

New Public Pension Fund Management System in Japan



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Decisions to Be Made

Method of Finance

To what extent should the pension liabilities be funded?
(How much reserve is required?)

Asset Allocation

Should reserve fund be invested in stock market?
(To what asset class should the fund be allocated?)

Management and Governance

How should fund management scheme be organized?
(What type of governance scheme is effective?)





Outline (□ □ topics to be discussed)

1. Public Pension Fund Management
2. New Fund Management Scheme
3. Difficulties Arising from Public Nature



1. Japanese Public Pension and Method of Finance

- Two tiered system

- □ □ NPI (Fixed amount)

- □ EPI (Earnings related)

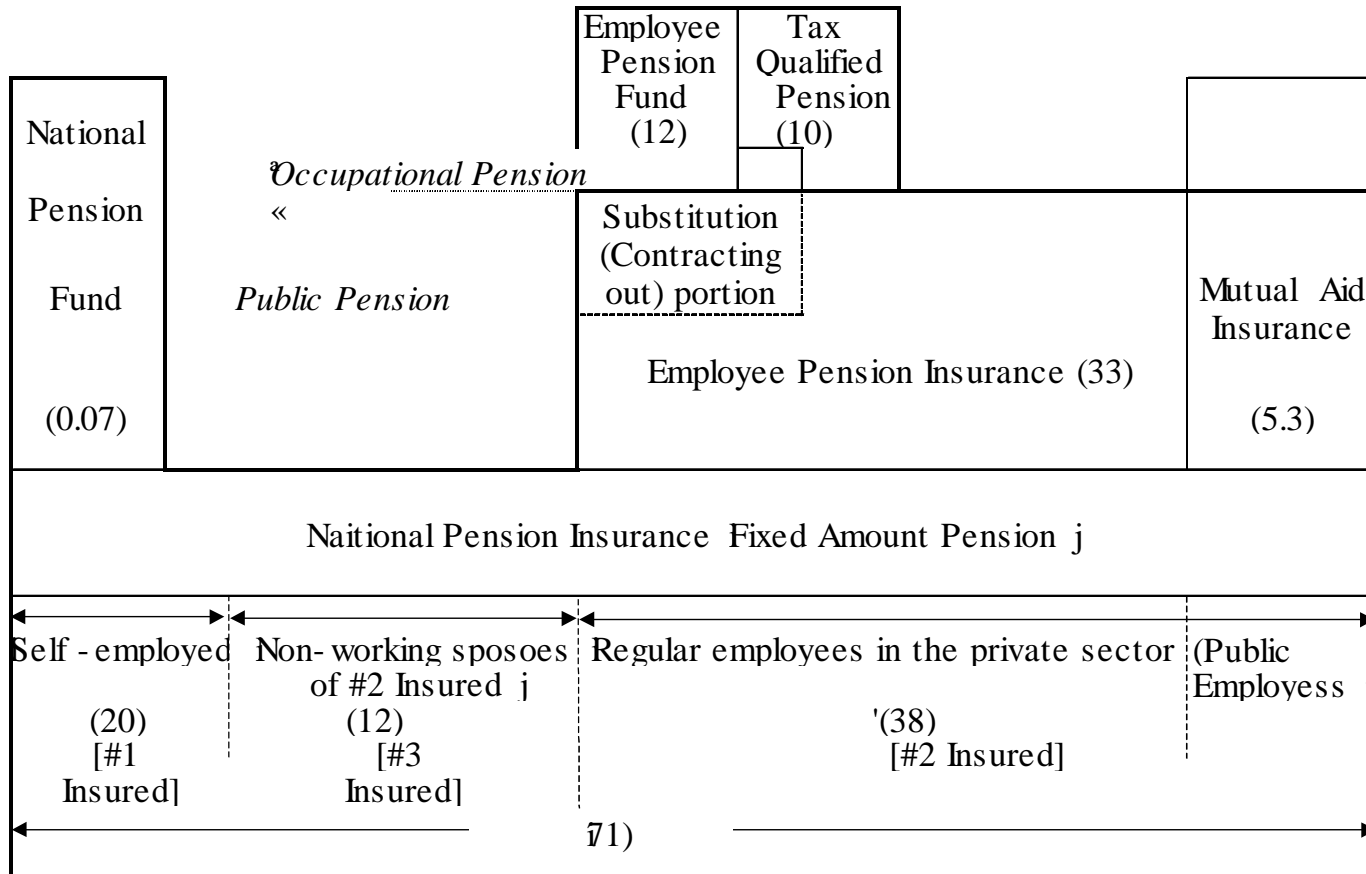
- Partially funded

- □ □ Pay-as-you-go finance □ with 143 tril. asset

Overview of Public Pension

(Source: MACA)

