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Best's
Methodology and Criteria

Understanding BCAR for Canadian Property/Casualty Insurers

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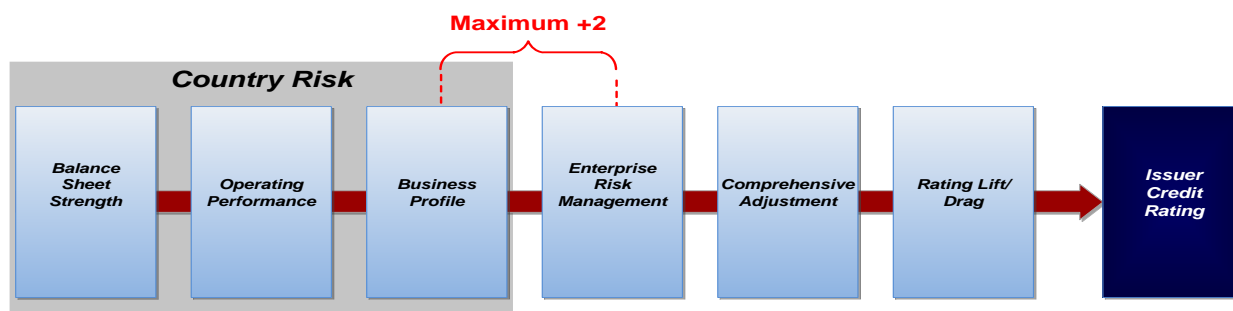# Understanding BCAR for Canadian Property/Casualty Insurers

Outline

   A. BCAR and the Rating Process
   B. Overview of BCAR
   C. Technical Review of the BCAR Formula
   D. Available Capital
   E. Conclusion

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 AM Best's 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 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: AM 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.

Canadian P/C BCAR

This criteria procedure and its accompanying model are used in the evaluation of balance sheet strength for those property/casualty insurers that file 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

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

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. **Exhibit B.2** contains a sample rating unit's BCAR calculations.

Understanding BCAR for Canadian Property/Casualty Insurers

Exhibit B.2: Sample BCAR Calculation

Net Required Capital (NRC)								
	VaR 95		VaR 99		VaR 99.5		VaR 99.6	
	Required Capital Amount	% Gross Required Capital	Required Capital Amount	% Gross Required Capital	Required Capital Amount	% Gross Required Capital	Required Capital Amount	% Gross Required Capital
B1 Fixed Income Securities Risk	12,195	5	13,621	4	14,459	3	14,563	3
B2 Equity Securities Risk	57,470	22	74,330	21	80,380	19	81,710	18
B3 Interest Rate Risk	8,614	3	12,161	3	13,681	3	14,188	3
B4 Credit Risk	9,997	4	11,825	3	13,812	3	14,893	3
Total	88,276	34	111,937	32	122,332	29	125,354	28
B5 Loss & LAE Reserves Risk	46,121	18	69,106	20	78,212	19	81,106	18
B6 Net Written Premiums Risk	59,783	23	90,098	26	101,916	24	105,736	23
Total	105,904	41	159,204	45	180,128	43	186,842	41
B7 Business Risk	3,080	1	3,080	1	3,080	1	3,080	1
B8 Catastrophe Risk	62,000	24	77,000	22	115,000	27	140,000	31
Gross Required Capital (GRC)	**259,260**	**100**	**351,221**	**100**	**420,540**	**100**	**455,276**	**100**
Less: Covariance Adjustment	139,638	54	188,242	54	223,136	53	238,263	52
Net Required Capital (NRC)	**119,621**	**46**	**162,979**	**46**	**197,404**	**47**	**217,012**	**48**

Available Capital		
Capital & Capital Adjustments	Amount	% to Reported Capital
Reported Capital (Surplus)	**220,000**	**100**
Equity Adjustments:		
Provision for Reinsurance	1,000	0
Unearned Premium Reserve Equity	-12,600	-6
Loss Reserves Equity	6,221	3
Fixed Income Equity	0	0
Other Adjustments:		
Surplus Notes	0	0
Off-Balance Sheet Losses	0	0
Future Dividends	0	0
Protected Cell Surplus	0	0
Goodwill & Intangibles	8,000	4
Available Capital (AC)	**206,621**	**94**

Effective Tax Rate = 20.0%

Best's Capital Adequacy Ratio				
BCAR = (AC - NRC) / AC	VaR 95	VaR 99	VaR 99.5	VaR 99.6
	42.1	21.1	4.5	-5.0

Net Required Capital Components

The BCAR model calculates the net required capital to support three broad risk categories: investment risk, credit risk and underwriting risk. These three broad risk categories are further subdivided into eight separately analyzed risk components (outlined in **Exhibit B.3**). A rating unit's gross required capital is the sum of the capital requirements for these eight components.

Exhibit B.3: Required Capital Risk Components

Required Capital
B1 Fixed Income Securities
B2 Equity Securities
B3 Interest Rate
B4 Credit
B5 Reserves
B6 Premiums
B7 Business Risk
B8 Potential Catastrophe Losses

As displayed in **Exhibit B.3**, the BCAR model includes a capital requirement B8 for the potential catastrophe losses. 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.4**).

Exhibit B.4: Net Required Capital Formula

$$Net\ Required\ Capital$$
$$= \sqrt{(B1)^2 + (B2)^2 + (B3)^2 + (0.5 * (B4))^2 + [(0.5 * (B4)) + (B5)]^2 + (B6)^2 + (B8)^2} + (B7)$$

Understanding the Required Capital Risk Components

Total investment risk, which includes three main risk components—B1 fixed income securities, B2 equity securities, and B3 interest rate—applies capital charges to different asset classes based on the risk of default, illiquidity, and/or market value declines in both equity and fixed income securities.

The B4 credit risk category applies capital charges to different receivable balances to quantify third-party default risk. Capital charges are applied to recoverables from all reinsurers, including affiliates, based on the AM Best Issuer Credit Rating (ICR) of the reinsurer and the duration of the recoverable. Required capital for credit risk may be modified by the rating analyst after taking into account any collateral offsets for reinsurance balances and the rating unit's dependence on its reinsurance program. Also included in the credit risk component are charges for outstanding premiums balances and other miscellaneous receivables.

Underwriting risk encompasses B5 reserves, B6 premiums, and B8 potential catastrophe losses. The reserve component requires an amount of capital based on the risk inherent in a rating unit's reserves, adjusted for AM Best's assessment of its reserve equity. The premium component requires capital based on the pricing risk inherent in a rating unit's mix of business. Required capital for the reserve

and premium components may be increased by an additional surcharge for "excessive" growth in exposure.

B8 potential catastrophe loss is included in the calculation of the rating unit's required capital. This allows the required capital amount to increase at higher confidence levels, whereas the amount of available capital would remain the same for each confidence level.

Collectively, these seven risk components have typically generated most of a rating unit's gross required capital, with the B7 business risk component usually generating minimal capital requirements for off-balance-sheet items. 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.4**, AM Best utilizes a "square-root rule" covariance calculation that recognizes the assumed statistical independence of many of the risk components. This covariance adjustment essentially says that it is unlikely for these independent risk components to develop simultaneously. B7 business risk is excluded from the covariance adjustment as AM 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 (total equity) reported in its financial statements. 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. These adjustments are contingent on the financial reporting standards of the rating unit. They serve to even the playing field and compensate for certain economic values not included in the filed financials. Available capital may be further adjusted for other items, such as debt-service requirements, goodwill, and other intangible assets.

Understanding BCAR for Canadian Property/Casualty Insurers

Exhibit B.5: Typical Components of Available Capital

| Available Capital |
|---|
| Reported Capital (Total Equity) |
| Equity Adjustments |
| Unearned Premiums |
| Assets |
| Loss Reserves |
| Reinsurance |
| Debt Adjustments |
| Surplus Notes |
| Debt Service Requirements |
| Other Adjustments |
| Future Operating Losses |
| Intangibles |
| Goodwill |

Value at Risk (VaR)

The basis of risk measurement for AM 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.6**.

Understanding BCAR for Canadian Property/Casualty Insurers

Exhibit B.6: Sample Probability Distribution

UW (Profit)/Loss as Percent of NPW
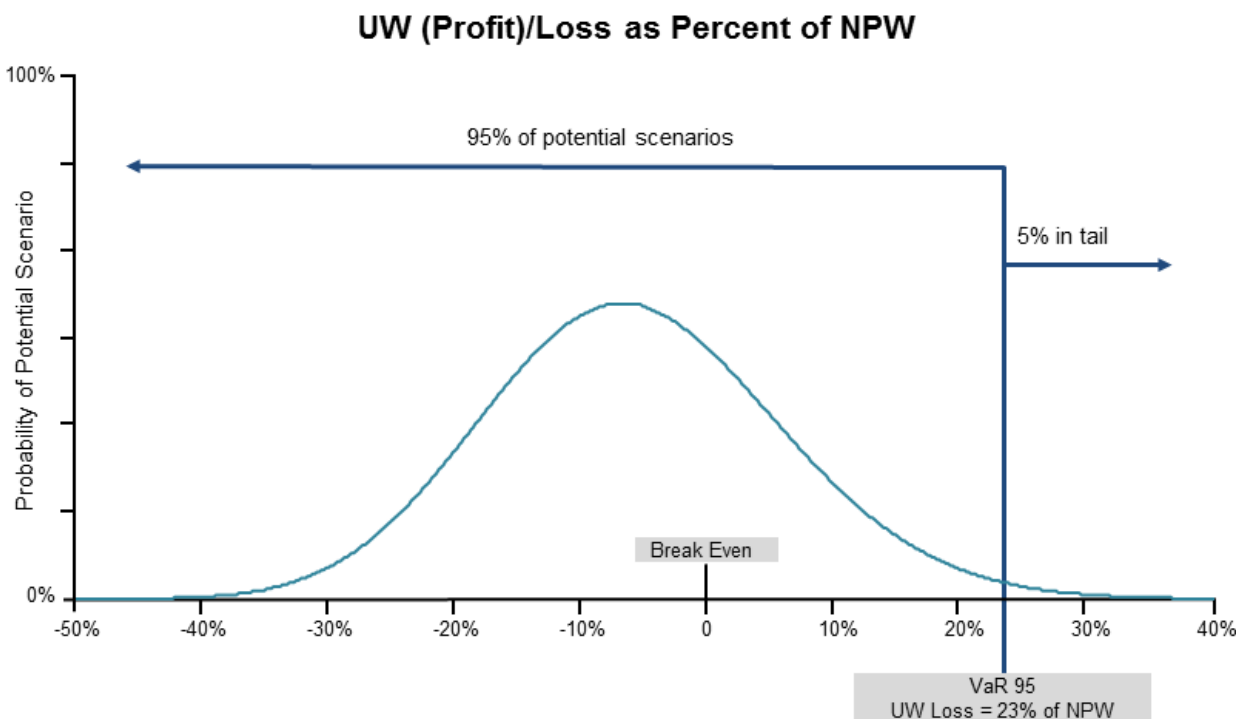
If management wants to hold enough capital to be confident that it can cover 95% of all potential outcomes, then it needs to find the value on the probability distribution such that 95% of all potential outcomes are less than or equal to that value. In this example, the size of loss where this occurs is at 23% of Net Premiums Written (NPW).

As shown in **Exhibit B.7**, if the NPW amount is CAD 100,000, then the VaR 95% value in dollars is CAD 23,000 (23% of CAD 100,000).

Exhibit B.7: Value at Risk (VaR) Illustration

Statement Amount	VaR Confidence Level (%)	Capital Factor	Loss Amount at VaR 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 VaR confidence level.

This means that 95% of all potential outcomes will be less than CAD 23,000 and that there is only a 5% chance that an underwriting loss of more than CAD 23,000 could occur, and therefore a 5%

chance of insolvency (provided that the initial amount of available capital carried was at least CAD 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.7** shows the value where this occurs is 30% of NPW. This means that for the same CAD 100,000 of NPW, management would need to hold CAD 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 CAD 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. AM 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, AM Best can gain insight into the balance sheet strength of the rating unit and the rating unit's ability to withstand tail events. AM 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.8 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.8: 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

AM 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, AM 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 interest rate changes, the stage of the underwriting cycle, changing reinsurance products and reinsurance dependence. 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.

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, AM 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 AM Best include interest rates, stock market returns, bond defaults, and real estate price movements.

Understanding BCAR for Canadian Property/Casualty Insurers

Treatment of Net Required Capital Components

B1 Fixed Income Securities and B2 Equity Securities

In order to calculate the risk factors at various confidence levels for the most frequently owned assets of insurers, AM 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 specific fixed income assets, and the potential movements in interest rates.

Nonaffiliated Bonds

The BCAR model's baseline bond risk charges are based on ESG-simulated bond defaults. **Appendix 1** contains the baseline charges for bonds based on its 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), AM 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.

Government Bonds

There is no capital charge for Canadian federal or US federal government bonds.

