RFC Process Summary:

RFC Process Summary: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

November 15, 2023

On Dec. 6, 2021, S&P Global Ratings published a request for comment (RFC) on its proposed criteria for insurer risk-based capital adequacy. Following feedback from market participants, we published a revised RFC, "Request For Comment: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions," on May 9, 2023. After reviewing the feedback received on this RFC, we finalized and published our criteria "Insurer Risk-Based Capital Adequacy--Methodology And Assumptions" on Nov. 15, 2023.

The changes from our previous criteria are intended to enhance global consistency and transparency, improve our ability to differentiate risk, improve usability by consolidating criteria, and incorporate updated methodologies, data, and regulatory developments since the publication of the previous criteria.

Our risk-based capital (RBC) adequacy criteria establish the quantitative starting point that is integral to our analysis of the capital adequacy of insurance and reinsurance companies worldwide. We base our overall opinion of an insurer's capital and earnings on insights drawn from this criteria framework, evaluated in conjunction with other factors in our insurer ratings methodology (IRM) framework.

Variations in global accounting standards, regulatory regimes, and complex legal entity structures present challenges in the analysis of insurance company capitalization, but we take a global approach, noting in the criteria where there are specific regional treatments. We typically express our capital and earnings opinion by comparing total adjusted capital with risk-based capital requirements at different confidence levels.

We'd like to thank investors, issuers, and other market participants who provided feedback. This article, which should be read in conjunction with the final criteria, provides an overview of the changes we made between both the first and second RFCs and between the RFCs and final criteria. Moreover, this article provides an overview of the areas of the criteria without significant changes, as well as changes we made that did not arise from market feedback.

For most of the changes noted in this article, commenters not only raised specific concerns but provided data or pointed us to new information that we had not previously considered in our calibration. 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 criteria. However, we have clarified the criteria text where we determined it would enhance usability and transparency. We also note that the market variables we initially proposed to include in a separate Sector and Industry Variables Report have instead been included as an appendix to the criteria.

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WRITTEN COMMENTS RECEIVED FROM MARKET PARTICIPANTS THAT LED TO SIGNIFICANT ANALYTICAL CHANGES TO THE FINAL CRITERIA

Determining The Rating Input For Bonds And Loans

Our original proposal for determining rating inputs for bonds and loans in an insurance company's portfolio relied primarily on ratings from S&P Global Ratings, with allowances for mapped ratings or assumptions based on the sector and location of the exposure. We later withdrew that aspect of our proposed framework, as described in "S&P Global Ratings Withdraws Rating Input Approach From Proposed Insurer Risk-Based Capital Adequacy Criteria," published May 9, 2022.

We considered the extensive feedback received and significantly revised the initial RFC's treatment for assets unrated by S&P Global Ratings.

For assets that S&P Global Ratings does not rate but that carry ratings from other credit rating agencies (CRAs), the criteria provide for the use of other CRAs' ratings using CRA mapping tables used by the insurer's domestic regulator to determine the applicable rating inputs, where:

- The CRA is registered or certified in accordance with relevant CRA regulations;
- The CRA is included in a mapping table that is used by insurance regulators in establishing capital requirements for credit assets;
- The regulatory mapping table relates the CRA's rating scale to S&P Global Ratings' global rating scale; and
- The mapping table is publicly available.

In addition, the criteria provide for the use of regulatory credit measures such as the National Assn. of Insurance Commissioners (NAIC) Securities Valuation Office (SVO) designations as well as insurers' internal credit scores that are mapped to credit quality steps under Solvency II and accepted for the determination of capital requirements by the insurer's regulator.

For assets without the credit measures described above, for which inputs may be determined under jurisdictional and sector-driven assumptions, we also added granularity by considering different tranches of structured finance securities, although we retained the ability to adjust these inputs up or down by one rating category.

We also received requests for guidance as to which regulatory mapping tables would be used and whether the ratings would be adjusted in any way. In response, we clarified our criteria to include as examples those mapping tables produced by the NAIC and used by state insurance regulators in the U.S. or those determined by the European Supervisory Authorities for use under the Solvency II Directive. We also clarified that under step 2, we base our rating input on a CRA's ratings using a regulatory mapping table, without adjustment.

The criteria state we typically apply the mapping table used by an insurer's domestic regulator. The domestic regulator would be the lead regulator of the insurance group when assessing capitalization at a group level, even though there may be subsidiaries regulated by a regulator that uses a different mapping table (such a table would be relevant if assessing capitalization at the level of that specific subsidiary).

Regarding the use of CRA ratings for structured assets, some comments questioned circumstances where insurers might have purchased legacy structured assets at a significant

discount, such some perceive the rating as not fully reflective of the inherent value of the securities and the recoverability of the assets. The methodology for credit risk charges encompasses a view as to recoverability, is calibrated based on S&P Global Ratings ratings performance, and, in our view, appropriately uses ratings as inputs consistent with the calibration.

Regarding the treatment of reinsurance receivables, we believe it is appropriate to differentiate the creditworthiness of these in line with our criteria for determining the rating inputs for bonds and loans. We also believe it is appropriate to maintain a differentiated approach for steps 1-3, which enables the criteria to reflect S&P Global Ratings' rating opinions, where available.

Summary of comments received

We received comments recommending reconsideration of the approach we initially proposed for determining the rating input for bonds, loans, and reinsurance counterparties unrated by S&P Global Ratings, including comments suggesting:

- We should not apply notching to securities rated by other CRAs and should instead treat these ratings as equivalent to S&P Global Ratings ratings;
- We should notch based on historical ratings performance only;
- The proposed criteria ignored the credit assessments of other CRAs, the SVO, and insurers' internal ratings;
- We should leverage regulatory CRA mappings (e.g., Solvency II credit quality steps and the proposed mapping by the International Assn. of Insurance Supervisors for the Insurance Capital Standard [ICS]);
- We should clarify the treatment of national scale ratings from other CRAs;
- We should use market indicators to assess relative credit risk, such as the yield of an insurer's portfolio;
- For structured finance securities, issuers should be able to provide more information to derive more appropriate risk charges;
- Structured finance securities unrated by S&P Global Ratings or mapped CRAs do not all relate to the most junior tranches of a securitization;
- The proposed criteria could create incentives for riskier holdings;
- The distinction between rating inputs in steps 1, 2, and 3 is unnecessary and operationally burdensome;
- We should use the regulatory rating hierarchy in regulatory reporting for commercial and residential mortgage-backed securities, rather than S&P Global Ratings or other CRA ratings, to determine creditworthiness;
- Use of the lowest rating in step 2 is overly conservative;
- All unrated bonds should be included in the 'BB' category;
- The regulatory mapping tables to be used should be specified in the criteria;
- The criteria should be clear in indicating that rating inputs in step 2 are used on an unadjusted basis; and
- The treatment of CRA ratings where the CRA is not included in regulatory mapping tables is concerning.

Hybrid And Debt-Funded Capital

Our initial debt-funded capital proposal allowed for senior debt and no-equity-content hybrids issued by nonoperating holding companies (NOHCs) in our measure of total adjusted capital (TAC) when two conditions were met: i) high structural subordination of senior creditors of the NOHC, and ii) proceeds of the NOHC issuance are downstreamed as equity to regulated operating entities.

We considered the extensive feedback received on this point and revised our criteria by removing the requirement to downstream NOHC debt to operating entities for inclusion in TAC. The criteria assume NOHC resources are available to fund operating entities and will be available to absorb losses in operating companies in stress scenarios.

We also included a new haircut of 20% on resources (cash and eligible investments, as adjusted) held at an NOHC where there is high structural subordination. This is a change from our revised RFC, where we indicated that the haircut would apply to NOHCs outside the regulatory perimeter. We believe cash and investments retained at an NOHC indicate that the group's capital resources are not fully deployed in regulated operating entities. And while we recognize that NOHC assets could be deployed to support regulated operating entities, we also recognize these assets can be deployed more easily for other uses, such as shareholder-friendly activities, and would not be available to support senior creditors of regulated operating entities in all stress scenarios. The proposed haircut captures that uncertainty. We maintained the relevant asset risk charges for NOHC assets, in addition to introducing the proposed haircut.

The criteria state conditions to determine the eligibility of debt-funded capital for TAC to ensure that we include only debt that we believe is available to absorb losses in regulated operating entities--a key principle for including debt-funded capital in TAC. We also explicitly exclude any short-term debt from debt-funded capital.

Relative to our original RFC, we changed our definition of high structural subordination to enhance global consistency in the treatment of NOHC debt in TAC. Specifically, we recognized that there could be situations where structural subordination is high even when the NOHC is inside the regulatory perimeter. The criteria treat regulatory restrictions to payment as a key factor in defining high structural subordination.

Moreover, we expanded the scope of eligible debt-funded capital to include certain NOHC debt instruments that have loss-absorbing features, thus increasing global consistency. We also revised the denominator of the formula we use to determine our debt-funded capital and hybrid tolerance limits--it now includes debt-funded capital and eligible high- and intermediate-equity-content hybrids. This approach will dampen the potential volatility in TAC and enable tolerance limits to be preserved in a stress scenario through replenishing capital with either eligible debt, hybrids, or equity, rather than just equity.

We also increased our tolerance limits for intermediate- and high-equity-content hybrid capital instruments relative to our original proposal, to reflect their higher quality than instruments included in debt-funded capital.

We will continue to assess restricted Tier 1 instruments under our hybrid capital criteria and will include eligible hybrid capital instruments in TAC up to the revised tolerance limits.

We believe the criteria, combined with other relevant criteria such as the insurance ratings framework and group rating methodology, appropriately capture the risks and benefits for insurers operating in different regulatory regimes while ensuring consistency in our ratings. For example, in jurisdictions where we would include senior debt as debt-funded capital owing to high

potential regulatory restrictions to payments from operating entities to the NOHC, the additional risk for NOHC creditors is generally reflected with wider notching in our ratings on NOHCs relative to the group credit profile.

Regarding comments about the treatment of different debt-issuing entities, we do not distinguish between regulated and unregulated entities in terms of debt-funded capital eligibility. The regulatory perimeter is not the determining factor in debt-funded capital eligibility. However, we believe it is important to distinguish between operating entities and nonoperating entities, both in our approach to determine debt-funded capital eligibility and from a ratings perspective. Structural subordination is undermined, in our opinion, by issuing debt from an operating entity.

We continue to believe that ownership by a regulated operating entity also undermines structural subordination. However, we do not suggest that structural subordination between an NOHC and its operating subsidiaries is undermined, but that structural subordination is undermined within our group analysis because, for example, senior creditors in the operating entity are more directly exposed to risks relating to leverage.

However, we made a change to allow debt-funded capital eligibility when an insurance NOHC is owned by a regulated bank, subject to meeting the other conditions in the criteria. This change recognizes the differences in the regulatory approach to insurance activities compared with banking activities in a resolution scenario and in capital adequacy calculations--differences that are also reflected in our methodologies and ratings.

Regarding comments on the link between structural subordination and diversification, we did not introduce quantitative limits on the extent of group diversification benefits between legal entities (or exclude it). Although we recognize there can be limits on the ability to realize group diversification benefits in stress scenarios, we believe these considerations can be captured, if relevant and material, through the application of our insurance ratings framework and our group rating methodology. For example, we may apply a negative capital and earnings adjustment when determining the group credit profile if our assumption of risk diversity and capital fungibility in our consolidated capital analysis overstates capital and earnings.

We clarified in the criteria that the eligibility of NOHC debt instruments based on loss-absorbing instrument features applies when we determine there is low structural subordination. There is no requirement for loss-absorbing instrument features when we determine there is high structural subordination. We do not include in TAC instruments without loss-absorbing instrument features, such as instruments that are eligible as regulatory capital owing to amortization of principal, unless we determine there is high structural subordination.

Where the NOHC is inside the regulatory perimeter, we consider it important that the regulator recognizes the debt instrument as regulatory capital in group solvency calculations. Moreover, where the issuer is inside the regulatory perimeter, regulatory eligibility is a necessary condition, but not a sufficient condition for inclusion in TAC. We have not added specificity to the criteria relating to the relevant regulatory limit for assessing whether an instrument is included as regulatory capital. We think this would add unnecessary complexity to the criteria and reflects a level of detail that has not been required when applying our hybrid capital criteria.

In our view, it is important to differentiate instruments that are eligible under our hybrid capital criteria from instruments that are eligible under the principles of debt-funded capital. The inclusion of debt instruments as debt-funded capital is based on the principle of structural subordination and downstreaming (or potential downstreaming) of proceeds to regulated operating entities as equity capital.

We also have higher tolerance limits for eligible hybrid capital instruments that reflect their higher quality relative to instruments that are eligible as debt-funded capital. This higher quality for

eligible hybrid capital instruments is reflected in our hybrid capital criteria, including the higher standards for residual maturity. Furthermore, we believe our capital and earnings projections provide sufficient flexibility to consider refinancings or near-term maturities of debt issues with a residual maturity of less than one year.

