Improving the Investment Performance of Public Pension Funds: Lessons for the Social Insurance Fund of Cyprus from the Experience of Four OECD Countries†

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Abstract

Public pension funds have the potential to benefit from low operating costs because they enjoy economies of scale and avoid large marketing costs. But this important advantage has in most countries been dissipated by poor investment performance. The latter has been attributed to a weak governance structure, lack of independence from government interference, and a low level of transparency and public accountability. Recent years have witnessed the creation of new public pension funds in several countries, and the modernization of existing ones in others, with special emphasis placed on upgrading their investment policy framework and strengthening their governance structure. This paper focuses on the experience of four new public pension funds that have been created in Norway, Canada, Ireland and New Zealand. The paper discusses the safeguards that have been introduced to ensure their independence and their insulation from political pressures. It also reviews their performance and their evolving investment strategies. All four funds started with the romantic idea of operating as ‘managers of managers’ and focusing on external passive management but their strategies have progressively evolved to embrace internal active management and significant investments in alternative asset classes. The paper draws lessons for other countries that wish to modernize their public pension funds. In this context, it discusses the management of the reserves accumulated by the Social Insurance Fund of Cyprus and considers options for raising the investment return on the reserves.

Keywords: social security, public pension funds, notional reserves, asset management, fund governance.

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1. Introduction

Public pension funds operate in many countries with very small reserves, covering pension payments for up to one year ahead. However, there is also a large number of both high income and developing countries where public pension schemes are partially funded and have accumulated significant reserves.

In general, public pension funds have the potential to benefit from low operating costs because they enjoy economies of scale and avoid large marketing costs. But this important advantage is often dissipated by a poor record on investment performance, caused by a weak governance structure, lack of independence from government interference, and a low level of transparency and public accountability.

Historically, public pension funds were managed poorly in most countries. They were forced to invest in government bonds and housing loans at low nominal interest rates, while investments in foreign assets were prohibited. In countries that suffered from high inflation, real investment returns were negative, while even in countries where nominal interest rates exceeded inflation, the returns on public pension reserves were well below equity market returns and well below the returns achieved by private pension funds.¹

Recognizing the poor track record of public pension funds and the need to build pension reserves to meet the growing demographic pressures on public pension schemes, several OECD countries have in recent years revamped the governance structure and investment management of their public pension funds or have created new funds that have benefited from a strong governance structure, independence from government, and a high level of transparency and public accountability.

This paper reviews the experience of four such OECD countries: Norway, Canada, Ireland and New Zealand.² After a brief synopsis of the past record of the investment performance of public pension funds, the paper discusses the creation of new public pension funds, and then reviews their

¹ The poor performance of public pension funds has been documented in many studies. For a summary overview, see World Bank (1994), while for more detailed studies of public pension fund governance and performance see Mitchell and Hsin (1997), Iglesias and Palacios (2000), Palacios (2002), Useem and Mitchell (2000), Hess and Impavido (2004), and Impavido (2002 and 2007).

² The paper is a slightly revised version of Chapter One of Vittas, Impavido and O’Connor (2008).
structure and performance in terms of their objectives, funding sources, institutional structure and fund governance, executive management, formulation of investment policy objectives and determination of strategic asset allocation, implementation of investment strategy and, last but by no means least, investment performance.

The paper draws lessons for other countries that wish to modernize their public pension funds. In this context, it focuses on the past performance of the Social Insurance Fund of Cyprus and considers options for raising the investment return on its reserves.

2. Past record of investment performance of public pension funds

The past record of the investment performance of public sector pension funds ranged from mediocre to disastrous and was far poorer than the record of private pension funds. Public pension funds that achieved a mediocre level of performance included, among others, the ATP (Allmänna TilläggsPensionen) fund in Sweden for the period before the early 1990s, the Social Security Corporation (SSC) of Jordan, the National Pensions Fund (NPF) of Mauritius and the Fiji National Provident Fund (FNPF). These funds underperformed financial markets because they invested heavily in marketable government bonds and did not benefit from the higher returns that were available on corporate equities and bonds or foreign assets. Their record was mediocre rather than disastrous since government bonds in these countries paid a positive rate of interest in real terms.

The Swedish ATP underperformed financial markets in the period before financial liberalization in Sweden in the early 1990s as a result of a requirement to invest a large part of its resources in bonds issued by mortgage credit institutions at below market levels. This was part of government policy to support the development of the housing market but it did affect the returns of the ATP. Over the past 15 years or so the ATP has enjoyed considerable investment policy autonomy and has diversified heavily into domestic and foreign equities.

In contrast, social security institutions in several Latin American countries in the 1970s and 1980s as well as in sub-Saharan African countries suffered heavy losses in their holdings of government bonds and housing loans, mainly because these instruments paid fixed nominal rates of interest at a time when inflation spiraled out of control and they also suffered from high levels of non-repayment (World Bank 1994, Iglesias and Palacios 2000). Social security institutions in Argentina, Bolivia, Costa Rica, Ecuador, Guatemala, Peru and Venezuela in Latin America effectively lost all their reserves in highly inflationary times. The same fate was met by
national provident funds in Ghana, Kenya, Nigeria, Tanzania, Uganda and Zambia in Africa.

Historically, there have been some notable exceptions to the generally poor investment record of public pension funds. In the US, the best known examples are CALPERS, the fund that covers employees of local government in California, and the Thrift Savings Plan (TSP), which covers employees of the federal government. CALPERS is a defined benefit plan, while TSP is a defined contribution plan, but they have both adopted sophisticated and market-based investment policies.3

In Canada, the Caisse de Dépôt et Placement du Québec (CDPQ) has operated since its inception in the mid-1960s as the investment manager of the reserves of the provincial pension plan. It has also managed other public funds originating from various sources. The CDPQ has invested its assets in equities and debt securities in Quebec as well as outside Quebec and in overseas markets to the extent permitted by foreign exchange control rules. It has earned market-based investment returns. The Ontario Teachers Pension Plan (OTPP) is another Canadian public pension fund that has implemented well-diversified and efficient investment policies. OTPP used to be required to place all its reserves in non-marketable provincial government bonds but the restriction was removed in 1990 and since then OTPP has been a world leader in applying innovative techniques in asset management.

In Europe, two public pension institutions that have long invested in marketable securities, including corporate equities and derivatives, are the ABP in the Netherlands and the ATP in Denmark. The ABP (Algemeen Burgerlijk Pensioenfonds) is a defined benefit plan for Dutch civil servants, while the Danish ATP (Arbejdsmarkedets TillaegsPension - Labor Market Supplementary Pension) is a mandatory defined-contribution supplementary pension scheme covering all Danish workers.4 Despite being in the public sector, these institutions, like their Canadian counterparts, have long played a leading role in adopting innovative

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3 The TSP offers to participating employees a range of indexed funds that can be selected directly or as part of lifecycle funds. Investment fees are less than 2 basis points over all funds, while total operating costs, including the investment fees, are less than 6 basis points.

4 The Danish ATP fund is a long-established public pension fund that has recently modernized its investment framework. Vittas (2008) discusses briefly the investment policies of ATP, the evolution of its contributions and benefits, and its risk-sharing arrangements.
investment policies and have had an enviable record of high operating efficiency and investment returns.

