December 5, 2014

Kevin M. McCarty
Chair, ComFrame Development and Analysis (G) Working Group
National Association of Insurance Commissioners
Via e-mail rworkman@naic.org

Re: *U.S. Group Capital Methodology Concepts Discussion Paper*

Dear Commissioner McCarty:

On behalf of the American Academy of Actuaries'[1] Solvency Committee, I would like to offer the following comments on the *U.S. Group Capital Methodology Concepts Discussion Paper*, which was recently exposed by the National Association of Insurance Commissioners' (NAIC) ComFrame Development and Analysis (G) Working Group (CDAWG).

We appreciate the working group's efforts in developing the discussion paper. The risk-based capital "plus" (RBC Plus) and cash flow stress testing (Cash Flow) methodologies explored in the paper each offer significant potential as a group capital measure. As the paper acknowledges, though, both also present significant challenges.

In this letter, we outline several advantages and disadvantages of each methodology from the perspective of the actuarial profession and highlight the possible merit of a hybrid approach that combines the RBC Plus and Cash Flow methodologies. Significant work would be required to implement such a hybrid approach and achieving international comparability would be challenging. Nonetheless, we believe that a hybrid approach to group capital could serve to complement the current legal entity approach in the United States.

Our comments are based on the principles that we previously developed to guide the creation of an insurance capital standard. We submitted these principles to the working group earlier this fall and, for reference, attach them to this letter as Appendix A.

[1] The American Academy of Actuaries is an 18,000+ member professional association whose mission is to serve the public and the U.S. actuarial profession. The Academy assists public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.

RBC Plus

As the discussion paper indicates, the RBC Plus approach would apply U.S. risk-based capital (RBC) factors to U.S. generally accepted accounting principles (GAAP) audited consolidated financial statements. This approach raises some basic conceptual problems.

Prudent Capital vs. Minimum Capital

In order to recommend a single methodology or a combination of methodologies, it is important first to consider whether the methodology or combination can effectively fulfill the capital standard's purpose. The key threshold question is whether the capital standard is intended to establish a minimum required level of capital or, alternatively, a prudent level of capital above the minimum required amount.

A minimum capital requirement sets a threshold for regulatory intervention in a weakly capitalized company. In contrast, a prudent capital standard does not establish such a minimum threshold but instead defines a target amount of capital above the minimum that the regulatory community establishes as an appropriate level for a strong company. A prudent capital requirement, for example, might target an amount of capital that allows the insurer to continue to function as a strong going concern and, therefore, contribute to the overall financial stability of the market.

The RBC system that exists today in the United States is designed primarily to aid regulators in identifying and correcting solvency concerns at weakly capitalized insurers. Rating agencies and other market participants sometimes use RBC for other purposes, but the system is intended to set a *de facto* minimum capital requirement for regulators.

Inherently, a factor-based approach is well suited to the establishment of a minimum capital requirement. While some risks are not effectively measured by the factors used to calculate RBC in the United States, a factor-based approach allows regulators to apply the same factors to every insurer using published, auditable financial data. If regulators adopt RBC Plus at a group level, it could function well as a reference point to aid in the identification of weakly capitalized groups.

As discussed below, if the goal is to create a prudent capital standard, then a methodology that relies on internal models, such as the Cash Flow approach, will produce more reliable results. Factor-based approaches like RBC Plus are limited in their precision and, therefore, cannot produce prudent capital requirements without a large number of false positives and false negatives. The exposure bases to be used in any factor-based approach to group capital requirements would be extremely diverse with respect to underlying risks, creating an inherent limit on the precision that the methodology is capable of achieving. This problem exists for nearly all insurance contract liabilities as a result of differences in products, legal environments, and local culture.

As an example, the personal auto liability loss reserves for a property and casualty company with a national exposure but low coverage limits will have less inherent risk than a book concentrated in litigious states and with high limits. Factor-based approaches cannot easily account for such differences. This problem becomes even more pronounced if the same factors are applied to balances from different jurisdictions.

