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RETIREMENT SAVING AND INCOME

The Pressing Question: Does CPP Expansion Help Low Earners?

by

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- The agreement-in-principle between Ottawa and the provinces on an expanded Canada Pension Plan (CPP) will provide much larger CPP benefits in the future: one-third larger for low- and middle-earning workers, and 50 percent larger for high earners.
- Our analysis shows that the expanded CPP will deliver a serious boost to the gross CPP replacement rates of most young Canadians starting out their careers in the new program. However, many low earners don't need extra coverage and will see much of their boosted CPP disappear because of clawbacks that reduce the income-tested Guaranteed Income Supplement (GIS).
- This CPP-GIS interaction concern can be fixed by shielding low earners from expanded coverage and required extra contributions, or by exempting the expanded CPP benefits from the income test for GIS.

Federal and provincial finance ministers agreed in June to expand the Canada Pension Plan. Under the status quo, CPP offers a 25 percent replacement rate on earnings up to a cap of \$54,900. The expanded CPP will add a new tranche that raises the replacement rate to 33.3 percent up to a new earnings cap set 14 percent above the existing cap.¹ To pay for this, both employer and employee

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1 A targeted earnings cap of \$82,700 for 2025 (see the Department of Finance Background on the Agreement in Principle on Canada Pension Plan Enhancement http://www.fin.gc.ca/n16/data/16-081_1-eng.asp) is 114 percent of the projected Year's Maximum Pensionable Earnings (YMPE) for the year 2025 in the 2012 CPP Actuarial Report (Office of the Chief Actuary, 2013).

contributions will be raised by one percentage point up to the existing earnings cap, and by four percentage points between the old and new earnings caps. This expansion will be phased in during the period 2019 to 2025 for contributions, with benefits being phased in over the next 50 years commensurate to contributions paid.

This reform will substantially raise expected CPP benefits for most young workers now entering the workforce. For lower- and middle-earning workers, the higher replacement rate leads to an eventual benefit increase of about 33 percent over existing CPP benefits.² For a high-earning worker, the maximum CPP benefits will increase more than 50 percent over the status quo. These expansions are large enough to make a noticeable difference for the younger generation of workers as the expanded CPP matures over the coming decades.

However, two important shortcomings of the new package hamper its effectiveness, both related to low earners.³

First, low earners are already well covered by the existing suite of public pension benefits – many now receive more income when retired than when working. Why expand coverage where it is not needed?⁴ As a contributory pension, the CPP risks worsening the balance of income between working and retirement years for low earners.

Second, the income-tested withdrawal of some government-program benefits wipes out much of the impact of extra CPP benefits for many low-earners. Around one-third of Canadian seniors currently receive the income-tested Guaranteed Income Supplement (GIS), so concerns about interactions with income-tested benefits have a broad base.

To summarize these issues: expanding CPP for low earners risks making some Canadians pay for pension coverage they don't need. To make matters worse, extra contributions may reduce the living standards of low earners today for modest net rewards in retirement tomorrow.

The CPP agreement-in-principle reached by the finance ministers may address some of these concerns by offering an improvement to the Working Income Tax Benefit alongside the CPP expansion.⁵ It is possible that an expanded WITB could effectively counteract increased CPP contributions by some low earners, but no details of the WITB expansion have been provided to date. Nevertheless, low earners would still face the problem of CPP-GIS interactions that undercut the impact of expanded CPP benefits.

In this E-Brief, we calculate the net boost to retirement incomes that will result from the expanded CPP, taking into account the interactions with income-tested benefits. We find substantial differences in the net payoff from the expanded CPP for lower and higher earners. We then propose a fix for the low-earner concerns and show how it ensures more workers can benefit fully from the expanded CPP.

2 Here and throughout the paper, we use 'middle earning' to mean someone earning near the existing YMPE earnings cap (\$54,900), which is set by legislation to track the average full-time industrial wage. We use 'lower earning' to characterize someone substantially below the current YMPE. We use 'high earning' for someone above the new earnings cap (2016 equivalent of \$62,500).

3 See Milligan and Schirle (2014) and Wolfson (2013) for a broader discussion of these challenges for lower-earnings workers.

4 Ostrovsky and Schellenberg (2010) have found that the majority of couples with earnings in the first quintile have income replacement rates of 100 percent or more. Milligan and Schirle (2014) have shown how this relates to the generosity of the public pension system.

5 The technical backgrounder provided by Finance Canada claims "The Government of Canada will enhance the Working Income Tax Benefit to offset the incremental CPP contributions of eligible low-income workers."

