LE POINT SUR...

The Investment Policy of Canadian Pension Funds:

EVOLUTION AND CURRENT ISSUES

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The asset allocation principles to be followed by pension funds have recently recorded some important modifications on the international level. Canadian pension funds have also been subject to these evolutions.

The main modifications concern the gradual elimination of some portfolio constraints, with a trend towards the prudent management principle, the recent focus on asset-liability management techniques, due to the actuarial deficits currently recorded by defined benefit funds, the increasing role of alternative investments and active management, the revision of accounting principles, which should in the longer term influence the pension fund asset allocation in a measurable way.

This paper's objective is to present these evolutions from the Canadian perspective, and to analyze how they are influencing, and will probably influence, the asset allocation of Canadian pension funds. After describing the main issues, a statistical analysis of the Canadian pension fund investment policy in the period 1990-2005 is proposed, with the aim of determining its main characteristics, yet also distinguishing the consequences of the regulatory and practice evolutions previously described.

The main conclusions are that the bond proportion appears as relatively stable in recent years, so that the recent focus on asset-liability management techniques and the current trend towards fair value accounting have not yet led to a reallocation towards bonds. Second, one notes that the home-country bias is today relatively weak in the equity investment, yet very pronounced in the bond investment, so that the consequences of the elimination of the foreign-property rule should be recorded mainly in the bond investment. Third, one observes an effective, and increasing, investment in alternative assets, even if its proportion still remains relatively weak.

The paper is organized as follows. The first section focuses on the recent regulatory and practice evolutions in the Canadian pension sector. A statistical analysis of the characteristics of the asset allocation of Canadian pension funds in the period 1990-2005 is proposed in the second section. The last section concludes.

1. CURRENT ISSUES CONCERNING THE INVESTMENT POLICY OF CANADIAN PENSION FUNDS

The asset value of trusteed pension plans in Canada has greatly increased in the last twenty years.[1] It reached 688 billion Canadian dollars at the end of 2004, an amount representing 50 % of the GDP approximately (Tuer and Woodman, 2005). OECD (2005) gives a more precise evaluation of this proportion, which is to amount to 52.1 % of the GDP. One then easily understands the attention devoted to the asset allocation characteristics of Canadian pension funds, as a modification in its general trends (like, for example, a variation in the relative proportions of bonds and equities) can have a major impact on the functioning of financial markets, as well as on the public debt characteristics. In practice, one expects a trend of reallocation from equities to bonds. This evolution could destabilize the market of equities, yet also the one of bonds. The demand of bonds from pension funds in fact already exerts a downward pressure on long term interest rates (OECD, 2005), and this trend could become largely more pronounced.

1.1. The Canadian pension market structure : the relative weight of defined benefit and defined contribution pension plans

The authors mainly focus on the investment characteristics of defined benefit (DB) funds, because of their overwhelming weight on the Canadian pension market, when compared to defined contribution (DC) funds. Tuer and Woodman (2005) emphasize that DB plans manage 92 % of the total assets of trusteed pension plans at the end of 2002, which represents 512 billion of Canadian dollars, while DC plans and the hybrid ones manage 7 % or 42 billion dollars.

1. Trusteed pension plans are managed under a trust agreement. They are funded through contributions from the employer and possibly from the employees, these contributions being made to a trusteed pension fund (De Leon, 1996).

Even if 8055 DC plans and 7010 DB plans were registered in Canada in 2001 (the proportions being thus of 53 and 47 % respectively), the comparison of the participant number confirms the superiority of DB plans: 4,5 million of beneficiaries in DB plans, against 750 000 only in DC plans in 2001, the proportions being 86 and 14 % of the total of members respectively.

An upward trend is nonetheless to note for DC plans, with a doubling of the number of members between 1992 and 2001, while DB plans record a reduction of 300000 members in the same period (Investor Education Fund, 2003).

Let us emphasize that this overwhelming weight of DB plans, which characterizes the Canadian pension market, is not a common feature on other pension markets. Other countries, like the United States, rather recorded a gradual, pronounced decline in the weight of DB plans, coupled with a generalization of DC plans.

Brown and Liu (2001) give some explanation for this only slight reduction of the weight of DB plans in Canada. The authors focus on two main factors : regulation and tax legislation. In their analysis, the authors reason relative to the United States. The US Employee Retirement Income Security Act of 1974 introduced a strict and detailed regulation concerning the management of DB plans, and by so doing provided an incentive to choose the alternative financing vehicle ; Contrary to the United States, Canada has not imposed such a constraining regulation on the DB plan functioning. Furthermore, the US federal government implemented policies favoring DC plans (for example, the full-funding limitation introduced by the Omnibus Budget Reconciliation Act of 1987, which penalizes early or large distributions from DB plans through an excise tax). As to the tax legislation, Canada benefits from a more favorable tax treatment of employee contributions, when compared to the United States, which facilitates the implementation of these contributions, and thus a sharing, between the sponsor and the employee, of the financial cost of accumulating future pensions.

