

Group Capital Calculation

2024 Instructions

Group Capital Calculation (GCC) Compared to ORSA Capital

Jane Ren

Group Capital and Macroprudential Policy
Advisor

Ned Tyrrell

Senior Advisor, International Solvency Policy

Eli Russo

NAIC ERM Advisor

Sherry "Cyranna" Flippo

NAIC Sr Policy Advisor
ERM/Receivership

NAIC OWN RISK AND SOLVENCY ASSESSMENT (ORSA) GUIDANCE MANUAL

Maintained by the
Group Solvency Issues (E) Working Group
of the Financial Condition (E) Committee

As of December 2025

Learning Objectives

- **Why present Capital at a Group Level?**
- **Understand the NAIC Group Capital Calculation (GCC)**
- **Understand ORSA Capital Requirements and methods that insurer use to present Capital in the ORSA Report**
- **Compare GCC and ORSA capital**
- **Example of using GCC and ORSA to produce a holistic view of group capital and populate the GPS**



Why present capital at a group level?

Why present capital at a group level?

- The US regulatory financial reporting presents surplus on a legal entity level.
- After the 2008 financial crisis, the need for the regulator to look at group capital and non-insurance entities that affected the insurer became vital.

Two regulatory tools were developed to provide regulators with a **view of capital at the group level**:

Group Capital Calculation (GCC) NAIC Model Law (#440) and Model Regulation (#450) - 2020:

- Builds on existing Statutory/RBC entity-level capital
- Provides uniformity across groups
- Gives regulators a clear, standardized view of group capital
- Emphasizes transparency and identification of non-insurance capital

Risk Management Own Risk Solvency Assessment (ORSA) NAIC Model Law (#505) - 2012:

- Principle-based, risk-focused capital view
- Varies by insurer, based on risk profile
- Evaluates capital through the lens of enterprise risk management
- Provides insight into material risks, risk appetite, and forward-looking capital needs

How does a different views of group capital benefit the regulator?

- The regulator can
 - Look at capital on a group basis rather than just a legal entity level presented by RBC
 - Gain a perspective on other affiliates within the group
 - Better understand the risks to insurance groups and their policyholders

What is the difference between the GCC and the capital in an ORSA?

Group Capital Calculation (GCC)

Background - Purpose & Benefits

Purpose

- Better understand the group
- NOT to be used to take regulatory action, nor meant to be used to compare one group to the next

Benefits

- Transparency into the group
- Help identify potential pressure from non-insurance entities or non-U.S. insurers
 - Provide early warning signals
 - Trending of financial information
 - Analytics tab of the GCC

Bottom-up approach

The GCC aggregation approach is intended to build on existing legal entity capital requirements where they exist rather than developing replacement/additional standards. In selecting this approach, it was recognized as satisfying regulatory needs while at the same time having the advantages of being less burdensome and costly to regulators and industry and respecting other jurisdictions' existing capital regimes.

To capture the risks associated with the entire group, including the insurance holding company, GCC calculations would need to be developed in those instances where no RBC calculations currently

The Group Capital Calculation Ratio


For each entity within the group, two amounts must be provided: available capital and calculated* capital

$$\begin{aligned} & \text{Available Capital} \\ & \div \text{Calculated Capital} \\ & = \text{Group Capital Ratio} \end{aligned}$$

**Represents the local required capital for insurers and other regulated entities (e.g. banks) and a calculation for non-regulated entities*

GCC Methodology (Aggregation)


Step 1: Accumulate entity-level data, including available capital and calculated capital, using RBC amounts where available, and apply a factor to other non-insurance entities



Step 2: Eliminate amounts for double-counting (available capital and calculated capital) for all entities (where applicable)

