

ReMetrics – Financial Consulting

Frequently Asked Questions regarding A.M. Best's Analysis of Catastrophe Exposure

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Background

The following document provides a summary of frequently asked questions (FAQs) regarding A.M. Best's analysis of catastrophe exposure. The questions and answers are based upon A.M. Best's published methodology papers and articles as well as Benfield's experience in working on over 125 assignments per year regarding rating agency matters. Many of the answers regarding A.M. Best's treatment of various items are determined on a case-by-case basis given a view of a company's risk profile, risk management expertise and financial flexibility, among other considerations.

The purpose of this document is to provide Benfield clients with a quick reference on key rating issues as it relates to catastrophe exposure. Many of the questions and answers in this FAQ document could be the subject of its own paper – however we have chosen to give as complete an answer as possible while limiting the scope to a summary format.

For additional clarification on any of the questions or answers related to this document, please feel free to call or e-mail the contacts listed on the cover page or e-mail RatingAgencyFAQ@us.benfieldgroup.com.

About Benfield

Benfield is the world's leading independent reinsurance and risk intermediary. Its customers include many of the world's major insurance and reinsurance companies as well as government entities and global corporations. Benfield operates from more than 40 locations worldwide. The company is listed on the London Stock Exchange under the ticker symbol BFD. www.benfieldgroup.com

Benfield's ReMetrics – Financial Consulting Team specializes in providing financial and strategic analysis on issues that influence a company's financial strength rating, such as: "stress" testing, growth plans and/or change in reinsurance structures. Other consulting services provided include: enterprise risk management (ERM), capital management, and reinsurance impact analysis.

Disclaimer

This paper is intended for general information purposes only and should not be construed as advice or opinions on any specific facts or circumstances. The analysis and comments in this paper represent general observations of Benfield and are based upon past experience with rating agencies. However, rating processes are forever changing; therefore actual future rating actions may indeed be materially different from the opinions expressed in this paper. The content of this paper is made available on an "as is" basis, without warranty of any kind. Benfield disclaims any legal liability to any person or organization for loss or damage caused by or resulting from any reliance placed on that content. Members of the Benfield ReMetrics – Financial Consulting Team will be pleased to consult on any specific situations and to provide further information regarding the matters discussed herein.

1. What is the “stress” test?

A.M. Best’s stress test gauges the Balance Sheet impact of multiple catastrophic events, whether natural or man-made, and is applied to a company’s Baseline BCAR model. In essence, A.M. Best assesses the financial impact as if the events had actually occurred.

In the Baseline BCAR model, a company’s surplus is reduced by the after-tax Net PML from a natural CAT event (largest of the 1:100 Wind or 1:250 EQ or actual event). The Net PML equates to a company’s retention plus co-participation plus reinstatement premium for a given return period (after considering all forms of reinsurance). For the stress test, it assumes two catastrophe losses; the analyst makes the following adjustments to the Baseline BCAR model for the additional event to derive the Stress BCAR:

- A. Add 80% of ceded PML (ex- Reinstatement) to reinsurance recoverables
 - o Also, Reinsurers downgraded one rating level
 - B. Add 80% of pre-tax Net PML less Reinstatement to reserves
- } Increases required capital by assuming 80% unpaid
-
- C. Reduce surplus by the after-tax Net PML of second event, largest of the:
 - o 1:100 Wind (same as 1st event), or
 - o 1:100 EQ (same locale as 1st event – 1:250 EQ), or
 - o 1:250 EQ (different locale than 1st event EQ)
- } Lowers adjusted surplus

Note: The 80% above is standard but may be adjusted lower

Below is an illustration of adjustments made from the Baseline to Stress BCAR:

XYZ Insurance Group		
Benfield's Simulation of Best's BCAR Model - Summary		
As of December 31, 200X		
NET REQUIRED CAPITAL (NRC)	Baseline	Stress
Asset Risk		
Fixed Income	2,805	2,805
Equity	282	282
Interest Rate	1,750	1,750
Credit	6,651	22,186 A
Underwriting Risk		
Loss Reserves	37,466	40,346 B
Premium	53,746	53,746
Business Risk	11	11
Gross Required Capital	102,711	121,126
Less: Covariance	35,064	45,824
Net Required Capital (NRC)	67,647	75,301
ADJUSTED POLICYHOLDERS SURPLUS (APHS)		
Reported Surplus (PHS)	101,742	101,742
UPR Equity	10,760	10,760
Reserve Equity	6,442	6,937
Fixed Income Equity	45	45
Less: 1st CAT Event Losses	(9,100)	(9,100)
Less: 2nd CAT Event Losses		(9,100) C
Adjusted Surplus (APHS)	109,889	101,284
BCAR Score (APHS / NRC)	162%	135%

Catastrophe Exposure Assumptions	
Gross PML (100yr wind)	145,750
Ceded PML (100yr wind)	136,750
Retention + Co-participation	9,000
Reinstatement	5,000
Pre-tax Net PML (100yr wind)	14,000

136,750 Ceded losses	
80% % assumed unpaid	
10% "A-" reinsurers; Downgraded from "A"	
1.42x Increased dependency factor	
15,535 Increase in Required Capital	
9,000 Retained net losses	
80% % assumed unpaid	
40% Net risk charge for reserves	
2,880 Increase in Required Capital	
Note: Reserve Equity is also impacted	

9,000 Retention + Co-participation	
5,000 Reinstatement	
14,000 Pre-tax Net PML (100yr wind)	
65% (1 - 35% Eff. Tax rate)	
9,100 After-tax PML Charge	

A.M. Best also analyzes the potential impact on financial leverage (i.e. debt to capital) assuming a company raises capital through debt issuances to replenish funds. Similar to Baseline and Stress BCAR, A.M. Best has thresholds for financial leverage at various rating levels.

