

Aging Society and Management of Public Pension Funds in Korea

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I. Introduction

A large proportion of the population in OECD member countries is expected to experience a significant aging transformation over the next half-century. On average, old-age dependency rates may nearly double between now and 2050¹. This aging transformation will decelerate economic growth and further increase the government's fiscal burden. Projections of an aging population have shifted focus to implementing policy approaches that place the future of public finances on a sustainable path, and a number of reform measures have been initiated or are being considered in many OECD countries. Reducing benefits and pay-outs from public pension systems will help ease the burden on public finances; however, reduced benefits and pay-outs may raise questions of political sustainability.

The National Pension Scheme (NPS), which provides coverage to workers in firms with 10 or more employees, was introduced in 1988. The National Pension Scheme has been acclaimed as having the capacity to accommodate an aging population. Korea has adopted a partial pre-funding public, defined benefit scheme; in that the sustainability of public pension systems for many pensioners depends, to some extent, on how these funds are managed. Debate continues to grow over policy reform of Korea's public pension system. The focus of attention centers around identifying policy provisions that will effectively increase the pre-funding levels of public pensions. The implicit public pension debt will impose an intertemporal fiscal constraint. If the government does not appropriately manage the implicit public pension debt, then future generations will bear the intergenerational transfer of public pension liabilities. In the past, public pension funds have been subject to political interference and mismanagement. To enhance the management of public funds, five OECD countries – Canada, Ireland, Japan, New Zealand and Sweden – recently introduced new management models². This paper attempts to present ways on how to improve the management of public pension funds in Korea, in particular, the National Pension Fund.

¹ OECD (2002), "Responding to Aging Through Later Retirement," ECO/CPE(2002)10, Economic Policy Committee, OECD.

² Palacios, Robert, "Managing Public Pension Reserves Part II: Lessons from Five Recent OECD Initiatives," World Bank, July 2002.

II. Aging Society

A large proportion of the population in OECD member countries are expected to experience a significant aging transformation over the next half-century. On average, old-age dependency rates will nearly double between now and 2050³. These demographic shifts can be attributed to the combination of several factors including, aging of the post-war “baby-boom” generation, increased longevity, and low birth rates. This aging transformation will decelerate economic growth and further increase the government’s fiscal burden. The ratio of elderly non-active to the working age population is rising, presenting serious challenges for many public sector pension schemes. Realizing that the financial burdens of public pensions could weigh heavily on public finances if benefits and pensions remain unchanged, several governments, including Korea, have been seeking ways to reform their pension systems.

It is expected that the demographic transformation in Korea will be more rapid compared to other countries. In other developed economies, the length of time for the proportion of the elderly population (aged 65 and over) to increase from 7 percent to 14 percent was more than 40 years, but Korea will experience the same growth rate in only 22 years. According to Lee and Hong (2002), Korea has already entered the stage of an “aging” society as of 2000 and will become an “aged” society by 2025. A society is defined as “aging” if the proportion of the population aged 65 and above is greater than 7 percent and “aged” if the proportion is greater than 14 percent. This aging transformation is expected to accelerate after 2030, and by 2050 the proportion of elderly people will reach almost 25 percent, a proportion similar to that of more advanced economies.

Consequently, the old age dependency ratio (the number of elderly people per 100 working-age persons) will rise from 10 in 2000 to 30 in 2030 and 45 in 2050. As a result of this aging population, the real GDP growth rate is expected to decline from 6.5 percent in 2000 to 1.2 percent in 2050⁴. Given the current state of the public pension and social welfare system, the combination of a rapidly aging population and a decline in the GDP growth rate will weigh

³ OECD (2002), “Responding to Aging Through Later Retirement,” ECO/CPE (2002)10, Economic Policy Committee, OECD.

⁴ Lee, Hyecheon and Kiseok Hong (2002), “The Structure of the Economy in an Aging Society,” Korea Development Institute.

heavily on public finances and will trigger substantial increases in age-related spending over the coming half century.

Table 1. International Comparison of the Aging Process

Percentage	Year			Number of Years			
	7%	14%	20%	7%	14%	14%	20%
Korea	2000	2022	2032	22		10	
Japan	1970	1994	2006	24		12	
France	1864	1979	2020	115		41	
Germany	1932	1972	2012	40		40	
UK	1929	1976	2021	47		45	
Italy	1927	1988	2007	61		19	
US	1942	2013	2028	71		15	
Sweden	1887	1972	2012	85		40	

Source: UN, "The Sex and Age Distribution of World Population."

III. Current Management of Public Pension Funds

1. Four Major Public Pension Funds

There are four major public pension funds in Korea– National Pension Fund, Government Employees Pension Fund, Teachers’ Pension Fund and Military Pension Fund. The combined assets of these four public pension funds totaled 88.37 trillion won or about 16.2 percent of GDP at the end of 2001. The majority of the assets are managed under the National Pension Fund. As of 2002, the National Pension Fund has accumulated assets totaling 92.8 trillion won or about 15.6 percent of GDP.

Table 2. Total Funds Raised and Assets of Four Major Public Pension Funds

(Units: In hundred million Won)

Fund Name	Funds Raised		Assets		Gov't Subsidies
	Accumulated	Percent of GDP	Accumulated	Percent of GDP	
National Pension Fund	756,412	13.88%	781,855	14.35%	0
Gov't Employees Pension Fund	45,522	0.84%	52,253	0.96%	0
Teachers' Pension Fund	43,844	0.80%	46,048	0.84%	0
Military Pension Fund	3,590	0.07%	3,590	0.07%	2
Total	849,368	15.58%	883,746	16.22%	2

Note: As of Year Ending 2001.

Source: Status of Pension Fund, 2002, <http://www.mpb.go.kr/>, Ministry of Planning & Budget, Budget Coordination Division, 2002.8.22.

