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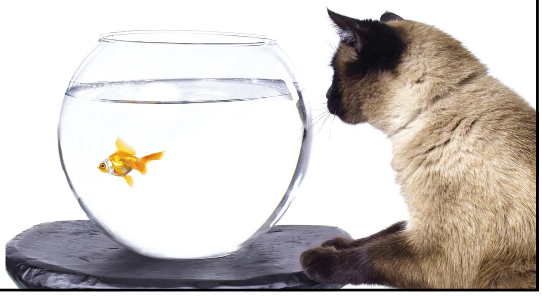

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- Solvency II
- IFRS 4 Phase II
- MCEV
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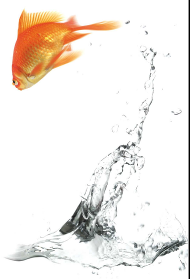
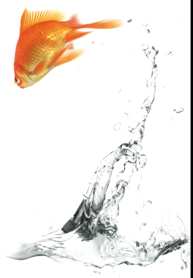
- Summary



Introduction



Introduction - Risk Management

- Risk management requires to somehow measure the amount of liabilities
- Three approaches
  - Regulatory – to protect policyholders interests
    - Solvency II
  - Accounting – to provide relevant and reliable information to investors
    - IFRS 4 Phase II
  - Shareholders – to measure consolidated value of shareholders' interests in the covered business
    - MCEV

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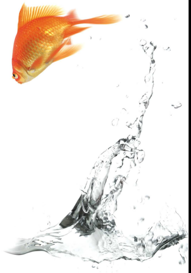
Solvency II



Solvency II

- New European risk-based economical framework to ensure that companies have the necessary financial resources and internal risk management
- Ensure protection of policyholders' interests by giving information on actual economical situation of insurer
- Measurement of liabilities
  - Liabilities shall be valuated at the amount for which they could be transferred, or settled, between knowledgeable willing parties in an arm's length transaction; no adjustment to take account of the own credit standing of the insurance or reinsurance undertaking shall be made

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Solvency II

- Estimates
  - Best estimate shall be equal to the probability-weighted average of future cash flows, taking into account the time value of money, using the relevant risk-free interest rate term structure
- Risk margin
  - Shall be calculated by determining the costs of providing an amount of eligible own funds equal to the SCRs necessary to support the insurance obligations over the lifetime thereof
- Own credit standing
  - Effects of own credit standing on the value of liabilities must be eliminated, even if the value of a liability is based on a readily observable market price. These effects also include changes in also include changes in the credit standing affecting the insurance industry as a whole (e.g. an industry-wide increase of credit spreads)

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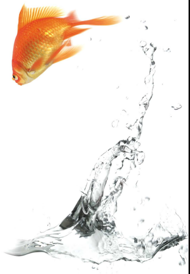
IFRS 4 Phase II



IFRS 4 Phase II

- New global framework related to the main components of an accounting model for Insurance contracts
- Providing of relevant and reliable information to investors (benchmark information on future profitability)
- Measurement of liabilities
  - Current exit value
  - Current fulfilment value
  - Value in use (IAS 36)
  - Others

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IFRS 4 Phase II – Measurement of Liabilities

- Current exit value (CEV)
  - Amount the insurer would expect to pay at the reporting date to transfer its remaining contractual rights and obligations immediately to another entity
- Current fulfilment value (CFV)
  - Expected present value of costs of fulfilling the obligation to the policy holder over time
- Value in use (as per IAS 36)
  - Present value of the future cash flows expected to be derived from an asset or cash generating unit

- Comments
  - CEV
    - Insurer's view of ***another entity's view*** of the "expected present value of the cost of fulfilling the obligation to the policy holder over time" ***plus*** the other entity's additional charge (plus or minus) for taking over the obligation
  - CFV
    - Insurer's ***own view*** of the "expected present value of the cost of fulfilling the obligation to the policy holder over time"

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Similarities between Current Fulfilment Value and Current Exit Value

