Consideration of the characteristics of pension liabilities and measurement methods

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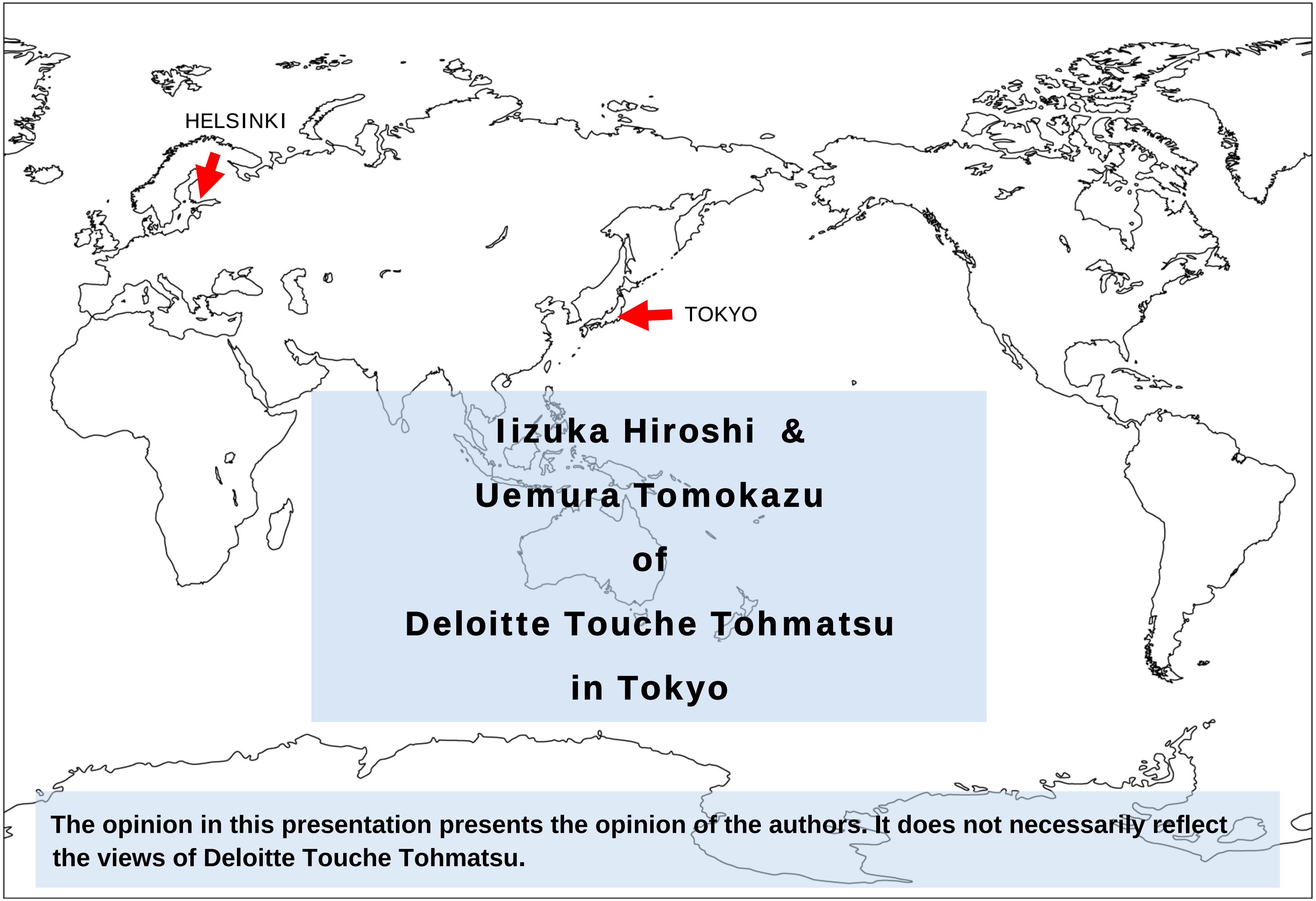

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Consideration about pension liabilities and measurement methods

Currently, three methods (based on **present value = "discounted"**) are used to evaluate post-retirement plans' liabilities in Japan

