

Public Scheme Reserve Funds: Helping sustain PAYG pensions

Survey Report



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First published 2007

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Printed in Switzerland

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Section I - Introduction

Background

Data on the investment of public social security scheme reserve funds is not readily available and little comparative research has been undertaken in this area. In 2002 the International Social Security Association (ISSA) created a Programme on the Investment of Social Security Funds with the express purpose of constructing a knowledge base in this important area of work. The Programme is implemented through the Association's Technical Commission on Statistical, Actuarial and Financial Studies which is Chaired by Chris Daykin, the UK Government Actuary. One of the first outputs of the Investment Programme was the "Guidelines for the investment of social security funds". The survey, which is the subject of this report, was conducted under the auspices of the ISSA Programme on the Investment of Social Security Funds. It is intended to help identify gaps between public pension scheme investment procedures and the ideal presented in the guidelines, with the aim of encouraging improved application of the guidelines where possible.

Scope of Survey

ISSA surveyed forty-three of its member institutions in November 2005 concerning public social insurance pension scheme reserve funds. Twenty-one responses were received, of which six indicated that no reserve fund existed and a further three only provided data on the qualitative part of the survey. Quantitative data was also researched from publicly available fund or scheme reports on a further eight countries and has been included in Section III of this report. Table 1 below summarises which scheme or reserve fund is covered in Section II and/or Section III, the institutional source of information in each case, and the year of financial data provided.

Table 1 – Schemes and Reserve Funds Included in the Report

Country	Scheme or Reserve Fund Name	Source	Included in Section II and/or III	Year of Financial Data
Barbados ¹	National Insurance Scheme	National Insurance Office	Sections II and III	2004
Belize	Social Security Scheme	Social Security Board	Sections II and III	2005
Canada	Canada Pension Plan	Office of the Chief Actuary	Sections II and III	2005
Denmark	ATP - Arbejdsmarkedets Tillægspension SP - Særlige Pensionsopsparing	ATP - Arbejdsmarkedets Tillægspension	Sections II and III	2005
Finland	All private-sector statutory earnings-related pension schemes	Finnish Centre for Pensions	Sections II and III	2004
France	Fonds de Réserve pour les Retraites	Fund Reports	Section III only	2005
Ireland	National Pension	Fund Reports	Section III	2005

¹ The information provided refers to the Main Fund which covers old age, disability and survivor benefits plus other benefits including sickness, work injury, maternity and funeral expenses. Two other Funds exist, the Unemployment Benefit Fund and the Severance Payments Fund, but are not covered in this report.

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Table 1 – Schemes and Reserve Funds Included in the Report

Country	Scheme or Reserve Fund Name	Source	Included in Section II and/or III	Year of Financial Data
	Reserve Fund		only	
Isle of Man	National Insurance Fund	Department of Health and Social Security	Section II only	-
Japan	Government Pension Investment Fund	Fund Reports	Section III only	2004
Jersey	Social Security System	Social Security Department	Sections II and III	2005
Jordan	Social Security Scheme	Social Security Corporation	Sections II and III	2004
New Zealand	New Zealand Superannuation Fund	Fund Reports	Section III only	2005
Norway	Government Pension Fund	Fund Reports	Section III only	2005
Philippines	Social Security System	Social Security System	Sections II and III	2004
Poland	Demographic Reserve Fund	Social Insurance Institution – ZUS	Sections II and III	2004
Portugal	Social Security Financial Stabilization Reserve Fund	Social Security Capitalization Funds Management Institute	Sections II and III	2005
Saudi Arabia	Social Insurance System	General Organization for Social Insurance	Section II only	-
Sierra Leone	Social Security System	National Social Security and Insurance Trust	Sections II and III	2005
Slovak Republic	Reserve Fund of Solidarity	Social Insurance Agency	Section II only	-
Spain	Social Security Reserve Fund	Fund Reports	Section III only	2005
Sweden	National Pension Funds AP1, AP2, AP3, AP4, and AP6	Fund Reports	Sections III only	2005
Tanzania	Social Security System	National Social Security Fund	Section III only	2004
USA	Social Security Program	Fund Reports	Section III only	2005

Section II – Qualitative Information

Scope of Data Covered

The fifteen schemes or reserve funds that replied to the qualitative part of the survey are shown in Tables 2a and 2b below, according to whether the assets are managed as part of the scheme or are in a reserve fund that is legally separate from the associated social security scheme. The age of the scheme or reserve fund and the branches of social security covered are also indicated.

Table 2a– Countries surveyed where reserves are managed as part of the scheme (i.e. no legally separate reserve fund)

	Scheme	Age of Scheme	Old Age	Survivors	Disability
Barbados ²	National Insurance Scheme	39 years	Yes	Yes	Yes
Belize	Social Security Scheme	25 years	Yes	Yes	Yes
Canada	Canada Pension Plan	41 years	Yes	Yes	Yes
Denmark ³	ATP - Arbejdsmarkedets Tillægspension SP - Særlige Pensionsopsparring	42 years	Yes	Yes	No
Finland	All private-sector statutory earnings-related pension schemes	69 years	Yes	No	Yes
Isle of Man	National Insurance Fund	55 years	Yes	Yes	Yes
Jordan	Social Security Scheme	26 years	Yes	Yes	Yes
Philippines	Social Security System	49 years	Yes	Yes	Yes
Saudi Arabia	Social Insurance System	7 years	Yes	Yes	Yes
Sierra Leone	Social Security System	5 years	Yes	Yes	Yes
Tanzania	Social Security System	42 years	Yes	Yes	Yes

Table 2b– Countries surveyed where the reserve fund is legally separate from the scheme

	Reserve Fund	Age of Reserve Fund	Old Age	Survivors	Disability
Jersey	Social Security System	53 years	Yes	Yes	Yes
Poland	Demographic Reserve Fund	4 years	Yes	No	No
Portugal	Social Security Financial Stabilization Reserve Fund	17 years	Yes	Yes	Yes
Slovak Republic	Reserve Fund of Solidarity	2 years	Yes	Yes	Yes

The institutional framework, governance and accountability arrangements for the management of the reserves are summarised in Tables 3 and 4 at the end of this section. More detailed information on these and other aspects taken from the country responses are provided in the following pages.

² The information provided refers to the Main Fund which covers old age, disability and survivor benefits plus other benefits including sickness, work injury, maternity and funeral expenses. Two other funds exist, the Unemployment Benefit Fund and the Severance Payments Fund, but are not covered in this report.

³ The information refers to the mandatory earnings-related scheme ATP and the mandatory individual account scheme SP.

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Regulatory and Institutional Framework

Public social insurance pension schemes may accumulate reserves (essentially the excess of current contributions over current benefits) and invest these to help ensure the long-term sustainability of the scheme and to provide a buffer for periods of difficulty due to either anticipated or unforeseen circumstances. These buffer or reserve funds may be included in the overall funds of the scheme and are usually managed by the social security institution or they may be legally separate from the scheme (e.g. held in trust or corporation). Given the vital role that public pension schemes play in providing an adequate income in retirement, governance and accountability arrangements for managing scheme reserves are of prime interest.

In all but four countries surveyed (see tables 4a and b for details), the schemes or legally separate reserve funds are required by law to have a governing body. The number of governing body members range from three to fourteen, with nine being the most frequent. Nearly all are required to have tripartite representation (usually equal among employees, employers and government). Two countries, Saudi Arabia and Sierra Leone, also have specific provision for pensioner representation (although there are no pensioners as of yet in the scheme in Sierra Leone).

Members of governing bodies are mostly appointed for a fixed-term mandate (with the possibility of reappointment) according to their expertise in investment, business, economics and financial management. Additionally, disqualification conditions related to malpractice, including fraud, dishonesty, incompetence, or gross financial mismanagement, apply. The governments, through the presidents, responsible ministers or state secretaries, conduct the appointment process, and candidates are usually proposed by organizations represented on the governing body. In the few cases where schemes or reserve funds do not have governing bodies, the responsible minister or state secretary is usually the chairperson of the investment committee. In Denmark, the members of the governing body appoint the chairperson who must be independent of employer and worker organizations (i.e. the Chief Executive Officer of the Danish Institute of Social Research or the Official Conciliator).

Governing bodies are invested with broad powers, of which the most important responsibilities and functions with regard to scheme reserves or reserve funds are to:

- Set investment policy;
- Take or approve investment decisions;
- Appoint auditors and in some cases actuaries; and
- Report on the scheme's or reserve fund's activities.

Though governing bodies are autonomous and have complete independence in their decisions, there is nevertheless a close relationship between them and the Government and/or Parliament. Governing bodies are accountable to the responsible ministries (e.g. Ministry of Social Security or Ministry of Finance), to the head of State (through the responsible minister in some cases), and to Parliament. In nine of the fifteen countries (see tables 4a and b for details), the governing body is directly accountable to Parliament for the performance of the scheme or reserve fund as the reports and accounts are submitted to Parliament or to a Parliamentary committee where the content can be questioned and actions sanctioned.

Legal restrictions on the type of expenditure that may be made from schemes or reserve funds apply in nearly all cases. There are particular restrictions in Poland preventing any benefit expenditure to be made from the reserve funds until 2009. In Canada, although there are no

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specific regulations, contributions are expected to exceed expenditures until 2021, after which time some investment returns will be required to pay for expenditures. In other cases, the use of the scheme reserves or reserve fund is decided by the governing body.

Financing and Expenditure

In the countries surveyed, the schemes generally build their reserves by allocating the annual excess of contributions received over benefits paid. In contrast, the assets of legally separate reserve funds increase mainly through the excess of investment income over administrative costs. In three cases, Finland, Jersey and Portugal, capital transfers are also made from the State, either for specific purposes or to meet (actual or future) scheme shortfalls. Only two countries, Poland and the Slovak Republic, earmark contributions for the reserve fund. In the former, 0.25% of employees' contributions (rising to 0.35% until 2008 reducing to nil thereafter) is earmarked for the reserves. In the latter, employers, the self-employed and the voluntarily insured all contribute 4.75% of the earnings assessment base towards the reserves while the State contributes a further 2% of the earnings assessment base.

In defined benefit schemes, the minimum level for scheme reserves is mainly determined by actuarial valuations taking into account future liabilities and income. In a few cases, the minimum level is based on the scheme's or fund's ability to pay a specific minimum number of monthly pension benefits (e.g. six months in Belize; twenty-four in the Isle of Man and Portugal). Canada, however, uses a particular method of calculating the scheme contribution rate to ensure that the asset/expenditure ratio remains the same in the 10th and 60th year following the end of a review period in order to sustain the Canada Pension Plan.

Actuarial valuations are mandatory for all eleven schemes included in the study but only for one of the four legally separate reserve funds and are carried out at least every five years. The most favoured frequency is every three years (seven countries) with Denmark being an exception in undertaking assessments four times a year. In seven countries the valuation is undertaken by an external actuary, the Government Actuary or a private actuarial firm, rather than an actuary employed by the scheme or reserve fund.

Disbursements from scheme reserves or reserve funds are tightly regulated. For example, in Poland, where the reserve fund has no governing body, any decision about benefit expenditures from the fund can only be undertaken by the government. In schemes, disbursements principally constitute benefit payments whereas in legally separate reserve funds they are mainly administrative and investment costs. Where reserve funds are legally separate, the cost of administration of the reserve fund is usually paid from the reserve fund. If, however, the reserves are managed as part of the scheme, then usually administrative costs are not paid from the reserves but from the general operating account of the scheme.

Asset Management

The majority of schemes and reserve funds have comprehensive investment policies or guidelines, some of which are approved through national legislation. Most are publicly available although in a few cases the policies and guidelines are confidential. Guidelines usually not only cover investment decisions and asset allocation but also establish a minimum framework for the conduct of those involved in the investment of funds and the avoidance of conflicts of interest, etc.

