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

Live Webinar and Q&A – May 24, 2023
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The Existing And 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 the existing capital adequacy criteria).

• Proposed capital adequacy criteria
  - We propose a definition for high structural subordination that aligns with concepts used within our group rating methodology and focuses on potential regulatory restrictions that might prevent regulated operating entities from making payments to the NOHC.
  - We propose two defined paths that could allow debt at the NOHC level to be eligible as debt-funded capital.

NOHC—Nonoperating holding company.
Proposed Criteria | Two Defined Paths For Debt-Funded Capital

**Path 1**
If we assess the potential for regulatory restrictions to payments as high (i.e., there is high structural subordination), then we could:

- View debt issued by the NOHC of an insurance group as eligible debt-funded capital, 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.

Under our GRM, where potential regulatory restrictions to payment are high, the ICR on the NOHC is generally three notches lower than the ICR on its core operating entities.

**Path 2**
If we assess the potential for regulatory restrictions to payments as low (i.e., structural subordination is not high), then we could:

- Only view NOHC debt instruments that have 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.

Under our GRM, where potential regulatory restrictions to payment are low, the ICR on the NOHC is generally two notches lower than the ICR on its core operating entities.

Conditions apply to both paths, including that if the NOHC is inside the regulatory perimeter, only debt instruments eligible as regulatory capital would be considered eligible as debt-funded capital under our proposed criteria.

The specific treatment for debt issued by an NOHC will be determined by a committee, which will apply our finalized proposals and other relevant criteria and incorporate the facts and circumstances specific to the issuer.

GRM—Group rating methodology. ICR—Issuer credit rating. NOHC—Nonoperating holding company.
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 financial obligations of the NOHC or its financing subsidiary 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., it is not a hybrid capital instrument we classify as having intermediate or high equity content).
Proposed Treatment Of Debt Issued By OHC Versus NOHC

Hybrid capital instruments
• We determine the equity content of hybrid capital instruments by applying our hybrid capital criteria.
• We assess the equity content of hybrid capital instruments issued by NOHCs, OHCs, operating entities, and related financing entities.
• We are not proposing any changes to our hybrid capital criteria.

Debt-funded capital
• Debt-funded capital is debt raised by NOHCs (or financing subsidiaries of NOHCs) where the proceeds are available to regulated operating entities.
• Debt issued by operating entities or OHCs is not eligible as debt-funded capital under the proposed criteria.

OHC—Operating holding company. NOHC—Nonoperating holding company.
## Calculation Of Hybrid Capital And Debt-Funded Capital Tolerance Limits

Denominator of hybrid capital and debt-funded capital tolerance limit formula:

<table>
<thead>
<tr>
<th>Current criteria (U.S.)</th>
<th>U.S. GAAP (consolidated) capital + total hybrid + total senior debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current criteria (non-U.S.)</td>
<td>Group consolidated TAC (excluding hybrid) + regulatory qualifying hybrid capital</td>
</tr>
<tr>
<td>Initial proposal</td>
<td>ACE</td>
</tr>
<tr>
<td>Revised proposal</td>
<td>ACE + high-equity-content hybrids + intermediate-equity-content hybrids + DFC</td>
</tr>
</tbody>
</table>

### Current Criteria (U.S.)

- U.S. GAAP (consolidated capital)
- Total hybrid + total senior debt

### Revised Proposal

- ACE
- Eligible hybrid capital instruments + eligible debt-funded capital

### Current Criteria (Non-U.S.)

- Group consolidated TAC (excluding hybrid)
- Regulatory qualifying hybrid capital

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ACE—Adjusted common equity. TAC—Total adjusted capital. DFC—Debt-funded capital. GAAP—Generally accepted accounting principles.

