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

The objective of A.M. Best's financial strength ratings is to provide an opinion of an insurer's financial strength and ability to meet its ongoing obligations to policyholders. The assignment of an interactive rating is derived from an in-depth evaluation of a company's balance sheet strength, operating performance and business profile, as compared with A.M. Best's quantitative and qualitative standards. A.M. Best's life/health BCAR model is designed to capture major life and health insurance risks of U.S. and Canadian life/health (L/H) companies and quantifies the level of capital needed to support them.

Balance Sheet Strength

In determining a company's ability to meet its current and ongoing obligations to policyholders, the most important area to evaluate is its balance sheet strength, since it is the foundation for policyholder security. Performance then determines how that balance sheet strength will be enhanced, maintained or eroded over time. Balance sheet strength measures the exposure of a company's surplus to its operating and financial practices. A.M. Best's analysis also encompasses a thorough review, using various financial tests and ratios, of historical trends over a five-year period of a company's:

- Reported capital and surplus, including a comparison of the growth rate of statutory capital to the growth rate in assets and net premiums written;
- Exposure to various types of leverage, such as operating leverage (net premiums written to capital or capital to liabilities), financial leverage (debt and debt-like instruments to capital) and reinsurance leverage (reserves ceded to capital);
- Historical sources of growth in capital, such as operating gains, capital gains, capital contributions, etc.; and
- Quality and diversity of invested assets through a review of trends in asset allocations, exposure to higher-risk assets, and asset concentrations by class, issuer and industry.

Structural Overview – Best's Capital Adequacy Ratio

$$BCAR = \frac{\text{Adjusted Surplus}}{\text{Net Required Capital}}$$

Adjusted Surplus Components

Reported Surplus

Equity Adjustments
- Asset Valuation Reserves
- Unearned Premiums
- Dividends Payable

Debt Adjustments
- Surplus Notes

Other Adjustments
- Operating Losses
- IMR Amort.Following Year
- Off-Balance Sheet Derivatives
- Negative Reserves (Canada Only)

Net Required Capital (NRC) Components

(C-1-Non Eq)	Fixed Income Securities
(C-1-Eq)	Equity Securities
(C-2)	Mortality/Morbidity
(C-3-Int)	Interest Rate
(C-3-Mkt)	VA Market
(C-4)	Business

Covariance

$$NRC = \sqrt{(C\text{-}1\text{-}Non\ Eq + C\text{-}3\text{-}Int)^2 + (C\text{-}1\text{-}Eq + C\text{-}3\text{-}Mkt)^2 + (C\text{-}2)^2} + C\text{-}4$$

Analytical Contact
George Hansen
+1 (908) 439-2200 Ext. 5469
George.Hansen@ambest.com

Stephen Irwin
+1 (908) 439-2200 Ext. 5454
Stephen. Irwin@ambest.com

Steve Vincent
+1 (908) 439-2200 Ext. 5802
Steve.Vincent@ambest.com

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A.M. Best's assessment of balance sheet strength also includes an analysis of an organization's balance sheet under GAAP at both the operating insurance company and holding company levels.

The holding company analysis includes an assessment of the organization's consolidated capital structure, financial leverage, fixed-charge coverage (ratio of earnings or cash in relation to fixed charges, such as interest on debt) and other key ratios.

A.M. Best notes that although BCAR is an extremely useful tool in evaluating a company's balance sheet strength, it is only one component of that analysis. Although it is a valuable tool in the rating process, it is not the sole determinant of a rating assignment. In addition, balance sheet strength is only one component of the overall rating, which also includes operating performance and business profile. BCAR establishes a guideline to support a rating, but other factors driving expectations of future balance sheet strength drive the rating as well. All of these factors are important to the overall rating process.

Overview of BCAR

A.M. Best's life/health BCAR model computes required capital to support four broad risk categories: asset risk, insurance/underwriting risk, interest-rate/VA market risk and business risk. The BCAR model also contains an adjustment for covariance, reflecting the assumed statistical independence (mutually exclusive nature) of the individual components. A company's adjusted surplus is divided by its net required (risk-based) capital, after the covariance adjustment, to determine its BCAR score.

Structural Overview:

The BCAR ratio is one measure of a company's capital position and an integral component of an ongoing concern's rating. The BCAR model allows flexibility as an interactive tool; analysts can use discretion in making adjustments to the model based on their knowledge of the company. Such adjustments within A.M. Best's capital model provide a more economic and comparable basis for evaluating capital adequacy. 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. In addition, A.M. Best analysts may supplement their initial assessment of a company's baseline capital position by performing various sensitivity calculations. These analyses might incorporate the capital required to support future business plans; reflect the impact of pro forma transactions on the current capital position; or reflect changes in the business mix or investment portfolio. These sensitivity calculations help quantify the extent of the capital cushion or shortfall relative to a company's current rating level. The ability of the model to respond to these market issues makes it a robust tool that assists in the evaluation of the company's balance sheet strength.

Over time, A.M. Best will modify the BCAR model to enhance its accuracy in measuring balance sheet strength and operating risk. A.M. Best will continue to closely monitor industry experience, product trends and regulatory changes impacting the level of capital required to support life and health insurance company operations.