3. The record of pension institutions with ‘notional’ reserves

There are also public pension funds in several countries that have been required to place all their accumulated reserves in non-marketable government securities and have earned an administered rate of return. This practice has effectively transformed these institutions from ‘partially funded’ into ‘pay-as-you-go’ schemes, relying on future contributions and government tax revenues for the payment of pensions. At least, if they hold marketable government securities, they can start a diversification program out of government bonds into corporate or even foreign securities. When they hold ‘non-marketable’ debt they must first replace it with marketable instruments and this will depend on the ability of the government to recognize this debt.

Notable examples of this practice include the United States and Egypt as well as Cyprus (see next section). In the United States, the Social Security Trust Fund has accumulated reserves exceeding 2 trillion US dollars and representing more than 15 percent of GDP. The reserves have been accumulated following the recommendations of the Greenspan Commission in 1983, which proposed among other measures a significant increase in the contribution rate. The purpose was to create a demographic buffer fund that would be used to meet the projected large increase in pension benefits linked to the retirement of the baby boomer generation. The reserves were invested in non-marketable government securities and their rate of remuneration equaled the average yield of US government securities.

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5 This option is available to the Fiji National Provident Fund, which has assets equivalent to 65 percent of GDP and invests heavily in government bonds. However, its ability to diversify out of government bonds into other domestic securities or foreign assets is heavily constrained by the adverse impact that such action is likely to have on government finances and foreign exchange reserves. This implies that even holding marketable government securities may result, under some circumstances, in transforming pension fund assets into ‘notional’ reserves.
Three important questions arise when the reserves of public pension funds are entirely or predominantly invested in government debt, whether in tradable or non-tradable form. What is the nature of the reserves? What is the nature of the flow of administered income? And, what is the rationale for setting payroll contributions at a rate that is significantly higher than the level required for financing current benefit payments?

The answers to these questions depend on whether the public pension fund is part of general government or not. As regards the nature of the reserves, if the pension fund is part of general government, then its holdings of government debt are excluded from the definition of public debt since they are consolidated in the general government accounts. The reserves are therefore ‘notional’ and only represent an accounting entry: they cannot be used to finance the expenses of the fund. In fact, the government will need to increase its borrowing (or raise taxes) to meet any cashflow needs of the fund, making it functionally equivalent to a ‘pay-as-you-go’ pension scheme. In contrast, when the public pension fund is established as a public entity outside general government, its holdings of government securities are counted as part of public debt and the reserves are ‘real’. Of course, being ‘real’ does not mean that such reserves can be readily realized to meet fund requirements – this depends on whether the securities are tradable and the liquidity of the secondary market on which they are traded.

As regards the second question, income on the reserves is an internal accounting entry that cancels out in the consolidated general government accounts if the public pension fund is part of general government. The level of the income does not affect the liquidity position of the institution unless the government intends and is able to create at some point in the future a segregated fund with effective reserves. In such a case, the level of the administered rate would determine the size of the reserves and the transfer of resources that would be required. But if the government is subject to fiscal constraints, the liquidity of the public pension fund would rely on current transfers from the budget.

If the public pension fund is established outside general government, interest on its holdings of public debt will count as interest expenditure on the consolidated general government accounts.

The answer to the third question is more contentious. If a high payroll tax is not linked to the immediate creation of an ‘effective’ reserve that is totally segregated from the government budget and is invested in marketable assets, the imposition of a high payroll tax is a regressive form of taxation that is a burden on low and middle income workers and weakens the degree of progressivity of personal income taxation. The underlying rationale is political rather than financial.

In Egypt, the social security institutions have accumulated reserves between 30 and 50 percent of GDP over the past two decades. The administered rate of interest was initially fixed at a low level. As a result of

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* For instance, the Stability and Growth Pact of the European Union places limits on annual fiscal deficits and net levels of government debt on EU countries that participate in the Euro zone.
high and volatile inflation, the institutions ‘earned’ a negative real rate of return of minus 11.7 percent between 1981 and 1989 (World Bank 1994:128). During the 1990s, the nominal rate of interest was raised to market levels and, with inflation falling to single digits, the social security institutions ‘earned’ positive annual real rates of return of more than 5 percent.7 The problem in Egypt was that the deficit was then transferred to the National Investment Bank, which had advanced the funds to public projects and institutions of various types and had never earned the high returns that were required to be able to sustain the very high rate of interest it was crediting to the balances of the Social Security Institutions. The Egyptian authorities recognized in the end the non-existence of this ‘notional’ fund and decided in 2005 to implement over the ensuing years a radical systemic reform of the pension system.

When public pension funds are required to place all their reserves in non-tradable government securities, the question of designing an efficient investment policy framework does not arise. The administered rate of return may (and often does) become a bone of contention but all other aspects of sound investment policy from adopting a strategic asset allocation to ensuring the safe custody of assets become moot.

In the terms of the ensuing discussion on fund governance, the main weakness of funds like the SSTF in the US, the SIF in Cyprus or the social security institutions in Egypt has been the failure to ensure the legal segregation of their accumulated assets from the rest of the government budget. Three important policy questions arise when the social security funds are invested in non-tradable government debt (see box). However, for the purpose of this paper, it suffices to note that since the reserves are ‘notional’, there is no need for the creation of an investment policy framework.

4. The reserve management of the social insurance fund of Cyprus

The Social Insurance Fund (SIF) of Cyprus is a traditional defined-benefit social security scheme for private sector workers and civil servants. It was created in 1964 and was significantly expanded in terms of both coverage and benefit levels in 1980. The SIF is financed by contributions from employees, employers and the government.

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7 Robalino (2005:150-152) documents the rise in the rate of interest paid by the NIB in the second half of the 1990s and beyond.
In recent years, government contributions have represented about 4 percent of GDP and have exceeded the annual financial surplus of the SIF. Thus, without the significant government contributions, the SIF already operates with a financial deficit. In addition, the SIF faces future viability challenges resulting from the increasing longevity of the Cypriot population, generous benefit levels and early retirement provisions, and inadequate levels of funding and investment income. Various parametric changes have been under discussion, including increases in contribution rates and containment of benefit levels. An increase of the rate of return on the reserves of the SIF has figured prominently in these discussions.

Because revenues from contributions and investment income have exceeded benefit outlays, the SIF has been able to accumulate substantial reserves that correspond to 36 percent of GDP. However, the SIF reserves have been invested almost exclusively in non-marketable government securities and remunerated by an administered rate of interest which recently has been half way between the interest rate of 13-week Treasury bills and the yield on 10-year government bonds.

The SIF is part of general government and its holdings of public debt are deducted from the reported level of public debt. As a result, its reserves are ‘notional’, implying that its future ability to pay pension benefits will rely on future contributions and government tax revenues. Raising the administered rate of return, as is often suggested by the social partners, will increase the reported financial surplus of the SIF and will delay the date on which the notional reserves will be exhausted. In practice, however, little will change from such a measure since the viability of the SIF will continue to depend on the ability of the government to transfer the necessary funds from other budgetary uses.

