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An Introduction to the Insurance Capital Standard and its impact on General Insurers

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Introduction to ICS

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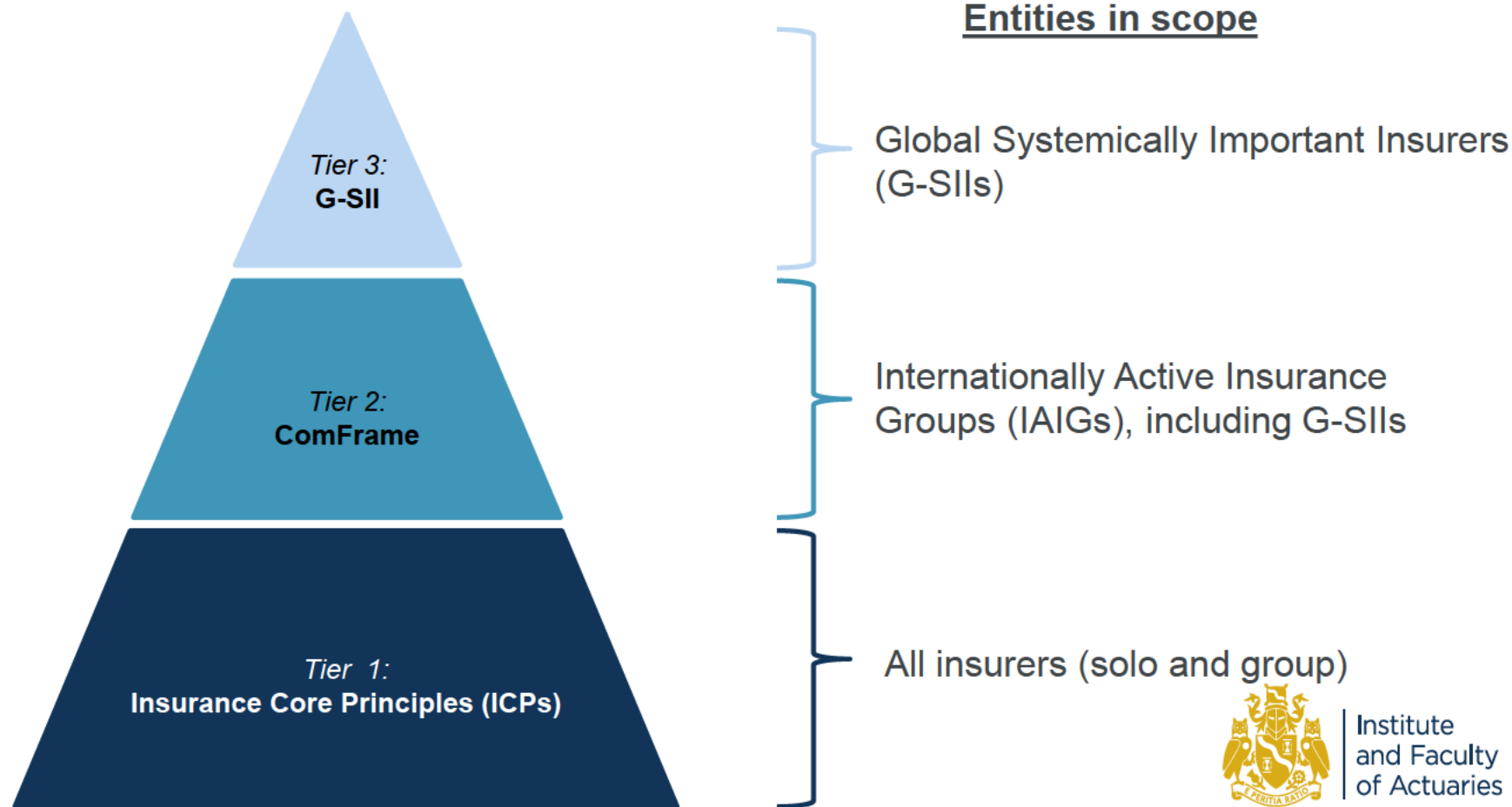
Who are the IAIS?

- The *International Association of Insurance Supervisors* (IAIS) was established in 1994 to **promote cooperation among insurance supervisors** around the globe and with supervisors in other financial sectors.
- Voluntary membership organization:
 - Regulators from more than 200 jurisdictions in more than 140 countries
 - 97% of the world's insurance premiums
 - All EU member states and EIOPA are represented in IAIS
- Its objectives are to:
 - Promote **effective and globally consistent** supervision of the insurance industry.
 - Contribute to **global financial stability**.



IAIS: Proposed regulatory framework

- The IAIS is proposing a three-tiered global regulatory framework:



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ComFrame: Context of ICS

The Insurance Capital Standard (ICS) forms part of the *Common Framework for the group-wide supervision Internationally Active Insurance Groups* (ComFrame), under development by the IAIS.

| Module 1: Scope of ComFrame | Module 2: The IAIG | Module 3: The supervisors |
|---|--|--|
| M1E1 Criteria for identifying of IAIGs | Group structure and strategy | Group supervisory process |
| | M2E1 IAIG's legal and management structures | M3E1 Supervisory process |
| M1E2 Process of identifying IAIGs | Group governance | Supervisory cooperation |
| | M2E2 Governance | M3E2 Supervisory colleges, cooperation and coordination |
| M1E3 Scope of IAIG supervision | Group ERM | Crisis management and resolution |
| | M2E3 Enterprise Risk Management | M3E3 Crisis management and resolution among supervisors |
| M1E4 Identification of group-wide supervisor | M2E4 ERM policies | |
| | Group financial condition | |
| | M2E5 Capital adequacy assessment | |

Source: Draft ComFrame, September 2014



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Scope of ICS

Internationally Active Insurance Groups (IAIGs) are designated by their lead regulator, following the following criteria:

- Size:
 - \$50bn total assets, OR
 - \$10bn gross written premiums
- International activity:
 - Premiums written in **three or more jurisdictions**, AND
 - At least **10%** of the group's total gross written premium written **outside the home jurisdiction**

There are expected to be ~55 IAIGs globally.