Integration of BCAR In the Rating Process

BCAR is an important quantitative tool that allows A.M. Best to differentiate the financial strength of companies and determine whether a company's capitalization is appropriate for its rating. However, BCAR is not the sole basis for determining a company's rating. In many cases, companies with similar risk-adjusted capital positions may be assigned different ratings based on the integration of other important considerations unique to each insurance company, such as operating performance and business profile.

In addition, the quality of capital may differentiate one rating from another, even though companies may have similar BCAR scores. Many soft capital transactions, for example, are admitted as surplus under statutory accounting rules but ultimately drain cash, place a drag on earnings or only provide contingent capital, thereby compromising policyholder security and negatively impacting financial strength.

Availability of BCAR Output

Because of the sensitive nature of the underlying adjustments and qualitative information incorporated in a company's BCAR calculation, detailed BCAR output for a particular company is made available only to that company's management. Often, a discussion of A.M. Best's capital model is included in rating meetings. Upon a rated entity's request, A.M. Best's analysts generally are available to run a limited number of scenarios to aid management in understanding the impact of their decisions on their BCAR and ultimately on A.M. Best's view of capital strength.

Technical Review of the BCAR Formula

A.M. Best's BCAR analysis can be performed on a rating unit or stand-alone basis as well as throughout various levels of insurance groups. In each risk category, capital charges are applied to key risks, then adjusted by a covariance formula to produce the required capital for these key risks. The BCAR result is the Adjusted Capital divided by the Required Capital. Companies deemed to have "adequate" balance sheet strength normally generate a BCAR score exceeding 110% and usually will carry a "B+" or better Financial Strength Rating.

Where detailed information is not readily available, A.M. Best will request the information directly from the company. For example, itemization by credit rating or National Association of Insurance Commissioners (NAIC) class for certain assets may not be available in the annual statements. A.M. Best's Supplemental Rating Questionnaire (SRQ) is used to collect more detailed information for inclusion in the BCAR model.

Treatment of Key Risk Components

C-1: Asset Risk

Capital charges are applied to asset classes based on the risk of default, illiquidity and market value declines. A.M. Best does not assign asset classes but uses those reported on the statutory statements as assigned by the NAIC's Capital Markets & Investment Analysis Office for U.S. life and health companies. For Canadian companies, A.M. Best relies on credit ratings assigned to assets.

Life/Health BCAR Guidelines

BCAR	Implied Balance Sheet Strength
175%	A++
160%	A+
145%	A
130%	A-
120%	B++
110%	B+
100%	B
90%	B-
80%	C++
70%	C+
60%	C
50%	C-
<50%	D

Source: A.M. Best

Base Default Risk. Within the C-1 section, a company's investment portfolio is segregated by asset class. The major asset classes are bonds (short-term and long-term), preferred stock, common stock, mortgage loans, real estate and other invested assets. The model is updated as new asset categories emerge within the regulatory environment. Within each asset class, further distinctions reflect the varying levels of credit quality, liquidity and volatility within a particular class of assets. A.M. Best's risk factors were developed after reviewing industry default statistics and proprietary empirical data. Risk charges vary by the designated NAIC 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.

Exhibit 1
C-1 Asset Risks – Asset Categories Subject to Spread-of-Risk Factor

	Base RBC Factor	Other RBC Factor
BONDS (Including Short-Term): United States[1]		
AVR Exempt Obligations	0.0010	0.0015
NAIC Class 1	0.0080	0.0120
NAIC Class 2	0.0250	0.0375
NAIC Class 3	0.0600	0.0900
NAIC Class 4	0.1200	0.1800
NAIC Class 5	0.2500	0.3750
NAIC Class 6	0.3000	0.4500
Affiliated Bonds (additional risk charge)	0.2500	
PREFERRED STOCK:		
NAIC Class 1	0.0080	0.0120
NAIC Class 2	0.0250	0.0375
NAIC Class 3	0.0600	0.0900
NAIC Class 4	0.1200	0.1800
NAIC Class 5	0.2500	0.3750
NAIC Class 6	0.3000	0.4500
MORTGAGE LOANS		
Residential – Insured/Guaranteed	0.0030	0.0060
Residential – All Other (Non-Guaranteed)	0.0050	0.0360
Farm	0.0300	0.0600
Commercial – Insured/Guaranteed	0.0050	0.0600
Commercial – All Other (Non-Guaranteed)[2]	0.0500	0.2400
Restructured	0.0200	n/a
Other Unaffiliated	n/a	0.2400
60 Days Overdue	0.1500	n/a
Interest Due & Unpaid: 60 Days Overdue	1.0000	n/a
Taxes Due: 60 Days Overdue	1.0000	n/a
In Process of Foreclosure	0.2000	n/a
Interest Due & Unpaid: In Process of Foreclosure.	1.0000	n/a
Taxes Due: In Process of Foreclosure	1.0000	n/a
OTHER ASSETS		
Cash (Balance)	0.0015	n/a
Short-Term Investments – Excluding Bonds	0.0030	n/a
Premium Notes (Net Admitted)	0.1000	n/a

1. Canada Categories:
   Government Obligations
   Highest Quality – AAA to A-
   High Quality – BBB+ to BBB-
   Medium Quality – BB+ to BB-
   Low Quality – B+ to B-
   Lowest Quality – CCC+ to C
   In or Near Default – D or Below
   Affiliated
2. Subject to mortgage quality factor.

