



### Is the Benefit from Public Pension Adequate for retired Workers in Japan

Munekazu Kawachi

**Chief Manager** 

Group Life & Pension Actuarial Office

Nippon Life Insurance Company





## Introduction

 In Japan, the automatically balancing scheme was introduced on 2004 pension reform.

According to the Financial Report on the Public Pension System
 FY2009, the "replacement rate" is 62.3% in 2009 and it will be
 50.1% in 2038.

This means that 20% of the benefit will be cut.

# How to Analyze this Topic

1 st: Overview about the income protection for retired workers in Japan.

2 nd: How much money do aged households expend in a month?

3 rd: The future pension benefit is anticipated and the effect of the automatically balancing scheme is considered.

4 th: Is the reduced benefit enough for expenditure of aged households ?

# Background (1)

 The income protection for retired workers in Japan is composed of 3 layers.

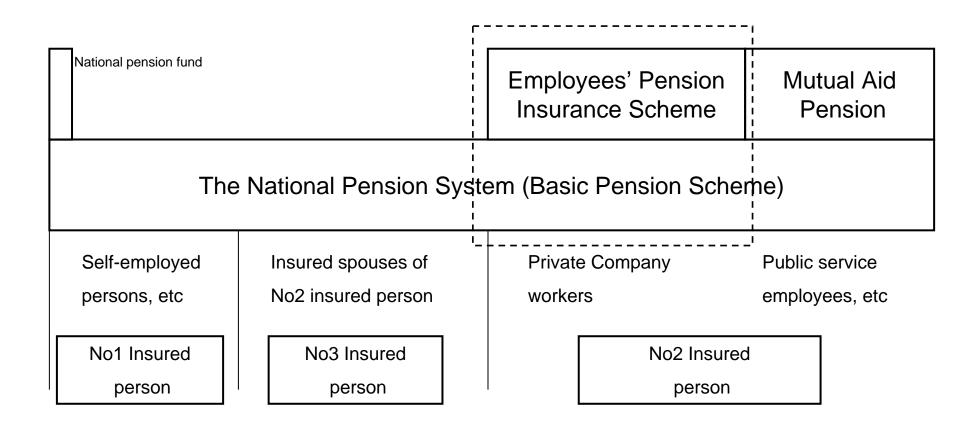
3rd layer	Protection by the Individuals	Personal Savings
-----------	-------------------------------	------------------

2nd layer	Protection by the Employers	Corporate Pension Plans, Retirement Lump Sum etc
-----------	-----------------------------	---

1st layer	Protection by the Government	Public Pension Schemes
-----------	------------------------------	------------------------

# Background (2)

☐ The Outline of Public Pension Schemes of Japan



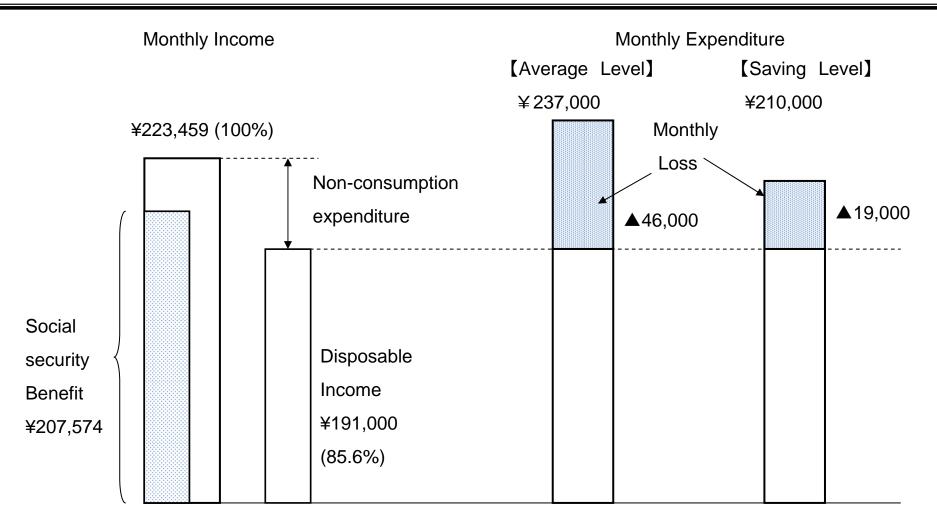
# Background ③

□ The outline of automatically balancing scheme

- This scheme was introduced by 2004 pension reform
- The characteristics of this scheme
  - (1) The contribution schedule is fixed and it is stipulated in law.
  - 2 The benefit level is automatically adjusted to restore financial equilibrium.
  - ③ The replacement rate as the minimum benefit level is stipulated in law to monitor the benefit level.
- The "replacement rate" is 62.3% in 2009 and it will decrease gradually and be 50.1% in 2038.

