

Planning for Retirement: Are Canadians Saving Enough?



Will you be financially ready to retire by 2030?

If you are considering retiring in 2030, ask yourself the following three simple questions:

1. Do you contribute at least 15 percent of your yearly earnings to a Registered Retirement Savings Plan?
2. Does your employer sponsor a workplace pension plan?
3. Do you own a home and do you intend to have it paid for by retirement?

If you are 40 years old or over, and have not given much thought to these questions, your retirement planning picture may be somewhat troubled. While this is not good news, you should know that you are not alone. Estimates show that two-thirds of Canadians may not be saving at the levels required to meet required household expenses in retirement.

So says the following study sponsored by the Canadian Institute of Actuaries and carried out this spring by the University of Waterloo's Department of Statistics and Actuarial Science.

Introduction

The tremendous shock that the baby boom generation will have on many parts of society is not some uncertain, far-off event. The impact is being felt now, as those born in the first year of the boom (1947 in Canada) are nearing retirement. Their influence will be significant and should not be underestimated. But is this generation, particularly those born in the early to mid '60s doing enough to prepare financially for their retirement years?

The Canadian Institute of Actuaries, in an effort to understand and share the implications of this group moving into retirement, has worked with the University of Waterloo's Department of Statistics and Actuarial Science to assess the financial preparedness of those planning to retire in 2030.

The objective of this study is to raise the awareness of Canadians about the need to save for their retirement, and the tools they can draw upon in doing so. The research project and the dissemination of its conclusions provide evidence of the value of actuarial science in decision-making and long-term planning, and the commitment of the profession to the public interest.

1. Executive Summary

Our research examined the financial adequacy of retirement preparation for those expected to stop working in 2030.

Our conclusion: two thirds of Canadian households expecting to retire in 2030 are not saving at levels required to meet necessary living expenses. Old Age Security (OAS) and the Canada and Quebec Pension Plans (C/QPP) provide a modest base, and by themselves, are not designed to fill the gap. Home ownership will help to narrow the gap, but, by itself, won't be enough. Participation in a workplace pension plan (RPP), by itself, won't be enough. And, saving through a Registered Retirement Pension Plan (RRSP) plays an important role, but is unlikely to fill the gap.

To generate sufficient income in retirement to pay for necessary living expenses, some combination of these resources will be required.

In reaching this conclusion, our research focused on households with two different income levels: those earning the Average Industrial Wage (approximately \$40,000 in 2005) and those earning twice the Average Industrial Wage (\$80,000).

We first developed a base case scenario that measures the gap between the amount of income that will be provided by OAS and C/QPP in 2030, and the level of income required to pay for necessary living expenses in retirement. We used this information to calculate the level of annual savings needed — from all sources — in order to fill the gap. With that base case in mind, we also looked at what would happen to the savings targets if home ownership were taken into account, and if the individual retired at a later age. We also developed targets to illustrate the level of savings required in order to generate sufficient income to maintain pre-retirement disposable income — in other words, to allow retirees to do more than just cover basic necessities.

According to Statistics Canada, about 9.4 million households — or 70.6 percent — had some form of pension assets in 2005. In order to take a finer look at what is behind this statistic, we used current information on retirement plan participation and savings, combined with reasonable economic assumptions, to develop 72 different household profiles.

For each of the 72 profiles, we identified the main sources of retirement income in 2030, based on current average levels (using recent historic data and reasonable projection assumptions), and projected expenses in 2030 for necessary living expenses, based on an analysis of the amount of these expenses for the years 1998 – 2003 and 2005 and the trend in the data to 2030. These necessary living expenses are defined as food, shelter, clothing, transportation, health care, energy and taxes. In 2003, before taxes such expenses averaged \$24,909 for a senior one-person household and \$43,717 for a senior two-person household. Tax rates and brackets were adjusted for assumed inflation to 2030, but were otherwise assumed to remain unchanged. The following table shows the percentage of income in 2030 that is projected to be required to meet these necessary expenses including taxes.

