income tested top-ups to the OAS and GIS.

The Canada and Quebec Pension Plan(s) (C/QPP) make up the second pillar. The C/QPP are compulsory earnings related programs that replace 25 per cent of pre-retirement earnings up to average wages and salaries. When combined with OAS and GIS, the C/QPP allows a person with half average wages and salaries to maintain their standard of living in retirement. For people with higher levels of earnings, additional income is needed from the third pillar to meet this objective.

The third pillar, made up of privately administered Employment Pension Plans (EPPs) and Registered Retirement Savings Plans (RRSPs), is extremely diverse. The third pillar is privately administered but receives government support in the form of special tax measures and regulatory oversight. EPPs may be either defined benefit (DB) or defined contribution (DC) plans and a growing number combine elements of both DB and DC. Participation in EPPs is positively associated with: large employers, a unionized workplace, level of earnings and education, and sector of employment. Until the recent past, male employees were more likely than females to be EPP members but that is no longer the case.

Participation in RRSPs grew rapidly from the mid 1970s to the mid 1990s and has been stable since then. Participation is strongly associated with level of income. Since the early 1990s, some employers have introduced group RRSPs (GRRSPs) as an alternative to EPPs. RRSPs and GRRSPs operate outside of the regulatory framework that applies to EPPs.

Many of Canada’s elderly get additional income from sources other than the RIS (e.g. earnings from employment and self-employment, and investments). Their standard of living is influenced by the ownership of consumer durables such as housing. It may also be influenced by provincial government subsidies for housing and prescription drugs.

### *Canada’s RIS in Comparative Context*

The Organization for Economic Cooperation and Development (OECD) brings together 30 high income democracies and provides a good point of comparison for Canada’s RIS.

Canada is similar to most OECD countries in having a three pillar RIS. However, there are important differences among OECD countries in the roles played by different pillars. Compared to the OECD as a whole, Canada's pillars 1 and 2 together place more emphasis on providing minimum income protection to the elderly, and less emphasis on replacing earnings across a broad range of pre-retirement earnings. Canadian pillars 1 and 2 have a higher rank among OECD countries in replacing low versus high levels of earnings.

The latter part of the 20<sup>th</sup> century was a period of income improvement for the elderly through much of the OECD.

### ***Criteria for Judging Canada's RIS***

The adequacy of incomes arising from an RIS is commonly judged by two criteria: how do incomes compare to poverty measures, and do they allow retired persons to maintain their pre-retirement standard of living. Although these concepts are quite straightforward, there is a great deal of debate about how to make them operational.

There is debate as to whether poverty is a state of absolute deprivation or a state of relatively low income, and this generates further debate about the correct measure of poverty.

The common approach to determining whether the elderly are maintaining their standard of living is to compare the income of the elderly population with their pre-retirement earnings. This comparison is called the replacement rate and it is usually expressed as a percentage. Actual replacement rates are compared with a benchmark replacement rate – usually in the range of 70 to 75 per cent of gross pre-retirement earnings – to decide whether people are maintaining their pre-retirement standard of living.

The predictability of retirement income is also cited as an important consideration. Predictability is seen as an intrinsic virtue as the elderly often have little ability to adjust to adverse income shocks by changing their participation in the labour force. Predictability is also thought to be important in allowing people to plan their personal financial affairs.

Pensions are also judged in relation to criteria such as financial sustainability and/or fairness among generations. Like the standards of income adequacy though, these concepts are not easy to make operational.

The life cycle consumption theory provides some help in thinking about the extent to which pre-retirement earnings should be set aside to provide for retirement. According to the theory, savings during the pre-retirement period should be at a level that permits continuity in consumption between the pre-retirement and post-retirement periods. However, many people do not set aside enough to meet this objective. On the other hand, over-saving for retirement, especially if it is forced over-saving, is not benign. Lifetime consumption and well-being may be negatively affected for people who are forced to over-save for retirement.

### ***The RIS and Today's Elderly: An Assessment***

Over the period from 1976 to 2007 the median real income of elderly couples increased by 55 per cent, and the real income of elderly singles by 79 per cent. There was also a general equalizing tendency in incomes of the elderly until the mid 1990s.

Income from the C/QPP and the third pillar has grown very strongly. (Canadian income data does not permit a separation of income from EPPs versus income from annuities and RRIFs.)

Most of the growth in income from the C/QPP occurred by the mid 1990s while income from the third pillar continues to grow. Income from investments and employment has declined over time, although there has been some increase in employment income in the recent past.

Generally speaking, people in the lower half of the elderly income distribution rely heavily on income from the OAS, GIS and C/QPP while people in the upper portion of the distribution rely much more heavily on third pillar income. At the highest level of income (the 10<sup>th</sup> decile) investment and employment income is much more prominent: 20 per cent from each source.

Since the late 1970s there has been a sharp decrease in poverty among the elderly from about 35 per cent to roughly 5 per cent based on the Low Income Measure (LIM). The elderly poverty rate in Canada is one of the lowest in the OECD. However, subsets of the elderly (e.g. widowed and separated women) have notably higher rates of poverty.

Three Statistics Canada analysts have recently used newly available data to measure Canadian replacement rates over the period from the early 1980s to the middle of the current decade. They found that most elderly Canadians have incomes that amount to 80 per cent or more of their pre-retirement earnings. At the same time, there are significant minorities whose incomes are less than 60 per cent of pre-retirement earnings. This finding is generally consistent with the way that the elderly assess their current financial situation compared to their pre-retirement financial situation.

The latter part of the 20<sup>th</sup> century was a period of significant improvement in the incomes of older Canadians. However, this positive achievement must be qualified. First, by most measures, positive developments were achieved by the mid 1990s, and the period since then has been one of stability or mild deterioration. Second, the improvements reflect not just the strength of the RIS, but the way it interacted with a particular set of financial and economic circumstances. The existing RIS will produce different outcomes under different circumstances.

### ***The RIS of the Future: Outcomes and Influences***

Several attempts have been made to estimate quantitatively the likely retirement income situation of Canada's future elderly. Generally these efforts have focused on age cohorts near retirement age. As there is no established protocol for this type of work, existing studies use a variety of approaches. Among them, the most convincing is prepared by two analysts at Statistics Canada based on data from the 1999 Survey of Financial Security (SFS). They estimate that roughly one-third of Canadians in the 45 to 64 age range are likely to end up with incomes that fall short of adequate minimum incomes and/or incomes that will allow them to maintain their standard of living. Other studies reach different numerical conclusions but they agree that income adequacy will be a problem for a significant minority of the future elderly.

Limitations in the attempts to quantify the future incomes of the elderly point to the need for tools that are very granular, longitudinal and stochastic. Analytical methods that rely on "average" experience and suppress a view of uncertainty are a chronic problem in the pension world. Attempts to quantify incomes of the future elderly generally assume that the RIS has a stable institutional structure and that the economic, financial and labour market environments are also stable. The RIS structure and the economic environment are, of course, changing all the time.

Economic, labour market and demographic trends may make it harder for third pillar institutions to deliver adequate retirement incomes in the future. Two developments stand out in particular:

- The ratio of the retirement period to the pre-retirement period is growing.
- The gap between returns on financial assets and wage and salary growth is likely to shrink.

These developments will increase the contribution/savings rates required by third pillar institutions.

Since the late 1970s, the portion of employed Canadians who participate in EPPs has declined from 46 per cent to 39 per cent. Both public and private sectors have experienced this decline but it has been more acute in the public sector.

So far, the decline in EPP participation has not been reflected in declining third pillar income. Until the mid 1990s, the decline was partially offset by the increasing use of RRSP. Another mitigating factor has been that, as the portion of the employed who participates in EPPs has declined, the portion of the adult population that is employed has gone up. Thus, the portion of the adult population that participates in EPPs has been quite stable. In addition, coverage at the level of couples has not declined as steeply as has coverage of individuals. Underlying both of these mitigating factors is the increasing portion of women in the paid labour force. Finally, regulatory changes in the late 1980s increased EPP beneficiaries thanks to new rules on vesting and survivor benefits. Some of these mitigating influences have limits to the relief they can provide: once all adults are coupled and in the paid labour force, no further relief will come from these sources.

The other major development that is widely noted with respect to EPPs is a general shift from defined benefit (DB) to defined contribution (DC) coverage. This change has been taking place in both sectors, but has been more pronounced in the private sector. It raises concerns about the predictability of retirement incomes. The shift away from classic DB has included the emergence of hybrid plans in addition to the growth of pure DC. Research done for the Ontario Expert Commission on Pensions (OECPC) indicates that two-thirds of the EPP members who are classified as belonging to DB plans in Ontario, belong to hybrids.

Data from the SFS suggest that the decline in EPP coverage and the shift from DB to DC are not prompting offsetting forms of wealth accumulation for retirement. This is a very important issue that needs further study.

Four provincial governments established inquiries into the problems of EPPs in the recent past: Ontario, Nova Scotia and a joint review by Alberta and British Columbia. In addition, the federal government and Quebec undertook inquiries that were somewhat less formal.

The scrutiny to which EPPs have been subjected reflects a number of problems: concerns about DB funding rules as result of volatile contributions, unresolved legal disputes about appropriate use of DB pension surplus, a lack of clarity about plan sponsor responsibilities under DC plans, lack of clarity about the application of regulatory law to new hybrid plans, lack of uniformity of regulatory law among jurisdictions, and declining coverage of EPPs.

The provincial inquiries addressed a wide range of issues related to the regulatory law and processes, and the governance of EPPs. Proposed changes should make EPPs easier to

manage if only by removing legal uncertainties. The inquiries also made proposals that reflect concerns raised by Ambachtsheer about the limited scale, lack of expertise in EPP governance and management, and lack of alignment of beneficiaries' interests with those of plans' governors and managers. The reports also note the need for changes to tax and bankruptcy law. Despite the potential benefits of the proposed changes, the inquiries recognized the need for more substantial change in order to address the coverage issue.

The reports prepared for Alberta and British Columbia, and for Nova Scotia recommend the creation of provincial pension plans. Employees with earnings above a minimum level who do not belong to EPPs would be enrolled in these plans unless they opt out. The self-employed would opt in. The OECP recommended the creation of an Ontario Pension Agency that might serve as an investment and pension plan manager. It also recommended that large plans be allowed to sell investment and other services to small plans and individuals, and that Ontario consider proposals to expand the role of the CPP.

### ***Gaps in Data, Research and Information Systems***

The research study identified important gaps in data, research and information systems. See section 7.

### ***Conclusions***

The incomes of the elderly improved significantly in the latter part of the 20<sup>th</sup> century and there is reason to believe that significant portions of the future elderly will be well served by existing arrangements. But a number of issues remain.

In pillars 1 and 2 an important issue is how the OAS and GIS benefits will be adjusted in the future if real wage growth resumes in response to demographic change. If benefits remain price indexed with no further adjustment, these programs will be less useful in preventing poverty and maintaining pre-retirement living standards.

The EPP component of the third pillar faces serious challenges. Provincial inquiries have made recommendations that should facilitate the operation of EPPs. However, the big question is whether something needs to be done outside the purely voluntary framework in order to address the coverage issue. This report identifies the questions that need to be addressed in considering this issue:

- what is the earnings range to which a new initiative might apply;
- what age cohorts would participate in a new initiative;
- how should any new initiatives relate to existing EPPs;
- what is the right balance of voluntarism and compulsion in a new initiative and is it the same for employees and the self-employed;
- what is the right mix of public and private institutions in a new initiative; and,
- what are appropriate federal and provincial roles?

The status quo is an option. But, it is an option that may leave a significant minority of people with moderate to high earnings facing a decline in their standard of living in retirement, and force many people to rely on sub-optimal pension and retirement savings institutions.



## Section 1: Introduction

This paper has been prepared for the Ministry of Finance of the Province of Ontario. The general purpose of the report is to “... assess the capacity of Canada’s retirement income system to provide retirement incomes in the future ...”. The Ministry has also specified that:

“... retirement incomes should be compared to poverty indices and pre-retirement earnings with appropriate adjustments. The study should assess these broad questions in terms of individuals and families to the extent possible using existing and publicly available data sources.”

The issue raised by the Ministry is profoundly important. Over the coming twenty years, the portion of the population over 65 will nearly double, from 13.4 per cent in 2007 to 23.2 per cent in 2030 and continue to increase to 26.3 per cent in 2075. (OCA, 2008) Thus, the success (or lack thereof) that is achieved in providing adequate incomes to the older and largely retired population will have an increasing impact on the economic and social well being of the population in general. It is equally clear that providing adequate incomes to the elderly<sup>1</sup> population entails increasing the claims that the elderly population will make on national income. These are two sides of the same coin that will have to be balanced.

The issue raised by the Ministry also has dimensions that extend in many directions. The Retirement Income System (RIS) in Canada is in a constant state of flux and participation in its component parts is also in a constant state of change. Changing degrees of participation reflect not only changes in taste, but changes in variables such as: levels of earnings, the sector composition of employment, rates of unionization, changes in female participation in the labour force, and so on. Moreover, the outcomes generated by the RIS will vary based on economic and financial variables such as rates of inflation and real wage growth and rates of return on financial assets.

The Ministry asked the author of the report to prepare this report within a time frame that precludes undertaking original research on all aspects of the issue. Fortunately, there is a good deal of relevant literature, analysis and data already in the public domain and it has been drawn on heavily. Nonetheless, there are some dimensions of the general issue that deserve more attention than they get in the report. As is noted in Section 7, much of the discussion in this report needs an assessment with the specific situation of women and immigrants in mind. The report does present new data on the incomes of the current elderly.

Two things about the way the report has been prepared need mentioning at the outset.

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<sup>1</sup> Unless context demands otherwise, the terms elderly, pensioners, seniors and retirees will be used interchangeably and will be used to designate individuals who are 65 years of age and older and/or economic families in which the oldest member of the household is 65 or older.

In the process of preparing the report, gaps in existing data and analysis have become evident. Indeed the author of the report has been noting these for some years. (See: Baldwin, 2007 and 2008) Despite these limitations, issues that need to be addressed have been addressed even where the existing data and analysis have been less than complete. Relevance has trumped reliability in the preparation of this report. Second, the subject matter of this report, like pensions as institutions, focuses on the future, which by its nature is uncertain. This is not a field that permits fixed and firm answers to questions (though many are propounded). Answers to all of the key questions in this report need to be treated with some caution irrespective of the source. The reality of uncertainty also has some implications for analytical tools that are best suited for analyzing future retirement income prospects and these are noted in Section 7 and in the Conclusions in Section 8.

The report proceeds as follows.

**Section 2** provides an overview of the Canadian RIS. The component parts are briefly described, as is the manner in which they combine to meet retirement income goals.

**Section 3** looks at the Canadian RIS in an international comparative perspective. The comparators are provided by the 30 high income democracies that make up the membership of the Organization for Economic Cooperation and Development (OECD). The roles played by different parts of the RIS are compared with those in other countries.

**Section 4** is largely conceptual and discusses criteria for judging the RIS. It notes some of the difficulties in making key concepts operational.

**Section 5** describes the income situation of the current elderly, as well as elderly income trends. It notes amounts and sources of income, the evolution of poverty among the elderly, replacement rates and quasi-replacement rates. All but the discussion of replacement rates relies on data gathered for the report.

**Section 6** looks to the future with a view to answering the key questions the report has been asked to address. It begins with a review of several attempts to quantify the future retirement income prospects of Canadians and it also notes the subjective assessment of near retirees in Canada of their retirement income prospects. Section 6 moves on to discuss changes that are taking place in Employment Pension Plans (EPPs) in Canada and some proposals that have been made to overcome some of their current problems and limitations. Section 6 also includes a brief discussion of issues related to Canada's public pension plans.

**Section 7** takes stock of some of the limitations in data, research and information systems relating to incomes of the elderly and future retirement income prospects.

Conclusions are drawn in **Section 8** and references are identified in **Section 9**.

## Section 2: The Structure of Canada's Retirement Income System

### 2.1 Introduction

In order to describe the structure of the Canadian RIS in a manner that is consistent with the comparative context presented in the next section of the report, the Canadian RIS will be described in terms of the three pillars structure employed by the OECD. (See for example: OECD, 2009). In the OECD's classification:

- The first pillar is made up of programs that are financed from general tax revenues and are available to the elderly based solely on age plus years of residence or citizenship, or these qualifications plus an income or means test.
- The second pillar is made up of compulsory programs that are designed to replace pre-retirement earnings. These programs could be either defined benefit (DB) or defined contribution (DC).
- The third pillar is made up of privately administered retirement income plans, including those that are put in place "voluntarily"<sup>2</sup> by employers for their employees (EPPs) and individual tax assisted retirement saving accounts.

This typology developed by the OECD is useful and widely used. However, several things about it are worth noting. First, incomes of the elderly include sources of income that are not encompassed by it because they are not specifically designed to provide income in retirement. Investment income and earnings from employment and self-employment are the most obvious cases in point. Second, publicly administered retirement incomes are not the only source of public support for the elderly. Other types of support may include drug and housing subsidies. Public support is also provided to privately administered retirement income plans through tax support and regulation. Finally, it is noteworthy that the typology does not differentiate among pillars based on funding method.

Pension plans can be financed on one of two classic bases: pay-as-you-go (pay-go) or fully pre-funded. In a pay-go plan, contributions are levied at a rate sufficient to pay benefits due to be paid in the current time period. No reserve fund is built up, there are no pension investments, and investment income plays no direct role in the financing of the plan. The contribution rate under a pay-go plan will reflect two ratios: the ratio of pensioners to contributors, and the ratio of retirement benefits to contributory earnings.

In a fully pre-funded plan, contributions in a particular year are levied to match the present value of the future benefit payments that are earned that year. Typically, assets that accrue in the pension fund are required to match the full amount of the financial obligation of the plan to its members. In cases where there is a shortfall of assets in relation to plan obligations (liabilities), special payments to the pension plan over and above those needed to match newly accruing benefits are typically required. Conversely,

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<sup>2</sup> EPPs are voluntary for employers in the sense that they are not required to provide them by law. But, union bargaining pressure and pressures from competitors on the demand side of the labour market may leave employers little choice but to offer them as part of a compensation package.

if there is an excess of assets over liabilities, reduced contributions may be allowed or required. Contribution rates in fully funded plans will depend on the ratio of the retirement period to the period over which contributions are made and, assuming wage related benefits, the relationship between returns on pension investments and wage growth.<sup>3</sup>

First pillar programs are almost invariably pure pay-go programs and until the recent past the same could also have been said of second pillar programs in OECD countries. However, the tax base used to support first and second pillar programs usually differs even where both are being financed on a pay-go basis. First pillar programs usually rely on the full tax base of the government which means that to some degree, capital income and the incomes of the elderly form part of the tax base. Second pillar programs usually levy contributions exclusively on labour income and then, only up to a maximum level. In recent years, a number of OECD countries have begun to introduce or expand pre-funding in second pillar programs and Canada is a case in point. Other members of the OECD, particularly new members, have complete pre-funding of their second pillar as a result of having adopted mandatory DC arrangements.

Plans in the third pillar are almost invariably fully pre-funded. This is true by definition of pure DC plans and true, with some notable exceptions, of DB plans.

Canadian arrangements will be described against this backdrop.

## **2.2 Pillar 1: OAS, GIS, The Allowance and Provincial Top-Ups**

In Canada, the first pillar is dominated by two large programs that are financed and administered by the Government of Canada – namely, Old Age Security (OAS) and the Guaranteed Income Supplement (GIS), which is part of the OAS program in a formal, legal sense. It also includes a smaller income tested supplement (The Allowance) and provincial top-ups to GIS in most of Canada's provinces and territories.

The OAS was established in 1952 as a universal flat rate benefit that provides monthly benefits to all Canadians who satisfy age and residence requirements. Initially, the age of eligibility was 70 but was lowered to 65 in one-year annual stages from 1966 to 1970. The residence requirement was ten years of residence in Canada between ages 18 and 65 in order to qualify for OAS. Starting in 1973, the amount of the monthly benefit was indexed to changes in the Consumer Price Index (CPI), with the price adjustments being made quarterly.

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<sup>3</sup> It is typically assumed that returns on investment will exceed wage growth and that therefore pre-funded contribution rates will be lower than pay-go contributions. While this assumption is likely to hold true in most situations, it will not hold true in all. Moreover, the fully funded contributions are likely to be more volatile and, even if the contribution rates are lower, the claims of the pensioners on national income do not change from one funding method to another. The claims of the pensioners on national income are determined entirely on the benefit side of the pension plan. What allows the contribution rate to be lower in pre-funded plans is their ability to claim property income through the ownership of assets, in addition to wage based contributions.

Residence requirements for OAS were amended in 1977 so that 10 years of residence would qualify a person for 10/40ths or one quarter of a full benefit. Each additional year of residence would qualify a person for an addition 1/40<sup>th</sup> of a full benefit. Forty years of residence would be required for a full benefit. At the time of the change in residence requirements, it was hoped that Canada would enter into social security agreements with countries that were the source of immigration so that partial payments of social security pensions would be received by adult immigrants to Canada. In addition, immigrants from countries with which Canada had signed social security agreements would be allowed to aggregate years of residence in Canada and countries of origin in order to satisfy qualifying requirements.

In 1989, the universal flat rate nature of the OAS program was ended. For individual OAS recipients with incomes above a threshold level, a surtax of 15 per cent was imposed on income above the threshold until the full amount of the OAS benefit was taxed. The threshold level of income at which the tax applied was originally set at \$50,000. For tax year 2008, it was roughly \$65,000 and the threshold is now indexed to movements in the CPI. In 2008, the surtax applied to incomes between \$65,000 and \$105,000 and, in effect, no OAS is paid to older individuals with incomes above \$105,000.

The GIS was established in 1966 as an income tested supplement to the OAS program. GIS benefits are available to OAS recipients with low incomes. Maximum GIS benefits are established for individuals and couples (the maximum benefit for couples is 1.6 times the maximum benefit for individuals reflecting the idea that there are economies of scale in cohabiting). The maximum benefit is paid to individuals and couples who have no income except OAS and the maximum benefit is reduced by \$1 for every \$2 of income from sources other than OAS. The maximum GIS benefits are indexed to price increases in the same manner as OAS.

The GIS was introduced at the same time as the Canada and Quebec Pension Plans (C/QPP) and was modest in amount. The maximum GIS for singles was \$30.00 per month compared to an OAS benefit of \$75.00 per month and, initially there was no difference between the maximum GIS for singles and for couples. Part of the thinking in introducing the GIS was that the elderly at that time should get some compensation for not being able to participate in the newly created C/QPP. But, with the passage of time, GIS benefits have tended to grow in relation to other public programs for the elderly. The rationale for this shifting balance has been that limited fiscal resources of governments should be targeted to those most in need. Thus, there have been no discretionary increases in OAS benefits above the increases attributable to CPI increases since indexation was introduced in 1973. GIS benefits have been increased on a number of occasions. As a consequence, maximum GIS benefits for the single elderly at the end of 2008 were \$653 per month, compared to OAS benefits of \$517 per month.

In 1975, the Spouses' Allowance (SPA) was introduced. It was designed to extend the minimum income guaranteed to couples through OAS and GIS to couples in which one

spouse was eligible for OAS and the other was aged 60 to 64. In 1979, the SPA was amended so that a surviving spouse under age 65 in couple receiving an SPA benefit would continue to receive the benefit if their spouse who was eligible for OAS died. Starting in 1985, the SPA could be paid to all widows and widowers aged 60 to 64. The SPA was renamed the Allowance in 2000. As of 2007, it provided benefits to about 94,000 people compared to about 4.4 million recipients of OAS benefits.

In addition, most provinces and territories offer income tested top-ups to OAS and GIS. Being in receipt of GIS is typically a condition of qualifying for the supplements. In some cases, the provincial top-ups can be quite substantial. In Alberta, for example, they amount to more than \$2,800 per year for a single and \$4,200 for a couple as of 2003. In Newfoundland and Labrador the amounts are much smaller at \$350 and \$700 per year for singles and couples, respectively, again in 2003. Quebec and Prince Edward Island do not have supplements. (Cohen and FitzGerald, 2004)

Provinces may also supplement top ups with additional forms of support that are delivered through the tax system. For example, Ontario's top up, known as GAINS, provides maximum benefits of almost exactly \$1,000 per years to singles and \$2,000 to couples. In addition, senior home owners may qualify for a property tax grant that provide a tax benefit of up to \$1,300 per year when combined with property and sales tax credits.

All of the first pillar programs described above are financed from federal and provincial general tax revenues, and expenditures under the programs are included in relevant government budgets.<sup>4</sup>

### **2.3 Pillar 2: The Canada and Quebec Pension Plans**

Since 1966 when the C/QPP was created, all employed and self-employed Canadians have been required to contribute to the C/QPP on earnings between a yearly basic exemption (YBE) and yearly maximum pensionable earnings (YMPE). The YMPE roughly tracks average wages and salaries. Retirement benefits from the C/QPP amount to 25 per cent of lifetime contributory earnings. For purposes of the benefit calculation, each year's contributory earnings (i.e. earnings up to the YMPE) are increased to reflect growth in the YMPE over the period that separates the years when contributions were made and the YMPE at retirement date. Adjusted earnings are averaged over the entire period from age 18 to retirement date, with provision being made for dropping from the calculation limited periods when adjusted earnings are below average. Once C/QPP retirement benefits begin to be paid, they are indexed to increases in the CPI on an annual basis. Retirement benefits calculated according to the basic formula in the plans are payable at age 65. Retirement benefits can be initiated between ages 60 and 65 but are reduced from what would be paid based on the formula, and benefits can be initiated

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<sup>4</sup> Prior to 1972, the OAS program was financed by a designated tax and a notional OAS account was maintained to track program revenues and expenditures.

between ages 65 and 70 but are increased above what would be paid based on the formula.<sup>5</sup>

The C/QPP also provide survivor and disability benefits in addition to retirement benefits. In the case of the death of a contributor who is receiving a retirement benefit the survivor benefit is based on the retirement benefit in pay in the case. In the case of a contributor dying or becoming disabled before receiving a retirement benefit, the survivor and disability benefits are somewhat more complicated, but are based largely on the retirement benefit that would have been paid had the contributor reached 65 on the date of death or disability.