For companies with terrorism exposure, a similar stress test is applied using the after-tax Net PML for natural catastrophes as the second event. Please see FAQ #3 for more information.

RECOMMENDATION: *Although A.M. Best does not publish Stress BCAR scores, this information will be provided to management upon request. As such, we highly recommend management request Stress BCAR model output and understand the implications on the rating.*

2. Why does A.M. Best “stress” test?

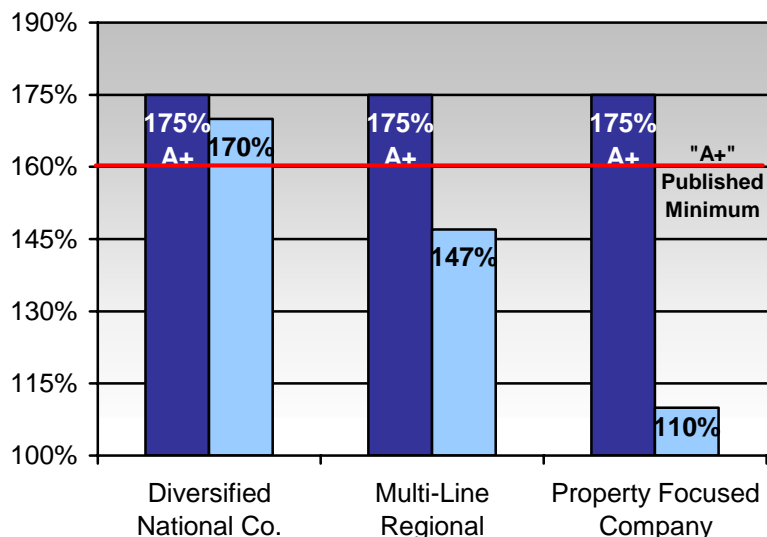
The premise for stress testing is a result of the increase in frequency and severity from catastrophic losses such as the 2001 terrorist attacks and the hurricanes of 2004 & 2005. A.M. Best also found the need to stress test due to variances between modeled and actual losses, especially highlighted by Hurricane Katrina.

The purpose of the stress test is to assess the areas of concentration within a company’s portfolio and provides a preview of the capitalization of a company if the events actually occurred. A.M. Best believes that following a severe event, the company retains its exposure and subsequent events can still occur.

The stress test reflects A.M. Best’s view that catastrophe risk poses an immediate threat to solvency due to:

- Rapid escalation of values of insured property risk
- The potential for a significant, rapid and unexpected impact on Surplus

A company’s BCAR model must be able to absorb “stress” scenarios in order for A.M. Best to feel comfortable with their level of capitalization. As seen in the sample graph at right, three companies with varying business profiles appear to be well capitalized based on their baseline BCAR scores. However, the stress test provides a different picture on each company’s level of capitalization in relation to a CAT event than the Baseline BCAR. Intuitively the diversified company is better equipped to handle CAT losses in comparison to the property focused company.



RECOMMENDATION: *The Stress BCAR provides A.M. Best with a secondary measure of capitalization that can be compared across companies with similar risk profile and will be a key driver of capital requirements going forward. As a result, it is important for management to know the Stress BCAR target for their company.*

3. How does A.M. Best analyze terrorism exposure?

A.M. Best requires companies with significant commercial business (more than 10% of gross written premium) to complete the terrorism section of the SRQ. As such, a similar stress test is applied to BCAR utilizing either modeled loss output for a five or six ton truck bomb attack or 50% of the largest aggregate exposure as disclosed in the SRQ (Questions 47-51 in the 2007 SRQ). The stress test for terrorism is calculated in the same manner as described in FAQ #1 although, the first event is terrorism and the second event is natural CAT. Within the stress test, Net PML for terrorism excludes the benefit of TRIPRA (Terrorism Risk Insurance Program Reauthorization Act of 2007). Although, given the enhanced terms of TRIPRA, such as eliminating the distinction between foreign (a.k.a. “certified”) and domestic events and greater permanence with coverage in place for the next seven years, there has been less emphasis on the terrorism stress test. As such, A.M. Best is placing more focus on the potential probability of attacks by considering the number of locations that represent greater than 10% of surplus net of TRIPRA as well as the number of locations greater than 20% of surplus gross of TRIPRA. These results are examined within three tiers of potential target cities with 5 locations in Tier 1 (New York, Chicago, San Francisco, Washington DC, and Los Angeles), 21 named cities in Tier 2, and all other cities in Tier 3. In addition, they evaluate the largest exposures individually and consider location and layout (i.e. campus vs. high rise). Further, A.M. Best reviews potential exposure from events that may fall below the \$100m TRIPRA event trigger.

Going forward, A.M. Best is evaluating incorporating a terror “PML” within baseline BCAR, comparable to the current charge from a company’s natural catastrophe net PML. The terror “PML” would be derived based upon a probability assumption, location, number of large exposures and data quality among other components and compared against the natural catastrophe net PML, with the larger being deducted from adjusted surplus. At this time this is still preliminary, but is expected to be formally introduced through a methodology paper later in 2008.

4. What are the implications of the difference in scores between Baseline and Stress BCAR results?

The stated guideline is that the Stress BCAR score should not be more than two rating levels (i.e., 30 points) below the established minimum Baseline BCAR score required for a given rating. However, in practice, insurers are generally required to absorb two events and still maintain a Stress BCAR above the published minimum for the rating, especially for insurers heavily exposed to CAT events. For instance, the 2005 Bermuda start-up class were required to maintain at least a 175% Stress BCAR for an “A-” rating. Two rating levels below the published Baseline minimum for “A-” is 100%, while 175% is the published Baseline minimum for “A++” implying an extremely conservative view. In short, most property focused companies are required to maintain capitalization levels significantly higher than the published minimum guidelines with Stress BCAR as the main driver.