The assets of the schemes and reserve funds included in the study are mostly managed in-house by the investment division of the social security institution. Exceptions to this are Canada (Investment Board), the Isle of Man and Jersey (the Treasury) and Portugal (the

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independent institution responsible for the legally separate reserve fund). Although Portugal has no legal restrictions on outsourcing the asset management, the reserve fund has to date been managed in-house. Barbados, Canada, Finland, Jersey and Saudi Arabia all employ a number of different asset management options, including insurance companies, banks, specialized asset managers and other financial institutions, in addition to in-house management.

The use of custodians to hold the scheme or fund assets is not widespread with only four of the fifteen countries (see tables 4a and b for details) indicating that assets must be held by a custodian. Where this is the case, the custodians are principally public financial institutions (i.e. central banks and depository of securities).

The investment strategies of the schemes and reserve funds surveyed show diverse approaches to maximising returns and minimising risk. While some reserve funds must comply with investment guidelines or a strategy developed on the basis of return, solvency, liquidity and diversification, others must observe investment limits specified in regulations or decisions made by the governing body. Only two schemes, Jordan and Philippines, specifically mentioned that they follow the prudent person rule.

Although only three schemes or reserve funds, Poland, Tanzania and Portugal, are subject to regulations limiting investment in foreign assets, in practice many seek to invest domestically where this meets the other requirements of return, solvency, liquidity and diversification.

Investments are mainly valued at market prices where available, although one scheme, Belize, values at cost. Other methods are also used, including discounted cash flow, contingent claim valuation, amortized cost, etc. with discounted cash flow being the most frequently used of these measures.

An extremely important issue for schemes or reserve funds is risk management. In nearly all cases, investment risk indicators have been, or are being, adopted in order to control the risk exposure of the portfolio. These indicators mainly relate to liquidity, volatility, risk/reward, tracking error and value at risk.

The final decision on the composition of the investment portfolio is usually taken by the governing body although in a few cases it is taken by the specialized investment unit. However, when the governing bodies take the final decision it is usually based on technical recommendations submitted by the specialized investment units.

Financial and Technical Requirements and Reporting

As previously indicated actuarial valuations are required for all the schemes surveyed but only for one legally separate reserve fund. Valuations are carried out at least every five years, and usually more frequently, by an independent actuarial firm or public institution invested with actuarial responsibilities. In some cases governing bodies have the power to require more frequent valuations if they deem it necessary. In Canada, in addition to the regular triennial valuations, an actuarial report is mandatory if a legislative Bill is to be introduced in Parliament that materially affects any estimates in the most recently available regular actuarial report.

All schemes and reserve funds are subject to formal examination of their accounts to ensure compliance with internal and external regulations. In all countries surveyed except the Slovak Republic for which information is not available, audits are carried out by an external auditor at least once a year. In four countries (see tables 4a and b for details) the audit is carried out by the Government Auditor or a private auditor appointed by the government.

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All schemes and reserve funds report their results at least once a year. In Barbados, Belize, Canada, Finland, Jersey, Philippines and Poland (there is no legal requirement in the latter) the annual reports are submitted to Parliament and in Sierra Leone and Tanzania they are submitted to a Parliamentary Committee. None of the schemes or reserve funds specifically mentioned that they use international accounting standards other than Denmark which moved to international accounting standards from 1 January 2005.

For the purposes of reporting on performance of schemes and reserve funds, investments are usually benchmarked against specific indices according to the investment type (i.e. equities, real estate, fixed income investments, etc.).

Tax Treatment

In the majority of countries surveyed, the income on domestic investments is tax-exempt. For those countries that invest overseas, tax may be due on the income therefrom depending on the jurisdiction and tax treaties in force. In Denmark and Finland the managing institutions are subject to the same tax regime applicable to other limited liability companies.

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Summary Tables

Table 3 – Institutional framework of reserve funds

	Reserves managed as part of the scheme				Reserve funds legally separate from the scheme		
	Assets held separately in ring-fenced ¹ reserve funds	Reserves are part of overall scheme assets	Managed by the social security institution	Other	Managed by an independent institution	Managed by the social security institution	Other
Barbados		Yes	Yes				
Belize	Yes		Yes				
Canada	Yes			CPPIB ²			
Denmark		Yes	Yes				
Finland	Yes		Yes ³				
Isle of Man	Yes			Treasury			
Jersey							Treasury
Jordan	Yes		Yes				
Philippines	Yes		Yes				
Poland						Yes	
Portugal					Yes		
Saudi Arabia	No information available	No information available	Yes				
Sierra Leone		Yes	Yes				
Slovak Republic						Yes	
Tanzania		Yes	Yes				

¹ Reserves are segregated from the assets of the scheme and those of the managing institution(s) and may only be used for a defined purpose.

² Canada Pension Plan Investment Board

³ Includes pension insurance companies coordinated by the Finnish Centre for Pensions, public-sector pension providers and the Social Security Institution, KELA.

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Table 4a– Governance and accountability arrangements in countries where reserves are managed as part of the scheme (i.e. no legally separate reserve fund)

Country	Governing Board			Independent Audit Report			Independent Actuarial Report			Annual Report		Scheme Assets	
	Required by law	No. of members	Tripartite	Required by law	Govt. / private audit firm	Minimum frequency of reports	Required by law	Internal / External actuary ¹	Minimum frequency of reports	Published	Parliamentary Oversight ²	Required by law to be held by custodian ³	Required by law to invest in domestic market
Barbados	Yes	9	Yes	Yes	Govt. auditor	Yearly	Yes	External	3 years	Yes	Yes	No	No
Belize	Yes	9	Yes	Yes	Private	Quarterly	Yes	External	3 years	Yes	Yes	No	No
Canada	Yes	12	Nomination process via Federal and Provincial Finance Ministers	Yes	Private plus internal audit	Yearly	Yes	External (Govt.)	3 years	Yes	Yes Tabled in Parliament	Yes	No
Denmark	Yes	13	No ⁴	Yes	Private	Yearly	Yes	Internal	4 times a year	Yes	No	No	No
Finland	Yes	Varies (3 minimum)	Yes	Yes	Private	Yearly	Yes	Internal	Yearly	Yes	Yes	No	No
Isle of Man	No	N/A	N/A	No	N/A	N/A	Yes	External (Govt.)	5 years	Yes ⁵	Yes	No	No
Jordan	Yes	9	Yes	Yes	Private	Yearly	Yes	External	5 years	Yes	No	Yes	No
Philippines	Yes	9	Yes	Yes	Govt. auditor	Yearly	Yes	Internal	4 years	Yes	Yes	No	No
Saudi Arabia	Yes	9	Yes	Yes	Private	Yearly	Yes	No information available	3 years	No	No	No	No
Sierra Leone	Yes	14	Yes	Yes	Govt. auditor or private firm appt by Govt.	Yearly	Yes	Yes	3 years	No	Yes Committee	No	No
Tanzania	Yes	12	Yes	Yes	Private	Twice a year	Yes	External	3 years	Yes	Yes Committee	No	Yes – 100%

N/A = Not applicable

¹ *Internal* means the actuary is an employee of the scheme or reserve fund. *External* means an independent actuary or actuarial firm.

² *Parliamentary oversight* means that the report and the details of the scheme or reserve fund are submitted to a Parliamentary Committee and/or Parliament itself for discussion and questions.

³ Where the *custodian* is independent of the scheme or reserve fund.

⁴ The Governing Board has only two parts, employer and worker representatives. The Government is only represented as an employer.

⁵ The accounts of the scheme are published as part of the Isle of Man Government accounts and, as such, are subject to Parliamentary oversight.

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Table 4b– Governance and accountability arrangements in countries with schemes where reserve funds are legally separate from the scheme

Country	Governing Board			Independent Audit Report			Independent Actuarial Report			Annual Report		Scheme Assets	
	Required by law	No. of members	Tripartite	Required by law	Govt. / private audit firm	Minimum Frequency of reports	Required by law	Internal / External actuary ¹	Minimum frequency of reports	Published	Parliamentary Oversight ²	Required by law to be held by custodian ³	Required by law to invest in domestic market
Jersey	No	N/A	N/A	Yes	Private	Yearly	Yes	External	3 years	Yes	Yes	Yes	No
Poland	No	N/A	N/A	Yes	Private plus internal audit	Yearly	No	No	N/A	Yes	Yes (but not required by law)	Yes	Yes -100%
Portugal	Yes	3	No - However Advisory Board includes tripartite representation	Yes	Private Plus Govt. auditor	Yearly Ad hoc	No	No	No	Yes	No	No	Yes – 50%
Slovak Republic	No - Supervisory Board of Social Insurance Agency is responsible body	No information available	No information available	No information available	No information available	No information available	No	No information available	No information available	No information available	No information available	No information available	No information available

N/A = Not applicable

¹ *Internal* means the actuary is an employee of the scheme or reserve fund. *External* means an independent actuary or actuarial firm.

² *Parliamentary oversight* means that the report and the details of the scheme or reserve fund are submitted to a Parliamentary Committee and/or Parliament itself for discussion and questions.

³ Where the *custodian* is independent of the scheme or reserve fund.

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SECTION III – Quantitative Analysis

Scope of Data Covered

In addition to the twelve countries that responded to the quantitative section of the survey, the qualitative section of this report contains data that was researched directly from fund or scheme reports for a further eight countries.

In order to aid analysis and identify any major differences all data in this section has been split according to whether reserves are legally separated from the associated scheme or are managed as part of the scheme. However, where the information requires analysis as a complete set, countries are presented together.

Sources of information

The data for twelve countries was provided directly to the ISSA by the institutions that administer the funds. ISSA staff researched data on a further eight countries from publicly available statistical and financial reports. GDP figures are taken from the International Monetary Fund statistical database for the same year as the reserve fund data.

Table 5 - Sources of information

	Source	Year of financial data ¹
Barbados ²	National Insurance Office	2004
Belize	Social Security Board	2005
Canada	Office of the Chief Actuary	2005
Denmark ³	ATP - Arbejdsmarkedets Tillægspension	2005
Finland	Finnish Centre for Pensions	2004
France	Fund Reports	2005
Ireland	Fund Reports	2005
Japan	Fund Reports	2004
Jersey	Social Security Department	2005
Jordan	Social Security Corporation	2004
New Zealand	Fund Reports	2005
Norway	Fund Reports	2005
Philippines	Social Security System	2004
Poland	Social Insurance Institution – ZUS	2004
Portugal	Social Security Capitalization Funds Management Institute	2005
Sierra Leone	National Social Security and Insurance Trust	2005
Spain	Fund Reports	2005
Sweden ⁴	Fund Reports	2005
Tanzania	National Social Security Fund	2004
USA	Fund Reports	2005

¹ Relates to the respective accounting year of the scheme or reserve fund.

² The information provided refers to the Main Fund which covers old age, disability and survivor benefits plus other benefits including sickness, work injury, maternity and funeral expenses. Two other Funds exist, the Unemployment Benefit Fund and the Severance Payments Fund, but are not covered in this report.

³ This information relates to the mandatory earnings-related scheme ATP and the mandatory individual account scheme SP.

⁴ Includes National Pension Funds AP1, AP2, AP3, AP4, and AP6.

