

Understanding Universal BCAR

A.M. Best's Capital Adequacy Ratio for Insurers—and Its Implications for Ratings

The purpose of this report is to document the existing criteria and methodology related to A.M. Best's Universal BCAR model, which is used on these companies that do not file U.S. or Canadian statutory statements.

Introduction

The objective of A.M. Best's rating system is to provide an opinion of an insurer's financial strength and ability to meet ongoing obligations to policyholders. The assignment of an interactive rating is derived from an in-depth evaluation of a company's balance-sheet strength, operating performance and business profile as compared with A.M. Best's quantitative and qualitative standards.

For interactive ratings, A.M. Best believes the balanced approach of evaluating a company on both quantitative and qualitative levels provides a better analysis of a company and also results in a more discerning and credible rating opinion.

A.M. Best's quantitative evaluation is based on an analysis of numerous key financial tests and supporting data. These tests, which underlie A.M. Best's evaluation of balance-sheet strength and operating performance, vary in their importance depending on a company's characteristics.

A company's quantitative results are evaluated on their own merits and also are compared with industry composites as established by A.M. Best. Composite standards are based on the performance of other insurance companies with comparable business mix and organizational structure. These industry benchmarks are adjusted when needed to reflect

changes in underwriting, economic and regulatory market conditions.

Balance-Sheet Strength

In determining a company's ability to meet its current and ongoing obligations to policyholders, the most important area to evaluate is its balance-sheet strength, since it is the foundation for policyholder security. Performance then determines how that balance-sheet strength will be enhanced, maintained or eroded over time. Balance-sheet strength measures the exposure of a company's capital to its operating and financial practices. An analysis of a company's underwriting, financial and asset leverage is very important in assessing its overall balance-sheet strength.

Underwriting leverage is generated from current premium writings, reinsurance recoverables and loss reserves. In order to assess whether a company's underwriting leverage is prudent, a number of factors unique to the company are taken into account, including type of business written, quality and appropriateness of its reinsurance program, and adequacy of loss reserves.

Financial leverage is created through debt or debt-like instruments (including financial reinsurance) and is reviewed in conjunction with a company's underwriting leverage. An analysis of financial leverage is conducted at both the operating company and holding company levels, since debt at either level could place a call on the insurer's earnings and strain its cash flow, leading to financial instability.

Asset leverage measures the exposure of a company's capital to investment, interest rate and credit risks. The volatility and credit quality of the investment portfolio, recoverables and agents balances determine the potential impact of asset leverage on the company's balance-sheet strength.

A company's underwriting, financial and asset leverage also are subjected to an evalua-

Further questions about A.M. Best's universal BCAR methodology can be directed to Thomas Mount, ACAS, MAAA, assistant vice president of the property/casualty division of A.M. Best Co



tion by Best's Capital Adequacy Ratio (BCAR), which allows for an integrated review of these leverage areas. The universal BCAR model calculates the Net Required Capital to support the financial risks of the company associated with the exposure of assets and underwriting to adverse economic and market conditions and compares this required capital to economic capital. Some of the stress tests within BCAR include above-normal catastrophes, a decline in equity markets and a rise in interest rates. This integrated stress evaluation permits a more discerning view of a company's balance-sheet strength relative to its operating risks.

A company's BCAR result is extremely useful in evaluating its balance-sheet strength, but BCAR is only one component of the analysis. In addition, balance-sheet strength is only one component of the overall financial strength rating, which also includes operating performance and business profile. BCAR is very often a minimum requirement to support a rating, but other factors driving expectations of future balance-sheet strength drive the rating as well. All of these factors are important to the overall rating process.

Overview of BCAR

A.M. Best's capital formula uses a risk-based capital approach whereby net required capital is calculated to support three broad risk categories: investment risk, credit risk and underwriting risk. A.M. Best's capital adequacy formula also contains an adjustment for covariance, reflecting the statistical independence of the individual components. A company's adjusted capital is divided by its net required capital, after the covariance adjustment, to determine its BCAR.

Investment Risk

Investment risk includes three main risk components: fixed-income securities, equities and interest rate. Capital charges are applied to different asset classes based on the risk of default, illiquidity and market-value declines in both equity and fixed-income securities. Additionally, higher capital charges are ascribed to affiliated investment holdings, real estate, below-investment-grade bonds and nonaffiliated, privately traded common and preferred shares because of the illiquid nature of the asset and/or the potential volatility of the reported value.