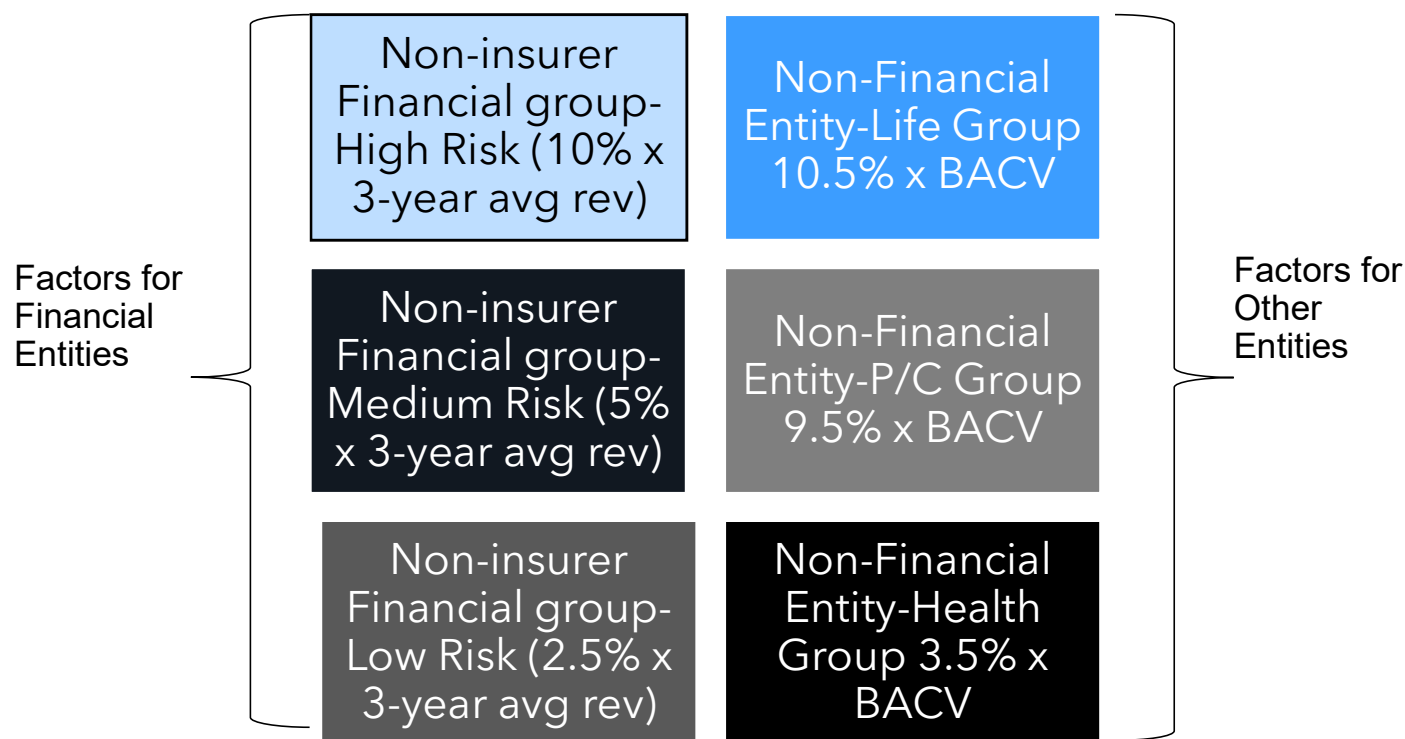


Step 3: Aggregate the results for all entities, thereby calculating total available capital and total required capital after eliminations (scaling for entities in non-US jurisdictions)



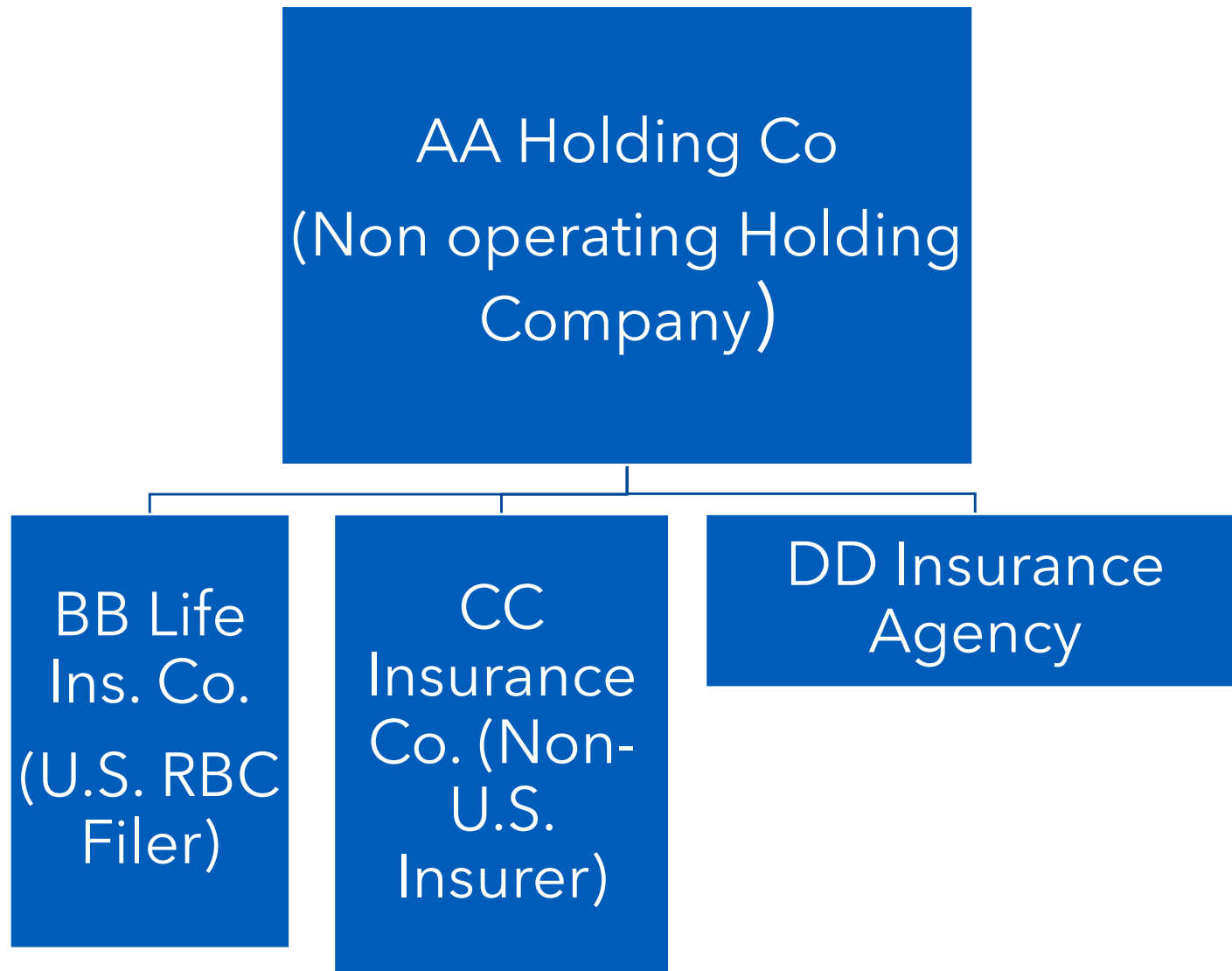
Step 4: Analyze the results—the group capital ratio

