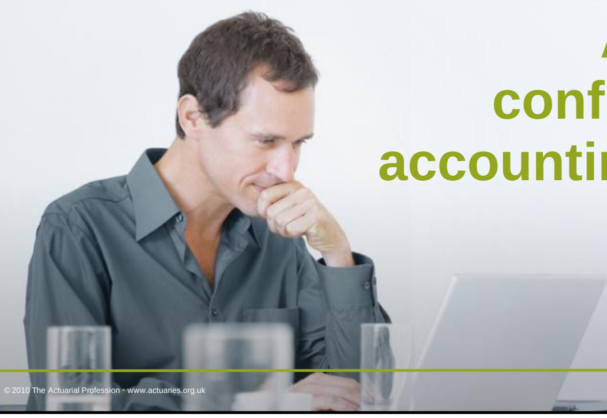
The Actuarial Profession
making financial sense of the future

Pensions, benefits and social security colloquium 2011
Ryo Matsubara



Are there any conflicts between accounting valuations and funding valuations?

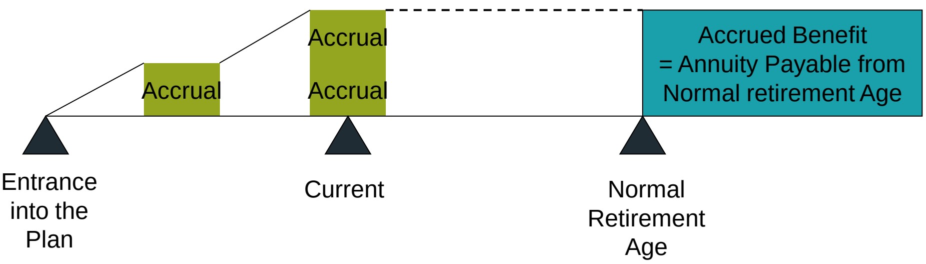
25-27 September 2011

Today's Agenda

- Introduction of the "Defined Accumulation (DA) Plan"
  - Dr. Kubo's idea shown at ICA2010
- My Assertions in the past
- Integration of Assertions
- Defined Benefit Plan in the future = Basis of Discussion
- Structure of Corporate Pension Plan
- Liability Measurement of DB plan
- Behavior of Employer sponsoring a DB plan
- Protection of Benefit Rights

Introduction of the "Defined Accumulation" Plan — *Shown by Dr. Kubo at ICA2010*

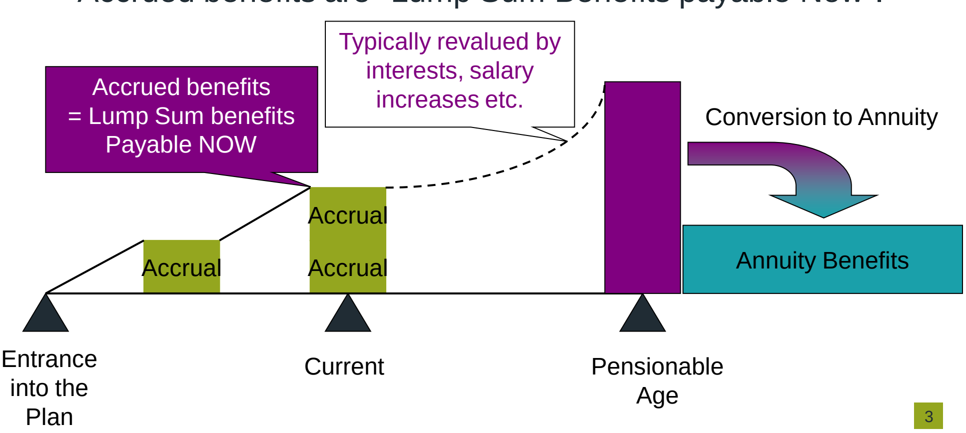
- Traditional Defined Benefit Plan common in the USA, UK and other places
  - Accrued benefits are "Annuity Benefits payable at Normal Retirement Age".



2

Introduction of "Defined Accumulation" Plan — *Shown by Dr. Kubo at ICA2010* (cont.)

- Defined Accumulation Plan
  - Accrued benefits are "Lump Sum Benefits payable Now".