A.M. Best's capital model incorporates an interest-rate risk component that considers the decline in market value of a company's fixed-income portfolio as a result of rising interest rates. The interest rate risk calculation will reflect the fact that companies writing life and annuity products will have an exposure to disintermediation and cash-flow mismatch risks, whereas a company writing property/casualty products will have an interest-rate risk exposure when a shock event occurs.

Investment risks are typically the main drivers of a life insurer's capital requirements.

Credit Risk

Capital charges are applied to different receivable balances to reflect third-party default risk. Credit risk factors are ascribed to recoverables from all reinsurers, including affiliates. Required capital for credit risk may be modified after taking into account accept-

A.M. Best Co. Methodology

March 19, 2007

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able collateral offsets for reinsurance balances; the quality of the reinsurers that participate in the company's reinsurance program; and the company's dependence on its reinsurance program. Also included in the credit risk component are charges for premium balances receivable; accrued retrospective premiums; deposits in pools and associations; funds held by ceding insurers; and other, miscellaneous receivables.

Underwriting Risk

This category encompasses the risks associated with net loss and loss-adjustment expense reserves, net premiums written and net unearned premiums. The reserve component requires capital based on the risk inherent in a company's loss and loss-adjustment expense reserves, adjusted for A.M. Best's assessment of its reserve equity. The net premiums written component is a forward-looking component and requires capital based on the pricing risk inherent in a company's expected book of business for the upcoming year. The unearned premium component reflects the exposure to pricing risk on business written in the past but is still unearned as of the current evaluation date.

Required capital for the underwriting risk components may be increased to reflect an additional surcharge for "excessive" exposure growth. In addition, there is credit for a well-diversified book of business, but this credit is minimized for those companies that maintain small books of many lines of business and may not necessarily have expertise in each of them. For those composite companies that write both property/casualty and life insurance, the amount of diversification credit may be increased to reflect the additional benefits from diversifying across insurance sectors.

For life and health insurers, underwriting risks are divided into mortality risks and morbidity risks. Mortality risks are based on volume of insurance in force, net of reserves and reinsurance, with risk charges grading lower for higher amounts at risk. Morbidity risks vary by line of business and therefore warrant different charges. A.M. Best believes risk profiles of individual and group health lines are substantially different, with individual lines bearing higher risks.

For property/casualty insurers, underwriting risk is typically the largest risk category and usually accounts for two-thirds of a com-

pany's gross required capital.

Collectively, the investment, credit and underwriting risk components generate more than 99% of a company's gross required capital, with the business risk component generating minimal capital requirements for off-balance-sheet items. A company's gross required capital, which is the sum of the capital required to support all of its risk components, reflects the amount of capital needed to support all of those risks if they were to develop simultaneously. However, these individual components then are subjected to a covariance calculation within the BCAR formula to account for the assumed statistical independence of these components. This covariance adjustment essentially says that it is unlikely that all of the individual risk components will develop simultaneously, and this adjustment generally reduces a company's overall required capital.

A.M. Best recognizes the distortions caused by the "square root rule" covariance adjustment, whereby the more capital-intensive risk components are disproportionately accentuated while the less capital-intensive risk components are diminished in their relative contribution to net required capital. Nevertheless, by using other distinct capital measures, A.M. Best can counterbalance this apparent shortcoming.

Determination of Available Capital

A.M. Best makes a number of adjustments to a company's reported capital within its universal capital model to provide a more economic and comparable basis for evaluating capital adequacy. Different accounting methods and regulatory requirements across the world require numerous adjustments to a company's reported capital. Goodwill and other intangible assets are eliminated. Pre-event catastrophe reserves are removed from the loss reserves and moved into available capital on a tax-effected basis. Adjustments for any embedded value in unearned premium

Available Capital Components

Reported Capital

Equity Adjustments:

- Unearned Premiums
- Assets
- Loss Reserves
- Reinsurance

Debt Adjustments:

- Surplus Notes
- Debt-Service Requirements

Other Adjustments:

- Potential Catastrophe Losses
- Future Operating Losses
- Future Dividends
- Goodwill
- Other Intangible Assets

reserves, loss reserves and fixed-income securities are made if the company has not already reflected these in its reported capital. Further adjustments are made to capital to reflect other non-balance-sheet risks, including catastrophe exposures and debt-service requirements.

