



IAIS Capital-related Stakeholder Meeting

IAIS Capital Development Working Group and Field Testing Working Group
Los Angeles, 5 February 2015



Agenda

1. Welcome
2. General discussion about ICS covering first 4 sections of ICS consultation document
3. Valuation – Section 5 of the ICS CD
4. Capital resources - Section 6 of the ICS CD
5. General approach to ICS capital requirement – Sections 7 and 8 of ICS CD
6. ICS capital requirement: an example of the standard method using the market-adjusted valuation basis – Section 9 of ICS CD
7. Other methods of calculating ICS capital requirement – Section 10
8. Wrap up, feedback and future capital-related stakeholder meetings

1 Welcome – 8:30-8:45

Structure of stakeholder meeting

- CDWG/FTWG members to briefly introduce each topic
- Speakers who have requested to speak on a topic will be asked to speak
- Floor opened for further comments and discussion

Introductory remarks

- 2 weeks until submissions due on ICS CD
- This stakeholder meeting is an opportunity to:
 - Provide initial feedback and views on the ICS CD
 - Seek clarifications about content in the ICS CD
 - We will not be providing resolutions to comments
- A number of members of the CDWG/FTWG are present today
- ICS CD is a product of all jurisdictions represented on CDWG/FTWG to develop, review and challenge the material
- Parts produced by different teams – 17 teams set up (individual contributions of some parts as well)

ICS Consultation document overview

- First step in a multi-year process to develop and finalise the ICS
- Very open consultation document – 169 questions
- ICS is a group-wide, consolidated insurance capital standard applicable to IAIGs
- The ICS is part of ComFrame, a comprehensive framework addressing qualitative as well as quantitative requirements for IAIGs
- Not intended as a legal entity requirement
- Once finalised and agreed, the ICS will be a measure of capital adequacy for IAIGs
- 10 ICS Principles

2 General discussion about ICS covering first 4 sections of ICS consultation document – 8:45 – 9:30

Sections 1-4

- 8 weeks consultation period (18 Dec 2014 – 16 Feb 2015)
 - Feedback by 16 Feb necessary to inform field testing tech specs development
- 2nd Quantitative Field Testing planned for end-Apr to end-June 2015
 - Testing of standard method and valuation basis
 - Note: this is combined with private reporting for BCR and field testing of HLA

Sections 1-4

- 3 Main components of ICS:
 - Valuation
 - Qualifying capital resources
 - ICS capital requirement

ICS Ratio = qualifying capital resources / ICS capital requirement

- ICS applies to all IAIGs including G-SIIs
 - Definition of 'IAIGs' and 'Group' to be taken from ComFrame
- Consultation Document focuses on Insurance activities
 - Treatment of Non-Insurance activities in ICS will be addressed in future consultation

Sections 1-4

- The ICS will constitute the minimum standard to be achieved and one which the supervisors represented in the IAIS will propose for adoption in their respective jurisdictions
- Supervisors will be free to adopt additional arrangements that set higher standards or higher levels of minimum capital
- Moreover, they are free to put in place supplementary measures of capital adequacy for the IAIGs in their jurisdiction

3 Valuation 9:30 – 10:30

Valuation

- Overall design of ICS - total balance sheet approach
- ICS Principles – complementary goals for valuation
 - Comparability – ICS Principles 1 and 5
 - Promote prudentially sound behaviour while minimising inappropriate procyclical behaviour – ICS Principle 7
- Segmentation noted as issue for further consideration across both valuation bases
- The absence of a consistent and comparable valuation basis across jurisdictions constitutes one of the main hurdles to be overcome to ensure the successful development of the ICS

Valuation

- In 2014, the IAIS Field Tested three valuation bases
 - Generally Accepted Accounting Principles Basis (GAAP valuation approach)
 - Generally Accepted Accounting Principles Basis with specified valuation for material assets and insurance liabilities (Market-adjusted approach)
 - Economic valuation approach

and assessed them against the criteria of Comparability and Risk Sensitivity

Valuation

- In October 2014, the IAIS decided that

“The market-adjusted valuation approach will be used as the initial basis to develop an example of a standard method in the ICS.

The GAAP valuation approach data will be collected. Reconciliation between the market-adjusted valuation approach and GAAP valuation approach will be requested of the participating IAIGs. This will be used to explore and, if possible, develop a GAAP with adjustments valuation approach.”