Publicly Traded Common Stocks

Insurers who invest in equities are exposed to fluctuations in the market value of those assets. As a starting point, AM Best generates baseline risk factors for market volatility; these may be adjusted if further information is provided by the company.

The same risk factors are used for both affiliated and non-affiliated common stocks that are publicly traded. **Exhibit C.1** shows the baseline risk factors for publicly traded common stocks at the different confidence levels, using the S&P/TSX Composite Index.

Exhibit C.1: 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

As a starting point based on the credit rating assigned to the stock, AM Best assigns risk factors to publicly traded preferred stocks, which are derived from the bond default risk factors. 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 may receive risk factors based on the market price volatility of publicly traded common stocks.

Real Estate

Risk factors for real estate are based on simulated movements in an index that measures the total rate of return of a large pool of individual 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.

Mortgage Loans

Risk factors applied to mortgage loans are based on an industry study of commercial mortgages. For those insurers with a material exposure to mortgage loans, a closer review could result in lower risk factors if the portfolio consists of higher-rated commercial mortgages, or it could result in a higher risk factor if the portfolio consists of a large percentage of loans that have been restructured or are in or near default.

Cash & 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. Other cash-like assets expected to mature within one year receive a baseline 1% risk charge.

Other Investments

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. Any investments in affiliates recorded in this asset category are initially assigned a risk charge of 100%.

Investment in Affiliates

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. For equity investments in affiliated insurers, the baseline risk charge may be adjusted if AM Best determines that there is capital flexibility in the affiliate based on its business plans and operating performance.

If the amount of investments in affiliates represents a material portion of the rating unit's available capital, AM 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.

AM Best charges the full carrying value of the non-insurance affiliate to the parent. Unless the insurer is actively committed to selling a non-insurer with proceeds to be reinvested in the insurance operations, the baseline treatment is a 100% capital charge. In this regard, AM 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 a baseline charge of 100% used for investment in 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 AM 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.

Derivative Assets
As the baseline treatment, 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 when 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, AM Best may reduce the required capital for that risk. In such cases, AM Best will remove the asset value of the derivative from available capital.

In addition to determining whether a derivative is for hedging or speculative purposes, AM 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.

Securities Lending Reinvested Collateral
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.

Catastrophe-Exposed Investments
Investments in non-affiliated sidecars, catastrophe bonds, or other investments that are exposed to a sudden loss of value due to the occurrence of a catastrophe are initially assigned a baseline risk charge of 100% on the investment page. However, these investments may be removed directly from available capital when they are a material portion of total equity or added directly to the net probable maximum loss (PML) on a pre-tax basis, depending on a review of their exposure, attachment points, perils insured, term to maturity, etc.

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, AM Best may double the asset risk charge for single, large investment holdings that are greater than 10% of total equity. 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 total equity. If a rating unit has significantly concentrated investments in any particular asset class, AM Best may adjust the respective asset class charge to account for this concentration.

Spread of Risk 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 required capital is generated from this adjustment for rating units with more than USD 500 million in invested assets; rating units with less than USD 10 million in invested assets could receive as much as a 50% surcharge that is added to their baseline capital requirement for investments.

Exhibit C.2 contains a sample rating unit's investment risk charges and calculations.

Exhibit C.2: Fixed Income Securities B1 and Equity Securities B2 Example

Investments	Statement Value	Adjustment	Adjusted Amount	Capital Factors (%)				Required Capital (Adjusted Amount * VaR Capital Factor)			
				VaR 95	VaR 99	VaR 99.5	VaR 99.6	VaR 95	VaR 99	VaR 99.5	VaR 99.6
Bonds:											
U.S. Gov't.	20,000	0	20,000	0.0	0.0	0.0	0.0	0	0	0	0
Canadian Federal	92,000	0	92,000	0.0	0.0	0.0	0.0	0	0	0	0
AAA	343,000	0	343,000	0.0	0.1	0.2	0.2	0	343	686	686
AA+ to AA-	110,000	0	110,000	0.4	0.7	0.9	0.9	440	770	990	990
A+ to A-	20,000	0	20,000	1.3	1.8	2.0	2.1	260	360	400	420
BBB+ to BBB-	5,000	0	5,000	3.3	4.3	4.6	4.7	165	215	230	235
BB+ to BB-	4,000	0	4,000	10.4	11.7	12.1	12.3	416	468	484	492
B+ to B-	2,000	0	2,000	26.6	28.1	28.5	28.7	532	562	570	574
CCC+ and Lower	1,000	0	1,000	48.0	48.3	48.4	48.5	480	483	484	485
Affiliated	3,000	0	3,000	100.0	100.0	100.0	100.0	3,000	3,000	3,000	3,000
Total Bonds	**600,000**	**0**	**600,000**	**0.9**	**1.0**	**1.1**	**1.1**	**5,293**	**6,201**	**6,844**	**6,882**
Preferred Stocks:											
AAA	29,000	0	29,000	0.0	0.1	0.2	0.2	0	29	58	58
AA+ to AA-	14,000	0	14,000	0.4	0.7	0.9	0.9	56	98	126	126
A+ to A-	12,000	0	12,000	1.3	1.8	2.0	2.1	156	216	240	252
BBB+ to BBB-	10,000	0	10,000	3.3	4.3	4.6	4.7	330	430	460	470
BB+ to BB-	9,000	0	9,000	10.4	11.7	12.1	12.3	936	1,053	1,089	1,107
B+ to B-	8,000	0	8,000	26.6	28.1	28.5	28.7	2,128	2,248	2,280	2,296
CCC+ and Lower	6,000	0	6,000	48.0	48.3	48.4	48.5	2,880	2,898	2,904	2,910
Non-Affiliated (Private)	5,000	0	5,000	100.0	100.0	100.0	100.0	5,000	5,000	5,000	5,000
Affiliated (Public)	4,000	0	4,000	25.0	38.0	43.0	44.0	1,000	1,520	1,720	1,760
Affiliated (Private)	3,000	0	3,000	100.0	100.0	100.0	100.0	3,000	3,000	3,000	3,000
Total Preferred Stocks	**100,000**	**0**	**100,000**	**15.5**	**16.5**	**16.9**	**17.0**	**15,486**	**16,492**	**16,877**	**16,979**
Common Stocks:											
Non-Affiliated (Public)	80,000	0	80,000	27.0	41.0	46.0	47.0	21,600	32,800	36,800	37,600
Non-Affiliated (Private)	5,000	0	5,000	100.0	100.0	100.0	100.0	5,000	5,000	5,000	5,000
Affiliated (Public)	10,000	0	10,000	27.0	41.0	46.0	47.0	2,700	4,100	4,600	4,700
Affiliated (Private)	5,000	0	5,000	100.0	100.0	100.0	100.0	5,000	5,000	5,000	5,000
Total Common Stocks	**100,000**	**0**	**100,000**	**34.3**	**46.9**	**51.4**	**52.3**	**34,300**	**46,900**	**51,400**	**52,300**
Mortgage Loans	2,000	0	2,000	3.3	4.9	5.4	5.6	66	98	108	112
Real Estate:											
Company Occupied	30,000	0	30,000	12.0	17.5	19.5	20.2	3,600	5,250	5,850	6,060
Investments	10,000	0	10,000	12.0	17.5	19.5	20.2	1,200	1,750	1,950	2,020
Total Real Estate	**40,000**	**0**	**40,000**	**12.0**	**17.5**	**19.5**	**20.2**	**4,800**	**7,000**	**7,800**	**8,080**
Other Loans	1,000	0	1,000	5.0	5.0	5.0	5.0	50	50	50	50
Cash & Cash Equivalents	25,000	0	25,000	0.3	0.3	0.3	0.3	75	75	75	75
Other Short-Term Investments	15,000	0	15,000	1.0	1.0	1.0	1.0	150	150	150	150
Assets Held for Sale	10,000	0	10,000	15.0	15.0	15.0	15.0	1,500	1,500	1,500	1,500
Derivative Asset	3,000	0	3,000	100.0	100.0	100.0	100.0	3,000	3,000	3,000	3,000
Securities Lending Reinvested Collateral	9,000	0	9,000	10.0	10.0	10.0	10.0	900	900	900	900
Other Investments	10,000	0	10,000	29.7	45.1	50.6	51.7	2,970	4,510	5,060	5,170
Other Assets	5,000	0	5,000	20.0	20.0	20.0	20.0	1,000	1,000	1,000	1,000
Total Investments	**945,000**	**0**	**945,000**	**7.4**	**9.3**	**10.0**	**10.2**	**69,665**	**87,951**	**94,839**	**96,273**
			Multiply by: Spread of Risk Factor					1.00	1.00	1.00	1.00
			B1 and B2 Required Capital					**69,665**	**87,951**	**94,839**	**96,273**

B3 Interest Rate Risk

Interest rate risk represents the potential loss a rating unit would incur if it were forced to sell its fixed income assets during a period of rising interest rates. As interest rates rise, the market value of the fixed income assets will decline and, if the rating unit needs to sell the fixed income assets, it would be at a price lower than what is currently considered in the calculation of available capital. Rating units that maintain a high level of exposure to short-term cash needs—such as those with a high gross catastrophe PML—are the most exposed to interest rate risk because they could be forced to sell fixed income assets on short notice in order to pay claims.

AM Best uses increases in interest rates that reflect the confidence level being used to generate the required capital for interest rate risk. AM Best selected the following changes in interest rates: 170 basis points at the 95th percentile, 240 basis points at the 99th percentile, 270 basis points at the 99.5th percentile, and 280 basis points at the 99.6th percentile. These changes in interest rates are used to estimate the interest rate risk on the market value of bonds, preferred stocks, and mortgage loans.

Rating Units with Natural Catastrophe Exposure

Using the base assumption that the rating unit's gross PML for catastrophes is the maximum exposure an insurer has to interest rate risk, the interest rate risk calculation uses the ratio of the rating unit's pre-tax gross 1 in 100 year catastrophe PML from the all perils combined per occurrence curve to its liquid assets. This factor is applied to the decline in the market value of the total fixed income portfolio following the rise in interest rates. By relating the rating unit's PML to all liquid assets first, AM Best assumes a rating unit is no more likely to liquidate a fixed income asset than it is to liquidate any other liquid asset.

AM Best applies an exposure percentage (minimum 10%) against the rating unit's decline in market value after the rise in interest rates, recognizing that there are other reasons for a rating unit to have a short-term need for cash. Interest rate risk is evaluated at the different confidence levels— the 95th percentile, the 99th percentile, the 99.5th percentile, and the 99.6th percentile

A key assumption in the calculation comes from AM Best's process of marking bonds to market using a fixed income equity adjustment to available capital (adjusted for caps and taxes). Because AM Best adjusts fixed income securities to market value each year through its re-evaluation of capitalization, only the incremental risk that a capital loss will be realized over the next year needs to be considered. Any risk of lost future income will be reflected at subsequent evaluations. Therefore, only a rating unit's short-term cash needs—such as the occurrence of its PML—would trigger a decline in capitalization over the next year.

Exhibit C.3 illustrates the interest rate risk calculation at the various confidence levels.

Exhibit C.3: Interest Rate Risk B3 Example

	Average Contract Maturity	Estimated Duration	Market Value	Market Decline due to 170 BP Rise (Estimated Duration * Market Value *1.7%)	Market Decline due to 240 BP Rise (Estimated Duration * Market Value *2.4%)	Market Decline due to 270 BP Rise (Estimated Duration * Market Value *2.7%)	Market Decline due to 280 BP Rise (Estimated Duration * Market Value *2.8%)
Fixed Income Securities							
Bonds	4	3.5	600,000	35,700	50,400	56,700	58,800
Preferred Stocks	8	7.6	100,000	12,920	18,240	20,520	21,280
Mortgage Loans	10	9.5	2,000	323	456	513	532
Totals			**702,000**	**48,943**	**69,096**	**77,733**	**80,612**

Catastrophe Exposure Percentage Calculation:	VaR 95	VaR 99	VaR 99.5	VaR 99.6
Gross PML	150,000	150,000	150,000	150,000
Liquid Assets	853,000	853,000	853,000	853,000
PML To Liquid Assets Percentage (10% minimum)	**17.6**	**17.6**	**17.6**	**17.6**

B3 Required Capital	8,614	12,161	13,681	14,188
	(= 17.6% * 48,943)	(= 17.6% * 69,096)	(= 17.6% * 77,733)	(= 17.6% * 80,612)

B4 Credit Risk

Reinsurance Recoverables

The BCAR model includes a charge for the credit risk associated with the potential inability of the insurer to collect from its reinsurers. The BCAR model uses factor tables based on stochastic

simulations of reinsurer impairments to calculate the credit risk of the recoverables at the various confidence levels—the 95th percentile, the 99th percentile, the 99.5th percentile, and the 99.6th percentile. These credit risk factors reflect the credit quality of the reinsurers, the type of recoverable, the future time periods the recoverables are assumed to be collected, a 50% recovery rate applied to the loss, and an annual discount rate of 4% to present value the amount of recoverables uncollected due to the reinsurer impairment. Since impairments can occur at any point during a future year, discounting is done from mid-point of the future year. As an example, an impairment that occurs in the fourth future year would be discounted 3.5 years.

