



SOCIETY OF ACTUARIES

**Market-Consistent Embedded Value Seminar  
December 2008**

**Session 8: MCEV compared to others (EEV,  
IFRS, EC, etc)**  
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## MCEV compared with others

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Watson Wyatt Worldwide

Market-Consistent Embedded Value  
December 4-5, 2008 | Philadelphia, Pa.

December 5, 2008



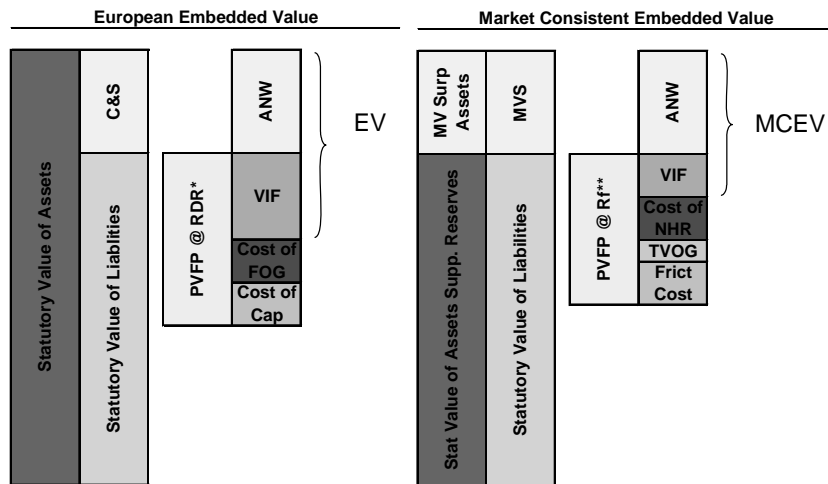
## Agenda

- From EEV to MCEV
- MCEV vs IFRS Phase 2, Solvency 2
- Impact - winners and losers?

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# EEV vs MCEV



\* Best Estimate Assumptions (incl. inv.), Risk adjusted discount rate

\*\* Market consistent inv. assumptions, Risk free discount rate

## Main differences with EEV principles

- Market consistency
- Cost of Required Capital renamed Frictional Costs
  - Costs of tax and investment management expenses from holding Required Capital
  - Reduces in size relative to top-down EEV approaches as investment returns and discount rates are now equal
- Cost of Non-Hedgeable Risk
  - Previously implicit allowance in discount rate
  - Explicit margin for price that markets put on non-hedgeable risks within insurance companies
- Improved disclosure
  - Increased transparency on methodology and assumptions
  - More consistency in analysis of results

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## Building blocks

### **MCEV**

- Free surplus +
- Required capital +
- Value of in-force business

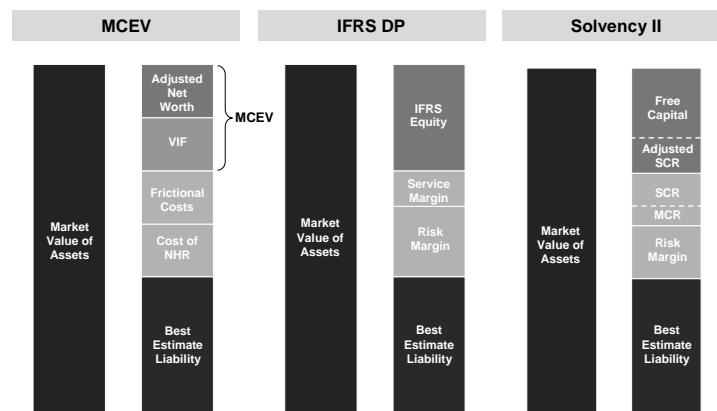
### **IFRS Phase 2**

- Estimates of the contractual cash flows
- Current market discount rates
- A risk margin and a service margin

### **Solvency 2**

- Technical provisions based on best estimate cash flows plus risk margin
- Discounted at risk free rate
- Hedgeable risks valued market consistently
- Non-hedgeable risks valued at best estimate plus risk margin

## Balance sheet comparison



## General approach

	MCEV Principles	IFRS phase 2 (IASB DP)	Solvency II (QIS 4)
Coverage	Covered business	Insurance contracts only	All
Basic measurement approach	Settlement/fulfilment value	Current exit value	Current exit value
Discounting basis	Swap rates	"consistent with observable current market prices for cash flows whose characteristics match those of the insurance liability, in terms of, for example, timing, currency and liquidity"	Swap rates
Own credit risk	Excluded	Included	Excluded

## Cashflow assumptions

	MCEV Principles	IFRS phase 2 (IASB DP)	Solvency II (QIS 4)
Demographic/expense assumptions	Entity specific	Market specific	Entity specific
Renewal premiums	Included even if non-contractual but "reasonably predictable"	Included if and only if -secures guaranteed insurability; or -insurer can compel policyholder to pay; or -increases liability	Included
Discretionary policyholder payments	Included	Included where there is a legal or constructive obligation	Included
Tax	Tax assets/liabilities discounted	Tax assets/liabilities not discounted	?