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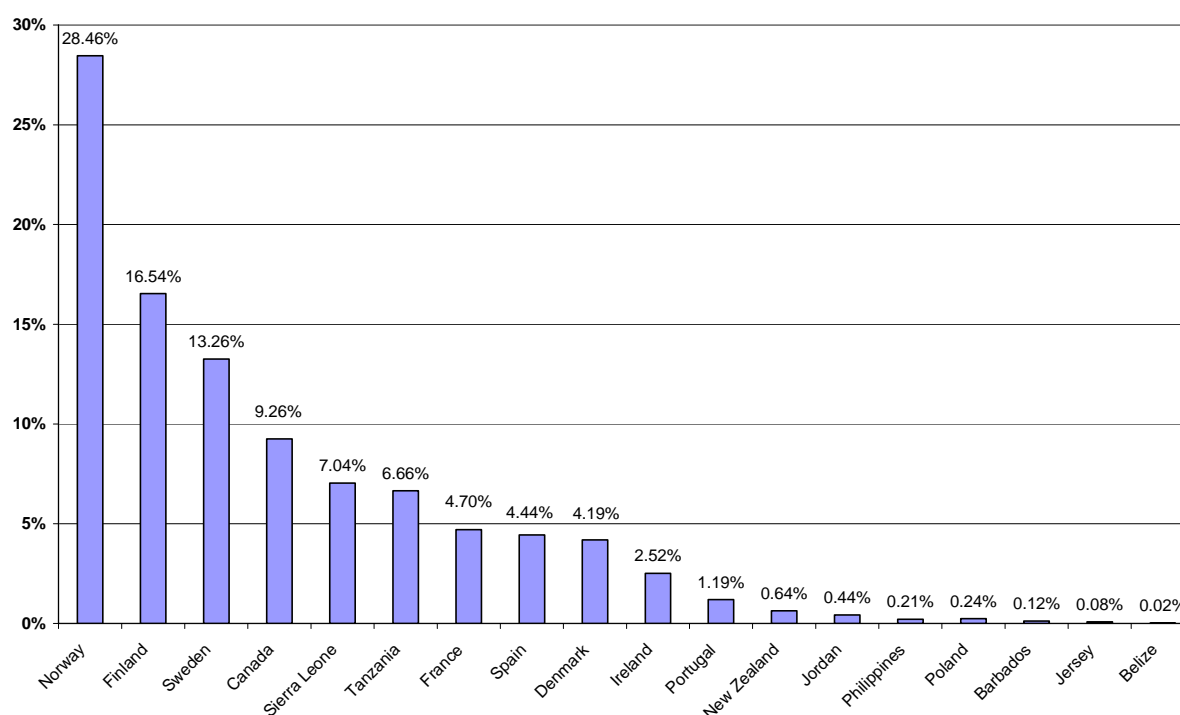
Total Investments

The total amount of assets held in reserve funds in the twenty countries studied is USD 3.44 trillion, of which USD 2.19 trillion is held in reserve funds managed as part of the scheme and USD 1.25 trillion in legally separate reserve funds. In the former category, the United States accounts for 84.87% of the USD 2.19 trillion and in the latter, Japan accounts for 67.87% of the USD 1.25 trillion.

If both these countries are excluded then the total amount of reserves is USD 732.16 billion, of which USD 331.61 billion is in reserve funds managed as part of the scheme and USD 400.56 billion in those that are legally separate from the associated scheme. Hence almost 80% of total assets in the countries studied are held by the United States and Japan.

If the United States and Japan are excluded, then the Nordic countries (Norway, Finland and Sweden) account for around 60% of the remaining assets. The asset distribution by country, excluding the United States and Japan, is shown in Chart 1.

Chart 1 – Assets by country as a % of total reserves of countries included in the chart



Tables 6a and 6b and Charts 2a and 2b below show total assets of reserve funds as a percentage of GDP and its components in terms of bonds, equities, cash and deposits, and others as follows:

- Bonds: includes bills and bonds issued by local governments and the National Debt Offices (long term and short term), securities/bills issued by companies (financial and non-financial enterprises), and bonds issued by banks and other financial institutions.
- Equities: includes all forms of shares in the capital of enterprises, quoted on official stock exchanges, and all forms of unquoted shares and other equities.
- Cash: includes current account and other short-term savings/securities in the financial system.
- Deposits: includes funds placed on deposit with a financial institution and does not include certificates of deposit and other short-term securities.

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- Others: includes real estate (land, buildings etc. owned by the reserve fund), both retail and institutional funds (open end and closed end), institutional funds (investment pools of several funds on which further breakdown of assets is not available), savings instruments or insurance contracts where the underlying assets belong to the reserve fund (not to an insurance company), and financial assets not included in other categories (derivatives, trade credits and advances and other accounts receivables and payables).

Table 6a– Total investments as a % of GDP (Reserves as part of the scheme)

	2004	2004	2004	2005	2005	2005	2005	2005	2004	2004
	Finland	Jordan	Barbados	Denmark	USA	Belize	Canada	Sierra Leone	Philippines	Tanzania
Bonds	27.99%	8.11%	20.96%	15.10%	14.89%	0%	2.15%	2.72%	0.39%	1.35%
Equities	13.63%	13.97%	3.60%	6.87%	0%	0%	3.73%	0.19%	1.00%	0.23%
Cash and Dep	0.57%	5.64%	6.38%	0.35%	0%	4.49%	0.21%	0.18%	0.00% ¹	0.04%
Others	15.65%	5.06%	1.66%	4.43%	0.00% ¹	10.26%	0.02%	0.52%	1.88%	1.22%
Total	57.84%	32.79%	32.59%	26.75%	14.89%	14.74%	6.11%	3.60%	3.27%	2.84%

NA= Not applicable; ¹ Rounded to two decimal places

Chart 2a– Total investments as a % of GDP (Reserves as part of the scheme)

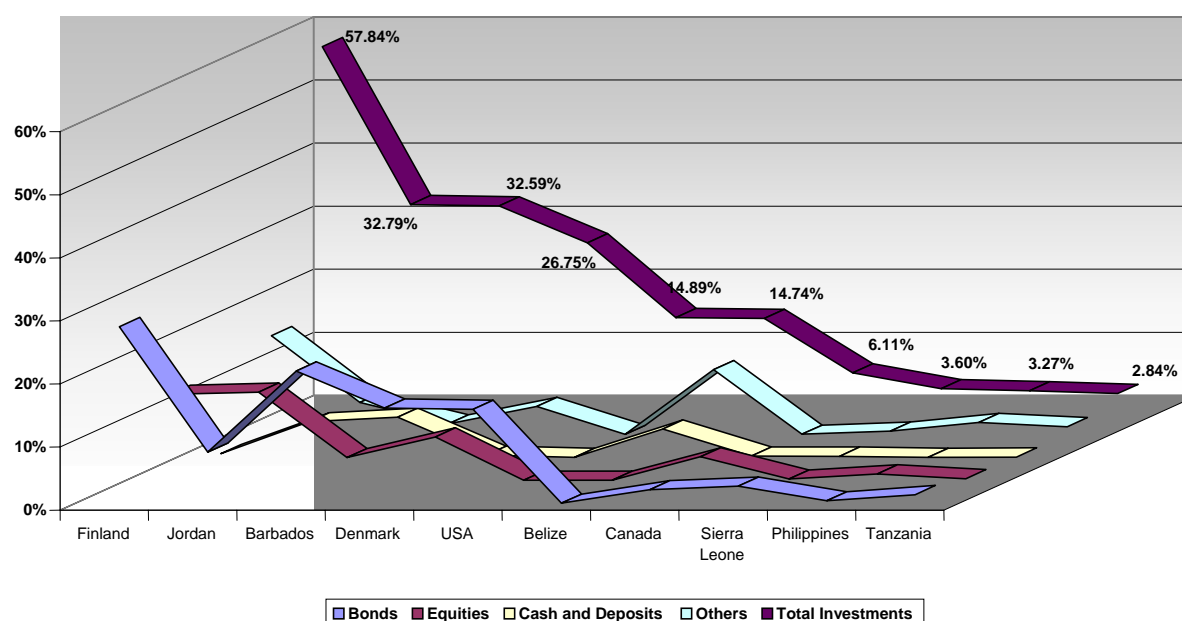


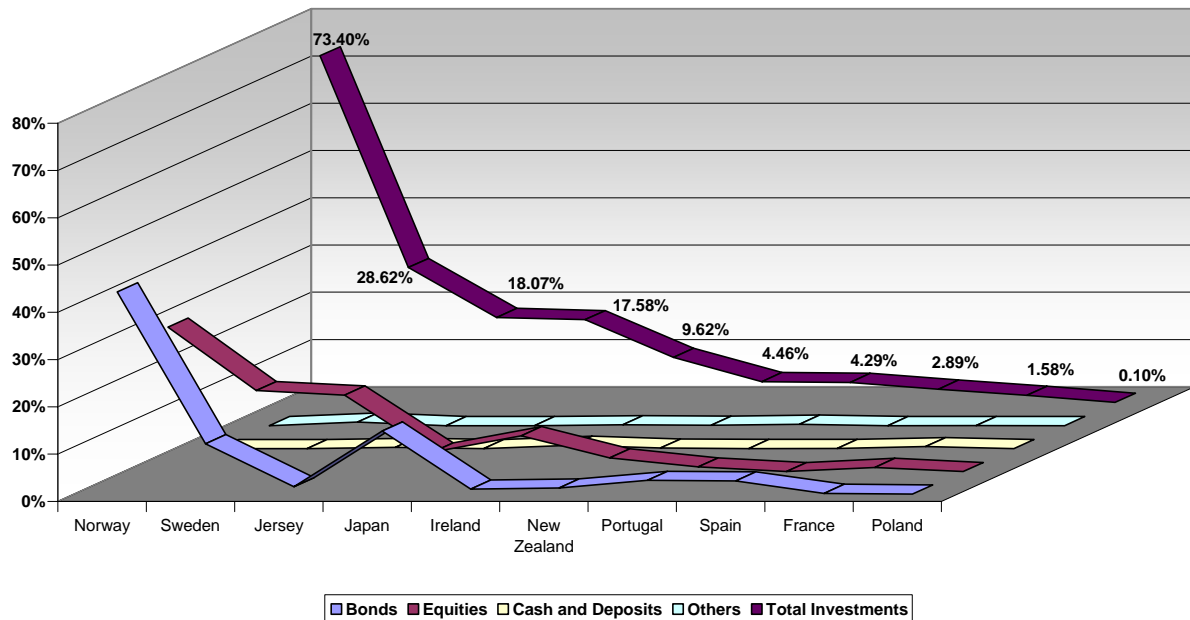
Table 6b– Total investments as a % of GDP (reserves legally separate from the scheme)

	2004	2005	2005	2004	2005	2005	2005	2005	2005	2004
	Norway	Sweden	Jersey	Japan	Ireland	New Zealand	Portugal	Spain	France	Poland
Bonds	42.85%	10.73%	1.64%	13.44%	1.12%	1.36%	2.99%	2.85%	0.24%	0.10%
Equities	30.55%	17.13%	16.17%	4.15%	7.57%	2.89%	0.98%	ND	0.88%	0.00% ¹
Cash and Dep	ND	ND	0.26%	ND	0.71%	0.12%	0.01%	0.04%	0.42%	0.00% ¹
Others	ND	0.77%	0%	ND	0.21%	0.09%	0.31%	ND	0.03%	0.00% ¹
Total	73.40%	28.62%	18.07%	17.58%	9.62%	4.46%	4.29%	2.89%	1.58%	0.10%

ND= Data not available; NA= Not applicable; ¹ Rounded to two decimal places

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Chart 2b - Total investments as a % of GDP (reserves legally separate from the scheme)



Asset Allocation

Charts 3a and 3b show the asset allocation of reserve funds. The investment categories and definitions used are the same as those in Chart 2.

Reserve funds managed as part of the scheme and those that are legally separate have a similar pattern of asset allocation with respect to bonds but not to other types of assets. While legally separate reserve funds in general hold more equities, reserves managed as part of the scheme hold more investments in liquid assets (cash and deposits), real estate and mutual funds (also known as unit trusts). Canada, France, Ireland, Jersey, Jordan, New Zealand, Philippines and Sweden all held a significantly higher proportion of assets, in some cases more than double, in equities than in bonds. The United States, which has a particular asset allocation strategy, invests all assets in special-issue Treasury bonds to Social Security. At the other end of the spectrum, Belize held neither bonds nor equities in the year in question.

Four countries, Belize, Jersey, Philippines and Tanzania, all hold a substantial proportion, around 40% or more, in the “other assets” category. In Belize and Tanzania these consist principally of loans and real estate (land and buildings). In the Philippines they are mainly loans while in Jersey they principally comprise mutual funds (also known as unit trusts).

In those reserve funds that are managed as part of the scheme the investment and asset management is primarily carried out by the social security institution itself alongside all the other scheme activities (Canada being an exception with an Investment Board). In contrast, the investment and asset management of most legally separate reserve funds are the responsibility of an independent specialized institution one of the main purposes of which is to maximize returns through the most effective asset allocation. This institutional specialization may be one factor in explaining why funds such as those in Canada, Ireland, Jersey, New Zealand and Sweden hold a greater proportion of variable income assets in their portfolio in a similar way to non-pension investment funds.