Box 1. CPP, OAS and GIS Benefits

Status Quo CPP	<p>Offers 25% replacement rate on average earnings up to the Year's Maximum Pensionable Earnings (YMPE, \$54,900 in 2016). CPP Income is taxable.</p> <p>Contribution rate: 9.9% of payroll, shared by employer and employee. Employee contributions are eligible for a non-refundable tax credit for individuals.</p>
Expanded CPP: offered on top of existing CPP. Contributions phased in 2019-2025.	<p>Offers an extra 8.33% replacement rate on average earnings up to the new upper earnings limit (targeted to be \$82,700 in 2025; equivalent value of \$62,500 in 2016). Takes the CPP total replacement rate up to 33.33%. CPP Income is taxable.</p> <p>Contribution rate: 2% of payroll on earnings up to the YMPE and 8% of payroll on earnings between YMPE and new upper earnings limit, shared by employer and employee. Employee contributions to expanded CPP are tax deductible for individuals.</p>
Old Age Security	Offers a monthly benefit of \$573.37 in July 2016, reduced by 15% of income over \$73,756.
Guaranteed Income Supplement	<p>Offers a monthly benefit of up to \$856 for a single individual in July 2016. It is comprised of two parts:</p> <p><i>Basic GIS benefit:</i> Approximately \$723 per month in 2016. The basic benefit is reduced by 50 cents for every dollar of income (excluding OAS income) so that the benefit is reduced to zero when income is just over \$17,300.</p> <p><i>Additional GIS benefit:</i> Until June 2016, the additional benefit was about \$52 per month. In July 2016, the additional benefit is expanded to approximately \$132 per month for a single individual. The benefit is reduced by 25 cents for every dollar of income over \$2,000 (not including OAS income). It is completely clawed back when income reaches approximately \$8,300.</p> <p><i>Note:</i> Low-income seniors receiving the basic and additional GIS benefit will have their combined GIS benefit reduced by 75 cents for every extra dollar of income over \$2000.</p>

Methodology

We use pension income replacement rates to evaluate the long-run impact of CPP expansion. The benefits received in retirement are compared to earnings during the work life. So, someone with lifetime earnings in the \$40,000 range and \$30,000 in retirement benefits has a replacement rate of 75 percent.

We concentrate on the benefits received from the public retirement income system, including the Canada Pension Plan, Old Age Security and Guaranteed Income Supplement. We also consider cases with and without a workplace pension. The resulting calculation yields a net replacement rate that accounts for interactions between the various components of the retirement income system.⁶

⁶ Ideally, the net replacement rates should be calculated on an after-tax basis. However, to keep the analysis more intuitive and focused on the low-earner interaction concern, we have not included taxes in the analysis presented here. We have performed all the analysis presented here on an after tax basis as well. The main conclusions remain.

For the simulations of the expanded CPP, we envision a parallel world in which the expanded CPP has been in place forever. We then compare this scenario to the status quo world in order to understand the long-run implications of the expansion. We set aside transition issues for the purpose of this analysis and focus solely on the steady-state comparison of the fully phased-in CPP expansion to the status quo case.

We set the analysis in 2016, taking as given the existing parameters of the system.⁷ The new expanded CPP therefore extends up to an upper earnings limit that is 14 percent above today's \$54,900. For simplicity, we use a single person with constant lifetime earnings for the simulation. In other work we have shown the sensitivity of the analysis to these assumptions.⁸ The interaction between CPP benefits and income-tested benefits looks essentially the same whether the earnings and marital status are modeled in a stylized or more realistic manner. For ease of exposition, we have chosen the simplest assumptions here.⁹

We use average lifetime earnings in our analysis. In reality many people cycle in-and-out of low-earner status as their career progresses or they suffer from a bout of unemployment. These kinds of life-cycle earnings dynamics are easily considered within our framework: someone with some years of low earning and some years of high earning will on average look like a lifetime-average middle earner. In contrast, someone with most years in low-earning ranges will look most like lifetime-average low earner. The appropriate pension for low earners and high earners should depend on the proportion of one's career one spends at different levels.

Our analysis does not incorporate the value of CPP contributions or attempt a 'value for money' actuarial assessment or calculation of implicit returns. Our choice to limit the analysis to the retirement income replacement rate is motivated by the desire to shine a light on the importance of the structure of benefits for low-earning workers.