In our formula, we do not include policyholder capital in ACE because we do not allow policyholder capital to be levered. Including policyholder capital in ACE would also introduce inconsistencies in tolerance limits between ring-fenced and non-ring-fenced participating business. The exclusion of policyholder capital from ACE is unrelated to considerations of weaker forms of capital.

Some comments addressed tolerance limits. We believe the limits strike an appropriate balance in the quality of capital instruments included in TAC and achieve a key objective of enhancing global consistency. We have clarified that the tolerance limit of 0% for no-equity-content hybrids applies unless these instruments are eligible as debt-funded capital.

Finally, we confirm that we do not "grandfather" or apply transitional arrangements to debt instruments that do not meet our criteria; we apply the relevant criteria that are in effect.

Summary of comments received

On the principles for determining eligibility of debt-funded capital, comments we received suggested:

- Support for a principles-based approach and widening of scope to enhance global consistency;
- Proceeds of NOHC debt issues shouldn't have to be downstreamed to regulated operating entities, given historical evidence of support;
- Net debt as a measure of what has been downstreamed would not recognize NOHC assets and limits capital fungibility;
- It is incompatible to allow debt instruments to be eligible as debt-funded capital based on the principle of structural subordination without requiring downstreaming of proceeds in full;
- It is inconsistent in a group capital model to recognize structurally subordinated debt and include diversification benefits between legal entities;
- The proposal negatively impacts long-term commitments on debt issued under the previous criteria;
- We should apply transitional provisions to debt instruments that are not eligible under the revised criteria;
- The treatment of no-equity-content hybrids as debt-funded capital adds complexity to the subordinated debt market;
- Including debt-funded capital does not promote global consistency, creating competitive advantages where regulators do not preclude its use;
- Senior debt is not loss absorbing and should not be eligible as capital in a group capital model;
- The one-year residual maturity requirement is inconsistent with the residual maturity standards for intermediate-equity-content hybrids in our hybrid capital criteria;
- The criteria puts mutual insurers at a disadvantage relative to nonmutual peers by treating senior debt instruments more favorably than surplus notes;
- The residual maturity requirement does not consider refinancings completed or planned;

- Structural subordination is not only high when the NOHC is outside the regulatory perimeter;
- The regulatory perimeter should not be used to identify structural subordination;
- We should remove references to group supervision and group solvency requirements;
- The criteria implied that when an NOHC was within the regulatory perimeter, policyholder protection was weakened;
- We should not preclude DFC eligibility for debt issued by NOHCs that are owned by operating entities;
- We should focus on the regulatory approach taken to debt instruments;
- The definition of loss-absorbing instrument features should be expanded to include principal amortization when this is accepted by regulators;
- We should not differentiate the treatment of identical debt instruments issued by unregulated and regulated entities;
- We should remove the distinction between nonoperating holding companies, operating holding companies, and operating companies that are within the regulatory perimeter;
- The definition of the regulatory perimeter should not be left open to interpretation;
- We should clarify the relevant regulatory measure for determining whether a debt instrument is included as regulatory capital in group solvency calculations;
- We should clarify the application of debt-funded capital to support transparency and usability; and
- Local laws and solvency regulations that govern the flow of resources from operating entities to NOHCs are not adequately reflected and the contractual and structural subordination of NOHC debt is not recognized in the criteria.

Comments we received on the haircut applied to NOHC assets suggested:

- Applying a haircut does not give full credit to debt-funded capital and reduces capital efficiency, increasing the cost of doing business;
- Diversification benefits can be realized only if there is capital fungibility, which is best achieved by holding excess capital at the NOHC;
- The haircut will create incentives for downstreaming, reduce capital flexibility, and increase overall enterprise risk, given it would be imprudent to hold excess capital in regulated entities, which is likely the opposite of our intentions;
- No haircut should be applied because NOHC cash can be used to fund regulated activities;
- A 20% haircut is arbitrary and punitive and could lead to a double impact on TAC where an NOHC is holding assets backing debt in excess of tolerance limits;
- The haircut does not consider that companies have policies or histories of maintaining minimum levels of NOHC liquidity;
- The haircut should be based on public or typical capital commitments, or we should reduce NOHC resources subject to the haircut by any stated minimum liquidity level used as a stress buffer;
- The haircut is duplicative with the governance modifier; and
- We should define the regulatory perimeter.

Comments we received on the tolerance limit formula for debt-funded capital and hybrid capital suggested:

- Using ACE to define limits could promote greater consistency and address a circularity under the current criteria whereby the issuance of debt resulted in additional capacity to issue debt;
- Using ACE could reduce the ability of insurers to raise eligible debt and hybrids in a stress scenario and increase the cost of capital unnecessarily;
- We should include eligible hybrids in ACE;
- We should include policyholder capital in ACE;
- We should base the tolerance limits on capital requirements, use an average of ACE, or exclude market-related impacts to reduce pro-cyclicality
- Changing our approach is unfair to insurers that relied on the existing approach;
- Changing our approach would penalize insurers with noninsurance businesses that are typically assessed using cash flow metrics, since excluding goodwill would implicitly overstate the amount of debt that is supporting the insurance business and limit TAC;
- We should recognize that intangibles can be monetized; and
- Cash flows from noninsurance businesses can provide significant support to the insurance business in stress.

Comments we received on our debt-funded capital and hybrid capital tolerance limits suggested:

- Agreement with the global alignment of the criteria;
- The limit reduction in some jurisdictions would reduce total resources available for policyholder claims;
- There are significant barriers to effectively and efficiently restructure debt in line with lower tolerance limits;
- The limits are too conservative, arbitrary, and punitive;
- The limits are inconsistent with financial leverage tolerances and therefore should be increased;
- We should include all loss-absorbing instruments and not apply tolerance limits;
- Tolerance limits sufficiently address considerations for quality of capital, and therefore hybrid capital and debt-funded capital should not be considered weaker forms of capital;
- We should give more credit to contingent capital instruments;
- The higher tolerance limit for hybrids will increase costs; and
- The limit for no-equity-content hybrids that are eligible as debt-funded capital is unclear.

Comments we received on our treatment of regulatory capital instruments and alternative capital structures suggested:

- We should include regulatory capital instruments in TAC that are not eligible under our hybrid capital criteria, including ancillary own funds;
- Preference shares should be included in ACE because these are a legal form of equity;
- We should include perpetual preference shares with replacement capital covenants as

high-equity-content hybrids;

- Alternative capital structures should be addressed in the criteria;
- We should consider and make transparent in the methodology the value of the mutual insurance structure; and
- We should strengthen the role of debt service coverage ratios in our analysis to capture the risk from use of leverage.

Value Of In-Force Business

Based on the feedback we received on our initial RFC, we revised our approach to value of in-force (VIF) life business and similar items. Specifically, the criteria treat on-balance-sheet disclosed life reserves that we view as reserve margins above best estimate as equity-like life reserves and exclude these from the VIF risk charge. These life reserve surpluses will be given full credit posttax in TAC with no risk charge.

The criteria include only life reserve surpluses that are explicitly identified in the reported financial statements or those that can be determined using information that is reported under different reporting standards (e.g., U.S. statutory and generally accepted accounting principles). We include these 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). We added a definition of equity-like life reserves in the glossary in the criteria. Examples include:

- Prudence from XXX/AXXX regulation under U.S. statutory accounting principles;
- Provisions for adverse deviations (PfADs) where the margin is disclosed;
- Contractual service margin and risk adjustment under International Financial Reporting Standard (IFRS) 17;
- Excess liability reserves in Japan;
- Asset valuation reserves (under U.S. statutory accounting); and
- Interest maintenance reserves (under U.S. statutory accounting).

Under the criteria, we may apply a negative capital and earnings adjustment (where these balances are material) to address fungibility constraints. This is because these items may not be available to absorb losses from all risks across the group and are reported as nonequity items.

In the criteria, on-balance-sheet VIF items like life deferred acquisition costs (DAC) or value of business acquired (VOBA) will receive full credit in TAC but will be subject to the proposed VIF charges. However, VIF is no longer included as a weaker form of capital in the application of our insurers ratings methodology.

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 but will be subject to the proposed VIF risk charges.

We believe it's important to retain a VIF risk charge to capture the potential change in VIF in stress scenarios, particularly for products and risks that are not fully captured through our asset and liability risk charges alone--for example, risks from future management fees, future investment income, and lapsation.

The principles in the criteria provide a fair treatment of life reserve surpluses across multiple accounting regimes when they are disclosed or can be identified. Under our approach, companies reporting on an economic basis (like IFRS 17) will not get credit for off-balance-sheet VIF where the reported balance sheet is presented on an economic basis.

Although we may not be able to fully adjust for differences in accounting standards, the principles in the criteria support our ability to enhance global consistency, given the disparate accounting standards in the global insurance sector. We believe the criteria balance the available information against the complexity of addressing specific means of reporting, while reducing the potential for double counting.

We received additional feedback questioning the treatment of the contractual service margin (CSM) and risk adjustment as weaker forms of capital, requests to reconsider the treatment of non-life unearned profit embedded in reserves given potential for different accounting presentations under IFRS, and requests to reconsider allowing off-balance-sheet VIF as capital irrespective of whether the financial statements are presented on an economic value basis.

We believe analytical judgment is key to assessing the extent and nature of softer forms of capital that make up part of an insurer's capital base. As a result, we clarified the scope of analytical judgment in the IRM to indicate a capital and earnings adjustment may be made where the composition of capital is overly reliant on weaker forms of capital.

Regarding the treatment of CSM for non-life insurers, we clarified that we include an adjustment in ACE for the surplus or deficit of all non-life reserves, rather than just loss reserves. We recognize the potential for surplus to be embedded in technical provisions of a non-life insurer beyond loss reserves and that these may be available to absorb losses in a stress scenario. This change reflects the possibility of enhanced disclosure under IFRS 17 and our goal of global consistency for these companies. Although these companies may not explicitly disclose such margins in technical reserves, we may still be able to identify them for our analytical purposes.

Regarding the treatment of off-balance-sheet life VIF, we made no further changes. We think that analytically it is relevant to consider IFRS 17 as a fair presentation of an insurer's economic financial position, such that we do not make further adjustments to include profitability not already included in the accounts.

Regarding points raised on global consistency, the criteria have identified other equity-like life reserves in many jurisdictions, including the U.S. These have been included in the glossary of the criteria. We do not think, based on our review and testing of the criteria, that the principles in the criteria favor a particular region or undermine our objective of global consistency, as some comments suggested.

Summary of comments received

Comments we received on VIF suggested:

- The risk charge on VIF double-counts risk because of the risk charges applied to life liabilities;
- Our treatment of CSM and VIF may be inconsistent;
- The proposed treatment of specific reserves across jurisdictions may be inconsistent;
- The proportion of weaker forms of capital will increase;
- Treatment of CSM and risk adjustment as weaker forms of capital is not appropriate; and
- We should allow off-balance-sheet VIF as capital irrespective of whether the financial

statements are presented on an economic value basis.

Diversification

We considered significant feedback on diversification and revised certain aspects of our approach to the impact of diversification. Specifically, we updated our correlations for morbidity and mortality and for mortality and pandemic risks as follows:

- Morbidity and mortality--Revised to 50% from 75%
- Mortality and pandemic--Revised to 25% from 50%

Our initial morbidity and mortality calibration of 75% reflected an assumption that an increase in mortality rates could be linked to a deterioration of general health conditions, and vice versa.

However, after further review of the benchmark analysis, we determined a correlation of 50% is reasonable. Although we still believe there is a strong link between mortality rates and general health, the revision reflects that it is typically a one-way dependency and that there is potential for diversification within an insurer's portfolio through its pool of policyholders.

We revised our proposed mortality and pandemic correlation to 25% from 50% to better reflect that pandemic risk is also a one-way risk: A pandemic would cause mortality above and beyond the standard mortality assumption, and the impact from a pandemic is typically short term, while mortality risk is intended to capture a change in long-term trends.

We also revised our criteria to allow for diversification of "other" non-life risks, with a 50% correlation. Our initial proposal of a 100% correlation conservatively captured the lack of information on the "other" exposures. The revised approach recognizes that these lines generally do not overlap with the remaining categories.

Consistent with our initial calibration, we believe title insurance to be correlated with GDP, but upon further consideration, we determined title insurance is more appropriately reflected as an "other" line of business than as a financial line. The reclassification allows for greater consideration of the diversification benefits with financial risks.

Summary of comments received

Comments we received on diversification suggested:

- The haircuts for diversification credit are overly conservative;
- Correlation assumptions within life exposures are too conservative;
- Correlation assumptions within non-life exposures are too conservative;
- Correlation assumptions within asset exposures are too conservative;
- Some of the level 3 correlations are too conservative;
- Explicit credit for geographical diversification should be considered;
- The 100% correlation of "other" with the six non-life businesses is counterintuitive;
- Non-life premium and reserve correlations should be more granular; and
- The treatment of title insurance as a financial line would result in S&P Global Ratings not giving diversification credit against market and credit risk.

