

**FALL 2011**

**EXAM AFE**

**Advanced Finance and  
Enterprise Risk  
Management**

**CASE STUDY**

**AFE morning**



# **Advanced Finance/ERM**

**Case Study**

**Fall 2011**

## **Zoolander Life**

**It's your life!**

*From the desk of*  
**R. Tomas Lyon, IV**

April 14, 2011

Re New CFO

Congratulations. You will have been through a rigorous screening process. I have every confidence that the search committee has picked the right person for this important position. I am sure you will do a fine job as Zoolander Life's new Chief Financial Officer.

Anyway, you have a lot of work to do. Your predecessor, Mr. A. Hugh Dodo, left to pursue other opportunities at a critical time for Zoolander Life. My executive assistant, Mr. Charley Pigeon, will help you get settled in your new position.

Ideally we would have all the issues that you will face as our new CFO laid out similar to a fancy case study. Well, the real world is not that neat. Charley has been instructed to pull together memos, e-mails and other documents to help you familiarize yourself with the company and the issues in the Finance Department. You should be finding this memo at the top of the collection that he has created for you. If there's anything else you need, please don't hesitate to ask him.

This job will be a real test. I am counting on you to learn quickly and to make decisions that will take our company to the next level.

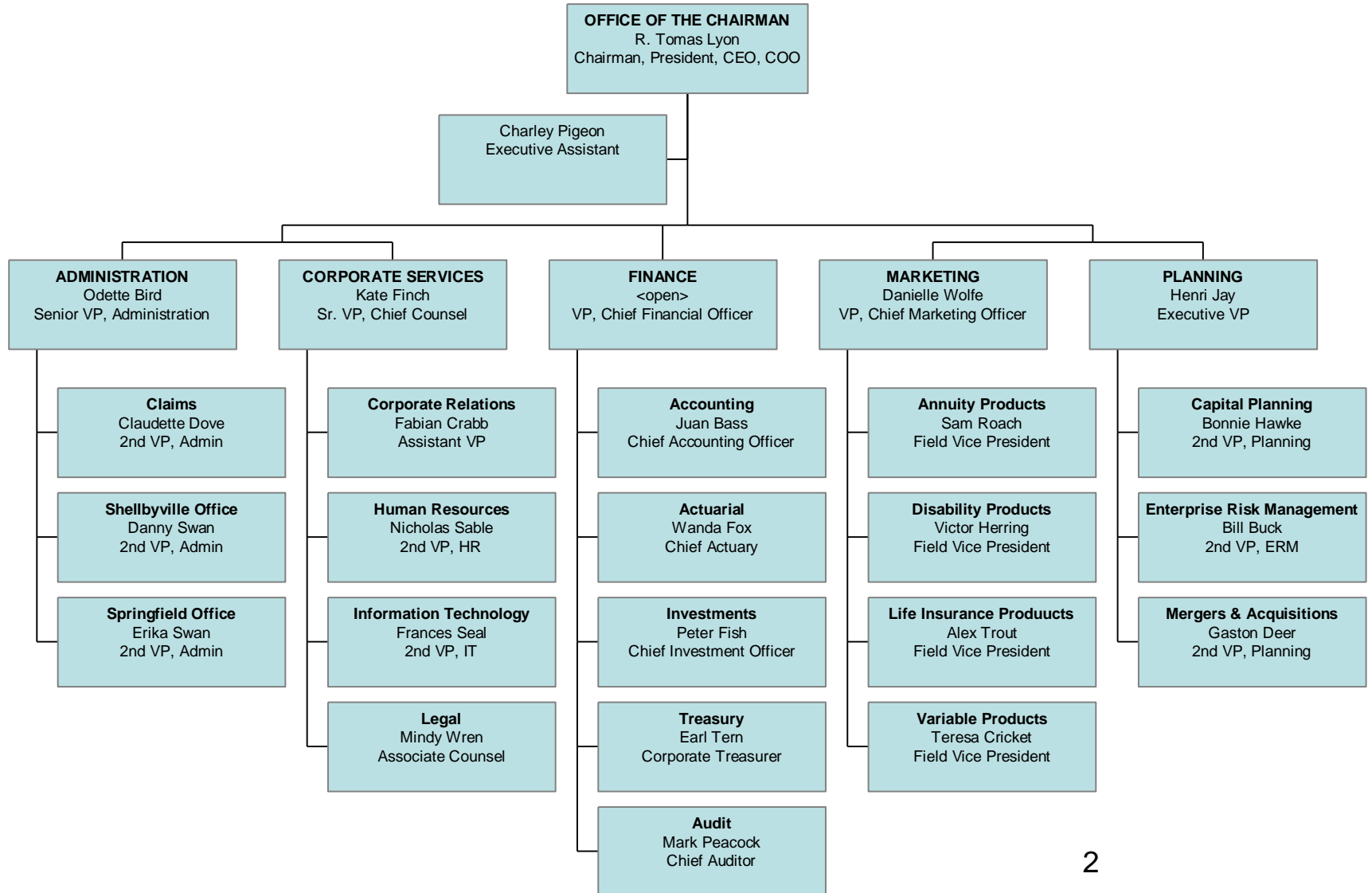
Very Sincerely

R. Tomas Lyon, IV  
Chairman, President, CEO and COO  
Zoolander Life Insurance Company

Cc Charley Pigeon

# Zoolander Life Insurance Company

as of March 18, 2011



## **Charley Pigeon**

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**From:** "Larry McCaw" McCawL@zlic.com  
**To:** "All Employees" <mail list zlicEEs@zlic.com>  
**Sent:** Monday, March 15, 2011 11:28 AM  
**Subject:** Founder's Day Celebration

Zoolander Life will celebrate Founder's Day this year on Friday, June 10, 2011. In honor of the 106<sup>th</sup> anniversary of our founding, employees are encouraged to wear jeans to work on that day. In addition, we will have the traditional Founder's Day picnic. Back again this year by popular demand, we will have a bear wrestling demonstration and carnival games.

While this is always a fun time, the Founder's Day Committee would like to take this opportunity to remind everyone of our company's long and colorful history. After all, there is a reason we celebrate Founder's Day.

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Noah Zoolander, pioneer, business mogul and town founder established the Zoolander Friends Assessment Society in 1904. His belief was that even the common man had a right to insure his life for a fair price. Zoolander served as the first president of the company which bore his name. Ironically, Noah Zoolander lost the company in the Banking Panic of '05 when it was taken over by Lyon & Sons (now known as Lyon Enterprises).

R.T. Lyon served as the second President (1905-1915) until passing on those responsibilities to his son Richard (Rich) Lyon, Jr. Under Rich Lyon's leadership (1915-1929), the company grew to insure over 1,000 people and converted from an assessment society to a legal reserve mutual life insurance company. In October of 1929, Rich Lyon died under mysterious circumstances; his policy was the first paid out under the new legal structure and it nearly caused the company to fail.

Now known as the Zoolander Life Insurance Society, the company then passed to R.M. (Trip) Lyon, III. Trip Lyon's tenure at the company (1929-1965) was mostly uneventful. In 1965, the Presidency of the company was handed to Trip Lyon's 24-year old son, R. Tomas Lyon, IV who continues to run the company today.

Tomas Lyon has been an innovator and champion in the insurance industry. He eliminated the Home Service Life Insurance division in the late 1960's and was one of the first to offer Term Insurance in a big way with the innovative "Life Term" policy. A Property & Casualty subsidiary (Zoolander Car & Dwelling) was opened in 1977 and subsequently closed in 1989. In the early 1980's the company was one of the pioneers of Guaranteed Investment Contracts (GICs). Lyon also led the company's charge into Variable annuities in 1990. Lyon shepherded the company to conversion from a mutual insurer to a public company with a successful IPO in March 1998. His contacts and business acumen were instrumental in the 2009 capital raise which protected Zoolander from the recent financial crisis and diversified company ownership over a wider group of investors.

In a little over 100 years, Noah Zoolander's experiment of offering the common man a little life insurance to pay for final expenses has evolved into the insurance and financial services firm we know today. Remember at Zoolander Life.....It's your Life™!

Larry McCaw  
Chair, Founder's Day Committee  
Company Historian  
Sr. Records Tech – Section AH  
Ext #752

## Excerpts from Zoolander Life Proxy Statement – Dated March 21, 2011

### **Board of Directors – Biographies**

R. Tomas Lyon IV – Chairman, President, CEO, and COO. Age 70. Term Expires September 2011.

Karl Palomino – Former CFO, Zoolander Life (retired September 2009). Age 62. Term began September 2009, term expires September 2013.

Jeanne Holstein-Palomino – Philanthropist, former administrative assistant, Zoolander Life. Age 30. Term began September 2009, term expires September 2013.

Ivan X. Salmon – former Chief Legal Counsel, Zoolander Life (retired September 2009). Age 58. Term began September 2009, term expires September 2013.

Hermine Dauphin – former accounting partner for Dollars ‘R Us, former insurance regulator for Insurance Department of Illinois. Age 52. Term began September 2009, term expires September 2011.

### **Executive Incentive Compensation Program**

The goal of the Zoolander Executive Compensation Program (ZECF) is to align performance with rewards for senior management at the Vice President level and above. Each executive has a bonus formula which reflects the appropriate balance sheet and/or income statement item(s) which is/are under that executive’s direct control. The Board of Directors determines the ZECF bonus pool based on full year financial results and an evaluation of execution against major company initiatives. All awards are paid in company stock options and vest immediately. The amount of stock options is determined using an option strike price calculated by Zoolander’s Chief Investment Officer.

2010 Goals for the Zoolander Executive Compensation Program are as follows:

- A. Marketing  
1% x (actual new and renewal premiums – plan premium)  
(Field VPs bonus reflects only premiums for their respective product areas)
- B. Actuarial  
-1% x (actual change in statutory reserves – projected change in statutory reserves from Annual Plan) – 2% x (actual change in statutory risk based capital – projected change in statutory risk based capital from Annual Plan)
- C. Investments  
1% x (actual investment income – projected investment income from Annual Plan)
- D. Planning  
1% x (actual GAAP income – projected GAAP income from Annual Plan)

E. Other Areas

-1% x (actual expenses – projected expense from Annual Plan)

- Expenses include both incremental expenses and overhead
- Only an executive’s allocated expenses are used in the formula

**Board of Directors Committees**

Board Member	COMMITTEES				
	Audit	Compensation	Nomination	Investment	Risk Management
Lyon	M		C	M	
Palomino	C	M			M
Holstein-Palomino	M	C			M
Salmon		M	M	C	
Dauphin			M	M	C
Meetings Held	1	1	1	0	4

C = Chairperson  
M = Member

**Selected Excerpts from Meetings held in 2010**

Report of Committees

1. Audit Committee – Mr. Lyon reported that the committee met once. The committee had voted to reappoint Brown & Co as Independent Accountants for 2011. This recommendation was approved unanimously by the full Board.

Mr. Lyon expressed appreciation for the Board’s support of the long-standing, strong relationship with Brown & Co., since it allowed Zoolander to spend less money and streamline the audit process.

The committee also reviewed a report from Mr. Dodo outlining the status of Zoolander’s system of internal controls. Mr. Lyon suggested that Mr. Dodo’s report focused too much on potential risks and too little on audit. Lyon noted that risk evaluation was the purview of the Risk Management committee. Further, Lyon, preferred that Mr. Dodo focus more effort on audit staff training in order to prevent the possibility of fraud in the processing of paychecks and travel reimbursements.

The committee also received Mark Peacock’s audit reports for the current and prior quarters.

