

The Future of Public Employee Retirement Systems

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Chapter 10

The Outlook for Canada's Public Sector Employee Pensions

Silvana Pozzebon

Occupational pension plans are a key component of Canada's retirement income system. Assets held by occupational pensions or registered pension plans accounted for 60 percent of the total CAN\$1.9 trillion of assets amassed in the country's retirement programs in 2006.¹ Occupational pension plans of public sector employees in turn play an important role in the Canadian retirement regime. With almost two-fifths of Canada's retirement assets held by public sector pension funds, the latter represented the largest share of the country's pension assets in 2006 (Statistics Canada 2008). The nine largest Canadian pension funds were also associated with the public sector, accounting for 46 percent of the total market value assets of CAN\$693.1 billion accumulated in Canada's 100 top pension funds (in 2006).²

In terms of employment, the public sector corresponded to 21 percent of the Canadian paid labor force in 2006.³ This sector includes civil servants and employees of government enterprises at various levels (federal, provincial, territorial, and local), as well as provincial and territorial employees of publicly-funded educational, health, and social service institutions.

The turbulent employment and market environments of recent years have spurred considerable interest in occupational pensions in Canada among practitioners, policymakers, and a few researchers. One area that remains largely unexplored concerns public sector employee pension plans, the subject of this chapter. In what follows, we first examine the relative importance of public and private sector employee pension plans in Canada and review their general characteristics drawing largely from administrative data collected by Statistics Canada (various years) through the *Pension Plans in Canada Survey*. We then turn to a discussion of funding issues and other challenges faced by public sector plans.

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Registered pension plans (RPPs) are the most common type of occupational pension arrangement in Canada.⁴ For reasons of simplicity, RPPs will be referred to as either occupational pension plans or employer-sponsored pension plans in what follows. Voluntarily-sponsored by employers or unions, RPPs must comply with federal income tax law to obtain favorable tax treatment for both employer and employee contributions within stipulated limits, as well as for investment earnings. RPPs are also subject to minimum standards prescribed by federal and provincial pension regulations. Some public sector employee groups (e.g., civil servants, teachers, and members of legislative assemblies) are covered by special pension statutes. These employee groups under special statutes differ among jurisdictions and in some instances, there is a degree of complementarity between special statutes and the general pension legislation applicable in the jurisdiction.

As Table 10-1 shows, a number of parallels can be drawn between the registered pension plan membership distribution of public and private sector employees. The 5.8 million Canadian RPP participants at the beginning of 2007 were almost evenly divided between the public and the private sectors. Moreover, the share of pension plan membership as a percentage of the country's paid workers was also similar in the two sectors (18% for the public sector versus 20% for the private sector). Differences in membership distribution between the sectors exceed similarities however. Public sector plan membership appears to be heavily concentrated (Table 10-1), with three-fifths of public sector RPP members employed by provincial government bodies or enterprises at the beginning of 2007. Analysis of additional data not reported in Table 10-1 indicates that the vast majority of public sector RPP members were found in two industrial classifications: 67 percent in public administration and 26 percent in educational services, health care, and social assistance.⁵ By contrast, private sector plan members work in a wider range of industries with the largest proportions being in manufacturing (25%), followed by trades (18%), construction (13%), and finance (12%).

Membership gender patterns between the public and private sectors also diverge, as shown in Table 10-1. Sixty percent of public sector plan participants were female with proportions reversed in the private sector where 62 percent of members were male. These numbers do not reveal the fact that females represent a steadily growing share of plan members in both sectors over time. The proportion of females in the public sector increased from 37 percent in 1974 to 60 percent in 2007, while in the private sector, the proportion almost doubled from 20 to 38 percent during

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TABLE 10-1 Overview of public and private sector Registered Pension Plans (RPPs), Canada, 2007 (at January 1)

	<i>Public (%)</i>	<i>Private (%)</i>
Active members in RPPs (total: 5.8 million)	47	53
Number of RPPs (total: 18,594)	7	93
Male members in RPPs (total: 3.0 million)	36	64
Plan assets as % of reserves held in all RPPs (total: 1.1 trillion CAN\$, market value)	67	33
Members in sector:		
Members as % of Canadian paid labor force	18	20
Members as % of paid labor force in sector	86	25
Male	40	62
Sub-sector of employment		
Municipal	24	—
Provincial	59	—
Federal	16	—
Other	1	—
Plan size		
1–99 members	1	7
100–999	3	26
1,000–9,999	11	35
10,000–29,999	12	11
30,000+	73	21

Sources: Author's calculations based on Statistics Canada (n.d. Table 183-0002, n.d. Table 280-0009, n.d. Table 280-0010, n.d. Table 280-0012, n.d. *Proportion of Labour Force and Paid Workers Covered by a Registered Pension Plan [RPP]*).

the same period.⁶ Among the explanations cited for this trend are the growth in female labor force participation, and employment shifts away from male-dominated areas such as heavy industry and manufacturing to female-dominated service industries (Schembari 2006).