Consider, for example, the auto-liability coverage: the minimum policy limit for auto liability coverage-bodily injury liability in Germany is €7.5 million, while the equivalent minimum policy limit in Florida is $10,000. If a single factor is used globally, any factor that produces a prudent level of capital for the average risk associated with the exposure base will produce an excessive amount of required capital for those areas in which the risk is lower than the average and an inadequate amount of required capital for areas in which the risk is higher than the average.

This problem is reduced to the extent that the exposure bases are similar. This type of mitigation may be more achievable for some risks than for others. In circumstances in which the market is global and labels are standardized, greater homogeneity is achievable. However, if markets are local and the impact of products, law, and culture are varied, mitigation is difficult. Consequently, it may be possible to have a factor-based approach work for some risks but it is highly unlikely that such an approach will be effective for <u>all</u> insurance contract risks.

Fundamentally, a factor-based approach is a blunt instrument. It is not realistic to expect that granular factors can be designed to take account of every nuance of risk across insurers and jurisdictions. While a factor-based approach can be used to establish a common minimum for U.S. insurers, it would not be an effective means of establishing prudent capital requirements above the minimum.

Delinking RBC from U.S. Statutory Accounting

The factors in the NAIC's RBC formula presume the use of U.S. statutory accounting, which has significant conservatism built into certain of its liability measurements. U.S. RBC is designed to take account of an insurer's material risks. If a risk materializes, the loss is measured on a statutory basis. As a consequence, applying the existing RBC factors to U.S. GAAP parameters would necessitate a comprehensive review of each RBC charge to determine if the GAAP-based capital requirements produce values consistent with regulatory objectives.

Therefore, it is important to consider the amount of conservatism inherent in various aspects of the U.S. statutory accounting principles. This conservatism functions as an implicit risk charge, lessening the amount of RBC that is required by the formula. For example, in the NAIC's RBC formula for property and casualty insurers, the conservative U.S. statutory accounting treatment of agent's balances over 90 days past due renders a RBC charge for these balances unnecessary. Any use of U.S. GAAP in place of U.S. statutory accounting would necessitate an evaluation of whether new risk charges should be introduced to address a generally less conservative accounting basis.

In addition, in constructing a group capital standard it is important to consider whether and to what extent capital is fungible among legal entities, particularly in times of stress. Because statutory accounting and the NAIC's existing RBC framework are entity-based, they do not address this issue.

Potential for Multiple and Possibly Contradictory Standards

Another potential problem results if existing U.S. RBC requirements, based on statutory accounting, continue to be used at an entity level after a group capital standard takes effect. The simultaneous applicability of different factors to different valuation bases could lead to contradictory results. To avoid this outcome, it is important to consider how regulators will use the results and the type of regulatory intervention or other consequences that could result if the minimum requirements are not met.

Calibrating Non-U.S. and Non-Insurance Risks

The factors in the NAIC's RBC formula are calibrated based on U.S. risks. This is true for both assets and insurance contract liabilities. For example, on the liability side, the risk charge applied to personal automobile liability loss reserves is based solely on U.S. experience and does not contemplate risks for other countries' motor insurance products, such as those from annuities mandated by U.K. claim judgments or the short payout tail from countries such as Mexico.

To address this problem, regulators could consider basing the charges for non-U.S. liabilities and assets on the local, non-U.S. capital requirements. The use of local capital standards for non-U.S. business would leverage local expertise and allow local standards to continue to apply without change. This approach would be comparable to the current NAIC RBC treatment of non-U.S. insurance affiliates, which applies charges for such affiliates in the factor covering insurance affiliate investment and (non-derivative) off-balance sheet risk (R0, C0 or H0). The only difference would be to use the local capital standard for the R0/C0/H0 value rather than 50 percent or 100 percent of the foreign subsidiary carrying value. The net result would be similar to an aggregation approach.

A further challenge arises from the potential need to address non-insurance risks. Many groups will include both insurance and non-insurance entities; therefore, a group capital standard must take account of non-insurance risks in some manner. Of course, the capital requirements for non-insurance businesses may be defined by another regulator, but even then, the possibility of correlation between insurance and non-insurance risks may need to be considered in the context of the insurance capital standard. Considerable effort would be needed to reflect non-insurance risks appropriately.