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S&P Global Ratings
## Hybrid Capital And Debt-Funded Capital Tolerance Limits

<table>
<thead>
<tr>
<th>Category</th>
<th>Revised proposal</th>
<th>Initial proposal</th>
<th>Current criteria (e.g., U.S.)</th>
<th>Current criteria (e.g., Europe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hybrids with high equity content</td>
<td>Up to 40% of capital*</td>
<td>Up to 50% of ACE*</td>
<td>Up to 25% of capital*</td>
<td>Up to 35% of capital*</td>
</tr>
<tr>
<td>Hybrids with intermediate equity</td>
<td>Up to 30% of capital*</td>
<td>Up to 33% of ACE*</td>
<td>Up to 15% of capital*</td>
<td>Up to 25% of capital*</td>
</tr>
<tr>
<td>content</td>
<td>0% of capital</td>
<td>0% of ACE</td>
<td>0% credit</td>
<td>0% credit</td>
</tr>
<tr>
<td>Hybrids with no equity content</td>
<td>Up to 20% of capital*</td>
<td>Up to 25% of ACE*</td>
<td>Up to 20% of capital§</td>
<td>0%§</td>
</tr>
<tr>
<td>Debt-funded capital</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*The limits are not cumulative (see RFC and current criteria for additional details). §Debt-funded double leverage.

Note: The capital definition in the revised proposal differs from the capital definitions in the current criteria.

RFC--Request for comment. ACE--Adjusted common equity.
## Proposed Treatment Of Various Equity-Like Reserves And Policyholder Capital

<table>
<thead>
<tr>
<th>Component*</th>
<th>Included in ACE§</th>
<th>Included in TAC§</th>
<th>Explicit risk charge†</th>
<th>Example of weaker form of capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contractual service margin and risk adjustment under IFRS 17‡</td>
<td>Yes</td>
<td>Yes</td>
<td>No liability risk charge</td>
<td>Yes</td>
</tr>
<tr>
<td>Excess XXX/AXXX reserves (U.S. statutory)‡</td>
<td>Yes</td>
<td>Yes</td>
<td>No liability risk charge</td>
<td>Yes</td>
</tr>
<tr>
<td>Excess liability reserves (Japan)‡</td>
<td>Yes</td>
<td>Yes</td>
<td>No liability risk charge</td>
<td>Yes</td>
</tr>
<tr>
<td>Provision for adverse deviations‡</td>
<td>Yes</td>
<td>Yes</td>
<td>No liability risk charge</td>
<td>Yes</td>
</tr>
<tr>
<td>Off-balance-sheet value of in-force‡</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes (VIF risk charge)</td>
<td>No</td>
</tr>
<tr>
<td>Life deferred acquisition costs, value of business acquired‡</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes (VIF risk charge)</td>
<td>No</td>
</tr>
<tr>
<td>50% of the policyholder dividend liability in the U.S.</td>
<td>No</td>
<td>Yes</td>
<td>No liability risk charge</td>
<td>No</td>
</tr>
<tr>
<td>Freie Rückstellung für Beitragsrückerstattung (free RfB) and terminal bonus in Germany</td>
<td>No</td>
<td>Yes</td>
<td>No liability risk charge</td>
<td>No</td>
</tr>
<tr>
<td>Unallocated policyholder dividend liability in Japan</td>
<td>No</td>
<td>Yes</td>
<td>No liability risk charge</td>
<td>No</td>
</tr>
<tr>
<td>Provision pour participation aux excédents (PPE) in France</td>
<td>No</td>
<td>Yes</td>
<td>No liability risk charge</td>
<td>No</td>
</tr>
</tbody>
</table>

This table is a simplification and for illustration purposes only; it does not supersede the proposed RFC.

*This list is not exhaustive; see RFC for more details. §See RFC for full context and conditions regarding the extent of inclusion. †Assets backing these reserves are subject to asset-related risk charges. ‡Subject to tax adjustments.