In the end, Stress BCAR targets for the same rating level are customized on a company-by-company basis and depend upon qualitative factors such as risk profile, risk management and financial flexibility.

A.M. Best Minimum BCAR Scores		
Rating	Baseline	Stress
A++	175%	145%
A+	160%	130%
A	145%	115%
A-	130%	100%

RECOMMENDATION: As Stress BCAR targets are customized, we suggest companies seek guidance from Benfield on comparable targets and assessment of appropriate benchmarks.

5. How is the catastrophe data in the Supplemental Rating Questionnaire (SRQ) used in A.M. Best's analysis?

A.M. Best views catastrophes, natural or man-made, as a significant threat to policyholders' surplus and thus requires companies to submit the latest data related to CAT exposures within their annual SRQ (most notably, Question 26 of the 2007 SRQ). The SRQ CAT data is an important part of A.M. Best's quantitative and qualitative analysis with respect to understanding the exposures a company faces.

- A. Probable Maximum Loss (PML): A.M. Best uses the company's Gross and Net PML results within its BCAR model. The Baseline model uses the more punitive Gross and after-tax Net PML of the 1:100 Wind or 1:250 EQ. Please see FAQ #1 for additional information on PMLs and the stress test. A.M. Best requires all sources of catastrophe risk to be included in the loss estimation (i.e. LAE, property/structure, business interruption etc.) PMLs should also include the following options such as fire following, demand surge (exclude if auto is primary focus), storm surge (exclude if flood is not covered), secondary uncertainty, and near term (Atlantic multi-decadal oscillation). At A.M. Best's discretion, the PMLs filed in a company's SRQ can be adjusted to reflect additional information provided by management.

RECOMMENDATION: Companies should understand all necessary "switches" as it pertains to their portfolio to avoid having A.M. Best add on additional conservatism. Benfield can provide guidance on suitable model "switches".

- B. Tail Value at Risk (TVaR): TVaR represents the weighted average of losses over a certain probability threshold. Although Stress BCAR remains a key metric for evaluating capitalization with respect to CAT exposure, TVaR results have been used in some select cases. Going forward, we expect A.M. Best to further incorporate TVaR by benchmarking results relative to industry standards with specific focus of identifying companies with high tail risk as measured by TVaR-to-PML ratios. Specifically, identifying those companies with TVaR-toPML ratios above the 75th percentile based upon 2006 SRQ filings.
- C. 5 Typical Events Producing Similar Gross PMLs: Question 26c in the current SRQ asks companies to list 5 typical CAT events that produce similar Gross PMLs at the 100-yr and 250-yr return periods. For companies that report relatively low magnitude events (e.g., category 1 storms), this may lead A.M. Best to take a deterministic approach within its analysis and request PML results if a category 4 event makes landfall at the same location.

RECOMMENDATION: Management should be versed in these events and understand potential results of deterministic scenarios given the underlying essence of the question.

- D. Top 5 Largest CAT Events: This question asks companies to list their top 5 largest actual CAT event losses in actual dollars (Question 28b). Companies are asked to not inflate the losses to current dollars as different companies may use different inflation assumptions. However, when an analyst reviews the data, he or she may ask what the losses would be if that event happened now with current exposures, coverages, limits, reinsurance, etc.

RECOMMENDATION: Management should know actual historical losses in today's dollars as well as potential losses should a similar event occur today given their current portfolio.

6. Does A.M. Best prefer certain catastrophe model versions or assumptions?

Yes, A.M. Best expects companies to use the latest model version and incorporate appropriate assumptions to reflect the most current information to help ensure accurate and relevant results. Further, A.M. Best expects companies to use industry recognized catastrophe models (e.g., AIR, RMS, EQE) or another validated model, but they do not endorse a specific catastrophe model. However, A.M. Best may inquire why management uses a specific vendor model, especially if the company has recently switched. In essence, A.M. Best wants to gauge whether a company is only providing the lowest model results, i.e., “model shopping.”

Since the modeled results are only as good as the data input into the model, loss exposure data must be timely to enable management the ability to mitigate current risks. As each company is unique, A.M. Best believes that management needs to be aware of all the risks related to the company’s geographic exposures. As such, A.M. Best uses the information related to catastrophe modeling results incorporating the underlying model version and assumptions, as a basis for evaluating a company’s catastrophe risk management capabilities. Further, A.M. Best uses this information and the overall process to assess data quality (e.g., timeliness of data and geocoding of properties), exposure monitoring (e.g., number of models / scenarios and frequency of monitoring), and controls (e.g., aggregate limits established and reinsurance protection in place).

A.M. Best expects companies to be realistic in their assumptions. Demand surge, loss-adjustment expenses and additional living expenses are considered real and are expected to be included in loss estimates. Depending on the lines of business a company underwrites, additional loss estimates may need to be included (i.e. fire following earthquake, crop losses, etc.). In the absence of estimates that A.M. Best believes should be included, the analyst may make conservative adjustments that have the potential to impact capitalization. In addition, A.M. Best views the absence of relevant loss estimates as a weakness in business practices which could impact a company’s rating regardless of the level of capitalization.

RECOMMENDATION: The results provided to A.M. Best should reflect the basis for management’s catastrophe risk tolerance, i.e., reinsurance purchase decision. Further, these results should consider relevant sources of loss in order for A.M. Best to have confidence in a company’s catastrophe risk management practices.