From: the Financial Report on the Public Pension System FY2009 by Ministry of Health, Labour and Welfare on 23 Feb, 2009

### Monthly Income and Expenditure



From: Tatsuya Ishikawa and Kouichi Haji "The Economic Situation of Aged Households : Income,

Expenditure and Assets" (Nissay Research of Institutes, Oct, 2008)

### How to Anticipation the Benefit

□ How to anticipate the future benefit

1 st step : To anticipate yearly income of workers

2 nd step: To anticipate worker's total remuneration

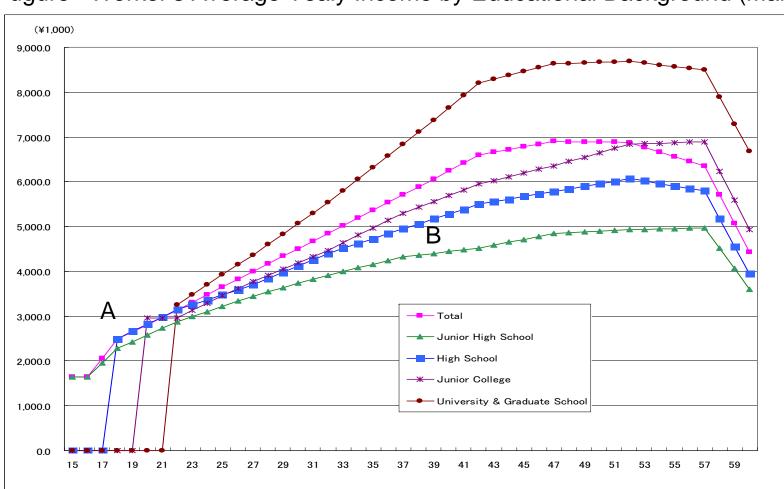
3 rd step : To anticipate worker's pension benefit in the future

□ Assumption

- 1: Worker's average yearly income is decided by age.
- 2: Wage increase rate per a year is 2.5%.

3: A worker is 15 years old in 2009.
He will become 65 years old in 2059 and he and his wife will receive pension benefit.
Such pension benefit is anticipated.

## Yearly Income of Workers (1)



Fugure Worker's Average Yealy Income by Educational Background (Male)

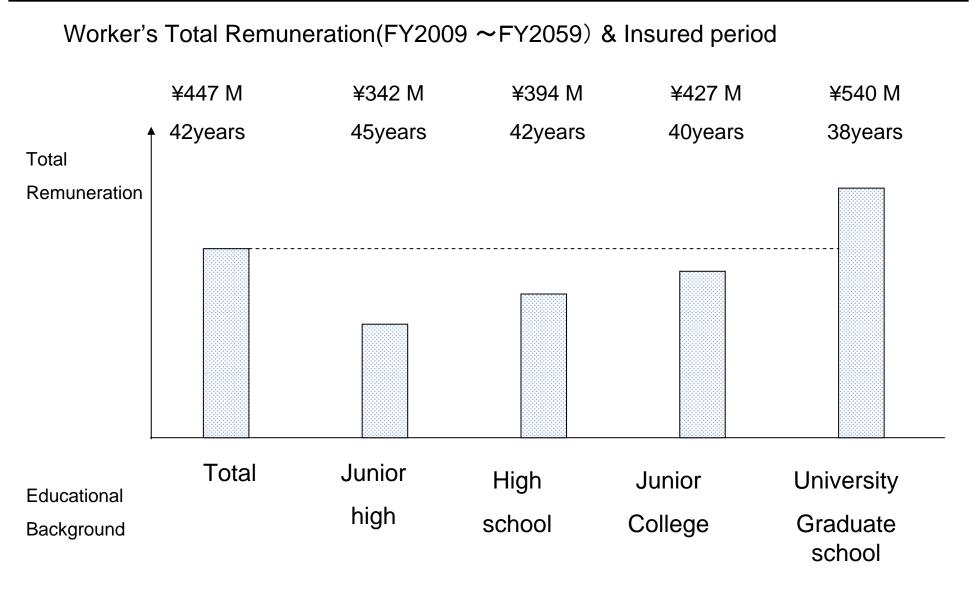
From: Basic Survey on Wage Structure 2007 by Ministry of Health, Labour and Welfare

