

The Case of the Strangely Volatile Surplus

You are a member of the Board of Directors or Senior Management of the Strangely Mutual Insurance Company (“SMIC”). SMIC, at \$300 million in assets, sells a diversified book of property/casualty products in its regional market of six neighboring states.

SMIC’s Board has only four members, so it has seen little need to have formal committees. Instead, all Board members can vote and participate on key decisions.

You have been given cards that represent each of the Board or Senior Management members and their background. Please note the following about each of your fellow Board members.

(Additional details in following slides)

- #1 - Chairman of the Board, Son of the Founder of SMIC
- #2 - President of SMIC, Board Member
- #3 - Past President of SMIC, Board Member
- #4 - Board Member
- #5 - Chief Financial Officer of SMIC
- #6 - Chief Actuary of SMIC



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#1 - Chairman of the Board, Son of the Founder of SMIC

- You are 60 years old. Your father (retired) founded SMIC 50 years ago and taught you everything you know about the insurance business. You joined the company after graduating college and promised your father to always manage SMIC with the same 'rock of Gibraltar' values he taught you. (Your father started his career as an agent for Prudential). You went to high school with the current President of SMIC. Recent financial market volatility has gotten your attention and you want to see that ugly investment risk reduced. "Investing is not what we are about," you can hear your father say, "We are in the insurance business, son, and the town of Strangely depends upon us to be their financial rock." Thus, you are 100% for reducing risk in the investment portfolio.



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#2 - President of SMIC, Board Member

- You are 57 years old and joined SMIC five years ago after a career of increasingly responsible positions at much larger insurers, mostly in the marketing and administrative areas. You always looked up to the Chairman, even when you both were in Strangely High School at the same time. However, you have learned new and different ways of running an insurance company and you now feel comfortable in starting to implement those new methods and improve SMIC. You have compared SMIC's investment philosophy to the larger insurers you have worked for and you are convinced that SMIC is too conservative. Besides, your bonus is tied to net income.



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#3 - Past President of SMIC, Board Member

- You are 60 years old and a long-time friend of the Chairman of the Board, having grown up across the street from each other. You have the strongest voice, literally, on the Board, as you have the ability to sound like an expert on nearly every subject (whether you are one or not), drowning out any possible dissention. From your perspective, you are the one that brought recent financial market volatility to the attention of everyone. And it is you who realize that volatility is spelled 'O-P-P-O-R-T-U-N-I-T-Y'. You think it is time to take full advantage and increase risk in the portfolio. 'The future belongs to the bold' is your approach to life and it has nearly always worked out well for you.



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#4 - Board Member

- You are an 85 year old retired M.D. in the town of Strangely and the longtime family doctor to the Chairman and his family. You have a very conservative personal investment portfolio (95% US Treasury bills, notes and bonds and 5% cash), but at this point in life you see no reason to take risks. You are more interested in the 'return of' instead of the 'return on' capital. Thus, the current volatility in the financial markets makes you queasy and realize what you've been saying for a long time: "We've got a perfectly good company, let's not make stupid mistakes and be the laughing stock of Strangely." Thus, you want to reduce risk in the investment portfolio, as you think it might be too high today.



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#5 - Chief Financial Officer of SMIC

- You were named CFO of SMIC a year after the current President arrived. Like him, you have a strong background at other larger, successful insurers. When he hired you, the President gave you a mandate to find new ways to improve the bottom line and you have been successful at that. You led a cost savings push, found improvements in the local banking arrangements and have increased the overall professionalism of your staff. Of course, not all of these changes went smoothly, but they did improve the bottom line. When viewing the investment portfolio, you are convinced Strangely is 'leaving money on the table.' So, despite recent surplus volatility, you want to see risk increased with the chance for much greater returns. After all, you have a bonus tied to that bottom line number.



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#6 - Chief Actuary of SMIC

- You are nearing your 30th year as Chief Actuary having guided the company's risk management through good times and bad. Besides underwriting results and other key factors, you keep a close eye on investments. Like some Board members, you realize that Strangely is an insurer not an investment firm. Thus, it is investments where it should tread lightly. You have voiced these concerns in the past, but are not always listened to since your expertise is assumed to be elsewhere. Given today's level of volatility and riskiness of the investment portfolio, you feel very strongly about reducing risk in the portfolio.



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Recent financial market volatility has caused the Board to reconsider its risk appetite, especially as it relates to the size of its Surplus Growth account (investments outside of the Core Fixed Income portfolio). The Surplus Growth account includes investments in various Risk Assets, including High Yield Bonds (20% of Risk Assets), Large US Equities (50% of Risk Assets), Developed Market Equities (20% of Risk Assets), and Emerging Market Equities (10% of Risk Assets).

