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Public annuity fund and public pension funds in pension policy making in Poland*

Dariusz Stańko

Abstract

The paper provides an input in the discussion on recent suggestion of Polish Ministry of Labour and Social Affairs that proposed to create a single, public annuity fund servicing payments from funded pension pillar. The paper assesses feasibility of such a solution in Poland both in terms of cost efficiency and political economy of the Polish pension reform. Further, some key advantages and disadvantages of public (centralized) management of pension funds found in the international literature are discussed with particular focus on investment efficiency, corporate governance and impact of state-owned public funds on the capital markets. Such issues are very important for policy making and should be born in mind while shaping the future annuity pension systems in Poland or any reforming country. The paper argues that governments should avoid creating huge, single annuity funds and/or pension funds that would have too much impact on local capital markets. One of the propositions of the paper is to use life insurance companies as private annuity providers and existing experience of countries like Chile and UK to design the annuity system in Poland.

JEL Classification codes: G23, H55, G22, G28

Key words: public pension funds, pension reforming, annuity funds, pension fund performance, Polish pension reform.

1. Summary

This paper presents key issues related to public pension funds and international experiences with their management, efficiency and competitiveness. The paper was prompted by a proposal tabled in 2006 by the Ministry of Labour and Social Policy in Poland, which intended to entrust a single public pension fund with tasks related to calculation of amounts of pension benefits, administration of their payments and investing of pension assets. Even though the topic was finally taken off the agenda, several substantial issues of policy making remains valid and should be born in mind while shaping the future annuity pension systems in Poland and/or reforming the current accumulation phase. The issue of public management of pension assets is one of the most interesting problems and is very often raised in policy making discussions in Europe. Very often, the reserve fund subject is mistakenly

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copied onto other parts of pension system, as it was attempted to be done in Poland in first half of 2007.

The conclusion of the paper is that the idea of setting a single, huge annuity fund in Poland should be dismissed both on the grounds of international experience and philosophy of the Polish pension reform. With the latter, it should be remembered, that one of the most important rationales of the Polish pension reform introduced in 1998 was to provide every insured with a right of free choice of their retirement provision offered by an open pension fund (OFE). Also, such a provision was supposed to have the nature of financial product. These assumptions were based upon the belief that only market competition, being naturally a subject to some proper supervision, can assure a safe and efficient management of pension savings, therefore protecting the pension system against any instability.

The international experience quite undoubtedly shows that the efficiency of publicly managed pension funds is lower than it is in the case of privately managed institutions. Public pension funds are also prone to some other risks coming directly from the State's intervention in the capital market. Thus, the paper suggests that the Polish government, while shaping the design of future annuity market, should use the experience of mature private markets. Perhaps the decision makers should consider creating a pay-out system where private institutions are competing for pension savings and the State is supervising the market to achieve maximum possible level of its transparency and to lower the costs of direct marketing.

Based on the discussion and review of pension literature, the following threats related to creating a single, public annuity fund were identified in the paper:

- possibility of wrong estimation of actuarial parameters (the financial scale of such a mistake is huge; so is the number of pensioners affected by such an error; there would be a need for introducing direct guarantees of the State) and a possibility of exerting political pressure for financing the State's deficit (there might be a temptation to change actuarial parameters and/or passing the costs of deficit onto further generations)
- possibility of achieving low rates of return in the future due to highly inevitable political pressure during the investment decision making process (there might be an encouragement to finance budgetary deficit and/or undertake social investments), lack of proper incentive mechanisms, difficulties with defining responsibility of the managing board and also—existence of legally binding financial constraints on remunerations of specialists employed in the public sector;
- likelihood that non-pension aims will be realized at the costs of pensioners—creating a serious potential for the conflict of interests between pensioners and the State (other taxpayers);
- possible reduction of fund's efficiency due to lack of competition—in the case of private solutions some legal framework can be established to curb the occurrence of excessive marketing costs;
- intervention of the State as a shareholder in the area of corporate governance—that may lead to inefficient management of corporations held by the pension fund in its investment portfolio; on the other hand, not using voting rights would lead to lowering the efficiency of capital management in the economy and to reducing the efficiency of capital markets;

- potential impact of publicly managed pension fund on the capital market due to fund's size—a high cost of active management related to the size of transactions (detrimental impact on prices during single sizeable transaction or costs occurred due to dividing such a transaction into smaller instalments; longer time period needed for changing the structure of investment portfolio) and the influence of such fund on the stock exchange (nationalization of large bulk of assets of the private capital market); in the case of passive investment—the possibility of lowering informational efficiency of the stock exchange (and in consequence, detrimental impact on index/benchmark);
- the State's renewed acceptance of its full responsibility for pension provision, this time in the capital market—such a move would represent a step back from the pension reform and would give an ambivalent signal to the society; it would also lower the long-run financial stability of Poland and its credibility amongst foreign partners.

Potential benefits enumerated by authors of the ministerial proposal, as well as the literature on publicly managed pension funds can be recapitulated as the following:

- some cost reduction due to dividing fixed costs between bigger number of participants and elimination of marketing costs (the argument raised by authors of the proposal);
- safety of pension benefits due to direct guarantees offered by the State (as above);
- potential for economic policy making and achieving other goals than the pension purpose only (for instance, one can think of realizing social goals or the projects that serve social development—arguments present in the literature);
- solution to the problem of too few of clients during the very first years of system's operation and the problem of uneven sex distribution amongst the clients of a particular annuity provider; such an issue would occur in the case of assigning pension payouts to multiple pension institutions (an argument raised by many domestic experts).

Many of the above-mentioned advantages of publicly managed pension funds have limited, if not illusory, character. On the contrary, the costs of the State's intervention in the capital market may turn out to be more important.

Based on the research review presented in this paper, it can be concluded that the State's monopoly in the market of universal, capital annuities cannot be found in any country in the world. The Ministry of Labour and Social Policy proposed therefore an experiment of very unique character. The international experience teaches that public system of pension payment and administration of savings run by a single institution increases investment risk, both due to the size of transactions needed for management of such huge assets and due to detrimental impact on the stock exchange and informational efficiency of indices. Investment decisions of large public fund are also likely to be influenced by non-economic, political factors which surely do not have to be beneficial for financial interests of retirees. The lack of direct competition between several entities seeking the same goal and of the same character would not incentivise managers and would impede objective performance evaluation.

Entrusting the tasks of investment and actuarial management of mandatory pension assets in Poland

to a single institution would increase the risk of wrong estimation of further average life expectancy in the scale of the whole market. Presence of commercial companies competing with one another would limit consequences of the estimation error only to clients of the entity that would commit such a mistake, whereas costs would be borne in first line by its private shareholders. If the same happened in public institution, some tendencies to shift financial consequences on taxpayers would emerge.