Most of the assets under management by the four major public pension funds rely heavily on bonds and asset allocations in other funds. In particular, the National Pension Fund allocates about 37.7% of its assets in other funds.

Table 3. Current Status of Asset Allocation of Four Major Public Pension Funds

(Units: In hundred million Won)

Asset Allocation		National Pension Fund	Government Employees Pension Fund	Teachers' Pension Fund	Military Pension Fund
Financial Investments	Deposit in BOK	-	-	-	-
	Deposit in Money bank	-	1,228	3,217	285
	Non-Monetary Investments (Non Bond & Stock)	217	-	9,555	686
	Bonds	404,625	36,607	13,692	-
	Stocks	48,359	1,611	745	-
	Other Commercial Loans	22,351	4,578	9,735	29
Inter Gov't Transactions	Other Accounting Allocations	-	-	-	-
	Other Funding Allocations	294,441	-	6,900	1,500
Real Estate		3,453	5,716	2,187	1,090
Others (Intangible Property et al.)		8,409	2,513	17	-
Total		781,855	52,253	46,048	3,590

Note: As of Year Ending 2001

Source: Status of pension Fund, 2002, <http://www.mpb.go.kr/>, Ministry of Planning & Budget, Budget Coordination Division, 2002.8.22.

However, inconsistent objectives set by government officials, responsible for overseeing the allocation of assets for the National Pension Fund, have led to a relatively low and long-run rate of returns on investments. In addition, reserve assets in public pension systems have been tapped to finance various types of government-sponsored economic and social projects. These management decisions reflect the low level of public accountability and transparency.

2. National Pension Scheme and National Pension Fund

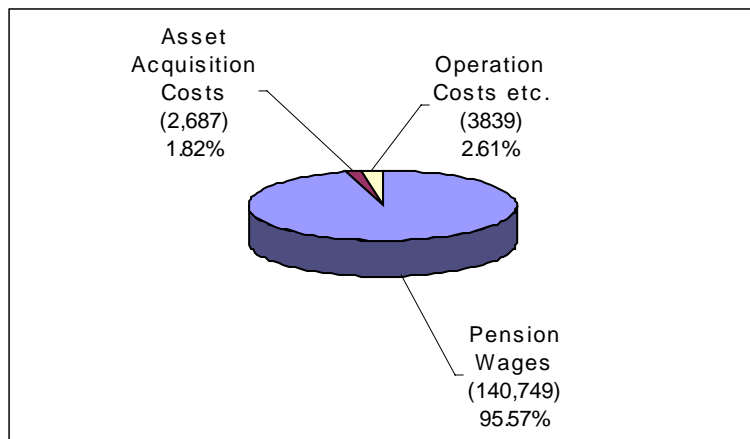
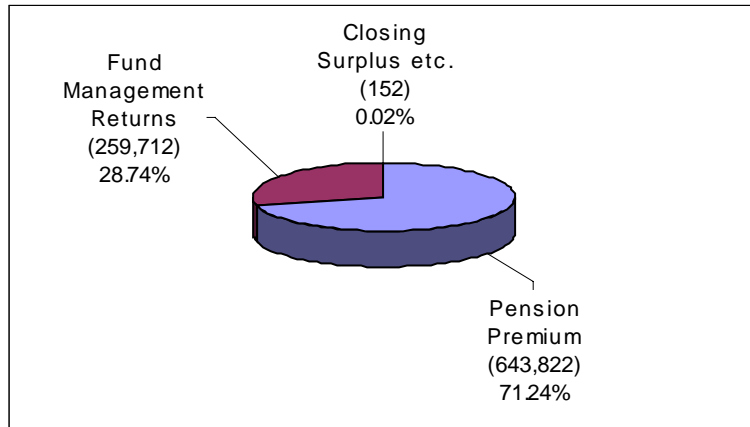
The National Pension Scheme (NPS), which provides coverage to workers in firms with 10 or more employees, was introduced in 1988. In 1992, the compulsory coverage was expanded to include firms with 5 or more employees. Under the current organization structure, the Minister

of Health and Welfare has fiduciary responsibility over the fund's management and operation. The management of the fund is strictly regulated by the National Pension Act, and allows only those transactions that are expressly and explicitly permitted by the relevant regulations. Given the long-term investment objectives and relative short life span of the National Pension Fund, the size of the fund is expected to grow, which as of year ending 2001 had accumulated a total of KRW 75.6 trillion in its reserves. The provision which requires public funds to allocate a portion of their assets to the Public Fund of the Ministry of Budget & Planning was repealed in 1998. Hence, the deregulation of this act is expected to increase the proportion of assets allocated in funds managed by professional fund managers.

The National Pension Fund strictly follows the "National Pension Fund Management Guidelines". The investment of the fund is classified into three different types: public sector, financial sector, and welfare sector. The fund's average return on investment was 12.15% over the period between 1988 to 2000, under-performing the average market rate of return of 14.63% which is based on returns of 3-year maturity corporate bonds. The fund's under-performance is believed to be attributed to inefficiencies caused by the fund's mandatory asset allocation requirements.