1.2. The regulatory framework : the portfolio constraints

1.2.1. The general management principle: the prudent person rule

The general management principle of pension plans in Canada takes the form of the prudent person rule. Introduced in 1985 by the Pension Benefits Standards Act (PBSA), it allows the introduction of a greater flexibility in the pension plan portfolio management. Following this principle, the pension plan manager must act with prudence and professional competence (De Leon, 1996).

Prior to the PBSA, the numerous and complex restrictions focused on each portfolio component separately. The eligible or qualified investments were clearly identified. The assets not falling in this category could represent up to 7 % of the book value of the pension fund. After 1985, one evolves to a total portfolio view, an investment being considered not with respect to its individual characteristics, but to its contribution to the total risk and return of the portfolio. Pension funds then benefit from a greater flexibility in the choice of their investments, which allows to conduct strategies compatible with the desired investment style or the liability characteristics.

Let us finally note that the prudent person rule requires a written description of the investment policy, a constraint which induced plan sponsors to more systematically apply modern financial management techniques, in particular the asset-liability ones.

1.2.2. The recent elimination of the foreign-property rule

The elimination of the foreign-property rule (FPR) in February 2005 can lead to modifications in the asset allocation of pension funds[2]. This rule, defining an investment constraint, determined a limit on the proportion of foreign assets in the book value of the fund total assets in order to benefit from tax exemption. This limit, fixed at 10 % in 1971, at 20 % since 1994, has been raised to 30 % in 2001. In practice, some possibilities existed to exceed this limit, by for example acquiring bonds in foreign currency issued by Canadian institutions. One could also use derivatives to reach this objective: By acquiring options, forward contracts, swaps on foreign market indices, foreign synthetic instrument portfolios could be created.

The impact of the elimination of the FPR is difficult to quantify, because of the existence of a strong home-country bias of institutional investors. It is possible that the main effect is recorded on the market of bonds (Kranc, 2005 ; Lewis, 2005), whose demand should increase in the future. Investing in foreign assets does in fact lead to several problems. These foreign securities are linked to a different economy, characterized by its own currency (against the variations of which one must hedge against), its interest rates, its inflation[3].

1.2.3. Some remaining quantitative investment limits

The investment possibilities of Canadian pension funds are nonetheless still limited by some quantitative rules (OECD, 2006b). Concerning domestic investment, no quantitative limits exist for investments in equities, bonds, retail investment funds, private investment funds, loans, bank deposits. Investment in domestic real estate is subject to a limit of 15 % if in resource property and 25 % if in real estate and resource property. No constraint currently applies to investment in foreign assets, whatever their category. As to maximum concentration rules, a maximum of 10 % of total book value of assets can be invested in securities of one company or person, while a 5 % limit must be respected when investing in a single property or in a resource property. Pension funds may own up to 30 % of voting shares of one company. Self-investment is permitted, yet limited to 10 % of the fund assets, securities having to be acquired on a public exchange.

2. See Burgess and Fried (2005) for an analysis of the costs and benefits of the FPR.
3. For a definition of the ideal portfolio mix of a Canadian pension fund after the elimination of the FPR, see Sasveld (2006).

1.3. The recent focus on asset-liability management techniques

1.3.1. The major problem of DB funds: the actuarial deficits

The major problem encountered by DB funds in recent years are actuarial deficits recorded in numerous funds, contrary to the end of the 90's, when large actuarial surpluses were frequently observed. Two main reasons can be invoked as an explanation for this underfunding : a pronounced downward trend on global equity markets in the period 2000-2002, leading to a reduction in the fund asset value, coupled with a decrease in long term interest rates, which increased the present value of liabilities.

Ambachtsheer (2004), basing on a sample of 68 Canadian DB pension plans of big size (whose total assets amounted to 300 billion Canadian dollars approximately), evaluates to nearly 30 % the lost in the collective financial position recorded in the three-year period going from 1999 to 2002. In this period, the fund assets yielded a median net return of only 1 % per year, while the fund liabilities increased by 10 % per year.

