BEST'S METHODOLOGY AND CRITERIA

Understanding BCAR for U.S. and Canadian Life/Health Insurers

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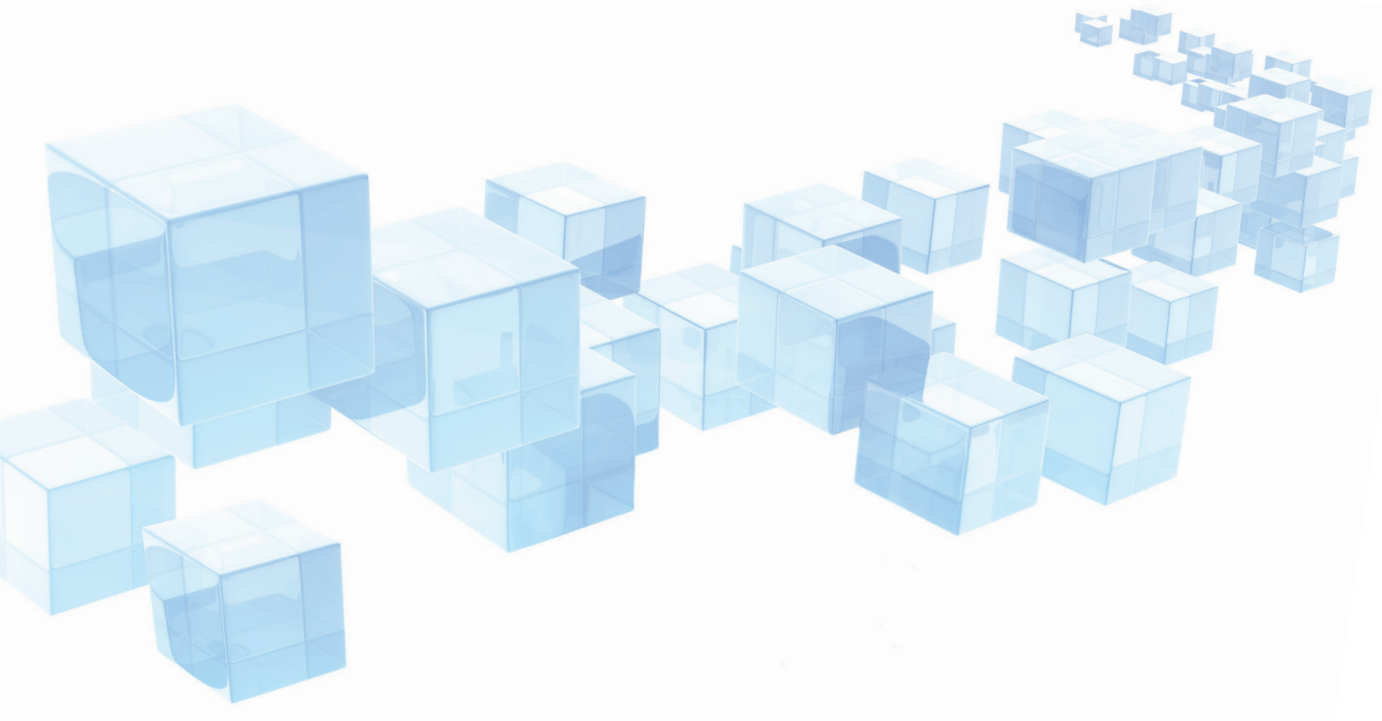

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A.M. BEST®

Understanding BCAR for U.S. and Canadian Life/Health Insurers

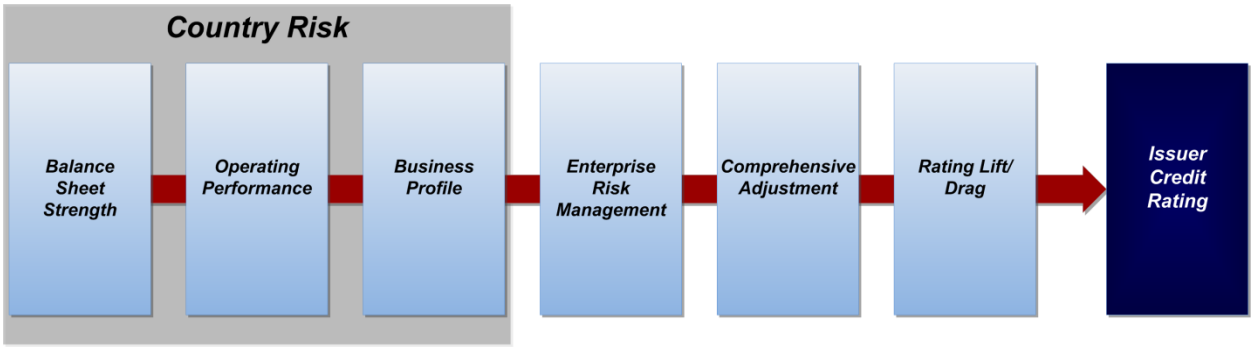
Outline

The following criteria procedure should be read in conjunction with *Best's Credit Rating Methodology (BCRM)* and all other related BCRM-associated criteria procedures. The BCRM provides a comprehensive explanation of A.M. Best Rating Services' rating process.

A. BCAR and the Rating Process

Best's Capital Adequacy Ratio (BCAR) depicts the quantitative relationship between a rating unit's balance sheet strength and its key financial risks that could impact such strength. As the foundation of financial security, balance sheet strength is critical to the determination of a rating unit's ability to meet its current and ongoing obligations. By establishing a guideline for the net required capital needed to support balance sheet strength, BCAR can assist analysts in differentiating among the financial strength of insurers and in determining whether a rating unit's capitalization is appropriate for its risk profile. The analysis of BCAR alone does not decide the balance sheet strength assessment. Other factors that can impact the balance sheet strength analysis include: liquidity, quality of capital, dependence on reinsurance, quality and appropriateness of reinsurance, asset/liability matching, reserve adequacy, stress tests, internal capital models, and the actions or financial condition of an affiliate and/or holding company which may include a BCAR calculation at the holding company/consolidated level. Similarly, a rating is more than a balance sheet strength assessment and includes evaluations of a rating unit's operating performance, business profile, and enterprise risk management (**Exhibit A.1**).

Exhibit A.1: A.M. Best's Rating Process



Thus, in many cases, insurers with similar capital positions might be assigned different ratings based on the integration of other key rating factors.

BCAR for U.S. and Canadian Life/Health Insurers

This criteria procedure and its accompanying model are used in the evaluation of balance sheet strength for those life/health insurers that file U.S. statutory or Canadian financial statements. Analysts have the option to modify the factors outlined in the following sections to reflect actual experience if appropriate data is provided for review.

B. Overview of BCAR

Calculating a rating unit's BCAR requires calculating its net required capital—namely the capital needed to support the financial risks of the rating unit associated with the exposure of its assets and underwriting to adverse economic and market conditions—and determining its capital available to support these risks. **Exhibit B.1** details the exact formula for calculating BCAR.

Exhibit B.1: The BCAR Formula

$$\mathbf{BCAR} = \left(\frac{\mathbf{Available\ Capital} - \mathbf{Net\ Required\ Capital}}{\mathbf{Available\ Capital}}\right) \times \mathbf{100}$$

The BCAR model calculates a rating unit's net required capital at different confidence levels, resulting in a BCAR score for each of these levels. Since the difference between a rating unit's available capital and its net required capital is expressed as a ratio to available capital, a BCAR score expresses the extent of the excess or shortfall as a percentage of available capital. A positive score at a particular confidence interval indicates the rating unit's available capital is in excess of its net required capital, whereas a negative score indicates the rating unit's available capital has fallen short of its net required capital.

Net Required Capital Components

The U.S. and Canadian Life/Health BCAR model computes the amount of capital required to support four broad risk categories: investment risk, underwriting risk, interest-rate/VA market risk, and business risk. These four broad risk categories are further subdivided into six separately analyzed risk components (outlined in **Exhibit B.2**). A rating unit's gross required capital is the sum of the capital requirements for these six components.

Exhibit B.2: Required Capital Components

Required Capital
C1-Non Eq Fixed Income Securities
C1-Eq Equity Securities
C2 Mortality/Morbidity
C3-Int Interest Rate
C3-Mkt VA Market
C4 Business

The net required capital formula reduces gross required capital for covariance to account for the assumed statistical independence of several of the individual components (**Exhibit B.3**).

Exhibit B.3: Net Required Capital Formula

$$Net\ Required\ Capital = \sqrt{(C1\text{-Non Eq} + C3\text{-Int})^2 + (C1\text{-Eq} + C3\text{-Mkt})^2 + (C2)^2} + C4$$

Understanding the Required Capital Risk Components

Total investment risk (C1-Non Eq and C1-Eq) applies capital charges to different asset classes based on the risk of default, illiquidity, and market value declines in both equity and fixed income securities. C1 fixed income securities also include capital charges for credit risk; these are ascribed to reinsurance recoverables as well as to reserves ceded in order to quantify third-party default risk.

Underwriting risk—C2 mortality/morbidity—encompasses a review of the rating unit's premium and reserves. For life insurers, mortality risk factors are based on excess claims relative to the mortality expectations built into the reserves for life insurance. For health risk, the net premiums written component requires capital based on the pricing risk inherent in a rating unit's mix of business.

Interest rate risk for fixed annuities and life insurance, as well as market risk for variable annuities are captured in C3. The charges for interest rate risk capture the risk of changes in interest rates. These risk charges vary by surrender protection and product type. Additional charges are assessed on asset liability mismatches. In the U.S., market risk charges for variable annuities are assessed on products with guarantees subject to Actuarial Guideline 43 and C-3 Phase II.

Business risk is captured in C4 and is based on direct life and health premiums (net of variable premiums), and separate account assets. Also included in business risk is a charge for unfunded pension and other post-employment obligations, non-controlled assets, and contingent commitments. A rating unit's gross required capital is the amount of capital needed to support all risks were they to develop simultaneously.

Covariance

As outlined in **Exhibit B.3**, A.M. Best utilizes a "square root rule" covariance calculation that recognizes the assumed statistical independence of risks associated with fixed-income assets and liabilities, risks associated with equities and variable liabilities, and risks associated with underwriting. However, to more accurately capture insurers' risk profiles, C1 fixed-income securities risk charges are correlated with C3 interest rate risks, and C1 equity-type risk charges are correlated with C3 market risks. C4 business risk is excluded from the covariance adjustment as A.M. Best expects a rating unit to maintain capital for these risks without the benefit of diversification.

Available Capital Components

The starting point for available capital is the financial statement of the entity or entities being evaluated. A rating unit's available capital is determined by making a series of adjustments to the capital (surplus) reported in its financial statements (**Exhibit B.4**). These adjustments may increase or decrease reported capital and result in a more economic and consistent view of capital available to a rating unit, which in turn allows for a more comparable capital adequacy evaluation. They serve to level the playing field and compensate for certain economic values not reflected in regulatory (U.S. statutory and Canadian Life-1) financial statements. Available capital may be further adjusted for other items, such as debt-service requirements, goodwill, and other intangible assets.

