

How Credit Worthy Is Your Reinsurer?

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Company

The individual life reinsurance market has changed significantly over the past 10 years.

- Acquisitions, new entrants, and withdrawals
- Ceding companies have increased their use of reinsurance
- Some life reinsurers have had financial troubles

Top U.S. Life Reinsurers in 1993

U.S. Ordinary Recurring Life Reinsurance Assumed

Company	Amt. Assumed	Market Share
Transamerica	\$34,364 MM	20.67%
RGA	\$21,726 MM	13.07%
Lincoln	\$16,888 MM	10.16%
Security Life	\$14,268 MM	8.58%
Life Re	\$12,842 MM	7.72%
AUL	\$11,063 MM	6.65%

Change from 1993 to 1998

- 26 Reinsurers in 1993 Munich Survey
- 21 Reinsurers in 1998 Munich Survey
- 6 exited or were acquired, 1 new entrant
- 1998 ceded amount = 4 times the 1993 ceded amount

Top U.S. Life Reinsurers in 1998

U.S. Ordinary Recurring Life Reinsurance Assumed

Company	Amt. Assumed	Market Share	1993 Rank
Swiss Re	\$111,817MM	16.49%	5, 7, & 9
Lincoln	\$78,545 MM	11.58%	3
Transamerica	\$73,636 MM	10.86%	1
RGA	\$62,704 MM	9.25%	2
Security Life	\$55,925 MM	8.25%	4
ERC	\$52,805 MM	7.79%	10 & 25

Change from 1998 to 2003

- 21 Reinsurers in 1998 Munich Survey
- 15 Reinsurers in 2003 Munich Survey
- 8 exited or were acquired, 2 new entrants
- 2003 ceded amount = 1.6 times the 1998 ceded amount

Top U.S. Life Reinsurers in 2003

U.S. Ordinary Recurring Life Reinsurance Assumed

Company	Amt. Assumed	Market Share	1998 Rank
Swiss Re	\$234,308 MM	22.16%	1 & 2
RGA	\$176,547 MM	16.70%	4 & 9
ING Re	\$154,199 MM	14.58%	5
Transamerica	\$120,900 MM	11.43%	3
Munich	\$110,069 MM	10.41%	10 & 11
Scottish Re	\$63,366 MM	5.99%	New & 21

Recent Changes

- 2 reinsurers in 2003 Munich Survey are no longer accepting new business
- Retrocession capacity is shrinking
- Reinsurers are pricing with less aggressive mortality assumptions and increasing costs for XXX reserve collateral

How Do You Choose a Reinsurer?

- Perform initial and periodic financial evaluation of reinsurer financial strength
- Consider value added by reinsurer
- Plan for uncertainty and change

Financial Evaluation of Reinsurers

- Ratings Agencies
- Reinsurer Statutory Surplus
- Financial Ratio Analysis
- Counterparty Risk for Unauthorized Reinsurers

Value Added by Reinsurers

- Risk Transfer: Mortality, Persistency, Investment (Permanent Plans)
- Facultative Underwriting Support
- Product Development Support
- Capital Management

Plan for Uncertainty and Change

- Be aware of history of your reinsurers
- Ask often about strategic direction
- Watch for news of mergers and acquisitions
- Monitor exposure to each reinsurer

What is Your Company's
Financial Exposure to Your
Reinsurers?

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XXX Implications

Bradley M. Smith

Milliman USA

Term Issued by Top 100 Writers

(Amounts in Billions)

<u>Issue Year</u>	<u>Term Issued</u>
1997	\$ 674.5
1998	786.3
1999	897.4
2000	1,000.5
2001	974.0
2002	1,171.4

Source: Thomson Financial Insurance Solutions U.S. Insurance (Life) database,
July 2003

Issued/Ceded Amounts

(Amounts in Billions)

<u>Issue Year</u>	<u>OL Issued¹</u>	<u>OL Ceded²</u>	<u>Percent Ceded</u>	<u>Term Issued/ OL Issued</u>
1997	\$1,217.8	\$506.7	41.6%	55.4%
1998	1,343.3	679.7	50.6%	58.5%
1999	1,455.1	810.6	55.7%	61.7%
2000	1,677.2	985.5	58.8%	59.7%
2001	1,520.4	947.2	62.3%	64.1%
2002	1,687.1	1,078.3	63.9%	69.4%

Source: ¹Thomson Financial Insurance Solutions U.S. Insurance (Life) database, July 2003, ² Munich American Reassurance Company, Life Reinsurance Surveys, 1997-2002

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Reserves Ceded

(Amounts in Billions)