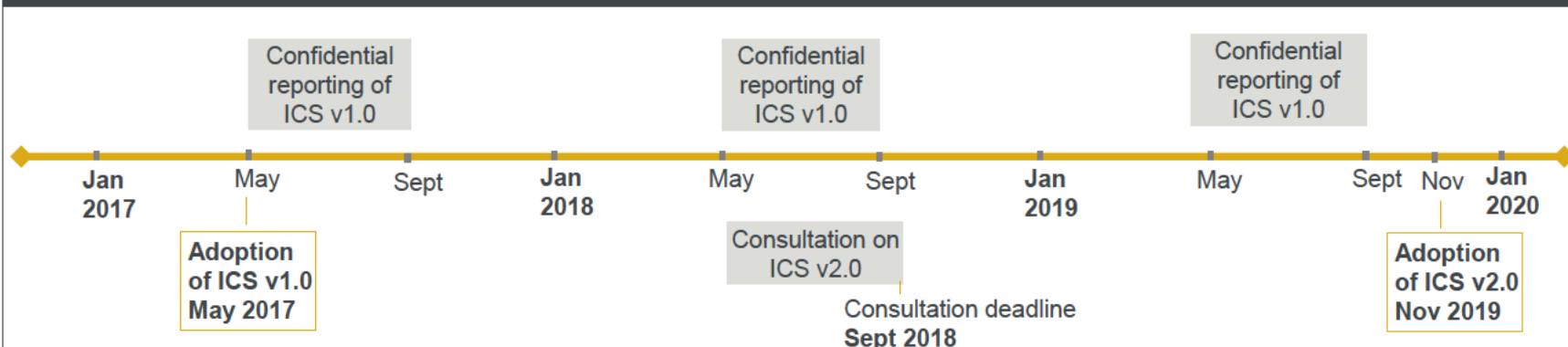
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ICS timeline

2016 ICS activities



2017 – 2019 ICS activities



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ICS Public Consultation

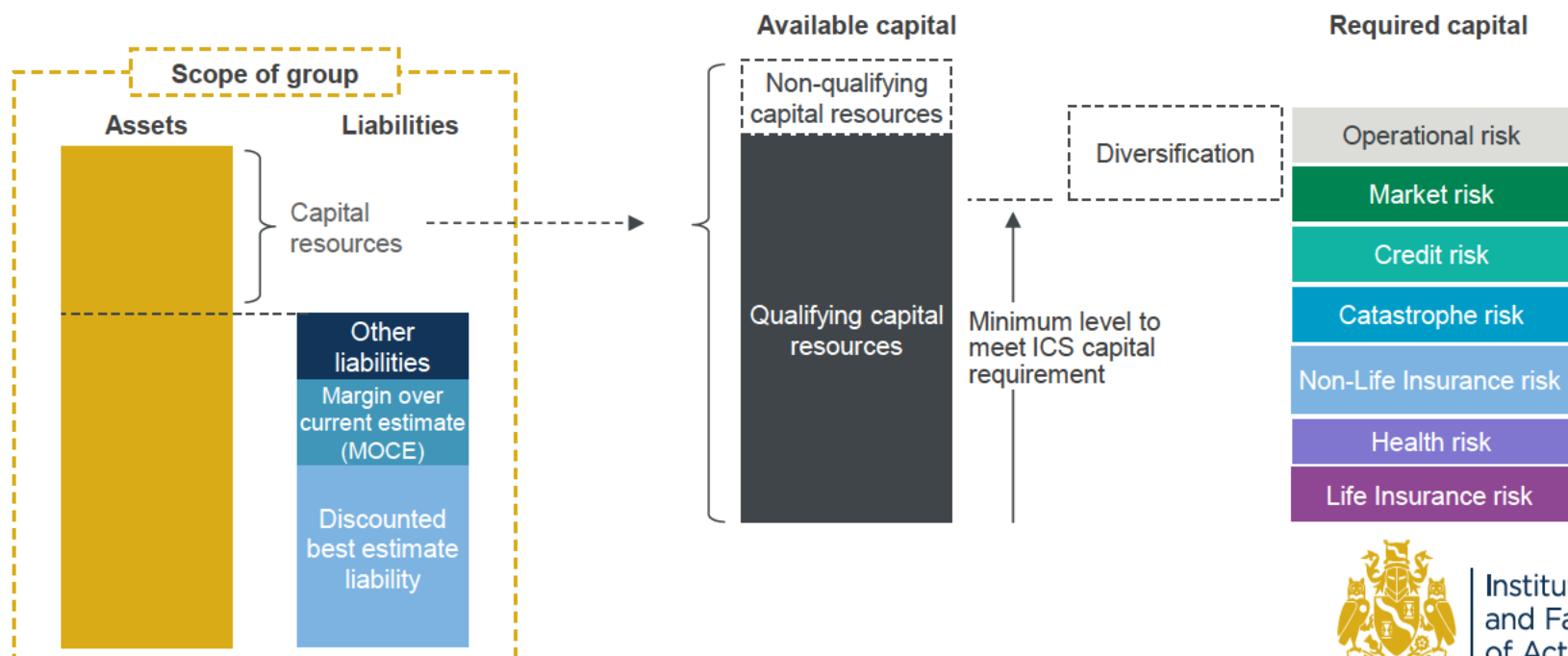
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ICS Consultation overview

The ICS consultation focuses on five main areas:

- 1 **Scope of Group**
 - Level of group consolidated balance sheet
- 2 **How to value assets and liabilities?**
 - MAV or GAAP+
 - Cost of Capital or Prudence MOCE
- 3 **How to assess quality of capital resources?**
 - Restrictions applied
 - Tiering of capital resources
- 4 **Capital requirements**
 - Exposure measures
 - Calibration of stresses
 - Diversification
- 5 **Holistic approach to tax**
 - Consistent tax treatment in valuation, MOCE, capital resources and required capital



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ICS Consultation questions

The Consultation document contains a total of **235** questions(!).