Exhibit B.4: Typical Components of Available Capital

Available Capital

- Reported Capital (Surplus)
- Equity Adjustments
  - Asset Valuation Reserves
  - Unearned Premiums
  - Dividends Payable
- Debt Adjustments
  - Surplus Notes
- Other Adjustments
  - Future Operating Losses
  - IMR Amort. Following Year
  - Off-Balance Sheet Derivatives
  - Negative Reserves (Canada Only)
  - Intangibles
  - Goodwill

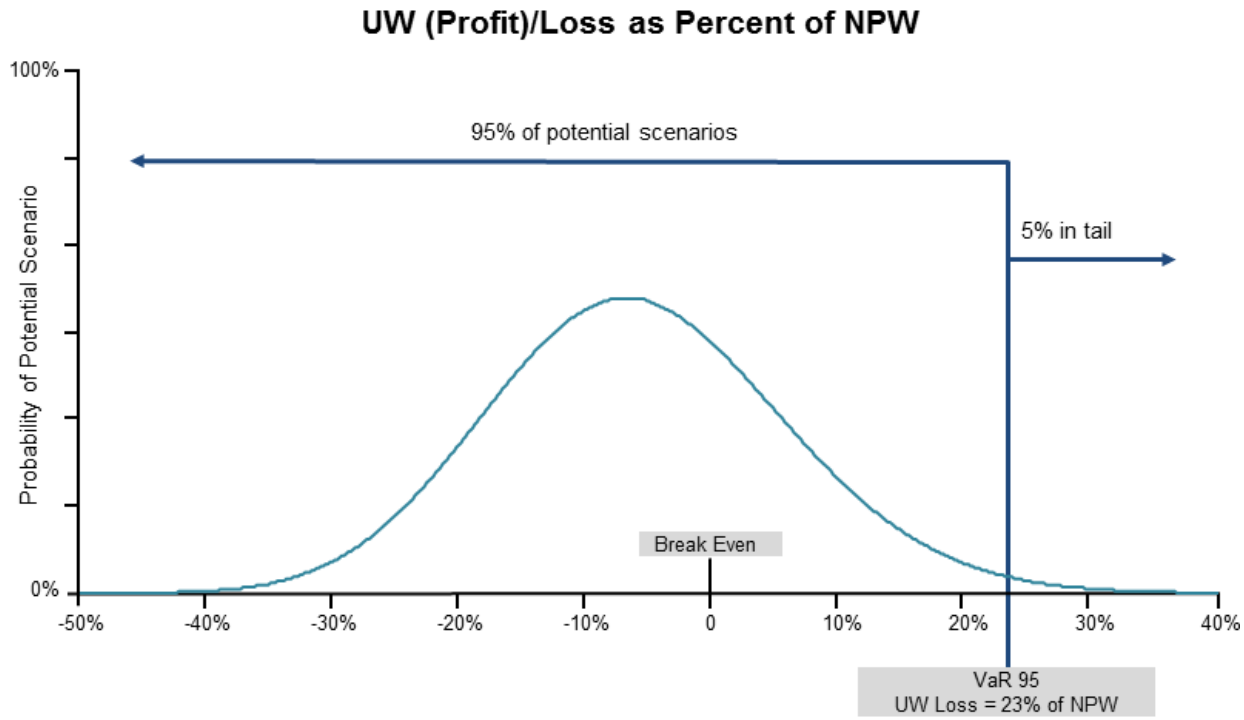
Value at Risk (VaR)

The basis of risk measurement for A.M. Best's BCAR models is Value at Risk (VaR). VaR is a statistical technique used to measure the amount of risk within an organization over a selected time horizon. VaR allows for more consistent calibration of the BCAR model's risk factors across its various risk components. Within the model, VaR is applied to the risks that are typically the most material to an insurer.

VaR can be used to evaluate the amount of risk for an individual item, for a portfolio of items, or for the organization as a whole. It requires three pieces of information to evaluate the item at risk: a time horizon, a confidence level, and a probability distribution of possible outcomes that can occur over the selected time period. The key component of VaR is the probability distribution of potential outcomes; that probability distribution can be based on a collection of observed historical outcomes, a theoretical distribution, professional judgment, or a combination of these.

VaR is used to find the value on the probability distribution such that the chance of observing an outcome less than or equal to that value equals the confidence level. For example, suppose a rating unit has estimated the potential for an underwriting profit or loss on a portfolio of policies as shown in **Exhibit B.5.**

Exhibit B.5: Sample Probability Distribution



If management wants to hold enough capital to be confident that it can cover 95% of all potential outcomes, then it needs to find the value on the probability distribution such that 95% of all

potential outcomes are less than or equal to that value. In this example, the size of loss where this occurs is at 23% of NPW.

As shown in **Exhibit B.6**, if the NPW amount is $100,000, then the VaR 95 value in dollars is $23,000 (23% of $100,000).

Exhibit B.6: Value at Risk (VaR) Illustration

Statement Amount	VaR Confidence Level (%)	Capital Factor	Loss Amount at Confidence Level (Statement Amount * Capital Factor)	Exceedance Probability* (100% - VaR Confidence Level)
100,000	95	0.23	23,000	5.0
	99	0.30	30,000	1.0
	99.5	0.34	34,000	0.5
	99.6	0.35	35,000	0.4

**Probability that an actual observed loss will exceed the loss amount of the confidence level.*

This means that 95% of all potential outcomes will be less than $23,000 and that there is only a 5% chance that an underwriting loss of more than $23,000 could occur, and therefore a 5% chance of insolvency (provided that the initial amount of available capital carried was at least $23,000).

If management wanted to be more conservative than a 5% chance of insolvency, then a confidence level of 99% could be chosen to set a target capital level. At this point, management would have to find the value on the probability distribution such that 99% of the potential outcomes are less than or equal to that value. **Exhibit B.6** shows the value where this occurs is 30% of NPW. This means that for the same $100,000 of NPW, management would need to hold $30,000 of capital to be 99% confident that the actual observed underwriting loss would be covered. In this case, there would only be a 1% chance that an underwriting loss of more than the VaR 99 value of $30,000 could occur, and therefore only a 1% chance of insolvency.

The drawback to using VaR as a metric for measuring risk is that VaR only looks at a single value on the probability distribution and provides no information about the other potential values that are beyond that single value (i.e., in the tail of the distribution). As such, capital adequacy models based on VaR tend to be centered solely on the probability of ruin, or insolvency. However, for the assessment of relative balance sheet strength, it is important to know what those other possible outcomes could be. A.M. Best addresses this issue by calculating required capital at different confidence levels using the VaR metric: the 95th percentile, the 99th percentile, the 99.5th percentile, and the 99.6th percentile. By calculating BCAR at multiple confidence levels, A.M. Best can gain insight into the balance sheet strength of the rating unit and the rating unit's ability to withstand tail events. A.M. Best also calculates required capital at the 99.8th percentile to facilitate discussion of tail risk during the evaluation of enterprise risk management within the rating process.

BCAR Interpretation of Capital

Exhibit B.7 provides a reasonable guide to BCAR scores and their associated assessments. As mentioned, the BCAR assessment is one factor considered within a rating unit's overall balance sheet strength assessment.

Exhibit B.7: BCAR Assessments

VaR Confidence Level (%)	BCAR	BCAR Assessment
99.6	> 25 at 99.6	Strongest
99.6	> 10 at 99.6 & ≤ 25 at 99.6	Very Strong
99.5	> 0 at 99.5 & ≤ 10 at 99.6	Strong
99	> 0 at 99 & ≤ 0 at 99.5	Adequate
95	> 0 at 95 & ≤ 0 at 99	Weak
95	≤ 0 at 95	Very Weak

Rating units that are expecting material changes over the next year are evaluated on both an "as is" and an "as will be" basis to better gauge the direction in which capital adequacy is moving.

Sensitivity Calculations

A.M. Best analysts may supplement their initial rating unit BCAR calculation by performing various sensitivity calculations. These analyses can quantify the capital required to support future business plans, the impact of pro forma transactions or the projected capital position. They can also reflect other changes, such as those expected to affect business mix and the investment portfolio. The rating analyst can also use the model to incorporate a number of stress scenarios into the rating analysis. These sensitivity calculations quantify the extent of the impact a stress scenario could have on a rating unit's capital position after such an event occurs. After calculating both a rating unit's standard and stressed BCAR, A.M. Best compares the results of the two analyses. If a rating unit's standard BCAR assessment were to deteriorate after a reasonable stress test such that its stressed BCAR assessment fell considerably and the potential for recovery from the capital shortfall was unlikely, it may receive a revised BCAR assessment that differs from its standard BCAR assessment. The extent of sensitivity analysis performed on a rating unit's capitalization varies by rating unit and situation.

Market Adjustments

The BCAR model allows the rating analyst to react to various market and/or economic conditions. Examples that can impact capitalization include mortality events, morbidity events, and changes to a company's reinsurance program. The ability of the model to respond to these market issues makes it a robust tool that assists in the evaluation of the rating unit's balance sheet strength.

C. Technical Review of the BCAR Formula

Economic Scenario Generator

An economic scenario generator (ESG) is a computer model that will randomly simulate thousands of possible values for a variety of economic or financial variables over a series of selected future time periods. ESG models are designed to simulate the observed and/or perceived relationships among the different economic or financial variables of the particular economy being modeled. An ESG does not predict the path an economy will take, but instead produces a collection of possible paths that an economy can take.

As noted in the following sections, A.M. Best uses the output from a third-party ESG to develop industry-level risk factors. The ESG-calculated risk factors act as a baseline and can then be adjusted for a company's specific profile. The variables simulated in the ESG used by A.M. Best include interest rates, stock market returns, bond defaults, and real estate price movements.

Treatment of Net Required Capital Components

C1 Non-Equity and Equity Risk

In order to calculate the risk factors at various confidence levels for the most frequently owned assets of insurers, A.M. Best uses the output from ten thousand simulations produced by the ESG to develop probability distributions for the potential movements in the market value of specific assets, the potential defaults on certain fixed income assets, and the potential movements in interest rates.

Company-specific risk charges vary by the time to maturity and credit rating classes and are applied to invested assets, adjusted for amounts that are assumed or ceded through funds withheld or modified coinsurance (MODCO) arrangements.

Nonaffiliated Bonds

The BCAR model's baseline bond risk charges are based on ESG-simulated bond defaults; **Appendix 1** contains the baseline charges for the various bond ratings at the different confidence intervals.

In generating the bond defaults, the ESG assumed lower-rated bonds have greater default risk than higher-rated bonds and also assumed that—since defaults were simulated at annual intervals into the future—bonds with maturity dates further out into the future have more opportunities to default. Therefore, bonds with longer maturity dates show greater default risk factors than bonds with shorter terms to maturity. The ESG simulated potential defaults each future year for a period of no more than ten years. The simulated defaults were discounted to present value based on the number of years into the future that the simulated defaults occurred, using an annual rate of 4%. They were also reduced to allow for an assumed recovery rate on the value of bonds defaulted. The assumed recovery rate varies based on the credit quality of the bonds that were simulated to default. The

recovery rate varies from an assumed 55% recovery for the highest-rated bonds to an assumed 20% recovery on the lowest-rated bonds.

Using information usually provided in the rating unit's supplemental rating questionnaire (SRQ), A.M. Best applies risk charges for potential bond defaults based on the credit quality and maturity distribution of the rating unit's bond portfolio. The rating unit's portfolio-specific bond default risk charges are calculated at four confidence levels—the 95th percentile, the 99th percentile, the 99.5th percentile, and the 99.6th percentile.

In cases where there are discrepancies between SRQ data and the rating unit's filed statutory statements, the BCAR will "true-up" to match the fixed income totals reported by NAIC Class in the statutory statements. For example, certain RMBS and CMBS securities held by U.S. insurers can be mapped to the NAIC Class, as opposed to the credit rating reported on the SRQ.

Government Bonds

There is no capital charge for U.S. federal government bonds and Canadian federal government bonds (in the Canadian model).

