
SOCIETY OF ACTUARIES
Exam AFE
Advanced Finance/ERM

Exam AFE
MORNING SESSION

Date: Thursday, October 29, 2009
Time: 8:30 a.m. – 11:45 a.m.

INSTRUCTIONS TO CANDIDATES

General Instructions

1. This examination has a total of 120 points. It consists of a morning session (worth 60 points) and an afternoon session (worth 60 points).
 - a) The morning session consists of 6 questions numbered 1 through 6.
 - b) The afternoon session consists of 6 questions numbered 7 through 12.

The points for each question are indicated at the beginning of the question. Questions 1 - 4 pertain to the Case Study, which is enclosed inside the front cover of this exam booklet.

2. Failure to stop writing after time is called will result in the disqualification of your answers or further disciplinary action.
3. While every attempt is made to avoid defective questions, sometimes they do occur. If you believe a question is defective, the supervisor or proctor cannot give you any guidance beyond the instructions on the exam booklet.

Written-Answer Instructions

1. Write your candidate number at the top of each sheet. Your name must not appear.
2. Write on only one side of a sheet. Start each question on a fresh sheet. On each sheet, write the number of the question that you are answering. Do not answer more than one question on a single sheet.
3. The answer should be confined to the question as set.
4. When you are asked to calculate, show all your work including any applicable formulas.
5. When you finish, insert all your written-answer sheets into the Essay Answer Envelope. Be sure to hand in all your answer sheets since they cannot be accepted later. Seal the envelope and write your candidate number in the space provided on the outside of the envelope. Check the appropriate box to indicate morning or afternoon session for Exam AFE.
6. Be sure your written-answer envelope is signed because if it is not, your examination will not be graded.

Tournez le cahier d'examen pour la version française.

Advanced Finance/ERM

Case Study

November 2009

Zolander Life

It's your life!

delivered to the new CFO by Wanda Fox (not included in the package from Charley Pigeon)

MEMORANDUM

To: Tomas Lyon
From: Hugh Dodo
cc: Wanda Fox
Kate Finch
Date: December 18, 2008
Subject: Recap of last night's discussion

Tomas, I want to make sure that you understand clearly how important the issues I explained last night are to me.

I was truly disappointed by the reception I received from the Board to my report on internal controls. I just don't know what more I can do to try to communicate the importance of the risks that Zoolander faces and the need for a change in our culture.

This is not just my opinion; I have been receiving informal warnings from regulators and a few rating agencies that Zoolander is not going to be able to continue with our old philosophy of seeking forgiveness rather than asking for permission. The regulators and rating agencies themselves are under more scrutiny than ever before.

My two main concerns are:

1. Zoolander must start taking its legal and regulatory obligations more seriously.
2. More reliance must be placed on Zoolander's professional staff so that a thorough, balanced decision-making process is followed. This also means that more respect must be shown to the staff, as well, so that they will be confident that it is worth performing analyses and expressing opinions. This is no longer a world in which most major decisions can be made solely by a CEO. Everything is too complex and interrelated for the ramifications of a decision to be understood easily. It cannot be assumed that the success Zoolander has had in the past is a result of forces that will continue to bring it prosperity. Kelly has already been pointing out areas of concern regarding the sustainability of our business model.

I believe I made my position clear last night. I can no longer wait to see if things will eventually change. I can only commit to a future with Zoolander if you can commit to a culture that respects the legal and regulatory realities of our environment, and makes appropriate use of the skills and professional expertise and commitment of the people who work for you.

From the desk of
R. Tomas Lyon, IV

March 21, 2009

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 similarly 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.