Other Calibration and Comparability Considerations

If work proceeds on an RBC Plus standard, further review of the standard's statistical calibration will be required. In particular, if the standard is to be compared to similar

standards in other jurisdictions around the world, it will be important to ensure that thresholds for regulatory intervention allow comparability across jurisdictions. As such, the base liability, the risk metric, and the time horizon will need to be considered and, possibly, brought onto a consistent basis. Consider, for example, that a 99.5 percent "value at risk" metric with a one-year time horizon is equivalent to a 95.1 percent "value at risk" metric with a 10-year time horizon.

The type of intervention and trigger levels are also relevant. Even if base liability metrics, risk metrics, and time horizons are identical across jurisdictions, comparability still may be difficult if the trigger levels or the nature of the regulatory consequences are materially different depending on the jurisdiction.

Cash Flow Methodology

The Cash Flow approach has an established precedent in U.S. statutory accounting—the concept of stress testing cash flows currently is used to establish U.S. statutory reserve requirements for variable annuities and as part of the capital requirements for fixed and variable annuities. Further, the adequacy of formulaic life insurance reserves is evaluated using a cash flow testing methodology.

Because the Cash Flow approach is based on internal models that can be calibrated to an insurer's actual risks, it offers a possible means of creating a standard that requires a prudent level of capital rather than a minimum. However, like the RBC Plus approach, it has disadvantages that may impact its suitability as a comprehensive, standalone group capital standard.

Comparability Challenges

Among the most significant challenges regulators would face in using a Cash Flow methodology would be achieving comparability of results among companies. A Cash Flow approach is capable of producing comparable results more easily if the risks faced by the insurers tested are comparable. It is more difficult to obtain comparable results for exposures to non-comparable stresses. The basic risk exposures and cash flow patterns for two different insurers, even in the same market, can be challenging to compare. The difficulty may result from differing product mixes, customer base, market environment, policy limits and other terms, underwriting, claims management practices, and reinsurance programs. The potential need to address non-insurance risks adds a further challenge, as it does for the RBC Plus methodology.

In this context, it is important to note that a capital standard aiming for a prudent level of capital, such as the Cash Flow methodology, must by definition aim for a level of capital that takes the distribution of risk into account and provides reasonable protection against low frequency tail risk.

To account for these differences across companies and time, regulators will need to develop a robust set of stress scenarios, all calibrated to a similar level of risk. There is

work currently ongoing at the NAIC that could be leveraged for this purpose. The NAIC's Life Risk-Based Capital (E) Working Group's Stress Testing Subgroup is currently evaluating stress scenarios for purposes of calculating a total asset requirement. In addition, the NAIC's Life Actuarial Task Force is evaluating the use of stress tests to calculate statutory reserves for fixed annuities.

To avoid unnecessary work, regulators and companies also will need to determine which of the scenarios are most relevant to a given insurer group. Developing stress scenarios is not an easy task. They need to reflect the dynamic nature of the underlying environment, human behavior, and technological innovation. In addition, it is unlikely that across-time catastrophic tail risk (e.g., a one-in-20 year or one-in-50 year event) can be reliably parameterized from historical data. This makes comparability of measurement across entities a material concern, especially given the different underlying risk exposures across entities.

Finally, as with an RBC Plus approach, it will be important to consider the fungibility of capital among legal entities.

Internal Models

Though it is difficult to envision a standard for prudent capital that eschews internal models, the use of models to regulate capital inevitably will require significant resources both for regulators fulfilling their oversight responsibilities and companies creating and maintaining the models.

Because of the resources required, any standard based on internal models will create competitive challenges for smaller insurers. The costs may be more difficult for them to absorb. As a consequence, it is likely that a group capital requirement based entirely on internal modeling may not be practical for smaller insurers. This reveals a relative advantage of a system that relies, at least in part, on a factor-based approach such as RBC Plus.

Absence of Audited Balance Sheet

The discussion paper notes that the Cash Flow methodology has the advantage of "accounting independence." There is no need to reconcile accounting systems across markets and jurisdictions in order to stress cash flows. While this is an advantage from one perspective, it is a disadvantage from another. Although accounting systems and requirements differ from country to country, the audit process lends rigor and credibility to financial statements. As such, a system that uses audited figures as its starting point may be desirable.