The table also reveals that, compared to the private sector, most public sector plan members were concentrated in large plans. Almost three-quarters of the public sector members were in plans of 30,000 or more, whereas more than two-thirds of private sector members were in plans of 10,000 or fewer. These figures are consistent with the fact that plans in the public sector represented only 7 percent of the 18,594 RPPs in Canada at the beginning of 2007.⁷

Perhaps the most telling distinctions between the public and private sectors emerge from a study of RPP coverage rates. At the end of 2006, total RPP participants in Canada represented 38.1 percent of paid workers.⁸ The RPP coverage rate fell from 44.7 percent in 1981 to 38.1 percent in 2006, with a consistent downward trend discernable since the early 1990s

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(see Figure 10-1). The decrease in overall RPP coverage rates in Canada has been driven by developments in the private sector. The proportion of private sector paid workers who were members of employer-sponsored pension plans has eroded slowly since 1991 from percentages in the mid- to low-thirties during the 1980s to 25 percent at the end of 2006. By comparison, the share of public sector paid workers in RPPs experienced a one-time jump from 76 percent in 1989 to 84 percent in 1991, rose slowly until 1999 and has been relatively stable since. As such, the 86 percent coverage rate at the end of 2006 for the public sector stands in sharp opposition to the situation in the private sector where only a quarter of the paid labor force is covered by an occupational pension.

Several explanations have been offered for the decline of private sector pension coverage in Canada. Among these are the structural shifts in employment as mentioned earlier, complex legal requirements which added to pension administrative costs, and an uncertain economic environment increasing the financial burden of pensions for employers. Differences in unionization rates between the private and public sectors may also be telling since unions have traditionally sought to secure pensions

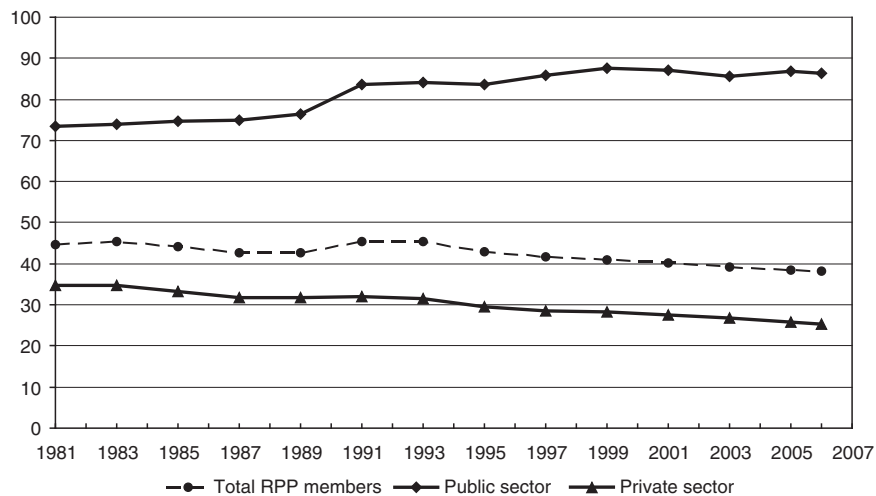


Figure 10-1 Percentage of paid workers covered by a Registered Pension Plan (RPP), total and by sector, Canada: 1981–2006. *Sources:* Total percentages: 1981–2003 data from Statistics Canada (2006*b*); 2005 data from Statistics Canada (2007*a*); 2006 data from Statistics Canada (n.d. Proportion of labour force and paid workers covered by a registered pension plan). Sector percentages: Author's calculations using: sources cited for total percentages; Statistics Canada (n.d. Table 183-0002, n.d. Table 280-0009); Statistics Canada (2006*a*).

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for their members. In fact, union density is fairly high in the public sector and has remained relatively stable at a little more than 70 percent (71% in 2006) since 1984. On the other hand, union density is considerably lower in the private sector and has decreased from 26 percent in 1984 to 17 percent in 2006 (Akyeampong 2004; Statistics Canada 2007*b*). Although a direct relationship cannot be established between RPP and union membership trends on the basis of these figures, it is interesting to note the parallels. Finally, the boost in public sector coverage in the early 1990s has been related both to the growth in female membership and changes to pension law extending RPP membership to part-timers (Schembari 2006).

Characteristics of public and private sector plans

General Plan Features. At the beginning of 2007, single-employer plans accounted for three-quarters of all the 5.8 million RPP members in Canada. Although slightly more than half of all single-employer plan participants worked in the public sector, the vast majority (89%) of this sector's members were in single-employer plans (Table 10-2). The normal retirement age of a small fraction of public sector plan members (15%) is set at the relatively early age of 60; it is 65 years of age for virtually all (96%) private sector plan members. Information on early retirement provisions is no longer made available. However, the author has not found evidence to dispute past evidence showing that unreduced early retirement benefits are prevalent in the public sector. Access to such benefits can be based on age and/or number of years of service combinations, such as the 55/30 rule for Canadian federal civil servants.