Uniqueness of Japanese plans is that the benefits are **based on lump-sum**

Due to such uniqueness, the liabilities were once measured by **"non-discount"** method

There are problems in **"non-discounted liability"**, and that method has been disused

However, the **"non-discount"** method may offer some solutions to the problems in evaluating **cash-balance** plans

Which the post-retirement plan's benefit is based on?
Pension or **Lump-sum**

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Summary of this presentation

- There are several liability types of post retirement benefits.
  - The liability for funding purposes
    - A debt for the accrued portion of the certain future expenses
  - The liability for accounting purposes
    - A reserve for the future payments
- These liabilities have different characteristics
  - The measurement methods must be different to match each characteristics
  - Especially the discount rate used to measure liabilities should have different meanings of basis
- **The discussion in this presentation is based on Japanese regulations, accounting standards and customs**
- Introduction of some features of Japanese post-retirement plans
  - The unique characteristics of Japanese plans
  - The concept of "non-discounted liability"
    - The problems of "non-discounted liability" and it's potentials of application.

Liability for accounting purposes

- The characteristics of a post retirement plan from the accounting point of view.
  - A plan that will pay an expense in the certain
  - An expense from the plan is predictable on some level
- The rules for expenses to be booked as an allowance under Japanese GAAP
  - A future expense or loss is scheduled for certain
  - The amount of that expense or loss can be projected with certainty
  - That expense or loss is related to the income of the fiscal year in which that expense or loss will be recognized
- Post retirement payments meet the above conditions, and shall be booked in a financial statement as an allowance
- The measuring method for accounting
  - Liabilities should be present values of the future expenses from the plans
  - The future expenses should be discounted with a risk-free (or quasi risk-free) rate to reflect only the time-value
    - Under Japanese GAAP: Japanese Government bonds, Government Agency bonds or high rated Corporation bonds are the risk-free rate

Liability for funding purposes

- The defined benefit pension plans are regulated by the government under two standards to secure sound management of the plans in Japan
  - The continuous standards
  - The discontinuous standards
- The continuous standards
  - Objective; to determine the level of contributions in order to meet the future payments and to see whether or not the reserves are sufficient
  - The “long-term” projection is important for the continuous standards
  - The discount rate for the continuous standards is determined based on long-term return on assets
    - There are lower bounds of the discount rate due to taxation

The lower bounds of the discount rate of the continuous standards

FY	The lower bounds		FY	The lower bounds
2002	1.20%		2005	1.30%
2003	1.20%		2006	1.20%
2004	0.90%		2007	1.30%

Liability for funding purposes

- The discontinuous standards
  - Objective; to see if the plan assets are sufficient to meet the accrued benefits of past service period of employees on plan termination
  - The discount rate for discontinuous standards is determined by the yield of risk-free assets
    - The reason is that the amount of distributed assets should be equal to the accrued benefits even when employees manage them by risk-free assets after the plan termination
  - The discount rate for discontinuous standards is regulated by the government in Japan

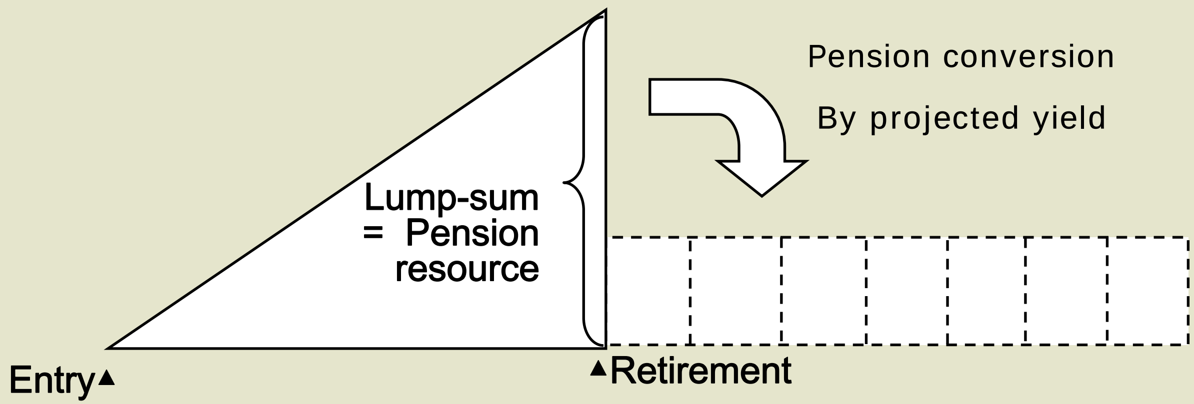
The regulated discount rate for the discontinuous standards