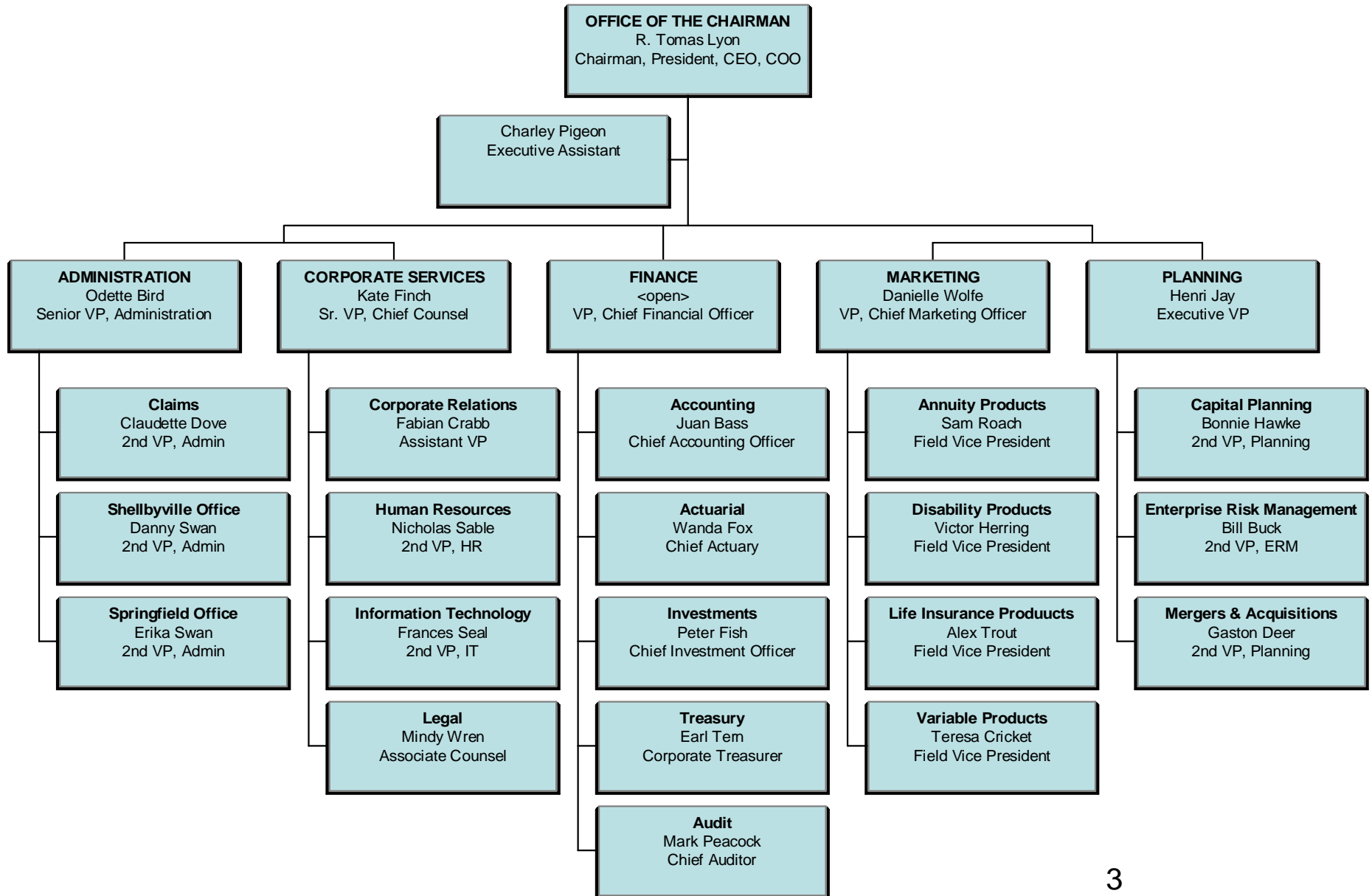
Very Sincerely

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

Cc Charley Pigeon

Zoolander Life Insurance Company

as of March 19, 2009



Zoolander Life Insurance Company

Mission, Vision, Values and Ethics

Mission

The mission of Zoolander Life is to be a high quality financial services company. To that end, we offer a range of insurance and financial services and products to meet the needs of our customers. We aim to provide the highest quality service to our customers. We maintain high ratings, financial strength and competitively priced products.

We respect our employees. We offer challenging career opportunities and personal development for all staff members. Our goal is to enable everyone to contribute to their fullest potential. We promote open and cooperative relationships among employees and customers.

In all that we do, we exemplify the highest standards of business ethics and personal integrity, and recognize our corporate obligation to the social and economic well-being of our community.

Vision

The Company's vision is to seek a balance among our four operations: GICs, Variable Annuities, Term Life Insurance, and Disability Insurance. Each line will be responsible for at least 20% of our income. Our Annuity operations will offer outstanding investment performance. We seek to be an innovator in the Term Life Insurance field and the Disability Insurance arena.

Values

We are in business to serve customers. Our goal is to establish long-term relationships; to that end, we endeavor to provide high quality customer service. We truly care about each person in our company. To be successful, we will treat others with the respect we desire for ourselves.

Ethics

We conduct the Company's affairs in strict compliance with both the letter and the spirit of the law, and, at all times, will treat policyholders, customers, suppliers, and all others with whom the Company does business fairly and honestly. We recognize that our reputation is our most important asset. We will not compromise our integrity. Honesty and fair dealing are hallmarks of our business operations.

Excerpts from Zoolander Life Proxy Statement – Dated March 11, 2009

Board of Directors – Biographies

R. Tomas Lyon IV – Chairman, President, CEO, and COO. Age 67. Term Expires September 2011.

Karl Palomino – Former CFO, Zoolander Life (retired September 2007). Age 62. Term began September 2007, term expires September 2011.

Jeanne Holstein-Palomino – former administrative assistant, Zoolander Life. Age 30. Term began September 2007, term expires September 2011.

Ivan X. Salmon – former Chief Legal Counsel, Zoolander Life (retired September 2007). Age 58. Term began September 2007, term expires September 2011.

Hermine Dauphin – former accounting partner for Dollars ‘R Us, former insurance regulator for Insurance Department of Illinois. Age 52. Term began September 2007, term expires September 2009.

2008 Compensation

1. Board of Directors

<u>Board Member</u>	<u>Basic Cash Payment</u>	<u>Basic Stock Payment</u>	<u>Committee Work</u> ¹	<u>Other Compensation</u> ²
Lyon	\$100,000	\$50,000	\$40,000	\$ 50,000
Palomino	75,000	25,000	40,000	250,000
Holstein-Palomino	75,000	25,000	40,000	125,000
Salmon	75,000	25,000	40,000	125,000
Dauphin	75,000	25,000	40,000	5,000

¹Committee Work represents \$20,000 for chairperson of any committee and \$10,000 for non-chair position on any committee.

² Other Compensation represents compensation awarded by Compensation Committee for extra services performed by members, including use of company transportation, access to legal and accounting services, and bonus cash awards.

Stock Ownership of Board Members

The following list details the value of stock awards and year awarded for each current Board member. Board members did not report owning any additional shares of Zoolander stock.

<u>Board Member</u>	<u>2007</u> ³	<u>2008</u> ⁴
Lyon	\$30,000,000	\$10,000,000
Palomino	20,000,000	5,000,000
Holstein-Palomino	10,000,000	3,000,000
Salmon	10,000,000	3,000,000
Dauphin	-----	-----

³ 2007 stock award represents employee awards granted upon completion of IPO.

⁴ 2008 stock award represents special bonus to key executives and Board members

2. Compensation of Key Executives

<u>Executive</u>	<u>Year</u>	<u>Salary</u>	<u>Bonus</u>	<u>Value of Stock Awards</u> ⁵
Lyon	2008	\$2,000,000	\$667,000	\$10,000,000
	2007	1,500,000	500,000	30,000,000
	2006	1,000,000	333,000	-----
Dodo	2008	\$1,500,000	\$500,000	\$7,500,000
	2007	450,000	150,000	500,000
	2006	275,000	92,000	-----
Finch	2008	\$600,000	\$200,000	\$2,000,000
	2007	270,000	90,000	-----
	2006	210,000	70,000	-----
Jay	2008	\$450,000	\$150,000	\$1,000,000
	2007	210,000	70,000	-----
	2006	180,000	60,000	-----

⁵ Stock Awards include both employee and Board Member awards

All Stock awards made in 2007 and 2008 vested immediately upon grant of award.

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 2008

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 2009. This recommendation was approved unanimously by the full Board.

Mr. Lyon also reported on a discussion of a report from Mr. Dodo outlining the status of Zoolander's system of internal controls. 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. Mr. Lyon suggested that Mr. Dodo's report focused too much on risk and too little on audit, and that risks were already taken care of in the Risk Management committee. He preferred that Mr. Dodo spend more energy training his audit staff how to test and recommend improvements to security with respect to the process of generating paychecks and travel reimbursements.

The committee also received Mark Peacock's audit report for the most current quarter.

2. Compensation Committee – Ms. Holstein-Palomino reported that at its annual meeting the committee submitted the increased compensation and awards to Mr. Lyon, who approved them.
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 all other Board members will be re-nominated in 2011. The recommendations were approved by the Board by a vote of 4 to 1.

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4. Investment Committee – Mr. Salmon reported that due to 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 reports and interviews with key employees in finance, systems, and audit. As a result of their investigation, a number of risk management concerns were revealed and the committee unanimously recommended the creation of an Enterprise Risk Management Officer.

During the debate of this recommendation with the full Board, Mr. Lyon expressed relief that this 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 would be able to prepare any reports needed by external audiences with respect to risk.

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 Officer to report to. Once the new Officer formulated recommendations from this input, he would give them to Mr. Jay, who would pass them on to the manager of the area or areas involved.