Formula Drivers

A company's gross capital requirement within A.M. Best's capital model is generated primarily from its investment, credit and underwriting risks. A company that maintains a more aggressive investment portfolio, is heavily concentrated in one asset or sector, or is heavily dependent on pyramided capital likely will generate a lower BCAR value. Companies that have excessive exposure to third-party credit risk or are heavily dependent on reinsurance likely will generate lower BCAR scores. The amount of required capital generated from the underwriting risk components is largely a function of the company's mix of business, amount of available capital, growth in exposure, stability of loss development, profitability, loss-reserve adequacy and length of claims payout. All other things being equal, the absolute BCAR score of a company will be lower because of higher capital requirements associated with greater indicated reserve deficiencies, as well as unstable or unprofitable business.

In addition, the model can be adjusted in response to various market issues. Some examples of the issues that can impact capitalization include 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.

The basis of risk measurement for some of the key drivers of required capital in the universal BCAR model is expected policyholder deficit. A.M. Best adopted the concept of expected policyholder deficit to better calibrate the model's loss-reserve and premium-risk factors, as well as other risk factors in the model. The concept of expected policyholder deficit allows risk charges to be calibrated to a specific level of insolvency risk and also takes into consideration the expected cost, or severity, of insolvency.

BCAR Is an Absolute Measure

The universal BCAR model produces an absolute score, which is the ratio of the company's adjusted capital to its own net required capital. This company-specific capital ratio indicates whether its capital strength aligns with A.M. Best's "Secure" or "Vulnerable" rating categories and is based on the specific risk profile of a company's operations. A BCAR score below 100% would be considered vulnerable. Given strong, stable operating performance and sound risk management, the chart at right provides a reasonable guide for the minimum BCAR levels needed to support A.M. Best's Financial Strength Ratings.

Minimum BCAR Requirements

Secure: FSR scale	Minimum BCAR
A++	175
A+	160
A	145
A-	130
B++	115
B+	100
Vulnerable:	
Vulnerable: FSR scale	Minimum BCAR
B	90
B-	80
C++	70
C+	60
C	50
C-	40
D	0

Additional Stress Testing

A.M. Best also will stress a company's BCAR score for a second catastrophic event according to the procedures outlined in its April 2006 methodology report titled "Catastrophe Analysis in A.M. Best Ratings." The testing will incorporate natural catastrophes and/or man-made events such as terrorism to monitor how sensitive a company's balance-sheet strength is to a second catastrophic event.

Conclusion

The tools to allocate capital and understand capital strength continue to evolve. These tools often vary in theory, purpose and outcome. It is important to remember that, while they can add significant value, they are only tools. A.M. Best's proprietary universal BCAR is one of those tools that look at capital needs well above financial solvency. A.M. Best will continue to enhance BCAR going forward to improve its accuracy in measuring balance-sheet and operating risk.

BCAR is important to A.M. Best's evaluation of both absolute and relative capital strength. Consistent with standards embedded within the universal BCAR model, A.M. Best would expect that well-managed and highly rated

companies will maintain capitalization levels in excess of the minimum amounts required to support their current ratings.

A.M. Best is quick to caution, however, that although BCAR is an important tool in the rating process, it isn't sufficient to serve as the sole basis of a rating assignment. BCAR, like other quantitative measures, has some limitations and doesn't necessarily work for all companies. Consequently, capital adequacy should be viewed within the overall context of the operating and strategic issues surrounding a company. Business profile and operating performance

are important rating considerations in evaluating a company's long-term financial strength and viability as well as the quality of the capital that supports the BCAR result. In addition, any holding company considerations also will play a key role in evaluating the financial strength of an insurance company.

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

GUIDE TO BEST'S FINANCIAL STRENGTH RATINGS

A Best's Financial Strength Rating is an independent opinion based on a comprehensive quantitative and qualitative evaluation of a company's balance sheet strength, operating performance and business profile. Best's Financial Strength Ratings are not a warranty of a company's financial strength and ability to meet its ongoing obligations to policyholders.

Financial Strength Ratings

A Best's Financial Strength Rating (FSR) is an opinion as to an insurer's financial strength and ability to meet its ongoing obligations to policyholders.

