

## MEMORANDUM

TO: Group Capital Calculation (E) Working Group

FROM: NAIC Staff

DATE: April 13, 2017

RE: Summary of Relative Ratio Approach to Scalars for Non-U.S. Insurers

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### **Introduction**

On March 22, 2017, the Group Capital Calculation (E) Working Group reviewed comment letters on a previously proposed “Relative Ratio Approach” for use as a scalar for non-U.S. insurers. This memorandum summarizes that approach, but as modified by the Working Group on the March 22 conference call for certain technical corrections as recommended by several interested stakeholders. This memorandum does not include the previous information on the “Distance to Intervention Approach” as that method was not considered the best alternative. This memorandum does not address various issues dealing with materiality or safe harbors, which NAIC staff believes could be addressed after testing is completed. This memorandum also does not address the jurisdictions the data could be collected for or for which jurisdictions the use of a scalar is needed (materiality of the jurisdiction to the U.S.). NAIC staff believes an industry drafting group could likely accumulate the data and develop specific recommendations on which jurisdictions are appropriate, but only after the Working Group determines that the “Relative Ratio Approach” is the best approach to a scalar for non-U.S. insurers.

### **Background Information**

The concept of a scalar was first introduced to the Working Group in a joint presentation from the American Council of Life Insurers (ACLI) and the American Insurance Association (AIA) at the 2016 Spring National Meeting. Within that presentation, it was suggested that the local capital requirements be multiplied by a factor (e.g., 1.0, 2.3, etc.) to equate the local capital requirement to an adjusted required capital level that is comparable to U.S. levels. During its Aug. 11, 2016 conference call, the Working Group again discussed the possible use of scalars for non-U.S. insurers and noted that scalars are needed, at least in part, to remove the differences that exist between countries because of the different level of conservatism built into the accounting and capital requirements. The purpose of a scalar is to address the issue of comparability of accounting systems and capital requirements between jurisdictions.

At the 2016 Summer National Meeting, the Working Group exposed for a 60-day public comment period an NAIC staff memo that included various questions related to the inventory approach to the group capital calculation. Two of the questions in the memo related to the possible development of a jurisdiction-specific scalar for use with non-U.S. insurers. The responses to the questions varied greatly, and there did not appear to be a general consensus among interested stakeholders regarding the best approach to scalars, or even if scalars were an appropriate component of a group capital calculation. However, some of the comment letters suggested that a scalar could be based on a relative ratio of a jurisdiction’s aggregate industry-wide total available capital to its industry-wide regulatory intervention level capital. The initial thought is that this would be the first level at which some sort of intervention or action is required—either on the part of the insurer or the regulator. A specific jurisdiction’s relative ratio would be compared to the U.S. ratio to develop the scalar. This would provide for more comparable results that take into account the differences in accounting and capital requirements, while considering the excess capital being held by the industry.

During the Working Group’s Nov. 7, 2016 meeting, the concept of a relative ratio approach to the development of jurisdiction-specific scalars was discussed. At that time, a group of interested parties were asked to develop this concept further for the Working Group’s consideration. In order to continue that discussion, NAIC staff prepared this memo

(originally dated Nov. 30, 2016) that included additional details regarding the mechanics of such an approach. The relative ratio approach requires detailed calculations that would need to be performed on a periodic basis and also requires data from regulators in other jurisdictions.

### **Relative Ratio Approach**

Included below are various steps that could be taken in the relative ratio approach to developing jurisdiction-specific scalars. In order to numerically demonstrate how this approach could work, hypothetical capital requirements and financial amounts have been developed for Country A. Based on preliminary research that has been performed by NAIC staff, it appears that the level of conservatism built into accounting and capital requirements within a jurisdiction may differ significantly for life insurers and non-life insurers. Therefore, it could be necessary that each jurisdiction have two different scalars based on the type of business. The example below includes information related to life insurers in the U.S. and Country A.

#### **1. Understand the Jurisdiction’s Capital Requirements and Identify the First Intervention Level**

The first step in the process is to gain an understanding of the jurisdiction’s capital requirements. This can be done in a variety of ways including reviewing publically available information on the regulator’s website, reviewing the jurisdiction’s Financial Sector Assessment Program (FSAP) reports and discussions with the regulator.

In Country A, assume that the capital requirements for life insurers are based on a capital ratio, which is calculated as follows:

$$\text{Capital ratio} = \frac{\text{Total available capital}}{\text{Base required capital (BRC)}}$$

In the U.S., capital requirements are related to the insurer’s risk-based capital (RBC) ratio. For purposes of the Relative Ratio Approach, an Anchor RBC ratio is used and calculated as follows:

$$\text{Anchor RBC ratio} = \frac{\text{Total adjusted capital}}{100\% \text{ Company Action Level RBC}^*}$$

\* 100% Company Action Level RBC is equal to the Total RBC After Covariance, without adjustment or 200% Authorized Control Level RBC.