Publicly Traded Common Stocks

Insurers who invest in equities are exposed to fluctuations in the market value of those assets. As a starting point, A.M. Best generates baseline risk factors for market volatility based on the Beta of the rating unit's common stock portfolio relative to the S&P 500 Index. The ESG created ten thousand simulations of possible one-year changes to the S&P 500 Index; the changes that correspond to the 95th, 99th, 99.5th, and 99.6th percentiles are used as the industry baseline risk charges. The rating unit's portfolio Beta is applied to these changes after adjusting the rating unit's Beta for the reliability of the calculated Beta. The Beta represents the level of movement in the market value of the common stocks owned by the rating unit relative to the stock market as a whole over a specified period of time. A.M. Best uses the R-Squared statistic to measure how reliable the calculated Beta is (**Exhibit C.1**).

Exhibit C.1: Common Stock Portfolio "Beta" and "R-Squared"

Beta can take on any value, positive or negative. If a rating unit has a Beta of 1.00, this means that should the stock market index increase X%, then the value of the rating unit's stock portfolio will increase by X%. A Beta of 1.50 means that if the stock market index increases X%, then the value of that rating unit's stock portfolio will increase by 1.50 times X%. A negative 1.00 Beta means that if the stock market index increases X%, then the value of the rating unit's stock portfolio will decrease by X% (i.e. the value of a portfolio with a negative Beta moves in the exact opposite direction of the index).

R-Squared is a statistic calculated by comparing historical movements in a stock portfolio versus historical movements in the stock market index. R-Squared can only take on values from 0.00 to 1.00, where a value of 0.00 implies a poor linear fit of the data (low reliability), and a value of 1.00 implies a perfect linear fit (high reliability).

The same risk factors are used for both affiliated and non-affiliated common stocks that are publicly traded. The calculation of the portfolio Beta excludes the effect of any hedging programs, as credit for hedging programs will only be given after analyst review of the hedging program (see commentary on derivative assets). A.M. Best uses the Beta and R-Squared provided in the rating unit's SRQ. **Exhibit C.2 and C.3** show the baseline risk factors for publicly traded common stocks in the U.S. and Canada at the different confidence levels assuming a Beta of 1.00.

Exhibit C.2: Publicly Traded-Common Stocks*

VaR Confidence Level (%)	Baseline Capital Factor (%)
95.0	25
99.0	38
99.5	43
99.6	44

**Traded in U.S. Stock Markets*

Exhibit C.3: Publicly Traded-Common Stocks*

VaR Confidence Level (%)	Baseline Capital Factor (%)
95.0	27
99.0	41
99.5	46
99.6	47

**Traded in Canadian Stock Markets*

Preferred Stocks

For those rating units that have demonstrated their willingness and ability to hold onto these investments for the long term, the publicly traded preferred stock portfolio can be allocated to individual NAIC classes using information provided in the statutory statement and then assigned corresponding risk factors based on the bond default risk factors by NAIC class. As most life companies are assumed to be willing to hold to maturity, they would fall under this classification.

For non-U.S. filers, as a starting point, A.M. Best assigns risk factors to publicly traded preferred stocks based on the simulated bond default risk of NAIC class 4 bonds, using the industry mix of bonds in rating and maturity. For those rating units that historically have actively traded their preferred stocks, or are exposed to sudden shock losses that could force a quick sale, preferred stocks receive risk factors based on the market price volatility of publicly traded common stocks.

Mortgage Loans

Risk factors applied to mortgage loans are based on the NAIC Risk Based Capital Working Group's 2013 study of commercial mortgages. When greater granularity is available (e.g. the U.S. Life statement), further gradation of credit quality for commercial loans in good standing can be

assessed. The baseline factors for health and Canadian life insurance companies in BCAR are derived from the Class 3 Commercial Mortgage risk factor. To arrive at the factors needed for the various confidence levels used in BCAR, this risk factor was extrapolated further out into the tail of the distribution. SRQ information on commercial mortgage loans may be used to adjust the risk factors.

Risk charges applied to guaranteed residential and farm mortgage loans vary based on the type of property and reflect the risk of inappropriate valuations. Residential loans backed by guarantees have slightly lower risk charges than those not guaranteed. Non-guaranteed commercial mortgage loans have the highest charge, as these tend to have low liquidity. Additional risk charges are applied to amounts that are 60 days overdue or are in the process of foreclosure.

Exhibit C.4 contains the baseline risk factors for mortgage loans.

Exhibit C.4: Mortgage Loans Baseline Risk Factors

Mortgage Loans	VaR 95	VaR 99	VaR 99.5	VaR 99.6
Residential - Insured/Guaranteed	0.0030	0.0045	0.0050	0.0052
Residential - All Other (Non-Guaranteed)	0.0060	0.0090	0.0100	0.0102
Farm - CM1	0.0100	0.0150	0.0170	0.0180
Farm - CM2	0.0230	0.0340	0.0380	0.0400
Farm - CM3	0.0330	0.0490	0.0540	0.0560
Farm - CM4	0.0630	0.0930	0.1030	0.1050
Farm - CM5	0.0850	0.1250	0.1380	0.1400
Commercial - Insured/Guaranteed	0.0060	0.0090	0.0100	0.0103
Commercial - All Other - CM1	0.0100	0.0150	0.0170	0.0180
Commercial - All Other - CM2	0.0230	0.0340	0.0380	0.0400
Commercial - All Other - CM3	0.0330	0.0490	0.0540	0.0560
Commercial - All Other - CM4	0.0630	0.0930	0.1030	0.1050
Commercial - All Other - CM5	0.0850	0.1250	0.1380	0.1400
60 Days Overdue	0.1500	0.2000	0.2200	0.2300
Interest Due & Unpaid: 60 Days Overdue	1.0000	1.0000	1.0000	1.0000
Taxes Due: 60 Days Overdue	1.0000	1.0000	1.0000	1.0000
In Process of Foreclosure	0.1800	0.2400	0.2600	0.2700
Interest Due & Unpaid: In Process of Foreclosure	1.0000	1.0000	1.0000	1.0000
Taxes Due: In Process of Foreclosure	1.0000	1.0000	1.0000	1.0000

Real Estate

Risk factors for real estate are based on simulated movements in an index that incorporates some elements of the National Council of Real Estate Investment Fiduciaries Property Index (NPI), which measures the total rate of return of a large pool of individual commercial real estate properties acquired for investment purposes. The same risk charges are applied to company-occupied real

estate and real estate held for investment purposes. The baseline risk charges for real estate can be found in **Exhibit C.5**.

Exhibit C.5: Baseline Risk Charges for Real Estate

Real Estate	VaR 95	VaR 99	VaR 99.5	VaR 99.6
Baseline Risk Charges	0.1200	0.1750	0.1950	0.2020

Cash and Short-Term Investments

The 0.3% risk charge applied to cash balances represents the risk that cash deposited in a banking institution might be uncollectible if the bank becomes insolvent. A 0.3% risk charge is also applied to cash equivalents and short-term investments. Certain short-term investments may be classified as other investments and are charged as such.

Other Investments

The majority of assets in this category are from Schedule BA of the U.S. statutory statement (Other Long Term Invested Assets Owned). Other investments in the Canadian model primarily relate to other loans and invested assets as reported on the company's balance sheet.

The baseline risk factors for other investments are the industry baseline common stock risk factors but adjusted 10% higher. These factors were selected after a review of the ESG-simulated market volatility of more than 30 hedge fund indices. The risk factors may be reduced if the insurer provides more detail on items such as the types of investments, the volatility of the investments, the liquidity of the investments, correlations within the portfolio of investments, correlations to other risk categories such as underwriting risk, and how the rating unit manages the individual and overall risks created by this portfolio of assets.

When greater detail about the investment is available within the financial statement schedules, the investment will be matched to various indices produced by the ESG for that asset class (e.g. investments with the underlying characteristics of real estate). The risk charge assessed may be higher than the baseline for that specific asset class (e.g. real estate) due to potential difficulty in valuing the asset and/or lower liquidity. Any investments in affiliates recorded in this asset category are initially assigned a risk charge of 100%. All other invested assets may be reviewed by the rating analyst to determine the proper risk charge, utilizing company provided detail.

The baseline risk factors for the various other invested assets are displayed in **Exhibit C.6.**

Exhibit C.6: Baseline Risk Factors for Other Invested Assets

Other Invested Assets	VaR 95	VaR 99	VaR 99.5	VaR 99.6
Bonds: Exempt Obligations	0.0000	0.0000	0.0000	0.0000
Working Capital Financial Notes: Class 1 Category	0.0147	0.0212	0.0239	0.0246
Working Capital Financial Notes: Class 2 Category	0.0531	0.0671	0.0721	0.0735
Bonds: Class 1 Category	0.0366	0.0488	0.0533	0.0542
Bonds: Class 2 Category	0.0843	0.1024	0.1083	0.1100
Bonds: Class 3 Category	0.2281	0.2455	0.2511	0.2532
Bonds: Class 4 Category	0.2892	0.3037	0.3082	0.3095
Bonds: Class 5 Category	0.4112	0.4117	0.4118	0.4118
Bonds: Class 6 Category	0.5483	0.5489	0.5491	0.5491
Bonds: Other (Not Broken Down by Class)	0.2358	0.2503	0.2555	0.2569
Preferred Stock: Class 1 Category	0.0366	0.0488	0.0533	0.0542
Preferred Stock: Class 2 Category	0.0843	0.1024	0.1083	0.1100
Preferred Stock: Class 3 Category	0.2281	0.2455	0.2511	0.2532
Preferred Stock: Class 4 Category	0.2892	0.3037	0.3082	0.3095
Preferred Stock: Class 5 Category	0.4112	0.4117	0.4118	0.4118
Preferred Stock: Class 6 Category	0.5483	0.5489	0.5491	0.5491
Preferred Stock: Other (Not Broken Down by Class)	0.2358	0.2503	0.2555	0.2569
Mortgage Loans: Farm	0.0850	0.1250	0.1380	0.1400
Mortgage Loans: Residential-Guaranteed	0.0060	0.0090	0.0100	0.0104
Mortgage Loans: Residential-All Other	0.0120	0.0180	0.0200	0.0204
Mortgage Loans: Commercial-Guaranteed	0.0120	0.0180	0.0200	0.0204
Mortgage Loans: Commercial-All Other (CM1)	0.0100	0.0150	0.0170	0.0180
Mortgage Loans: Commercial-All Other (CM2)	0.0230	0.0340	0.0380	0.0400
Mortgage Loans: Commercial-All Other (CM3)	0.0330	0.0490	0.0540	0.0560
Mortgage Loans: Commercial-All Other (CM4)	0.0630	0.0930	0.1030	0.1050
Mortgage Loans: Commercial-All Other (CM5)	0.0850	0.1250	0.1380	0.1400
Other Unaffiliated	0.0850	0.1250	0.1380	0.1400
Common Stock: Unaffiliated Public	0.2460	0.4040	0.4540	0.4660
Common Stock: Unaffiliated Private	0.3580	0.4970	0.5410	0.5610
Common Stock: All Affiliated	1.0000	1.0000	1.0000	1.0000
Total Real Estate: Schedule BA	0.2370	0.3890	0.4530	0.4730
Guaranteed Low-Income Housing Tax Credits	0.0060	0.0060	0.0060	0.0060
Non-Guaranteed Low-Income Housing Tax Credits	0.0600	0.0600	0.0600	0.0600
Collateral Loans: Schedule BA	0.0990	0.2200	0.2680	0.2790
Other Invested Assets: Schedule BA	0.2750	0.4180	0.4730	0.4840
Other Invested Assets: Schedule DA All Other	0.2750	0.4180	0.4730	0.4840

Investment in Affiliates

A.M. Best assesses an additional risk charge of 25% for affiliated bonds, in addition to the baseline bond risk charges. For details on equity affiliated investments, please see below.