Table 10-2 also reveals that pension plans of the defined benefit (DB) type remain prevalent among Canadian RPP members, particularly among those who work in the public sector. Respectively, 81 percent of all RPP participants and 93 percent of public sector plan members were covered by such savings arrangements at the start of 2007.⁹ DB plans have especially stood the test of time in the public sector. As Figure 10-2 shows, they have represented over 90 percent of the sector's members for over three decades even if a slight downward trend is perceptible. The percentage of private sector plan members in DB plans also remains important (67% at the beginning of 2007), but the decline is more pronounced than in the public sector. During the period from 1974–2007, coverage in the private sector fell by 21 percentage points versus 6 percentage points for the public sector.

By contrast, the share of plan members from both sectors in defined contribution (DC) plans has increased, rising considerably more rapidly in the private sector than in the public sector. Rising to a peak of 25 percent in

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TABLE 10-2 General characteristics of public and private sector registered pension plans, Canada 2007, at January 1 (percent of members)

	<i>Public</i> (2,730,676 members)	<i>Private</i> (3,037,604 members)
RPP members in single employer plans (total:4.3 million)	56	44
Single employer plan members in sector	89	62
RPP members in DB plans (total: 4.6 million)	56	44
DB plan members in sector	93	67
RPP members in DC plans (total: 0.9 million)	15	85
DB plan members in sector	5	25
Normal retirement		
Age 60	15	2
Age 65	80	96

Sources: Author's calculations based on Statistics Canada (n.d. Table 280-0012, n.d. Table 280-0013, n.d. Table 280-0016, n.d. Table 280-0024).

2007, the proportion of private sector plan members in DC plans was almost three times as high as it was in 1974 (9%). The public sector's share of members in DC plans was only 5 percent at the beginning of 2007 and this represented a decline of 1 percent from the previous peak. Additionally, data not presented here indicate that a small but rising percentage (from

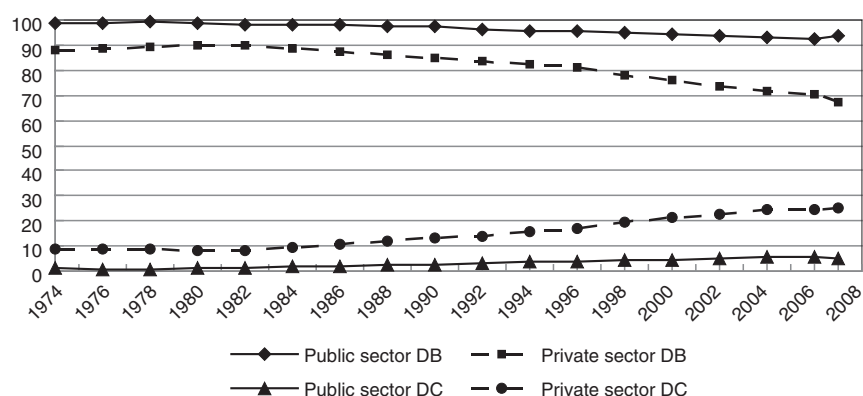


Figure 10-2 Percentage of registered pension plan members in defined benefit and defined contribution plans by sector, Canada: 1974–2007 (at January 1). Source: Statistics Canada (n.d. Table 280-0016).

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1% in 2000 to 4% in 2007) of overall RPP members are covered by some sort of defined benefit/defined combination arrangement, and much of this change appears to be concentrated in the private sector.¹⁰

The trends noted in the earlier paragraphs are consistent with the movement discerned internationally regarding the shift from DB to DC plans, even if the latter is less marked in Canada than elsewhere (Schembari 2006). However, the growing importance of plans of the DC type in Canada is not entirely captured by statistics on RPPs as these do not include one increasingly popular retirement savings arrangement offered by private sector employers, *group registered retirement savings plans* (see Pozzebon [2005]).

Defined Benefit Plan Features. The overall generosity of RPPs of the DB type is higher for the public sector than the private sector, as is indicated in Table 10-3. Two factors likely explain this outcome. First, unlike the private sector, essentially all public sector plan participants must make contributions; and second, these are relatively more substantial in the public sector (contributions are discussed in more detail in the following text).

At the beginning of 2007, the pension formula of a representative public sector worker was based on a calculation using 2 percent of the average of the best four to five years of earnings.¹¹ By comparison, the benefit formula of only 58 percent of private sector plan members was earnings-based, with the remaining plans providing a flat benefit (and the latter are generally expected to result in lower pension benefits). The benefit calculation for private sector participants covered by earnings-based plans was also more varied: 66 percent were in plans using the average of best earnings which are likely to provide the most generous benefits in the earnings-based group; 14 percent were in plans using average of final earnings;¹² and 21 percent were in plans using average of career earnings, typically the least generous of the earnings-based group. Finally, the method for determining the pension benefit of slightly less than half of the private sector's members was based on a percent of annual earnings with 47 percent of this group covered by plans that used a multiplier of less than 2 percent.

Public sector employee pension plans were also relatively more generous than those of their private sector counterparts in providing automatic pension benefit adjustments that fully or partially compensate for increases to the consumer price index (CPI). The contrast between the two sectors is notable: the plans of more than three-quarters of public sector members included such an adjustment at the beginning of 2007, while those of approximately a sixth of private sector plan members did so. The share of members in both sectors belonging to plans offering benefit integration with the Canadian social security program—either the Canada Pension Plan (CPP) or the Quebec Pension Plan (QPP)—was important in both sectors, accounting for almost all public sector plan members and 74 percent of their private sector counterparts.

