



# Joint Colloquium of the IACA, PBSS and IAAHS Sections of the International Actuarial Association

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**The setting of “asset value for recognized cost in net profit or loss” from the standpoint of asset and liability approach**

**- Actuarial asset valuation methods  
applied to the accounting for post retirement benefits -**

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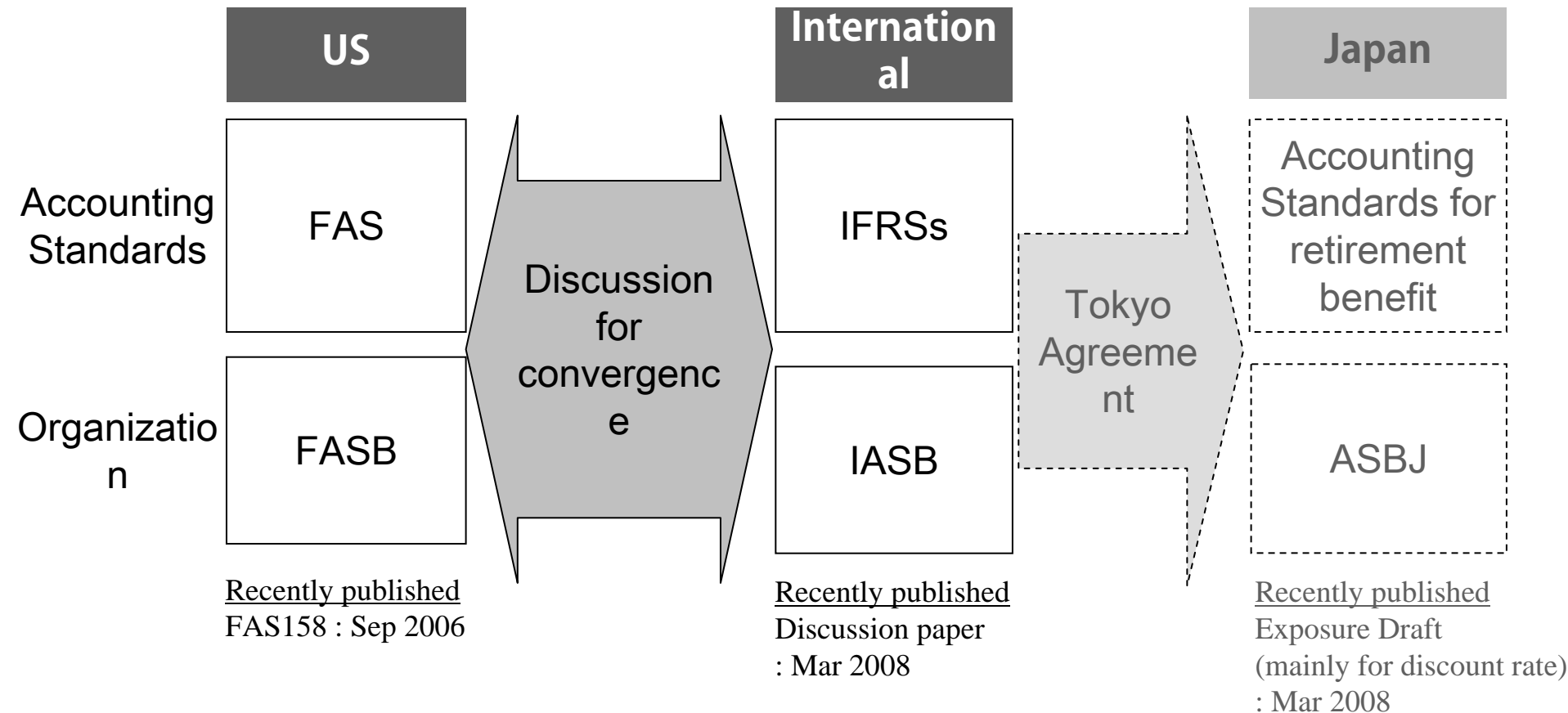
# Agenda

- Background
- Latest discussions for revising IAS 19 in the discussion paper (mainly presentation issues)
- ‘Asset value for recognized cost in net profit or loss’ from the standpoint of AL approach
- Application of actuarial valuation methods
- Comparison of valuation methods (simulations)
- Results and Conclusions

# **Background**

# Convergence of accounting standards

- As for the post employment benefit, FAS and IFRSs plan to be converged by 2011.