Since the assets of the SIF have consisted of non-marketable government securities, there has been no need to design and implement a well-articulated investment policy. Sole responsibility for investment policy has been conferred on the Minister of Finance. A large tripartite Advisory Council, comprising representatives of the social partners, has been created. It has a consultative role on issues that span pension policy, pension administration and investment policy, but in the latter area its basic role has been to argue for a higher administered rate of return.

One way to reduce the dependence of the SIF on the government budget would be to create an effective reserve that would be outside general government accounts, would be invested in domestic and international marketable assets, and would be managed with a view to underpinning its long-term sustainability. This approach would depend on the ability of the government to transfer the required funds and on the creation of an
investment policy framework that would promote efficient asset management with a robust governance structure and a high level of public transparency and accountability.

5. Creation and objectives of new public pension funds

Faced with growing financial pressures arising from changing demographics, several countries around the world decided in the past 15 years or so to modernize existing pension funds or to create new public pension funds with substantial reserves to help finance the rising cost of public pensions. Japan, Korea and Sweden have taken steps to remove or relax existing restrictions on the investment policies of their public pension funds. Other countries that have long operated completely unfunded or very lightly funded public pension schemes have created new public pension funds. Recent initiatives have been taken in such diverse countries as Australia, Canada, France, Ireland, New Zealand and Norway.

These public pension funds joined the ranks of some pre-existing public pension funds and several government investment institutions that have been created in Arab oil-exporting countries, such as Abu Dhabi, Bahrain, Dubai, Kuwait, Qatar and Saudi Arabia, as well as in China, Russia and Singapore. They are therefore part of a broader international trend. This paper focuses on the experience of recently created public pension funds in four OECD countries: Norway, Canada, Ireland and New Zealand. All created new funds, transferred reserves, committed to make annual contributions, and promoted a modern framework for efficient investment performance.8

Norway was the first of these countries to establish a new public fund. It created the Government Petroleum Fund in 1990 in order to invest in overseas markets the part of oil revenues (net of oil-related investments) that the authorities decided to save for the benefit of future generations (Kjaert 2004). The Petroleum Fund was not initially formally set up as a pension fund although it was from the start expected to play an important part in meeting future demands on state pension expenditures. But in January 2006, the link was formally recognized and the Government Petroleum Fund was officially renamed the Government Pension Fund -

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Global (GPFG), reflecting the global orientation of its investments. There is also a Government Pension Fund - Norway, which manages the domestic, and much smaller, assets of the National Insurance Fund.

Norway followed the precedent created by Kuwait in the late 1970s, when it established the Kuwait Investment Office (KIO) with a remit to invest in overseas markets its fast accumulating foreign exchange reserves. In Norway the creation of the Petroleum Fund was motivated by the decision to preserve assets for future generations and avoid the Dutch disease effects that would likely ensue from immediate spending of the oil wealth. In some sense, Norway also followed the example of Singapore, which was able to accumulate large foreign exchange reserves in the 1970s as a result of the success of its export-led economic policies. The Singaporean authorities decided in the late 1970s to create the Government of Singapore Investment Corporation (GSIC) with the objective to diversify the investment of foreign reserves away from holding low-yielding US treasury bills and into high-return global equities as well as direct investment projects in various parts of the world.

A fundamental difference between the Norwegian fund and those of Kuwait and Singapore relates to transparency and public accountability. While the operations of KIO and GSIC have suffered from severe opacity, the Norwegian fund is required to operate with a very high level of transparency and accountability. The Ministry of Finance reports to Parliament on the performance of the fund. In addition, Norges Bank, which is responsible for managing the fund, holds press conferences every quarter on investment results and posts on its website comprehensive reports on its performance.

The creation of new public pension funds in the other three countries (Canada, Ireland and New Zealand) was specifically linked to the need to finance the anticipated large rise in pension outlays over the next 20 to 50 years. The Canada Pension Plan Investment Board (CPPIB) was created in 1997 as part of a package of measures that aimed to prevent the insolvency of the CPP in 2015. A major change was the acceleration in the projected increase in the contribution rate from 6 percent in 1997 to 9.9 percent in 2002. This was expected to generate significant reserves and the CPPIB was established to ensure their efficient management. The CPPIB objective is to accumulate reserves equal to 20 percent or more of the actuarial pension liabilities of the CPP.

In Ireland, the National Pensions Reserve Fund (NPRF) was created in 2000 to manage assets to meet the growing financial pressures of anticipated adverse demographic developments (Maher 2004). The fund is designed to underpin the long-term sustainability of existing pension
arrangements by accumulating reserves that would cover about one-third of the cost of public pensions (social welfare and public service) between 2025 and 2055 and possibly beyond.

The New Zealand Superannuation Fund (NZSF) was established in October 2001 with the aim of partially funding the universal public pension that is paid to all old-age persons residing in New Zealand (McCulloch and Frances 2004). The accumulation of the fund and its use during the payout phase will offset the steep increase in the cost of the universal pension, particularly after 2020. The fund will thus smooth out the financial burden on the budget from the impact of demographic aging on the universal pension scheme.

In three of these countries (Ireland, New Zealand and Norway), the level of public debt is very low, ranging between 12 and 20 percent of GDP. As a result, the authorities did not face a difficult policy dilemma in deciding to create a new public pension fund. Creating a fund and investing in global assets was likely to earn a higher rate of return than the cost of public debt. In contrast, Canada has a higher level of public debt, amounting to 35 percent of GDP for federal government and another 25 percent for the provincial governments. The new fund was created to forestall the financial insolvency of the CPP. It is to be funded by the projected annual surpluses of the CPP, following the substantial increase in the contribution rate (McNaughton 2004).

However, all four pension funds have similar objectives. They all aim to invest their resources efficiently to maximize investment returns while assuming a prudent level of risk. All four funds have a long investment horizon. No withdrawals from these funds are expected for at least the first 20 years of their existence and perhaps much longer. This has major implications for the formulation of investment policy objectives and the setting of their asset allocation strategies.

6. Funding sources

With the exception of the Norwegian fund, which is already very large but is required to invest in overseas markets, all the other funds are small relative to the size of the national economy. Their assets range between 6 and 11 percent of GDP (Table 1). Although their assets are expected to grow significantly, the pension funds will not become dominant players in the local financial systems, which comprise large banks, insurance companies, and other public and private pension funds. This has important implications for avoiding excessive concentration of financial
power in public institutions and for minimizing pressures from local interests for investment policies that are biased toward the home markets.

TABLE 1

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<tr>
<td>Norway - GPFG</td>
<td>26.3</td>
<td>40.2</td>
<td>40.1</td>
<td>53.6</td>
<td>59.2</td>
<td>73.5</td>
<td>83.0</td>
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<td>Canada – CPPIB¹</td>
<td>4.5</td>
<td>4.8</td>
<td>4.8</td>
<td>5.8</td>
<td>6.3</td>
<td>7.2</td>
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<td>Ireland – NPRF</td>
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<td>5.7</td>
<td>6.9</td>
<td>7.9</td>
<td>9.6</td>
<td>10.8</td>
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<tr>
<td>New Zealand - NZSF</td>
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Note: ¹Includes all CPP assets and refers to end March of following year.
Source: Vittas, Impavido and O’Connor (2008).