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TABLE 10-3 Design features of public and private sector Defined Benefit Registered Pension Plans, Canada 2007, at January 1 (percent of members)

<i>Benefit integrated with CPP/QPP**</i>	<i>Public (2,550,813 DB members)</i>	<i>Private (2,039,992 DB members)</i>
Benefit formula		
Flat benefit	0 ⁺	42
Earnings-based	100	58
Final average earnings	4	14
< 4 years	24	14
4 to 5 years	x	x
> 5 years	x	x
Average best earnings	93	66
< 4 years	7	22
4 to 5 years	92	76
> 5 years	1 ^E	2 ^E
Career average earnings	3	21
% Earnings per year of service	99*	48*
< 1.50	1 ^E	16 ^E
1.50–1.99	1	31
2.00	97	53
> 2.00	0	1
Automatic adjustment of pension to CPI	77	16
Full increase	39	13
Partial increase	54	79

Notes: Totals may not add to 100 due to rounding.

x Data not reported by Statistics Canada to meet the Statistics Act confidentiality criteria.

⁺ Data rounded to 0. Only 165 RPP members in the public sector are covered by a flat benefit plan.

^E Though data are not reported by Statistics Canada to meet the Statistics Act confidentiality criteria, percentage is estimated using data from remaining categories.

* Percentage calculated as follows: numerator is members in plans reported in the 'Total benefit rate based on percentage of earnings' category from Statistics Canada (n.d. Table 280-0022). This does not correspond to the numerator used for the 'earnings-based' entry in this table which is from Statistics Canada (n.d. Table 280-0017). Differences appear to be related to how hybrid and other combination plans are classified. Denominator is members in plans not classified as defined contribution in Statistics Canada (n.d. Table 280-0022) which includes hybrid and other combination plans.

** Percentage of members with benefit integration among plans classified under the category 'Total benefit rate based on percentage of earnings' from Statistics Canada (n.d. Table 280-0022). CPP is the government sponsored retirement income program for Canadians other than those living in Quebec. The latter are covered by the QPP.

Source: Author's calculations based on Statistics Canada (n.d. Table 280-0016, n.d. Table 280-0017, n.d. Table 280-0022, n.d. Table 280-0023, n.d. Table 280-0025).

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TABLE 10-4 Contributions to public and private sector Registered Pension Plans, Canada 2007, at January 1

	<i>Public</i>	<i>Private</i>
Employee contributions required (% of members)	99.7	64
Contributory plans based on % of earnings	89	59
Contributory plans based on variable rate	11	22
Employee contribution rate: % of earnings (% of members)		
< 5.0	1	48
5.0–5.9	6	33
6.0–6.9	12	16
≥ 7.0	81	3
% of contributions made by employer (total ER contributions 2007: CAN\$31.7 B)	64	84
Current service (net)	78	53
Actuarial deficiencies and unfunded liabilities	22	47

Source: Author's calculations based on Statistics Canada (n.d. Table 280-0018, n.d. Table 280-0026).

Contributions. Practically all public sector plan participants are in contributory plans (see Table 10-4). By comparison, slightly less than two-thirds of their private sector counterparts are required to make contributions. As to contribution levels, only 1 percent of the public sector membership made annual contributions of less than 5 percent of earnings to their pension funds at the start of 2007; 81 percent of members contributed at least 7 percent of earnings. The share of private sector plan members in these same two categories was quite different: 48 percent fell into the first group but only 3 percent into the second. Interestingly, the distribution of members in the 'employee contribution rate' categories presented in Table 10-4 is fairly representative of the longer term situation in the private sector but not so in the public sector. The 2007 figures resemble those of the 1990s more closely than the distribution of subsequent years which showed higher percentages of members contributing between 5–6.9 percent of earnings and a lower share contributing at least 7 percent of earnings. As will be discussed further in the following text, funding issues offer a likely explanation for these patterns.

Overall, Canadian employers and employees contributed CAN\$31.7 billion to pension funds in 2007. The relative percentage of contributions attributed to employers (versus employees) was lower in the public sector (64%) than in the private sector (84%). This difference may be partly attributed to the larger proportion of private sector members in non-contributory plans, which is consistent with employers assuming a

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larger share of overall costs. In fact, the proportion of contributions made by the sector's employers has been at least 70 percent in the period from 1974 to 2007 and remained consistently lower during the same time span in the public sector, ranging from 56 to 64 percent.

Consideration of the latter trends alone may be misleading, for example, if differences in contribution proportions between the sectors are merely reflecting dissimilar shares being allocated to funding liabilities. At first glance, Table 10-4 appears to support this premise. Yet additional analyses reveal that in both sectors, not only did the percentage of overall employer contributions reach a historic high in 2007, but more monies were being allocated to the reduction of pension deficits. With respect to the latter, the 47 percent figure reported on the last line of Table 10-4 represents a peak for the private sector. Similarly, the admittedly lower share of overall employer contributions in the public sector allotted to improve funding (22%) was also the highest it has been since 1993.¹³

Funding issues and other challenges

As the earlier discussion suggests, considerable effort has been expended in improving the funding situation of Canadian occupational pension plans in recent years. Much of the attention has been focused on the private sector, however. This is not unrelated to the stricter funding requirements imposed on the sector's employers and the implementation of special legislative measures to improve the solvency ratio of the plans they sponsor. Less is known about funding issues and developments in the public sector, so to these topics we turn next.