1 Scope of group (4)

2 Valuation (65)

MAV (28)

GAAP (15)

MOCE (19)

Reinsurance recognition (3)

3 Capital resources (21)

4 Capital requirement (126)

Risk Mitigation (8)

Look-through (1)

Management actions (4)

Life Risks (36)

Non-Life Risks (12)

Catastrophe Risk (13)

Market Risks (33)

Operational Risks (4)

Aggregation (8)

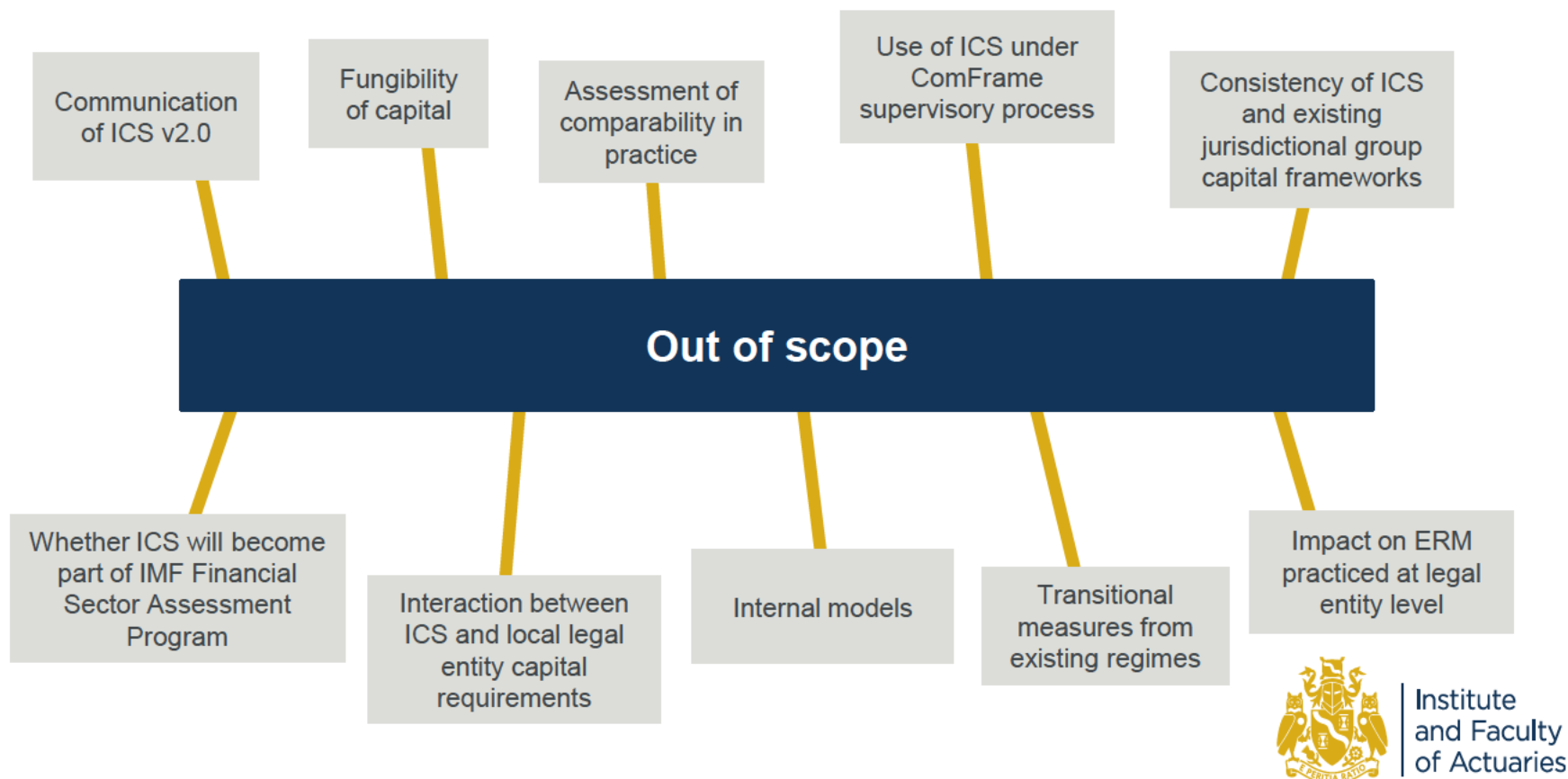
5 Holistic approach to tax (19)



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Issues excluded from scope

The IAIS has explicitly excluded a number of key issues from the scope of the 2016 consultation, in order to finalize ICS v1.0 in 2017.





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Valuation bases & Capital resources

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Valuation bases: MAV and GAAP Plus