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

Ana Lamb

From: "Larry McCaw" McCawL@zlic.com
To: "All Employees" <mail list zlicEEs@zlic.com>
Sent: Monday, March 16, 2009 11:28 AM
Subject: Founder's Day Celebration

Zoolander Life will celebrate Founder's Day this year on Friday, June 12, 2009. In honor of the 105th 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.

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) until passing on those responsibilities to his son Richard (Rich) Lyon, Jr. Under Rich Lyon's leadership (1905-29), the company grew to insure over 1,000 people and converted from an assessment society to a legal reserve mutual life insurance company. Unfortunately, Rich Lyon died after suffering a fall in October of 1929. 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 February 2007, whereby ownership was widely diversified amongst numerous 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 giant 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

Zoolander Life.....It's your life™

Zoolander Life Insurance Company

MEMORANDUM

February 15, 2008

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 that hedge fund that just went under. 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 GICs and restore their profitability, but we will also be able to draw on his expertise when exploring ways to hedge various options that we might want to consider offering with our VA product. Even beyond this, in John's capable hands we'll be able to leverage the derivatives desk and generate excess profits turning this into a profit center on its own!

As of now, John will be a one-man show, but expects to hire a couple of derivatives traders within a couple of months, if I get more budget 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. He 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 will be making up the rules as we go, to some extent, and we don't 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!

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Zoolander Life Insurance Company

MEMORANDUM

April 16, 2008

TO New CFO

FROM Peter Fish

RE Hedge Fund Initiative

I'm very excited to present our Hedge Fund initiative for your approval. Until now the activities of our head derivatives trader, John Badger, at Zoolander have been limited to hedging Zoolander's own risks. This initiative puts Zoolander's resources to use in a new way.

We are seeking seed capital to launch a new hedge fund into the marketplace, Zoolander's first, targeting high net worth individuals. John has built a proprietary model using something he calls a "volatility arbitrage strategy". Basically, the model can determine when the market has mispriced the volatility of complex derivatives. We can take advantage of the mispricings, and close our positions for profit when the market valuations catch up.

John also wanted me to mention that he will manage the fund under tight delta limits, utilizing a dynamic hedging strategy derived from his model. We don't have to worry about administration as John's model can mark the fund's positions to market daily. John has thoroughly reviewed and tested his model. He can even show that his model has consistently produced lower prices than where the market traded on some particular fancy derivative.

Another advantage we plan to capitalize on is John's philosophy of never purchasing credit enhancements or any other related risk-reduction arrangements, as he considers them to be a waste of money.

John has forwarded his model assumptions to Bill Buck for his review. He also provided Bill with a walk-through of his model's calculations using a straight-forward interest rate swap. I am sure this will get Bill comfortable with this initiative.

Once we get this thing launched, not only will we get our huge management fees, we will get great returns on as much seed capital as you want participating in this great strategy!

Zoolander Life Insurance Company

MEMORANDUM

April 14, 2009

TO Charley Pigeon

FROM Isabel Cougar, Planning, ext 641

RE Financial Statements for the New CFO

Per your request for financial statements for the past few years, I've been able to get these year-end 2008 financial statements for each product line. I received input from Wanda Fox regarding the asset allocation to each block, and this is reflected within these statements.

Although I didn't have prior historical statements readily available to pass along, I believe Wanda has a copy of the Kelly Ratings report for us. This report should provide various asset and product line financial trends over the past few years, as I'm assuming this is what you're after in your request for historical info. Simply drop her an E-mail and request a copy.

Attachments:

2008 Income Statement by LOB

2008 Balance Sheet by LOB

Zooslander Life Insurance Company

Income Statement

for the year ended, December 31, 2008

(\$ millions)

	GIC	Long-Term Disability	Term Life Ins	Variable Annuity	Corporate	Total
Revenues						
Premiums	-	180.0	223.6	56.8	-	460.4
Investment Income	398.6	46.8	19.9	30.4	44.7	540.4
Total Revenue	<u>398.6</u>	<u>226.8</u>	<u>243.5</u>	<u>87.2</u>	<u>44.7</u>	<u>1,000.8</u>
Expenses						
Death/LTD Benefits	-	153.0	140.5	10.9	-	304.4
Surrenders & Partial W/D	-	-	-	36.4	-	36.4
Increase in Reserves	-	42.3	57.0	9.3	-	108.6
Interest Credited	375.6	-	-	-	-	375.6
Commissions	-	12.3	22.2	6.5	-	41.0
Other Expenses	8.6	22.2	10.1	2.4	9.1	52.4
Total Expenses	<u>384.2</u>	<u>229.8</u>	<u>229.8</u>	<u>65.5</u>	<u>9.1</u>	<u>918.4</u>
Transfers to Separate Account	-	-	-	17.1	-	17.1
Income before Taxes	14.4	(3.0)	13.7	4.5	35.6	65.2
Income Tax	<u>5.0</u>	<u>(1.1)</u>	<u>4.8</u>	<u>1.6</u>	<u>12.5</u>	<u>22.8</u>
Net Income after Tax	<u><u>9.4</u></u>	<u><u>(2.0)</u></u>	<u><u>8.9</u></u>	<u><u>2.9</u></u>	<u><u>23.1</u></u>	<u><u>42.4</u></u>

Zoollander Life Insurance Company

Balance Sheet
as of December 31, 2008
(\$ millions)

	GIC	Long-Term Disability	Term Life Ins	Variable Annuity	Corporate	Total
Assets						
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	-	-	-	348.5	-	348.5
Other Assets	-	4.8	2.7	4.1	-	11.6
Total Assets	6,717.0	654.4	468.6	834.1	871.1	9,545.2
Liabilities						
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	-	-	-	348.5	-	348.5
Total Liabilities	6,671.8	644.4	453.6	736.4	2.7	8,508.9
Shareholder Equity	45.2	10.0	15.0	97.7	868.4	1,036.3
Total Liabilities and Equity	6,717.0	654.4	468.6	834.1	871.1	9,545.2

Kelly Ratings & Analysis

1 Kelly Drive, Capital City

ph 123/555-6500

www.KellyR&A.com

March 10, 2009

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 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 through 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 2008 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.

I have also attached a draft of our Liquidity Standards that are currently being developed. Since they are likely to affect our discussions in the future, I thought I might as well bring them along to acquaint you with them.

Sincerely

Otto Gold
Director
Financial Services Rating Bureau
Ph 123/555-6534
OGold@KellyR&A.com

Cc Paula Silver, Kelly Ratings & Analysis

Kelly Ratings & Analysis

Insurance Enterprise Liquidity Standards *under review*

Rating Standards

Rating Level	Quick Liquidity	Current Liquidity
A+ (Superior)	71+	201+
A (Robust)	31-70	181-200
A- (Stable)	21-30	171-180
B+ (Fair)	11-20	101-170
B (Troubled)	0-10	0-100

Rating levels corresponding to liquidity standards are general guidelines to be used in conjunction with the rest of the Kelly rating process.

