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PENSION PAPERS

The Public-Sector Pension Bubble: Time to Confront the Unmeasured Cost of Ottawa's Pensions

By

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- Fair-value accounting reveals Ottawa's employee pension obligations to be larger and more volatile than they appear, a problem shared by European and US state governments.
- The federal government's net pension obligation under the fair-value approach stands at almost \$208 billion – some \$65 billion larger than reported in the Public Accounts; to keep pace with benefit accruals and stop the gap from growing, contributions in the latest fiscal year would have had to be almost double what was actually paid in.
- Taxpayers risk finding that responsibility to back-fill the funding hole falls to them – and potentially finding that fears of sovereign defaults by governments with opaque balance sheets and big exposure to public employee pensions drive up the cost of borrowing.

Government employee pensions are rapidly emerging as a major fiscal problem.¹ Reducing these obligations is a priority for heavily indebted European countries, such as the United Kingdom, where a recent fair-value estimate of the unfunded obligations of national government pensions (Record 2009) put them at £1.1 trillion – some 40 percent higher than official figures. A similar look at US state governments puts their unfunded pension liabilities at close to \$3 trillion, more than twice their reported value (Novy-Marx and Rauh 2010). A recent issue of *The Economist* highlighted “the public-sector pensions scandal” on its cover, and speculated that US sovereign defaults might spark the next financial crisis.²

If this issue seems to have gone from obscurity to notoriety in a flash, it is because government sponsors of defined-benefit (DB) plans typically account for them using smoothed values for assets and, critically, making obligations look smaller by discounting them at interest rates that are arbitrarily higher than market rates. In the private sector, pension plan liabilities must be measured and funded on a “solvency” basis, using the market value of assets and discounting liabilities using yields based on long-term Government of Canada bonds. Taking the same fair-value approach to public-sector plans typically reveals their costs – and hence the exposure of taxpayers, who may have to cover unfunded obligations – to be more volatile and much higher than government financial statements show.

1 We thank Neil Record, and the members of the C.D. Howe Institute's Pensions Papers Advisory Group, especially Leo de Bever, Malcolm Hamilton, Ian Markham, James Pierlot and Terri Troy, for their comments. We alone are responsible for any errors and for the views expressed here.

2 *The Economist*. “Three-trillion-dollar hole: American states have promised their employees benefits they can't afford.” 14 October 2010.

Financial Impact of Fair-Value Approaches to Ottawa's Pensions

Canada's federal government is a case in point. Most federal employees have DB pensions, principally the Public Service (PS), the Canadian Forces (CF), and the Royal Canadian Mounted Police (RCMP) plans, along with special schemes for members of parliament and judges. For higher-income public servants, "retirement compensation arrangements" provide coverage at salaries above the maximum pensionable earnings under federal tax rules for registered pension plans. Some of these plans are partially funded, others completely unfunded. In the recently published Public Accounts for Ottawa's 2009/10 fiscal year, the balance sheet for these plans was as shown in the first column of Table 1.

Table 1: Federal Pension Plans Assets and Liabilities at 31 March 2010

	Public Accounts	Fair Value
Assets (1)	45.4	46.8
Liabilities (2)	-201.4	-254.5
Unamortized Estimation Adjustments	13.2	
Balance	-142.8	-207.8

Notes:

1. Includes investments and contributions receivable for past service.
2. Fair value estimated using methodology found in footnote 3, and explained in Laurin and Robson (2009).
3. Table may not add precisely due to rounding.