Combining the RBC Plus and Cash Flow Methodologies

The RBC Plus and Cash Flow methodologies each have disadvantages that may impact their individual suitability as a group capital measure. Therefore, we suggest regulators

consider a hybrid approach that draws from the best features of each methodology. For example, state regulators could use the RBC Plus methodology to establish a minimum required level of capital that applies to all U.S. insurers. The Cash Flow methodology could then be used to establish a prudent capital level above this minimum. We believe such an approach could maximize the advantages of each approach while minimizing the disadvantages.

More generally, allowing a combination of approaches will better position regulators to make the adjustments needed to account for differences across companies and products. The presence of an acceptable, comparable factor-based minimum will give regulators flexibility in any capital requirements that apply above the minimum. In a situation in which all companies start with a common minimum established by RBC Plus, the Cash Flow (or another prudent capital methodology) could be structured to take adequate account of the significant economic differences between the life insurance and property and casualty industries. Similarly, as suggested above, the use of a common factor-based minimum could help regulators to feel comfortable applying the Cash Flow approach to smaller companies in a way designed to mitigate the costs of the internal modeling that the Cash Flow approach would entail.

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Thank you for this opportunity to provide our views on the CDAWG's conceptual proposals for group solvency and capital standards. If you have any questions or would like to discuss this letter in more detail, please contact Lauren Sarper, the Academy's senior policy analyst for risk management and financial reporting, at 202.223.8196 or sarper@actuary.org.

Sincerely,

Elizabeth K. Brill, MAAA, FSA
Chairperson, Solvency Committee
Risk Management and Financial Reporting Council
American Academy of Actuaries

Cc: Michael McRaith, Director, Federal Insurance Office, U.S. Department of Treasury
Tom Sullivan, Senior Adviser for Insurance, Federal Reserve Board
Jeff Schlinsog, Chair, Financial Regulatory Task Force, Risk Management and Financial Reporting Council, American Academy of Actuaries

Appendix A

American Academy of Actuaries Solvency Committee
Principles for an Insurance Capital Standard

1. A group solvency regime should be clear regarding its regulatory purpose and goals. For example, the purpose could be to protect policyholders, enhance financial stability, ensure a competitive marketplace, provide a level playing field, identify weakly capitalized companies, rank well-capitalized insurers, improve risk management practices and procedures, or some combination of the above. The regulatory purpose and goals will aid in the development of a standard itself, as well as the associated regulatory actions and priorities.

2. Any metrics, information, or other output of a group solvency standard should be useful to all relevant parties, including regulators, management, shareholders, and rating agencies.

3. A group solvency regime should promote responsible risk management in the regulated group and encourage risk-based regulation. For example, a solvency regime should recognize risk-mitigation activities, such as asset/liability matching, hedging, and reinsurance. The actuarial functions are critical in the risk management process and their role should be clearly defined, as it is in the U.S. reserving and solvency framework. Actuaries can and should identify where factor-based systems may miss key emerging risks, set reasonable boundaries around more subjective estimates and modeling and, as appropriate, render actuarial opinions.

4. Methods should recognize and take into consideration the local jurisdictional environments under which members of an insurer group operates, including the local regulatory regime, product market, and economic, legal, political, and tax conditions.

5. A group solvency standard should be compatible across accounting regimes, given the political uncertainties in achieving uniform standards.

6. A group solvency standard should minimize pro-cyclical volatility so as to avoid unintended and harmful consequences on regulated insurance groups, insurance markets, and the broader financial markets.

7. A group solvency standard should present a realistic view of an insurance group’s financial position and exposures to risk over an agreed-upon time frame.

8. All assumptions used in any capital or solvency model should be internally consistent.

9. It is more important to focus on the total asset requirement than the level of required reserves or capital on a separate basis. The focus should be on holding adequate total assets to meet obligations as they come due. Whether a jurisdictional standard requires the allocation of these assets to liabilities versus capital/surplus should be irrelevant to the overall solvency regime.

10. It must be demonstrated that the capital held is accessible, including in times of stress, to the entity facing the risk for which the capital is required.