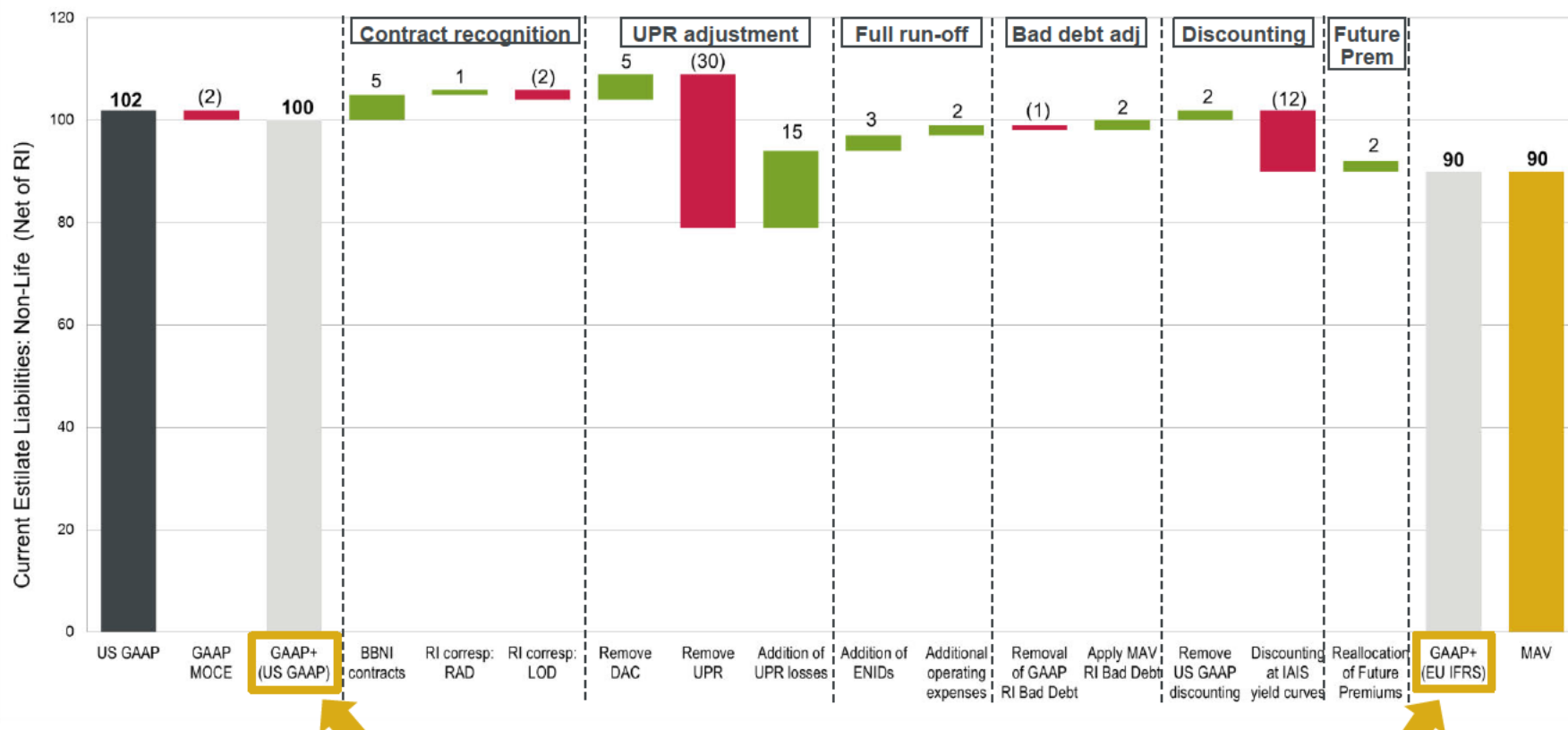
There are two valuation bases being considered within ICS.

| Valuation basis | Starting point | Adjustments | Similar to |
|--|--|---|--|
| Market adjusted valuation (MAV) | Jurisdictional GAAP accounting, with IAIS prescribed adjustments to significant components | <ul style="list-style-type: none"> Requirement to use current estimates for insurance liabilities IAIS prescribed yield curves for discounting Fair value for financial instruments | Solvency II |
| GAAP with adjustments (GAAP Plus) | <p>Audited, consolidated, general-purpose GAAP financial statements</p> <p>Examples provided for:</p> <ul style="list-style-type: none"> US GAAP US Statutory (<i>Mutuals</i>) EU IFRS Canada Chinese Taipei Japan Korea Singapore | <p>Examples provided of adjustments under various jurisdictional GAAP starting points.</p> <p>For non-life insurance liabilities:</p> <ul style="list-style-type: none"> <i>US GAAP</i>: Use US GAAP valuation, expected to be undiscounted in most cases <i>European IFRS</i>: Use Solvency II technical provisions as proxy while IFRS Phase II being developed | <p>Depends on starting local GAAP...</p> <p><i>US GAAP filers</i>:</p> <ul style="list-style-type: none"> US GAAP <p><i>EU IFRS filers</i>:</p> <ul style="list-style-type: none"> Solvency II |

Valuation bases: Current estimates

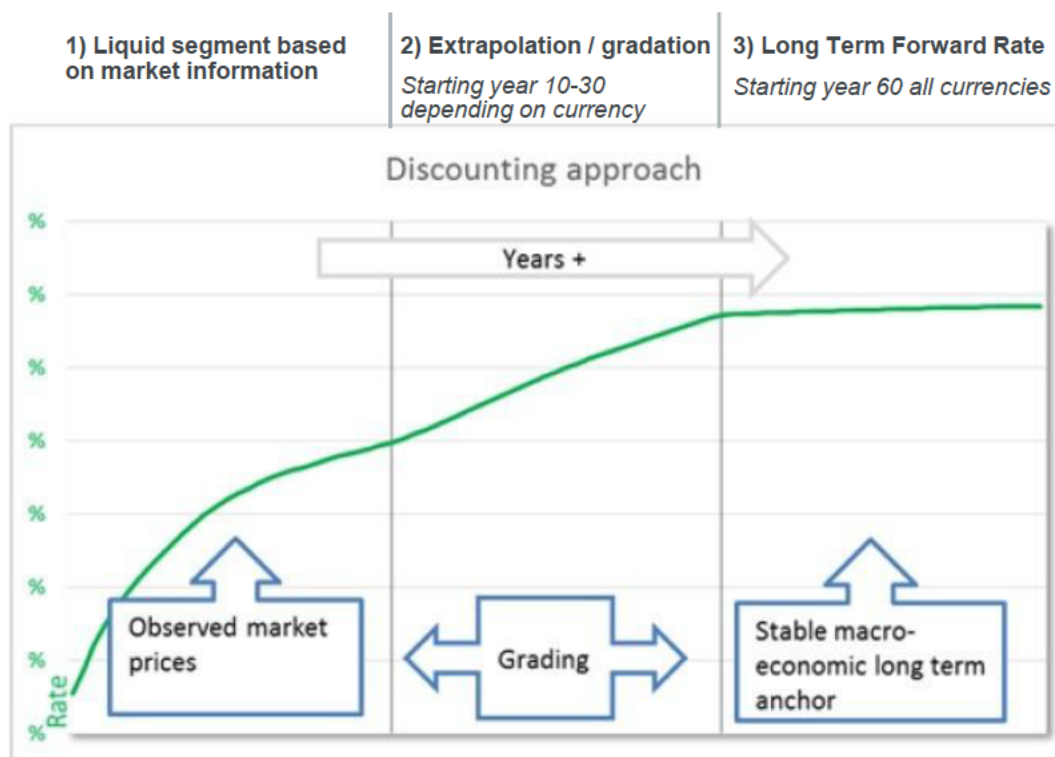
The chart below shows an example of how the different bases compare for net current estimates.