The process of calculating credit risk begins with estimating the percentage of existing recoverables on reserves that will be collected in each future year. The BCAR model assumes that recoverables on reserves are collected within 30 years and estimates when those recoverables will be collected based on a combination of industry collection patterns that vary by line of business and the rating unit's own mix of ceded reserves by line of business. This collection pattern is applied to the ceded reserves for all reinsurers and any recoverables on unearned premium are added to the ceded reserve amounts that are collected within one year.

Using the AM Best ICR of each reinsurer, a set of risk factors by rating and year at the corresponding VaR are multiplied against the rating unit's aggregated recoverables by rating and year to get the rating unit's required capital for credit risk at that VaR level. **Appendix 2** shows the credit risk factors for reinsurance recoverables at each VaR level. These tables were developed using a portfolio of 20 reinsurers and the assumption that each reinsurer is responsible for 5% of the recoverables. For insurers with a concentration of recoverables ceded to a small number of reinsurers, a qualitative assessment of the concentration risk will be done elsewhere in the balance sheet strength evaluation.

Reinsurers that do not have a published AM Best ICR, or have a published AM Best ICR of ccc+ or lower, initially receive a 100% impairment rate for all future time periods. This impairment rate is offset with a 50% recovery rate, resulting in an undiscounted risk charge of 50% for all future time periods. This 50% undiscounted risk charge is then discounted 6 months, using an annual rate of 4%, to reflect the assumption that any recoveries from these reinsurers will be collected within the next year. The same discounted risk factor is shown for years one through ten in **Appendix 2** since these recoveries are assumed to be collected in year one. The initial discounted risk charges for unrated reinsurers may be reduced if adequate additional information about the unrated reinsurer is provided to AM Best. Such information may include the published ratings of other agencies.

Other Forms of Collateral

100% credit for funds held is given by reinsurer using the same collection pattern as the corresponding recoverables but capped at the amount of recoverables. AM Best will consider other forms of collateral, such as trust funds and letters of credit (LOCs), as an offset to reinsurance recoverable balances. At most, the amount of credit given for trusts and LOCs will be 90% of the risk factors used on the corresponding recoverables. However, the amount of credit given will vary based on a number

of factors including, but not limited to the following: the quality and liquidity of assets in the trust, access to the funds in trust, type of LOC and whether the LOC is irrevocable and evergreen. Offsets that require certain conditions before the collateral is posted might not receive an offset credit until the collateral option is exercised, since there is no access to the collateral until the threshold has been triggered.

Reinsurance Dependence

AM Best includes an additional capital requirement, or surcharge, for rating units that analysts believe are excessively dependent on unaffiliated reinsurance, given their lines of business and financial resources. For these rating units, AM Best increases the overall credit risk charge for their recoverable balances, regardless of underlying credit quality. This additional charge reflects the increased exposure to reinsurance disputes and cash-flow problems the rating unit might face as a result of the higher dependence on reinsurance.

This increased exposure to dispute risk can have a severe impact on total equity. A rating unit with recoverables equal to five times its capital could lose 50% of its capital if 10% of its recoverables are successfully disputed by the reinsurer. In an effort to recognize this exposure to dispute risk, AM Best employs two reinsurance dependence tests. The first test compares the rating unit's unaffiliated recoverables-to-capital ratio to an industry composite benchmark recoverables-to-capital ratio, which is displayed in the BCAR model. The second test examines the rating unit's total ceded leverage to thresholds of five, seven, and ten times capital, resulting in respective risk charges of 15%, 20%, and 25% of recoverables from unaffiliated reinsurers. The rating unit's total ceded leverage is defined as its recoverables plus written premium ceded to unaffiliated reinsurers as a ratio to reported capital. This total ceded leverage test is forward looking, since it includes not only the existing recoverables but also the potential exposure to be added in the upcoming year.

Generally, affiliates demonstrate a history of substantial support with minimal disputes on ceded balances; therefore, the BCAR model does not generate a reinsurance dependence factor for affiliated reinsurance. However, if the affiliated support is not sufficiently present or the quick transfer of funds from the affiliates to the ceding insurer is hindered and the amount of recoverables from the affiliates is material, a reinsurance dependence factor may be applied to the affiliated recoverables.

Credit Enhancements to Reinsurance Recoverables

If a ceding insurer's recoverables are insured by an unaffiliated third party, AM Best may reduce the risk charges to reflect the reduced credit risk. However, the reinsurance dependence factor might not change if the contract does not cover uncollectibility resulting from a dispute.

Pools and Associations

As a baseline, pools and associations are treated as "Not Rated" reinsurers. However, in those instances when additional information is provided, this baseline risk factor may be adjusted based on AM Best's opinion of the pool or association's creditworthiness.

Risk-Free Servicing Carrier Business

For ceded reinsurance associated with risk-free servicing carrier business, AM Best does not intend to charge for credit risk. However, the insurer is expected to provide information related to risk-free servicing carrier business in order for the model to be adjusted properly.

Premium Receivables and Other Receivables

AM Best applies a baseline 5% capital charge for premiums receivable from agents, brokers, policyholders, and installment programs in the course of collection, as well as a 10% charge for accrued retrospective balances. These balances can be reduced by valid collateral and contractual offsets. Any other uncollected premium balances that are concentrated within a single entity or are approaching the 90-day overdue threshold may be assigned a higher capital charge. Other receivable balances generally are assessed a 5% charge and represent a minor overall capital requirement.

Exhibit C.4 illustrates the credit risk calculation at the various confidence levels.

Exhibit C.4: B4 Credit Risk Example

	Statement Value	Increase for Reserve Deficiency	Other Adjustments	Adjusted Amount		Capital Factors (%)				Required Capital for Reinsurance Recoverables and Other Receivables (Adjusted Amount * VaR Capital Factor)			
						VaR 95	VaR 99	VaR 99.5	VaR 99.6	VaR 95	VaR 99	VaR 99.5	VaR 99.6
Receivable Balances:													
Gross Agents' Balance*	90,000	-	0	90,000		5.0	5.0	5.0	5.0	4,500	4,500	4,500	4,500
Reinsurance Recoverables:													
Affiliated	10,000	398	0	10,398		3.4	5.0	6.7	7.5	354	520	697	780
Less: Funds Held	2,000	0	0	2,000		3.4	5.0	6.7	7.5	68	100	134	150
Less: LOCs & Trusts**	3,000	0	0	3,000		3.1	4.5	6.0	6.8	93	135	180	204
Unaffiliated	150,000	5,971	0	155,971		3.4	5.0	6.7	7.5	5,303	7,799	10,450	11,698
Less: Funds Held	30,000	0	0	30,000		3.4	5.0	6.7	7.5	1,020	1,500	2,010	2,250
Less: LOCs & Trusts*	20,000	0	0	20,000		3.1	4.5	6.0	6.8	620	900	1,200	1,360
Net Reinsurance Recoverables	105,000	6,369	0	111,369		3.5	5.1	6.8	7.6	3,856	5,684	7,623	8,514
All Other Receivables**	1,809	-	0	1,809		4.5	4.5	4.5	4.5	81	81	81	81
Company Totals	196,809	6,369	0	203,178		4.2	5.1	6.0	6.4	8,437	10,265	12,204	13,095

	Indicated Reinsurance Dependence Factor	Adjustment to Reinsurance Dependence Factor	Selected Reinsurance Dependence Factor (Indicated + Adjustment)		Required Capital for Reinsurance Dependence (Required Capital for Reinsurance Recoverables and Other Receivables *(Selected Reinsurance Dependence Factor -1.0))				Minimum Required Capital for Reinsurance Dependence
					VaR 95	VaR 99	VaR 99.5	VaR 99.6	
Receivable Balances:									
Gross Agents' Balance*	-	-	-		0	0	0	0	0
Reinsurance Recoverables:									
Affiliated	1.000	0.000	1.000		0	0	0	0	0
Less: Funds Held	1.000	0.000	1.000		0	0	0	0	0
Less: LOCs & Trusts**	1.000	0.000	1.000		0	0	0	0	0
Unaffiliated	1.200	0.000	1.200		1,061	1,560	2,090	2,340	1,560
Less: Funds Held	1.150	0.000	1.150		153	225	302	338	0
Less: LOCs & Trusts**	1.150	0.000	1.150		93	135	180	204	0
Net Reinsurance Recoverables					815	1,200	1,608	1,798	1,560
All Other Receivables*	-	-	-		0	0	0	0	0
Company Totals	-	-	-		815	1,200	1,608	1,798	1,560

	Total Required Capital Amount (Required Capital for Reinsurance Recoverables and Other Receivables + Max(Required Capital for Reinsurance Dependence, Minimum Required Capital for Reinsurance Dependence))			
Receivable Balances:				
Gross Agents' Balance*	4,500	4,500	4,500	4,500
Reinsurance Recoverables:				
Affiliated	354	520	697	780
Less: Funds Held	68	100	134	150
Less: LOCs & Trusts**	93	135	180	204
Unaffiliated	6,863	9,359	12,540	14,038
Less: Funds Held	1,020	1,500	2,312	2,588
Less: LOCs & Trusts**	620	900	1,380	1,564
Net Reinsurance Recoverables	5,416	7,244	9,231	10,312
All Other Receivables*	81	81	81	81
B4 Required Capital	9,997	11,825	13,812	14,893

*Reflects a blended capital factor because of multiple categories that that were collapsed for presentation.

**Credit for acceptable letters of credit & trusts. Analysis performed by reinsurer and credit cannot exceed amount of uncollateralized recoverable. Risk charge for acceptable letters of credit and trusts capped a 90% of the risk factor charged to the corresponding recoverables.

B5 Reserves Risk

Loss and Loss-Adjustment Expense Reserves (Provision for Unpaid Claims & Adjustment Expenses)

To a large extent, AM Best's reserves risk component emphasizes adjusted reserve leverage and stability in loss development as gauges of a rating unit's exposure to reserving errors in its book of business. Consequently, if a rating unit exhibits more volatility in its case incurred loss development, and higher reserves to surplus compared to its peers, then the BCAR model will generate a greater reserve risk capital requirement.

Required capital for reserve risk at each of the confidence levels is generated by applying the corresponding capital factors to a rating unit's reserves for each line of business. To ensure equitable capital treatment among rating units, the BCAR model places considerable weight on a rating unit's adjusted reserves, which emphasizes reserve adequacy and the time value of money embedded in those reserves. A rating unit that historically has under-reserved will be penalized for maintaining lower reported reserves.

Reserve Equity Adjustments

A rating unit's reported reserves are adjusted to an economic basis that accounts for AM Best's view of a rating unit's ultimate reserves, which are discounted to their present value recognizing the time value of money. Reported reserves are adjusted to an economic basis through two modification factors: the reserve deficiency factor and the discount factor.

The reserve deficiency factor reflects AM Best's view of a rating unit's reserve deficiency expressed as a fraction of its original reserve plus 1.0. For example, a rating unit with a 10% reserve deficiency would show a 1.10 reserve deficiency factor in the model, whereas a rating unit with a 20% reserve deficiency would show a 1.20 reserve deficiency factor in the model. A quantitative analysis using loss development techniques in combination with a qualitative assessment of the rating unit's operating environment and historical reserve development are used to arrive at AM Best's view of reserve deficiency. Generally, unseasoned rating units with less than five years of loss experience are assigned a minimum deficiency of 10%, while the reserves of seasoned rating units are determined relative to their own historical experience.

A number of issues can affect AM Best's view of a rating unit's reserve position, including the number of reserve adjustments, the size of the adjustments, the lines of business involved, the accident years generating the adverse development, and whether the adjustment was anticipated or unexpected. For companies of concern, the minimum reserve deficiency applied to the reserves will typically be 10% but may be higher.

In addition to assessing the rating unit's core reserves for property/casualty business, AM Best may perform a separate analysis of its asbestos and environmental reserves liabilities. Any deficiency in mass-tort reserves is added to the core deficiency.

Discount factors, based on industry payout patterns by line of business and a 4% annual discount rate, are applied to the estimated ultimate loss and LAE reserves. The resulting deficiency and discount factors are applied to the rating unit's reported by-line loss reserves to derive the rating unit's adjusted reserves. To maintain a consistent treatment of the time value of money, all discounting is treated as reserve deficiency, and credit is given through the discount factor.

Reserve Capital Factors

To determine a rating unit's reserve capital requirement, by-line reserve capital factors are provided at the various confidence levels and are derived from industry risk factors that are adjusted for a rating unit's volatility in its case incurred development.

Exhibit C.5 shows reserve risk capital factors applied to a sample rating unit with average stability.