In spite of the increase in the fund asset value in the years following the stock market crash, due to the taking off on equity markets and the increase in contributions (the contributions to trusteed pension plans having more than doubled between 2000 and 2004), underfunding remains, because of the continuous decrease in long term interest rates. [4]

1.3.2. The necessity of a redesign in asset allocation rules: the focus on asset-liability management techniques

This situation of underfunding of future liabilities has led to a redesign of investment and risk management techniques, with an emphasis on techniques focused on liabilities: Historically paying attention mainly to the asset return, managers nowadays opt for asset-liability management methods (Parmar, 2007).

In the past, the asset allocation decision appeared as a trade-off between risk and reward of equities, which led funds to increase the proportion invested in equities during the 90's, in the objective of generating high returns, in order to reduce the necessary contributions. As a consequence, the asset allocation of the majority of Canadian DB plans was close to 60/40 (for equities and fixed-income securities respectively) since the mid-90's approximately (Tuer and Woodman, 2005).

Technically, the objective of a liability-relative investing is the maximization of the surplus of assets over the liabilities, for a given surplus volatility. In this framework, the performance measure is set not relative to the market, yet relative to liabilities [5].

A significant reallocation of assets cannot be observed in practice yet, because, among other things, of the necessity to first reduce the actuarial deficits via the generation of high returns. One can nonetheless expect, in a more of less immediate future, an increase in the proportion invested in fixed-income securities (Bisch and Kranc, 2006), which many consider as adequate for meeting the liabilities of the plan [6].

One should nonetheless emphasize that the supply of long term bonds appears as limited when compared to the asset value of the pension sector. Tuer and Woodman (2005) estimate that nominal bonds of more than 10 years and real return bonds of the Government of Canada amounted to 77,5 billion Canadian dollars in 2004, while the trusteed pension plan assets reached 688 billion dollars in the same year. The OECD, in its Newsletter from December 2005, also pointed out the relative scarcity of high-quality long term bonds, with respect to the future needs of pension funds. Let us finally note that the ageing of the working population and the higher maturity of pension plans shall render even more pronounced this demand for fixed-income securities in the future.

1.4. Other trends in the asset allocation principles

1.4.1. An increasing investment in alternative assets

An important evolution in the pension fund asset allocation consists in the increasing investment in alternative assets (Bisch and Kranc, 2006 ; Lewis, 2006) : These are real estate, private equity [7], hedge funds, infrastructure, raw materials. Alternative assets are nowadays considered as a third asset class, after equities and bonds, which is integrated in the total portfolio in the objective of reducing its volatility and/or increasing its return.

Tuer and Woodman (2005) emphasize the big gap between the proportions effectively invested in alternative assets and those desired in the longer term.

The existence of this gap stems from the frequent high complexity of these assets, necessitating a prior effort in acquiring the required qualification. It thus appears that numerous funds prefer a prudent approach, first investing small amounts, in order to test their ability to manage this asset type.

The investment in real estate, private equity and hedge funds has nearly doubled between 1999 and 2003 for Canadian DB funds. The resulting proportion nonetheless still represented less than 10 % of the total assets, with more than half of it invested in real estate.

1.4.2. An increasing role of active management

Active management plays an increasing role among Canadian pension plans. While passive management aims the generation of the market return (via an indexing on a market benchmark), active management has as its objective the generation of a return independent from the market direction, and builds on a superior information or qualification of the manager.

4. In November 2006, the Canadian government provided a temporary funding relief to defined benefit pension plans, by proposing four options to help fund the deficits.
5. Waring (2004a, 2004b) proposes a technical description of liability-relative management methods.
6. The need for reallocating assets towards bonds is a view largely shared by the pension profession. Yet some authors oppose this view. For example, El Mekkaoui de Freitas and Romaniuk (2006) present some arguments in this direction.
7. Chemla (2004) proposes a characterization of the investment in private equity and venture capital in Canada.

Figure 1: Evolution of the Canadian pension fund asset value in the period 1990-2005 (in millions of Canadian dollars)