2. Compensation Committee – Ms. Holstein-Palomino reported that at its annual meeting the committee submitted recommendations for increased compensation and performance rewards for Fiscal Year 2010 to the Board of Directors. The recommended level of compensation increases and amount of bonus pool were determined by the committee based on the full year financial results, compared against the Plan results. The recommendations on the executives’ performance rewards were based on the bonus formulas as defined in the ZECP. The Board approved the recommendations.



3. Nominating Committee – Mr. Lyon reported that the nominating committee voted to recommend a continuation of the current Board structure (5 members with at least one independent member). Mr. Lyon noted that Ms. Dauphin recommended expanding the Board with a larger portion of independent members; this recommendation was defeated 2 to 1. The Committee also recommended that Mr. Salmon begin a search of candidates to replace Ms. Dauphin, whose term expires next year. It is contemplated that Mr. Lyon will be re-nominated in 2011. The recommendations were approved by the full Board by a vote of 4 to 1.
4. Investment Committee – Mr. Salmon reported that due to numerous calendar conflicts, this committee did not meet during the year.
5. Risk Management Committee – Ms. Dauphin reported that the committee met on a regular quarterly basis during the year. Meetings focused on reviewing internal risk reports and interviews with key employees in finance, systems, and audit. As a result of their investigation, a number of risk management concerns were discovered. The committee unanimously recommended the creation of an Enterprise Risk Management Officer, who will create and lead an independent ERM department, and will be responsible for developing and implementing a comprehensive company-wide ERM program and also serves as a liaison across various business segments to address significant emerging risk concerns. The committee also recommended that the ERM officer will report on ERM and risk-related issues to the Risk Management Committee at the Committee's quarterly meeting.

During the debate of this recommendation with the full Board, however, Mr. Lyon expressed that the Risk Management Committee would not be needed in the future once the ERM Officer came on board. He also wanted to ensure that the position reported to someone with a lot of experience who knew the company well and could serve as a guide to the ERM Officer, helping him/her gather information from various areas within the company. The new ERM Officer should also be able to prepare any reports needed by external audiences with respect to risk and ERM.

Ms. Dauphin brought up the subject of what would happen to the concerns that the Risk Management Committee had brought to light if the Committee were disbanded. Mr. Lyon responded that they would be forwarded to the new ERM Officer. He decided that Henri Jay would be the right person for the new ERM Officer to report to. Once the new ERM Officer formulated recommendations from this input, he would deliver them to Mr. Jay, who would pass them on to the manager of the area or areas involved. Ms. Dauphin raised the concern that positioning the ERM officer under the Planning Department would result in a lack of sufficient independency and might not form an effective organizational structure to promote the company-wide ERM culture and initiatives; furthermore, she was concerned that, without oversight of the Risk Management Committee, adequate governance of risk management functions and emerging risk concerns could be in question in the future.

The full Board voted 4 to 1 in favor of Mr. Lyon's recommendations.

# Zolander Life Insurance Company

## Statutory Income Statement

for the year ended, December 31, 2010

(\$ millions)

	<b>GIC</b>	<b>Disability Insurance</b>	<b>Term Life Ins</b>	<b>Variable Annuity</b>	<b>Corporate</b>	<b>Total</b>
<b>Revenues</b>						
Premiums	-	180.0	223.6	56.8	-	460.4
Investment Income	398.6	46.8	19.9	20.0	44.7	530.0
<b>Total Revenue</b>	<b>398.6</b>	<b>226.8</b>	<b>243.5</b>	<b>76.8</b>	<b>44.7</b>	<b>990.4</b>
<b>Expenses</b>						
Death/LTD Benefits	-	153.0	140.5	55.9	-	349.4
Surrenders & Partial W/D	-	-	-	186.4	-	186.4
Increase in Reserves	-	42.3	57.0	(11.0)	-	88.3
Interest Credited	375.6	-	-	-	-	375.6
Commissions	-	12.3	22.2	11.5	-	46.0
Other Expenses	8.6	22.2	10.1	7.3	9.1	57.3
<b>Total Expenses</b>	<b>384.2</b>	<b>229.8</b>	<b>229.8</b>	<b>250.1</b>	<b>9.1</b>	<b>1,103.0</b>
<b>Transfers to Separate Account</b>	-	-	-	(177.9)	-	(177.9)
<b>Income before Taxes</b>	<b>14.4</b>	<b>(3.0)</b>	<b>13.7</b>	<b>4.6</b>	<b>35.6</b>	<b>65.3</b>
Income Tax	5.0	(1.1)	4.8	1.6	12.5	22.9
<b>Net Income after Tax</b>	<b>9.4</b>	<b>(2.0)</b>	<b>8.9</b>	<b>3.0</b>	<b>23.1</b>	<b>42.4</b>

**Zolander Life Insurance Company**  
**Statutory Balance Sheet**  
as of December 31, 2010  
(\$ millions)

	<b>GIC</b>	<b>Disability Insurance</b>	<b>Term Life Ins</b>	<b>Variable Annuity</b>	<b>Corporate</b>	<b>Total</b>
<b>Assets</b>						
Private Bonds						
Investment Grade	607.7	55.8	120.8	52.9	220.6	1,057.9
Below Investment Grade	329.5	3.0	19.4	19.5	104.4	475.8
subtotal	937.3	58.8	140.2	72.4	325.0	1,533.7
Public Bonds						
Investment Grade	3,427.7	454.8	144.2	204.3	161.1	4,392.1
Below Investment Grade	486.2	31.9	20.1	37.1	41.7	617.0
CMO (Investment Grade)	466.7	16.7	49.4	29.7	66.3	628.8
subtotal	4,380.6	503.4	213.7	291.1	269.1	5,657.9
Commercial Mortgages						
Investment Grade	617.3	81.6	62.6	65.8	81.5	908.8
Below Investment Grade	124.2	-	-	-	51.3	175.5
subtotal	741.6	81.6	62.6	65.8	132.8	1,084.3
Equities and Equity Derivatives	-	-	-	20.0	-	20.0
Real Estate	652.3	2.5	42.2	27.5	118.1	842.7
Cash & Short Term Investments	5.2	1.1	0.8	3.0	26.1	36.2
Premiums Due and Unpaid	-	2.2	6.4	1.7	-	10.3
Assets held in Separate Account	-	-	-	3,348.5	-	3,348.5
Other Assets	-	4.8	2.7	4.1	-	11.6
<b>Total Assets</b>	<b>6,717.0</b>	<b>654.4</b>	<b>468.6</b>	<b>3,834.1</b>	<b>871.1</b>	<b>12,545.2</b>
<b>Liabilities</b>						
Policy Liabilities - General Account	6,658.4	640.4	447.0	379.6	-	8,125.4
Other Liabilities - General Account	13.4	4.0	6.6	8.3	2.7	35.0
Separate Account Liabilities	-	-	-	3,348.5	-	3,348.5
<b>Total Liabilities</b>	<b>6,671.8</b>	<b>644.4</b>	<b>453.6</b>	<b>3,736.4</b>	<b>2.7</b>	<b>11,508.9</b>
Shareholder Equity *	45.2	10.0	15.0	97.7	868.4	1,036.3
<b>Total Liabilities and Equity</b>	<b>6,717.0</b>	<b>654.4</b>	<b>468.6</b>	<b>3,834.1</b>	<b>871.1</b>	<b>12,545.2</b>

\* represents required capital for each line of business; remaining capital is shown in the Corporate line

From: "Otter, Samuel" [otters@zlic.com](mailto:otters@zlic.com)  
To: "Fox, Wanda" [foxw@zlic.com](mailto:foxw@zlic.com)  
Cc: "Pigeon, Charles" [pigeonc@zlic.com](mailto:pigeonc@zlic.com)  
Re: In-force Projections for Zoolander Life  
Date: April 5, 2011

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Wanda,

I wanted to follow up on your voicemail from last week. I am not sure what you'll be using these for, but please find attached projections for all the in-force blocks by product. The projected results start from the actual 2010 financials, so they provide a good starting point for whatever it is you are doing. I have attached the details for the deterministic projection of cash flows based on our current best estimate assumptions, using the current yield curve for asset cash flows.

When I realized you needed the assets to be run as well as the liabilities, I sensitivity-tested the asset composition using a variety of starting sub-portfolios of assets allocated to the term line, before I finally settled on a starting asset portfolio recommended by Peter Fish. I was surprised to find the results were rather insensitive to starting portfolio composition, as long as the starting portfolio was reasonably constructed. For now I am operating under the assumption that the starting portfolio composition is an equally minor factor with respect to the other products.

You had mentioned using conservative experience assumptions, but I will need more direction on what this means. Similarly, you had mentioned that these projections should utilize a conservative reserve basis. We should discuss this further as well.

The reserves I used for the GIC model are set equal to present value of future benefits discounted at valuation interest rates. For the disability insurance block, the disabled life reserve basis I used is based on the 1985 Commissioners Individual Disability Table A (CIDA) at 4%. The results I am providing for term life assume that both stat and tax reserves are computed using the current XXX CRVM reserving methodology. The variable annuity results are calculated using Actuarial Guideline 43 for statutory reserves.

Each line of business holds its required capital with Zoolander's remaining capital held in the Corporate line. Net Investment Income for each line includes the investment return on that capital.

If you need more runs made, drop me an e-mail.

Sam Otter, ASA

Attachments:

**Projected Cash Flows for GIC LOB**

Prepared by Sam Otter (ext. 7890)

Statutory Reserve: 6,671.8  
Required Capital 12/31/2010 45.2  
PV After-Tax Income 12/31/2010 25.7

	Actual <u>2010</u>	Projections -->								
		<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
Premiums	-	-	-	-	-	-	-	-	-	-
Net Investment Income	398.6	393.4	258.3	194.0	95.9	35.2	-	-	-	-
Commissions & Acquisition Expenses	-	-	-	-	-	-	-	-	-	-
Maintenance Expenses	8.6	8.7	5.7	4.3	2.1	0.8	-	-	-	-
Credited Interest	375.6	372.7	244.7	183.8	90.8	33.4	-	-	-	-
Change in Reserves	-	-	-	-	-	-	-	-	-	-
Transfers to Separate Accounts	-	-	-	-	-	-	-	-	-	-
Pre-Tax Income	14.4	12.0	7.9	5.9	2.9	1.1	-	-	-	-
Taxes	5.0	4.2	2.8	2.1	1.0	0.4	-	-	-	-
After-Tax Income	9.4	7.8	5.1	3.9	1.9	0.7	-	-	-	-

**Projected Cash Flows for Disability Insurance LOB**

Prepared by Sam Otter (ext. 7890)

Statutory Reserve: 644.4  
Required Capital 12/31/2010 10.0  
PV After-Tax Income 12/31/2010 9.1

	Actual <u>2010</u>	Projections -->								
		<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
Premiums	180.0	176.4	171.1	162.6	156.9	147.5	140.1	126.1	113.5	102.1
Net Investment Income	46.8	44.0	40.9	39.3	37.3	35.4	32.6	29.3	26.1	23.0
Commissions & Acquisition Expenses	12.3	-	-	-	-	-	-	-	-	-
Maintenance Expenses	22.2	27.3	26.5	25.2	24.3	22.9	21.7	19.5	17.6	15.8
Benefits	153.0	142.9	138.6	131.7	127.1	119.4	113.5	102.1	91.9	82.7
Change in Reserves	42.3	45.0	43.6	41.5	40.0	37.6	35.7	32.1	28.9	26.0
Transfers to Separate Accounts	-	-	-	-	-	-	-	-	-	-
Pre-Tax Income	(3.0)	5.2	3.3	3.5	2.8	3.0	1.8	1.6	1.2	0.5
Taxes	(1.1)	1.8	1.1	1.2	1.0	1.1	0.6	0.6	0.4	0.2
After-Tax Income	(2.0)	3.4	2.1	2.3	1.8	2.0	1.2	1.0	0.8	0.3