Source: A.M. Best

Default risk charges applicable to unaffiliated preferred stock are the same as those applicable to bonds. This calculation assumes that investors expect preferred stock to perform like fixed-income securities with fairly stable valuations, and that the credit ratings will reflect the relative subordination within an issuer's capital structure.

Default risk factors applied to amounts reported as having similar characteristics to bonds and unaffiliated preferred stock, but not reported in standard fixed income schedules (i.e., Schedule D for U.S. companies), are 50% higher, assuming that these assets may be less liquid and have more price volatility than typical fixed-income assets.

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

Mortgage Loans. Risk charges applied to 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. 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.

Mortgage Quality Factor. To reflect factors specific to an insurer's mortgage loan portfolio, A.M. Best's BCAR model adjusts the risk charges applicable to commercial mortgage loans using a weighted average of diversification and performance components. Diversification is determined by the type of mortgage as well as the geographical distribution of mortgages. Performance components include mortgages overdue, restructured or foreclosed, loan-to-market values, debt-service coverage and tracking of the current outstanding balance relative to the original issue balance. A.M. Best reviews current market conditions to determine weightings used in calculating a company's mortgage quality factor.

Cash and Short-Term Investments. Modest risk charges are applied to cash balances, reflecting the risk of insolvency of the banking institution. Slightly higher risk charges are applied to other assets expected to mature within one year.

Unaffiliated Common Stock. Risk charges applied to common stock reflect A.M. Best's view that life insurers have a longer term, buy-and-hold view compared with other insurers, which may have a shorter time horizon. Stock-market volatility with respect to unrealized gains and losses warrants higher capital charges when compared with other assets. Common stock holdings may include investments in Federal Home Loan Bank (FHLB) stock. FHLB holdings are shown as a separate component within unaffiliated common stock. FHLB stock exhibits characteristics similar to bonds, and there is government backing. FHLB stock is treated as having characteristics similar to medium- to high-quality bonds.

In addition to the base risk charges mentioned above, certain asset classes are subject to specific treatment in the BCAR model as explained below.

Treatment of Affiliated Investments. Charges on affiliated investments in bonds and stocks account for potential diminished liquidity and possible double leverage in the organization. Affiliated asset risk charges may be subject to adjustment based on the liquidity of the investment, for example if the investment is traded on a stock exchange and has a supportable market value. Independent, external valuations are reviewed by analysts to determine appropriate risk charges for affiliated, non-insurance, fixed-income or equity holdings.

If the company owns a large proportion of a publicly traded affiliate, regulatory or shareholder approval may be necessary before a sale, making it less liquid. Additionally, the sale of an affiliated investment in a stress situation could give the buyer leverage during the price negotiation, which may result in a realized value less than the reported value. The lower liquidity of these assets results in risk that resembles that of a privately held subsidiary.

Exhibit 2
C-1 Asset Risks – Asset Categories Exempt From Spread-of-Risk Factor

	RBC Factor[1]
PREFERRED STOCK	
Affiliated	1.000
COMMON STOCK	
Unaffiliated	0.300
Federal Home Loan Bank	0.050
Affiliated	1.000
REAL ESTATE	
Occupied by Company – Including Encumbrances	0.100
Held for Production of Income – Including Encumbrances	0.150
Held for Sale – Including Encumbrances	0.150
OTHER INVESTED ASSETS	
Common Stock:Unaffiliated	0.360
Common Stock: Affiliated	1.000
Total Real Estate: Schedule BA	0.240
Guaranteed Low-Income Housing Tax Credits	0.006
Non-guaranteed Low-Income Housing Tax Credits	0.060
Collateral Loans: Schedule BA	1.000
Other Invested Assets: Schedule BA	1.000
Other Invested Assets: Schedule DA All Other	1.000
REINSURANCE	
Recoverable-Paid Losses[2]	0.008
Recoverable-Unpaid Loss[2]	0.008
Unearned Premium Reserve Ceded[2]	0.008
Accident & Health Reserve Ceded[2]	0.008
Life & Annuity Reserve Ceded[2]	0.008
Reinsurance in Unauthorized Companies	-0.005
Funds Held With Unauthorized Reinsurers	-0.005
DERIVATIVES – Potential Exposure	
Exchange-Traded	0.002
Class 1 Category	0.016
Derivative FV Collateral	0.016
Class 2 Category	0.050
Class 3 Category	0.120
Class 4 Category	0.240
Class 5 Category	0.500
Class 6 Category	0.750
High-Risk Collateralized Mortgage Obligations	0.150
OTHER ASSETS – Miscellaneous	
Derivatives Not Included Above	0.100
Aggregate Write-Ins Invested Assets	0.100
Receivables-Uninsured Plans	0.050
EDP Equipment and Software	0.100
Furniture & Equipment	0.100
Health Care Receivables	0.050
Corporate-Owned Life Insurance – Write-In Asset	0.008
Aggregate Write-Ins Other Than Invested Assets (excl. COLI)	0.100

1. Risk charges applicable to similar assets held in separate accounts.
2. May be subject to reinsurance dependence factor.

