Request For Comment (RFC) | Insurer Risk-Based Capital Adequacy – Methodology And Assumptions

Live Webinar and Q&A – May 16, 2023
## Request For Comment | Project Goals

<table>
<thead>
<tr>
<th>Objective</th>
<th>Description</th>
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<tr>
<td>Incorporate recent data and experience</td>
<td>Since our last update of the insurance capital model criteria, integrate new data and experiences to reflect current market conditions.</td>
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<tr>
<td>Enhance global consistency</td>
<td>Improve global consistency in risk-based capital analysis for insurance companies to ensure a unified approach across jurisdictions.</td>
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<tr>
<td>Increase risk differentiation</td>
<td>Enhance risk differentiation in capital requirements where relevant and material to our capital adequacy analysis, and reduce complexity where it does not add analytical value.</td>
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<td>Improve the transparency and usability</td>
<td>Enhance transparency and usability of our methodology, such as superseding 10 related criteria articles with the new single criteria article.</td>
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<tr>
<td>Support our ability to respond to changes in macroeconomic and market conditions</td>
<td>Enable our ability to respond to changes in macroeconomic and market conditions by incorporating sector and industry variables.</td>
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Agenda

1. Proposed Changes To The Existing Criteria
2. Notable Changes In Updated RFC Compared To Initial RFC
3. Areas Of Feedback Without Significant Changes
4. Q&A
5. Appendix
Proposed Changes To The Existing Criteria
Proposed Methodology

The different stress levels we use for individual risks are 99.5%, 99.8%, 99.95%, and 99.99%.

§ Subject to any applicable company-specific adjustments.

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Revising our calculation of TAC to reduce complexity and align with proposed changes to our measure of an insurer’s RBC requirements, including:

- Removing various haircuts to liability adjustments;
- Not deducting non-life DAC;
- Updating our approach to non-life reserve discounting; and
- Simplifying the approach to unconsolidated insurance subsidiaries, noninsurance subsidiaries, associates, and other affiliates.

Revising our methodology for including hybrid capital and debt-funded capital in TAC—although we are not proposing any changes to our hybrid capital criteria — by:

- Updating the principles for determining the eligibility of debt-funded capital in TAC;
- Aligning globally the hybrid capital and debt-funded capital tolerance limits; and
- Introducing a new metric, ACE, to be used in determining the amount of hybrid capital and debt-funded capital that is eligible for inclusion in TAC.

TAC – total adjusted capital; RBC – risk-based capital; DAC – deferred acquisition costs; ACE – adjusted common equity.

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• Clarifying how we adjust equity for life insurers when there is a mismatch between the balance-sheet valuation of assets and liabilities (e.g. when assets are valued at market or fair value and the liabilities are valued at fixed discount rates).

• Updating our treatment of certain equity-like reserves to enhance global consistency.

• Using a narrower definition of policyholder capital that is eligible for inclusion in TAC, clarifying our treatment of unrealized investment gains on participating business, and making enhancements to our criteria for assessing risks relating to ring-fenced participating business.

• Updating the analytical principles relating to property/casualty loss reserves and U.S. life insurance reserves.

• Clarifying that adjustments to determine TAC are net of the related tax impact, and all capital requirements are pre-tax.

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TAC – total adjusted capital.

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• More explicitly capturing the benefits of risk diversification in RBC requirements by revising the confidence levels that we use to calibrate risk charges to 99.5%, 99.8%, 99.95%, and 99.99% from 97.2%, 99.4%, 99.7%, and 99.9%, respectively, and proposing updated correlation assumptions and additional risk pairings.

• Updating capital charges for almost all risks based on the revised confidence levels and incorporating recent data and experience.

• Using a single set of charges for each risk with country- or region-specific charges as warranted to reduce complexity and enhance global consistency in the treatment of similar risks.

• Removing the potential adjustment to the capital model output resulting from our review of insurers’ economic capital models (the "M factor") because of proposed changes to these criteria, such as the update to our approach to assess interest rate risk to better capture an insurer's risk exposures.
• Changing our methodology for determining credit risk charges on bonds (and certain other credit assets) to capture only unexpected losses, rather than total losses.

• Increasing risk differentiation in our credit risk capital requirements for bonds and loans to capture:
  – Variations in loss given default based on sector, creditor ranking, and collateral features; and
  – Differences in potential losses for structured finance assets, compared with assets in other sectors based on our correlation and recovery assumptions.