GCC Factors For Non-Insurance Entities



Note: BACV stands for book/adjusted carrying value

EE Insurance Group (EEIG)



EEIG Financial Info

Entity	Total Available Capital (TAC)	Calculated Capital
AA Holding Company	\$50.0M ¹	\$1.26M ³
BB Life Ins. Company	\$30.0M	\$6.0M ²
CC Insurance Company	\$6.0M ¹	\$1.6M ²
DD Insurance Agency	\$2.0M ¹	\$0.21M ³

¹ For non-RBC reporting entities, this is the available regulatory capital or stockholder's equity

² Minimum required capital (first level of intervention (200% RBC) or equivalent amount in foreign jurisdiction)

³ **Calculated using a factor (see following pages)**

(Calculations herein have been simplified for demonstration purposes.)

Eliminations of the Available Capital

Entity	TAC	Less Subs' TAC	Adjusted TAC
AA Holding Company	\$50.0M	(\$38.0M) ¹	\$12.0M
BB Life Ins. Company	\$30.0M	0	\$30.0M
CC Insurance Company	\$6.0M	0	\$6.0M
DD Insurance Agency	\$2.0M	0	\$2.0M
Available Capital (EEIG Total)			\$50.0M

¹ \$30.0M+6.0M+2.0M = \$38.0M

Calculations of Non-Insurance Calculated Capital

Entity	Value	Factor	Calculated Capital
AA Holding Company	\$12.0M	10.5%	\$1.26M
DD Insurance Agency	\$2.0M	10.5%	\$0.21M

Calculation of the Group Capital Ratio

- Available capital = \$50.0M
- Calculated capital = \$9.07M
- Ratio = $\$50.0\text{M} \div \$9.07\text{M} = 5.51$

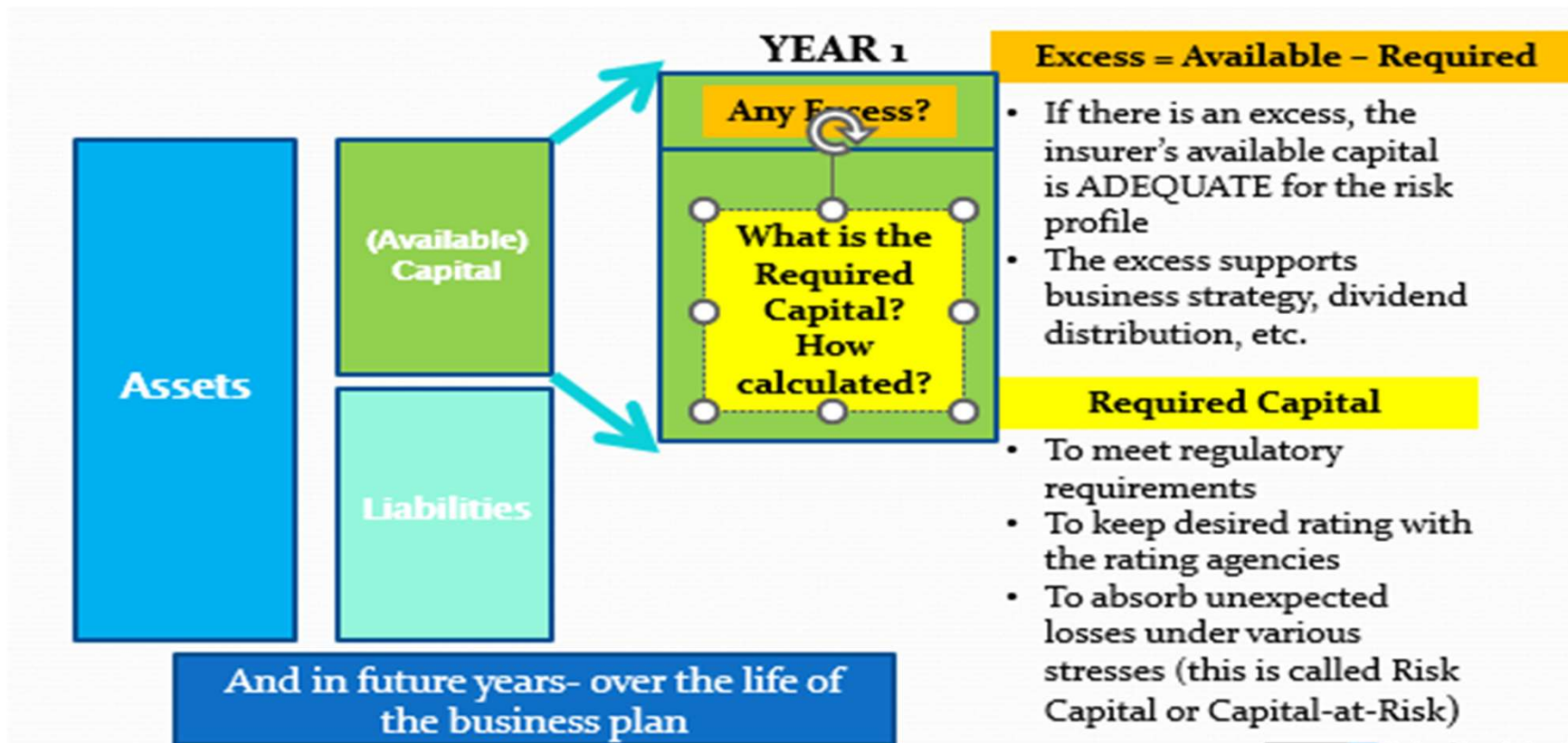
(A ratio of 1.0 is the equivalent of an RBC of 200%; 5.51 is well above 1.0)