2. Introduction

The project of Ministry of Labour and Social Policy envisaged entrusting several tasks to the Social Insurance Institution (ZUS, *Zakład Ubezpieczeń Społecznych* in Polish). These would cover: calculation of pension benefits, administration of payments and investment of pension assets which were to be deposited in the public fund called Fund of Capital Pensions (FEK, *Fundusz Emerytur Kapitałowych* in Polish). Members of mandatory open pension funds (OFE, *Otwarty Fundusz Emerytalny* in Polish), having paid their accumulated pension capitals into the FEK, would receive pension benefits until their death (an annuity).

The project assumed that FEK fund would be managed by ZUS just in the same way some other pension funds or private insurance institutions do¹. Therefore, ZUS would have to handle two types of risks: investment and actuarial. The investment risk relates to managing portfolio in financial markets. The actuarial risk can be defined as the risk of wrong estimation (underestimation, in particular) of further life expectancy—a parameter used for calculating value of annuities².

Main pros for the public annuity fund are: a) lower costs thanks to taking advantage of scale economies (dividing fixed costs by bigger number of clients) and b) safety for pensioners (beneficiaries) due to public nature of retirement provider. However, one needs to weight them against potential costs induced by negative effects of public management of substantial financial assets and see whether the latter do not exceed the former ones.

The paper endeavours to present key issues related to entrusting the task of pension provision to a single pension institution and to provide an assessment of feasible solutions for the design of future annuity market in Poland.

¹ The most developed private annuity markets are located in the United States, Australia, Canada, Chile and the United Kingdom (c.f. James et al., 2006).

² Simplifying slightly, while assessing the value of a pension one has to divide accumulated pension assets by further number of years that a person in retirement age is statistically going to live. Bearing in mind that the current life tables for a unisex person (i.e. a weighted life table taking into account further life expectancies both for women and men, with weights equal to some 0,75 and 0,25, respectively), equals to 209 months, for each 1000 USD of premium paid into the annuity fund, a person would receive lifelong stream of payments of 4,79 USD a month. We do not take into consideration operating costs of the pension provider nor safety and profit margins. These reduce the value of annuity. On the other hand, gains from invested premium increase the value of annuity.

3. Advantages and risks related to existence of a single public pension provider managing funded pension benefits

In the case of pension benefits that are paid out of the so-called funded pillar³, their values are determined by market mechanism (mainly by current level of interest rates—how much one can obtain from investment of assets paid as a premium by an annuitant) and by actuarial mechanism (the length of average pensioner's life—for how long he or she will be receiving pension benefits). Entrusting management and actuarial administration tasks to a single institution (whatever public or private one) in the context of sizeable mandatory public pension pillar **creates the risk that negative consequences of wrong estimation of further life expectancy parameter would be passed on all tax payers**. Bigger number of market participants would seriously diminish the scale of this problem. It is so, because decisions of private institutions would, to some extent, be independent of one another, so their estimation mistakes would tend to, at least partial, be “netting out” in the scale of the whole market⁴.

What is more, **in the case of private annuity companies, costs of actuarial errors are first borne by their shareholders** and yet in the next turn—in case of the bankruptcy—by taxpayers provided that the State decides to bail the company up. **In the case of public institution, all actuarial mistakes would be financed from public means**, not from private capitals. Under such a scenario, some strong inclination could emerge to “pass on” financial consequences of estimation errors onto further taxpayers.

The authors of the proposals argued that the creation of a public system of annuity payments (both administration and asset management) would produce substantial savings as there would be no marketing costs. Servicing pensioners by a single institution makes sense also when there is a legal obligation to use unisex life tables⁵. The single institution system (no matter whether the private or public one) **eliminates the risk of uneven sex distribution, i.e. the situation when clients of a particular provider are mainly females**.

Notwithstanding, creation of such system may in long run bring about considerable risk that the society will loose money, since there would be no incentives for emerging private competitive market with better risk pricing and lower involvement of public money in State's guarantees⁶.

³ The funded pension pillar in Poland consists of mandatory individual pension accounts that are located in open pension funds managed by private asset administrators. Such a system, even though using a capital market as financing vehicle and private providers, is a part of public old-age security system. For more on Polish pension reform and mandatory pension markets c.f. Stanko (2003, 2004). Recent developments are presented in Stańko (2007).

⁴ Partial, because commercial annuity providers would be observing prices quoted by their competitors. Thus indirectly, at similar operational costs level, each provider while quoting its own price would be taking into account actuarial assumptions made by competitors.

⁵ As it has already been mentioned, such tables assume some average life span for both of sexes, thus the same pensions are bought with the same amount of money. Women tend to live longer than men, however, which implies that, on average, an annuity provider that uses unisex life tables loses on female clients (their pension benefits are somewhat higher than they would be if actuarial calculations had been used) and gains on male clients (their pensions are lower than actuarial amounts). In the case of more numerous female clients (which is very likely, as the ratio of females to males aged 62 in Poland is approx. 3:1), the provider experience a loss.

Another option, voiced by policy makers, was to establish a fund that would manage reserves for annuities sold to pensioners. However, in result of investment and actuarial risks⁷, some negative difference between the value of assets under management (investment portfolio) and the value of liabilities (life pension benefits) may emerge. A private institution would have to eliminate such a deficit before long via additional payments from shareholders into the company to compensate its depleted capital. **In the case of public institution**, it is quite likely that such deficit would be kept hidden. Assuming that no prompt actions aimed at elimination of the shortage would be taken, for example due to reluctance to meet current costs of unpopular decisions such as tax raises, **the deficit would grow and be postponed for next generations.**

4. Disadvantages of public (centralized) pension management

A public pension fund offers possibility to seriously bring down operational costs. One should ask, however, whether such a reduction is big enough to cover damages associated with lower long–run rates of return triggered by the entrance of the State in capital market (c.f. the next point of this paper)? The proponents of public annuity fund argue in “Assumptions to the pension law on annuity payments from pension means accumulated in open pension funds (OFE)⁸ that:

“Comparing to OFEs, functioning of Reserve Demographic Fund (FRD) within ZUS structure is cheap. FRD incurs only these costs that are enumerated in the Delegation of Minister responsible for social security issues”⁹.

During the period 2002–2005, operational costs dropped from 29 basis points to 7 bps (i.e. 0.07%) of the average assets and were—in the opinion of authors of the proposal—several times lower than in the case of open pension funds (OFEs). However, cited document acknowledges also that:

“Apart from the costs borne directly by the Fund, some of its expenditures are covered by ZUS. These costs include: staff costs, office rents, office operational costs and some other costs of indispensable services”.

The costs mentioned above—borne by taxpayers—should also be taken into account during the decision process on how to shape the future annuity market in Poland. Moreover, cost comparisons should also consider the long–run impact of public annuity fund on the informational efficiency of capital markets and on the economic growth, as well as one should think of social costs created by the nationalization of benefits and—in effect—by constraining rights of insured to take their own individual decisions.

In similar vain, one could disagree with regard to **safety matters. The choice of public institution**

⁶ An opinion voiced by Mr. Leonardo Camozzato; the former director of Brazilian Actuarial Institute IBA (private correspondence, December 2006).