Achieving the liquidity standard does not automatically imply qualification for a particular rating level.

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 face new challenges as a public company. Future sales remain a question mark.

Rating History

Date	Kelly Rating
12/12/1974	A+
10/5/1983	A
9/21/2006	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. Earlier in 2007, 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 earnings 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 Long-Term Disability 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 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.

With the demutualization earlier in 2007, Zoolander has set some very aggressive growth targets. 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 its demutualization in 2007, the company did not break out results by business segment. The numbers attributable to those business segments for years prior to 2007 below are approximate.

Profitability Analysis (in millions of dollars)

Net Op Gain	2007	2006	2005	2004
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

Zoolander's capital and surplus at the end of 2007 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 the demutualization in 2007.

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
2004	55.9	1.2	(0.5)	1.0	57.6
2005	62.0	8.7	(0.3)	0.2	70.6
2006	53.4	(6.6)	(0.3)	(29.5)	17.0
2007	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
2004	469.6	n/a	0.0	0.7	0.9
2005	540.2	n/a	0.0	0.4	0.9
2006	557.2	n/a	0.0	0.1	0.8
2007	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.

Liquidity Tests
(ratios except for Cash Flow)

Year	Operating Cash Flow	Quick Liquidity	Current Liquidity	Non-Invest Grade Bonds to Capital
2004	63.5M	61.6	209.9	0.1
2005	11.2M	33.1	189.9	0.2
2006	11.0M	35.0	185.4	0.6
2007	11.8M	27.0	173.4	0.9

Investment Yields
(as a %)

Year	Net Yield	Mort- gages	Cash & Sh Trm	Inv Exp Ratio	
2004	6.90	6.88	7.66	5.02	8.88
2005	6.92	6.70	7.59	5.22	10.24
2006	6.78	6.66	7.60	4.87	7.25
2007	6.54	6.41	7.34	4.64	11.05

Investment Data
(in millions of dollars)

2007 distribution of bonds by maturity

	Years					yrs avg
	0-1	1-5	5-10	10-20	20+	
(% allocation)						
gov	....	0.9	0.3	.....	.....	4
gov agency	....	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

	2007	2006	2005	2004
<u>Bonds (Bil)</u>	6.9	6.1	5.3	4.4

	2007	2006	2005	2004
(% allocation)				
gov	1.2	4.7	5.6	7.4
gov agency	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

	2007	2006	2005	2004
<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	.....	.....

	2007	2006	2005	2004
<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

	2007	2006	2005	2004
<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

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 2007 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

Hermine 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, 2006 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 20, 2009

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

Dear Otto:

It was good to see you and Paula again last week. We certainly had a thorough discussion! I was a little surprised, though, at how much importance you seemed to place this year on processes and procedures. Our presentation was almost exclusively numbers because I've always thought that's what makes the world go 'round.

I am taking this opportunity to address a few of the topics you raised at the meeting for which either we did not have a sufficiently organized response, or you did not seem to understand or appreciate the response that we offered.

Asset/Liability Management

I am very proud of the work we have done in this area. We have had our processes in place for some time now.

For interest sensitive liabilities we monitor Macaulay duration, which is a well-established measurement at Zoolander. Within each of these blocks 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. This immunization approach has worked well so far.

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 a failed hedge fund a few years ago, and has helped us to 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 his ad hoc approach not only effective from a loss perspective, but also cost-effective.

John has long term goals of moving to a more systematic approach, especially with the new VA Plus product, which has guaranteed living benefits, as well as death benefits. This long term plan involves utilizing liability portfolio characteristics, such as delta, gamma, vega and rho. However, he doesn't quite have a timeline for this methodology change yet.

Internal Control

We have a very good audit department, reporting to our CFO. These people have years of experience in detecting possible fraudulent claims and other such problems. In fact, we have

Zoolander Life.....It's your life™

one staff member who was a pioneer in systems auditing. He works very closely with our IT department and makes sure he knows what is going on over there. Each quarter, Mark Peacock prepares a report for the Audit Committee of the Board. This report shows all exceptions to control limits that occurred in the past quarter. It also lists any audits performed of company processes that occurred during the past quarter.

Compliance is handled in the product/pricing area. As part of their research into pricing a product, the pricing actuaries are expected to ensure that their products comply with the current regulations. Additionally, Wanda Fox, our chief actuary, keeps up to date on any regulatory trends on the horizon, such as Fair Value. If any of these new concepts were implemented for regulatory or accounting purposes, Wanda would direct her staff accordingly for future pricing and financial reporting.

As I explained at the meeting, we have an ERM officer now, Bill Buck. He has set up a Risk Management committee to gather information on what is happening around the company. When he and his committee detect any risks that they feel should be of concern, Bill is to write a memo about it to his boss, Henri Jay. If Henri feels that Bill's recommendation has merit, he will forward it to the manager of the department involved.

We have a great Board of Directors, a group of people who are used to each other and who communicate with each other regularly, whether or not it's about business. We have no trouble seeing eye to eye, and our meetings go smoothly. I am very proud of the job the Board has done, and I'm proud to be a part of it.

The CFO reports to us at each Board meeting about what is going on with the company. As I mentioned before, numbers make the world go 'round, so I think it's appropriate that he would be the one to give us the all-over view of the company. And he speaks my language.

As I mentioned, I was 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 no documentation of a plan in place to achieve the company's strategic goals. Mark Peacock's exceptional audit team reviews all business processes on a regular basis. I am planning on having Mark start sharing his Board report with the Senior Management team to help make the team more aware of their role in ensuring the company complies with documented procedures in the future.

I hope this gives you an organized view of the internal controls and shows you that things go smoothly around here.

Management of Specified Risks

Credit Risk – Although we don't have quantitative targets, we are comfortable with our current credit profile, and Peter Fish and his Investments team are very good about not straying too far away from this credit allocation. I checked with them again just now and they reminded me that they also watch concentration to both corporate entities and industry sectors. Wanda Fox, our chief actuary, is also cognizant of the concentration of counterparty risk with reinsurers, which was included in the material we presented to you.

ALM and Market Risk Control – I already covered our ALM process above, but in addition, I would just like to mention how well Wanda and Peter work together in sharing information to make this work. The ALM activities are formally in Wanda's area but she is very dependent, of course, on Peter's cooperation to get everything to come together. At the end of each year, we close that

year's block of new investments and liabilities and Wanda prepares a report showing how the durations have been matched. She also takes a look at the prior years' blocks and lets Peter know if any of them have strayed too far with respect to the difference between total assets and total liabilities. If they have diverged too much, she lets Peter know and she makes sure that he transfers the appropriate assets to get the totals evened up. Also, before he left, Hugh Dodo wrote his proposal for liquidity risk management. He was very comprehensive and detail-oriented when it came to thinking up new things, so I have made sure that all the top financial management has a copy of it to use in case of any liquidity problems.