Figure 1. National Pension Fund Reserves (903,686 hundred Million Won) and Expenditures (147,275 hundred Million Won)

(Units: In hundred Million Won)



Note: As of Year Ending 2001

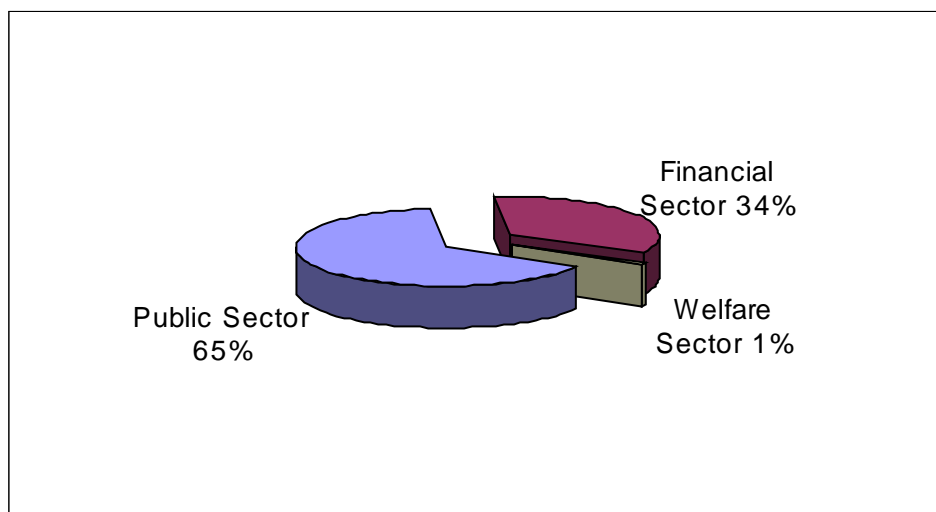
Source: National Pension Corporation, National Pension Statistical Yearbook 2002

Table 4. Investment Breakdown of the National Pension Fund by Sector

	1988	1992	1993	1994	1995	1996	1997	1998	1999	2000	Ave.
Market Rate of Returns	14.45%	16.30%	12.62%	12.92%	13.82%	11.87%	13.40%	15.10%	8.86%	9.34%	14.63%
Total	11.98%	12.68%	11.99%	12.10%	12.11%	10.75%	8.84%	14.41%	12.80%	4.69%	11.23%
Public Sector	11.00%	11.00%	9.67%	10.25%	11.64%	10.30%	10.33%	13.02%	8.45%	8.57%	10.42%
Welfare Sector	-	11.00%	11.00%	10.94%	10.68%	9.69%	8.67%	8.93%	8.01%	8.05%	9.66%
Financial Sector	12.95%	14.07%	13.87%	13.91%	13.11%	11.86%	5.56%	18.37%	24.49%	-1.83%	12.64%

Source: National Pension Corporation, Internal data; Won, Jong Wook (2002)

Figure 2. Investment Breakdown of National Pension Fund



The Korean National Pension Scheme has been acclaimed as having the capacity to accommodate an aging population. Substantial funds have been accumulated in the National Pension Fund as shown in Table 2. The National Pension Fund plays a critical role in the economy. The pension system not only offers good income prospects for present and future generations, it also allows for a collective sharing of intergenerational risks by spreading out both economic windfalls and

setbacks with younger working generations. The consolidation of risks among generations contributes to making the economy more resilient to financial shocks. A true assessment of the NPS's long-run financial stability should be based on the net volume of implicit pension debt, that is, the difference between the amount of reserves required for meeting all future pension pay-outs and the actual reserves of the National Pension Fund. The net implicit pension debt was estimated to exceed 120 trillion won as of 1998⁵.

The financial vulnerability of the National Pension Scheme originates from its structural imbalance stemming from the low pension contributions and high pension benefits given to pensioners. To deal with the NPS's structural problems, the National Pension Reform Committee was formed in 1997, followed by an amendment to the National Pension Act in 1998. The revisions lowered the average income replacement rate from 70 percent to 60 percent and implemented steps to gradually raise the minimum qualifying age from 60 to 65. In addition, the contribution rate (currently 9 percent) was modified to include periods of readjustment every 5 years beginning in 2010 to narrow the gap between contributions and pay-outs. The National Pension Fund is projected to grow to approximately 600 ~ 800 trillion won (in 2000 constant prices) by 2020 ~ 2030 if the current rate of pension contributions and pension benefits continue to be applied to the current pension scheme. However, the National Pension Fund, will incur deficits in the budget as early as 2036 and will run out of funds by 2047. Table 5 illustrates the financial projections of the National Pension Scheme up to 2080.

⁵ Hyngpyo Moon, "The Korean Pension System: Current State and Tasks Ahead," mimeograph, Korea Development Institute, 2002.

Table 5. Financial Projections of the National Pension Scheme

(Units: In billion won, in 1999 Constant Prices)

Year	Revenues			Expenditures			Cash Balance	Accumulated Reserves
	Total	Pension Contributions	Investment Returns	Total	Pension Benefits	Admin. Expenses		
2000	18,660	12,706	5,954	813	559	254	17,847	75,379
2010	47,434	28,166	19,268	4,454	3,891	563	42,980	330,959
2020	72,184	34,606	37,577	24,789	24,097	692	47,395	659,256
2030	90,425	45,445	44,979	68,743	67,834	909	21,682	821,103
2040	94,963	59,391	35,572	137,137	135,949	1,188	-42,174	606,174
2050	77,855	77,855	-	213,152	211,595	1,557	-135,297	-
2060	102,605	102,605	-	293,735	291,683	2,052	-191,130	-
2070	135,604	135,604	-	390,178	387,465	2,712	-254,574	-
2080	181,151	181,151	-	496,271	492,648	3,623	-315,120	-

Source: National Pension Corporation

There are several ways to increase the funding ratio that is defined as the size of reserve assets, which is relative to the pension liability. Increasing a pension fund's ratio can be achieved by reducing benefits, increasing pension contributions or achieving a higher return on investments. Among the three methods, increasing the return on investment would be the preferred option. The National Pension Fund Management Board (NPFMB) should implement a new investment policy to ensure the long-term fiscal sustainability of the National Pension Fund; in that the fund's investment policy should coincide with the interests of the pension members to maximize returns without taking on undue risk of loss.