## Margins

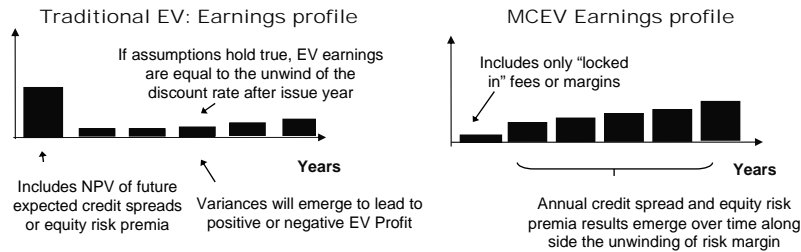
	MCEV Principles	IFRS phase 2 (IASB DP)	Solvency II (QIS 4)
Risk margin	Cost of residual non-hedgeable risk	"explicit and unbiased measurement of the compensation that market participants demand for bearing risk"	Risk margin for non-hedgeable risk (6% of NHR capital)
Frictional cost	Taxation and investment costs.	No	No
Service margin	No	"explicit and unbiased measurement of the compensation that market participants demand for ... providing other services"	No

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## Impact on EV earnings (1 of 2)

- Higher/lower MCEV compared to EEV at valuation date will mean lower/higher earnings on in-force in the future
- A key difference is that under MCEV, credit spreads & equity risk premia emerge over time only when realised
- Unwind of risk margin replaces unwind of risk discount rate



Earnings profile will be different

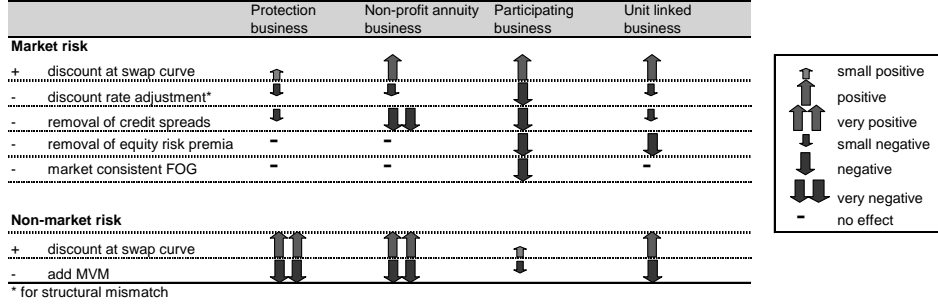
## Impact on EV earnings (2 of 2)

- MtM accounting means more volatility
  - Return on Free Surplus and Required Capital
  - Impact of ALM mismatch on liabilities, including
  - Cost of Financial Options and Guarantees
- Volatility is 'pure' and not due to accounting effects

Earnings likely to be more volatile

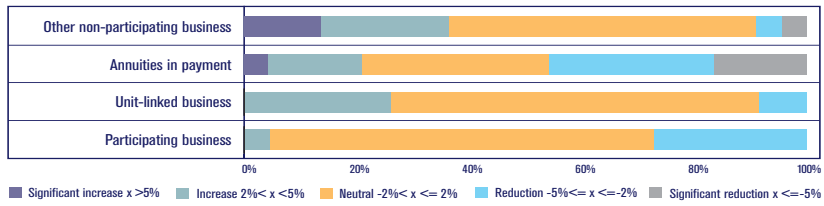
# Impact on different products

Expected impact for different product types of a shift from Traditional EV/EEV to MCEV

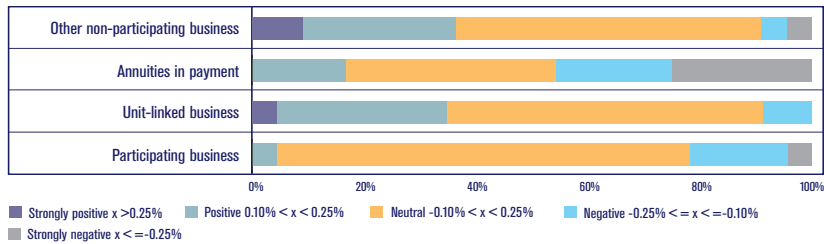


# The survey says...

Impact on in force value:

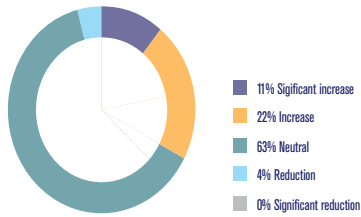


Impact on new business margin:

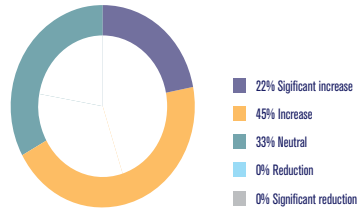


## The survey says...

- Impact on volatility of earnings (all companies)?