The sources of funding are different in each of these countries. Norway transfers to the GPFG the net oil revenues that are saved for future generations. Although the Fund was created in 1990, no transfers took place in the first half of the 1990s because of low net oil income and large oil-related investments. The first transfer was made in May 1996. Since then, annual transfers have been quite sizable, exceeding on several occasions 10 percent of GDP, as both oil production and the price of oil increased rapidly, while oil-related investments declined.

Norway adopted in 2001 the so-called 4-percent fiscal rule. This limits the non-oil government budget deficit to 4 percent of the value of the accumulated fund, i.e., the expected real rate of return on fund assets. Taking into account the investment income generated by its assets, the size of the fund has grown at a rapid pace both in absolute terms and as proportion of GDP. The fund accumulated assets equal to 1,784 billion NOK in 2006, equivalent to about 285 billion USD (216 billion EUR) or 83 percent of GDP (Table 1). The assets of the Government Pension Fund - Norway amounted in 2006 to 107 billion NOK or 5 percent of GDP. Thus, in total, the Government Pension Fund had assets corresponding to 88 percent of GDP.

The CPPIB was created in December 1997 but received the first transfer of funds in March 1999. The Board receives all cash flows that are not required by the CPP to pay current pensions and also retains all investment income generated from its operations. The annual operating surplus of the CPP grew substantially following the increase in contribution rates. The CPPIB also received the proceeds of redeemed federal and provincial government bonds that the CPP used to hold before 1998. The total assets of the CPP amounted to 117 billion CAD in March 2007. They rose from 4.5 percent of GDP in 2000 to 8.1 percent in 2007.
The Irish NPRF is funded with annual government contributions equal to 1 percent of GNP, possibly supplemented by privatization proceeds. The NPRF was created in 2000 but the first transfer of funds was made in April 2001. It included 6.5 billion EUR that had been accumulated in a temporary holding fund since 1999, pending the creation of the NPRF. This included the proceeds from the privatization of the State’s Telecom company. Total assets reached 18.9 billion EUR at the end of 2006, corresponding to 12.6 percent of GNP (or 10.8 percent of GDP).

The NZSF is funded by annual government contributions. These vary from year to year and depend on a formula that calculates annually the required contribution for meeting the financial objective of the fund. The annual contribution reached 1.5 percent of GDP in 2006, when total assets amounted to 6.3 percent of GDP. The first transfer of contributions was made in October 2003, two years after the creation of the NZSF. The first transfer included funds that had been set aside in fiscal year 2002 and 2003 in anticipation of the creation of the fund.

7. Institutional structure and fund governance

New separate state entities with their own boards of directors have been created in three of the four countries (Canada, Ireland and New Zealand). The boards of directors (commissioners in the case of Ireland, guardians in the case of New Zealand) are responsible for formulating the investment policies of the funds, setting the strategic asset allocations, and supervising management. All three entities have small boards of experts rather than representatives of stakeholders: 6 in New Zealand, 7 in Ireland, and 12 in Canada. This structure contributes to greater effectiveness.

In Canada and New Zealand, a two-stage process was followed in appointing directors. First, an independent nominating committee was created. This consisted of private sector executives with relevant experience in New Zealand, while the Canadian nominating committee included both business executives and government officials, with a private sector executive in the chair. The nominating committees were required to identify and recommend individuals with the requisite expertise. The governments then made appointments from the short lists prepared by the nominating committees. In Ireland, the government is required to appoint as commissioners individuals with appropriate professional expertise.

The relevant acts in the three countries do not specify director qualifications in precise terms. In Ireland, commissioners must have acquired substantial expertise and experience at a senior level in a broad range of areas, including investment or international business
management, finance or economics, law, actuarial practice, accountancy and auditing, civil service, trade union representation, pension industry, and consumer protection. In Canada, a sufficient number of directors must have proven financial ability or relevant work experience. In New Zealand, board members must have substantial experience, training and expertise in the management of financial investments. These specifications ensure that directors are experienced professionals. They do not, however, ensure that they have adequate knowledge of modern financial instruments and strategies whose complexity grows at a very rapid pace. However, this is an issue that affects the boards of directors of all types of entities, private corporations as well as public sector bodies, not just public pension funds.

Directors are appointed for fixed terms that are staggered to ensure continuity. Directors can only be removed for just cause. The first appointments of some directors were for shorter terms to enable the staggering of board service. The boards of directors operate with strong governance structures. Their operations are based on two important principles: independence from government and other interests, especially in making investment decisions; and full public accountability. They all have been given commercial mandates subject to the ‘prudent person’ rule.

In general, the boards of directors of these three funds have adopted corporate governance and conflict of interest guidelines and have set up Audit Committees to ensure the effectiveness of internal control systems. They have appointed auditors and global custodians and adopted appropriate asset segregation and valuation rules. They have also made considerable use of external advisers on a wide variety of topics, ranging from advice on asset allocation strategies to the selection of external asset managers and the adoption of sophisticated information systems.

In Norway, the fund has not been set up as an independent legal entity but as a government account with the central bank. The fund itself has no rights or obligations against private sector entities or public authorities and may not institute, or be subject to, legal proceedings. Responsibility for managing the fund is vested in the Ministry of Finance, which makes all strategic decisions, formulates investment policy objectives, and sets the strategic asset allocation and benchmarks. However, an Advisory Council

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9 In New Zealand, the minister of finance has the power under the law to issue directions to the governing board of the public pension fund. However, these must be in writing, must be presented to Parliament, and must be published in the official gazette. No direction has been issued up to now.
on Investment Strategy has also been appointed. The voting rights of the fund are exercised by its operational manager.

The Norwegian GPFG does not enjoy formal independence from government. Apart from the 4-percent fiscal rule, no other special measures have been adopted to insulate the fund from political interference. The fiscal rule limiting the use of accumulated balances is set by the government and must be approved by Parliament. The strategic asset allocation is also subject to parliamentary approval. But, as already noted above, the fund is required to operate with a very high level of transparency and public accountability. Moreover, the various features of strong corporate governance, such as asset segregation, valuation rules and effective internal controls, are all observed at the level of the operational manager (see below).

Public accountability of the four funds is buttressed by regular independent reviews of their performance as well as special examinations that may be commissioned by the ministers of finance. All the funds are required to submit reports to the government and give evidence to parliamentary committees.

All four funds have endorsed the Principles of Responsible Investing that have been sponsored by the United Nations. The aim of the principles is to integrate consideration of environmental, social and governance issues into investment decision-making and ownership practices and thereby improve long-term returns. In addition, all four funds have adopted clear guidelines on the proper exercise of their rights as shareholders in local and foreign corporations. In general, the funds favor the development of corporate governance policies that promote transparency and respect the rights of shareholders.

8. Executive management

Two of the funds, the CPPIB and the NZSF, have appointed internal chief executives who are responsible for managing the funds. In Canada, board directors cannot be appointed officers of the CPPIB and officers cannot serve as directors. The positions of Board Chair and Chief Executive Officer are separate. The Chair is responsible for leading the Board of Directors and the CEO for leading management. The same pattern applies in New Zealand.

In Ireland, the NPRF Commission has the right to appoint the manager of the fund in consultation and with the consent of the Minister of Finance. But the National Treasury Management Agency (NTMA) was appointed
under the National Pensions Reserve Fund Act, 2000 as the first executive manager of the fund for a period of 10 years.