The initial risk charge for non-insurance affiliates is the statutory carrying value, i.e., a 100% capital charge. A.M. Best assumes the net asset value of the affiliate is needed to support its own operations and is not available to support the insurance operations. Risk charges may be subject to adjustment pending analysts' review.

For property/casualty (P/C) affiliates, the net required P/C BCAR capital is added to the parent company's required capital in the L/H BCAR model.

Spread-of-Risk Factor. The asset risk assessed for each insurer also is subject to a spread-of-risk (SOR) factor, based on the relative size of the investable portfolio. The spread of risk is a sliding-scale factor that is applied to the aggregate, nonaffiliated investments in bonds, preferred stock, mortgages, cash and short-term investments. The asset portfolio is adjusted to reflect the impact of funds withheld and/or MODCO reinsurance arrangements. Assets assumed under these arrangements will increase the base used in determining the factor, while assets ceded will decrease the asset base. This approach coincides with the assumption of the transfer of risks in the underlying reinsurance treaties. Asset classes with higher risk charges (common stock, real estate and assets reported in Schedule BA) are excluded from the SOR, as their original risk charges sufficiently cover the risks inherent in these assets.

The SOR factor decreases as the portfolio of qualifying assets increases, reflecting the ability of a larger organization to diversify its risk across a broader range of issuers and asset classes. By applying the SOR factor to this pool of qualifying assets, A.M. Best recognizes the benefits of dispersing risk across all major asset classes. The SOR factor in the BCAR model is calculated for each entity based on its asset size, as well as for each group/rating unit or other composite based on the aggregate asset size. Companies that are members of groups with common investment management may receive the benefit of a lower SOR factor based on aggregate assets of the group, at the discretion of the analysts.

Concentration Risk. A.M. Best's BCAR model applies increased risk factors to investments that exceed 10% of the company's reported capital and surplus including the asset valuation reserve (AVR). The additional charge is assessed only on that portion of the investment exceeding the 10% limit. Risk charges may also be subject to additional adjustment based on concentration, pending analyst's review.

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 will not be included in the invested asset total used to determine SOR factors, and the SOR factor will not be applied to these risk charges.

Other Invested Assets. Other assets with characteristics of common stock are assessed risk charges that are higher than the baseline common stock charge to reflect the fact that these investments may be more difficult to value and may have lower liquidity since they are not traded on a known exchange. Higher risk charges also are applied to other real estate assets for similar reasons (valuation and liquidity). All other invested assets reported in Schedules BA and DA of the NAIC Annual Statement are reviewed by the analyst to determine the proper risk charge to apply to these assets. As other asset classes emerge, A.M. Best's BCAR model will reflect these classes along with appropriate risk charges. Various types of tax-favored assets related to low-income housing, for example, have been added to insurance companies' portfolios in recent years. The BCAR model assesses higher risk charges to those assets that are non-guaranteed versus those that have guarantees.

Reinsurance Risk Charges. The BCAR model assesses risk charges to reinsurance amounts recoverable and to reserves ceded to reflect the credit risk of specific reinsurers. Risk charges are applicable only to those amounts related to unaffiliated companies. The life reinsurance market is dominated by mostly highly rated companies, and as such, the average credit quality of reinsurers is assumed to approximate that of Class 1 bonds. Lower

credits against such risks are given to amounts ceded to unauthorized reinsurers when the direct writer retains assets, as in funds-withheld or MODCO arrangements. The credit is subject to adjustment by the analyst following a review of the company's largest exposures to unauthorized reinsurers. A.M. Best requests additional information in its Supplemental Rating Questionnaire (SRQ) to aid analysts in assessing concentration risk and counterparty risk for a company's largest exposures.

A.M. Best is concerned with companies that may be overly dependent on reinsurance. The BCAR captures reinsurance dependency using a reinsurance leverage ratio, defined as the 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 for reinsurance leverage ratios in excess of 900%.

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. Risk charges applied are higher than for typical fixed-income assets because of the 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.

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. Corporate-owned life insurance (COLI) policies typically reported as write-in invested assets, for example, are subject to risk charges of 0.8%, reflecting the higher quality of insurance carriers that sell these products. Higher charges may be applied depending on the credit quality of the counterparties involved. A 5% risk charge is applied to reinsurance and health-care receivables, as well as to admitted portions of furniture, equipment and EDP assets.

C-2: 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 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. Federal Employees' and Servicemembers' Group Life Insurance (FEGLI/SGLI) risk charges are assessed based on the lowest risk charge for group life business, reflecting the high volume of business and its concentration in a few large carriers.