Materiality Threshold For Analytical Adjustments

Our original RFC limited the company-specific adjustments to TAC and RBC requirements to those that are material to our analysis. The proposed criteria included examples of materiality, such as a change in total RBC requirements of 10% or an adjustment that could lead to a change in our capital and earnings assessment within the IRM framework.

Based on the feedback received and after further consideration, we lowered the materiality threshold to 5% from 10% and clarified that the materiality assessment is based on a single adjustment. Although the original proposal did not preclude adjustments below the 10% threshold--for example, those that could change our capital and earnings assessment--we agreed that 10% is a high bar for a single adjustment, given the diversity of risks for most insurers.

We also agreed that for more complex risks--for example, interest rate risk and natural catastrophe risk--using issuer-specific inputs is important. That is why we use issuer-specific inputs for certain risks, such as the duration mismatch and the results from catastrophe models. We do not consider these to be company-specific adjustments. We also added granularity in the natural catastrophe inputs to increase risk differentiation.

While we acknowledge that very granular company-specific adjustments can lead to a more precise capital model output, we do not make every possible adjustment. A key objective of our criteria is appropriately differentiating risk exposures and capital positions between insurers. Accordingly, we place less emphasis on the precise quantitative capital model output than on capital positions within the context of our capital and earnings assessments. Therefore, we believe it is important to retain the concept of materiality in the criteria in relation to company-specific adjustments. In addition, the materiality thresholds defined in the criteria are examples of when we typically consider a company-specific adjustment to be material. There may be other situations where we determine an adjustment is material.

We do not believe it is appropriate to apply the materiality threshold at the level of a specific risk category or input line. A specific risk may not be material in our overall assessment (e.g., a 10% threshold for a risk that represents 5% of RBC would be a 0.5% adjustment to total RBC).

Quantitative adjustments are intended for cases that are material to our ratings analysis--not for immaterial cases where adjustments create a false sense of precision.

We also do not believe the threshold should be based on the cumulative impact of adjustments. We do not expect to make company-specific adjustments on a frequent basis, and making multiple company-specific adjustments for a single insurer is likely to be even less prevalent.

We made no further changes to the materiality threshold based on the additional feedback we received on the second RFC. When considering reducing the threshold to 5%, we took into consideration the inclusion of the VIF risk charge. Qualitative tools can be used in situations where capital and earnings are understated. The materiality assessment is based on total RBC requirements and includes asset risks retained on the NOHC balance sheet, reflecting our group consolidated capital analysis.

Summary of comments received

Comments received on the materiality threshold suggested:

- The proposed criteria could limit the ability to apply adjustments because the threshold is too high;

- It was unclear whether the materiality threshold is intended to apply to single adjustments or cumulatively;
- An adjustment might be considered material only if it could lead to a change in total RBC requirements of more than 10% or if it could result in a change in our capital and earnings assessment;
- We should either remove the 10% limit or significantly reduce it;
- We should apply the 10% threshold to each risk category rather than the total capital requirement;
- The threshold should apply cumulatively rather than to any single adjustment;
- The complexity of an individual risk (e.g., natural catastrophe), rather than size, warrants company-specific inputs;
- 5% still seems overly harsh and should be lowered to 1%, given there are only an extremely small number of individual factors or subfactors that may have such on influence on RBC;
- The 5% threshold may set incentives not to act in a risk-conscious way;
- Such a large single risk concentration suggests the 5% threshold is likely to be irrelevant for most insurers and may also create an unintended incentive for insurers to make concentrated investments;
- We should apply the 5% threshold at the aggregate level, rather than as single adjustments or to individual risk categories;
- The NOHC should not be included in the materiality metric; and
- We should reconsider 5% because including the VIF risk charge in RBC increases the threshold for adjustments.

Real Estate Country Categorization

After considering feedback on our initial RFC, including suggestions on alternative data points, we determined Switzerland should be recategorized into group 1 from group 2 and Canada into group 3 from group 4 in our real estate country categorization.

Longevity Risk

After considering comments on our initial RFC, we scaled down the longevity risk capital charges for issuers in reserving regimes that are calibrated more conservatively than our standard assumption. The longevity capital charges effectively assume reserves are set close to a best estimate. In reserving regimes that are calibrated more conservatively, the difference between the reserve and the stressed net present value (NPV) of payments would likely be smaller than the one implied by the proposed charges. The reduction we apply varies based on the confidence level of the reported reserves.

Summary of comments received

Comments received on longevity risk suggested:

- Even with the diversification benefit, the longevity charge remains particularly onerous and

significantly higher than key benchmarks, including U.S. NAIC charges; and

- Consideration was not given to similar analyses performed, and regulatory factors that were formulated in the U.S. at the 95th percentile, to recognize the conservatism inherent in the reserves.

Morbidity Risk--Critical Illness

We received feedback stating our proposed charge for critical illness, at 3x the equivalent risk charge for mortality risk, was too high, whereas a ratio of 2x was believed to be more appropriate.

Following further review of our assumptions of critical illness relative to mortality risk for the different net amounts at risk (NAR), we revised our proposed critical illness charges. The revision more closely ties the critical illness charges to mortality charges. Specifically, we recalibrated the critical illness charges to just over 2x the mortality charge at each NAR group.

Non-Life Lines Of Business

Based on feedback and our further analysis, we separated global marine liability premium and reserve risk charges, which are applicable when this business line is material, as is typically the case for members of marine mutual clubs. We kept regional charges for marine, aviation, and transport lines of business, however, which reflect the regulatory disclosures in each region. For example, in Europe, Solvency II has marine, aviation, and transport as one line of business, while U.S. statutory reporting has portions of the exposure reported in special property lines as well as ocean marine and aviation coverage.

We also revised risk charges for U.S primary workers' compensation reserve risk to 15% at the 99.5% confidence interval. The previous proposed reserve charge of 30% was largely derived from benchmarking against Solvency II and based on our analytical judgment that the U.S. workers' compensation market is more volatile than that in Europe, the Middle East, and Africa (EMEA). However, a closer look at the two systems (U.S. versus EMEA) and a further review of more recent U.S. workers' compensation reserve development data suggest otherwise. We also noted the ICS view that workers' compensation loss reserve volatility is lower in the U.S. than in EMEA.

U.S. excess workers' compensation charges remains at the initial proposal of 30% at the 99.5% confidence interval, given our view that the volatility is consistent with other liability occurrence claims. Excess workers' compensation claims occur after a relatively high deductible (e.g., $500,000 per accident), which differs from the higher-frequency and lower-severity workers' comp claims.

Based on our further analysis, we updated premium risk charges for U.S. dental and vision to 5% at the 99.5% confidence interval, down from 7.5%. Feedback we received highlighted some qualitative aspects of dental and vision products (such as the limited benefit structure and maintenance aspect of most dental services) that we had previously considered, but our further analysis indicated these were not fully reflected in the previous proposed risk charges when considering relative risks between products.

We also updated our approach to capturing Canadian health insurance risks. Given the materiality of the supplementary health business (for which separate charges are proposed in other regions), combined with the updated Canadian regulatory reporting (which enables us to accurately capture this exposure for non-life insurers), we believed it appropriate to develop a separate supplementary health charge applicable to both life and non-life Canadian insurers.

We made the following changes to our treatment of the Canadian accident and sickness line of business:

- We added a "supplementary health" line of business capturing group and individual medical and dental;
- We scaled up premium and reserve charges to 15% and 5%, respectively, at the 99.5% confidence interval;
- We changed our treatment of disability income exposure to be consistent with life insurance exposures; and
- We changed the charges for the remaining exposure, accident and sickness (excluding supplementary health and disability income), to match those for the U.S.

And finally, we added a new line of business, "motor--Japan and Taiwan," with a premium risk charge of 10% and a reserve risk charge of 10% at the 99.5% confidence interval. Upon further review, we observed that Japanese motor and Taiwanese motor have experienced lower volatility and more favorable loss experience than other Asian markets, including Hong Kong and Singapore, that we mapped to the Asia-Pacific motor category. The proposed charges for Japanese and Taiwanese motor equate with charges for Australian and New Zealand commercial motor.

Summary of comments received

Comments on marine charges suggested:

- The regional differences S&P Global Ratings observes are likely due to marine being dominated by different sublines (cargo, aviation, energy, hull) in different regions, and splitting by region is thus not likely to improve the modeling for insurers focusing on a specific subline; and
- The 66% charge in EMEA is inappropriately high relative to the U.S.'s 33% and high relative to the capital charge that EMEA issuers would incur under their Solvency II requirements.

Comments on U.S. workers' compensation charges suggested:

- The significant increase in the U.S. workers' compensation reserve risk charge is not supported by fundamentals;
- Changes to workers' compensation insurance statutes in most states have capped the cost escalation of benefits for workers' comp insurance; and
- The proposed reserve risk factors for workers' comp and excess workers' comp and the premium risk factor for excess workers' comp are too high (50%) relative to the risks for these lines of business.

Comments on our U.S. dental and vision premium risk charge suggested:

- The proposed premium risk charge for dental and vision insurance is the same as for major medical, which is too high; and
- Relative to medical insurance, both dental and vision insurance are service delivery models, with maximum benefits that are usually capped.

Comments on our approach to the Canadian health business suggested:

- The significant premium and reserve risk increases for Canadian health business are too high,

given that unlike in the U.S., there is no differentiation by line of business; and

- Risks for Canadian group supplemental health business as an exposure should be treated similar to those for other regions, such as the U.S.

Comments on our inclusion of Japanese motor risks in a broader Asia-Pacific charge suggested:

- The capital charge proposed for motor in Japan is not differentiated from the remainder of Asia-Pacific, like Australia and New Zealand, which, like Japan, are developed countries; and
- The proposed Japan motor charges are high relative to the ICS charges.

Natural Catastrophe

Based on market feedback regarding our approach to interpolating the natural catastrophe charges, we revised our approach to use the one-in-250 year return period for 99.8% and one-in-333-year return period for 99.95%, and we maintained the interpolation approach absent that data for an insurer.

The update will make better use of available data, provides more stability and transparency in the actual risk charge, and does not add significantly to the complexity or operational challenges of the criteria. We also believe this approach will more accurately reflect insurers' risk profiles.

In response to feedback, we revised our original proposal for calculating the premium offset when determining the aggregate loss estimate under steps 1 and 2. Under the revised approach, we may adjust our calculation of catastrophe-related premium when there is information that is subject to an independent third-party review (such as by an auditor or regulator).

We recognize that our proposal to base the premium offset on an industry view would not fully reflect premium estimates that are company specific. In our view, the full cat premium calculation is not sufficiently standardized and might not be widely used in the industry. For consistency and comparability reasons, we believe it is appropriate to infer the premium from annual average loss expectations and the industry loss ratio. We are likely to consider the actual profitability of this line of business in other aspects of the rating analysis--in the business risk profile or earnings forecast, for instance.

We received additional feedback suggesting consideration should be given for issuers' ability to access capital markets following a catastrophe event. We do not think it is appropriate to allow for hypothetical access to capital markets in the capital model, given this is already considered in our analysis of the funding structure within the IRM framework.

As well, commenters indicated they believe an independent review of cat premium is impractical, considering that S&P Global Ratings captures the following-year exposure. As stated in the criteria, we may adjust our calculation when there is catastrophe-related premium information that is subject to an independent third-party review (such as by an auditor or regulator). We think this flexibility allows for adequate consideration to adjust for premium expected in the following year.

Summary of comments received

Comments we received on natural catastrophe suggested:

- It could be more accurate to use actual return periods for all cat charges, considering that these points are available;

- Instead of using an industry approach that will not be able to capture the risk profiles of different companies, we should use a company-specific premium figure;
- Consideration should be given for an issuer's access to the capital markets;
- We should use cat premium information provided by companies, and an independent review of the cat premium is impractical;
- There is a lack of clarity on perils included in the probable maximum loss (PML); and
- The use of one-in-500-year stress is excessive, and the use of a one-in-500-year versus one-in-10,000-year approach is questionable.

Infrastructure Equity Holdings

Comments suggested we should differentiate risk charges for unlisted equity by underlying asset classes (especially for renewables and infrastructure) and explicitly allow for consideration of actual portfolio diversification and riskiness. Commenters supported their view by pointing to market data that indicated the volatility of infrastructure and renewables indices is in general significantly lower than that of private equity indices.

After reviewing market feedback and the data provided, we differentiated infrastructure equities from broader equity market investments. Regulated assets such as toll roads, gas or energy networks, and renewable energy investments often provide state-guaranteed returns. As such, they do not carry the market, business, and execution risks that are typically attached to equity market investments. This is an asset class that we expect will grow over time and therefore become more material on insurers' balance sheets, warranting a more granular approach.