⁷ Investment risk relates to a possibility to incur loss in capital markets. The actuarial risk relates to possibility of wrong estimation of the actuarial model and its parameters.

⁸ It is very interesting to note that the very name of the pension law proposal does not reflect at any rate the issue of the problem. The operation of paying out benefits, as one of administrative activities, is of secondary importance after all.

⁹ Own translation.

is motivated by the desire to eliminate possible bankruptcies of private institutions and to mitigate risk of wrong decisions of uninformed clients. Nevertheless, this argument is superficial, since one always has to pay for the security, whatever the form of particular solutions—public or private—is chosen. In the project of the Ministry, direct costs of guarantees reduce to the payments made by retiring persons into FEK's reserve fund. The indirect costs of guarantees relate to the need of financing potential losses by taxpayers. It is better when State's guarantees serve to secure effective rather than ineffective activities. Investment of sizeable financial resources done by the State is a less efficient activity because it is associated by the risk that several detrimental phenomena described in the international literature will materialize. These are taken up in the next point of the paper. **The role of the State is to eliminate market failures**—for instance an informational asymmetry between the vender of pensions and the client (buyer)—but not to replace the market mechanism with public production of services that could be, after meeting some specific standards, supplied by more efficient private market. The Chilean case shows that it is possible to create a transparent, private system of pension management system. If going *ad absurdum*, the State wanting to protect its citizens from negative consequences of their decisions, should create a single public insurance company so that marketing costs were curbed and full safety for the insured was provided.

The third argument in the discussion on public management of annuity assets concentrates on **possibility of investing them in socially desired projects and supporting State's economic policy.** Such thinking, however, stays in sharp conflict with the fundamental goal of any pension fund, which is to invest pension savings in the best interest of its members (pensioners in the case of public annuity fund). International experience proves that **investing money in non-pension goals is detrimental to pensioners.** Therefore, the regulation of current pension law on organization and functioning of open pension funds, as well, as the conduct of the supervisory office in Poland (KNF, The Polish Financial Supervision Authority) precisely consider the interest of pension fund members' as most important and unique basis for decision making of pension funds. Any regulation infringing this assumption would be considered as the regress in current practice.

5. Problems related to public (centralized) management of pension assets—international experience

5.1. Types of funded pension funds with public management¹⁰

With regard to public management, two model types of funded pension funds can be distinguished. The first category operates in **partly funded pension systems with defined benefits formula.** These are the countries with weakly developed pension systems such as: the Francophone part of Africa and Middle East. However, countries such as Canada, Ireland, Japan, New Zealand or Sweden, Denmark, Norway¹¹, Spain and China also have some funded pension funds. In the case of these countries, their

¹⁰ This point draws heavily on Iglesias and Palacios (2000: 6–7).

funded pension institutions represent some kind of national pension reserve funds, i.e. a demographic reserve that is being set aside for the future to meet increased pension expenditures induced by the ageing of societies. Usually, when creating reserve funds, the government commit itself to paying into the funds some regular transfers, that come for instance from budgetary surpluses. Accumulated assets may be used only either from some predefined moment (for example 2020—in Holland or New Zealand) or on the occurrence of particular events (deficit in the system—in the USA) or with no specification (for example Canada, Japan). In the case of certain countries (for instance Holland, New Zealand or USA), reserve funds are included into the State's budget, whereas in some others (for instance Canada, Finland)—not (GAO, 2005: 52–53, 8).

The second type of funds represents centrally managed funds with defined contribution. Such funds very operate as provident funds. They can be found in former British colonies of Africa and Asia¹². The biggest is the Employees Provident Fund (EPF) in India, while the most known is the Central Pension Fund in Singapore. Provident funds run individual accounts and most of their investments boil down to buying treasury bonds.

To the best knowledge of the author, there is no system operating in the world that would be similar to the framework postulated by Ministry of Labour and Social Policy. Thus, **a warning question emerges whether it makes any sense to create a public pension fund whose characteristics resemble a single, huge annuity company** and to expose society to all the risks associated with creating pioneer's solutions and **the costs of mistakes being eventually borne not by the private entities, but by taxpayers?** This issue begs the question even more as there are several models of pension products that operate already in the world and whose experiences can serve as good lessons for our policy makers (c.f. for instance James et al., 2006; Cannon and Tonks, 2006; KNUiFE 2002, 2004).

5.2. Performance and investment strategies of public pension funds in the world

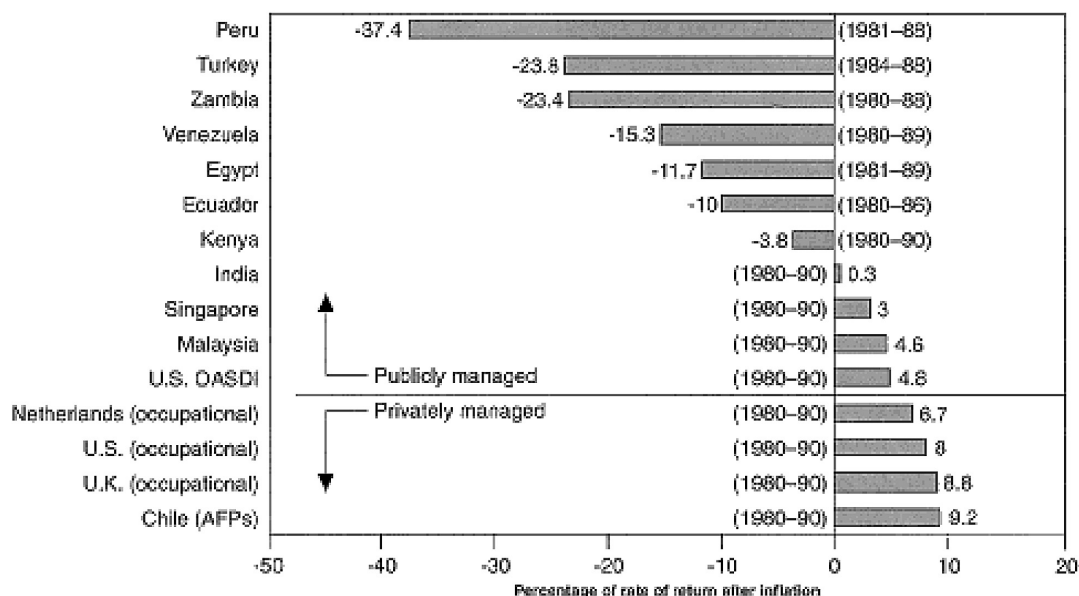
As it is shown in the international empirical research¹³, **historical rates of return achieved by public pension funds used to be low and considerably worse than the results of their private counterparties.** The investigation of the World Bank for the period 1980–1990 points out significant advantage of privately managed pension funds, especially Chilean funds (Diagram 1). Funds managed publicly had annual rates of return lower than the bank deposits' interest rate on average by 1,8%. Only in the case of funds in Sweden, Philippines, Korea and Japan, their performance was higher than bank deposits by some 1% per year (Diagram 2). The problem of unsatisfactory results was found also in the US pension market (Diagram 3). Coronado et al (2003: 580) prove that, when taking into

¹¹ *The Government Pension Fund* is built from petrol sales revenues and is intended to protect the level of living of future societies as well as securing future pension benefits payments (c.f. http://www.norges-bank.no/nbim/pension_fund/).