**Projected Cash Flows for Term Life Insurance LOB**

Prepared by Sam Otter (ext. 7890)

Cash Surrender Value:	22.3
Statutory Reserve:	453.6
Required Capital 12/31/2010	15.0
PV After-Tax Income 12/31/2010	55.0

	Actual 2010	Projections -->								
		2011	2012	2013	2014	2015	2016	2017	2018	2019
Premiums	223.6	207.9	197.8	189.3	182.1	176.6	181.0	171.4	159.7	148.5
Net Investment Income	19.9	22.6	19.9	19.3	18.6	18.0	18.0	18.1	17.7	17.1
Commissions & Acquisition Expenses	22.2	-	-	-	-	-	-	-	-	-
Maintenance Expenses	10.1	9.5	8.8	8.3	7.8	7.4	6.9	6.6	6.2	5.8
Benefits	140.5	198.4	226.0	240.1	243.8	239.9	229.6	222.5	216.4	213.2
Change in Reserves (CRVM)	57.0	9.6	(29.6)	(40.1)	(51.0)	(58.2)	(54.3)	(60.9)	(68.5)	(77.9)
Transfers to Separate Accounts	-	-	-	-	-	-	-	-	-	-
Pre-Tax Income	13.7	13.0	12.5	0.3	0.1	5.5	16.8	21.3	23.3	24.5
Taxes	4.8	4.6	4.4	0.1	0.0	1.9	5.9	7.5	8.2	8.6
After-Tax Income	8.9	8.5	8.1	0.2	0.1	3.6	10.9	13.8	15.1	15.9

**Projected Cash Flows for Variable Annuity LOB**

Prepared by Sam Otter (ext. 7890)

Statutory Reserve General Account:	387.9
Statutory Reserve Separate Account:	3,348.5
Required Capital 12/31/2010	97.7
PV After-Tax Income 12/31/2010	51.3

	Actual <u>2010</u>	Projections -->								
		<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
Premiums	56.8	58.5	60.3	62.1	63.9	65.8	67.8	69.9	72.0	74.1
Net Investment Income	20.0	19.1	18.1	17.1	16.0	15.0	13.9	12.7	11.5	10.3
Commissions & Acquisition Expenses	11.5	-	-	-	-	-	-	-	-	-
Maintenance Expenses	7.3	7.0	6.6	6.2	5.8	5.5	5.1	4.6	4.2	3.7
Surrenders & Other Benefits	242.3	258.5	263.3	268.1	273.1	278.1	285.9	294.0	302.3	310.8
Change in Reserves	(11.0)	(23.9)	(22.6)	(21.4)	(20.0)	(18.7)	(17.3)	(15.9)	(14.4)	(12.8)
Transfers to Separate Accounts	(177.9)	(181.5)	(185.1)	(188.8)	(192.6)	(196.4)	(202.3)	(208.4)	(214.6)	(221.1)
Pre-Tax Income	4.6	17.5	16.2	14.9	13.7	12.3	10.3	8.2	6.0	3.8
Taxes	1.6	6.1	5.7	5.2	4.8	4.3	3.6	2.9	2.1	1.3
After-Tax Income	3.0	11.4	10.6	9.7	8.9	8.0	6.7	5.3	3.9	2.4



**Projected Cash Flows for Corporate LOB**

Prepared by Sam Otter (ext. 7890)

Statutory Reserve General Account:	-
Statutory Reserve Separate Account:	-
Remaining Capital 12/31/2010	868.4
PV After-Tax Income 12/31/2010	174.5

	Actual <u>2010</u>	Projections --> <u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
Premiums	-	-	-	-	-	-	-	-	-	-
Net Investment Income	44.7	45.9	46.8	47.8	48.8	49.8	50.8	51.8	52.9	53.9
Commissions & Acquisition Expenses	-	-	-	-	-	-	-	-	-	-
Maintenance Expenses	9.1	9.4	9.7	9.9	10.2	10.5	10.9	11.2	11.5	11.9
Surrenders & Other Benefits	-	-	-	-	-	-	-	-	-	-
Change in Reserves	-	-	-	-	-	-	-	-	-	-
Transfers to Separate Accounts	-	-	-	-	-	-	-	-	-	-
Pre-Tax Income	35.6	36.5	37.2	37.8	38.5	39.2	39.9	40.6	41.3	42.1
Taxes	12.5	12.8	13.0	13.2	13.5	13.7	14.0	14.2	14.5	14.7
After-Tax Income	23.1	23.7	24.1	24.6	25.0	25.5	25.9	26.4	26.9	27.3

**Total Projected Cash Flows**

Prepared by Sam Otter (ext. 7890)

Statutory Reserve General Account: 8,157.7  
 Statutory Reserve Separate Account: 3,348.5  
 Total Capital 12/31/2010 1,036.3  
 PV After-Tax Income 12/31/2010 315.5

	Actual <u>2010</u>	Projections -->								
		<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
Premiums	460.4	442.8	429.2	413.9	402.9	389.9	388.9	367.3	345.1	324.7
Net Investment Income	530.0	525.0	384.0	317.5	216.6	153.4	115.2	112.0	108.2	104.3
Commissions & Acquisition Expenses	46.0	-	-	-	-	-	-	-	-	-
Maintenance Expenses	57.3	61.8	57.3	53.9	50.3	47.0	44.5	42.0	39.5	37.3
Surrenders & Other Benefits	911.4	972.5	872.6	823.7	734.8	670.8	629.0	618.6	610.6	606.7
Change in Reserves	88.3	30.7	(8.6)	(20.0)	(31.0)	(39.3)	(35.9)	(44.6)	(54.0)	(64.7)
Transfers to Separate Accounts	(177.9)	(181.5)	(185.1)	(188.8)	(192.6)	(196.4)	(202.3)	(208.4)	(214.6)	(221.1)
Pre-Tax Income	65.3	84.2	77.1	62.5	58.0	61.1	68.8	71.7	71.8	70.9
Taxes	22.8	29.5	27.0	21.9	20.3	21.4	24.1	25.1	25.1	24.8
After-Tax Income	42.4	54.7	50.1	40.6	37.7	39.7	44.7	46.6	46.7	46.1

## **Quarterly Product Report Zoolander Product Committee**

### **Term Insurance**

Product Description – traditional level term products and an annual renewable term (ART) plan, which features a level death benefit paid for by annually increasing premiums. The level term plans provide a level death benefit for a guaranteed level premium period of 10, 15, 20 or 30 years followed by an ART premium scale. Substandard policies and those that exceed retention limits are currently reinsured on a facultative YRT basis.

Market Position – Sales have been very strong, in part due to our competitive 100% first year commission. Also, strong underwriting performance allows us to price our products very aggressively in the better rate classes. Recently, Periwinkle Life's new term product has cut into our market share; however, we don't think they can sustain that position since their premium level doesn't appear sustainable.

Value Proposition – low price due to our extraordinary underwriting department and facultative reinsurance process, which has yielded actual experience mortality to be in line with pricing mortality rates. The underwriters each have many years of experience, have clearly defined processes and are adequately staffed to meet the number of underwriting requests given them. This has led to low volatility of claims.

Other Concerns – reinsurer (Rose Re) was recently downgraded. We may need to look for a new reinsurer if Rose Re continues to struggle. Some concern that Zoolander will not be able to reinsure at the current retention level and/or for the same price.

Experience – the expenses for this block continue to run at the levels expected in pricing. Lapse and mortality stress tests are performed annually on the block. Only constraint on new business is capital strain.

Recent Committee Decisions – product selling and performing well; move repricing effort back to mid next year.

### **Guaranteed Investment Contracts (GIC)**

Product Description – one to five-year fixed-return contracts issued primarily to mutual funds and pension funds (institutional clients). Some of these contracts have surrender protection since there are covenants in most of our GICs that do not allow early surrender except in the event of a ratings downgrade of Zoolander.

Market Position – becoming very competitive. At the recommendation of the investment department, we have substantially increased our holdings in higher-yielding bonds and added private placement bonds to the portfolio backing these liabilities. In this environment the asset strategy has improved investment returns and permitted higher guarantees. Those impressive returns have allowed us to aggressively compete in this market while still maintaining good spreads.

Value Proposition – currently it offers outstanding investment returns and higher guarantees. Private placement bonds are working out well. It is a win-win for both parties since a direct relationship between borrower and lender allows the borrower to save on underwriting & issuance costs and share the savings with Zoolander (as the lender) in the form of higher yields relative to market.

Other Concerns - none

Experience – recently GICs have been the highest earning line. Surrender protection greatly mitigates liquidity and disintermediation risks. Deviating from strict duration matching, we have been able to pick up even more investment income by lengthening the term of our assets dramatically.

Recent Committee Decisions – work with distribution to see how we can expand the GIC line.

## **Variable Annuity**

Product Description – standard individual variable annuity offering a collection of eight proprietary Zoolander mutual fund choices and a fixed fund invested in Zoolander’s general account.

Market Position – waning. Sales are way down. We really need to add more investment options to get new customers and retain our existing clients. Distribution is clamoring for living benefit riders.

Value Proposition – no real differentiation from competitors with the current product. New fund families will be available starting in 4Q. The enhanced product, VA Plus, will add both an improved Guaranteed Minimum Death Benefit (GMDB) option and a Guaranteed Minimum Income Benefit (GMIB) option.

Other Concerns – probably need to do some advanced modeling with the new GMDB & GMIB options but we have plenty of time for that. Administrative systems need additional programming to handle an increased slate of fund offerings and that project is on schedule to be completed by the end of 3Q.

Experience – marginally successful on profitability but very disappointing sales. Senior management really wants this product line to do much better from both a growth and profitability perspective.

Recent Committee Decisions - for the GMDB we were divided over whether to use a voluntary reset or premium accumulation for the guarantee. We compromised by using the larger of a voluntary annual reset of the fund level at the anniversary date and a return of cumulative premium accumulated at 5% per annum upon death. We didn’t see any harm in being generous since this benefit only pays out if the insured dies and the market performs below historical average—a rare combo, we think. For the GMIB we can use the same 5% accumulation of premium assumption to buy annuity payments at our current purchase price assumptions.

## **Disability**

Product Description – standard individual disability insurance policy. Guaranteed renewable to age 65. Optional return of premium rider which returns 70% of all premiums paid less claims paid at the end of every ten years.

Market Position – base product has poor sales but when paired with the optional return of premium rider, sales are generally meeting expectations.

Value Proposition – return of premium rider is very popular among our agents. Have several distributors who annually get over 90% of their commissions from selling our DI product (with the rider).

Other Concerns – base policy is reinsured but the return of premium rider is not. At the end of ten years, we have to return a portion of the premiums but the reinsurer doesn’t return its premiums to us. Rider assumes asset returns of 10% which are currently unobtainable. Pricing also assumes an industry standard morbidity rate so we monitor that. Need to invest in a claims system upgrade. Manual spreadsheet based system developed in the early 1980’s results in frequent time-consuming error corrections.

Experience - problematic line of business for us. The base policies are profitable due to our excellent claims experience—far below industry average. Also, the persistency rate is very high, especially in the last half of the ten year period. However, this has led to losses on the return of premium rider because more premiums are being returned than was originally anticipated in pricing.