	Rating	Descriptor	Definition
Secure	A++, A+	Superior	Assigned to companies that have, in our opinion, a superior ability to meet their ongoing obligations to policyholders.
	A, A-	Excellent	Assigned to companies that have, in our opinion, an excellent ability to meet their ongoing obligations to policyholders.
	B++, B+	Good	Assigned to companies that have, in our opinion, a good ability to meet their ongoing obligations to policyholders.
Vulnerable	B, B-	Fair	Assigned to companies that have, in our opinion, a fair ability to meet their ongoing obligations to policyholders, but are financially vulnerable to adverse changes in underwriting and economic conditions.
	C++, C+	Marginal	Assigned to companies that have, in our opinion, a marginal ability to meet their ongoing obligations to policyholders and are financially vulnerable to adverse changes in underwriting and economic conditions.
	C, C-	Weak	Assigned to companies that have, in our opinion, a weak ability to meet their ongoing obligations to policyholders and are financially very vulnerable to adverse changes in underwriting and economic conditions.
	D	Poor	Assigned to companies that have, in our opinion, a poor ability to meet their ongoing obligations to policyholders and are financially extremely vulnerable to adverse changes in underwriting and economic conditions.
	E	Under Regulatory Supervision	Assigned to companies (and possibly their subsidiaries/affiliates) that have been placed by an insurance regulatory authority under a significant form of supervision, control or restraint whereby they are no longer allowed to conduct normal ongoing insurance operations. This would include conservatorship or rehabilitation, but does not include liquidation. It may also be assigned to companies issued cease and desist orders by regulators outside their home state or country.
	F	In Liquidation	Assigned to companies that have been placed under an order of liquidation by a court of law or whose owners have voluntarily agreed to liquidate the company. Note: Companies that voluntarily liquidate or dissolve their charters are generally not insolvent.
	S	Suspended	Assigned to companies that have experienced sudden and significant events affecting their balance sheet strength or operating performance whereby the rating implications cannot be evaluated due to a lack of timely or adequate information.

Rating Modifiers and Affiliation Codes

A rating modifier can be assigned to indicate that a Best's Financial Strength Rating may be subject to near-term change (under review), that a company did not subscribe to Best's interactive rating process (public data) or that the rating is assigned to a syndicate operating at Lloyd's. Affiliation codes (g, p, and r) are added to Best's Financial Strength Ratings to identify companies whose assigned ratings are based on group, pooling or reinsurance affiliation with other insurers.

	Modifier	Descriptor	Definition				
Rating Modifiers	u	Under Review	A modifier that generally is event-driven (positive, negative or developing) and is assigned to a company whose Best's Rating opinion is under review and may be subject to change in the near-term, generally defined as six months.				
	pd	Public Data	Assigned to insurers that do not subscribe to Best's interactive rating process. Best's "pd" Ratings reflect qualitative and quantitative analyses using public data and information.				
	s	Syndicate	Assigned to syndicates operating at Lloyd's.				
Affiliation Codes		g	Group	p	Pooled	r	Reinsured

Not Rated Categories (NR)

Assigned to companies reported on by A.M. Best, but not assigned a Best's Rating. The five categories are:

NR-1: Insufficient Data.	NR-2: Insufficient Size and/or Operating Experience.	NR-3: Rating Procedure Inapplicable.
NR-4: Company Request.	NR-5: Not Formally Followed.	

Rating Outlook

Best's Financial Strength Ratings (A++ to D) are assigned a Rating Outlook that indicates the potential direction of a company's rating for an intermediate period, generally defined as the next 12 to 36 months. Public Data Ratings are not assigned an Outlook. Rating Outlooks, which appear in the rating rationale section of the company's *Best's Company Report*, are as follows:

Positive	Indicates a company's financial/market trends are favorable, relative to its current rating level and, if continued, the company has a good possibility of having its rating upgraded.
Negative	Indicates a company is experiencing unfavorable financial/market trends, relative to its current rating level and, if continued, the company has a good possibility of having its rating downgraded.
Stable	Indicates a company is experiencing stable financial/market trends and there is a low likelihood that its rating will change in the near term.

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GUIDE TO BEST'S CREDIT RATINGS

A Best's Credit Rating is an independent opinion based on a comprehensive quantitative and qualitative evaluation of a company's balance sheet strength, operating performance and business profile and, where appropriate, the specific nature and details of a rated debt security. Best's Credit Ratings are not a warranty of a company's ability to meet its ongoing financial obligations.

Financial Strength Ratings

A **Best's Financial Strength Rating (FSR)** is an opinion as to an insurer's financial strength and ability to meet its ongoing obligations to policyholders.