The Chief Executive of the NTMA is an ex officio member of the Commission. The NTMA is responsible for managing the public debt of Ireland. Debt management agencies are created with the objective of minimizing the total cost of public debt subject to a prudent level of risk. It is thus a natural choice to manage the assets of the NPRF with the objective of maximizing the investment return subject to a prudent level of risk. Since the NPRF is not allowed to invest in Irish government securities, there is no direct conflict of interest between these major functions of the NTMA.\(^\text{10}\)

The three funds started their operations with small executive teams, mainly because the plan was to engage in passive indexed management and outsource asset management to external specialists. The CPPIB started with a staff of 15, and the NTMA and NZSF with less than 10. However, the CPPIB has undergone an extensive change in its investment orientation and has engaged not only in internal active management but also in principal investing and short-term trading. As a result, the total number of staff expanded substantially each year and reached 271 in March 2007. The NTMA employed 17 officers to cover the operations of the NPRF in 2006 and the NZSF had 15 people in June 2006, but was planning to increase its staff to 25 in the current year.

In Norway, the Ministry of Finance selected Norges Bank (the central bank of Norway) as the operational manager of the GPFG. The assignment is open-ended and is subject to a one-year period of notice of termination by either party. The Ministry supervises the operations of the bank and uses independent consultants to evaluate its performance. Norges Bank offers investment advice to the Ministry on most aspects of the operations of the fund but especially on investment policies and asset allocation strategies.

Norges Bank created a special unit, Norges Bank Investment Management (NBIM), to manage the assets of the fund. Prior to the creation of this specialized unit, the Market Operations Department was dealing with the management of foreign exchange reserves. However, the bank felt that the investment experience gained from managing the foreign exchange reserves did not provide an adequate foundation for efficient management of the much larger and longer-term resources of the GPFG. NBIM was

\(^{10}\) When investments in infrastructure projects are considered, proper Chinese walls are put in place between the managers of the NPRF and the managers of infrastructure projects.
created by transferring some employees from other departments of the Bank, but most staff was hired through external recruitment. NBIM had 41 staff at the end of 1998. This grew to 79 by 1999 and reached 128 staff at the end of 2006. Some employees are based in the London and New York offices of NBIM. Remuneration is on a separate scale and reflects international competitive levels.\textsuperscript{11}

All four funds have placed special emphasis on monitoring and controlling both financial (market) and operational risks. They have installed comprehensive information systems and developed detailed control procedures. They have all separated investment decision making from back-office operations, including record keeping, settlement, and performance measurement. They have also installed sophisticated systems to measure the performance of external asset managers.

9. Investment policy objectives and strategic asset allocation

In Canada, Ireland and New Zealand, the formulation of investment policy and the determination of strategic asset allocation are the responsibility of the boards of directors of the three funds. In contrast, in Norway this responsibility is vested in the Ministry of Finance. All funds have relied on external advisers for setting their first strategic asset allocation policies. Asset allocation strategies have been subject to regular reviews and revisions, entailing significant shifts in emphasis and orientation.

The asset allocation strategies have reflected their long investment horizon and their operation as final wealth maximization units, free for a long period of time from the requirement to match assets and liabilities. They have been based on the historical level and volatility of returns on eligible instruments, but they have also been influenced by the perceived level of risk tolerance of their stakeholders.

\textsuperscript{11} NBIM observes all the requirements of good corporate governance. It established from the start proper procedures to separate investment decisions from back-office operations, including record keeping, settlement, and risk and return measurement. The assets of the GFPG are segregated from the other assets of the central bank and are reported separately in the bank's balance sheet as a government account. Proper custodial arrangements have been put in place for the safe custody of assets, securities are marked to market on a continuous basis, and both risk and return measurements are closely monitored and assessed. An internal audit department has been created and is required to report to the Audit Committee of the executive board of Norges Bank.
The last factor may explain why the Norwegian fund was initially entirely invested in fixed-income securities and only in 1997, after two parliamentary debates, the ministry decided to change the strategic asset allocation to 60 percent bonds and 40 percent equities (Table 2). It may also explain why despite having the largest relative size of all the funds under review and also the longest investment horizon, the GPFG continues to use a much more conservative asset allocation than the other three funds.

However, taking into account the persistence of the equity premium in global markets over a period of more than 100 years (Dimson et al 2002), the Norwegian authorities announced in late 2006 their intention to increase the equity allocation to 60 percent and to expand the universe of eligible investments by including small listed companies and possibly also real estate and infrastructure investments. The asset allocation excludes investments in Norwegian equities because the local market represents less than 0.2 percent of the global equity market and the fund would be too large for the local market. The much smaller Government Pension Fund - Norway invests in local bonds and equities.

The other three funds have followed very similar approaches in setting and subsequently revising their asset allocation strategies. The CPPIB took into account the inherited bond portfolio of the CPP and thus its initial allocation favored equity investments. In Ireland and New Zealand, the asset allocation strategies, which were prepared with advice from the same firm of international investment consultants, targeted a broad allocation of 80 percent equities (growth assets) and 20 percent bonds (defensive assets).

The Irish fund prohibits investment in Irish government bonds. Its investments in Irish equities are less than 1 percent of total assets, in line with the share of the Irish stock market in Eurozone equities, which are perceived as the relevant domestic market. In New Zealand, local equities account for 7.5 percent of total assets and local bonds for an additional 10 percent. The NZSF has resisted pressures to raise its allocation to local equities to 30 percent or more, but its current allocation exceeds the relative importance of the local market in global equities. The CPPIB has the largest share of assets allocated to local equities and bonds. Even though this share has been declining, it still amounted to 55 percent of total assets in 2006. However, as in other funds, the use of derivatives products,

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12 GFPG investments are subject to strict ethical guidelines that aim to ensure that the companies in which the fund invests its resources have good corporate governance structures, are well managed, respect human rights, and protect the environment.
including especially traded options, may cause a substantial change in the relative exposure of the CPPIB to Canadian and foreign assets.

**TABLE 2**

*Asset allocation (percent of total assets)*

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
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<td><strong>Norway – GPFG</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>40.9</td>
<td>37.9</td>
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<td>41.0</td>
<td>41.6</td>
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<td>Public Equities</td>
<td>14.7</td>
<td>25.9</td>
<td>28.1</td>
<td>42.7</td>
<td>56.2</td>
<td>58.5</td>
<td>57.9</td>
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<td>0.0</td>
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<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
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<td>60.8</td>
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<td>42.8</td>
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<td>3.8</td>
<td>0.6</td>
<td>0.1</td>
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*Note: ¹ Data refer to end March of following year.*

*Source: Vittas, Impavido and O’Connor (2008).*
All three funds started by emphasizing passive management through external asset managers. However, this concept was relatively quickly expanded to allow active management, use of customized indexing to limit excessive exposure to index-dominating companies and allow investments in smaller companies, and development of internal management capabilities, first in passive management and progressively also in active management. The approach was later expanded further to encompass investments in several alternative asset classes, including private equity, real estate and infrastructure projects as well as emerging markets.