Income Replacement Rates

The expanded CPP raises replacement rates in different ways for those earning at different levels, and depending on whether they have other sources of retirement income. In Table 1 we first consider a few stylized illustrative examples.¹⁰

7 See footnote 1 for more detail on the expansion. Setting the analysis in 2016 avoids the issue of projecting what the OAS and GIS will look like decades in the future.

8 See Milligan and Schirle (2014).

9 We have also simplified the status quo CPP formula in our calculations. The true formula obtains an annual CPP benefit by multiplying an average of monthly pensionable earnings-to-YMPE ratios by one quarter of a five-year average of the YMPE (see Milligan and Schirle 2008). To keep our examples simple and more intuitive, we have used the ratio of average lifetime pensionable earnings to the YMPE multiplied by one quarter of the YMPE to obtain an annual benefit. The main conclusions on the CPP-GIS interaction stand up when we incorporate the actual YMPE averaging formula.

10 The other sources of retirement income are featured here because they affect the importance of the CPP-GIS interaction. The retirement income could be from a Registered Retirement Savings Plan, an employment-based pension plan, or other taxable retirement income. We chose the stylized examples with a workplace pension to simplify the exposition. It should be noted that workplace pensions among low earners are rare. Our examples are chosen to be illustrative of the impact of CPP reform at different earnings levels.

Table 1: Income and Public Pension Replacement Rates

Lower Earner: Average Earnings \$20,000				
	Ali: No Workplace Pension		Barbara: With Workplace Pension	
	Status Quo	Expanded CPP	Status Quo	Expanded CPP
Pension	\$0	\$0	\$10,000	\$10,000
CPP	5,000	6,667 (+33%)	5,000	6,667 (+33%)
OAS	6,863	6,863	6,863	6,863
GIS – Basic	6,165	5,331	1,165	331
GIS – Additional	833	416	0	0
Net Replacement Rate	94.3%	96.4%	65.1%	69.3%
Change	2.1%		4.2%	
Mid Earner: Average Earnings \$50,000				
	Cathy: No Workplace Pension		Denis: With Workplace Pension	
	Status Quo	Expanded CPP	Status Quo	Expanded CPP
Pension	\$0	\$0	\$25,000	\$25,000
CPP	12,500	16,667 (+33%)	12,500	16,667 (+33%)
OAS	6,863	6,863	6,863	6,863
GIS – Basic	2,415	331	0	0
GIS – Additional	0	0	0	0
Net Replacement Rate	43.6%	47.7%	38.7%	47.1%
Change	4.1%		8.3%	
Higher Earner: Average Earnings \$80,000				
	Edward: No Workplace Pension		Francine: With Workplace Pension	
	Status Quo	Expanded CPP	Status Quo	Expanded CPP
Pension	\$0	\$0	\$40,000	\$40,000
CPP	13,725	20,862 (+52%)	13,725	20,862 (+52%)
OAS	6,863	6,863	6,863	6,863
GIS – Basic	1,802	0	0	0
GIS – Additional	0	0	0	0
Net Replacement Rate	28.0%	34.7%	25.7%	34.7%
Change	6.7%		8.9%	

Source: Authors' calculations.

Consider first an individual (Ali) who earned \$20,000 annually and does not have a workplace pension. With the status quo target 25 percent replacement rate, Ali receives a CPP benefit of \$5,000 annually.¹¹ With the expanded CPP program featuring a 33 percent replacement rate, Ali receives an annual CPP payment of \$6,667 – a boost of one-third over the status quo. The expanded CPP does not affect his OAS payment, but does count as income for the purposes of GIS eligibility. With the expanded CPP, Ali's basic GIS benefit is reduced by \$833 (with the 50 percent GIS clawback rate on income). Moreover, his additional GIS benefit is reduced by \$417 (with the 25 percent clawback rate on income). As such, Ali's net gain from moving to the expanded CPP is really \$417, or an increase in his net replacement rate of only 2.1 percentage points. In other words, the total 75 percent clawback rate applicable for GIS benefits also claws back three-quarters of Ali's gain from the expanded CPP's higher replacement rate.

We next consider Barbara, who earned the same \$20,000 annually as Ali, but has a workplace pension that replaces 50 percent of her earnings. She enjoys the same CPP and OAS benefits as Ali. Her GIS benefits, however, differ from Ali because the GIS was already reduced to account for her workplace pension. The expanded CPP benefits only affect her basic GIS, leaving her with a net benefit from moving to the expanded CPP of \$834, which corresponds to an increase in her net replacement rate of 4.2 percentage points. In Barbara's case, the 50 percent clawback rate applicable to her GIS benefits also claws back 50 percent of Barbara's gain from the expanded CPP.