Trends in Public Sector Funding. Funding issues do not appear to have been much of a concern for most public sector pension plan sponsors in Canada as recently as 10–15 years ago. In the past, for instance, it was not unknown for governments to pay their share of retirees' benefits on a pay-as-you-go basis out of general revenue funds, where employee contributions were also deposited if they were not held in designated revenue funds invested in non-marketable government bonds. Such approaches to funding began to raise anxieties about the ability of public sector employers to secure the pension promise as demographic and economic conditions changed in the last two decades. Among the factors that appear to have played a major role were increased pressures for governments to balance budgets, the aging of the public sector workforce (many of whose members are part of the large baby boomer cohort), and increased life expectancies. Lobbying efforts by unions strongly established in the sector was another likely contributing factor.

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Several approaches, many of them interrelated, have been used in an attempt to improve the funding status of Canadian public sector pensions in recent years. The widespread move to market-based investment of public sector pension assets is the most visible. In many cases this has also involved the establishment of autonomous funded schemes (as opposed to non-autonomous consolidate revenue funds, for example) to which both employers and employees direct contributions.¹⁴

The well-known Ontario Teachers' Pension Plan Board, set up in 1990, was probably a precursor of these trends that grew slowly during the 1990s, developed momentum toward the end of the decade, and continue today. A brief look at the situation of some of Canada's most important public sector pensions is suggestive. For example, the decade of the 1990s saw the creation of other autonomous funds in Ontario such as the Ontario Public Service Employees Union Pension Trust (OPTrust) which invests and manages the Ontario Public Sector Employees Union pension plan monies. In 1999, the British Columbia Investment Management Corporation (bcIMC), an independent body which provides investment services for several of the province's major public sector unions, came into being. A few months later, in April 2000, the Public Sector Pension Investment Board was established for federal civil servants.

The creation of independent funded entities in Canada has further been associated with the establishment of joint trusteeship of pension funds, although the two movements are not entirely concurrent. The little information available on joint trusteeship suggests that the phenomenon has grown beyond the early stages. Penetration of joint pension plan governance is most prevalent among the large public sector plans of two of Canada's foremost provinces, Ontario and British Columbia. Information available from the National Union of Public and General Employees (2007), a federation of unions in Canada, provides a good overview of existing joint governance arrangements among its affiliates scattered throughout the country.¹⁵ The National Union of Public and General Employees (2007) also indicates that active lobbying has garnered commitments from the governments of at least two Atlantic Provinces to move toward joint trusteeship of public sector plans in these jurisdictions.

It is upheld that the joint trusteeship of pension plans implies a shared responsibility between the employer and employees that will result in the greater financial stability of the plan. From the employer's perspective, it can be argued that as an active participant with an obligation to assume half of the plan's liabilities, a union may interpret the notion of defending the interests of the employees differently than when it assumes solely a bargaining stance. For example, since pension costs cannot be as easily passed on to the employer in a joint trusteeship

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context, unions may pursue benefit improvements less aggressively at the expense of other considerations. Similarly, it may be that unions worried about securing the pension promise for their members will be in a better position to pressure reluctant employers to tackle funding questions.

Theory, of course, does not necessarily translate into practice. In the absence of any systematic data on the success of joint governance arrangements, the experience of several high-profile Canadian public sector plans that embrace joint trusteeship provides insights that inspire confidence in the approach (e.g., the Ontario Teachers' Pension Plan, the Ontario Public Sector Employees Union, and British Columbia's Public Service Pension Plan). Public documents testify to the efforts that are continuously being made to assure the financial health of these pension funds, some of which have been rather successful. There is also a noticeable transparency in the information provided, a factor probably not unrelated to the existence of joint trusteeship arrangements. In fact, several large public sector pensions under such agreements or the investment management entities with which they are associated, actively promote good governance practices among institutional investors. A glance at the membership list of the Canadian Coalition for Good Governance supports this.¹⁶

Investment Strategies. While little documentation exists to attest to the trends described earlier, Statistics Canada does collect data on trustee pension funds, that is, those that operate according to the terms of a trust agreement. These funds accounted for 75 percent of total RPP plans assets in 2006.¹⁷ As such, data on trustee pension funds provide valuable information on the investment strategies of occupation pension plans. This is especially true for public sector funds which held 65 percent of total trustee plans assets (CAN\$873.6 billion) in 2006.