Japanese Pension System



Note j in parenthesis is the number of non beneficiary insured at the end of March 1999, Unit Billion j
 Source White Paper on Welfare 2000 (MHLW)



Method of Finance in the Past

- At the time establishment in 1940s, plan was fully funded
- With the increase of benefits, it became difficult to maintain actuarially fair premium level
- Under current partially funded plan, 143trill. yen asset is reserved

Role of reserve asset in public pension

end of Fiscal Year	NPI		EPI		Total of two accounts		
	Annual Benefits	Asset	Annual Benefits	Asset	Total Benefits	Total Asset	Total Asset Total Benefits
2000	3.5	12.1	28.1	177.2	31.6	189.3	6.0
2010	5.3	13.3	47.7	209.2	53.0	222.5	4.2
2020	7.5	18.4	65.0	234.2	72.5	252.6	3.5
2025	8.5	23.8	71.2	275.1	79.7	298.9	3.8
2030	9.7	29.7	78.5	327.1	88.2	356.8	4.0

(nominal value, unit:trillion yen)

Note: MHLW has made this forecast assuming growth of CPI and wage are 1.5% 2.5% and rate of return is 4.0%

Assets of EPI and two accounts total include substitution (contrating out) portion in EPF (ocupational pension).

→ Liquidity reserve

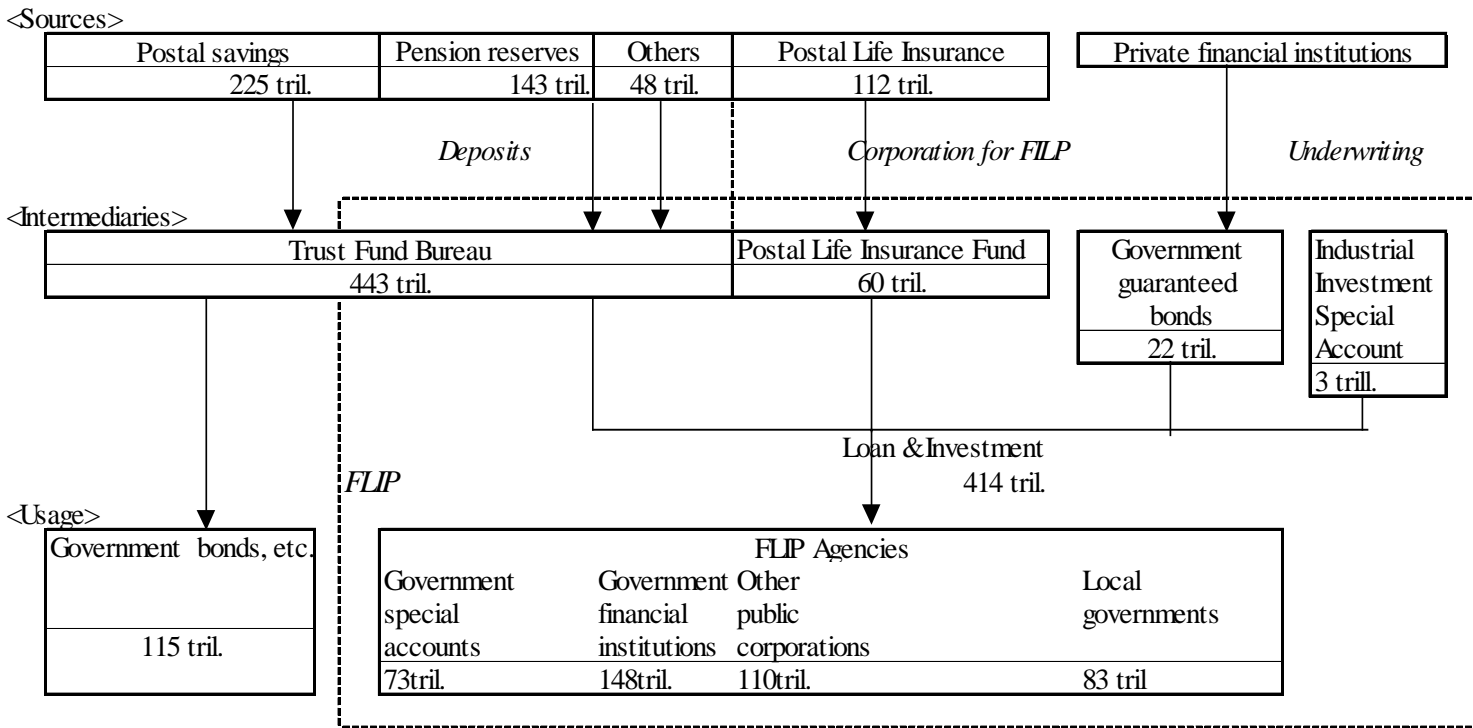
→ To balance burden among generations



2. Asset Allocation (Method of Fund Management)

- Until 2001, pension fund managed by Trust Fund Bureau (TFB) under Fiscal Loan and Investment Program (FLIP) = Fund was used for public purposes
- From April 2001, fund has come to be managed by Minister of Health Labor and Welfare and invested in stock and bond markets

2-1. Overview of old FLIP





Fund management under FLIP

(Fiscal Loan and Investment Program)

- Funds of pension account was obligated to be deposited to Trust Fund Bureau.
- With funds from postal savings, TFB has used 443 trill. for investments and loans to public agencies, municipals and central government.
- Amount of investment and loans has been decided by FLIP which is part of national budget.