IFRS--International Financial Reporting Standards. RFC--Request For Comment.
CSM and risk adjustment under IFRS 17

- We propose recognizing the CSM and risk adjustment as equity-like reserves; as such, we would not apply risk charges against them.
- We intend to include equity-like reserves, like the CSM and risk adjustment, in ACE and TAC on a post-tax basis, where we determine these reserves are available to absorb future unexpected losses.
- We will not include off-balance-sheet life value in-force in ACE and TAC, where we determine the reported financial statements are based on economic value, as they would be under IFRS 17.
- We also propose updating the guidance to our insurers rating methodology to include nonfungible equity-like reserves as a weaker form of capital. This may include CSM and RA. If capital primarily comprises weaker forms of capital and we determine that it is overstated, we may revise down the capital and earnings assessment.
- Our financial leverage calculation is based on reported shareholders' equity and is unaffected by this proposal.
Proposed Treatment Of Other Equity-Like Life Reserves

Other equity-like life reserves
• We include in ACE for life insurers other equity-like reserves that we determine are available to absorb future unexpected losses.
• We include such reserves when they are explicitly identified in the reported financial statements that we use for our capital analysis as reserve items in excess of best-estimate reserves.
• Typically, this indicates that the relevant regulatory rules or accounting standards require the establishment of the reserves.
• When reserves are not explicitly identified, we may use information declared under different reporting standards (e.g., regulatory solvency statements) to determine the excess over the best estimate, but only where the excess stems from the use of conservative assumptions (e.g., mortality assumptions), rather than from future profits related to future fees or investment income.

Examples of other equity-like reserves
• Excess XXX/AXXX reserves (U.S. statutory);
• Provision for adverse deviations; and
• Excess liability reserves (Japanese GAAP).

VIF--Value in-force. ACE--Adjusted common equity. TAC--Total adjusted capital.
Proposed Treatment Of Value In-Force Life Business

Value of in-force life business

- On-balance-sheet VIF items, such as life deferred acquisition costs or value of business acquired will receive full credit in TAC but will be subject to the proposed VIF risk charges. However, VIF would no longer be considered a weaker form of capital.
- Off-balance-sheet VIF will be considered in TAC only for companies that do not report on an economic-value basis.
- Off-balance-sheet VIF will receive up to 100% credit in TAC (post-tax) but will be subject to the proposed VIF risk charges.
- We generally use information that is subject to an independent third-party review (such as by an auditor, regulator, or actuarial consultancy).
- In our view, it is important to retain a VIF risk charge, which captures the potential change in VIF in stress scenarios, particularly where we cannot capture the product or risk in full through our asset and liability risk charges alone—e.g., risks from future management fees, future investment income, and lapsation.

VIF—Value in-force. ACE—Adjusted common equity. TAC—Total adjusted capital.
Interest rate risk
• The required capital for interest rate risk is equal to the net change in market value (NCMV) of assets and proxy market value of liabilities, due to upward or downward parallel, permanent shifts in yields.
• We propose deriving a company-specific NCMV or duration mismatch under certain conditions.
• We can also acknowledge company-specific loss-absorbing features (e.g., lowering crediting rates, policyholder dividend, or bonus participation), hedging techniques, or product composition.
• NCMV may be based on a company's own calculations of interest rate risk (e.g., for regulatory purposes or an internal risk assessment) but based on our yield stresses.

Unrealized gains and losses on investments
• Unrealized investment gains are added to shareholders’ equity and unrealized investment losses are deducted if they are not included in reported equity or surplus. We make this adjustment to ensure we capture in ACE the full market or fair value of investments, and to align the valuation with the exposures we use to determine capital requirements.

Non-life reserve discounting:
• We typically adjust non-life technical reserves for the impact of discounting when an insurer reports a material proportion of its reserves on an undiscounted basis.

Life reserve valuation adjustment:
• When there is a mismatch between the valuations of assets and liabilities, we apply an adjustment to the life reserves.
• In the absence of credible information on the reported life liabilities valued using nonfixed discount curves, we typically use the unrealized gains or losses on bonds and derivatives backing life liabilities to adjust the value of reported life liabilities.
• We may further adjust when the mismatch is material: For example, we may increase liabilities by more than the unrealized gains on bonds if the duration of assets is much shorter than the duration of liabilities.
How do the proposed criteria address different accounting standards and potential accounting changes?