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- For 2015 Field Testing the IAIS
 - Will test refinements to the MA valuation basis
 - Will collect data on the GAAP with Adjustments valuation basis (details provided on Agenda item 3)
 - Volunteers will be asked to provide both valuation bases

3A POSSIBLE ENHANCEMENTS TO MARKET-ADJUSTED VALUATION APPROACH

MOCE

- 2014 Field Testing
 - (GAAP-)MOCE calculated during the 2014 FT is a balancing item;
 - Difference between the jurisdictional GAAP insurance liabilities and the current estimate as specified for FT.
- 2015 Field Testing
 - Investigation of a consistent and comparable MOCE.
 - Consistent with ICP 14.9:

The MOCE reflects the inherent uncertainty related to all relevant future cash flows that arise in fulfilling insurance obligations over the full time horizon thereof.

Purpose of the MOCE

- Two families of purpose for a consistent and comparable MOCE:
 - Margin for prudence
 - To cover insurance obligations at a particular confidence level;
 - To prevent/limit the recognition of profit at inception of the contract.
 - Margin to recognise a transfer value (including “own fulfilment” purpose)
 - To allow for the transfer of insurance obligations under distressed conditions; or
 - To allow for the transfer of insurance obligations under normal conditions.
- Question 4. Should the IAIS attempt to develop a consistent and comparable MOCE?
- Question 5. If the IAIS were to develop a consistent and comparable MOCE should it fulfil one of the possible purposes above?

IAIS yield curves

- 2014 field testing
 - Risk free interest rate curves developed based on market data.
 - Adjustment applicable to all insurance liabilities (based on 40% of the actual corporate bond spread at the 10 year maturity point).
 - The curves are flat after 30 years.
- Objective for 2015 field testing
 - Reflect on the feedback received.
 - Refine the approach used during the 2014 field testing.

Discounting feedback received

- Feedback from 2014 field testing
 - Mainly concerns with volatility and harm to the long term nature of insurance business
- Additional feedback received from industry
 - Long duration discount rates should not be extrapolated from extremely limited tenors
 - Use more stable long-term rate based on a macroeconomic or historical approach
 - Transition period between liquid maturities and long term rate

Other enhancements

- The specification of contract boundaries
- The valuation of options and guarantees
- The valuation of future bonuses and other discretionary benefits;
- Clarification of the relationship between current estimate as defined by the IAIS and 'best estimate' as defined in accounting and actuarial standards
- Deferred taxes

3B GAAP WITH ADJUSTMENTS VALUATION APPROACH

Background

- Of the 35 firms involved in field testing, about 60% are based in various jurisdictions that use IFRS, and about 40% countries such as the United States and Japan that use their own jurisdictional GAAP.
- Accounting basis used is not necessarily a function of the location of the firm's headquarters; for example, two non-U.S. volunteers use U.S. GAAP.
- There is no single global standard on accounting for insurance contracts; IFRS 4 allows local jurisdictional GAAPs
 - The consolidated insurance liabilities of an IFRS filer can be composed of an aggregation of provisions under multiple GAAPs – in effect, apples and oranges are aggregated
 - Two IFRS filers headquartered in the same country can have different jurisdictional GAAPs in their respective consolidated insurance liabilities, depending on the locations of their underlying businesses
 - Not all countries require IFRS; e.g., US and Japan each have their own GAAP
- Potential implications on 2015 field testing
 - Need for principles, and an example (U.S.)

Why GAAP+

- Concerns of some members of the FTWG/CDWG
 - Precedence in basing capital requirements on audited data, systems and processes
 - Deterministic v. stochastic reserving
 - Transparent and verifiable to supervisors
 - US issues - Address mutuals that file SAP which, for them, is GAAP
 - Roles of accounting and of auditing standard setters
 - Independent expertise; discipline; enforcement
 - IASB may adopt final standard late 2015
 - Some evidence that U.S. GAAP for life will yet converge with IASB (but not currently foreseen for non-life)
 - Lower maintenance costs/efforts in the long run