Capital in ORSA

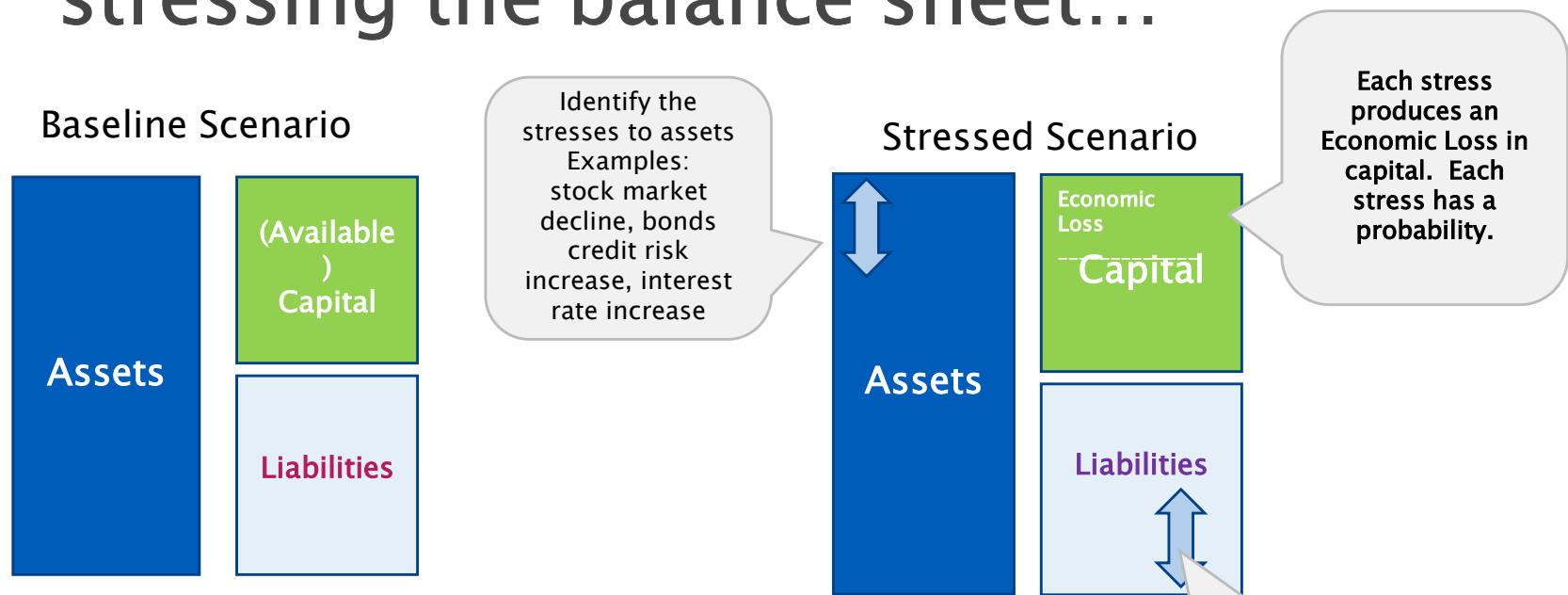
Capital Language from ORSA Guidance Manual

The goal of the group capital assessment is to provide an overall determination of risk capital needs for the insurer based on the nature, scale, and complexity of risk within the group and its risk appetite; and compare that risk capital to available capital to assess capital adequacy. Group assessment of risk capital should not be perceived as the minimum amount of capital before regulatory action will result (e.g., the triggers in the Risk-Based Capital (RBC) for Insurers Model Act [#312]); rather, it should be recognized that this is the capital needed within a holding company system to achieve its business objectives.