Table 1. Necessary Expenses As A Percentage of Income In 2030

Income of Household in 2005	No. in Household (At Retirement)	Expenses as % of 2030 Income (Low Inflation)	Expenses as % of 2030 Income (Moderate Inflation)
\$40,000	1	42%	32%
\$40,000	2	76%	60%
\$80,000	1	21%	16%
\$80,000	2	38%	30%

Based on this modeling, we were able to identify where gaps between savings and projected expenses will exist in 2030, should people continue with their current savings pattern between now and then. We assumed that people would begin saving for retirement approximately 25 years before their expected retirement date, i.e., starting at age 40. For those who have started saving at an earlier age, a lesser amount of annual savings will be required in the 25 years prior to retirement to achieve the required retirement income.

As noted earlier, the income provided by our public pension system (OAS and C/QPP) will not by itself be sufficient to cover necessary living expenses in retirement. Our analysis shows that for a household with earnings at the Average Industrial Wage (AIW) (\$40,000 in 2005) additional annual savings are needed. A single person earning \$40,000 would need to save 14 percent of their gross wages every year in order to supplement OAS and C/QPP at levels sufficient to meet necessary living expenses. Similarly, a couple earning \$40,000 would need to save 30 percent of gross wages every year.

Some of the yearly savings targets that are outlined in the report may be beyond the reach of some households, who may need to consider postponing retirement. Our analysis shows that a 40-year-old single person earning \$40,000 that is saving at a rate of 10 percent of their earnings each year, over a period of 28 years (and therefore retiring at age 68) should be able to generate sufficient income to meet necessary living expenses. The yearly savings target rises to 21 percent for a couple whose household income is \$40,000.

For a 40-year-old considering postponing retirement to age 73, our analysis shows that a single person earning \$40,000 that is saving at a rate of 6 percent of earnings each year, over a period of 33 years, should be able to generate sufficient income to meet necessary living expenses. The yearly savings target rises to 13 percent for a couple whose household income is \$40,000.

2. Background

This report examines the financial adequacy of retirement preparation for those individuals expected to retire in 2030. Households with two different income levels were considered:

- those earning the Average Industrial Wage (AIW), which stood at approximately \$40,000 in 2005; and
- those earning twice the AIW – approximately \$80,000.

Different compositions of households were considered, including those with one or two individuals and one or two income earners.

The sources of retirement income considered were OAS, C/QPP, Registered Pension Plan (RPP) either defined benefit (DB) or defined contribution (DC), RRSP and home equity. No consideration was given to other potential sources of income such as non-registered investments, inheritances or lottery winnings. For each household, all the available sources of retirement income were identified and the projected level of retirement income was calculated, based on collected data and some reasonable assumptions. Expenses for necessities were projected to 2030. Estimated income, in 2030, was then compared to estimated expenses to determine whether there was a gap. If a gap existed, then the required rate of additional annual savings was calculated in order to eliminate the gap, i.e., so that projected income would equal projected expenses in 2030.

Our analysis takes into consideration two different projections for expected inflation (that is, the rate of increase in the Consumer Price Index) from 2005 to 2030: a low inflation assumption of 1.43 percent per year, and a moderate inflation assumption of 2.53 percent.

For the purpose of the research, it was assumed that all forms of savings would be converted at retirement into a stream of lifetime income indexed to inflation (an indexed annuity). For example, home equity would be realized by selling the home and purchasing an indexed annuity. As it is unlikely that all retirees would consider this to be a desirable option, there is an opportunity for the development of products that enable retiring Canadians to access some of the equity in their home without selling it, and to guard against living beyond the extent of available equity.

3. What We Examined

The Canadian pension system is built on four pillars:

- Old Age Security, and the Guaranteed Income Supplement (funded through general tax revenues);
- the Canada Pension Plan/Quebec Pension Plan (funded through contributions by workers, their employers and the self-employed, and intended to replace about 25 percent of average pensionable earnings up to the Average Industrial Wage);
- private pensions:
 - employer pension plans (Defined Benefit and Defined Contribution plans);
 - registered retirement savings plans (RRSPs); and
- personal savings.