ExCo's Guidance

- The issue: Proceed only with market adjusted valuation, or also consider GAAP+?
- Debated by TC and ExCo at Amsterdam meetings
- Steer by ExCo “which does not prejudge any aspect of the Insurance Capital Standard (ICS)”, as follows:
 - *“The market-adjusted valuation approach will be used as the initial basis to develop an example of a standard method in the ICS.*
 - *The GAAP valuation approach data will be collected. Reconciliation between the market-adjusted valuation approach and GAAP valuation approach will be requested of the participating IAIGs. This will be used to explore and, if possible, develop a GAAP with adjustments valuation approach.”*
- ExCo is having ongoing discussions about comparability, goals, and implications on the ICS project plan

IAIS GAAP+ Workstream

- Activated post-Amsterdam
- Members:
 - Canada
 - EIOPA
 - Germany
 - Japan
 - United States: FIO (chair), Federal Reserve & NAIC
- Prepared GAAP+ text for ICS Consultation Document
- Currently discussing potential principles as support to determine necessary adjustments
- Will address specific adjustments and 2015 field test specs, including specific data elements and the nature of the reconciliation to be performed

Basic characteristics of GAAP+

- Focus only on the key items, i.e., invested assets and insurance liabilities, which should be adjusted from GAAP to a best estimate/consistent basis - Like MAV,
- Other prudential adjustments in the ICS guidance on capital resources should be consistent between MAV and GAAP + unless there is a compelling reason related to the differentiated treatment of invested assets and/or insurance liabilities
- Adjustments based on amounts, disclosures, systems and processes that are subject to independent audit and thus practicable and reliable given each firm's existing audited GAAP basis of reporting.

4 Capital Resources 10:45 – 11:30

Capital Resources

Proposed Changes from BCR to ICS:

- Modified naming: Tier 1 and Tier 2 instead of Core and Additional
- Introduce a Tier 1 composition limit in order to manage the quality of instruments in Tier 1 capital resources
- Qualifying criteria will distinguish between two types of Tier 1 instruments
- Tier 1 for which there is not a limit (e.g. common/ordinary shares): highest quality as these instruments take the first loss
- Tier 1 for which there is a limit (e.g. preferred shares and hybrid instruments): not highest quality because they do not meet all of the criteria for no-limit Tier 1 (e.g. they have a preference as to distributions or characteristics of a debt security, etc.)
- Tier 2 capital resources distinguished into paid-up and not yet paid-up
- Note: Relationship between BCR ('fixed') and ICS re Capital resources (evolving)

Capital resources – feedback sought

- Characteristics determining tier a capital instrument will fall in: Subordination, Availability, Loss absorbing capacity, Permanence, Absence of encumbrances and/or mandatory servicing costs (Question 18)
- Tiering of capital resources (Questions 19 to 22)
- Treatment of MOCE and Reserves (Question 23 and 24)
- Principal loss absorbency mechanism for Tier 1 capital resources for which there is a limit (Question 25)
- Tier 2 – DTA, computer software and DB pension plan assets (questions 26 and 27)
- Instruments issued by consolidated subsidiaries (Question 28)
- Deductions from Tier 1 capital resources (Questions 29 to 30)
- Deductions from Tier 2 capital resources – deduction or capital requirement (Question 31)
- Limits (Questions 32 to 36)

5 GENERAL APPROACH TO ICS CAPITAL REQUIREMENT 11:30 – 12:15

ICS Capital Requirement

Purpose	<ul style="list-style-type: none">• Should it be implemented as a PCR?• Should it be complemented by a (less risk-sensitive) backstop?
Risk coverage	Insurance, market, credit and operational risk
Risks not covered explicitly	Group risks, liquidity risk (but addressed in other risks)
Risk Measure (target criteria)	<ul style="list-style-type: none">• At least 99.5% VaR over one year• At least 90% Tail-VaR over one year
Risk mitigation	<ul style="list-style-type: none">• General principles for recognition of risk mitigation• Treatment of profit sharing and adjustable products
Diversification / Concentration	<ul style="list-style-type: none">• How to deal with risk dependencies (and subsequently level of diversification)

Risk Measurement – determination of capital requirements: potential approaches

- **Factor Based approach:** factors are applied to specific exposure measures (cf. BCR)
- **Stress Based approach:** Capital requirement is determined as decrease between the amount of capital resources on the unstressed balance sheet and the amount of capital resources on the stressed balance sheet.
- **Stochastic Modelling approach:** capital requirement is determined using stochastic processes giving scenarios for the possible outcomes of each risk factor
- **Structural Modelling approach:** built on causal relations specified a priori using a combination of statistical data and qualitative causal assumptions
- The ICS Capital Requirement may be built from a combination of approaches

