AMERICAN ACADEMY of ACTUARIES

Changes in the Concentration Calculation for Replication by the American Academy of Actuaries Life-Risk Based Capital Committee

Presented to the National Association of Insurance Commissioners Life Risk-Based Capital Working Group

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Changes in the Concentration Calculation for Replication Transactions

Note: The changes recommended by the Academy's LRBC Committee are underlined and deleted material is shown by a strike-through.

ASSET CONCENTRATION FACTOR

LR010

Basis of Factors

The purpose of the concentration factor is to reflect the additional risk of high concentrations in single exposures (represented by an individual issuer of a security or a holder of a mortgage, etc.). The concentration factor doubles the risk-based capital factor (with a maximum of 30 percent) of the ten largest asset exposures excluding various low risk categories or categories that already have a 30 percent factor. Since the risk-based capital of the assets included in the concentration factor has already been counted once in the basic formula, this factor itself only serves to add in the additional risk-based capital required. The calculation is completed on a consolidated basis, however the concentration factor is reduced by amounts already included in the concentration factors of subsidiaries to avoid double counting.

Specific Instructions for Application of the Formula

The ten largest asset exposures should be developed by consolidating the assets of the parent with the assets of the company's insurance and investment subsidiaries. The concentration factor component on any asset already reflected in the subsidiary's RBC for the concentration factor should be deducted from Column (4). This consolidation process effects higher tiered companies only. Companies on the lowest tier of the organizational chart will prepare the asset concentration on a "stand alone" basis. The ten largest exposures should exclude the following: affiliated and non-affiliated common stock, affiliated preferred stock, home office properties, policy loans, bonds for which AVR and RBC are zero, class 1 and class 6 bonds, Class 1 Unaffiliated Preferred Stock, Schedule BA assets with a 30 percent factor, and any other asset categories with RBC factors less than 1 percent (this includes residential mortgages in good standing, insured or guaranteed mortgages, and cash and short-term investments).

Assets should be aggregated by issuer before determining the ten largest exposures. Aggregations should be done separately for bonds and preferred stock (by the first six digits of the CUSIP number), mortgages and real estate. Securities held within Schedule BA partnerships should be aggregated by issuer as if the securities are held directly. Likewise, where joint venture real estate is mortgaged by the insurer, both the mortgage and the joint venture real estate should be considered as part of a single exposure. Tenant exposure is not included. For bonds, aggregations should be done first for classes 2 through 5. After the ten largest issuer exposures are chosen, any class 1 bonds from any of these issuers should be included before doubling the risk-based capital. For some companies, following the above steps may generate less than ten "issuer" exposures. These companies should list all available exposures.

<u>Replicated assets other than synthetically created indices should be included in the asset concentration calculation in the same manner as other assets.</u>

The **book/adjusted carrying** value of each asset is listed in Column (2).

The RBC factor will correspond to the risk-based capital category of the asset reported previously in the formula before application of the size factor for bonds. The RBC filing software automatically allows for an overall 30 percent RBC cap.

<u>Lines (1.14) through (1.19)</u>
The Asset Concentration RBC Requirement for a particular property plus the Real Estate RBC Requirement for a particular property cannot exceed the **book/adjusted carrying** value of the property. Any properties exceeding the **book/adjusted carrying** value must be adjusted down to the **book/adjusted carrying** value in Column (6) of the Asset Concentration.

Line (1.15), Column (4) is calculated as Line (1.14), Column (2) multiplied by 0.1500 plus Line (1.15), Column (2) multiplied by 0.1275, but not greater than Line (1.14), Column (2).
Line (1.17), Column (4) is calculated as Line (1.16), Column (2) multiplied by 0.1000 plus Line (1.17), Column (2) multiplied by 0.0775, but not greater than Line (1.16), Column (2).
Line (1.19), Column (4) is calculated as Line (1.18), Column (2) multiplied by 0.1500 plus Line (1.19), Column (2) multiplied by 0.1275, but not greater than Line (1.18), Column (2).

Changes in the Concentration Calculation for Replication Transactions

Lines (1.20) through (1.39)
The Asset Concentration RBC Requirement for a particular mortgage plus the LR004 Mortgages RBC Requirement or LR009 Schedule BA Mortgages RBC Requirement for a particular mortgage can not exceed 30 percent of the **book/adjusted carrying** value of the mortgage. Any mortgages exceeding 30 percent of the **book/adjusted carrying** value must be adjusted down in Column (6) of the Asset Concentration.