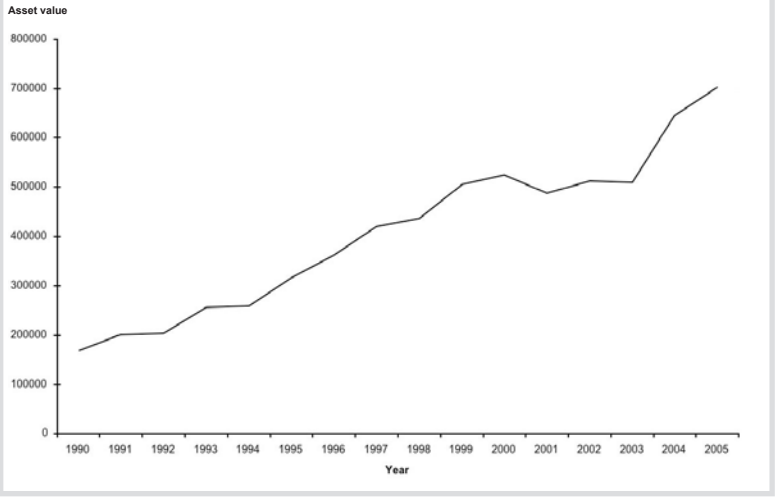
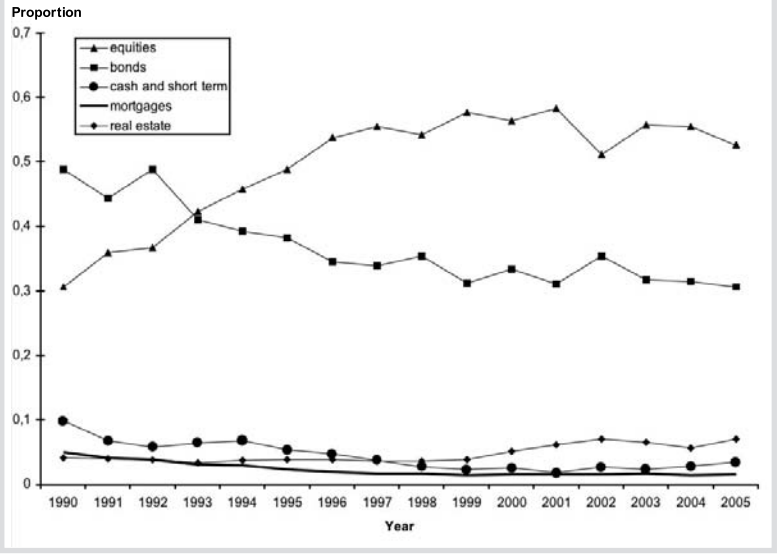


Figure 2: Evolution of the Canadian pension fund asset allocation in the period 1990-2005



1.5. The revision of accounting principles

One currently notes a trend of revision in accounting principles, aiming a compliance with the standards of the International Accounting Standards Board (IASB). The pension sector in Canada is thus seeking to adopt the fair value approach.

Parallel to this general principle revision, some current practices are being strongly criticized, and in particular the use of the equity risk premium (ERP) (i.e. the expected difference between the equity return and the riskless rate) instead of the market interest rate when discounting liabilities.

This debate is representative of a general evolution towards actuarial valuation principles compatible with the financial economics foundations. Yet in return, accounting documents of pension plans shall be subject to a greater volatility of marked-to-market values.

This accounting principle evolution could lead to a measurable impact on the asset allocation of pension plans. One expects that they will invest more in fixed-income securities, in order to reduce the volatility of their official results.[8]

Let us now proceed to a statistical analysis of the evolution of the Canadian pension fund asset allocation in the period 1990-2005.

2. STATISTICAL ANALYSIS OF THE EVOLUTION IN THE ASSET ALLOCATION CHARACTERISTICS OF CANADIAN PENSION FUNDS

The data used in this study are taken from the website of the Pension Investment Association of Canada (PIAC), which currently represents over 130 pension funds that manage total assets in excess of 790 billion Canadian dollars[9].

The analysis proceeds in four steps. The evolution of the total value of the assets invested by pension funds in the period 1990-2005 is first presented. The evolution of the asset allocation in the same period is then analyzed. The third subsection focuses on the characteristics of the allocation in 2005. Finally, the fourth subsection deals with the relative evolution of the components of the three main asset classes – equities, bonds and alternative assets – in the period 2000-2005.

2.1. Evolution in the value of the assets invested by Canadian pension funds in the period 1990-2005

Figure 1 illustrates the pronounced growth in the asset value managed by Canadian pension funds in the period 1990-2005.

In the last 15 years, the value of the assets managed by Canadian pension funds went from 167 991 million Canadian dollars in 1990 to 702 491,6 million in 2005.

One observes a fall in this value in 2001, the year 2004 constituting the beginning of a net recovery. As already mentioned, this fall corresponds to a crash period on international equity markets.

2.2. Evolution in the asset allocation of Canadian pension funds in the period 1990-2005

Figure 2 plots the evolution in the asset allocation of Canadian pension funds in the period 1990-2005[10].