Throughout its history, the C/QPP has operated on a modified pay-as-you go basis. In the late 1990s, a number of changes were made to the plans, with particular emphasis on their financial arrangements. The target size of the reserve funds was raised from two to five years of plan expenditures (roughly 25 per cent of liabilities) and the CPP fund was to be invested in marketable securities, as had always been the case with the QPP. The investments of the new CPP fund were to be managed by an “arm’s length” CPP Investment Board (CPPIB).

An important objective of the 1990s reforms was to stabilize the combined employer and employee contributions below 10 per cent of contributory earnings. According to the new rules put in place in the late 1990s, if a future triennial actuarial report establishes the required contribution rate at more than 10 per cent and the federal and provincial finance ministers cannot agree to a new rate above 10 per cent, the indexation of benefits will be curbed in order to keep the contribution rate below 10 per cent. Thus, the purely DB character of the C/QPP has been ended. The new rules also require that any benefit improvements be fully funded.<sup>6</sup>

The CPP is administered by various departments of the Government of Canada. However, changes to the benefits and contributions require an agreement between the Government of Canada and two thirds of the provinces with two thirds of the Canadian population. For purposes of this amending formula, Quebec is a province like the others in spite of its managing its own QPP. It is also noteworthy that the revenues and expenditures of the CPP are not budget items for the Government of Canada.

#### **2.4 Pillar 3: EPPs and Individual Retirement Savings**

While some third pillar pension plans existed as early as the late 19<sup>th</sup> century, they became widely available in the twenty years following the second World War. A study

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<sup>5</sup> At the time of writing (August, 2009), the Government of Canada and the provinces have agreed to three small changes to the CPP that are described in Section 6.4.

<sup>6</sup> The 1990s changes also included benefit reductions, mainly to survivor and disability benefits, that were expected to reduce CPP expenditures by 10 to 15% in 2030. In addition, the YBE was frozen in its absolute dollar amount, thus increasing the size of the plan’s contributory earnings’ base and limiting the redistributive character of the C/QPP. The CPPs pay-go contribution rate is now estimated at 11.02 in 2030 (OCA, 2007) compared to 14.2 % in OCA, 1995.

undertaken by the Industrial Relations Centre (IRC) at Queen's University in 1938 could identify only 615 EPPs in Canada. (IRC, 1938) According to a 1965 survey by Statistics Canada's predecessor, the Dominion Bureau of Statistics (DBS), there were 13,600 plans with 2,346,000 members. (DBS, 1967) As of 2008, data from Statistics Canada's Pension Plans in Canada (PPIC) data base suggest there were no less than 19,185 EPPs in Canada with 5,908,633 active members. The absolute numbers of members in EPPs continues to grow and is impressive in size. But, in relation to the size of the employed workforce, EPP membership has been declining since the late 1970s and has fallen from 46.1 per cent of paid workers in 1977 to 38.3 per cent in 2007.

By its nature, the third pillar is very diverse. The PPIC data base classifies 11,539 EPPs as DB plans in 2008 and these plans have 4,538,192 members. The same source identifies 7,165 plans as DC with 935,236 members.<sup>7</sup> While this suggests that DB plans predominate, the portion of plan members that are in DB plans has declined steadily in recent years, as is documented in Section 6.2 below.

The evolution of DB and DC participation is important and this issue will be returned to in Section 6.2. But, it understates the degree of diversity in plan design in Canada. The DB world has always included a variety of basic plan types, and more and more plans are emerging that combine elements of classic DB and DC plan designs.

Through most of the public sector and parts of the private sector (e.g. finance, transportation, telecommunications and utilities), it has been common for DB plans to provide retirement benefits based on final or best average pay. In unionized parts of the private sector – especially mining and manufacturing – it has been common for DB plans to be flat benefit plans that provide a fixed number of dollars per month per year of service. Until the mid-1980s, a very common type of DB plan was the career average earnings plan, in which benefits were based on a percentage of each year's earnings over a working career. These plans were widely abandoned in the high inflation environment of the 1970s and 1980s and tend now to be found in a minority of smaller plans.

In its classic form, DB plans provide complete certainty of benefit promises and complete uncertainty of required contributions, and the employers who sponsor these plans accept the contribution rate uncertainty.<sup>8</sup> At the other extreme, classic DC plans provide complete certainty of contribution rates and complete uncertainty of benefits, and the plan members accept the uncertainty of benefits.<sup>9</sup>

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<sup>7</sup> As is noted below, the emergence of hybrid plans that include elements of DB and DC make this bimodal classification somewhat unsatisfactory.

<sup>8</sup> DB plans that make no provision for post retirement adjustments may define a standard of living for retirees at the moment of retirement, but offer little definition of the standard of living that a retiree will enjoy over the retirement period. Also, there is a great deal of uncertainty about whether the economic burden of the special contributions that employers make to DB plans to offset deficits is shifted to plan members. See: Pesando, 2008.

<sup>9</sup> There are many ways to conceptualize the difference between DB and DC. In view of what comes later in this report, it is worth adding the following distinction: classic DC establishes a fixed rate of pre-retirement savings and the benefit and replacement rate are unknown; and DB establishes a benefit and/or replacement

In the provincial public and near-public sectors, pension plans have been moving away from the classic DB structure for nearly 20 years, led by the Ontario Teachers' Pension Plan (OTPP). Pension models that involve joint governance and the joint sharing of financial risk on the contribution side of the plans have emerged. More recently, the acceptance of financial risk by plan members has been extended to the indexation of benefits, which is now provided in whole or in part based on the financial performance of the pension plan. On the other hand, the university sector has for many years provided examples of plans that are DC at core but which include DB guarantees. Although tax law currently blocks their introduction in Canada, cash balance plans that combine known rates of contribution and minimum rate of return guarantees have become quite common in the US, especially in the private sector.

Union initiated multi-employer plans (MEPPs) provide a longstanding example of the plans that incorporate elements of classic DB and DC. These plans establish rates of contribution to a common plan with a number of different employers and are governed by boards of trustees who are union nominees and/or a mix of union and employer nominees. On the advice of an actuary, the board of trustees will establish a benefit rate as in a DB plan and benefits will be paid based on the DB formula, as long as financial circumstances permit. Benefits are usually expressed in flat benefit terms. However, in order to accommodate the certainty of employer contributions required by these plans, regulatory law in all Canadian jurisdictions allows trustees to reduce accrued benefits in order to balance the plans' assets and liabilities. Sponsors of single employer DB plans are not allowed to reduce accrued benefits except in the context of the bankruptcy of an employer who is sponsoring a plan.

Given the emergence of new plan types that combine elements of DB and DC, it is less useful to think of DB and DC as a bimodal choice than it is to think of a spectrum of choice, with DB and benefit certainty at one end of a spectrum, and DC and contribution certainty at the other end.

Diversity within the EPP sector is not limited to the basic design features just noted. There are also important differences among DB plans in terms of the ancillary benefits they provide, with early retirement options being one of the most important. DB and DC plans vary, too, in terms of size. In general, DC plans have tended to be found in smaller workplaces and establishments – a fact that is reflected in their representing a much larger share of the plan universe than the plan membership universe. But, whereas one might have felt free to generalize in the past that DC is found only where the risks and costs of DB cannot be borne by a small employer, that generalization would not be safe today.

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rate that is known and constantly adjusts the rate of pre-retirement savings (based on actuarial valuation reports) to meet the target. DB funding rules and practice typically allow the effects financial risks to be pooled and spread across cohorts, within formal and informal limits. In DC, there is a much stronger tendency for financial risks around the age of retirement to impact only those close to either side of retirement. Those who are just retired are not affected if they have chosen annuities as opposed to self-managed withdrawals as the means of converting their accumulated assets into retirement income.

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On the other hand, it is striking that while DC tends to be associated with small firms and workplaces and while there are strong arguments for the positive importance of scale in the operation of all types of plans, there are a sizeable number of small DB plans that operate only for executives. PPIC data for 2004 identify 3,081 of these plans (43.9 per cent of DB plans in Canada) that include 0.9 per cent of DB plan members and have an average size of 14 members. Finally, it is worth noting that while most EPPs in Canada now insure their own benefits, this was not always the case. Until the early 1980s, it was common for small pension plans, in particular, to buy fully insured products. But from 1984 to 1986, the percentage of all EPPs doing so declined from 45 to 13 per cent. Fully insured products transfer the financial risk of providing pensions to the insurance industry.

Participation in EPPs has never been randomly distributed among members of the paid labour force and, indeed, it would be somewhat odd if it were randomly distributed, since the public administered programs fill much more of the retirement income needs of low earners compared to high earners. However, there are other social and economic characteristics that come into play, as well. One of the most thorough investigations of the social and economic characteristics of participants in EPP was undertaken roughly a decade ago by Lipsett and Reesor, two analysts at Human Resources and Social Development Canada (HRSDC). Quoting from an earlier study by the author of this report:

... some ... job characteristics prove to be strong explanatory variables [for EPP participation] on both the bivariate and multivariate analyses. This is particularly true of firm size and union status. Clear relationships also existed for full time and permanent employment status, seniority, sector and occupation. Sectors with high coverage include public administration, community services, and finance, insurance and real estate. Low coverage rates are found in agriculture, business and personal services, wholesale and retail trade and construction. In view of the sectoral shifts in employment and the growth in non-standard employment that were observable at that time, Lipsett and Reesor express some pessimism about future levels of RPP coverage. Also, given the widely noted difference between RPP coverage rates in the public and private sectors, it is worth noting that Lipsett and Reesor find that this difference is largely explained by differences in unionization rates, education and occupation.<sup>10</sup>

Lipsett and Reesor, like other analysts, also note a positive relationship between EPP coverage and level of wages or earnings. It is commonly found, however, that the positive relationship between earnings or income and EPP coverage does not extend to the very highest levels of earnings or income, while it does for participation in RRSPs. (See, for example, Horner, 2007)

The third pillar also includes tax assisted individual retirement saving accounts in the form of Registered Retirement Savings Plans (RRSPs). The Income Tax Act (ITA) has

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<sup>10</sup> Lipsett and Reesor also note the importance of firm size in explaining EPP coverage. This consideration is also relevant to differences in EPP coverage in the public and private sectors.

made provision for these since 1957, with support taking the form of tax deductible contributions within specific limits and the non-taxation of investment income while savings are accumulating. Benefit payouts are taxable. Financial institutions offer registered plans to individual consumers. As is noted by Dilnot, 1996, the exemption of pension contributions and investment income from taxation and the taxation of benefit payments is typical of OECD countries.

RRSPs were not heavily used until the 1970s, when there was an expansion in the dollar limits up to which tax deductible contributions could be made. Until major reforms were made to the ITA provisions relating to pensions and RRSPs at the beginning of the 1990s, the tax room provided for RRSPs was a minor fraction of what was available for DB pension plans in particular, and to a lesser degree, DC pension plans. The tax reforms of the early 1990s substantially eliminated the differences among plan types in terms of the amount of tax support they would receive. With the growth in RRSP usage following the 1990s reforms, the number of RRSP contributors has come to exceed the number of EPP members, though there has been a levelling off in RRSP usage since the mid-1990s. RRSP use is strongly associated with income as well as age and EPP membership. The reforms of the early 1990s also established a highly integrated set of rules for DB and DC pensions and RRSPs; that had not been the case in the years beforehand.

In recent years, it has become a common practice for employers to establish “group RRSPs” (GRRSPs) that, typically, employees can opt into but are not required to join. Employers may offer incentives to employees to participate in them, with the incentives taking the form of offering matching contributions up to a limit. The GRRSPs are usually an alternative to a formal EPP. They merit attention here because they obscure the distinction between EPPs and individual retirement saving arrangements. Indeed, Horner, 2007 speculates that the 1990s ITA changes may have led to some substitution of GRRSPs for EPPs. The GRRSPs operate outside the regulatory framework that applies to EPPs and, like individual RRSPs, accumulated savings can be withdrawn before retirement age but PIT will be paid on the withdrawal as if it were income.

Use of the third pillar is voluntary on the part of employers, individuals or both.<sup>11</sup> There is, however, a strong public policy presence in this realm. EPPs are regulated in all but one Canadian jurisdiction and regulations tend to cover a common set of issues: plan member benefit rights in areas such as eligibility to be a member, vesting of benefits and survivor benefits; disclosure of information to plan members and related member rights in governance structures; and funding requirements for DB pension plans. In recent years, there has been a good deal of debate about the suitability of the regulations currently in place in Canada and four provincial governments (Alberta and British Columbia jointly, Ontario and Nova Scotia) have recently established three inquiries into pension regulation in their jurisdictions. The Government of Canada has had two public consultations of a similar sort in recent years and Quebec has conducted stakeholder

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<sup>11</sup> In 2008, 85% of the members of EPPs are in plans in which membership is compulsory: 90% of DB members and 60% of DC members.

consultations on the same issues. The issues addressed by these inquiries are identified in Section 6.3 of this report.

The ITA also plays an important role in shaping the third pillar. The ITA sets contribution limits for DC pensions and RRSPs, and maximum benefit limits for DB plans, including ancillary benefits. The ITA has also set limits on employer contributions to DB pension plans that have limited the building up of prudential reserves in them.<sup>12</sup>

The operation of the third pillar is also impacted by judicial interpretations of statutory law, the common law of trusts, professional standards of the actuarial and accounting professions, and related fields of statutory law such as bankruptcy law. In the course of this report, data on incomes of the elderly are identified by source and the term “pension income” and “3<sup>rd</sup> pillar income” are used interchangeably. This use of language reflects the fact that, in data on sources of income, it is impossible to distinguish among incomes that might arise from RRSPs in the form of RRIFs or annuities, and incomes that might arise from EPPs. Incomes from EPPs cannot be identified as coming from DB or DC plans. Some data sources refer to income from all of these sources as pension income, but it is best thought of as third pillar income.

## **2.5 Combining Programs and Pillars**

In combination, the OAS and GIS provide a minimum income floor for Canadians over 65 and the Allowance extends this minimum floor to 60 for those who qualify. In 2007, the minimum income floor for individuals over 65 was roughly \$13,500 per year and the minimum for couples was \$21,825. These amounts are \$1,900 and \$1,275 below the annual Low Income Measure (LIM) lines for individuals and couples. Thanks to the presence of provincial programs that top up GIS payments, the minimum income guarantees are somewhat higher for most of Canada’s elderly.

The C/QPP is specifically designed to replace pre-retirement earnings and replaces 25 per cent of pre-retirement earnings from zero earnings to roughly average wages and salaries. The OAS program also contributes to this objective. But because the OAS pays a flat rate amount irrespective of pre-retirement earnings, it replaces a higher portion of low earnings than high earnings. OAS currently replaces about 14 per cent of average wages and salaries, 28 per cent of half-average wages and salaries, and 7 per cent of twice average wages and salaries. Although GIS is designed with a view to providing an income floor, its size means that if an older Canadian has no source of income but OAS and a maximum C/QPP retirement benefit payable at age 65, they will be eligible for a small GIS payment. Thus, the combination of OAS, GIS and a maximum C/QPP retirement benefit replaces: 73 per cent of half-average wages and salaries; 42 per cent of

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<sup>12</sup> In 2008 the Government of Canada introduced the Tax Free Savings Account (TFSA), which permits after tax contributions to the TFSAs to accumulate investment income tax free and exempts payouts from the TFSAs from personal income tax. The TFSAs are not established specifically to generate retirement income but may become important vehicles for people who anticipate facing very high marginal tax rates in retirement (e.g. people who anticipate receiving GIS). The TFSAs are too new to have an established pattern of use.

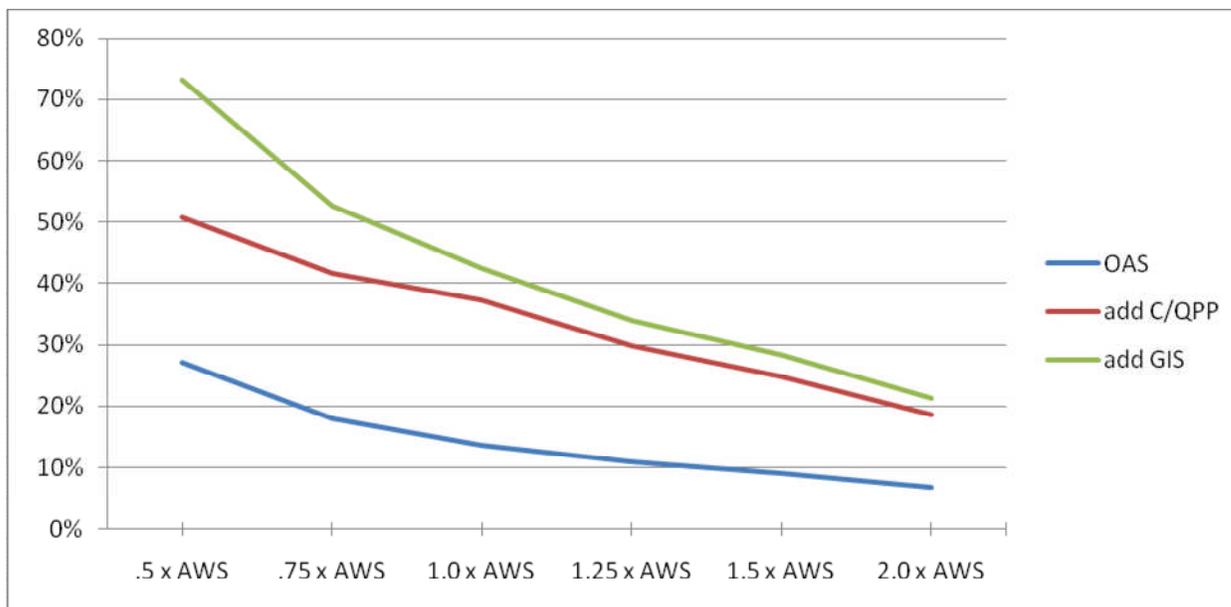
average wages and salaries; and 21 per cent of twice average wages and salaries. Canadians with higher wages and salaries will have to rely more heavily on privately administered retirement income programs to achieve a given percentage of pre-retirement incomes than will Canadians with lower wages and salaries. This issue is discussed more thoroughly in Section 4.

Figure 1 below illustrates amounts available from OAS, C/QPP and GIS. The amounts are expressed as percentages of pre-retirement earnings; earnings are expressed as fractions or multiples of average wages and salaries (i.e. replacement rates); and the YMPE under the C/QPP serves as a proxy for average wages and salaries.

As can be seen in Figure 1, on earnings up to one-half average wages and salaries, the benefits from Canada's publicly administered programs meet the commonly used replacement rate target of 70 per cent of pre-retirement earnings. However, the replacement rate that emerges from these programs declines quite steeply as a result of the flat rate amount of the OAS and the offset of CPP benefits against GIS entitlements. Thus, at average wages and salaries, there is a significant gap to be filled by third pillar income to eliminate the difference between what is available from OAS, C/QPP and GIS, and a replacement rate target of 70 per cent. As earnings increase beyond the level of average wages and salaries, the gap to be filled continues to increase.

Two additional points about Figure 1 are significant. At lower levels of earnings, the GIS is playing an important role in replacing pre-retirement earnings. The good news is that GIS is adding to income but it has somewhat unfortunate (dis)incentive effects that should not be forgotten. In addition, provincial top-ups are not included in these calculations.

**Figure 1**  
**Benefits from OAS, GIS and C/QPP as a Percentage of Pre-retirement Income**  
**(based on 2008 benefit levels)**



### Section 3: Canada’s RIS Structure in Comparative Context

Formal pension arrangements are associated with societies in which work takes place largely in the context of formal employment relationships and labour productivity is high enough that deferring consumption from working years to retirement makes sense. Pension arrangements in the OECD countries form an appropriate point of reference for comparing Canada’s pension arrangements, as the OECD brings together 30 high income democracies.

Most OECD countries have three pillar pension systems. Exceptions are provided by five countries that have no first pillar programs (Austria, Germany, Hungary, Italy, and the US), and two countries with no second pillar programs (Iceland, and New Zealand). In addition, a few countries have such comprehensive publicly administered programs that the third pillar and EPPs have little role to play (Finland, Greece, Italy, Poland, Portugal, Spain, Turkey). Deciding whether EPPs belong in the second or the third pillar is not straightforward in countries where EPPs are mandatory as a result of legislation (e.g. Finland, Iceland, Switzerland), or effectively mandatory thanks to highly centralized and comprehensive collective bargaining regimes (e.g. Denmark, Netherlands, and Sweden). Generally, the OECD has classified EPP regimes of this sort as second pillar.

While there are typically three pillars in the pension systems in most OECD countries, there are important differences in the structure of the first two pillars and in the balance

among pillars. Thus, most countries have one first pillar program that provides either a universal flat rate benefit or a benefit based on an income or means test. Seven OECD countries in addition to Canada have both a flat rate benefit and an income or means tested program – namely: Czech Republic, Denmark, Iceland, Luxembourg, Mexico, Norway and the UK. In the Czech Republic, Luxembourg and Mexico, the minimum income protection in the first pillar only applies to pension income (i.e. there is a minimum pension guarantee and income from other sources is ignored in calculating the benefit).

Until recently, second pillar programs were overwhelmingly earnings-related DB plans that operated on a pay-as-you-go basis. But the landscape has become quite diverse in recent years. A number of OECD countries now have mandatory individual savings accounts as their second pillar program (e.g. Australia, Denmark, Hungary, Mexico, and the Slovak Republic)<sup>13</sup>. In other cases, a small layer of mandatory individual savings has been added to a second pillar that still operates largely on a DB basis (e.g. Norway, Poland, Sweden). In addition, new program designs have emerged that combine elements of DB and DC. In the late 1990s, Sweden introduced what was called a notional DC design in its second pillar. It functions, though, much like the career average adjusted plan design of the C/QPP with the twist that longevity risk for each age cohort is reflected in the amount of benefit payout. Wage-related post retirement adjustments can be capped under specified financial circumstances. Notional DC schemes also exist in Italy and Poland. In the early 2000s, EPPs in the Netherlands switched from being final pay schemes with wage indexed benefits, to plans that guarantee nominal career average benefits but aspire to provide indexation of both pre-retirement accruals and post retirement adjustments. The plans in the Netherlands are fully funded and have to be funded to achieve the aspired level of benefits.

The role played by the first two pillars (including mandatory privately administered plans) in meeting retirement income needs varies widely within the OECD. This can be illustrated by comparing benefits from the first two pillars with different levels of pre-retirement earnings as is done in Table 1 immediately below. In Table 1, benefits provided by Pillars 1 and 2 are expressed as replacement rates at three levels of earnings: 0.5 times average wages; 1.0 times average wages; and 1.5 times average wages. Rows identify Canada's replacement rate (RR); Canada's rank among 30 OECD countries (counting down from the highest rate); the OECD average RR; the highest RR among OECD countries and the lowest RR among OECD countries.

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<sup>13</sup> In the case of the Slovak Republic and Hungary, the DC schemes are only mandatory for entrants to the labour market after specified dates.

**Table 2**  
**Gross Replacement Rates Provided by Pillars 1 and 2,**  
**Canada and OECD Comparators**

	<b>0.5 x Average Wage</b>	<b>1.0 x Average Wage</b>	<b>1.5 x Average Wage</b>
Canada RR	76.5	44.5	29.7
Canada Rank	13	20	26
OECD Average RR	71.9	59.0	54.3
OECD Highest RR	124.0	95.7	95.7
OECD Lowest RR	43.0	30.8	21.3

Based on OECD, 2009

Table 1 reflects the fact that pillars one and two in Canada tend to focus on meeting minimum retirement income needs rather than replacing large percentages of earnings across a broad range of pre-retirement earnings. The earnings replacement provided by the C/QPP is modest even after taking account of OAS, and the level of covered earnings under the C/QPP is the lowest in the OECD. (OECD, 2005) The emphasis on providing minimum income protection is a characteristic feature of social security in the liberal Anglo-Saxon countries in the OECD. (See: Esping-Andersen, 1990)

Many of the European members of the OECD have older populations than Canada, and population ageing was putting upward pressure on pay-go contribution rates through the late 20<sup>th</sup> century. Thus, many of these countries adopted pension reforms that varied in their specifics but were generally designed to reduce future pension expenditures. Increasing the age of retirement and/or eliminating early retirement incentives were common features of reforms. In OECD, 2007 it is noted that 28 of 30 member countries introduced pension reforms since 1990. (See also: OECD, 2000)

OECD, 2009 provides some insight into the achievement of retirement income goals in OECD countries. Over the period from the mid-1980s to the mid-2000s, average incomes of the population over 65 tended to grow in line with incomes in the population as a whole in the 20 OECD countries for which relevant data were available. (Incomes are measured on an after-tax basis adjusted for family size and the taxes considered include social security contributions). There are a few cases of more rapid growth in the incomes of the older population and some of slower growth, but in most countries the differences amount to no more than a few percentage points. In cases where the growth in the incomes of the older population is more rapid, it typically reflects the maturing of pension arrangements that were introduced relatively recently.