Operational Risk – As I explained in our meeting, here again we really benefit from our strong team and the fact that they have been working together for so long. Our new ERM officer is taking care of working with the various departments to gather up everyone's ideas about risk and sort them out into a report. He will be able to share this throughout Zoolander's management and, of course, we will be happy to share it with you. As I mentioned above, we have a strong audit team, including one person with a special interest in IT security issues.

Economic Capital

I found our discussion on different types of financial reporting systems to be very enlightening, as well as challenging! The message I took away was that the outside world's expectations are growing that we will build our own Economic Capital model tailored to our own particular risks, rather than relying on statutory and regulatory formula-based capital requirements to determine whether the company is financially strong enough.

As I mentioned at the meeting, Wanda has also been giving me updates from time to time on the changes going on in Europe and Canada, and new concepts that are gaining acceptance, such as Fair Value and Economic Capital. You will be happy to know that earlier today I sent her a memo instructing her to get started on planning the implementation of Economic Capital at Zoolander.

I hope this additional information helps you get more comfortable with the processes here at Zoolander. Please let me know if I can be of any further help.

Sincerely,

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

Zoolander Life Insurance Company

MEMORANDUM

February 25, 2009

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 3 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 is trained as an actuary. He received his FSA in 2003. 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 5 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 members 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

April 22, 2008

TO New CFO

FROM Henri Jay

RE Liquidity Risk

I am forwarding to you a memo I just received from Bill Buck, Second Vice President—ERM. I think that Bill's concerns are valid and that liquidity is an important issue for the new CFO to address.

Bill and I are happy to provide ideas and do footwork to support related projects, but when it comes to getting the right people to hear just the right words at just the right time, well, we are smart enough to look for just the right people to do it.

Hugh Dodo had attempted to get this ball rolling once before, but all that remains of that attempt is a rough draft of Hugh's initial ideas, which Tomas distributed to various executives, but has never discussed with anyone, including Hugh.

Would you be willing to provide some bullet points for a memo to the Board, describing this risk and recommending methods of managing it? Perhaps if we make sure we are focusing our communication on the key items, and we work together to figure out the who and when, we can get things moving in a positive direction.

Welcome aboard!

Zoolander Life Insurance Company

MEMORANDUM

March 20, 2009

TO Henri Jay
FROM Bill Buck
RE Liquidity Risk

Henri, during my survey of Zoolander's key risks, I have become particularly concerned about liquidity risk. I have a feeling I am not the only one. I think that our liquidity conditions is one of the issues Kelly has with Zoolander, that has resulted in our A- rating with negative implication for 2 years. The Liquidity Test numbers from the 2006 rating report certainly show a decreasing trend.

I need to consider Liquidity in the ERM model I am building. As I consider the balance sheet as of December 31, 2008, I would like to make sure I have a good grasp of Zoolander's liquidity ratios. Are they currently calculated? If so, how are they defined?

I realize that the balance sheet looks just fine and that most people would say that there are enough assets to cover all liabilities. But what if current market conditions were to worsen and trigger a run-on-the-bank scenario?

From: "Otter, Samuel" otters@zlic.com
To: "Fox, Wanda" foxw@zlic.com
Cc: "Pigeon, Charles" pigeonc@zlic.com
Re: Your recent request for inforce projections for the term life and LTD blocks
Date: March 13, 2009

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 the term life and LTD inforce blocks. The projected results start from the actual 2008 financials, so I think that they should 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 scenario 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 LTD block.

You had mentioned using conservative experience assumptions, but I will need more direction on what this means. Similarly, you had mentioned that these projections would be used for reserving purposes. We should discuss this further as well. 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 LTD disabled loss reserves are based on 80% 1987 Group Disability Terminations.

Sam Otter, ASA

Attachment:

Projected Cash Flows for Term Life Insurance LOB

Prepared by Sam Otter (ext. 7890)

Cash Surrender Value:	22.3	PV after-tax income on capital 2.6
Statutory Reserve:	453.6	PV capital release 11.0
Required Capital 12/31/2008	XX	earnings rate on capital 9%
PV After-Tax Income 12/31/2008	60.3	discount rate 9%

	Actual <u>2008</u>	Projections -->								
		<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Premiums (Net of Reinsurance)	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	7.4	4.0	2.8	2.3	1.8	1.6	1.3	1.0	0.8
Maintenance Expenses	10.1	9.5	8.8	8.3	7.8	7.4	6.9	6.6	6.2	5.8
Benefits (Net of Reinsurance)	140.5	191.0	222.0	237.3	241.5	238.1	228.0	221.2	215.4	212.4
Change in Reserves (CRVM)	57.0	9.6	(29.6)	(40.1)	(51.0)	(58.2)	(54.3)	(60.9)	(68.5)	(77.9)
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	2.4	2.3	0.1	0.0	1.0	3.1	4.0	4.3	4.6
After-Tax Income	8.9	10.6	10.2	0.2	0.1	4.5	13.7	17.3	19.0	19.9
Weighted Treasury Yield	4.86%	4.86%	4.86%	4.86%	4.86%	4.86%	4.86%	4.86%	4.86%	4.86%
Portfolio Yield	4.52%	4.52%	4.52%	4.52%	4.52%	4.52%	4.52%	4.52%	4.52%	4.52%

Projected Cash Flows for Long Term Disability Insurance LOB

Prepared by Sam Otter (ext. 7890)

Statutory Reserve:	644.4	PV after-tax income on capital (0.1)
Required Capital 12/31/2008	XX	PV capital release 4.6
PV After-Tax Income 12/31/2008	3.3	earnings rate on capital 9%
		discount rate 9%

	Actual <u>2008</u>	Projections -->								
		<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Premiums (Net of Reinsurance)	180.0	189.0	192.8	192.8	202.4	206.5	212.7	219.0	225.6	232.4
Net Investment Income	46.8	44.0	48.4	51.8	53.8	55.5	57.1	58.3	60.6	62.4
Commissions & Acquisition Expenses	12.3	13.2	13.5	13.5	14.2	14.5	14.9	15.3	15.8	16.3
Maintenance Expenses	22.2	22.7	23.1	23.1	24.3	24.8	25.5	26.3	27.1	27.9
Benefits (Without Reinsurance)	153.0	160.7	163.9	163.9	172.1	175.5	180.8	186.2	191.8	197.5
Change in Reserves (CRVM)	42.3	47.3	42.5	40.4	38.4	40.3	42.3	45.7	49.4	53.3
Pre-Tax Income	(3.0)	(10.8)	(1.8)	3.7	7.4	6.9	6.3	3.8	2.2	(0.2)
Taxes	(1.1)	(3.8)	(0.6)	1.3	2.6	2.4	2.2	1.3	0.8	(0.1)
After-Tax Income	(2.0)	(7.0)	(1.2)	2.4	4.8	4.5	4.1	2.5	1.4	(0.1)
Weighted Treasury Yield	4.86%	4.86%	4.86%	4.86%	4.86%	4.86%	4.86%	4.86%	4.86%	4.86%
Portfolio Yield	4.52%	4.52%	4.52%	4.52%	4.52%	4.52%	4.52%	4.52%	4.52%	4.52%

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

From: "Wolfe, Danielle" WolfeD@zlic.com
To: "Fox, Wanda" FoxW@zlic.com
Sent: October 1, 2008 1:14 PM
Subject: Re: Variable Annuity Writing Agent Survey – the new "VA Plus" line of business

Wanda, I really thought our meeting yesterday was very productive. I've been able to follow up on one item you were concerned about and wanted to pass along some info.