We included in the criteria a stand-alone charge for infrastructure equities with these specific low-risk attributes, split into two categories by country based on several factors, such as our view on country risk and the predictability of regulation and government policy.

We received further feedback suggesting the calibration still does not adequately reflect the lower risk of infrastructure investments and suggesting a lower charge. Other commenters suggested revising the criteria to define eligible infrastructure securities more specifically.

We made no further changes based on this additional feedback and believe the charges in the criteria adequately reflect the underlying data and risks. The criteria define equity infrastructure assets as equity exposures to infrastructure assets that are i) in the operational phase; ii) regulated or contractually protected so that they generate predictable operational cash flows; and iii) part of a diverse infrastructure equity portfolio. We believe this definition allows for adequate consideration of the investment to ensure it is properly categorized.

Corporate-Owned Life Insurance And Other Assets

We received several comments on our proposal to capture otherwise undefined exposures as "other assets" and apply a 100% capital charge. Some commenters suggested that our treatment of corporate-owned life insurance (COLI) as an "other asset" was too conservative. We also received suggestions to redefine the scope of the "other assets" category, including by clarifying our treatment of deferred tax assets, non-life DAC, low-income housing tax credits, and other specific assets.

We agreed that the 100% charge on COLI was too conservative, so we revised the methodology to use a differentiated approach to COLI depending on whether the COLI is a general account or held

as a separate account. If it is a general account COLI, we proposed charging the exposure as a long-term bond at the rating of the insurance counterparty. For separate accounts, we initially proposed a look-through approach to the underlying assets, in recognition that the risk relates to the investments. We also clarified the scope of the "other assets" category in the criteria and added examples of assets that we expect to be captured elsewhere.

However, we received additional feedback on the second RFC suggesting that we should not differentiate treatment for separate account and general account COLI, based on the belief that both types of COLI are typically held to maturity and are subject to significant tax penalties for early surrenders. Based on further review, we changed our approach and now apply the credit risk charges to all COLI assets, based on the rating on the insurance counterparty and assuming a tenor of over 20 years. We also clarified that we assume the insurer has the willingness and ability to hold the COLI asset until maturity and that volatility in the carrying value of the COLI asset does not represent a material risk.

We also received additional feedback indicating we should take a more principles-based approach to how "other assets" are considered, and we received requests for increased clarity on and differentiation between the "other chargeable," "exempt," and "other assets" categories. Although we appreciate the desire for greater granularity, it's precisely because a variety of immaterial assets may be included under the umbrella category of "Other Assets" that we chose not to be more specific or exhaustive. The criteria provide examples of the types of assets that may be eligible for the proposed treatment in the respective categories.

WRITTEN COMMENTS RECEIVED FROM MARKET PARTICIPANTS THAT DID NOT LEAD TO SIGNIFICANT ANALYTICAL CHANGES TO THE FINAL CRITERIA

We received several comments pertaining to how the criteria would be implemented, as well as questions relating to the application of the under criteria observation (UCO) designation to entities with ratings that the new criteria might affect. We also received requests to delay implementation of the final criteria, announce the effective date of the criteria in advance, or grandfather in certain aspects of the criteria.

We determined not to delay the implementation date, and we do not apply different criteria based solely on the date of issuance of the criteria. Further, CRAs regulated under Regulation (EC) No 1060/2009, as amended, are required to immediately place credit ratings potentially affected by changes in rating methodology "under observation" (see "Standard & Poor's Announces "Under Criteria Observation" Identifier For Ratings Potentially Affected By Criteria Changes," published May 7, 2013). The UCO designation is not equivalent to a CreditWatch placement and does not indicate the likelihood of a credit rating change or the timeline for which any change might occur. The UCO identifier remains in place on these ratings until the conclusion of the review under the changed criteria, at which time the ratings may be affirmed, changed, or placed on CreditWatch.

We also received feedback from commenters indicating they believe our criteria are conceptually inconsistent in the treatment of certain risks, incorporate multiple levels of conservatism, and incorporate only limited recognition of jurisdictional differences. As well, we received comments requesting greater transparency and disclosure of the underlying data on which our methodology is based.

Broadly speaking, we believe the disclosure and rationale in the criteria are clear, and we have provided additional information on these in this RFC Process Summary. We will not provide further data other than that which is disclosed in the criteria that form the basis of our, due to the mix of

public, private, and confidential data and given analytical judgment used in our determinations.

Regarding the feedback speaking to potential inconsistencies, we made analytical choices in our determinations with a view of overall consistency in the criteria, data availability, the nature of the risk exposure, and losses that could occur, and we differentiated between jurisdictions where we thought appropriate and where we had the data to do so. We think the approaches taken are conceptually consistent with the analytical goals and calibration of these--and related--criteria, such as our IRM.

Calibration

Comments suggested that our recalibration of the framework is too conservative or is excessive. Some commenters flagged the confidence levels and risk charges as high compared with some insurance regulatory frameworks. Furthermore, some feedback questioned whether the insurance industry was being held to comparable, or higher, capital standards than other industries and requested that we publish a comparative analysis of our capital standards. Commenters questioned the use of average default rates in stress scenarios and the use of one-year default rates for longer-term risk assessments, and some recommended recalibrating the stress levels to lower confidence intervals.

The objective in selecting the confidence levels was to ensure outcomes that preserve rank ordering and risk differentiation and that are consistent with the calibration of our insurance ratings framework--and our ratings definitions more broadly. We determined the confidence levels using analytical judgment--informed by the confidence levels we use in other sectors (see below)--and using modeled outcomes based on observed ratings performance. The confidence levels are not based on observed default rates for insurers or observed default rates for any other one sector, although observed ratings performance was one factor that informed our broader determination. Moreover, the confidence levels should be considered alongside our approach to diversification.

Our calibration of risk charges is based on observed volatility, supplemented by scenario-based analysis and analytical judgment. Furthermore, we agree that results would not necessarily be robust if we were to calibrate risk charges based on the limited amount of available data at the higher confidence intervals. To address those limitations, we apply scaling factors to our 99.5% calibration.

The scaling factors between different confidence levels for each risk depend on several factors, such as the underlying distribution assumption (e.g., normal or log normal) and the methodology and assumptions for determining the specific risk charge. In the criteria, we apply multipliers based on a log-normal distribution, rather than a normal distribution, for more risks than under the previous criteria; this results in greater risk differentiation between the stress levels. The higher scaling factors between confidence levels improve the alignment with our ratings definitions for the different stress scenarios.

We believe that a comparison of the calibration of criteria in other sectors that also use confidence levels shows close alignment with the insurance RBC criteria. For example:

- Alternative investment funds: 99.7% 'BBB' stress, compared with a 99.5% moderate stress for the insurance RBC criteria.
- The financial institution risk-adjusted capital framework: Calibrated to an 'A' stress scenario, for market risk measured as a one-year 99.9% value at risk, compared with a 99.8% substantial stress for insurance RBC criteria (note the capital requirements in the financial institutions capital model are calibrated at a single stress scenario ['A'] with thresholds for different capital

and earnings assessments defined in the financial institutions rating methodology).

- Insurance-linked securities: 99.985% 'AA' calibration, compared with a 99.95% severe stress for the insurance RBC criteria.
- Collateralized debt obligation: 99.999% 'AAA' calibration, compared with a 99.99% extreme stress for the insurance RBC criteria.

We also typically expect capital requirements at higher stress scenarios to exceed regulatory standards, as they did under our previous criteria. We use the different stress scenarios to differentiate creditworthiness. This approach differs from regulatory capital requirements, which typically define minimum capital requirements or different trigger points for regulatory actions.

Diversification

We received comments requesting that we allow for geographic diversification more explicitly in the capital model and indicating that some elements of the criteria were unclear. We also received comments indicating the criteria were too conservative, did not align to historical data, and that some level of diversification should be allowed between VIF and other risks.

We continue to believe the capital model criteria, when viewed in conjunction with the broader IRM framework, give us the ability to appropriately capture geographic diversity within our ratings. The charges, despite the recalibration of the confidence intervals, retain some implicit geographic diversification via the selected methodology and the underlying data on which the charges are based, such as through the assumption of diversified portfolios.

We didn't make changes to our assumptions between credit and market risk, financial and other non-life risks, or motor and property, nor to assumptions, based on their perceived conservatism compared with regulators and actual issuer experience, nor did we incorporate workers' compensation as a separate diversification category. We recognize that individual companies might have developed their own judgments based on their own data that may differ from our criteria. Our correlations have been developed using the available historical data and have been benchmarked against industry and regulatory data.

We maintained the diversification haircuts of 10%, 20%, and 30% at the substantial, severe, and extreme stress scenarios, respectively. This reflects the increased uncertainty of diversification benefits as stress increases into the tail.

For pandemic risk, we believe the 75% correlation with financial risks is appropriate. We recognize that it is a one-way dependency, with a pandemic being the cause for a potential negative impact on financial markets, but we believe the COVID-19 surge in 2020 demonstrated how financial markets may respond at the time of a major pandemic, with the markets recovered by the end of 2020. However, we consider it credible that a pandemic of a different nature could have more prolonged effects on the economy and financial markets. The potential for a prolonged effect is also relevant given that we do not consider potential market recovery beyond our one-year stresses. Further, the extent of government support also dampened the economic impact of COVID-19. We believe it is important that our model appropriately reflects the potential impact of a pandemic on an insurer's assets in addition to its liability exposure.

The relationship between premium and reserve risk is complex especially in times of stress, particularly given the differing dynamics between short- and long-tailed business lines that may experience different levels of correlations. We believe the 75% correlation is a reasonable assumption that addresses correlation expectations for a balanced mix of business. The risk of mispricing is one of the main drivers of correlation in periods of stress, and we expect it will likely

contribute to reserve and premium risks simultaneously.

We did not change our approach to the diversification of VIF. Because of the specificity of this item, we determined that the diversification treatment should also be specific. VIF is typically exposed to diverse risks, which is captured in the calibration of the underlying VIF risk charge. We believe including VIF in our correlation assumptions would add unnecessary complexity and could understate risk.

We clarified the criteria on these points, although these clarifications did not constitute a change to the analytical approach:

- We indicated that we make the following adjustments to determine total diversified capital requirements: i) We do not give diversification credit for financial lines against credit and market risks; and ii) we do not give diversification credit for variable annuities against credit and market risks.
- We clarified that pandemic risk is aggregated at level 3.
- We do not provide for diversification credit between variable annuities (VAs) and life products in level 2. VAs are exposed to both longevity and other life technical risks, which are the key drivers of life risk, and they are directly exposed to both market and credit risk. We expect the diversification of these risks to be explicitly embedded in the VA charge.

Because of strong links between the source of insurance claims for financial lines and credit and market risk, as supported by historical data, we do not allow for diversification credit for financial lines with market and credit risk. Our analysis suggests that from a mathematical viewpoint, the correlation for financial lines, while not compatible with a 100% assumption, could be as high as 90%, such that not giving diversification credit is a reasonable approach within the context of the correlation matrices.

We recognize that our diversification credit for pandemic risk could benefit from clarification. Our aggregation at level 3 aims to reflect implied diversification from level 2 of pandemic risk with life risk. We believe the level of correlations between pandemic and market and credit risk is much higher than between life technical and market and credit risk. This is because the short-term and catastrophic nature of a pandemic is much more likely to affect financial markets than the potential long-term change in mortality trends. To better capture these differences and the potential materiality of pandemic risk for a life re/insurer, our criteria aggregate this risk at level 3.

Although we have made the clarifications noted above, we determined no further changes were necessary to our correlations for longevity and morbidity; longevity and pandemic; and longevity and mortality risk pairs. We acknowledge these risks exhibit one-way dependencies, but we think the calibration of the charges reflects this. In our view, an increase in population life expectancy (i.e., a longevity stress) could increase the likelihood of occurrence of a critical illness or disability such that we maintain the proposed 25% correlation. We also view the long-term shift in longevity improvement as somewhat independent of the short-term mortality impact of a pandemic, such that we believe it appropriate to maintain the 0% correlation for longevity and pandemic risks.

For longevity and mortality risk, we recognize a negative dependency. The portfolios exposed to these risks may nonetheless relate to different age or geography cohorts, and an individual policyholder might not hold both life and annuity policies with the same insurer. These risks may therefore react differently to long-term trends in mortality.

Economic Capital Model/M-Factor

We received comments stating the M-factor should not be removed and that internal models are more detailed, provide insights into the capital requirements of insurers, and provide a better representation of risk. Commenters stated the criteria give a limited view of company-specific risks in favor of other objectives, and that a "one-size fits all" approach to risk charges is inappropriate. Commenters also suggested that limitations in the new model will lead to a need for company-specific adjustments that could be better addressed by retaining the M-factor and indicated that if the M-factor were not retained, an alternative mechanism should be used to recognize economic capital model credit.