8. For a discussion on the possible consequences of the accounting principle reforms currently taking place on an international level, the reader is referred to Fore (2004).
9. As to the representativeness of the asset allocation of pension funds taken into account in the PIAC data, when compared to the total of Canadian pension funds, let us note that, following the Canada's National Statistical Agency, the total assets of all Canadian pension funds amounted to 687961 million Canadian dollars at the end of 2004, while the PIAC data present the asset allocation for an asset total of 645212 million in the same year. The conclusion of a high representativeness thus appears as adequate.
10. One represents the proportion of the given asset class value with respect to the total asset value. The equity class includes private equity.

First, one notes a heavy increase in the equity proportion in the period 1990-2001, going from 30 % to nearly 60 %, followed by a sharp drop to 52 % in 2002 (in connection with the stock market crash), and then a light recovery in 2003. Yet the trend seems to be slightly decreasing since then. The equity proportion amounts to 53 % in 2005.

The bond proportion has recorded an opposite evolution. It has strongly diminished in the period analyzed, going from nearly 50 % to a value slightly higher than 30 %, with a peak in 2002, during the stock market crash.

The cash and short term proportion decreases from 10 % to 2 % until 2001, and then follows a slight upward trend, reaching 4 % in 2005.

The mortgages proportion decreases in the period analyzed, going from 5 % to 2 %.

Finally, the real estate proportion records an opposite evolution: It increases from 5 % to 8 % approximately, a slight decrease being observed in the period 2002-2004.

To conclude, in the period 1990-2005, the asset allocation has become more determined by the return maximization criterion: The equity proportion has increased, the bond proportion has decreased, which is representative of the implementation of riskier policies.

One also observes a new trend since the stock market crash: It appears that the bond proportion remains relatively stable, yet the equity proportion follows a slightly decreasing trend. The equities are thus being gradually replaced, even if in a slight proportion, by other asset classes.

As mentioned in the first section, the recent focus on asset-liability management techniques, and possibly the current trend of revision in accounting principles, could lead to an increase in the proportion of bonds: As they are considered as providing a good hedge against the inflation and interest rate risks, they are generally seen as adequate for matching liabilities ; Their lower volatility (when compared to equities) is an advantage when adopting market-to-market values. Yet the actual trend in the bond proportion is rather slightly decreasing, so that it appears that the described evolution has not yet taken place.

2.3. Asset allocation of Canadian pension funds in 2005

In 2005, the equity proportion amounts to 48,7 % approximately[11], with 24 % invested in Canadian equities, 7,7 % in US equities, 8,1 % in EAFE equities[12], 0,4 % in emerging markets equities and 8,5 % in global equities (table 1 and figure 3). Nearly half of the investment in equities is thus made in domestic equities. The majority belongs to foreign equities, with a comparable proportion of approximately 8 % for US, EAFE and global equities.

Bonds represent 30,6 % approximately, with 26,2 % corresponding to Canadian nominal bonds, 3,8 % to real return bonds and 0,6 % to foreign fixed income (table 1 and figure 3). The investment in Canadian nominal bonds is thus overwhelming when compared to the total investment in bonds. Real return bonds are relatively weakly represented. The proportion of foreign fixed income is marginal, so that one can emphasize the existence of a very pronounced home-country bias in the bond investment.

Table 1: Asset allocation of Canadian pension funds in 2005

Asset class	Proportion
cash and short term	0,0347
Canadian nominal bonds	0,2621
real return bonds	0,0381
foreign fixed income	0,0060
mortgages	0,0156
real estate	0,0715
Canadian equities	0,2399
US equities	0,0768
EAFE equities	0,0808
emerging markets equities	0,0040
global equities	0,0852
venture capital/private equity	0,0395
hedge funds	0,0197
other assets	0,0255

The alternative assets – real estate, private equity and hedge funds – have a proportion of 13,2 % approximately, with more than a half (7,2 %) invested in real estate, 4 % in venture capital/private equity and 2 % in hedge funds (table 1 and figure 3). One thus observes an effective investment in alternative assets, even if its proportion remains relatively weak, which confirms the views expressed in the first section.

The proportions of cash and short term and of mortgages amount to 3.5 % and 1,6 % respectively (table 1 and figure 3).

2.4. Evolution of the relative weights of the components of the three main asset classes in the period 2000-2005[13]

Let us begin with the evolution of the bond components (figure 4).

One notes the overwhelming, relatively stable, weight of the proportion of Canadian nominal bonds (which account for nearly 90 % of the bond total amount), with a very slight increase between 2000 and 2002, followed by a slight decrease.