Building Block of Capital in ORSA



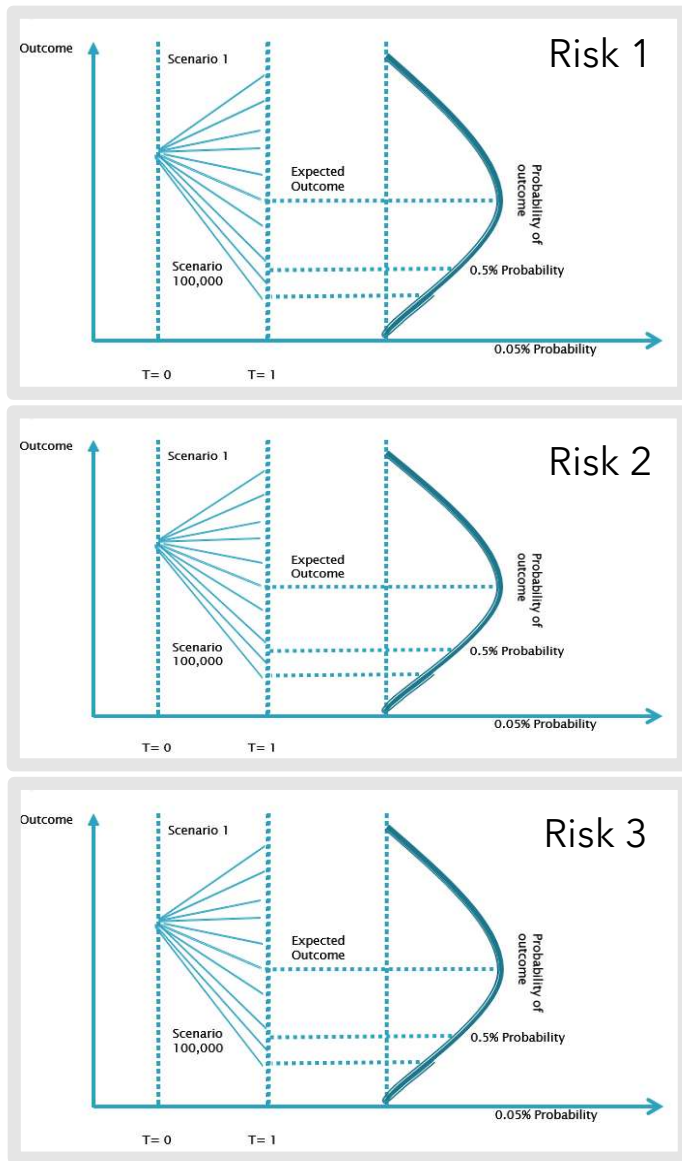
Economic Capital is measured by stressing the balance sheet...



- Steps To Quantify Economic Capital:**
1. Select key risks for Assets and Liabilities
 2. Select risk drivers behind each key risk
 3. Generate stresses for each risk driver: scenario description and associated probability
 4. Quantify impact on Assets and Liabilities values
 5. Quantify changes in capital (i.e. economic loss)

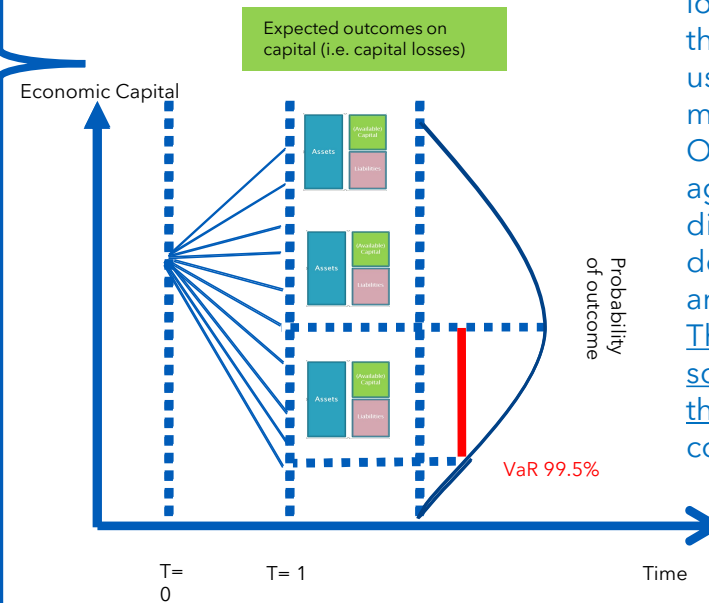
Identify stresses to liabilities
Examples:
adverse reserve development, large natural CAT, uncollectable reinsurance

Internationally Active Insurance Groups (IAIGs) are required to Use Economic Capital Models



Scenario-based model (Stochastic - Thousands simulations)

Aggregation
(Correlation Matrix or Copula)



After simulating each risk individually, I have lots of capital losses. I combine these simulations using a correlation matrix or a copula. Once I have the aggregate distribution, I can determine its mean and percentiles. The modeling software does all this, and this is why companies buy it.