3. Aging Population and the National Pension Fund

Several emerging trends could raise the risks for pensioners and those saving for a pension, and

have an impact on inter-generational risk sharing including the aging population, individualization and increasing international labor mobility. An aging population means that the ratio of pensioners to those in the labor force increases, eroding the basis for a collective sharing of inter-generational risk. The higher the pension assets and liabilities in relation to the number of people in employment, the smaller the pension contribution base becomes. Subsequently, financial shocks in investment returns or liabilities will then have to be absorbed by fewer people, so the extent in which these shocks affect individual contributions is magnified⁶. Currently ten workers are supporting one retiree; however, projections estimate that four workers will have to support three retirees after 2060.

The loss in capital by the National Pension Fund will have a significant impact on the Korean economy. The rise in the volatility of pension contributions increases the risk level for future generations. The question is whether future generations will be able and willing to absorb the financial shocks to the system. In addition, the growing international labor mobility will provide more opportunities for evading the burden of pension contributions. For instance, suppose that the fund's pension contributions with a disproportionate percentage of aging pensioners have to be substantially raised due to disappointing investment returns, then new pension participants would face a capital loss.

The National Pension Fund can initiate three different measures to prevent the risk of macroeconomic spillovers: implementing a more conservative investment strategy, spreading out the risk among pension members, and lowering the National Pension Scheme's level of ambition. The Committee on the National Pension Scheme Development is currently conducting a study on various ways to increase the funding ratio of the National Pension Fund. If the government adopts the Committee's preferred option, then National Pension contributions are expected to rise gradually from 9 percent of total wages to 15.85 percent in the coming years starting in 2011. And the average income replacement rate will be reduced from 60 percent to 50 percent. The higher pension contributions would not only affect the purchasing power of people in employment, but they would also affect the labor market and public sector finances (through the deductibility of pension contributions). Consequently, higher pension contributions attribute to a rise in labor costs and contraction in employment.

⁶ Casper van Ewijk and Martijn van de Ven (2003).

4. Current Management Structure of the National Pension Fund

The National Pension Fund is operated under the oversight of the Fund Operation Committee, whose objective is to maximize investment returns and safeguard the long-term stability of the fund. The management principles of the National Pension Fund are as follows: First, considering that the pension fund is comprised of the participants' contributions, meeting the legal reserves for future pension payments is a critical factor, and thus investments must be conducted in a way that ensures the long-term stability of the fund. Second, the National Pension Fund's objective is to maximize the rate of return on investment. Third, the National Pension Fund is a public fund composed of contributions by the majority of the nation's citizens. The size of the fund as of 2001 was 13.9% of Korea's GDP, and is by far the largest domestic fund. Therefore, the fund's investment policies must serve to positively affect the national economy while carefully assessing the interests of the participants during the investment process.

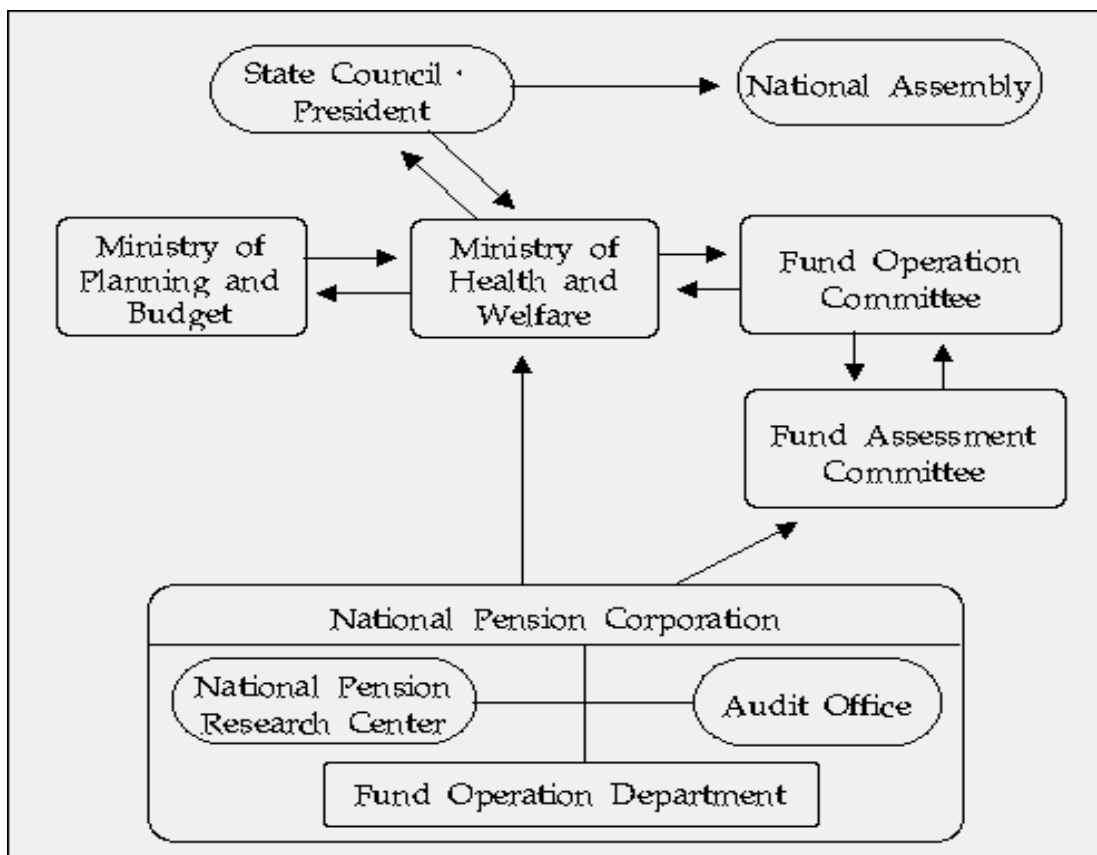
Currently, the National Pension Fund Operation Committee and the National Pension Fund Assessment Committee determine the investment ratios and size for each sector (public, finance, and welfare sector). It is the National Pension Corporation's responsibility to set the annual fund management plan and to determine the size of investment for each financial market and product in accordance with the Pension Fund Management Plan. In addition, the fund's management and performance is internally evaluated by the National Pension Fund Research Center.