# Recent trends of accounting standards in the post employment benefits

- **Immediate recognition**
  - Investors are critical of deferred recognition processes, because they are confusing and difficult to understand.
  - Revision to ‘immediate recognition’ is basically due to the shift from the traditional revenue and expense view (RE approach) to the asset and liability view (AL approach).
- **Presentation issues in financial statements**
  - Recognizing all changes on the balance sheet in ‘comprehensive income’ has almost reached agreement.
  - Subject of future discussions will mainly be focused on the recognition to ‘net profit or loss’.

**Latest discussions for revising IAS 19  
in the discussion paper**

# Proposal 1 of the IASB

- All changes are recognized in 'net profit or loss'

Classification of changes	Comprehensive income	
	'Net profit or loss'	Other comprehensive income (OCI)
Service cost	○	×
Interest cost	○	×
Changes in the liability side (excluding due to fluctuations in the discount rate)	○	×
Changes in the liability side (due to fluctuations in the discount rate)	○	×
Changes in the asset side (mainly due to investment gain or loss)	○	×

○ : recognized, × : not recognized at all

# Proposal 2 of the IASB

- ‘Financial cost’ is recognized in other comprehensive income and the other costs recognized in ‘net profit or loss’

Classification of changes	Comprehensive income	
	‘Net profit or loss’	Other comprehensive income (OCI)
Service cost	○	×
Interest cost	×	○
Changes in the liability side (excluding due to fluctuations in the discount rate)	○	×
Changes in the liability side (due to fluctuations in the discount rate)	×	○
Changes in the asset side (mainly due to investment gain or loss)	×	○

○ : recognized, × : not recognized at all

# Proposal 3 of the IASB

- ‘Remeasurement cost’ is recognized in other comprehensive income and the other costs recognized in ‘net profit or loss’

Classification of changes	Comprehensive income	
	‘Net profit or loss’	Other comprehensive income (OCI)
Service cost	○	✕
Interest cost	○	✕
Changes in the liability side (excluding due to fluctuations in the discount rate)	○	✕
Changes in the liability side (due to fluctuations in the discount rate)	✕	○
Changes in the asset side (mainly due to investment gain or loss)	*	*