Example of Capital Views

S&P HAS A CAPITAL MODEL

S&P Model Required Capital for "A" rating		
	Risk Type:	millions:
1	Premium Risk	1,000
2	Reserve Risk	2,000
3	Cat Risk	600
4	Asset Risk	1,500
5	Life Risk	500
6 = Sum(1thru5)	Undiversified Capital	5,600
7	Diversification Benefit	800
8=6-7	Diversified Required Capital	4,800
9	Available Capital	7,200
10=9-8	Cushion	2,400
11=9/8	Available/Required Capital	150%

A.M. BEST HAS A CAPITAL MODEL

AM Best BCAR for "A" rating		
	Risk Type:	millions:
1	Asset Risk	1,400
2	Reserve Risk	2,100
3	Premium Risk	800
4	Business Risk	600
5	Cat Risk	500
6 = Sum(1thru5)	Undiversified Capital	5,400
7	Diversification Benefit	1,000
8=6-7	Diversified Required Capital	4,400
9	Available Capital	7,500
10=9-8	Cushion	3,100
11=9/8	Available/Required Capital	170%
	$\{(9)-(8)\}/(9)$ BCAR Ratio	41%

More Examples of Capital Views

NAIC HAS THE RBC CAPITAL MODEL

		RBC	
	Risk Type:		millions:
1	R0 - Asset Risk-Affiliated		100
2	R1 - Asset Risk-Fixed Income		400
3	R2 - Asset Risk-Equity		200
4	R3 - Asset Risk-Credit		300
5	R4 - UW Risk-Reserve		400
6	R5 - UW Risk-NPW		700
7	Rcat - Catastrophe Risk		300
8 = Sum(1thru7)	Undiversified Capital		2,400
9	Covariance Adjustment		1,000
10=8-9	Authorized Control Level		1,400
11	Total Adjusted Capital		6,200
12=11-10	Cushion		4,800
13=11/10	RBC ratio		443%

SOME INSURERS HAVE THEIR OWN INTERNAL ECONOMIC CAPITAL MODEL

		Economic Capital Model @99VaR	
	Risk Type:		Year 1 millions:
1	Cat Risk		1,000
2	Reserve Risk		1,100
3	Market Risk		900
4	Credit Risk		1,500
5	Premium Risk		800
6	Life Risk		300
7 = Sum(1thru6)	Undiversified Capital		5,600
8	Diversification Benefit		2,500
9=7-8	Diversified Required Capital before load		3,100
10	Load for operational & non-modeled risk		10%
11= (1.0 + (10))*9	Diversified Required Capital		3,410
12	Available Capital		7,600
13=12-11	Cushion		4,190
14=12/11	Available/Required Capital		222%

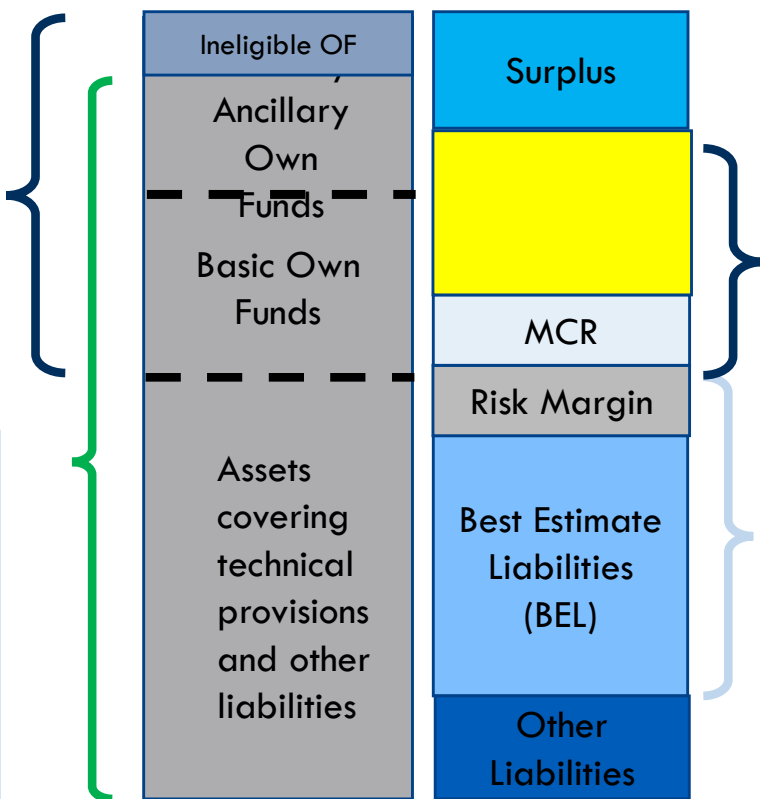
ORSA prepared under Solvency II - THE BALANCE SHEET

Assets:
Valued at Market Value

“Own Funds” are divided into “**Basic Own Funds**” which are assets on the insurer’s balance sheet and “**Ancillary Own Funds**” which are off balance sheet and require supervisory approval.

Own Funds

Assets covering technical provisions, other liabilities, MCR, and SCR



Capital Requirements:
SCR = Solvency Capital Requirement
 Standard Formula or Internal Model
 First regulatory intervention point
MCR = Minimum Capital Requirement
 Final regulatory intervention point

Technical Provisions (TP):
 3 building blocks:
 1. **Best estimate** of all future cash flows
 2. **Discounted** at risk-free interest rate
 3. **Risk margin** for non-hedgeable risks and unavoidable market risks.