• Introducing globally consistent assumptions for determining the rating input for bonds and loans to better differentiate risk.

• Enhancing global consistency in assessing capital requirements for residential and commercial mortgage-backed securities and mortgage loans.
Proposed Changes To The Existing Criteria | RBC Requirements (cont.)

Updating our methodology for assessing interest rate risk to enhance global consistency, better capture an insurer’s risk exposures, and increase risk differentiation in our interest rate stress assumptions by country, as well as proposing to:

- Use liabilities as the exposure measure for life and non-life liabilities in all countries;
- Enable use of company-specific inputs under certain conditions;
- Apply an assumption based on the mean term of non-life liabilities to measure the duration mismatch for non-life business; and
- Reduce the risk of understating capital requirements by introducing floors in our mismatch assumptions and limiting the ability to offset losses in one business segment with gains in another segment.
• Increasing risk differentiation in our equity risk capital requirements by introducing explicit risk charges for exposures to eligible infrastructure equities.

• Aligning our methodology for life technical risks (in particular, longevity, lapse, expense, and operational risks) across all countries, along with introducing additional risk differentiation for assessing the extent of longevity risk embedded in certain products.

• Introducing explicit capital requirements to capture morbidity risks on disability and long-term care products outside the U.S.

• Revising the conditional tail expectation (CTE) levels we use to determine capital requirements for variable annuities (VAs), consistent with the updates to our confidence levels, and increasing the amount of credit we include for VA hedging to up to 80% from 50%.
• Introducing capital charges to capture pandemic risk and contingent counterparty credit risk relating to reinsured catastrophe exposures.

• Replacing the flat one-in-250-year post-tax property catastrophe capital charge with a pre-tax natural catastrophe (i.e., across all non-life business lines) capital requirement that varies from one-in-200 to one-in-500 years at different stress scenarios.

• Enhancing consistency in assessing liability-related risks by aligning the treatment of mortgage insurance, trade credit insurance, and title insurance with other non-life business lines.

• Introducing a scaled risk charge on life value-in-force (VIF) to capture the potential change in VIF in stress scenarios (this change is related to our proposal to include up to 100% of life VIF in TAC).

• Removing explicit capital charges for convexity risk and regulatory closed blocks in the U.S.

• Removing capital charges for assets under management and deducting the investment in asset management businesses to determine TAC to increase the consistency of our approach to noninsurance businesses.

• Clarifying that we make company-specific adjustments only where they are material to our analysis.

TAC – total adjusted capital; RBC – risk-based capital.

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Notable Changes In Updated RFC Compared To Initial RFC
Notable Areas of Change From Prior Proposal Based On Market Feedback

- Determining the rating inputs for bonds and loans
- Hybrid And Debt-Funded Capital
- Value Of In-Force Business
- Diversification
- Materiality Threshold For Analytical Adjustments
- Real Estate Country Categorization
- Longevity Risk
- Morbidity Risk--Critical Illness
- Non-Life Lines Of Business-Various Risk Charges
- Natural Catastrophe
- Infrastructure Equity Holdings
- Corporate-Owned Life Insurance And Other Assets
Notable Changes In Updated RFC Compared To Initial RFC

Determining the rating input for bonds and loans

- **Step 1**: Assets rated by S&P Global Ratings.
- **Step 2**: Assets rated by other CRAs.
  - Use regulatory mapping table.
  - Include ratings from CRAs that are:
    - Registered or certified in accordance with relevant CRA regulations;
    - Included in a mapping table that is used by insurance regulators in establishing capital requirements for credit assets;
    - Included in a mapping table produced by the regulator that relates the CRA’s rating scale to S&P’s Global Ratings’ global rating scale; and
    - Included in a mapping table that is publicly available.
- **Step 3**: Assets with regulatory credit measures approved by insurer’s domestic regulator.
  - Use mapping tables from step 2.
  - Includes NAIC designations assigned by the SVO, and insurers’ internal credit scores mapped under Solvency II.

RFC - Request For Comment; CRA – credit rating agency; NAIC – National Association of Insurance Commissioners; SVO – Securities Valuation Office.
Determining the rating input for bonds and loans (cont.)