A.M. Best capital charges for morbidity risks are determined by a detailed evaluation of the risks of different accident-and-health business lines, premium inflation and the quality of reserves. The risk profiles of certain individual and group health lines are substantially different, with the individual lines generally bearing higher risk. Risk charges are applied to net earned premiums, reflecting the benefits of scale for certain lines of business. For U.S. health lines of business, company-specific claims experience is utilized for the risk exposures of hospital and major medical, Medicare (including Medicare+Choice, Medicare Supplement and Medicare Part D), Medicaid and dental lines of business. Claims experience

Exhibit 3
C-2 – Mortality/Morbidity Risk

	RBC Formula/Factor*
MORTALITY (United States & Canada)	
Industrial Life In-Force (Less) Indust. Life Reserve= Industrial Life Net Amount at Risk	0.0015 for 1st 500m, 0.0010 next 4500m, 0.00075 next 20000m, 0.0006 over 25000m
Ordinary Life In-Force (Less) Ord. Life Reserve (Less) Ord. Variable Life Reserve= Ordinary Life Net Amount at Risk	0.0015 for 1st 500m, 0.0010 next 4500m, 0.00075 next 20000m, 0.0006 over 25000m
Credit Life In-Force (Less) Credit Life Reserve= Credit Life Net Amount at Risk	0.0012 for 1st 500m, 0.0008 next 4500m, 0.0006 next 20000m, 0.0005 over 25000m
Group Life In-Force (Less) FEGLI/SEGLI In-Force (Less) Group Life Reserve (Less) Group Variable Life Reserve= Group Life Net Amount at Risk	0.0012 for 1st 500m, 0.0008 next 4500m, 0.0006 next 20000m, 0.0005 over 25000m
FEGLI/SEGLI In-Force	0.0005
*Mortality risk charges calculated net of reinsurance	
MORBIDITY (United States)	
Individual Accident & Health:	
Hospital & Major Medical**	0.25 for 1st 50m 0.15 thereafter
Hospital Indemnity/Accidental Death & Dismemberment	0.08
Medicare Supplement**	0.12 for 1st 50m 0.07 thereafter
Medicare Choice**	0.20 for 1st 75m 0.125 thereafter
Medicaid**	0.20 for 1st 50m 0.125 thereafter
Medicare Part D**	0.11 for 1st 50m 0.07 thereafter
Medicare Part D Supplemental Benefits	0.35
Fee-for-Service	0.01
Disability – Non Cancellable	0.45 for 1st 50m 0.20 thereafter
Disability – Other	0.30 for 1st 50m 0.10 thereafter
Long-Term Care	0.30 for 1st 50m 0.18 thereafter
Dread Disease	0.12
Group Accident & Health:	
Hospital & Major Medical**	0.15 for 1st 75m 0.09 thereafter
Hospital Indemnity/Accidental Death & Dismemberment	0.08
Federal Employee Health Benefit Plans	0.05
Dental**	0.12 for 1st 25m 0.076 thereafter
Vision	0.10 for 1st 25m 0.06 thereafter
Disability – Long-term	0.20 for 1st 50m 0.05 thereafter
Disability – Short-term	0.07 for 1st 50m 0.05 thereafter
Long-Term Care	0.25 for 1st 50m 0.15 thereafter
Dread Disease	0.12
Stop Loss & Minimum Premium	0.30 for 1st 100m 0.25 thereafter
Limited Benefit	0.15
Student	0.10
**Risk charges adjusted for claims experience	
Credit:	
Credit Accident & Health	0.12
Other:	
Premium Equivalent – Administrative Services Only/Stop Loss	0.005
Workers' Compensation Carve-Out Liability	0.386
Other Claim Liability	0.050
Workers' Compensation Carve-Out Premium	0.400
Other Premiums Not Allocated	0.300 for 1st 50m 0.180 thereafter

Note: Managed Care Credit adjusted for provider contract arrangements may apply (Health companies only).

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may result in risk charges of between 80% and 120% of the baseline risk charges for these lines of business. A.M. Best continues to monitor claims experience for all health insurance lines of business. In addition, the range of net risk charges may be modified based on future claims experience.

Other Risks. Morbidity risk charges also apply to administrative service premium equivalents. Although little morbidity risk generally is associated with premium equivalents, these charges reflect A.M. Best's view of the capital needed to support the significant investment required in technology and systems for this administrative fee-based business. The BCAR model also applies risk charges for workers' compensation carve- out premiums and reserves.

Claim Liabilities. Claim reserve levels on accident and health (A&H) products also are given considerable attention as another exposure on the balance sheet. Risk charges are established to cover the possibility of negative reserve development due to adverse claims experience. In addition, A.M. Best reviews historical reserve development and current reserve margins above any third-party estimate. A.M. Best also evaluates a company's policy for the desired level of margin and premium-stabilization funds and whether these percentages are maintained consistently.

Credit Charge for Provider Contract Arrangements. This charge reflects the risk a managed care organization (MCO) faces when making capitation payments to providers and intermediaries that don't provide the insured member with the agreed-upon services. Additionally, in this case, the (MCO)

might incur additional, unforeseen costs in arranging for alternative services coverage for its insured.

Managed Care Credit. 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. In the case of capitation arrangements backed by letters of credit or funds-withheld treaties, analysts will review such arrangements to determine any credit-risk reductions.