OAS and C/QPP are not fixed amounts for all persons. OAS is dependent on the period of Canadian residency and C/QPP are dependent on the number of years of participation in the plan and the level of earnings while participating. For someone considered to have lengthy participation in both plans, together, the OAS and C/QPP provide a basic level of income in retirement that is roughly equal to the Low Income Cutoff, a measure often used to define poverty levels in Canada. As such, these programs have been designed to provide only a modest base upon which individuals are expected to build their retirement income through additional, private savings. In our research, we modeled different periods of participation and earnings history.

As indicated above, our report looks at the financial adequacy of retirement preparation for those individuals expected to retire in 2030; in other words, to determine the degree to which people are saving — through various means — to augment what they will receive from Canada's public pension system.

We developed a base case scenario — that is, how much income would OAS and C/QPP provide in 2030, and how would this measure up against what would be needed to cover basic necessities? We then determined for a 40-year-old the savings that would be needed on a yearly basis, for the next 25 years, in order to fill any gap. These annual savings rates are expressed as a percentage of gross wages, for those households earning the Average Industrial Wage (\$40,000) or twice the Average Industrial Wage (\$80,000). As is the case with all of the savings targets contained in this report, they are shown for two scenarios: low and moderate inflation.

Table 2. Household retirement saving levels by income levels and earners to retire at age 65 in 2030

Income of Household	No. in Household (At Retirement)	No. of Earners (Before Retirement)	Annual (Low Inflation)	Annual (Moderate Inflation)
\$40,000	1	1	14%	20%
	2	1	30%	44%
	2	1.5	28%	42%
\$80,000	1	1	5%	7%
	2	1	12%	19%
	2	2	12%	18%

Canadians retiring in 2030 can be expected to have adequate income to meet expenditures for household necessities, through the combination of government-provided and government-organized programs, such as OAS and C/QPP, and additional retirement savings, such as RPPs, RRSPs and home equity, provided they have followed a regular savings regime each year over a period of 25 years prior to retirement at age 65. For a household with earnings at the Average Industrial Wage level, additional annual savings from all sources of 14 percent for a single person or 30 percent for a couple would likely be adequate to supplement income from OAS and C/QPP, to meet household necessities.

We also looked at how savings targets would be altered when home equity is considered. Approximately 70 percent of the population of our study is projected to have home equity in addition to OAS and C/QPP. Based on our assumptions that home prices will increase at the rate of inflation, OAS, C/QPP, in combination with home equity will not provide sufficient income to meet necessary expenses for most — although it plays a major role in narrowing the gap. The following table indicates how the yearly savings targets in the base case are altered with the assumption of home equity.

Table 3. Household retirement saving levels by income levels and earners to retire at age 65 in 2030 — taking into account home equity

Household No. in Household	(At Retirement) No. of Earners	(Before Retirement) Annual	(Low Inflation) Annual	(Moderate Inflation)
\$40,000	1	1	5%	9%
	2	1	21%	33%
	2	1.5	19%	31%
\$80,000	1	1	—	1%
	2	1	8%	13%
	2	2	7%	13%

Given the high percentage of Canadians who appear to require some portion of their home's equity to provide adequate retirement income, governments could consider making interest paid on the mortgage on a principal residence tax deductible. Assuming that the interest on a \$100,000 mortgage payable over 25 years was tax deductible and that the tax savings were invested to provide retirement income, the annual retirement savings requirements listed in Table 3 would each be reduced by approximately one percent.

In the absence of sufficient savings over the 25 year period contemplated in the base case, postponing retirement beyond age 65 might be necessary. As such, we looked at how the savings targets for a 40-year-old would be altered if retirement were delayed by three years, to age 68, and by eight years, to age 73.