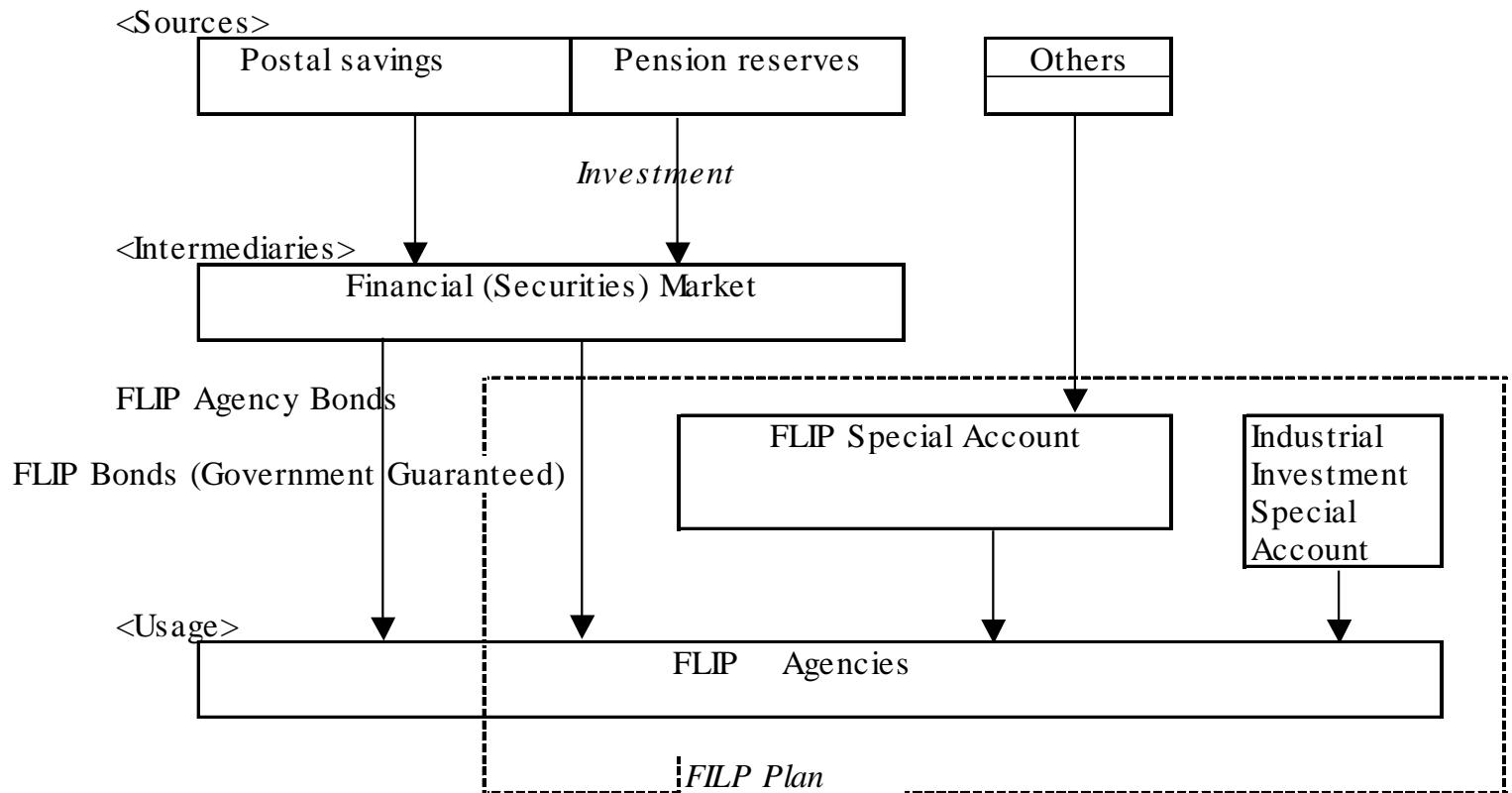


Investment management by PWSPC

(Pension Welfare Service Public Corporation)

- Out of 143 tril. yen pension fund 27tril□ yen was loaned to PWSPC.
- PWSPC managed those funds by investment by investment in bonds (in-house), and stocks and foreign securities (outside fund managers).

2-2. Scheme of new FLIP plan





New fund management scheme (from April 2001)

- Fund will be managed by MHLW and invested in the market
- Asset allocation is decided by MHLW after consultation to outside experts
- Government Pension Investment Fund was assigned with administration and management

cf. New FLIP

- No obligation of deposits
- Issuance of FLIP Bonds and FLIP Agency Bonds



Transitional period

- It will take 7 years for all the funds currently deposited to TFB (FILP) to be returned to GPIF
- It is requested for MLHW and GPIF to pay consideration to sufficient liquidity of FILP

IPS Asset allocation

	Allocation (%)	Allowance of Deviation	Forecasted Balance tril. yen j			
			End of FY 2008		End of FY 2024	
			Balance	Increase from March 2001	<Case 1>	<Case 2>
Domestic Bond	68	60 ~ 76	97	83	131	167
Convertible Bond	0	0	0	0	0	0
Domestic Stock	12	, U 18	17	11	23	30
Foreign Bond (no hedge)	7	, Q 12	10	7	13	17
Foreign Stock(no hedge)	8	, R 13	11	10	15	20
Money	5	, m`	7	7	10	12
		Total	143	117	192	246

1. For fiscal 2008, we assume the asset amount remains constant from the level at March 2001. (That number includes both PWSPC and FLIP portion).
2. In case 1, we assume total amount of asset (excluding substitutional (contracting out) portion) will be 192 tril. yen at the end of 2025 based on the expected return of 4.0% and one third of fixed amount pension is defrayed by tax instead of premiums.
3. In case 2, we assume total amount of asset (excluding substitutional (contracting out) portion) will be 246 tril. yen at the end of 2025 based on the expected return of 4.5% and a half of fixed amount pension is defrayed by tax instead of premiums.