<u>Calendar Year</u>	<u>Term Inforce</u>	<u>OL Inforce</u>	<u>OL Reins. Inf. Ceded</u>	<u>OL Reins. Inf. Res. Ceded</u>	<u>Reserve Per \$1000 Ceded</u>
1997	\$ 4,923.5	\$ 9,835.7	\$2,852.6	\$26.3	\$9.22
1998	5,990.1	11,301.2	3,865.2	34.5	8.91
1999	7,091.6	12,621.7	4,659.8	35.5	7.62
2000	8,215.0	14,439.3	5,822.5	42.5	7.29
2001	9,620.4	15,876.0	7,186.2	50.7	7.06
2002	11,375.2	17,614.3	8,673.0	59.2	6.83

Source: Thomson Financial Insurance Solutions U.S. Insurance (Life) database, July 2003

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Model Projected Results

(Amounts in Millions)

1980 CSO Reserves

<u>EOY</u>	<u>Existing Business Reserve</u>	<u>Existing Business Inforce</u>	<u>Res. per \$1000 Inforce</u>
2003	17,887	2,137,895	8.37
2004	27,235	1,948,314	13.98
2005	34,676	1,778,841	19.49
2006	40,463	1,632,990	24.78
2007	44,945	1,508,257	29.80
2008	48,363	1,400,965	34.52
....			
2012	54,351	843,937	64.40
....			
2016	51,536	598,430	86.12

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Model Projected Results

(Amounts in Millions)

1980 CSO Reserves

<u>EOY</u>	<u>New Business Reserve</u>	<u>New Business Inforce</u>	<u>Res. per \$1000 Inforce</u>
2003	-	-	
2004	902	790,900	1.14
2005	5,882	1,575,694	3.73
2006	14,569	2,356,299	6.18
2007	26,501	3,140,405	8.44
2008	41,377	3,937,543	10.51
....			
2012	88,306	2,800,819	31.53
....			
2016	102,806	1,788,127	57.49

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Model Projected Results

(Amounts in Millions)

<u>EOY</u>	<u>Total Reserve</u>	<u>Total Inforce</u>	<u>Res. per \$1000 Inforce</u>
2003	17,887	2,137,895	8.37
2004	28,137	2,739,214	10.27
2005	40,558	3,354,535	12.09
2006	55,031	3,989,289	13.79
2007	71,446	4,648,662	15.37
2008	89,740	5,338,508	16.81
....			
2012	142,658	3,644,757	39.14
....			
2016	154,342	2,386,557	64.67

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Model Projected Results

(Amounts in Millions)

2001 CSO Reserves			
<u>EOY</u>	<u>New Business Reserve</u>	<u>New Business Inforce</u>	<u>Res. per \$1000 Inforce</u>
2003	-	-	
2004	538	790,900	0.68
2005	4,583	1,575,694	2.91
2006	11,624	2,356,299	4.93
2007	21,307	3,140,405	6.78
2008	33,401	3,937,543	8.48
....			
2012	70,877	2,800,819	25.31
....			
2016	76,512	1,788,127	42.79

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Model Projected Results

(Amounts in Millions)

<u>EOY</u>	<u>Total Reserve</u>	<u>Total Inforce</u>	<u>Res. per \$1000 Inforce</u>
2003	17,887	2,137,895	8.37
2004	27,773	2,739,214	10.14
2005	39,258	3,354,535	11.70
2006	52,086	3,989,289	13.06
2007	66,252	4,648,662	14.25
2008	81,763	5,338,508	15.32
....			
2012	125,228	3,644,757	34.36
....			
2016	128,048	2,386,557	53.65

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Projected Reserves Existing Business

(Amounts in Millions)

<u>EOY</u>	1980 CSO Reserves		2001 CSO Reserves	
	<u>Existing Business Reserve</u>	<u>Res. per \$1000 Inforce</u>	<u>Existing Business Reserve</u>	<u>Res. per \$1000 Inforce</u>
2003	17,887	8.37	14,374	6.72
2004	27,235	13.98	22,156	11.37
2005	34,676	19.49	28,195	15.85
2006	40,463	24.78	32,840	20.11
2007	44,945	29.80	36,293	24.06
2008	48,363	34.52	38,671	27.60
....				
2012	54,351	64.40	39,874	47.25
....				
2016	51,536	86.12	34,372	57.44

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Projected Reserves

(Amounts in Millions)

2001 CSO Reserve with 4%
Lapse Rate

<u>EOY</u>	<u>Existing Business Reserve</u>	<u>Reserve per \$1000 Inforce</u>
2003	12,033	5.63
2004	18,489	9.49
2005	23,641	13.29
2006	27,745	16.99
2007	30,927	20.50
2008	33,236	23.72
....		
2012	35,342	41.88
....		
2016	31,578	52.77

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Projected Reserves

(Amounts in Millions)