- **Step 4**: Assets not included in Steps 1-3.
  - Rating input based on sector and economic risk group.
  - Further delineation of structured finance assets.
  - May modify assumption up/down by up to one rating category.

- **Step 5**: Assets not included in Steps 1-4.
  - Where we have been provided no further information on the asset, the rating input will be ‘CCC’.
    - We expect this to occur only in limited circumstances, given Steps 1-4 should address the large majority of credit assets.
  - In all cases, the rating input is D/SD for a bond that is rated D/SD or equivalent under Steps 1, 2, or 3.
Debt-Funded Capital/Hybrid Equity

• Debt instruments that are issued by an NOHC (or a financing subsidiary of the NOHC) are eligible as debt-funded capital where, in addition to all the conditions on the next slide being met, either:

  • There is high structural subordination of creditors of the NOHC relative to senior creditors of the regulated operating entities (we consider structural subordination high when potential regulatory restrictions to payment are high between regulated operating entities and the NOHC—typically this is when the NOHC is outside the regulatory perimeter); or
  
  • The NOHC debt instrument is available and able to absorb losses through coupon deferral or cancellation or through principal deferral, write-down, or conversion without causing an event of default.
Debt-Funded Capital/Hybrid Equity (cont.)

• Debt instruments are eligible as debt-funded capital only where all the following conditions are met:
  • The regulator allows NOHC debt to fund operating company capital (we exclude amounts that exceed any regulatory tolerance limits);
  • If the NOHC is inside the regulatory perimeter, the debt instrument is included as regulatory capital in group solvency calculations (we exclude any portion of the instrument that is not included as regulatory capital);
  • The residual time until the effective maturity exceeds one year (we apply the definition of effective maturity from our hybrid capital criteria);
  • The NOHC directly or indirectly owns the regulated operating entities and is not owned directly or indirectly by regulated operating entities (and any financing subsidiary is not owned directly or indirectly by regulated operating entities);
  • None of the NOHC’s (or financing subsidiary of the NOHC’s) financial obligations are guaranteed by regulated operating entities;
  • In our view, the proceeds from the debt instrument are available to the regulated operating entities to absorb losses on a going concern basis (for example, debt raised to fund nonregulated activities or debt that we define as operational leverage is not eligible as debt-funded capital); and
  • The debt instrument is not an eligible hybrid capital instrument (i.e. an intermediate- or high-equity content hybrid capital instrument).

RFC - Request For Comment; NOHC - nonoperating holding company.

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Debt-Funded Capital/Hybrid Equity (cont.)

- Additional considerations for NOHC cash and investments:
  - We apply a 20% haircut to the value of NOHC cash and investments in our calculation of TAC, where the NOHC is outside the regulatory perimeter.
  - We may apply a higher haircut if we have heightened doubts about the availability of the group’s capital resources to absorb losses in operating entities (for example, we may apply a 50% haircut when the group standalone credit profile is bb+ or lower).
  - We may also adjust the value of NOHC assets that are subject to the haircut, for example to exclude NOHC assets that:
    - are being held to pay an external dividend that we have already deducted from shareholders’ equity, or
    - relate to debt that is not eligible as debt-funded capital.
  - We limit the total value of the haircut to the amount of eligible debt-funded capital included in TAC, but only to the extent the debt-funded capital relates to debt issued by an NOHC outside the regulatory perimeter.
Debt-Funded Capital/Hybrid Equity (cont.)

<table>
<thead>
<tr>
<th>Category</th>
<th>Updated RFC</th>
<th>Initial RFC</th>
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<tbody>
<tr>
<td>High Equity Content Hybrids</td>
<td>Up to 40% of Capital #</td>
<td>Up to 50% of ACE #</td>
</tr>
<tr>
<td>Intermediate Equity Content Hybrids</td>
<td>Up to 30% of Capital #</td>
<td>Up to 33% of ACE #</td>
</tr>
<tr>
<td>No Equity Content Hybrids</td>
<td>0% of Capital</td>
<td>0% of ACE</td>
</tr>
<tr>
<td>Debt-Funded Capital</td>
<td>Up to 20% of Capital #</td>
<td>Up to 25% of ACE #</td>
</tr>
</tbody>
</table>

# The limits are not cumulative. See RFC for additional details.

To determine the maximum tolerance, we use the higher of capital or 0.