Similar to legal entity RBC requirements in the U.S., Country A utilizes an early intervention approach by establishing target capital levels above the prescribed minimums that provide an early signal so that intervention will be timely and for there to be a reasonable expectation that actions can successfully address difficulties. Presume that this target capital level is similar to the U.S.’s Company Action Level (CAL) event, both of which can be considered the first intervention level in which some sort of action—either on the part of the insurer or the regulator—is mandated. For simplification purposes, NAIC staff is not considering the RBC trend test in this memo.

For Country A, the target capital level is presumed to be a capital ratio of 150%. That is, the insurer’s ratio of total available capital to its BRC should be above 150% to avoid the first level of regulatory intervention. Again, this is similar to the U.S.’s CAL event, which is usually represented as an RBC ratio of 200% of Authorized Control Level (ACL) RBC (ignoring the RBC trend test.). In the Relative Ratio approach, the Anchor RBC ratio represents the Company Action Level event (or first level of regulatory intervention) as 100% CAL RBC (instead of 200% ACL RBC), because CAL RBC is the reference point that is used to calibrate against other regimes. The Anchor RBC Ratio (Total Adjusted Capital ÷ 100% CAL RBC) tells us how many “multiples of trigger level capital” that the company holds. Conceptualizing the CAL event as 100% CAL RBC allows the consistent definition of local capital ratios that are calibrated against a “multiples of the trigger level” approach, to ensure an apples-to-apples comparison<sup>1</sup>.

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<sup>1</sup> While it is mathematically equivalent to use 200% ACL RBC as the denominator, the Approach is designed to use the representation of first-intervention level capital levels as the conceptual underpinning of the Relative Ratio Approach, where 100% CAL RBC is the reference point to calibrate against other regimes.

## 2. Obtain Aggregate Industry Financial Data

The next step is to obtain aggregate industry financial data, and many jurisdictions include current aggregate industry data on their websites. Included below are the financial amounts for use in this exercise.

*U.S. Life Insurers – Aggregate Data*  
Total Adjusted Capital = \$495B  
Authorized Control Level RBC = \$51B  
Company Action Level RBC = \$102B

*Country A Life Insurers – Aggregate Data*  
Total Available Capital = \$83B  
BRC = \$36B

## 3. Calculate a Jurisdiction’s Industry Average Capital Ratio

To calculate a jurisdiction’s average capital ratio, the aggregate total available capital for the industry would be divided by the minimum or base capital requirement for the industry in computing the applicable capital ratio. In Country A, this would be the BRC. In the U.S., this base or minimum capital requirement is usually seen as the ACL RBC, but because the Relative Ratio Approach is using 100% CAL RBC as a reference point to calibrate other regimes to, the Relative Ratio formula uses 100% CAL RBC as the baseline and the first-intervention level to calculate the Average Capital Ratio and Excess Capital Ratio. As a result, the scaled ratio of a non-U.S. company should inform regulators how many multiples of first-intervention level capital the non-U.S. company holds. Included below is the formula to calculate a jurisdiction’s industry average capital ratio:

### *General Industry Average Capital Ratio Formula*

$$\frac{\text{Total adjusted capital (or similar amount)}}{\text{Base/minimum capital requirement}}$$

Based on the formula above and data obtained in Step #2, included below are how to calculate each jurisdiction’s industry average capital ratio.

### *Calculation of U.S. Industry Average Capital Ratio – Life Insurers*

$$\frac{\$495\text{B (Total Adjusted Capital)}}{\$102\text{B (CAL RBC)}} = 485\%$$

### *Calculation of Country A Industry Average Capital Ratio – Life Insurers*

$$\frac{\$83\text{B (Total Available Capital)}}{\$36\text{B (BRC)}} = 231\%$$

## 4. Calculate a Jurisdiction’s Excess Capital Ratio

The next step is to understand the level of capital the industry is holding above the first intervention level. Therefore, to calculate a jurisdiction’s excess capital ratio, one would first need to calculate the amount of the capital ratio carried in excess of the capital ratio required at the first intervention level. This amount would then need to be divided by the capital ratio required at the first intervention level.