	Rating	Descriptor
Secure	A++, A+	Superior
	A, A-	Excellent
	B++, B+	Good
Vulnerable	B, B-	Fair
	C++, C+	Marginal
	C, C-	Weak
	D	Poor
	E	Under Regulatory Supervision
	F	In Liquidation
S	Suspended	

A **Best's Long-Term Issuer Credit Rating (ICR)** is an opinion as to the ability of the issuer to meet its ongoing senior financial obligations. A.M. Best also assigns Issuer Credit Ratings to insurance companies using its Long-Term Credit Rating Scale. The definitions applied to insurance companies that are assigned a long-term Issuer Credit Rating are as follows: (aaa) - Exceptional; (aa) - Superior; (a) - Excellent; (bbb) - Good; (bb) - Fair; (b) - Marginal; (ccc and cc) - Weak; (c) - Poor; (rs) - Regulatory Supervision/Liquidation. The (nr) designation may be assigned to insurers that were previously rated. A.M. Best may also assign Short-Term Issuer Credit Ratings to certain insurance companies using its Short-Term Credit Rating scale.

Rating Modifiers		Affiliation Codes	
"u"	Under Review	"g"	Group
"pd"	Public Data	"p"	Pooled
"s"	Syndicate	"r"	Reinsured

Not Rated Categories (NR)

NR-1	Insufficient Data
NR-2	Insufficient Size and/or Operating Experience
NR-3	Rating Procedure Inapplicable
NR-4	Company Request
NR-5	Not Formally Followed

Long-Term Issuer Credit, Bank Deposit and Debt Ratings

A.M. Best uses its long-term credit rating scale when assigning:

- **Debt Ratings** (an opinion as to the issuer's ability to meet its financial obligations to security holders when due);
- **Issuer Credit Ratings** (an opinion as to the ability of the issuer to meet its ongoing senior financial obligations) and
- **Bank Deposit Ratings** (an opinion as to a bank's ability to meet its ongoing obligations to depositors).

	Rating	Descriptor
Investment Grade	aaa	Exceptional
	aa	Very Strong
	a	Strong
	bbb	Adequate
Non-Investment Grade	bb	Speculative
	b	Very Speculative
	ccc, cc, c	Extremely Speculative
	d	In Default

Ratings from "aa" to "ccc" may be enhanced with a "+" (plus) or "-" (minus) to indicate whether credit quality is near the top or bottom of a category, and a "u" modifier for Under Review. Ratings prefixed with an ("i") denote indicative ratings. Issuer Credit Ratings may also be assigned a "pd" modifier, which indicates that a company does not subscribe to A. M. Best's interactive rating process. A.M. Best may also assign the "rs" designation, which indicates that a company is under regulatory supervision or liquidation.

Short-Term Issuer Credit and Debt Ratings

A.M. Best uses its short-term credit rating scale when assigning:

- **Debt Ratings** (an opinion as to the issuer's ability to meet its obligations having maturities generally less than one year) and
- **Issuer Credit Ratings** (an opinion as to the ability of the issuer to meet its senior financial commitments on obligations maturing in generally less than one year).

	Rating	Descriptor
Investment Grade	AMB-1+	Strongest
	AMB-1	Outstanding
	AMB-2	Satisfactory
	AMB-3	Adequate
Non-Investment Grade	AMB-4	Speculative
	d	In Default

A company's Short-Term Credit Rating also may be assigned an Under Review modifier ("u") that generally is event-driven (positive, negative or developing) and indicates that the company's Best's Rating opinion is under review and may be subject to near-term change. Ratings prefixed with an ("i") denote indicative ratings.

Not Rated (nr)

The nr designation may be assigned to issuers or issues that were previously rated.

Rating Outlook

Best's Credit Ratings (A++ to D, aaa to c) are assigned a Rating Outlook that indicates the potential direction of a company's/issue's rating for an intermediate period, generally defined as the next 12 to 36 months. A.M. Best does not assign Public Data Ratings to Bank Deposit or Debt Ratings. Financial Strength and Issuer Credit Public Data Ratings are not assigned an Outlook. Rating Outlooks are as follows:

Positive	Indicates a company's financial/market trends are favorable, relative to its current rating level, and if continued, the company has a good possibility of having its rating upgraded.
Negative	Indicates a company is experiencing unfavorable financial/market trends, relative to its current rating level, and if continued, the company has a good possibility of having its rating downgraded.
Stable	Indicates a company is experiencing stable financial/market trends and that there is a low likelihood that its rating will change in the near term.



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