¹² These are the following countries: Gambia, Kenya, Swaziland, Uganda in Africa and Brunei, Fiji, India, Indonesia, Kiribati, Malaysia, Nepal, Singapore, Salomon Islands, Sri Lanka, Vanuatu and Western Samoa in Asia-Pacific countries—as of 2004 (SSA, 2005a and 2005b).

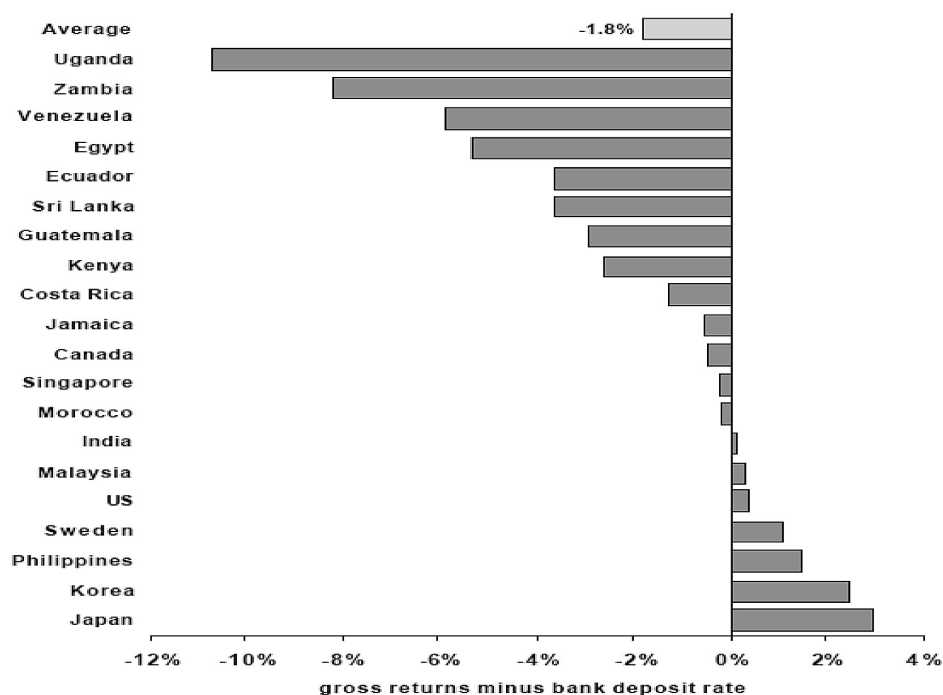
¹³ See: World Bank (1994), Iglesias and Palacios (2000) for pension funds in various countries and Coronado et al. (2003) for the USA.

Diagram 1. Average real rates of return for selected pension funds



Source: World Bank (1994), quoted after: Ostaszewski (1997).

Diagram 1. Difference between real annual capitalized rates of returns achieved by publicly managed pension funds and the bank deposit rates in 20 countries



Source: Iglesias i Palacios (2000: Diagram 6).

account differences in size of those funds and their asset allocation strategies, pension plans managed publicly tended to achieve significantly lower rates of return in 1998.

Iglesias and Palacios (2002: 32) observe that portfolios of public pension funds were invested in two ways. In the first group, funds bought primarily government debt or instruments guaranteed by the State and bank deposits. The second group of funds used to buy similar assets; however they were also involved in ETI investments (*socially and economically targeted investments*). Very few of researched funds invested their assets in private securities, whereas foreign exposure was practically non-existent. Regarding social investments, a large portion were bank deposits or real estate investments and housing loans (c.f. Diagram 4). Such investment of pension assets supposed to finance future pension benefits is highly irrational both from the point of view of fund members and economy itself, because it does not produce sufficiently high investment profits that would assert satisfactory level of life during the retirement. With regard to the whole country, pension savings of such public funds practically do not finance “the real economy”. It is so, because pension assets are not involved in investment projects (private or public) that would increase future national product but finance the consumption (or redistribution of income).

Low rates of return can be attributed mainly to the fact that investment decisions are largely politically-driven and do not have much to do with application of the modern investment theory. **Typically, public pension funds are seriously limited in their investment choices.** These

Diagram 2. Investment returns of American pension plans during the period 1968–1996. DB–defined benefit funds, DC–defined contribution funds

TABLE 1
INVESTMENT RETURNS TO PENSION PLANS
(Average Annual Returns, Percent, 1968–1996)

Time Period	State & Loc. Gvt. Pensions ¹	Private Pensions ²	Hybrid Mutual Funds ³	Equity Mutual Funds ³	Stock Market Returns
1968–83	6.9	7.6	n.a.	n.a.	9.3
1977–83	9.1	11.3, 10.4	n.a.	n.a.	12.8
1986–90	11.9	8.7 (DB) 11.1 (DC)	n.a.	n.a.	11.6
1990–94	8.8	8.4 (DB) 8.4 (DC)	8.5	9.1	9.7
1992–96	11.2	11.1 (DB) 8.9 (DC)	11.1	13.8	15.6

¹ Data for 1968–83 are from Mitchell and Hsin (1997). Data from 1986–96 are from Zorn (1994, 1996, 1997).

² Data from 1968–83 are from Mitchell and Hsin (1997), and are for large private pension plans. For the time period 1977–83, returns are calculated from two data sources (SEI Financial Services and 5500 Reports, respectively). Data from 1986–96 are unpublished Flow of Funds data for all defined benefit (DB) and defined contribution (DC) plans, which uses From 5500 reports.

³ Data are from Morningstar. Hybrid funds, on averagem hold about 60 percent of their assets in equities and the remainder in bonds and cash.

constraints can have both **formal** (for example, a ban on investing in certain corporations or countries on ethical or political grounds) and **informal character** (for example, a pressure to decrease investment in private corporations and to finance public debt via purchase of treasury bonds). Very characteristic feature of these funds is therefore the limited presence in private capital markets. Iglesias and Palacios (2000: 29) conclude that since supervisory boards in public funds use different criteria for investment decision making and ignore the concept of risk adjusted return, the results do not depend much on skills of investor managers employed in these institutions.

Scientists who analysed the investment of public pension funds point out that **the key problem is the existence of political pressure on investment decision**¹⁴ (see for example World Bank, 1994). For instance, the Indian EFP fund had to invest 90% of its assets in government debt instruments or papers guaranteed by the government. Such activity resulted in lower long-term rates of return. Moreover, **“a captive credit”, i.e. the feasibility of easy financing government debt, may lead to increased State expenditures.** Cogan (1998) gives econometric proof for the existence of such phenomena in the United States while the work of Von Furstenberg (1979) indicates that government expenditures in provinces tended to go up in result of the subsidized credit provided by the Canadian Pension Plan (Iglesias and Palacios, 2000: 35).