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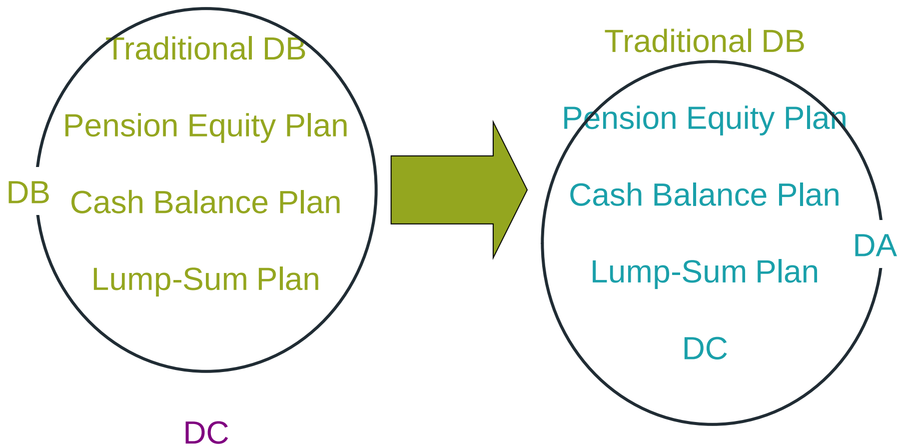
Introduction of the DA Plan — New Classification — *Shown by Dr. Kubo at ICA2010*

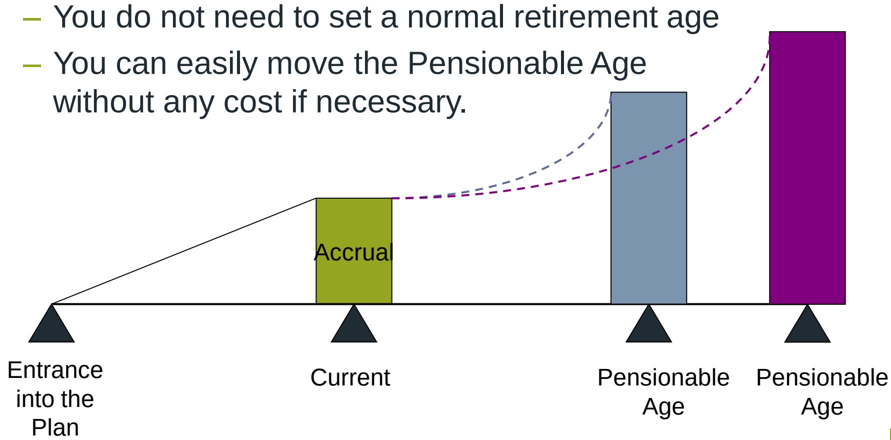
- We can classify the corporate plans by DA



4

My Assertions in the past Colloquia Sydney 2004

- DA plans have flexibility that suit an aging society well.
  - You do not need to set a normal retirement age
  - You can easily move the Pensionable Age without any cost if necessary.



5

My Assertions in the past Colloquia Paris 2006

- Projected Unit Credit actuarial cost method (PUC), which is typically used for measurement of liabilities of DB plans under global accounting standards such as USGAAP and IAS, is not suitable for measurement of liabilities of DA plans.
- Instead, "Walk-away benefit obligations (WABO)" should be used for accounting valuations.
  - PBO of a DA plan calculated by PUC may be less than WABO.
  - WABO has much less volatility than PBO.

6

My Assertions in the past Colloquia Helsinki 2007

- Minimum funding requirements for DA plans should be based on "Walk-away benefit obligations", because walk-away benefits are basic promises of a DA plan.
- Fundamental structure of protection of benefits rights are--
  - Both active and inactive participants are well informed about the plan's financial situation.
  - Participants have enough knowledge to make a relevant decision based on the information.
  - If necessary, participants can demand the plan sponsor take necessary actions, such as increase of contributions, change of investment strategy and so on.

7

Integration of assertions in the past

- Current situation ==> strong concerns about "De-risking"
  - Aging society
  - Recent movement of accounting standards to fair value
  - Longevity risk

If employers want to keep their DB plan,
DA plans without longevity risk must give them solutions.