Target criteria

- Risk measure
 - Seeking views (Q42) on: VaR, Tail-VaR, other?
- Time horizon: proposed to be 1 year
 - I.e. the ICS capital requirement is exposed to all events assumed to occur within the year, evaluated on the year-end balance sheet
 - Seeking views if (Q44) 1 year time horizon appropriate? Alternatives? Why?
 - Should the ICS include (Q45) Going concern/ new business during the year?
- As expressed in the ICS CD, our working assumption is to test two different target criteria:
 - a) At least 99.5% VaR over 1 year
 - b) At least 90% Tail VaR over 1 year.

Risk mitigation

- More precise and explicit allowance of risk mitigation than the BCR to be considered in the ICS subject to proposed general principles:
 - Consideration of basis risk during a stress scenario, and other risks associated with risk mitigation (e.g. credit risk)
 - Must be legally effective and enforceable; must be an effective transfer of risk to third party; assets and liabilities at reference date of ICS calculation; no double counting of mitigation effects; providers of risk mitigation should have an adequate credit quality, determined objectively

Participating products

- ICS capital requirement could be reduced for participating/profit sharing and adjustable products to the extent the discretionary benefits are recognised and identified in the insurance liabilities.
- Some criteria on the nature of the “discretion” will be specified to allow for the reduction of the capital requirement
- The reduction could be calculated:
 - Using scenarios projections of the capital requirement calculation; or
 - Based on the “value” of the discretionary benefits
- IAIGs may be requested to calculate the reduction
 - By major blocks of business, separately by jurisdiction; or
 - In aggregate as an overall adjustment

Concentration of risks & diversification effects in the ICS capital requirement

- Pooling of risks generally leads to diversification; risk concentrations reduce diversification; not all risk is diversifiable (systematic risk); diversification may decrease under stressed conditions
- Some diversification is considered to be recognized in the ICS capital requirement, taking into account in particular
 - the key variables driving dependencies
 - non-linear dependency
 - lack of diversification under extreme scenarios
- Three basic approaches may be considered:
 - Addition of risk charges for individual risks (full dependency)
 - Aggregation using a defined dependency structure (variance-covariance matrix or copulas)
 - Use of structural dependencies, usually reflecting the impact of identified risk drivers (e.g. specific economic variables such as inflation)
- Q56/57: How to address dependencies under stress? Any further aspects to consider?

**6 ICS CAPITAL REQUIREMENT: AN EXAMPLE OF
THE STANDARD METHOD USING THE MARKET-
ADJUSTED VALUATION BASIS – 12:15 TO 15:30**

Overview of example standard method

- While valuation basis is market-adjusted there are questions throughout the section asking –
 - If GAAP with adjustments were used as an alternative valuation approach...
- For each risk category determine an approach to measuring that risk which is suitable from those mentioned in section 8
- All quantifiable risks addressed as per section 7

Overview of approach to measuring risk in example standard method

Risk/Sub-risk Potential Approach	Factor-based	Stress	Other
<u>Insurance risks</u>			
• Mortality		✓	
• Longevity		✓	
• Morbidity/disability		✓	
• Lapse		✓	
• Expense Risk		✓	
• Premium	✓		
• Claim reserve/revision	✓		
• Catastrophe			✓
<u>Market risks</u>			
• Interest rate		✓	
• Equity		✓	
• Real estate		✓	
• Currency/FX		✓	
• Asset concentration	✓		
<u>Credit risk</u>	✓		
<u>Operational Risk</u>	✓		



9.2.1 Look-Through

Feedback sought on 2 approaches for applying look-through

Option 1:

- Full look-through applied whenever possible
- When not possible, apply partial look-through
- When no look-through possible, highest charge applied to full investment

Option 2:

- Adopt only partial look-through approach
- Rationale:
 - *Current holdings of a collective fund may not represent the true risk of the investment*
 - *Where a fund is leveraged, the risk is akin to equities risk because the fund unit holders or shareholders own a residual value of the fund*