Example valuation adjustments between accounting bases
Net Current Estimate (excluding Risk Margin)



Discounting (MAV): Base yield curves

Discounting is based on yield curves by currency, broken into three segments:



The proposed Long Term Forward Rate is based on a macroeconomic approach using OECD information.



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Discounting (MAV): Credit spread adjustm't

- Hot topic in ICS this year is credit spread adjustment above risk free yield curves
 - Mainly issue for Life insurers, with long term business
 - Less material for Non-Life insurers, but causes operational complexities to produce results
- Three options are being tested in 2016, along with three reference methods:

| Reference Methods | | | | Options | | |
|----------------------------------|-----------|--------------------------------------|---|---------------------------------------|---|---|
| | Risk-free | 2015 methodology | Asset earned rate | Option 1: Currency-specific | Option 2: Firm-specific | Option 3: Bucketing |
| Liability segmentation (buckets) | N/A | 1 | 3 | 1 | 1 | 3 |
| Portfolio Composition | N/A | Reference portfolio per jurisdiction | IAIG's own portfolio – own view of asset earning rate | Representative portfolio per currency | Weighted average based on firm's assets | Weighted average based on firm's assets |
| Default Deduction | N/A | Included in 60% deduction of spread | Risk Correction | Risk Correction | Risk Correction | Risk Correction |
| Liquidity buckets | 1 | 0% | 100% | 80% | 100% | 80% |
| | 2 | | 60% | | | 60% |
| | 3 | | 40% | | | 40% |

Includes Non-life disability annuities (e.g. UK PPOs)

Most Non-Life insurance

Margin Over Current Estimate (MOCE)

- ICS MOCE was introduced to reflect inherent uncertainty in future cash flows arising from fulfilling insurance obligations.
- Two approaches are being considered:

| Valuation basis | Description | Consultation issues | Consistent with |
|---|---|--|--|
| Cost of Capital MOCE (CoC-MOCE) | Margin to recognize transfer value <i>Cost of capital approach</i> | <ul style="list-style-type: none"> Cost of Capital parameter (5%) Projection of capital requirement Discount factor Included within Capital Resources? | Solvency II |
| Prudence MOCE (P-MOCE) | Margin for prudence <i>Avoid recognition of future profits / discounting</i> | <ul style="list-style-type: none"> Should it be loss absorbing? If yes, under which circumstances? Should it be stressed in the ICS capital requirement? | US GAAP UPR + <i>undiscounted reserves</i> |

Care needs to be taken to ensure the MOCE is consistent with the valuation basis, e.g. US GAAP Plus with CoC-MOCE will lead to two risk margins.



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Capital Resources

- Capital resources are subject to tiering and other eligibility restrictions, similar to Solvency II.

| | ICS Capital Resources | Solvency II Own Funds |
|--------------------------|---|---|
| Number of tiers | Two tiered system Tier 1: Unlimited / Limited Tier 2: Paid-in / Not paid-in | Three tiered system Tiers 2&3: Basic / Ancillary |
| Composition limits | Tier 1 limited: (two approaches) <ul style="list-style-type: none"> <10% of ICS, or <20% of Tier 1 capital Tier 2 < 50% of ICS Tier 2 non-paid up <10% ICS | Tier 1 > 50% of SCR Tier 2 & 3 < 50% of SCR Tier 3 < 15% of SCR |
| Structural subordination | Currently not eligible, but being consulted on | Not eligible |
| Encumbered assets | Encumbered assets not eligible | Restrictions based on encumbrance, but assets may be eligible at lower tier |

Senior debt issued by the holding company and pushed down to subsidiaries is structurally, but not contractually, subordinated to policyholders