For those wishing to retire at age 68, in order to be able to meet necessary expenses, annual savings for the 28 years (i.e., one still starts to save at age 40) prior to retirement at age 68, should be at approximately the following levels:

Table 4. Household retirement saving levels by income levels and earners to retire at age 68 in 2033

Income of Household	No. in Household (At Retirement)	No. of Earners (Before Retirement)	Annual (Low Inflation)	Annual (Moderate Inflation)
\$40,000	1	1	10%	14%
	2	1	21%	33%
	2	1.5	20%	31%
\$80,000	1	1	3%	4%
	2	1	9%	14%
	2	2	8%	13%

Should the decision be made to delay retirement for eight years, in order to be able to meet household expenses, annual savings for the 33 years prior to retirement at age 73 should be at approximately the following levels:

Table 5. Household retirement saving levels by income levels and earners to retire at age 73 in 2038

Income of Household	No. in Household (At Retirement)	No. of Earners (Before Retirement)	Annual (Low Inflation)	Annual (Moderate Inflation)
\$40,000	1	1	6%	9%
	2	1	13%	21%
	2	1.5	12%	20%
\$80,000	1	1	2%	3%
	2	1	5%	9%
	2	2	5%	8%

Our modeling assumed that investment returns will follow the projected yield curve for Government of Canada bonds adjusted for the low and moderate inflation assumptions. This suggests that the required annual savings amounts are conservative estimates. However, it should be remembered that the investment returns in the model are net of all expenses. By taking more investment risk and earning potentially higher returns, the required annual savings could reduce.

The following table shows the annual savings, for a 40-year-old, from all sources, for the 25 years prior to retirement at age 65, to supplement the OAS and C/QPP in order to be able to meet the necessary expenses, assuming that an investment return of 1 percent more per year could be achieved (compared to Table 2, which illustrates the base case).

Table 6. Household retirement saving levels by income levels and earners to retire at age 65 in 2030 if investment returns of 1 percent more per year were achieved

Household No. in Household	(At Retirement) No. of Earners	(Before Retirement) Annual	(Low Inflation) Annual	(Moderate Inflation)
\$40,000	1	1	12%	17%
	2	1	26%	39%
	2	1.5	24%	37%
\$80,000	1	1	4%	6%
	2	1	11%	17%
	2	2	11%	16%

Our base case shows the yearly savings targets that are needed in order to cover necessary living expenses — the minimum criterion for testing a household’s financial security. However, for many households, having sufficient income to allow for discretionary spending will be necessary in order to avoid a reduction in their standard of living. Many financial planners suggest that those planning for their retirement need to save enough to generate 70 percent of their pre-retirement income each year, in order to maintain their pre-retirement disposable income. There are a number of material expenses that do not continue after retirement. That is why one only needs a 70 percent replacement ratio to retain one’s standard of living. This is a crude measure which is dependent on the level of income and the number in the household. As can be seen from Table 1, necessary expenses are projected to be between 16 percent and 76 percent of pre-retirement income depending on income level and the rate of inflation. In order to provide a margin for discretionary spending regardless of income level and household composition, we looked at the annual savings rate required to provide 70 percent of pre-retirement income after taxes. what the yearly savings targets would be in order to provide a level of income which allows for discretionary spending.

The following table shows the annual savings requirement for the 25 years prior to retirement at age 65 if the objective is to have after-tax income equal to 70 percent of pre-retirement income.

Table 7. Household retirement saving levels by income levels and earners to retire at age 65 in 2030 to provide after-tax income of 70 percent of pre-retirement income each year

Income of Household	No. in Household (At Retirement)	No. of Earners (Before Retirement)	Annual (Low Inflation)	Annual (Moderate Inflation)
\$40,000	1	1	38%	80%
	2	1	34%	79%
	2	1.5	31%	77%
\$80,000	1	1	42%	84%
	2	1	40%	86%
	2	2	39%	85%

We next looked at the degree to which OAS would need to grow in order to provide sufficient income to meet necessary expenses, assuming no other savings. Our findings show that the OAS would need to be increased to approximately three or four times its current level, as shown in the following table:

Table 8. Multiple of OAS required to cover household necessities, with no other savings

Income of Household	No. in Household (At Retirement)	No. of Earners (Before Retirement)	Annual (Low Inflation)	Annual (Moderate Inflation)
\$40,000	1	1	4.27	4.25
	2	1	4.44	4.69
	2	1.5	4.23	4.48
\$80,000	1	1	3.07	3.05
	2	1	3.82	4.06
	2	2	3.78	4.03

In examining this option, it is important to note the yearly cost of OAS benefits: in 2005/2006, approximately \$29 billion in OAS payments were made to 4.3 million seniors. Given this, and the magnitude of the increases required, we do not anticipate the government being able to move in this direction.

4. Assessing the Gap

According to Statistics Canada, about 9.4 million households — or 70.6 percent — had some form of pension assets in 2005 — whether from workplace pension plans, RRSPs or RRIFs. In order to get a better sense of how households are saving for their retirement in 2030, we broke the overall population down into finer segments, excluding those earning below \$20,000, and those earning in excess of \$100,000. The remaining households are considered broadly representative of households earning between 50 percent and 250 percent of the Average Industrial Wage (AIW). Those households earning below 50 percent of the AIW were excluded, as it is assumed that they are not saving at sufficient levels and will likely require additional financial assistance from government sources in retirement. We excluded those above the range, as they are assumed to have the means to adequately finance their retirement.

In order to examine how well factors such as home equity, RPPs, and RRSPs are working in combination with OAS and C/QPP in terms of reaching the desired savings targets, we then analyzed 72 different household profiles. These profiles drew on different compositions of households and used current information regarding retirement plan participation and savings, combined with reasonable economic assumptions. Expenses for household necessities were projected to 2030. Projected 2030 income was then compared to predicted expenses to determine if there is a gap. If a gap emerged, then the required rate of additional annual savings was calculated in order to eliminate the gap, i.e., so that projected income will equal forecasted expenses in 2030.

Our modeling took into account average values for the various income sources that were measured — i.e., what we know today about the average value of home ownership, registered pension plan benefits and RRSP contributions. We excluded other potential sources of income such as non-registered investments, inheritances or lottery winnings.

Although it is not possible to estimate the percentage of the population that falls into each of the 72 profiles, the information that follows provides insight into the earnings and savings patterns of Canadians today.

The following table shows the proportion of individuals in selected income ranges participating in pension plans from 1996 to 2004. The proportion participating in a DB plan is decreasing and the proportion participating in a DC plan is increasing; that said, the largest category is those without a pension plan. It should be noted that the table below depicts broad averages by income. The rate of participation in DB plans in the public sector is approximately 80 percent, while the rate in the private sector is marginally over 20 percent. Statistic Canada's Pension Plans in Canada survey indicated that 39 percent of paid workers were covered by a registered pension plan in 2004 — down from 45.3 percent in 1991.

Table 9. Trends in workplace pension plan membership, 1996–2004

Income	RPP	1996	1998	2000	2002	2004
\$30,000- \$40,000	DB	39.86%	37.05%	35.21%	33.76%	33.47%
	DC	4.75%	5.39%	5.66%	5.95%	6.45%
	Other Plan	0.63%	0.69%	0.75%	1.06%	1.15%
	No plan	54.75%	56.87%	58.38%	59.28%	58.94%
\$80,000+	DB	49.03%	47.35%	46.85%	44.28%	43.04%
	DC	5.84%	6.89%	7.53%	7.80%	8.29%
	Other Plan	0.78%	0.88%	1.00%	1.39%	1.48%
	No plan	44.34%	44.88%	44.62%	46.59%	47.19%

(Source of Data: CANSIM data provided by Statistics Canada)

Distribution by RRSP

The following table shows the proportion of people who made a contribution to an RRSP in the year shown.