## Yearly Income of Workers (2)

For example

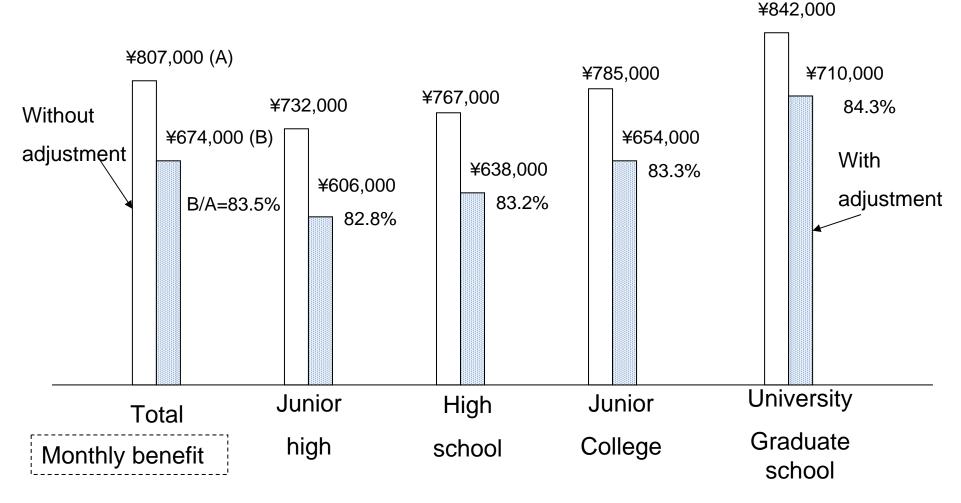
Age 19 years old who is graduated from high school Yearly income at 19 years old :  $\pm 2,496,000$  (Point "A") Yearly income at 39 years old without wage increase :  $\pm 4,946,000$  (Point "B") Wage increase rate per a year is 2.5% Actually yearly income at 39 years old:  $\pm 4,946,000 \times (1.025)^{20} = \pm 8,104,597$ 

### Worker's Total Remuneration



## The Anticipation of Benefit

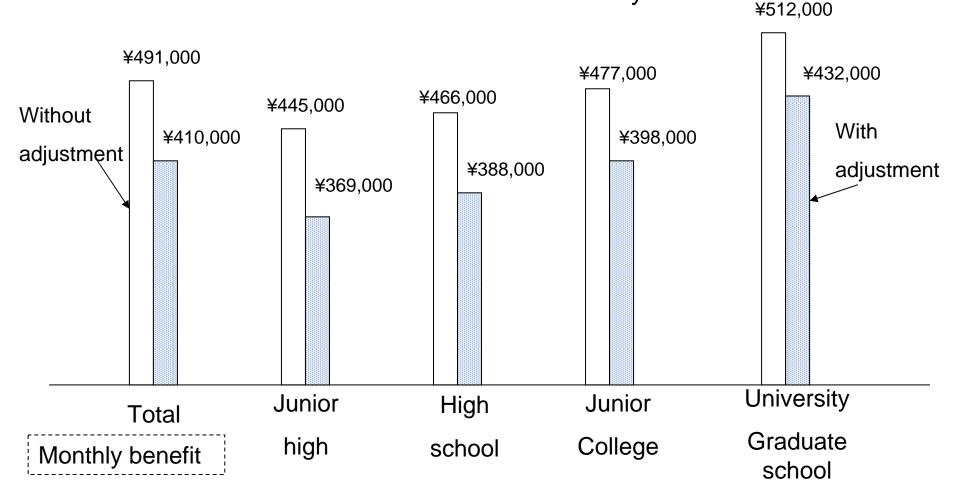
The anticipation of worker's pension benefit in FY2059