- Main similar aspects of three building blocks (future cash flows, time value of money, margin)
  - Using current estimates of cash flows, rather than locked in estimates
  - Consistency with observable market prices for factors such as interest rates and equity prices *("market-consistent")*
  - Using expected value rather than a single outcome
  - Reflecting time value of money
  - Including a risk margin, and recognizing income in line with the release from risk. The objective of the risk margin should be to convey decision-useful information to users about the uncertainty associated with future cash flows

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Differences between Current Fulfilment Value and Current Exit Value I

- Estimates (CFV)
  - Estimates should be consistent with the estimates that market participants would face
  - It does not mean to exclude entity-specific cash flows
  - Board expects that insurer would use its own estimates of (servicing) expenses, unless there is clear evidence that the insurer is significantly more or less efficient than other market participants
- Own credit risk
  - Credit characteristic should not be part of CFV because an insurance company would not be able to realize such gains and remain a going-concern

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Differences between Current Fulfilment Value and Current Exit Value II

- Risk margin
  - Objective of risk margin should be to provide information on uncertainty of future cash flows
  - CEV: it is the amount the market participants require
  - CFV: it is not immediately clear what the principle would be
    - Two approaches discussed
      - Approach A is based on the cost of bearing risk
      - Approach B sets the initial margin to the premium

- Day one profit (CFV)
  - Approach A: Day one difference should be recognized as a liability, or in other comprehensive income
  - Approach B: The initial margin should be calibrated directly to the premium and should not allow for day one profits; margin should be reported in the income statement only as the insurer is released from risk

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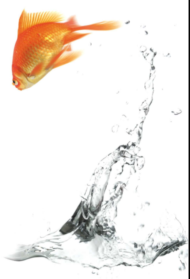
MCEV

Key Issues



CFO Forum

- High level discussion group
- Founded in 2002
- Focused on
  - New regulations for insurers
  - Increase in transparency for investors
  - Improving consistency of information reported
- 20 European-centred insurance groups

Aegon	**CNP**	**ING**	**Prudential**
Allianz	**Fortis**	**Legal & General**	**Scottish Widows**
Aviva	**Generali**	**Mapfre**	**Standard Life**
AXA	**Hannover Re**	**Munich Re**	**Swiss Re**
BNP Paribas	**IF P&C**	**Old Mutual**	**Zurich FS**

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Context for MCEV Principles

- European Embedded Value
  - Improved quality of sensitivities & disclosures
  - Explicit provision for options & guarantees
  - But apparent wide diversity of practice
- Future convergence within
  - MCEV (CFO MCEV Principles)
  - Solvency II (CRO Forum Market Value of Liabilities)
  - IFRS 4 Phase II (CFO Forum Elaborated Principles)

EEV May 2004	IFRS July 2005	EV Enhanced Disclosures October 2005	IFRS Elaborated Principles for Phase II June 2006	MCEV June 2008	IFRS 4 Phase II Solvency II

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Introduction – MCEV Principles

- MCEV = shareholder’s perspective on value, i.e. the present value of future cash flows available to the shareholder, adjusted for the risks of those cash flows
- Further improvements in disclosures, including
  - Standardised analysis of MCEV Earnings
  - Analysis of free surplus movement
  - Group MCEV analysis
- Framework for consistent analysis of business performance over time, highlighting financial performance compared to expectations

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Improvements from EEV

MCEV Principles address key issues

- Consistency of the basic framework for risk valuation
  - Economic assumptions
  - Financial risks
  - Non-financial and non-hedgeable risks disclosed
- Increased disclosures
  - Free surplus movement showing cash emergence for covered business
  - Disclosure of Group EV information
- Mandatory External Review