Table 10. Proportion of population who made a contribution to an RRSP, 1996–2004

Income	1996	1998	2000	2002	2004
\$30,000-40,000	46.46%	45.58%	45.23%	43.31%	42.67%
\$80,000+	80.73%	80.58%	79.18%	75.29%	76.77%

(Source of Data: Statistics Canada)

It should be noted that some of those contributing to an RRSP are also members of a workplace pension plan — as such, the participation rates for each should not be simply added together.

Distribution by Home Equity

The research paper *The Wealth of Canadians: An Overview of the Results of the Survey of Financial Security 2005* by the Pensions and Wealth Surveys Section of Statistics Canada shows that 69.2 percent of Canadians age 65 or older in 2005 owned a home and 88 percent of them did not have a mortgage. The median value of the principal residence for homeowners at age 65 or older was \$163,400.

5. What We Found

Not surprisingly, OAS and C/QPP by themselves provide insufficient income to meet the necessary living expenses. These programs have been designed to deliver income at approximately the Low Income Cutoff, which is one relative measure used in defining poverty. They have been designed to provide only a modest level of income.

Our analysis indicates that the following factors are key in determining the degree to which households can save adequately for their retirement.

Importance of Defined Benefit (DB) Plans

In order to determine the importance of workplace pension plans, we examined the level of benefits typically provided by a defined benefit plan, and compared this with those provided under a typical defined contribution plan. We used a final-average-pay plan providing 1.25 percent of earnings up to the Average Industrial Wage and 2 percent of earnings in excess of the Average Industrial Wage, for each year of service, as a typical DB pension plan. We used a contribution rate of 5 percent of each year's earnings as typical of a DC pension plan. We concluded that a single person who has participated in a typical DB pension plan for a long period prior to retirement, such as 25 years, could be expected to have earned sufficient benefits in combination with OAS and C/QPP to meet household expenses in retirement; however, if only one member of a couple has participated in a DB pension plan, additional savings will likely be required to meet this threshold. A single person who has participated in a typical DC pension plan for a similar period could still be expected to need additional savings in combination with OAS and C/QPP to meet household expenses in retirement. This is also true even if both members of a couple have participated in a DC plan.

The Role of Home Equity

As our analysis shows, home equity can have a very positive financial impact on the ability of individuals to narrow the gap between what they will receive from the public pension system, and the income they will need in order to cover necessary living expenses in retirement. And as discussed earlier, allowing the interest paid on mortgages to be deductible would further narrow the gap.

Given that approximately 70 percent of the population of our study is projected to have home equity, it appears that for a significant portion of Canadians, the adequacy of their retirement income will be dependent on the value of their home's equity. In a number of ways this makes the retirement decision a risky one. Property values, on average, have tended to increase over time; however, individual properties may decline in value. Although the long-term trend in property prices has been upward, there have been shorter periods of either significant decline or relatively flat prices. Although purchasing a home by paying a mortgage is a form of regular saving, because of the size of the mortgage relative to one's income, there may be little other available income for saving for retirement in any other vehicle. It is risky to have most of one's retirement savings in a single investment, especially an investment that may be illiquid and whose price may fluctuate.

There is considerable speculation on what the impact on house prices will be as the baby boom generation retires. Some argue that the baby boomers will all wish to sell their houses at about the same time, driving down prices. This would be cruel irony if those same baby boomers are counting on the value of home equity to provide adequate income in retirement. Others argue that in major urban areas house prices are undervalued, on a global scale, and that there will be continuing demand to reside in urban areas which will continue to drive house prices upward. Rather than adopt either of these views, house prices have been projected to increase at the rate of inflation.

The Role of RRSPs

The RRSP is a tax-effective vehicle for retirement saving, for most taxpayers. Contributions to the RRSP are tax deductible and accumulated funds in the RRSP are not taxed until withdrawn. However, for low income retirees who receive income-tested government assistance, such as the Guaranteed Income Supplement, the marginal rate of tax on withdrawals from an RRSP can be very high. Canadians, on average, have significant amounts of unused RRSP room available for retirement savings. There is a limit on the amount of new contribution room created for an RRSP each year of 18 percent of the previous year's earnings (less an adjustment for pension plan participation). Since 18 percent is less than certain of the contribution percentages required in addition to OAS and C/QPP to meet necessary expenses, as shown in the base case scenario, certain income-family-composition profiles, if only saving through an RRSP, will not be able to achieve adequate income.