Investment in Affiliated Insurers

For those investments in affiliated insurers that are not consolidated into a rating unit, a baseline risk charge of 100% is applied to the investment in affiliates, regardless of which investment schedule it is recorded in—i.e., surplus notes recorded as other investments in Schedule BA. For equity investments in affiliated insurers, the baseline risk charge may be adjusted if A.M. Best determines that there is capital flexibility in the affiliate based on its business plan and operating performance.

If the amount of investments in affiliates represents a material portion of the rating unit's available capital, A.M. Best may perform a supplemental BCAR analysis that removes the affiliated investments from both available capital and required capital. This supplemental analysis can be performed regardless of whether the affiliate is a property/casualty or life/health insurer.

Investment in Non-Insurance Affiliates

There are a number of elements considered when determining the appropriate risk charge for investments in non-insurance affiliates. If the investment is publicly traded, it might receive a lower risk charge than a privately placed investment because privately placed investments generally are viewed as being less liquid. However, if the insurer owns a large proportion of a publicly traded affiliate, it might require regulatory or shareholder approval to sell it, making the asset less liquid. In another instance, the sale of an affiliated investment in a stress situation could give the buyer leverage during the negotiation of the sale price, resulting in a realized value for the asset that is lower than the reported value. These issues make these types of assets less liquid than other publicly traded investments with risks that resemble those of a privately held subsidiary.

A.M. Best charges the full statutory carrying value of the non-insurance affiliate to the parent. Unless a life/health insurer is actively committed to selling a non-insurer, with proceeds to be reinvested in the life/health operations, the baseline treatment is a 100% capital charge. In this regard, A.M. Best presumes that the net asset value of the affiliate is needed to support its own operations and is not available to support the insurance operation.

Special Purpose Investment Subsidiaries

The net required capital to support the underlying assets and liabilities of a special purpose affiliate is charged to the parent company. For example, a downstream holding company that holds special-purpose real estate investments would receive the capital charges from the real estate asset category rather than the baseline charge of 100% afforded "other investment affiliates."

Intercompany Loans

The baseline treatment for intercompany loans is a 100% capital charge. However, if an intercompany loan that normally is recorded as a liability is given as credit to the borrower's available capital by A.M. Best, then the amount of credit given to the borrower is directly removed from the

available capital and the investments of the lender. The intent is to avoid giving capital credit in more than one rating unit.

Derivatives/High-Risk Collateralized Mortgage Obligations (CMOs)

Risk charges for derivatives are based on the reported NAIC class; however, amounts held as acceptable collateral are treated as Class 1 assets, with the balance of the exposure based on reported NAIC risk classes. The applied risk charges are higher than for typical fixed-income assets because of volatility and liquidity issues. The BCAR model also applies additional risk charges to higher risk CMO assets. These assets are typically held in tranches that are of lower priority and thus bear characteristics of equity-type investments. **Exhibit C.7** contains the baseline risk charges for derivatives.

Exhibit C.7: Baseline Risk Charges for Derivatives

Derivatives	VaR 95	VaR 99	VaR 99.5	VaR 99.6
Exchange-Traded	0.0020	0.0020	0.0020	0.0020
Class 1 Category	0.0147	0.0212	0.0239	0.0246
Derivative FV Collateral	0.0147	0.0212	0.0239	0.0246
Class 2 Category	0.0531	0.0671	0.0721	0.0735
Class 3 Category	0.1188	0.1348	0.1403	0.1420
Class 4 Category	0.2358	0.2503	0.2555	0.2569
Class 5 Category	0.4217	0.4243	0.4254	0.4256
Class 6 Category	0.5271	0.5298	0.5308	0.5311
High Risk Collateralized Mortgage Obligations	0.1188	0.1348	0.1403	0.1420

In instances where detailed data is not available, derivatives shown as an asset receive a 100% risk charge to the asset value reported in the financial statement. However, both the asset value and the risk charge may be modified once information about the derivative itself and the rating unit's derivative program is ascertained. The asset value may be replaced with the notional value of the underlying investments if that is a better proxy for the exposure. In some instances where a derivative is considered to be purely speculative in nature, the required capital calculation may be moved to the business risk page. This results in a direct addition to net required capital rather than enabling the derivative to remain on the investment risk page and benefit from the covariance credit when calculating net required capital. Where possible, if the derivative is hedging a specific quantifiable risk captured in the BCAR model, A.M. Best may reduce the required capital for that risk. In such cases, A.M. Best removes the asset value of the derivative from available capital.

In addition to determining whether a derivative is for hedging or speculative purposes, A.M. Best's evaluation may include, but is not limited to, a review of the following factors:

- The counterparty credit risk involved;
- The liquidity of the derivative;
- The volatility of the asset value;

- The potential maximum downside loss;
- The correlation of the derivative asset value with the value of the related index or investment;
- The remaining term of the derivative versus the term of the associated investments or liabilities;
- The relationship of the triggering event to the current economic environment; and
- The size, purpose, expertise, and track record of the rating unit's derivative program.

Foreign Investments

For insurers with a material amount of foreign investments in a particular investment category, the risk charge for that asset category may be increased to account for the increase in volatility and/or decrease in liquidity associated with those foreign markets, financial systems, and economies.

Separate Accounts

Assets backing guaranteed interest liabilities held in separate accounts are assessed risk charges similar to those applied to assets backing general account guarantees. Assets backing guaranteed interest contracts held in Canadian segregated accounts are included in the reported invested assets, sorted by credit rating with appropriate risk charges assessed. These risk charges assume the company bears risk through crediting rate guarantees on these liabilities. It is important to note, however, that separate-account assets are not included in the invested asset total used to determine spread-of-risk (SOR) factors, and the SOR factor is not applied to these risk charges.

Other Miscellaneous Assets

Risk charges are assessed for write-in assets (net of amounts reported as derivatives); admitted portions of furniture, equipment, and electronic data processing (EDP) assets; and for receivables related to reinsurance arrangements and health-care plans. The baseline risk charge applied to write-in assets is 10%. However, certain write-in assets with lower risk characteristics may be assessed lower charges. For corporate owned life insurance (COLI), which is typically reported as a write-in invested asset, charges may be adjusted depending on the credit quality of the counterparties involved and the quality of the assets backing the policy. Higher charges may be applied to assets held in separate accounts. A 5% risk charge is applied to reinsurance and health-care receivables, as well as to admitted portions of furniture, equipment, and EDP assets.

Securities Lending Reinvested Collateral

For non-life U.S. filers, as a baseline, reinvested collateral is charged a risk factor of 10%. This factor can be adjusted following a review of the types of investments in which the collateral was reinvested.

Reinsurance Risk Charge

The BCAR model assesses risk charges to reinsurance amounts recoverable and to reserves ceded. Risk charges are applicable only to those amounts related to unaffiliated companies.

The life reinsurance market is dominated by highly rated companies. The baseline charges are based on the "AA" rated reinsurers one-year credit risk factor throughout the four confidence levels. Amounts reported as ceded to unauthorized reinsurers will receive a credit if the direct writer retains assets, as in funds-withheld or MODCO arrangements. Credit is subject to adjustment by the rating analyst following a review of the company's largest exposure to unauthorized reinsurers. Rating analysts may assess concentration and counterparty risk for a company's largest exposures. The baseline risk charges for reinsurance are detailed in **Exhibit C.8**.

Exhibit C.8: Reinsurance Baseline Risk Charges

Reinsurance	VaR 95	VaR 99	VaR 99.5	VaR 99.6
Recoverable-Paid Losses	0.0074	0.0172	0.0221	0.0239
Recoverable-Unpaid Loss	0.0074	0.0172	0.0221	0.0239
Unearned Premium Reserve Ceded	0.0074	0.0172	0.0221	0.0239
Accident & Health Reserve Ceded	0.0074	0.0172	0.0221	0.0239
Life & Annuity Reserve Ceded - Exh 5, 7	0.0074	0.0172	0.0221	0.0239
Reserve Ceded to Affiliates - Sch S	(0.0074)	(0.0172)	(0.0221)	(0.0239)
Reinsurance In Unauthorized Companies	(0.0050)	(0.0050)	(0.0050)	(0.0050)
Funds Held With Unauthorized Reinsurers	(0.0050)	(0.0050)	(0.0050)	(0.0050)

A.M. Best is concerned companies may be overly dependent on reinsurance. The BCAR captures reinsurance dependency using a reinsurance leverage ratio, defined as the unaffiliated reinsurance ceded reserves and recoverables divided by capital and surplus. The base reinsurance risk charge is increased on a graded basis for companies having a reinsurance leverage ratio of 500% or more and is capped at reinsurance leverage ratios in excess of 900%.

Asset Concentration Adjustment

For asset classes that do not currently reflect concentration risk in their capital factors, such as bonds, preferred stocks, and mortgage loans, A.M. Best may double the asset risk charge for single, large investment holdings that are greater than 10% of surplus plus the asset valuation reserve (AVR). This additional capital requirement applies to amounts in excess of the single investment limit, with the baseline charge for that investment type applying to the amount less than 10% of surplus (plus AVR). If a rating unit has significantly concentrated investments in any particular asset class, A.M. Best may adjust the respective asset class charge to account for this concentration.

Spread-of-Risk (SOR) Factor Adjustment

The BCAR model generates additional required capital to support investment risk relating to diversification of the portfolio, using a size factor corresponding to the spread of risk among all major asset classifications. Generally, no additional capital is generated from this adjustment for rating units with more than $500 million in invested assets; rating units with less than $10 million in invested assets could receive as much as a 50% surcharge that is added to their baseline capital requirement for investments.

C2 Mortality and Morbidity (Insurance) Risk

The insurance risk capital charges are based on the integration of the risk inherent in a particular line of business and the company's size. The BCAR divides insurance risks into mortality and morbidity components.

Mortality Risk Charges

Mortality risks are assessed based on volume of insurance, net of reserves and reinsurance, with risk charges graded lower for higher volumes. These charges reflect the surplus needed for excess claims and pricing or reserve inaccuracies. Evidence of antiselection may result in higher charges.

The stochastic-based mortality factors (**Exhibit C.9**) were constructed from data derived from Society of Actuaries' (SOA) mortality studies. This data included issue age, gender, smoker/non-smoker classifications, and average policy size. Information from annual statement filings was then used to adjust average policy sizes for net-at-risk bands. The baseline mortality risk factors are based on net amount at risk (face amount less reserves held) after reinsurance. These are adjusted for company-specific factors, such as the size of the inforce block and the specific business line.