Capital is defined as ACE + High equity content hybrids + Intermediate equity content hybrids + Debt-funded capital.

• For capital models not based on consolidated financial statements, we may calculate ACE using consolidated GAAP or IFRS financials solely for the purpose of determining the hybrid capital and debt-funded capital tolerance limits.
Notable Changes In Updated RFC Compared To Initial RFC (cont.)

Other equity-like life reserves/VIF

- We include in ACE other equity-like life reserves that we determine are available to absorb future unexpected life losses.
- We include these reserves when they are explicitly identified as reserve items in excess of best estimate reserves in the reported financial statements that we use for our capital analysis.
- These explicit reserves are typically required to be established under the relevant regulatory rules or accounting standards.
- When they are not explicitly identified, we may use information that is reported under different reporting standards (e.g., regulatory solvency statements) to determine the excess over the best estimate, but only to the extent the excess does not result from future profits related to future fees or investment income, but rather from conservatism in other assumptions (e.g., mortality assumptions).
- Glossary: Other equity-like reserves include the following:
  - Contractual service margin (IFRS 17);
  - Risk adjustment (IFRS 17);
  - Excess XXX/AXXX reserves (US statutory);
  - Provision for adverse deviations; and
  - Excess liability reserves (JGAAP).
- Other equity-like life reserves would be given credit post tax in TAC with no specific risk charge.
- Weaker forms of capital: we propose to include non-fungible equity-like reserves and to remove reference to VIF in IRM guidance.
Notable Changes In Updated RFC Compared To Initial RFC (cont.)

- **Diversification/Correlation**
  - Some correlation assumptions have been reduced (mortality/morbidity, mortality/pandemic).
  - Include level 2 diversification for “Other” non-life product lines.
  - Reclassify Title insurance to “Other” from “Financial” and Engineering in APAC from "Other" to "Property".

- **Analytical Adjustments**
  - Clarify when we apply company-specific adjustments.
  - Revise threshold for when we typically consider an adjustment material to our analysis (to 5% from 10%).

- **Real estate risk**
  - Add Switzerland to group 1 (from “other Europe” in group 2) and Canada to group 3 (from “other world” in group 4).
Notable Changes In Updated RFC Compared To Initial RFC (cont.)

• **Life**
  - Longevity risk: differentiate charge based on prudence of reserves.
  - Critical illness: reduction of charges (from 3x mortality charges to just over 2x mortality charges).
  - Add the following countries to the list of highly developed life markets: Cyprus, Czech Republic, Hungary, Liechtenstein, Poland, Slovakia, Slovenia.
  - Variable annuities: increase the maximum credit for hedging from 75% to 80%.

• **Non-Life**
  - Update some premium & reserve charges (e.g., US worker compensation, Marine P&I, US Dental & Vision, Canada Health, Motor Japan & Taiwan).
  - Nat cat risk: additional data granularity for all confidence levels.

• **Equity risk**
  - Introduce separate charges for eligible infrastructure equities.

• **Other assets**
  - Include additional detail on treatment of specific assets (e.g., COLI, other chargeable assets, exempt assets).
Notable Changes In Updated RFC Compared To Initial RFC (cont.)

• **Interest rate risk**
  - Flexibility to determine net change in market value based on a given yield stress.
  - Update interest rate shocks to reflect volatility in 2022 and reclassify Poland and Kazakhstan from category 4 to category 5 and U.K., Australia, and New Zealand from category 3 to category 4.
  - Improve clarity around standard and company-specific assumptions and enhance flexibility in definition of duration.

• **Other changes**
  - Clarifications related to unrealised gains and life reserve adjustments.
  - Clarify treatment of unrealised gains on participating business and policyholder capital.
  - Explicit approach for intangibles related to invested assets.
  - Revised treatment of bond funds.
  - Charges for Health business with aging reserves apply globally not just in Germany.
  - Various editorial changes to improve clarity (e.g., calibration of charges at higher confidence levels, noninsurance subs).
Areas Of Feedback Without Significant Changes
Areas of Feedback Without Significant Changes

- Feedback received also covered a variety of areas where we determined not to make significant changes.
- We were less likely to make changes where commenters criticized our approach but did not offer an alternative option or, if they did, it did not meet the goals of our proposed criteria.
- We made several clarifying changes in the interests of transparency.
- Please refer to our publication “Summary Of Feedback On Proposed Criteria For Insurer Risk-Based Capital Adequacy” for details.
Any Questions, Please Feel Free To Contact Us