○ : recognized, \* : partially recognized, ✕ : not recognized at all

# Discussion of the future direction (except for 'service cost' and 'interest cost')

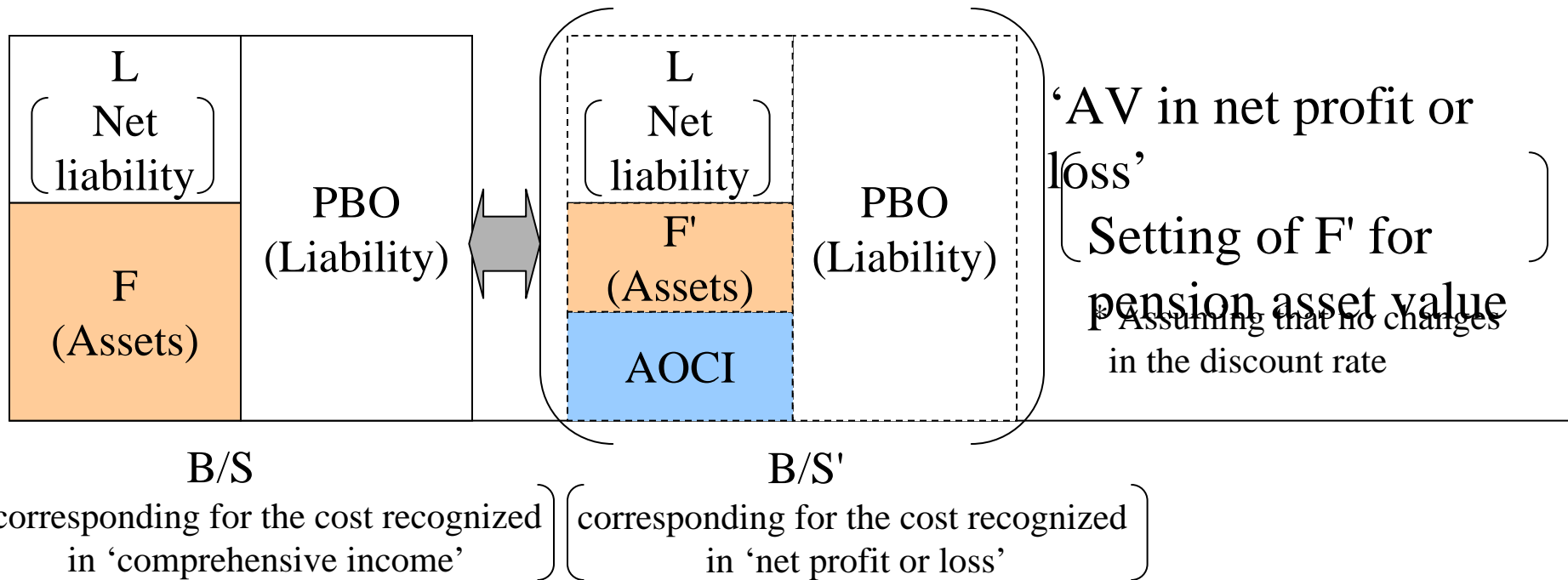
- Of all changes, especially for the changes in the asset side will be the main focus of future discussions on how to recognize them in 'net profit or loss' and/or OCI.

Classification of changes	Comprehensive income
Changes in the liability side (excluding due to fluctuations in the discount rate)	'Net profit or loss'
Changes in the liability side (due to fluctuations in the discount rate)	'Net profit or loss' and/or OCI
Changes in the asset side (mainly due to investment gain or loss)	<Main focus of future discussions>

**‘Asset value for recognized cost in net profit or loss’ from the standpoint of AL approach**

# Difference between the asset value in the balance sheet and the recognized cost

- Important to evaluate asset value for recognized cost in net profit or loss (F' : 'AV in net profit or loss') different from the fair value (F) recognized in the balance sheet with the view of AL approach.
- The difference (F-F') is accumulated other comprehensive income (AOCI).



# **Application of actuarial valuation methods (simulations)**

# Three key requirements that make the value of asset appropriate

1. Co-movement to the fair value
2. Exclusion of discretion of employers
3. Stability of cost

# Comparison in the setting of the value of assets

Valuation methods		Base income part	Smoothing part	Features		
				1	2	3
Conventional standard (Setting of expected rate of return)		Forecasted future income (based on the expected returns of assets considering the allocation of each asset class)	All the changes except for base income	×	×	○
Actuarial valuation method	Moving average of fair value method	Income gain		○	○	*
	Smoothing the difference between the past average returns and realized returns method	Average realized return on pension assets				
	Smoothing the unrealized returns method	Realized return				

Features 1: Co-movement to the fair value, 2: Exclusion of discretion of employers, 3: Stability of Cost  
 ○ : good, \* : partially good, × : no good