Line (1.20), Column (4) is calculated as Line (1.20), Column (2) multiplied by 0.0225 multiplied by LR003 Mortgage Experience Adjustment Factor Line (13).
Line (1.21), Column (4) is calculated as Line (1.21), Column (2) multiplied by 0.0225 multiplied by LR003 Mortgage Experience Adjustment Factor Line (13).
Line (1.22), Column (4) is calculated as Line (1.22), Column (2) multiplied by the greater of: (a) 0.0750 or (b) 0.0225 multiplied by [LR003 Mortgage Experience Adjustment Factor Line (13)] plus 0.0150.
Line (1.24), Column (4) is calculated as the greater of 0.1500 multiplied by [(Line (1.23) plus Line (1.24)] less Line (1.24) or Line (1.23) multiplied by 0.0225 multiplied by LR003 Mortgage Experience Adjustment Factor Line (13).
Line (1.26), Column (4) is calculated as the greater of 0.0100 multiplied by [(Line (1.25) plus Line (1.26)] less Line (1.26) or Line (1.25) multiplied by 0.0050.
Line (1.28), Column (4) is calculated as the greater of 0.1500 multiplied by [(Line (1.27) plus Line (1.28)] less Line (1.28) or Line (1.27) multiplied by 0.0225 multiplied by LR003 Mortgage Experience Adjustment Factor Line (13).
Line (1.30), Column (4) is calculated as the greater of 0.2000 multiplied by [(Line (1.29) plus Line (1.30)] less Line (1.30) or Line (1.29) multiplied by 0.0225 multiplied by LR003 Mortgage Experience Adjustment Factor Line (13).
Line (1.32), Column (4) is calculated as the greater of 0.0200 multiplied by [(Line (1.31) plus Line (1.32)] less Line (1.32) or Line (1.31) multiplied by 0.0050.
Line (1.34), Column (4) is calculated as the greater of 0.2000 multiplied by [(Line (1.33) plus Line (1.34)] less Line (1.34) or Line (1.33) multiplied by 0.0225 multiplied by LR003 Mortgage Experience Adjustment Factor Line (13).
Line (1.35), Column (4) is calculated as Line (1.35) multiplied by 0.0225 multiplied by LR003 Mortgage Experience Adjustment Factor Line (13).
Line (1.37), Column (4) is calculated as the greater of 0.1500 multiplied by [(Line (1.36) plus Line (1.37)] less Line (1.37) or Line (1.36) multiplied by 0.0225 multiplied by LR003 Mortgage Experience Adjustment Factor Line (13).
Line (1.39), Column (4) is calculated as the greater of 0.2000 multiplied by [(Line (1.38) plus Line (1.39)] less Line (1.39) or Line (1.38) multiplied by 0.0225. multiplied by LR003 Mortgage Experience Adjustment Factor Line (13).

COMMON STOCK CONCENTRATION FACTOR

LR011

Basis of Factors

The purpose of the common stock concentration factor is to reflect the additional risk of high concentrations in single exposure of common stock. The common stock concentration factor increases by 50 percent the risk-based capital factor for the five largest common stock exposures. The 50 percent increase was chosen by comparing the total variance of particular holdings of common stock to the portion of the variance that can be explained by movements of the overall stock market. The risk-based capital of the assets included in the unaffiliated common stock concentration factor has already been counted once in the basic formula, this factor itself only serves to add in the additional risk-based capital required. The calculation is completed on a consolidated basis, however the common stock concentration factor is reduced by amounts already included in the concentration factors of subsidiaries to avoid double counting.

Specific Instructions for Application of the Formula

The five largest common stock exposures should be developed by consolidating the assets of the parent with the assets of the company's insurance and investment subsidiaries. The concentration factor component on any asset already reflected in the subsidiary's RBC for the concentration factor should be deducted from Column (4). This consolidation process effects higher tiered companies only. Companies on the lowest tier of the organizational chart will prepare the asset concentration on a "stand alone" basis.

Changes in the Concentration Calculation for Replication Transactions

The five largest holdings should exclude common stock in the FHLB, investment companies (mutual funds) and common trust funds, that are diversified with the meaning of the Investment Company Act, and affiliated investments other than investments in non-insurance subsidiaries. For non-insurance subsidiaries, i.e, those with affiliate code 6 on LR035 (the portion of holding companies in excess of indirect subsidiaries) and those with affiliate code 12 (other subsidiaries), the total stock investment including both preferred and common stock should be used.

Replicated assets in the nature of common stock other than synthetically created indices should be included in the common stock concentration calculation in the same manner as other investments in common stock.

Assets should be aggregated by issuer before determining the five largest exposures.

The book/adjusted carrying value of each asset is listed in Column (2).