We agree that internal models can be more accurate or appropriate for a specific insurer, but our view of the risk may appropriately differ from an insurer's view and/or the regulatory calibration. In cases where that difference is material and we determine the capital model overstates or understates the risk specific to the respective company, our criteria provide the appropriate flexibility to address this. We believe the criteria allow us to apply a consistent view of risk and exposures across all companies. Output from internal models will remain relevant in our capital requirement assessment for a risk such as natural catastrophe if consistent with our definition of the risk (aggregate one-in-200-year loss estimate across all lines of business for 99.5% moderate stress).

Tax Basis Of TAC And Risk Charges

Commenters expressed concern with our criteria where we calculate TAC on a posttax basis and calculate capital requirements on a pretax basis, as well as disagreement with tax-effecting equity-like reserves. Comments suggested:

- Disallowing the potential economic benefits from future tax benefits is overly conservative and doesn't reflect the loss-absorbing capacity of reserves, given these are reversed on a pretax basis;
- The proposed criteria effectively treated insurers as if they were not ongoing concerns by failing to recognize the ability to realize tax benefits;
- Our approach is not aligned with that of regulators that allow deferred tax assets as part of capital; and
- Insurers in countries with higher effective tax rates are placed at a disadvantage by treating TAC on a posttax basis and RBC requirements on a pretax basis.

Broadly speaking, we did not change our approach other than to clarify that where the tax effect is not disclosed or is otherwise unavailable, we will use the effective tax rate.

We believe there is significant uncertainty in the ability of companies to realize future tax benefits under the conditions of stress we are modeling. The inclusion of the tax impact on risk capital charges, while potentially more reflective of the economic benefits in certain stresses, also increases uncertainty in the comparability of insurer capital requirements. Capital requirements could become more dependent on tax regimes, become less reflective of management's ability to manage capital, and introduce unintended volatility as tax regimes and tax benefits change. The realization of tax effects such as carry-backs and carry-forwards may be dependent on the timing and jurisdiction of losses incurred, the profitability a company might realize, and whether taxes were paid in the periods preceding net losses.

Similarly, we believe a posttax view of capital supports our goal of global consistency. An approach incorporating different tax regimes and standards into the criteria would likely significantly increase the complexity and granularity of the criteria due to complex tax regimes, while at the same time increasing the potential for inconsistencies to arise, whether due to the complexity of the tax laws or the uncertainty that the tax benefits would be realized under stress scenarios. Adjustments to reported equity to determine ACE and TAC enhance consistency by removing differences in valuation assumptions and accounting standards--adjustments for which we need to consider the related tax impact.

We believe equity-like and redundant reserves should be treated as equity. This approach requires the reserve to be reclassified into equity but, in doing so, requires the related deferred tax asset to be eliminated as well.

We clarified that we do not tax-effect reserves that are tax deductible. These reserves, unlike non-tax-deductible reserves, offset current income and thus reduce the tax obligation in the current period. The current tax deductibility effectively creates a future tax obligation upon the release of the reserves; however, we recognize there is uncertainty that the company would be able to pay the future obligation in a stress scenario, since the release is generally tied to a loss event. Accordingly, we may allow for continued recognition of the tax benefit, specific to tax-deductible reserves, to the extent the company is able to recognize it in the current period.

Our approach differentiates non-tax-deductible reserves in that the tax benefits would be recognized in a future period only to the extent the company is able to generate future profitability and reduce the future tax obligation. Here too, we recognize the uncertainty that the company will be able to generate future profitability in a stress scenario to be able to realize the tax benefit, and as such, we eliminate the deferred tax asset associated with non-tax-deductible other equity-like reserves. We expect the ability to realize the tax benefit to be less predictable or reduced in a stress scenario even if the insurer is still a going concern, given this has happened to insurers before the point of liquidation.

With regard to the consistency (or lack thereof) with regulatory approaches, we note that these differ based on the perspective and goals of the respective regulator. For example, some regulatory capital requirements are on a posttax basis, or the regulators allow deferred tax assets as part of regulatory capital, whereas others disallow or significantly limit tax benefits. Our approach is globally consistent, enabling ratings comparability across regions, while also allowing the flexibility to consider companies' unique circumstances through analytical and capital and earnings adjustments where necessary.

Analytical Adjustments

We received comments in support of allowing company-specific adjustments, as well as questions on the scope of company-specific adjustments and whether these included certain inputs, such as the life reserve adjustment or the company-specific asset-liability management duration mismatch assumptions. We also received requests for more clarity on the treatment of hedge programs and how we adjust for the level of conservatism that an insurer adopts.

As a result of this feedback, we clarified that company-specific adjustments are intended to capture specific items, risks, or risk mitigants not explicitly addressed in our criteria, such as hedge programs or certain nonproportional reinsurance transactions (other than those relating to natural catastrophe risk). Company-specific adjustments could also apply to specific risks that are addressed in our criteria but where a company's product structures present unique risks that differ from the assumptions underlying the calibration of our risk charges. Where we make a company-specific adjustment to RBC requirements, it is typically an adjustment to the capital

charge or an increase or decrease in the capital requirements for a specific risk.

We use the term "routine adjustments" for adjustments to reported equity that apply to all companies irrespective of materiality. These include items such as non-life and life reserve adjustments (which adjust for the level of conservatism in reserves). We also reference a "company-specific duration mismatch" in our interest rate risk charges. Company-specific inputs in our analysis are not intended to be classified as company-specific adjustments. Similarly, reclassifying exposures to alternative risk categories or adjusting the exposure measure where we determine it does not adequately reflect the underlying risk does not constitute a "company-specific adjustment" in the criteria.

We may have different opinions on risks than an insurer or its regulator; therefore, company-specific adjustments should not be considered mechanisms to align to other views of risk charges where our methodology and assumptions differ. We did not add specificity to the criteria on the application of company-specific adjustments, such as for hedge programs. The types of transactions that are likely to be captured under this adjustment are typically bespoke, and we do not believe it is appropriate to further limit the application of analytical judgment.

Foreign Exchange Risk

Comments noted that foreign exchange (FX) risk is a significant risk captured in internal models and that its omission from the proposed criteria would produce differences in results. We also received comments stating it was unclear where FX risk was captured in S&P Global Ratings' analysis.

We agree that FX risk can be a significant risk for insurers. However, we do not explicitly capture it in our capital model criteria. In our view, including FX risk in our capital model criteria would add significant complexity for a risk that we believe is already captured in other areas of our analysis.

In response to the comments received, we made a change to clarify that we capture FX risk in our IRM framework. In the IRM framework, we state that FX risk is not captured in our capital and earnings analysis but is assessed under our risk exposure key rating factor.

Accounting Issues

Comments indicated that some market participants perceived our proposed criteria as inclined toward generally accepted accounting principles (GAAP) equity or market-value-based regimes and that our criteria do not appear to recognize the conservatism in U.S. statutory accounting. Specifically, some comments voiced support for the use of U.S. statutory accounting, suggesting that reported reserves prescribed under statutory accounting are more conservatively calculated than reserves reported on a GAAP or IFRS basis and that excess statutory reserves should be recognized as loss-absorbing capital.

We intend our criteria to be indifferent to the forms of reporting due to the variations by which accounts may be represented. Our criteria state that specific circumstances or reporting differences may require additional adjustments to common shareholders' equity or policyholders' surplus. Accordingly, we may adjust reported financial information to better capture the underlying economic positions of issuers we rate, subject to materiality. We believe the criteria are clear that we may use financial statements produced on a GAAP or IFRS basis, but we may calculate TAC and use exposures from information contained in regulatory financial statements if there are no IFRS or GAAP financial statements or if the regulatory financial statements provide information that we believe is more relevant to our capital analysis. For example, we may add back

certain reserves reported under U.S. statutory accounting principles, such as the asset valuation and interest maintenance reserves, Schedule F penalties, and non-life DAC.

Regarding reserves, our criteria allow us to consider them in excess of best estimates by treating these as equity-like reserves and included in TAC. We clarified that subject to the conditions outlined in the criteria, we may include in TAC the value of policyholder capital that is included in regulatory filings, such as 50% of the policyholder dividend liability in the U.S. Our criteria already consider DAC balances, and we clarified that we consider reported assets such as life DAC or life VOBA to be on-balance-sheet life VIF. We also made a nonmaterial change to include more examples of equity-like reserves in the glossary to the criteria.

We received additional feedback stating we should use insurance revenue as an exposure base for certain lines of business being reported under IFRS 17, as well as requests to reconsider our treatment of insurance receivables.

Insurance revenue as reported under IFRS is net of commissions and thus is not a comparable measure to net written premium, which non-life charges were calibrated from. We continue to believe it is possible for an insurer to provide net written premium.

Regarding insurance receivables, our criteria enable us to adjust the relevant exposure measure when we determine it does not adequately reflect the underlying risk. This also enables us to address cases where the accounting classification (e.g., policy loans from primary insurers) does not reflect the underlying risk as reported in the financial statements applied, as a starting point to determine the nature and risk classification of exposures.

Yields Used For Discounting

We received comments that noted perceived inconsistency in our criteria when considering different reporting regimes, as well as comments that noted the potential for short-term volatility by using the government bond yield.

Different reporting regimes may require or allow for the selection of different methods of discounting, some of which could cause greater disparity between reporting metrics (such as the use of a risk-free rate versus a government yield or a risk-free rate plus a liquidity premium adjustment), whereas others would produce less disparity. Even under the same reporting standards, there can be differences in the approach to discounting (for example, top-down versus bottom-up methods under IFRS 17 and different assumptions to determine the illiquidity adjustment). Nonetheless, our criteria do not dictate the method for discounting to be selected where the reserves are already discounted. Rather, to determine ACE, 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.

Where we perform the discounting, we typically use the yield to maturity on a government bond as a proxy for a risk-free rate, with a term closest to the mean term of the reserves to facilitate more consistent application. Where non-life technical reserves are already discounted or are expected to settle on average within one year, we do not usually make an adjustment. While reporting and regulatory approaches may differ, our approach balances analytical consistency and operational complexity to come to a reasonable view of the adjustment for discounting, if any, to determine available capital.

We received additional feedback requesting we remove the premium receivables adjustment from the definition of non-life technical reserves. We believe it is appropriate to make this adjustment based on the fact these are receivable balances that should not be discounted. Further, we clarified in the final criteria that this adjustment should typically be made, not just in those cases

where receivable balances are material.

Total Adjusted Capital

We received a variety of comments about our definition of TAC and its various components. Some questioned the scope of reserves included in capital, while others questioned our treatment of affiliates and subsidiaries. We also received comments and questions on our approach to intangibles and unrealized gains and losses.

To help clarify our treatment of reserves, we added examples of other equity-like reserves that we determine are available to absorb future unexpected losses. We also clarified that for capital models that are not based on consolidated financials, we typically deduct intragroup transactions from common shareholders' equity (for example, a loan from a subsidiary to its parent in lieu of a dividend) and include adjustments for other entities, such as the group parent, to ensure our capital analysis fully captures the resources and risks of the consolidated group. We further clarified that we add to shareholders' equity unrealized investment gains (or deduct unrealized investment losses) that are not included in reported equity (or surplus). And finally, we clarified that "noninsurance subsidiaries" refer to operating entities and that there is no intention to apply both a 100% deduction and an asset risk charge to unconsolidated subsidiaries.

Our criteria do not define materiality when it comes to our treatment of subsidiaries, given we believe it is important to preserve the ability to apply analytical judgment in this determination. This decision also recognizes that the relevant metric for determining materiality could be different depending on the sector of the subsidiary.

The risk-based capital model is an insurance capital model. We capture the risks and benefits of noninsurance operations elsewhere in our analysis through the insurer ratings framework. Assuming that an entity could be sold would also create an inconsistency in our analysis unless we excluded any benefits from this entity that we had reflected elsewhere in our analysis (for example, we should then exclude these activities from our competitive position assessment and our rating for any NOHC). We also do not believe it would be appropriate to include the excess over the regulatory required capital of noninsurance subsidiaries. This could overstate the capital and earnings assessment in our analysis of the group credit profile. Where we determine a noninsurance subsidiary is more strongly capitalized than the rest of group, we may reduce the amount we deduct for such entities.

We also do not intend to deconsolidate an entity that is established solely to hold an insurer's investment assets, such as a property company. For these entities, we apply the relevant asset risk charge to the assets held by the noninsurance subsidiary. Similarly, for asset management subsidiaries, we do not deconsolidate the insurer's assets managed by the subsidiary--only the assets on the balance sheet of the asset management subsidiary.

Consistent with our goal to include items in TAC that are likely to be loss absorbing, we excluded intangibles and goodwill because we believe these assets are unlikely to be realizable during stress and that the recoverability value in such a stress is likely to be highly uncertain. This approach also ensures consistency of capital treatment between companies that have grown organically and those that have grown through acquisitions.

Use Of Market Values

We received comments stating that the unrealized gain or loss on fixed-income assets was a poor proxy for the market value of life liabilities and that using market values to determine capital

requirements creates procyclical distortions in capital adequacy.