7. How many CAT model results does A.M. Best require? Are blended results acceptable?

Typically, A.M. Best does not require a company to provide more than one catastrophe modeling result. However, if a company has switched vendor models, they may request results from the previous model and inquire the reason for the change so they can gauge whether a company is “model shopping.”

Blended results are acceptable if a company normally utilizes multiple catastrophe models. In such cases, A.M. Best’s baseline approach is to take a straight average of the model results to arrive at Gross and Net PMLs for an event at specific return periods. In cases where a company and the natural peril modeler can effectively explain key assumptions and differences, a weighted average may be used in the rating analysis. However, if the use of multiple models is new for a company, we expect A.M. Best to inquire about the change. As such, management should not rely on switching models to address a weakness in a rating metric, e.g. BCAR.

RECOMMENDATION: Overall, use of multiple models is a good catastrophe risk management practice even if the reinsurance purchase decision is not based upon the most conservative results.

8. What does A.M. Best do following a significant catastrophic event?

In the event of a significant catastrophe, A.M. Best takes several steps to identify the affected companies and determine the impact on their capitalization. Following a catastrophic event, A.M. Best would review market share data to identify companies most likely affected by the event. In addition, SRQ data filed with A.M. Best is reviewed to determine CAT events described or modeled in the questionnaire.

After the companies are identified, A.M. Best solicits from management estimates that would more accurately depict their potential losses. This information is compared to estimates received from other companies and industry wide losses for reasonableness. If there is no prompt response from management, A.M. Best will use the market share data to estimate the losses. Also, A.M. Best will review reinsurance coverage and evaluate ongoing protection in place for future events.

Loss estimates collected from management are utilized to determine the impact on the company’s capitalization (both Baseline and Stress BCAR). If BCAR indicates deficiency in the company’s post event capitalization (from loss of capital or lack of adequate reinsurance coverage going forward), A. M. Best will most likely place the rating under review until capitalization is improved within a reasonable period of time or downgrade the rating if such actions are not taken.

RECOMMENDATION: Following a significant catastrophe, a company should actively communicate with A.M. Best regarding potential losses, prospective reinsurance protections, and any action plan that may be needed.

9. How does A.M. Best consider regional catastrophe reinsurance covers?

A.M. Best's analysis regarding catastrophe exposure often begins with a review of a company's Gross and Net PML results at various return periods as reported on the SRQ for the entire book of business. Whereas, the SRQ requests for PML results by peril on a nationwide basis, the reported information should reflect the Net PML at various return periods incorporating the impact of regional CAT covers. However, due to the impact from regional covers, Gross and Net PML retention for a given return period may not be the same implied event. Thus, reinsurance recoveries reflect the simple difference between the modeled Gross and Net PML retention results, with an estimate for reinstatement premium applied. Therefore, A.M. Best may review a company's PML results on a regional basis with the specific CAT reinsurance cover (e.g., Florida-only) as well as the nationwide results excluding that region. From there, A.M. Best may calculate BCAR and Stress BCAR results under both scenarios, applying the more conservative results within the rating evaluation.

RECOMMENDATION: Management should first fully understand the PML results on a regional and nationwide basis and then a company should communicate with A.M. Best the reasons behind the regional cover and its consideration within risk management practices.

10. How does the Florida Hurricane Catastrophe Fund (FHCF) compare to Reinsurers and how is it treated within BCAR?

The Florida Hurricane CAT Fund (FHCF) is state-mandated reinsurance coverage for Florida residential property insurers. The coverage exists only for residential policies and only in the event of major CAT(s). The FHCF, being a state sponsored fund, has the capability to issue tax-free bonds to raise funds as well as to levy assessments to all Florida P/C premiums (except Workers' Comp., A&H, Med Mal, and Federal Flood) to help pay off the bonds. For an insurance company, the cost of buying coverage from the FHCF is typically less than the cost of buying similar coverage from a private reinsurer.

However, unlike the FHCF, private Reinsurers can reinsure any and all lines of business and are not limited by a CAT event as the sole trigger, making them more flexible. Also, insurance companies can buy reinstatement covers which brings the same level of coverage back should one or more events in a year use up all of the reinsurance limit. This is not possible with the FHCF where the coverage disappears once the limit is used up.

With regards to A.M. Best, recoverables from the FHCF are assessed a 4% risk charge in the Baseline BCAR model and a 12% risk charge in the Stress BCAR model. As a reference, reinsurers are downgraded one rating level in the stress test, which increases the credit risk charge from 6% to 10% for "A" and 10% to 15% for "A-". As such, the stress risk charge for the FHCF is comparable to an "A / A-" reinsurer. Since it is state-sponsored, A.M. Best views the dispute risk of these recoverables as negligible and so no reinsurance dependence penalty is applied. The topic of reinsurance dependence is addressed in more detail in FAQ #12.

Conversely, recoverables with private reinsurers carry a risk charge from 2% to 100% and dispute risk is factored by way of the reinsurance dependence penalty. Separately, A.M. Best gives benefit for collateral in place (e.g., funds held & LOCs), which helps offset related credit risk charge of reinsurers who post collateral.