6C INSURANCE RISKS

Insurance risks in the sample standard method

	Proposed Approach	Business	Level	Trend	Volatility	Catastrophe	#Q
Insurance risks							
• Mortality	Stress	Life & Non-Life	✓	✓	?	✗	10
• Longevity	Stress	Life & Non-Life	✓	✓	?	✗	
• Morbidity/disability	Stress (+Factor ?)	Life & Non-Life (Split ?)	✓	✓	✗	✗	7
• Lapse	Stress	Life	✓	✓	✗	✓	5
• Expense Risk	Stress	Life & Non-Life	✓	✓	✗	✗	2
• Premium	Factor	Non-Life	✓	✗	✗	✗	8
• Claim reserve/revision	Factor	Non-Life	✓	✗	✗	✗	6
• Catastrophe	Other	Life & Non-Life				✓	11

- 8 risks with an expected impact on either life, non-life or both
- Catastrophe risk in a dedicated risk module (except mass lapse)
- 50 related questions in the consultation

Common issues

- Grouping of life policies per homogeneous risk group (all risks) ?
- Geographical grouping and diversification ?
 - Potential geographical grouping (EEA, US & Canada, Japan, Other developed, Emerging)
- More or less detailed granularity ?
- Potential incidence of using a GAAP+ approach on the sample standard method ?

Mortality and Longevity risks specificities

- Two sides of a single risk driver (mortality rates)
- Including claims originating from non-life guarantees
- Over hedging of risks avoided by applying mortality stress (resp. longevity stress) on insurance liabilities contingent to mortality risk (resp. longevity risk)
- Main issues:
 - Sub risks needed (level, trend, volatility) ?
 - Unbundling of liabilities (measurement of risk mitigations) ?
 - Handling of participating policies ?
 - Potential bucketing of stress levels (+10% to +50%) ?

Morbidity/disability risk specificities

- A complex risk, across life and non-life business, covering:
 - 9 sub-risks
 - 3 types of claims payment patterns
 - 3 direct risks factors + indirect when the guarantee works as a top-up on an external primary claim
- Sample set of possible implementing scenarios : 3 combined (simultaneous) stresses
- Main issues:
 - More granular modelling (sub-risks, payment pattern, inclusion of indirect risk) ?
 - Differentiate between life and non-life ?
 - Fitness for purpose of the sample scenarios (content, aggregation technique) ?

Lapse (contractual option risk) – a life only risk

- A level and trend component
 - Higher than expected option take up
 - Lower than expected option take up / persistency
- And a mass lapse sub risk
- Excluding market related origins, included in market risk
- Main issues:
 - More sub-risks ?
 - Differentiation of the mass lapse component per product ?

Expenses risk specificities

- Appropriateness of the proposed methodology
 - Increase in unit expense level
 - + increase in expense inflation

Premium and claim/revision specificities

- Apply to the non-life risks not already covered by the life (mortality/longevity), morbidity/disability or cat risks
- On a segmentation informed by the field testing exercise
- Distinguishing between future insured events (premium risk) and already incurred events (claims/revision risk)
- Using mainly premiums and current estimates as exposure measures

- Main issues:
 - Practicability of unbundling life and cat (premium risk only) risk drivers ?
 - Fitness for purpose of the proposed factor based approach ?
 - Appropriateness of proposed exposures ?
 - Appropriate level of segmentation (e.g. reinsurance) ? Consistency between premium and claim/revision risks segmentation ?
 - Handling of multi-year covers ?

A cat risk based on perils

- Decomposed in perils potentially impacting many risks (including market risks)
- Natural catastrophes or man-made perils, with a reference list of predefined large perils (Cyclone, Windstorm, Earthquake, Terrorist attack, Marine collision and Pandemic).
- Potentially supplemented with IAIG specific other events for material other perils
- Main issues:
 - Aggregation across perils ?
 - Based on IAIS predefined scenarios ? IAIGs defined scenarios ? Internal models ?
 - Prerequisites to use IAIG defined scenario or partial internal model ?
 - Appropriateness of the predefined list of perils ?
 - Materiality definition for non predefined perils ?
 - Practicability to collect more information as part of field testing ?