The problem of non-objective investment decisions concerns also the countries with highly developed democracies. Useem and Hess (1999) as well as Mitchell and Hsin (1997) present some empirical evidence that state governments in the USA pressed American public pension plans to invest in projects developing a particular state (Palacios, 2002: 11).

Another outcome of the political influence is so-called **economically targeted investments** (ETI). They take into account not only possible rates of return, but also economic benefits for local societies (such as investing in own state) or the whole country (investing in domestic industry, building the infrastructure etc.). During the presidential campaign in 1992, Bill Clinton encouraged pension funds to undertake ETI investments. In 1990-ies, such investments became one of the most controversial issues for both private and public pension funds (Hess, 2005: 207). Some examples include the investment carried out by state pension funds—a fund from California put out 375m USD for family housing to create cheaper apartments and new workplaces. A fund from Connecticut invested 25 m USD in local enterprises to protect 1000 workers from being fired. Yet another case is a fund from Pennsylvania that would give preferential real estate loans (Hess, 2005: 208)¹⁵.

Proponents of such investments argue that these present a chance to realize socially desired projects that otherwise would not have received financial resources. However, as Nosfinger notes, assuming that capital markets are working quite properly the very fact that there is no capital for such projects

¹⁴ This is one of the agency conflict issues that occur in any institution, and particularly in these where the supervision is carried out by bodies consisting of elected representatives of organizations, parties and social partners. More about this topic in the context of public pension funds—see Hess and Impavido (2004).

¹⁵ Alan Greenspan, the former president of Federal Reserve concluded that assets of public pension system should not be invested in stock markets because he does not believe such huge assets can be politically immuned from the government's influence. Thus, investing public money would lower efficient allocation of national resources (see Hess and Impavido, 2004: 60).

means that potential gains do not correspond to potential risks (Nofsinger, 1998: 87–88; quoted after: Hess, 2005: 208, footnote 123). ETI investments aim at improving public situation in a particular geographical region and often make the impression that their benefits are substantial while costs—insignificant. Nevertheless, costs imposed on taxpayers do exist but come up with some delay—in the moment when financing the deficit brought about by this kind of investment becomes inevitable

Diagram 4. Asset allocation of public pension funds

Country	Year	Govmt. Bonds/ Fixed Deposits	Loans/Mortgages/ Housing Bonds	Shares/ Equity	Real Estate/Other	Total
<i>percentages</i>						
Canada (CPP)	1991	100	0	0	0	100
Egypt	1995	100	0	0	0	100
Pakistan	1981	100	0	0	0	100
Sri Lanka	1997	100	0	0	0	100
Switzerland	1997	100	0	0	0	100
United States	1997	100	0	0	0	100
Yemen	1996	100	0	0	0	100
Colombia	1982	100	0	0	0	100
India	1995	100	0	0	0	100
Venezuela	1981	100	0	0	0	100
Niger	1980	96	3	1	0	100
Senegal	1980	93	6	1	0	100
Jamaica	1987	91	9	0	0	100
Tanzania	1996	90	0	0	10	100
Korea	1997	89	3	3	6	100
Rwanda	1980	82	4	5	8	100
Ethiopia	1996	80	0	0	20	100
Costa Rica	1987	79	15	0	6	100
Burundi	1981	78	9	6	8	100
Peru	1988	76	7	0	17	100
Kenya	1994	73	0	11	16	100
Uganda	1994	68	8	1	23	100
Japan	1995	63	17	19	0	100
Malaysia	1996	63	21	15	1	100
Togo	1981	59	1	3	37	100
Morocco	1994	58	32	7	3	100
Cameroon	1989	57	40	2	1	100
Mauritius	1996	56	0	2	42	100
Jordan	1995	52	25	17	6	100
Philippines	1995	44	38	10	8	100
Tunisia	1990	43	30	0	27	100
Sweden	1996	42	40	0	18	100
Sudan	1982	26	58	0	16	100
Ecuador	1986	10	83	3	3	100
Mean		75	14	3	8	100

Source: Palacios and Pallares (2000).

Note: Provident funds in bold.

Source: Palacios and Pallares–Miralles (2000) quoted after. Palacios and Iglesias (2002: Table 3).

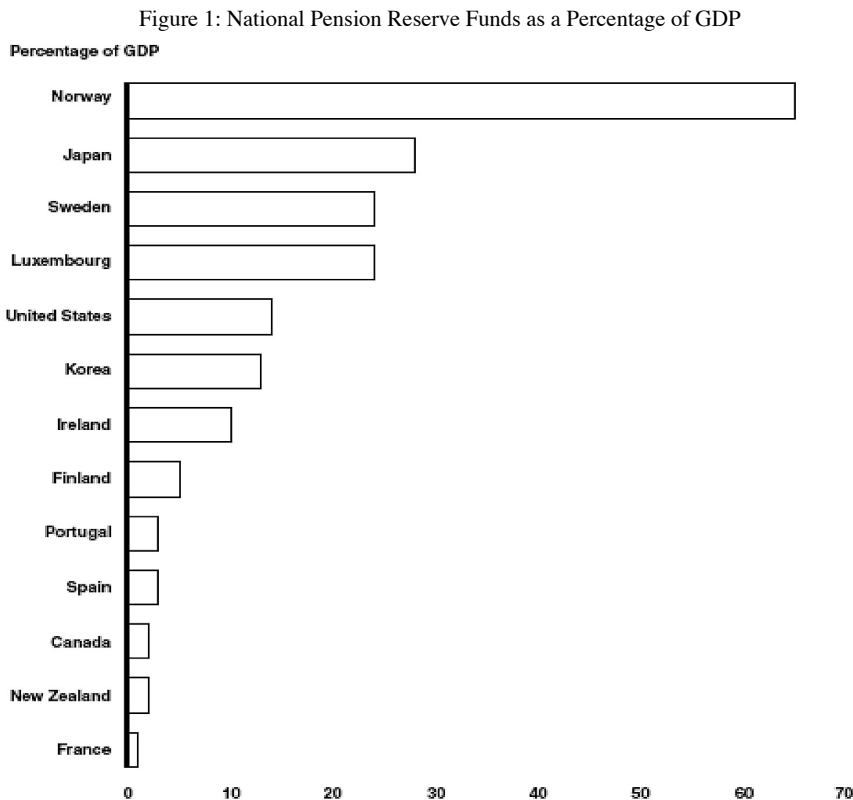
(Nofsinger, 1998: 89; quoted after: Hess and Impavido, 2004: 62).

Some scientific papers (quoted in details in Hess, 2005: 209) pointed out the negative relationship between ETI investments and fund's performance (Romano, 1993: 828–829; Nofsinger 1998: 92–94; Mitchell and Hsin, 1994: 109–110), while other scholars (Munnell and Sundén, 2001: 158–159; Coronado et al., 2003: 589–590) did not find such relation to be statistically significant.