<table>
<thead>
<tr>
<th>Insurance Team Contacts*</th>
<th>Methodologies Contacts</th>
<th>Media Contacts</th>
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*See RFC for additional contacts

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The Existing & Proposed Criteria | Debt Funded Capital

- **Existing Capital Adequacy Criteria**
  - Where enforcement of structural subordination is high and regulators allow holding-company debt to fund operating company capital, we include debt funded double leverage in our calculation of capital, subject to tolerance limits (see table 3 in existing capital adequacy criteria).

- **Proposed Capital Adequacy Criteria**
  - We propose a definition for high structural subordination, which aligns with concepts used within our Group Rating Methodology, focusing on potential regulatory restrictions to payment from regulated operating entities to the NOHC.
  - We propose two defined paths for NOHC debt to be potentially eligible as DFC.

DFC – debt funded capital. NOHC – non-operating holding company.

*S&P Global Ratings*
Proposed Criteria | Two Defined Paths For Debt Funded Capital

Path 1
If we assess potential regulatory restrictions to payments are high (i.e. high structural subordination), then, subject to certain conditions, we would:

- Include debt issued by the NOHC of an insurance group as eligible DFC (whether it has any loss absorbing features or not); and
- Apply a 20% haircut to the value of cash and investments retained on the balance sheet of a NOHC

GRM: where potential regulatory restrictions to payment are high, the ICR of an NOHC is generally 3 notches lower than the ICR on the core operating entities.

Path 2
If we assess potential regulatory restrictions to payments are low (i.e. high structural subordination does not apply), then, subject to certain conditions, we would:

- Only include NOHC debt instruments with loss-absorbing features as eligible debt-funded capital; and
- Not apply the 20% haircut to cash and investments retained on the balance sheet of a NOHC

GRM: where potential regulatory restrictions to payment are low, the ICR of a NOHC is generally 2 notches lower than the ICR on the core operating entities.

Under both paths, if the NOHC is inside the regulatory perimeter, only debt instruments that are eligible regulatory capital would be considered as eligible debt funded capital under our proposed criteria.

The specific treatment for debt issued by NOHCs will be determined by a committee—considering the facts and circumstances specific to an issuer—in the application of our finalized proposals and other relevant criteria.

DFC – debt funded capital, GRM – group rating methodology, ICR – issuer credit rating, NOHC – non-operating holding company.

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We are proposing the following sector and industry variables:

- **Credit risk recovery** categories;
- **Rating input** assumptions by sector and economic risk group, including sector definitions;
- **Equity market** groups by country;
- **Real estate** groups by country;
- **Interest rate risk categories** by country;
- **Duration mismatch assumption** groups by country (life insurers);
- **Natural catastrophe risk**: industry average catastrophe loss and expense ratios; and
- **Mortality/morbidity risk**: Highly developed life markets.

RFC appendix includes proposed SIVR related to our proposed criteria. We intend to publish the sector and industry variables as a separate document following the publication of the final criteria article.
Proposed Changes To Guidance For Insurers Rating Methodology

- If we adopt the proposed criteria, we will update table 1 in "Guidance: Insurers Rating Methodology," replacing references to 'AAA', 'AA', 'A', and 'BBB' with 99.99%, 99.95%, 99.8%, and 99.5%, respectively.

- We will revise the second sentence of the final bullet of paragraph 30 of the guidance to "We typically consider nonfungible equity-like reserves, discounts on P/C reserves, and hybrid capital and debt instruments to be weaker forms of capital".

- We will add two considerations to paragraph 30 for determining whether the capital and earnings assessment is understated or overstated: "if the ability to reduce future discretionary bonuses and share losses with policyholders (also known as the 'loss-absorbing capacity of technical provisions') is materially understated in our capital model" and "if our interest rate risk capital requirements materially understate an insurer's exposure to yield shocks, for example owing to convexity risk in either assets or liabilities that is not adequately captured in the capital model".

- We will update paragraph 54 of the guidance to:
  - Replace references to 'A' with 99.5%;
  - Replace the property catastrophe charge with the natural catastrophe and pandemic charges; and
  - Delete references to the net trade credit exposure charge.