Exhibit C.9: Baseline Mortality Factors

Industrial/Ordinary Life

	Net Amount at Risk (000)			
	Under 500,000	500,000 to 5,000,000	5,000,000 to 25,000,000	25,000,000 to 50,000,000
VaR 95	0.0022	0.0009	0.0005	0.0002
VaR 99	0.0034	0.0014	0.0008	0.0005
VaR 99.5	0.0036	0.0015	0.0009	0.0005
VaR 99.6	0.0037	0.0016	0.0011	0.0006

Group/Credit Life

	Net Amount at Risk (000)			
	Under 500,000	500,000 to 5,000,000	5,000,000 to 25,000,000	25,000,000 to 50,000,000
VaR 95	0.0021	0.0003	0.0002	0.0001
VaR 99	0.0029	0.0005	0.0004	0.0002
VaR 99.5	0.0030	0.0008	0.0005	0.0003
VaR 99.6	0.0031	0.0009	0.0006	0.0004

Morbidity Risk Charges

The risk profiles of certain individual and group health lines are substantially different, with the individual lines generally bearing higher risk. Industry loss probability distributions were created for each of the lines of business, reflecting volatility that varies with size. The size thresholds were selected after segmenting the data for the particular line of business to reflect decreasing volatility with increasing size. From these distributions, by line of business industry factors are selected to correspond with the various VaR levels. These industry factors are then adjusted based on a rating unit's profitability or volatility in order to arrive at its specific risk factors. **Appendix 2** contains the size thresholds for the various lines of business (both for premium and reserves). **Appendix 3** contains the baseline premium industry risk factors for the lines of business, while **Appendix 4** contains the baseline reserve industry risk factors.

Long-Term Care and Long-Term Disability

The stochastic-based risk factors for long-term care (LTC) and long-term disability (DI) were modeled using industry data on profitability for LTC and industry data on premium adequacy for DI.

Other Risks

Morbidity risk charges also apply to administrative service only premium equivalents. Although little morbidity risk is generally associated with premium equivalents, there is a charge for administrative fee-based business. The BCAR model also applies risk charges for workers' compensation carve-out premiums.

Managed Care Organization (MCO) Credit and Reduction

This credit reflects the reduction in the overall premium risk charge for companies with managed care arrangements that reduce uncertainty regarding future claim payments. This credit is reduced for the risk that the MCO will pay the capitation to a provider but not receive the agreed-upon services and will encounter unexpected expenses in arranging for alternative coverage. The credit risk charge is based on the contractual relationship between the MCO and a provider. Higher credit risk charges apply to capitation payments made to unaffiliated or third-party care providers than to capitation payments made to affiliated care providers.

Net Earned Premium

For net premiums written, the risk facing the rating unit is the potential to incur an underwriting loss on the book of business written in the next year. The rating unit's current year written premium is used in the model as a proxy for the premium to be written next year. To create an industry database of profit and losses for each line of business, each insurer's calculated underwriting profit or loss based on the actual reported results was used. The industry database was then split based on the size of the net premiums written for that line of business, and the curve-fitting software was applied to generate industry baseline lognormal probability distributions of underwriting profit and loss ratios by line and by size. These industry factors can be adjusted based on the rating unit's own profitability. Those rating units with better historical profitability are expected to maintain a greater

risk margin in the pricing and underwriting of future business and, therefore, require a lower premium capital factor.

The rating unit's premium adequacy is reflected by applying a profitability adjustment factor that ranges from 0.80 to 1.20, based on whether the rating unit is higher or lower than an industry-expected profitability ratio for each line of business. An extremely unprofitable book of business would receive an adjustment factor of 1.20 applied to each industry risk factor, thereby increasing capital requirements for an unprofitable rating unit. In contrast, an extremely profitable book of business would receive an adjustment factor of 0.80 applied to each industry risk factor, thereby reducing capital requirements for a profitable rating unit. The measurement used to judge the rating unit's profitability in a line of business is the rating unit's three-year average reported profitability ratio (defined as underwriting gain (loss)/ net earned premium) in that line of business.

Reserves

Claim reserve levels on accident and health (A&H) products are given considerable attention as another exposure on the balance sheet; the applied risk charges are intended to cover the possibility of negative reserve development due to adverse claims experience.

A.M. Best's reserve risk factors are based on an industry database of each company's reserve adequacy (deficiency) generated from the annual statements by line of business. Using this data, four health-business industry curves were developed for reserve size (very small, small, medium, and large) for each line of business. From these distributions, industry factors are selected to correspond with the various VaR levels.

To determine a reserve capital requirement, industry factors are adjusted based on the rating unit's reserve adequacy. Reserve adequacy is based on a three-year average of reported claims relative to the claims reserve liability held. The rating unit's reserve adequacy is reflected by applying a reserve adjustment factor that ranges from 0.80 to 1.20, based on whether the rating unit is higher or lower than an industry-expected reserve adequacy for each line of business. A rating unit that historically has under-reserved will be penalized for maintaining lower reported reserves and would receive an adjustment factor of 1.20 applied to each industry risk factor, thereby increasing capital requirements. In contrast, an extremely well reserved book of business would receive an adjustment factor of 0.80 applied to each industry risk factor, thereby reducing capital requirements

Diversification Credit

A.M. Best calculates diversification factors using correlation matrices based on health reserves and health premiums. For reserves, the diversification factor reflects the reduction in overall reserve risk within a well-diversified portfolio. The reserve correlation matrix determines the level and direction of reserve deviation in one line of business relative to reserve deviation in another line of business. A.M. Best created an industry-level reserve correlation matrix using industry-aggregated reserve development data.

For premiums, the diversification factor reflects the reduction in overall pricing risk within a well-diversified book of business. The premium correlation matrix determines the level and direction of underwriting profits and losses in one line of business relative to underwriting profits and losses in another line of business.

C3 Interest Rate/VA (Variable Annuity) Market Risk

A.M. Best's BCAR model includes risk charges for interest-rate risks on fixed annuities and for market risks on variable annuities (segregated funds in Canadian model). These charges capture the risks associated with changes in interest rates, including the potential impact of asset/liability mismatches. Risk charges also are assessed to reflect the impact of changes in equity markets and volatility on variable annuities with living benefit guarantees.

Fixed annuity risk charges were developed primarily using data from third party software. Risk charges were developed for payout annuities (standard and structured settlements) and for deferred annuities with interest rate guarantees (both fixed and variable). Deferred annuity capital factors were developed for products with and without market value adjustment protection and for various periods of surrender charge protection (at issue, partial, and no surrender charge protection).

The risk charges for variable annuities were developed based on company-provided data.

Interest Rate Risk

The C3 interest risk charges depend on the level of reserves in both annuity and life insurance products. Required capital was determined by projecting cash flows out for 30 years using 1,000 interest rate scenarios. The resulting cash flows were discounted and then sorted. The resulting required capital (negative present value of cash flows) at the respective VaR levels is expressed as percentages of reserves.

Baseline factors were developed for both matched portfolios (asset duration equals liability duration) and mismatched portfolios (asset duration greater than or less than liability duration) and can be applied based on analyst assessment of the company's ALM strategies.

Interest rate risk factors for other annuity categories were created by combining the factors generated for payout and deferred annuities, recognizing the level of policyholder optionality. As optionality increases, risk factors are closer to those of deferred annuities as opposed to those of payout annuities. Baseline factors may be adjusted for ALM strategies, similar to the adjustments made for payout and deferred annuities.

The level of surrender charge protection is the primary factor in determining interest rate risk charges for fixed deferred annuities. Annuities with market-value adjustment (MVA) features, in addition to surrender-charge protection, are assessed slightly lower capital charges in the BCAR model. MVA features provide better matching of assets to liabilities when policies are surrendered; however, it is assumed that surrender charge protection is the primary driver of policyholders'

behavior. Contracts with MVAs are segregated by year-of-surrender charge protection, rather than based on the MVA protection period.

Lower interest rate risk charges are applied to life insurance reserves (net of policy loans), as these liabilities tend to be less interest rate sensitive. Life interest rate risk factors were determined in a similar fashion to that of other annuities. In general, life products have stable longer-term cash flows, although increased policyholder optionality can create negative cash flows similar to deferred annuities. Baseline factors may be adjusted for company-specific ALM strategies or for other characteristics that may be present in a company's life insurance and/or annuity products.

Please see **Exhibit C.10** for baseline C3 capital factors.

Exhibit C.10: Baseline C3 Capital Factors Assuming Matched Portfolio

	VaR 95	VaR 99	VaR 99.5	VaR 99.6
1. Not Subject to Discretionary Withdrawal				
General Account Individual Annuities Excluding Structured Settlements	0.0054	0.0095	0.0108	0.0109
Structured Settlements	0.0211	0.0271	0.0293	0.0297
G/A Guaranteed Investment, Experience Rated & Index Group Pensions	0.0127	0.0212	0.0241	0.0243
All Other General Account Group	0.0163	0.0270	0.0307	0.0311
2. Subject to Discretionary Withdrawal With Market Value Adjustments				
Individual Annuities				
Surrender Charges Expire During Year 1	0.0197	0.0299	0.0336	0.0340
Surrender Charges Expire During Year 2	0.0175	0.0275	0.0307	0.0312
Surrender Charges Expire During Year 3	0.0175	0.0275	0.0307	0.0312
Surrender Charges Expire After Year 3	0.0147	0.0251	0.0293	0.0297
Group Annuities				
Surrender Charges Expire During Year 1	0.0197	0.0299	0.0336	0.0340
Surrender Charges Expire During Year 2	0.0175	0.0275	0.0307	0.0312
Surrender Charges Expire During Year 3	0.0175	0.0275	0.0307	0.0312
Surrender Charges Expire After Year 3	0.0147	0.0251	0.0293	0.0297
3. Subject to Discretionary Withdrawal Without Market Value Adjustments				
Individual Annuities				
Surrender Charges Expire During Year 1	0.0261	0.0379	0.0454	0.0456
Surrender Charges Expire During Year 2	0.0259	0.0358	0.0406	0.0415
Surrender Charges Expire During Year 3	0.0259	0.0358	0.0406	0.0415
Surrender Charges Expire After Year 3	0.0199	0.0328	0.0373	0.0378
Group Annuities				
Surrender Charges Expire During Year 1	0.0261	0.0379	0.0454	0.0456
Surrender Charges Expire During Year 2	0.0259	0.0358	0.0406	0.0415
Surrender Charges Expire During Year 3	0.0259	0.0358	0.0406	0.0415
Surrender Charges Expire After Year 3	0.0199	0.0328	0.0373	0.0378
4. Subject to Discretionary Withdrawal With No Surrender Charges With Market Value Adjustments				
Individual Annuities	0.0197	0.0299	0.0336	0.0340
Group Annuities	0.0197	0.0299	0.0336	0.0340
5. Subject to Discretionary Withdrawal With No Surrender Charges Without Market Value Adjustments				
Individual Annuities	0.0261	0.0379	0.0454	0.0456
Group Annuities	0.0261	0.0379	0.0454	0.0456
6. Life Insurance Reserves Net of Policy Loans	0.0077	0.0134	0.0154	0.0156

Variable Annuity (VA) Market Risk

The market risk captures the required capital for variable annuities with living benefit guarantees sold by U.S. companies under the NAIC C-3 Phase II rules. Under C-3 Phase II, companies are required to calculate the total asset requirement on a stochastic basis in order to determine the risks of variable annuity products with guarantees. With policyholders bearing most of the risk of variable

annuities without guarantees, the risks of variable annuity guaranteed death benefits and living benefits are assessed market risk charges.

Using SRQ or company-provided information on the various VaRs, the total required capital is determined by reviewing the Total Asset Requirement after adjusting for reserves held. For VAs with living benefit guarantees, the required capital at each VaR level represents the excess (if any) of total asset requirement over reserves held. For Canadian insurers, A.M. Best will review data from the company's regulatory filing as well as company provided information related to segregated fund products with guarantees to determine if the baseline risk charges are sufficient.