The Overall Picture

It is not known what percentage of Canadians will fall into each income-family-composition profile in the year 2030. However, based on current data, we estimate that approximately one third of Canadian households may be saving regularly, from all sources, at the levels in this report stated as necessary to meet required household expenses, when combined with OAS and C/QPP. The following tables illustrate two profiles of households with a combination of savings expected to be sufficient to meet necessary expenses, in combination with OAS and C/QPP.

Table 11. Sample household profiles with sufficient savings

Income of Household	No. in Household (At Retirement)	No. of Earners (Before Retirement)	Retirement Age	Inflation Assumption	Home Equity	Pension Plan	Annual RRSP Contribution
\$40,000	2	1	68	Low	Yes	No	14%
\$80,000	2	1	65	Moderate	Yes	Yes DB	0%

It is estimated that two thirds of households are not saving regularly, from all sources, at the levels in this report stated as necessary to meet household expenses, when combined with OAS and C/QPP. The following table illustrates four profiles of households with a combination of savings that would not be expected to achieve the required income necessary to meet household expenses.

Table 12. Sample household profiles with insufficient savings

Income of Household	No. in Household (At Retirement)	No. of Earners (Before Retirement)	Retirement Age	Inflation Assumption	Home Equity	Pension Plan	Annual RRSP Contribution
\$40,000	1	1	65	Low	No	No	10%
\$40,000	2	1	68	Moderate	Yes	No	10%
\$40,000	2	2	65	Low	Yes	1 Earner with DB	0%
\$80,000	2	1	65	Moderate	Yes	No	10%

Conclusion

The savings targets contained in our base case highlight the urgent need for individuals to save for their own retirement. To illustrate the magnitude, a single person earning \$40,000 needs to save between 14 to 20 percent of annual earnings to cover non-discretionary expenses in retirement, while a couple with a combined income of \$40,000 needs to save 30 percent or more. These targets are correspondingly higher if the goal is to have sufficient income to allow for discretionary spending.

The good news is that Canada's public pension system (OAS and C/QPP) is working as intended — in fact, the CPP has been put on such a sound footing that it is expected to be financially viable for the next 75 years. The bad news is that despite the fact that the public system is not designed to do it all, not enough households are getting that message.

With OAS and C/QPP geared to replacing only about 40 percent of the gross income (at the Average Industrial Wage) individuals must build upon this modest income through some combination of the following: workplace pension plans, RRSPs, home ownership, and personal savings.

However, while some are on track, we estimate that about two-thirds of Canadian households are currently saving at levels that will not generate sufficient income to cover their non-discretionary expenses in retirement.

Our analysis shows that home ownership and workplace pension plans have the greatest potential to fill the gap. However, to be a viable retirement savings tool, home equity must be sufficient and be accessible when it is required to provide retirement income. Similarly, having a workplace pension plan isn't necessarily enough — much depends on the plan design, and a defined benefit plan has the potential to fill more of the gap than a defined contribution plan will.

For public policy makers, these findings suggest the need for greater education about the role that different savings vehicles can play in generating retirement income, and for consideration of

measures aimed at improving savings levels, such as the deduction of mortgage interest. They also underscore the desirability of reversing the trend of declining pension plan participation, especially in defined benefit plans.

Given our findings, the importance of individuals arranging for structured savings over the next 25 years, from a range of sources and at the levels outlined in our base case, cannot be stressed enough.

Project Team

The research was directed by a project team constituted by the CIA which included CIA members Doug Andrews, MBA, FCIA, Steve Bonnar, B.Math, FCIA and Robert L. Brown, Ph.D., FCIA.

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