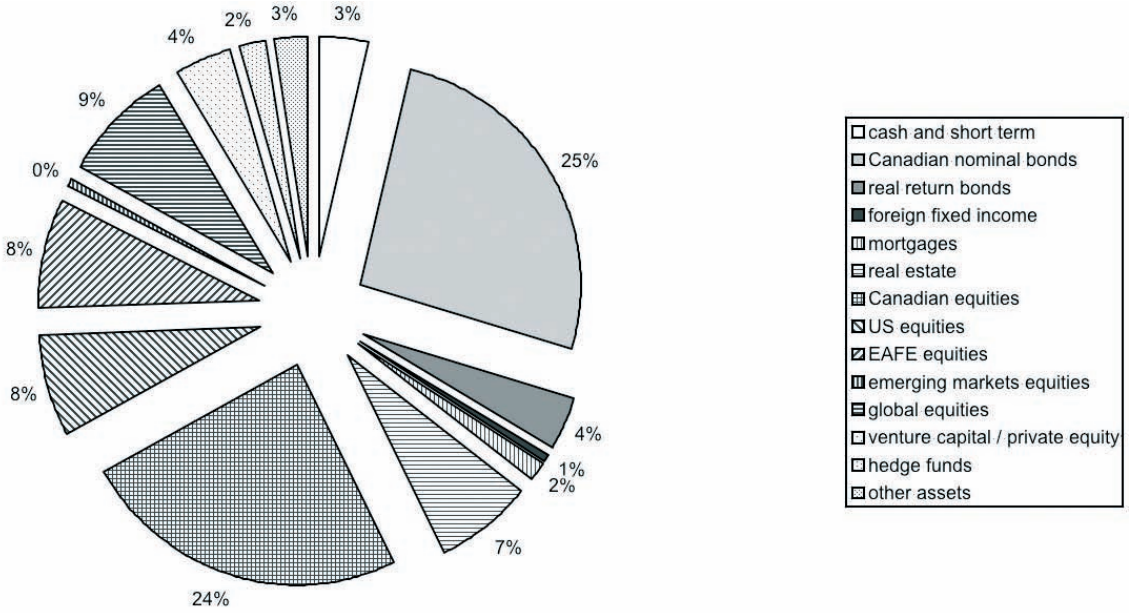
Real return bonds represent approximately 10 % of the bond total amount. Their proportion records an increase in

11. The value of this proportion differs from the preceding subsection, as private equity is not included in the equity proportion anymore.

12. EAFE are the initials of Europe, Australia and Far East.

13. Let us emphasize that the analyzed time interval partly corresponds to a period of a pronounced equity market fall. It thus appears as necessary to take account of this specificity when interpreting the results. It is also advised to follow the future evolution, beyond the year 2005, to confirm the conclusions of this study.

Figure 3: Asset allocation of Canadian pension funds in 2005

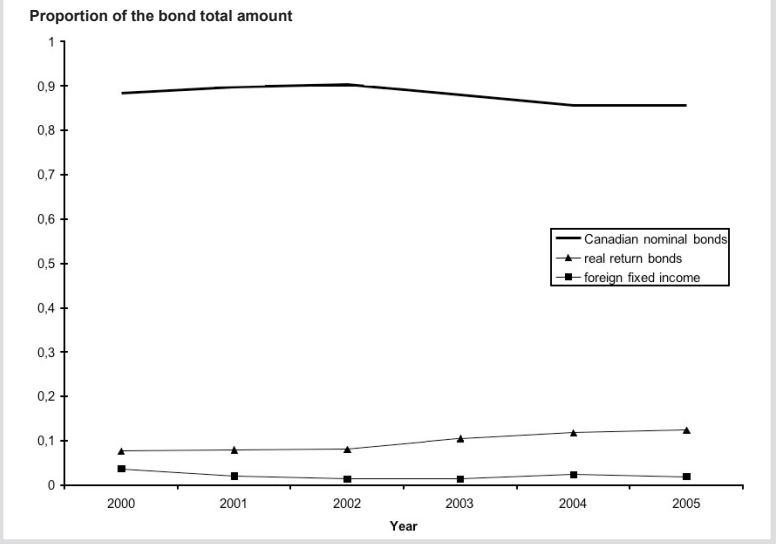


the analyzed period, from 8 % to 12 % approximately.

The proportion of foreign fixed income appears as weak and relatively stable, at a level of 3 % approximately (a slight decrease, followed by a slight increase can be observed).

To sum up, the overwhelming weight is attributed to Canadian nominal bonds: The home-country bias appears as very strong in the area of bonds. The slight decrease in the relative proportion of Canadian nominal bonds is balanced by a slight increase in the relative proportion of real return bonds, which could reflect a growing focus on the need of covering against the inflation risk.