Exhibit 3

C-2 – Mortality/Morbidity Risk *(continued)*

	RBC Formula/Factor
MORBIDITY (Canada)	
Individual Accident & Sickness:	
All Noncancellable A&H	0.55 for 1st 50m 0.25 thereafter
Accidental Death & Dismemberment	0.08
Medical	0.12
Dental	0.12
Income Replacement Cancellable	0.15
Other	0.25 for 1st 25m 0.15 thereafter
Group Accident & Sickness:	
Medical	0.12
Accidental Death & Dismemberment	0.08
Dental	0.12
Income Replacement	0.15
Other	0.15 for 1st 50m 0.07 thereafter
Creditor Disability:	
Creditor Disability	0.12
Property/Casualty	0.50
Other:	
A&S Claim Reserves	0.05
A&S Claim Reserves (Life-1 less above amount)	0.05
Property/Casualty Reserves	0.40

Source: A.M. Best

C-3: Interest Rate/VA 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. Risk charges reflect 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 sold by U.S. companies.

Interest-Rate Risk. The C-3 interest risk charges are based on the level of reserves in both annuity and life insurance products. Risk charges on annuity reserves vary by withdrawal characteristics, surrender-charge expiration and the insurer's ability to make market-value adjustments to the crediting rates.

Each of these characteristics allows the insurer to better manage its investment portfolio relative to its liabilities, thereby limiting capital risks. The level of surrender charge protection is the primary factor in determining interest-rate risk 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.

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. With policyholders bearing most of the risk of variable annuities without secondary guarantees,

Exhibit 4
C-3 Interest/VA Market Risk
INTEREST RATE RISK

	RBC Factor
GENERAL ACCOUNT/SEPARATE (SEGREGATED) ACCOUNT ANNUITIES	
1. Not Subject to Discretionary Withdrawal:	
- General Account Individual Annuities Excluding Structured Settlements	0.0075
- Separate Account & Segregated Account Individual & Group Annuities	0.0075
- Structured Settlements	0.0175
- G/A Guaranteed Investment, Experience Rated & Index Group Pensions	0.0150
- All Other General Account Group	0.0150
- General Account Liabilities Maturing in 1 Year	0.0100
2. Subject to Discretionary Withdrawal With Market Value Adjustments:	
Individual and Group Annuities	
- Surrender Charges Expiring in 1 Year	0.0165
- Surrender Charges Expiring in 2 Years	0.0100
- Surrender Charges Expiring in 3 Years	0.0085
- Surrender Charges Expiring After 3 Years	0.0075
3. Subject to Discretionary Withdrawal With Surrender Charges > 1%:	
Individual and Group Annuities	
- Surrender Charges Expiring in 1 Year	0.0235
- Surrender Charges Expiring in 2 Years	0.0175
- Surrender Charges Expiring in 3 Years	0.0160
- Surrender Charges Expiring after 3 Years	0.0150
4. Subject to Discretionary Withdrawal With NO Surrender Charges:	
- Individual and Group Annuities	0.0300
LIFE INSURANCE RESERVES (Net of Policy Loans)	
Non-Interest-Sensitive Reserves	0.0050
Interest-Sensitive Reserves	0.0050

VA MARKET RISK:

C-3 PHASE 2 AMOUNT (From Supplemental Rating Questionnaire), PLUS, ADDITIONAL RBC - Margin applied to assets used in C-3 Phase 2 testing*

* Margin based on risk profile as determined by analysts. Current margins as follows:

Low Risk	10 basis points (.10%)
Medium Risk	25 basis points (.25%)
High Risk	50 basis points (.50%)

(Margins subject to change based on market conditions.)
Source: A.M. Best

the risks of variable annuity guaranteed death benefits and living benefits are assessed market risk charges. A.M. Best determines an asset-based margin to be added to each company's C-3 Phase II results. The margin depends on the risk profile of the block of business based on factors such as the level of benefits guaranteed, extreme tail risks, risk-mitigation techniques and fund mix. Extreme tail risk can be viewed by analysts through information requested in the SRQ. C-3 Phase II requires companies to hold capital using a conditional tail expectation (CTE) 90 metric (average of the worst 10% of scenarios). Through the SRQ, companies are requested to provide CTE 98 (average of the worst 2% of scenarios) results to provide analysts a better view of extreme tail risks. A.M. Best assesses an additional asset-based charge of 0.10% to low-risk companies, 0.25% to medium-risk companies and 0.50% to high-risk companies. The risk profile is determined by the analysts for each company. In addition to tail risk, equity-market volatility, interest rates and hedge effectiveness are considerations for assessing the overall risk profile of a variable annuity book of business.

C-4: Business Risk
The C-4 charges represent the numerous general business risks of a life and health insurance company, including risks posed by the legal, regulatory and competitive environments. The C-4 charges recognize the other general business risks by charges assessed on life and annuity premiums, net of variable annuity premiums. A.M. Best has employed this approach because policyholders bear most of the risk for variable products without secondary guarantees. Risks of variable annuity guaranteed death benefits and living benefits borne by the insurance companies are accounted for in the C-3 section of the BCAR model via the C-3 Phase II requirements. Risk charges also are assessed on A&H and health maintenance organization (HMO) premiums.