Incomes of the over 65 population are compared to average incomes of the total population for OECD countries in the mid-2000s. Canada is somewhat above the OECD average of 82.4 per cent, and measures range from 97 per cent in Mexico and Austria to 66 per cent in Ireland. This range is significant, but is less dramatic than one might expect from the differences among OECD countries in sources of income in the mid-2000s. Public transfers account for less than 50 per cent of income received in a number of

OECD countries with relatively mature pension systems, including Canada, and more than 85 per cent in France and Hungary. In eight OECD countries, earnings from employment account for one quarter or more of total incomes of the over 65 population.

The incidence of poverty among the elderly is also identified in OECD, 2009. Poverty is measured based on what is described below in Section 4 as the after-tax LIM measure. Because there is a further discussion of poverty among the elderly in Section 5.2, a few points will suffice at this juncture. Across the OECD, the elderly poverty rate is 13.3 per cent and Canada is one of eight countries with poverty rates below 5 per cent. Seven countries have rates in excess of 20 per cent. Overall, women in the OECD tend to have higher poverty rates than men (15 per cent versus 10 per cent). Poverty rates among the elderly fell over the period from the mid-1980s to the mid-2000s in most OECD countries. Ireland and Spain are two countries where that did not happen, as the elderly did not share fully in rapid economic growth to which the LIM measure is sensitive. There have also been increases in elderly poverty between the mid-1990s and the mid-2000s in Australia, Finland, Sweden, Switzerland and the United States.

## Section 4: Criteria for Judging Canada's RIS

### 4.1 Assessing Income Adequacy

It is a common feature of pension policy discourse in Canada and abroad that the adequacy of incomes provided by pension systems are judged by two criteria: do they provide incomes above a minimum acceptable level, typically some variant of a poverty line; and do they allow people who are retiring from active employment to maintain their standard of living?<sup>14</sup> The achievement of the latter objective is usually measured by a replacement rate that expresses retirement income as a percentage of pre-retirement earnings.<sup>15</sup> The actual replacement rate calculated in this manner is compared to a benchmark replacement rate deemed to allow people to maintain the continuity in their standard of living in retirement. These criteria have already been introduced in passing in earlier sections of this report. Here they will be explored a little more fully. Despite their conceptual simplicity, they are not easy to make operational in a fully satisfactory way.

Even at a conceptual level, there is a longstanding debate about whether poverty is a state of absolute deprivation or a relative state of low income. The lack of conceptual agreement is reflected in the existence of a variety of measures of low income that accentuate either the relative or absolute nature of poverty. Measures also vary in using pre-tax versus after-tax incomes.

The most widely recognizable and commonly cited low income measure in Canada is Statistics Canada's Low Income Cut Off (LICO), which is a hybrid of the absolute and relative measures of low income. Separate LICOs are established for different sized family units and for rural and different sized urban areas. Until recently, Statistics Canada has given higher profile to the before tax measure of LICO, but now focuses attention on the after-tax measure. It should be noted that Statistics Canada has always taken the position that the LICO is not a measure of poverty.

In recent years, Canadian academic writers on poverty issues have tended to use the purely relative LIM. Much of the international discourse on poverty issues is cast in terms of purely relative measures like the LIM. This is true of the work of the OECD.<sup>16</sup> Unless otherwise noted, this report will use the LIM measure as it will facilitate comparability with other commentaries on poverty to a greater degree than will other measures.<sup>17</sup>

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<sup>14</sup> Horner, 2007 reminds his readers that the policy of the Government of Canada is to achieve the anti-poverty objective through public programs and to facilitate the achievement of the earnings replacement objective.

<sup>15</sup> It bears emphasis that it is earnings from employment and self-employment that need to be replaced in retirement, and other forms of income (i.e. property income and transfers) are ignored for purposes of calculating the replacement rate.

<sup>16</sup> A major exception is provided by the World Bank, which tends to focus on low-income countries and uses a measure of one or two dollars per day.

<sup>17</sup> In recent years, there has been some interest among Canadian government officials in a Market Basket Measure of poverty, which reflects an absolute deprivation approach. For purposes of this report, the

It is difficult to avoid some arbitrariness in choosing a low income or poverty measure. The choice matters in some contexts but not in all. It will make a difference to measures of the number of people living in poverty, poverty rates and measures of the depth of poverty. It is also the case that minimum income guarantees are likely to be assessed in terms of poverty measures. On the other hand, the directional nature of poverty trends should not vary significantly based on the measure that is chosen. In Table 2, below, a number of low income measures are identified and the portion of different household types (seniors and all Canadians) with incomes below the different lines are noted. The table also identifies the incomes and income ranges associated with each measure. The sensitivity of low income rates to the choice of measure is clear from the table.

**Table 3**  
**Poverty Rates for Senior Families, 2007**  
**Various Measures**

	Low-Income Cut-Off – Before Tax  LICO-BT	Low-Income Cut-Off – After Tax LICO-AT	Low-Income Measure (50% of Median) LIM	Near LIM (+10%)  Near LIM	Market Basket Measure MBM
Senior Family (highest income person is senior)	11%	3%	9%	15%	5%
Senior Family (highest income person is non-senior)	0%	0%	0%	3%	0%
Senior (unattached individual)	3%	0%	1%	4%	0%
Couple	33%	14%	10%	20%	5%
<b>All Family Types</b>	<b>16%</b>	<b>6%</b>	<b>6%</b>	<b>12%</b>	<b>3%</b>
Income Thresholds* - Single Person	\$14,914 - 21,666	\$11,745 - 17,954	\$15,400	\$16,940	\$12,142 - 15,884
Income Thresholds* - Couple	\$18,567 - 26,972	\$14,295 - 21,851	\$23,100	\$25,410	\$16,998 – 22,238
* Income concepts vary between the poverty definitions.					
<i>Source: Tabulations by Tristat Resources using Statistics Canada SCFs and SLIDs</i>					

As is true of the poverty and low income measures, the conceptual simplicity of the replacement rate generates a wide variety of approaches as it is made operational. The replacement rate can be thought of in terms of a simple equation:

$$\text{Replacement Rate} = \text{Retirement Income} / \text{Pre-retirement earnings}$$

The problem in applying this simple formula is that it is not clear what belongs in the numerator and how the denominator should be defined.

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market basket measure suffers from the weakness that it does not permit an historical time series of any length.

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Establishing the numerator requires a decision on what to include in it. While income from pensions and individual savings programs designed to provide retirement incomes are obvious inclusions, the appropriate way to treat housing and other forms of non-pension wealth is less obvious. Should assessments of the replacement rate presume the annuitization of housing and other forms of wealth and/or attribute imputed rent to home owners? Another important question about the numerator is the time frame over which retirement incomes are measured. Should one look only at income received immediately after retirement; average (real) income over the retirement period; (real) income at the end of the retirement period; or something else? These measures are likely to vary for the entire income received in retirement, as well as income from specific sources.

The denominator, like the numerator, requires some decisions about how to define it. The time frame over which pre-retirement earnings are measured will have a substantial impact on the size of the denominator. Unadjusted career average earnings will result in a smaller denominator than career average earnings that are adjusted to reflect wage growth, as in the C/QPP benefit rate calculation, and both are likely to be lower than a measure of best average earnings for people whose earnings are high relative to average earnings for limited periods of time. Either implicitly or explicitly, the denominator will also have to come to terms with how to deal with periods spent outside the labour force.

To the extent that the denominator is supposed to reflect an established standard of living, other important considerations that mediate the relationship between earnings and living standards come into play. For instance, many Canadian adult households will be making mortgage payments and raising children through a significant part of working life. Both of these will limit the direct contribution that pre-retirement earnings will make to the living standard of the pre-retiree. These conditions could be taken into account in either the denominator of the replacement rate calculation and/or the criteria for judging the replacement rate. But, in thinking about how to deal with them, it is important to bear in mind that the time frames over which these considerations are relevant are not identical to the periods of work and retirement, nor are they relevant in equal degree to all people.

The criteria for judging replacement rates typically incorporate a recognition that the pre-retirement period includes expenses associated with making provision for retirement (e.g. pension contributions, individual retirement savings, and so on) and certain work related expenses that will end with retirement. In addition, other payroll taxes on employees will end (e.g. EI premiums), and certain tax measures targeted on the elderly will come into play (e.g. the aged exemption, the pension income deduction, the non taxation of GIS, pension income splitting, and so on). In addition, assuming replacement rates of less than 100 per cent, the progressive element in the personal income tax will result in lower personal income taxes in the retirement period compared to the pre-retirement period.<sup>18</sup> The net result of these considerations is that a replacement rate of less than 100 per cent will allow a retired person to maintain their standard of living in retirement.

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<sup>18</sup> Recipients of GIS and other income tested benefits tend to face very high marginal tax rates in retirement.

The relevance of many of the questions that arise in calculating replacement rates and in establishing criteria for judging the adequacy of replacement rates will vary from person to person, and household type to household type. Thus, it has become quite common practice in Canadian analytical discourse and internationally to accept a somewhat arbitrary benchmark as the target replacement rate and to judge actual replacement rates accordingly. Typically, a gross replacement rate of roughly 70 per cent of pre-retirement earnings from all sources is a standard measure in Canada. In the following sections of this report studies of replacement rates generated by Canada's RIS will be reviewed and a range of methods and assumptions in the calculation of replacement rates will be noted. Some of the preferences of the author of this report with respect to methods and assumptions are presented after reviewing replacement rate analyses in Section 6.1.

To measure replacement rates, longitudinal data that measure incomes of the same individuals before and after retirement should be used and the path of their incomes should be followed. In addition, the current elderly at any point in time can be asked to assess their standard of living compared to what it was in working years, and this may be the most useful way to come to grips with the idiosyncratic aspects of living standards, although it is less helpful in assessing replacement rates prospectively. Until recently, there has not been a longitudinal data base in Canada that is adequate to measure replacement rates and here, as in many countries, reliance has been placed on "quasi-replacement rates" that compare the incomes of the current elderly with the incomes or earnings of younger age cohorts.

The quasi-replacement rate has traditionally been considered the analytic poor cousin of the replacement rate. Its focus is attention on the relationship between the incomes and living standards of the elderly compared to younger age groups at particular moments in time. The quasi-replacement rate has often garnered attention in discussions of whether the elderly do (and should) have the real value of their incomes protected and/or whether they should share in economic growth during their old age.<sup>19</sup> At a more mechanical level, concern about the quasi-replacement rate has been important in discussions about whether pension income should be indexed to price movements, wage movements or not at all.

However, the issue of how the elderly share in the fate of the economy is an issue that is not only relevant to periods of economic growth and/or inflation. One could imagine periods of economic decline and/or deflation in which pension commitments to the elderly would generate growing real and relative incomes. Beyond some point, it is hard to imagine the elderly not being asked to share in the decline in some fashion. The point has been argued that the only promises to the elderly that can be honoured in all circumstances are promises that are framed as shares of current income.

In Section 5 of this report, note will be made of actual replacement rates, self-assessed comparisons of living standard before and after retirement, and quasi-replacement rates.

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<sup>19</sup> An interesting analysis of this issue is found in Musgrave 1980, who extends the discussion to address sharing the impact of demographic change.

## 4.2 Predictability of Retirement Income

The shift from DB to DC coverage in the third pillar has given rise to concerns about the predictability of pension and retirement income. In part, predictability is seen as an intrinsic merit, especially for the elderly who have limited opportunities to offset negative financial surprises through participation in the labour market. It has also been seen as important in allowing people to plan their individual savings efforts in the pre-retirement years.

Traditionally, concerns about predictability have been central to debates about the relative merits of DB and DC. DB has been seen to provide predictable and certain benefits but not contributions, and the opposite is true of DC. This distinction still carries some weight but it also tends to overlook: the context in which the issue is relevant; benefit risks in DB; and, the emergence of new plan designs that combine elements of DB and DC.

Notwithstanding the recent changes to the C/QPP that create some risk to the indexation of benefits, it is a safe generalization that the first two pillars of Canada's retirement income system are DB. Thus, the unpredictability of DC benefits is an issue for people who need third pillar benefits to close the income gap between what is available from pillars one and two and a replacement rate that will permit continuity of living standards. The low end of the income range where this issue becomes relevant is somewhere between half-average wages and salaries, and average wages and salaries. (This is also the part of the population for whom coverage by EPPs is an issue).

While uncertainty or unpredictability of pension income is associated with DC plans, there are some noteworthy sources of uncertainty in third pillar DB plans, as well. The most prominent source of uncertainty stems from the absence of any formal adjustments to pensions in pay in light of price or wage movements. In an inflation environment like that of the 1970s, this can be catastrophic; more than half of the purchasing power of a nominal income was lost during that decade. But, even if the Bank of Canada succeeds in keeping inflation at 2 per cent per year, 35 per cent of the purchasing power of a non-indexed benefit will be lost over the average remaining lifetime of a 65 year-old Canadian woman. Thus, DB benefits that make no cost of living adjustments define an income at retirement age but not over the period of retirement.

Other sources of uncertainty about incomes provided by DB plans are also worth noting. One is that people who change jobs prior to reaching retirement age often find that the settlements they receive from the DB plans of the employers they are leaving are less valuable than what their accumulated service would have provided had they stayed with their employer to retirement age.<sup>20</sup> The same issue arises for active members of DB plans whose plans are partially or totally wound up.

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<sup>20</sup> It is important to note that while common practice in the settlements with early leavers tends to have the effect noted here, this is not an intrinsic characteristic of DB.

Moreover, when DB plans get into financial difficulty, the result may be a reduction in DB benefits based on future service or a switch to DC for future service. Either type of change may increase the onus on individual plan members to save for their own retirement. Financial difficulties may also lead to increased employee contributions to their pension plans. As is noted two paragraphs below, in jointly governed and cost sharing plans, this is sometimes a precursor to benefit changes.

An important source of uncertainty in private sector DB pension plans is the risk that the employer who sponsors the plan will go bankrupt and the assets of the pension fund will not be sufficient to provide all of the benefits promised to the plan members. Underlying this risk is the reality that, while private sector DB plans always have to be financed with the aim of having sufficient assets to match the value of benefit promises (liabilities), this is not a condition that has to be satisfied at all times. Indeed, underfunding can persist for long periods of time. (Also at risk in bankruptcy are the non-registered retirement plans that are common among high paid employees in the private and public sectors, and insurance benefits for retirees.)

Finally, as was noted above, third pillar pensions in Canada have come to include an increasing number of plans that combine elements of DB and DC. The need to make a bimodal choice between the extremes is giving way to making a choice to locate at a particular point along a spectrum. The practical question in pension design is becoming how much benefit certainty or predictability is compatible with the degree of contribution rate uncertainty that can be tolerated. It is striking that the move away from “classic DB” to plans that involve some degree of risk bearing in the benefit structure is not confined to plans operated in the private sector. Some of the most prominent changes of this sort have been made in plans in the public and near public sector at the provincial level in plans with joint governance structures and joint cost sharing. In practice, these plans have discovered the outer limit of the willingness of both plan members and employers to absorb contribution rate increases.

### **4.3 Sustainability & Intergenerational Equity**

Providing adequate and somewhat predictable income in retirement is a central concern in assessing a pension or retirement income system. However, the achievement of this objective typically requires a considerable sacrifice of pre-retirement income and consumption. Thus, consideration has to be given to the impact of the pension systems on pre-retirement as well as post-retirement incomes. Much of the discussion of these issues is cast in terms of sustainability and inter-generational equity – two concepts that are important but difficult to make operational.

The sustainability of a pension system is important in that arrangements that are put in place at a particular moment in time are often counted on to deliver incomes for decades into the future. Individuals planning their retirement need to be able to count on the survival of existing arrangements. Thus, the path dependency that political scientist Paul Pierson, 1997 has observed in pension reforms is not just an observed fact, but a desired

characteristic.<sup>21</sup> Threats to sustainability are typically identified as expenditures rising above an acceptable level, and especially in prefunded DB plans, volatility of pension contributions or accounting expenses for pensions. However, discussions of pension sustainability are often slippery in not being clear about the criterion used to distinguish between sustainable and unsustainable expenditure increases. While it is useful and important to estimate what pension expenditures will be in the future, it is something else again to decide whether they are acceptable. For pillars one and two, the decision on what is acceptable will and should bring into play concerns about the appropriate role of governments in this area. Thus, creating institutional arrangements that do not enjoy broadly based support could be added as an additional threat to sustainability,.

For purposes of this report, the discussion of intergenerational equity can be limited to a few statements that apply to both existing arrangements and proposals for change:

- It is important to try to understand the impact of pension arrangements on different cohorts and generations in terms of benefits received, contributions made and financial risks borne.
- Windfall gains for particular cohorts and generations need to be identified and justified.<sup>22</sup>
- Preferences for pensions change through time and tend to increase as individuals and societies get older and increase their incomes. (See: Burtless and Quinn, 2002)
- Ongoing mortality improvements mean that each cohort that passes through a DB pension system, all other things being equal, will get a more valuable benefit than earlier cohorts and, as a corollary, it is not possible to stabilize both contributions and benefits.
- As third pillar DB plans become more mature they become riskier financially and the risk is borne by younger and future plan members – assuming that past accruals cannot be reduced. (See: Hamilton, 2007)
- In classic DC plans, members of different cohorts whose work lives and retirement savings have otherwise been similar will retire with different ratios of benefits received to contributions made, and these differences will manifest themselves in different replacement rates and/or different retirement ages. (See: Thomson, 1998 and Bodie, 2003)
- Differences within cohorts and generations may be greater and of greater significance than differences between generations.

There is a good deal of latitude in how the important concepts of sustainability and intergenerational equity might be applied in particular contexts. A further idea that helps frame the appropriate relationship between pension contributions and benefits is provided

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<sup>21</sup> In recent years, there have been many pension reforms that do not conform to the path dependency model and many of these have been strongly influenced by the World Bank. (See: Orenstein, 2008). Proponents of radical reforms have complained of governments resisting paradigm shifts in favour of parametric reforms and in doing so, tacitly acknowledge the importance of path dependency. (See: Holzman, MacKellar and Rutkowski, 2003)

<sup>22</sup> On the possibility that they may be justifiable, see: Baldwin, 1997 and 1998.

by the life cycle theory of consumption. According to this theory, it is a rational choice for people to give up pre-retirement consumption to the degree that it will generate an income in retirement that will permit continuity in their level of consumption. This concept is not always identified in popular pension discourse, but is often implicit in it.

Historically, the major concern about the relationship between pre-retirement earnings and retirement income has been that people do not save enough to provide for continuity of consumption, and this remains a concern for considerable parts of the population. However, it is also important to register the concern that “over-saving” for retirement, especially if it is forced saving, is not entirely benign. People who are forced to over-save (i.e. their pre-retirement consumption is being forced below their post-retirement level) may be better off consuming more and saving less prior to retirement.

In closing, this discussion of criteria for judging the retirement income system, it is worth noting that there is a degree of tension between providing adequate and reasonably predictable retirement incomes on the one hand, and recent policy interest in encouraging people to work later on the other hand.

## **Section 5: The RIS and Today’s Elderly: An Assessment**

This section presents several different perspectives on the incomes of today’s elderly. The amounts of income received by the elderly and how both the amounts and sources of income have changed over time are presented first. The next issue to be addressed is poverty among the elderly. This discussion draws on both data gathered for this report and on two recent commentaries on elderly poverty. Then the replacement rates achieved by the current elderly are discussed, also relying on secondary commentaries. The evolution of quasi-replacement rates is then noted and a concluding comment is added.

### **5.1 Amounts and Sources of Income of the Elderly**

The movement in the amounts of real income received by senior couples and senior individuals over the period from 1976 to 2007 is presented in Figures 2 and 3. For both household types, the continuous improvement in real median incomes is striking. For couples, real incomes increased by 55 per cent from \$33,380 in 1976 to \$51,682 in 2007.<sup>23</sup> For singles, the increase is a little larger. Incomes net of inflation grew by 79 per cent from \$12,076 in 1976 to \$21,576 in 2007. For couples, the growth in real median incomes is concentrated at the two ends of the period while for singles, it is concentrated more at the beginning of the period.

Figures 2 and 3 also illustrate the movement in incomes at the 5<sup>th</sup> and 95<sup>th</sup> percentiles. The growth in incomes at the 5<sup>th</sup> percentile is similar to that at the median but is a little stronger over the entire period at the 5<sup>th</sup> than the 95<sup>th</sup> percentile. Overall, the real incomes of couples at the 5<sup>th</sup> percentile grew by 99 per cent compared to 28 per cent at the 95<sup>th</sup> percentile. For singles, the comparable numbers were 140 per cent and 79 per cent. But,

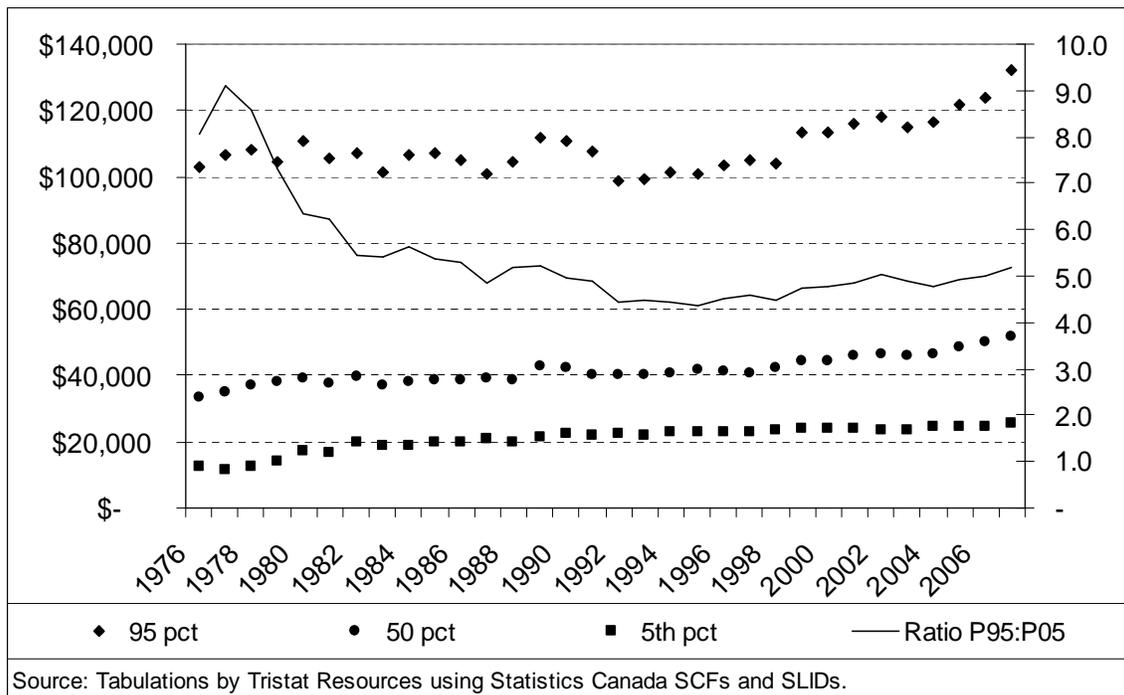
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<sup>23</sup> The dollar figures in Sections 5.1 and 5.2 are 2007 dollars.

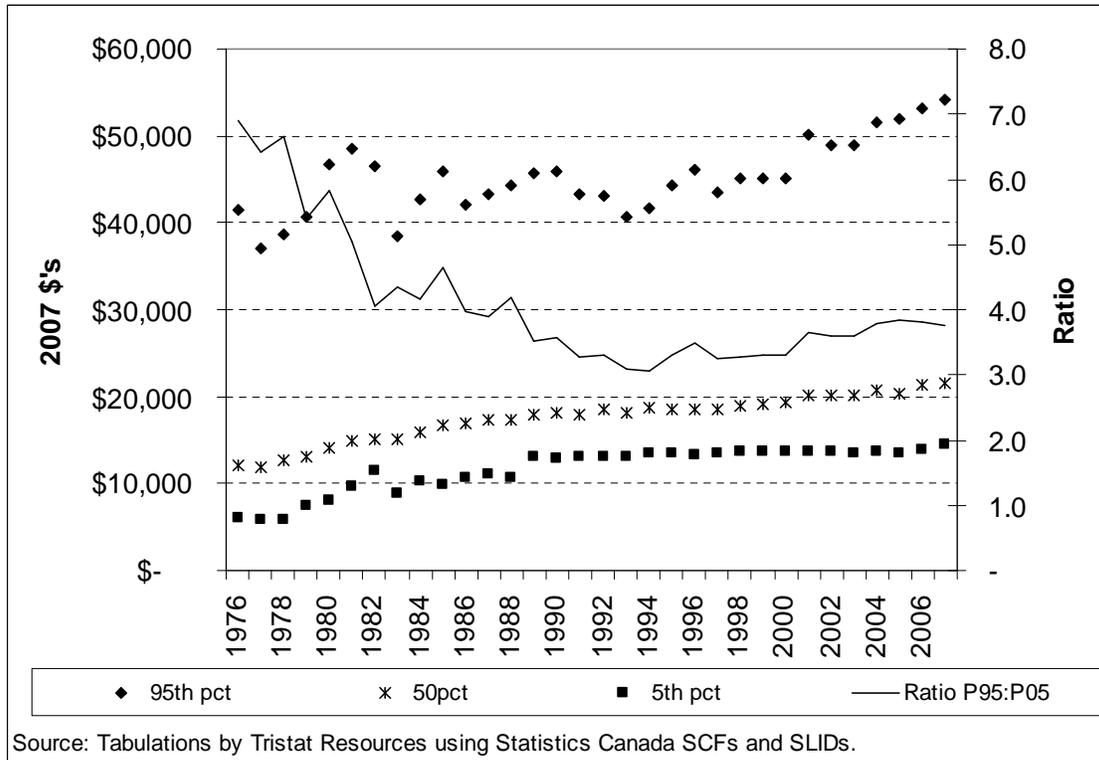
as is evident in Figures 2 and 3, income movements at the 95<sup>th</sup> percentile were much more erratic than at the median or 5<sup>th</sup> percentile. The incomes of couples at the 95<sup>th</sup> percentile fell continuously in relation to the 5<sup>th</sup> percentile from roughly 1978 to 1994. But the 2000s have seen some widening in the 95<sup>th</sup>/5<sup>th</sup> income gap. Among single seniors, the relationship between incomes at the 95<sup>th</sup> and 5<sup>th</sup> percentiles has been broadly similar. The decline in the ratio of income at the 95<sup>th</sup> compared to the 5<sup>th</sup> percentile starts earlier and ends earlier and is less pronounced at the very end of the period.