FY	Discount rate		FY	Discount rate
2002	2.50%		2005	2.20%
2003	2.23%		2006	2.17%
2004	2.29%		2007	2.20%

Overview of Japanese post-retirement plans

- The uniqueness of Japanese post-retirement plans
  - Based on lump-sum payments
    - The relatively large amount of public pension could cover the living expenses for the aged
    - The delayed regulation of corporate pension systems
    - The needs of temporary money to refund mortgages
  - Many companies have made their retirement benefits be able to be paid as pension
    - Most plans still pay the retirement benefits only in lump-sum to short-term employees
    - To receive payments as pension, employees need to have long-term service or retire after a certain age

Pension payment of lump-sum based plan



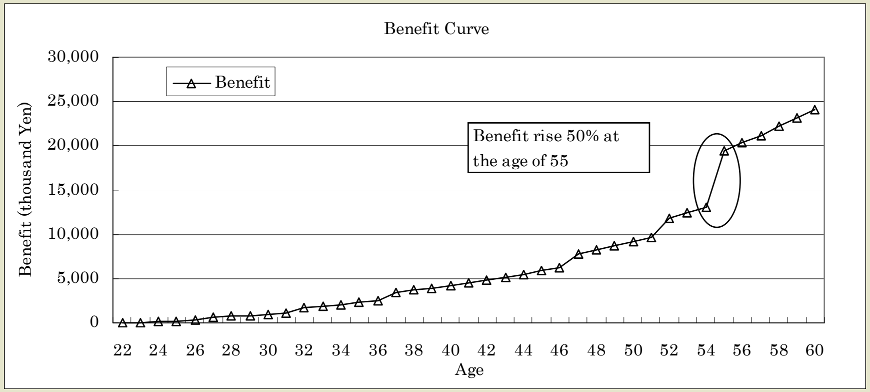
"Non-discounted liability"

- The former plan liability for lump-sum only plans was measured by "non-discounted liability" (before 2000/4/1)
- The amount of the "non-discounted liability" equals to the total amount of the lump-sum benefits as of measurement date (i.e. the amount of liability = the total accrued benefits)
  - The measurement method used before the introduction of the Projected Credit Unit method same as FAS87 and IAS19
  - Currently, rather small companies (smaller than 300 employees) may be allowed to use this "non-discounted liability" for accounting purpose
    - Measuring liability with "Non-discount" method is allowed only when the reliability of assumptions (salary increase rates and withdrawal rates) is relatively lower.

“Non-discounted liability”

- The problems of “non-discounted liability”
  - 1. “Non-discounted liability” cannot reflect the future increase of the benefit
    - The “back-loaded” plans have much serious problems