Exhibit C.5: Reserve Risk B5 Example

Class of Insurance	%	Statement Amount	Allocated Adjustments	Manual Adjustment	Adjusted Amount (Statement + Allocated + Manual)	Deficiency Factor	Discount Factor	Adjusted Factor (Deficiency Factor * Discount Factor)	Adjusted Reserves (Adjusted Amount * Adjusted Factor)
Personal Property	2.5	8,000	0	0	8,000	1.00	0.955	0.955	7,638
Commercial Property	3.1	10,000	0	0	10,000	1.00	0.945	0.945	9,448
Aircraft	4.6	15,000	0	0	15,000	1.05	0.926	0.972	14,580
Auto Liability	15.4	50,000	0	0	50,000	1.15	0.934	1.074	53,691
Auto Personal Accident	7.7	25,000	0	0	25,000	1.10	0.941	1.035	25,876
Auto Other	2.2	7,000	0	0	7,000	1.00	0.974	0.974	6,819
Boiler & Machinery	5.5	18,000	0	0	18,000	1.00	0.926	0.926	16,663
Credit	3.4	11,000	0	0	11,000	1.00	0.950	0.950	10,447
Credit Protection	3.7	12,000	0	0	12,000	1.10	0.950	1.045	12,536
Fidelity	4.0	13,000	0	0	13,000	1.10	0.910	1.001	13,011
Hail	3.1	10,000	0	0	10,000	1.10	0.945	1.039	10,392
Legal Expense	6.2	20,000	0	0	20,000	1.10	0.851	0.936	18,729
Liability	9.2	30,000	0	0	30,000	1.00	0.851	0.851	25,540
Mortgage	2.2	7,000	0	0	7,000	1.00	0.931	0.931	6,516
Other Approved Products	2.5	8,000	0	0	8,000	1.00	0.961	0.961	7,688
Surety	2.8	9,000	0	0	9,000	1.00	0.910	0.910	8,189
Title	1.5	5,000	0	0	5,000	1.00	0.840	0.840	4,202
Marine	4.9	16,000	0	0	16,000	1.00	0.926	0.926	14,812
Accident & Sickness	3.1	10,000	0	0	10,000	1.10	0.950	1.045	10,447
Warranty	5.8	19,000	0	0	19,000	1.00	0.947	0.947	18,000
Long Duration Contract UPR	6.8	22,000	0	0	22,000	1.00	1.000	1.000	22,000
Total	**100.0**	**325,000**	**0**	**0**	**325,000**	**1.05**	**0.927**	**0.976**	**317,224**

Class of Insurance	Capital Factors VaR 95	VaR 99	VaR 99.5	VaR 99.6	Required Capital Amount (Adjusted Reserves * VaR Capital Factor) VaR 95	VaR 99	VaR 99.5	VaR 99.6
Personal Property	0.242	0.364	0.412	0.426	1,848	2,780	3,147	3,254
Commercial Property	0.243	0.366	0.415	0.430	2,296	3,458	3,921	4,063
Aircraft	0.200	0.299	0.338	0.350	2,916	4,359	4,928	5,103
Auto Liability	0.169	0.250	0.281	0.291	9,074	13,423	15,087	15,624
Auto Personal Accident	0.169	0.250	0.281	0.291	4,373	6,469	7,271	7,530
Auto Other	0.188	0.279	0.314	0.325	1,282	1,903	2,141	2,216
Boiler & Machinery	0.200	0.299	0.338	0.350	3,333	4,982	5,632	5,832
Credit	0.206	0.307	0.346	0.359	2,152	3,207	3,615	3,750
Credit Protection	0.206	0.307	0.346	0.359	2,582	3,849	4,337	4,500
Fidelity	0.252	0.381	0.433	0.448	3,279	4,957	5,634	5,829
Hail	0.243	0.366	0.415	0.430	2,525	3,803	4,313	4,469
Legal Expense	0.283	0.430	0.487	0.507	5,300	8,053	9,121	9,496
Liability	0.283	0.430	0.487	0.507	7,228	10,982	12,438	12,949
Mortgage	0.252	0.381	0.433	0.448	1,642	2,483	2,821	2,919
Other Approved Products	0.206	0.307	0.346	0.359	1,584	2,360	2,660	2,760
Surety	0.252	0.381	0.433	0.448	2,064	3,120	3,546	3,669
Title	0.443	0.692	0.793	0.826	1,861	2,908	3,332	3,471
Marine	0.200	0.299	0.338	0.350	2,962	4,429	5,006	5,184
Accident & Sickness	0.206	0.307	0.346	0.359	2,152	3,207	3,615	3,750
Warranty	0.188	0.279	0.314	0.326	3,384	5,022	5,652	5,868
Long Duration Contract UPR	0.170	0.250	0.290	0.300	3,740	5,500	6,380	6,600
Total	**0.213**	**0.319**	**0.361**	**0.375**	**67,577**	**101,254**	**114,597**	**118,836**
Multiply by: Diversification Factor					0.65	0.65	0.65	0.65
Multiply by: Growth Factor					1.05	1.05	1.05	1.05
B5 Required Capital					**46,121**	**69,106**	**78,212**	**81,106**

Four industry baseline probability distributions of potential reserve deviations were created for each line of business based on the size of the reported reserve. The points on the probability distribution that represent the 95th, the 99th, the 99.5[th], and the 99.6[th] percentiles are used as the baseline industry reserve capital factors in the BCAR model. The rating unit's amount of reserve for a line of business determines the industry baseline risk factors that are then adjusted based on the rating unit's case incurred development for non-life lines of business. AM Best views the size and variation in a rating unit's case incurred development pattern as a strong indicator of the risk inherent in its reserves and of the rating unit's ability to make accurate projections of ultimate losses.

Stability factors are used to differentiate the volatility in a specific rating unit's reserves. The stability factors are calibrated around 1.00—ranging from 0.70 to 1.30—and are based on the stability of the rating unit's case incurred development. These stability factors are applied to the baseline industry risk factors and will decrease or increase the industry volatility to reflect the rating unit's stability.

These adjusted capital factors are applied to the rating unit's adjusted reserves to produce required capital charges for reserve risk by line of business at each confidence level.

Diversification Credit

The diversification factor reflects the reduction in overall reserve risk within a well-diversified portfolio. This diversification factor is calculated using a correlation matrix. 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. AM Best created an industry-level reserve correlation matrix using industry-aggregated reserve development data.

Rating units with larger reserve balances for multiple lines of business tend to show correlations similar to the industry-level correlations but rating units with smaller reserve balances tend to show lower line-by-line correlations than the industry due to their higher volatility in the individual lines. Because of this observation, AM Best adjusts the industry correlation matrix based on the size of the rating unit's total reported net loss and LAE reserve. Rating units with smaller reserve balances will receive more diversification benefit by applying a larger reduction to the industry-reserve correlation matrix than the reduction given to rating units with larger reported reserve balances.

Exhibit C.6: Industry Reserve Development Correlation Matrix

	Personal Property	Commercial Property	Aircraft	Auto Liability	Auto Personal Accident	Auto Other	Boiler and Machinery	Credit	Credit Protection	Fidelity	Hail	Legal Expense	Liability	Mortgage	Other Approved Products	Surety	Title	Marine	Accident and Sickness	Warranty
Personal Property	1.00	0.66	0.70	0.64	0.64	0.50	0.70	0.24	0.24	0.00	0.64	0.27	0.27	0.00	0.24	0.00	0.24	0.70	0.24	0.00
Commercial Property	0.66	1.00	0.88	0.85	0.85	0.87	0.88	0.00	0.00	0.26	0.89	0.74	0.74	0.25	0.00	0.26	0.24	0.88	0.00	0.00
Aircraft	0.70	0.88	1.00	0.81	0.81	0.79	0.90	0.00	0.00	0.00	0.85	0.50	0.50	0.00	0.00	0.00	0.00	0.90	0.00	0.00
Auto Liability	0.64	0.85	0.81	1.00	0.91	0.79	0.81	0.00	0.00	0.00	0.82	0.71	0.71	0.00	0.00	0.00	0.00	0.81	0.00	0.00
Auto Pers Accident	0.64	0.85	0.81	0.91	1.00	0.79	0.81	0.00	0.00	0.00	0.82	0.71	0.71	0.00	0.00	0.00	0.00	0.81	0.00	0.00
Auto Other	0.50	0.87	0.79	0.79	0.79	1.00	0.79	0.00	0.00	0.22	0.87	0.70	0.70	0.22	0.00	0.24	0.00	0.79	0.00	0.00
Boiler and Machinery	0.70	0.88	0.90	0.81	0.81	0.79	1.00	0.00	0.00	0.00	0.85	0.50	0.50	0.00	0.00	0.00	0.00	0.90	0.00	0.00
Credit	0.24	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.90	0.00	0.00	0.00	0.00	0.49	0.00	0.00	0.49	0.00	0.00	0.00
Credit Protection	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.90	1.00	0.00	0.00	0.00	0.00	0.49	0.00	0.00	0.49	0.00	0.00	0.00
Fidelity	0.00	0.26	0.00	0.00	0.00	0.22	0.00	0.00	0.00	1.00	0.23	0.45	0.45	0.27	0.00	0.51	0.46	0.00	0.00	0.00
Hail	0.64	0.89	0.85	0.82	0.82	0.87	0.85	0.00	0.00	0.23	1.00	0.74	0.74	0.21	0.00	0.24	0.00	0.85	0.00	0.00
Legal Expense	0.27	0.74	0.50	0.71	0.71	0.70	0.50	0.00	0.00	0.45	0.74	1.00	0.91	0.45	0.00	0.47	0.26	0.50	0.00	0.00
Liability	0.27	0.74	0.50	0.71	0.71	0.70	0.50	0.00	0.00	0.45	0.74	0.91	1.00	0.45	0.00	0.47	0.26	0.50	0.00	0.00
Mortgage	0.00	0.25	0.00	0.00	0.00	0.22	0.00	0.49	0.49	0.27	0.21	0.45	0.45	1.00	0.00	0.50	0.72	0.00	0.00	0.00
Other Approved Products	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.24	0.00	0.00	0.00
Surety	0.00	0.26	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.51	0.24	0.47	0.47	0.50	0.00	1.00	0.48	0.00	0.00	0.00
Title	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.49	0.49	0.46	0.00	0.26	0.26	0.72	0.24	0.48	1.00	0.00	0.00	0.00
Marine	0.70	0.88	0.90	0.81	0.81	0.79	0.90	0.00	0.00	0.00	0.85	0.50	0.50	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Accident and Sickness	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
Warranty	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00

Growth Charge

The reserve growth charge reflects the additional risk that typically comes from growth and is based on the growth in a rating unit's exposures. The growth charge applied to the reserve aggregate required capital reflects the substantial risk a rating unit faces in the claims and reserving areas during a time of significant growth.

Understanding BCAR for Canadian Property/Casualty Insurers

A growth charge is applied when a rating unit's growth in exposure is in excess of industry thresholds. Comparisons to the industry thresholds are made on a one-year basis and a three-year annualized basis. The growth charge is based on the comparison that generates the greatest amount in excess of the industry thresholds. Growth in exposures can be adjusted based on company-supplied exposure information.

The model initially calculates the rating unit's growth charge based on the growth in policies inforce for primary insurers and for gross premiums written for reinsurers. The initial calculation compares the rating unit's most recent year growth rate to an industry one-year growth threshold and then compares the rating unit's three-year annualized growth rate to the industry three-year annualized growth threshold. The comparison that generates the greatest amount of premium growth in excess of the corresponding industry threshold generates the growth charge that is used in the analysis. These thresholds are chosen based on rate changes in the industry during those time periods, plus an allowance for moderate growth in exposure.

Exhibit C.7 shows a sample calculation of growth factors for a primary insurer and a reinsurer.

Exhibit C.7: High Premium Growth Example

Calendar Year (CY)	Primary Insurer Year End In-Force Policy Count	Reinsurer Gross Premiums Written (000)
Third Prior	1,000	100,000
Second Prior	1,000	100,000
First Prior	1,000	100,000
Most Recent	1,100	125,000
One Year Growth Rate:	10.0%	25.0%
Three Year Average Growth Rate:	3.2%	7.7%
Industry Growth Thresholds		
One Year Growth Rate:	6.0%	16.0%
Three Year Growth Rate:	5.0%	15.0%
Indicated Growth Factors		
One Year Growth Rate:	1.04	1.09
Three Year Average Growth Rate:	1.00	1.00
Selected Growth Factor	1.04	1.09

Loss Sensitive Business

A rating unit's reserve-risk factor may be adjusted within the casualty lines for loss sensitive business (i.e., retrospectively rated).

Retroactive Reinsurance

Because BCAR already gives credit for loss-reserve equity, retroactive reinsurance provides little benefit unless it also includes adverse-development protection. There is no true economic gain other than the risk protection awarded for stop-loss protection above the expected ultimate, and that benefit is reflected with a risk factor adjustment. In fact, in some cases where investment yields above those earned by the insurer are guaranteed to the reinsurer, these contracts can be punitive in AM Best's view of capitalization.