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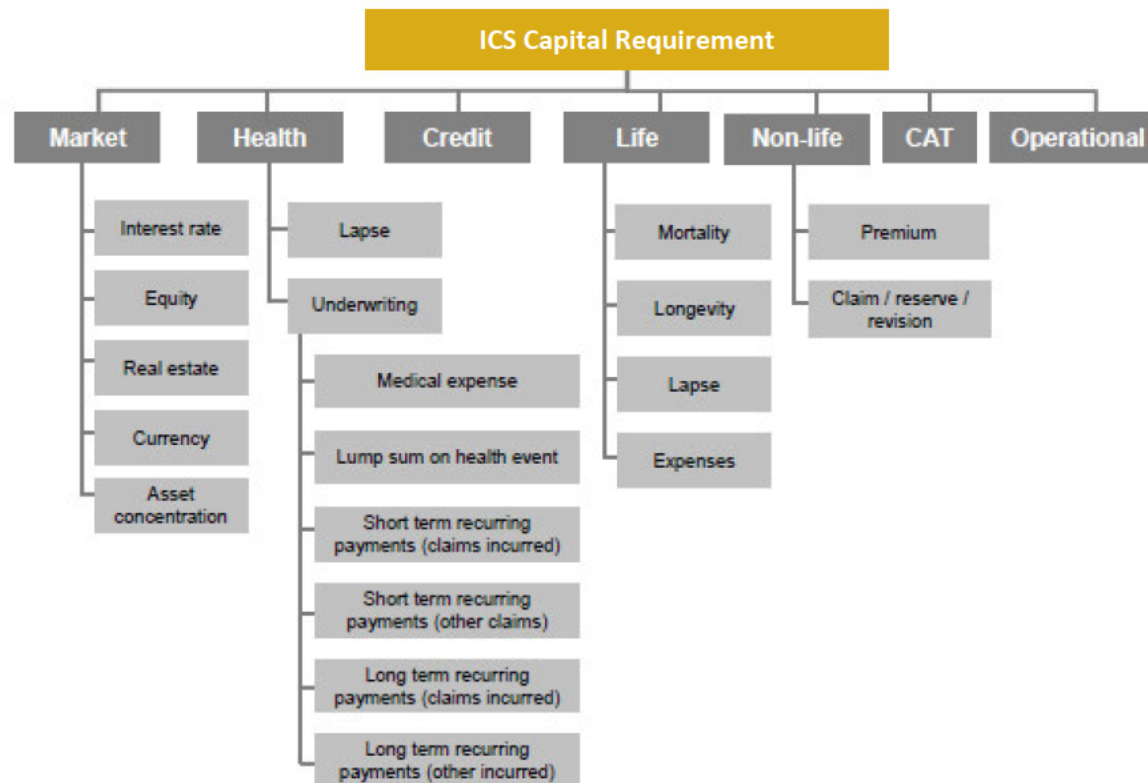
Capital requirement

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Overall structure

The risks within the ICS capital requirement can be broken down as follows:



Risk categories included

The categorizations of risks are broadly consistent with other regimes:

| Types of risks | IAIS (ICS) | Solvency II (SCR) | US (RBC) |
|-----------------------------------|-------------------------|--------------------|---------------------------------|
| Non-life underwriting risk | | | |
| Premium risk | ✓ | ✓ | ✓ |
| Reserve risk | ✓ | ✓ | ✓ |
| Natural catastrophe risks | ✓ | ✓ | Implicit in Prem and Res risk . |
| Man made catastrophe risks | ✓ | ✓ | Implicit in Prem and Res risk * |
| Health risk | ✓ | ✓ | ✓ |
| Life underwriting risk | | | |
| Mortality risk | ✓ | ✓ | ✓ |
| Longevity risk | ✓ | ✓ | ✓ |
| Morbidity/disability risk | ✓ | ✓ | ✓ |
| Lapse | ✓ | ✓ | ✓ |
| Expenses | ✓ | ✓ | No |
| Market risk | | | |
| Interest rate risk | ✓ | ✓ | Variable annuity only |
| Equity risk | ✓ | ✓ | ✓ |
| Property risk | ✓ | ✓ | ✓ |
| Spread/credit default risk | Included in credit risk | ✓ | ✓ |
| Concentration risk | ✓ | ✓ | ✓ |
| Currency risk | ✓ | ✓ | No |
| Credit/counterparty risk | ✓ | ✓ | ✓ |
| Operational risk | ✓ | ✓ | Implicit in Prem and Res risk * |
| Aggregation of risk types | | | |
| | Correlation matrix | Correlation matrix | Sum of squares |
| Geographic diversification | ✓ | ✓ | No |

* Explicit consideration under development



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Premium & Reserve risk: Methodology

Premium risk is based on factors, by product class and jurisdiction, applied to net earned premiums and net claims reserves (GAAP Plus and MAV bases).

Segmentation:

- Jurisdictional statutory reporting segments maintained for each region
 - e.g. Solvency II classes for EEA; US annual statement classes (“yellow book”)
- Segmentation by location of risk, rather than location of writing legal entity
 - Brings operational challenges for insurers to obtain these splits

Calibration:

- IAIS are collecting supplemental Non-Life data to help calibrate charges

Aggregation:

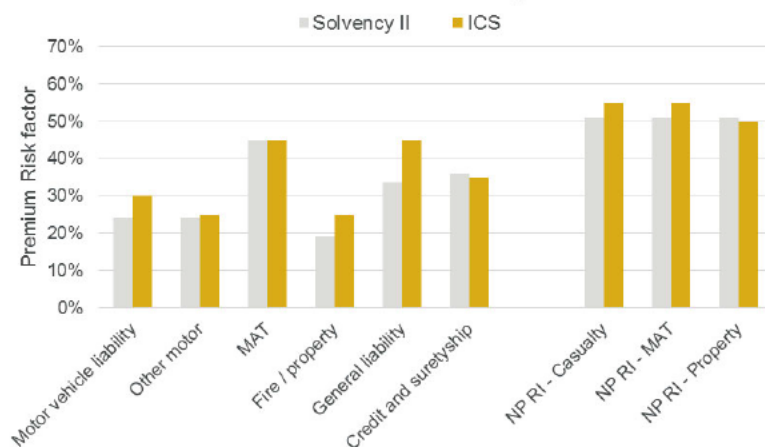
- Diversification given between LoBs and geographic regions



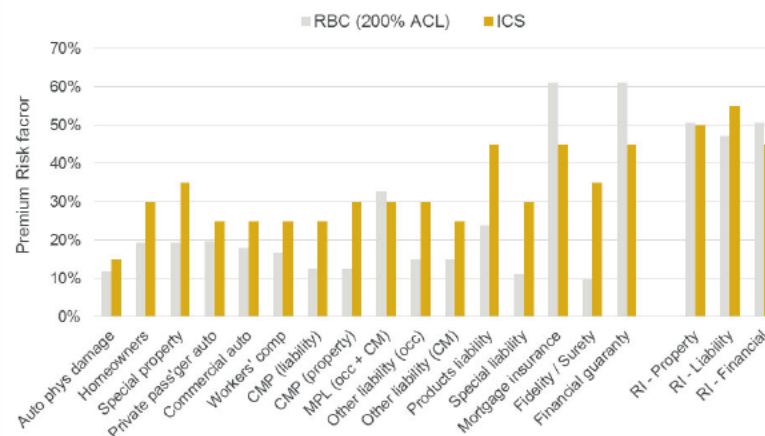
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Premium & Reserve risk: Charge factors