The National Pension Fund Operation Committee is comprised of twenty-one members; the Committee chairman and six *ex officio* members, twelve members representing pension participants, and two professional experts. The Chairman is the Minister of Health and Welfare and the six *ex officio* members are comprised of five deputy ministers from related ministries and the chief executive of the National Pension Corporation. The pension participants are represented by six members recommended by business and labor organizations

each having three representatives, and six members representing regional pension participants. Term limits on the committee members allow them to serve two years but *ex officio* members can be reappointed accordingly.

The Operation Committee has the authority to act as a decision making body on the pension fund’s management. The Committee deliberates and establishes the fund’s investment policy in the areas of management guideline, negotiation of interest rates on deposits, annual management plan, evaluation of management performance, and making required adjustments to the investment strategy. The Committee is required to meet four times annually.

Figure 3. National Pension Fund Operation Structure



Source: National Pension Corporation, National Pension Statistical Yearbook 2002

Figure 4. Organization of National Pension Fund Operation Committee

Classification	
Ex officio members (7)	
Delegated Committee members	Representatives of Employers(3)
	Representatives of Employees(3)
	Representatives of regional pension members (6)
	Experts(2)

Source: National Pension Corporation, <http://www.npc.or.kr>

Additionally, the National Pension Fund Assessment Committee was established to provide greater professional expertise to the Operation Committee, and is the organizational body that is responsible for monitoring the overall management process. The committee examines and evaluates fund asset management/accounting procedures and operational activities, and makes necessary assessments and improvements in management and operations, as well as areas raised before the Operation Committee and recognized by the chairman of the Assessment Committee as requiring examination. The structure of the Assessment Committee is comprised of the Vice Minister of Health and Welfare as the Committee Chair, seven officers, and seven other members consisting of pensioner representatives and others. The actual management of the fund is conducted internally by the Fund Operation Department.

IV. International Comparison in Managing Public Pension Reserves

In the past, public pension funds in Korea have been subject to political interference and mismanagement. Five OECD countries – Canada, Ireland, Japan, New Zealand and Sweden – recently introduced new models of public pension fund management⁷. We attempt to highlight the well-devised practices from the five OECD initiatives and to apply them in Korea’s public pension system, in particular, the National Pension Fund.

Table 6 gives a brief background on the six OECD countries - Canada, Ireland, Japan, New Zealand, Sweden and Korea – where, except Korea, new models of public pension fund management have been introduced in recent years. Korea has the youngest demographic structure whereas, Japan and Sweden have an older population. As the table shows, Japan and Sweden have amassed large public pension reserves, while Korea and Canada have also accumulated a significant amount compared to Ireland and New Zealand which have none.

Table 6. Statistical Comparison of Six OECD Countries

Country (Year Enacted)	Population of Age 65+ ¹⁾	Public Pension Per GDP ³⁾	Public Pension Fund Asset Per GDP ⁴⁾	Private Pension Fund Asset Per GDP ⁵⁾
Canada(1998)	16.5%	5.4%	10%	48%
Japan(2001)	23.1%	6.9%	34%	19%
Ireland(2000)	15.5%	4.6%	None	45%
New Zealand (2001)	15.5%	6.5%	None	n. a.
Sweden(2001)	22.1%	11.1%	33%	3%
Korea (2001)	12.2% ²⁾	15.6%	16.2%	4 ⁶⁾

Notes:

1. World Bank (2000)

2. The National Statistical Office (Over Age 60 + Age unknown)/Total Population, Census Population (2000).

3. OECD Social Expenditure database (1997).

4. Accumulate amount of only four major public pension funds in 2001.

5. Data on 1998 from OECD Institutional Investors Yearbook (2000).

6. [Individual pension plans in 2002.](#)

Source: Palacios (2002); OECD(1996); OECD(2000); World Bank population database; Financial Supervisory Service, Korea.

⁷ Palacios, Robert, “Managing Public Pension Reserves Part II: Lessons from Five Recent OECD Initiatives,” World Bank, July 2002.

Table 7 summarizes key features of public pension funds in six OECD member countries – Canada, Ireland, Japan, New Zealand, Sweden and Korea with respect to governance, revealing some key fundamental similarities and differences. With the exception of Korea and Japan, several countries attempted to create some distance between government officials or ministries and the pension fund⁸.

Table 7. Comparison of Governance and Transparency

	Canada	Ireland	Japan	New Zealand	Sweden	Korea
Fiduciary Authority	Professional Board	Professional Board	Minister	Professional Board	Hybrid Board	Representative Board
Appointing Body	Finance Minister ¹⁾	Finance Minister	Minister of Health and Labor ²⁾	Governor-General ³⁾	Government ⁴⁾	Minister of Health and Welfare ⁵⁾
Annual External Audits	Yes	Yes	Yes	Yes	Yes	Yes
Percentage of Portfolio Managed Externally	All	85%	Approx. 1/3	All	At least 10%	8.8% ⁶⁾
Explicit & Objective Selection & Monitoring Criteria	Yes	Yes	Yes	Yes	Yes	Yes

Notes:

1. Selects from list of nominees.
2. Designated by law.
3. Selects from list of nominees.
4. Appoints 5 and selects 2 each from employer/ee nominees.
5. Designated by law.
6. (2000)

Source: Palacios (2000), Author's elaboration.