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Chart 3a – Investment categories as a % of total assets (reserves as part of the scheme)

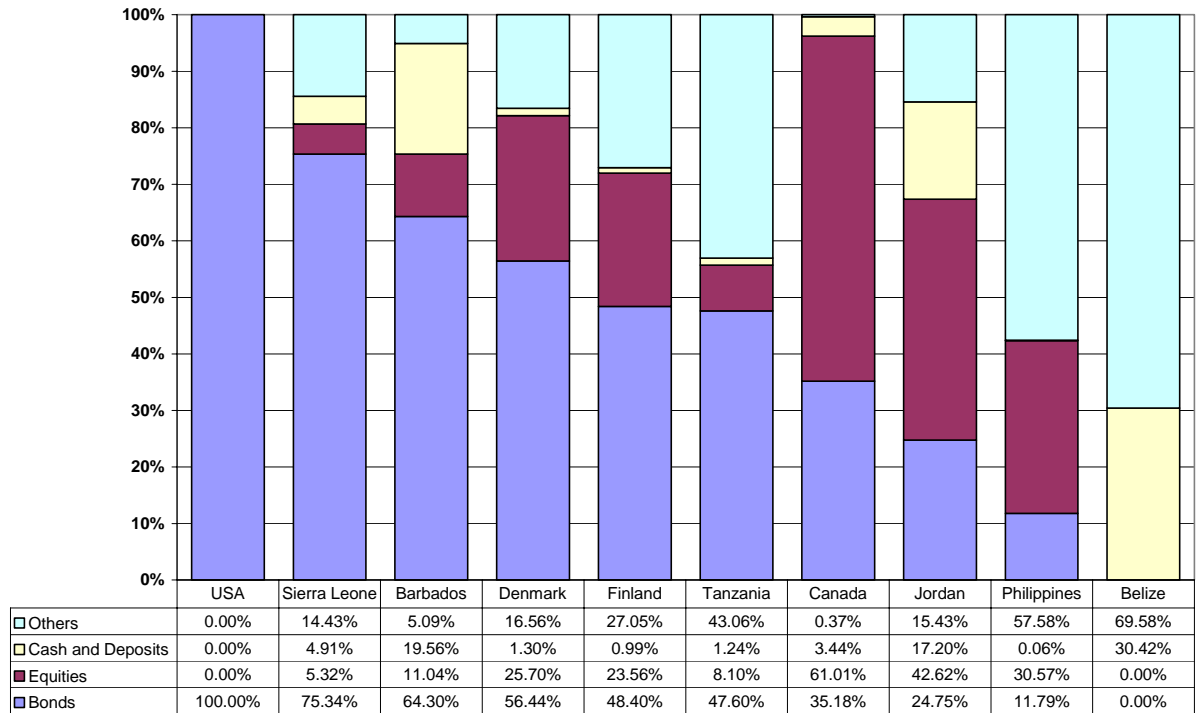
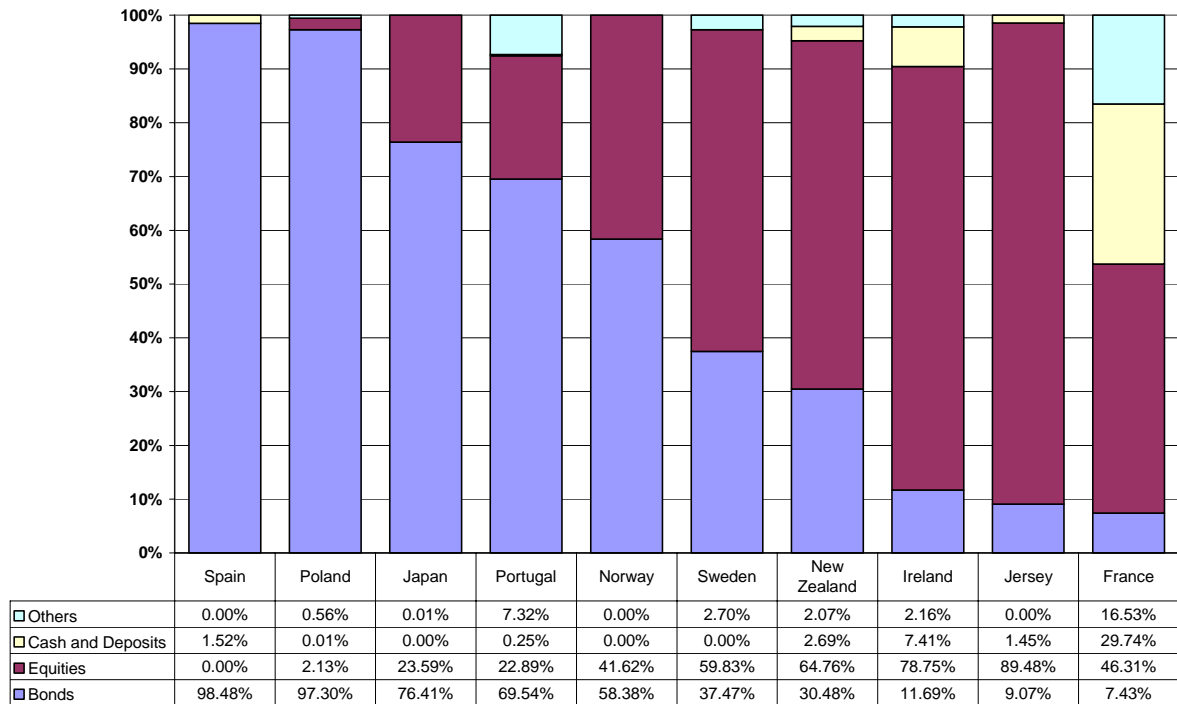


Chart 3b – Investment categories as a % of total assets (reserves legally separate from the scheme)



An important aspect in an asset allocation strategy is the decision whether to invest all assets domestically or to further diversify by investing overseas if foreign investment is permitted. Charts 4a and 4b show the proportion of total assets invested in domestic and foreign assets. The figures in these charts show clearly that legally separate reserve funds invest more in

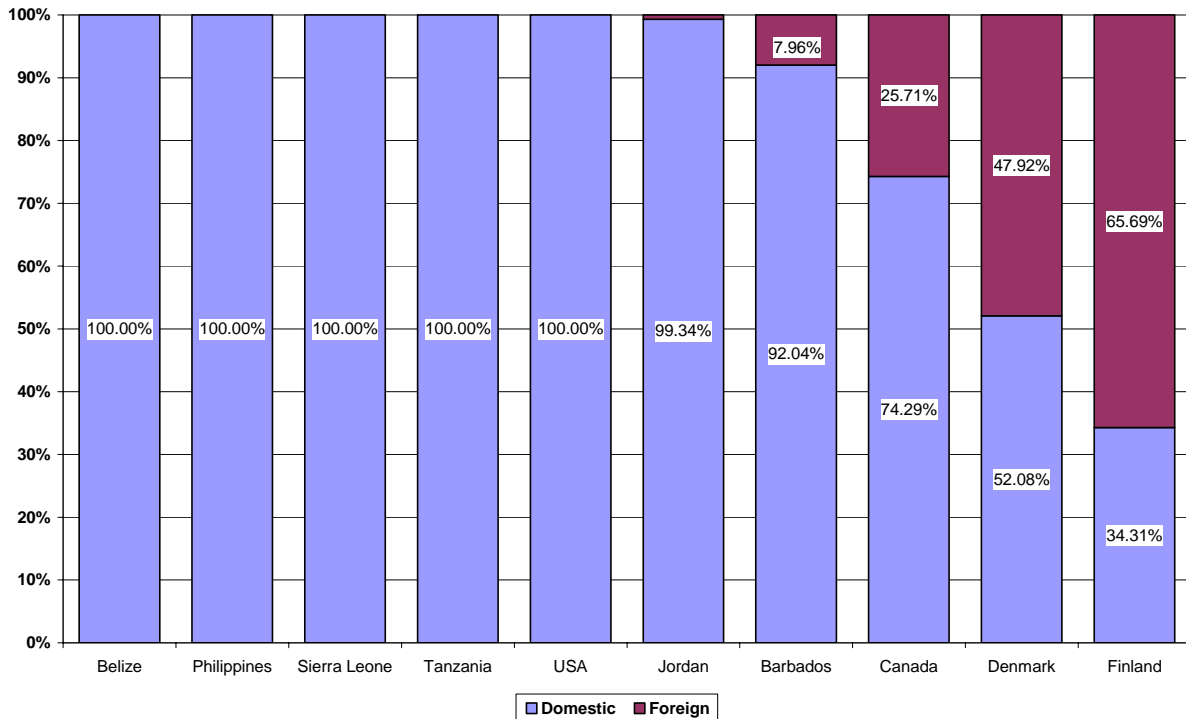
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foreign assets than reserves that are managed as part of the scheme. Reasons for this may be due to legally separate reserve funds:

- a) Having more flexible regulations concerning the type and spread of assets that they can invest in;
- b) Usually being managed by independent and specialized institutions that focus on investment and asset management and which have the capacity to research and analyze potential foreign investments;
- c) Having a larger pool of money available to invest (as they do not pay benefits) and are, therefore, better able to diversify into foreign assets;
- d) Being situated in countries that have few or no currency exchange problems; and
- e) Possibly being under less political pressure to invest in domestic assets, mainly public bonds, because of a lack of a direct link between the reserve fund and the scheme.

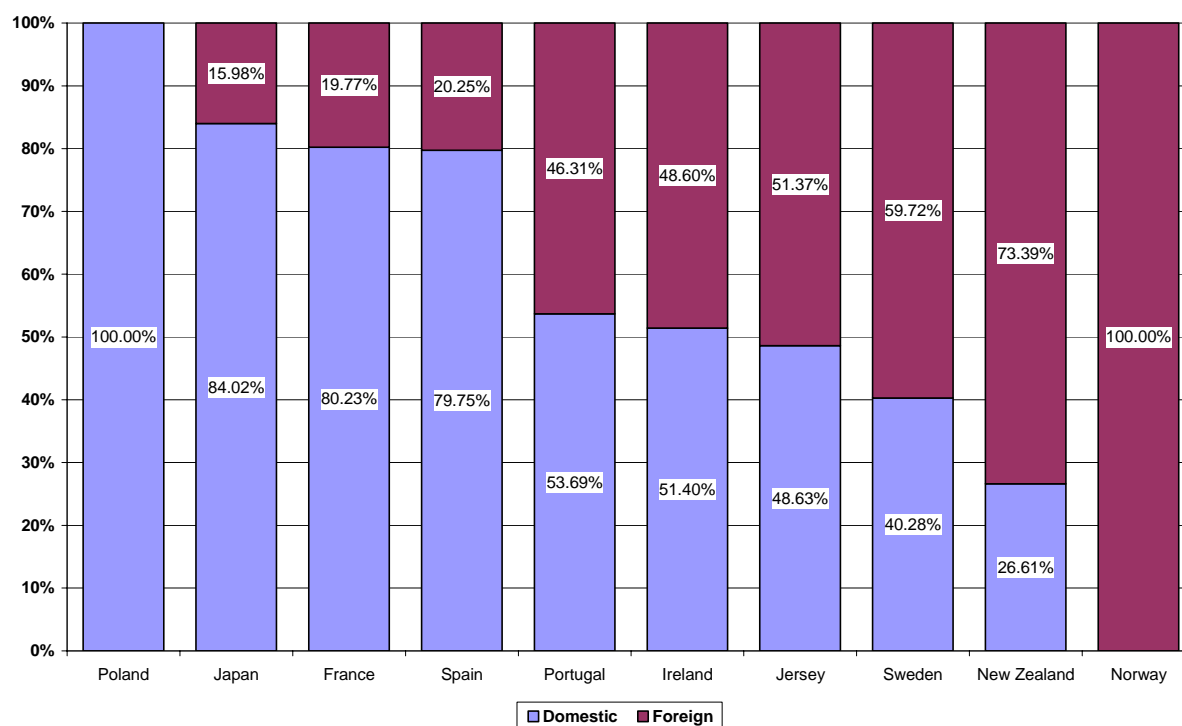
It is also evident that the more developed countries, with the exception of the United States as previously mentioned, invest a greater proportion of the reserves abroad. Norway is an extreme case in that it holds only overseas assets as the asset allocation policy does not permit the fund's capital to be invested in Norwegian Kroner or in securities issued by Norwegian companies.