- The adjustments we make to reported equity enable us to account for differences in the valuation of assets and liabilities under different accounting standards and to address recent and ongoing financial reporting changes.
- We expect insurance entities, including those reporting under IFRS 17, will be able to provide us with sufficient information to support our analysis, even if it is not provided as part of their financial disclosures.

**Premium risk**

We generally apply capital charges to non-life net premium written (i.e., net of business ceded to reinsurers) to capture potential unexpected losses from higher-than-expected claims on business written in stress scenarios.

**Reserve risk**

We apply capital charges to adjusted non-life net loss reserves to capture potential unexpected losses from higher-than-expected incurred claims in stress scenarios.

IFRS--International Financial Reporting Standards.
We are making the illustrative model available to aid market participants in evaluating the proposal.

Only the Input and Adjustment tabs accept user inputs.

The Output tab shows the results of the illustrative model.

The other tabs are used to calculate the model outputs and are made visible to users to increase transparency. None of these tabs need any input from the user.
Thank You - Any Questions, Please Feel Free To Contact Us

**Insurance Team Contacts***:

- Ali Karakuyu, London, ali.karakuyu@spglobal.com
- Charles-Marie Delpuech, London, charles-marie.delpuech@spglobal.com
- Carmi Margalit, CFA, New York, carmi.margalit@spglobal.com
- Patricia Kwan, New York, patricia.kwan@spglobal.com
- Eunice Tan, Hong Kong, eunice.tan@spglobal.com
- Simon Ashworth, London, simon.ashworth@spglobal.com

**Methodologies Contacts***:

- Mark Button, London, mark.button@spglobal.com
- Ron Joas, CPA, New York, ron.joas@spglobal.com
- Steven Ader, New York, steven.ader@spglobal.com
- Michelle M Brennan, London, michelle.brennan@spglobal.com

**Media Contacts***:

- Jeff Sexton(Americas), jeff.sexton@spglobal.com
- Russell Gerry (EMEA), russell.gerry@spglobal.com
- Michelle Lei (APAC), michelle.lei@spglobal.com
- Chris Krantz (Global), christopher.krantz@spglobal.com

*The Request For Comment lists additional contacts.

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Appendix
Proposed Changes To The Existing Criteria
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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Proposed Changes To The Existing Criteria | Total Adjusted Capital

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.
Proposed Changes To The Existing Criteria | Total Adjusted Capital (cont.)

- 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.

TAC – total adjusted capital.
Proposed Changes To The Existing Criteria | RBC Requirements

- 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.

RBC – risk-based capital.
Proposed Changes To The Existing Criteria | RBC Requirements (cont.)

- 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.

RBC – risk-based capital.
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.
Proposed Changes To The Existing Criteria | RBC Requirements (cont.)

- 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.
Notable Changes In Updated RFC Compared To Initial RFC
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<th>Notable Areas of Change From Prior Proposal Based On Market Feedback</th>
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<td>Hybrid And Debt-Funded Capital</td>
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<td>Value Of In-Force Business</td>
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<td>Materiality Threshold For Analytical Adjustments</td>
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<td>Real Estate Country Categorization</td>
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<td>Longevity Risk</td>
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<td>Morbidity Risk--Critical Illness</td>
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<td>Non-Life Lines Of Business-Various Risk Charges</td>
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<tr>
<td>Natural Catastrophe</td>
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<tr>
<td>Infrastructure Equity Holdings</td>
</tr>
<tr>
<td>Corporate-Owned Life Insurance And Other Assets</td>
</tr>
</tbody>
</table>
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.
Notable Changes In Updated RFC Compared To Initial RFC (cont.)

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.

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

S&P Global
Ratings
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).
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.
### Hybrid Capital & Debt-Funded Capital Tolerance Limits

<table>
<thead>
<tr>
<th>Category</th>
<th>Updated RFC</th>
<th>Initial RFC</th>
</tr>
</thead>
<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.