⁸ Robert Palacios, "Managing Public Pension Reserves Part II: Lessons from Five Recent OECD Initiatives," World Bank, 2002.

Table 8 summarizes key features of public pension funds in six OECD member countries – Canada, Ireland, Japan, New Zealand, Sweden and Korea - with respect to investment policy. The investment policy options available to each Board are subject to quantitative restrictions in each country except for New Zealand. Public pension funds in six OECD countries except for Korea avoided mandates for targeted investments and adhered to a commercial investment policy in principle. The risk that the public pension funds will be utilized in a way that distorts the capital markets is mitigated in Ireland and New Zealand through large allocations of foreign investments.

Table 8. Comparison of Public Pension Fund Investment Policies

	Canada	Ireland	Japan	New Zealand	Sweden	Korea
Commercial Investment Mandate	Yes	Yes	Ambiguous	Yes	Yes	No
Statutory Asset Class Restrictions	Yes ¹⁾	Yes ²⁾	³⁾	No	Yes ⁴⁾	Yes ⁵⁾
Statutory Mandates (Social/ETIs)	No	No	No	No	No	Yes ⁶⁾
Minimum for Government Treasuries	No	No	Yes, de facto	No	Yes, 30%	No
Shareholder Voice Policy	Yes	Yes ⁷⁾	⁸⁾	Yes ⁷⁾	Yes ⁹⁾	No

Notes:

1. 30% Limit on foreign securities.
2. Prohibits holdings of domestic govt. treasuries.
3. Established by Minister, not by Law.
4. 40% Limit on nonhedged foreign securities.
5. In Law.
6. Social/ETIs
7. Limited by foreign investment.
8. Delegated to manager with conditions.
9. Limits on individual firm Shares.

Source: Palacios (2000), Author's own elaboration.

In all of six OECD countries except for Korea and Japan, the arms' length Board arrangement combined with the commercial investment mandate acts as a safeguard against governments seeking to shore up domestic financial markets or direct investment to favored instruments. In Korea, the size of the National Pension Fund and direct government oversight, have raised concerns that some of the funds may be used for intervention in domestic financial markets.

Table 9 shows a qualitative assessment of how well each of the six countries manages the challenges in insulating against specific political interference. The last column provides some measures designed to minimize these risks⁹. It seems fair to say that Korea has not implemented these safeguards – commercial investment mandate, a buffer zone between the board – for the National Pension Fund.

Table 9. Qualitative Assessment of Safeguard Mechanisms Against Conflicts of Interest

	Canada	Ireland	Japan	New Zealand	Sweden	Korea	Mitigation Procedures
Safeguard Mechanisms against:							
Increased Government Borrowing	High	High	Low	High	Moderate	High	CIM, P-A L-B, Prohibits Public Bonds
Social Mandates And ETIs	High	High	Moderate	High	High	High	CIM, P-A L-B, Prohibits ETIs
Capital Market Distortions	Moderate	High	Low	High	Moderate	Moderate	CIM, P-A L-B, Foreign Investments
Corporate Governance Conflicts	Moderate	High	Moderate	High	Moderate	Moderate	CIM, P-A L-B, Foreign Investments

Notes:

CIM = Commercial Investment Mandate.

P-AL-B = Professional, Arms-Length Board.

Source: Palacios (2000), Author's own elaboration.

⁹ Palacios (2000).

V. Reform of the National Pension Fund Management System

1. Governance

Four major public pension funds in Korea use representative committees. The current National Pension Fund Management Committee is comprised of government, labor, employer and self-employed representatives; however, there are few committee members with expertise in finance, investment, and pension management. We have to reorganize the current composition of the committee and its selection process to establish a more independent and professionally knowledgeable Board. For reference, we could gain valuable lessons in reform from the Canada Pension Plan Investment Board and New Zealand Superannuation Fund. In order to improve efficiencies and the long-term financial standing of the National Pension Fund, we have to establish a buffer zone between the professional committee and the government ministries and bureaucrats to ensure optimum management of pension funds and to insulate the Board from political influence.

First, the current National Pension Fund Management Committee, which currently meets four times a year, should be reorganized into a permanent Board responsible for formulating the overall investment policy and developing a plan for managing assets and monitoring investment results. The Board should include members with expertise in finance, investment, and pension management. The selection process of the Board members should be revised as follows: First, the 12 - 15 member Board should be first nominated by a ten member nominating committee established by the Minister of Health and Welfare and comprised of members with relevant work experience that would enable them to identify qualified candidates for appointment. Then, the Minister would appoint the Board members among the pool of nominated candidates. In addition, the Chairman of the National Pension Fund Management Board would be appointed by the President from the group of Board members with the Minister's recommendation. Finally, the term of each Board member would be no more than 3 years with a possibility for reappointed for another three-years with a maximum limit of three terms. This system of selecting Board members would create a buffer by widening the distance between the government ministries and the Board. Board members would have to abide by strict codes of conduct and be required to uphold both honest and ethical values during the term of service. In addition, Board members would be

obligated to immediately report any conflicts of interest to the board.

2. National Pension Fund Management Board

The Board should invest the fund by adopting a prudent, and commercially driven investment policy that seeks to maximize returns at an acceptable level of risk. The fund should be managed solely for the purpose of maximizing returns; hence, socially driven and economically targeted investments should be gradually phased out all together.