2001 CSO Reserve with 4%
Lapse Rate

<u>EOY</u>	<u>New Business Reserve</u>	<u>Reserve per \$1000 Inforce</u>
2003	-	
2004	534	0.68
2005	3,911	2.48
2006	9,760	4.14
2007	17,836	5.68
2008	27,993	7.11
....		
2012	60,660	21.66
....		
2016	67,541	37.77

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Projected Reserves

(Amounts in Millions)

2001 CSO Reserve with 4%
Lapse Rate

<u>EOY</u>	<u>Total Reserve</u>	<u>Reserve per \$1000 Inforce</u>
2003	12,033	5.63
2004	19,023	6.94
2005	27,552	8.21
2006	37,505	9.40
2007	48,763	10.49
2008	61,229	11.47
....		
2012	96,002	26.34
....		
2016	99,119	41.53

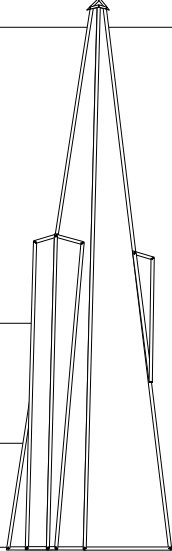

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How Creditworthy is Your Reinsurer? Onshore Perspective	
San Antonio Spring Meeting	
	 1

How Creditworthy is Your Reinsurer?

Overview

- Risks to Reinsurer Credit/Solvency
- Counterparty Standards
- Provisions to Protect Against Reinsurer Credit Risk

How Creditworthy is Your Reinsurer?

Risks to Reinsurer Credit/Solvency

- Catastrophic events -- large portfolio of very correlated risk? (COLI?, GMDB)
- Regulatory risk –
 - allowability of reserve credit collateral
 - aggressive accounting positions
- Parental / affiliate connections
- Litigation risk
- Pricing risks

How Creditworthy is Your Reinsurer?

Counterparty Standards

- | | |
|---------------------------|------------------------------------|
| ■ Rating Agency Standards | ■ Catastrophic event risk |
| ■ Concentration of Risk | ■ Regulatory risk |
| ■ Timely Claim Payment | ■ Parental / affiliate connections |
| | ■ Litigation risk |
| | ■ Pricing risks |

How Creditworthy is Your Reinsurer?

Protection Provisions

- | | |
|---------------------------|-----------|
| ■ Arbitration | ■ Require |
| ■ Recapture (Downgrade) | ■ Avoid |
| ■ Recapture (Insolvency) | ■ ? |
| ■ Recapture (Quota Share) | ■ Avoid |
| ■ Transfer of Reserves | ■ AVOID! |
| ■ Abide the Issue | ■ Avoid |

PROPERTY/CASUALTY INSURANCE & REINSURANCE LIFE/ANNUITY

**Society of Actuaries
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Monday, June 14th , 2004
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**HOW CREDIT WORTHY IS YOUR
REINSURER**

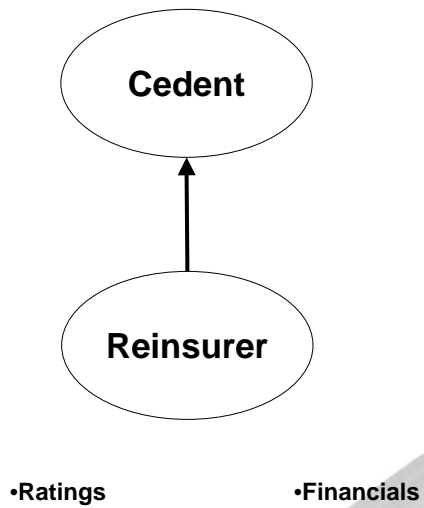
**Offshore Reinsurance
Perspective**

Reinsurance Collateral

OVERVIEW

- Transaction solvency
- Current practice
- Regulatory requirements
- Comparisons between types of collateral
- What happens if....
- Prevention techniques
- Collateral flexibility