Many individuals with middle earnings, in the \$35,000 to \$55,000 range, are affected the same way as Barbara. Consider Cathy and Denis (Table 1) who both earned \$50,000 annually: the gain in CPP benefits is \$4,167 for both of them. Cathy, with no workplace pension, sees the gain in CPP benefits erode her GIS, while Denis with his workplace pension was out of the GIS clawback range even without the expanded CPP. The 50 percent clawback of Cathy's GIS means that her basic GIS benefits are reduced by one-half the gain in CPP – by \$2,083. So, her net replacement rate only rises by 4.2 percentage points. In contrast, Denis receives the full 8.3 percentage point boost to his net replacement rate.

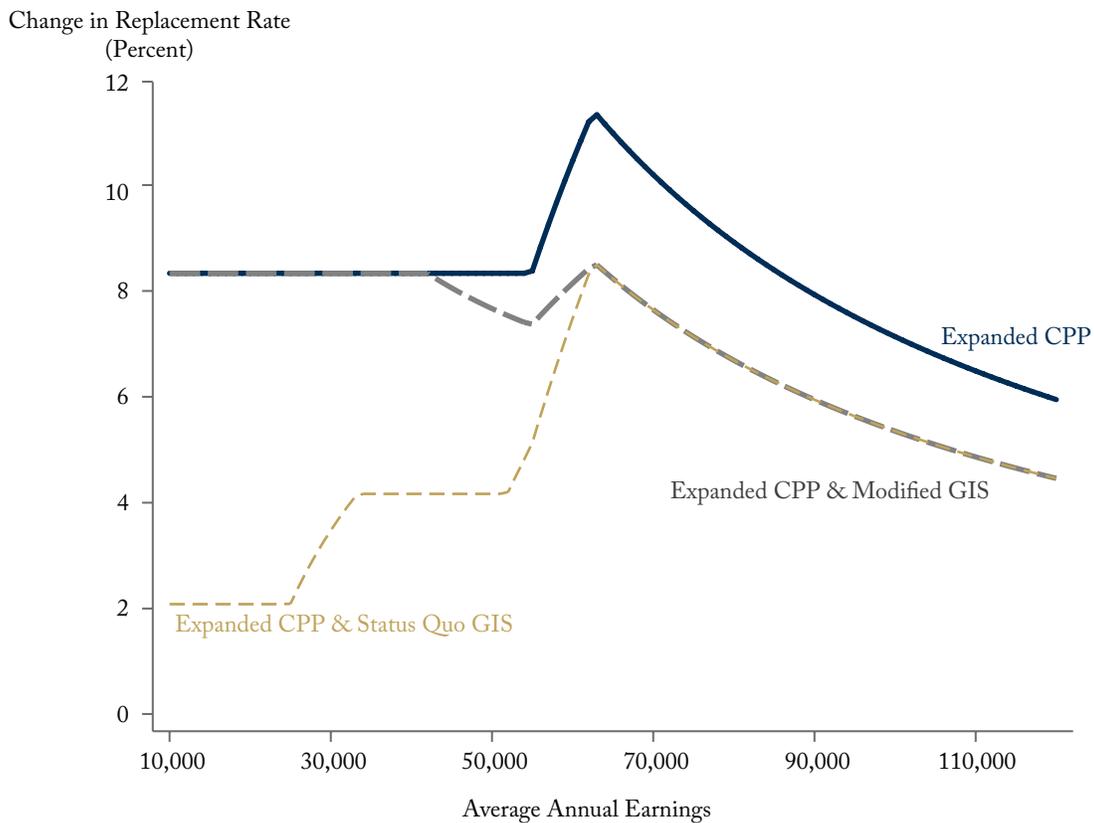
Finally, we consider Edward and Francine, who each earned \$80,000 annually (which puts them above the new upper earnings limit). So, they will receive the maximum 52 percent boost from the expanded CPP. Edward was still receiving some GIS before the expansion, so the move to the expanded CPP doesn't deliver the maximum boost to his net replacement rate as he loses some GIS. Francine's workplace pension had her already out of GIS range, so she isn't affected by the CPP-GIS interaction for her expanded CPP benefits. Her net replacement rate rises almost 9 percentage points, reflecting both the higher 33 percent CPP replacement rate up to the Year's Maximum Pensionable Earnings and the expansion of coverage up to the new upper earnings limit.¹²