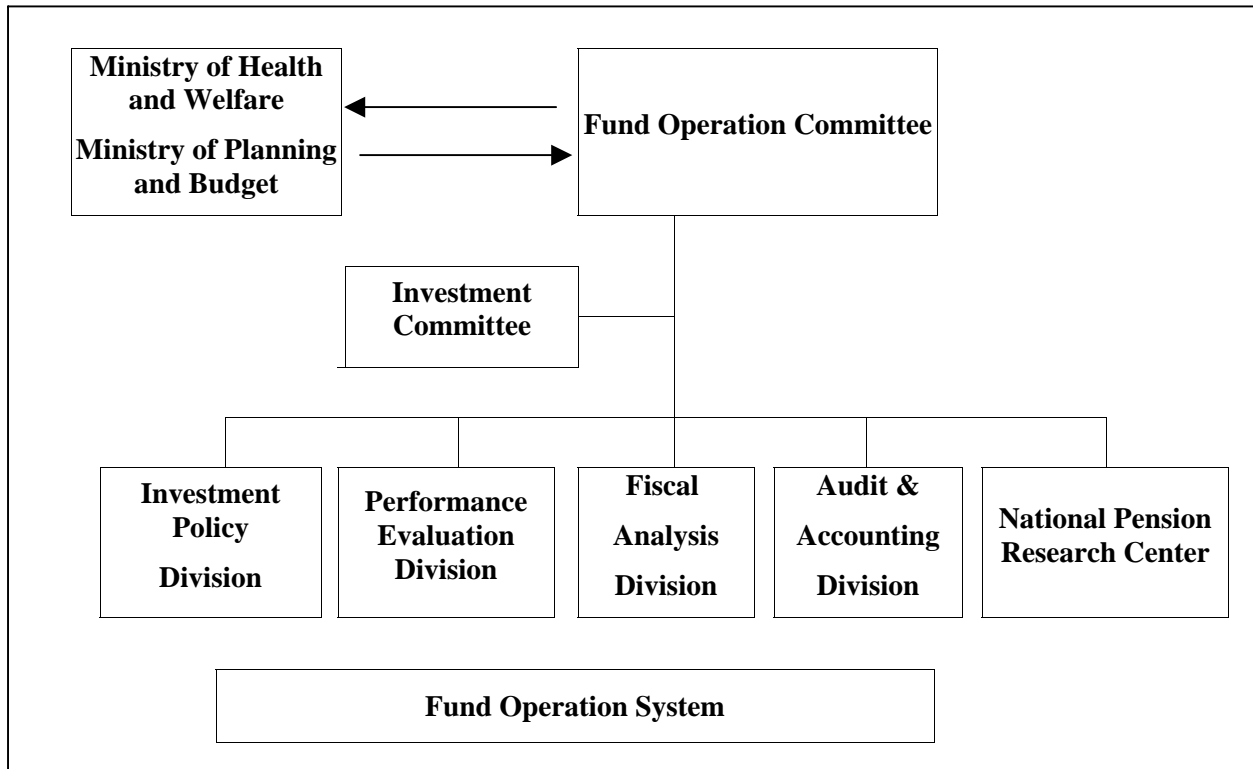
The Board would have investment policymaking authority for overall medium- and long-term investments, as well as determining the annual strategic asset allocation policy. In addition, the Board would also be responsible for tracking and evaluating investment performance. In doing so, the Board would be assisted by the executive office, consisting of four divisions including, Investment Policy Division, Performance Evaluation Division, Fiscal Analysis, and Audit and Compliance Division. In the following organization structure, both the National Pension Corporation Investment Management (NPCIM) and the National Pension Research Center of the National Pension Corporation would be placed under the Board's management.

Once reorganization has been completed, the current National Pension Fund Assessment Committee would be phased out. The National Pension Corporation Investment Management (NPCIM) would oversee the preparation of the strategic asset allocation policy, the quarterly investment policy as well as the implementation guidelines. The NPCIM would have direct management over some of the funds with the capacity to outsource private asset managers and commission contracts; however, external managers would manage most of the fund's total assets.

The Ministry of Health and Welfare would be responsible for submitting the Fund Investment Plan to the Ministry of Planning and Budget (MPB) and would consult with the MPB about the Plan on behalf of the Board. The Ministry would also supervise the fund and oversee the legislative activities and regulation of the National Pension Fund. The Board must present a detailed independently audited report on the fund's performance to the Minister of Health and Welfare who in turn must disclose the reported results to the National Assembly and general public. In addition, management of the fund in terms of administrative and internal costs and

investment performance should be regularly reported to the public through an independently audited report, annual report, and quarterly financial statements.

Figure 5. Proposed Reorganization of Fund Operation Management System



3. Efficient Management of Assets

External Management

The advantage in the internal management of assets is that investment returns can be achieved at a lower cost and with greater autonomy. However, in public sector enterprises such as the National Pension Corporation, asset managers who demonstrate an exceptional investment performance are often recruited by the private sector. In addition, drawing upon the expertise of external asset managers has its benefits such as utilizing them as benchmarks for internal managers and leveraging their research capacities in the areas of asset allocation and risk management. The government began to commission contracts to private asset managers in 2001. The proportion of

total National Pension reserves managed by external managers reached 8.8 percent in 2002. In contrast, all assets under the Canada Pension Plan (CPP) and the New Zealand's Superannuation Fund are managed externally, while roughly one-third of Japan's National Pension Fund is managed externally.

Thus, the Board should seek to commission more contracts to external asset managers and the Pension Fund Investment Pool under the Ministry of Planning and Budget (MPB). This would give the MPB direct oversight and responsibility of the private asset managers contracted under the Pension Fund Investment Pool. Under the new structure, the Board would be responsible for selecting external asset managers and evaluating their investment performance against a predefined set of benchmark indices. In addition, the Board would have to monitor the risk management and the internal control system, and review the investment performance of external asset managers.

Foreign Investment

The National Pension Fund is expected to expand considerably relative to domestic capital markets. As of December 2001, 73 percent of the Korea Stock Exchange's total market capitalization was concentrated in ten stocks, which is far higher compared to other countries including, England, Japan and the United States¹⁰. Funds invested in a heavily concentrated stock market coupled with a strong preference for investing in domestic companies will lead to lower and highly volatile returns over the long-term. Hence, the retirement incomes of National Pension participants will be tied to the performance of a few domestic companies.