Recent Committee Decisions – revisit return of premium rider pricing 4Q this year. Create an IT initiative to look at replacing the claim system.

March 18, 2011

Wanda Fox, Chair Product Committee

# Kelly Ratings & Analysis

1 Kelly Drive, Capital City

ph 123/555-6500

www.KellyR&A.com

February 10, 2011

A. Hugh Dodo, CFO  
Zoolander Life Insurance Co  
411 Main Street  
Zoo Falls 54321

Dear Hugh

Time once again for Kelly Ratings & Analysis' annual review of Zoolander Life. I will call you next week to set up a date. Ideally, Paula Silver, Director of our Financial Services Practice, and I would like to meet with Zoolander Life sometime in early April. As in past years, we will come to your offices for a day of meetings with your senior management team. Count on the presentation from Zoolander Life taking the first half of the meeting; the second half will be a free form Q&A with your management. We can finalize the agenda during next week's call.

I apologize that we did not meet with your company's management last year. However, let me assure you that Kelly's professional financial services analysts performed a thorough review of Zoolander Life utilizing publicly available information.

Attached is Kelly's rating rationale from last year. Please look through this document and make note of any changes you feel are necessary. In addition, we will need your 2010 financial information to be provided in the same format as in past years. I would like to receive that in advance of our meeting.

I note that the Kelly Financial Wherewithal Rating™ (commonly known as the "Kelly Rating") for Zoolander Life is currently **A-** with a negative implication. It is rare for a company's rating to carry a negative implication for two years. We would like to resolve the issues surrounding the negative implication during this review cycle of Zoolander Life.

Evaluating implementation and effectiveness of insurers' ERM processes has become an increasingly important part of Kelly's evaluation and rating of insurer's financial strength. During this year's annual review, we would also like to start having more discussions with Zoolander' management on several aspects related to the risk management processes that Zoolander has in place, such as ERM culture and policies, risk governance, risk control and mitigation processes, strategic risk management, as well as management of specific risks (e.g., ALM, credit risk, liquidity risk, operational risk).

Sincerely,

Otto Gold  
Director  
Financial Services Rating Bureau  
Ph 123/555-6534  
[OGold@KellyR&A.com](mailto:OGold@KellyR&A.com)

Cc Paula Silver, Kelly Ratings & Analysis

**When it comes to ratings, clearly you need Kelly**

## ZOOLANDER LIFE INSURANCE CO

**411 Main St**  
**Zoo Falls 54321**  
**Ph 123/555-0000 Fax 123/555-0006**

### Kelly Financial Wherewithal Rating™

Based on our opinion of the company's financial strength, it is assigned a **Kelly Financial Wherewithal Rating™ of A-** (Super). The company's Financial Size Category is Class VIII.

### Rating Rationale

Rating Rationale: The rating for Zoolander Life reflects the company's strong capital position, fine operating performance and the long-term stability of its management. However, profitability has not been strong and Zoolander will continue to face challenges as a public company. Future sales remain a question mark.

### Rating History

Date	Kelly Rating
12/12/1974	A+
10/5/1983	A
9/21/2009	A-

### Business Review

Zoolander Life Insurance Company began operations in 1904. For most of its history, it has been controlled by the Lyon family. R. Tomas Lyon is its fourth generation leader. In 1998, Zoolander completed a demutualization and issued public stock.

Zoolander made its name selling innovative term life insurance at very aggressive rates. That continues to be a hallmark of the company today. The majority of the company's past earnings have come from the term life line of business.

The company's ventures outside of the term life insurance line have not been as profitable. Zoolander's Disability Insurance line has yet to show consistent results. Variable annuities have been marginally successful and have helped the company reach a more affluent class of customers.

Zoolander's started its Guaranteed Investment Contracts (GIC) business in the early 1980's and has generally managed it well. Investment operations have not performed as well on a risk adjusted basis and there is some concern if the low interest rate environment persists. However, the company has seen increasing income in this line over the past few years.

The GIC business is viewed as a nice complement to Zoolander's other businesses. The customers and the distribution system used to reach them are much different than those for the other lines of business.

After several years of sluggish growth, Zoolander has set some very aggressive growth targets for the future. The company appears to have the capital to fund this growth internally; however the plan to actually achieve sales at these levels remains unclear.

### Earnings

Zoolander's earnings have benefited over the years from investment income on its very strong capital position. We expect this source of earnings to decline in the future as the company attempts to grow its business in a very competitive market. The current low interest rate environment will also continue to put pressure on earnings.

Prior to 2009, the company did not break out results by business segment. The numbers attributable to those business segments for years prior to 2009 below are approximate.

### Profitability Analysis

(in millions of dollars)

Net Op Gain	2009	2008	2007	2006
Corporate	30.3	29.4	33.2	35.7
GIC	13.1	9.8	8.8	6.0
Term Life	9.2	16.7	14.7	10.2
Disability	3.2	(4.4)	(1.2)	0.3
Variable Ann	2.1	1.9	6.5	3.7
Total	57.9	53.4	62.0	55.9

### Capitalization

With the recent capital raise, Zoolander's capital and surplus at the end of 2009 totaled nearly \$1 billion (\$989.6 million). While the company continues to maintain a very strong capital position, the level of capital and surplus is not really comparable to prior years due to their new growth strategy.

We note that the company continues to operate without any long-term debt. While there is capital to fund available growth opportunities, Zoolander has stated that their desired long term capital structure would be 30% debt. However, at this time there are no immediate plans to reach this target structure in the near future.

### Sources of Capital Growth

(in millions of dollars)

Year	Net Gain	Cap Gains	Change AVR	Other Changes	Change in Cap & Surp
2006	55.9	1.2	(0.5)	1.0	57.6
2007	62.0	8.7	(0.3)	0.2	70.6
2008	53.4	(6.6)	(0.3)	(29.5)	17.0
2009	57.9	3.1	0.8	370.6	432.4

### Capital Trends

(in millions of dollars)

Year	Capital & Surplus	Stkhldr Divds	Policy Divds	AVR	IMR
2006	469.6	4.2	0.0	0.7	0.9
2007	540.2	4.6	0.0	0.4	0.9
2008	557.2	4.7	0.0	0.1	0.8
2009	989.6	22.2	0.0	0.9	1.2

### Investments and Liquidity

Default experience in the fixed income portfolio has been very good and can be viewed as much better than industry averages over the past five years.

Zoolander's liquidity position has been dropping over the past few years as they have increased their allocation of investments to longer-term non-investment grade bonds and real estate in order to boost yields.

	2009	2008	2007	2006
<u>Other Assets (Mil)</u>	76.2	73.5	66.6	70.0
Cash & Short-Term	32.4	30.0	28.6	27.7
Equity & Derivatives	20.2	18.2	18.8	20.0
All Other	23.6	25.3	20.2	22.3

### Investment Yields

(as a %)

Year	Net Yield	Bonds	Mort-gages	Cash & Sh Trm	Inv Exp Ratio
2006	6.90	6.88	7.66	5.02	8.88
2007	6.92	6.70	7.59	5.22	10.24
2008	6.78	6.66	7.60	4.87	7.25
2009	6.54	6.41	7.34	4.64	11.05

### Investment Data

(in millions of dollars)

2009 distribution of bonds by maturity

	Years					yrs avg mature
	0-1	1-5	5-10	10-20	20+	
(% allocation)						
gov	....	0.9	0.3	.....	.....	4
gov agncy	....	0.1	1.7	0.5	0.8	13
pub util	....	0.7	1.9	.....	.....	6
industrial	2.3	35.0	43.7	10.9	0.3	7
cap loans	....	0.2	0.3	0.3	.....	9
Total	2.3	36.9	47.9	11.7	1.1	7

	2009	2008	2007	2006
<u>Bonds (Bil)</u>	6.9	6.1	5.3	4.4

(% allocation)

gov	1.2	4.7	5.6	7.4
gov agncy	3.2	1.7	1.9	2.1
pub util	2.6	6.2	8.4	6.8
industrial	92.1	86.3	82.2	81.4
cap loans	0.9	1.0	1.8	2.2
private	16.3	18.4	24.4	22.6
public	83.7	81.6	75.6	77.4

	2009	2008	2007	2006
<u>Bond Quality (%)</u>				
Class 1	67.9	70.6	73.1	79.6
Class 2	21.3	22.3	24.9	18.6
Class 3	7.1	4.3	2.0	1.8
Class 4	2.3	1.7	.....	.....
Class 5	.....	.....	.....	.....
Class 6	1.4	1.1	.....	.....

	2009	2008	2007	2006
<u>Mortgage and RE (Bil)</u>				
Mortgages	1.1	1.0	0.9	0.8
Real Estate	0.8	0.7	0.7	0.6

### History

**Incorporated** -- August 8, 1904

Originally formed as the Zoolander Friends Assessment Society in 1904. Purchased by the forerunner to Lyon Enterprises in 1905. Changed to a legal reserve Mutual life insurance company in 1929. In 1998 converted to a stock insurance company through an IPO and took on the current name.

### Officers

Chairman of the Board, President, CEO and COO R. Tomas Lyon, IV; Executive VP-Planning, Henri Jay; Sr VP & Chief Counsel, Kate Finch; Sr VP-Administration, Odette Bird; VP-CFO, A. Hugh Dodo; VP-CMO, Danielle Wolfe; Field VPs, Sam Roach, Teresa Cricket, Victor Herring, Alex Trout

### Directors

Herminie Dauphin, Jeanne Z. Holstein, R. Tomas Lyon IV, Karl Palomino, Ivan X. Salmon

### Reinsurance

Zoolander Life utilizes a YRT reinsurance agreement with facultative support with Rose Reinsurance for their Term Life Insurance business. In addition, Zoolander has coinsurance coverage through Rose Reinsurance on their disability business.

### Regulatory

An examination of the financial condition was made as of December 31, 2008 by the state insurance department. An annual, independent, audit of the company is conducted by the accounting firm of Brown & Company.

**Territory:** Zoolander Life is licensed in all states except New York.

# Zoolander Life Insurance Company

400 Main Street – Zoo Falls 54321

April 6, 2011

Mr. Otto Gold  
Director  
Financial Services Rating Bureau  
Kelly Ratings & Analysis  
1 Kelly Drive, Capital City

Dear Otto:

I appreciate the time that Kelly Ratings was able to spend with us last week. Your insights into industry trends are always valuable. Hopefully you got the information you needed from us to appropriately rate Zoolander.

Without our CFO in place to drive the meeting, Zoolander wasn't as organized for the discussion as we have been in past years. To that end, let me take this opportunity to address a few of the topics you raised at the meeting for which either we did not have a sufficiently detailed response, or you did not seem to understand or appreciate the response that we offered.

## Asset/Liability Management

Zoolander has had a strong ALM process in place for several years. We monitor industry best practices and are continually making improvements to our procedures.

For interest sensitive liabilities we monitor Macaulay duration, a well-established measurement at Zoolander. Within each block of business, we periodically measure the duration of the assets and liabilities. If these measures begin to drift apart, we rebalance our asset portfolio such that its new duration approaches that of the liabilities. The liability duration is measured as part of our semi-annual cash flow testing exercises. The immunization approach has worked well in the past.

As mentioned during your visit, John Badger manages our hedging for the VA GMDB. He is our Head Derivatives Trader and reports directly to Peter Fish. John came from the Crimson Sardine Hedge Fund, and is helping us avoid losses on our GMDB guarantees. He uses an ad hoc approach based on In-The-Money (ITM) and CTE measures from a stochastic analysis of the guarantee. His extensive experience working in the hedge fund business has made this ad hoc approach not only effective from a loss perspective, but also very cost-effective.