In the case of Canada, this has even included the taking of principal positions in individual corporations and participating actively in cooperation with private equity funds in hostile takeovers of leading entities in the domestic and international markets (principal investing). It also included the development of short-term trading capabilities. The CPPIB has also established several subsidiaries specializing in private equity investments in emerging countries and plays a management role in large infrastructure projects in several developing countries. In New Zealand the current strategy covers internal management of investments in forestry and timber operations.

In all cases, investments in hedge funds and derivative instruments have also been authorized. Derivatives, including equity index swaps and futures, are used to manage risk, enhance returns, and provide liquidity, but they change drastically the exposure of funds to different types of assets and risks. The fundamental change in risk exposures that is caused by the use of some derivative products, especially options, makes the discussion of asset and liability structures less meaningful. However, a full presentation of risk exposures is lacking from all publicly available reports and this weakens the claims about complete transparency.

These developments are a far cry from the original idea of passive investment in indexed instruments and the concept of public pension funds as ‘managers of managers’. The departure from that ideal has been justified by the need to enhance the investment performance of the fund. In the case of Canada, it has been argued that the new approach is necessary to obviate the need for a future increase in contributions or a reduction in benefits.

This evolution of the strategic asset allocations of the four public pension funds has reflected the growing trend over the past decade or so among large university endowment funds, charitable foundations, and corporate pension funds to diversify out of investments in listed equities and bonds and seek higher returns in alternative asset classes, including private equity, real estate, hedge funds, and emerging markets (Bernstein
Alternative asset classes may promise higher expected returns. Although their expected volatility is also likely to be higher, the low correlation of their returns with those of listed equities and bonds implies at most a small increase in the volatility of total portfolio returns. In addition, some of these assets are marked-to-market at infrequent intervals, which would imply a smaller recorded volatility, even if the underlying volatility were much greater.

Thus, the departure of the investment policies of public sector funds from the romantic idea of passive external management follows a widespread trend among large institutional investors. Nevertheless, some aspects of the new approach should raise policy concerns. First is the risk (identified by Warren Buffett, the well-known investor) that ‘mark-to-model’ valuations may over time mutate to ‘mark-to-myth’ valuations. The recent experience with CDOs based on sub-prime mortgages lends support to this concern. Second, the more extreme forms of alternative investments, such as management of infrastructure projects, engaging in principal investing, and participation in hostile takeovers, expose public pension funds to risks for which they are unlikely to be well prepared and for which they are unlikely to have the requisite skills. It would be more consistent with the long-term objective of public pension funds to seek to maximize returns with a prudent level of risk if they limited their involvement in alternative asset classes to those that avoid ‘principal investor’ risks and rely on robust valuation models.

10. Implementation of investment strategy

Implementation of the investment strategy is the responsibility of executive management. However, the decision regarding the relative reliance on passive and active management and the use of internal and external managers as well as the selection of external managers require board approval. Executive management is fully responsible for monitoring the performance of both internal and external managers and for reporting to the board. Executive management also plays an important advisory role and is often the driving force for important changes in investment strategy. This seems to be more pronounced in Canada where a generous system of executive compensation is used.

Implementation of investment strategy in the four public pension funds involved the selection and appointment of global custodians, transition managers and external asset managers. In all cases, clear technical criteria were established for the selection of external service providers and a transparent process was utilized to ensure objectivity and avoidance of
conflicts of interest. Global custodians were selected to secure the legal segregation and safe custody of assets and to facilitate a more efficient monitoring of the performance of external asset managers. Use of global custodians simplifies the assignment and termination of mandates to different managers. Custodians also provide supplementary services in transaction settlement, collection of income, claiming of tax refunds, cash sweeps, fund accounting and reporting, and securities lending. Transition managers were retained to assist in investing large amounts of cash in domestic and foreign markets with minimal market impact.

The number of retained external managers and the number of mandates has increased dramatically over time in all cases following the expansion of investments in private equity, real estate and infrastructure projects. Initially external managers were specializing in passive indexing but over time the emphasis has shifted to asset managers specializing in particular sectors, regions, or strategies. The CPPIB maintains relationships with well over 70 private investment, real estate and infrastructure groups. The Norwegian fund also has a large number of external managers and mandates, while for the remaining two funds, the number of managers ranges between 15 and 25.

The appointment of external managers requires close monitoring of their performance and adoption of well-constructed benchmarks to facilitate the measurement and attribution of performance and risk to different managers. All funds have adopted sophisticated systems of reporting and measurement of risks and returns that complement the work of custodians. Formal review meetings of external asset managers are held at regular intervals and these reviews inform the board decision to renew or terminate particular mandates.

11. Investment performance

All four pension funds have achieved positive investment results with excess returns over their respective benchmarks. However, equity returns have been adversely affected by the bursting of the high tech bubble in 2000 and the fall in equity prices in 2001 and 2002.

In Norway the average annual return over the whole period since 1997 equaled 6.5 percent. The return on equities for the period since 1998 reached 7 percent, while bonds produced over the same period a lower return of 5.4 percent. NBIM reported an excess return that averaged 48 basis points over the period 1998-2006. Operating costs are low and compare favorably with those of other large international pension funds.
Overall operating costs reached 10 basis points in 2006. But deducting performance-based fees, the other costs amounted to 7 basis points.

### TABLE 3

**Asset returns (percent)**

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway – GPFG</td>
<td>2.5</td>
<td>-2.4</td>
<td>-4.7</td>
<td>12.6</td>
<td>8.9</td>
<td>11.1</td>
<td>7.9</td>
<td>6.5</td>
</tr>
<tr>
<td>Canada – CPP¹</td>
<td>7.0</td>
<td>4.0</td>
<td>-1.5</td>
<td>17.6</td>
<td>8.5</td>
<td>15.5</td>
<td>12.9</td>
<td>8.2</td>
</tr>
<tr>
<td>Canada – CPPIB²</td>
<td>-17.6</td>
<td>2.8</td>
<td>-25.8</td>
<td>28.6</td>
<td>10.9</td>
<td>16.6</td>
<td>12.9</td>
<td>6.6</td>
</tr>
<tr>
<td>Ireland – NPRF</td>
<td>3.3</td>
<td>-16.1</td>
<td>12.8</td>
<td>9.3</td>
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<td>12.4</td>
<td>6.5</td>
<td></td>
</tr>
<tr>
<td>New Zealand – NZSF</td>
<td>10.4</td>
<td>14.1</td>
<td>19.2</td>
<td>14.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:** ¹ Data refer to end March of following year. ² Average rates for the reported period of activity for each fund. ³ Source: Vittas, Impavido and O’Connor (2008).