A typical Japanese “back-loaded” plan’s benefit curve

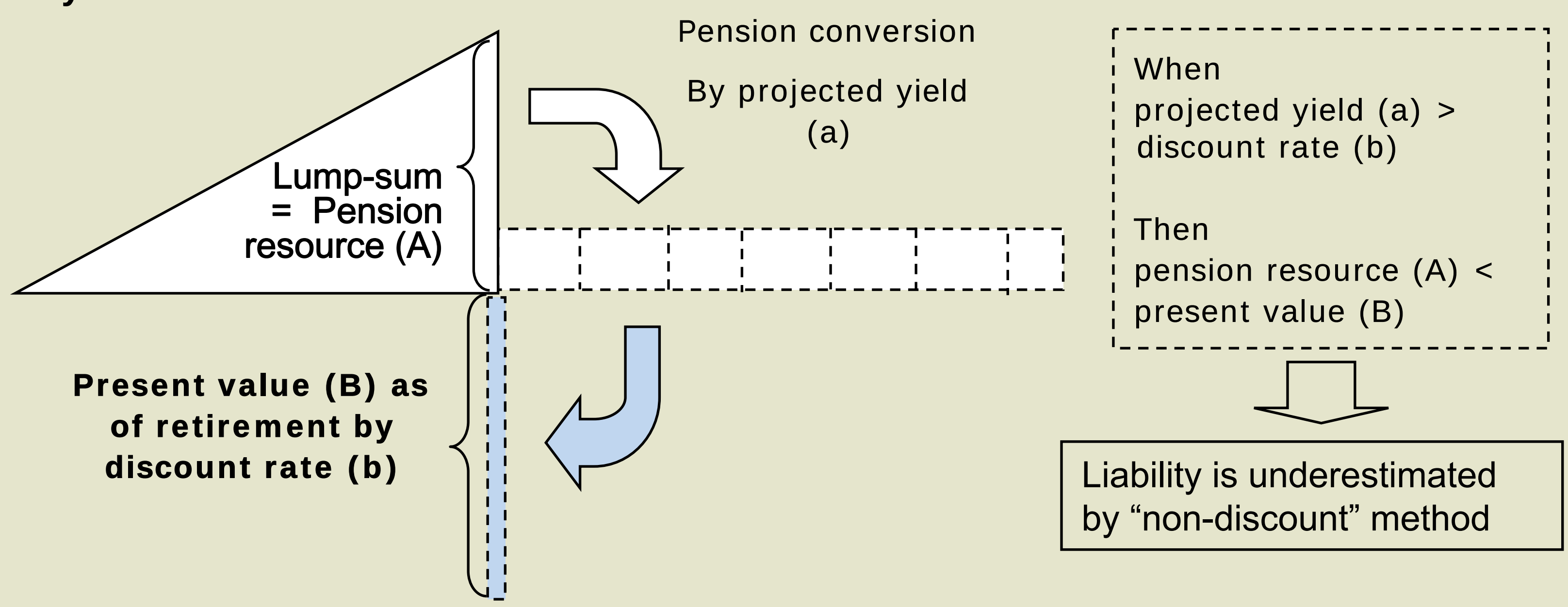


  - The amount of the liability should rise rapidly as the employees service year increase
    - This is the case with projected credit unit method as well
    - In the case where the benefits are attributed by the benefit formula, the liability measured by the projected credit unit will be smaller than “non-discounted liability”
    - To measure those “back-loaded” plans the benefit attribution should be based on a straight-line service year basis (FAS87, IAS19)

“Non-discounted liability”

- The problems of “non-discounted liability”
  - 2. The difference between the projected yield for the pension resources and the discount rate at pension payable plans
    - Projected yield for the pension > Discount rate, then “non-discounted liability” will be smaller than the PV of the pension payments

Projected yield and discount rate



"Non-discounted liability"

- The conditions to regard the "non-discounted liability" as a reasonable liability for accounting
  - Benefits are not "back-loaded" excessively
  - When the plan can pay benefits as pension, the projected yield for the pension resource is related to the discount rate

Cash-balance plans might meet above requirements

-Benefit accrual are generally mild (not so rapid)

-Revaluation may be based on the same index as discount rate (such as government bonds or low-risk corporate bonds)

Note: Due to the diversity of cash-balance plans, many points should be considered before using "non-discounted" method to measure the liabilities.

IV. Conclusion

- The discount rates are determined by two main approaches
  - The liability approach which reflects the concept of accounting
  - The assets approach which reflects the concept of continuity of funding

- The issue of “non-discounted liability”
  - The similarity of lump-sum based plans and cash-balance plans suggests the “non-discounted” method to measure the liability for those types of plans
    - The concept of cash-balance plans are not much like other “pension based” plans prevailing in U.S. and EU
    - But it has some similarity with “lump-sum based” plans such as Japanese post-retirement plans
    - Also some conditions may be suitable for “non-discount” method to be applied