Zoolander has long term goals of moving to a more systematic approach, to support our new VA Plus product, which has guaranteed living benefits, as well as death benefits. The project was slowed during the financial crisis but we are picking it up again in 2011. Ultimately, Zoolander will utilize liability portfolio characteristics, such as delta, gamma, vega and rho.

## Internal Control

Zoolander has a very strong audit department, reporting to our CFO. These employees have years of experience in detecting fraudulent claims and other problems. In fact, we have

Zoolander Life.....It's your life™



one staff member who is recognized as a pioneer in systems auditing. He works very closely with our IT department to provide a through review of our systems. Each quarter, Mark Peacock prepares a report for the Audit Committee of the Board. This report details all exceptions to control limits that have occurred in the past quarter. It also lists audits performed on company processes that were completed during the past quarter.

Compliance is handled within the product/pricing area. As part of the research into developing a product, pricing actuaries are expected to ensure that their products comply with current regulations. Additionally, Wanda Fox, our chief actuary, monitors regulatory trends and proposed changes. When new concepts are implemented for regulatory or accounting purposes, Wanda's staff puts together a project to assure compliance for future pricing and financial reporting.

As I explained at the meeting, we recently hired an ERM officer: Bill Buck. He has set up a Risk Management committee to gather information on exposures throughout the company. When he and his committee detect risks that they feel should be addressed, the issue is documented and forwarded to Henri Jay, Executive VP. If Henri feels that Bill's recommendation has merit, he will forward it to the manager of the department involved for resolution.

We have a great Board of Directors, a group of people who know each other and communicate with other members regularly, both professionally and socially. Because of this closeness, the Board rarely has disagreements; our meetings are productive and run smoothly. I am very proud of the job the Board has done for Zoolander, and I'm proud to be the leader of our Board.

The CFO reports to the Board at each meeting. My view is that numbers drive results, so I believe it is critically important that the Board hear from and interact with our CFO on a regular basis. Over the years, we have developed detailed financial metrics of our business that the CFO uses to lead those Board discussions

I was somewhat surprised with your questions concerning processes and procedures. I noted your concerns that Senior Management does not take an active role in enforcing the company's policies and procedures and that there is little documentation of a specific plans to achieve the company's strategic goals. Mark Peacock's exceptional audit team reviews all business processes on a regular basis. I am planning to have Mark start sharing his Board report with the senior management team to help make senior leaders more aware of their role in ensuring the company complies with documented procedures in the future.

#### Management of Specified Risks

*Credit Risk* – Although we do not have quantitative targets, we are comfortable with our current credit profile. Peter Fish and his Investments team are very good about not straying too far away from this credit allocation. We didn't mention it during our meeting but we also watch concentration within both corporate entities and industry sectors. Wanda Fox, our chief actuary, is also cognizant of the concentration of counterparty risk with reinsurers.

*ALM and Market Risk Control* – The ALM process has already been covered above, but we also want to point out the strong partnership between the investment and actuarial departments in making this work. ALM activities are formally in the actuarial area but they are very dependent upon cooperation with the investment area. At the end of each year, we close that year's block of new investments and liabilities and actuarial prepares a report showing how the durations have been matched. We also look at the prior years' blocks and determine if any have strayed too far with respect to the difference between total assets and total liabilities. If they have diverged more than our acceptable tolerance, the investment area allocates appropriate assets to rebalance the cohort.

*Liquidity Risk* – We were surprised by the depth of your questions concerning how we would handle a market-wide liquidity crunch. I guess that is a sign of the times. Prior to the financial crisis, we had always focused our liquidity risk management on a reputational liquidity crisis where markets continue to operate normally and the liquidity crunch only affects us. Our model anticipated situations where Zoolander’s ability to sell assets to meet cash needs from our liability products was hindered by the market knowing that we were in a liquidity crisis and taking advantage of us. We did not contemplate a scenario where the entire market was not able to sell assets at a reasonable value. Before he left, Hugh Dodo, our former CFO, was working on a proposal for liquidity risk management. I plan to have our new ERM officer pick up this project and work on incorporating this type of market liquidity scenario immediately.

*Operational Risk* – As was explained during our meeting, Zoolander benefits from a strong team and the fact that they have been working together for so long. Our new ERM officer is the point person for collecting and disseminating risk information. A report is prepared monthly and distributed to Zoolander’s management. We would be happy to share a copy of that report with Kelly Ratings. As I mentioned above, we have a strong audit team, including one individual with a special focus on IT security issues.

#### Economic Capital

Again, very interesting to hear what our competitors are doing on the Economic Capital front. My takeaway was that the outside world’s expectations are growing that companies will build their own Economic Capital model tailored to their company specific risks, rather than relying on statutory and regulatory formula-based capital requirements to determine financial sufficiency.

We are kicking off a project to implement Economic Capital at Zoolander. We hope to be able to share the results of that project with Kelly Ratings in six months or less.

I hope this additional information helps you get more comfortable with the processes and helps you to better understand the financial strength of Zoolander Life. Please let us know if we can be of any further assistance.

Sincerely,

R. Tomas Lyon, IV  
Chairman, President, CEO and COO

# Zoolander Life Insurance Company

MEMORANDUM

February 22, 2011

TO Department Heads  
FROM Henri Jay, Planning, ext 663  
RE Enterprise Risk Management – Introducing Bill Buck

Please join me in welcoming Bill Buck to the Zoolander Life team. Bill will be starting in the Planning Department on March 1 and he will report to me. His position will be Second Vice President – ERM. As you can tell by his title, he will be leading our efforts to bring Enterprise Risk Management to Zoolander Life.

Bill's primary ERM responsibilities will include

- establishing Zoolander's ERM framework and infrastructure;
- developing and implementing ERM policies, processes and procedures;
- leading a Risk Management Committee to identify potential risk concerns and to provide recommendations to address those risk concerns;
- coordinating and monitoring risk identification, measurement and control processes in collaboration with the internal auditing area;
- recommending appropriate actions to reinforce internal control processes; and
- preparing reports on risks and risk management for internal audiences and external audiences such as regulators and rating agencies.

Bill is trained as an actuary. He received his FSA in 2005 and CERA in 2008. For the last six years, he worked for NADA Life where he was in charge of their Insurance Planning department. It is in that role where he was exposed to Enterprise Risk Management. He developed the first ERM models for NADA Life. Bill has been a speaker on the topic of ERM at several Society of Actuaries meetings. He has an undergraduate degree in Mathematics from State University and spent the first five years of his career in various actuarial positions at Zest Life Insurance.

In a couple of weeks, after Bill has gotten settled, I would like to introduce him to you and your staff. Perhaps the best forum for that would be at your department's staff meetings (if you have one) where Bill could spend 10-15 minutes describing Enterprise Risk Management. I anticipate that Bill will be working very closely with you and some of your staff over the next several months as we bring ERM to Zoolander Life.

In a couple of months, Bill will put together an internal seminar on Enterprise Risk Management. We will also be setting up an ERM council. It is not too early to start thinking about who from your staff would participate.

I thank you in advance for giving Bill your full cooperation as we implement Enterprise Risk Management at Zoolander Life.

# Zoolander Life Insurance Company

MEMORANDUM

February 25, 2010

TO Department Heads

FROM Peter Fish

RE Derivative Team

I'm very excited to announce that John Badger has agreed to join Zoolander Life, reporting to me in the newly created role of Head Derivatives Trader and Director of Derivative Securities Administration. He will be charged with building a derivatives team at Zoolander to deal with trading and administration.

We managed to scoop this derivatives hotshot from the Crimson Sardine Hedge Fund that recently wound down operations. John is very keen on the opportunity to put his own leading-edge derivative pricing model to work developing innovative derivative strategies in the more collegial and autonomous environment offered here at Zoolander.

Our investment team to date has lacked sophisticated derivatives skills. With John on board, not only will we be able to dynamically hedge our current VA product, but he can also help the pricing actuaries work out all those fancy GM-ABCs they are considering for the new VA product. Even beyond this, in John's capable hands we'll be able to leverage the derivatives desk and generate excess earnings turning this into a profit center on its own!

As of now, John will be a one-man show, but plans to hire a couple of derivatives traders within a few months, if we can get more budget dollars allocated to this initiative.

One of the ways that we can manage to establish this operation with minimal staff is that John has developed some rules of thumb that he uses to estimate credit-risk exposure. This saves having to bother with time-consuming modeling of this risk.

He also has developed good contacts in the industry so he is used to being able to informally set up an agreement with a trading partner each time a new type of trade is transacted. No matter how many positions we may have with a certain counterparty, each new deal has its own quirks and he likes to start fresh, without being constrained by the past. John has several years of experience in this market, so Zoolander will be the beneficiary of his established relationships.

We're going to let John be the front man for a while, since he's the one with the relationships, even though he is going to keep in constant contact with senior management so that he doesn't get us into any deals that are bigger than we really want.

For now, we plan to say as little as possible publicly about these activities since we are still fleshing out all the operating parameters. We do not want too much scrutiny before we feel that we are really ready for it, and things have become somewhat stabilized.

I see a very profitable future ahead!

----- Original Message -----

**From:** "Wolfe, Danielle" WolfeD@zlic.com  
**To:** "Fox, Wanda" FoxW@zlic.com  
**Sent:** March 24, 2011 3:17PM  
**Subject:** Re: Variable Annuity Writing Agent Survey – the new "VA Plus" line of business

Wanda,

Thanks for your note. I really thought our meeting yesterday was very productive. We are not stuck on the 20bps GMDB charge. It just needs to be a guarantee customers want and the pricing has to be competitive. If that is 85bps, so be it.

To address the concern you raised regarding understanding contract holder behavior with regards to VA guarantees, we're going to make the survey of our VA writing agents an annual exercise. Specifically, we hope to determine the dynamic surrender behavior as a function of the In-The-Money (ITM), both for guaranteed living benefits and death benefits. In addition, we hope to get detailed benefit election information from this same survey.

I feel that we can get reliable information from our VA producers because of their strong relationship with their clients, our contract holders. We hope that Actuarial staff can quantify both the surrender behavior and benefit election propensity, and be able to use this information in your modeling function. Towards this end, I'm fairly confident that we can get the data in whatever format you need it.

----- Original Message -----

**From:** "Fox, Wanda" FoxW@zlic.com  
**To:** "Wolfe, Danielle" WolfeD@zlic.com  
**Sent:** March 24, 2011 7:26 AM  
**Subject:** Re: Variable Annuity Writing Agent Survey – the new "VA Plus" line of business

Danielle,

I'm not sure if you grasped the importance of all the technical requirements that John Badger referenced during our meeting yesterday, but I thought I'd take the time to break it down in this e-mail.

John needs us to measure and keep track of In-The-Money (ITM) every quarter. Of course, he'll also have available to him all the normal financial reporting measures, such as Account Value (AV), Cash Surrender Value (CSV), policy count, reserves, etc. I've also agreed to provide John CTE values for various levels of solvency capital accumulation. These values will come from our pricing models, which we will update with emerging experience of contract holder behavior. John plans to hedge our risk exposure on an ad hoc basis, when he deems our risk exposure has gotten too large. For example, if the CTE measure calculated using the current stock market level is 10% or higher than the CTE calculated using the issue date stock market level, that will trigger John to put on a hedge. He has a separate test for ITM. He believes by using such a flexible hedging system, that he can keep hedging costs down.