IPS formulation process

- Expected return by building block method
- Historical data (from 1974) are used for expected volatility and return correlation
- Three investment constraints:
 - Domestic bonds □ foreign bonds
 - □ □ □ □ of domestic stocks □ foreign stocks
 - foreign stocks □ foreign bonds
- After the Monte Carlo simulation, from portfolio □ with □ 4.0% to 4.5% expected return, one with smallest risk is chosen

Expected return and risk of each asset class

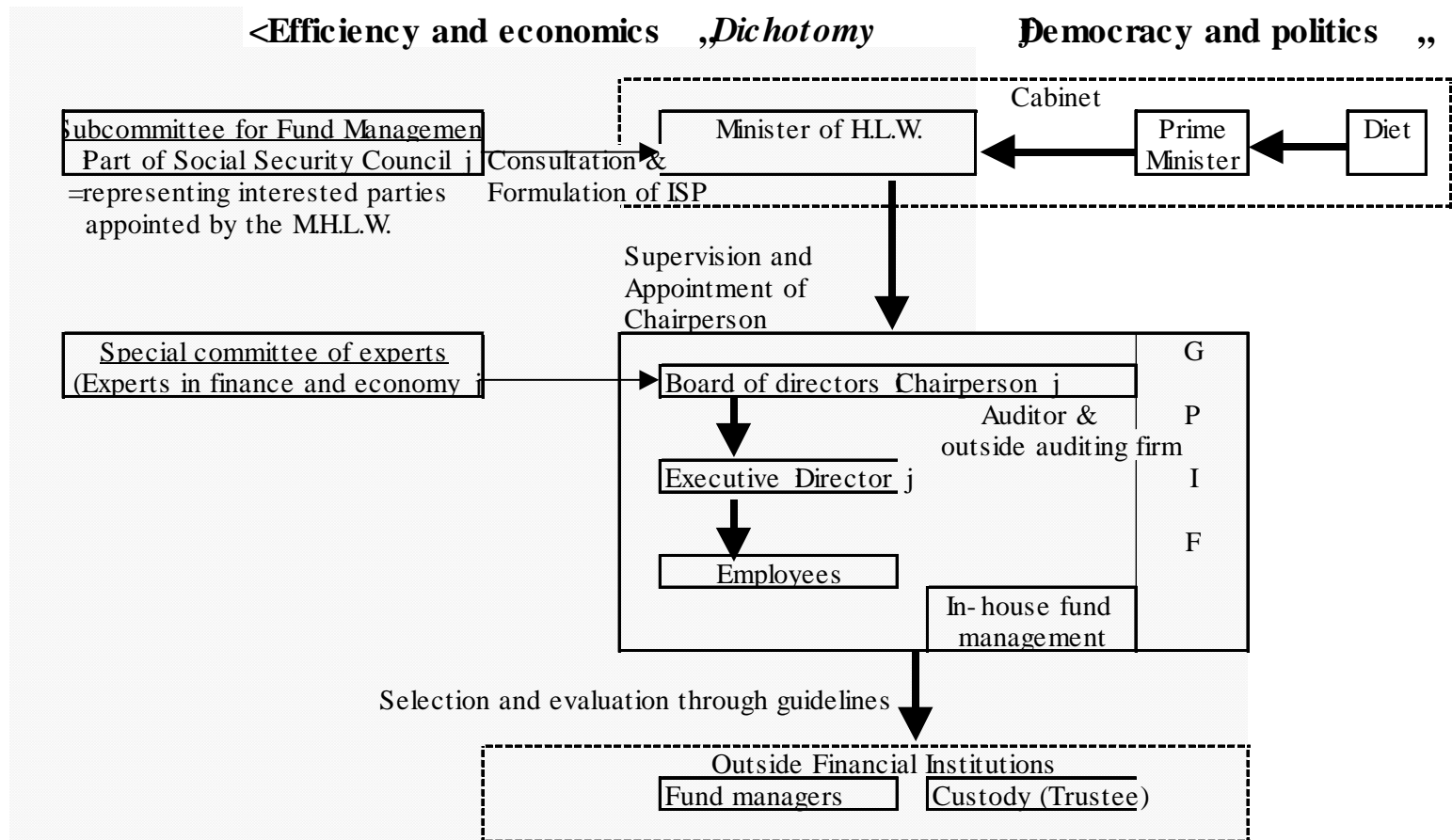
	Risk Free Rate	Risk Premium	Expected Return	Standard Deviation
Money	2.5*	0	2.5	3.38
Domestic Bond		1.5	4	5.45
Domestic Stock		4	6.5	21.62
Foreign Bond		2	4.5	14.67
Foreign Stock		4.5	7	7

* (Real growth rate 1.0%
+CPI inflation rate 1.5%)