The general tendency for elderly incomes to become more equal over the time period observed is also reflected in Table 3. Whether one focuses on singles or couples, medians or averages, the general tendency is for incomes in the lower deciles to grow more rapidly than incomes in the higher deciles. While this tendency is clear and quite pronounced, it is not monotonic. It is striking for example, that the median and average growth rate for couples in the tenth decile is higher than in the ninth decile. For singles, the pattern of growth from decile to decile is less stable, but shows the same general tendency.

**Figure 2**  
**Median and Selected Percentiles Income After Tax and Ratio of 95<sup>th</sup> to 5<sup>th</sup> Percentiles, Senior Couples, Canada 1976 to 2006**



**Figure 3**  
**Median and Selected Percentiles Income After Tax and Ratio of 95<sup>th</sup> to 5<sup>th</sup> Percentiles, Senior Singles, Canada, 1976 to 2007**



**Table 4**  
**Growth Rate in Real Median and Average After Tax Incomes of Elderly Couples and Singles, by Decile, 1976 to 2007**

Percentile*	Decile	Percentage Change in Income		Average Annual		
		Couples	Single	Couples	Single	
5	1		99%	140%		
15	2		61%	91%	2.2%	2.9%
25	3		66%	76%	1.6%	2.1%
35	4		68%	82%	1.7%	1.8%
45	5		60%	80%	1.7%	2.0%
55	6		49%	81%	1.5%	1.9%
65	7		49%	81%	1.3%	1.9%
75	8		38%	85%	1.0%	2.0%
85	9		29%	74%	0.8%	1.8%
95	10		24%	57%	0.7%	1.5%
	<b>All Deciles</b>		<b>28%</b>	<b>31%</b>	<b>0.8%</b>	<b>0.9%</b>
			<b>55%</b>	<b>79%</b>	<b>1.4%</b>	<b>1.9%</b>

Note: the median of the first decile is the 5th percentile  
 Source: Tabulations by Tristat Resources using Statistics Canada SCFs and SLIDs.

Figures 4 to 6 include indicators of total income growth of older Canadians before and after tax, and focus attention on sources of income of older Canadians and how incomes from different sources have evolved over time. These Figures present data for all individual seniors, and the amounts by source are pre-tax amounts. Figure 4 presents data on the average amount received from each source for all seniors, while Figure 5 presents data on average amounts received from each source by seniors in the third decile, and Figure 6 does the same for seniors in the 8<sup>th</sup> decile.

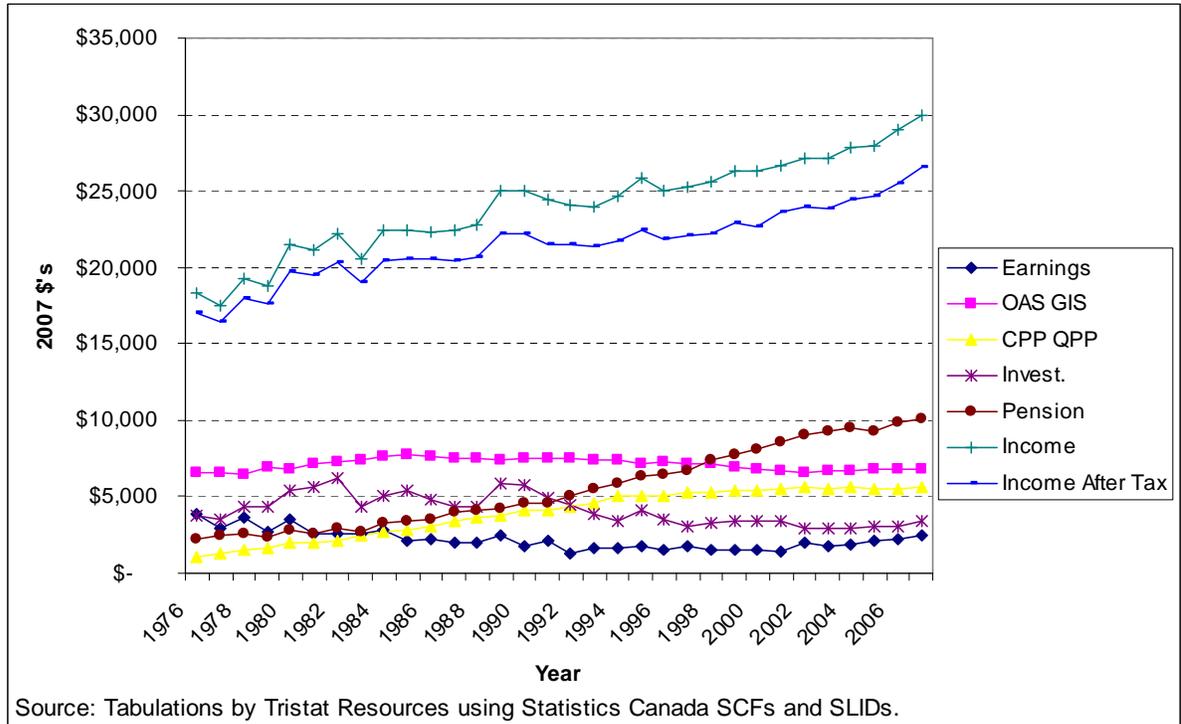
In view of the strong growth in the incomes of couples and singles noted above, it is no surprise to see the individual real average incomes of seniors rise. The fact that they rise somewhat more slowly than the incomes of couples is also no surprise, as it reflects the wider access that both spouses in a married couple have to pensions. However, the key issue to be addressed by these Figures is the source of change in the incomes of older Canadians.

Looking at the overall averages in Figure 4, the sources of growth are the C/QPP and “pensions.”<sup>24</sup> There is, however, an important difference between them in that the increase in income from the C/QPP has been almost fully achieved by the mid-1990s, whereas the increase in pension income continues through to the end of the period under observation.

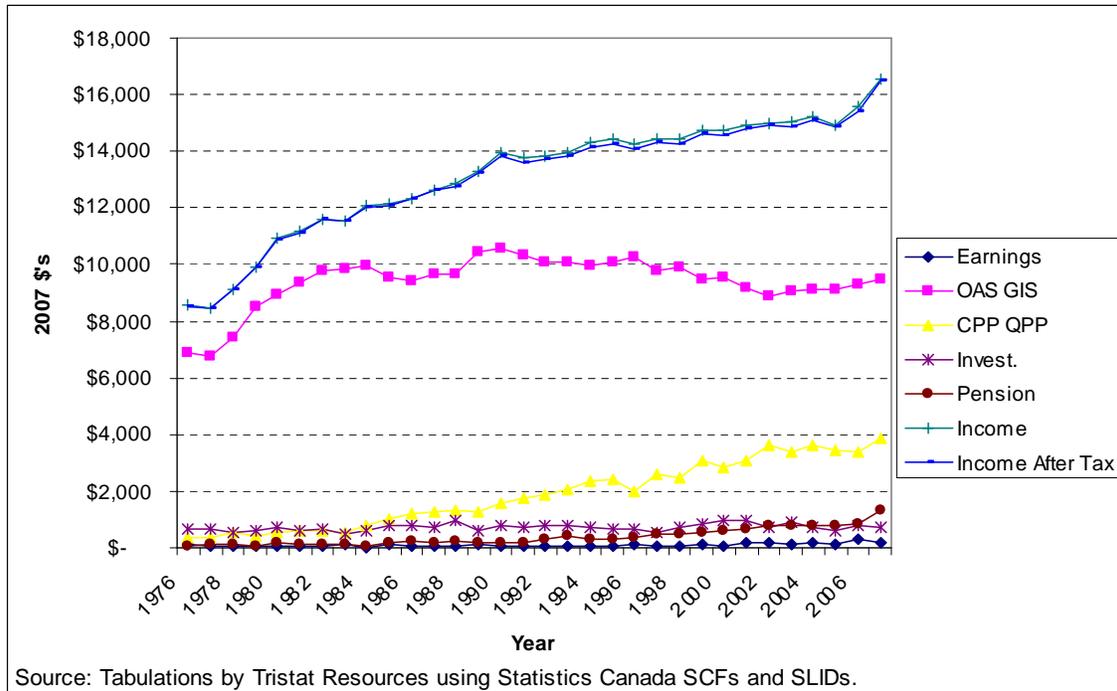
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<sup>24</sup> The term “pension income” refers to income that arises from both DB and DC pension plans, as well as annuities and RRIFs that arise from RRSP savings. Available Canadian data does not permit a separation of income from these different sources. Thus, the pension category might best be thought of as income from the 3<sup>rd</sup> pillar.

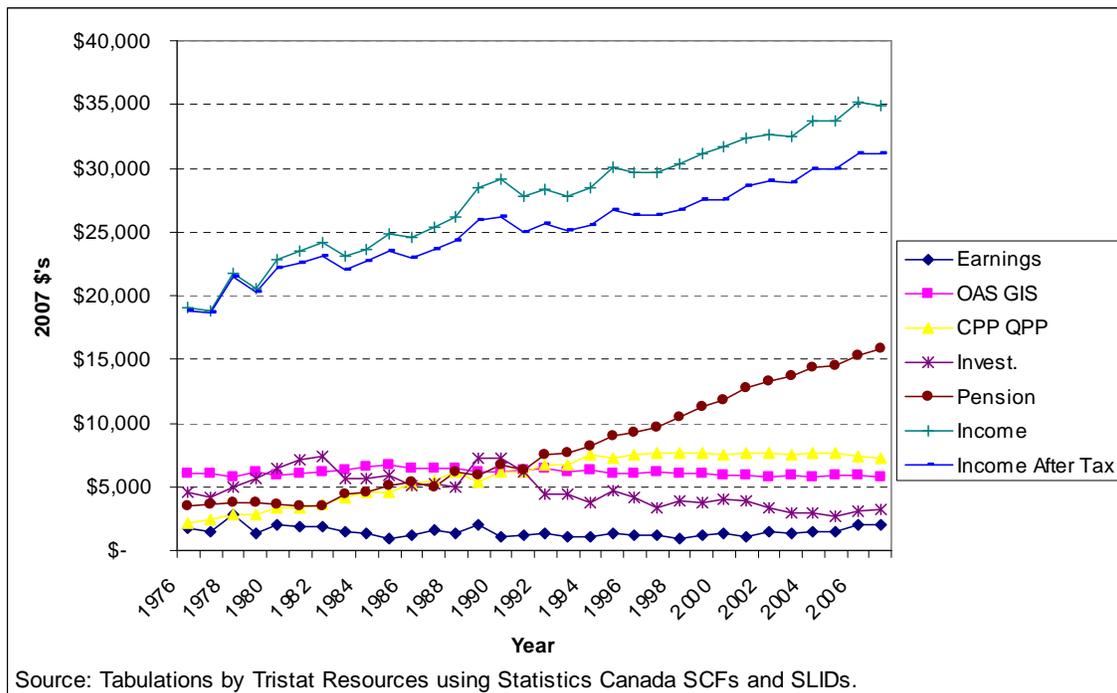
**Figure 4**  
**Average Incomes of Senior Individuals by Source of Income**  
**1976-2007 (\$2007)**



**Figure 5**  
**Average Incomes of Senior Individuals by Source of Income**  
**1976-2007, 3rd Decile (\$2007)**



**Figure 6**  
**Average Incomes of Senior Individuals by Source of Income,**  
**1976 to 2007, 8th Decile (\$2007)**



Income from OAS and GIS, which is the most stable of all sources, declined slightly after the mid-1990s. Investment income is the least stable of all sources and has declined somewhat since the early 1990s. Earnings from employment are relatively low and stable over the entire period. They decline slightly from the late 1970s to 2000 and increase slightly thereafter.

Figures 5 and 6 provide an insight into the importance of different sources of income to seniors with different levels of income. Differences in both the relative levels of income at particular points in time and their movements through time are of some interest.

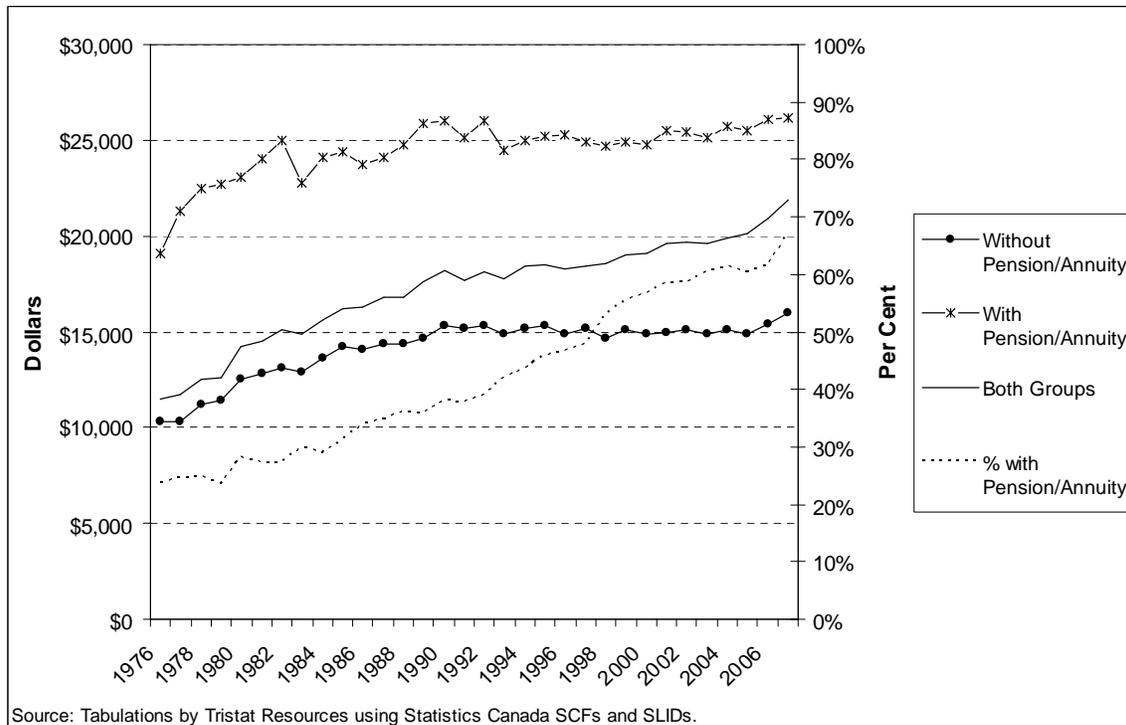
What is most striking about income sources in the third decile is the prominent role of incomes generated by the first two pillars – especially pillar 1. OAS/GIS alone is accounting for nearly 60 per cent of total income. The C/QPP is accounting for roughly 25 per cent of total income and the GIS tax back associated with the growth of C/QPP income may account for the decline in OAS/GIS payments starting in the 1990s. Increasing female access to C/QPP benefits may go some distance in explaining these overall patterns. Income from other sources plays a relatively insignificant role for seniors in the third decile. Since the mid-1990s, there has been a small increase in the income coming from the 3<sup>rd</sup> pillar.

In the 8<sup>th</sup> decile, the importance of the first two pillars is much smaller. Together, they account for roughly one out of every three dollars received in 2007. Income from the 3<sup>rd</sup> pillar accounted for nearly one out of every two dollars of income for seniors in the 8<sup>th</sup> decile. The pattern of income received from these sources through time is also noteworthy. Income from the OAS/GIS has been stable over the entire period. Income from the C/QPP grew from the beginning of the period until the start of the 1990s and has been stable since then, while income from the third pillar has grown over the entire period. Amounts received from the 2<sup>nd</sup> and 3<sup>rd</sup> pillars were roughly equal at the start of the 1990s, but 3<sup>rd</sup> pillar income now exceeds 2<sup>nd</sup> pillar income by a significant amount. For seniors in the 8<sup>th</sup> decile, investment income has declined somewhat since the early 1990s and earnings from employment have increased slightly since the late 1990s from a very low base.

The third and eighth deciles were chosen to illustrate the variations in income sources on the grounds that they are more representative of high and low incomes than the very ends of the distribution. However, there is an aspect of incomes received in the tenth decile that is worth noting with 2007 data. The tenth decile is the one decile where earnings from employment still play a prominent role as a source of income. More than 40 per cent of seniors in the tenth decile have earnings from employment, and income from this source accounts for 20 per cent of all income received. In no other decile does income from this source account for more than 7 per cent of total income received and that is in the 9<sup>th</sup> decile. In the tenth decile, investment income also accounts for 20 per cent of total income received and this is almost double the 11 per cent of income from this source in the 9<sup>th</sup> decile, the only other decile where investment income accounts for a double digit portion of total income.

In light of issues discussed elsewhere in this report, brief note will be made of three things. First, in Figure 7 below, the difference in the level of income of seniors with and without 3<sup>rd</sup> pillar income is noted. Incomes of both groups rise strongly until about 1990 and then tend to stabilize until roughly 2004 when growth resumes. One aspect of Figure 7 that is interesting is the continued growth in income of the two groups combined. This continuing increase is the result of a growing portion of the elderly receiving 3<sup>rd</sup> pillar income.

**Figure 7**  
**Median Income After Tax for Individual Seniors With and Without**  
**from the 3rd Pillar, 1976-2007**  
**(\$2007)**



The growth of the incomes of the elderly in relation to poverty measures and earnings replacement is documented in Sections 5.2 and 5.3 below.

The amounts and sources of income received by individual senior women and men, by senior immigrants and the entire senior population deserve more attention than can be given to them here. In Table 4 below, the average total income before tax for individual senior women and men is presented along with amounts received from various sources and in Table 5 similar data is presented for all seniors and senior immigrants.

**Table 5**  
**Amounts and Sources of Income of Seniors, Women and Men,**  
**Canada, 2007**

	<b>Total Income</b>	<b>OAS/GIS</b>	<b>C/QPP</b>	<b>Pension</b>	<b>Investment</b>	<b>Earnings</b>
Women	\$23,700	\$7,000	\$4,600	\$6,800	\$2,700	\$1,100
Men	\$34,600	\$6,200	\$6,600	\$13,400	\$3,400	\$3,400

The broad patterns of income received by individual men and women are much as Baldwin and Laliberté, 1999 found them to be a decade ago. Men had higher incomes, and the more the income source is linked to paid employment during working life, the greater is the male advantage. However, the gap in average incomes has narrowed by degree from roughly 38 per cent in the mid-1990s to 32 per cent in 2007. The percentage of older women receiving C/QPP benefits has increased over this time period from 70 to 84 per cent<sup>25</sup> and the percentage with 3<sup>rd</sup> pillar income has increased from 34 to 55 per cent. There remains, however, a substantial but narrowing gap between the amounts that men and women who have 3<sup>rd</sup> pillar income get from that source — \$12,300 versus \$18,900 in 2007.

**Table 6**  
**Amounts and Sources of Income of All Seniors and Immigrant Seniors,**  
**Canada, 2007**

	<b>Total Income</b>	<b>OAS/GIS</b>	<b>C/QPP</b>	<b>Pension</b>	<b>Investment</b>	<b>Earnings</b>
All seniors	\$30,000	\$6,800	\$5,600	\$10,100	\$3,500	\$2,500
Immigrant Seniors	\$29,000	\$6,900	\$4,900	\$8,100	\$4,000	\$3,100

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<sup>25</sup> Female recipients of CPP retirement benefits now outnumber male recipients.

Two things stand out in Table 5. First, the total income gap between the two populations is not large — \$1000 or 3.4 per cent. Second, the incomes are composed somewhat differently. The C/QPP and 3<sup>rd</sup> pillar income play a somewhat larger role for the total population than for immigrants. Immigrant seniors rely somewhat more on earnings from employment and investment income. In considering these data, it is important to bear in mind that no distinction is made within the immigrant population with respect to time of arrival in Canada, gender or source country. All of these variables may be relevant to amounts and sources of income in old age. In context, note should be made of Veall's comments below.

## **5.2 Poverty Among the Current Elderly**

Figure 8 below illustrates changes in the low income rates among the elderly families and unattached individuals in Canada over the period from 1976 to 2006 using the LIM measure. It also illustrates the “near LIM” low income rate — i.e. the rate if 10 per cent is added to the LIM measure.

The most striking thing about the movement of both measures is the steep decline in the low income rate over the period of observation. Just over 35 per cent of elderly families and unattached individuals had incomes below the LIM rate in the late 1970s and this is now down to roughly 5 per cent. Most of this decline was achieved by the mid- to late 1980s, by which time the LIM rate had dropped below the double digit level. The LIM rates reached their low point in the mid-1990s and have increased marginally and unsteadily since that time. The sharp decline in the LIM rates through the late 1970s and 1980s reflects, no doubt, the benefit increases in the GIS and the maturation of the C/QPP. (On the role of the latter, see: Myles, 2000). Below, Milligan's interpretation of the increase in the LIM rate is noted.

**Figure 8**  
**Low Income Rates for Senior Families and Unattached Individuals**  
**Using LIM and LIM + 10%, 1976-2007**

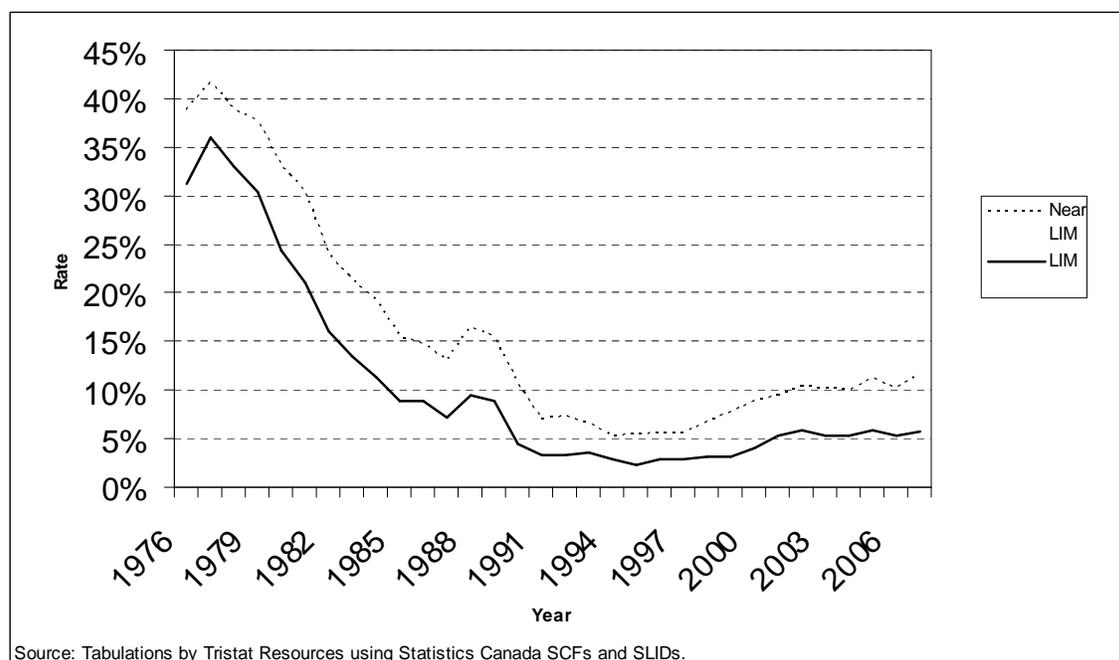


Table 6 below draws on family income data from 2007 to illustrate the point that the incomes of the elderly are clustered more densely around the low income line than is the case with incomes of the non-elderly. The table shows LIM based low income rates and rates based on LIM plus 10 per cent for different age groups. Adding 10 per cent to the LIM adds proportionately more people to the below LIM portion of the population age 65 and over, than it does to younger age groups. It is also striking in Figure 8 that the low income rates defined by the LIM and the LIM plus 10 per cent tend to move in tandem.

**Table 7**  
**Low Income Rates Using LIM and LIM plus 10%**  
**Measures by Age of Family Head, 2007**

Year	Age of Family Head	Poverty Rates - LIM	Poverty Rates LIM + 10%	% Increase: LIM to near LIM
2007	Under 25	48.3%	53.4%	10.65%
	25-44	14.5%	16.8%	15.2%
	45-64	14.9%	17.4%	16.6%
	65 +	5.7%	11.6%	103.1%
	All Ages	14.2%	17.5%	23.0%

Two recent commentaries by Veall, 2008 and Milligan, 2008 on poverty among the elderly are worth noting, as they add further insights on poverty among the elderly in Canada. Both commentaries recognize the sharp decline in poverty rates among the elderly in the latter part of the 20<sup>th</sup> century and the low level of elderly poverty that has been achieved in Canada.