# Application of actuarial valuation methods to the proposals of the IASB

Actuarial valuation methods and the proposals of the IASB		Base income part	Smoothing part	Remarks
Proposal 1	Fair value	Income gain Capital gain/loss Unrealized gain/loss	Zero	<ul style="list-style-type: none"> <li>•‘Smoothing’ is equal to the amount recognized in AOCI that is subject to recycling, if required.</li> <li>•The IASB shows the reluctance ‘to introduce recycling into a standard that currently does not require it, pending its work in the financial statement presentation project’.</li> </ul>
Proposal 2	Moving average of fair value method	Zero (‘Interest cost’, considering the changes in the liability side)	Income gain Capital gain/loss Unrealized gain/loss	
Proposal 3	Moving average of fair value method	Income gain	Capital gain/loss Unrealized gain/loss	

# **Comparison of valuation methods**

# Seven examples for simulations

- **Conventional method (future forecasting)**
  - Expected rate of return: 2%, 4.57% and 5%
- **Actuarial valuation method**
  - Moving average of fair value method
    - : smoothing period is 5 year
- **Proposals shown in discussion paper of the IASB**
  - Proposal 1 : Using fair value
  - Proposal 2 : Moving average of fair value method
    - Base income 2% (same as discount rate)
  - Proposal 3 : Moving average of fair value method
    - Base income realized income gain

# Assumptions 1

- Realized investment performances in Japan (from Jan. 1990 to Dec. 2007)

Index	NOMURA-BPI Yen			TSE Yen			Citigroup (ex. Japan) Yen			MSCI Yen			Guaranteed Interest Contract
	Total Return	Capital Gain	Income Gain	Total Return	Capital Gain	Income Gain	Total Return	Capital Gain	Income Gain	Total Return	Capital Gain	Income Gain	
1990	2.208%	-3.934%	6.142%	-39.436%	-39.871%	0.435%	6.393%	-2.748%	9.136%	-8.937%	-12.388%	3.451%	6.746%
1991	12.012%	5.542%	6.470%	-0.394%	-1.179%	0.785%	5.291%	-3.167%	8.491%	13.517%	9.803%	3.714%	6.316%
1992	10.054%	4.025%	6.029%	-23.023%	-23.770%	0.747%	4.377%	-3.756%	8.187%	1.976%	-1.232%	3.208%	5.266%
1993	12.501%	6.907%	5.593%	10.975%	10.030%	0.945%	-1.270%	-8.272%	7.080%	9.300%	6.622%	2.678%	4.288%
1994	-1.345%	-6.274%	4.929%	9.115%	8.314%	0.801%	-9.777%	-16.586%	6.859%	-10.110%	-12.532%	2.423%	4.219%
1995	11.965%	7.134%	4.831%	2.087%	1.316%	0.771%	25.812%	17.951%	7.815%	33.720%	30.865%	2.855%	3.473%
1996	5.188%	1.129%	4.059%	-6.064%	-6.841%	0.777%	19.534%	11.932%	7.538%	38.480%	35.715%	2.765%	3.132%
1997	5.653%	1.919%	3.734%	-19.412%	-20.238%	0.826%	13.648%	6.677%	6.950%	40.056%	37.704%	2.352%	2.364%
1998	0.404%	-2.982%	3.386%	-6.568%	-7.559%	0.991%	-0.101%	-6.845%	6.799%	10.573%	8.614%	1.959%	1.518%
1999	5.354%	2.283%	3.071%	59.688%	58.702%	0.986%	-17.975%	-23.644%	5.744%	10.033%	8.413%	1.620%	1.732%
2000	2.056%	-0.547%	2.603%	-24.961%	-25.582%	0.621%	17.712%	11.359%	6.291%	-0.278%	-1.683%	1.406%	1.710%
2001	3.314%	1.054%	2.260%	-18.905%	-19.685%	0.780%	17.782%	11.736%	5.995%	-2.521%	-4.081%	1.559%	1.293%
2002	3.329%	1.389%	1.940%	-17.499%	-18.438%	0.939%	10.319%	4.858%	5.491%	-27.956%	-29.638%	1.681%	1.278%
2003	-0.712%	-2.341%	1.629%	25.195%	23.992%	1.203%	5.674%	0.561%	5.114%	20.587%	18.069%	2.518%	0.988%
2004	1.306%	-0.171%	1.476%	11.337%	10.154%	1.183%	7.287%	2.567%	4.742%	10.143%	7.835%	2.308%	1.498%
2005	0.752%	-0.646%	1.398%	45.226%	43.889%	1.337%	10.063%	5.499%	4.553%	24.679%	22.093%	2.587%	1.361%
2006	0.206%	-1.198%	1.405%	3.023%	1.904%	1.119%	10.021%	5.481%	4.509%	23.775%	21.185%	2.590%	1.751%
2007	2.656%	1.148%	1.508%	-11.106%	-12.358%	1.252%	4.517%	-0.107%	4.615%	4.304%	1.736%	2.568%	1.697%