C4 Business Risk

The C4 charges (**Exhibit C.11**) represent the numerous general business risks of a life and health insurance company, including risks posed by the legal, regulatory and competitive environments. The C4 charges recognize the other general business risks by charges assessed on life and annuity direct premiums, net of variable annuity premiums. A.M. Best assesses the charges net of variable annuity premiums because policyholders bear most of the risk for variable products without secondary guarantees. Risk charges also are assessed on accident and health/sickness (A&H), and health maintenance organization (HMO) premiums.

The C4 section includes charges for off-balance-sheet items whereby the insurer does not retain control of assets. These are typically reported in the General Interrogatory section of the annual statement and may be part of securities lending programs. Risk charges applicable to noncontrolled assets (securities loaned, pledged as collateral, etc.) are assessed a risk charge of 1%, subject to analyst review.

Exhibit C.11: Baseline Business Risk Charges

Business Risk	VaR 95	VaR 99	VaR 99.5	VaR 99.6
Life & Annuity Premiums/Deposits (Net of Variable Premiums)	0.0200	0.0200	0.0200	0.0200
Accident & Health Premiums	0.0075	0.0075	0.0075	0.0075
Noncontrolled Assets	0.0100	0.0100	0.0100	0.0100
Contingent Commitments	0.0150	0.0150	0.0150	0.0150
Separate Account Assets	0.0020	0.0020	0.0020	0.0020
Unfunded Pension Obligations	1.0000	1.0000	1.0000	1.0000
Unfunded Other Post Employment Obligations	1.0000	1.0000	1.0000	1.0000

Contingent Commitments

BCAR assesses capital charges on contingent commitments as well as on other noncontrolled assets. Contingent commitments include guarantees for the benefit of affiliates and commitments to join ventures, partnerships or limited liability companies. Contingent commitments receive a risk charge of 1.50%.

Separate (Segregated) Accounts

With market risks associated with variable annuity guarantees accounted for in the C3 section, the risk charge applicable to separate-account assets is a flat 0.2%. This charge covers the business risks associated with separate accounts because of the increased complexity of products offered, ongoing suitability issues, and the administrative challenges associated with separate-account businesses.

Pension and Other Post-Employment Obligations

Pension plans and other post-employment/retirement obligations will be charged for the unfunded portion of these obligations in the baseline calculation of required capital for business risk. However, this charge can be reduced for any liabilities already shown on the rating unit's balance sheet that are designated for the unfunded portion of these obligations. The charge also may be reduced to reflect the rating unit's planned annual reduction of the remaining unfunded obligations. For those insurers whose unfunded obligations reside at an affiliated company, the rating unit's share of the unfunded obligation will not be factored directly into the rating unit's BCAR analysis but is factored into the balance sheet evaluation.

D. Available Capital

A.M. Best may make adjustments to a rating unit's reported capital within the BCAR model to provide a more economic and comparable basis for evaluating capital adequacy. For U.S. filers reported capital and surplus (plus the asset-valuation reserve and other conditional reserves) is the starting point for available capital. This starting point is then adjusted for the current year's amortization of the interest-maintenance reserve, a credit for a portion of unearned premium reserves, and credit for 50% of the policyholder dividends scheduled to be paid in the following year. In the Canadian model, the starting point is reported equity per the Life Quarterly Return & Annual Supplement.

The BCAR model emphasizes the permanent capital of an organization and reduces a company's capital and surplus for any encumbered capital, including haircuts to surplus notes, anticipated repayment of financial reinsurance or capital deficiency to support a subsidiary's rating, goodwill, and other intangible assets.

The following sections highlight possible adjustments made to available capital. Further discussion of available capital is included in related criteria procedures.

Future Operating Losses

A company's reported capital and surplus generally is reduced for operating losses, assuming that such losses would recur in the following year. However, given the cyclical nature of certain lines of business, A.M. Best recognizes that certain operations within the insurance company can support other business lines in different economic environments. Therefore, capital is reduced only if there is a net operating loss for the company in total, thus allowing gains in one line to offset losses in another. This assumes that sustained profitability and operating contributions to surplus are crucial

components of long-term capital adequacy. Any reduction caused by operating losses can be modified by the analyst for one-time or nonrecurring items that impact operating results.

Negative Reserves (Canada Only)

The BCAR model deducts (non-admits) negative reserves from capital and surplus. Negative reserves arise due to valuation standards in Canada that make allowances for initial acquisition costs in the reserve calculation. The BCAR model treatment considers that these reserves run off over time and that increases in surrenders can accelerate this run off; thus, the resulting asset is not considered permanent capital but rather a timing difference due to valuation methods. In addition, negative reserve amounts may increase if experience warrants changing assumptions when determining these reserves.

Derivatives

The BCAR model adjusts capital and surplus for potential exposure to off-balance-sheet derivatives by deducting 10% of the amount of such exposure from reported capital and surplus.

Surplus Notes

All surplus notes are initially deducted from capital and surplus. Assuming that surplus notes exhibit equity-like features, equity credit may be given if such features are present. The maximum equity credit for surplus notes is 90% for third-party (externally held) notes and 95% for notes held by affiliates. Maximum equity credit is allowed for the period up to five years prior to the notes' stated maturity. Equity credit thereafter is reduced 20% per year (on a straight-line basis) until the notes mature. This assumes that as surplus notes approach maturity, they become more debt-like.

Stress Tests

A.M. Best stresses a rating unit's available capital further as part of its sensitivity analysis. The stress tests show what the rating unit's BCAR looks like after a stress test scenario occurs. Although these stress-tested BCAR results are not published, they may impact A.M. Best's view of capitalization.

Stress tests may include mortality, morbidity or economic/market scenario type of events, and will be tailored to what is most appropriate based on what is viewed as the rating unit's largest exposure. Typical stress tests may include the following:

1. Mortality Event: The analyst can stress C2 using gross mortality risk as opposed to net, assuming either a recapture of all mortality risk or loss of reinsurance capacity.
2. Morbidity Event: The analyst can stress a rating unit's LTC block by assuming a rating unit is unable to achieve required state-approved premium increases needed over the next 12 months to improve the block's operating performance.
3. Mark to Market of Fixed Income Instruments: The analyst can adjust available capital to reflect a rating unit's fixed-income securities' market value. The pre-tax impact of this adjustment is limited to -15% of reported capital, and the result is then tax-affected. The limits represent the fact that it is unlikely that a rating unit would need to sell all of its fixed-

income securities at the current market value. The 15% limit may be adjusted higher based on the magnitude of interest-sensitive liabilities out of surrender charge. Unrealized losses in excess of the limit would require an additional analysis of whether the loss is believed to be temporary or permanent, whether the underlying assets still are performing, and whether there is a near-term cash flow requirement and sufficient cash flow or liquidity to handle this need.

4. Instantaneous Interest Rate Shock: The analyst may use data provided in the SRQ to assess the impact on capital of an instantaneous 100 to 300 basis point increase/decrease in interest rates (with a floor rate of 0%) as of the beginning of the year with maintenance of that level for the life of the portfolio.

E. Conclusion

BCAR is important to A.M. Best's evaluation of both absolute and relative balance sheet strength. Although BCAR is an important tool in the rating process, it is not the sole basis of a rating assignment. BCAR, like other quantitative measures, has limitations and does not necessarily work for all rating units. Consequently, capital adequacy should be viewed within the overall context of the operating and strategic issues surrounding a rating unit. In addition, holding-company considerations will play a key role in evaluating the balance sheet strength of a rating unit. Business profile, operating performance and enterprise risk management are important rating considerations in evaluating a rating unit's long-term financial strength and viability, as well as the quality of the capital that supports the BCAR result.

A.M. Best believes that well-managed and highly rated insurers will continue to focus on the fundamentals of building future economic value and financial stability, rather than on managing one, albeit important, component of A.M. Best's rating evaluation.

Appendix 1: Baseline Bond Risk Charges

VaR 95										
Rating	**1 Year**	**2 Year**	**3 Year**	**4 Year**	**5 Year**	**6 Year**	**7 Year**	**8 Year**	**9 Year**	**10 Year**
aaa	0.00%	0.00%	0.00%	0.00%	0.01%	0.02%	0.03%	0.04%	0.05%	0.05%
aa+	0.00%	0.05%	0.09%	0.14%	0.18%	0.21%	0.24%	0.26%	0.28%	0.30%
aa	0.00%	0.10%	0.18%	0.27%	0.34%	0.41%	0.45%	0.48%	0.52%	0.54%
aa-	0.08%	0.24%	0.37%	0.52%	0.62%	0.71%	0.78%	0.82%	0.86%	0.91%
a+	0.25%	0.53%	0.78%	1.01%	1.19%	1.33%	1.43%	1.48%	1.55%	1.62%
a	0.33%	0.67%	0.99%	1.25%	1.47%	1.63%	1.74%	1.81%	1.89%	1.96%
a-	0.42%	0.86%	1.24%	1.56%	1.82%	2.02%	2.13%	2.21%	2.30%	2.38%
bbb+	0.75%	1.52%	2.16%	2.70%	3.13%	3.46%	3.69%	3.83%	3.99%	4.13%
bbb	0.88%	1.75%	2.47%	3.09%	3.56%	3.93%	4.18%	4.33%	4.48%	4.65%
bbb-	1.16%	2.29%	3.20%	3.95%	4.53%	4.97%	5.25%	5.41%	5.58%	5.78%
bb+	1.89%	3.65%	5.15%	6.43%	7.48%	8.35%	9.03%	9.49%	9.93%	10.34%
bb	2.21%	4.24%	5.94%	7.36%	8.54%	9.49%	10.22%	10.71%	11.18%	11.61%
bb-	4.35%	8.14%	11.12%	13.47%	15.24%	16.55%	17.46%	18.00%	18.46%	18.82%
b+ to b-	6.52%	11.91%	16.32%	19.90%	22.67%	24.85%	26.48%	27.66%	28.45%	28.92%
ccc+ to ccc-	24.38%	37.13%	43.41%	46.09%	46.77%	46.77%	46.77%	46.77%	46.77%	46.77%
cc to c	28.45%	43.32%	50.64%	53.77%	54.56%	54.56%	54.56%	54.56%	54.56%	54.56%
d	32.51%	49.51%	57.87%	61.45%	62.36%	62.36%	62.36%	62.36%	62.36%	62.36%

VaR 99										
Rating	**1 Year**	**2 Year**	**3 Year**	**4 Year**	**5 Year**	**6 Year**	**7 Year**	**8 Year**	**9 Year**	**10 Year**
aaa	0.00%	0.00%	0.04%	0.08%	0.11%	0.14%	0.16%	0.19%	0.21%	0.23%
aa+	0.05%	0.14%	0.24%	0.33%	0.40%	0.47%	0.52%	0.55%	0.59%	0.62%
aa	0.11%	0.27%	0.44%	0.60%	0.71%	0.81%	0.88%	0.92%	0.98%	1.02%
aa-	0.20%	0.45%	0.69%	0.90%	1.05%	1.19%	1.27%	1.33%	1.40%	1.45%
a+	0.39%	0.81%	1.19%	1.50%	1.75%	1.91%	2.05%	2.12%	2.21%	2.29%
a	0.48%	0.99%	1.43%	1.80%	2.08%	2.28%	2.43%	2.51%	2.60%	2.69%
a-	0.60%	1.20%	1.73%	2.16%	2.49%	2.72%	2.88%	2.96%	3.06%	3.17%
bbb+	1.01%	2.02%	2.87%	3.56%	4.09%	4.51%	4.79%	4.93%	5.12%	5.29%
bbb	1.15%	2.29%	3.24%	4.01%	4.57%	5.04%	5.34%	5.49%	5.70%	5.87%
bbb-	1.45%	2.85%	4.01%	4.91%	5.62%	6.10%	6.46%	6.64%	6.83%	7.01%
bb+	2.26%	4.33%	6.15%	7.66%	8.86%	9.81%	10.58%	11.12%	11.54%	11.99%
bb	2.59%	4.95%	6.99%	8.67%	9.98%	11.00%	11.80%	12.36%	12.82%	13.30%
bb-	4.83%	8.99%	12.28%	14.89%	16.73%	18.06%	18.98%	19.47%	19.91%	20.26%
b+ to b-	7.07%	12.91%	17.65%	21.42%	24.28%	26.49%	28.09%	29.28%	29.93%	30.37%
ccc+ to ccc-	25.06%	37.91%	44.06%	46.60%	47.13%	47.13%	47.13%	47.13%	47.13%	47.13%
cc to c	29.24%	44.23%	51.40%	54.36%	54.99%	54.99%	54.99%	54.99%	54.99%	54.99%
d	33.41%	50.55%	58.74%	62.13%	62.84%	62.84%	62.84%	62.84%	62.84%	62.84%