Long Duration Contracts

Long duration contracts are defined as contracts having terms in force for more than 13 months and for which the insurer cannot cancel or increase the premium during the life of the contract (generally excluding surety, mortgage guaranty, financial guaranty and title). Long duration contracts create larger unearned premium reserves than contracts with one-year terms. This creates a larger pricing risk in the unearned premium reserve than anticipated for contracts having terms of one year or less. In order to capture this increased risk, the long duration unearned premiums are included on the loss reserve page. The unearned premiums are included on the loss reserve page instead of the pricing risk page in an effort to reflect diversification from business being written in the future versus business written in the past. Baseline factors are applied at each confidence level to the net unearned premiums and may be adjusted based on the profitability of the book.

Other adjustments to credit risk, unearned premium equity, and written premiums are made in an effort to capture all of the risks associated with writing long-duration contracts. These adjustments vary based on the terms of the contracts and the structure of the business.

B6 Premiums Risk

Required capital for premiums risk within the BCAR model is calculated at each confidence level by applying premium capital factors to a rating unit's premiums for distinct lines of business.

Premium Capital Factors

Premiums risk capital factors are obtained from industry probability distributions of potential underwriting profit and losses that may be adjusted for a rating unit's profitability. The determination of premium capital factors for a rating unit begins with the selection of an industry baseline capital factor for each line of business based on the size of the net premiums written by the rating unit in that particular line of business. Four industry baseline probability distributions of potential underwriting profit/loss were created for each line of business based on the size of the net premiums written. The points on these probability distributions that represent the 95th, the 99th, the 99.5th, and the 99.6th percentiles are used as the baseline industry premium capital factors in the model. In developing the industry baseline probability distributions for the property lines, AM Best limited the volatility of the historical data in an effort to remove volatility due to catastrophe losses, since catastrophe risk is captured in a separate risk component of the rating unit's required capital B8. AM Best believes the profitability of a rating unit's business and the overall industry pricing levels are good indicators of the

level of risk margin expected within a rating unit's future business. 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 the rating unit's historical overall operating ratio. 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 initially used to judge the rating unit's profitability is its historical operating ratio.

To account for any changes in current market pricing, the model uses an underwriting cycle adjustment that reflects the impact current pricing has on underwriting risk. The underwriting cycle factor is applied when calculating the premium adequacy adjustment, which can increase or decrease premium capital factors to reflect the current market conditions. This adjustment is necessary because the profitability adjustment is initially based on past results, whereas the premium risk is looking forward one year.

Similar to the loss reserve component, AM Best may adjust a rating unit's premium risk factor within the BCAR model to reflect reduced charges for loss-sensitive business, retroactive reinsurance, aggregate stop loss reinsurance, or finite quota-share reinsurance.

A rating unit's final premium capital factors for each line of business reflect the industry baseline with the aforementioned adjustment factors applied. Two final adjustments are made to the aggregation of the by-line required premium capital charge. These adjustments include a charge to reflect the additional risk that typically comes from excessive growth and the benefit typically derived from a more diversified book of business.

Exhibit C.8 shows the premium capital factors applied to a sample rating unit

Exhibit C.8: B6 Premiums Risk Example

		Net Premiums Written			
Class of Insurance		**Statement Amount**	**Allocated Adjustment**	**Manual Adjustment**	**Adjusted Amount** (Statement Amount + Allocated Adjustment + Manual Adjustment)
Personal Property	4.8	20,000	0	0	20,000
Commercial Property	3.6	15,000	0	0	15,000
Aircraft	3.8	16,000	0	0	16,000
Auto Liability	8.3	35,000	0	0	35,000
Auto Personal Accident	3.3	14,000	0	0	14,000
Auto Other	6.0	25,000	0	0	25,000
Boiler&Machinery	3.6	15,000	0	0	15,000
Credit	4.0	17,000	0	0	17,000
Credit Protection	4.3	18,000	0	0	18,000
Fidelity	4.5	19,000	0	0	19,000
Hail	4.8	20,000	0	0	20,000
Legal Expense	5.0	21,000	0	0	21,000
Liability	6.7	28,000	0	0	28,000
Mortgage	3.3	14,000	0	0	14,000
Other Approved Products	3.8	16,000	0	0	16,000
Surety	5.2	22,000	0	0	22,000
Title	6.0	25,000	0	0	25,000
Marine	6.4	27,000	0	0	27,000
Accident & Sickness	5.5	23,000	0	0	23,000
Warranty	7.1	30,000	0	0	30,000
Total	**100.0**	**420,000**	**0**	**0**	**420,000**

	Capital Factors					Required Capital Amount (Adjusted Amount * VaR Capital Factor)			
Class of Insurance	**VaR 95**	**VaR 99**	**VaR 99.5**	**VaR 99.6**		**VaR 95**	**VaR 99**	**VaR 99.5**	**VaR 99.6**
Personal Property	0.263	0.398	0.452	0.468		5,260	7,960	9,040	9,360
Commercial Property	0.246	0.373	0.423	0.438		3,690	5,595	6,345	6,570
Aircraft	0.242	0.367	0.416	0.432		3,872	5,872	6,656	6,912
Auto Liability	0.210	0.314	0.354	0.367		7,350	10,990	12,390	12,845
Auto Personal Accident	0.210	0.314	0.354	0.367		2,940	4,396	4,956	5,138
Auto Other	0.185	0.276	0.310	0.322		4,625	6,900	7,750	8,050
Boiler&Machinery	0.242	0.367	0.416	0.432		3,630	5,505	6,240	6,480
Credit	0.229	0.345	0.390	0.405		3,893	5,865	6,630	6,885
Credit Protection	0.229	0.345	0.390	0.405		4,122	6,210	7,020	7,290
Fidelity	0.238	0.359	0.406	0.422		4,522	6,821	7,714	8,018
Hail	0.246	0.373	0.423	0.438		4,920	7,460	8,460	8,760
Legal Expense	0.259	0.394	0.447	0.464		5,439	8,274	9,387	9,744
Liability	0.259	0.394	0.447	0.464		7,252	11,032	12,516	12,992
Mortgage	0.238	0.359	0.406	0.422		3,332	5,026	5,684	5,908
Other Approved Products	0.229	0.345	0.390	0.405		3,664	5,520	6,240	6,480
Surety	0.238	0.359	0.406	0.422		5,236	7,898	8,932	9,284
Title	0.141	0.207	0.232	0.240		3,525	5,175	5,800	6,000
Marine	0.242	0.367	0.416	0.432		6,534	9,909	11,232	11,664
Accident & Sickness	0.229	0.345	0.390	0.405		5,267	7,935	8,970	9,315
Warranty	0.194	0.289	0.327	0.338		5,820	8,670	9,810	10,140
Total	**0.226**	**0.341**	**0.385**	**0.400**		**94,893**	**143,013**	**161,772**	**167,835**
Multiply by: Diversification Factor						0.60	0.60	0.60	0.60
Multiply by: Growth Factor						1.05	1.05	1.05	1.05
B6 Required Capital						**59,783**	**90,098**	**101,916**	**105,736**

Diversification Credit

The diversification factor reflects the reduction in overall pricing risk within a well-diversified book of business. This diversification factor is calculated using a correlation matrix. 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.

Rating units with larger books of business covering multiple lines of business tend to show correlations similar to the industry-level correlations in underwriting profits and losses; those with smaller books

tend to show lower line-by-line correlations than the industry due to their higher volatility in the individual lines. As such, AM Best adjusts the industry-premium correlation matrix based on the size of the rating unit's total reported net premiums written. Rating units with smaller net premiums written receive more diversification benefit as a larger reduction to the industry-premium correlation matrix is applied than that given to rating units with larger books of business.

Exhibit C.9: Industry Premium Correlation Matrix

	Personal Property	Commercial Property	Aircraft	Auto Liability	Auto Personal Accident	Auto Other	Boiler and Machinery	Credit	Credit Protection	Fidelity	Hail	Legal Expense	Liability	Mortgage	Other Approved Products	Surety	Title	Marine	Accident and Sickness	Warranty
Personal Property	1.00	0.60	0.65	0.62	0.62	0.63	0.65	0.50	0.50	0.00	0.70	0.07	0.63	0.39	0.24	0.00	0.27	0.63	0.49	0.00
Commercial Property	0.60	1.00	0.74	0.25	0.25	0.52	0.74	0.26	0.26	0.00	0.85	0.36	0.42	0.40	0.23	0.00	0.20	0.66	0.27	0.00
Aircraft	0.65	0.74	1.00	0.50	0.50	0.81	0.91	0.46	0.46	0.00	0.79	0.21	0.64	0.00	0.25	0.00	0.20	0.82	0.44	0.00
Auto Liability	0.62	0.25	0.50	1.00	0.90	0.78	0.50	0.47	0.47	0.00	0.22	0.49	0.48	0.00	0.25	0.00	0.20	0.45	0.46	0.00
Auto Personal Accident	0.62	0.25	0.50	0.90	1.00	0.78	0.50	0.47	0.47	0.00	0.22	0.49	0.48	0.00	0.25	0.00	0.20	0.45	0.46	0.00
Auto Other	0.63	0.52	0.81	0.78	0.78	1.00	0.81	0.50	0.50	0.00	0.47	0.48	0.69	0.00	0.24	0.00	0.19	0.68	0.48	0.00
Boiler and Machinery	0.65	0.74	0.91	0.50	0.50	0.81	1.00	0.46	0.46	0.00	0.79	0.21	0.64	0.00	0.25	0.00	0.20	0.82	0.44	0.00
Credit	0.50	0.26	0.46	0.47	0.47	0.50	0.46	1.00	0.90	0.00	0.27	0.00	0.63	0.40	0.24	0.00	0.48	0.42	0.00	0.00
Credit Protection	0.50	0.26	0.46	0.47	0.47	0.50	0.46	0.90	1.00	0.00	0.27	0.00	0.63	0.40	0.24	0.00	0.48	0.42	0.00	0.00
Fidelity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.19	0.00	0.44	0.25	0.49	0.49	0.00	0.00	0.00
Hail	0.70	0.85	0.79	0.22	0.22	0.47	0.79	0.27	0.27	0.00	1.00	0.00	0.47	0.18	0.24	0.00	0.00	0.77	0.27	0.00
Legal Expense	0.07	0.36	0.21	0.49	0.49	0.48	0.21	0.00	0.00	0.19	0.00	1.00	0.25	0.15	0.23	0.40	0.00	0.00	0.24	0.00
Liability	0.63	0.42	0.64	0.48	0.48	0.69	0.64	0.63	0.63	0.00	0.47	0.25	1.00	0.24	0.24	0.20	0.27	0.31	0.22	0.00
Mortgage	0.39	0.40	0.00	0.00	0.00	0.00	0.00	0.40	0.40	0.44	0.18	0.15	0.24	1.00	0.24	0.25	0.65	0.00	0.16	0.00
Other Approved Products	0.24	0.23	0.25	0.25	0.25	0.24	0.25	0.24	0.24	0.25	0.24	0.23	0.24	0.24	1.00	0.25	0.24	0.23	0.24	0.00
Surety	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.00	0.40	0.20	0.25	0.25	1.00	0.43	0.00	0.00	0.00
Title	0.27	0.20	0.20	0.20	0.20	0.19	0.20	0.48	0.48	0.49	0.00	0.00	0.27	0.65	0.24	0.43	1.00	0.00	0.00	0.00
Marine	0.63	0.66	0.82	0.45	0.45	0.68	0.82	0.42	0.42	0.00	0.77	0.00	0.31	0.00	0.23	0.00	0.00	1.00	0.43	0.00
Accident and Sickness	0.49	0.27	0.44	0.46	0.46	0.48	0.44	0.00	0.00	0.00	0.27	0.24	0.22	0.16	0.24	0.00	0.00	0.43	1.00	0.00
Warranty	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00

Growth Charge

This charge reflects the sizable risk a rating unit faces when bringing in substantial new business based on weaker underwriting and pricing standards or lack of market knowledge. The calculation of the premium growth charge is identical to the calculation of reserve growth charge and is applied directly to the aggregate required capital for premium risk.

In the cases of both the premium and reserve growth charges, adjustments may be made to mitigate higher growth charges based on a rating unit's substantial, historical control of the book of business, as well as the historical profitability and stability of the book of business.

B7 Business Risk

AM Best applies a nominal 1% capital charge to several off-balance-sheet items, including balances associated with non-controlled assets, guarantees for affiliates, contingent liabilities, long-term lease obligations, and interest-rate swaps. This charge represents a starting point for business risk capital charges assessed based on qualitative assessments of off-balance-sheet liabilities that might encumber a rating unit's capital growth or preservation. **Exhibit C.10** shows the business risk calculation for a sample rating unit.