To address your concerns of understanding contractholder behavior with regards to VA guarantees, we're going to institute an annual survey of our VA writing agents. 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. We feel that we can get reliable information from our VA producers, because of their strong relationship with their clients, our contractholders. We hope that you guys in Actuarial can actually quantify both of these behaviors, and thus be able to use this information in your modeling function. I'm fairly confident that we can get the data in whatever format you need it in towards this end.

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

From: "Fox, Wanda" FoxW@zlic.com
To: "Wolfe, Danielle" WolfeD@zlic.com
Sent: October 1, 2008 8:27 AM
Subject: Re: Variable Annuity Writing Agent Survey – the new "VA Plus" line of business

Danielle,

I'm not sure if you understood all that technical "mumbo jumbo" from John Badger during our meeting yesterday, but I thought I'd take the time here to break it down.

John wants 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 agreed to also provide John CTE values for various levels of certainty. These values will come from our converted pricing models, which we hope to update with emerging policyholder behavior experience. He plans to hedge our risk exposure on an ad hoc basis, when he deems our risk exposure has gotten too large. I guess he's going to make this assessment using the ITM and CTE measures. He believes by using such a flexible hedging system, that he can keep hedging costs down.

His long term goals are to hedge based on the liability portfolio characteristics, such as delta, gamma, vega, rho, both with and without hedging assets, but he doesn't have a plan as to when he'll start measuring these factors, much less manage against them.

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

From: "Wolfe, Danielle" WolfeD@zlic.com
To: "Fox, Wanda" FoxW@zlic.com
Sent: September 29, 2008 5:58 PM
Subject: Re: Variable Annuity Writing Agent Survey – the new "VA Plus" line of business

Wanda,

I just wanted to pass along some info 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 policyholder 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 be no 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 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 they die 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. This allows us to easily tell the customer what their guaranteed monthly benefit will be. Since these benefits don't put us at much risk, it shouldn't take you very long to crank out rates for them.

Finally, regarding the introduction of new mutual funds, there's quite a bit of risk introducing all these funds at one time. First off, there's the administration challenge of adding funds to our product line from three different families of funds. Then, there's the marketing challenge of not overwhelming the contractholder with all these new investment possibilities, and to educate them of the both the risks and opportunities of these much riskier funds. There's also the risk that will not be able to negotiate consistent revenue sharing arrangements across all three of these fund families, so that Zoolander is 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 make available each family's funds over a period of time. I feel that this strategic choice allows us to minimize problems emanating from these aforementioned challenges.

Danielle

From: "Fox, Wanda" FoxW@zlic.com
To: "Wolfe, Danielle" WolfeD@zlic.com
Sent: September 29, 2008 9:05 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 this, here are my initial thoughts and questions to consider at our meeting:

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

Available Funds For Zoolander VA Products

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

- Although we qualitatively understand that accounts with greater volatility have a greater chance for guarantee payouts, we don't yet have a quantitative relationship. Similarly, although there seems to be some correlation between In-The-Money (ITM) and lapse rates for our current GMDB product, we're not sure how much stronger that relationship will grow for guaranteed living benefits.
- GMAB, GMIB and GMMB would be new features at Zoo. 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 am thinking 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 can take a multi-faceted approach to managing the ALM risk rather than think of this as simply an investment strategy approach. I can walk you through some ideas during our meeting.
- We will obviously need to charge for these benefits somehow. What do you think is most palatable for our client base, premium based charges or margin offset fees? We'll need to reconsider the level of our surrender charges with the need to increase these dramatically. This is all related to the issue of policyholder behavior which I will need help with as well.
- What were you thinking regarding the voluntary reset? Was this going to be available every year? Every 3 years? Every 5?
- 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 market in a former life 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: September 26, 2008 4:16 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 better to position our products in this market and to improve our sagging profitability in this line of business. The market has reached a level of maturity such that our margins are continuously tightening. Anyhow, while we received a lot of feedback, there seemed to be two prevailing themes for the improvement of the existing product, which they hope can be implemented into the new VA Plus product.

One of these requested features is to make available more separate account funds for the policyholder. They suggest making available funds from three different large mutual fund companies, including fairly volatile sector-specific funds. These funds include those invested in minerals, energy, emerging markets, amongst others. Ironically, mutual fund companies are those we've traditionally competed against for investor funds. Who'd have thought we would end up collaborating with these guys???

The other major alteration is to make available a variety of guarantees. As you know, the old product only included Guaranteed Minimum Death Benefits (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 some rate, perhaps 2% per annum or some historical average market return, at any of the option rollover dates. The option rollover dates occur every tenth policy anniversary. It wasn't clear from the feedback what the agents felt about introducing a voluntary reset option in conjunction with the GMAB.
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) a return of cumulative premium paid upon death to (b) a return of 90% of cumulative premium accumulated at 2% per annum upon death and (c) a return of cumulative premium accumulated at 5% per annum upon death.
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 policyholder 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 preference to offer a benefit which was easier to communicate to potential clients and which allowed us to specify at policy issue what the monthly annuity benefit would be.

Obviously I don't expect a full pricing 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.....It's your life™

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

From: "Seal, Frances" SealF@zlic.com
To: "Wolfe, Danielle" WolfeD@zlic.com
CC: "Bird, Odette" BirdO@zlic.com
Sent: October 3, 2008 3:16 PM
Subject: New Funds for VA Plus

Danielle, I just heard through the grapevine that you guys intend to offer new funds for the new product. I think we should probably meet about this in the near future, as I'm not sure you realize that our VA administration system has limitations. 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 require us bringing in consultants. In addition, our IT maintenance folks, as well as Odette Bird's admin group, will probably have to be trained in using the changed system. Odette's personnel will also need to become familiarized with the new funds' details. And we haven't even begun discussing their availability to take time for this extensive training process, or their current capabilities to handle more complex systems.

As you can imagine, the severity of screwing up this system implementation would be pretty 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 minimize the probability of fouling up our implementation with proper planning and enough lead time.