Veall provides an international comparative perspective on poverty among the elderly by comparing Canadian data with data from the other 24 countries that participate in the Luxemburg Income Study (LIS) over the period from 1970 to 2000. The LIS poverty data are all prepared on a LIM basis.

Veall finds that no country experienced as sharp a decline in elderly poverty as did Canada and, in 2000, only four had poverty rates lower than Canada's 6 per cent (Netherlands, Hungary, Poland and Luxemburg). These countries share with Canada the distinction of being the only countries in the LIS that have lower rates of elderly poverty than child poverty and poverty of the general population. Some other countries have poverty rates among the elderly that are close to the Canadian level (e.g. Sweden and Germany), while some countries have significantly higher rates (e.g. Australia, 23 per cent; the UK, 20 per cent; and the US 25 per cent). As is true of Canada, the poverty rates for other countries are sensitive to the definition of poverty.

One of Veall's chief interests is to determine whether there are subsets of the elderly population for whom poverty rates are significantly higher than for the population as a whole. He generalizes that the following groups are at risk of higher poverty rates: recent immigrants; people who have separated or divorced, especially women; and seniors with young dependents. With regard to immigrants, he notes that his use of LAD data for this part of his research may pose a problem, as the LAD data does not capture the effect of immigrants sharing living accommodations with relatives other than parents and children. Nonetheless, it is worth noting that more than two out of three recent immigrants who are elderly have incomes below the LIM rates. Veall presents below LIM rates for males and females by five year age groups starting at age 66 and then includes an open ended age group 91+. The data are grouped by marital status. Men who are separated and never married have LIM rates somewhat over the elderly-wide rate of 6 per cent: 7-10 per cent and 11-14 per cent, respectively. For women in all age and marriage groups other than married, the below LIM rates exceed 6 per cent: widows, 7-12 per cent; divorced, 10-21 per cent; separated, 18-25 per cent; and never married, 14-16 per cent.

Veall notes that within the elderly population, there is little change in poverty rates by age.

Milligan focuses on low income rates among Canada's elderly over the period from the early 1970s until 2004. He uses three income-based measures of poverty: the LIM, the LICO, and what he has labelled the Elderly Relative Poverty Measure (ERPM), which is similar to the LIM but excludes the elderly from the base calculation of median family

adjusted income. All measures employ family adjusted income measures after tax. He also develops three consumption-based measures of poverty that employ different measures of consumption but are conceptually similar to the ERPM, in that they are used to identify the portion of the elderly population with consumption levels less than half of the consumption levels of the non-elderly. The consumption measures are: consumer non-durables with imputed rent; non-durables without imputed rent; and current expenditure.

The income-based time series are built using data from the Survey of Consumer Finances (SCF) up to the mid-1990s and then the Survey of Labour and Income Dynamics (SLID). The data underlying the consumption measures comes from the Family Expenditure Survey (FAMEX) and then the Survey of Household Spending (SHS).

The general pattern of declining elderly poverty that shows up in the data presented above is found in all of the income measures. Indeed, they all move in close tandem through time. The declines are steep in all measures from the late 1970s until the late 1980s, and Milligan notes real increases in the GIS that helped bring about that result. The decline after the late 1980s is more modest and there is actually some increase in poverty based on the LIM and ERPM measures starting in the mid-1990s. This is driven by increased income in the non-elderly part of the population and the concentration of income growth in the elderly among higher income earners at that time.

Milligan summarizes his conclusions on consumption based poverty as follows:

The consumption poverty analysis produces three major findings. First, the time-trend in consumption poverty measures is sharply down over the last 35 years, similar to income. Second, the level of consumption poverty among the elderly is very sensitive to the treatment of housing flows — when these flows are imputed, poverty rates are quite low, but they are high when no imputation is made. Finally, there is no spike in consumption poverty that resonates with the pattern observed immediately before and after age 65 for income measures.

The foregoing discussion of poverty among the elderly is based on LIM measures. It was noted in Section 4.1 that the LIM is but one of a number of measures of poverty and that the poverty lines and rates are higher if certain other measures are used. It is not clear that there is a science that directs analysts to one versus another low income or poverty line. There is a degree of arbitrariness in the choice. By any measure, there has been a substantial improvement in poverty rates in Canada, but there is ample room for debate about the degree to which the anti-poverty objective has been met. Moreover, Veall reminds us that there may be subsets of the senior population for whom the issue is more important than it is for the older population as a whole.

### **5.3 Replacement Rates**

#### *i) LaRochelle-Coté, Myles and Picot*

Maintaining living standards as and after a person makes the transition from work to retirement has long been recognized as an objective in Canadian and international

discourse on pensions. Until recently, however, it has not been possible to directly compare the incomes of the same individuals before and after retirement. This data limitation has been overcome in recent years with the development of the Longitudinal Administrative Database (LAD) which is built from tax files dating from 1982. The LAD links tax files on a longitudinal basis and adds certain other administrative data. It is a large file (20 per cent of T-1 returns) and includes most social and economic markers of interest, except educational attainment.

The LAD was used by three Statistics Canada analysts, Sébastien LaRoche-Coté, John Myles and Garnet Picot (referred to as the StatCan analysts) to study the incomes of Canadians as they make the transition from work to retirement. The incomes of six age cohorts that were aged 54 to 56 in five year intervals from 1983 to 1998 and who had significant employment earnings (more than \$10,000) while aged 54 to 56 were tracked until 2005. The incomes were analyzed on an after-tax, family income basis, and family incomes were adjusted for family size.

The StatCan analysts focus primarily on the age cohort that was aged 54 to 56 in 1983, as this group could be followed over the longest period. The income path of the other cohorts was assessed to check for consistency of results across cohorts, which proved to be high.

The median replacement rate for the 1983 cohort remained close to 1.0 until about age 60, and then declined to about 0.8 around age 65. The replacement rate remained at about this level throughout later life. While the median remained high throughout the observation period, the portion of the population with replacement rates above 1.0 declined from almost 50 per cent at age 59 to 61, to 35 per cent at age 64 to 66 to 23 per cent at age 69 to 71. On the other hand, the share of people with replacement rates of less than 60 per cent increased from 10 per cent at age 60 to 21 per cent at age 75.

The population that is included in the study by the StatCan analysts includes people with low levels of earnings at age 54 to 56 and, if these are accepted as indicative pre-retirement earnings, then it would be expected that public pensions alone would provide significant replacement rates for many people. Thus, it is important to focus on the third and top quintile of earners in the 1983 cohort. In the middle income quintile, 18.1 per cent of the population has replacement rates of less than 60 per cent at ages 64 to 66, as does about 25 per cent at ages 69 to 71 and 74 to 76. Median earnings for the middle quintile in 1983 were \$46,600 in 2005 dollars and the YMPE in 2005 was \$41,100. The top quintile had median earnings of \$101,000 in 1983, again in 2005 dollars. At age 65, 27.4 per cent of the top quintile had a replacement rate of less than 60 per cent, as did more than 30 per cent at ages 69 to 71 and 74 to 76. Significant subsets of the middle and upper earnings groups did suffer significant declines in their income in retirement.

The StatCan analysts note that within the different quintiles there are significant differences in replacement rates, and they identify the income sources that account for these differences. At the age 64 to 66 point, the differences are accounted for primarily

by differences in earnings from employment and self-employment. Smaller but significant differences arise from differences in capital gains and the presence of 3<sup>rd</sup> pillar income. As the cohort ages, differences are accounted for more fully by differences in income from the 3<sup>rd</sup> pillar, especially after age 70.

Although it is not a point specifically about replacement rates, it is worth noting that the StatCan analysts found that there was an equalizing tendency in retirement incomes as the incomes of the top quintile fell more than that of the lowest quintile. In addition, the lowest quintiles tend to have more stable incomes thanks to the greater role played by benefits from OAS, GIS and the C/QPP as a source of income. Also, while the patterns noted in the analysis of the 1983 age cohort are generally similar to those of the younger cohorts, the younger cohorts had higher incomes thanks to higher incomes from the 3<sup>rd</sup> pillar.

The study by LaRochelle-Coté, Myles and Picot is extremely valuable in providing the first direct measure of replacement rates over an extended period of time.<sup>26</sup> Their analysis provides a positive picture of median replacement rates for the 1983 and subsequent cohorts. But, it also indicates that there is a significant minority in the middle and upper parts of the 1983 earnings distribution who will have replacement rates of less than 60 per cent on an after-tax basis. It is also important to note that earnings from employment and self-employment play an important role as a source of income in the numerator of the replacement rate calculations. The replacement rates in their analysis are not focused exclusively on people who have withdrawn from the labour force. Finally, the changing composition of households after age 54 to 56 is not discussed specifically, and neither is the replacement rate of surviving spouses after one member of a couple dies. The increase in the number of families with replacement rates below 60 per cent in later ages is related to this transition.

ii) *Lise*

Lise, 2001, is also interested in the question whether living standards are maintained in old age and investigates the question with a consumption measure. He uses FAMEX and SHS data to construct consumption profiles through time of different cohorts. His consumption measure adds an imputed annual service stream for housing and automobiles to spending on non-durables, and deducts savings. Savings rates, which are important to his work, are calculated as changes in net assets to disposable income. As is true of the other studies cited, Lise works with family data adjusted for family size.

For cohorts that have reached retirement age, Lise finds that there is no disruption of consumption as families pass through the period from when people are typically working to when they are typically retired (ages 50 to 75). Lise breaks down his data by quartiles within cohorts and finds that the only shock faced by the first quartile is likely to be

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<sup>26</sup> Gower had used the LAD to study the replacement rate of a single age cohort that was 55 years old in 1992. At the time, the LAD had only 14 years of data.

positive. No shocks are evident in higher quartiles though there are modest declines in consumption.

Lise is also concerned about the prospects for baby boomers who will be retiring in the future. He notes that the savings rates of non-retired cohorts are generally higher than those of retired cohorts at the same age. From this, he concludes that if the younger cohorts experience similar returns on their investments, they should experience no disruption in the consumption levels in retirement.

Lise notes that his assessment of the current and future situation of the elderly is optimistic and he declares that Canada's retirement income system is working. But, similar to the results of the research by the StatCan analysts on income continuity, his conclusions are compatible with the possibility that there are subsets of elderly whose consumption levels fall in retirement. Moreover, Horner (2007) says that in an unpublished follow-up paper, Lise reran his data without adding services from durables and that the declines in consumption in quartiles two through four were more evident: 15 per cent, 18 per cent and 12 per cent for quartiles two through four compared to 9.5 per cent, 8 per cent and 5 per cent. Concerns about Lise's inferences about the future will be raised below in 6.1.

*iii) Alan, Atalay and Crossley*

Retired respondents to Statistics Canada's General Social Survey (GSS) were asked in 1999 and 2002 to respond to the question "Compared to the year before you retired, would you say that you are better off financially, worse of or about the same?" They were also asked "Compared to the year before you retired, do you enjoy life more, less or about the same? The question on the overall satisfaction with life in retirement was also asked in the 1989 GSS, and similar questions were asked in a "one off" survey on retirement conducted in 1975. The results of these surveys form the basis of an analysis by Sule Alan, Kadir Atalay and Thomas Crossley, 2008 on the self-assessed income adequacy of Canada's elderly. The response to the first of the two questions just noted, speaks directly to self-assessed earnings replacement.

The authors screened into their analysis people who are 55 years of age and older, who identify their current labour market status as retired, and who indicate that they were employed in the past. For purposes of this report, the most important findings in the work of Alan, Atalay and Crossley can be summarized in the Table 7 immediately below (which is a slightly changed version of a table created by the authors):

**Table 8**  
**General Social Survey**

**Compared to the year before you retired, would you say now that you are better off financially, worse off or about the same?**

	Aged 55+		Aged 70+		Retired within Last 5 years
	1994	2002	1994	2002	2002
Worse	30.5%	26%	23%	21%	31%
Same	50%	56%	51%	57%	57%
Better	19.5%	18%	26%	22%	12%

At age 55 and over, just over one quarter of respondents indicate that they are worse off financially in retirement than they were immediately before, and for those aged 70 and over, just over 20 per cent respond that way. For both age groups, there was some decline in the percentages of respondents saying that they were worse off. The 2002 survey indicates that the portion that is worse off is somewhat higher among the recently retired than in the retired population as a whole.

The GSS respondents who indicate that they are worse off are comparable to the numbers in the StatCan study in the third and fifth quintiles. It should be noted that the screening process used by Alan, Atalay and Crossley does not include a pre-retirement income screen. Thus, the self-assessed number may look larger than expected based on the StatCan study. Part of the explanation for this may be that the retired population in the analysis of self-assessed well-being excludes all people who are currently employed or looking for work.

The authors undertake an analysis of characteristics of retirees who express more satisfaction with life in general in retirement, and with their financial situation. They present their finding on both a bivariate and multivariate basis. Based on their bivariate analysis, both having a pension from their former employer and owning a home are positively related to retirees' general satisfaction with retirement and with their financial situation. In the multivariate analysis, the relationship between these characteristics and general satisfaction with retirement is found to be statistically significant and, while there is a positive relationship with self-assessed financial well-being and these characteristics, it is not statistically significant. In the multivariate analysis, the strong positive relationships with self-assessed financial well-being are age<sup>27</sup> and retiring voluntarily, while there is a strong negative relationship with poor self-assessed health status.

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<sup>27</sup> The authors' note that age can be a difficult variable to interpret in these cross-sectional data with which they work because it can be indicative of: age itself, cohort effects, selection bias (it is not a random sample of people at a given age who survive to a later age), time in retirement and related adaptation.

While it is not directly related to replacement rates *per se*, the authors use pairs of cross sectional data from the GSS and from Statistics Canada's 1992 Family Expenditure Surveys and the 1998 Survey of Household Spending to illustrate that both real family income and real family consumption adjusted for household size tend to be hump-shaped with respect to age and peak in the 50s, while general satisfaction with life tends to stay relatively constant through different ages.

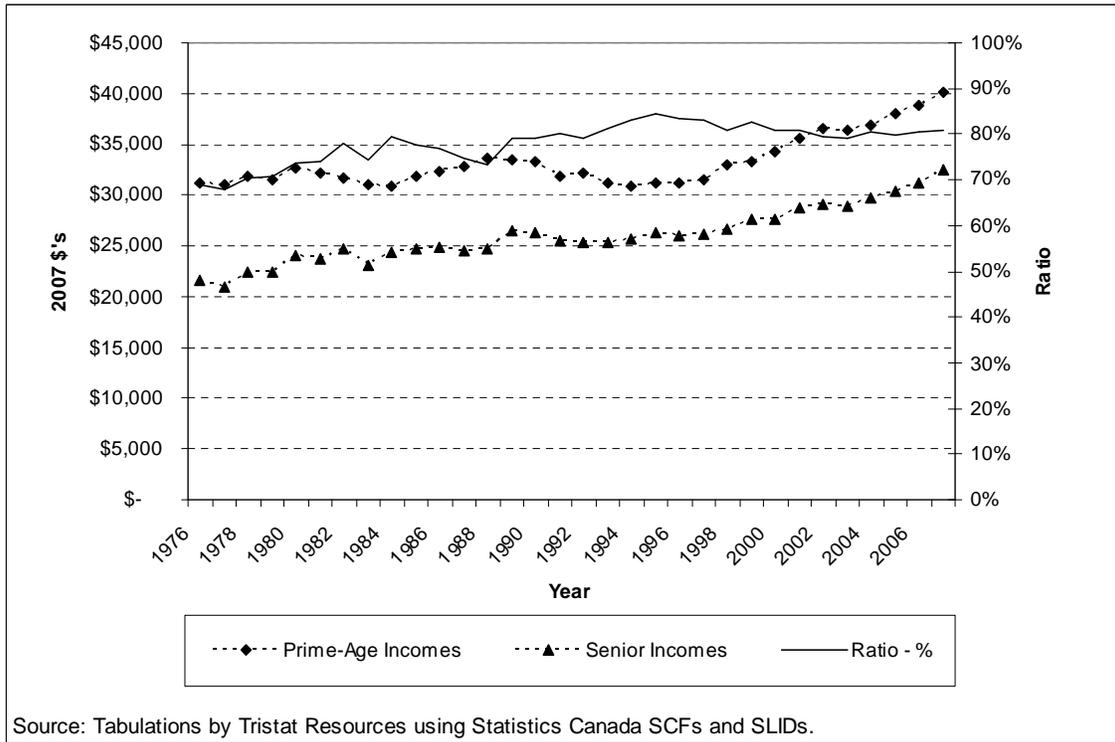
#### **5.4 Quasi-replacement Rates**

It was noted above in Section 4 that the incomes of seniors are sometimes compared to the incomes of younger age groups and the comparisons are referred to as quasi-replacement rates. While these rates are sometimes thought of as intellectual poor cousins of actual replacement rates, they do provide an insight into the relative living standards of the elderly in the total population.

In Figure 9, below, the after-tax incomes of elderly families and unattached individuals are compared with the after-tax incomes of families and unattached individuals in the age 45 to 64 (prime age) range. Families are classified by age based on the age of the oldest family member. The family data are adjusted for family size so that they are equivalent.

As can be seen in Figure 9, there has been an increase in the incomes of the older families compared to families in the prime age range, but the improvement has followed a somewhat erratic path. The gap between the prime age and older incomes closed more or less continuously over the period from 1976 to the mid-1990s. Since the mid-1990s, there has been a modest decline in the incomes of the older population compared to the prime age population. But, even at the end of the period of observation, the median after-tax adjusted income of the older population was still 80 per cent of that of the prime age population. Given that this takes no account of pension saving or work related expenses, this may be close to full equivalent income. This type of generalization will not hold for all of the elderly, but the typical experience seems to have been positive. Some of the caveats in Section 5.5 apply to the inferences to be drawn from this Figure.

**Figure 9**  
**Median Equivalent Income After Tax,**  
**Families and Unattached Individuals,**  
**Aged 45-64 and 65+,**  
**Canada, 1976 to 2007**



### 5.5 Concluding Comments on Incomes of the Current Elderly

In relation to the standards for judging retirement incomes set out in Section 4, the latter part of the 20<sup>th</sup> century was a period of remarkable improvement in incomes of the elderly. Real incomes grew, income relative to the younger population grew, poverty rates declined by any measure and replacement rates were generally quite high. Much was achieved. Certain caveats, however, are in order.

First, there is a legitimate debate about the degree of elderly poverty based on different conceptions of what constitutes poverty and different measures of it. Second, even in the context of a generally favourable picture, there may be subsets of the population experiencing relatively higher rates of poverty and/or experiencing non-trivial declines in their standard of living in retirement. It should be recalled, too, that favourable trends tended to level off in the 1990s and earnings from employment and self-employment still play an important contributing role in the favourable outcomes. The income measures that have been used to characterize the incomes of older Canadians have not been limited to the incomes of people who have fully withdrawn from the labour force.

Finally, and maybe most importantly, the favourable outcomes that were experienced in terms of retirement income reflect not only the strength of retirement income arrangements, but the way they interacted with a particular set of economic and financial circumstances. Relatively low inflation after 1990, the absence of real average growth in wages and salaries, unusually high returns on financial assets and a substantial increase in the labour force participation of women, all made a contribution to the favourable outcomes described above. Changes in these circumstances will change outcomes generated by current retirement income programs.

## Section 6: The RIS of the Future: Outcomes and Influences

This section looks to the future. It begins with a review of several attempts to quantify future retirement income prospects of Canadians. These efforts, while not flawless, are all serious efforts. They tend to take existing retirement income arrangements, as well as social and economic conditions, as given. Following the review of attempts at quantification, evolving and proposed changes to each of the three pillars of the RIS are discussed. Here, much more attention will be given to pillar 3 and EPPs. The evolution of EPP coverage and the shift from DB to DC will be discussed, as will reports on problems with EPPs prepared by inquiries established by provincial governments. This latter discussion will pick up two other informed commentaries on pillar 3. A relatively brief commentary on issues relating to the future of pillars 1 and 2 will be added. Finally, note will be made of some evolving demographic and labour market developments that will have an impact on incomes generated by the RIS.

### 6.1 Quantification of Future Retirement Income Prospects

The results of three attempts to quantify the likely retirement income prospects of the future elderly along with a brief description of their methodologies are presented here. A concluding comment on them will be offered, along with a reference back to the Lise study noted in Section 5.3.

#### *i) Maser and Dufour*

The 1999 Survey of Financial Security (SFS) was the first survey of the wealth of Canadians conducted since 1984 and it was the first one ever that attempted to estimate the EPP wealth. The SFS data was used by two Statistics Canada analysts, Maser and Dufour, to try to answer the question: what portion of the nearly retired population (unattached individuals and family units with a head of family aged 45 to 64) who were still employed the year before the survey would likely be unable to replace their pre-retirement earnings at age 65 or have an income above the after-tax LICO. (Statistics Canada, 2001) Maser and Dufour use two levels of earnings replacement as indicative of maintaining pre-retirement living standards: 66.67 per cent and 80 per cent. In addition, individuals with prospective retirement incomes in excess of \$60,000 and families with incomes in excess of \$100,000 are deemed to have met their targets irrespective of their estimated replacement rate.

Maser and Dufour go through the following steps to determine whether a household is likely to meet the replacement targets they establish:

1. Based on current income, they establish the dollar amount of the income replacement target.
2. The amount of estimated OAS/GIS and C/QPP benefits is deducted from the target in order to determine what has to be provided by private pension wealth.
3. The income gap established in step 2 is converted into an amount of wealth that has to be present at age 65 in order to meet the target established in step 1.

The conversion from income to wealth is made using standardized annuity factors for men and women.

4. The wealth needed at 65 is discounted to the current age of the person being observed to account for the increase in the amount of existing wealth by age 65 and a second time to account for continuing wealth accrual (i.e. new retirement saving).
5. The discounted wealth established in step 4 is compared to actual retirement wealth accumulated at that date.

In calculating C/QPP benefits, a 20 per cent replacement rate is used on the grounds that very few recipients of CPP retirement benefits collect the full 25 per cent. Also, it is implicit in the study by Maser and Dufour that OAS keeps pace with wage growth. The discount rates used in step 4 above are 2.5 per cent, which is low for this type of calculation. But, there is no wage projection so that the discount rate is implicitly 2.5 per cent per annum in excess of wage growth, which is high. The wealth taken into account by Maser and Dufour in step 5 included not only wealth in the form of pensions and RRSPs, but half of: housing wealth, non-pension financial wealth, real estate wealth and equity in a business.

The central conclusion of the analysis by Maser and Dufour is that 33 per cent of the near elderly will not be able to meet the 66.67 per cent retirement income target and that this number increases to 44 per cent for the 80 per cent target. For economic families, the comparable numbers are 30 and 42 per cent, and for unattached individuals, 46 and 53 per cent. The much higher numbers for unattached individuals reflects a larger number of them having incomes below the LICO.

By level of current income, the likelihood of not meeting the retirement income target has a “u” shaped distribution with families at the two ends of the spectrum being most likely not to meet retirement income targets – though, at the low end it is the LICO target that is being missed and at the top end it is the earnings replacement target. The earnings range where the likelihood of not meeting the targets is at its lowest is the \$20,000 to \$39,999 range where the likelihood of meeting the two-thirds target is less than 25 per cent.

Maser and Dufour present their findings on the likelihood of different subsets of the near elderly meeting the two-thirds replacement target. (The patterns described here for the two-thirds target hold for the 80 per cent target, as well. The latter are not cited for ease of presentation.) They find that the employed are more likely to fall short of target than the self-employed (36 versus 21 per cent). By occupational group, those in government and education are least likely to fall short of target (19 per cent) while those in manufacturing and processing are most likely to fall short (46 per cent). Those in services and trades and transportation also have a high likelihood of falling short (39 per cent). Given the methodology employed by Maser and Dufour, it is not surprising that homeownership is strongly associated with meeting the retirement income target. They estimate that only 15 per cent of people who own their own home without a mortgage

will fall short of their target compared to 34 per cent who own their own home and have a mortgage and 59 per cent who are not home owners.

The SFS was conducted again in 2005 but no comparable analysis has been done on data arising from it. Indeed it is not clear that it can be done, given that the sample size for the 2005 survey was much smaller than in 1999.

*ii) University of Waterloo*

A more recent attempt to quantify the adequacy of retirement savings was prepared for the Canadian Institute of Actuaries by a group at the University of Waterloo (University of Waterloo, 2007 -U of W), which will be referred to as the Waterloo study. Readers should be cautioned that the study does not explain all aspects of the methodology used.

The Waterloo study is concerned with the question of whether Canadians are saving enough to meet retirement income targets at age 65 in 2030, with the targets being defined as meeting necessary basic living expenses. Necessary basic living expenses are defined as: food, shelter, clothing, transportation, health care, energy and taxes. Average expenditures on these items for the early to middle first decade of the 21<sup>st</sup> century are established for one and two person senior households, and these expenditure levels are projected forward to 2030 using two different rates of annual inflation (1.43 per cent and 2.53 per cent). The study uses the projected expenditures as retirement income targets. A projected level of retirement income is estimated based on what will be available from OAS, C/QPP, EPPs, RRSPs and home equity. Where the amounts available from these sources fall short of the target, the rate of saving required to meet the target is estimated. Savings are converted into indexed forms of retirement income and savings rates required to achieve the target retirement income are calculated for a 25 year savings period.