Exhibit 5
C-4 – Business Risk

Component	RBC Factor
Life & Annuity Premiums/Deposits (Net of Variable Premiums)	0.0200
Accident & Health Premiums	0.0075
Noncontrolled Assets	0.0050
Contingent Commitments	0.0150
Separate/Segregated Account Assets	0.0020
Unfunded Pension Plan Obligations	1.0000
Unfunded Other Post-Employment Benefit Obligations	1.0000

Source: A.M. Best

The C-4 section includes charges for off-balance-sheet items whereby the insurer

does not retain control of assets. These generally are 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 0.50%, subject to analyst review.

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 joint ventures, partnerships or limited liability companies. Risk charges applicable to contingent commitments will be 1.50%.

Separate/(Segregated) Accounts. With market risks associated with variable annuity guarantees accounted for in the C-3 section, the risk charge applicable to separate-account assets is a flat 0.2%. This charge accounts for the business risks associated with separate accounts because of the increased complexity of products offered,ongoing suitability issues and 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 amount can be reduced for any liabilities already shown on the company's balance sheet that are designated for the unfunded portion of these obligations. The amount of an unfunded obligation may also be reduced to reflect the company's planned annual reduction of the remaining unfunded obligations. For those companies whose unfunded obligations reside at an affiliated company, the company's share of the unfunded obligation will not be factored directly into the company's BCAR analysis, but will be factored into the rating discussion.

Required Capital

Covariance. The covariance formula used in the BCAR calculation reflects the independence of risks associated with fixed-income assets and liabilities,and risks associated with equities and variable liabilities. To reflect insurers' risk profiles,fixed-income C-1 asset-risk charges are correlated with C-3 interest-rate risks,and C-1 equity-type risk charges are correlated with C-3 market risks.

Adjusted Capital and Surplus

In the calculation of a company's BCAR score, the aggregate required capital (after applying the covariance adjustment) is compared with adjusted capital and surplus. Reported capital and surplus plus the asset-valuation reserve and other conditional reserves are the starting point for adjusted capital and surplus. This starting point then is 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 dividends scheduled to be paid in the following year.

The BCAR model emphasizes the permanent capital of an organization and will reduce 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. Within the Canadian capital model, goodwill and other intangible assets are eliminated from capital and surplus.

Exhibit 6

Adjusted Capital & Surplus

	RBC Factor
Stmt. Capital & Surplus	1.00
AVR	1.00
Unearned Premium Reserve	0.10
Dividend Payable	0.50
Negative Reserves (Canada Only)	1.00
Operating Losses	1.00
IMR: Following Year Amortization	1.00
Surplus Notes	0.90/0.95*
Derivatives-Off Bal.Sheet Risk	0.10

* Maximum credit allowed (see page 12)
Source: A.M. Best

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. Given the cyclical nature of certain lines of business, however, 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, 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. It also should be noted that 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. A.M. Best's 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.

Surplus Notes. The BCAR model initially deducts all surplus notes 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 will be allowed for the period up to five years prior to the notes' stated maturity. Equity credit thereafter will be 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, thus warranting reduced equity credit.

Derivatives. A.M. Best's 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.

Stress Tests. With dramatic changes in market conditions impacting what were considered stable fixed-income assets, substantial unrealized losses due to widening credit spreads and other factors impacting credit quality have affected insurers' balance sheets. A.M. Best's BCAR model reflects various stress tests measuring the impact of unrealized losses on an after-tax basis should they become realized losses. One such stress test assumes that unrealized losses are capped at 15% of capital and surplus.

Another stress test looks at BCAR levels assuming 15% of such unrealized losses will become realized, if such amount exceeds 15% of capital and surplus. As an extreme stress test, the entire loss is assumed to become realized. The stress tests will be used only for internal analysis and will not impact the final published BCAR score. Information for the stress tests is based on fair values shown for bonds and preferred stocks in the annual statement. The values reported are net of any unrealized gain positions in those portfolios. No credit is given, however, to aggregate gains reported from the interrogatory. Analysts' discussions with companies include potential cash flows and liquidity in the event extreme losses become realized.

The BCAR model contains two additional stress tests related to C-1 asset risks. The first stress applies higher charges to Class 1 and 2 bonds, as well as higher charges to commercial mortgages. Class 1 bonds in effect are charged 1% (vs. 0.8%), Class 2 bonds are charged 3% (vs. 2.5%), and mortgages are charged 6% (vs. 5%). This test is being performed as the NAIC has undergone a process that re-rates securities. Under these methods, several assets in lower rating classes may be re-rated as Class 1 or 2 assets. The stress reflects the"dilutive" impact of the re-rated assets and the fact that the NAIC methods may change. Commercial mortgages are stressed when increased delinquencies emerge in the market.

The second stress test treats non-agency residential mortgage-backed securities (RMBS) rated Class 1-4 as other bonds, which receive a 50% higher risk charge. These securities were re-

rated based on third-party pricing criteria. The higher charges reflect the fact that under the new valuation process, the values will be more volatile because of changes in assumptions and the fact that RMBS assets remain less liquid in today's market conditions.