### The Present Value of Benefit (1)

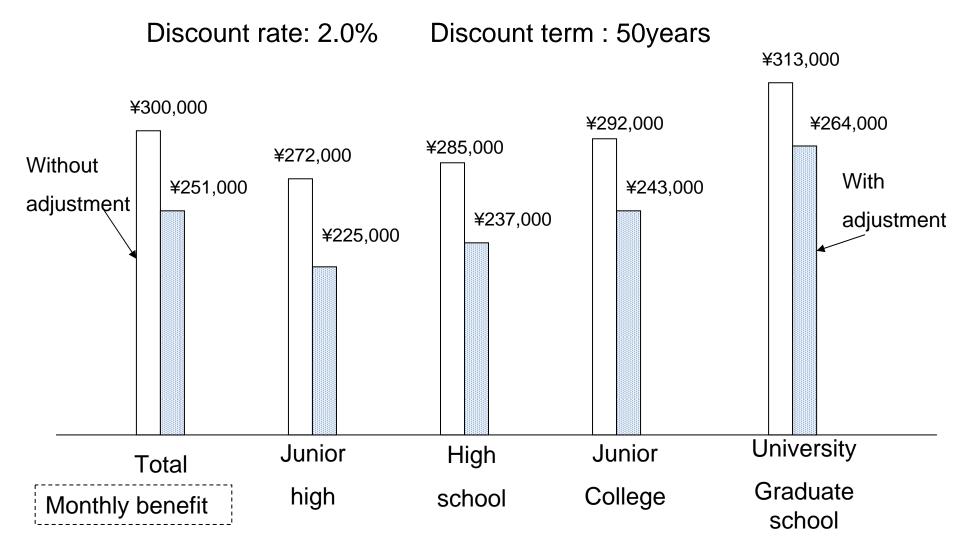
Case1 The present value of worker's pension benefit

Discount rate: 1.0% Discount term : 50years



### The Present Value of Benefit (2)

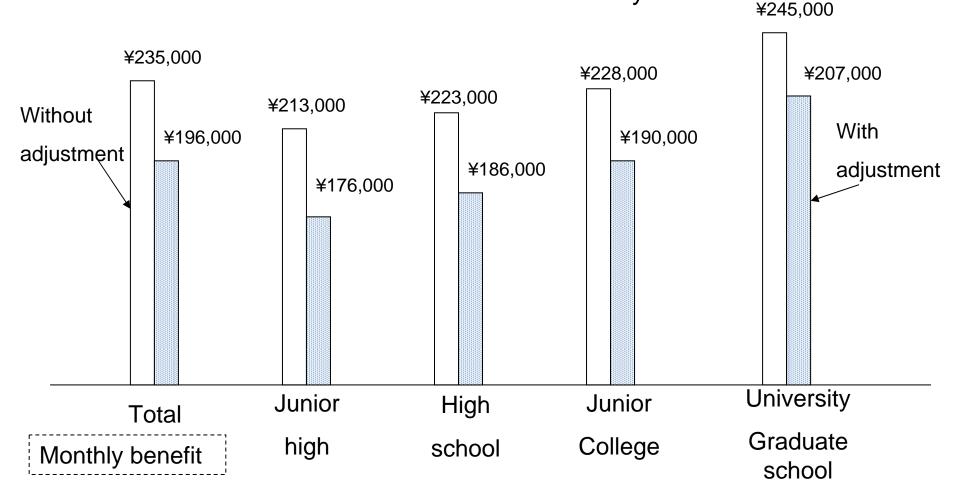
Case2 The present value of worker's pension benefit



### The Present Value of Benefit ③

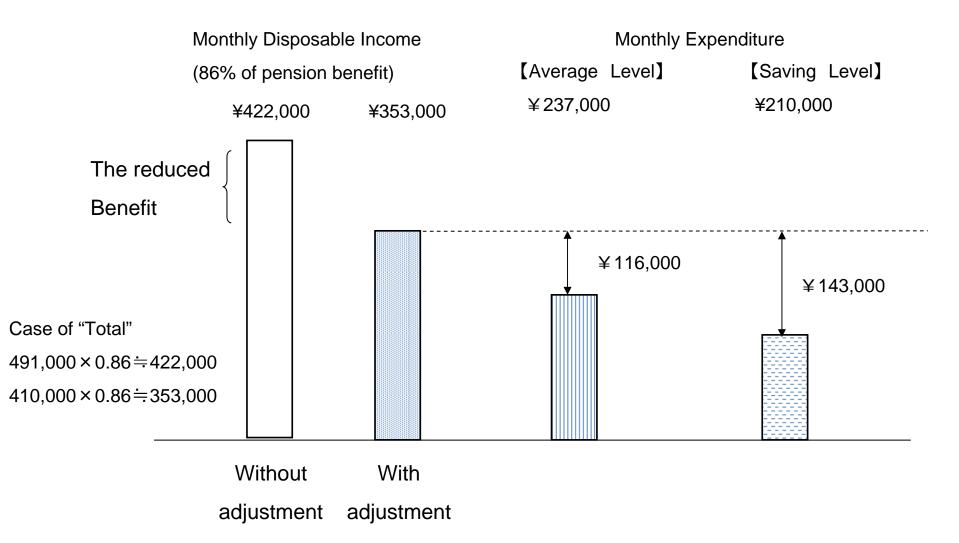
Case3 The present value of worker's pension benefit