You have been presented with a chart of Risk Asset Stress Testing and statistics on long term credit defaults of corporate bonds. You also note that during the current year, the Surplus Growth account has returned approximately negative 10%. Meanwhile, falling energy prices have hammered the 15% allocation to energy within the High Yield Bond portfolio, as several are now under consideration for material (30-50%) Other Than Temporary Impairment write downs



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The Chairman has called a special meeting of the Board of Directors to discuss recent financial market volatility and its impact on Strangely. He has also invited the Chief Financial Officer as well as the Chief Actuary of SMIC, as he is concerned that recent volatility has more of an impact on this year's financials than last year's financials. Underwriting results are expected to continue to provide a combined ratio close to 100, with profitability being strongly influenced by investment results.

With this in mind, Strangely must decide the following questions:

- 1 – Given recent financial market volatility and its impact on Surplus, has the Board's risk appetite changed? Why or why not?**
- 2 – Irrespective of the answer to the first question, should Strangely increase or decrease its commitment to Surplus Growth assets? Should it change the mix of its Surplus Growth assets and, if so, how?**



Risk Asset Stress Testing – Based Upon Year End Financials

Surplus Growth Assets As % of Total Portfolio ³	Surplus Growth Assets-to-Surplus Ratio	STAT Surplus ¹	Risk Assets ²	Surplus Level (\$): 47.4% Decline Surplus Growth Assets ⁴	Downside Impact: As % of STAT Surplus
59%	100%	174.1	174.1	91.5	-47.4%
50%	84%	174.1	146.7	104.5	-40.0%
41.2%	69.4%	174.1	120.8	116.8	-32.9%
40%	67%	174.1	117.3	118.5	-32.0%
35%	59%	174.1	102.7	125.4	-28.0%
30%	51%	174.1	88.0	132.4	-24.0%
25%	42%	174.1	73.3	139.3	-20.0%
20%	34%	174.1	58.7	146.3	-16.0%
15%	25%	174.1	44.0	153.2	-12.0%
10%	17%	174.1	29.3	160.2	-8.0%

1) Using STAT surplus at 12/31/2013.

2) Surplus Growth Assets as of 12/31/2013.

3) Using total portfolio market value as of 12/31/2013 (less operating cash).

4) Lowest cumulative surplus growth asset return from peak to trough during 2008/2009 for U.S. equity markets



Corporate Bond Stress Testing – High Yield Portfolio

Moody's Rating	Annual Default Rates % (By Issuer)			Average Default Rates % Through 2014 (By Issuer)			Average Default Rate By Credit Rating	Max Calendar Year Default Rate By Credit Rating
	2014	2013	▲	10 Year Average	20 Year Average	▲	1983-2014 Average Default Rate	1983-2014 Max Issuer Default Rate
Aaa	-	-	-	-	-	-	-	-
Aa1	-	-	-	-	-	-	-	-
Aa2	-	-	-	-	-	-	-	-
Aa3	-	-	-	0.214	0.107	0.11	0.11	2.14
A1	0.495	-	0.50	0.248	0.124	0.12	0.08	1.55
A2	-	-	-	0.030	0.040	(0.01)	0.02	0.50
A3	-	-	-	0.091	0.071	0.02	0.04	0.62
Baa1	-	0.239	(0.24)	0.205	0.196	0.01	0.15	1.26
Baa2	-	-	-	0.214	0.179	0.03	0.14	0.89
Baa3	0.215	-	0.22	0.170	0.230	(0.06)	0.33	3.65
Ba1	-	-	-	0.244	0.357	(0.11)	0.62	3.79
Ba2	-	-	-	0.061	0.346	(0.29)	0.54	2.96
Ba3	0.418	1.344	(0.93)	0.979	1.164	(0.19)	1.81	9.26
B1	-	-	-	0.769	1.397	(0.63)	2.44	8.20
B2	0.830	1.255	(0.43)	1.441	2.816	(1.37)	5.23	23.16
B3	-	1.551	(1.55)	1.921	4.497	(2.58)	8.85	28.76
Caa-C	7.026	9.573	(2.55)	11.807	15.141	(3.33)	22.11	100.00
Investment-Grade	0.078	0.041	0.04	0.136	0.113	0.02	0.09	0.55
Speculative-Grade	2.044	3.010	(0.97)	3.589	4.294	(0.71)	4.57	13.32
All Corporates	1.044	1.446	(0.40)	1.639	1.802	(0.16)	1.75	6.02
				<i>Scenario #1</i>	<i>Scenario #2</i>		<i>Scenario #3</i>	<i>Scenario #4</i>

Source: Moody's Investor Services

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