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MCEV

Technical Interlude

MCEV Principles

- MCEV Principles are a set of 17 principles of which 12 correspond to the existing EEV Principles
- Significant extension in the scope of at least 3 of them (numbers refer to the MCEV principles)
  - # 1 General purpose of (market consistent) embedded value
  - # 7 Financial Options and Guarantees
  - #17 Disclosure
- The remaining new 5 principles cover the following areas
  - # 8 Frictional costs of required capital
  - # 9 Costs of residual non hedgeable risk
  - #13 Investment returns and discount rates
  - #14 Reference (risk-free) rates
  - #15 Stochastic models

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#1 General Purpose

Market Consistent Embedded Value (MCEV) is a measure of the consolidated value of shareholders' interests in the covered business. **Group Market Consistent Embedded Value** (Group MCEV) is a measure of the consolidated value of shareholders' interests in covered and non-covered business.

- 'Non-covered business' should be included at least at the IFRS net asset value (with required adjustments)
- Except where they are not considered material, **compliance with Principles is compulsory** and any non-compliance with underlying Guidance should be explicitly disclosed
- For published MCEV results, **an independent external review must be performed**; the scope of the review should include, as a minimum, the methodology, assumptions, sensitivities, movement analysis and compliance with the Principles

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#2 Coverage

The business covered by the MCEV Methodology should be clearly identified and disclosed.

- MCEV Methodology should, where material, include, **as a minimum**, any contracts that are regarded as **long-term life insurance business**
- MCEV Methodology **may cover short-term life insurance** such as group risk business and long-term accident and health insurance business
- MCEV Methodology may be applied by group companies that are not predominantly long term insurance companies, e.g. banking groups and pension funds

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#3 MCEV Definitions

MCEV represents the present value of shareholders' interests in the earnings distributable from assets allocated to the covered business after sufficient allowance for the aggregate risks in the covered business. **The allowance for risk should be calibrated to match the market price for risk where reliably observable.** The MCEV consists of the following components

- Free surplus allocated to the covered business;
- Required capital; and
- Value of in-force covered business (VIF).

The value of future new business is excluded from the MCEV.

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#4 Free Surplus

The free surplus is the market value of any assets allocated to, but not required to support, the in-force covered business at the valuation date.

- Free surplus not formally allocated to covered business should not be included in the MCEV
- Free surplus unlike required capital is not required to support the in-force covered business at the valuation date and is therefore held at market value with **no associated frictional costs**
- Intangible assets should be removed from the free surplus to the extent that their recovery is supported out of future profits (such as deferred acquisition costs) or to the extent they represent the book value of acquisitions (such as transaction related goodwill)
- Practical interpretation: **Free Surplus = ANAV – Required Capital**

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#5 Required Capital

Required capital is the market value of assets, attributed to the covered business over and above that required to back liabilities for covered business, whose distribution to shareholders is restricted.

- Should be presented from a shareholders' perspective
- Should meet at least the shareholders' portion of the level of solvency capital at which the supervisor is empowered to take any action (will become involved in the management of the business)
- Should include capital to meet internal management objectives
  - To avoid closer attention from regulators
  - To meet internal risk-based capital goals
  - To maintain a given credit or financial strength rating

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#6 Value of In-Force Covered Business

The value of in-force covered business (VIF) consists of the following components:

- Present value of future profits (where profits are post taxation shareholder cash flows from the in-force covered business and the assets backing the associated liabilities) (PVFP)
- Time value of financial options and guarantees (TVOG, Principle 7)
- Frictional costs of required capital (Principle 8)
- Cost of residual non hedgeable risks (Principle 9)

- PVFP should reflect the intrinsic value of financial options and guarantees on in-force covered business
- Where shareholders expect renewal of in-force business this should be reflected in the MCEV (Principle 10)

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#7 Financial Options and Guarantees

Allowance must be made in the MCEV for the potential impact on future shareholder cash flows of **all financial options and guarantees** within the in-force covered business. The allowance for the time value of financial options and guarantees **must be based on stochastic techniques** using methods and assumptions consistent with the underlying embedded value. All projected cash flows should be valued using economic assumptions such that they are valued **in line with the price of similar cash flows that are traded in the capital markets**.