Our long term goals are to hedge based on the liability portfolio characteristics, such as delta, gamma, vega, rho, both with and without specifically hedging the assets. However, we are still working on a plan as to how we can start measuring these factors. Actually managing against them will come after that.

As promised, the actuarial department made some quick calculations of GMDB costs. Using our simplified model where premiums are paid at the beginning of the year and benefits paid at the end of the year, based on a single deterministic scenario of historical returns we got we got an annual cost of 0.85% of account value to provide a 20-year GMDB with a 6% guaranteed return on premiums on the new VA Plus contract.

This is highly dependent upon the assumptions. We did use the fund allocation 85%/15% split (equities vs. fixed income), we discussed at the meeting. However, I updated the estimated returns to match our common assumption set: equities 8.25%, fixed income 5.65%, risk free rate 4.00%. For our standard 45 year old target market, the average annual mortality rate for the guarantee period is 0.0001 and I assumed we'd have withdrawals of 0.002 annually.

Anyway, the actual pricing will be a lot more sophisticated but if your distributors are stuck on keeping the cost to 20bps or less you mentioned in the meeting, we'll have to make the GMDB much more restrictive.

----- Original Message -----

**From:** "Wolfe, Danielle" WolfeD@zlic.com  
**To:** "Fox, Wanda" FoxW@zlic.com  
**Sent:** March 22, 2011 4:58 PM  
**Subject:** Re: Variable Annuity Writing Agent Survey – the new "VA Plus" line of business

Wanda,

Thanks for your input, here is some additional info for you before our meeting tomorrow.

A quick note on the guarantees. It might help you to know that we are targeting these features to provide benefits which are reflective of historical index returns. They are NOT intended to provide the contract holder with amounts in excess of average historical market performance but rather will only be in the money if the market fails to perform according to historical averages. This might make you more comfortable with the ALM risk for these features as there should not be substantial benefits paid unless the markets underperform. This should also get you comfortable with avoiding any onerous ALM testing or requirements.

Also, we have decided on the GMDB and the GMIB for the VA Plus line. We will use margin offset fees to charge for the benefits. For the GMDB we were divided over whether to use a voluntary reset or premium accumulation for the guarantee. We compromised by using the larger of a voluntary annual reset of the fund level at the anniversary date and option (c): a return, upon death, of cumulative premium accumulated at 5% per annum. We didn't see any harm in being generous since this benefit pays out only if they die and only if the market performs below historical average—we think that is a rare combination. For the GMIB we can use the same 5% accumulation of premium assumption to buy annuity payments at our current purchase price assumptions. Since these benefits don't put us at much risk, I hope it won't take you very long to price for these.

Finally, regarding the introduction of new mutual funds, there's some risk if we introduce all these funds at the same time. First off, there's the administrative challenge of adding funds to our systems from three different fund families. Then, there's the marketing challenge of not overwhelming our producers with dozens of new choices. Plus there needs to be marketer education on the unique risks and opportunities of these much riskier funds. Finally, there is also the concern that we will not be able to negotiate consistent revenue sharing arrangements across all three of these fund families. If we don't do that, Zoolander would not be indifferent to policyholder investment choices. For these and other reasons, we've decided to proceed cautiously and introduce one fund family at a time, and to make each family's funds available over a period of time. I feel that this strategic choice allows us to minimize problems emanating from the aforementioned challenges.

Danielle

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**From:** "Fox, Wanda" FoxW@zlic.com  
**To:** "Wolfe, Danielle" WolfeD@zlic.com  
**Sent:** March 22, 2011 9:15 AM  
**Subject:** Re: Variable Annuity Writing Agent Survey – the new "VA Plus" line of business

Hi Danielle,

I know we are meeting to discuss this tomorrow so I wanted to share some preliminary thoughts with you before then. We are nowhere near having a comprehensive assessment of the costs and risks associated with these features. Having said that, here are my initial thoughts and some questions to consider for our meeting:

- We may need to restrict our fund offerings where these investment guarantees are present, especially if we want to make all the new funds available, many of which are volatile. Alternatively, we would need to limit the guarantees to only that portion of the contract holder funds which have been invested in approved funds. Here is a listing of the most popular fund offerings associated with our existing VA contracts.

Available Funds For Zoolander VA Products

Fund Name	Average Return ( $\mu$ )	Volatility ( $\sigma$ )	Annual Mgmt. Fee (m)
ZooBalanced	7.2%	20%	3.00%
ZooEquity500	8.4%	25%	1.25%
ZooFixedIncome	5.9%	10%	2.00%

- Although we would all agree that accounts with greater volatility likely have a greater chance for guarantee payouts, we do not yet have that relationship quantified. Similarly, although there seems to be some correlation between In-The-Moneyness (ITM) and surrender rates for our current GMDB product, we are not sure how much stronger that relationship will be for guaranteed living benefit options.
- GMAB, GMIB and GMMB would be new features at Zoolander. We'll need to invest some time to build the necessary knowledge base to fully understand these features. In particular, we have not typically subjected our VA line to asset/liability testing. I believe that we will need to do so for the VA Plus products. My initial thoughts would be to use an actuarial approach to fund the liability associated with the proposed features using high quality fixed income assets and setting a funding level at CTE 95% or so of the expected liability.
- We could take a multi-faceted approach to managing the ALM risk rather than think of ALM as simply an investment strategy approach. I can walk you through some ideas during our meeting.
- Obviously we will need to charge for these benefits somehow. Which option do you think is most palatable for our client base, premium based charges or margin offset fees? We should reconsider the level of our surrender charges with the likely outcome that we need to increase surrender charges dramatically. This is all related to the issue of forecasting contract holder behavior. I will need help with that as well.
- What are your thoughts regarding the voluntary reset? Was this going to be available every year? Every 3 years? Every 5 years?
- I have invited John Badger to our meeting. We will need his involvement to understand our ability to hedge the risks associated the VA Plus features. I have also invited Gaston Deer. He used to work with the reinsurance markets at his prior employer and may have ideas on whether reinsurance could help with some of these risks.
- With regards to the GMDB, the guaranteed benefit level doesn't really matter provided the client is willing to pay for the benefit they select. This feature is probably the easiest to develop quickly.

**Wanda**  
X-345

----- Original Message -----

**From:** "Wolfe, Danielle" WolfeD@zlic.com  
**To:** "Fox, Wanda" FoxW@zlic.com  
**Sent:** March 18, 2011 4:34 PM  
**Subject:** Variable Annuity Writing Agent Survey – the new "VA Plus" line of business

Wanda,

I wanted to follow up with you on the conversation we had last week regarding the Variable Annuity writing agent survey. As you recall, we undertook an initiative which involved soliciting feedback from our top VA writers to understand how to better position our products in this market and improve our profitability in this line of business. While we received a lot of feedback, there seemed to be two prevailing themes for the improvement of the existing product, which the producers hope can be implemented in the new VA Plus product.

One of these requested features is to make available more separate account funds for the contract holder. They suggest making available funds from three different large mutual fund companies, including some high return sector-specific funds. These funds include those invested in minerals, energy and emerging markets, among others. Ironically, the mutual fund companies most often mentioned are those we've traditionally competed against for investor funds.

The other major request is to make available a variety of guarantees. As you know, the old product only included a Guaranteed Minimum Death Benefit (GMDB). To this end, we compiled a list of potential features or benefits which might address the concerns raised by our VA producers. At this point, I would like some initial input from your team on which of these features might be easiest to implement quickly.

1. 10 Year GMAB: A GMAB which guarantees that the policy value will be the greater of the actual accumulated value or the initial premium accumulated at 2% per annum at any of the option rollover dates. The option rollover dates occur every tenth policy anniversary.
2. GMDB: There was a lot of interest in a GMDB with a wide range of opinions regarding what the benefit level should be. Suggestions included a return, upon death, of (a) cumulative premium paid, (b) 90% of cumulative premium accumulated at 2% per annum, and (c) cumulative premiums accumulated at 5% per annum.
3. GMMB: A guarantee that offers a minimum return on premium at the time of contract maturity. The minimum return would vary based on the issue age of the annuitant with a higher rate being offered for the youngest issue ages. The intent would be to provide a guarantee to the contract holder that they would realize some historical average market return by maturity.
4. GMIB: This option was considered as an alternative to the GMMB. There was some broker demand to offer a guaranteed benefit using current annuity purchase rates.

Obviously I don't expect a full pricing analysis for all of these features at this time. However, if you let me know which of these are easily introduced and which might be more difficult, I can devise a plan to hopefully target some of the concerns raised by our VA producers in a timely fashion.

Danielle



# Zolander Life Insurance Company

MEMORANDUM

March 11, 2011

TO Hugh Dodo

CC Peter Fish, Wanda Fox

FROM John Badger

RE Hedging and Option Data

Hugh,

Thank-you for your interest in my hedging program for the GMDB on the old VA products. I want to formalize the Q&A on this subject in a memorandum. I think it is pretty straightforward, but please don't hesitate to let me know if you have any questions.

In general, I took an approach that hedges big risks, while avoiding unnecessary costs in transitioning from the actuarial risk management approach originally used at Zolander for this benefit.

The actuarial approach to managing the risk for the old VA GMDB used the GMDB liability present value at the CTE(95) level, and invested this amount of funds in risk-free bonds. To transition the current methodology to my new, dynamic hedging program, I wait until the current risk profile suggests it is cost-effective to do so. Currently, Wanda's actuarial area sends me a quarterly report tracking individual policy CTE(95) levels, that compares the current level to the CTE(95) level that was used to develop the actuarial hedge at issue. Once the current requirement exceeds the initial level by 10% or more, I transition from the actuarial approach and move the policy to my dynamic hedging program.

The following table shows the option valuations and details you asked for - I've provided both puts and calls. To keep it simple, I've assumed management charges are zero. These valuations are based on the classic Black-Scholes formulae that you may be familiar with, and I've included them below. The beauty of these formulae is that they also indicate how to construct a hedge portfolio that replicates the option, so I've added this additional breakdown of the option cost to the table. I think it will help you understand the hedging strategy further. Please let me know if there is any notation that you are unfamiliar with.

Black-Scholes formulae used:

$$P_t = Ke^{-r(T-t)} \Phi(-d_2) - S_t \Phi(-d_1)$$

$$C_t = S_t \Phi(d_1) - Ke^{-r(T-t)} \Phi(d_2)$$

$$\text{Where, } d_1 = [ \ln(S_0/K) + (r + \sigma^2/2)(T - t) ] / [ \sigma \sqrt{T-t} ]$$
$$d_2 = d_1 - \sigma \sqrt{T-t}$$

# Zolander Life Insurance Company

I have provided 1-year, 2-year and 3-year options, all at the same strike level, but relative to various index levels. I have shown sample interim values as the options age to maturity. Please let me know if you would like to see different tenors or index levels.