In Canada the average rate of return on all CPP assets for the period 2000-2007 was 8.2 percent, while for assets managed by the CPPIB it amounted to 6.6 percent. Annual data on excess returns over the benchmark portfolio show that very large excess returns of the order of 8 percentage points were realized in fiscal 2001 (second column in Table 3). This is explained by the decision to reduce exposure to Nortel Networks that accounted at the time for 35 percent of the Toronto market and underscored the benefits of using customized indexing. The operating costs of the CPPIB at 11 basis points appear low at first sight and comparable to those of the most efficient pension fund management institutions around the world, like the TSP in the US, ATP in Denmark, or the NBIM in Norway. In reality, however, total operating costs are higher than the costs of these other institutions. This is because the reported costs exclude external management fees and trading commissions, which amounted to around 20 basis points in the last couple of years. Adding external management fees and trading commissions to total operating costs would raise their level to between 28 and 42 basis points over the last 5 years.¹³

In Ireland investment returns fluctuated considerably from year to year, reflecting the high volatility of equity market returns in the early years of the new millennium. The fund achieved a substantial excess return over its benchmark in 2001 and 2002 mainly because of a deliberate delay in implementing its asset allocation strategy. The annualized average rate of

¹³ It should be noted that reported operating costs of most pension funds do not include investment management fees charged indirectly for participations in investment funds.
return over the whole period 2001-2006 amounted to 6.5 percent. Operating expenses, including the expenses of NTMA, increased over time and amounted to 21 basis points in 2006. The combined Commission and NTMA expenses ranged between 6 and 7 basis points and are comparable to management expenses of other large pension funds. However, external management fees exceeded 15 basis points.

TABLE 4

<table>
<thead>
<tr>
<th>Total operating costs1 (basis points)</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway - GPFG</td>
<td>9.0</td>
<td>10.4</td>
<td>10.5</td>
<td>10.6</td>
<td>9.8</td>
</tr>
<tr>
<td>Canada - CPPIB2</td>
<td>37.9</td>
<td>34.6</td>
<td>27.3</td>
<td>24.5</td>
<td>26.9</td>
</tr>
<tr>
<td>Ireland - NPRF</td>
<td>14.0</td>
<td>21.2</td>
<td>20.9</td>
<td>22.7</td>
<td>20.8</td>
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<tr>
<td>New Zealand - NZSF</td>
<td>28.3</td>
<td>47.5</td>
<td>71.1</td>
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</table>

Notes: 1Includes internal and external management costs.  
2 Data refer to fiscal year ending in March of following year.  
Source: Vittas, Impavido and O’Connor (2008).

In New Zealand fund performance, net of investment management expenses, averaged 14.5 percent since its inception. The strong results are attributed to the fact that the fund avoided the unsettled markets at the start of the new millennium. Mainly because of the young age of the fund and its small size, operating expenses relative to average total assets are high by comparison to other large public pension funds. Operating expenses rose to 71 basis points in 2006, up from 28 points in 2004. Investment management fees account for the lion’s share of expenses.

12. Concluding remarks

The newly created public pension funds of Canada, Ireland and New Zealand share many common characteristics. They all have small professional boards, are independent of government, and operate with a very high level of transparency and public accountability. They all have regular sources of funding as well as long investment horizons and they have been charged with a commercial mandate to seek high investment returns with a prudent level of risk. The boards of directors are responsible for setting the strategic asset allocation and executive management for implementing the chosen strategy.

The GPFG of Norway shares all these features, except that it is not independent of government. Its asset allocation is determined by the Ministry of Finance and approved by Parliament. However, the adoption
of the 4 percent fiscal rule, whereby only 4 percent of the total value of the fund can be used in any one year to finance the structural deficit of the government, has placed a strict limit on the use of the fund for current political objectives. A practical aspect of the different composition of the board is that, despite being the largest and having the longest investment horizon, the Norwegian fund has persistently adopted the most conservative asset allocation of all four funds.

Two of the public pension funds (CPPIB and NZSF) have appointed internal chief executives. Management of the Irish fund has been assigned to the National Treasury Management Agency (NTMA), which also manages the public debt of Ireland. In Norway, executive management of the fund has been entrusted to Norges Bank. The latter created a special investment management unit, NBIM, which has discharged its duties as manager in the same professional way as the executive managers of the other three funds.

All four funds were initially set up to operate with a small complement of skilled staff, build diversified portfolios of global equities and bonds, and effectively act as managers of managers, focusing on passive indexed management through external managers. This romantic idea did not last long. Passive indexed management was soon complemented with enhanced indexing, which allows transactions that respond to special pricing opportunities, and customized indexing, which limits exposure to index-dominating companies and also allows investments in smaller local companies that are not included in the main market index. Then passive management was brought in-house, followed after a while with developing internal active management. The role of external managers was gradually limited to implementing active overlay programs, seeking excess returns through performance-based contracts.

A major shift in investment strategy occurred with decisions to expand allocations to private equity, real estate and other alternative assets. These investments involve non-passive management, although they rely for the most part on external managers. Three of the funds have already authorized substantial increases in such allocations, while in Norway the case for investments in alternative assets is under evaluation. The Canadian fund has also pursued principal investing, management of infrastructure projects, and short-term trading. For its part, the New Zealand fund has become involved in operating large timber investments.

Alternative asset classes promise high returns and their valuation is not exposed to the high volatility of securities traded on public markets. But they are a far cry from the original perception of passive indexed management through external managers. An important implication of
these changes has been a large expansion of staff, especially by the Canadian and Norwegian funds.

The investment performance of the four funds has been positive in real terms but far from spectacular. This is explained by the poor returns of global equity markets in the first few years of the new millennium following the bursting of the high tech bubble in early 2000. The New Zealand fund, which started operations after the rebounding of equity markets, has reported much higher investment returns than the other three funds. Excess returns relative to their benchmarks have been realized by all funds. However, the growing emphasis on alternative asset classes, which are not ‘marked-to-market’ but are rather ‘marked-to-model’, weakens the relevance of the benchmarks.

In conclusion, despite the clear and significant departure from the original concept of external passive management, the experience of the four public funds has been positive. Governance and public accountability are strong in all countries. Their example has already been followed in several other OECD countries and is likely to be copied in a growing number of developing countries where public pension funds continue to play an important role. However, care needs to be taken to ensure that the more active approach to management and the emphasis on alternative asset classes do not cause a derailment of the fundamental objective of these funds, which is to help finance the anticipated large increase in public pension outlays over the next 20 to 50 years. As the investment horizon of these funds becomes shorter, asset allocation strategies would need to be adjusted to favor more liquid instruments that are easier to value.

13. Lessons for other countries

At the risk of some repetition and oversimplification we summarize below the main lessons for other countries. These are presented as a checklist of policy issues.

Preconditions: Public pension funds should be established only if they can rely on regular transfers of funds and can operate with long investment horizons. Care should be taken to avoid a large level of public debt; in other words, countries that have high levels of public debt should give priority to a reduction in their debt level before they start transferring resources to a public pension fund. The size of the public pension fund should not be too large relative to the national economy and the local financial markets. Global diversification should be encouraged. Countries, which already have public pension funds and seek to modernize their investment operations, should also address questions regarding their
relative size and should consider changing other parameters to ensure that their public pension fund does not acquire a dominant position in the local economy and financial market. Needless to add, the ability to enforce high standards of fund governance is crucial to the success of the new approach to public pension fund management.

**Objective:** The public pension fund should have a clear and unequivocal commercial mandate. The mandate should be to seek to maximize long-term investment returns, subject to a prudent level of risk, and after taking fully into account the structure of its liabilities and the length of its investment horizon.

**Legal Status:** The public pension fund should ideally be established as a separate legal entity and not as a general government agency. This would imply that it should not be treated as a budgetary unit and its assets should be legally segregated from the general government.

**Institutional Independence:** The public pension fund should be independent from government and should be insulated from political interference. However, the fund should be required to operate with a very high level of public transparency and should be subject to full public accountability to Parliament and its main stakeholders.