We retained the general principles in the criteria and note that the unrealized gain or loss on bonds and derivatives backing life liabilities is used in the absence of credible information on the reported life liabilities valued using nonfixed discount curves. However, we clarified our approach for life insurers to indicate that we may exclude from ACE the unrealized gains and losses on fixed-income assets to address situations where we are unable to determine or estimate the market value of life liabilities. For example, where we are unable to estimate the market value of life liabilities using the unrealized gain or loss on bonds and derivatives backing life liabilities. We made some related changes to the life reserve valuation adjustment to maintain consistency with the valuation basis of assets in ACE and TAC.

We also made some related changes to the exposure measures for determining capital requirements. We may use the reported value of certain assets and liabilities as the exposure measure where this aligns with the valuation basis we use in TAC.

Policyholder Capital

We received comments stating that S&P Global Ratings should widen the scope of policyholder capital and should include future discretionary benefits and parts of policyholder dividends. There was also some confusion about our treatment of taxes in our approach to policyholder capital.

To clarify our treatment of policyholder dividends, we added examples to the criteria. Specifically, we cite 50% of the U.S. policyholder dividend and the unallocated portion of the Japanese policyholder dividend as part of policyholder capital that we would expect to include.

We acknowledge that future discretionary benefits (FDB; also known as the loss-absorbing capacity of technical provision) may play an important role in insurance companies' absorbing of losses. In our assessment of interest rate risk, in line with the original RFC, we will continue to consider loss-absorbing features in the determination of a company-specific net change in market value (NCMV) or company-specific duration mismatch.

While interest rate risk is often one of the most relevant risks for an insurance company, FDB may also be available to mitigate other risk types. We did not widen the definition of policyholder capital to include FDB for participating life business, in part because its ability to absorb losses is based on the insurer's assumptions and calibration of risk, which do not necessarily align with our model. It is also not fungible within an insurance group.

However, we clarified our treatment of unrealized gains on investments backing participating business to recognize their loss-absorbing qualities. We also updated the guidance for our IRM framework to indicate we may also consider a positive qualitative adjustment when the loss-absorbing features of the FDB are materially higher than the recognition provided in the capital model.

Regarding our approach to taxes and policyholder capital, we clarified that we include policyholder capital items and freie Rückstellung für Beitragsrückerstattung (free RfB) without tax deduction. If there were a deferred tax asset, we would eliminate it (i.e., reduce the policyholder capital by the amount of the related deferred tax asset). We clarified that we include policyholder capital net of any associated on-balance-sheet tax impact.

We received additional feedback that for ring-fenced participating business, the FDB should be given full credit instead of just 50% and the calibration of scaling was too punitive. We also received requests to clarify the treatment of ring-fenced funds.

We believe the haircut is warranted to reflect the uncertainty of the extent to which FDB may

absorb future losses in stress situations, and the calibration reflects our confidence intervals for the model as well as the nonlinearity of the effect of management actions that may occur in tail-event scenarios.

Asset Risks

We received a significant number of comments on our approach to asset risk, with several common themes. Generally, comments suggested our charges were too high, insurers are not typically subject to forced selling, we should add more granularity to enable issuers to reflect the unique nature of their exposures, and we should align more with regulatory approaches or base our charges on country-specific default rates.

A few comments also expressed confusion about how we would categorize certain risks across various asset risk categories. Commenters also suggested we should alter our approach to equities to better reflect the global nature of insurance company investments and the longer-term nature of investing, as well as alter our approach to unlisted equities and alternative investments.

We clarified our approach to asset risk:

- Where the underlying exposures in a fund are primarily bonds, we may treat the investment as bonds if we have sufficient information on the underlying investments (e.g., rating and tenor) and there are no additional risks (e.g., leverage).
- We added examples to table 37, "Credit Risk Recovery Categories," including adding preferred stock to category 3 and residential mortgage-backed securities (RMBS), commercial mortgage-backed securities (CMBS), collateralized loan obligations, collateralized debt obligations, and asset-backed securities to category 4. We also clarified that all agency and nonagency residential- and commercial-backed securities, rather than just nonagency securities, are to be included in category 4.

In some areas, the criteria use a less granular approach to asset risk than the current criteria or regulators, particularly for areas such as commercial and residential loan exposures in the U.S., including RMBS and CMBS holdings. We believe the approach provides a more appropriate balance of risk differentiation against operational complexity. Where we note material deviations from these assumptions that we believe would lead to risks being overstated or understated, we may address these through company-specific analytical adjustments or a qualitative adjustment as part of our IRM framework (e.g., through a capital and earnings adjustment). We might make those adjustments if an issuer's portfolio includes material exposures to written-down assets or assets bought at large discounts to par.

The incremental charge for private equity reflects our view of the higher average risk profile of unlisted stocks, owing to their generally higher illiquidity, leverage, and valuation risk. We think our charges should reflect these differences beyond the historical observation of existing indices.

We received feedback requesting separate charges for alternative investments. However, we do not believe it is appropriate to formulate one single and distinct asset risk charge for an exposure that may vary significantly by design. Recognizing the nonstandard composition of the underlying assets and investment structures, we allow for the reclassification of exposures to reflect differentiated risks where necessary and material.

We also received a comment suggesting the country of risk rather than the country of domicile should be used when the data is unavailable. In the final criteria, we made a change to clarify that we differentiate risk typically based on the domicile of the equity investment. This change allows flexibility where warranted.

For residential mortgage risk, we received feedback stating categorizing agricultural and equity release mortgages as high-risk commercial mortgages is not in line with the experience of the portfolio, and treating equity release mortgages as commercial mortgages is excessive particularly because it does not consider loan to value (LTV). We also received feedback recommending the risk charges for residential mortgages should factor in credit scores, loan types, or subordination and that the LTV of residential mortgage loans should be net of any credit enhancements (such as mortgage insurance).

We made no changes based on this feedback. We believe the mortgages we have categorized as higher risk are inherently riskier than other residential mortgage loans, with appropriately higher capital charges. Our analyses of delinquency rates indicate high volatility in delinquency and loss experience for higher-risk mortgages, with agricultural loans additionally being more susceptible to fire and other natural disasters. We also believe equity release mortgages expose the lender to no-negative equity guarantees, longevity, and changes in housing prices, thereby increasing the risk.

For commercial loan exposures, we received feedback stating the risk charges are overly conservative and recommending we reconsider various elements in determining the appropriate charges for commercial loans, geographic and borrower diversity within commercial loan portfolios, inclusion of more LTV categories and use of separate factors for interest-only loans; or using the NAIC RBC method pertaining to commercial loans. We also received comments stating the proposal did not remove expected losses, which appeared inconsistent with the proposed approach for fixed-income credit risk, and asking that we review the relative charges across categories as well as the slope of the risk charges.

As discussed in the criteria, the capital charges for commercial mortgages are informed by our analysis of the performance and underwriting quality of mortgage loans held by U.S. life insurers, based on the proposed confidence intervals and assuming a highly diverse portfolio. We think further delineation of the variables by which capital needs for commercial loans are determined would lead to overcomplexity in our analysis without adding significant analytical rigor.

Regarding credit enhancements, if we believe they provide significant benefits that are not captured, we may apply a company-specific quantitative adjustment where we determine it is material, or through the IRM framework where not quantifiable.

Regarding the Dutch Nationale Hypotheek Garantie (NHG) guarantee program, we determined it currently does not qualify for a rating substitution under our guarantee criteria. For derivative counterparty credit risk, we received additional feedback recommending the use of the weighted average life rather than a default time bucket, as well as a recommendation to apply credit charges to the net exposure (net of collateral), rather than charging the net unrealized gains.

The criteria indicate that for material exposures, we would apply the credit charges as per table 4, whereas immaterial exposures assume a five-to-10-year tenor. We believe this approach appropriately balances the analytical and operational elements relating to over-the-counter derivatives.

Regarding respondents' suggested use of a net notional amount, or an exposure net of collateral, we do not believe such an approach to be superior, but merely an alternate, from an analytical perspective. The criteria allow us to consider mitigation techniques and collateral and meet our goal of reducing complexity. The respondents' approach would have us pursue a more granular and complex analysis that we do not believe would add significant analytical value.

Interest Rate Risk

We received comments welcoming our proposal to consider a company's individual risk profile in our criteria, as well as requests to clarify certain aspects of our proposal (e.g., the definition of "duration") and its application (mainly for deriving an individual duration mismatch). We also received feedback that our assumptions on duration, interest rate shocks, and floors are too conservative.

We clarified our intention that the required capital for interest rate risk is equal to the NCMV of assets and proxy market value of liabilities, due to either upward or downward parallel, permanent shifts in observable yields. Our intent is that the calculations for the NCMV should 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. We therefore allow for determining an NCMV or a company-specific duration that incorporates a company's own calculations and potential management actions. In that context, we also widened the definition of "duration."

We use duration to measure exposure to interest rate risks. Our standard duration assumptions are informed by industry data, reports from regulators on duration, and information from issuers. Where our standard assumptions differ from a company's, we propose deriving a company-specific NCMV or duration mismatch under certain conditions. By taking the company's individual risk profile into account, we can also acknowledge company-specific loss-absorbing features (e.g., lowering crediting rates, policyholder dividend, or bonus participation), hedging techniques, or product composition.

We make a simplifying assumption that in the up or down stress, yields in all currencies move in the same direction and to the full extent of our stress scenarios. When we determine one single NCMV or one single duration mismatch at the group level, we allow implicitly for offsets between countries or currencies and segments that are captured in a company's modeling of its interest rate risk exposure.

We use corporate bond indices because they capture volatility in systemic credit spreads, which affects the net change in economic value of assets, liabilities, and hedge instruments. We do not believe our methodology double-counts the impact of spread movements. We have calibrated our credit risk charges to capture the unexpected losses due to credit default risk for the term of the exposure. Our interest rate risk charges capture the potential detrimental impact of yield movements over a one-year period.

We received additional feedback regarding our treatment and definition of duration and interest rate shocks specified in the criteria, as well as requests to clarify how the criteria and model would be applied and a recommendation to use a log-normal interest rate model. Some commenters expressed that the interest rate risk calculation is a theoretical exercise based on an extreme risk scenario that has no practical application for life insurers selling certain life products, given assets are held to maturity. Some commenters also indicated they believe the criteria generate unintentional volatility and are procyclical, whereas liabilities are long term and may not be surrendered.

We think the Hull-White model (which assumes a normal distribution) is an appropriate model to determine interest rate movements over one year. We recognize there are alternatives that may follow other distributions that may be used in the industry. We nonetheless think the Hull-White model has various advantages, such as the simulation of negative interest rates.

We clarified that where we apply step 1, the company-specific assumptions capture the group balance sheet in full. We expect the company-specific assumptions to reflect the magnitude of our

yield stress, but they may also incorporate a company-specific view on the extent of the stress at the long end of the yield curve where market data may not be available. We also clarified that for our yield stresses, we assume permanent parallel shifts in observable yields that vary by currency. We clarified that the relevant category for yield stresses is based on the currency of the liability, but for life duration mismatch, it is usually the country or countries where the life insurer writes a material amount of business.

Several commenters recommended changes to duration mismatches--steps 1, 1a, and 1b--and requested further clarifications and reconsideration of country calibrations. The duration gaps provided for in our criteria are based on the available data and our analytical judgment. We do not model spread risk and interest rate risk with different shock assumptions. We assume a combined shock that is relevant across asset and liability valuations. Further, the criteria offer the flexibility to use a company-specific mismatch approach in step 1b that can be consistent with the outcome of step 1a. We nonetheless acknowledge potential different outcomes between step 1a and step 1b. To the extent that we apply step 1b for an insurer with significant asset or liability convexity, we may address this risk through our IRM framework.

Commenters indicated a belief that our criteria lack a mechanism to ensure consistency and robust review of company-specific duration mismatch. The criteria provide consistent principles to be applied, whereas these comments pertain to the application of the criteria. Our analytical processes ensure consistent analytical application, such as with our Analytical Oversight and Consistency Councils and our committee processes. Other commenters indicated the use of corporate bond yields for the calibration is not reflective of an insurer portfolio and that we should use risk-free rates. We used investment-grade corporate bond indices because we believe these reflect well the average, or typical, portfolios of insurance companies based on data we have. The use of corporate bond yields is also consistent with the assumptions we used to calibrate our credit risk charges (e.g., a well-diversified portfolio across sectors). The use of corporate bond yields also captures the diversification between interest rate and spread risk.

We received feedback noting the criteria are not consistent with VA conditional tail expectation (CTE) methodology or with the U.S. asset adequacy test approach. We acknowledge the differences between these approaches and our criteria. We have determined a factor-based model is appropriate for the purpose of our rating analysis, and we have introduced flexibility to use company-specific assumptions informed by a company's own view of risk. We did not add complexity by stating the specific interest rate stresses we expect companies to run for the purposes of determining VA capital requirements, and we note that our criteria more broadly are focused on enhancing consistency on a global basis through our defined confidence levels for determining capital requirements.