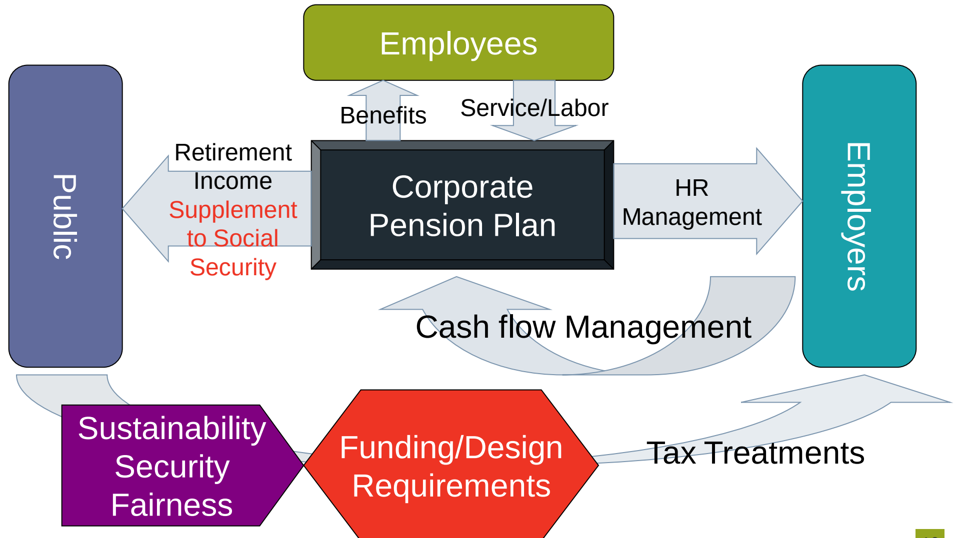
8

Defined Benefit Plan in the future = Basis of Discussion afterwards

- DA plans that provide only certain annuity (and lump sum) benefits have good features for resolving plan sponsors' concerns.
  - A DA plan is suitable for an aging society because it can provide "age-neutral" benefits.
  - It is very difficult or even impossible for a company to owe longevity risk.
    ==> Longevity risks should be covered by social security.
  - Among DA plans, cash balance plans with interest credit rates based on (government) bonds yields are effective against interest rate risks, because signs of the duration of interest credit rates and discount rates are reversed.

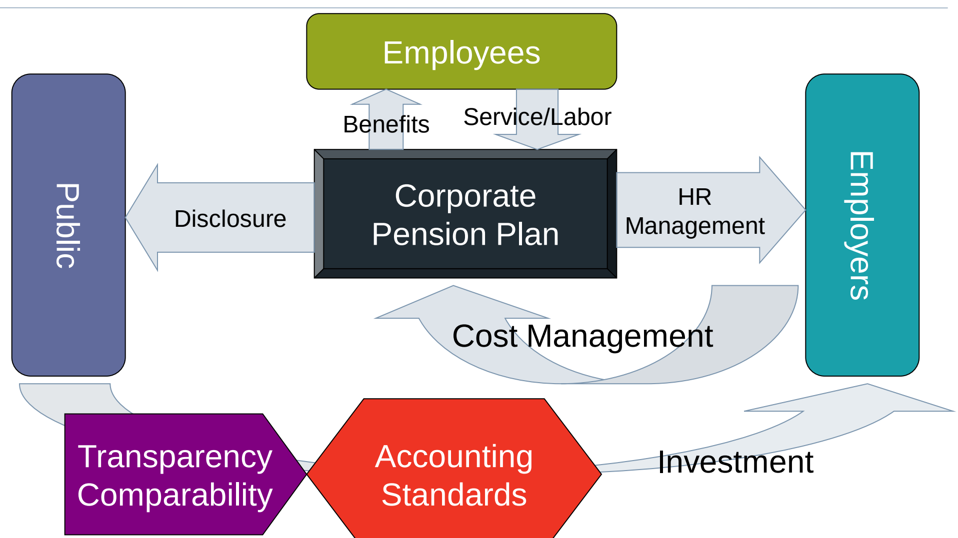
9

Structure of Corporate Pension Plan — Funding/Design Requirements



10

Structure of Corporate Pension Plan — Accounting Standards



11

Liability Measurement of DB plans — Funding Valuation

- The primary purpose of funding is to enhance the security of plan participants' benefit rights.
  - From the viewpoint of plan participants, it is desirable that the plan asset is not less than the present values of plan participants' accrued benefit.
  - The supervisor or payment insurance institute may think that there should be a cushion for possible events.
  - The plan sponsors want various things, such as minimum contributions, flexibility, stability and so on.