Chart 4a – Domestic and Foreign Investments (Reserves as part of the scheme)



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Chart 4b– Domestic and Foreign Investments (Reserves legally separate from the scheme)



Income

Charts 5a and 5b show the total income of the reserve funds split as follows:

- Net investment income (i.e. after deducting investment expenses): includes income from investments, re-adjustments on investments and income from realised and unrealised capital gains and losses. It also includes rents receivable, interest income, dividends and realised and unrealised capital gains.
- Contribution payments: includes all payments made to the reserve fund by employers, employees, self-employed, etc. including scheme contributions, and penalties.
- Payments from the State: includes all payments made to the reserve fund by the State, receipts from privatizations, etc.
- Other income: includes income not included in other categories.

Charts 5a and 5b reveal a clear differentiation in the financing of the two types of reserve funds. While all but three legally separate reserve funds derive more than 90% of their income from investments, all reserve funds that are managed as part of the scheme, except for Denmark, derive at least 60% of total income from social security contributions.

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Chart 5a– Sources of Income (Reserves as part of the scheme)

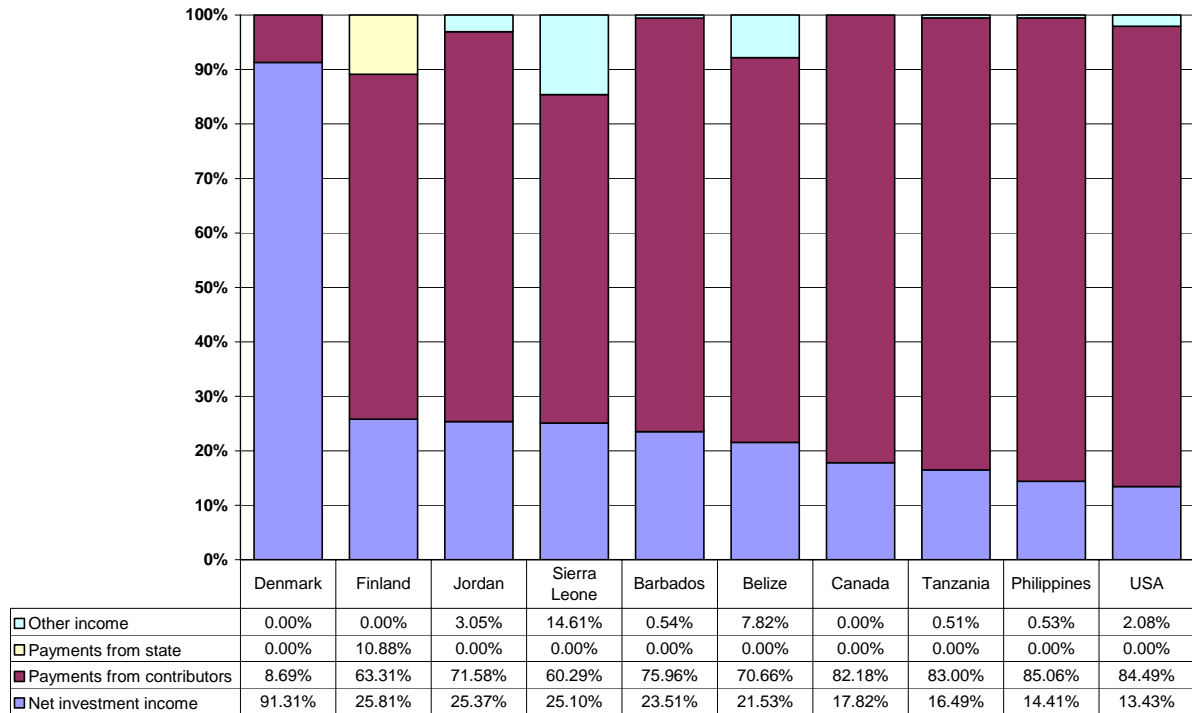
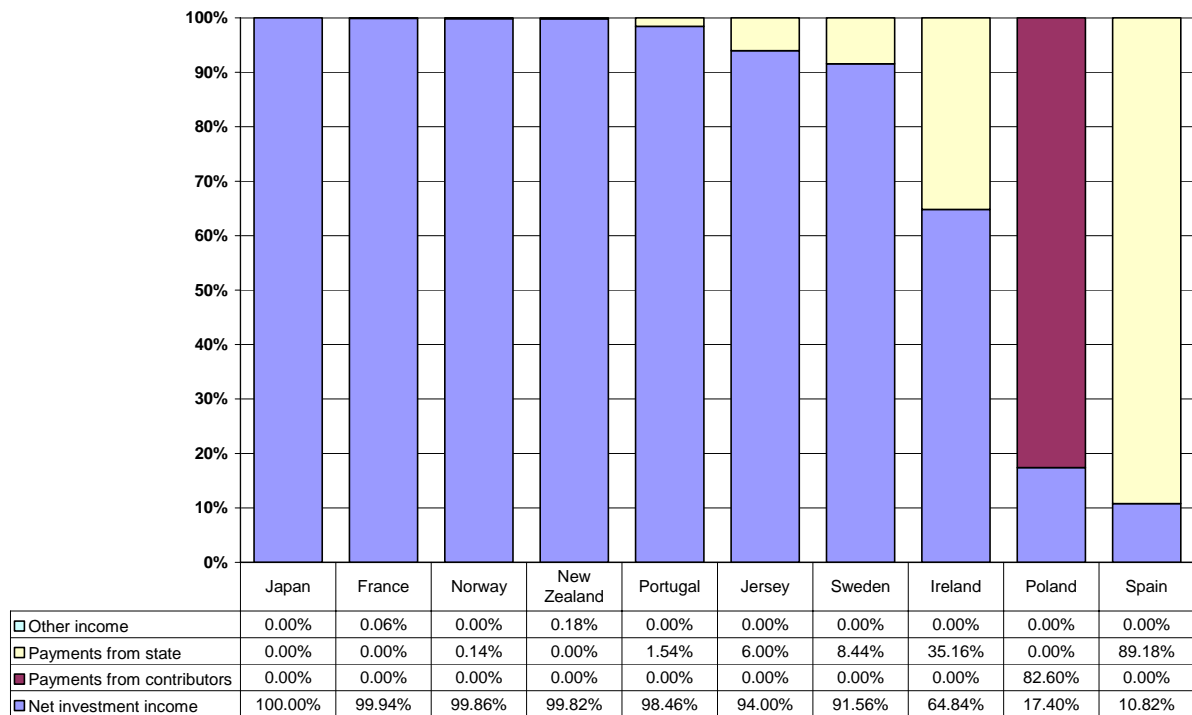


Chart 5b– Sources of Income (Reserves legally separate from the scheme)

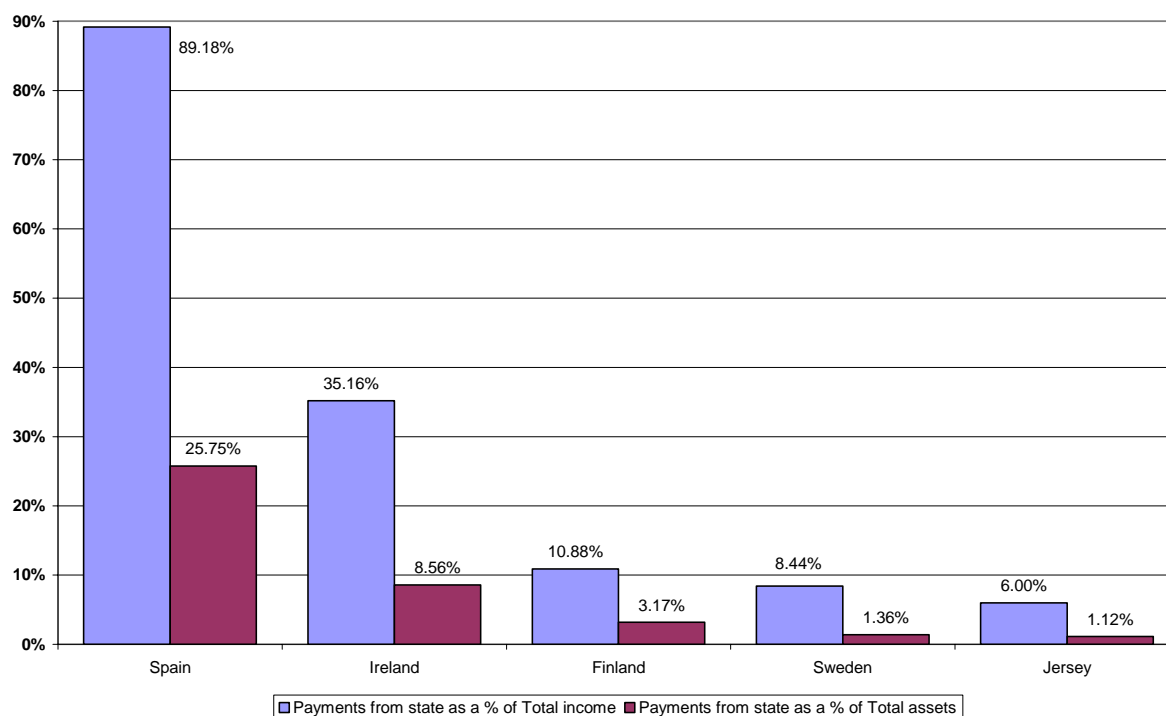


Six reserve funds also received payments from the State. In Norway the amount was marginal but in Ireland and Spain these payments constituted an important source of income, being 35% and 89% respectively of the total. Chart 6 shows the income from the State as a proportion of the reserve funds' total income and total assets. The amount of money paid by the State is usually set out in the legislation establishing the reserve fund (e.g. in Ireland the

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Government is required to invest 1% of Gross National Product), or in the budget law (e.g. Spain). In Sweden and Jersey the State contribution shown in Chart 6 relates to money transferred from the associated social security scheme.

Chart 6 – Payment from the State as a % of Total income and Total Assets



Expenditure

Charts 7a and 7b show the total expenditure of reserve funds split as follows:

- **Benefits and premiums:** includes payments made by the reserve fund specified in legal rules (i.e. minimum benefit guarantee, coverage of temporary deficits, etc.) and the total insurance premium payable to allocated insurance contracts.
- **Cost of fund administration:** includes all costs arising from the general administration of the reserve fund plus investment costs that are treated as fund expenses.
- **Other expenses:** includes expenses not included in other categories.

Some reserve funds have legal commitments which provide that withdrawals of capital are only possible from a stipulated date. This is the case in Ireland, New Zealand and Poland where no money can be taken from the fund to pay benefits before 2025, July 2020 and 2009, respectively. In Canada, although some of the investment earnings will be required to pay expenditures after 2021 it is projected that no capital will need to be withdrawn.

Legally separate reserve funds are designed to act as a buffer to balance periods of surplus and deficit of the scheme they serve. The payment of benefits is not usually, therefore, an expense of such reserve funds. Chart 7b confirms this premise in that none of this type of reserve fund paid any benefits and their main expenditure was administrative costs.

In Denmark, Jersey, Portugal and New Zealand, the category “other expenses” accounted for a substantial proportion of total costs. In Denmark they constituted tax on investment returns (the managing institution being subject to the same tax regime applicable to other limited

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liability companies). In New Zealand these principally related to income tax expenses (comprising almost 50% of “other expenses”) and in Jersey they were mainly overseas withholding tax. In Portugal, these comprised custody costs, fees and other settlements.