Figure 4: Evolution in the relative proportions of the bond types in the period 2000-2005



During the same period (2000-2005), the proportion of Canadian equities represents nearly half of the equity total amount (figure 5). It first records a decrease in the period 2000-2003, going from 51 % to 43 % approximately, and then an increase in the period 2003-2005, reaching almost 50 % in 2005.

The home-country bias thus does not appear as too strong: The equity investment is divided in domestic and foreign in the proportions 50 %-50 % approximately. In the period considered, it is initially reduced (pension funds seek for higher returns and portfolio diversification possibilities abroad) yet this trend is reversed since 2003.

The proportions of US and EAFE equities increase in the period 2000-2003, going from 19 % to 24 % and from 15 % to 18 % respectively, and then decrease in the period 2003-2005, to 16 % and 17 % respectively. The global equity proportion records an opposite evolution: It decreases from 15 % to 13 % in the period 2000-2002, and then increases to 18 % in the period 2002-2005.

The emerging markets equities remain very weakly represented, with a proportion of 1 % approximately.

To conclude, during the period 2000-2005, one first observes a light reduction in the home-country bias, coupled with an increase in the US and EAFE equity proportions. Yet since 2003 the trend appears as reversed: The proportion of Canadian equities increases.

As to alternative assets, the evolution of the relative proportions of real estate and private equity in the period 2000-2005 is plotted in figure 6.

The real estate proportion is decreasing, going from 78 % to 64 % approximately, while the private equity proportion records an opposite evolution, going from 22 % to 36 % approximately. Real estate thus still constitutes the major part of the alternative asset investment, even if its weight has been decreasing.

The investment in hedge funds is not represented because

of unavailable data before the year 2004. The proportion of hedge funds remains less pronounced than the ones of the two plotted assets. The proportion of the hedge fund investment in the total assets of pension funds reaches 1,4 % in 2004 and 2 % in 2005, while the real estate and the private equity proportions amount to 5,7 % and 3,4 % respectively in 2004, and to 7,2 % and 4 % respectively in 2005.

As the alternative investment components appear in the asset allocation data only recently (the venture capital/ private equity category first appears in 2000, the hedge fund class in 2004 only), their precise analysis remains difficult. One can nonetheless claim that this new category records a quickly increasing proportion, reaching 13,2 % of the total assets in 2005.

3. CONCLUSION

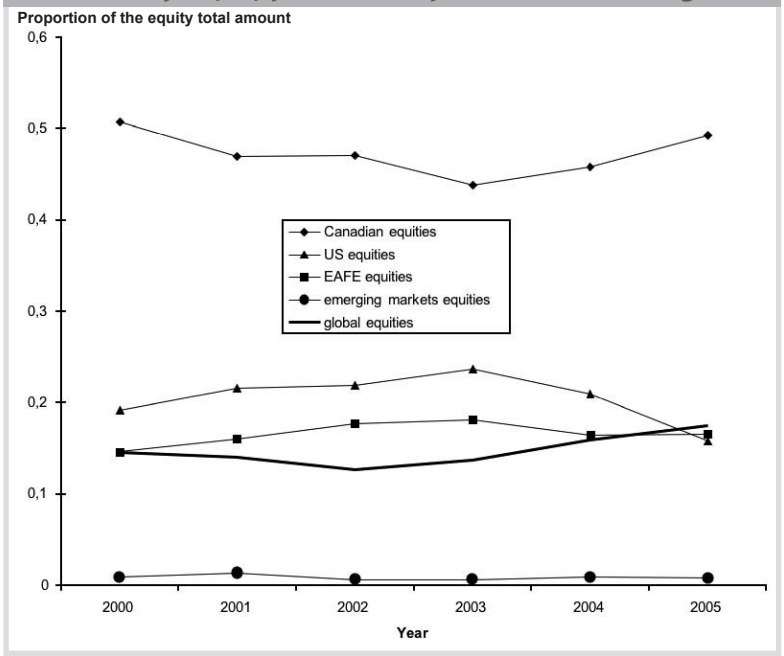
The asset allocation principles to be followed by Canadian pension funds have recently been subject to modifications. The first ones concerned the gradual elimination of some portfolio constraints, like the foreign-property rule, which has been removed in February 2005. Second, one observes the recent focus on liability-driven investment techniques, due to the actuarial deficits currently recorded by defined benefit funds. Third, the increasing role of alternative investments and active management must be highlighted. Finally, an important factor is also the trend of revision in accounting principles, aiming at a generalization of the fair value approach.