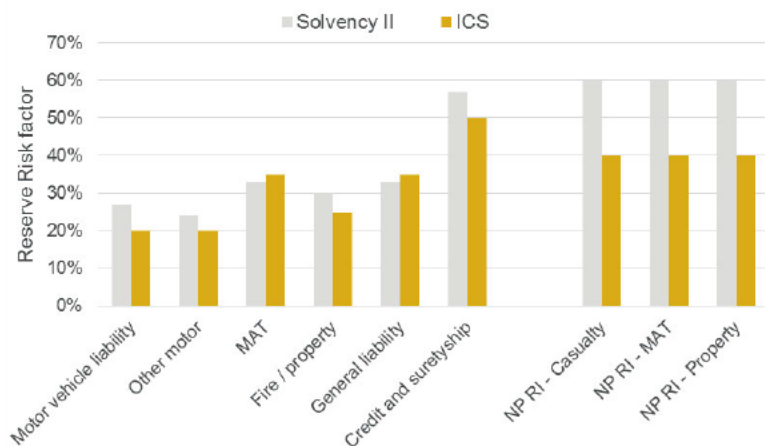
Premium Risk factors: European risks



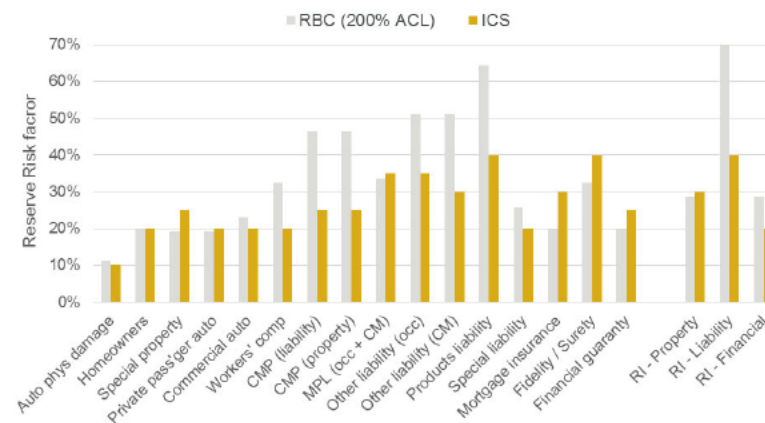
US Premium Risk factors: US risks



Reserve Risk factors: European risks



Reserve Risk factors: US risks



Catastrophe Risk

IAIS categorize Catastrophe Risk into the following risk types:

Natural Perils

- a) Tropical cyclone
- b) Extra-tropical windstorm
- c) Earthquake
- d) Other material Nat Cats, e.g.:
 - Flood
 - Tornado / Hail / SCS
 - Other risks

Man-made scenarios

- a) Terror attack
- b) Latent Liability
- c) Pandemic
- d) Marine
- e) Aviation
- f) Credit / Surety

- IAIS allows use of natural catastrophe models, calibrated to 99.5% VaR (1 yr)
 - *Differs from SII's factor-based methodology, consistent with Bermuda approach*
- Man-Made catastrophes remain factor or scenario based approaches, e.g. largest aviation collision loss. *(see next slide for details)*

Per the 2015 Field Testing *(includes Life/Health)*:

- Natural Catastrophes accounted for 40% of Catastrophe Risk
- Liability Catastrophe accounted for 30% of Catastrophe Risk
- Risk mitigation is material (on average reduced gross loss by 30%)



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Man-Made Catastrophe Risk

| | ICS | Solvency II |
|-------------------------|--|---|
| Terror attack | 1-tonne bomb blast in highest exposed area: <ul style="list-style-type: none"> 50% damage within 100m radius 20% damage between 100-200m radius 10% fatality rate within 100m radius 1% fatality between 100-200m radius | Damage due to fire or explosion, including as a result of terrorist attacks, impacting all buildings within a radius of 200m. |
| Latent liability | Set of factors (see below) applied to average of last 8 years Gross Earned Premium | Set of factors (see below) applied to next year's Gross Earned Premium |
| Pandemic | Global increase in deaths of 1.0 per thousand | Global increase in deaths of 1.5 per thousand (Life Catastrophe Risk module) |
| Marine | Largest loss of vessel or offshore platform | Largest tanker collision or platform explosion |
| Aviation | Largest loss from collision of two aircraft | Largest loss from single aircraft |
| Credit / Surety | Charges for i) Mortgage insurance, ii) Trade Credit and iii) Surety | Charges for i) Default (10% credit exposure) and ii) Recession (100% earned premiums) |

Liability Catastrophe

| ICS factors | Product liability | | Gen comm liab | | EL / Work Comp | |
|-----------------|-------------------|------|---------------|-----|----------------|-----|
| | Prop'l | NP | Prop'l | NP | Prop'l | NP |
| EEA & Swiss | 45% | 90% | 25% | 50% | 25% | 50% |
| US / Canada | 65% | 130% | 35% | 75% | 15% | 30% |
| Japan | 35% | 65% | 20% | 35% | 20% | 35% |
| China | 25% | 50% | 15% | 30% | 15% | 30% |
| Other developed | 30% | 60% | 15% | 35% | 15% | 35% |
| Emerging mkts | 25% | 50% | 15% | 30% | 15% | 30% |