- Financial risks at current market price
  - No credit in present value for future returns in excess of swaps
  - Assets held at the valuation date are used as the starting point for the valuation
  - PVFP + TVOG reflects current cost of hedging financial risks

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#8 Frictional Costs of Required Capital

An allowance should be made for the **frictional costs of required capital** for covered business. The allowance is independent of the allowance for non hedgeable risks.

- Required capital at the greater of regulatory requirement or company target level
- Frictional costs should reflect the taxation and investment costs on the assets backing required capital
- Frictional cost of capital should be offset from the PVFP

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#9 Costs of Residual Non-Hedgeable Risks

An allowance should be made for the **cost of non hedgeable risks** not already allowed for in the time value of options and guarantees or the PVFP. This allowance should include the impact of non hedgeable non financial risks and non hedgeable financial risks. An appropriate method of determining the allowance for the cost of residual non hedgeable risks should be applied and sufficient disclosures provided to enable a comparison to a cost of capital methodology.

- Insurance (mortality, longevity, lapses), operational, and other risks require capital
- Best estimate assumptions for non hedgeable risks in TVOG and PVFP should reflect at least the mean expectation of outcomes of that risk variable; the total MCEV should allow for the mean impact of all non hedgeable risks on shareholder value; difference: asymmetries in the impact of these risks and risks not allowed for in TVOG or PVFP
- Allowance for uncertainty should be considered; allow for inaccuracy or insufficiency of the calibration of the market risk models
- Presentation through an equivalent average cost of capital charge on the projected residual non hedgeable risk based capital

#10 New Business and Renewals

New business is defined as that arising from the sale of new contracts and in some cases increases to existing contracts during the reporting period. The value of new business includes the value of expected **renewals** on those new contracts and expected future contractual alterations to those new contracts. The MCEV should only reflect in-force business, which excludes future new business. The value of new business should reflect the additional value to shareholders created through the activity of writing new business.

- Examples of indications that premium represents new business
  - New contract has been signed
  - Underwriting has been performed
  - New policy or new policyholder details have been entered on administration systems
  - Incremental remuneration has become due to the distributor/salesperson
  - The pricing basis for the premium allows for the full cost of their marketing and distribution
  - **It is a sensitive area** as the contribution from new business is a key indicator for users analysing the future prospects for the company

#11 Non Economic Projection Assumptions

The assessment of appropriate **assumptions for future experience** should have regard to past, current and expected future experience and to any other relevant data. The assumptions should be best estimate and **entity specific** rather than being based on the assumptions a market participant would use. Changes in future experience should be allowed for in the VIF when sufficient evidence exists. The assumptions should be **actively reviewed**.

- Best estimate assumptions: each component of cash flow, each policy group
- Dynamic policyholder behavior considered in TVOG
- Expense – ongoing levels except for startups (overruns separately in VIF)
- "*Look through*" basis for service companies' costs, allocation of holdings' costs
- External service companies allowed for through actual and expected fees
- Tax rates should consider the cash flows and tax position of the company

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#12 Economic Assumptions

Economic assumptions must be internally consistent and should be determined such that projected cash flows are valued in line with the prices of similar cash flows that are traded on the capital market. No smoothing of market or account balance values or unrealised gains is permitted.

- Where appropriate market instruments are available **price inflation** assumptions should be derived from them
- Investment returns must be those **actually earned on a market** basis over the period

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#13 Investment Returns and Discount Rates

VIF should be discounted using **discount rates consistent with** those that would be used to value such cash flows in **the capital markets**.

- Deterministic discounting with the reference rates for cash flows and guarantees that are linearly correlated or are uncorrelated with market movements
- Where cash flows contain financial options and guarantees such that they do not move linearly with market movements, asset cash flows can be projected and all cash flows discounted using risk-neutral stochastic models
- Alternative approaches, for example using deflators, may also be used
- Otherwise the reference rates should be used as risk free rates

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#14 Reference Rates

The reference rates used should, wherever possible, be the **swap yield curve** appropriate to the currency of the cash flows.