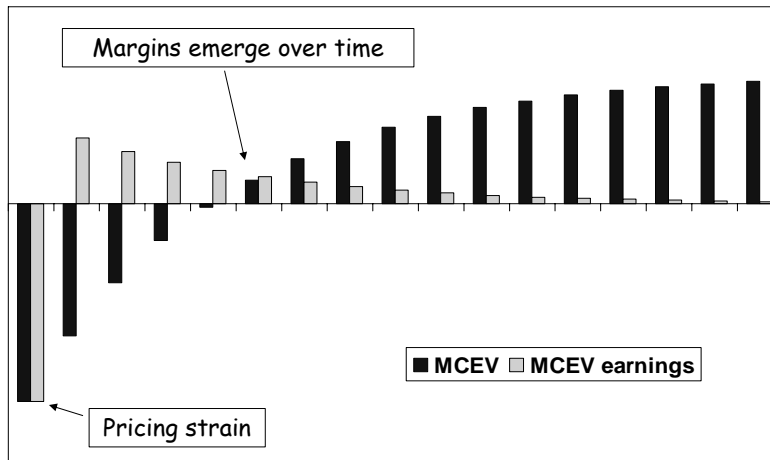


- Impact on volatility of earnings (those not currently reporting MC EEV)?

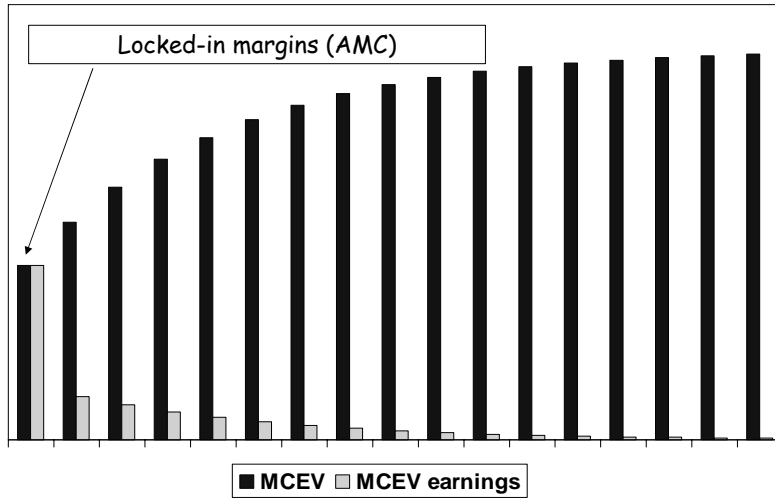


Managing and explaining volatility will be crucial

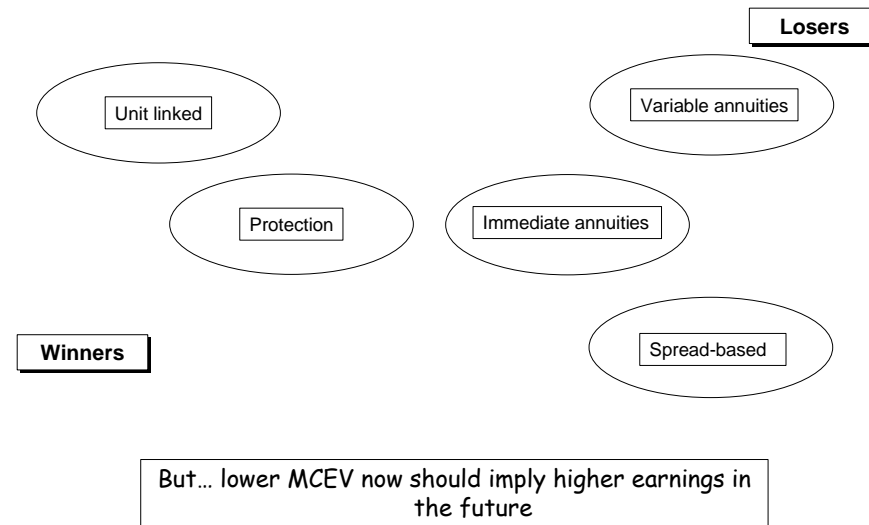
## Immediate annuity profile



## Unit-linked product profile



## Winners and Losers?



Questions?



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