**Funding Sources:** The public pension fund should have access to stable and long-term sources of funding. Ideally, funding should be in the form of regular transfers either from the surplus of worker contributions over pension benefits or directly from the budget. Funding could be supplemented with ad hoc transfers from privatization revenues or other financial transactions.

**Board of Directors:** The public pension fund should have a small board of experts (less than 10) rather than representatives of stakeholders or ex-officio appointees. There should be a sufficient number of directors with adequate expertise and experience on financial matters, investment policies and portfolio management. To ensure the appointment of high-caliber professionals, a nominating committee should be created to identify a short list of candidates from which the Minister of Finance would make director appointments. To promote continuity, director appointments should be staggered. Appointments should be for fixed terms and could be renewed for a stated number of terms (2 or 3), while removals should only be permitted for just cause. The process of director removal should be clearly stipulated in the relevant act.

**Board Committees:** The Board of Directors should create several key committees with clear terms of reference and areas of responsibility. These should include an audit committee, a governance committee, and an
investment committee. Outside experts could be recruited to serve on these committees along side board directors.

**Governance Policies:** The Board of Directors should establish clear guidelines on corporate governance, including rules on conflicts of interest and ethical conduct by directors and senior managers of the fund. It should also establish clear policies on its role in promoting good practices of corporate governance in investee companies. These should emphasize transparency and public disclosure and full respect of shareholder rights.

**Internal Controls:** The Audit Committee of the Board should establish clear policies on internal control systems and should especially institute a separation of investment decision making from back-office operations, such as confirmation and settlement of transactions, record keeping, and measurement and attribution of investment performance and risk.

**Investment Policy and Strategic Asset Allocation:** The Investment Committee could undertake the fundamental analysis of options but the Board of Directors should be responsible for approving the investment policy and asset allocation strategy. This should be based on the investment horizon of the fund and should take into account the expected returns and risk levels of different types of instruments. The structure of liabilities should also be taken into account. Initially, passive management of investments in listed equities and bonds could be favored but over time consideration could also be given to active management and investment in unlisted securities, including alternative asset classes, such as private equity, real estate and infrastructure projects. Even with passive management, customized and enhanced indexing should be adopted at an early stage to mitigate risks and increase returns.\(^{14}\) In contrast, principal investing and assumption of managerial responsibilities in individual companies or projects should be avoided unless there are strong reasons and well-documented safeguards in favor of such initiatives. The strategic asset allocation should be subject to regular reviews and should be modified in the light of experience and changing market conditions.

**Executive Management:** The Board of Directors should have responsibility for appointing a Chief Executive Officer and approving the selection of top management, including a chief accountant, an internal auditor, and an actuary (if necessary). Alternatively, it could opt for appointing an external

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\(^{14}\) Customized indexing would limit investments in index-dominating companies and would also permit investments in smaller companies that are not included in the market index. Enhanced indexing would allow the exploitation of special pricing opportunities.
agency for the executive management of the fund. An external management agency should specialize in managing long-term investment assets and should employ staff with long experience and relevant skills in the markets in which the assets of the fund are to be invested. It should also recruit staff that is experienced in selecting, managing and monitoring the performance of external asset managers. The management agency should also develop sophisticated information systems to track the performance of asset managers.

**Selection of External Service Providers:** The Board of Directors should be responsible for the selection and termination of various providers of external services, including a global custodian, a transition manager (if necessary), external asset managers, external auditors, and external consultants. Clear and detailed selection criteria should be adopted, while the performance of external asset managers should be monitored and evaluated by reference to well-constructed benchmarks that properly reflect the level of risk of particular assets. The Board of Directors should opt for using specialist external consultants in setting the asset allocation strategy and determining the selection criteria for other service providers. The appointment of a reputable global custodian is a particularly important decision because global custodians play a very critical role in the segregation and safekeeping of assets and in monitoring the performance of external asset managers.

**Transparency and Public Disclosure:** The Board should abide by a very high level of transparency and public disclosure. It should publish audited annual financial statements, quarterly performance reviews as well as internal and external governance and other audit reviews. It should publish its investment policy objectives and all its corporate and internal control guidelines. Its chairperson should be required to report periodically to relevant Parliamentary committees.

**14. Investment policy options for the social insurance fund in Cyprus**

The Social Insurance Fund faces fundamental challenges for its future viability. These have resulted from long-run demographic and socioeconomic trends that have raised the cost of annual benefits relative to the inflow of annual contributions. Although the SIF continues to report an annual financial surplus, this is due to the high level of government contributions. Excluding the government transfers, the SIF already suffers from an annual deficit.

The factors behind the long-term trends are the increasing longevity of the population, early retirement provisions, and generous benefit levels.
Addressing these problems will require fundamental parametric reforms. Improving the investment performance of the SIF reserves will not be a panacea, given the current fiscal constraints. It will only make a small contribution to the future financial viability of the SIF, by extending the day of reckoning by a few years.

The SIF has two investment policy options. The first entails an increase in the administered rate of return that is applied to the reserves of the fund. However, as long as the SIF reserves are invested in non-marketable government securities and are effectively ‘notional’ reserves, increasing the administered rate of interest will not improve the solvency and liquidity position of the SIF. Raising the administered rate will increase internal transfers among different units of the government but will not affect the overall financial condition of the government. The notional reserves of the SIF will appear to be larger and to be exhausted at a later date but in practice the ability of the SIF to meet its obligations will continue to depend on the ability of the government to transfer the necessary funds from other budgetary uses.

The second investment policy option entails the creation of effective reserves that are held outside the accounts of general government and are invested in a diversified portfolio of domestic and international marketable assets. This approach will critically depend on the ability of the government to set aside an adequate level of effective reserves and with the requisite maturity.

The SIF currently has total reserves that correspond to 36 percent of GDP but these are ‘notional’ and are not available in their totality for investment outside the general government accounts. The financial situation of the SIF and the Stability and Growth Pact of the European Union constrain the ability of the government to borrow in excess of what is needed to finance current fiscal deficits in order to accumulate the effective reserve. But some resources can be found from the implementation of parametric reforms that will create some needed fiscal space and from transfers of resources arising from so-called stock-flow adjustments that do not affect the level of public debt. These include the use of the sinking funds that are currently targeted for debt reduction, some or all of the proceeds of the privatization of the telecommunication or electricity companies and the sale of other assets including government-owned land.

Through these means the government could set aside a significant effective reserve and set a sufficiently long investment horizon (e.g., a minimum of 10 years). This would be a sufficiently long horizon to maximize the probability of realizing expected returns from risky assets in excess of the marginal cost of government borrowing.
Creating an effective reserve that is invested in domestic and international marketable assets will make a modest but real contribution to meeting the future financial challenges of the SIF. It will require professional asset management subject to strong governance safeguards and a high level of transparency and public accountability. Following sound international practice, as exemplified by the experience of the four OECD countries reviewed in this paper, the effective reserve should be invested prudently in the global markets, treating the broad euro markets as the domestic markets and also investing a reasonable proportion of assets in non-euro markets. It should be insulated from political and social pressures to invest either in local government securities or in securities listed on the local stock exchange.

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