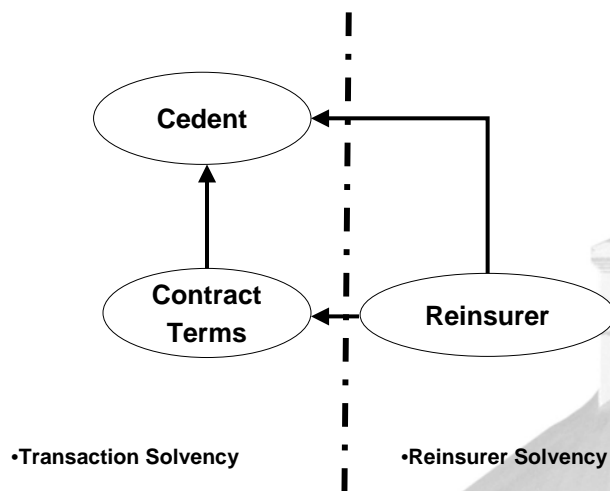
Traditional Model

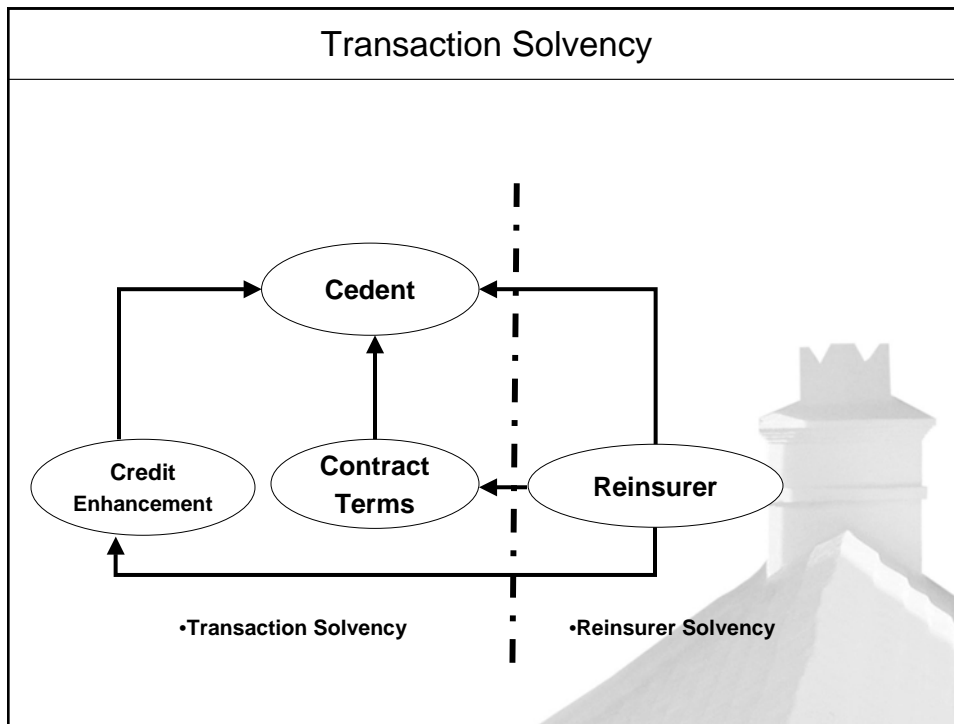


Transaction Solvency

- Distinct from reinsurer solvency
- Transaction ratings
- Credit enhancement
- Run – off versus reserve growth

Transaction Solvency





- ### Current Practice
- Reserve credit
 - Licensed or accredited reinsurer
 - Unauthorized Reinsurer

 - Unauthorized reinsurer
 - Modified coinsurance
 - Funds withheld
 - Letter of credit
 - Trust account

Regulatory Requirements

■ Trust

- Qualified U.S. financial institution
- Assets:
 - cash
 - SVO / NAIC admitted assets
 - Letters of credit
- Held in U.S.
- For sole benefit of cedent
- Cedent may withdraw without notice
- Termination requires 30 to 45 days notice
- Reinsurer insolvency: Commissioner steps in

Regulatory Requirements

■ Letters of Credit

- Qualified U.S. financial institution
- Clean
- Irrevocable
- Unconditional
- At least one year
- Evergreen: at least 30 days notice for expiration or nonrenewal
- Issuer's obligation not contingent on reimbursement

Comparisons of LOC Versus Trust

	LOC	Trust
Counterparty risk	Issuer	Diversified assets
Credit risk amount	Full	Each asset / Issuer
Mark to market	n/a	Quarterly / Monthly
Interest rate exposure	None	Top-up
Reserve increase	Top-up	Top-up
Adjustments	Annual	Frequent / Income
Current cost	High	Low
Expense risk	High	Low

What Happens If....

- Claims are not paid
- Trust assets are too low
- Collateral is not renewed or topped-up

- Discuss & negotiate!
- Arbitrate
- If all else fails.....access collateral

Prevention Techniques

- Arbitration
- Collateral for domestic reinsurance
- Require excess collateral
- Benign contract triggers
 - Pay premiums into trust
 - End trust income withdrawals
 - Change trust investment management
 - Stipulate broad collateral draw rights
 - Request modest collateral increase
- Highly rated conduit

Collateral Flexibility

- Europe vs US
- Negotiate
- Excess collateral
- Domestic reinsurance
- Nothing is certain...
 - Too much of a good thing
- Comparison with asset exposures

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