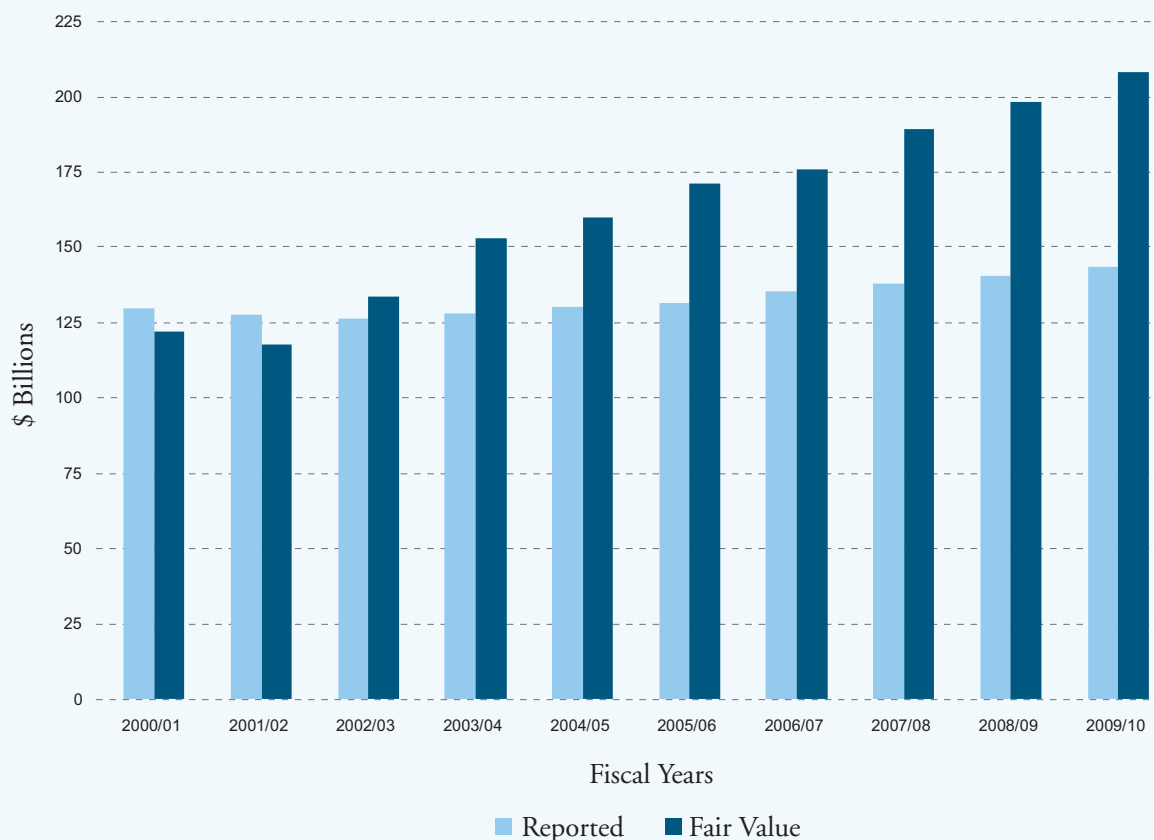
These Public Accounts figures are not what a fair-value approach would show. The \$45.4 billion asset figure is a smoothed value, based on expected returns "whereby the fluctuations between the market and expected market value are averaged over a five-year period, within a ceiling of plus or minus 10 percent of the market value" (RGC 2010, p. 2.18). This means that deviations in investment performance relative to expectations, especially those that create a gap greater than 10 percent between actual and expected market value, register with a delay. The market value for assets at March 31, 2010, appears in the second column of the table.

More importantly, the federal government arrives at the \$201.4 billion liability figure by discounting its accrued benefit obligations using notional interest rates. One of these – a legacy from before April 2000, when federal pensions were completely unfunded, and Ottawa needed a benchmark to track its accumulating obligations – is the interest rate on 20-year federal bonds for obligations arising from service before then. The other is the expected return, currently about 4.2 percent in real terms, on fund assets for benefits earned since April 2000. Neither rate reflects current reality. Deferred compensation is akin to a loan from employees to the government – in this case, a loan indexed to inflation and backed by taxpayers. For that reason, the best interest rate for discounting the obligation is the yield on federal real return bonds (RRBs).³ At the RRB rate on March 31, 2010 – 1.56 percent – liabilities for 2009/10 would have totalled about \$255 billion, as shown in the second column of Table 1.⁴

3 The suitability of yields on real-return bonds as a discount rate for government pensions is not universally accepted, but they are better than any alternative (Laurin and Robson 2009). It seems certain that any proposal to buy participants in these plans out at a rate above the RRB rate would encounter resistance. The thin float of these bonds is not an argument against using their yield, since that scarcity makes inflation protection more valuable; it is an argument for issuing more RRBs, which would be desirable in any event (Laurin, Robson, Busby and Poschmann 2010).

4 To convert the liabilities discounted at the government's rates to liabilities discounted at the RRB rate, we used the sensitivities to discount rates reported in the Public Accounts. In 2010, the Public Accounts (RGC 2010, p. 2.21) shows that a percentage point decrease in the discount rate increases the pension obligation by \$32.6 billion. We weight the discount rates for the superannuation accounts and the pension funds by their reported dollar values to get a single effective (real) discount rate for each year, and use the gap between that and the RRB yield to get the fair-value accrued pension obligation (Laurin and Robson 2009).

Figure 1: Net Federal Pension Obligation, 2001/01 to 2009/10: As Reported versus Fair-Value Estimate



Source: Public Accounts; authors' calculations as described in footnote 3, and explained in Laurin and Robson (2009).

The final entry in the first column of Table 1, “unamortized estimation adjustments,” is the portion of changes in asset values and liability estimates, using the government’s accounting, not yet reflected in the Public Accounts. The fair value column contains no such entry, because fair-value accounting recognizes all such changes immediately.