- We will delete the sector-specific mortgage insurance and title insurance sections of the guidance (paragraphs 68-73 and tables 4-6) and delete references to mortgage insurers in paragraph 28, so the liquidity and capital and earnings sections, including table 1, will then apply to mortgage and title insurers.

- We will align the terms in the guidance with the proposed criteria and update criteria references.
## Total Adjusted Capital | Proposed Components

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<thead>
<tr>
<th>Common shareholders’ equity/policyholders’ surplus</th>
<th></th>
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<tbody>
<tr>
<td>Plus</td>
<td>Equity non-controlling interests</td>
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<tr>
<td>Minus</td>
<td>Investments in own shares/treasury shares</td>
</tr>
<tr>
<td>Minus</td>
<td>Shareholder distributions not accrued</td>
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<tr>
<td>Minus</td>
<td>Intangible assets</td>
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<tr>
<td>Plus/minus</td>
<td>Post-retirement employee benefits</td>
</tr>
<tr>
<td>Plus/minus</td>
<td>Unrealized gains/(losses) on investments</td>
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<tr>
<td>Plus/minus</td>
<td>Non-life reserve adjustments</td>
</tr>
<tr>
<td>Plus/minus</td>
<td>Life reserve adjustments</td>
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<tr>
<td>Plus/minus</td>
<td>Company-specific analytical adjustments to determine ACE</td>
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</table>

= **Adjusted Common Equity (ACE)**

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<tbody>
<tr>
<td>Plus</td>
<td>Hybrid capital/debt funded capital (subject to tolerance limits)</td>
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<tr>
<td>Minus</td>
<td>Investments in non-insurance subsidiaries and unconsolidated insurance subsidiaries</td>
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<tr>
<td>Plus</td>
<td>Policyholder capital available to absorb losses</td>
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<tr>
<td>Plus</td>
<td>Unrealized gains on investments backing participating life business</td>
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<tr>
<td>Plus/minus</td>
<td>Company-specific analytical adjustments to determine TAC</td>
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= **Total Adjusted Capital (TAC)**
Proposed Risk-Based Capital (RBC) Requirements

RBC requirements

- Credit risk
  - Bonds and loans
  - Mortgages
  - Reinsurance
  - Other

- Market risk
  - Equity risk
  - Real estate risk
  - Interest rate risk

- Non-life technical risk
  - Premium risk
  - Reserve risk

- Natural catastrophe risk

- Life technical risk
  - Mortality
  - Longevity
  - Morbidity
  - Other

- Pandemic risk
  - Other

- Product specific risk

- Life VIF
  - Variable annuities
  - Ring-fenced funds
  - Long-term Health *

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Diversification | Proposed Components

To determine the total RBC requirements, we assess risk dependencies using correlation assumptions between various risk pairings. This explicit diversification credit brings the sum of the capital requirements across each risk to a level commensurate with the defined stress scenarios.

We apply correlation assumptions at three levels:

- **Level 1 diversification**: Within business lines.
- **Level 2 diversification**: Within risk categories.
- **Level 3 diversification**: Between risk categories.

### Correlation Assumptions Between Risk Categories

<table>
<thead>
<tr>
<th>Market risk</th>
<th>Credit risk</th>
<th>Nat cat risk</th>
<th>Non-life technical risk</th>
<th>Life technical risk</th>
<th>Pandemic risk §</th>
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<tbody>
<tr>
<td>Market risk</td>
<td>100%</td>
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<td>Credit risk</td>
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<td>Nat cat risk</td>
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<td>Non-life technical risk</td>
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<td>Life technical risk</td>
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</tbody>
</table>

*We calculate the implied correlation (IC) between pandemic and life technical risk capital requirement based on the diversified life technical risk capital requirements including pandemic risk. This is calculated by applying the correlation assumptions in table 34 to the capital requirements for mortality, morbidity, longevity, other life technical, and pandemic risks and adding the capital requirements for long-term health business with aging reserves and variable annuities. §Natural catastrophe and pandemic risks are inclusive of contingent reinsurance counterparty risk.*
Proposed | Determining The Interest Rate Risk Capital Requirement

Can we determine the net change in market value (NCMV) based on company-specific assumptions?

- **Yes**

Can we determine for each of the life and non-life segments, if applicable, that the duration of assets is either greater or less than the duration of liabilities (i.e. do we know the direction of the mismatch)?