Appendix 1 Continued

VaR 99.5										
Rating	**1 Year**	**2 Year**	**3 Year**	**4 Year**	**5 Year**	**6 Year**	**7 Year**	**8 Year**	**9 Year**	**10 Year**
aaa	0.00%	0.03%	0.09%	0.13%	0.17%	0.21%	0.24%	0.27%	0.30%	0.33%
aa+	0.08%	0.20%	0.32%	0.42%	0.51%	0.57%	0.64%	0.67%	0.72%	0.77%
aa	0.16%	0.37%	0.57%	0.72%	0.85%	0.97%	1.06%	1.09%	1.15%	1.23%
aa-	0.26%	0.57%	0.84%	1.05%	1.22%	1.37%	1.48%	1.52%	1.59%	1.67%
a+	0.46%	0.95%	1.36%	1.68%	1.94%	2.16%	2.31%	2.35%	2.43%	2.55%
a	0.56%	1.14%	1.63%	2.00%	2.30%	2.56%	2.71%	2.76%	2.85%	2.97%
a-	0.68%	1.37%	1.95%	2.38%	2.74%	3.01%	3.19%	3.25%	3.33%	3.47%
bbb+	1.12%	2.25%	3.16%	3.91%	4.47%	4.91%	5.16%	5.32%	5.49%	5.70%
bbb	1.27%	2.53%	3.55%	4.40%	5.00%	5.44%	5.73%	5.92%	6.08%	6.28%
bbb-	1.59%	3.11%	4.33%	5.33%	6.01%	6.56%	6.86%	7.03%	7.20%	7.42%
bb+	2.41%	4.67%	6.53%	8.14%	9.31%	10.37%	11.11%	11.63%	12.12%	12.52%
bb	2.74%	5.30%	7.38%	9.11%	10.46%	11.56%	12.33%	12.88%	13.40%	13.82%
bb-	5.05%	9.36%	12.72%	15.32%	17.28%	18.63%	19.47%	19.99%	20.43%	20.72%
b+ to b-	7.34%	13.33%	18.13%	22.00%	24.90%	27.08%	28.67%	29.77%	30.48%	30.82%
ccc+ to ccc-	25.35%	38.23%	44.37%	46.81%	47.26%	47.26%	47.26%	47.26%	47.26%	47.26%
cc to c	29.57%	44.60%	51.77%	54.61%	55.14%	55.14%	55.14%	55.14%	55.14%	55.14%
d	33.79%	50.97%	59.16%	62.41%	63.02%	63.02%	63.02%	63.02%	63.02%	63.02%

VaR 99.6										
Rating	**1 Year**	**2 Year**	**3 Year**	**4 Year**	**5 Year**	**6 Year**	**7 Year**	**8 Year**	**9 Year**	**10 Year**
aaa	0.00%	0.05%	0.10%	0.14%	0.19%	0.23%	0.27%	0.30%	0.32%	0.38%
aa+	0.09%	0.21%	0.35%	0.45%	0.54%	0.61%	0.68%	0.71%	0.77%	0.82%
aa	0.18%	0.40%	0.61%	0.77%	0.90%	1.00%	1.10%	1.15%	1.21%	1.27%
aa-	0.28%	0.59%	0.87%	1.11%	1.29%	1.40%	1.53%	1.58%	1.64%	1.72%
a+	0.48%	0.99%	1.42%	1.77%	2.02%	2.21%	2.37%	2.42%	2.50%	2.61%
a	0.58%	1.18%	1.70%	2.09%	2.39%	2.60%	2.78%	2.83%	2.93%	3.03%
a-	0.71%	1.42%	2.01%	2.48%	2.85%	3.07%	3.25%	3.32%	3.41%	3.52%
bbb+	1.17%	2.31%	3.26%	4.00%	4.57%	5.00%	5.31%	5.42%	5.60%	5.79%
bbb	1.32%	2.61%	3.64%	4.48%	5.10%	5.58%	5.91%	6.02%	6.19%	6.39%
bbb-	1.62%	3.19%	4.42%	5.40%	6.13%	6.67%	7.02%	7.17%	7.33%	7.54%
bb+	2.47%	4.76%	6.67%	8.26%	9.51%	10.53%	11.23%	11.78%	12.24%	12.67%
bb	2.82%	5.40%	7.52%	9.28%	10.65%	11.73%	12.50%	13.02%	13.51%	13.96%
bb-	5.10%	9.48%	12.89%	15.50%	17.51%	18.82%	19.66%	20.16%	20.56%	20.89%
b+ to b-	7.43%	13.44%	18.29%	22.13%	25.09%	27.25%	28.79%	29.93%	30.61%	30.95%
ccc+ to ccc-	25.46%	38.31%	44.42%	46.84%	47.30%	47.30%	47.30%	47.30%	47.30%	47.30%
cc to c	29.70%	44.69%	51.82%	54.64%	55.18%	55.18%	55.18%	55.18%	55.18%	55.18%
d	33.94%	51.08%	59.23%	62.45%	63.06%	63.06%	63.06%	63.06%	63.06%	63.06%

Appendix 2: Size Thresholds by Line of Business

Net Earned Premium												
	Size Category											
	Very Small	Small				Medium				Large		
Individual Accident & Health												
Individual Hosp Maj Med	Under $1M	$1M	to	$10M		$10M	to	$100M		Over	$100M	
Individual Hosp Indem ADD	Under $1M	$1M	to	$4M		$4M	to	$20M		Over	$20M	
Individual Medicare Supp	Under $5M	$5M	to	$25M		$25M	to	$100M		Over	$100M	
Individual Medicare Adv plus Choice	Under $5M	$5M	to	$25M		$25M	to	$100M		Over	$100M	
Individual Medicaid	Under $1M	$1M	to	$5M		$5M	to	$20M		Over	$20M	
Individual Medicare Part D	Under $3M	$3M	to	$10M		$10M	to	$50M		Over	$50M	
Individual Medicare Part D Supp	Under $3M	$3M	to	$10M		$10M	to	$50M		Over	$50M	
Individual Fee for Service	Under $1M	$1M	to	$5M		$5M	to	$25M		Over	$25M	
Individual Dread Disease	Under $1M	$1M	to	$5M		$5M	to	$25M		Over	$25M	
Group Accident & Health												
Group Hosp Maj Med	Under $10M	$10M	to	$50M		$50M	to	$300M		Over	$300M	
Group Hosp Indem ADD	Under $1M	$1M	to	$5M		$5M	to	$20M		Over	$20M	
Group FEHBP	Under $5M	$5M	to	$20M		$20M	to	$100M		Over	$100M	
Group Dental	Under $2M	$2M	to	$10M		$10M	to	$50M		Over	$50M	
Group Vision	Under $1M	$1M	to	$10M		$10M	to	$20M		Over	$20M	
Group Disability - STD	Under $2M	$2M	to	$5M		$5M	to	$25M		Over	$25M	
Group Dread Disease	Under $1M	$1M	to	$5M		$5M	to	$25M		Over	$25M	
Group Stop Loss and Min Prem	Under $5M	$5M	to	$20M		$20M	to	$70M		Over	$70M	
Group Lim Benefit	Under $1M	$1M	to	$5M		$5M	to	$25M		Over	$25M	
Group Student	Under $1M	$1M	to	$5M		$5M	to	$25M		Over	$25M	
Credit	Under $1M	$1M	to	$3M		$3M	to	$10M		Over	$10M	
Other												
Group Prem Equiv ASO Stop Loss	Under $100M	$100M	to	$300M		$300M	to	$500M		Over	$500M	
Workers' Comp Carve Out Prem	Under $2M	$2M	to	$10M		$10M	to	$20M		Over	$20M	
All Other (Group&Indiv)	Under $1M	$1M	to	$5M		$5M	to	$15M		Over	$15M	

Reserves												
	Size Category											
	Very Small	Small				Medium				Large		
Group A&H	Under $4M	$4M	to	$15M		$15M	to	$100M		Over	$100M	
Credit A&H	Under $1M	$1M	to	$3M		$3M	to	$10M		Over	$10M	
Collectively Renewable	Under $1M	$1M	to	$3M		$3M	to	$15M		Over	$15M	
Non-Cancellable	Under $3M	$3M	to	$15M		$15M	to	$100M		Over	$100M	
Guarenteed Renewable	Under $3M	$3M	to	$10M		$10M	to	$50M		Over	$50M	
Non-Renewable	Under $2M	$2M	to	$5M		$5M	to	$15M		Over	$15M	
Other Accident	Under $1M	$1M	to	$5M		$5M	to	$50M		Over	$50M	
All Other	Under $1M	$1M	to	$2M		$2M	to	$10M		Over	$10M	
Workers Comp Carve-Out Liability	Under $5M	$5M	to	$20M		$20M	to	$75M		Over	$75M	
Comprehensive	Under $10M	$10M	to	$25M		$25M	to	$75M		Over	$75M	
Medicare Supplement	Under $2M	$2M	to	$10M		$10M	to	$20M		Over	$20M	
Dental	Under $1M	$1M	to	$2M		$2M	to	$5M		Over	$5M	
Vision	Under $1M	$1M	to	$3M		$3M	to	$5M		Over	$5M	
Fed Employees	Under $1M	$1M	to	$5M		$5M	to	$10M		Over	$10M	
Title XVIII Medicare	Under $10M	$10M	to	$25M		$25M	to	$50M		Over	$50M	
Title XIX Medicaid	Under $10M	$10M	to	$25M		$25M	to	$50M		Over	$50M	
Other Health	Under $2M	$2M	to	$4M		$4M	to	$10M		Over	$10M	