We also received comments suggesting debt should be included as part of the interest-rate-sensitive liabilities, as well as a question on whether it would be more accurate to allow for different countries or currencies in the capital segment. We do not include debt instruments in the relevant liability exposure because we assume the debt instrument is effectively capital, rather than a matching liability, for these purposes and therefore fully exposed to interest rate risk.

Liability Risk--Life

Pandemic risk

Comments in this area stated that the pandemic risk charge (in particular, our assumption on

excess deaths) is too onerous or is not needed at all, given that the risk is either immaterial or included in our mortality risk charge. Moreover, comments stated we should allow for risk mitigation and internal modeling of pandemic risk. Other commenters suggested it is an oversimplification to have a flat mortality stress across age groups and recommended excluding pandemic risk or differentiating between group and individual policy, as well as stated that it is not clear how we derived the charge based on the 1.5 excess deaths.

Our pandemic risk charge captures event risk associated with a life catastrophe event--beyond the risks captured by our mortality charges. It represents capital that insurers may need to cover unexpected losses arising from a pandemic event--unlike mortality risk, which captures exposure to changes in mortality trends. The data we used in our calibration for the mortality charges excluded impacts relating to the COVID-19 pandemic. Our key assumption of 1.5 excess deaths per 1,000 at the 99.5% confidence level benchmarks well with industry and regulatory assumptions.

Longevity risk

We received questions on how to allocate deferred annuities and on the exposure for longevity swaps. Generally, the allocation of products to categories is based on the longevity risk embedded within the products. We do not name deferred annuities explicitly in the product categorization because, in our view, they could fall under category 2 or 3, depending on their annuitization profile.

Our longevity charges are calibrated and applied to the present value of longevity-exposed payments (e.g., payout annuities). For a longevity swap, this is the present value of the floating leg. Any incoming payments not already reflected in reported equity may be eligible as a life reserve adjustment in TAC.

We received additional feedback indicating our charges are still too high despite the revisions made after the original RFC; the reductions based on conservatism are too low and should increase exponentially rather than linearly as well as include confidence intervals beyond 90%; and granularity should be added in the charges and product definitions. We made no further changes to the charges or the reductions in the criteria based on this feedback. While our charges may be higher than those proposed by regulators, they have been calibrated to our modeled confidence intervals, consistent with our overall approach. In addition, longevity required capital may be further reduced by diversification benefits.

We believe adding granularity to the capital charges and expanding the scope of the reductions, based on conservatism in reserves, requires making tradeoffs between more accurate capital charges and simplicity of application. In our view, the amount of additional accuracy that might be gained by implementing these changes is uncertain and would likely not justify the additional data, model complexity, and operational burden that would come with it.

Mortality risk

Comments suggested we should reclassify certain markets as "highly developed." Other comments stated we should further differentiate our risk charges, e.g., by age, geography, or product type.

We reclassified the life insurance markets of the following countries to "highly developed": Liechtenstein, Czech Republic, Slovakia, Poland, Slovenia, Cyprus, and Hungary. This was based on our updated data analysis. We also made some minor updates to our charges based on that updated data analysis.

Our charges for mortality risk are based on the variation in actual mortality compared with expected mortality and not the actual mortality rates. We believe this variation is agnostic on age, given insurers considered it (in their pricing) during issuance of policy. As one of the largest life insurance markets, the U.S. market has data on actual versus expected mortality experience that serves as a reasonable proxy for other developed and mature life insurance markets globally.

Further, our criteria differentiate risk charges based on domicile by categorizing the development of life markets into "highly developed" and "less developed" groups, which provides some geographic risk differentiation. We did not propose differentiating our mortality charges based on individual and group life products, given the underlying risk between both products is mortality. Group life's lower absolute mortality and repricing flexibility are reflected in the data used to calibrate the mortality charges.

We received additional feedback requesting clarification of the NAR input and whether NAR should reflect adjustments related to other equity-like reserves. Commenters also recommended we consider a reduction similar to that we made for longevity risk based on reserve confidence levels.

Our mortality charges were calibrated based on reported reserves; therefore, there is no need to adjust reported reserves in NAR. For example, if there are AXXX/XXX reserves within the operating company and the value is added to TAC, we do not adjust the NAR (defined as in-force – reserves), meaning we do not reduce reserves in NAR and therefore do not increase the exposure for mortality charges.

Regarding a potential reduction in risk charge related to conservatism in the reserves, for mortality, the NAR approach captures conservatism in reserves--that is, conservative reserves mean higher reserves, and therefore the NAR (in force – reserve) will be smaller, resulting in a lower capital requirement and obviating the need for a reduction similar to that for longevity risk. For other life technical risk, we reduce the actual exposure for any adjustment we make in TAC (this could be conservatism identified through VIF or other equity-like reserves).

Morbidity risk

Comments on morbidity risk stated the criteria lack clear definition on how morbidity NAR is determined for critical illness before risk charges can be applied, as well as indicated that the determination of NAR can include a wide spectrum of assumptions that can bring immaterial morbidity NAR to very material levels.

We clarified that we apply capital charges to the NAR on critical illness products with predetermined and fixed payments upon incident (e.g., lump sum payments) to capture the potential losses from higher-than-expected morbidity inception rates in stress scenarios.

We also clarified that we apply the relevant non-life charges to critical illness products with variable payments upon incident (e.g., indemnity or reimbursement critical illness insurance). We believe the nature of the risk exposure for disability and long-term care products is different from that for critical illness products. We also do not believe using NAR as the exposure measure for disability products can be implemented on a globally consistent basis. Under the criteria, we apply capital charges to premiums and reserves to capture unexpected losses on disability products that are not covered by current premiums and policy reserves.

Long-term care

We received comments questioning the magnitude of the increase in charges, how premium rate

increases are incorporated, how we account for interest accretion on claim reserves, and the appropriateness of our analysis of loss ratio volatility.

Although our charges have increased significantly relative to the prior capital model criteria, the historical increases in reserves and claims justify the increase. Our analysis shows that regardless of long-term care (LTC) business mix (e.g., stand-alone LTC versus hybrid life and LTC products that involve an accelerated death benefit to cover LTC expenses), loss ratios have significantly deteriorated over the past 10 years. The average attained age in each book is also still rather young (60 years old) compared with the age at which policyholders typically begin collecting benefits (about 85 years old), such that we expect further reserve increases could continue as actuarial experience unfolds--which further justifies our increase in risk charges.

The loss ratio tends to be low in the early years of an LTC policy, until the participant begins collecting benefits, at which point the ratio can spike (as seen in the data we used in our analysis). In our opinion, incorporating data with a focus on recent years therefore provides a more appropriate view on loss experience.

The calibration of capital requirements represents the potential volatility in risk drivers over a one-year period. Future rate increases that have not yet been approved by regulators take place beyond a one-year horizon and are out of scope of our capital model. Further, we would apply our charges to reserves that already incorporate rate increases that have been approved by regulators through asset adequacy testing, since projected cash flows consider approved rate increases.

We apply our charges to data that is consistent with that provided to regulators and that does not exclude interest accretion on reserves. By requesting figures that are provided to regulators, we increase comparability and remove the potential for skewed data caused by aggressive interest rate assumptions. Interest accretion is a predominant risk in an LTC product, so removing its effects from our charge calculations would materially understate the risk.

We received additional feedback indicating we should collect premium and claims data for LTC books outside the U.S. and charge each one separately, that the difference between LTC morbidity risk and disability morbidity is unclear, and that applying the same risk charge for disability and LTC for non-U.S. countries potentially overstates the risk for insurers in particular countries other than the U.S. Granular data on premiums and claims within LTC blocks is not consistent or comparable from country to country outside the U.S., such that we decided to charge the liabilities as reported in financial statements. We believe the criteria are sufficiently clear on the nature of the underlying risk in disability products versus long-term care. Where disability is a material exposure and where disability product risks for an insurer differ materially from our assumptions, we may choose to reclassify the exposure to an alternative risk category.

We also received feedback indicating the data for the morbidity risk assessment would require a split between critical illness, disability, and long-term care risks and that work would be required to disaggregate this information. We believe insurers will be able to provide this information consistent with the criteria. Further, if the company does not have the resources to disaggregate, we may use our analytical judgment in recategorizing risk to an appropriate risk category in line with the criteria.

Lapse risk

Comments stated that we should provide further background on our suggested product classification and allow for wider product differentiation. Moreover, we received comments that there should not be a lapse charge and that there is an overlap with interest rate risk.

For many life companies, lapse risk is a major life technical risk. Also, many regulatory

frameworks include a specific lapse risk charge. We therefore think applying a lapse risk charge is reasonable, reflects reality, and enhances transparency. We developed the lapse product categories as standard product categories for global consistency purposes. We think introducing three categories provides sufficient granularity to allow us to differentiate the products by the inherent differences in their exposure to lapse risk.

Life expense risk

Comments stated we should exclude a life expense charge from the model because the expense risk is in the control of an insurer and is already included in other charges.

While we understand expense risk is typically manageable for a life insurer, in our view life insurers are still exposed to such risk. The risk can also be more pronounced for insurers that are in the start-up stage or running closed-book businesses. Having explicit charges better reflects reality and enhances transparency.

Liability Risk--Non-Life And Health

We received comments pertaining to liability risk for non-life and health with several common themes. These comments suggested:

- Risk charges are significantly higher than in the previous criteria and in some cases appear overstated relative to regulatory requirements and regulators' or respondents' view of risk.
- We should introduce additional subregions to address different views of risks or introduce more similar product groupings within regions (e.g., marine, aviation, and transport EMEA relative to other regions).
- The potential severity of results relative to premium is highly volatile due to catastrophe and similar high-volatility exposures.
- We should add granularity by subregion as compared with our regional breakout or, alternatively, add lines of business, including marine protection and indemnity, motor – Japan and Taiwan, Canadian health, finite reinsurance, and U.S multiperil crop insurance. These commenters stated their belief this would result in a more accurate reflection of risk.
- Unique features of an insurer, including its products, exposures, and reinsurance program, may preclude an accurate capital assessment.
- How risks should be allocated by line of business or geographic location is unclear.
- We reviewed all received comments and made some significant analytical changes. Please see the "Non-Life Lines of Business" section of "Written Comments Received From Market Participants That Led To Significant Analytical Changes To The Final Criteria" section for additional details.

In addition, we made a few less significant clarifications to the intended approach:

- We clarified that we used U.S. statutory data as a starting point for developing loss reserve charges, given its public availability on an accident-year basis. We also clarified that we applied analytical judgment in developing our charges and incorporated industry data, including regulatory capital charges.
- Similarly, we clarified that we generally differentiate risk by location, which may differ from the domicile of the insured risk. We recognize that for some exposures, including marine, aviation,

and transport, this allocation likely will be on a portfolio level.

- Finally, we made other nonmaterial changes, including more clearly defining some lines of business as well as relocating the definition of "adjusted non-life loss reserves" to the glossary.

Although many of the risk charges have increased relative to our previous criteria, we think the total capital requirement has remained relatively unchanged when considering the benefits of risk diversification that are now explicitly considered. In the few cases where the charges are significantly different, they reflect our view of volatility in the particular lines.

When developing our criteria, we considered available data and reporting conventions within each region. Our charges are net of reinsurance and derived by analyzing the data in concert with a comparative analysis to account for data limitations in other regions. We believe our approach to calibrating charges by risk and region by applying regulatory reporting conventions reduces complexity while maintaining global consistency. We acknowledge this may lead to different classification of business lines by region (see the "Non-Life Lines of Business" section of "Written Comments Received From Market Participants That Led To Significant Analytical Changes To The Final Criteria"), yet we believe the granularity by region and line of business represents an appropriate balance. That said, we retained the ability to define lines of business by subregion or within a line of business when there is sufficient support and rationale for making that differentiation.

The underlying data used in developing the charges incorporates risk mitigation pursued by the industry, both in product structure and reinsurance protection, including excess-of-loss reinsurance. Furthermore, the underlying data includes fully reserved exposures for which there is no potential for adverse loss reserve development. That said, we believe our criteria enable us to capture material differences in an insurer's exposure profile relative to our calibration of our ratings. Our criteria provide for sufficient analytical flexibility, allowing for the application of a company-specific adjustment or recategorization when we determine the mitigations are material and sustainable or where we determine an insurer's exposure is not explicitly addressed in our charges, such as with finite re transactions.

When the potential severity of results relative to premium is highly volatile due to catastrophe and similar high-volatility exposures, we capture this volatility through an exposure-based risk charge for natural catastrophe risk, rather than a premium-based charge. This is in addition to a premium surcharge for higher-volatility excess-of-loss reinsurance.