6D MARKET RISK

Market risk

- Market risk is organised into several sub risks:
 - Interest rate risk
 - Equity risk
 - Real estate risk
 - Currency risk
- Spread risk – could be covered under credit or market risk
- Asset concentration risk (covered separately in example standard method)

Interest rate risk

- Interest rate risk is defined as the risk of loss arising from adverse movements in the level and volatility of interest rates.
- 2 approaches considered
 - **Duration based approach:** approach measuring duration of assets and liabilities
 - **Prescribed stress approach:** the interest rate risk charge will be the maximum loss to an IAIG's qualifying capital resources under various prescribed up and down interest rate stress scenarios

Equity risk

- **Broad class of assets**, including
 - Common listed equities
 - preference shares
 - infrastructure investments
 - Commodities
 - unlisted equities,.....
- **Coverage:** This risk module should capture all direct and indirect impacts on the financial situation of the IAIG of one or several stress scenarios related to the value of equities

Equity risk

- **Segmentation:** 5 buckets, distinction between emerging and developed markets
- **Aggregation:** 2 options
 - For each stress scenario, apply it to all equity classes simultaneously and then base the equity risk charge on the scenario that produces the maximum loss; or
 - For each of an IAIG's equity positions, determine the stress scenario that produces the maximum loss, and then base the equity risk charge on the results aggregated using a correlation matrix or other aggregation techniques.

Real estate risk

- Stress approach proposed
- 3 possible stresses
 - a) Stress to the level of real estate market prices;
 - b) Stress to the volatility of real estate market prices (proposed not to pursue); and
 - c) Stress to the amount and timing of cash flows from investment in real estate
- Question: Is it appropriate to include property held for own use in within the real estate risk charge?

Real estate risk

- For stress to the level of real estate prices – simple downward stress
- Possible other approaches:
 - a rental yield approach on the real estate stress allows for a layered approach - reference financial yield plus a real estate specific spread – stress e.g. financial yield = interest rate risk charge and real estate layer
 - split the market value of a property into the present value of contractually stipulated cash flows under leases in force (with no assumed renewals), and a residual amount – stress to value of lease based on credit risk charge and interest rate risk charge and equity risk charge on residual amount

Currency/FX risk

- Currency risk is the risk associated with changes in the level or volatility of currency exchange rates
- Stress approach proposed – effects on assets and liabilities
- Currency risk will be assessed against a reference currency
- Reference currency - official currency of the jurisdiction in which the IAIG is located or domiciled or the currency in which the financial statements are produced
- Stress - all currencies to which the IAIG is materially exposed
- Stress – both an increase and a decrease of the exchange

Currency/FX risk

- 2 possible approaches:
 - a) Individual stresses for each individual pairs of currencies or baskets of similar currencies (different level of granularity)
 - b) (Preferred) Single stress to be applied similarly to all currencies, based on a reasonably diversified portfolio of assets and liabilities deemed to replicate the exposure profile to currency risk of an IAIG
- Net capital investments in foreign subsidiaries – 2 options - like any other currency exposure or limited exemption of the investments from the currency risk charge

6E ASSET CONCENTRATION RISK

Asset concentration risks

- The IAIS expects IAIGs to have well-diversified asset portfolios
- Standard asset risk capital charges are generally developed under the assumption that asset portfolios are well diversified
- If asset portfolios are not well-diversified, an incremental capital charge is being proposed to address idiosyncratic asset risks
 - Focussed on exposures to single counterparties or connected groups, including reinsurers, as well as to property exposures
 - Calculated based on IAIS set specifications for 'net exposures'
 - Thresholds based on % of qualifying capital resources, similar to BCBS approach for limiting large exposures
 - Determining specific thresholds and Incremental charges will require much judgment, as no common approach exists
- Suggestions on direction and approach that the IAIS should take to address asset concentrations can be made in response to ICS CD

9F CREDIT RISK

Credit risk

Definition:

- Both risk of actual default and
- Losses due to deterioration in an obligor's creditworthiness short of default, including migration and spread risks

- Segmentation and Granularity – 8 identified segments (including other) – question asked
- Question about reducing reliance on mechanistic use of credit ratings
- Considering Basel standardised credit risk factors modified through expert judgement particularly taking into account different target criteria
- same credit risk approach for reinsurance, OTC derivatives counterparty, and off-balance sheet exposures as is used for bond and loan exposures.
- OTC derivatives and off-balance sheet exposures will be calculated by applying credit risk factors to credit equivalent amounts

9.2.6 OPERATIONAL RISK

Operational risk

- Examples include
 - losses due to fraud
 - failures in computer systems and administrative processes
 - mis-selling of products
- 3 possible options for determining operational risk charge
 - a) based on the other risk charges - e.g. the sum of the other charges after any diversification credit
 - b) based on the business of the IAIG – e.g. premiums or liabilities or account balance or
 - c) based on a combination of both (a) and (b)
- Considering a minimum or maximum contribution of the operational risk charge to the overall ICS capital requirement

AGGREGATION

How do we intend to aggregate the results arising from the application of factors/stresses?