Rating Level	Baseline Risk Charge	Stress Risk Charge
A++	2%	4%
A+	4%	6%
FHCF	4%	12%
A	6%	10%
A-	10%	15%

11. What are the proposed changes to the FHCF for 2008? How does the FHCF impact Stress BCAR?

At the time this document was completed, the actual retention and limit for mandatory FHCF coverage for 2008 had not yet been finalized. According to the legislation, the amount of limit offered by the mandatory FHCF coverage is expected to grow by the increase in the cash balance of the Fund – between \$500 million and \$1 billion – to somewhere between \$16.4 and \$16.8 billion. The limit provided by the layer of reinsurance that sits above the mandatory layer, the Temporary Increase in Coverage Limit (TICL) layer would remain at \$12 billion (90% of \$13.33 billion). However, for 2008, there is a proposal to reduce the total amount of limit offered through TICL to \$9 billion (70% of approximately \$12.86 billion). It is noteworthy to highlight the proposed 25% reduction in limit (from \$12 to \$9 billion) would be achieved mainly by increasing the company participation amount from 10% to 30%.

The proposed change in TICL capacity decreases the potential size of future borrowing needed to pay claims after a hurricane. However, the size of the potential borrowings needed would still be significant, and the vast majority of the FHCF's claims-paying capacity would still rely on debt issuance.

Resulting from the Florida legislation in 2007, which significantly expanded FHCF capacity, A.M. Best increased the recoverable credit risk charge in Stress BCAR from 6% to 12%. As a result, insurers with dependence on FHCF saw the credit risk charge double for recoverables from FHCF under the stress test. Despite the reduced capacity proposed for 2008, we do not expect A.M. Best to reevaluate this risk charge in the near term.

FHCF Recoverables: Credit Risk Charge		
BCAR Model	2006	Current
Baseline	4%	4%
Stress	6%	12%

When comparing recoverables from the FHCF to private reinsurers, the impact on Stress BCAR might not be as drastic as the increase in credit risk charge implied. The mitigating factor is the reinsurance dependence penalty, which is applied to recoverables from private insurers but removed for the FHCF (See FAQ #12 for more information on the reinsurance dependence factor). The reinsurance dependence penalty increases the required capital for credit risk and impacts negatively on the Stress BCAR. Therefore, the benefit derived from no reinsurance dependence penalty for the FHCF could ultimately offset the increased credit risk charge, resulting in minimum effect on Stress BCAR. However, it is noteworthy to mention that collateral (e.g., LOCs) from private reinsurers may more than offset the impact of the RDF (See FAQ #15)

As seen in the illustration at right, despite higher participation in 2008 from reinsurers with a lower credit risk charge than the FHCF, the benefit is offset as their recoveries are subject to a reinsurance dependence penalty (which is not the case for the FHCF). As such, the Stress BCAR score weakens slightly in this example (column A vs. B). See FAQ #12 for more detail regarding the impact of the reinsurance dependence penalty.

Further, in column (C), where the company does not utilize the FHCF and depends exclusively on private reinsurers, the BCAR score drops significantly despite having a lower recoverable credit risk charge. This is due to the impact the reinsurance dependence penalty has on the total credit risk charge.

XYZ Insurance Co. of Florida
Benfield's Simulation of Best's BCAR Model - Summary
As of December 31, 2007

(\$000s)	(A)	(B)	(C)
	with FHCF in 2007 Stress	with FHCF in 2008 Stress	No FHCF in 2008 Stress
NET REQUIRED CAPITAL			
Asset Risk			
Fixed Income	689	689	689
Equity	58	58	58
Interest Rate	676	676	676
Credit	29,047	31,384	50,506
Underwriting Risk			
Loss Reserves	6,228	6,228	6,228
Premium	30,557	30,557	30,557
Business Risk			
	0	0	0
Gross Required Capital	67,255	69,592	88,714
Less: Covariance	27,553	28,832	38,084
Net Required Capital (NRC)	39,702	40,760	50,630
ADJUSTED SURPLUS			
Reported Surplus (PHS)	43,814	43,814	43,814
UPR Equity	5,077	5,077	5,077
Reserve Equity	796	796	796
Fixed Income Equity	(66)	(66)	(66)
Less: 1st CAT Event Losses	(3,185)	(3,185)	(3,185)
Less: 2nd CAT Event Losses	(3,185)	(3,185)	(3,185)
Adjusted Surplus (APHS)	43,251	43,251	43,251
BCAR Score (APHS / NRC)	109%	106%	85%

12. Why is the reinsurance dependence factor important and how does it impact Stress BCAR?

Reinsurance dependence factor (RDF) is a surcharge on required capital for reinsurance recoverables risk which increases the Gross Required Capital within BCAR. The surcharge accounts for the risk of dispute in collecting recoverables from reinsurers. For example, a company with recoverables 5x its Surplus can lose half of its Surplus if only 10% of the recoverables are successfully disputed by its reinsurer(s). As a result, a minimum surcharge of 1% of recoverables is always applied. A notable exception is for recoverables from FHCF which A.M. Best believes have no dispute risk, and thus the RDF is always 1.000x, indicating no reinsurance dependence penalty. The table below shows the sample impact of how RDF impacts the risk charge within Stress BCAR for a Florida property company:

(A)	(B)	(A x B)	(C)	(A x B x C)	(B x C)		
Recoverables (e.g., 100,000)	Baseline Risk Charge	Stress Risk Charge	Implied Rating	Req. Capital	RDF	Total Req. Capital	Effective Stress Risk Charge
A+ rated reinsurers	4.0%	6.0%	A	6,000	2.500	15,000	15.0%
FHCF	4.0%	12.0%	A- / B++	12,000	1.000	12,000	12.0%
A rated reinsurers	6.0%	10.0%	A-	10,000	2.500	25,000	25.0%
A- rated reinsurers	10.0%	15.0%	B++	15,000	2.500	37,500	37.5%

As is evident, RDF has an enormous impact on the risk charge and the total required capital. In the table above, recoverables from FHCF have a lower effective risk charge than even “A+” rated reinsurers despite its risk charge increasing from 4.0% in Baseline to 12.0% in Stress BCAR. This is due to the other insurers being impacted by the RDF while recoverables from the FHCF are shielded. It should be noted that the RDF varies by insurance company as it is based on a complicated calculation which can make it be higher than 6.000. Finally, collateral can help mitigate the impact of the RDF (see FAQ #15).