Anyhow, as I suggested above, please set up a meeting with me to discuss. I also feel that it's advisable to invite Odette, to get her perspective from the administration side.

Quarterly Product Report Zoolander Product Committee

Term Insurance

Product Description – traditional level term products and an annually 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 – very competitive. Sales continue to be very strong, in part due to our competitive 100% first year commission. Also, strong underwriting performance allows us to price our products very competitively in the better rate classes.

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. They 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.

Operational Risks – 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 – expenses for this block continue to stay at the levels expected in pricing. Lapse and mortality stress tests are performed annually on the term block. Only constraint on new business is capital support.

Recent Committee Decisions – product 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. There are covenants in most of our GICs that do not allow early surrender except in the unlikely 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 it has improved investment returns and allowed us to offer higher guarantees. Those impressive returns have allowed us to aggressively compete in this market while still maintaining good spreads

Value Proposition – currently it is 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 and issuance costs and shares the savings with Zoolander (as the lender). We get a yield that is somewhat higher than comparably rated public bonds.

Operational Risks – Surrender protection greatly mitigates liquidity and disintermediation risks. We have been able to pick up even more investment income by lengthening the term of our assets dramatically.

Experience – recently GICs have become more profitable than any other line and may really help carry the company in the future.

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 guarantee option through the general account.

Market Position – waning. Sales are way down. With the market declines, really need to add more investment options with better performance records to get customers to return to the product. Distribution is clamoring for living benefit riders.

Value Proposition – no real differentiation with the current product. New fund families will be available starting in 3Q. The enhanced product, VA Plus+, will add both a Guaranteed Minimum Death Benefit (GMDB) option and a Guaranteed Minimum Income Benefit (GMIB) option.

Operational Risks – 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 2Q.

Experience – marginally successful on profitability but 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 they die 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. This allows us to easily tell the customer what their guaranteed monthly benefit will be.

Disability

Product Description – standard individual disability insurance policy. Guaranteed renewable to age 65. Optional return of premium rider which returns 80% 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 improve.

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 the DI product (with the rider).

Operational Risks – base policy is reinsured but the return of premium rider is not. At the end of ten years, we have to return the premiums but the reinsurer doesn't return its premiums to us. Rider assumes asset returns of 11% which are currently unobtainable. Pricing also assumes an industry standard morbidity rate so we monitor that.

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 anticipated in pricing.

Recent Committee Decisions – revisit return of premium rider pricing 4Q this year.

March 20, 2009

Wanda Fox, Chair Product Committee

Blue Sky Reinsurance Intermediaries

500 Wilderness Lane, Out There 00000

December 15, 2008

R. Tomas Lyon IV
Chairman, President, CEO and COO
Zoolander Life Insurance Co.
411 Main Street
Zoo Falls 54321

Dear Mr. Lyon:

It was good talking with you yesterday. These are indeed interesting times. Everyone is looking for more capital and the market is moving quickly. Let me assure you that Blue Sky Intermediaries has the breadth and depth of experience to help your company. Our client list includes over 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 every reinsurer 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. So, please be sure to ask any questions that you have that will help with your reinsurance decision.

After our discussion, I did visit 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 assist you in this research.

Sincerely,

Fuchsia Farina
Vice President
Ph (501) 555-0000

Blue Sky Reinsurance Intermediaries

PROPOSAL

Proposed cedent:	Zoolander Life Insurance Company
Proposed reinsurer:	Amber Re
Reinsurer's rating:	Kelly Rating: A- (3rd highest of 5)
Reinsurer's domicile:	Bermuda
Is reinsurer authorized in cedent's domicile?	No
Proposed effective date:	December 31, 2008
Cedent's business to be reinsured:	Term Life
New Business/Inforce	existing block as of 12/31/2008, no new business
Type of reinsurance:	Funds withheld coinsurance
Expense allowance:	n/a
Annual risk charges:	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.

Blue Sky Reinsurance Intermediaries

PROPOSAL

Proposed cedent:	Zoolander Life Insurance Company
Proposed reinsurer:	Amethyst Re
Reinsurer's rating:	Kelly Rating: A (2nd highest of 5)
Reinsurer's domicile:	Bermuda
Is reinsurer authorized in cedent's domicile?	No
Proposed effective date:	December 31, 2008
Cedent's business to be reinsured:	Term Life
New Business/Inforce	existing block as of 12/31/2008, no new business
Type of reinsurance:	Quota Share Coinsurance
Expense allowance:	n/a
Annual risk charges:	n/a
Other:	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 Reinsurance Intermediaries

PROPOSAL

Proposed cedent:	Zoolander Life Insurance Company
Proposed reinsurer:	Aquamarine Re
Reinsurer's rating:	Kelly Rating: A+ (highest)
Reinsurer's domicile:	Bermuda
Is reinsurer authorized in cedent's domicile?	No
Proposed effective date:	December 31, 2008
Cedent's business to be reinsured:	Term Life Retention (after existing Rose Re amount)
New Business/Inforce	existing block as of 12/31/2008, no new business
Type of reinsurance:	Coinsurance 100%
Expense allowance:	n/a
Annual risk charges:	n/a
Other:	Blue Sky has not worked with Aquamarine before but they come highly recommended, have a great reputation within the industry and carry very strong ratings. Blue Sky has found Aquamarine's pricing to be more competitive on new business than on inforce blocks.

Blue Sky Reinsurance Intermediaries

PROPOSAL

Proposed cedent: Zoolander Life Insurance Company

Proposed reinsurer: Emerald Re

Reinsurer's rating: Kelly Rating: B+ (4th highest of 5)

Reinsurer's domicile: Bermuda

Is reinsurer authorized in cedent's domicile? No

Proposed effective date: December 31, 2008

Cedent's business to be reinsured: Term Life

 New Business/Inforce existing block as of 12/31/2008, no new business

Type of reinsurance: Modified Coinsurance

Expense allowance: Term block's Value of Inforce (VIF)

Annual risk charges: n/a

Other: Emerald Re is new to this market but the three main principals came over from Rose Re. In Blue Sky's other deals, Emerald Re has exhibited very competitive pricing and a willingness to be flexible in contract terms & conditions. At present, no Blue Sky clients have consummated a deal with Emerald Re.

Blue Sky Reinsurance Intermediaries

PROPOSAL

Proposed cedent:	Zoolander Life Insurance Company
Proposed reinsurer:	Garnet Re
Reinsurer's rating:	Kelly Rating: A- (3rd highest of 5)
Reinsurer's domicile:	Connecticut
Is reinsurer authorized in cedent's domicile?	Yes
Proposed effective date:	December 31, 2008
Cedent's business to be reinsured:	Long Term Disability
New Business/Inforce	New business sold beginning 1/1/2009
Type of reinsurance:	Funds withheld coinsurance 50%
Expense allowance:	25% of ceded premium
Annual risk charges:	5% of ceded reserves at beginning of year 5% of ceded premium for the year
Other:	Garnet Re is a sub of the very large LTD writer Garnet Financial. They are looking for additional LTD 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.