Understanding BCAR for Canadian Property/Casualty Insurers

Exhibit C.10: B7 Business Risk Example

Off Balance Sheet Item	Statement Value	Adjustment	Adjusted Amount (Statement + Adjustment)	Risk Factor %		Required Capital Amount (Adjusted Amount * Risk Factor)
Noncontrolled Assets	50,000	0	50,000	1.0		500
Guarantees For Affiliates	10,000	0	10,000	1.0		100
Contingent Liabilities	12,000	0	12,000	1.0		120
Long Term Lease	1,000	0	1,000	1.0		10
Interest Rate Swaps	30,000	0	30,000	1.0		300
Derivative Liability	2,000	0	2,000	100.0		2,000
Pension Plan Obligations	50,000	0	50,000	0*		0
Other Post Employment Obligations	15,000	0	15,000	0**		0
Other	5,000	0	5,000	1.0		50
Totals	**175,000**	**0**	**175,000**	**1.8**	**B7 Required Capital**	**3,080**

*A risk factor of zero assumes the pension plan PBO for vested and non-vested employees is fully funded or the company has a liability on its balance sheet for the entire unfunded amount.
**A risk factor of zero assumes the other post-employment/retirement PBO for vested and non-vested employees is fully funded or the company has a liability on its balance sheet for the entire unfunded amount.

After gaining an understanding of the inherent risk relating to off-balance-sheet items, the analyst can modify the capital charge to reflect the appropriate level of risk. For example, to capture the risk associated with credit default swaps, the analyst can assess the credit quality of the underlying portfolio of counterparties using additional information to determine the appropriate capital charge. In such a case, the capital charge may be increased to as high as 100% if recovery is unlikely from the various counterparties.

Pension plans and other post-employment/retirement obligations are charged for the unfunded portion of these obligations in the calculation of required capital for business risk. The charge 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 is not factored directly into the rating unit's BCAR analysis but is factored into the balance sheet evaluation.

Derivatives with a liability value on the balance sheet are initially placed on the business risk page with a 100% risk factor. However, the rating unit's entire derivative program is evaluated in the manner discussed earlier within the treatment of derivative assets.

Although many of these items are classified appropriately in the business risk component, adjustments for these items may alternatively be included in the available capital component.

B8 Catastrophe Risk

Occurrence of a Catastrophe

A standardized incorporation of a rating unit's PMLs in the model highlights AM Best's concern that catastrophes are a severe threat to solvency in the industry because of the significant, rapid, and unexpected impact that can occur. While many other exposures can affect solvency, no single exposure can affect policyholder security more instantaneously than catastrophes. To reflect this concern, AM Best adds the rating unit's modeled catastrophe losses to required capital at each confidence level.

The net PML used for each confidence level is taken from the per-occurrence all-perils combined information provided to AM Best. The pre-tax net PMLs, which are based on worldwide exposures, are net of reinsurance and include reinstatement premiums. The determination of these losses should be provided through the SRQ or through discussions with management. The information filed by rating units within the SRQ can be a key component within the assessment of their capital strength. However, like any other component within BCAR, the PML responses can be adjusted to reflect additional information provided by management. The PML response also can be adjusted if AM Best determines additional conservatism should be taken into consideration based on a review of the catastrophe study.

Discussion regarding output from third party models may be used to assist management and AM Best analysts in assessing a rating unit's catastrophe exposure at the various confidence levels. This assessment should not be limited to the output of a catastrophe model, or the average of several models, and it should reflect a full consideration of the rating unit's potential losses.

For those rating units that do not provide modeled PMLs, AM Best may use other information to estimate potential large losses, such as total policy limits; total insured value by region; actual historical catastrophe losses; etc.

PMLs are quite often stated on a "return period" basis, such as a 1-in-100-year loss or a 1-in-200-year loss. The BCAR model uses the PML for a particular return period at its corresponding confidence level. **Exhibit C.11** shows the return periods and corresponding confidence levels for each of the PMLs used in the BCAR model.

Exhibit C.11: Return Periods vs. Confidence Levels

Return Period (Years)	Annual Probability (%)	Confidence Level (%)
20	5.0	95.0
100	1.0	99.0
200	0.5	99.5
250	0.4	99.6

Casualty Catastrophes

For casualty writers, an estimate of a catastrophic casualty loss may be used in the analysis of balance sheet strength.

Terrorism

Information on terrorism risk can be provided to AM Best by the rating unit through discussions with management when the risk is material. This information should be provided both gross and net of reinsurance. From this information, AM Best can then calculate a charge to required capital that may be included in the standard BCAR analysis if the terrorism charge is greater than the natural catastrophe PML. The terrorism charge may consider the probability of a large-scale attack, the

location of the attack, the number of exposure concentrations, the size of the exposures relative to total equity, data quality, and any available loss mitigation.

D. Available Capital

AM 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. These adjustments even the playing field and compensate for certain economic values not reflected in the statutory financials. Reported capital may be modified for equity adjustments related to unearned premiums, loss reserves, and fixed income assets on an after-tax basis, based on a three-year average effective tax rate that can be modified to reflect the rating unit's projected medium-term tax rate.

The following sections highlight possible adjustments made to available capital in the BCAR for Canadian Property/Casualty insurers.

Unearned Premium Equity

In the case of unearned premiums, AM Best reduces available capital for high loss ratios and pricing risk embedded within the unearned premium reserves.

To the extent that a rating unit's book of business generates a discounted accident year loss and LAE ratio in excess of 100%, AM Best does not recognize any equity in unearned premiums and will reduce the reported capital by the after tax net deferred acquisition costs included in the reported capital. For rating units with discounted accident year loss and LAE ratios below 100% but still higher than their pre-paid underwriting expense structure will allow, AM Best recognizes only a pro-rata share of the deferred acquisition costs as equity.

A risk charge is applied to the unearned premiums to reflect the pricing risk inherent in the rates charged for business written last year, but still unearned as of the current year-end. This risk charge is also included in the unearned premium equity adjustment and is also a reduction to the reported capital. This pricing risk is separate from the risk charged on the premium risk page, which attempts to capture the pricing risk associated with the business that will be written in the upcoming year. The model uses the current year written premium as a proxy for the upcoming year's writings.

Loss Reserve Equity

AM Best adjusts available capital to reflect the net equity embedded within loss reserves. This equity represents the difference between a rating unit's economic reserves—which reflects AM Best's view of ultimate reserves on a discounted basis—and carried reserves. The adjustment, which can be sizable for a casualty insurer, enables AM Best to even the playing field and better differentiate rating units that have historically under-reserved from those that have strong loss reserve positions.

Any reserve equity gain from reinsurance transactions already included in available capital is removed from available capital, since the equity will be awarded through the calculation of loss reserve equity. This is consistent with AM Best's treatment of discounting and with efforts to treat loss reserve equity

consistently. The best example of this is retroactive reinsurance through a loss portfolio transfer in which a rating unit often pays the reinsurer assets equal to the present value of the loss reserve portfolio plus a risk margin and then cedes the full value loss reserves, producing a gain that is embedded in reported capital. Depending upon the accounting treatment of the ceded reserves, these ceded reserves may need to be added back to the primary insurer's reserves. When the ceded reserves remain within the balance sheet reserves, some form of adjustment is needed. Otherwise, the time value of money would be credited twice—once within reported capital and once within the calculation of loss reserve equity. In this case, AM Best removes the gain from reported capital, and the equity within these reserves is awarded through the discount factor within the calculation of reserve equity. A reserve risk charge still applies to these reinsured losses. Without additional stop loss, the primary insurer remains exposed to any potential adverse loss development on these reserves.

Stress Test Adjustments

AM Best stresses a rating unit's available capital further as part of its sensitivity analysis. This analysis measures a rating unit's prospective capital needs stemming from a number of off-balance-sheet items, including commitments or guarantees to affiliates, outstanding litigation, excessive catastrophe losses not contained within a rating unit's reinsurance program, and continued operating losses. 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 do impact AM Best's view of capitalization.

Rating Units with Natural Catastrophe Exposure

Rating units with a natural catastrophe exposure may be subjected to additional stress tests related to the occurrence of such an event. The stress test assumes an event occurred and the stress test adjusts the rating unit's pre-event BCAR to reflect the impact on its balance sheet using the following adjustments:

1. Total equity is reduced by the 1-in-100-year net post-tax PML (including reinstatement premium) from the per-occurrence all-perils combined information.
2. Reinsurance recoverables are increased a minimum of 40% of the difference in the 1-in-100 gross and net pre-tax per-occurrence all perils combined PMLs (excluding reinstatement premiums). This adjustment can also increase the reinsurance dependence factor. In determining the appropriate risk charge for these recoverables, AM Best assumes the ratings of the reinsurers will remain unchanged as a result of the event.
3. An amount equal to 40% of the 1-in-100 year per-occurrence all-perils combined net pre-tax PML (excluding reinstatement premiums) is added to the loss reserves. This amount may be adjusted based upon the reinsurance structure (i.e., caps, co-participation, etc.).
4. If necessary, the net pre-tax PMLs (including reinstatement premiums) used at each confidence level for the B8 catastrophe risk may be adjusted to reflect any changes in the net PML due to changes in the reinsurance structure in place after the first event occurs.

Note: The reduction to surplus in Step 1 is on a post-tax basis only if the analyst believes that the company will be able to use the tax benefit. Otherwise, the calculation is on a pre-tax basis.

E. Conclusion

BCAR is important to AM 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.

AM 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 AM Best's rating evaluation.

Understanding BCAR for Canadian Property/Casualty Insurers

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%

Understanding BCAR for Canadian Property/Casualty Insurers

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: Credit Risk Factors

Reinsurance Recoverables Credit Risk Factors - VaR 95											
Best's ICR of Reinsurer	FSR	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
aaa	A++	0.3%	0.4%	0.5%	0.6%	0.6%	0.7%	0.8%	0.9%	1.0%	1.0%
aa+	A++	0.5%	0.6%	0.7%	0.8%	0.8%	1.0%	1.1%	1.2%	1.3%	1.4%
aa	A+	0.7%	0.8%	0.9%	1.0%	1.1%	1.2%	1.4%	1.5%	1.6%	1.7%
aa-	A+	1.0%	1.1%	1.3%	1.4%	1.5%	1.6%	1.7%	1.9%	2.0%	2.1%
a+	A	1.2%	1.5%	1.7%	1.9%	2.1%	2.3%	2.4%	2.5%	2.7%	2.8%
a	A	1.5%	1.8%	2.0%	2.3%	2.5%	2.7%	2.9%	3.1%	3.3%	3.4%
a-	A-	2.0%	2.4%	2.7%	3.1%	3.4%	3.7%	4.0%	4.3%	4.6%	4.8%
bbb+	B++	2.5%	3.2%	3.9%	4.5%	5.0%	5.6%	6.2%	6.7%	7.2%	7.6%
bbb	B++	2.9%	4.0%	5.0%	5.9%	6.7%	7.6%	8.4%	9.1%	9.7%	10.3%
bbb-	B+	3.9%	5.4%	6.8%	8.1%	9.2%	10.2%	11.0%	11.8%	12.5%	13.1%
bb+	B	5.9%	7.5%	9.1%	10.5%	11.7%	12.9%	14.0%	14.9%	15.8%	16.5%
bb	B	8.8%	10.6%	12.2%	13.7%	15.1%	16.3%	17.4%	18.3%	19.2%	20.0%
bb-	B-	11.8%	13.7%	15.4%	17.0%	18.4%	19.3%	20.2%	20.9%	21.5%	22.1%
b+	C++	14.7%	16.3%	17.7%	19.0%	20.1%	21.0%	21.7%	22.4%	22.9%	23.4%
b	C++	17.7%	18.9%	20.0%	20.9%	21.8%	22.6%	23.3%	23.9%	24.4%	24.8%
b-	C+	19.6%	20.7%	21.8%	22.7%	23.5%	24.2%	24.8%	25.3%	25.8%	26.2%
ccc+ and Lower		49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%
Not Rated by A.M. Best		49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%

*Includes reinsurance recoverables on paid loss & LAE, known case loss & LAE reserves, IBNR loss & LAE reserves, and unearned premium.