RECOMMENDATION: To accurately compare the stress risk charge of the FHCF against private reinsurers, a company should fully understand the impact of the reinsurance dependence factor.

13. How do FHCF Credit Wraps impact BCAR?

FHCF Credit Wraps are products that reduce credit risk of FHCF by transferring the risk to a third party, i.e., the underwriter. If the FHCF is unable to pay the insurers’ claims within a specified time, the underwriter of the credit wrap pays the amount due to the insurer in exchange for the rights to the amounts claimed from the FHCF. These products are often underwritten by reinsurers affiliated with investment banks (e.g., Deutsche Bank and Morgan Stanley). The impact on the BCAR depends on the terms and conditions of the credit wrap which if satisfactory to A.M. Best, reduces the credit risk charge for FHCF recoverables in the Stress BCAR model from 12% to 1%.

Satisfactory terms and conditions must include the following:

- Termination language that prevents early cancellation
- Allowance for a sufficient development period
- Identified and acceptable triggers
- If the reinsurer is unrated, a guarantee with clear cut-through from the highly rated parent to the initial policyholder is required

The maximum benefit afforded by this product applies to companies with a high Gross PML, has credit risk as a primary driver of the BCAR score, and relies heavily on the FHCF (e.g., a Florida-only homeowners-only company). The benefit progressively decreases as recoverables from other reinsurers increase or if a reinsurance program has reinsurers other than FHCF. The amount of benefit for a company has to be determined on a case-by-case basis. Additionally, taking cost of the product into consideration, contributing a similar amount of capital in to the company may be more beneficial for many companies. Thus, this product may be the right decision for only a few companies.

RECOMMENDATION: When a company is considering a credit wrap solely for Stress BCAR purposes, they should understand the key drivers to ensure intended benefit. As depicted in FAQ #12, although the FHCF has a stress risk charge higher than “A” rated companies (12% vs. 10%), its effective stress risk charge maybe lower since it is not subject to a reinsurance dependency penalty. Thus, a credit wrap on private reinsurers may prove to be more beneficial.

14. What is the impact of a Reinstatement Premium Protection (RPP) on Baseline and Stress BCAR?

For A.M. Best purposes, Net PML includes retention, co-participation and reinstatement premium cost for the relevant return period. As the cost of catastrophe reinsurance has increased, reinstatement premium represents a significant portion of the Net PML for many companies. In many cases, reinstatement premium is as much as 50% of the total pre-tax net loss of insurers.

As a result, an RPP (or pre-paid reinstatement) can significantly reduce a company's Net PML, thus improving Baseline and Stress BCAR. Although the cost is a drag on earnings when no event occurs, the net effect is always accretive on Baseline and Stress BCAR in the near-term.

At right is a sample impact of an RPP on Baseline BCAR; it has similar impact on the Stress BCAR.

RECOMMENDATION: *A company looking to manage Stress BCAR in the near-term should consider the benefits of RPP.*

XYZ Insurance Co.
Benfield's Simulation of Best's BCAR Model - Summary
As of December 31, 2006

(\$000s)	(A)	(B)
NET REQUIRED CAPITAL	Baseline No RPP	Baseline With RPP
Asset Risk		
Fixed Income	366	366
Equity	4,426	4,426
Interest Rate	2,272	2,272
Credit	13,847	13,847
Underwriting Risk		
Loss Reserves	11,678	11,678
Premium	14,332	14,332
Business Risk		
	<u>2</u>	<u>2</u>
Gross Required Capital	46,923	46,923
Less: Covariance	21,936	21,936
Net Required Capital (NRC)	24,987	24,987
Reported Surplus	25,051	25,051
UPR Equity	3,030	3,030
Reserve Equity	1,332	1,332
Fixed Income Equity	(358)	(358)
Less: Surplus Notes	(400)	(400)
Less: 1st CAT Event Losses	<u>(3,900)</u>	<u>(650)</u>
Adjusted Surplus (APHS)	24,755	28,005
BCAR Score (APHS / NRC)	99%	112%

15. What are Letters of Credit (LOC) and how are they treated within BCAR?

An LOC is a contractual agreement between a bank (on behalf of a reinsurer) authorizing another bank to make payment to an insurance company. The insurance company has the right to receive payment if it can provide documentary evidence required by the terms in the letter of credit. In the Insurance industry, LOCs are usually irrevocable which means they can not be revoked or modified without the agreement of the banks and the insurance company.

Within BCAR, A.M. Best usually gives 90% credit to an irrevocable LOC, which helps to reduce the required capital for credit risk. Additionally, for Stress BCAR, A.M. Best may allow LOCs to mitigate the higher risk from the increased recoverables, if they can be triggered when the Stress event were to occur. There is no limit on the amount of points the LOCs can improve a Stress BCAR score as long as the LOCs do not exceed the total amount of reinsurance recoverables.