Chart 7a– Expenditure Distribution (Reserves as part of the scheme)

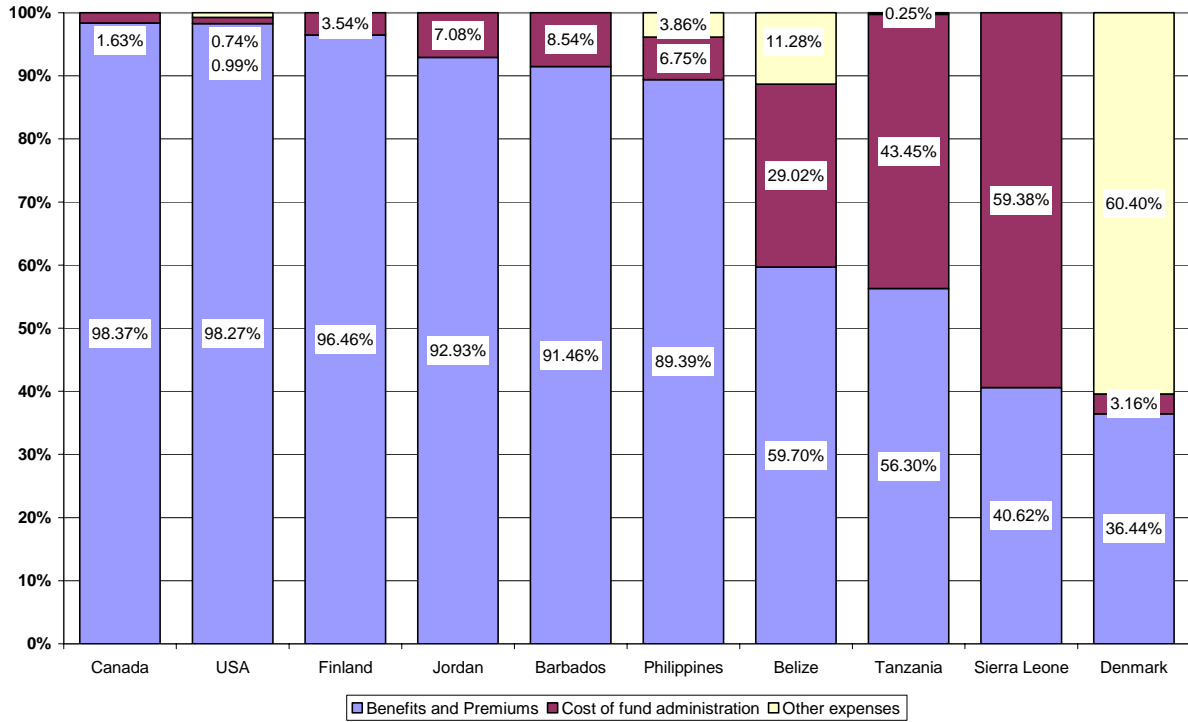
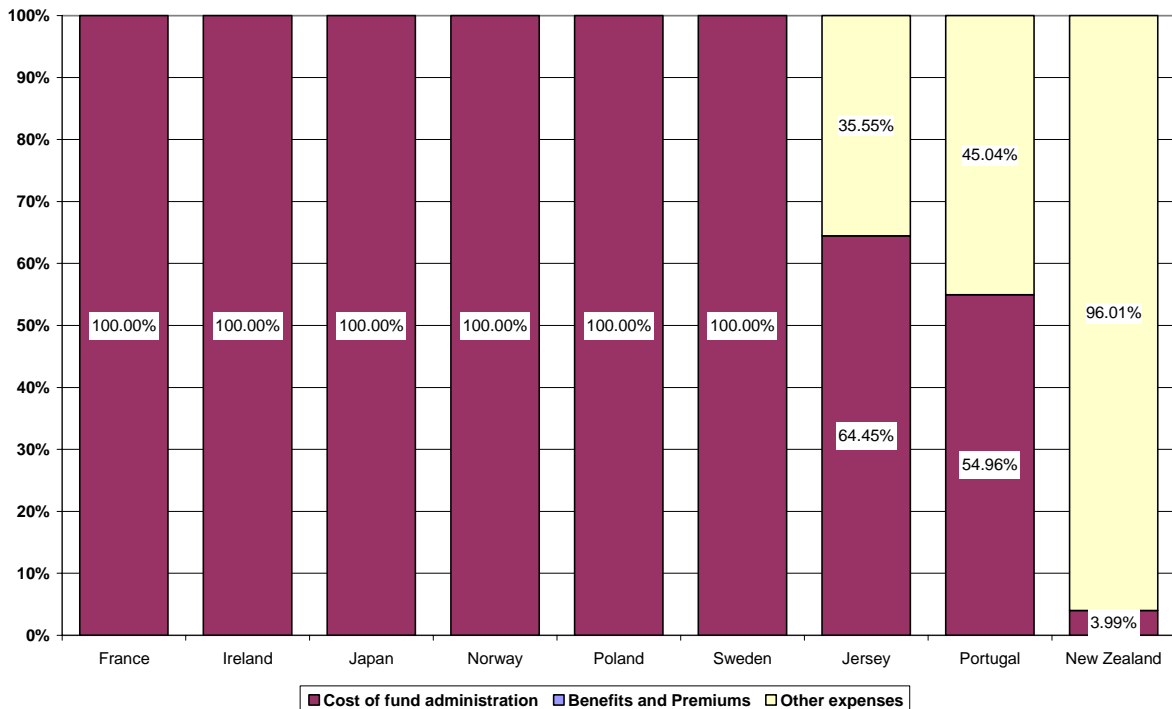


Chart 7b– Expenditure Distribution (Reserves separate from the scheme)



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Administrative and Investment Cost

Tables 7a and b and Chart 8 shows the proportion of total assets that is spent in the administration of reserve funds, including investment expenses. On this basis it appears that reserve funds that are managed as part of the scheme are more costly than legally separate reserve funds. However, it is not certain that the costs are comparable as the administration of reserves that are managed as part of the scheme is usually amalgamated with the general scheme administration (which includes benefit payment, contribution collection etc.). Whereas the situation in the case of legally separate reserve funds is clear in that the administrative costs relate solely to the operation of the reserve fund in terms of human resources, custody and transaction costs, tax expenses, external asset management, etc. Consequently, no hard and fast conclusions should be drawn from these figures.

It should be noted that the very high administrative cost of 46.18% shown for France in 2005 would appear to be an anomaly when compared to the 2004 figure of 8.89%. This sharp rise was due to the move towards full-operational status of the fund which impacted on financial management and operational expenses (i.e. fees paid to managers and brokerage commissions on trades, custodial and fund administration costs).

Table 7a– Administrative and Investment Costs as a % of Total Income and Total Assets (Reserves part of the scheme)

	Sierra Leone	Tanzania	Belize	Philippines	Barbados	Jordan	Finland	Canada	USA	Denmark
% of Total income	21.03%	18.35%	17.53%	6.52%	5.12%	3.68%	2.35%	1.15%	0.75%	0.68%
% of Total assets	11.78%	5.52%	3.90%	2.09%	1.36%	0.49%	0.68%	0.49%	0.28%	0.13%

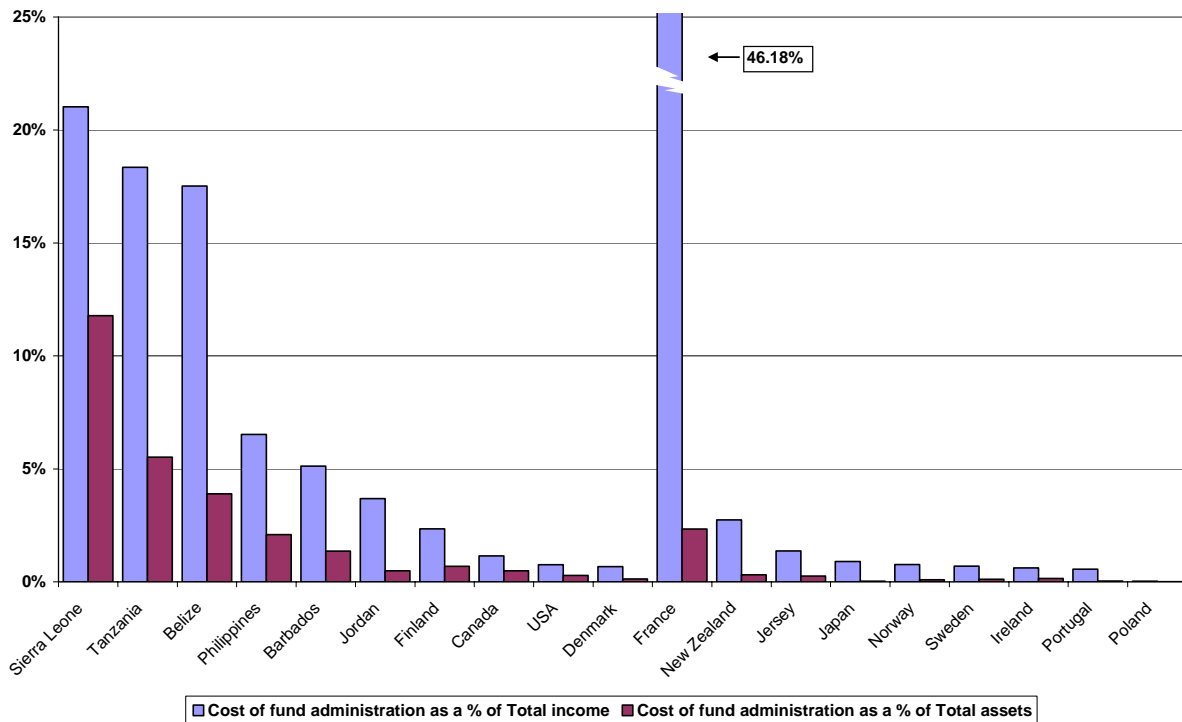
Table 7b– Administrative and Investment Costs as a % of Total Income and Total Assets (Reserves separate from the scheme)

	France	New Zealand	Jersey	Japan	Norway	Sweden	Ireland	Portugal	Poland
% of Total income	46.18%	2.74%	1.37%	0.90%	0.77%	0.69%	0.61%	0.56%	0.02%
% of Total assets	2.34%	0.31%	0.26%	0.03%	0.09%	0.11%	0.15%	0.04%	0.01%

Spain: not included above as the administrative costs are borne by the Treasury of Social Security which manages the fund.

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Chart 8 – Administrative and Investment Costs as a % of Total Income and Total Assets



Cash flow

Charts 9a and 9b show the cash flow of reserve funds, with and without payments from the State, in order to assess whether the fund is accumulating assets or not.

Figures in Table 8a and 8b indicate that all reserve funds are accumulating assets (although in nine countries it was less than 1% of GDP in the relevant year) irrespective of their legal framework and whether or not they receive payments from the State.