\* Performance of Guaranteed Interest Contract (GIC) is alternated by subscriber's yield of 10-y national bond  
 Performances of 'Short-term Fund' and 'Others' are based on the premise of no return

# Assumptions 2

- **Asset allocation of pension assets**

(Average ratio of each asset class in 6 years from FY 2001 to FY 2006)

Asset	Bond (Nation )	Stock (Nation )	Bond (Foreign )	Stock (Foreign )	Guaranteed Interest Contract	Short- term Fund	Others	Total
Ratio	21.55%	28.62%	11.44%	17.40%	10.12%	5.16%	5.73%	100.00%

\* Performances of ‘Short-term Fund’ and ‘Others’ are based on the premise of no return

- **Other parameters**

- **Service cost in each fiscal year**

- : 4.0% of the obligation of the post employment benefit

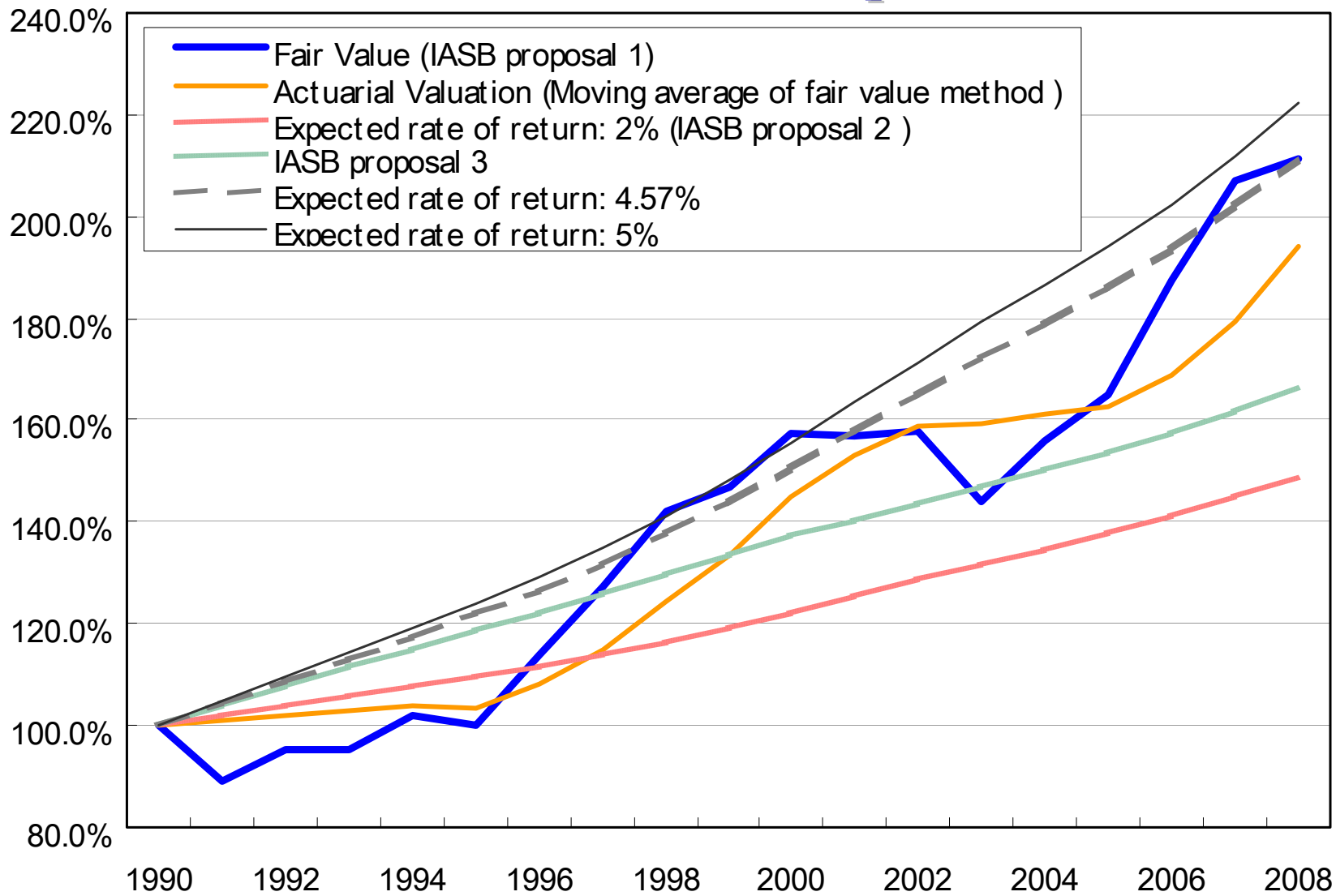
- **Benefit payment in each fiscal year**