The government’s net pension obligation under the fair-value approach thus stands at almost \$208 billion – some \$65 billion larger than reported in the Public Accounts. This raises the net public debt by an equivalent amount. And, because the gap between reported and fair-value pension obligations has grown over time (Figure 1), these adjustments also change the annual budget balances. Since 2001/02, the Public Accounts show the cumulative budget balances to be almost exactly zero, with surpluses and deficits offsetting each other.⁵ The fair-value approach to pensions, by contrast, shows a cumulative deficit over that period of \$72 billion. In 2009/10 alone, the annual deficit would have been not the \$55 billion reported, but \$63 billion.

Funding Implications: The True Cost of Federal Pensions

The larger-than-reported gap between federal pension promises in these plans and the assets that back them is a problem, both for federal employees and for taxpayers.

For federal employees, the gap represents a risk if future taxpayers refuse to fill the hole left by inadequate contributions. Sensitivities provided in the Chief Actuary’s most recent valuations of the PS, RCMP and CF plans

⁵ We treat the relatively small figure “other comprehensive income or loss” item as part of the budget balance.

(OCA 2009a, 2009b, 2009c) suggest that backing their promises with RRBs would require eye-popping contribution rates: 35 percent, 41 percent and 42 percent of pay respectively.⁶ Actual contributions to these plans are currently 19 percent, 22 percent and 21 percent respectively (OCA 2009a, 2009b, 2009c), of which more than two-thirds is already borne by the employer – that is, taxpayers. So simply to keep pace with benefit accruals and stop the gap from growing, contributions in the latest fiscal year would have had to be almost double what was actually paid in, and filling that entire gap would require the federal government to borrow or otherwise find an additional \$65 billion over and above the \$143 billion unfunded liabilities already recognized in Canada’s national debt. Mitigating this risk would be a useful part of a larger reform of federal employee compensation to increase current compensation and adopt a pension model like the jointly governed, shared-risk plans that have proved successful elsewhere in Canada’s broader public sector.

Taxpayers face two types of risks. One is obvious: responsibility to back-fill the funding hole will fall to them. The other risk is more speculative: as debt levels rise, fears of sovereign defaults will likely drive up the cost of borrowing – for all governments, but particularly for those with opaque balance sheets and big exposure to public employee pensions. Europe’s less fiscally healthy governments now face double-digit borrowing costs and painful budgetary consolidations. US state governments may be next.

Fair-value reporting of Ottawa’s pension obligations, ideally in conjunction with supporting change in Canada’s public-sector accounting standards, plus a credible plan to manage the costs revealed by a proper measurement of pension liabilities, would help keep Canada off that list.

⁶ Although we do not pursue it here, we note that benefit accruals of this magnitude are far higher than the 18 percent of pay that the Income Tax Act permits for participants in defined-contribution and registered retirement savings plans. It is practically impossible for participants in money-purchase arrangements to achieve income replacement in retirement comparable to that available to participants in these federal plans.

References

- Laurin, Alexandre, and William Robson. 2009. "Supersized Superannuation: The Startling Fair-Value Cost of Federal Government Pensions." C.D. Howe Institute Backgrounder 122. Toronto: December.
- Laurin, Alexandre, William Robson, Colin Busby and Finn Poschmann. 2010. "Back to Balance: A Shadow Federal Budget for 2010." C.D. Howe Institute Backgrounder 127. Toronto: February.
- Novy-Marx, Robert, and Joshua D. Rauh. 2010. "Public Pension Promises: How Big Are They and What Are They Worth?" SSRN Working Paper, October and *Journal of Finance*, Forthcoming.
- Office of the Chief Actuary (OCA) 2009a. "Actuarial Report on the Pension Plan for the Public Service of Canada, as at 31 March 2008." Ottawa: Office of the Superintendent of Financial Institutions Canada.
- _____. 2009b. "Actuarial Report on the Pension Plan for the Royal Canadian Mounted Police, as at 31 March 2008." Ottawa: Office of the Superintendent of Financial Institutions Canada.
- _____. 2009c. "Actuarial Report on the Pension Plan for the Canadian Forces, Regular Force, as at 31 March 2008." Ottawa: Office of the Superintendent of Financial Institutions Canada.
- Receiver General for Canada. Various Years. *Public Accounts of Canada, Vol. 1: Summary Report and Financial Statements*. Ottawa: Minister of Public Works and Government Services.
- Record, Neil. 2009. *Public Sector Pensions: The UK's Second National Debt*. London: Policy Exchange.

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The C.D. Howe Institute launched the Pension Papers in May 2007 to address key challenges facing Canada's system of retirement saving, assess current developments, identify regulatory strengths and shortfalls, and make recommendations to ensure the integrity of pension earnings for the growing number of Canadians approaching retirement. The Institute gratefully acknowledges the participation of the advisory panel for the program.

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