The danger resulting from the mismanagement of funds in a way that distorts the capital markets could be eased through large foreign investments. By increasing overseas investments, the fund's asset allocation would be greatly diversified, lowering the volatility of returns, increasing risk-adjusted returns and opening more opportunities for better performance. Pension funds in OECD countries have begun to implement an asset allocation policy of diversifying across borders; however, by the mid-1990s, only a relatively small portion of a funds' assets were

¹⁰ Shaw B. Wagner, "Governance Structures and Investment Policies for Public Pension Funds," International Symposium on National Pension Fund Management, National Pension Corporation, March 2002, pp. 79-99.

invested in foreign markets. Among G-10 countries with significant pension fund holdings, the proportion of foreign asset allocations increased from 12 percent in 1990 to 17 percent in 1996¹¹.

Presently, the National Pension Fund has yet to accumulate sufficient experience and expertise necessary to make overseas investments. With long-term objectives in mind, the fund should seek to develop expertise internally and draw on external money managers with specialized expertise in international markets. The approach of combining domestic and international fund management is critical in enhancing competition and diversification among asset managers.

Diversification of Assets

During 1990s, the pension fund market experienced a significant shift towards foreign investments. In general, the investment trends of pension funds have largely targeted U.S. and European equity markets, as the Netherlands and Japan have followed similar international investment trends. There has been a sharp rise in the proportion of equity investments in the asset allocation of many pension funds compared to bonds, which produce a lower rate of return. For example, pension funds in OECD countries showed a significant increase in the proportion of equity holdings in the period between 1990-1996. In contrast, Asian-Pacific pension funds, which include those in Japan, Korea and Australia, recorded the lowest increase in equity holdings¹².

Initially, risk-bearing pension funds benefited considerably from strong returns in equity investments due to the dramatic rise in share prices in U.S. and European countries. By the same token, equity heavy portfolios have made pension funds equally sensitive to declining share prices, which has become more evident in recent years¹³. To achieve higher returns on investments, funds may have to target illiquid investments such as non-listed stocks and private equity and real estate investments. The U.S. in 1979 through the Employee Retirement Income Security Act (ERISA) allowed pension funds to allocate assets in venture capital funds. This gave venture capital funds access to an enormous resource of capital, and by 2000 the percentage of venture capital

¹¹ OECD (1998), "International Financial Market Implications of Aging Populations," Financial Market Trends, No. 71, November 1998.

¹² OECD (1998), "International Financial Market Implications of Aging Populations," Financial Market Trends, No. 71, November 1998.

¹³ Casper van Ewijk and Martijn van de Ven, "Pension Funds at Risk," cpb Report 2003/1, cpb, 2003.

investments increased substantially capturing 55 percent of the private equity market in the U.S. Pension funds have become by far the main source of capital for venture funds, accounting for 59 percent of total assets under management in 1999¹⁴. Similarly, in the United Kingdom, pension funds have also become the principal source of capital for venture funds, accounting for 51 percent of total funds in 1996¹⁵. The approach in asset allocation taken by U.S. and U.K. pension funds of investing in venture funds may also be worth examining.

¹⁴ NVCA, 2000 National Venture Capital Association Yearbook, 2000.

¹⁵ British Venture Capital Association (1997), Report on Investment Activity.

VI. Concluding Remark

The rapid demographic shift towards an aging society over the coming decades presents Korea with a complex and formidable set of inter-related challenges. Overcoming the challenge of an aging population will demand comprehensive reform initiatives that address the limits of Korea's pension and health system, as well as the fiscal, financial and labor market implications. Korea has adopted a partial pre-funding public, defined benefit scheme. A sustained move toward a more fully funded pension system would have an enormous affect on the size and nature of the capital markets. One implication of an aging population in Korea as well as other OECD countries and the associated growth of pension funds, is the increased demand for professional fund management services. With continued efforts to liberalize cross-border capital flows and to strengthen capital markets, pension funds will continue to pursue strategic asset allocation policies to achieve greater diversification of portfolios. In addition to assisting in diversifying fund portfolios, these initiatives will serve to increase the breadth and depth of the financial markets. Thus, fund managers will be able to improve the return-to-risk ratio of the portfolios, further adding to ensure that there are sufficient reserves for benefits and pension pay-outs¹⁶.

This paper has attempted to present policy recommendations for reforming the governance structure of the National Pension Fund and improving the fund's development of investment policies. The recommendations could be applied to other public pension funds in Korea as well. The improvement in the management of public pension funds will contribute to enhancing their performance, thus increasing the long-term fiscal sustainability of the pension funds and removing distortions caused by current policies. Without proper accountability and governance, no public pension system can survive in the long-term.

The government can initiate a broad range of polices to strengthen the public pension system, but all the approaches will certainly include difficult political choices. The burden of having fewer workers supporting each retiree over time will require a board overhaul of the public pension system including, raising pension contributions, reducing benefits, diverting other tax revenues to

¹⁶ OECD (1998), "International Financial Market Implications of Aging Populations," Financial Market Trends, No.71, November 1998, pp. 53-66.

finance pensions, or raising the investment returns of pension funds. The degree of suffering involved in realizing the first three choices will depend on future economic growth¹⁷. Although rapid economic growth may ease the pressures placed on the government and workers, it will not solve all the difficulties brought about by an aging population.

¹⁷ Erica L. Groshen and Thomas Klitgaard (2002), "Live Long and Prosper: Challenges Ahead for an Aging Population," Current Issues, Volume 8 Number 2, Federal Reserve Bank of New York.

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