- : 2.5% of the obligation of the post employment benefit

- **Discount rate: 2.0% (general setting in Japan)**

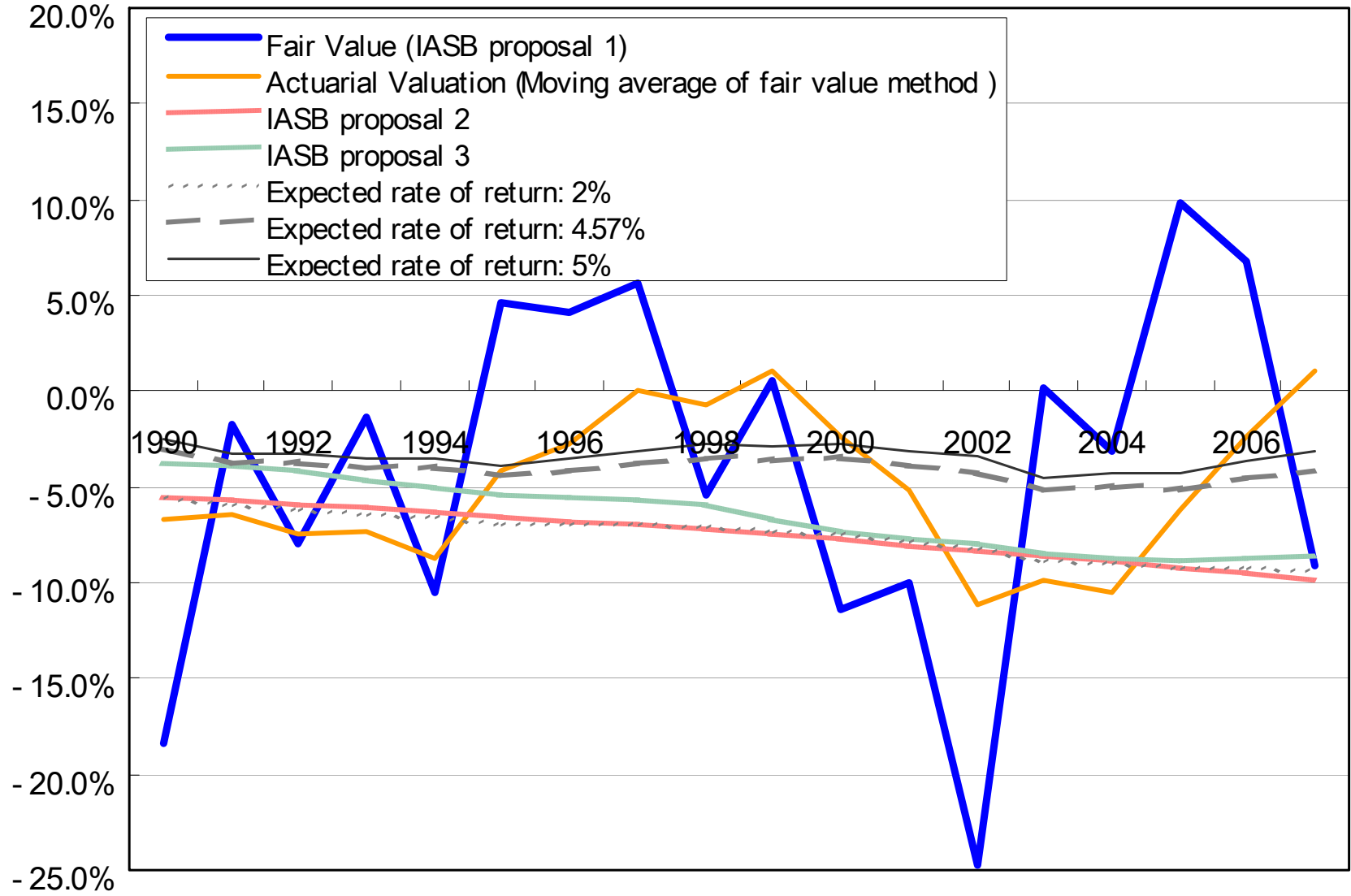
# **Results and Conclusions**

# Transition of 'AV in net profit or loss'

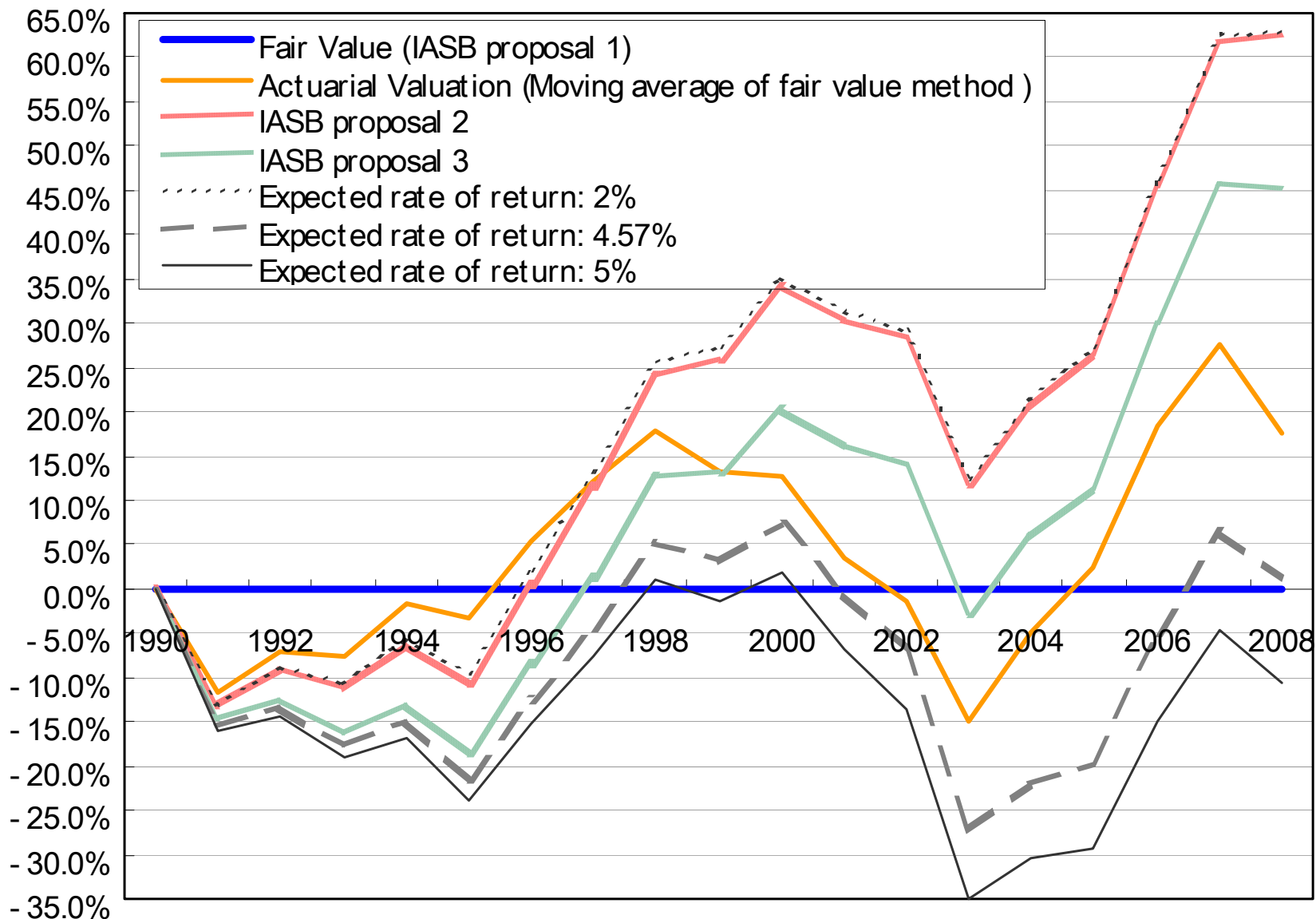


\* Setting the starting point at Jan. 1st 1990 as 100.0%

# Transition of recognized cost in 'net profit or loss'



# Transition of AOCI



# Conclusions 1

- **Main focus in the future for convergence**  
According to the latest discussion paper of the IASB, of all the asset and liability changes, which part of changes in asset side are recognized in 'net profit or loss' will be the main focus in the future.
- **The importance of 'AV in net profit or loss'**  
Evaluating of 'AV in net profit or loss' different from the fair value recognized in the balance sheet itself is of great importance to set the cost in 'net profit or loss' with the view of AL approach.