Other. Analysts may consider making other adjustments to reflect financial accounting distortions or qualitative issues that might affect a particular company's prospective capital needs. This flexibility is necessary to meet A.M. Best's objective of providing a relative assessment of capitalization and financial strength as part of a comprehensive rating analysis.

Special-Purpose Life Insurance Captive BCAR Treatment

As more states allow the establishment of captives, life insurers continue to set up special-purpose captives. Initially, captives were used predominantly to fund redundant reserves associated with Regulation XXX (and AXXX), thus supporting increased levels of sales of term and universal life (UL) products with secondary guarantees. While such transactions continue, A.M. Best notes that captives have been established for other purposes, including the transfer of volatile reserves required for variable annuities. A.M. Best continues to monitor the evolution of XXX and AXXX solutions, along with other evolving uses of captives and the impact on direct writers' capital strength (in terms of operating leverage, etc.). As part of A.M. Best's standard review of an entity's financial strength, the impact on BCAR, along with other capital ratios from such transactions, is assessed.

A.M. Best's Perspective

For A.M. Best to properly review the relationship between a captive and the direct writer, and to provide for appropriate treatment in the BCAR model, A.M. Best reviews the structure of the transaction and the schematics of the organizational structure/capital structure of the captive. In addition, A.M. Best reviews terms and provisions of any guarantees to determine other risks present in these transactions. To the extent that additional analysis of the nature of reserve sensitivities or transaction structure by external parties is available, A.M. Best takes this under consideration.

Treatment of any related debt as financial or operating leverage also is reviewed.

Captive Capitalization

A.M. Best reviews the capitalization of the captive entity on an ongoing basis. For domestic captives, a BCAR is calculated from the statutory filings on a stand-alone basis. In the initial seeding of the company, capital in many cases is funded primarily with long-term surplus notes, which are given substantial equity credit in A.M. Best's BCAR model, given their long-term duration.

Assuming A.M. Best is comfortable with the stress testing; the structure and assumptions used in the transaction; and the stand-alone BCAR of the captive, no additional charges will be made to the ceding company's published BCAR. A consolidated BCAR, which would be used for internal analytical purposes, also will be reviewed and will factor in the captive's results in the consolidation. This allows A.M. Best to view the consolidated entity's risk-adjusted capital position, including the impact of securitization of redundant reserves.

A.M. Best does not anticipate negative rating impacts from securitization activity, which generally has been nonrecourse and has been used as a vehicle for regulatory relief. However, excessive use of securitizations would necessitate a review of the group's overall capital structure, risk appetite and risk management process. As securitization is viewed as a means to write more business than a company's capital otherwise would permit, a review is necessary similar to excessive use of reinsurance or other forms of leverage. If the requested data are not received, A.M. Best will take a more conservative view of the direct writer's and the group's risk-adjusted capitalization, which may result in a negative impact on the rating.

Conclusion

The tools to better allocate capital and understand capital strength continue to evolve. These tools vary in theory, purpose and outcome. A.M. Best's proprietary BCAR tool looks at capital requirements well above financial solvency. A.M. Best will continue to enhance BCAR to improve its accuracy in measuring balance sheet strength and operating risk.

BCAR is important to A.M. Best's evaluation of both absolute and relative capital strength. Consistent with standards embedded within the BCAR model, it is generally the case that well-managed and highly rated companies will maintain capitalization levels in excess of the guideline amounts implied given their current ratings.

A.M. Best cautions that although BCAR is an important tool in the rating process, it is not the sole basis of a rating assignment. Consequently, capital adequacy should be considered within the context of the operating and strategic issues surrounding a company. The BCAR model is intended to reflect the risks present in today's environment, as well as to facilitate consistency with regulatory capital models and other models A.M. Best uses. A.M. Best will continue to closely monitor industry experience, product trends and regulatory changes impacting the level of capital required to support life and health insurance companies' operations.

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A.M. Best Rating Services, Inc.
Oldwick, NJ
CHAIRMAN & PRESIDENT **Larry G. Mayewski**
EXECUTIVE VICE PRESIDENT **Matthew C. Mosher**
SENIOR VICE PRESIDENTS **Douglas A. Collett, Stefan W. Holzberger, James F. Snee**

WORLD HEADQUARTERS
1 Ambest Road,
Oldwick, NJ 08858
Phone: +1 908 439 2200

MEXICO CITY
Paseo de la Reforma 412,
Piso 23,
Mexico City, Mexico
Phone: +52 55 1102 2720

LONDON
12 Arthur Street, 6th Floor,
London, UK EC4R 9AB
Phone: +44 20 7626 6264

DUBAI*
Office 102, Tower 2,
Currency House, DIFC
P.O. Box 506617,
Dubai, UAE
Phone: +971 4375 2780
*Regulated by the DFSA as a Representative Office

HONG KONG
Unit 4004 Central Plaza,
18 Harbour Road,
Wanchai, Hong Kong
Phone: +852 2827 3400

SINGAPORE
6 Battery Road,
#40-02B,
Singapore
Phone: +65 6589 8400

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