- **No**

### Step 2
For each confidence level, the interest rate risk capital requirement is based on our standard assumptions and is the higher of:

1. Interest rate risk in the up scenario, defined as the sum of interest rate risk for the capital segment and for any segments (i.e. life and/or non-life) where the up scenario is the most onerous; and
2. Interest rate risk in the down scenario, defined as the sum of interest rate risk for any segments (i.e. life and/or non-life) where the down scenario is the most onerous.

In this step, we do not offset losses in one segment with gains in another segment.

The interest rate risk capital requirement is subject to a floor of 1 year applied to the total of the relevant exposures for life, non-life and capital in the most onerous yield stress scenario, as determined in i and ii.

### Either Step 1a

The interest rate risk capital requirement for each confidence level is the NCMV based on the relevant yield stress for each country for all assets and liabilities in scope of this section of the criteria (applying only the most onerous yield stress scenario). The result is subject to a floor based on 0.5 year determined using the methodology in step 1b.

### Or Step 1b

The interest rate risk capital requirement for each confidence level is the sum across all countries of the product of:

1. The relevant exposure for life, non-life and capital;
2. The company-specific duration mismatch (subject to a floor of 0.5 year); and
3. The relevant yield stress for each country (applying only the most onerous yield stress scenario).

### Step 3
The interest rate risk capital requirement is the sum of the interest rate risk for the life, non-life, and capital segments for the up scenario based on standard assumptions for each confidence level.

S&P Global Ratings
Proposed | Determining The Net Aggregate Loss Estimate

Is the AEP curve available?

Yes → Step 1
Use the AEP curve, subject to any adjustments.

No → Step 2
Use the OEP curve, subject to any adjustments.

We typically increase the adjusted OEP losses by 30% to estimate the aggregate net losses. This is based on the assumption of a well-diversified portfolio by geography and peril.

Is the OEP curve available?

Yes → Step 3

We estimate the one-in-200-year aggregate net loss typically as the higher of:

i) 40% of total property net written premiums; or

ii) 10% of total net written premiums

We also estimate the contingent reinsurance credit risk.

No → Step 4

If we determine that the results based on Step 1, 2, or 3 are not reflective of the risk, we apply Step 4. We estimate the one-in-200-year aggregate net loss (and contingent reinsurance credit risk) typically based on one or more of the following:

- regulatory disclosures;
- an insurer’s assessment of their exposure;
- an insurer’s reinsurance program; or
- historical losses

Step 3

We estimate the one-in-200-year aggregate net loss typically as the higher of:

i) 40% of total property net written premiums; or

ii) 10% of total net written premiums

We also estimate the contingent reinsurance credit risk.

AEP – Aggregate exceedance probability. OEP – Occurrence exceedance probability.
Criteria Articles To Be Fully Superseded By The Proposed Criteria

- Methodology: Treatment Of U.S. Life Insurance Reserves And Reserve Financing Transactions, March 12, 2015
- Methodology: Mortgage Insurer Capital Adequacy, March 2, 2015
- Methodology For Assessing Capital Charges For U.S. RMBS And CMBS Securities Held By Insurance Companies, Aug. 29, 2014
- Assessing Property/Casualty Insurers' Loss Reserves, Nov. 26, 2013
- Refined Methodology And Assumptions For Analyzing Insurer Capital Adequacy Using The Risk-Based Insurance Capital Model, June 7, 2010

- **Guidance to be retired** - Guidance: Methodology For Calculating The Convexity Risk In U.S. Insurance Risk-Based Capital Model, March 3, 2018
Insurance Criteria Context

- Convexity Risk Criteria
- Economic Capital Model Criteria
- Methodology For Assessing Capital Charges For Commercial Mortgage Loans Held By U.S. Insurance Companies
- Trade Credit Capital Requirements
- Assessing Property/Casualty Insurers' Loss Reserves
- Methodology: Capital Charges For Regulatory Closed Blocks Under Standard & Poor's Capital Model Framework
- Key Credit Factors For Title Insurers
- Insurers Rating Methodology
- Enterprise Risk Management Criteria
- Methodology For Assessing Capital Charges For U.S. RMBS And CMBS Securities Held By Insurance Companies
- Methodology For The Mortgage Insurance Industry
- Key Credit Factors For The Mortgage Insurance Industry
- Insurers Rating Methodology
- Methodology And Assumptions For Analyzing Bond Insurance Capital Adequacy
- Hybrid Capital: Methodology And Assumptions
- Group Rating Methodology
- Insurers Rating Methodology
- Insurers Rating Methodology
- Insurance Capital Model Criteria