Policy changes implemented during the early 1990s permitted many large public sector funds to invest in equities (Anderson 2006).¹⁸ As Figure 10-3 shows, this resulted in an increase in the proportion of assets held in stocks and a decline in that held in bonds at least until 1996. That year marked a shift in investment strategy, as fund managers attempted to reduce risk by diversifying plan portfolios. Consequently, exposure to stocks was lowered and that to pooled investment funds raised. The overall investment patterns for private sector trustee funds are generally similar to those of the public sector from 1996 onward (see Figure 10-4) except with respect to exposure to stocks and pooled investments after 2004. According to their decreasing importance in the portfolio mix, the public-private sector asset distribution in 2006 was: 33 percent versus 42 percent in pooled investments, 32 percent versus 30 percent in stocks, 23 percent versus 19 percent in bonds, and 11 percent versus 8 percent in other investments.

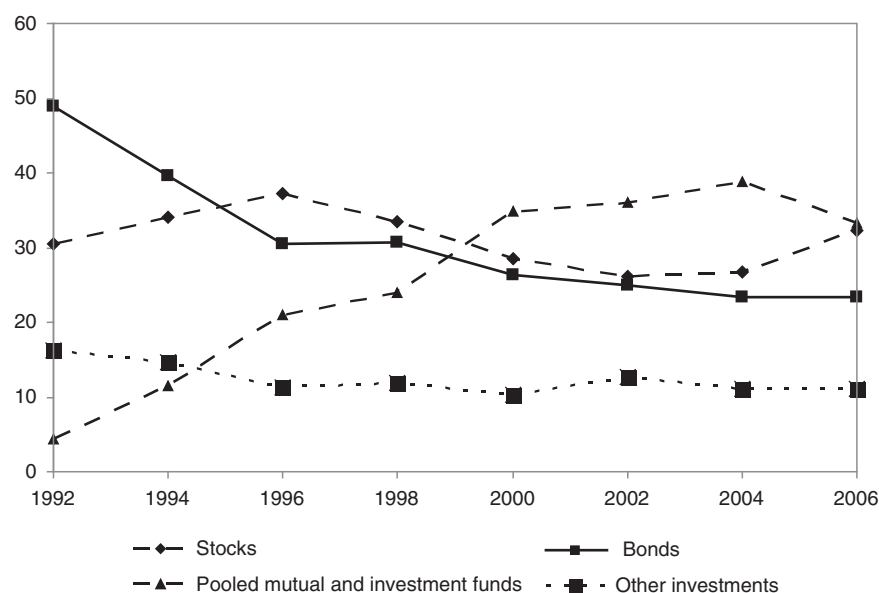
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Figure 10-3 Asset allocation of trustee public sector pension funds, Canada: 1992–2006 (percentage of total assets at market value). *Note:* Other investments include mortgages, real estate, cash, deposits, short-term funds, and miscellaneous assets. *Source:* Author's calculations based on Statistics Canada (n.d. Table 280-0005).

It is also interesting to note that a few of Canada's large public sector pensions have recently also become major players in the private equity market, by virtue of the investment sophistication they have developed and the size of their asset holdings.¹⁹ They are attracted to the potentially high returns private equity markets can offer and have participated in innovative private equity partnerships with foreign partners both in Canada and abroad. Alternative investments, particularly infrastructure assets are a draw for public sector pensions in search of long-term stable returns.

Challenges. Lacking systematic data available on funding ratios for Canadian public sector plans, attempts to qualify their overall financial health would be misplaced. Nevertheless, this author ventures to say that experience in this regard is likely quite varied, as is true of the private sector. Moreover, as the previous section suggests, there is a degree of convergence between the sectors with respect to investment strategy. On the basis of the widely documented vulnerability of private sector pensions to market volatility, it is clear that, as public pension funds assume investment

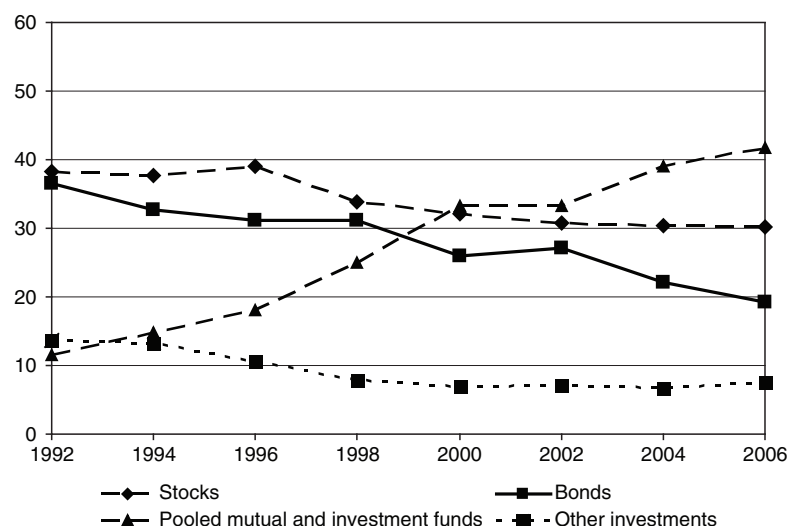
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Figure 10-4 Asset allocation of trusted private sector pension funds, Canada: 1992–2006 (percentage of total assets at market value). *Note:* Other investments include mortgages, real estate, cash, deposits, short-term funds, and miscellaneous assets. *Source:* Author's calculations based on Statistics Canada (n.d. Table 280-0005).

behaviors comparable to those of the private sector, they will face similar market risks and challenges.