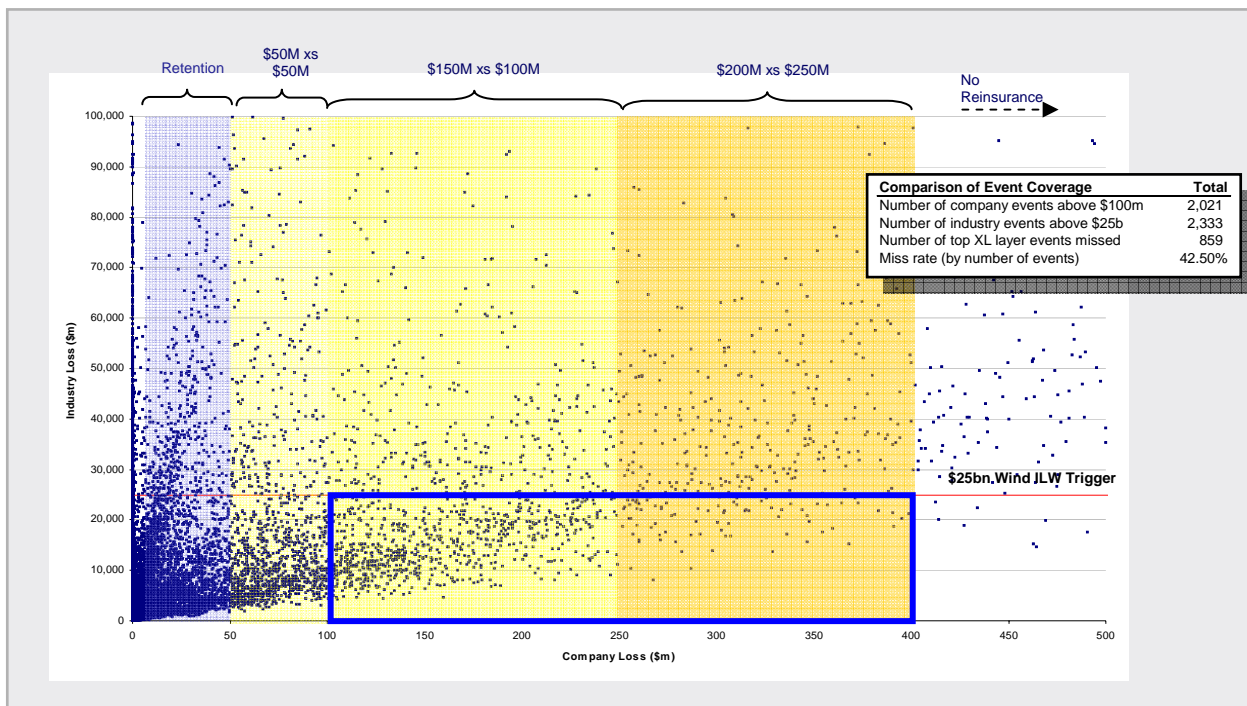
RECOMMENDATION: *A company should provide to A.M. Best information on collateral in place to mitigate the reinsurance recoverable credit risk charge. For the Stress BCAR, they should provide A.M. Best with detail on CAT reinsurers that are required to pledge collateral post event.*

16. How does non-traditional reinsurance (e.g., CAT Bonds) impact BCAR?

Insurance Linked Securities (ILS) are securities used to transfer insurance risk into the capital markets. These can include Cat Bonds, Sidecars and Cat Loans. Since they are often structured to provide protection on an index, or parametric, basis, A.M. Best must gauge the “basis risk” associated with the overage in order to determine how much credit to apply towards reducing the company’s PML in Baseline and / or second event Stress test BCARs.

Basis risk can mean many things, but in this context it represents the possibility that there will not be a full recovery during a PML scenario due to differences between the company’s actual losses and the index used on the ILS. While there is also an “upside” to basis risk, where an insurer can make a full recovery on its ILS without incurring a PML scenario, A.M. Best is only concerned with the “downside” risk. (See the graph below of a CAT Bond with high “downside” basis risk – area boxed in blue).

When estimating basis risk, A.M. Best takes two approaches: (1) a scorecard where scores are assigned to a list of quantitative and qualitative variables and (2) observing the modeled impact of the CAT Bond on PML and providing the reinsurance credit based on the resulting net PML. Some key considerations for evaluating basis risk include: the level of independent peril modeler involvement; specific perils that are being covered; composition and stability of the book of business; and losses based on a wide range of company results, among other aspects. The maximum credit given to indexed ILS is 90% as reflected in the net PML charge applied in BCAR. Separately, there is usually minimal credit risk charge for ILS recoveries as they are fully funded and held in trust. A similar approach is considered for Industry Loss Warranties (ILWs).



RECOMMENDED: CAT Bonds and ILWs are treated on a case by case basis and should be expected to undergo significant scrutiny by A.M. Best with respect to receiving credit within BCAR.

APPENDIX I: GLOSSARY

Adjusted Surplus (APHS): is the numerator of the BCAR score and reflects A.M. Best's view of "economic" surplus. It starts with reported surplus and makes adjustments for various components such as unearned premium (DAC), loss reserves (time value of money) and catastrophe exposure (Net PML charge) among others.

Baseline BCAR: the term used for A.M. Best's standard BCAR calculation that is published in the A.M. Best report (or BIR) and reflects the charge for **one** catastrophe event (natural).

BCAR: Best's Capital Adequacy Ratio Model is a proprietary capital adequacy model that evaluates capitalization based on the ratio of adjusted policyholders' surplus (APHS) to net required capital (NRC).

Gross PML: based upon sophisticated catastrophe modeling, represents Probable Maximum Loss (PML) amount after deductibles but before catastrophe and other reinsurance protection.

Gross Required Capital: sum of required capital of seven categories of risk (fixed-income securities, equity securities, interest rate, credit, loss & loss adjustment expense reserves, net written premium and off balance sheet) as measured in the BCAR model.