The statistical analysis of the Canadian pension fund investment policy in the period 1990-2005, conducted with the aim of distinguishing the consequences of the evolutions previously described, allows some interesting conclusions.

First, the characteristics of the asset allocation in the period 1990-2005 show an increasing role of the return maximization criterion: One notes an increase in the equity proportion and a decrease in the bond proportion. A new trend can be also observed since the stock market crash: The bond proportion remains relatively stable, while the equity proportion follows a slightly decreasing trend. The equities are thus being gradually replaced, even if in a slight proportion, by other asset classes. As to the recent focus on asset-liability management techniques and the current trend towards fair value accounting, these could lead to an increase in the proportion of bonds: Though the statistical analysis reveals that the described evolution has not yet taken place.

Second, the asset allocation of Canadian pension funds in 2005 is characterized by an equity proportion of 48,7 % approximately, with nearly half of it invested in Canadian equities. Bonds represent 30,6 % approximately, with 26,2 % corresponding to Canadian nominal bonds, 3,8 % to real return bonds and 0,6 % to foreign fixed income. One can thus conclude that the home-country bias is relatively weak in the equity investment and very pronounced in the bond investment. The alternative assets have a proportion of 13,2 % approximately, with more than a half (7,2 %) invested in real estate, 4 % in venture capital/private equity and 2 % in hedge funds. One thus

Figure 5: Evolution in the relative proportions of the equity types in the period 2000-2005

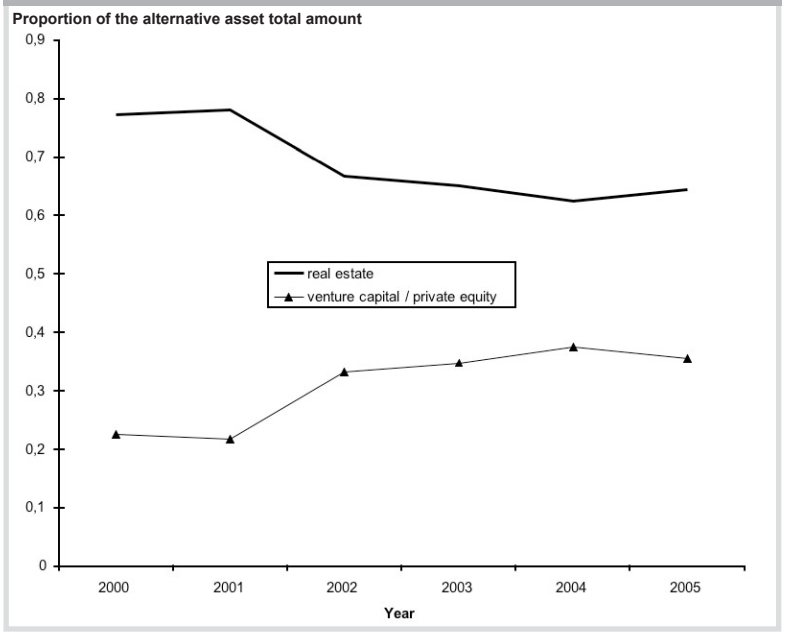


observes an effective investment in alternative assets, even if its proportion remains relatively weak.

Third, the paper finally analyzes the evolution in the relative weights of the components of the three main asset classes in the period 2000-2005.

Concerning the bond investment, one notes the overwhelming, relatively stable, weight of the proportion of Canadian nominal bonds (which account for nearly 90 % of the bond total amount). The slight decrease in

Figure 6: Evolution in the relative proportions of the alternative asset types in the period 2000-2005



their relative proportion is balanced by a slight increase in the relative proportion of real return bonds, which could reflect a growing focus on the need of covering against the inflation risk.

As to the investment in equities, one first observes, in the period considered, a light reduction in the home-country bias, coupled with an increase in the US and EAFE equity proportions. Yet since 2003 the trend appears as reversed: The proportion of Canadian equities increases.

Concerning the alternative investments, when analyzing the evolution in the relative proportions of real estate and private equity, one concludes that real estate still constitutes the major part of the alternative asset investment, even if its weight has been decreasing. One notes that some alternative investment components (like hedge funds) appear in the asset allocation data only recently, their precise analysis thus remains difficult. One can nonetheless claim that this new category records a quickly increasing proportion, reaching 13.2 % of the total assets in 2005.

The Canadian pension funds today live a period of important evolutions in their regulatory framework and asset allocation practices. The analysis made in this paper shows that some first signs of these evolutions can be seen in their asset allocation characteristics. Yet the changes are far from being complete, it thus appears as important to continue this study in the next years, in order to get a more comprehensive view of the effective modifications in the investment policies.■

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