The core of the analysis addresses the situations of one and two member households with 2005 earnings of \$40,000 and \$80,000 (roughly average wages and salaries and twice average wages and salaries).

The study calculates a number of hypothetical savings rates, assuming initially the presence of no private retirement savings. In other words, they calculate the savings rate needed to meet the retirement income target, assuming that only OAS and C/QPP is available. These savings rates are of some value in illustrating sensitivities in required savings rates to different variables. For example, the base required savings rate for a single person with earnings of \$40,000 is 14 per cent of gross pay over 25 years to meet the target of necessary expenses at age 65. However, this drops to 12 per cent if the return on saving is increased by 1 percentage point over the base case assumption that used the projected yield curve on Government of Canada bonds; to 10 per cent if retirement is at age 68 and 6 per cent if retirement is at age 73; and to 5 per cent if home equity is considered.

According to the study, the initial hypothetical work was supplemented by data from the 2005 SFS to see how much retirement savings had been done by households with

different characteristics. Established levels of accumulated savings were projected forward using “reasonable” economic assumptions to estimate incomes in 2030 and to compare those estimated incomes with the necessities-based target described earlier. In all, seventy-two household profiles were assessed. The study concludes that, based on existing data, about two-thirds of households expecting to retire at age 65 in 2030 are not saving enough to provide for basic necessities as defined above. It identifies two example profiles that are expected to have sufficient retirement income and four that are not. The two that are have home equity and either an EPP or an RRSP savings rate of 14 per cent. But beyond that, clear patterns of variables are hard to discern. It is at least somewhat surprising that one household with an income of \$40k, with home equity and one member in a DB plan, is deemed to have inadequate saving.

The study claims that two thirds of households appear not to be saving enough to cover basic expenses in 2030. But the authors also acknowledge that they don’t know what portion of the population corresponds with each of their 72 profiles. Several other aspects of the Waterloo analysis are not fully explained: the value assigned to OAS in 2030; wage growth; and the assumed DC savings rate of 5 per cent. Also, passing comment is made on the fact that the modelling has used average asset values from the SFS. More needs to be known about this, as these values tend to be strongly age-sensitive; it is not clear that average values apply to people retiring in 2030. Finally, the use of a twenty-five year saving period is shorter than one often finds in this type of analysis and the relatively short savings period raises the required saving rate. To some degree, this is reflected in the postponed retirement calculations, although these calculations also reflect a shorter period of pension payments in addition to a longer savings period. Finally, it should be noted explicitly that the methodology used in the Waterloo study is not a replacement rate methodology, and the expense-based income target for couples is substantially higher than what would normally be considered the equivalent for singles.

### *iii) Troubled Tomorrows*

An early attempt to quantify the adequacy of retirement savings is provided by the Task force on Retirement Savings of the Canadian Institute of Actuaries (CIA) in a publication *Troubled Tomorrows* (CIA, 1995). In *Troubled Tomorrows*, the Task Force establishes the savings rates that would be required on a consistent basis starting at age 30 in order to meet a retirement income target in 2030. The retirement income target is cast in a familiar replacement rate fashion but is 80 per cent on earnings up to one third of average wages and salaries and 70 per cent on higher earnings. Target replacement rates and retirement savings rates are established separately for one and two earner families, reflecting the higher replacement rate provided by OAS/GIS for one earner families. The assumption throughout the analysis is that the target should be met through retirement income savings programs (i.e. EPPs, RRSPs and deferred profit sharing plans, or DPSPs). Housing and other forms of wealth are ignored.

Fourteen years later, in 2009, some of the assumptions used in the calculations would likely be regarded as “bold”. Inflation is assumed to be 4 per cent per year and returns on a balanced portfolio of equities and fixed income securities is assumed to be 8.75 per cent

nominal, and 4.75 per cent real. Mortality is based on GAM '83, not projected. These assumptions would tend to lower the required savings rate compared to a savings rate based on assumptions that reflect current outlooks and attitudes. A feature of the Task Force analysis that distinguishes it from other attempts to model future retirement incomes is its assumption that the value of OAS declines relative to wages and salaries at retirement date. Unfortunately, the report creates some ambiguity about whether it is capturing the general decline in the relative value of OAS or only the impact of the "clawback."

The analysis of the Task Force is based on 1992 tax data and focuses on the subset of the population that has: made C/QPP contributions that year; relies on earnings from employment and self-employment as its major source of income; is between ages 25 and 65; and has annual income between \$20,000 and \$80,000. The Task Force concluded that, in 1992, the population included in their analysis had a savings rate of 10.1 per cent, which is greater than the 8.9 per cent target rate that would allow two earner families to meet their retirement income target. The breakdown of the source of savings is of some interest: EPP contributions, 6.5 per cent (4.3 per cent by employers); and, RRSP contributions, 3.6 per cent.

The Task Force does some decomposition of its overall results and discovers, for example, that there is a rough correspondence between the actual savings rates by income level and savings targets suggested by the Task Force. This relationship is reflected in Table 8 below.

**Table 9**  
**Target and Actual Savings Rates by Income**

<b>Income</b>	<b>Savings Target</b>	<b>Actual Savings Rate</b>
< \$20, 000	4.5%	2.9%
\$20-40,000	6.9%	7.2%
\$40-80,000	10.7%	12.6%
>\$80,000	12.4%	8.3%

Source: CIA, 1995

The Task Force notes that tax assistance for retirement saving was capped at that time at annual earnings just above \$80,000 per year.

The Task Force further differentiates savings targets and rates by public and private sector and by participation and non-participation in EPPs. Results are presented in Table 9.

The Task Force notes that the average situation in the public and private sectors is that people should be able to meet their retirement income targets at age 65 in 2030, and that the relatively stronger situation in the public sector reflects higher levels of participation in EPPs. EPP participation is important in this analysis. The Task Force notes, too, that

public sector employees are as likely to be RRSP contributors as are employees of business and the self-employed although they contribute at a somewhat lower rate (2.7 per cent versus 3.9 per cent and 5.7 per cent).

**Table 10**  
**Target and Actual Savings Rates by Public and Private Sector**

Sector	Savings Target	Actual Savings Rate
Public Sector	9.2%	15.7%
Employees of Business		
<i>With EPP/DPSP s</i>	8.8%	9.1%
<i>No of EPPs/DPSPs</i>	8.8%	4.5%
<i>All</i>	8.8%	6.8%
Other employees and Self-employed	8.3%	6.8%
All Sectors	8.9%	10.1%

Source: CIA, 1995.

The Task Force notes that it has become a common aspiration to retire before age 65. Thus, they recalculate their retirement savings targets assuming retirement at age 60 and compare the actual savings rates with the new targets. On this basis, they conclude that among the categories of people identified in Table 9, it is only the public employees who are saving at a rate to meet their retirement income target at that age.

*iv) Comment on Quantification Efforts*

The attempts to quantify the likelihood that the future elderly will be able to maintain their standard of living in retirement employ a range of methods and assumptions and, not surprisingly, yield different answers. No common protocol for assessing the issue has emerged. What is common among the attempts to quantify is that they suggest that some significant subsets of the future elderly are likely to have difficulty maintaining their standard of living in retirement. What is at issue in the three studies above is the size of the group, with the U of W study suggesting a number that is twice the size of the Maser and Dufour number. The Lise study noted in Section 5.3 is an outlier in generalizing without qualification that the future elderly will be able to maintain their standard of living in retirement. As was noted above, Lise's general conclusion is compatible with the possibility that some subsets of the elderly will not achieve this objective. Moreover, some portion of the higher saving rate observed by Lise will be required to accommodate improved mortality, and there is some doubt about whether one should expect similar returns on investment in the future. Given current concerns about EPP coverage, it should also be noted that it is not clear how Lise has treated changes in EPP savings.

Another point in common among the studies is the view that, up to a certain level of lifetime pre-retirement earnings, Canada's publicly administered pension programs provide adequate replacement income. Thus, the need for private source income only arises above this level.

Differences among the studies highlight the importance of basic assumptions about savings periods, assumed returns on retirement savings, retirement age and mortality. It is also important to be as clear as possible about the future value of OAS as it affects the retirement income required from other sources – especially at the lower end of the earnings range. Unless there is a clear commitment on the part of the Government of Canada to have OAS (and GIS) increase in line with real wage growth, it seems appropriate that any modelling exercise include a base line projection that has the relative value of OAS (and GIS) declining over time in the face of real wage growth.

In the modelling reviewed immediately above and in discussion of replacement rates in Section 5.3, the treatment of housing and other forms of non-pension wealth is an important consideration. A case for ignoring it, as is done in *Troubled Tomorrows*, could be based on one of two lines of thought. One would be that not everyone approaching retirement is a homeowner and assuming that everyone is a homeowner will result in lifetime renters being “under annuitized.” One might also argue more abstractly that pre-retirement earnings should be replaced by pensions and that including housing wealth in some form in the assessment of post-retirement income rationalizes a general underperformance in terms of what is expected from pensions.

On the other hand, homeownership is widespread in Canada and provides a flow of services in retirement that obviates the need for cash (and, indeed, home ownership can become a source of cash income through downsizing housing and/or a reverse mortgage annuity). To ignore home ownership and fully replace pre-retirement earnings net only of pension contributions will result in the “over annuitization” of a large part of the population. As is noted above, “over annuitization” is not totally benign. For purposes of calculating replacement rates, it seems appropriate to include some portion of housing wealth in retirement income and, if one believes that the earnings in the denominator is earnings just prior to retirement, it is also appropriate to include some reflection of housing wealth in the denominator, as well.<sup>28</sup>

The degree of variation in the conclusions reached in the studies referred to above is somewhat dissatisfying for anyone seeking a firm correct answer to the question of how the future elderly will fare. But it also speaks to the inherently unanswerable nature of the question. Indeed, one of the things that is somewhat unsatisfactory about all of the studies is their tendency to have limited granularity (only Maser and Dufour get down to individual experience) and their reliance on deterministic modelling (i.e. modelling that projects a single set of assumptions forward through time).<sup>29</sup> The problem of limited

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<sup>28</sup> As a reminder, studies that explicitly account for housing wealth include: Lise, Maser and Dufour, and the University of Waterloo. Housing wealth may be implicit in the self-assessment studies. It can also be assumed in establishing the criteria for judging the adequacy of replacement rates in the study by LaRochelle-Coté, Myles and Picot. But housing wealth has no explicit presence in that study or in the study *Troubled Tomorrows*.

<sup>29</sup> By way of contrast with the approaches taken in the modelling reviewed here, Booth advises individuals who are saving for retirement to adopt an asset allocation that gives them a 70% chance of achieving a 70% replacement rate. In Booth’s approach, the reality of uncertainty is in the forefront. Booth also notes that

granularity is illustrated in the CIA study, where the results get richer with each further decomposition of general data and would be much richer still if they were able to further decompose their results. The problem with deterministic modelling is that it suppresses a clear view of the most salient problem of retirement saving, which is the inherent uncertainty of the future and the variability of key determinants of future well-being. This is nowhere more evident than in returns on retirement saving, which are subject to wide ranges of annual variability and cumulative variability over various time horizons.<sup>30</sup> This central aspect of reality does not come to the fore in deterministic modelling. The most appropriate tool for addressing the future retirement income prospects is something like the longitudinal micro-simulation model of Statistics Canada, LifePaths. The results of the model will offer a sense of the probability that can be attached to different outcomes.

In view of the discussion that follows in the remaining portions of Section 6, it is worth underlining the point that the attempt at quantitative projection assumes a stable institutional environment, as well as stable economic, financial and labour market circumstances.

v) *Self-assessment by Near Retirees*

Schellenberg and Ostrovsky, 2008a use data from the 2007 GSS to determine how Canadians approaching retirement age assess their retirement income prospects and they explore certain other features of their retirement planning. They include in their analysis GSS respondents who are aged 45 to 59 in 2007 (born 1948 to 1962), whose main activity during the previous year was “employed,” and who responded negatively to the question of whether they had ever retired before.

Participants in the survey were asked how adequate they thought their household income and investments would be to maintain their standard of living in retirement. They were given four alternative responses and the percentage that responded to each is indicated in brackets: more than adequate (9 per cent); adequate (62 per cent); barely adequate (19 per cent); and, inadequate or very inadequate (9 per cent). There is some uncertainty about what people have in mind in describing their prospects as “barely adequate.” Yet the results seem consistent with the view that emerged from the attempts to quantify future retirement income prospects. For a large segment of the population, replacement expectations are likely to be met. But there is a significant minority for whom retirement may bring a decline in living standards.

Schellenberg and Ostrovsky find that self-assessed adequacy of prospective retirement incomes is, not surprisingly, associated in a statistically significant way with participation

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median returns will be below average and that the difference will grow with the volatility of returns. (See: Booth, 2006).

<sup>30</sup> Moore, 2009 provides an interesting reminder of the importance of variations in earnings through time in determining replacement rates. He notes that the stylized individual with earnings that track the YMPE closely over an entire working career are rare and that replacement rates for people who have lifetime average earnings close to the YMPE often have replacement rates from OAS and CPP well below 40%, as a result of fluctuations in their earnings in relation to the YMPE.

in EPPs and having contributed to RRSPs. Other characteristics that are positively associated with self-assessed adequacy include: being married; post-secondary education; good self-assessed health status; unionization; job tenure; and home ownership. Significant differences are also found among people working in some sectors of the economy: there is a strong positive association with government employment and a negative association with personal services sector employment. By occupation, managers, professional and clerical workers are found to have a positive view of their retirement income prospects.

Schellenberg and Ostrovsky develop a statistical model that is designed to predict favourable retirement income prospects – not only in terms of self-assessed income adequacy, but also in terms of likely retirement age and certainty of age of retirement. They note that even for people who are quite similar in important respects, differences in other areas can make a significant difference in prospects. They cite the case of two 52 year old married men, who are in very good health and work as technicians. They are both born in Canada and both own their own home with mortgages. One has 20 years job tenure, is a union member, belongs to an RPP and has a small RRSP accumulation (< \$50,000) and a household income of \$100,000. The other has 10 years job tenure, is not a union member, has no EPP, has RRSP assets between \$50 and 100,000, and a household income between \$60,000 and \$100,000. The differences between the two are not remarkable. Yet the statistical model suggest that the predicted retirement age of the former will be three years before the latter (59 versus 62); the likelihood of being very certain about retirement age is greater (46 per cent versus 29 per cent); and the expectation of an adequate retirement income will be greater (81 per cent versus 67 per cent).

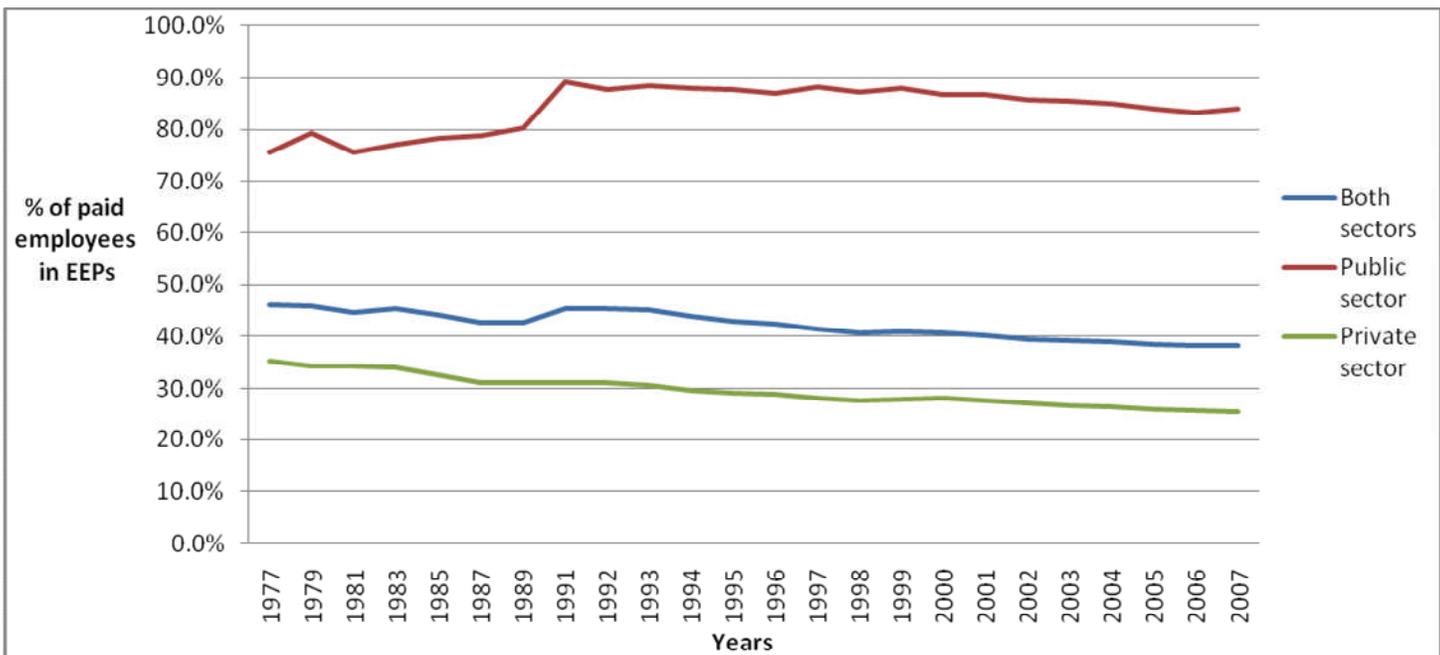
The work of Schellenberg and Ostrovsky is of interest primarily for the light it sheds on the discussion of replacement rates. However, it includes at least two other points of interest. First, they put together time series data on people's expectations with respect to their retirement age. The data comes from 1991 Survey of Ageing and Independence and the 2002 and 2007 GSS. The time series suggests some upward movement in expected age of retirement. Second, the immigrant subset of the population, especially immigrants since 1990, has less certain retirement expectations and is less optimistic about income adequacy. In another study based on the 2007 GSS, Schellenberg and Ostrovsky, 2008b find that the immigrant population also has a lower self-assessed understanding of public and private retirement income programs.

## **6.2 EPP Coverage and the Shift from DB to DC – Reviewing the Numbers**

This discussion of changes to EPPs will begin by documenting two widely noted developments – namely, declining coverage of EPPs and the shift from DB to DC. These changes were noted in the reports on EPPs prepared for the governments of Alberta and British Columbia, Ontario and Nova Scotia, and had an important impact on their recommendations (See: Section 6.3 below). An assessment of these developments will follow, along with a discussion of some related issues.

Figure 10 below presents what have become familiar data on the percentage of paid employees who participate in EPPs. The data cover the period from 1977 through 2008. Bearing in mind the important role played by EPPs in providing retirement income for people with moderate to high earnings, the direction of change conveyed by these data is not encouraging. For the economy as a whole, there has been a continual decline in EPP coverage over the entire period, from roughly 46 per cent in 1977 of employed persons to 38 per cent in 2008. Coverage in the public sector is higher throughout the period, but shows some decline in the 2000s. The decline in coverage in the private sector is more continuous over the entire period and more marked – a ten percentage point decline on an initial base of 35 per cent. One of the striking things about the decline in coverage is the absence of sharp breaks in the data. The one exception to this generalization is the sharp increase in coverage in the public sector in 1991.

**Figure 10**  
**Percentage of Paid Employees in EPPs by Sector, 1977 to 2007**



There has also been an important change in the gender make up of EPPs and the coverage rates for men and women. Traditionally, men were much more prominent than women in EPP membership and this was not just because of higher rates of labour force participation by men. As recently as the early 1990s, there was a ten percentage point gap between the portion of employed men who belonged to EPPs and the portion of employed women who participated. By the early 2000s, the gap had disappeared.

The other development that has attracted widespread attention is the change in the form of EPP coverage from DB to DC plans. Figure 11 below provides a perspective on the declining portion of EPP members who belong to DB pension plans. While membership in DB plans still accounts for a majority of EPP plan members in both sectors, the trend

to a declining portion of EPP members being in a DB plan is felt in both the public and private sectors. The portion of EPP members in the private sector is smaller throughout the period and declines more rapidly. Once again, the continuous nature of the decline and the absence of sharp break points are striking, although one notes some acceleration in the shift away from DB in the private sector in recent years.

The data that underlie Figures 10 and 11 have attracted a good deal of attention in recent years out of concern that they portend inadequate retirement incomes in the future. With so much emphasis placed on the direction of the trend line, it is important to note that the stocks of EPPs and plan members, and the numbers of DB plans and members remain substantial. These are not institutions on the brink of extinction. The total number of EPPs and EPP members reached all time highs in 2008 at 19,185 and 5,908,633 respectively. Even in the private sector, where concerns about coverage have been strongest, there were 17,936 EPPs with 3,018,408 members, which is a record. Focussing specifically on private sector DB plans, there a record number of them in 2008, 11,130, but the membership at 1,900,360 is about 400,000 less than the high water mark reached in 1992. Much of the growth in DB plans in recent years seems to have been in small plans for owner operators of business or senior executives.

The data that is most commonly cited in discussions of EPP coverage — like the data that underlie Figures 10 and 11 and the discussion immediately above — come from the PPIC data base. This database does not include data on group RRSPs or individual RRSPs. This is worth noting, because if one was include data on GRRSPs, the decline in coverage would likely be somewhat less severe, but the shift to DC (treating a GRRSP as a DC type of plan) would be stronger — again, especially in the private sector. Lipsett and Reesor, 1997 estimated the coverage rate including GRRSP coverage at 52 per cent in the mid-1990s, compared to 41 per cent based on PPIC data alone. The author of this report has estimated the percentage of members in DC arrangements in the private sector at 50 per cent, if GRRSP members are all treated as members of a DC arrangement in the private sector. (Baldwin, 2008)

In the discussion of amounts and sources of income of the elderly in Section 5.1, it was noted that income from the third pillar continues to be more widely available to the elderly in spite of the continuous decline in EPP coverage. A possible explanation for this might be that people are substituting RRSP participation for EPP participation. There has been a marked increase in RRSP participation in recent decades, and analysis by Morissette and Drolet, 2000 covering the time period from 1986 – 1997, found a high degree of substitution of RRSP contributions for declining EPP contributions. But, Horner, 2008 reviewed EPP and RRSP participation in 1995 and 2005 in work for the Ontario Expert Commission on Pensions (OECPC) and noted a larger decline in participation in either type of retirement plan than in EPPs alone.

There is another reason why the decline in coverage may not have begun to affect data on incomes of the elderly such as those in Section 5.1. Over the time frame for which the PPIC coverage data are presented, there has been a marked increase in the percentage of

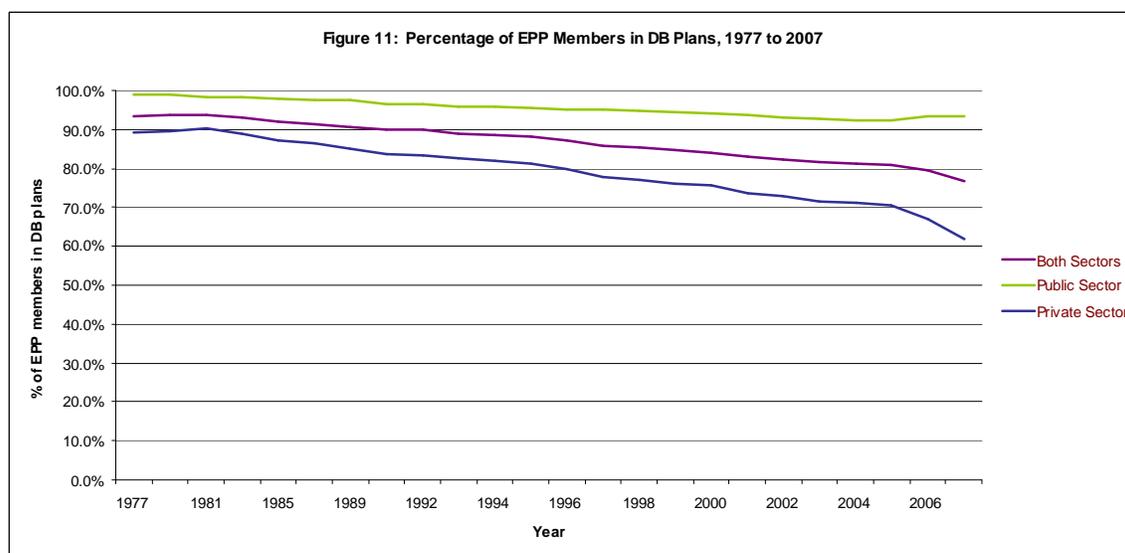
the adult population that is in the paid labour force. Much of this increase is accounted for by the increase in female participation in the labour force. Thus, in an earlier paper, Baldwin, 2007 calculated EPP participation as a percentage of the adult population (aged 18 to 64) and found no decline in coverage over the period from 1974 to 2004. Coverage was stable in the range of 26 to 29 per cent. Male coverage declined from roughly 40 to 30 per cent, while female coverage increased from roughly 15 to 25 per cent.

The foregoing comments on coverage have focussed on coverage of individual members of the paid labour force and/or the adult population. But most of the measures of well-being discussed in this report focus on family units. Thus, it is helpful that Morissette and Ostrovsky, 2006 have used data from a number of sources, most importantly the LAD, to analyze coverage by families. For purposes of this discussion, the most important thing to note is that they found that the possibility of no EPP coverage at the family level increased over the period of their study (1986 to 2003), but by less than individual coverage as declining coverage of “husbands only” was offset to some degree by coverage for “wives only.” “No coverage” at the family level seemed to peak at the end of the 1990s.