Notwithstanding, also Iglesias and Palacios (2002: 28–29) conclude that the government action encouraging funds to carry out ETI investment or socially-targeted projects (such as for instance financing losses of state corporations) very often produces rates of return lower than the market results. A widespread ban on investing abroad constitutes another important problem for investment managers who are trying to diversify their domestic country risk (which is sometimes very substantial).

Some of governments took efforts to improve their public pension systems in particular by re-designing pension fund governance rules (c.f. point 5.7). Partly due to this fact, as well as in result of

Diagram 5. Size of national pension reserve funds as a percentage of GDP, as of 2003



Source: OECD and individual government sources.

Note: The figure for Finland excludes the statutory pension funds (58.3% of GDP). Figures as of 2003, except as follows: as of December 31, 2000, for Portugal, as of December 31, 2004, for Spain, Ireland, the United States, and Norway.

Source: GAO (2005, Figure 1: 20).

increasing ageing of societies and problems with financing future benefits, governments decided to increase investment of public pension funds in private markets. However, **these actions may in turn generate another type of problems** (Iglesias and Palacios, 2002: 37), which results from the interaction of the State and private enterprises in capital market (see the next point).

5.3. Corporate governance. The State as corporate shareholder

A public pension fund that invests in capital markets affects the way in which the corporate governance (i.e. the effective control over corporations owned) is carried out¹⁶). Due to their size, pension funds are usually important shareholders in corporations. Considerable stakes of equities or shares give them control over the company. In the case of public demographic reserve entity and small domestic capital market such fund could also shape the activity of biggest economic entities in the country.

Investments of public pension savings **leads to nationalization of significant part of the economy and produce several negative outcomes**¹⁷ (Ostaszewski, 1997). This happens regardless whether the State behaves as an active shareholder that manages its corporations or whether the State gives up its ownership rights.

The active shareholder creates a temptation to control activities of particular companies or to influence some branches of the economy. Thus, **a serious conflict of interests emerges: a State finds itself to have two competing functions of the regulator and the owner** (c.f. Iglesias and Palacios, 2002: 37).

In the case of a public institution, some severe difficulties may be faced when setting up a purely market-based, competitive mechanism for nominating and firing managers of the corporations owned in the portfolio. Such a mechanism is indispensable to guarantee high level of management efficiency. On the other hand, granting the voting rights to some external institution would give it for free a strong power over the corporations (Ostaszewski, 1997).

The State has also another option. It can deliberately give up its shareholder's mandate. It would lead, however, to considerable **reduction in efficiency of the corporate governance in capital market** (a significant part of capital would not be represented during general meetings of shareholders) and—on the other hand—to unwarranted **increase of the position of other shareholders**. The very same effect appears if—due to fund's size—its managers are not able to participate efficiently in the management of smaller corporations.

¹⁶ "Corporate governance is a system of legal norms and action rules for institutional investors and boards of directors of exchange-traded corporations that allows the shareholders to run an effective control of decisions taken by corporation boards" (Slawinski, 2006: 5).

¹⁷ As an illustration, Ostaszewski (1997) shows that the value of provident fund that is a reserve of Social Security will reach in the future some 2900 billion USD, whereas the market capitalization of all 2723 corporations being traded on the New York Stock Exchange was in 1995 some 6000 billion. In Ostaszewski's opinion, such a development scenario would give a full or at least a considerable control over practically all bigger corporations in the US.

5.4. The governance of a public pension fund

The management of public pension funds is a similar activity to the case of private pension funds; however this analogy is not true in all aspects. For example, practically no public pension funds are subject to the same rules as private pension. Similarly, they are not under the jurisdiction of the same supervisor (Palacios, 2002: 8)¹⁸.

Governance of the fund or pension plan is defined as

“...processes and structures used to direct and manage the affairs of the pension plan, in accordance with the best interests of the plan participants. The processes and structures define the division of power and establish mechanisms for ensuring accountability.” (the definition of Association of Canadian Pension Plan Management, quoted after Palacios, 2002: 8, emphasis added).

Palacios (2002: 8–13) provides an overview of key issues related to the governance of such funds. As it has been mentioned, public funds are regulated by legal acts that are usually different from the rules binding private institutions. In majority of cases, the main managing entity of public funds is the board of directors or the board of trustees. Very often, members of these boards lack knowledge of finance, law or investment. **The decision makers ought to be fully responsible for their decisions. However, it is difficult to achieve such accountability rule in public pension funds due to strong political influence. The problem with hiring professionals** due to constraints set upon their salaries (either because of lack of money or due to legal regulations) is very often another issue. The conflict of interests that occurs between government institutions, members of managing board and pensioners may be moderated, if a code of conduct is set up. However, Palacios (2002: 9) notes that such conflicts are somehow built in the nature of the public institution, particularly when a government official takes a decision that may have detrimental impact on interests of fund members. As an example can serve the imposing of investment policy by Finance Ministry to invest in state-owned companies (here some potential goals that may be pursued are: protection of workplaces, development of domestic industry or a region) or to buy treasury bonds in amounts not justified by a fund's investment purposes (the goal is to finance the budgetary deficit). Such purposes are not unjustified in their own; however participation of pension funds in financing these projects should be done on the commercial basis, i.e. with prices determined by capital markets.

The key element of pension governance lies in setting up investment policy and guaranteeing its transparency (Palacios, 2002: 10–11). The board of directors should be accountable for the whole investment policy that should be written down in a formal and transparent document. The assumptions of fund's governance policy should specify long-term goals such as the expected rate of return and the accepted level of risk, as well as clearly state the corporate governance view of the board with regard to possessed equities, shares and preferred socially-responsible investments or other types of ETI. Due to the reasons described in previous paragraphs, a public fund should be limited with regard to investments in domestic treasury bonds and also should avoid non-pension related investments. Thus,

¹⁸ The only exclusion is a partly funded public pension system in Costa Rica which is a subject of the same regulatory office as the private pension market—Palacios (2002: footnote 2).

somewhat stronger protection mechanisms are recommended that in the case of the private system. Such policy increases the likelihood that negative impact of sizeable funds exerted on local financial markets will be reduced or eliminated. It also helps to achieve higher diversification and to avoid conflicts of interests between the fund's long-term goals and public policy goals (c.f. Palacios, 2002: 10).

The investment policy of a fund should determine whether it will be passive or active and whether some external asset management companies will be used. Also, it should formulate hedging strategies protecting the fund against investment risks. Another issue that has to be specified *ex ante* is the set of rules for hiring and evaluation of managers against properly defined, objective benchmarks. Investment decisions should be independent of political influences. At the same time, some fundamental information describing the fund's performance, i.e. achieved rates of return, administrative costs and so on, should be publicly available (Palacios, 2002: 11).