	Money	Domestic Bond	Domestic Stock	Foreign Bond	Foreign Stock
Money	1				
Domestic Bond	0.273	1			
Domestic Stock	-0.103	0.188	1		
Foreign Bond	0.065	0.005	-0.227	1	
Foreign Stock	-0.229	-0.058	0.144	0.668	1

3. Scheme of management and governance

-1. Role of each parties





Minister of HLW

(Minister of Health, Law and Welfare)

- Insurer=Formulation of implementation of public pension plans
- Stipulation of Investment Policy Statement (IPS)
 - He must consult with outside experts Subcommittee for Fund Management in Social Security Council
- Supervision of GPIF activities



Government Pension Investment Fund

- Planning and Implementation of Fund Management Activities
 - Setting guidelines for investment management
 - Delegation to outside fund managers
 - Domestic bond investment in-house
- Three board members – only chairman is appointed by the Minister
- Organizing a committee of outside investment experts



Items in “Guideline for management and administration”

- Objectives and constraints
- Methodology in investment management
- Supervision of fund managers, custodians and trustees
- Evaluation and selection criteria of fund managers and administrators
- Guideline of in-house investment management



Procedures to control and evaluate outside fund managers

- Quantitative= risk/ return profile based on excess return, tracking error from index, and information ratio
- Qualitative=investment policy, process, professionals, risk management and organization
- Fund management contract is scrutinized for the renewal at least every 5 years



3-2. Other measures to maintain discipline=Duty of loyalty and care

- Duty of loyalty and prohibited transactions = executive officers
- Duty of care= employees and executive officers of GPIF
- Duty of best efforts =bureaucrats
- However, legal duty (responsibility) has its own limits in terms of amount and protection of bureaucrats .



Disclosure requirement

- GPIF must report to the Minister about annual business plans and its achievements incl. investment results (audited by outside accounting firm)
- Minister must disclose that report as well as its supervision policy of GPIF and investment policy
- Disclosure must be made to Social Security Council, the Diet and general public (insured)

Summary of Governance Scheme

Investment (Legal list)	Target asset categories are stipulated in law There is no restriction other than that.
Performance evaluation	Outside fund managers are evaluated by GPIF. Performance of GPIF is evaluated by MHL.W.
Asset allocation	IPS is decided by MHL.W. by consultation with Council for Social Securities. Short term tactical side is decided by GPIF Board.
Responsibility of GPIF board	Setting of Guideline for management and administration. Selection and evaluation of outside fund managers based on Guideline.
GPIF Board composition	Chairperson is nominated by MHL.W. Other two are selected by chairperson with admission of MHL.W.

In this table, MHL.W. refers to Minister of Health Labor and Welfare.

(cf. Useem and Hass [2001]) □



4. Difficulties Arising from Public Nature

- Political intervention in asset allocation
 - □ → Large exposure to domestic bonds
- Exercise and delegation of voting rights
 - Reporting of “Anti-social” activities
- Setting proper incentives and disciplines to related parties

4-1. Questions about optimization

- Is 4.0% of domestic bond expected return realistic?
- Why little consideration to change in liabilities ?
- □□□ 4.0 to 4.5% expected return range ?
- Is there rationale for three constraints, esp. domestic bias ?
 - Is 68% bond share is optimal? (Who is responsible for the result of asset allocation ?, Who will evaluate?)

What is appropriate risk premium for domestic bonds?

Historical rate of return by asset class

FY	Money	Domestic Bond	Domestic Stock	Convertible Bond	Foreign Bond	Foreign Stock
71- 80	7.56	8.11	12.14	9.67	2.17	3.70
81- 90	5.73	6.96	15.26	10.14	7.04	11.88
91- 200	1.77	6.22	- 1.68	5.46	5.91	12.34
Average	5.02	7.10	8.57	8.42	5.04	9.31

Bond risk premium is set at 1.5% □ but average premium for bonds from 1971-90 is just 0.90%



Little integration with Liability Side

- Amount of asset is just 24% of liabilities
→ Low sensitivity of premium rate to rate of investment return
- If the amount of asset declines less than half in 2024 (from 215 to 105 trillion yen), required raise in premium rate to make up for that decline is only 1.4% (from 24.9% to 26.3%)