Example of Solvency II Capital in ORSA-

Total Assets = 5,700

Total liab. & Capital = 5,700

Basic Own Funds = 1600

Other Assets = 4100

Free Surplus = 800

SCR = 700

Liabilities = 4200

Coverage ratio = BOF/SCR = 228%

Item	YE	YE +1	YE + 2
Assets	5700	5900	6100
Liabilities	4200	4445	4600
Basic Own Fund	1600	1800	1780
SCR	700	775	800
Surplus	800	680	700
Coverage Ratio	228%	232%	254%

Capital Per Risk	YE
Insurance Risk	3,400
Financial Risk	2,400
Operation Risk	800
Diversification	-1,850
Internal Required Capital	4,750

Use of the Economic Capital Model to inform GPS

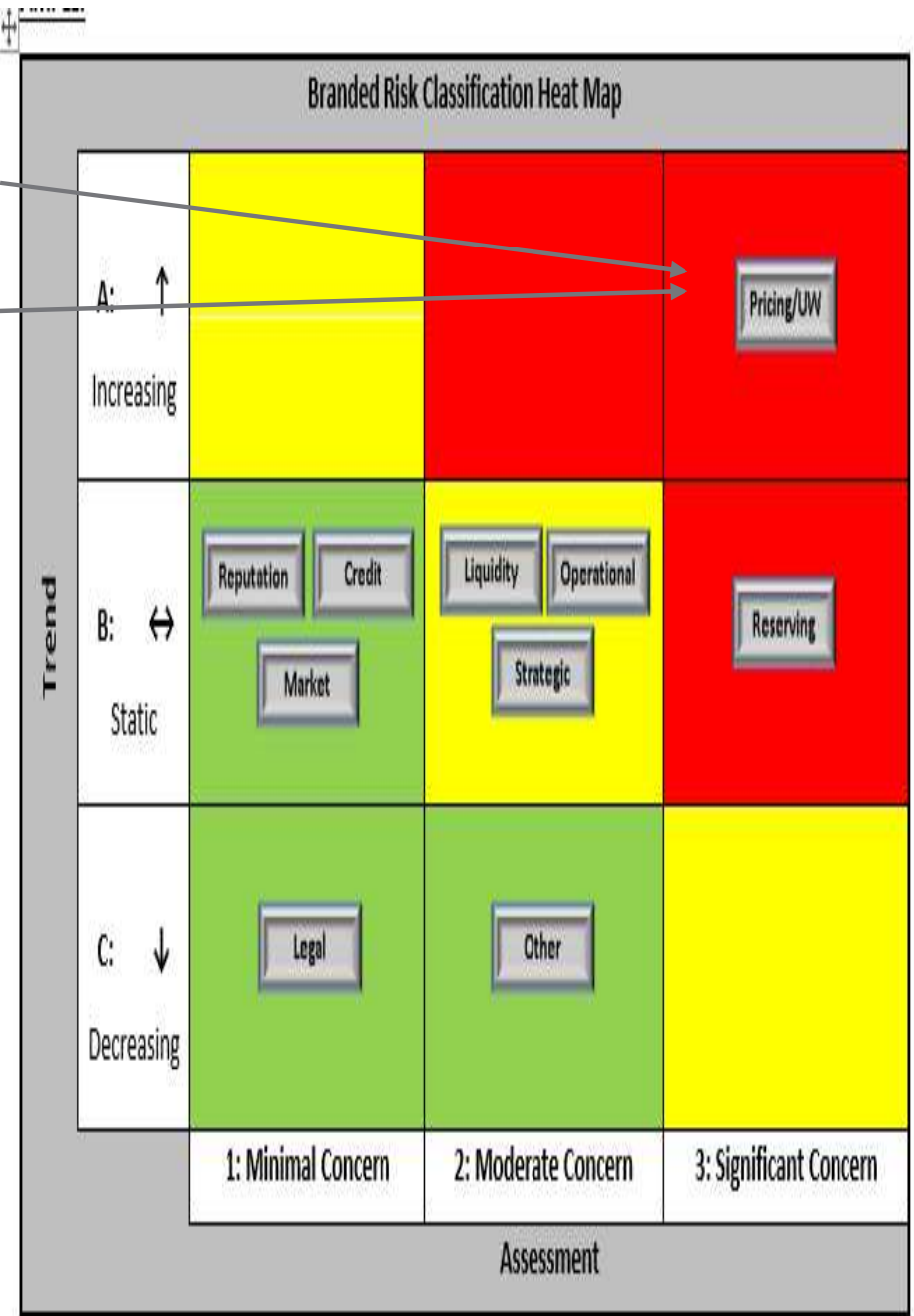
Modeled Risks
(using ECM)

Quantified but
Non-Modeled
Risks

Non-Modeled
Risks

Risk	Risk Capital @ VAR 99	
	YEAR 1	YEAR 2
CAT	678	850
Market	468	455
Reserve	728	835
U/W	625	721
Credit	58	50
Total	2557	2911
Diversification	-895	-1164
Post-Div. Total	1662	1747
Operational	199	210
Required Capital	1861	1956
Available Capital	2777	2485
Excess Capital	916	529

Liquidity 2X liabilities at YE



CAT and U/W risks should be evaluated during exam

Key Points Related to Capital in ORSA

- Insurer may use several capital metrics for different stakeholders
 - For Internationally Active Insurance Groups (IAIG's), the ORSA should show economic capital at the group -level
- Insurer can choose metrics, calibration, diversification, assumptions

BUT

- No US regulatory pre-approval but verification/control testing/walkthrough
- Insurer should support choices made
- Insurer should explain which key risks are included or add capital stresses for risks not included.