Unlike private sector plans, it is improbable that those in the public sector will be confronted with a sponsoring employer's bankruptcy, but other employer-related funding threats exist. More specifically, governments at all levels still hold large pension liabilities. These amounted to CAN\$205.1 billion in 2006, with the federal government responsible for 64 percent of this total.²⁰ Note that liabilities at the federal level entail obligations that predate the move in 2000 to an autonomous funded pension arrangement.

There is reason for limited optimism in this area however. As the budgetary position of provincial governments has improved, several provinces have taken steps to reduce their pension liabilities (Lovely 2006).²¹ For example, the government of Newfoundland and Labrador directed a CAN\$2 billion transfer payment from the federal government to the elimination of the unfunded liability of the province's teachers' pension in 2005 and it has since moved to reduce its pension liabilities toward other public service employees using debt-financed payments. Canada's three other Atlantic provinces, as well as the governments of Manitoba and Quebec,

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have also taken steps to decrease public employee pension liabilities by making special payments.

The situation of Quebec is noteworthy. This province accounted for 77 percent of the CAN\$74 billion of pension liabilities accumulated by all governments other than at the federal level in 2006.²² To better assess the relative size of this liability, consider that at 36 percent, Ontario employed the highest proportion of Canada's public sector workers in 2006 relative to Quebec which took second place at 24 percent, and British Columbia which came in third at 11 percent. Yet, the Ontario government's pension liabilities represented only 3 percent of total non-federal pension liabilities and British Columbia held less than 1 percent.

In an effort to improve the funding situation of its public sector employee pensions, the Quebec government established a designated fund in 1993, the Retirement Plans Sinking Fund, to which it has since regularly made optional annual payments (Finances Quebec 2008). These special contributions have been financed by issued government bonds and, in turn, monies accumulated in the designated fund have been invested in a mixed portfolio by the Caisse de Depot et Placement. The Caisse has also managed assets originating from employee contributions since the early 1970s. As of March 2008, the Quebec government reported that it had met approximately half of its pension actuarial obligations and projects to reach its goal of 70 percent earlier than anticipated. Notwithstanding these promising results, it should be recalled that debt-financed schemes such as this one, which are based on the expectation that investment returns will exceed the cost of borrowing, carry their own risks.

Demographic issues also pose considerable challenges for public sector pensions. As is generally true of Canada's workforce, public sector workers are aging. Many of these are baby boomers, so they are moving toward retirement *en masse*. Consider further that the Canadian public sector experienced an important expansion during the late 1960s and into the 1970s. Add to this the prevalence of unreduced early retirement benefits and the provision of some measure of inflation protection in public sector pension plans, and longevity has also increased in the overall Canadian population during the last decades. Taken together, this particular confluence of factors appears to be putting important pressure on public sector plans.

Moreover, the large group of baby boomers that joined the ranks of the public sector at approximately the same time is nearing retirement age. Many of the sector's workers have accumulated sufficient credits to be eligible for unreduced early retirement benefits and it appears they are opting for this choice.²³ As such, not only will this large group receive pension benefits (generally with some measure of inflation protection whose costs

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are difficult to predict) during an extensive retirement period, but pensioners are expected to live longer than actuaries had predicted. Coupled with the demographically driven decrease in the workforce, a decline in the ratio of active members to retirees can be expected. Overall, this scenario suggests that there will be insufficient funds in many public sector plans to meet retirement benefit requirements in the future, particularly if the large unfunded liabilities accumulated by governments at various levels remain on the books.

No systematic study of Canada's public sector pension plans confirms these outcomes, but anecdotal evidence is suggestive. In a recent submission to the Ontario Expert Commission on Pensions reviewing the province's pension legislation, the OPTrust expresses the belief that the ratio of active members to retirees is falling for many public sector pension plans (OPTrust 2007). The OPTrust further provides evidence of its own declining membership ratio attributed in part to high early retirement take-up rates. In the same vein, the case of the Ontario Teachers' Pension Plan is particularly revealing.²⁴ This pension plan recently ranked as the top pension service provider in North America and internationally, has a reputation for being a successful institutional investor. It has made an annual average return of 11.4 percent since 1990, consistently outperformed market benchmarks and generated surpluses from 1993 to 2005. But Teachers' has been at odds with funding shortfalls more recently. These are attributed to the declining ratio of active members to retirees resulting from early retirements and the longer life expectancy of pensioners. Because of the low ratio of contributors to pensioners, taking on additional investment risk is perceived as a less than optimal solution. Teachers' also judges that contribution increases alone (these have already been raised for 2006–09) will make it difficult to assure the plan's future viability. It is currently studying the situation in search of more creative solutions.

As suggested earlier, turning to market-based investment of pension funds is a popular option for those seeking to improve or maintain the financial health of public sector pension plans. While a well-crafted investment strategy can prove beneficial, it may not be sufficient going forward. Moreover, the search for higher returns carries corresponding risks. Other solutions will have to be considered. Increasing contributions is one of the more obvious and some public plans have already taken this route, but this option can place a disproportionate burden on active members. Benefit decreases or restructuring as well as less favorable early retirement conditions are other alternatives. These longer-term measures will require membership and retiree education and careful consideration to assure the equitable treatment of all. Clearly, there is scope for creativity in the search

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for solutions that will not impose undue costs on active members, retirees,²⁵ or both.