Reinsurance Recoverables Credit Risk Factors - VaR 99											
Best's ICR of Reinsurer	FSR	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
aaa	A++	1.2%	1.4%	1.5%	1.6%	1.7%	1.8%	1.9%	1.9%	2.0%	2.1%
aa+	A++	1.5%	1.7%	1.8%	2.0%	2.1%	2.3%	2.4%	2.5%	2.7%	2.8%
aa	A+	1.7%	1.9%	2.2%	2.3%	2.5%	2.7%	2.9%	3.1%	3.3%	3.4%
aa-	A+	2.0%	2.2%	2.5%	2.7%	2.9%	3.2%	3.5%	3.7%	3.9%	4.1%
a+	A	2.2%	2.5%	2.8%	3.1%	3.4%	3.7%	4.0%	4.3%	4.6%	4.8%
a	A	2.5%	3.0%	3.4%	3.8%	4.2%	4.5%	4.8%	5.1%	5.3%	5.5%
a-	A-	2.9%	3.5%	4.1%	4.6%	5.0%	5.5%	5.9%	6.3%	6.6%	6.9%
bbb+	B++	3.9%	4.7%	5.4%	6.1%	6.7%	7.4%	8.1%	8.6%	9.2%	9.7%
bbb	B++	4.9%	5.9%	6.8%	7.6%	8.4%	9.4%	10.2%	11.0%	11.8%	12.4%
bbb-	B+	5.9%	7.3%	8.6%	9.8%	10.9%	11.9%	12.9%	13.7%	14.5%	15.2%
bb+	B	8.8%	10.4%	11.8%	13.1%	14.3%	15.3%	16.3%	17.1%	17.9%	18.6%
bb	B	11.8%	13.4%	15.0%	16.3%	17.6%	18.7%	19.7%	20.6%	21.4%	22.1%
bb-	B-	14.7%	16.5%	18.1%	19.6%	21.0%	21.8%	22.5%	23.1%	23.6%	24.1%
b+	C++	17.7%	19.1%	20.4%	21.6%	22.6%	23.4%	24.0%	24.6%	25.1%	25.5%
b	C++	20.6%	21.7%	22.7%	23.5%	24.3%	25.0%	25.6%	26.1%	26.5%	26.9%
b-	C+	22.6%	23.6%	24.5%	25.3%	26.0%	26.6%	27.1%	27.6%	27.9%	28.3%
ccc+ and Lower		49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%
Not Rated by A.M. Best		49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%

*Includes reinsurance recoverables on paid loss & LAE, known case loss & LAE reserves, IBNR loss & LAE reserves, and unearned premium.

Understanding BCAR for Canadian Property/Casualty Insurers

Appendix 2 Continued

Reinsurance Recoverables Credit Risk Factors - VaR 99.5											
Best's ICR of Reinsurer	FSR	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
aaa	A++	1.7%	1.9%	2.0%	2.2%	2.3%	2.4%	2.5%	2.6%	2.7%	2.8%
aa+	A++	2.0%	2.2%	2.4%	2.6%	2.7%	2.9%	3.1%	3.2%	3.3%	3.4%
aa	A+	2.2%	2.5%	2.7%	3.0%	3.1%	3.4%	3.6%	3.8%	4.0%	4.1%
aa-	A+	2.5%	2.8%	3.2%	3.5%	3.8%	4.0%	4.3%	4.5%	4.7%	4.8%
a+	A	2.9%	3.4%	3.9%	4.3%	4.6%	4.9%	5.2%	5.4%	5.7%	5.9%
a	A	3.4%	4.0%	4.5%	5.0%	5.5%	5.8%	6.1%	6.4%	6.7%	6.9%
a-	A-	3.9%	4.7%	5.4%	6.1%	6.7%	7.1%	7.4%	7.8%	8.0%	8.3%
bbb+	B++	4.9%	5.9%	6.8%	7.6%	8.4%	9.0%	9.6%	10.1%	10.6%	11.0%
bbb	B++	5.9%	7.1%	8.2%	9.2%	10.1%	11.0%	11.8%	12.5%	13.2%	13.8%
bbb-	B+	7.8%	9.2%	10.4%	11.6%	12.6%	13.5%	14.4%	15.2%	15.9%	16.5%
bb+	B	10.8%	12.3%	13.6%	14.8%	15.9%	16.9%	17.8%	18.6%	19.4%	20.0%
bb	B	13.7%	15.3%	16.8%	18.1%	19.3%	20.3%	21.2%	22.1%	22.8%	23.4%
bb-	B-	16.7%	18.4%	20.0%	21.4%	22.6%	23.4%	24.0%	24.6%	25.1%	25.5%
b+	C++	19.6%	21.0%	22.2%	23.3%	24.3%	25.0%	25.6%	26.1%	26.5%	26.9%
b	C++	22.6%	23.6%	24.5%	25.3%	26.0%	26.6%	27.1%	27.6%	27.9%	28.3%
b-	C+	24.5%	25.5%	26.3%	27.0%	27.7%	28.2%	28.7%	29.1%	29.4%	29.6%
ccc+ and Lower		49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%
Not Rated by A.M. Best		49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%

*Includes reinsurance recoverables on paid loss & LAE, known case loss & LAE reserves, IBNR loss & LAE reserves, and unearned premium.

Reinsurance Recoverables Credit Risk Factors - VaR 99.6											
Best's ICR of Reinsurer	FSR	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
aaa	A++	1.8%	2.0%	2.2%	2.3%	2.5%	2.6%	2.7%	2.8%	2.9%	2.9%
aa+	A++	2.1%	2.3%	2.5%	2.7%	2.9%	3.1%	3.2%	3.4%	3.5%	3.6%
aa	A+	2.4%	2.7%	2.9%	3.1%	3.3%	3.6%	3.8%	4.0%	4.2%	4.3%
aa-	A+	2.7%	3.1%	3.4%	3.7%	4.0%	4.2%	4.5%	4.7%	4.8%	5.0%
a+	A	3.2%	3.7%	4.1%	4.5%	4.8%	5.1%	5.4%	5.7%	5.9%	6.1%
a	A	3.7%	4.3%	4.8%	5.3%	5.8%	6.1%	6.5%	6.7%	7.0%	7.2%
a-	A-	4.3%	5.1%	5.8%	6.5%	7.1%	7.5%	7.8%	8.1%	8.4%	8.6%
bbb+	B++	5.3%	6.3%	7.2%	8.0%	8.8%	9.4%	10.0%	10.5%	11.0%	11.4%
bbb	B++	6.4%	7.5%	8.6%	9.6%	10.5%	11.4%	12.2%	12.9%	13.5%	14.1%
bbb-	B+	8.3%	9.7%	10.9%	12.0%	13.0%	13.9%	14.8%	15.6%	16.3%	16.9%
bb+	B	11.3%	12.7%	14.1%	15.3%	16.3%	17.3%	18.2%	19.0%	19.7%	20.3%
bb	B	14.2%	15.8%	17.2%	18.5%	19.7%	20.7%	21.6%	22.4%	23.1%	23.8%
bb-	B-	17.2%	18.9%	20.4%	21.8%	23.1%	23.8%	24.4%	25.0%	25.4%	25.8%
b+	C++	20.1%	21.5%	22.7%	23.8%	24.7%	25.4%	26.0%	26.5%	26.9%	27.2%
b	C++	23.0%	24.0%	24.9%	25.7%	26.4%	27.0%	27.5%	27.9%	28.3%	28.6%
b-	C+	25.0%	25.9%	26.7%	27.5%	28.1%	28.6%	29.1%	29.4%	29.7%	30.0%
ccc+ and Lower		49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%
Not Rated by A.M. Best		49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%	49.0%

*Includes reinsurance recoverables on paid loss & LAE, known case loss & LAE reserves, IBNR loss & LAE reserves, and unearned premium.

Appendix 3: Size Thresholds by Line of Business (USD)

Net Loss and LAE Reserve Risk

Class of Insurance	Very Small	Small	Medium	Large
			Size Category	
Personal Property	Under $2M	$2M to $5M	$5M to $15M	Over $15M
Commercial Property	Under $2M	$2M to $5M	$5M to $17M	Over $17M
Aircraft	Under $2M	$2M to $10M	$10M to $60M	Over $60M
Auto Liability	Under $5M	$5M to $15M	$15M to $50M	Over $50M
Auto Personal Accident	Under $5M	$5M to $15M	$15M to $50M	Over $50M
Auto Other	Under $2M	$2M to $5M	$5M to $17M	Over $17M
Boiler and Machinery	Under $2M	$2M to $10M	$10M to $60M	Over $60M
Credit	Under $2M	$2M to $5M	$5M to $17M	Over $17M
Credit Protection	Under $2M	$2M to $5M	$5M to $17M	Over $17M
Fidelity	Under $2M	$2M to $5M	$5M to $17M	Over $17M
Hail	Under $2M	$2M to $5M	$5M to $17M	Over $17M
Legal Expense	Under $4M	$4M to $12M	$12M to $40M	Over $40M
Liability	Under $4M	$4M to $12M	$12M to $40M	Over $40M
Mortgage	Under $2M	$2M to $5M	$5M to $17M	Over $17M
Other Approved Products	Under $2M	$2M to $5M	$5M to $17M	Over $17M
Surety	Under $2M	$2M to $5M	$5M to $17M	Over $17M
Title	Under $10M	$10M to $100M	$100M to $250M	Over $250M
Marine	Under $2M	$2M to $10M	$10M to $60M	Over $60M
Accident and Sickness	Under $2M	$2M to $5M	$5M to $17M	Over $17M
Warranty	Under $2M	$2M to $5M	$5M to $17M	Over $17M

Net Premium Written Risk

Class of Insurance	Very Small	Small	Medium	Large
			Size Category	
Personal Property	Under $2M	$2M to $10M	$10M to $30M	Over $30M
Commercial Property	Under $2M	$2M to $10M	$10M to $30M	Over $30M
Aircraft	Under $2M	$2M to $10M	$10M to $30M	Over $30M
Auto Liability	Under $2M	$2M to $10M	$10M to $30M	Over $30M
Auto Personal Accident	Under $2M	$2M to $10M	$10M to $30M	Over $30M
Auto Other	Under $2M	$2M to $10M	$10M to $30M	Over $30M
Boiler and Machinery	Under $2M	$2M to $10M	$10M to $30M	Over $30M
Credit	Under $2M	$2M to $10M	$10M to $30M	Over $30M
Credit Protection	Under $2M	$2M to $10M	$10M to $30M	Over $30M
Fidelity	Under $2M	$2M to $10M	$10M to $30M	Over $30M
Hail	Under $2M	$2M to $10M	$10M to $30M	Over $30M
Legal Expense	Under $2M	$2M to $10M	$10M to $30M	Over $30M
Liability	Under $2M	$2M to $10M	$10M to $30M	Over $30M
Mortgage	Under $2M	$2M to $10M	$10M to $30M	Over $30M
Other Approved Products	Under $2M	$2M to $10M	$10M to $30M	Over $30M
Surety	Under $2M	$2M to $10M	$10M to $30M	Over $30M
Title	Under $2M	$2M to $10M	$10M to $30M	Over $30M
Marine	Under $2M	$2M to $10M	$10M to $30M	Over $30M
Accident and Sickness	Under $2M	$2M to $10M	$10M to $30M	Over $30M
Warranty	Under $2M	$2M to $10M	$10M to $30M	Over $30M

Appendix 3 Continued (CAD)

Line of Business Thresholds

Net Loss and LAE Reserve Risk								
	Size Category							
Class of Insurance	**Very Small**	**Small**			**Medium**			**Large**
Personal Property	Under $2.7M	$2.7M	to	$6.8M	$6.8M	to	$20.3M	Over $20.3M
Commercial Property	Under $2.7M	$2.7M	to	$6.8M	$6.8M	to	$23M	Over $23M
Aircraft	Under $2.7M	$2.7M	to	$13.5M	$13.5M	to	$81M	Over $81M
Auto Liability	Under $6.8M	$6.8M	to	$20.3M	$20.3M	to	$67.5M	Over $67.5M
Auto Personal Accident	Under $6.8M	$6.8M	to	$20.3M	$20.3M	to	$67.5M	Over $67.5M
Auto Other	Under $2.7M	$2.7M	to	$6.8M	$6.8M	to	$23M	Over $23M
Boiler and Machinery	Under $2.7M	$2.7M	to	$13.5M	$13.5M	to	$81M	Over $81M
Credit	Under $2.7M	$2.7M	to	$6.8M	$6.8M	to	$23M	Over $23M
Credit Protection	Under $2.7M	$2.7M	to	$6.8M	$6.8M	to	$23M	Over $23M
Fidelity	Under $2.7M	$2.7M	to	$6.8M	$6.8M	to	$23M	Over $23M
Hail	Under $2.7M	$2.7M	to	$6.8M	$6.8M	to	$23M	Over $23M
Legal Expense	Under $5.4M	$5.4M	to	$16.2M	$16.2M	to	$54M	Over $54M
Liability	Under $5.4M	$5.4M	to	$16.2M	$16.2M	to	$54M	Over $54M
Mortgage	Under $2.7M	$2.7M	to	$6.8M	$6.8M	to	$23M	Over $23M
Other Approved Products	Under $2.7M	$2.7M	to	$6.8M	$6.8M	to	$23M	Over $23M
Surety	Under $2.7M	$2.7M	to	$6.8M	$6.8M	to	$23M	Over $23M
Title	Under $13.5M	$13.5M	to	$135M	$135M	to	$337.5M	Over $337.5M
Marine	Under $2.7M	$2.7M	to	$13.5M	$13.5M	to	$81M	Over $81M
Accident and Sickness	Under $2.7M	$2.7M	to	$6.8M	$6.8M	to	$23M	Over $23M
Warranty	Under $2.7M	$2.7M	to	$6.8M	$6.8M	to	$23M	Over $23M