Liability Catastrophe

| Solvency II | SCR Factor |
|--------------------------|------------|
| Professional Malpractice | 100% |
| Employers Liability | 160% |
| D&O Liability | 160% |
| Other Liability | 100% |
| Non-Prop'l RI: Liability | 210% |

| | Correlations | | | | |
|-------|--------------|------|------|-------|-------|
| | PM | EL | D&O | Other | NP RI |
| PM | 100% | 0% | 50% | 25% | 50% |
| EL | 0% | 100% | 0% | 25% | 50% |
| D&O | 50% | 0% | 100% | 25% | 50% |
| Other | 25% | 25% | 25% | 100% | 50% |
| NP RI | 50% | 50% | 50% | 50% | 100% |

Market Risks

Market risks are broken down into the following risk types:

| | ICS | Solvency II |
|---------------------------------|---|---|
| Interest rate risk | Three IAIS prescribed shocks to yield curves: <ul style="list-style-type: none"> • Up • Down • Flattening | Two EIOPA prescribed shocks to yield curves: <ul style="list-style-type: none"> • Up • Down |
| Equity risk | 35% decrease in listed shares, developed mkts 48% decrease in emerging market shares 49% decrease in all other types of assets Increase in volatilities, depending on maturity Decrease in hybrid debt, by credit rating | 39% decrease in listed shares, developed mkts 49% decrease in emerging market shares <i>...plus symmetric adjustment between +/-9%</i> 22% decrease in strategic participations |
| Real estate risk | 30% decrease in value of real estate exposure (including own use) | 25% decrease in value of real estate exposure (including own use) |
| Currency risk | Risk charge on pairwise currency interactions Applied to excess of assets over “liabilities + 10% net insurance liabilities”, with latter term representing subsidiary’s contribution to ICS | 25% increase or decrease in foreign currency values <i>Applied to excess of assets over liabilities for each currency</i> |
| Asset concentration risk | Charges on assets exceeding threshold, by credit rating | Charges on assets exceeding threshold, by credit rating |

Credit Risk

Credit risk is based on factors, which vary by credit rating, applied to exposures.

Key issues for consultation include:

- Reliance on use of external credit ratings
 - *Including use of US NAIC ratings*
- Granularity of commercial and residential mortgage factors
 - *Greater granularity introduced in 2016 field testing*
- Treatment of reinsurance exposures
 - *“Double default” scenario required for collateral to be impaired*
 - *Haircut applied to collateral to account for Market / Credit risk of collateral assets*
- Treatment of sovereign exposures (currently receive 0% charge)



Operational Risk

Operational risk is based on the following factors for Non-life products:

| | Exposure | ICS Factor | SII Factor |
|--------------------|--|---|--|
| Premium | Gross written premium in the most recent financial year | 3.0% direct 2.5% assumed | 3.0% direct & assumed |
| Liabilities | Gross current estimate | 3.0% direct 2.5% assumed | 3.0% direct & assumed |
| Growth | Gross written premium in the most recent financial year exceeding the growth threshold compared to the previous year | 3.0% direct 2.5% assumed <i>growth threshold: 20%</i> | 3.0% direct & assumed <i>growth threshold: 20%</i> |



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Aggregation / Diversification

- Aggregation approach relies on correlation matrices between risks.
- There is a hierarchical structure between risk types, as follows:
 - Aggregation between risks (*e.g. Non-life and Market risks*)
 - Aggregation within risks (*e.g. Premium and Reserve risks within Non-life risk*)
 - Aggregation by geographical region (*e.g. Europe vs North America*)
 - Aggregation by product level (*e.g. class of business within Premium & Reserve risk*)
- Note that there are only six geographical regions, each pair with 25% correlation factor
 - EEA & Switzerland
 - USA & Canada
 - Japan
 - China
 - Other developed markets
 - Emerging markets





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Additional items

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Additional items

- Scope of group
- Treatment of reinsurance
- Look-through approach
- Life & Health risk issues
- Holistic approach to tax





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Key issues for general insurers

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Key issues: General

- Timetable continues to be tight when there are still high level issues to be resolved
- Consideration of implementation cost and wider cost benefit agenda
- Calibration of standard stresses, including diversification benefit, still needs work
- Internal Models should be given focus
- Transitional arrangements, particularly around classification of capital resources (*see next slide*)
- Treatment of structural subordination
 - Debt raised at holding company level is structurally, but not contractually, subordinated to policyholders
- Fungibility and asset encumbrances need further work



Key issues: Capital resources

Grandfathering and classification of FI should be a priority, particularly given field test evidence that:

- Current mechanical approach cannot capture all circumstances as such the addition of principles for determining incentives to redeem need to be contemplated.
- The identification of a step up feature and classification is a determination made at issue. There is an argument to consider whether this could be or should be reassessed at regular intervals noting that market dynamics can alter what is an incentive over time, and also noting that this may lead to adverse treatments in some circumstances.
- There are understandable arguments for amortising instruments as they approach maturity and other event dates however consideration needs to have regard to situations where redemption is at the control of a regulator or where there is a mandatory roll over or replacement.



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Top areas for concern for market

Some of the key issues impacting general insurers are highlighted below.

Scope of group (4)

Defining material entities in scope

Valuation (65)

MAV (28)

GAAP Plus for US GAAP reporters materially different to Solvency II

GAAP (15)

MOCE (19)

Issues with consistency of P-MOCE and CoC MOCE with GAAP Plus

Reinsurance recognition (3)

Treatment of reinsurance in valuation basis

Capital Resources (21)

Eligibility of structurally subordinated senior debt at holding company

Holistic approach to tax (19)

ICS is top-down group level, but tax needs to be derived bottom-up

Capital Requirement (126)

Risk Mitigation (8)

Treatment of reinsurance in capital requirement

Look-through (1)

Management actions (4)

Life Risks (36)

Non-Life Risks (12)

Segmentation, calibration and diversification

Catastrophe Risk (13)

Use of Cat models ; Latent liability catastrophe scenario

Market Risks (33)

Operational Risks (4)

Aggregation (8)

Appropriate recognition of diversification benefits



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Questions

Comments

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