

# Understanding BCAR for Canadian Property/Casualty Insurers

## Exhibit B.2: Sample BCAR Calculation

Best's Capital Adequacy Model  
Sample Rating Unit  
(\$ Thousands)

### RECAP of NET REQUIRED CAPITAL (NRC)

Risk Component	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
<b>Asset Risk:</b>								
(B1) Fixed Income Securities Risk	12,120	5	13,546	4	14,384	3	14,488	3
(B2) Equity Securities Risk	57,545	22	74,405	21	80,455	19	81,785	18
Investment Risk	69,665	27	87,951	25	94,839	23	96,273	21
(B3) Interest Rate Risk	8,614	3	12,161	3	13,681	3	14,188	3
Subtotal	78,279	30	100,112	29	108,520	26	110,461	24
(B4) Credit Risk	9,997	4	11,825	3	13,812	3	14,893	3
<b>Total Asset Risk</b>	<b>88,276</b>	<b>34</b>	<b>111,937</b>	<b>32</b>	<b>122,332</b>	<b>29</b>	<b>125,354</b>	<b>28</b>
<b>Underwriting Risk:</b>								
(B5) Loss & LAE Reserves Risk	46,168	18	69,178	20	78,291	19	81,185	18
(B6) Net Written Premiums Risk	59,518	23	89,703	26	101,470	24	105,274	23
<b>Total Underwriting Risk</b>	<b>105,686</b>	<b>41</b>	<b>158,881</b>	<b>45</b>	<b>179,761</b>	<b>43</b>	<b>186,459</b>	<b>41</b>
(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)	259,042	100	350,898	100	420,173	100	454,893	100
Less: Covariance Adjustment	139,506	54	188,079	54	222,942	53	238,052	52
<b>Net Required Capital (NRC)</b>	<b>119,536</b>	<b>46</b>	<b>162,819</b>	<b>46</b>	<b>197,231</b>	<b>47</b>	<b>216,841</b>	<b>48</b>

### RECAP of AVAILABLE CAPITAL (AC)

	Amount	% to Reported Capital
<b>Capital &amp; Capital Adjustments</b>		
Reported Capital (Surplus)	220,000	100
<b>Equity Adjustments:</b>		
Provision for Reinsurance	1,000	0
Unearned Premium Reserve Equity	-12,540	-6
Loss Reserves Equity	5,958	3
Fixed Income Equity	0	0
<b>Other Adjustments:</b>		
Surplus Notes	0	0
Off-Balance Sheet Losses	0	0
Future Dividends	0	0
Protected Cell Surplus	0	0
Goodwill & Intangibles	8,000	4
<b>AVAILABLE CAPITAL (AC)</b>	<b>206,418</b>	<b>94</b>

Effective Tax Rate = 20.0%

Best's Capital Adequacy Ratio	VaR 95	VaR 99	VaR 99.5	VaR 99.6
BCAR = (AC - NRC) / AC	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.