Variable Annuities

Market participants provided feedback on VAs that primarily focused on suggestions to align our methodology with that of regulators, as well as suggestions that our modeling assumptions may be inappropriate, given reliance on issuers' modeling. Other commenters indicated that we should tax-effect the VA charges or that the hedge credit we initially proposed of 75% was too low.

Based on this feedback and our observations of hedge effectiveness, we revised our criteria to increase the credit for hedging to allow up to 80%. Recent evidence points to the resilience of hedge programs; for example, the impact on capitalization for VA writers was minimal during periods of meaningful equity market declines over the past few years. Considering these factors and the 95% hedge credit given by U.S. regulators, we felt it appropriate to consider a hedge credit higher than initially proposed.

Our criteria retain the specified CTE levels (in lieu of just requesting the same output insurers use for regulatory reporting) because scaling up results (at our confidence levels) can be highly

inaccurate and because the increase in CTE levels is consistent with our calibrations. Moreover, our goal is to have a consistent approach across the globe. This goal is also true for our approach to the impact of taxes, insofar as we are not proposing to tax-effect any risk charges.

We received additional feedback that, despite our revision to the initial RFC to allow up to 80% credit for hedging, this credit is still too low and may discourage insurers from performing hedging. Comments recommended we align our methodology with U.S. regulators, which effectively give 95% credit to hedging. We also received feedback that the CTE levels in the criteria are too high and are impractical for companies that run a low number of scenarios (e.g., 1,000) in their stochastic models--a situation that is exacerbated, in the commenter's view, by limited diversification credit. The feedback recommended we align CTE levels with that of the NAIC RBC required CTE of 98%.

Other commenters suggested we should prescribe minimum levels of assumptions for stochastic modeling. We also received feedback stating that the long-term nature of VA policies and the fact that the cash flow modeling extends to the life of the products (e.g., 30-40 years) make the pretax treatment unrealistic.

Our CTE levels have been calibrated to higher confidence intervals than NAIC requirements, consistent with the overall calibration of our model. We believe an 80% credit to hedging appropriately captures the balance between the benefits of hedging and the real-world challenges of achieving those benefits under stress. Regarding the low number of scenarios, this may be relevant under certain circumstances but is better addressed by using more qualitative measures when relevant (by using, for example, a capital and earnings adjustment) than by using lower CTE levels across the board.

We believe the description of the requirements of the stochastic modeling in the criteria is otherwise sufficient. The long-term nature of the VA product and its impact on the pretax treatment are not unique to VAs. We determined these should remain on a pretax basis, consistent with our approach to risk charges for other long-term liabilities.

German Health

We received feedback on German health stating that our charges are too high because the premium adjustment is not sufficiently reflected in our charges.

In our view, the mechanism to adjust premiums is reflected in our one-year duration assumption for the German long-term health business. This is our lowest default assumption and lower than the standard assumption of four years for German life business. The German long-term health business is exposed to technical risk, i.e., mortality, lapse, expense, and medical costs.

Therefore, we apply at the 99.5% confidence level a 2.5% risk charge on the aging reserves. From our perspective, this 2.5% assumption compares well to Solvency II data for some German health insurers.

We also widened the scope of the charges for German long-term health business to all long-term health business with aging reserves. This allows the possibility to apply this to other businesses globally if they show similar features (i.e., having a long-term nature and building aging reserves over time).

U.K. With-Profit Business

We received feedback on U.K. with-profit business stating that we should recognize management actions in the calculation of the risk charge for ring-fenced business.

According to the criteria, if the regulator allows management actions to assess the capital requirements of a ring-fenced fund, we incorporate the management actions in our assessment. Further, in the criteria, we use the regulatory information to calculate the RBC at the 99.5% confidence level. For higher confidence levels, the criteria use scaling factors that recognize that the ability to apply management actions and share losses with policyholders diminishes as the severity of stress increases. However, the criteria still recognize management actions.

If we cannot use regulatory information, we calculate capital adequacy for such products in line with the other provisions in the criteria for participating business.

Natural Catastrophe

We received comments on our natural catastrophe approach that questioned the increase in capital requirements to one in 500 years from one in 250 years. Some stated they viewed it as excessive and suggested there would be a lack of availability of reinsurance at this level.

Commenters also suggested there is model uncertainty at this high-level return period, that this return period is not commonly used, and that it could influence marketplace behavior like reinsurance purchases. We also received feedback stating that the increase in the natural catastrophe charge, including exposure to natural catastrophe risk in the risk exposure in the IRM framework, leads to a double counting of the risk.

Based on the overall calibration of the criteria, we increased the confidence levels relative to the previous criteria, with the highest confidence level being equivalent to a one-in-10,000-year return period. However, despite the ability of cat modeling to capture tail risk of this sort, and notwithstanding the overall calibration of our criteria to stress scenarios between the 99.5% and 99.99% levels, we determined it would be unreasonable to use a one-in-10,000-year return period and instead decided to use the one-in-500-year return period.

We think this data point enables us to reasonably capture natural catastrophe tail risk. We recognize the potential model uncertainty in the tail, but based on market disclosure, we think there is still credibility at this level in the tail. Some regulatory regimes use a tail value-at-risk approach for their measurement of the risk, which would encompass an understanding of the risk at the one-in-500-year level. The change in confidence level should also be considered alongside this change to incorporate the diversification benefits of natural catastrophe risk.

We calibrated the criteria to capture risk that we believe is relevant for our ratings beyond the one-in-200-year return period. We think that with our new approach, we can better capture both diversification and nonlinearity in the tail.

We also clarified that natural catastrophe risk is for non-life exposures only.

We expect companies to model their exposure across all perils that are relevant to their organizations, and we expect this to be reflected in the outputs of companies' models of their exposure to catastrophe risk. Where we believe there might be deficiencies in a company's ability to model relevant risks, our ratings framework can capture these through quantitative adjustments or qualitative considerations.

We think it remains appropriate to consider each company on its own merits, including

consideration of natural catastrophe risk as a source of potential capital and earnings volatility through our risk exposure assessment, even after recalibrating our capital model for recognition of this risk. The criteria allow for adjustments when we determine that the output from catastrophe models, including any loadings, does not adequately capture risk.

Mortgage Insurance

Commenters requested clarity on how our mortgage insurance charges are calibrated, how they compare with the regulatory approach, how we use Private Mortgage Insurer Eligibility Requirements (PMIERs) information, and how mortgage insurance lines are captured in our diversification calculation. We also received feedback suggesting that reinsurance benefits were not adequately recognized under the criteria and questions about how we would consider reporting changes resulting from IFRS 17, particularly with regard to unearned premiums. We also received requests to clarify how we would define the materiality threshold that would need to be met to apply our mortgage insurance charges.

We clarified that we apply capital charges to net written premiums and/or unearned premium reserves (or an equivalent). Under IFRS 17 reporting, our premium risk charges for single or upfront premium business will be assessed using "liability on remaining coverage," which, for these purposes, we consider to be equivalent to the current "unearned premium reserve."

With regard to calibration, our default frequencies reflect observed cure rate delinquencies and regulations, stipulating cancellation where the LTV ratio falls below 78%, further adjusted based on our estimations of reinsurance benefits such as excess-of-loss reinsurance covers and insurance-linked notes and premium income. The benefits of nonproportional reinsurance are calibrated based on our analysis of mortgage insurers' reinsurance strategies and various reinsurance programs. The data we observed reflects diversified mortgages before and after the financial crisis of 2007-2008 and reflects the observed volatility of mortgage insurance loan performance in 1999-2017.

Our extreme stress is calibrated to a 99.99% confidence interval, such that our risk charges are significantly higher than that of PMIERs (which could be calibrated at lower confidence levels), but our criteria include the benefit of premium income offset, which PMIERs do not consider. While PMIERs are not calibrated in the same way our model is, we may use PMIERs to aid in our understanding of the capital position of mortgage insurers, similarly to how we use the regulatory information for other lines of business. Regarding our approach to mortgage insurance for diversification purposes, mortgage insurance premium and reserve risks are aggregated under financial lines.

We believe the mortgage re/insurance pricing today sufficiently reflects the underlying risks of the loan portfolios. Thus, we've aligned our approach to assess mortgage insurance risk (i.e., based on net premiums written) with other property/casualty lines. This approach introduces greater dependence on adequate pricing and thus pricing risk, particularly relative to the attachment point, which may differ between excess-of-loss contracts. It also assumes a reasonably well-diversified portfolio, such that excess-of-loss contracts may reach the respective attachment points at different times, depending on any relative concentrations where losses may arise. Given the potential for variation in loss experience and in the attachment points, we believe conservatism in our crediting of reinsurance is warranted.

Our premium risk factor was calibrated with consideration of regional differences, including loss experiences, premium-earning patterns, and structural differences in housing markets, among other factors. We also recognize the regional differences through our insurance industry and country risk assessment (IICRA) outside of the capital model framework.

We do not believe it is appropriate to further define materiality, due to the complexity of the mortgage insurance line of business. We determine whether the line is material based on our analytical judgment and company-specific inputs, including our view of the issuer's risk management capabilities, to assess the concentration and materiality of this risk to the issuer. If we determine the exposure is immaterial, we will assess mortgage insurance as a financial guaranty line and apply the respective premium and reserve risk charges.

Bond Insurance

Commenters provided feedback stating they believe the inclusion of unrealized gains and losses on invested assets in the bond insurance capital model would increase the volatility of bond insurance capital model results without improving the analytical basis for our credit assessment.

A related comment highlighted a lack of clarity in the scope section about the interaction of the bond insurance criteria and these criteria. Specifically, the scope section stated that the proposed criteria would apply to assessing asset-related risks of bond insurers but was silent on TAC considerations (such as unrealized gains or losses).

Based on this feedback, we clarified these criteria apply globally to all insurers in the life, property/casualty, health, mortgage, trade credit, and title insurance and reinsurance sectors and that we apply the bond insurance capital adequacy criteria (see "Related Criteria") to assess the risk-based capital adequacy of bond insurers.

We also clarified in the bond insurance capital model criteria that to determine TAC, we apply our RBC criteria with the following bond insurance-specific considerations:

- We do not add unrealized gains (or deduct unrealized losses) on bonds that are not included in reported equity (or surplus); and
- We do not apply a non-life reserve discounting adjustment.

Other Changes

We received comments requesting a variety of clarifications, including:

- Additional rationale on the methodology,
- Clarity on the definition and treatment of routine adjustments to shareholders' equity,
- Clarity on the use and application of the capital and earnings adjustment in the IRM framework,
- Inclusion of further examples within the criteria, and
- Defining of "materiality" where it is referenced in the criteria.

We provided the rationale for the changes to the criteria, along with additional details in the related commentaries that we published during the RFC period. In summary, the proposed changes reflect several factors, including updating confidence levels to capture the benefits of risk diversification more explicitly, updating to our methodology and assumptions for calibrating risks, and incorporating recent data and experience.

We added examples where we believed appropriate and made editorial changes to increase the clarity of our criteria.

Regarding "materiality," we believe we provided sufficient definition to allow for consideration of

the risk exposures, while balancing the need for analytical judgment.

ANALYTICAL CHANGES TO THE FINAL CRITERIA THAT DID NOT ARISE FROM MARKET FEEDBACK

Interest Rate Stresses

We updated our yield stresses to capture the significant volatility in yields experienced during 2022. We applied the methodology outlined in the criteria to determine our yield stresses, and we analyzed the annual volatility over a one-year period of investment-grade corporate bond yields in various countries, using a methodology consistent with the Hull-White interest rate framework. In addition to updating the yield stresses, we reallocated a few countries to categories with higher yield shocks.

U.S. Health

Clarification of administrative services only (ASO) and administrative services contract (ASC)

We clarified our criteria to indicate that for non-underwritten U.S. health and disability ASO and ASCs, we apply a premium risk charge to capture operational risks.

Clarification of line-of-business descriptors

We made nonmaterial changes to clarify our line-of-business descriptors:

- We added "specified disease" to the "hospital indemnity, accidental death and dismemberment, specified disease, and other limited benefits" line of business and deleted the mention of "not anticipating rate increases."
- We revised "other limited benefits (anticipating rate increases)" to "other health."

The first change adds clarity by being more consistent with the regulatory description as well as more clearly highlighting where to include critical-illness-type products not captured in the life charges for critical illness, whereas the second change clarifies that the category is intended to be a catch-all category for health products that do not fit into the other categories.

Mortgage Insurance

Upon further testing, we reviewed the calibration of the net unearned premium reserve (or equivalent) to an annual premium equivalent for mortgage insurers with respect to earnings pattern changes under the IFRS 17 accounting regime. As a result, we changed the conversion percentage applied to net unearned premium reserve (UPR) or unearned premium liability (UPL) to 20% from 25% for both Australia and Canada (and other regions adopting IFRS 17 accounting), reflecting the slower earnings pattern. We also clarified that we treat the liability for remaining coverage in the same way as UPR for the purposes of determining the mortgage insurance exposure base to which risk charges are applied.

This report does not constitute a rating action.

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