Conclusion

This chapter has shown that Canadian public sector RRP's have retained their traditional characteristics until recently, offering generous defined benefits to the vast majority of the sector's employees. This outcome is associated with the fact that essentially all public sector pension plan participants are required to make substantial contributions to their plans.

Public pensions appear less static when funding issues are considered. Coverage rates for private sector workers have fallen over time and a rising proportion of this sector's employees are members of DC plans. Efforts to increase the financial health of these plans have seen many public sector funds mimicking the market-based investment behavior and structure of the private sector, with the inherent risks and successes this entails. Positive models of joint pension fund sponsorship have also emerged in the public sector. But, even for those who have been successful forerunners on all these fronts, the Ontario Teachers' Pension Plan being a case in point, demographics will continue to represent a formidable challenge. In this context, the large unfunded pension liabilities held by governments are an additional cause for concern.

Notes

¹ Author's calculations based on Statistics Canada (2008). In addition to occupational pensions, Canada has a two-tier social security component providing basic income for the elderly (a quasi-universal flat benefit and low-income supplements through the Old Age Security programs) and an earnings-based benefit through the Canada Pension Plan/Quebec Pension Plan schemes; and individual registered savings plans.

² Sector affiliation of pension plans and calculations by author based on Kranc (2007).

³ Author's calculations based on sources given in Figure 10-1.

⁴ An increasingly prevalent occupational pension arrangement in Canada's private sector is the form known as group 'registered retirement savings plans' (group RRSPs). These are not subject to pension regulation, offer tax exemptions only for employee contributions and are essentially pools of individual registered retirement savings plans (RRSPs) to which employers facilitate access. The overlap between individual and group RRSPs as well as the lack of category specific data on these two types of savings vehicles can justify classifying group RRSPs as individual savings plans rather than occupational pension arrangements. This approach is often adopted in Statistics Canada publications and we follow their example here.

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- ⁵ Figures for manufacturing and construction are estimated by the author since Statistics Canada did not report data for these sectors due to confidentiality constraints. See Statistics Canada (n.d. Table 280-0011).
- ⁶ Author's calculations based on Statistics Canada (n.d. Table 280-0008).
- ⁷ Interestingly, a third of the more than 17,000 private sector RPPs had only one member. Statistics Canada (n.d. Table 280-0010).
- ⁸ The unemployed, unpaid family members, and the self-employed with an unincorporated business are not considered paid workers.
- ⁹ Aggregate data on RPP membership from Statistics Canada (n.d. Table 280-0008).
- ¹⁰ Author's calculations based on data from Statistics Canada (n.d. Table 280-0016).
- ¹¹ To determine the benefit payable, this percentage is multiplied by the number of years of service.
- ¹² For two otherwise equivalent plans, if earnings in the final years before retirement are the highest, then final average earnings and best average earnings will yield the same pension benefit.
- ¹³ Author's calculations based on Statistics Canada (n.d. Table 280-0026).
- ¹⁴ The assets of the pension plan that regroups various categories of the province of Quebec's public sector employees, RREGOP, have been managed by the Caisse de Depot et Placement du Quebec since 1973. Since these assets represent monies originating only from employee contributions, RREGOP falls into a category distinct from those discussed in the paper.
- ¹⁵ See especially Appendix 3 of National Union of Public and General Employees (2007).
- ¹⁶ Interestingly, one of Canada's largest institutional investors of pension funds, the Caisse de Depot et Placement du Quebec, is absent from this list.
- ¹⁷ Author's calculations based on Statistics Canada (2008).
- ¹⁸ Much of this paragraph draws from Anderson's analysis (2006) of investment trends for total assets held in trustee RPPs funds.
- ¹⁹ This paragraph draws largely from Koumanakos (2007). The group of major players discussed here also includes the Canada Pension Plan Investment Board and the Caisse de Depot et Placement du Quebec which hold the assets of government administered social security programs.
- ²⁰ Author's calculations based on Statistics Canada (n.d. Table 385-0014).
- ²¹ This paragraph draws from Lovely (2006).
- ²² Data in this paragraph based on author's calculations using Statistics Canada (n.d. Table 183-0002, n.d. Table 385-0018).
- ²³ In 2007, the median age of retirement was 58.8 in the public sector and 62.4 in the private sector. Both sectors experienced a fall in the median retirement age during the 1980s (from the mid-1980s on in the public sector and a few years later in the private sector) to 1999, but the decline was more accentuated in the public sector. Since then the median retirement age has increased slightly in both sectors. Statistics Canada (n.d. Table 282-0051).
- ²⁴ This paragraph draws from Ontario Teachers' Pension Plan (2008a, 2008b).
- ²⁵ To avoid repetition, the URL for the E-STAT distributor is included in this reference only. The same URL applies for all subsequent references that mention the E-STAT distributor.

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