Table 8a – Income over Expenditure as a % of GDP (Reserves part of the scheme)

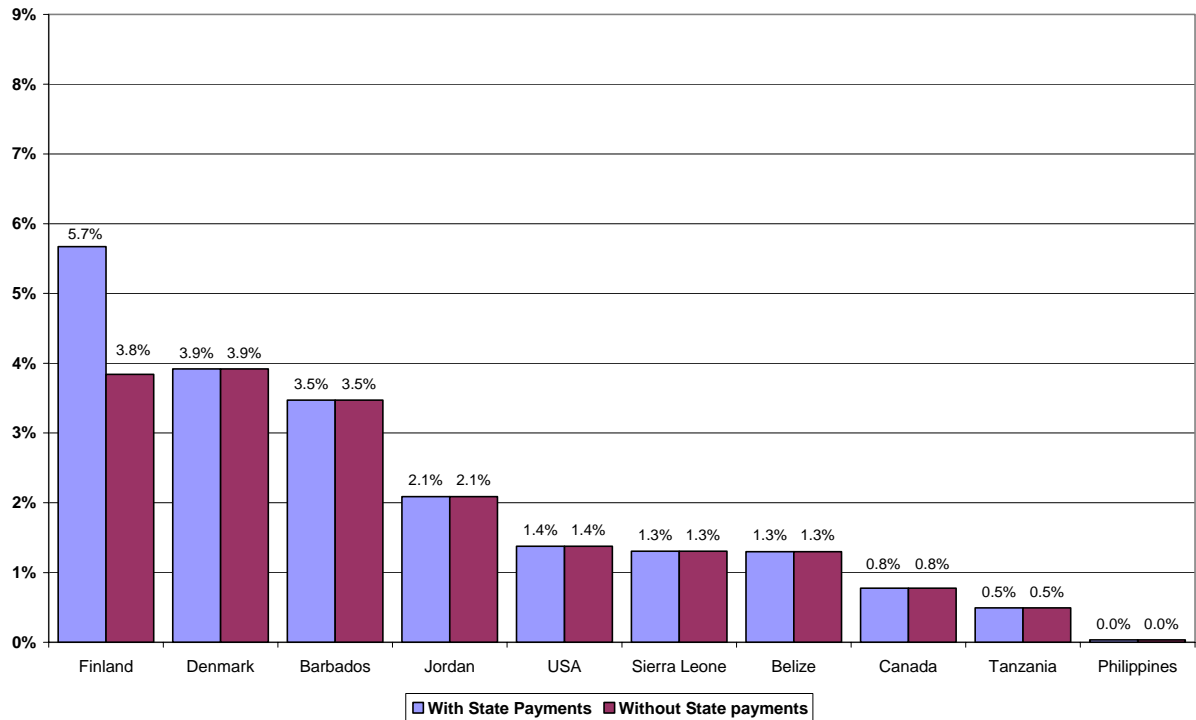
	Finland	Denmark	Barbados	Jordan	USA	Sierra Leone	Belize	Canada	Tanzania	Philippines
With State Payments	5.672%	3.919%	3.472%	2.088%	1.376%	1.304%	1.299%	0.775%	0.494%	0.036%
Without State Payments	3.841%	3.919%	3.472%	2.088%	1.376%	1.304%	1.299%	0.775%	0.494%	0.036%

Table 8b – Income over Expenditure as a % of GDP (Reserves separate from the scheme)

	Norway	Sweden	Ireland	Jersey	Spain	Japan	Portugal	New Zealand	Poland	France
With State Payments	8.401%	4.586%	2.327%	3.373%	0.835%	0.517%	0.273%	0.159%	0.046%	0.043%
Without State Payments	8.390%	4.196%	1.504%	3.166%	0.090%	0.517%	0.269%	0.159%	0.046%	0.043%

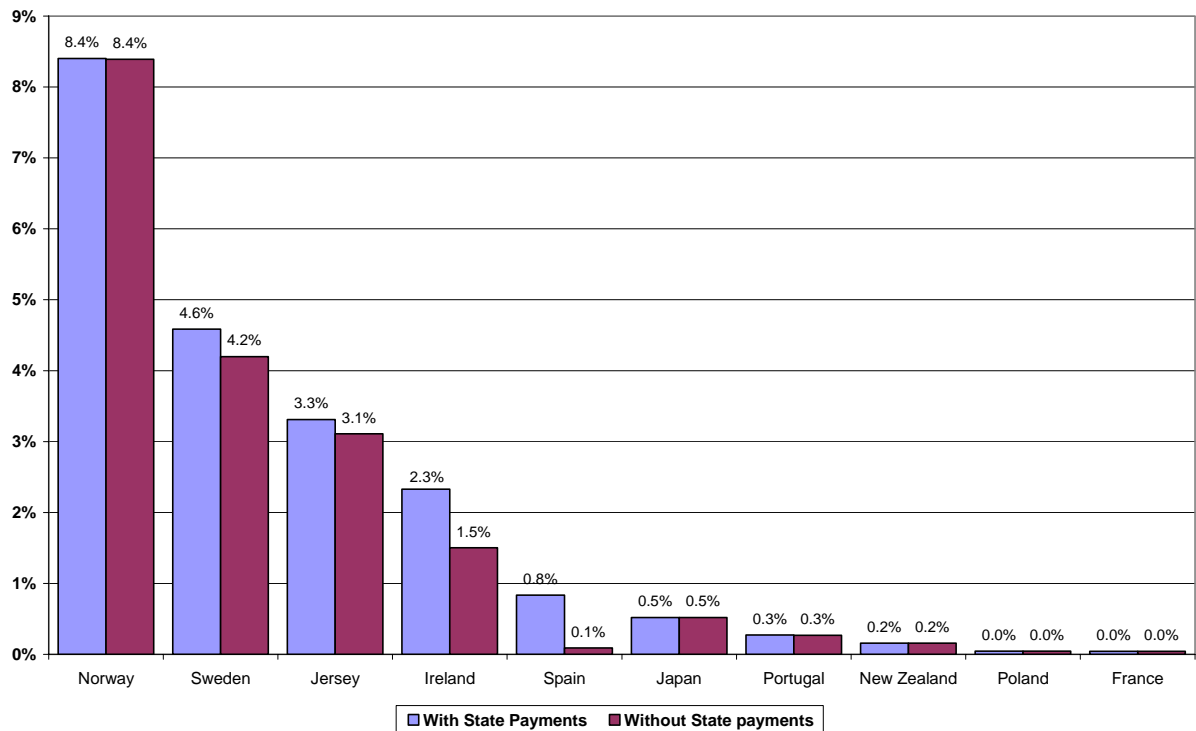
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Chart 9a – Income over Expenditure as a % of GDP (Reserves as part of the scheme)



Philippines: Rounded to two decimal places

Chart 9b – Income over Expenditure as a % of GDP (Reserves separate from the scheme)



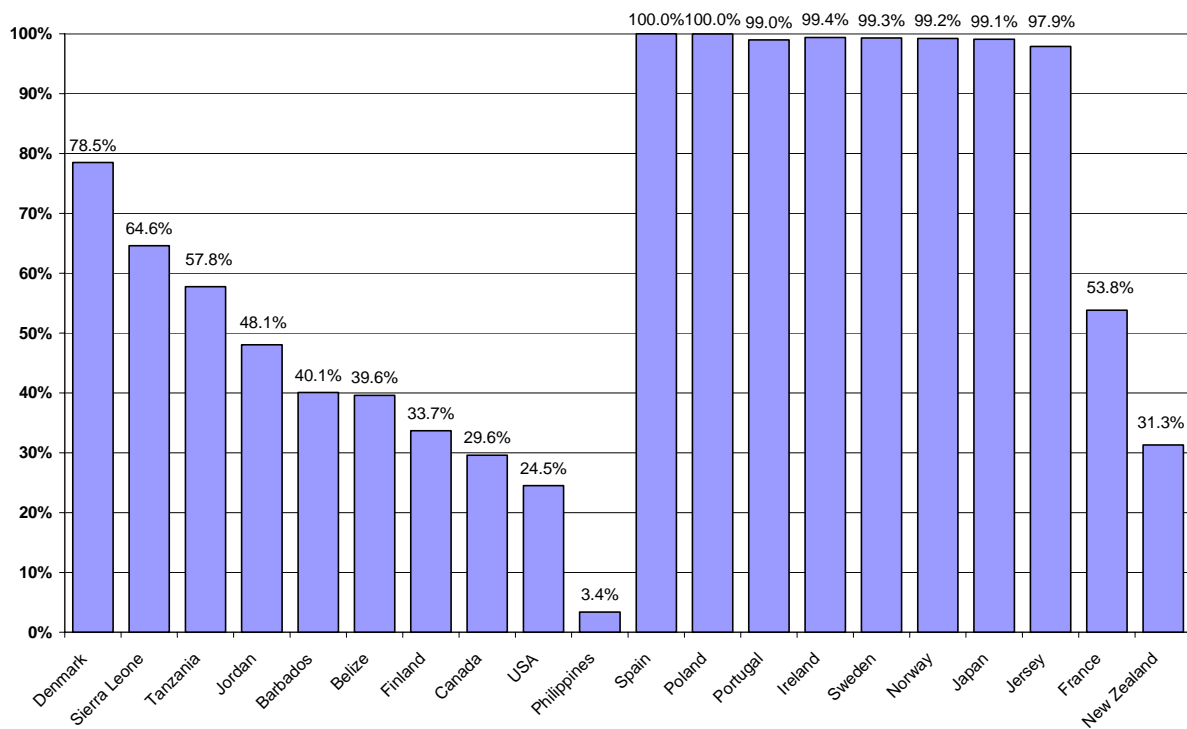
Poland and France: Rounded to one decimal place

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Chart 10 shows that legally separate reserve funds have a greater excess of income over expenditure than those that are managed as part of the scheme. This is because the expenditure of these types of reserve funds is primarily related to administration and not benefit payment, which affords them a proportionately greater volume of funds available to be invested.

The situation with regard to reserves that are managed as part of the scheme is somewhat different. The amount of money placed in the reserve fund is usually determined by the operational result of the scheme. This accounts for these types of funds having a significantly lower excess income than legally separate reserve funds.

Chart 10 – Excess of income over expenditure

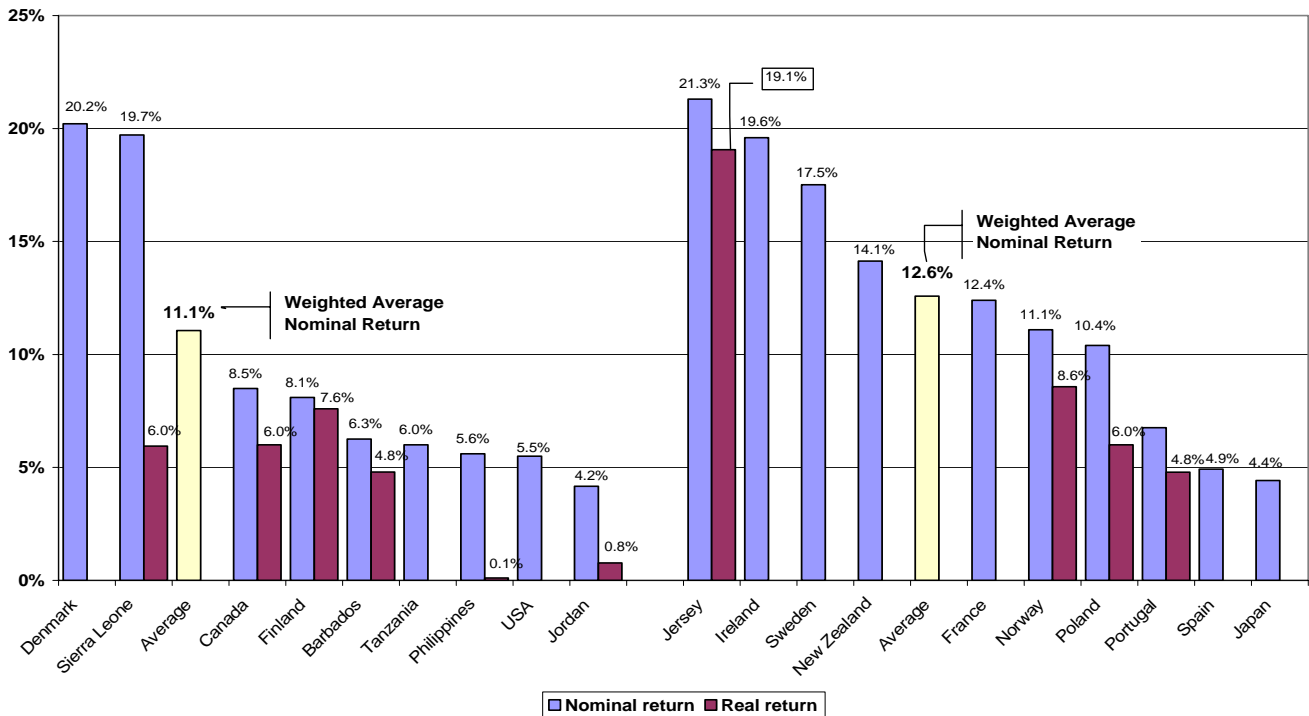


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Returns

Chart 11 shows returns of the reserve fund in the last year, in nominal and real terms.