Sensitivity of premium is not large

NPI

	Expected amount in , QOQS @ril.yen j	Premium rate in 2024 (nominal yen)	Differential from average
5percentile	13.2	19,080	1019 yen
25 percentile	16.7	18,570	509
Average	20.1	18,061	-

EPI

	Expected amount in , QOQS @ril.yen j	Premium rate in 2024 (%)	Differential from average
5percentile	105.3	26.34	1.49%
25 percentile	159.3	25.61	0.76%
Average	215.4	24.85	-

1. Forecast of average was made assuming annual CPI growth rate is 1.5% wage growth rate is 2.5% and rate of return is 4.0%
2. Assets of EPI account includes substitution (contrating out) portion in EPF (ocupational pension).



Key factor = Strong risk aversion of the insured people and the Diet

- Bank deposits and postal savings have 55% share in household asset
- Loss of principal will be heavily criticized in the Diet
 - =Concept of risk diversification in MPT is yet to be understood commonly
- Radical divestiture from domestic bonds may jeopardize fund raising of FILP
 - Is it political intervention ?



How can an integrated decision be made?

- = It is difficult to make integrated preferences of all participants and enforce discipline with that. Because
 - The insured is very large group and are of variable characteristics, esp. risk tolerance in investment .(cf. Arrow [1963])□
 - Reduction in premium by good investment is too small per capita.
 - Transfer of beneficiary rights is impossible.
 - Free rider problem is unavoidable.



4-2.Exercise of voting rights

- Political intervention into private enterprise can harm management efficiency
- Exercise of voting rights is delegated to outside fund manager as well as stock selection
- GPIF is to request a standards in voting and the result of their voting from fund managers and has to inquire about their reaction in case of invested company's anti- social activities
 - Excessive attention to anti-social activities may harm efficiency



4-3. Difficulties in setting proper incentives and disciplines

- Asymmetry of information (principal agency problem)
 - Insured (General public) vs. the Minister
 - The Minister vs. GPIF boards and executives
 - GPIF vs. outside fund managers



Countermeasures in private pension

- Contract for hiring, evaluating, and firing administrator/managers, outside fund managers and custodians
- Duty of loyalty (as a fiduciary) to prevent self-indulgence
- However, to make the most of expertise □
some discretionary room must be given
→ Situation of “Incomplete Contract”



In new scheme public entity

- The Minister has political rather than economic responsibility
- Most key players are public employees and managers and their compensation is regulated and constrained by the budget



5. Conclusion

- New scheme of public pension fund management has several potential merits
 - Increase in exposure to risky assets
 - Efficient management of investment



Opportunity to increase risk exposure

- Japanese household financial assets have been limited to deposits and other fixed income assets
- Behind this risk-aversion tendency is institutional constraints, ex. high commission, large minimum transaction size, insufficient tools to gather information
 - → new scheme can be useful to
 - □ overcome them

Composition of household financial asset (End of 2000)

	Japan	U.S.	UK	(%)
Cash & Ordinary Depo.	12.0	1.3	15	
Time Depo.	42.9	10.0	7.1	
MMF	NA	3.0	NA	
Bonds	1.9	5.6	1.5	
Investment Trust	2.4	8.9	5.9	
Stocks	4.8	22.9	17.4	
Pension	9.7	29.6	} 49.6	
Insurance	18.2	2.2		
Trust Bank Account	2.2	3.2	NA	
Others		15.5		
Total	1390.2	33,352	2,893	
	tril. yen	bil.dollars	bil. pound	

US household includes nonprofit organizations

UK household includes nonprofit household servicers.

Source: BOJ, Flow of Funds Account h

Source FRB Flow of Funds Account h

Source: Office for National Statistics



Maintaining cost efficiency

- Large size of GPIF fund enable to to take advantage of scale economy.
- Core portion of equity investment will be managed in passive style.



Room for improvement

- Scheme to avoid political intervention
- Scheme to prepare incentives and disciplines for efficient management
- Full disclosure of information

Even under current scheme, the Minister can

=Secure independence of

Subcommittee for Fund Management

=Hire more professionals for executive and management positions in GPIF

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