RFC - Request For Comment; VIF - value-in-force; ACE - adjusted common equity; IRM – insurers rating methodology.
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 prudency 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.
Request For Comment | Project Goals

- **Incorporate recent data and experience** since our last update of the insurance capital model criteria

- Enhance **global consistency** in our risk-based capital analysis for insurance companies

- **Increase risk differentiation** in capital requirements where relevant and material to our capital adequacy analysis, and **reduce complexity** where it does not add analytical value

- Improve the **transparency and usability** of our methodology, such as our proposal to supersede 10 related criteria articles with the new single criteria article

- Support our ability to **respond to changes in macroeconomic and market conditions** by introducing sector and industry variables
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.*
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

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

\[ \text{Adjusted Common Equity (ACE)} \]

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plus</strong></td>
<td>Hybrid capital/debt funded capital (subject to tolerance limits)</td>
</tr>
<tr>
<td><strong>Minus</strong></td>
<td>Investments in non-insurance subsidiaries and unconsolidated insurance subsidiaries</td>
</tr>
<tr>
<td><strong>Plus</strong></td>
<td>Policyholder capital available to absorb losses</td>
</tr>
<tr>
<td><strong>Plus</strong></td>
<td>Unrealized gains on investments backing participating life business</td>
</tr>
<tr>
<td><strong>Plus/minus</strong></td>
<td>Company-specific analytical adjustments to determine TAC</td>
</tr>
</tbody>
</table>

\[ \text{Total Adjusted Capital (TAC)} \]
Proposed Risk-Based Capital (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
- Product specific risk
  - Variable annuities
  - Ring-fenced funds
  - Long-term Health *
- Life VIF

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></th>
<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>
</tr>
</thead>
<tbody>
<tr>
<td>Market risk</td>
<td>100%</td>
<td>75%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>75%</td>
</tr>
<tr>
<td>Credit risk</td>
<td>75%</td>
<td>100%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>75%</td>
</tr>
<tr>
<td>Nat cat risk</td>
<td>25%</td>
<td>25%</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Non-life technical risk</td>
<td>25%</td>
<td>25%</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
<td>25%</td>
</tr>
<tr>
<td>Life technical risk</td>
<td>25%</td>
<td>25%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
<td>N/A *</td>
</tr>
<tr>
<td>Pandemic risk  §</td>
<td>75%</td>
<td>75%</td>
<td>0%</td>
<td>25%</td>
<td>N/A *</td>
<td>100%</td>
</tr>
</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.

RBC – risk-based capital.

S&P Global Ratings
Proposed | Determining The Interest Rate Risk Capital Requirement

**Step 1**

1. **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.

2. **Or Step 1b**
   
   The interest rate risk capital requirement for each confidence level is the sum across all countries of the product of:
   
   i) the relevant exposure for life, non-life and capital;
   
   ii) the company-specific duration mismatch (subject to a floor of 0.5 year); and
   
   iii) the relevant yield stress for each country (applying only the most onerous yield stress scenario).

**Step 2**

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

i) 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

ii) 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

**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

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Proposed | Determining The Net Aggregate Loss Estimate

Is the AEP curve available?

Yes

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

No

Is the OEP curve available?

Yes

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.

No

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.

Is the AEP curve available?

Yes

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

No

Is the OEP curve available?

Yes

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.

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

AEP – Aggregate exceedance probability. OEP – Occurrence exceedance probability.

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

S&P Global Ratings

RatingDirect®
Planned events and outreach
Global Webinars | Dedicated Webpage

Webinars:
• **May 11th:** Webinars provided an overview on the RFC and guidance on related resources
• **May 16th:** Webinars that examined the proposal further and helped 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 16):
• 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
- Financial Risk Profile
- Business Risk Profile
- Governance
- Liquidity
- Comparable Ratings Analysis
- Stand-Alone Credit Profile
- Group or government influence
- Issuer Credit Rating
- Financial Strength Rating

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#rfc, 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)