Iglesias and Palacios (2000: 29) investigated two hypotheses related to the impact of the quality of governance of public funds on their investment results. The first hypothesis assumed that differences in the governance in various countries contributed to the variability of observed results. The latter stated that the very fact that a fund was publicly managed reduced its performance. To verify these hypotheses, authors run multivariate regressions. The variable explained was the gross rate of return achieved by a particular fund reduced by a bank deposit rate. Explanatory variables included the index of governance's quality and a dummy variable taking the value of 1 in the case of private management. The governance index was constructed as the average of three elements: the efficiency of legal system, the size of bureaucracy and the level of corruption¹⁹. Results obtained for 14 countries are statistically significant for both explanatory variables and prove the fact that lower rates of return are experienced in the case of public management. Also, some positive impact of governance quality on the performance was noted (c.f. Diagram 6):

The results show that **publicly managed pension funds tend to have lower performance than their private counterparts at any levels of governance.**

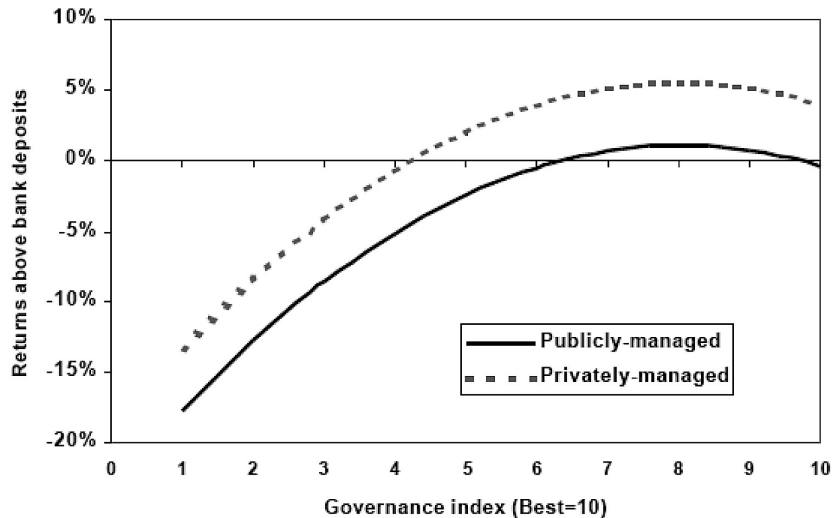
5.5. Impact of public pension fund on capital market

The size of pension fund may allow for **scale economies** (c.f. Indro et al., 1999), i.e. to split fixed costs (related mainly due to administration and infrastructure of a fund) onto higher assets. **However, increasing fund's size can at some moment become a real burden for achieving good investment results** (so-called anchor of performance—Blake et al, 2002). This effect has been observed in mutual fund markets. Its main reasons are: increasing problems with governance, decreasing marginal utility from obtaining additional information due to increasing number of companies held in the investment portfolio and strong negative impact of sizeable transactions on the price or interest rates levels (so-called price impact).

A huge fund must, inevitably, execute its transactions in large blocks, which considerably lowers

¹⁹ Zob. Mauro (1995: Appendix 3).

Diagram 6. Expected normalized rates of return and quality of private and public governance of pension funds



Source: Mauro (1995: Fig. 6) quoted after: Iglesias and Palacios (2002: Fig. 9).

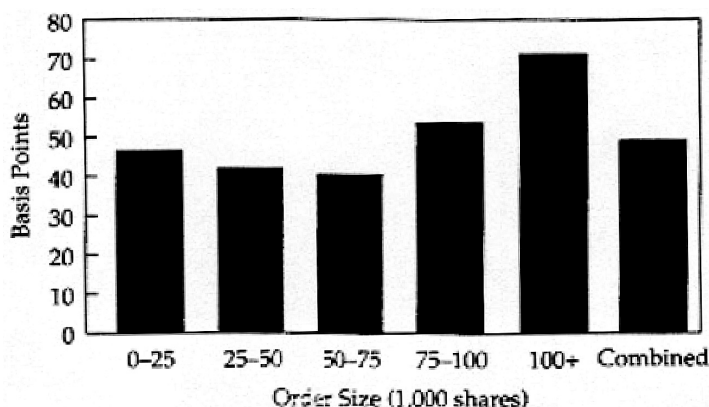
that price of an instrument when sold and increases—when bought. Alternatively, these transactions can be split into smaller block, however, such action creates higher transaction costs (relatively higher brokerage fees) and alternative costs, related to the slow reaction to a particular situation in the market (so-called cost of waiting). Damodaran (2003, chapter 5) quotes a study by Leinweber, who researched 13651 transactions worth 2 billion USD conducted in 1991 by the largest corporate pension funds. Leinweber found a weak relationship between the value of a transaction and its costs. Net costs of trading were the highest in the case of extreme (i.e. the highest and the smallest) transactions, whereas the costs induced by largest transactions were the highest (see Diagram 7).

The negative impact of investment fund's size on its performance was a subject of numerous empirical studies. One of the seminal works that proves the existence of such relationship is the study of Chen et al. (2004). Its authors point out that the rates of returns achieved by investment funds, whether in gross or net categories, tend to decrease with the size of a fund. The effect is stronger when a particular fund's liquidity is lower which suggests that detrimental size consequences will be the strongest in the case of funds investing in small and illiquid securities (Chen et al, 2004).

It seems therefore, that **some similar problems of reduced investment performance can occur also in the case of a huge public pension fund in Poland.** What is more, **fund of such size would be influencing the situation in the capital market.** In the case of passive investment, the crucial issue would be the relative size of public fund to the market. Passive investment offers several benefits due to avoiding transaction costs and price impact losses. However, the indispensable condition is that the capital market is efficient²⁰. If too large share of market becomes managed passively, considerable amounts of capital will become outside the control of price arbitrage²¹, which will lower the market's informational efficiency. In result, passive strategy loses its sense. Passive investing (aimed at

Diagram 7. Net trading costs of stock transactions depending on their size

Figure 5.5: Net Trading Loss By Order Size



Source: David J. Leinweber.

Source: Damodaran (2003: chapter 5).

lowering the investment costs) is therefore advisable only when there is large enough number of active investors who provide the market with proper pricing and liquidity.

In the case of large annuity fund (FEK) postulated by the authors of the proposal, they did not specify what its final portfolio structure would be like. One can speculate that—due to the nature of pension liabilities and considerable safety requirements for assets being invested—a substantial (if not dominating) position would be treasury bonds (plus, potentially, corporate bonds and foreign treasury bonds). Each State has monopoly for issuing of treasury bonds. It therefore **possess strong capacity to determine prices** of these instruments—by adjusting the size of emissions (manipulation of the “production” size with fixed demand) as well as by **determining the demand** for those instruments by regulations (via creating investment limits that generate the demand for treasury debt instruments). Usually, the State limits the size of supply of these instruments. With fixed demand made by pension institutions, such a situation would lead to increases of prices and decrease of debt servicing costs. Thus, such a situation creates a conflict of interests between the State and pensioners’—**the State, would be tempted to influence the bond market²² to obtain cheaper financing. This process would be carried out, however, at the expense of pensioners.** As it has been already mentioned, the

²⁰ The market is efficient (informationally) when prices of financial instruments reflect all publicly available information and do not deviate from its fundamental values (i.e. real economic worth). Due to the intensity of this phenomena, one can distinguish markets that are weakly, semi or strongly efficient. In such markets is not possible to achieve rates of return that consistently higher than the average market rates.