- Should be regarded as a proxy for risk free used in the calibration of the models
- Advantages
  - No value in advance from investing in risky assets
  - Swap markets are more liquid than government bond markets
  - Swap prices are consistent with how traded options are quoted which is the basis for the market-consistent valuation approach (Volatility of actual risky assets captured in valuation of options granted to policyholders)
- It is expected that Solvency II will be on the same basis
- Disadvantages
  - Swap yields contain a small margin for credit risk
  - In some markets swaps are not available at long durations or at all

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#15 Stochastic Models

Stochastic models and the associated parameters should be appropriate for the covered business being valued, internally consistent and, where appropriate, based on the most recent market data. Volatility assumptions should, wherever possible, be based on those implied from derivative prices rather than the historical observed volatilities of the underlying instruments.

- Stochastic models should cover all material asset classes
- Calibration of the model based on market values
- Volatility, correlations - sufficient number of the most recent data
- Check the reasonableness against external sources

#16 Participating Business

For participating business the method must make assumptions about future bonus rates and the determination of profit allocation between policyholders and shareholders. These assumptions should be made on a basis consistent with the projection assumptions, established company practice and local market practice.

- Future bonus participation and management action is important driver of MCEV
- Rules should be
  - Consistent with local regulation and contractual obligations
  - Consistent with other projection assumptions, especially future investment returns
  - Influenced by past company practice on future discretion
  - Influenced by market practice (policy behaviour)

#17 Disclosure

MCEV results should be disclosed at consolidated group level using a business classification consistent with the primary statements, with clear description of what business is covered by MCEV Methodology and what is not. Except where they are not considered material, compliance with the MCEV Principles is compulsory and should be explicitly disclosed.

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Consistent Analysis of Movement

	Earnings on MCEV analysis			
	FS	RC	VIF	MCEV
Opening MCEV				
Opening adjustments				
Adjusted opening MCEV				
New business value				
Expected existing business contribution (reference rate) (1) (2)				
Expected existing business contribution (in excess of reference rate) (1) (3)				
Transfer from VIF and required capital to free surplus				
Experience variances				
Assumption changes				
Other operating variance				
Operating MCEV earnings				
Economic variances				
Other non operating variance				
Total MCEV earnings				
Closing adjustments				
Closing MCEV				

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Consistent analysis of Group MCEV

	Covered business MCEV	Non covered business IFRS	Total Group MCEV
Opening Group MCEV			
Opening adjustments			
Adjusted opening Group MCEV			
Operating MCEV earnings			
Non-operating MCEV earnings			
Total MCEV earnings			
Other movements in IFRS net equity			
Closing adjustments			
Closing Group MCEV			

Example footnote: ***Non covered business reflects CU Xm less profit than IFRS reporting representing asset management profits for managing covered business assets that has modelled with the covered business MCEV***

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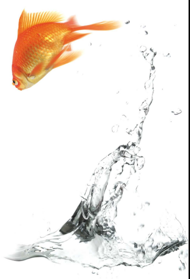
Summary



What the MCEV Principles Bring

- MCEV = shareholder's perspective on value
  - Present value of future cash flows available to the shareholder, adjusted for the risks of those cash flows
- Risk adjustments
  - Not taking any credit for any future investment returns in excess of risk-free rates ("given by swap rates")
  - Improvement in reflecting the current market price of hedging financial risks
  - Transparent allowance for non-hedgeable risks (now separated from O&G/CAC)
  - Reflecting the actual and expected experience of the specific business
- Further improvements in disclosures, including
  - Standardized definition and presentation of MCEV Earnings
  - Analysis of free surplus movement
  - Group MCEV analysis

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What the MCEV Principles Bring (cont.)