Appendix 3: Baseline Premium Risk Factors

Typical Premium Risk Capital Factors

Size Category: Very Small

	Confidence Level			
	95	99	99.5	99.6
Indiv Hosp Maj Med	0.281	0.433	0.493	0.511
Indiv Hosp Indem ADD	0.243	0.373	0.425	0.441
Indiv Medicare Supp	0.227	0.347	0.394	0.409
Indiv Medicare Adv plus Choice	0.248	0.380	0.432	0.450
Indiv Medicaid	0.273	0.420	0.478	0.496
Indiv Medicare Part D	0.218	0.332	0.376	0.391
Indiv Medicare Part D Supp	0.256	0.393	0.447	0.463
Indiv Fee for Service	0.180	0.273	0.309	0.320
Indiv Disability - Non Can	0.400	0.450	0.475	0.500
Indiv Disability - Other IDI	0.200	0.225	0.240	0.250
Indiv Long Term Care	0.250	0.400	0.500	0.525
Indiv Dread Disease	0.264	0.405	0.460	0.478
Group Hosp Maj Med	0.188	0.285	0.321	0.333
Group Hosp Indem ADD	0.229	0.351	0.399	0.414
Group FEHBP	0.050	0.065	0.072	0.075
Group Dental	0.189	0.287	0.325	0.336
Group Vision	0.169	0.256	0.290	0.301
Group Disability - LTD	0.150	0.200	0.225	0.250
Group Disability - STD	0.248	0.380	0.432	0.450
Group Long Term Care	0.200	0.300	0.400	0.450
Group Dread Disease	0.227	0.347	0.394	0.409
Group Stop Loss and Min Prem	0.189	0.287	0.325	0.337
Group Lim Benefit	0.232	0.354	0.402	0.417
Group Student	0.186	0.282	0.319	0.330
Credit	0.259	0.399	0.454	0.472
Group Prem Equiv ASO Stop Loss	0.030	0.045	0.052	0.055
Workers' Comp Carve Out Prem	0.300	0.459	0.522	0.543
All Other (Group&Indiv)	0.261	0.403	0.460	0.476

Size Category: Small

	Confidence Level			
	95	99	99.5	99.6
Indiv Hosp Maj Med	0.232	0.353	0.401	0.416
Indiv Hosp Indem ADD	0.207	0.315	0.358	0.371
Indiv Medicare Supp	0.173	0.262	0.296	0.307
Indiv Medicare Adv plus Choice	0.193	0.292	0.331	0.344
Indiv Medicaid	0.234	0.358	0.407	0.422
Indiv Medicare Part D	0.180	0.273	0.308	0.320
Indiv Medicare Part D Supp	0.199	0.302	0.342	0.354
Indiv Fee for Service	0.144	0.217	0.245	0.254
Indiv Disability - Non Can	0.400	0.450	0.475	0.500
Indiv Disability - Other IDI	0.200	0.225	0.240	0.250
Indiv Long Term Care	0.250	0.400	0.500	0.525
Indiv Dread Disease	0.225	0.342	0.387	0.402
Group Hosp Maj Med	0.142	0.215	0.242	0.250
Group Hosp Indem ADD	0.193	0.295	0.334	0.346
Group FEHBP	0.040	0.050	0.055	0.057
Group Dental	0.154	0.232	0.262	0.271
Group Vision	0.135	0.204	0.230	0.238
Group Disability - LTD	0.150	0.200	0.225	0.250
Group Disability - STD	0.211	0.321	0.364	0.378
Group Long Term Care	0.200	0.300	0.400	0.450
Group Dread Disease	0.191	0.290	0.328	0.341
Group Stop Loss and Min Prem	0.154	0.232	0.263	0.272
Group Lim Benefit	0.195	0.296	0.335	0.347
Group Student	0.150	0.226	0.255	0.264
Credit	0.222	0.340	0.386	0.401
Group Prem Equiv ASO Stop Loss	0.020	0.030	0.035	0.037
Workers' Comp Carve Out Prem	0.270	0.409	0.464	0.483
All Other (Group&Indiv)	0.225	0.344	0.391	0.405

Size Category: Medium

	Confidence Level			
	95	99	99.5	99.6
Indiv Hosp Maj Med	0.184	0.278	0.315	0.326
Indiv Hosp Indem ADD	0.171	0.259	0.294	0.304
Indiv Medicare Supp	0.121	0.182	0.205	0.212
Indiv Medicare Adv plus Choice	0.139	0.210	0.237	0.246
Indiv Medicaid	0.197	0.299	0.339	0.351
Indiv Medicare Part D	0.144	0.217	0.244	0.254
Indiv Medicare Part D Supp	0.162	0.245	0.277	0.286
Indiv Fee for Service	0.108	0.163	0.183	0.190
Indiv Disability - Non Can	0.400	0.450	0.475	0.500
Indiv Disability - Other IDI	0.200	0.225	0.240	0.250
Indiv Long Term Care	0.250	0.400	0.500	0.525
Indiv Dread Disease	0.205	0.311	0.352	0.365
Group Hosp Maj Med	0.099	0.148	0.167	0.172
Group Hosp Indem ADD	0.159	0.241	0.272	0.282
Group FEHBP	0.030	0.035	0.037	0.038
Group Dental	0.136	0.206	0.232	0.240
Group Vision	0.102	0.153	0.172	0.179
Group Disability - LTD	0.150	0.200	0.225	0.250
Group Disability - STD	0.175	0.264	0.299	0.310
Group Long Term Care	0.200	0.300	0.400	0.450
Group Dread Disease	0.155	0.235	0.265	0.275
Group Stop Loss and Min Prem	0.136	0.206	0.233	0.240
Group Lim Benefit	0.159	0.240	0.270	0.280
Group Student	0.123	0.186	0.210	0.216
Credit	0.187	0.284	0.321	0.333
Group Prem Equiv ASO Stop Loss	0.010	0.015	0.017	0.018
Workers' Comp Carve Out Prem	0.251	0.379	0.429	0.446
All Other (Group&Indiv)	0.207	0.315	0.358	0.370

Size Category: Large

	Confidence Level			
	95	99	99.5	99.6
Indiv Hosp Maj Med	0.147	0.221	0.250	0.258
Indiv Hosp Indem ADD	0.154	0.232	0.263	0.272
Indiv Medicare Supp	0.070	0.106	0.120	0.124
Indiv Medicare Adv plus Choice	0.088	0.132	0.149	0.155
Indiv Medicaid	0.179	0.270	0.306	0.317
Indiv Medicare Part D	0.126	0.190	0.213	0.222
Indiv Medicare Part D Supp	0.144	0.217	0.245	0.253
Indiv Fee for Service	0.074	0.111	0.125	0.130
Indiv Disability - Non Can	0.400	0.450	0.475	0.500
Indiv Disability - Other IDI	0.200	0.225	0.240	0.250
Indiv Long Term Care	0.250	0.400	0.500	0.525
Indiv Dread Disease	0.186	0.282	0.318	0.330
Group Hosp Maj Med	0.064	0.097	0.109	0.113
Group Hosp Indem ADD	0.142	0.214	0.242	0.251
Group FEHBP	0.025	0.028	0.029	0.029
Group Dental	0.119	0.180	0.203	0.210
Group Vision	0.085	0.128	0.144	0.150
Group Disability - LTD	0.150	0.200	0.225	0.250
Group Disability - STD	0.139	0.210	0.237	0.246
Group Long Term Care	0.200	0.300	0.400	0.450
Group Dread Disease	0.138	0.208	0.235	0.243
Group Stop Loss and Min Prem	0.119	0.180	0.203	0.210
Group Lim Benefit	0.141	0.212	0.239	0.248
Group Student	0.106	0.159	0.180	0.186
Credit	0.169	0.256	0.290	0.301
Group Prem Equiv ASO Stop Loss	0.005	0.008	0.009	0.009
Workers' Comp Carve Out Prem	0.232	0.349	0.394	0.410
All Other (Group&Indiv)	0.189	0.287	0.325	0.337

Appendix 4: Baseline Reserve Risk Factors

Typical Reserve Risk Capital Factors

Size Category: Very Small

	Confidence Level			
	95	99	99.5	99.6
Group A&H	0.281	0.430	0.489	0.507
Credit A&H	0.257	0.392	0.446	0.462
Collectively Renewable	0.332	0.515	0.589	0.613
Non-Cancellable	0.247	0.372	0.421	0.435
Guaranteed Renewable	0.308	0.472	0.537	0.559
Non-Renewable	0.304	0.467	0.532	0.553
Other Accident	0.365	0.570	0.653	0.679
All Other	0.362	0.563	0.644	0.671
Workers Comp Carve-Out Liability	0.292	0.444	0.504	0.522
Comprehensive	0.232	0.351	0.398	0.414
Medicare Supplement	0.201	0.301	0.339	0.353
Dental	0.220	0.332	0.374	0.388
Vision	0.204	0.308	0.347	0.359
Fed Employees	0.009	0.011	0.012	0.012
Title XVIII Medicare	0.229	0.348	0.394	0.408
Title XIX Medicaid	0.213	0.321	0.363	0.377
Other Health	0.342	0.530	0.605	0.630

Size Category: Small

	Confidence Level			
	95	99	99.5	99.6
Group A&H	0.228	0.342	0.388	0.401
Credit A&H	0.240	0.363	0.413	0.427
Collectively Renewable	0.259	0.393	0.448	0.465
Non-Cancellable	0.190	0.283	0.319	0.329
Guaranteed Renewable	0.252	0.381	0.431	0.448
Non-Renewable	0.267	0.406	0.462	0.479
Other Accident	0.308	0.472	0.538	0.558
All Other	0.305	0.467	0.531	0.552
Workers Comp Carve-Out Liability	0.244	0.366	0.414	0.429
Comprehensive	0.182	0.272	0.307	0.318
Medicare Supplement	0.175	0.262	0.295	0.306
Dental	0.186	0.278	0.313	0.324
Vision	0.172	0.254	0.286	0.296
Fed Employees	0.007	0.008	0.009	0.009
Title XVIII Medicare	0.180	0.269	0.304	0.314
Title XIX Medicaid	0.189	0.282	0.319	0.330
Other Health	0.305	0.467	0.531	0.552

Size Category: Medium

	Confidence Level			
	95	99	99.5	99.6
Group A&H	0.175	0.261	0.294	0.304
Credit A&H	0.205	0.308	0.349	0.362
Collectively Renewable	0.206	0.309	0.351	0.363
Non-Cancellable	0.154	0.227	0.255	0.263
Guaranteed Renewable	0.198	0.295	0.333	0.345
Non-Renewable	0.230	0.347	0.393	0.409
Other Accident	0.252	0.381	0.432	0.447
All Other	0.267	0.406	0.461	0.478
Workers Comp Carve-Out Liability	0.223	0.334	0.377	0.390
Comprehensive	0.150	0.222	0.250	0.258
Medicare Supplement	0.160	0.237	0.266	0.276
Dental	0.153	0.227	0.254	0.263
Vision	0.139	0.204	0.228	0.236
Fed Employees	0.006	0.007	0.008	0.008
Title XVIII Medicare	0.165	0.244	0.276	0.284
Title XIX Medicaid	0.173	0.256	0.290	0.300
Other Health	0.249	0.377	0.426	0.442

Size Category: Large

	Confidence Level			
	95	99	99.5	99.6
Group A&H	0.125	0.184	0.206	0.213
Credit A&H	0.189	0.281	0.318	0.329
Collectively Renewable	0.156	0.231	0.260	0.269
Non-Cancellable	0.118	0.173	0.193	0.200
Guarenteed Renewable	0.146	0.214	0.241	0.250
Non-Renewable	0.196	0.292	0.330	0.341
Other Accident	0.198	0.295	0.333	0.344
All Other	0.213	0.319	0.361	0.374
Workers Comp Carve-Out Liability	0.207	0.308	0.347	0.359
Comprehensive	0.134	0.198	0.222	0.230
Medicare Supplement	0.144	0.212	0.238	0.247
Dental	0.137	0.202	0.227	0.234
Vision	0.106	0.155	0.174	0.179
Fed Employees	0.004	0.006	0.007	0.007
Title XVIII Medicare	0.148	0.220	0.248	0.255
Title XIX Medicaid	0.156	0.232	0.261	0.270
Other Health	0.196	0.292	0.329	0.341

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