Net Premium Written Risk								
	Size Category							
Class of Insurance	**Very Small**	**Small**			**Medium**			**Large**
Personal Property	Under $2.7M	$2.7M	to	$13.5M	$13.5M	to	$40.5M	Over $40.5M
Commercial Property	Under $2.7M	$2.7M	to	$13.5M	$13.5M	to	$40.5M	Over $40.5M
Aircraft	Under $2.7M	$2.7M	to	$13.5M	$13.5M	to	$40.5M	Over $40.5M
Auto Liability	Under $2.7M	$2.7M	to	$13.5M	$13.5M	to	$40.5M	Over $40.5M
Auto Personal Accident	Under $2.7M	$2.7M	to	$13.5M	$13.5M	to	$40.5M	Over $40.5M
Auto Other	Under $2.7M	$2.7M	to	$13.5M	$13.5M	to	$40.5M	Over $40.5M
Boiler and Machinery	Under $2.7M	$2.7M	to	$13.5M	$13.5M	to	$40.5M	Over $40.5M
Credit	Under $2.7M	$2.7M	to	$13.5M	$13.5M	to	$40.5M	Over $40.5M
Credit Protection	Under $2.7M	$2.7M	to	$13.5M	$13.5M	to	$40.5M	Over $40.5M
Fidelity	Under $2.7M	$2.7M	to	$13.5M	$13.5M	to	$40.5M	Over $40.5M
Hail	Under $2.7M	$2.7M	to	$13.5M	$13.5M	to	$40.5M	Over $40.5M
Legal Expense	Under $2.7M	$2.7M	to	$13.5M	$13.5M	to	$40.5M	Over $40.5M
Liability	Under $2.7M	$2.7M	to	$13.5M	$13.5M	to	$40.5M	Over $40.5M
Mortgage	Under $2.7M	$2.7M	to	$13.5M	$13.5M	to	$40.5M	Over $40.5M
Other Approved Products	Under $2.7M	$2.7M	to	$13.5M	$13.5M	to	$40.5M	Over $40.5M
Surety	Under $2.7M	$2.7M	to	$13.5M	$13.5M	to	$40.5M	Over $40.5M
Title	Under $2.7M	$2.7M	to	$13.5M	$13.5M	to	$40.5M	Over $40.5M
Marine	Under $2.7M	$2.7M	to	$13.5M	$13.5M	to	$40.5M	Over $40.5M
Accident and Sickness	Under $2.7M	$2.7M	to	$13.5M	$13.5M	to	$40.5M	Over $40.5M
Warranty	Under $2.7M	$2.7M	to	$13.5M	$13.5M	to	$40.5M	Over $40.5M

*Based on USD/CAN exchange rate of USD 1.00 / CAN 1.35 as of December 31, 2022. Thresholds updated annually.

Appendix 4: Baseline Reserve Risk Factors

Size Category: Very Small

	Confidence Level			
	95%	99%	99.5%	99.6%
Personal Property	0.320	0.492	0.560	0.581
Commercial Property	0.322	0.495	0.565	0.586
Aircraft	0.240	0.362	0.410	0.426
Auto Liability	0.202	0.302	0.341	0.352
Auto Personal Accident	0.202	0.302	0.341	0.352
Auto Other	0.226	0.339	0.383	0.396
Boiler and Machinery	0.240	0.362	0.410	0.426
Credit	0.283	0.430	0.488	0.507
Credit Protection	0.283	0.430	0.488	0.507
Fidelity	0.312	0.479	0.546	0.566
Hail	0.322	0.495	0.565	0.581
Legal Expense	0.379	0.587	0.671	0.699
Liability	0.379	0.587	0.671	0.699
Mortgage	0.312	0.479	0.546	0.566
Other Approved Products	0.283	0.430	0.488	0.507
Surety	0.312	0.479	0.546	0.566
Title	0.443	0.692	0.793	0.826
Marine	0.240	0.362	0.410	0.426
Accident and Sickness	0.283	0.430	0.488	0.507
Warranty	0.226	0.339	0.383	0.396

Size Category: Small

	Confidence Level			
	95%	99%	99.5%	99.6%
Personal Property	0.281	0.427	0.485	0.502
Commercial Property	0.280	0.425	0.484	0.502
Aircraft	0.225	0.338	0.382	0.397
Auto Liability	0.184	0.274	0.309	0.319
Auto Personal Accident	0.184	0.274	0.309	0.319
Auto Other	0.205	0.306	0.345	0.357
Boiler and Machinery	0.225	0.338	0.382	0.397
Credit	0.242	0.364	0.412	0.427
Credit Protection	0.242	0.364	0.412	0.427
Fidelity	0.270	0.410	0.466	0.483
Hail	0.280	0.425	0.484	0.502
Legal Expense	0.310	0.474	0.539	0.560
Liability	0.310	0.474	0.539	0.560
Mortgage	0.270	0.410	0.466	0.483
Other Approved Products	0.242	0.364	0.412	0.427
Surety	0.270	0.410	0.466	0.483
Title	0.420	0.652	0.746	0.777
Marine	0.225	0.338	0.382	0.397
Accident and Sickness	0.242	0.364	0.412	0.427
Warranty	0.205	0.306	0.345	0.358

Size Category: Medium

	Confidence Level			
	95%	99%	99.5%	99.6%
Personal Property	0.242	0.364	0.412	0.426
Commercial Property	0.243	0.366	0.415	0.430
Aircraft	0.200	0.299	0.338	0.350
Auto Liability	0.169	0.250	0.281	0.291
Auto Personal Accident	0.169	0.250	0.281	0.291
Auto Other	0.188	0.279	0.314	0.325
Boiler and Machinery	0.200	0.299	0.338	0.350
Credit	0.206	0.307	0.346	0.359
Credit Protection	0.206	0.307	0.346	0.359
Fidelity	0.252	0.381	0.433	0.448
Hail	0.243	0.366	0.415	0.430
Legal Expense	0.283	0.430	0.487	0.507
Liability	0.283	0.430	0.487	0.507
Mortgage	0.252	0.381	0.433	0.448
Other Approved Products	0.206	0.307	0.346	0.359
Surety	0.252	0.381	0.433	0.448
Title	0.385	0.594	0.678	0.706
Marine	0.200	0.299	0.338	0.350
Accident and Sickness	0.206	0.307	0.346	0.359
Warranty	0.188	0.279	0.314	0.326

Size Category: Large

	Confidence Level			
	95%	99%	99.5%	99.6%
Personal Property	0.205	0.306	0.346	0.357
Commercial Property	0.207	0.308	0.348	0.361
Aircraft	0.186	0.277	0.312	0.323
Auto Liability	0.151	0.223	0.250	0.259
Auto Personal Accident	0.151	0.223	0.250	0.259
Auto Other	0.170	0.252	0.283	0.292
Boiler and Machinery	0.186	0.277	0.312	0.323
Credit	0.188	0.280	0.315	0.326
Credit Protection	0.188	0.280	0.315	0.326
Fidelity	0.234	0.353	0.399	0.413
Hail	0.207	0.308	0.348	0.361
Legal Expense	0.279	0.422	0.478	0.497
Liability	0.279	0.422	0.478	0.497
Mortgage	0.234	0.353	0.399	0.413
Other Approved Products	0.188	0.280	0.315	0.326
Surety	0.234	0.353	0.399	0.413
Title	0.363	0.557	0.634	0.660
Marine	0.186	0.277	0.312	0.323
Accident and Sickness	0.188	0.280	0.315	0.326
Warranty	0.170	0.252	0.283	0.293

Appendix 5: Baseline Premium Risk Factors

Size Category: Very Small	Confidence Level			
	95%	99%	99.5%	99.6%
Personal Property	0.323	0.496	0.566	0.587
Commercial Property	0.303	0.466	0.530	0.551
Aircraft	0.289	0.445	0.506	0.527
Auto Liability	0.267	0.404	0.459	0.476
Auto Personal Accident	0.267	0.404	0.459	0.476
Auto Other	0.239	0.361	0.409	0.425
Boiler and Machinery	0.289	0.445	0.506	0.527
Credit	0.303	0.466	0.531	0.552
Credit Protection	0.303	0.466	0.531	0.552
Fidelity	0.303	0.466	0.530	0.552
Hail	0.303	0.466	0.530	0.551
Legal Expense	0.330	0.511	0.583	0.606
Liability	0.330	0.511	0.583	0.606
Mortgage	0.303	0.466	0.530	0.552
Other Approved Products	0.303	0.466	0.531	0.552
Surety	0.303	0.466	0.530	0.552
Title	0.296	0.452	0.515	0.534
Marine	0.289	0.445	0.506	0.527
Accident and Sickness	0.303	0.466	0.531	0.552
Warranty	0.248	0.376	0.427	0.442

Size Category: Small	Confidence Level			
	95%	99%	99.5%	99.6%
Personal Property	0.281	0.427	0.485	0.503
Commercial Property	0.266	0.404	0.459	0.476
Aircraft	0.266	0.405	0.460	0.479
Auto Liability	0.239	0.359	0.406	0.421
Auto Personal Accident	0.239	0.359	0.406	0.421
Auto Other	0.212	0.318	0.359	0.374
Boiler and Machinery	0.266	0.405	0.460	0.479
Credit	0.257	0.390	0.443	0.459
Credit Protection	0.257	0.390	0.443	0.459
Fidelity	0.266	0.404	0.459	0.477
Hail	0.266	0.404	0.459	0.476
Legal Expense	0.286	0.438	0.498	0.518
Liability	0.286	0.438	0.498	0.518
Mortgage	0.266	0.404	0.459	0.477
Other Approved Products	0.257	0.390	0.443	0.459
Surety	0.266	0.404	0.459	0.477
Title	0.203	0.302	0.342	0.353
Marine	0.266	0.405	0.460	0.479
Accident and Sickness	0.257	0.390	0.443	0.459
Warranty	0.221	0.332	0.376	0.389

Size Category: Medium	Confidence Level			
	95%	99%	99.5%	99.6%
Personal Property	0.263	0.398	0.452	0.468
Commercial Property	0.246	0.373	0.423	0.438
Aircraft	0.242	0.367	0.416	0.432
Auto Liability	0.210	0.314	0.354	0.367
Auto Personal Accident	0.210	0.314	0.354	0.367
Auto Other	0.185	0.276	0.310	0.322
Boiler and Machinery	0.242	0.367	0.416	0.432
Credit	0.229	0.345	0.390	0.405
Credit Protection	0.229	0.345	0.390	0.405
Fidelity	0.238	0.359	0.406	0.422
Hail	0.246	0.373	0.423	0.438
Legal Expense	0.259	0.394	0.447	0.464
Liability	0.259	0.394	0.447	0.464
Mortgage	0.238	0.359	0.406	0.422
Other Approved Products	0.229	0.345	0.390	0.405
Surety	0.238	0.359	0.406	0.422
Title	0.141	0.207	0.232	0.240
Marine	0.242	0.367	0.416	0.432
Accident and Sickness	0.229	0.345	0.390	0.405
Warranty	0.194	0.289	0.327	0.338

Size Category: Large	Confidence Level			
	95%	99%	99.5%	99.6%
Personal Property	0.257	0.388	0.440	0.456
Commercial Property	0.237	0.358	0.406	0.420
Aircraft	0.221	0.333	0.377	0.392
Auto Liability	0.189	0.282	0.318	0.329
Auto Personal Accident	0.189	0.282	0.318	0.329
Auto Other	0.168	0.249	0.280	0.290
Boiler and Machinery	0.221	0.333	0.377	0.392
Credit	0.211	0.316	0.357	0.371
Credit Protection	0.211	0.316	0.357	0.371
Fidelity	0.220	0.330	0.373	0.387
Hail	0.237	0.358	0.406	0.420
Legal Expense	0.242	0.366	0.414	0.430
Liability	0.242	0.366	0.414	0.430
Mortgage	0.220	0.330	0.373	0.387
Other Approved Products	0.211	0.316	0.357	0.371
Surety	0.220	0.330	0.373	0.387
Title	0.090	0.130	0.145	0.150
Marine	0.221	0.333	0.377	0.392
Accident and Sickness	0.211	0.316	0.357	0.371
Warranty	0.176	0.262	0.296	0.305

Best's Financial Strength Rating (FSR): an independent opinion of an insurer's financial strength and ability to meet its ongoing insurance policy and contract obligations. An FSR is not assigned to specific insurance policies or contracts.

Best's Issuer Credit Rating (ICR): an independent opinion of an entity's ability to meet its ongoing financial obligations and can be issued on either a long- or short-term basis.

Best's Issue Credit Rating (IR): an independent opinion of credit quality assigned to issues that gauges the ability to meet the terms of the obligation and can be issued on a long- or short-term basis (obligations with original maturities generally less than one year).

Best's National Scale Rating (NSR): a relative measure of credit-worthiness in a specific local jurisdiction that is issued on a long-term basis and derived exclusively by mapping the NSR from a corresponding global ICR using a transition chart.

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