In Figure 1 we demonstrate the effects of moving from the status quo to the expanded CPP program for individuals across the earnings distribution. The solid line in figure 1 shows how much CPP's replacement rate increases, without considering the GIS. For workers like Ali or Cathy with earnings up to the current YMPE, the

11 See footnote 9 for our simplified CPP formula.

12 The 8.9 percentage points can be considered as a weighted average over the different ranges of Francine's income: a boost of 8.3 percentage points over the income range 0 to \$54,900, a boost of 33.33 percentage points over the range \$54,900 to \$62,500, and a boost of 0 points over the uncovered range between \$62,500 and \$80,000. So, plus 33.33 points over 68.6 percent of her income; plus 8.33 points over 9.5 percent of her income, and plus 0 over 21.9 percent of her income.

Figure 1: Change in Net Replacement Rates by Earnings Level



Source: Authors' calculations.

gross CPP replacement rate increases from 25 percent to 33.3 percent, or 8.3 percentage points. For individuals with average earnings above the YMPE like Edward, the increase in the CPP gross replacement rate rises above 8.3 percentage points because they are gaining a full 33 percentage points between the YMPE and the new upper earnings limit.

The gold dashed line shows how much the net replacement rate (accounting for GIS clawbacks) changes with the expanded CPP program. Among the lowest-income retirees like Ali, the clawbacks of both the basic and additional GIS lower the gain in net replacement rates down to 2.1 percentage points. Among those with modest earnings over their careers like Cathy (from roughly \$34,000-\$51,000), the basic GIS clawback leads to a gain in net replacement rates of only 4.2 percentage points. Finally, for individuals like Edward earning over \$51,000, the net replacement rate rises as the importance of GIS diminishes, with the gain in net replacement rate rising to about 8 percentage points at the new upper earnings limit.

Overall, there are two main results from the analysis so far. First, the expanded CPP will deliver a serious boost to the gross CPP replacement rates of most young Canadians starting out their careers in the new program. Second, for lower-earning Canadians, a substantial part of this boost is lost through clawbacks of GIS payments. While the promised changes to the WITB may provide some protection to lower earners when they make contributions to the expanded CPP, the analysis makes clear their gains from the expanded CPP are muted in comparison to middle and high earners.

Is there a way to fix this shortcoming of the expanded CPP? Figure 1 makes clear that the worst segment of the CPP-GIS interaction could be avoided with a higher starting point for earnings coverage in the new expanded CPP tranche. Starting the expanded CPP coverage at \$35,000 or higher, instead of covering all earnings starting at zero, not only would minimize the CPP-GIS interaction problem, but also would target the reform more effectively on the middle-earners for whom research suggests the pension-savings problem is most acute.

Given the rushed timeline and delicate inter-governmental consensus on the expanded CPP, changes to the earnings range covered in the agreement-in-principle may not be possible. For that reason, we also offer a forward-looking reform that could be implemented in the future to mitigate the impact of CPP expansion on low earners.

Our proposed fix for the expanded CPP low-earner concern is to exempt some amount of expanded CPP income from the clawback calculation for the GIS. This adjustment means that lower-earners would receive better value from their expanded CPP benefits; they would not see their expanded CPP benefits reduce their GIS payments.

In Figure 1, we have illustrated the implications of a \$3,500 GIS exemption for expanded CPP benefits. The grey dashed line indicates that for earnings up to \$44,000 the expanded CPP benefits fully flow through to recipients without any impact on their GIS. Above \$44,000 in earnings, the expanded CPP benefits exceed our proposed \$3,500 GIS exemption, so the dashed grey line reverts to the default case of the gold dashed line. The analysis shows that a relatively simple change to future GIS benefits can largely offset the deleterious impact on lower earners.

Conclusion

The CPP agreement-in-principle reached by Canada's finance ministers produced a large increase in CPP retirement benefits of up to 50 percent for middle and high earners. However, these CPP gains are severely limited for lower earners by interactions with the income-tested GIS. Offsetting some of the increased CPP contributions through larger WITB payments may help, but does not eliminate the shortcomings of the expanded CPP for lower earners.

We argue in this E-Brief that more attention to how the CPP affects low earners is necessary. Ideally, the earnings range covered by the CPP expansion should be shifted upward. Failing that, low earners can be helped through adjusting how the expanded CPP payments interact with GIS. Addressing the shortcomings of the expanded CPP for low earners ensures more workers can benefit from the expansion.

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