Discount rate: 2.5% Discount term : 50years



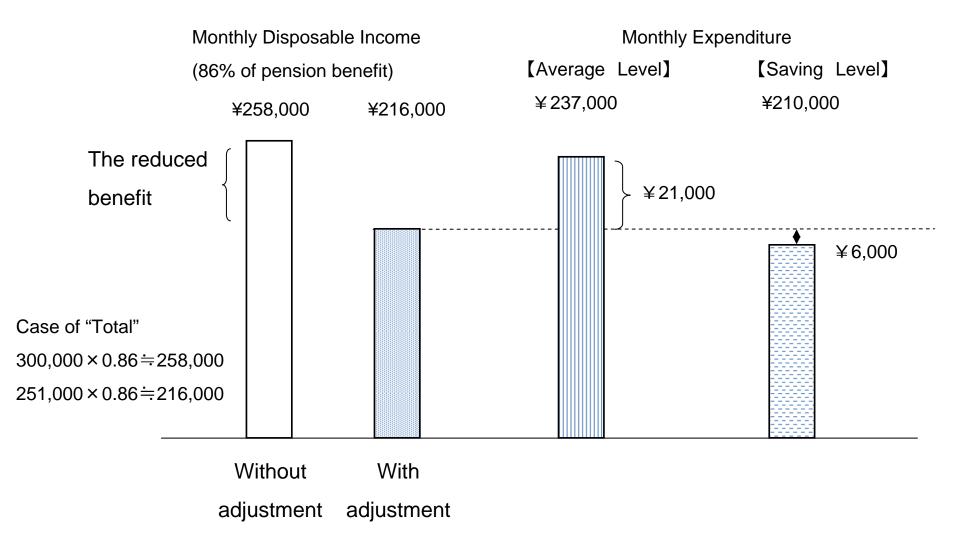
### The Benefit is Enough ? ①

#### Case1 Discounted by 1.0% (Consumer Price Increase Rate)



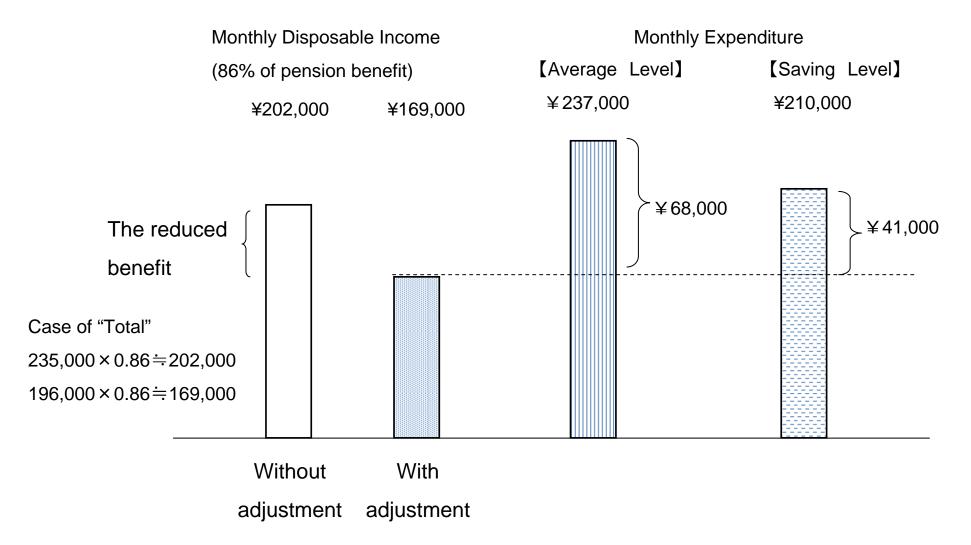
### The Benefit is Enough ? ②

#### Case2 Discounted by 2.0% (Consumer Price Increase Rate)



### The Benefit is Enough ? ③

#### Case3 Discounted by 2.5% (Consumer Price Increase Rate)



The present value of the reduced benefit which couples will receive while they are alive is calculated.