Green indicates criteria articles which will be superseded if the proposed capital model criteria is adopted

* Refined Methodology And Assumptions For Analyzing Insurer Capital Adequacy Using The Risk-Based Insurance Capital Model
# Archived criteria

RFC: Insurance Capital Model Criteria
Updated RFC: Insurance Capital Model Criteria


2023

2019

2018

2017

2016

2015

2014

2013

2012

2011

2010

2023

S&P Global Ratings
Key RFC documents
We issued an updated RFC, prototype model, summary of feedback and FAQ

RFC: Insurer Risk-Based Capital Adequacy – Methodology & Assumptions

Summary Of Feedback On Proposed Criteria For Insurer Risk-Based Capital Adequacy

Credit FAQ

Request For Comment: Insurer Risk-Based Capital Adequacy—Methodology And Assumptions

May 5, 2023

Overview and Scope

S&P Global Ratings is presenting a framework for proposed methodology and assumptions for determining the capital adequacy of insurers and reinsurers. The paper outlines the framework for assessing insurer risk-based capital adequacy, and the assumptions and methodologies used in the framework. The framework is intended to enhance the clarity of the proposed methodology and assumptions.

Summary Of Feedback On Proposed Criteria For Insurer Risk-Based Capital Adequacy

May 5, 2023

In the recent paper, S&P Global Ratings presented a framework for assessing insurer risk-based capital adequacy. Following feedback from market participants, we have updated the model. The revised model includes changes based on feedback received from market participants.

Credit FAQ

Understanding S&P Global Ratings' Revised Request For Comment On Proposed Change To Its Insurer Risk-Based Capital Adequacy Methodology

May 5, 2023

On June 6, 2023, S&P Global Ratings published a revised request for comment (RFC) on its proposed changes to its insurer risk-based capital adequacy methodology. The changes were based on feedback from market participants.
Planned events and outreach
Global Webinars | Dedicated Webpage

Webinars:
• **May 24th**: Webinars that will examine the proposal further and help market participants better understand the key analytical elements of the RFC
• *We will provide additional opportunities to explore the RFC, including country specific outreach in local languages*


• Webpage includes links to:
  • the RFC & related articles;
  • prototype capital model;
  • the webinars;
  • related slides;
  • process to submit comments; and
  • *Will be updated continuously.*

Contacts (see slide 31):
• Also feel free to reach out to your usual contact or any of the team listed in the RFC
Expected rating impact
Insurance Criteria Framework:

- Competitive Position
- Industry and Country Risk
- Capital & Earnings
- Risk Exposure
- Funding Structure

Darker shading represents a greater potential effect on the rating construction.

IRM – Insurers Rating Methodology; RFC - Request For Comment.
Source: S&P Global Ratings.
Ratings Impact | Expectations

- Our current expectation is that the proposed criteria could lead to credit rating actions on about 10% of ratings in the insurance sector.

- Majority of rating changes estimated to be by one notch, with more upgrades than downgrades.

- Up to 30% of insurers could see a change in Capital and Earnings assessment.

- Lower potential impact on ratings compared with components of our ratings reflects the application of IRM, GRM, and sovereign rating constraints.

IRM – Insurers Rating Methodology; GRM – Group Rating Methodology.
RFC Process
We encourage interested market participants to submit their written comments on the proposed criteria by June 30, 2023, to https://disclosure.spglobal.com/ratings/en/regulatory/ratings-criteria/-/articles/criteria/requests-for-comment/filter/all%23rfc, where participants must choose from the list of available Requests for Comment links to launch the upload process (you may need to log in or register first).

We will review and take such comments into consideration before publishing our criteria once the comment period is over. Upon publication of the finalized criteria, S&P Global Ratings will post comments received during the RFC process to this website.

Comments may also be sent to CriteriaComments@spglobal.com should participants encounter technical difficulties.

Current criteria is in effect until the proposal is finalized
When finalized we will publish a list of issuers with potential rating changes (Under Criteria Observation list)