The decline in EPP coverage that has been widely noted and that has been the source of concern has had its potentially negative impact mitigated to date, at least by degree, by the increase in the portion of the adult population in paid employment and by the increasing prevalence of two earner households with at least one spouse in an EPP. These mitigating developments have limiting cases. Once everyone is coupled and in the labour force, declining EPP coverage will no longer be offset by movements in these areas.

The relationship between coverage data and retirement income warrants two further comments. First, regulatory changes in the late 1980s in all Canadian jurisdictions required that EPPs provide survivor benefits unless they are waived by both spouses. In doing so, they created EPP beneficiaries who never were members of EPPs. A similar consequence followed from making EPP entitlements family assets in the context of marriage breakdown. The regulatory changes of the late 1980s included new vesting rules that reduced the chance that an employee who terminated employment prior to retirement age would lose their right to a pension. Second, there are always people who are not members of EPPs at particular points in time who become members at other points in their life. This is especially true of young people. Indeed, there is a strong positive relationship between age and all forms of retirement savings. Thus, one always has to be cautious about extrapolating directly from point-in-time coverage to future EPP payments. But, all other things being equal, one might have expected the ongoing ageing of the active workforce to bring about higher rates of EPP coverage and it is clear that this has not happened.

**Figure 11**  
**Percentage of EPP Members in DB Plans 1977 to 2007**



Accumulated DB pension entitlements and retirement income wealth in DC pension plans and RRSPs during the period leading up to retirement are likely to be stronger indicators of future retirement income prospects than are data on point-in-time coverage, although there is obviously a link between them. Unfortunately, wealth surveys have only been conducted intermittently in Canada and are still not conducted on a regular schedule. However, the SFS of 1999 and 2005 provides some insight into the pension and other wealth of near-retirees.

The 2005 SFS data suggest several important things about the pension and retirement income wealth of Canadians aged 55 to 64. First, the median net worth of families with EPP assets is substantially greater than that of families with no EPP assets, and families with EPP assets are likely to have significantly more housing wealth than families without EPP assets. Second, median EPP assets for families that have EPP assets significantly exceed the median RRSP assets of those with and without EPPs. Third, there are differences among families with EPP assets based on the sector and type of plan they belong to. Median wealth by sector and plan type is: private sector DC, \$53,000; private sector DB, \$65,000; and, public sector DB, \$165,000.<sup>31</sup> Even if one focuses exclusively on long term participants (21+ years) in their current DB and DC plans, the median accumulated wealth of 55 to 64 year olds in DB plans is significantly greater than DC plans: \$139,000 versus \$96,000.<sup>32</sup>

<sup>31</sup> These data reflect pension accumulations from both current and former plans. For current plans only, the relevant data are: \$36,000; \$60,000; and \$122,000.

<sup>32</sup> In principle, there is no reason why a DC arrangement should result in lower amounts of wealth being accumulated or in lower contribution rates. Yet in practice, the SFS data suggest lower asset accumulation, and in the UK, data suggest that when plans are converted from DB to DC, contribution rates typically go down. (See: Munnell, 2006).

The data from the SFS are highly suggestive that different forms of wealth that might be drawn on in retirement are not being freely substituted for each other. However, the data as presented are only suggestive. Although the data are reliable, they have not been assembled with the purposes of this paper in mind. Nor have they been analyzed in way that eliminates the possibility that variables other than plan type are being measured. (e.g. differences in earnings, job and plan tenure, unionization, and so on). They suggest the need for more a more focussed analysis than has been possible to conduct in the preparation of this paper, and this point will be returned to in Section 7.

The decline in point-in-time coverage may be a less important indicator of future retirement income problems than cumulative experience in EPPs. But participation in EPPs appears significant and so, as a result, are reasons for declining participation. There are two broadly defined schools of thought on the issues. One emphasizes disincentives for actual and potential sponsors of EPPs that arise primarily from regulatory burdens and legal uncertainties. These issues have been considered by a number of provincial inquiries in the recent past and they have made recommendations that should reduce these problems by degree. These inquiries are discussed in Section 6.3.

The other school of thought emphasizes changes in the structure of the labour market as the primary explanation for declining coverage. Morissette and Drolet, 2000 estimate that most of the decline in EPP coverage between 1984 and 1998 can be attributed to shifts in the sector composition of employment from sectors with high coverage to sectors with low coverage, and a decline in unionization. They also find that the largest decline in coverage is experienced by young men.

Despite the apparent importance of DB plans to retirement income prospects, DB plans are facing serious difficulties in the early part of the 21<sup>st</sup> century. The 21<sup>st</sup> century is not yet a decade old, and we have already passed through two periods when DB pension plans have faced serious underfunding and plan sponsors have asked for a relaxation of funding rules. The funding difficulties faced by DB plans provide at least part of the explanation for the shift from DB to DC and the general decline in EPP coverage.

A fair question that deserves an answer is: why are these plans any more difficult to manage now than in the past? Several things come immediately to mind in this regard:

- 1) Financial market change. After a stock market boom of unprecedented length and strength from 1982 to 2000, which allowed retirement savings to grow at unusual rates, we have entered a less supportive era. The effect of decelerating equity returns has been exacerbated by lower interest rates, which have increased the liabilities of DB plans and raised annuity prices.
- 2) Regulatory change. In the late 1980s, Canadian jurisdictions changed DB financial regulations and required DB plans to meet solvency requirements that are more sensitive to market movements in interest rates and asset values

than were previous regulations. For the first decade after the adoption of the new rules, they seemed benign if not irrelevant because market interest rates tended to be above the liability discount rates that had been used in going concern valuations up to that time. But, declining interest rates around the beginning of the millennium caused the solvency requirements to have a serious impact on DB pension financing, especially when coupled with relatively weak stock market performance.

- 3) Risk shifting. Until the early 1980s, it was common for small pension plans to buy fully insured products from insurance companies and, hence, to shift financial risk to them. This practice ended in a very short period of time with the consequence that even small plan sponsors now bear substantial risk if they operate DB plans.
- 4) Tax rules. In many ways, DB pension plans are operated as very high risk operations with the apparent approval of all stakeholders. One manifestation of the high degree of risk taking is the general avoidance of building up prudential reserves during good times to offset bad experience in the future. For plans that might wish to build up reserves, the ITA rule that prohibits employer contributions when assets exceed liabilities by more than 10 per cent is a serious problem.
- 5) Maturing EPPs. Many of Canada's EPPs are maturing and as they do so, two important things happen that make them more volatile financial entities than when they are less mature. (In context, maturing can be thought of as the growth of fixed liabilities for pensioners and deferred vesteds in relation to active plan members' liabilities). First, the revenue source for the plans tends to shift from relatively more stable pension contributions to relatively less stable investment returns. Second, pension liabilities grow in relation to the sponsors' payroll so that each percentage point of unfunded pension liability represents a growing claim on payroll.

To the extent that the shift away from pure DB has resulted in a shift to pure DC, plan members have been exposed to a great deal of financial risk. But the financial problems faced by DB plans over the past decade have given rise to attempts to mix DB and DC elements in the same plan. This has happened primarily in the public and near public sectors at the provincial level, where a number of large plans now provide benefit indexation based in whole or in part on the financial situations of the plan — typically, some variant of the funded status of the plan. These changes provide important reminders that there is a good deal of middle ground between classic or traditional DB and DC. Despite the prevalence in policy discourse to dichotomize between DB and DC, data gathered for the Ontario Expert Commission on Pensions (OECOP), 2008 suggest that two-thirds of the EPP plan members categorized as being in DB plans are actually in hybrids.

### **6.3 What Ails EPPs and What To Do About It: The Views of Provincial Reports (Ontario, Nova Scotia, Alberta and BC) and Two Related Commentaries**

In November of 2008, the province of Ontario released the Report of the OECP. A week later, the provinces of Alberta and British Columbia released the report of the Joint Expert Panel on Pensions (JEPP), which was commissioned jointly by the two provinces. Then, in January, 2009, the Government of Nova Scotia released the report of the Pension Review Panel (PRP).<sup>33</sup> These inquiries addressed a number of issues relating to the functioning of EPPs in their jurisdictions. In addition to these inquiries, the federal government and the Province of Quebec undertook less formal reviews on EPP issues.

The fact that all of this activity was taking place simultaneously reflects a number of concerns being felt about EPPs in Canada. Among the things that prompted the creation of the inquiries were: financial difficulties facing DB pension plans and related concerns about DB funding rules; long simmering and unresolved legal issues, the most prominent of which revolve around the use of surpluses in DB plans; ambiguity about how EPP regulations apply to new hybrid plans; a lack of harmonization among Canadian regulatory laws; and declining coverage by EPPs in general and DB plans in particular.

The mandates of the inquiries focus on regulatory issues and what the inquiries have to say about these issues is important and can make the operation of EPPs easier to manage in the future — if only by clarifying the rules by which EPPs have to abide. Thus, they all address key issues such as: appropriate funding rules; allowable uses of surplus; and rules that should govern full and partial plan wind-ups. They also recommend regulatory regimes that are somewhat more principles based, engage stakeholders more fully and that are more harmonized across jurisdictions. They all endorsed measures to make plan governance more transparent and initiatives to assure improved quality of plan governance. Moreover, while the JEPP undertook its review of regulatory law in Alberta and BC with the thought that an objective of the regulatory law is to encourage coverage by EPPs, all of the inquiries share the view implicitly or explicitly that coverage problems cannot be fully resolved by changes in regulatory law.

All of the inquiries express concern about declining coverage of EPPs and the implications of declining coverage for retirement incomes in the future. Two of the inquiries (the JEPP and the PRP) recommend the creation of provincial pension plans that would wrap around existing EPPs. The details of the proposals are somewhat different, but a key common element in them is that employees with earnings above a threshold level would be required to participate in the programs unless they chose to opt out. The self-employed would be allowed to opt in.

The OECP took the view that it did not have a mandate to address this question directly. However, it did recommend the creation of an Ontario Pension Agency to provide a home for commuted values of DB pensions that are transferred from EPPs. It also raised

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<sup>33</sup> A review of these reports has been prepared for the CD Howe Institute by Baldwin and FitzGerald, (forthcoming).

the possibility that the Agency could receive new pension contributions from individuals and companies. Further, it endorsed the idea that large pension plans in the province, such as Ontario Municipal Employees Retirement System (OMERS) and the OTPP, should be allowed to provide investment and other services to individuals and small companies. The OECP report also noted that a number of stakeholders had recommended increased benefits under the Canada Pension Plan. The OECP did not have a mandate to address this issue but, having noted what it heard, the OECP suggested that the Province study this possibility.<sup>34</sup>

All of the inquiries recommended significant changes to regulatory law that, if adopted, should make EPPs easier to manage in the future, and they made recommendations that would broaden the range of pension and retirement savings opportunities available to Canadians. But the reports have limitations too. In view of the growth in DC plans in recent years, it should probably be said that the inquiries devote less attention to the regulation of DC plans than is warranted. The OECPs mandate directed it away from this field of inquiry.<sup>35</sup> The inquiries in Alberta and BC and in Nova Scotia devote less consideration to plans that involve joint cost sharing and governance than does the OECP, and this may reflect the fact that their mandates exclude provincial employee pension plans. In addition, the DB financing issues and pension financing in general tend to be dealt with at the level of regulatory requirements and do not come fully to grips with some basic conceptual problems in DB pension financing.

In recent years, many private commentators and stakeholders have made important contributions to the discussion of problems facing EPPs. Two will be singled out here because they are particularly germane to the issues being addressed in this report and complement the issues raised by the provincial inquiries.

For some years now, Ambachtsheer has identified the need for three characteristics in the successful operation of pension plans: large scale of operations, expertise in the governance and management of pension plans, and an alignment of interests between those with governance and management responsibilities and plan beneficiaries. (Ambachtsheer, 2007) This has led him to advocate the creation of pension institutions that operate at arm's length from individual employers. He has also noted the shortcomings of EPP management in Canada in relation to these features of well-managed pension plans and his concern applies to both DB and DC plans. He has also expressed a great deal of concern about the absence of these attributes in the institutions that currently serve the individual retirement saver.

These concerns are reflected in varying degrees in the reports arising from the provincial inquiries. They are noted here because they have come to attract a significant degree of support among pension commentators, and also because they add an important dimension to the way one thinks about coverage issues. Understandably, coverage is thought of, first

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<sup>34</sup> The possibility of having the QPP play a greater role in providing retirement income is under discussion in Quebec's review of pensions.

<sup>35</sup> Baldwin, 2008 provides a review of issues that need to be addressed in this regard.

and foremost, in terms of the numbers of people participating in EPPs. One qualitative dimension of coverage frequently cited is the shift from DB to DC. But Ambachtsheer raises another qualitative dimension to the coverage issue, which is the quality of management in retirement savings institutions.<sup>36</sup>

Finally, Pierlot of Towers Perrin has prepared a paper in which he raises a number of concerns about tax incentives for retirement savings. (Pierlot, 2008) His work should remind readers of an important point made in the provincial reports, which is that the operation of EPPs is impinged on by a number of bodies of law — not to mention legal decisions and standards of professional practice — and among them, ITA rules related to pensions and RRSPs are among the most important. One of Pierlot's chief concerns is that current ITA rules limit the coverage of EPPs to employees in an employer-employees relationship, and prevent the formation of pension plans among affinity groups of the self-employed or employees, separate from their employers. Again, the provincial reports seem to anticipate moves in this direction. Pierlot also expresses his concern about the annual nature of limits on tax support and calls for the creation of lifetime savings limit — something that was proposed in 1984 by the federal government and dropped as being too complex. With the unlimited carry-forward of unused tax room that is now permitted under the ITA, there is plenty of room for catching up for years when contributions were not made, but little room for tax support in anticipation of future earnings.

There is, no doubt, a good deal of debate to be had about the Pierlot proposal for a lifetime limit. But it serves as a reminder that the tax rules need to be brought into the debate on retirement savings and they have not undergone a basic review in nearly twenty years.

## **6.4 Pillars 2 and 1: In Good Health but Issues Remain**

### *i) Pillar 2*

There is a certain irony to the prospects for change to Pillar 2. Major changes were made to the C/QPP just over a decade ago. Those changes are now widely heralded as a great success even by traditional critics of the C/QPP. In the 23<sup>rd</sup> Actuarial Report on the Canada Pension Plan (OCA, 2007), the Office of the Chief Actuary (OCA) certified that, in spite of the substantial increase in CPP benefit payments that would result from the retirement of the baby boom generation, the current legislated contribution rate of 9.9 per cent for employers and employees combined would be more than enough to pay for benefits through 2075. Federal and provincial finance ministers considered the Report in their triennial review of CPP finances in May, 2009, endorsed its main conclusion regarding the satisfactory state of the Plan's finances, and announced some changes to the plan that will likely have minor financial implications, but are not insignificant. Incentives for early and late retirement will be modified to decrease the attractiveness of

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<sup>36</sup> It also worth noting, for the record, that he shares the view of the JEPP and PRP that some form of supplement to the C/QPP should be created that would enrol people unless they opt out. He has labelled his proposed plan the Canada Supplemental Pension Plan. (Ambachtsheer, 2008) He has also argued strongly against the understanding that DB and DC represent a bimodal choice of pension plan design.

early retirement and increase the attractiveness of late retirement; phased retirement will be facilitated by allowing people to collect benefits while contributing and earning new claims on CPP retirement benefits; and the number of years of low earnings that can be deducted from the calculation of a CPP retirement benefit will be increased. These proposed changes have not been given legislative effect at the time of writing and are due to be implemented in 2011.

Despite the widespread satisfaction with changes made in the late 1990s, the second pillar could end up being changed more than the other pillars if it is chosen as a response to the problem of coverage by EPPs. No doubt there are groups who would choose to make that the preferred solution to declining EPP coverage.

In the meantime, there are some issues related to the C/QPP that are worth noting briefly, even though they do not involve a major change in its role in the RIS. First, it is not clear that all changes to the C/QPP made a decade ago have been fully absorbed and accepted. The requirement that future benefit improvements be fully funded and the possibility of reducing indexation to balance the C/QPP books are important cases in point. Moreover, the willingness of the contributor population to accept all of the adverse effects of market risk has been tested for only ten years, and so has the ability to keep the CPPIB function at arm's length from government. The challenge faced by CPPIB management on CPPIB management pay in recent hearings of the House of Commons Standing Committee on Finance is interesting in this regard. The decidedly opaque nature of federal-provincial review of CPP finances may also become an issue. In short, historical experience with the CPP as of the late 1990s is limited, and it remains an open question how all aspects of that reform will withstand the test of time.

Aside from the possibility of a significant change in the role of the C/QPP in the RIS, several more micro-focussed issues may get attention: the appropriate age of eligibility for retirement benefits; the ability of adult immigrants to build up C/QPP contributory earnings; the role of survivor benefits in an era of increased female participation in the labour force; and the declining average C/QPP quasi-replacement rate that follows from increasing longevity and price indexation (assuming real wage growth).<sup>37</sup>

*ii) Pillar 1*

Since the demise of the proposed Seniors' Benefit<sup>38</sup> in the mid-1990s, the OAS program has retreated to the low profile state it occupied before the debate on the Seniors' benefit. Bearing in mind the important role the OAS plays in the Canadian RIS, its low profile is somewhat unusual.

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<sup>37</sup> To date, the Canada and Quebec Pension Plans have managed to maintain the same contribution rate and very similar benefits structures. Evolving demographic differences may make this parallelism difficult to sustain in the future. Available time has not permitted an exploration of this issue.

<sup>38</sup> The proposed Seniors' benefit would have replaced the OAS and GIS with a single benefit based on a family income test.

Like the CPP, the OAS is now required to have actuarial reports on its finances prepared every three years. The most recent one had an effective date of December 31, 2006. (OCA, 2008). The report included both current numbers and projections of: numbers of beneficiaries, nominal dollar amounts of expenditures, and expenditures as a share of national income. The conclusions of the OCA on these points are summarized below in Table 10.

**Table 11**  
**Number of OAS Beneficiaries, OAS Expenditures and**  
**OAS Expenditures/GDP,**  
**Various Years: 2007 to 2070**

	<b>Beneficiaries (000)</b>	<b>OAS Expenditure \$ million (nominal)</b>	<b>Expenditures/GDP</b>
2007	4,362	24,711	1.66
2020	6,731	50,406	2.14
2030	9,125	86,939	2.49
2040	10,220	124,113	2.38
2050	11,909	169,558	2.20
2060	11,556	229,888	2.02
2070	11,902	302,841	1.78

With the ageing of the baby boom generation, it is not surprising to see the number of OAS beneficiaries and total nominal expenditures going up in the future. These developments are driven in a quite straightforward way by an increase in the portion of the population over 65 and inflation. The portion of the population over 65 will nearly double between today and 2030. What may be somewhat surprising is the pattern of OAS expenditures in relation to GDP. This ratio rises until 2030 with the increase in the portion of the population over 65, and declines thereafter.

The decline in OAS expenditures as a percent of GDP after 2030 is attributable to the OCA assumption that real wage growth will resume at an average annual rate of 1.3 per cent in response to population ageing. Thus, even though the rate of labour force growth will decline to nearly nothing (0.3 per cent per year), real GDP growth will occur. The related assumption is that OAS continues in its current statutory form and remains price indexed. Thus, its value relative to wages and prices declines. If the OCA assumptions are reflected in future events, the OAS replacement rate will decline from 13.5 per cent of average wages and salaries at present to 12 per cent in ten years and 10 per cent in twenty. These are not dramatic declines, but they do increase replacement rate targets progressively through time and also mean that OAS and GIS will be delivering less in relation to LIM type targets. The nature of future adjustments of OAS is an important issue.

In contemplating the future of OAS and GIS, it is important to remember that these programs differ from the CPP in two important respects. They fall under the exclusive control of the federal government and, therefore, within its budgetary framework. As a consequence, they are somewhat more vulnerable to change in response to immediate political pressures.

The related issues of the real value of OAS (and GIS) in the future and fiscal pressures associated with the programs are likely to be at the focal point of deliberations on their future. But it should be noted that the disincentives associated with GIS may also attract some attention. The 50 per cent tax back rate under GIS overlaps in small income ranges with positive rates of personal income tax, the winding down of tax credits and income tested provincial programs. The resulting marginal tax rates are extremely high and offer little reason for saving prior to retirement and/or earning income after retirement. The high marginal tax rates are incompatible with encouraging late-life work. The issue of the incentive to work has been addressed by degree through the introduction of a level of exempt earnings, which now stands at \$3,500 per year.

## **6.5 Demographic and Labour Market Changes: Variables in Motion**

The incomes generated by the Canadian RIS in the future will reflect not only the intrinsic characteristics of the RIS but their interaction with a variety of labour market, demographic and economic variables. It is beyond the scope of this report to offer a complete review of relevant developments and how they might impact the RIS outcomes. However, a brief survey of some key developments may be of help in contemplating efforts that have been made to date to assess future retirement income prospects and things that might be borne in mind in contemplating future work. These comments will focus mainly on demographic and labour market developments and, because some important developments (e.g. retirement ages) combine labour market and demographic dimensions, no attempt is going to be made to delineate sharply between them. Generally, more broadly defined economic developments will only be raised in so far as they are strongly linked to demographic and labour market developments. The format for presenting these issues will be to identify the development and then comment on its significance. Where appropriate, some measure of the size of the development will be included in the discussion.

### *i) Ageing population*

One of the most widely-noted aspects of demographic change is the general ageing of the Canadian population — a phenomenon that is driven by ever improving mortality and declining fertility. The manifestation of ageing most widely cited is the growing share of the population over 65. The Chief Actuary (OCA, 2008) estimates that the share of the population age 65 and over will increase from 13.4 per cent in 2007 to 26.3 per cent in 2075. The Chief Actuary has estimated that, over the period from the end of World War II to the early 2000s, female life expectancy at age 65 increased by roughly six years and male life expectancy by 4. (OCA, 2005) Life expectancy at age 65 for women is projected to increase by another 3.4 years between 2007 and 2075, and male life expectancy by another 3.8 years over the same time frame.

As was noted in Section 2.1, the ratio of the elderly to the non-elderly population affects pay-go costs directly, and this has been noted with respect to OAS in Section 6.4 above. Prior to the C/QPP amendments of 1997, the C/QPP contribution rates were strongly influenced by the ratio of beneficiaries to contributors, as the plans were largely pay-go. The amendments to the plans were designed to remove that demographic sensitivity. For pre-funded plans, whether they are DB or DC, contributions do not respond directly to changes in the ratio of beneficiaries to contributors. But the required contributions to pre-funded DB plans do respond to the ratio of the retirement period to the contributory period (though not proportionately) and increased life expectancy does increase that ratio. Moreover, the improvements in life expectancy will contribute to increasing ratios of pensioner to active plan member liabilities and, hence, financial volatility in DB plans. Increasing life expectancy may also give rise to some questions about intergenerational equity in these plans, as each cohort that passes through them is getting a more valuable benefit than preceding cohorts. In DC plans, the improvements in mortality will, with a given rate of contributions, result in lower benefits or later retirement.

ii) *Decelerating Population Growth*

Declining fertility, which is contributing to the ageing of the population, is also contributing to decelerating population growth. The Canadian fertility rate has been below the population reproduction rate of 2.1 since about 1970. In 2007, it was 1.56 and the Chief Actuary (OCA, 2008) expects it to stay at about that level over the long-term future. His mid-range population estimate assumes a fertility rate of 1.60. In the Canadian context, the fact that the fertility rate is below the population reproduction rate does not translate directly into a declining population as is true in many countries. In Canada, the effect on total population and labour force growth is mitigated by net inward migration. But declining fertility does mean decelerating population and labour force growth as we look to the future. Thus, Canadian employment grew at an average annual rate of 1.9 per cent from 1976 to 1991 and by 1.8 per cent from 1992 to 2007, but is expected to grow after 2010 at an annual rate of only 0.3 per cent.

The Chief Actuary assumes that decelerating labour force growth will result in a general tightening of labour markets and a resumption in real average wage growth in Canada of 1.3 per cent per annum. At the same time, aggregate labour force and GDP growth are likely to be adversely affected by the deceleration in labour force growth and so, in turn, is aggregate capital income and returns on common stocks. There may be some mitigation of this effect as capital is substituted for labour in response to the rising cost of labour and retirement savings portfolios increase their foreign content. But, in contrast to the previous twenty-five years when the gap between returns on financial assets and wage and salary growth was quite high, which made it relatively easy to meet earnings replacement targets, decelerating population growth is likely to push things in the opposite direction. These effects will be felt by all types of prefunded arrangements. The effects on a status quo OAS/GIS will be to reduce the programs' financial claim on national income. But, as noted above, the favourable effect on OAS/GIS generates its

own policy issue. All other things being equal, the resumption of real wage growth will also have a negative effect on quasi-replacement rates.