Table The Anticipation of Income Reduction

CPI (Unit : ¥1000)	Total	Junior high school	High school	Junior college	University & Graduate school
1.0%	20,043	19,043	19,511	19,749	20,052
2.0%	12,247	11,635	11,921	12,067	12,252
2.5%	9,590	9,112	9,336	9,450	9,595

### How much will the Benefit be Reduced? (2)

For example :

- Case CPI 1.0%, Pension start year:FY2059 (unit ¥1000)
- ① The yearly Benefit With adjustment

Husband is alive Remuneration-related : ¥3,878 Basic : ¥4,216

After husband is dead Remuneration-related : ¥2,908 Basic : ¥2,108

Benefit couples will receive while they are alive:

 $(3,878+4,216) \times 18 + (2,908+2,108) \times 5 \Rightarrow \pm 170,759$ 

② The yearly Benefit Without adjustment

Benefit couples will receive while they are alive : ¥203,722

- ③ The present value of the reduced benefit  $(203,702-170,759) \swarrow (1.01)^{50} \Rightarrow \$20,043$
- \* Life expectancy of male 65 : 18.13 years Female 65 : 23.19 years Remuneration-related benefit will become 75% after husband is dead.

### The Effects of the Scheme

#### □ The wage increasing rate is 2.5%

- CPI = 1.0% The benefit is sufficient.
- CPI = 2.0% The benefit is lower than the average level. The benefit is higher than the saving level.
- CPI = 2.5% The benefit is not enough.

The present value of the reduction of the benefit which couples will receive while they are alive is almost equal to ¥20M.
 (the CPI 1.0% case )

### To Raise the Public Pension Benefit

□ To raise the public pension benefit is politically difficult.

#### Because

- 1 The reduction of the benefit was caused by 2004 reform of laws and the object of the reform was to set upper limits to the contribution of the pension by adjusting the benefit through the automatically balancing scheme.
- 2 If the automatically balancing scheme were abandoned and the benefit were kept, the financial resources should be discussed.

There are three choices to solve the problem, to raise the contribution, to raise the pensionable age and to increase the Government liability. These choices are very difficult.

## To Raise the Retirement Lump Sum

☐ The possibility to raise the retirement lump sum is low.

- Because
  - 1 To raise the amount means the raise of personal expenses and post retirement liability for companies.
- 2 The company has various options to compensate employees. For example, if an employer raised bonus instead of raising the retirement lump sum, it would be good news for employees.

### Personal Savings and Investment

□ Personal savings and investment would be important.

□ For example of an active worker family

the monthly income¥532,000the monthly non-consumption expenditure¥89,000the monthly consumption expenditure¥315,000

the family can save ¥127,000 per a month.

### The Employment for Over 60 Years Old

 $\Box$  The retirement age is 60 and the pensionable age is 65.

So the couple has to withdraw their savings during the five years and it is about  $\pm 13 \sim 14$ M.

237,000 (average monthly expenditure)  $\times 60 = 14,220,000$ 210,000 (saving level monthly expenditure)  $\times 60 = 12,600,000$ 

□ If the couple had regular income after 60, the couple would not withdraw savings.

It is good for couples because the future pension benefit will be reduced.

## Conclusion (1)

The Government should adopt two policies as follows to compensate for the income reduction caused by the automatically balancing scheme.

1 The various saving instruments should be given to compensate for the income reduction. And the contribution paid to those instruments should be tax-deducted.

For example

- The "matching contribution" scheme of DC
- Personal-type DC plan
- The more expansion of tax breaks for annuity that is provided by life Insurance companies



2 The employment opportunities should be given to aged people so that they can get income until the start of the public pension.

And it is necessary to improve the labor conditions for aged people.

It is reported that the income which employees over 60 receive is around  $60 \sim 70\%$ .

### Appendix1:Matching contribution

Matching contribution in Japan is different from that of other countries.

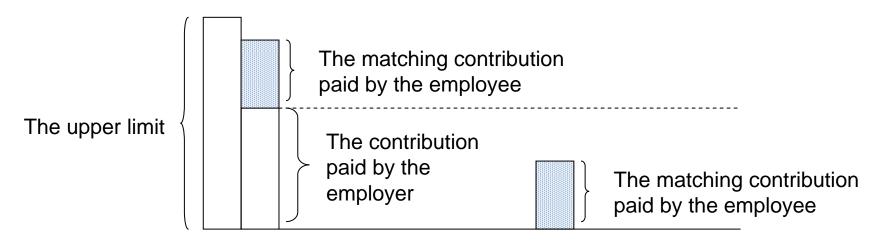
#### Because :

In Japan, the contribution to DC plan is paid by employers.

Upper limit of contribution is set.

And employees can not pay the contribution now.

The scheme of the matching contribution in Japan



### Appendix2: Personal-type DC

The protection provided by the employer