²¹ Arbitrage is a process of finding and using price differences in the same or separate markets. Arbitraders earn profits on price differences and contribute to disappearance of price discrepancies.

²² Mainly it is the segment of long-time zero-coupon and fixed-coupon bonds which constitute natural assets for hedging the long-term pension liabilities.

State's monopoly in this segment of bond market could be additionally protected by setting special investment limits imposed on FEK that would restrict the range of approved issuers, especially the private ones. It would therefore be very important to determine, whether annuity providers will have possibility to invest in foreign markets. In the case of central public management such a solution seems to be very unlikely.

It is worth mentioning what the current legal framework and practice of the Supervisory office are in Poland. The interest of a fund's member is very clearly stated in the law on organization and functioning of pension funds as the sole criterion for assessing the activities of pension institutions. On the basis of future pensioners' interest, the Supervisory office gives and takes away licences for pension fund administrators (art. 57, 62). Interests of members of open pension funds (OFEs) are also superior for financial institutions co-operating with pension funds (such as for instance custodian banks—art. 64). The State sets investment limits taking into account interests of the insured (art. 151, 155) and applies sanctions against this institutions (art. 204, 204c) and persons (art. 217) which act against interests of future pensioners.

5.6. Macroeconomic impact of public pension fund

Transferring pension commitment again to the State would represent a step back in regard to assumptions set up by the pension reform in Poland. Additionally, the level of future pensions would cease to be the economic issue and would become again the political one²³. The State would once more increase its commitment in this area, which would question its long-term financial stability. It is worth emphasizing that Poland was qualified by the European Commission as one of very few countries which, thanks to having undertaken a modern pension reform, enjoys the lowest term public finance instability risk. The long-run (fiscal) impact of society ageing is the lowest within the whole European Commission (European Commission, 2006). Thus, if the State decided to take on additional pension commitments, some new treasury bonds would have to be issued which in turn would lower Poland's financial standing and in consequence—would lead to deteriorated pricing of public debt in future and to increased debt servicing costs. Another important question would be how to qualify FEK's liabilities in the light of Maastricht's requirements.

5.7. Possible ways of limiting problems related to public pension fund management

The literature (Weaver, 2001, Palacios, 2002; Mc Culloch and Frances, 2003; Hess and Impavido, 2004) indicate some possible ways for serious improvement of public pension funds. Main actions is to set up proper fund's governance framework and to project independent, free from political pressure, rules for appointing, assessing and motivating the management staff. A serious challenge is the design of proper representation of all parties involved. For instance, with regard to American public DB pension funds Hess (2005) opts for proper governance mechanisms. In the opinion of this author, problems of political influence on public pension funds do not relate—as it is suggested by some critics

²³ An opinion of Mr. Pawel Pelc, private correspondence, December 2006. See also: Pelc (2006).

-to shareholders' activity or ethical investment, but to the issue that the governments use funds' assets to solve their budgetary problems. Creating proper nomination ways, board members' accountability rules as well as properly defining the role of managers and guaranteeing their independence in decision-making process could contribute to higher performance (Hess, 2005: 219).

The second area, related tightly to governance framework, is the new investment policy. For instance, the demography reserve fund in Ireland has statutory ban on investing in domestic bonds, whereas the Norwegian Government Petroleum Fund (NGPF) has to invest all of its assets into foreign securities of 42 countries and 31 currencies²⁴ (GAO, 2005: 52–53). Also, the fund in New Zealand invests globally and does not put too much assets in domestic treasury papers²⁵.

These reforming tendencies, however important and creating modern corporate solutions do not have direct application for the way the assets are invested. In the case of Poland, the problem lies not in reforming of existing public pension funds, which would have a character of demographic reserve, but in creating or not, a future Fund of Capital Pensions whose core part of assets would, from the very definition, consists of treasury papers. That is why the way and conditions of investments would depend to a great extent on the State. Consequently, a transfer of management functions to the regulator does not seem necessary. The success of pensioners and the level of their pension benefits will depend on setting up of investment limits, accepted level of risk and creation of cost-quality competition. All of these elements are a domain of the State.

6. Summary

This paper reviewed potential threats and benefits that might occur if the task of managing of pension savings were assigned to a public institution. **The overall assessment of the proposal of Ministry of Labour and Social Policy to establish such a fund is negative.** The main counterargument is derived from lower operational efficiency of public institutions which in turn can be attributed to its predisposition towards political pressure (the issue observed in many countries, also these with high level of democracy), organisational and management problems (procedures for nominating executive managers and assessing their performance) and smaller experience in investment and actuarial risk management. It begs a question whether Social Insurance Institution (ZUS) would really be capable to take up such tasks and whether the costs of its operation, defined as the sum of direct and indirect costs borne by taxpayers, would be lower than in the case of the framework based on many private institutions competing with one another. Lack of competition means in the long-time perspective a service monopoly with all its negative consequences. It seems that there would also be several conflicts of interests difficult to reconcile: divergence between the

²⁴ Information of the Norges Bank Investment Management, http://www.norges-bank.no/nbim/pension_fund/, data of access 17 December 2006.

²⁵ Managers have full freedom with regard to their investment decisions, also in the area of purchase of domestic treasury instruments. Due to the fact that New Zealand is "a small open economy", majority of investments is done in global capital markets so that to lower risk of local economy (information courtesy of Mr. Brian McCulloch, main advisor in Treasury Ministry of New Zealand, private correspondence, December 2006).

State and pensioners, the regulator and shareholders, the supervisor and pension provider. All of them are closely attributable to the intervention of the State.

Rather than offering a next service of public character, **the State should focus on supporting market mechanisms by establishing proper system of regulation and supervision.** Such a system can effectively eliminate unnecessary marketing costs and significantly reduce the level of insolvency risk without the need to involve considerable state capitals used as direct guarantees. One of the ways for cost reduction can be entrusting ZUS with handling the technical task of paying pension benefits (without passing on this institutions the issues of actuarial and investment risk management)—this would help to monitor values of benefits that are paid out to pensioners—a matter important for targeting recipients of guaranteed minimal pensions. One can also consider experience of the Swedish system, and think whether it makes sense to create a framework where there would be no agents acquiring clients to pension providers but it would be the client himself, equipped with proper information about market proposals, to choose his pension provider. The intermediary to provide data needed for informed decision could be a public institution—as it happens actually in Sweden.

Creating competitive market would in long run bring about considerable benefits. As an example can serve here the private annuity market in Chile that is properly supervised by the State. Benefits offered by this system are relatively higher (in terms of money worth ratio, c.f. James et al, 2006) than in the British market. One of possible solutions is to use experience of this country.

In the opinion of the author, the payout system in Poland must be created as quickly as possible. However, lack of time ought not to be used as the argument for introduction of ad-hoc solutions.

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