12

Liability Measurement of DB plans — Accounting Valuation

- Users of financial statements want transparency and comparability of costs and liabilities information of DB plans sponsored by a company.
  - A standardized method for measuring pension expense.
  - Immediate balance sheet recognition of a liability for underfunded plans.
  - Expanded footnote disclosures.

- FAS87 required recognition of ABO on the balance sheet, hence it may have given consideration to the security of plan participants' benefit rights.

13

Trends of DB plans — De-risking

- Changes of accounting standards and funding requirements, coupled with recent financial crises, have pushed companies away from DB plans.
  - To close DB plans for future participants
  - To freeze DB plans, i.e. to stop future accrual in the DB plans

  ==> move to DC plans
- Other de-risking
  - Liability Driven Investment (LDI)
  - Dynamic Investment Policy (DIP)

  ==> Shorter time horizon than before

14

Behavior of Employer sponsoring a DB plan from Aon Hewitt — Global Pension Risk Survey 2011

- Immediate recognition of actuarial gain/loss
  → De-risking becomes one of the main concerns of employers.
  - To control interest rate risk by LDI
  - To sell equities and buy long-duration bonds
  - To close DB plans for new hires or freeze DB plans
    → this move has slowed down
- Movement after the recent financial crisis
  - Rise in acceptance and adoption of DIP

    Worse funded status ==> Higher risk

    Better funded status ==> Lower risk

    Do you think this is reasonable?

15

Behavior of Employer sponsoring a DB plan from "Pension Finance" by David Blake (p84 to 91)

- Fully funded pension fund
  - EET tax system gives strong incentive to fully funded. Company tends to shift from equities to bonds.
- Underfunded pension fund
  - A company in financial distress has an incentive to underfund its pension plan and follow a risky investment strategy. The company has nothing to lose and everything to gain.
- Partially insured pension fund
  - A company has an incentive to underfund their pension plans and invest in risky equities.

16

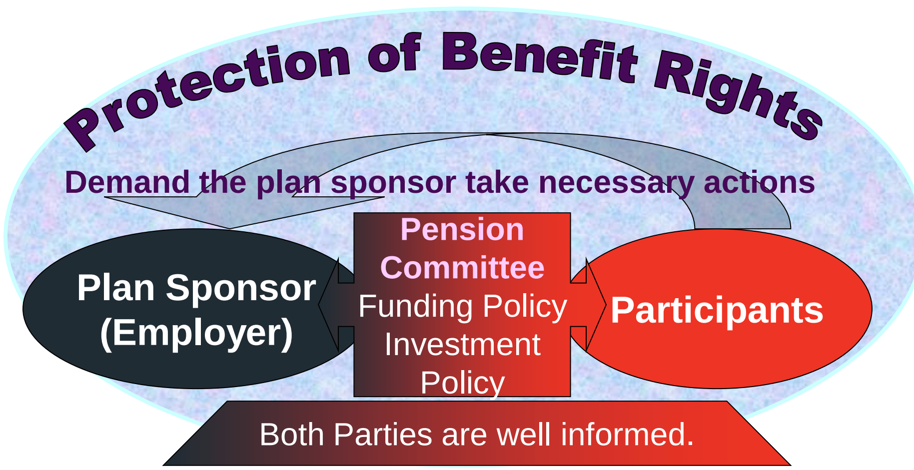
Are there any conflicts between funding and accounting of a DB plan?

- Funding
  - Employers may not have strong concerns about protection of benefit rights. They tend to minimize contributions to pension funds only to meet funding requirements to continue to enjoy favorable tax treatments.
  - Employers with an underfunded plan may endanger the security of protection of benefit rights by investing in risky assets.
- Accounting
  - Neither shareholders nor users of financial statements have any concerns about protection of benefit rights of participants of pension plans.

17

Getting back to purpose of funding

- The primary purpose of funding is to enhance the security of plan participants' benefit rights.



18

How are both parties, especially participants, to be well informed in a DA plan?

- "Walk-away benefit obligations (WABO)" should be used for accounting valuations of DA plans. (Slide 6)
- Minimum funding requirements for DA plans should be based on WABO, because walk-away benefits are basic promises of a DA plan. (Slide 7)
- WABO is easy to understand for active participants.

19

Concluding Remarks

- Only DA plans will survive in future.
- DA plans should be valued by WABO both for funding valuations and accounting valuations.
- Are there any conflicts between accounting valuations and funding valuations?
  - Answer is Yes and No.

20

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21

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22