## Puts

T	t	K	S <sub>t</sub>	σ <sup>2</sup>	r	(T-t)	d <sub>1</sub>	N(-d <sub>1</sub> )	d <sub>2</sub>	N(-d <sub>2</sub> )	Equity	Bond	Hedge Cost
1	0	100	100	0.04	0.03	1	0.2500	0.4013	0.0500	0.4801	-40.129	46.587	6.458
1	0	100	95	0.04	0.03	1	-0.0065	0.5026	-0.2065	0.5818	-47.745	56.459	8.714
1	0	100	105	0.04	0.03	1	0.4940	0.3107	0.2940	0.3844	-32.620	37.304	4.683
2	0	100	100	0.04	0.03	2	0.3536	0.3618	0.0707	0.4718	-36.184	44.434	8.250
2	0	100	95	0.04	0.03	2	0.1722	0.4316	-0.1106	0.5440	-41.006	51.237	10.231
2	0	100	105	0.04	0.03	2	0.5261	0.2994	0.2432	0.4039	-31.440	38.040	6.600
3	0	100	100	0.04	0.03	3	0.4330	0.3325	0.0866	0.4655	-33.250	42.543	9.293
3	0	100	95	0.04	0.03	3	0.2849	0.3878	-0.0615	0.5245	-36.845	47.936	11.091
3	0	100	105	0.04	0.03	3	0.5739	0.2830	0.2274	0.4100	-29.718	37.475	7.756
2	1	100	100	0.04	0.03	1	0.2500	0.4013	0.0500	0.4801	-40.129	46.587	6.458
2	1	100	90	0.04	0.03	1	-0.2768	0.6090	-0.4768	0.6832	-54.813	66.306	11.492
2	1	100	110	0.04	0.03	1	0.7266	0.2338	0.5266	0.2993	-25.713	29.041	3.328
3	1	100	100	0.04	0.03	2	0.3536	0.3618	0.0707	0.4718	-36.184	44.434	8.250
3	1	100	90	0.04	0.03	2	-0.0190	0.5076	-0.3018	0.6186	-45.680	58.257	12.577
3	1	100	110	0.04	0.03	2	0.6905	0.2449	0.4077	0.3418	-26.942	32.185	5.243
3	2	100	100	0.04	0.03	1	0.2500	0.4013	0.0500	0.4801	-40.129	46.587	6.458
3	2	100	80	0.04	0.03	1	-0.8657	0.8067	-1.0657	0.8567	-64.534	83.140	18.606
3	2	100	120	0.04	0.03	1	1.1616	0.1227	0.9616	0.1681	-14.724	16.315	1.592

## Calls

T	t	K	S <sub>t</sub>	σ <sup>2</sup>	r	(T-t)	d <sub>1</sub>	N(d <sub>1</sub> )	d <sub>2</sub>	N(d <sub>2</sub> )	Equity	Bond	Hedge Cost
1	0	100	100	0.04	0.03	1	0.2500	0.5987	0.0500	0.5199	59.871	-50.457	9.413
1	0	100	95	0.04	0.03	1	-0.0065	0.4974	-0.2065	0.4182	47.255	-40.585	6.670
1	0	100	105	0.04	0.03	1	0.4940	0.6893	0.2940	0.6156	72.380	-59.741	12.639
2	0	100	100	0.04	0.03	2	0.3536	0.6382	0.0707	0.5282	63.816	-49.743	14.074
2	0	100	95	0.04	0.03	2	0.1722	0.5684	-0.1106	0.4560	53.994	-42.940	11.054
2	0	100	105	0.04	0.03	2	0.5261	0.7006	0.2432	0.5961	73.560	-56.137	17.424
3	0	100	100	0.04	0.03	3	0.4330	0.6675	0.0866	0.5345	66.750	-48.850	17.900
3	0	100	95	0.04	0.03	3	0.2849	0.6122	-0.0615	0.4755	58.155	-43.457	14.698
3	0	100	105	0.04	0.03	3	0.5739	0.7170	0.2274	0.5900	75.282	-53.918	21.363
2	1	100	100	0.04	0.03	1	0.2500	0.5987	0.0500	0.5199	59.871	-50.457	9.413
2	1	100	90	0.04	0.03	1	-0.2768	0.3910	-0.4768	0.3168	35.187	-30.739	4.448
2	1	100	110	0.04	0.03	1	0.7266	0.7662	0.5266	0.7007	84.287	-68.004	16.284

# Zoolander Life Insurance Company

3	1	100	100	0.04	0.03	2	0.3536	0.6382	0.0707	0.5282	63.816	-49.743	14.074
3	1	100	90	0.04	0.03	2	-0.0190	0.4924	-0.3018	0.3814	44.320	-35.919	8.400
3	1	100	110	0.04	0.03	2	0.6905	0.7551	0.4077	0.6582	83.058	-61.991	21.066
3	2	100	100	0.04	0.03	1	0.2500	0.5987	0.0500	0.5199	59.871	-50.457	9.413
3	2	100	80	0.04	0.03	1	-0.8657	0.1933	-1.0657	0.1433	15.466	-13.904	1.562
3	2	100	120	0.04	0.03	1	1.1616	0.8773	0.9616	0.8319	105.276	-80.729	24.547

Regards,

John

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## ATTACHMENTS

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From: "Fish, Peter" [FishP@zlic.com](mailto:FishP@zlic.com)  
To: "Badger, John" [BadgerJ@zlic.com](mailto:BadgerJ@zlic.com)  
Cc: "Fox, Wanda" [FoxW@zlic.com](mailto:FoxW@zlic.com); "Buck, Bill" [BuckB@zlic.com](mailto:BuckB@zlic.com)  
Sent: Wednesday, March 2, 2011  
Subject: Fwd: Hedging and Option Data

Hi John,

Please respond to Hugh directly. I don't understand what exactly you are doing to hedge these fancy guarantees, so I better leave it to the expert to explain it to Hugh. He is also looking for some data on options – not sure why this would be of interest to him – but please get him what he wants. Let me know if there is something there that is too time-consuming to accommodate his request at this time.

Peter

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From: "Dodo, Hugh" [DodoH@zlic.com](mailto:DodoH@zlic.com)  
To: "Fish, Peter" [FishP@zlic.com](mailto:FishP@zlic.com)  
Cc: "Fox, Wanda" [FoxW@zlic.com](mailto:FoxW@zlic.com); "Buck, Bill" [BuckB@zlic.com](mailto:BuckB@zlic.com)  
Sent: Tuesday, March 1, 2011  
Subject: Hedging and Option Data

Peter,

It is great that you have brought in some derivatives expertise to Zoolander, I think that is a great step forward. I have been hearing a bit about the new hedging approach that we are now using on the old VA line, but none of the terms or descriptions sounded like anything I am quite used to, so I wonder if you could help me understand what Zoolander is currently doing to hedge our equity-linked exposures?

Another thing, which I think will also help my understanding, please get one of your staff to provide me with some sample options data - just a few representative terms using the same underlying assumptions as the pricing area.

Regards,  
Hugh

**From:** "Wolfe, Danielle" [WolfeD@zlic.com](mailto:WolfeD@zlic.com)  
**To:** "Seal, Frances" [SealF@zlic.com](mailto:SealF@zlic.com)  
**CC:** "Bird, Odette" [BirdO@zlic.com](mailto:BirdO@zlic.com), "Fox, Wanda" [FoxW@zlic.com](mailto:FoxW@zlic.com)  
**Sent:** March 28, 2011 7:26 AM  
**Subject:** Re: New Funds for VA Plus

Frances,

We do plan to offer new funds with the VA Plus product. I agree that we need to plan ahead so that we can avoid administrative problems and to make sure everyone stays focused on making the VA Plus product a success.

In addition to the concerns you have raised, I am also trying to address some concerns that Wanda Fox brought to my attention. She is worried that we will not have enough computing power to implement new techniques necessary to price and model the VA Plus product we want to launch. See the email below for some detail on this.

I'll set up a meeting with Odette, Wanda, and yourself to discuss administrative issues.

----- Original Message -----

**From:** "Fox, Wanda" [FoxW@zlic.com](mailto:FoxW@zlic.com)  
**To:** "Wolfe, Danielle" [WolfeD@zlic.com](mailto:WolfeD@zlic.com)  
**Sent:** March 11, 2011 2:14 PM  
**Subject:** Computing Power

Just to follow-up on my comments at the Product Committee meeting, I have real concerns regarding our computing power to model the new product features for VA Plus, particularly in support of the dynamic hedging program.

I do have some ideas to reduce runtime requirements (e.g. grouping of policies with similar characteristics, randomly varying scenarios by policy to ensure faster convergence of Monte Carlo simulations, using static policyholder behavior assumptions to increase accuracy and speed, etc.) but each of these has its own limitations. Some options may have impacts on product design or features.

How do we best address these issues?

----- Original Message -----

**From:** "Seal, Frances" [SealF@zlic.com](mailto:SealF@zlic.com)  
**To:** "Wolfe, Danielle" [WolfeD@zlic.com](mailto:WolfeD@zlic.com)  
**CC:** "Bird, Odette" [BirdO@zlic.com](mailto:BirdO@zlic.com)  
**Sent:** March 25, 2011 3:26 PM  
**Subject:** New Funds for VA Plus

Danielle,

I saw in the monthly reports that we are moving forward with new funds for the VA Plus product. I think we should probably meet about this in the near future; I have some real concerns about the limitations of our VA administration system. I would also suggest including Odette Bird to get her perspective from the administration side.

Depending upon the number and types of new offerings, we may need to modify our systems or even upgrade them, neither of which are cheap options. In fact, the upgrade option would likely require bringing in consultants. For any system upgrade, our IT maintenance folks, as well as Odette's admin group, will probably have to be trained in using the changed system. Odette's personnel will also need to become familiar with the new funds' details. We would also need to update our Sarbanes-Oxley testing procedures and documentation. Lots to do!

As you can imagine, the severity of failing to deliver the system capabilities would be very high. We'd not only be dealing with irate contract holders and producers, but also with financial, regulatory and tax reporting authorities. However, I feel that we can maximize the probability of a successful implementation with proper planning and enough lead time.

## Zoolander Life Insurance Company

### Meeting Minutes - Risk Appetite Meeting

Date and Location: April 11, 2011 at 3pm, Executive Conference Room

Organizer: Bill Buck

Attendees: Henri Jay, Sam Roach, Wanda Fox, Peter Fish, Charley Pigeon

Absentees: Danielle Wolfe, Victor Herring, Alex Trout, Teresa Cricket

Minutes transcribed by: Charley Pigeon

1. Bill Buck provided an overview and explained that the purpose of the meeting was to achieve a consensus on the risk appetite statement.
2. The following draft of the Zoolander Risk Appetite Statement was presented.

#### Preliminary Risk Appetite Statement

Enterprise Risk Exposure		Risk Appetite
"Pain Point"	Likelihood *	Likelihood – Hard Limit **
Statutory earnings fall short of Annual Plan by more than 25%	10%	20%
Statutory reserves increase by more than 12% due to equity risk	10%	20%
Shareholder equity falls below \$1 billion	5%	20%

\* Probability of reaching the "pain point" in a given year.

\*\* The maximum acceptable probability of reaching the "pain point" in a given year.

3. In addition, Zoolander does not want the required statutory capital to exceed \$200 million. At 12/31/2010, required statutory capital for Zoolander was \$167.9 million.
4. Peter Fish said that a risk appetite of \$200 million was very difficult to manage to. It would be helpful to allocate the risk appetite down to each business segment through risk limits. This way, he could evaluate each segment's risk exposure versus risk limit and act accordingly.
5. To help Peter Fish allocate the risk appetite across each business segment, Wanda Fox suggested
  - a. Using the required capital from the statutory balance sheet at 12/31/2010 as the initial enterprise risk exposure.
  - b. Allocating the optimal enterprise risk limit for each business segment proportionally to their general account assets on the statutory balance sheet at 12/31/2010.
  - c. For simplicity, exclude Corporate from the risk exposure and risk limit allocation.
6. Peter Fish and Wanda Fox disagreed on variable annuities' equity risk exposure.
  - Peter Fish believed that variable annuities' equity risk exposure was below the risk limit.
  - Wanda Fox believed that variable annuities' equity risk exposure was above the risk limit, so it is necessary to discuss some tactical risk management actions to bring variable annuities' equity risk exposure below the risk limit. Some possible options include reinsurance and dynamic hedging.
  - Bill Buck was to investigate further.
7. Meeting adjourned. Next step is for Henri Jay to approve the Risk Appetite Statement and formally roll it out to each of the business segments at Zoolander.