### *General Excess Capital Ratio Formula*

$$\frac{\text{Average Capital Ratio – Capital Ratio at the First Intervention Level}}{\text{Capital Ratio at the First Intervention Level}}$$

Based on the formula above and information provided in Steps #2 and #3, included below are how to calculate each jurisdiction's excess capital ratio. Note: The first intervention level in the U.S. is defined in the Relative Ratio Approach as 100% CAL RBC, while the first intervention level in Country A is a capital ratio of 150%.<sup>2</sup>

*Calculation of U.S. Excess Capital Ratio – Life Insurers*

$$\frac{485\% \text{ (Average Capital Ratio)} - 100\% \text{ (Capital Ratio at the First Intervention Level)}}{100\% \text{ (Capital Ratio at the First Intervention Level)}} = 385\%$$

*Calculation of Country A Excess Capital Ratio – Life Insurers*

$$\frac{231\% \text{ (Average Capital Ratio)} - 150\% \text{ (Capital Ratio at the First Intervention Level)}}{150\% \text{ (Capital Ratio at the First Intervention Level)}} = 54\%$$

5. Compare a Jurisdiction's Excess Capital Ratio to the U.S. Excess Capital Ratio to Develop the Scalar

Based on the information above, the U.S. excess capital is 385%. In other words, life insurers in the U.S. carry approximately 385% more capital than what is needed over the first intervention level. Country A's excess capital ratio is 54%. That is, life insurers in Country A carry approximately 54% more capital than what is needed over the first intervention level.

To calculate the scalar, one would divide a jurisdiction's excess capital ratio by the U.S. excess capital ratio. Therefore, the calculation of Country A's scalar for life insurers would be  $54\% \div 385\% = 14\%$ . Therefore, Country A's scalar for life insurers would be 14%.

6. Apply to the Scalar to the Non-U.S. Insurer's Amounts in the Group Capital Calculation

In order to demonstrate how the calculation of the scalar works, it would be best to provide a numerical example. For purposes of this memo, assume that a life insurer in Country A reports required capital of \$341,866 and total available capital of \$1,367,463. (These are the amounts previously used in a hypothetical calculation example that was discussed by the Working Group during its July 20, 2016, conference call.) As noted previously, the above information and calculation suggests that U.S. life insurers carry capital far above the minimum levels, while life insurers in Country A carry capital far closer to the minimum. Therefore, in order to equate the company's \$341,866 of required capital, we must first calibrate the BRC to the first regulatory intervention level by multiplying it by 150%, or Country A's capital ratio at the first intervention level. The resulting amount of \$512,799 is then multiplied by the scalar of 14% to get a scaled minimum required capital of \$71,792.

Further, the above rationale suggests that the available capital might also be overstated (since it does not use the same level of conservatism in the reserves) by the difference between the calibrated required capital of \$512,799 and the required capital after scaling of \$71,792, or \$441,007. Therefore, we should now deduct the \$441,007 from the total available capital of \$1,367,463 for a new total available capital of \$926,456. These two recalculated figures of required capital of \$71,792 and total available capital of \$926,456 is what would be included in the group's capital calculation for this insurer. These figures are further demonstrated below.

<sup>2</sup> 100% CAL RBC translates to an ACL RBC level of 200%, but for conceptual purposes, the Relative Ratio Approach refers to the U.S. first intervention level as 100% CAL RBC, as 100% CAL RBC is the reference point to which the Relative Ratio Approach calibrates other regimes. In other words, 100% CAL RBC ensures that the scaled ratio of Country A results in a ratio that determines how many multiples of first-intervention level capital that the company in Country A is holding.

*Calculation of Scaled Amounts for Group Capital Calculation*

Amounts as Reported by the Insurer in Country A

Total available capital = 1,367,463

Minimum required capital (BRC) = 341,866

Calibration of BRC to 1<sup>st</sup> Regulatory Intervention Level

341,866 (BRC) \* 150% = 512,799

Scaling of Calibrated Minimum Required Capital

512,799 (Calibrated BRC) \* 14% (Scalar) = 71,792 (Difference of 441,007)

Scaled Total Available Capital

1,367,463 (Total Available Capital) – 441,007 (Difference in scaled required capital) = 926,456

Given these scaled amounts, one can calculate the numerical effect on the company's relative capital ratio by using the unscaled and scaled amounts included below.

|                             | <i>Unscaled Amounts from Table Above</i> | <i>Scaled Amounts from Table Above</i> |
|-----------------------------|--|--|
| Total Available Capital     | 1,367,463                                | 926,456                                |
| Base Required Capital       | 341,866                                  | 71,792                                 |
| Capital Ratio (= TAC / BRC) | 400%                                     | 1290%                                  |

Considering the fact that life insurers in Country A hold much lower levels of capital over the first intervention level as compared to U.S. life insurers, the change in the capital ratio from 400% (unscaled) to 1290% (scaled) appears reasonable and consistent with the level of conservatism that we understand is built into the U.S life RBC formula driven primarily from the conservative reserve valuation.