The tightening up of labour markets, as anticipated by the Chief Actuary, may on its own generate a stronger interest among employers in providing EPPs as recruitment and retention of workers may become a greater issue. This tendency on the demand side of the labour market may be reinforced by the fact that the supply of labour will increasingly be weighted toward older active workers for whom EPPs are likely a more important benefit than is true for their younger counterparts, and for whom voluntary mobility is usually less of an issue. On the other hand, Ontario data suggest that almost all plans in that jurisdiction are using a unit credit actuarial method under which required current service contributions will increase with an older active plan membership. (FSCO, 2009)

*iii) Sector Composition of Employment and Unionization*

As was just noted, labour market tightening and an ageing active workforce may give some impetus to wider EPP coverage. However, it is important to remember that EPP coverage in the private sector is sensitive to the sector composition of employment, the level of unionization and the size of firm in which people are employed. None of these dimensions of future labour force development are investigated by the Chief Actuary and time has not permitted a reasonable exploration of them in the preparation of this report. They need to be considered in reflecting on the ability of EPPs to deliver retirement income in the future.

iv) *Female Participation in the Labour Force*

The Chief Actuary (OCA, 2008) notes that, over the period from 1977 to 2007, there was a dramatic narrowing of the gap between female and male labour force participation rates for 15 to 69 year olds. In 1977, the male rate was 77.7 per cent compared to a female rate of 45.7 per cent, making for a 32 percentage point gap. By 2007, the gap was down to 10.4 percentage points, with rates of 72.4 per cent and 62.1 per cent, respectively. The Chief Actuary assumes a continued shrinkage in the gap to 8.2 percentage points in 2050, which is the end of the projection period in the OAS report.

As has been noted above, the labour force participation of women and women gaining access to employment based pensions, both C/QPP and EPPs, has been an important element in the improvement in living standards of the elderly in recent decades. (This source of improvement in the incomes of the elderly is explored in Schirle, 2009). The closing of the gap in labour force participation rates will, all other things being equal, continue to contribute to this outcome. At the same time, the scope for continued improvement coming from this source is declining.

v) *Late Life Work*

It is an observed fact that, since the mid-1990s, the portion of the Canadian population aged 55 to 64 that is engaged in paid work has been increasing. For women, this reflects women of the baby boom working more at all stages of life. For men in this age range, it appears to be a behavioural shift. The Chief Actuary (OCA, 2008) anticipates a continuation of this trend into the future for both women and men. For women, the assumed increase in the age 55 to 59 range is from 62.4 per cent in 2007 to 66.0 per cent in 2030; in the age 60 to 64 range, it is from 37.3 per cent to 41.0 per cent; and in the 65 to 69 range, it is from 12.7 per cent to 14.0 per cent. For men, the increases are somewhat smaller: age 55 to 59, from 76.2 per cent to 79.0 per cent; age 60 to 64, from 53.4 to 56.0 per cent; and age 65 to 69, from 23.4 per cent to 25.0 per cent.

Compared to the possibility of lower levels of employment in old age, the one thing that is certain to follow from more late-life work is a greater contribution to GDP from this sector of the population, which is important in itself. It is not perfectly clear what the impact will be on pension expenditures as the later life work may be combined with receiving pensions. Of the many forces at play that may help to explain more late-life work, one that may increase the age at which pensions are claimed is later entry into career jobs. This is part of a more general phenomenon of later transitions from youth to adulthood that includes dimensions such as: leaving the parental home later, getting married later, and having children later. (A good overview of these developments is provided by Beaujot, 2004.) Late entry into paid employment will make it more difficult to accumulate pension entitlements by a given age and other aspects of net wealth accumulation are also likely to be delayed. If later entry into career jobs and, hence, later accumulations is not accompanied by later retirement, the effect of late entry would be to increase the ratio of the retirement period to the period of pension contributions and to raise pension expenditures (required savings rates).

All other things being equal, the increased late-life work anticipated by the Chief Actuary will increase economic output. But it should be noted that this favourable effect on labour force participation does not fully offset the decline in labour force participation that stems from there being a growing portion of the population in the older age range. Thus, the assumed labour force participation rate for the 15 to 69 age group declines slightly for men from 79.2 per cent to 78.3 per cent over the period from 2007 to 2030. For women, there is a modest decline anticipated between 2007 and 2015 and then an increase to 2030, so that the rate in 2030 is the same as in 2007, namely, 70.1 per cent.

vi) *Immigrants to Canada*

The Chief Actuary, 2008 assumes net inward migration to Canada over the period to 2015 at the historic average of the past 30 years — namely 0.50 per cent of total population per year. For the remainder of the projection period, he assumes a slight increase to 0.54 per cent in response to tightening labour markets. The result is a continual increase in the estimated portion of the population over 65 that will receive partial OAS payments. In 2007, the estimated portion of the OAS recipients who will receive partial payments is 8 per cent. This portion is expected to grow to 13 per cent by 2025 and to 15 per cent by 2050. This portion of the OAS recipient population will have fewer years in which to accrue benefits under the C/QPP and EPPs.

The demographic trends that have been noted immediately above are, for the most part, global trends, with different parts of the world having different beginning and end points by the mid-21<sup>st</sup> century. This is generally true of declining fertility, mortality improvements — especially in old age — and decelerating population growth. (These trends are reviewed in OECD, 2009 and in Baldwin, 2006.) Also, within the OECD area, the delayed transitions from youth to adulthood (see: Beaujot, 2004) and increased labour force participation among older pre-65s are common developments (see: Sundin, 2006).

## Section 7: Gaps in Data, Research and Information Systems

In this section, gaps in data, research and information systems are discussed. This discussion strives less to be comprehensive than to identify those items under each heading that are most important. It should be said that while the PPIC and Trusteed Pension Plan Financial Statistics still provide very useful information, a thorough review of the degree to which they are meeting information needs is in order. Pension investment data, data on the funded status of pension plans and data on combined employer and employee contributions to EPPs come to mind as areas not mentioned further below that need attention.

### 7.1 Data

Data on pension plans themselves need improvement in a number of areas. Classifications of benefit designs that rely entirely on the DB versus DC distinction are clearly being overtaken by events as new hybrid forms of pension emerge. In addition, it would be very helpful if flow as well as stock data on numbers of pension plans, by type, were available. In other words, the numbers of newly created plans, terminations and conversions should be readily available. Moreover, coverage data remains a problem. The PPIC provides global coverage data and a good deal of useful information on qualitative aspects of coverage. But the PPIC generates very little information on the social and economic characteristics of EPP members and no information on GRRSPs and their members. Other sources of data have provided insights into the social and economic characteristics of EPP members but virtually no qualitative information. The SFS has been an exception in yielding data on both the qualitative aspects of coverage and the social and economic characteristics of EPP members. But the SFS is not a regularly scheduled survey, and the most recent one (2005) had a sample that was too small to permit some necessary types of analysis.

Despite problems with the 2005 SFS, it or a wealth survey like it that includes pension wealth is of enormous value in addressing the state of readiness of near-retirees to provide themselves with the necessary supplement to publicly administered benefits in order to enjoy a comfortable retirement. It focuses attention on the cumulative nature of the benefit entitlement/retirement saving process in a way that the best of cross sectional data cannot. A regular survey of this sort should be regarded as a very high priority.

Finally, it is very unfortunate that data on incomes of the elderly cannot be distinguished by the type of retirement income vehicle from which they are provided: DB versus DC type of EPP, or RRSP or GRRSP. This is highly regrettable, since many important questions of public policy revolve around these distinctions, including many discussed in this report. This is not, however, an easy problem to solve. Most income data gathered by Statistics Canada now relies on data collected through the PIT and, hence, the classifications used in the PIT forms establish the categories that are available in data produced by Statistics Canada. Data that distinguish income by the type of retirement program from which it originates would provide a much clearer picture of the role of different sources of retirement income. It would also help address a number of questions

about DC pension plans, including the amounts and variability of income from DC sources, and whether people who self-manage their withdrawals exhaust their retirement assets before the end of their life. Gaining insight into these DC-related questions may require data collected from individual DC plans.<sup>39</sup>

## **7.2 Research**

Of the many possible things that could be noted here, four stand out:

- First, much of the research and analysis that has been undertaken in support of this report needs to be repeated with a stronger focus on women and immigrants;
- Second, it would be very helpful to develop a longitudinal perspective on the use of retirement savings vehicles, especially during the period of mid- to late working life;
- Third, research that sheds more light on the degree to which different forms of wealth are substituted for each other needs to be encouraged; and
- Fourth, an analytical tool like LifePaths needs to be employed to help with projections of future retirement incomes. The important characteristics of whatever tool is used are: it needs to be capable of micro-analysis, it needs to be longitudinal and it needs to have stochastic capabilities.

As was noted in Section 6.5, above, a clear sense of future labour market developments with respect to sectors of employment, employment by size of firm and unionization are important inputs to assessing the future of EPP coverage.

## **7.3 Information Systems**

In the 1980s, legislation was passed that required the OCA to prepare regular reports on the financial status and outlook of the OAS and CPP. The new information requirements marked an important step forward in generating an understanding of these programs. But, in one sense, it was like focusing on one-half of an equation. The other half, income adequacy, has not been the subject of an ongoing process of information gathering and dissemination. This gap should be filled. The OAS and CPP expenditure reviews should have a parallel process of information gathering and analysis of the income situation of the current elderly and future retirement income prospects. In view of the stakes that the federal and provincial governments have in this issue, the two levels of government should consider the creation of a joint institution to oversee the process.

The development of relevant data, research and information systems is an appropriate administrative expenditure for public pension programs. In context, it is worth noting that the U.S. Social Security Administration supports both significant “in house” research as well as three outside research centres that focus on pension and retirement related research.

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<sup>39</sup> The author of the report has not seen the SFS used in this way, but it may be possible to tease some insights out of the SFS.

## Section 8: Conclusions

The central issue to be addressed in this study is the capacity of Canada's RIS to provide adequate retirement incomes in the future. In assessing this issue, the author was asked to look at the incomes of the elderly in relation to anti-poverty and earnings replacement objectives. In Section 4, these notions were elaborated somewhat and the question of financial sustainability was added to the criteria relating to income adequacy.

Given the nature of the central issue, this conclusion will begin with a brief comment on the prospects for achieving the income adequacy objectives identified by the Province and on the issue of financial sustainability. Then, attention will turn to some of the issues that have to be addressed in contemplating actions to increase pension coverage and notes will be made of some of the proposals currently being propounded.

With respect to the anti-poverty objective, substantial progress has been made in recent years. However, there is still some legitimate debate about Canada's proximity to complete success and that debate revolves around differences in the conceptual view and measuring stick for deciding who is in poverty. Moreover, even if the general picture is positive, there may be subsets of the population who experience higher rates of poverty. Veall identifies single women, immigrants and older people with dependents as the key cases in point. In context, three comments are worth making. First, the OAS/GIS guarantee for a single person is less than the equivalent guarantee for a couple by almost exactly \$2,000. Second, it is difficult to address the immigrant issue in a way that does not trigger equity concerns by people who are born in Canada. Nonetheless, immigration of larger numbers of people who do not qualify for any OAS or GIS — especially if they have arrived from countries from which payments of pensions to expatriates is unlikely — is a matter of concern. Third, the issue of elderly persons supporting dependents may be as much a horizontal equity issue as an elderly issue.

Looking to the future, the biggest question with respect to the achievement of the anti-poverty objective will be the adjustments made to OAS and GIS if real wage growth resumes. Real wage growth is likely to boost all types of poverty and low income measures faster than the rate of growth in the CPI to which OAS and GIS payments are linked. Price indexing of OAS and GIS with no further adjustment will likely result in some growth in the poverty rate. In addition, the role of GIS and income-tested supplements to it need to be reviewed in terms of their impact on people's economic behaviour over the life course, and especially as people approach and enter retirement.

With respect to earnings replacement, the general picture that emerges from analytical work and from self-assessment is that this objective has generally been quite fully met for the current elderly. However, for a significant minority of elderly who had moderate to high earnings before retirement, retirement may have resulted in a noticeable decline in living standards.

In this report, several attempts to quantify future replacement rates are reviewed and there is also a self-assessment study that is reviewed. The general conclusion that emerges from these studies is that Canada should look forward to a situation in which the earnings replacement objective continues to be met for most of the elderly. However, the studies conclude that minorities of people with moderate to high earnings will not achieve continuity of living standards. The size of the minorities varies from study to study, but the one-third conclusion reached by Maser and Dufour provides a centre of gravity for the estimates. Lise offers the most optimistic conclusion on this issue, but his conclusions are compatible with a significant minority not maintaining their consumption levels in retirement. His methodology is not sufficiently granular to preclude the possibility.

In concluding the review of these studies, it was noted that they tend to take the existing structure of the RIS as a given. Thus, the generally favourable results of the studies rely on OAS maintaining its value relative to pre-retirement earnings, and legislative change to OAS would be required to achieve this state of affairs. Moreover, the replacement income provided by the C/QPP would also have to be maintained. Generally, the studies of future replacement rates do not assess the effect of declining EPP coverage and tacitly assume a stable economic, financial and demographic environment.

In addition to the income adequacy criteria, Section 4 noted that it is important for pension plans to be financially sustainable and fair to different generations of plan members. These issues have not been thoroughly assessed in the foregoing parts of the report. But a few brief comments are in order.

The pattern of OAS expenditures in relation to GDP was noted in Section 6.4. Expenditures are expected to rise through 2030 and decline thereafter. The actual pattern of expenditures will depend very heavily on decisions made about adjustments to OAS and GIS benefits. The C/QPP contribution rate is expected to remain stable at 9.9 per cent for the coming period of nearly 75 years. It should be noted, however, that C/QPP expenditures will rise in relation to the contributory earnings base, which, in context, is a reasonable proxy for GDP growth. As a portion of contributory earnings, CPP expenditures are projected to increase from 8.37 per cent in 2006 to 11.06 per cent in 2030. (OCA, 2007) The difference between the stable contribution rate and the rising expenditures as a portion of contributory earnings is accounted for by the increasing use of capital income generated by the investments of the CPPIB to pay benefits. Some portion of this capital income will be generated by foreign economic growth that is captured through the foreign investments of the CPPIB.

With respect to intergenerational issues, ever-improving mortality means that each cohort will receive benefits of higher value than earlier generations from OAS and C/QPP. The first age cohort that will spend its entire working career participating in the C/QPP as amended is still about 35 years from retirement. The implicit rate of return for successive cohorts of C/QPP contributors will decline gradually over that period time.

The heterogeneous nature of the third pillar makes it somewhat difficult to generalize quantitatively about sustainability and intergenerational fairness as one looks to the future. But some of the demographic trends noted in the report will have a predictable effect on EPPs and retirement savings in a directional sense.

A number of the demographic changes will tend to push required DB contributions upward. Cases in point include: improving mortality; late entry into work that is not fully offset by later retirement; and, the ageing of the active workforce. This upward push may be increased to some degree by decelerating population and labour force growth feeding through GDP growth, the growth in corporate profits and returns on common stocks. The maturation of DB plans will tend to make contributions somewhat more volatile. For DB plans in the third pillar, the first order effect of these changes will be to increase required contributions and make them somewhat less stable. But the emergence of cost- and risk-sharing arrangements and hybrid benefit designs over the past two decades is indicative of the fact that the second and third order effects may run in a number of unpredictable directions.

One aspect of the adaptation of DB plans worth noting is the different impact that change often has on different cohorts of plan members. The regulatory law in all but one Canadian jurisdiction specifically prohibits reductions in accrued DB benefits. While the intent of this requirement is understandable, it does mean that the impact of benefit reductions (like contribution rate increases) falls most heavily on younger and future plan members. Thus, on the one hand, if a DB plan survives in its current form, each cohort gets a more valuable benefit than the preceding cohorts. But if adjustments are required to benefits or contributions, those adjustments will have their strongest negative effect on young cohorts.

The demographic effects that will have an effect on DB plans will also affect DC plans and individual savings efforts. However, unless these changes inspire an increased savings effort, they will manifest themselves in a mix of lower periodic benefit payments or later retirement.

At present, much of the concern about the retirement income prospects of the future elderly revolves around concerns about the declining portion of the employed labour force that participates in EPPs. As was noted in Section 6.2, the decline has been ongoing since the late 1970s and, to date, has had little impact on retirement incomes, in general, or income from the third pillar, in particular. In the early years of declining coverage, there was a compensating increase in the use of RRSPs, but that seems not to have been the case for some years. In addition, the impact of declining coverage has been muted by the increase in the employment to population ratio and the emergence of more two earner couples. Underlying both of these developments is increased female participation in the labour force. While these developments have muted the effect of declining coverage, the scope for gaining additional relief from this source is limited. In addition, as is noted in Section 6.2, wealth data suggest — but do not decisively demonstrate — that EPP

coverage is important. It appears that people find it difficult to establish alternatives means of accumulating retirement income wealth that are as effective as EPPs.

The concern about EPP coverage has a qualitative dimension to it that focuses on the general trend from DB to DC coverage documented above. The central concern that has been raised in this regard is that the benefits provided by DC plans (and individual retirement savings plans) are unpredictable. Individual plan members bear not only the risks associated with their investments over the period prior to retirement, but also substantial interest rate risk at the moment of conversion to an annuity. Moreover, if individuals manage the withdrawal of their DC assets on their own rather than buying an annuity, then the investment risk carries over into that period of life.

There are some policy-relevant variations on the general theme of uncertainty of DC outcomes. For instance, because there is not a fixed relationship between wage growth and returns on financial assets through time, one should expect DC replacement rates (or retirement ages) to vary through time. In addition, it has been noted that women and men tend to invest differently in DC plans and systematic gender difference may arise from DC plans. (Turner, 2001) Moreover, in recent years behavioural economics literature has drawn attention to the difficulties people have in managing their retirement savings. (A review of this literature is provided by: Tapia and Yermo, 2007.) Finally, data presented in Section 6.2 raised questions about whether DC accumulations are adequate.

The concerns about the shift to DC are important and, as the author of this report has argued elsewhere, the regulation of pure DC plans has not been as thoroughly canvassed as it should be (Baldwin, 2008 and Baldwin and FitzGerald, forthcoming). There are some contending considerations with respect to this shift. Given the structure of Canada's RIS, it is only a portion of retirement income that is subject to DC investment risk. Moreover, there are arguments that DC plans do more to facilitate labour mobility and are preferable to DB because they are more neutral with respect the age of retirement. It might also be argued that, even if the wealth accumulated in DC plans is less than in DB under comparable circumstances, there is no reason in principle why this should be so and, therefore, it is not an intrinsic characteristic of DC that is being observed.

Debates about the merits of DB and DC attract a good deal of attention and, at times, passion and heat. However, two points should be reinforced at this point. First, there is a sad lack of data and information on the actual performance of DC plans in Canada. Second, while the discussion of this issue is often cast as it has been here as a bimodal choice, there are many benefit designs that incorporate elements of DB and DC. One can pick a spot along a spectrum at one end of which are plans that offer complete certainty of benefits and complete uncertainty of contributions, and at the other end of which are plans that reverse what is certain and what is uncertain. The author's bias is that EPPs should offer as much certainty of benefits as is compatible with the single or joint sponsor(s) willingness and ability to tolerate the associated uncertainty of contributions.

The discussion of EPP coverage has another qualitative dimension that is relevant to both DB and DC plans. Ambachtsheer, 2007 has raised concerns about the management of EPPs and has organized his concerns around three considerations: lack of scale; lack of expertise in the governance and management of plans; and poor alignment of the interests of people charged with the responsibility for governance and management on the one hand, and the plan beneficiaries on the other. The foundation for these concerns is well documented by Ambachtsheer and needs to be born in mind in contemplating the future of the third pillar. The general concern of Ambachtsheer is particularly relevant for small firms. Indeed, it is quite implausible that many small firms can serve as suitable platforms for delivering pension income even when the earnings and other characteristics of the employees would suggest that 3<sup>rd</sup> pillar income is needed by the employees. In addition to the issues identified by Ambachtsheer, many small firms will have life expectancies that are much shorter than those of their employees.

Concerns about declining coverage, the shift to DC and the adequacy of EPP management have inspired a number of proposals for pension reform. The proposals deal primarily with means of achieving the earnings replacement objective in the face of declining EPP coverage. Irrespective of what else is done in this regard, it is hoped that the recommendations of the provincial inquiries that would reduce legal uncertainties and irritants would proceed and that tax measures affecting retirement saving would be reviewed. The big question is whether more is required, as is suggested by the provincial inquiries.

This report will not offer a definitive answer to the question, but will identify the key subordinate questions.

If more effort is required to facilitate retirement saving/pension benefit accruals during working life, it is important to be clear about the earnings range where this effort is relevant. In Section 2, it was noted that the earnings replacement capacity of the Canadian RIS is quite complete based on the first two pillars alone at earnings levels up to one-half of average wages and salaries, but declines thereafter. However, this could be a moving target depending future real wage growth and adjustments that are made to OAS. The upper end of the range deserves consideration, too. As is noted in OECD, 2005, the maximum covered earnings of the C/QPP is certainly low by OECD standards. At the same time, an implicit assumption of Canadian pension policy has been that beyond a certain level of earnings, people should look after themselves.

Traditionally, a central question about pension policy options has been whether new initiatives should be voluntary or mandatory. The emergence of “auto-enrolment” schemes in which people are subscribed to a plan unless they opt out has broadened the range of choice in this regard. Experience with auto-enrolment has historical depth in DC plans at U.S. workplaces, where it seems to have increased participation over levels achieved in voluntary plans. There is, then, a general question about which of these three choices is preferred and whether the options implied by a voluntary or auto-enrolment regime are exercised by employees or employers. In the auto-enrolment and mandatory

regimes, are the same rules proposed for employees and the self-employed? The reports to the provinces of Alberta and BC and Nova Scotia would suggest not, but current C/QPP design does not distinguish between the employed and self-employed.

Closely related to the question whether new initiatives to strengthen earnings replacement should be voluntary or compulsory is the question whether they should wrap around or displace existing EPPs. Sections 5 and 6 suggest that existing arrangements have worked reasonably well for many of today's elderly and are likely to do so for many of the future elderly as well. Should new initiatives complement or displace what is working well?

If the wraparound option is preferred, there are questions to be resolved about how the decisions to wrap around get made. Employers and/or employees might have an unconstrained range of choice to opt in or out the new initiative, or there could be legislative constraints on the choice (e.g. opting out is only permitted where employees belong to a plan with specified characteristics). There are also portability issues that need to be considered if a wraparound option is chosen. How will movement of people between the opted-in and opted-out sectors be addressed?

There is a growing range of benefit design options. The choice of option may depend on answers to the prior questions about voluntary versus other forms of participation. Design options with a strong DB component often rely on compulsory participation in order to avoid adverse selection problems. Although it does not have to be the case, there is likely to be a link connecting the choice of benefits design, the time frame for phasing in a new earnings related benefits, and the funding method. A pure DC initiative is likely to be phased in over the full period of a working life and be fully funded, whereas a DB supplement to existing arrangements could, in theory, be phased in quickly and be pay-go. The links among benefit design, funding type and phase-in reflect more historical experience than conceptual necessity.

The question of how new initiatives might be phased in focuses attention on the question whether the retirement income problem to be addressed is one being faced by the current elderly or the future elderly. Much of the discourse on pension issues in Canada, including contributions by the author of this report, has focussed on problems of the future elderly arising from declining coverage. But Canada's historical experience with the introduction of C/QPP and GIS suggests that it may be difficult to introduce a pension reform package that does not deliver any benefit to the current elderly. If new benefits are introduced and phased in over a period that is less than a full working lifetime, then the initial cohorts of recipients will be beneficiaries of net intergenerational transfers, irrespective of how the new benefits are financed.

The fact that two of the reports prepared for provincial governments called for the creation of provincial pension plans and the OECP called for the creation of an Ontario Pension Agency that could evolve into a pension plan administrator, raises questions about the national and provincial roles in any new initiatives. What is appropriate in this regard will clearly depend on the specifics of the initiative being contemplated.

Nation-wide initiatives may be most compatible with desired patterns of labour mobility and may also contribute most readily to scale, expertise and alignment of interests. On the other hand, there may be enough difference in patterns of retirement savings and the economic, financial and labour market environment among the provinces that different arrangements are warranted. Provincial differences in EPP coverage have not been pursued in the report, but Baldwin, 2007 noted that, as of the middle of the current decade, declines in the EPP coverage rate were greatest in provinces where employment growth was strongest. Moreover, the consensus necessary to support new initiatives may be easier to achieve provincially or regionally than nationally.

Closely related to the decisions about national versus provincial roles is a set of decisions about centralized versus decentralized administration and the roles of public and private institutions in delivering new initiatives. The appropriate resolution of these issues depends on the type of initiative one has in mind. But there is ample room for mixing and matching – e.g. centralized public collection of retirement savings and decentralized administration.

In the period ahead, the debate about declining EPP coverage and how to respond to it will intensify. Some will argue that the *status quo* will continue to generate adequate retirement incomes. But there are alternatives that have been proposed by the provincial inquiries and proposals to strengthen the role of the Canada and Quebec Pension Plans have also been made. The OECP also proposed to change the landscape for voluntary initiatives by endorsing the view that large (mainly public sector) pension plans in the Province should be allowed to offer their investment and other services to individuals and employers. The provincial government has begun to amend the terms of reference of some plans accordingly. This initiative provides an important reminder that, even if one does not think that the coverage issue in the sense of the number of participants in EPPs warrants attention, there are still improvements that can be made in the range of organizational choices available for delivering benefits.

Because the central issue to be addressed in this report focuses on the future, it cannot be known in advance how things will work out. The tools we have for analyzing the issue can and should be improved, as has been suggested in Section 7. The option of leaving everything as is will have its adherents, but seems likely to result in a significant minority facing a decline in their standard of living in retirement and — looking beyond the numbers of people participating in EPPs — forcing many people to rely on pension plans and retirement savings institutions that are less effective than available alternatives.

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