Chart 11 – Investment Returns



Note: Real returns are not published in Fund Reports of Ireland, Sweden, New Zealand, France, US, Spain and Japan. Real returns from Denmark and Tanzania have not been provided. Belize has not provided information. Returns from Jordan are without Capital Appreciation. Weighted averages are without USA and Japan (See Section IV).

Nominal returns (and also real returns where data was provided by the country) were on average higher in legally separate reserve funds than in reserves managed as part of the scheme. Those schemes or reserve funds holding a higher proportion in equities and foreign assets also tended to have higher return rates. For the years shown the statistical evidence suggests a significant correlation between nominal returns and the amount of the fund portfolio held in equities and foreign assets. Chart 12 shows these correlations for legally separate reserve funds.

The fact that funds with higher returns have a greater proportion of assets invested in equities is in line with theory that dictates that equities should have a higher return than risk free or low risk assets such as bonds. The reason that reserve funds with overseas investments also have higher returns may be because the possibility of investing abroad increases the investment options available allowing better diversification of the portfolio and thereby providing the possibility of earning higher returns whilst at the same time minimising risk.

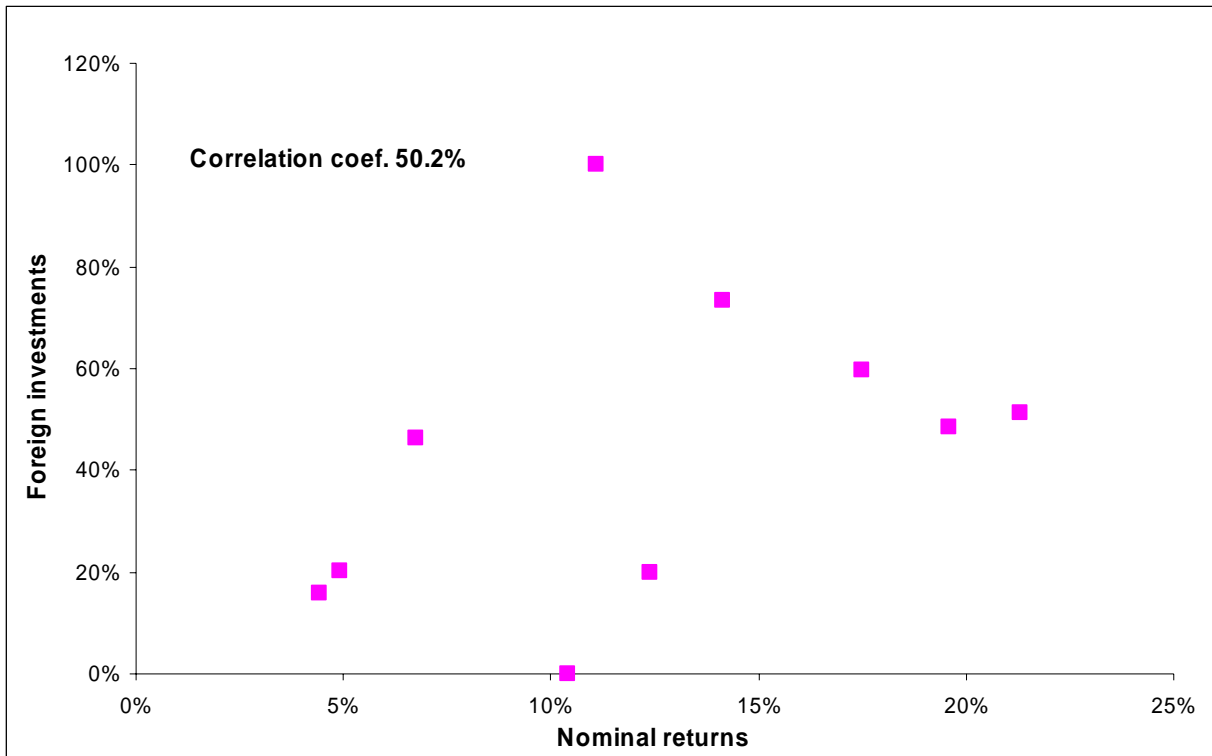
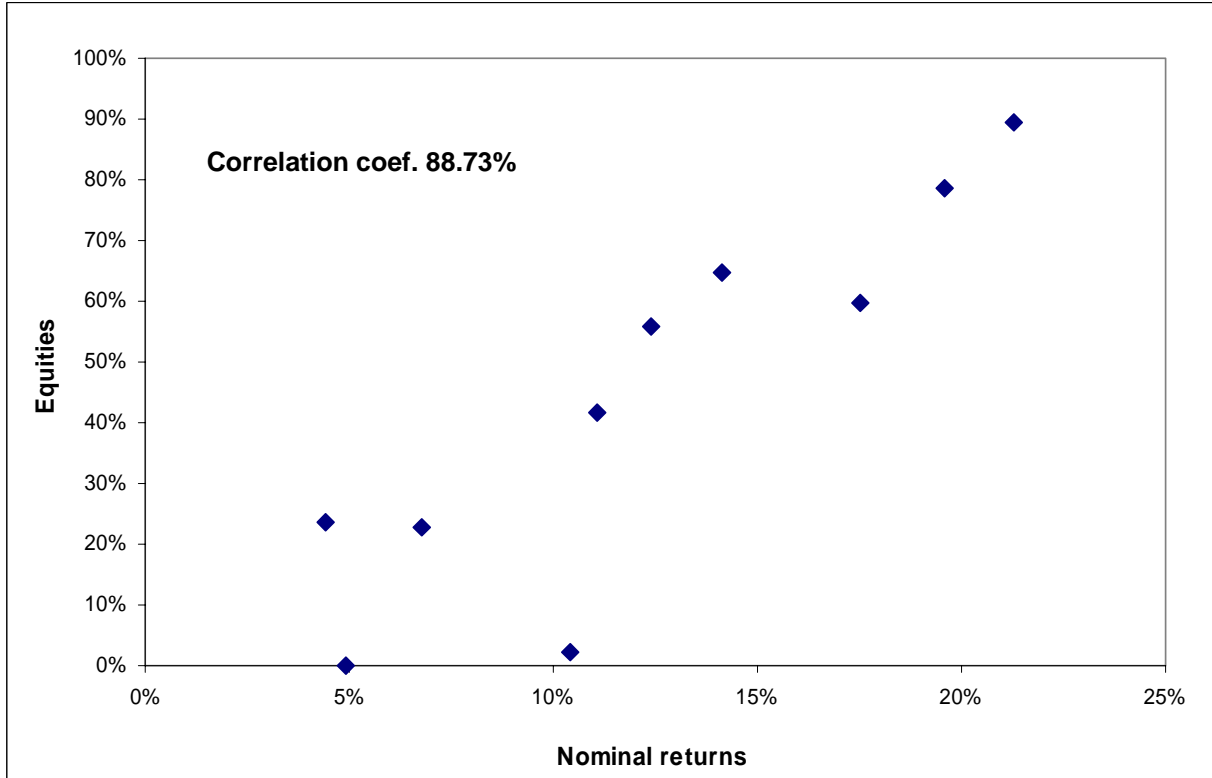
Another reason which could explain the difference in returns is the relative asset management expertise of the managing institutions. The concentration of activities related principally to investment inevitably leads to a strong development of financial knowledge and skills, which may in turn result in a more effective investment of assets. Moreover, independence from the scheme and from political influence should allow more freedom to set appropriate investment policies and benchmarks.

The excess of income over expenditure, which essentially represents the amount of money available to be invested, could also contribute to the ability to earn higher returns. As shown in

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Chart 10, legally separate reserve funds have a greater excess income and that undoubtedly affords those asset managers the opportunity to envisage a wider portfolio giving the possibility of earning higher returns.

Chart 12 – Return Correlations



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SECTION IV – Conclusions

The value of the combined reserves of the twenty countries covered in Section III is nearly USD 3.5 trillion, which serves to underscore the financial importance of public social insurance pension scheme reserves. Although small in comparison to the USD 17.9 trillion⁵ cited by the OECD as invested by occupational and private pension funds in thirty OECD countries in 2005 these figures are still not inconsequential. Moreover, the results of the survey point not only to the impact of public pension scheme reserves in purely financial terms but also to the role they can play in better ensuring adequate and sustainable public pensions.

Although the relatively small sample of countries studied, combined with the research constraints imposed by restricted data, makes it difficult to present definitive conclusions, there are indications that managing reserves in funds that are legally separate from the associated scheme may have certain advantages over managing reserves as part of the scheme. Tables 7a and 7b and Chart 11 show that legally separate reserve funds generally have lower administrative costs as a percentage of total assets as well as higher returns. The latter may be because they have fewer restrictions on asset allocation and invest a higher proportion in equities and overseas. They are also more focused on investment and asset management since they do not have other operations to handle such as administering benefits or collecting contributions. The larger excess income at their disposal for investment combined with their specific investment expertise may therefore allow better diversification of the portfolio resulting in higher returns.

Legally separate public pension reserve funds also match up to private pension or savings schemes in terms of administrative charges and returns. Table 7b shows that all legally separate reserve funds with the exception of France had administrative costs of 0.31% or less of total assets. These figures include portfolio management fees as well as other fund administration costs. This compares favourably with private pension schemes; for example, in Chile, the initiator of privately managed individual accounts, the weighted average administrative costs of pension fund administrators in 2004 was 0.52%⁶; and the 2005 average expense ratio for mutual funds worldwide and US 401K funds were 1.2% and 1.5%⁷ respectively. The figures for reserve funds are also well below the legal maximum asset management fee of 1.5% per annum of total assets for UK Stakeholder pensions (which are specifically aimed at low to middle income workers) and the maximum charge of 5% on contributions plus 1% per annum on assets under management currently applicable to Personal Retirement Savings Accounts in Ireland.

Chart 11 shows that the weighted average return for reserves managed as part of the scheme was 11.06% (USA excluded due to its particular asset allocation strategy) and 12.58% for legally separate reserve funds (Japan excluded because of the specific economic conditions still prevailing in the country in 2004). These figures are based on returns that in some cases relate to 2004 and some to 2005 and are likely to produce a smaller average return than if all 2005 returns were available (2005 being a better year generally for financial markets than 2004). These figures are comparable to those of the private pension industry. For example, in 2005 Dutch pension funds achieved an average 14.3%⁸ return on investment and Swiss pension funds 13%⁹; UK and Irish pension funds returned 9%¹⁰ and 10.2%¹¹ respectively in the

⁵ OECD, Pension Market in Focus, Newsletter, October 2006, Issue 3.

⁶ Valdés, Presidente Empresas ING, Reformas al Sistema Previsional, July 2006

⁷ Valdés, Presidente Empresas ING, Reformas al Sistema Previsional, July 2006

⁸ The Dutch Association of Industry-wide Pension Funds, 13 April 2006, www.vvb.nl

⁹ Swiss Pension Fund Association and Watson Wyatt, 27 February 2006 (results for the participating pension funds)

¹⁰ TrustNet®, Prices and performance of pension funds, www.trustnet.com

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last year; and Uruguay, which had the highest return amongst Latin American individual account schemes, achieved 12%¹² in 2005.

Public schemes and reserve funds are also generally more accountable than privately managed schemes. All but one of the eleven schemes covered in Section II are required by law to have a Governing Body and the social partners are represented on nine of these. In addition, all of the schemes and reserve funds are accountable not only to contributors and beneficiaries but also to the public at large through ministers. In nine countries the accounts of the scheme or reserve fund are subject to Parliamentary oversight so that their operation and results may be questioned and sanctioned in Parliament or by a Parliamentary Committee. This is rarely the case for privately managed schemes.

The results of this survey indicate that public pay-as-you-go defined benefit schemes that have established reserve funds have successfully incorporated some advantages of partial pre-funding in their design, which should help to mitigate financial issues raised by changing demographics, balance intergenerational fairness, improve adequacy, and better ensure the sustainability of the schemes.

The extension of the survey to other countries together with further study in this area, including the regular collection of statistical data, would undoubtedly allow more empirical analysis and help identify good practice in the governance and investment of public scheme reserves.

¹¹ Finfacts Ireland, 2 August 2006, www.finfacts.com

¹² AIOS, 2005 Statistical Bulletin