- MCEV – further considerations
  - Return on MCEV provides integrated measure of new business and in-force total performance
  - MCEV will be volatile if investment markets are volatile
  - Group MCEV combines MCEV for covered business with IFRS for non-covered business
- MCEV aligns with managing the business
  - Pricing with clear identification of the market price of risks
  - MCEV framework presents a clear picture of the asset/liability management choices made by companies
  - Disclosure of return potential if investments perform according to management's expectations
  - Integration between internal economic capital models and value models

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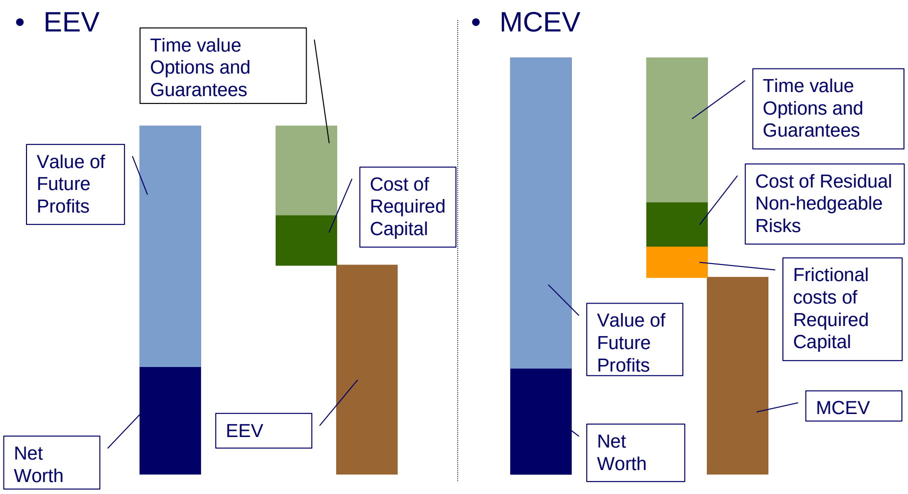
Comparison EEV vs MCEV



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Links to Solvency II and IFRS

	MCEV	Solvency II*	IFRS 4 Phase II**
Market-consistent financial assumptions driving best-estimate liability	Yes	Yes	Yes/Yes?/Yes?
Liability includes a risk margin above financial BEL	Yes	Yes	Yes/Yes/Yes
Current, not locked-in, assumptions	Yes	Yes	Yes/Yes/Yes
Scope of liabilities	Covered business	All	insurance + Investment DPF/Excluding IAS 39 Investment contracts/Excluding IAS 39 Investment contracts
Market value for all assets	Yes	Yes	No (IAS 39)
Entity-specific demographic / expense assumptions	Yes	Yes	Yes/No?/Yes
Reflect best estimate renewal premiums	Yes	Yes	Yes/No?/No?
Reflect best estimate policyholder benefits	Yes	Yes	Yes/No?/No?
Calibrate insurance liability valuation to premium at issue	No	No	No/No?/Depending on methodology
Own credit risk in valuation	No	No	No/Yes?/No
Diversification across portfolios considered	Yes	Yes	Yes/No?/No?
Discounted tax assets/liabilities	Yes	?	No/No/No
Frictional cost on total required capital	Yes	No	?

**under CRO Forum Market Value of Liabilities approach*
*** assuming CFO Forum Elaborated Principles/IASB Discussion: CEV/IASB Discussion: CFV*

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Literature

- MCEV Principles
- Solvency II, QIS 4
- Preliminary Views on Insurance Contracts (IASB)
- Agenda Paper 14A (IASB meeting 18 September 2008, London)

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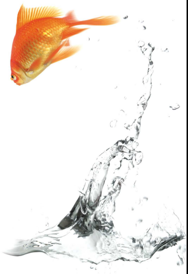
Děkujeme za pozornost!

Otázky



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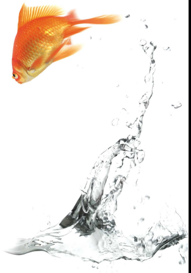

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