Summary

Compare the GCC and Economic Capital

GCC is a regulator defined methodology that looks at the RBC reporting entities as well as the non-insurance entities and those in other jurisdictions to arrive at the available capital and calculated capital.

ORSA is a principles-based company view of the ERM framework and the group capital and stresses currently and prospectively over the life of the business plan which is typically 3-5 year. ORSA should answer the question,

“What are the insurer’s key risks?”

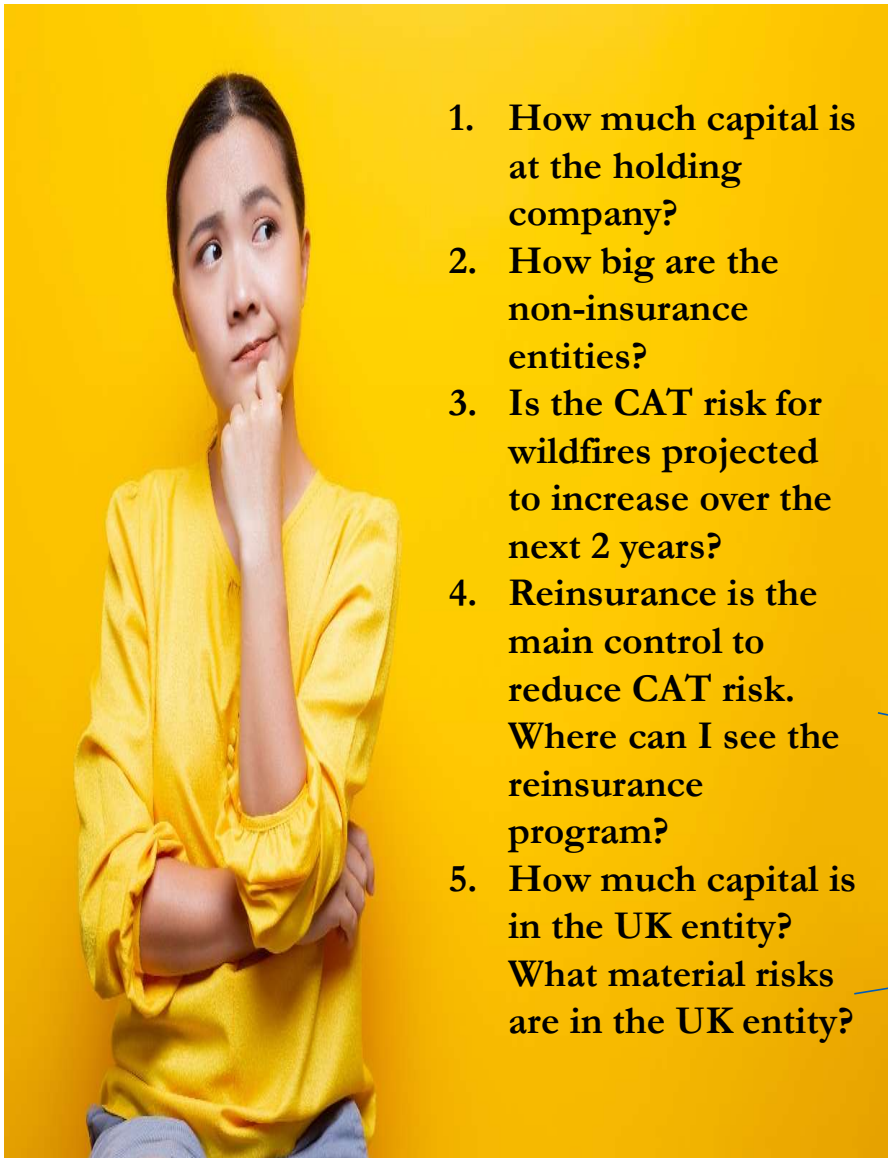
“ How much economic capital is needed to support those risks now and prospectively?”

How Issues are Addressed

Issue	GCC	ORSA
Affiliates, non-insurance entities and foreign jurisdictions	Systematic methodology for including in the calculation	Material affiliates, non-insurance and foreign jurisdictions to be presented
Prospective group capital projected	No	Yes- per instructions
Group Capital Allocated to Risk	No	Yes for IAIG (Economic Capital Model Required); Maybe on other insurers
Ratio of Calculated Capital (Risk Capital-ORSA) to Available Capital	Yes	Depends on Insurer; more prevalent in international insurers or Health Insurers using RBC multiples
Risks	Not presented by Risks	ORSA guidance manual instruction for all material risks, however insurer choose risks included in ORSA

Regulators can use both ORSA and GCC to obtain Company Group Capital and/or Group Risk View

This analyst is preparing the Group Profile Summary (GPS). Can the ORSA, GCC or RBC filing help answer her questions?



GCC



ORSA



NAIC Staff Contact

Contact:

GCC:

Dan Daveline, DDaveline@naic.org, +1 816-585-3727

Jane Ren, ren@naic.org , +1 212-386-1942

Ned Tyrell, ntyrell@naic.org,

ORSA:

Elisabetta Russo, erusso@naic.org, +1 718 286 9450

Sherry L. Flippo, sflippo@naic.org, +1 816-694-2320