# *Blue Sky Reinsurance Intermediaries*

*500 Wilderness Lane, Out There 00000*

December 21, 2010

A. Hugh Dodo, CFO  
Zoolander Life Insurance Co.  
411 Main Street  
Zoo Falls 54321

Dear Mr. Dodo:

It was good talking with you last week. I think you have a legitimate concern over the possibility that your reinsurer might have to cut off reinsurance for new business in the near future. You are not alone; some of our other clients have also mentioned that Rose Re is having capacity issues.

Everyone is looking for more capital and the market is moving quickly. These are indeed interesting times. Let me assure you that Blue Sky Intermediaries has the breadth and depth of experience to help Zoolander. Our client list includes 17 of the top 20 direct writers but we also provide outstanding service to many smaller clients too. We have over a decade of expertise in designing reinsurance programs and we have extensive contacts with reinsurers both large and small.

Enclosed are the reinsurance proposals that you requested. I think you will find them self-explanatory, but I will call you in a few days to discuss them with you and anyone else on your staff that you wish to include in your decision-making.

In our attempt to place each quote on as level a playing field as possible, we have squeezed everyone's proposal into our one-size-fits-all template. As a result, there may be some details that the reinsurers provided but which are omitted in this presentation. In addition, Blue Sky can use our personal relationships with the reinsurers to get more information, if needed. So, feel free to ask any questions that you have which will help with your reinsurance evaluation.

After our discussion, I did visit informally with a handful of other account managers here at Blue Sky and I can confirm (without naming specific clients) that other companies have had similar discussions with Kelly Ratings on capital coverage ratios. It appears that on the capital side, Kelly is looking for liquid assets equal to at least 6% of statutory reserves for their A+ rated companies. The corresponding numbers are 5% for A ratings, 4% for A- ratings and 3% for B+ rated companies.

Thank you for letting Blue Sky partner with Zoolander in this search.

Sincerely,

Fuchsia Farina  
Vice President  
Ph (501) 555-0000

# *Blue Sky Reinsurance Intermediaries*

Proposal for cedent **Zolander Life Insurance Company**

Reinsurer	<b>Amber Re</b>	<b>Amethyst Re</b>	<b>Aquamarine Re</b>	<b>Emerald Re</b>	<b>Garnet Re</b>	<b>Turquoise Re</b>
Reinsurer's Kelly Rating	A- (3rd highest of 5)	A (2nd highest of 5)	A+ (highest rating available)	B+ (4th highest of 5)	A- (3rd highest of 5)	A (2nd highest of 5)
Reinsurer's Domicile	Bermuda	Vermont	South Carolina	Bermuda	Connecticut	New York
Reinsurer Authorized in Cedent's Domicile?	No	No	No	No	Yes	Yes
Proposed Effective Date	12/31/2010	12/31/2010	12/31/2010	12/31/2010	12/31/2010	12/31/2010
Block of Business	Term Life	Term Life	Term Life Retention (after existing Rose Re amounts)	Term Life	Disability Insurance	Term Life
New Business/Inforce	existing block as of 12/31/2010 and new business	existing block as of 12/31/2010, no new business	existing block as of 12/31/2010 and new business	existing block as of 12/31/2010 and new business	New business sold beginning 1/1/2011	existing block as of 12/31/2010 and new business
Type of Reinsurance	Funds Withheld Coinsurance	Yearly Renewal Term	Coinsurance 100%	Modified Coinsurance	Funds Withheld Coinsurance 50%	Funds Withheld Coinsurance
Ceding Allowance	n/a	n/a	n/a	n/a	n/a	n/a
Renewal Year Expense Allowance	n/a	n/a	n/a	n/a	25% of ceded premium	n/a
Annual Risk Charges	n/a	n/a	n/a	n/a	5% of ceded reserves at beginning of year plus 5% of ceded premium	n/a
Other	Amber Re has extensive Term Life reinsurance capabilities. They have deals in place with dozens of other direct writers. Blue Sky has worked with them in more than 10 prior transactions.	Amethyst Re is new to the Term Life reinsurance market but they have a long history as a direct writer. Blue Sky has two other clients with Amethyst Re deals.	Blue Sky has not worked with Aquamarine before but they come highly recommended and have a great reputation within the industry. Blue Sky has found Aquamarine's pricing to be more competitive on new business than on inforce blocks.	Emerald Re is new to this market but the three main principals came over from Rose Re. They have very competitive pricing and a willingness to be flexible in contract terms & conditions. No current Blue Sky clients have consummated a deal with Emerald Re.	Garnet Re is a sub of the large disability writer Garnet Financial. Looking for additional disability exposure and have been fairly active in the market for the past 18 months. Blue Sky has no completed transactions with Garnet Re but has a half dozen deals with the parent company, Garnet Financial.	Turquoise Re is an old line reinsurer very familiar to everyone in this market. Approximately 20% of Blue Sky's Life Insurance clients use Turquoise Re with the transaction count above five dozen. Clients receive access to extensive mortality database information and are invited to participate in Turquoise Re's Industry Mortality Conference annually.

Account Manager: Fuchsia Farnia

Confidential Work Product of Blue Sky Reinsurance Intermediaries

Prepared: December 21, 2010

March 10, 2011

Henri Jay  
Executive VP – Planning  
Zoolander Life Insurance Co  
411 Main Street  
Zoo Falls 54321

Dear Mr. Lyon,

I am pleased to inform you that Cobalt Management Consultants is on target to complete the analysis of Zoolander's Strategic Risk profile in advance of month end. We are in the final stages of publishing the complete report and producing the corresponding slide deck that we will present to your senior management team at your 2011 Strategy Review off-site meeting in Palm Beach on April 1<sup>st</sup>.

In the meantime, I am pleased to share a high-level qualitative mapping of Zoolander's Strategic Risk, reflecting our assessment of the life insurance industry and Zoolander's relative position within it. The quantitative details and rationale behind the Risk Map will be provided in the final report. This may assist you in structuring and focusing the remaining time of your off-site to jump-start action plans for the most significant strategic risks.

Best Regards,

Hans Blau  
Partner  
Cobalt Management Consulting, Inc.  
Ph 987/555-1234

Attachment



*Cobalt Management Consultants, Inc.*

1 Blue Sky Way, Cerulean City

Tel: 987-555-1234

Type of Risk	Probability	Severity (% earnings at stake)	Expected Timing in Years			Changing probability over time	Summary
			<1	1-3	>4		
<b>Industry</b>							
Margin Squeeze	40%	50%		X		Increasing	Cobalt predicts heightened competitive pressure in the Term market, due to a recent shift in policyholder wealth.
Commoditization	50%	50%			X	Increasing	Cobalt predicts the lack of distinctive features in the Zoolander Term product will lead to commoditization of that product line.
Rising R&D/capital expenditure costs	20%	10%		X		Increasing	Cobalt predicts a small probability of a large downgrade in Zoolander's rating over the next 2 years could lead to higher capital costs and loss of strategic flexibility.
New Regulations	30%	40%		X		Constant	Cobalt predicts that proposed new regulations negatively impacting Zoolander's VA products will pass in the next 1 or 2 years.
<b>Technology</b>							
n/a							
<b>Brand</b>							
Erosion	20%	10%	X			Increasing	Cobalt predicts that the recent strategy shift to aggressive growth and resulting shift of priorities may harm Zoolander's image among current policyholders.
<b>Competitor</b>							
Emerging global rivals	20%	10%			X	Increasing	Cobalt predicts the increasing likelihood of the emergence of global financial conglomerates within a few years that would threaten the existence of Zoolander.
Gradual market-share gainer	30%	30%		X		Constant	Cobalt predicts that without the successful launch of guaranteed benefits in the VA line, other companies with such guarantees will gain market share on Zoolander.
<b>Customer</b>							
Customer priority shift	60%	25%		X		Increasing	Cobalt predicts that Zoolander's LTD customer base will totally shift away in the near future from the standalone LTD product towards LTD riders attached to UL products.
Increasing customer power	60%	20%		X		Increasing	Cobalt predicts that institutional investors in GIC products may, after a downgrade at Zoolander, use their considerable leverage from the surrender clause to extract better benefits.
Overreliance on a few customers	40%	30%	X			Constant	Cobalt predicts that the income from the GIC line of business could dwindle quickly if even a few contract holders renew elsewhere.
<b>Project</b>							
New Product Development Failure	70%	50%	X			Constant	Cobalt predicts a high probability that the new VA Plus will not be launched successfully on time.
Business-development failure	40%	30%			X	Constant	Cobalt predicts that new VA features may not meet market expectations once the products are launched.
Merger or acquisition failure	30%	25%		X		Constant	Cobalt predicts that the surplus currently held, making acquisition activity possible, may be squandered if capital is not managed appropriately.
<b>Stagnation</b>							
Flat or declining volume	70%	50%	X			Increasing	In about two years, Cobalt predicts a high probability of declining volume of Zoolander's GIC product line due to lack of product innovation.
Volume up, margin down	65%	30%		X		Increasing	Cobalt predicts a strong market increase in Term products, leading to decreased margins from new entrants to the market.
Weak pipeline	55%	10%	X			Constant	Cobalt predicts that losing the facultative underwriting provided by Rose Re could lead to poor placement of large Term cases.

MEMORANDUM

April 7, 2011

TO Wanda Fox

FROM Henri Jay

RE Economic Capital

After our meeting with Kelly Ratings & Analysis, Lyon is convinced that EC has moved from just an expensive "nice to have," best practice item to almost a minimum standard of competence. It would be nice to wait for the new CFO to be in place but we don't have that luxury. Lyon wants me to be executive sponsor of a project to install Economic Capital (EC) at Zoolander. You and your staff will provide the critical technical support.

Given the strong interest by Kelly, it is very important that we make this a top priority and get started as soon as possible. We should keep the Kelly people informed of our progress along the way. Someday, I hope to convince Kelly that their target capital calculations are too conservative and not a good measure for Zoolander. Zoolander EC calculations will add credence to that argument.

I will be setting up a meeting for us to get together next week to discuss a rough timeline for the project and to go over some of the critical decision points. In preparation for that meeting here are my thoughts on Economic Capital at Zoolander.

- Methodology – one year, market consistent approach. I think this will make aggregating our different lines of business easier and facilitate discussions on comparing those product lines.
- Risks Covered – credit, underwriting and general market. It is important to cover both asset and liability risks that Zoolander faces.
- Risk Measure – I am still open to a discussion of the merits of VaR vs. Tail VaR but in either case, I would like to use a 1 in 100 year type of standard. That level seems to line up with our risk rating goals and is easy for outsiders to understand.
- Diversification – need to be able to grant credit within our methodology for the various combinations of risks and products. My strong preference would be to keep this simple and use a correlation matrix. We can always refine the matrix as we gain experience.
- Operational Parameters – I envision running the full model once a year in preparation for Zoolander's annual planning exercise each fall. For quarterly reporting, we could use simple rules of thumb to true up results.

In general, we want to be able to implement EC quickly and economically. To that end, we need to utilize existing systems, models and staff to the extent possible. Simpler is better. We can add more detail and rigor, if necessary, in future years.

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