Natural Stress Test: the term used for Stress BCAR in which both catastrophic events are natural perils (i.e. wind, earthquake, etc.). (see FAQ #1)

Net PML: based upon sophisticated catastrophe modeling, represents PML amount after deductibles and after catastrophic and other reinsurance protection. It is the sum of retention, co-participation, and reinstatement costs (see FAQ #5). Net PML results are reported in the annual SRQ filing.

Net Required Capital (NRC): Gross Required Capital less an adjustment for covariance which is a statistical independence calculation that accounts for the unlikelihood of all components occurring simultaneously. NRC is the denominator of the BCAR score.

Stress BCAR: the term used for A.M. Best's BCAR calculation that reflects **two** catastrophe events. Although the Stress BCAR score is not published, it is available to company management. (see FAQ #1)

Supplemental Rating Questionnaire (SRQ): A.M. Best's annual rating questionnaire due on April 1st. This questionnaire provides additional insight regarding a company's trends and risk profile; and requests information such as catastrophe exposure, detailed reinsurance programs, policy count, and retention ratios to name a few.

Terrorism Stress Test: the term used for Stress BCAR in which the first event reflects terrorism and the second event reflects natural catastrophe. (see FAQ #3)

APPENDIX II: A.M. BEST REFERENCES

2008 Review & Preview Conference Presentation Materials

U.S. Property/ Casualty – Review & Preview (January 28, 2008)

2007 Supplemental Rating Questionnaire (and Instructions) for Property/Casualty Insurers

Press Release: “A.M. Best Places Updated Terrorism-Related SRQ Questions on its Website”
(December 14, 2007)

2007 Special Report: U.S. Federal Terrorism Legislation – Trend Review “Terror Backstop’s Extension Is Critical” (June 25, 2007)

Rating Implications of Recent Florida Legislation (February 26, 2007)

Press Release: “A.M. Best Comments on Ratings Impact of Recent Florida Legislation; Revises Credit Risk Factor for Florida Hurricane CAT. Fund” (February 23, 2007)

Review/Preview: Property Casualty Edition (January 2007)

2006 Supplemental Rating Questionnaire for Property/Casualty Insurers

Press Release: “A.M. Best Methodology: Property/Casualty Supplemental Rating Questionnaire”
(December 18, 2006)

Press Release: “A.M. Best Clarifies Trust Fund Treatment” (October 26, 2006)

Gauging the Basis Risk of Catastrophe Bonds (September 25, 2006)

Catastrophe Risk Management Incorporated Within the Rating Analysis (May 2006)

Rating Natural Catastrophe Bonds (May 12, 2006)

Catastrophe Analysis in A.M. Best Ratings (April 2006)

Understanding BCAR (November 24, 2003)

APPENDIX III: FINANCIAL CONSULTING SERVICES

Financial Analysis and Reinsurance Strategy

Benfield models and customizes proposed reinsurance structures using proprietary financial models, such as our award-winning ReMetrica[®] dynamic financial analysis tool. We also "stress test" these analyses to provide further guidance on the most appropriate structure (e.g., retention, limit) and terms. Benfield is also at the forefront in analyzing reinsurance recoverables and designs solutions to enhance the credit and collectibility of these assets.

Rating Agency Consulting

Benfield advises on financial, operational and strategic issues that can influence a company's long-term viability and financial strength ratings. Services include audit of rating models, pro forma simulations, rating assessments, evaluations of specific transactions and assistance with rating presentations. Benfield employs former analysts from A.M. Best and S&P who actively monitor rating standards through more than 125 rating assignments a year. As such, we believe we can add value to the process for even the most experienced management teams.

Enterprise Risk Management

Benfield's ERM team is led by seasoned technical experts representing cross disciplines in the field. In addition, Benfield pools additional resources (e.g., actuaries, rating consultants, financial modelers, etc.) for specific ERM initiatives for our clients. Services include: reviewing ERM "best practices", performing an ERM evaluation, developing an ERM presentation for a rating agency meeting, constructing an ERM application using ReMetrica[®], validating an economic capital model, and implementing ERM.

Capital Management

Benfield performs a range of capital analyses (e.g., capital needs analysis, cost of capital) to assist companies in developing their capital strategies. Pooled capital offerings, traditional debt, venture capital, private equity and public offerings represent some of the sources of capital Benfield has secured for clients. Benfield also considers blended solutions of reinsurance and capital to achieve desired returns while managing financial leverage.

Corporate Strategy

Creating the optimal corporate structure, including the right number of companies and capital allocation among companies, is integral to achieving a company's objectives. Benfield provides solutions to specific strategic or operational challenges by offering a thorough understanding of rating and regulatory implications (e.g., dividend capacity). Our team has experience evaluating inter-company pooling agreements, holding company structures and other strategic alternatives to help determine whether they meet the company's capitalization objectives.

Financial Planning and Modeling

Benfield's Financial Consulting team assists companies in their financial planning with the help of more than a dozen proprietary financial models. Since Benfield's financial models produce pro forma income statements and balance sheets, the financial results of potential transactions or strategies are transparent and measurable. Models can be tailored to meet individual needs and provide customized output.

Opportunities and Market Analysis

Benfield identifies opportunities through market analysis and helps clients capitalize on these opportunities through strategic analysis. We also highlight the strengths and weaknesses of clients through competitor profitability analyses and peer comparisons. Benfield has been instrumental in assisting many companies in their growth strategies whether achieving it within their current focus or expanding into new products or territories.

Implementation and Regulatory Assistance

Benfield works regularly with rating agencies, auditors, and regulators and is able to provide guidance on how these third parties may view a particular strategy or transaction, especially as they become increasingly complex. Benfield's models provide output that adheres to state regulations, SAP and GAAP accounting guidelines and can be tailored to help identify the impact of NAIC model laws or proposed legislation.