- **Three key requirements for the asset value**  
Picking up following three key requirements that make the asset value appropriate;
  1. Co-movement to the fair value
  2. Exclusion of discretion of employers
  3. Stability of cost

# Conclusions 2

- **Four merits of using 'AV in net profit or loss'**

- 1. Stability of cost**

: Cost is linked to the volatile realized return on pension assets every year, maintaining its stability.

- 2. Co-movement to the fair value**

: Evaluated value absolutely moves in tandem with the fair value.

- 3. Exclusion of discretion of employers**

: No discretion for employers to set the value of asset because the value is automatically linked to the fair value.

- 4. Clear definition of AOCI**

: Difference between the fair value of asset and the 'AV in net profit or loss', that is, AOCI, is able to have clear definition as a temporary account that was not yet recognized in 'net profit or loss' and the amount incurred in the past will be amortized by the end of the smoothing period.

# Conclusions 3

- Need for some mechanisms such as ‘recycling process’ of amortizing AOCI
  - According to the discussion paper, the IASB shows the reluctance ‘to introduce recycling into a standard that currently does not require it, pending its work in the financial statement presentation project’.
  - In this case, however, AOCI can be steadily piled up and not be extinguished. Therefore, it can be fair to say that some mechanisms such as ‘recycling process’ of amortizing AOCI have to be introduced.

# Thank you for your kind attention

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