- Proposed approach: explicit recognition of diversification through the use of correlation matrix
 - This will allow to take explicitly into account some diversification between risks reflecting different levels of diversification between IAIGs depending on their business (as opposed to single sum for instance).
 - Will apply in the absence of marginal distribution of risks (as opposed to use of copulas for instance).

Aggregation – correlation factors

- Option 1: use only correlations of 0 or 1
 - No need to calibrate specific correlation factors
 - Choice of factors (0 or 1) might not be realistic
- Option 2: use only a limited set of correlation factors (e.g. 0, low, medium, high, 100%)
 - Allow a more realistic approach than option 1
 - Avoid spurious accuracy in the calibration of factors considering the limited available data
- Option 3: calibrate all correlation factors without restricting a-priori the set of values

Aggregation – structure of correlation

- Option A: A single (big) correlation matrix

	Risk 1	Risk 2	Risk 3	Risk 4	...	Risk n
Risk 1	1	X_{12}	X_{13}	X_{14}	$X_{1\dots}$	X_{1n}
Risk 2		1	X_{23}	X_{24}	$X_{2\dots}$	X_{2n}
Risk 3			1	X_{34}	$X_{3\dots}$	X_{3n}
Risk 4				1	$X_{4\dots}$	X_{4n}
...					1	$X_{\dots n}$
Risk n						1

- Option B: Multiple steps of aggregation, each step using a correlation matrix



How do we intend to address the use of risk mitigation techniques/tools?

- General principles set out in the CD (previous slides)
- Detailed guidance on how risk mitigation should be taken into account within each risk/sub-risk to be set out in the technical specifications

How do we intend to address ALM?

- Work carried out to develop the factor-based approach set out for the BCR highlighted the difficulties of addressing this issue through additional factors or without increasing complexity
- Stress approach set out for the calculation of interest rate risk aims to overcome these drawbacks and provide a better recognition of ALM implemented by each IAIG

7 OTHER METHODS OF CALCULATING THE
ICS CAPITAL REQUIREMENT – 15:30 TO 15:45

Section 10 – Other Methods

- ICS may provide a range of options for determining the ICS capital requirement for IAIGs. The example standard method (Section 9) is one option.
- All of such methods must meet the ICS Principles; ICP 17
- Open question on the variation to standard method that should be allowed while ensuring comparability
- Possible other methods:
 - Variation in factors or parameters (leading to more prudent outcomes / better risk sensitivity)
 - Use of internal (and/or external) models

Section 10 – Other Methods

On internal models:

- Could cover some risks (partial models) or cover overall risks (full models)
- May use partial models as part of standard method
- Requires safeguards, explicit requirements & supervisory approval (para 370)

On external models:

- May be advantageous in certain areas, but subject to safeguards (e.g. CAT risk)

Possible criteria for supervisory approval:

- Quantitative aspects, e.g. suitability of methodologies, credibility of assumptions, quality of data
- Qualitative aspects, e.g. governance, risk management framework

7 WRAP UP, FEEDBACK AND FUTURE CAPITAL-RELATED STAKEHOLDER MEETINGS – 15:45 TO 16:00

End of first capital related stakeholder meeting

- How did the format work?
- Was it helpful?
- Is the timing of the stakeholder meeting useful?
- Length of the meeting?
 - We thought it needs to provide enough time for stakeholders to justify the travel
- Other thoughts

Other Stakeholder meetings

Capital related stakeholder meetings with CDWG/FTWG members

- Friday 20 March in Rome
- Wednesday 6 May in New York
- Tuesday 12 May in Tokyo
- Tuesday 4 August in Basel
- Monday 5 October in Basel

General Stakeholder Hearing

- Friday 19 June, Macau



IAIS

INTERNATIONAL ASSOCIATION OF
INSURANCE SUPERVISORS

Thank you