Blue Sky Reinsurance Intermediaries

PROPOSAL

Proposed cedent:	Zoolander Life Insurance Company
Proposed reinsurer:	Turquoise Re
Reinsurer's rating:	Kelly Rating: A (2nd highest of 5)
Reinsurer's domicile:	New York
Is reinsurer authorized in cedent's domicile?	Yes
Proposed effective date:	December 31, 2008
Cedent's business to be reinsured:	Term Life
New Business/Inforce	existing block as of 12/31/2008, no new business
Type of reinsurance:	Funds withheld coinsurance
Expense allowance:	n/a
Annual risk charges:	n/a
Other:	Turquoise Re is an old line reinsurer should be very familiar to anyone in this market. Approximately 20% of Blue Sky's Life Insurance clients use Turquoise Re with the transaction count above five dozen. One of the strengths of Turquoise Re is their extensive mortality database. Clients receive access to that information and are invited to participate in Turquoise Re's Industry Mortality Conference each year.

Cobalt Management Consultants, Inc.

1 Blue Sky Way, Cerulean City

Tel: 987-555-1234

March 10, 2009

R. Tomas Lyon IV
Chairman, President, CEO and COO
Zoolander Life Insurance Co
411 Main Street
Zoo Falls 54321

Dear Mr. Lyon,

I am pleased to inform you that Cobalt Management Consultants are 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 deck that we will present to your senior management team at your 2009 Strategy Review off-site meeting in Palm Beach on April 5th.

In the meantime, I am pleased to share a high-level mapping of Zoolander's Strategic Risk, reflecting our assessment of the life insurance industry and Zoolander's relative position within it. 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

Zoolander Strategic Risk Map:

Type of Risk	Probability	Expected timing in years					Changing probability over time
		1	2	3	4	5	
Industry							
Margin Squeeze	40%	■	■	■	■	■	Increasing
Commoditization	50%	■	■	■	■	■	Increasing
Rising R&D/ capital expenditure costs	20%	■	■	■	■	■	Increasing
New Regulations	30%	■	■	■	■	■	Constant
Technology							
n/a							
Brand							
Erosion	20%	■	■	■	■	■	Increasing
Competitor							
Emerging global rivals	20%	■	■	■	■	■	Increasing
Gradual market-share gainer	30%	■	■	■	■	■	Constant
Customer							
Customer priority shift	60%	■	■	■	■	■	Increasing
Increasing customer power	60%	■	■	■	■	■	Increasing
Overreliance on a few customers	40%	■	■	■	■	■	Constant
Project							
New Product Development Failure	70%	■	■	■	■	■	Constant
Business-development failure	40%	■	■	■	■	■	Constant
Merger or acquisition failure	30%	■	■	■	■	■	Constant
Stagnation							
Flat or declining volume	70%	■	■	■	■	■	Increasing
Volume up, margin down	65%	■	■	■	■	■	Increasing
Weak pipeline	55%	■	■	■	■	■	Constant

From the desk of
R. Tomas Lyon, IV

April 20, 2009

To Wanda Fox

Re Economic Capital

Well, here is the moment you have been preparing [me] for. After the meeting with Kelly Ratings & Analysis, I see that I have to bite the bullet and seriously think about Economic Capital (EC).

Please put together a memo for me that outlines what is involved in getting us from where we are now to where we need to be in order to implement EC at Zoolander. To show you that I really have been listening when you tell me that I'm not, I will lay out below what I think should be included in the plan. Some of this is based on the education you have given me, some from the discussion with Kelly, and some on the articles I have been reading and discussions I have had with heads of other insurance companies in the last year or so. Given the interest by Kelly, it is very important that we get started with this as soon as possible, so that we can keep the Kelly people informed of our progress toward having this ready for them. Some day I hope to convince them that Kelly's target capital figures are too conservative, and the only way I see to convince them is from a thorough EC calculation.

1. Cost. Please be sure to keep costs as low as possible.
2. IT. Please use existing systems and hardware as much as possible.
3. Definition of EC. It seems to me that there is a lot of confusing terminology out there. Please be specific about what definition we should use and what it means, exactly. Keep in mind all interested parties, and how to minimize the number questions they will be likely ask. While you're at it, it might also be good to jot down some reasons we can give different audiences for why we are doing this and what it is supposed to accomplish.
4. Frequency of calculation. I don't want to give this thing a life of its own. Please see if we can piggy-back our calculations from our routine semi-annual cash flow testing.
5. Borrow where possible. I also don't want to reinvent the wheel. Similar to the calculation frequency, see if you can use our conservative cash flow testing models. For risks not explicitly modeled, like operational risk, let's try to use some kind of factor model with relevant exposures. We'll start by borrowing Kelly's factors for these risks, and as we gain experience we'll substitute our own methodologies.
6. Methodology. I want to make sure we use the one-year mark-to-market approach (I think that's what it's called) because Jack Benson over at Hearth and Home told me that he knew of a company that used the other method and ended up

spending way too much time. Please limit as much as possible the number of times this thing has to be rerun for different scenarios.

7. Type of information needed. To the extent possible please figure out what inputs and outputs could be piggybacked with other systems or reports that are currently in use. Also, if there is any kind of related need that you foresee in the near future, please incorporate that as much as possible in planning this so that we use our resources efficiently.
8. Resources needed. Please make sure we can do this with the people we have. It's OK to outsource some of it for peak times while it is in development, if it does not cost too much. If there are any decisions like this to be made, be sure to show me the differences not only in cost but also how much time would be saved.
9. Threats and Opportunities. As long as you are going through this thought process, it would be great if you could put together a list of problems we might run into and decision points that are likely to come up along the way. Also, anything you can give me that would tell the story to Kelly and the shareholders about why the way we are going about it is the best way would be helpful. And, I suppose it would also be good if you could list any objections you think they might have about what we are doing or how we are doing it (you know that no matter how good we are, they always come up with something).

Well, I thought about keeping at it until I had an even 10 items, but I decided to give you a break since you have a lot to do! Can you have this to me in a week or so?

Thanks,
Tomas

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

CASE STUDY INSTRUCTIONS

The case study will be used as a basis for some examination questions. Be sure to answer the question asked by referring to the case study. For example, when asked for advantages of a particular plan design to a company referenced in the case study, your response should be limited to that company. Other advantages should not be listed, as they are extraneous to the question and will result in no additional credit. Further, if they conflict with the applicable advantages, no credit will be given.

****BEGINNING OF EXAMINATION****
Morning Session

*Questions 1 – 4 pertain to the Case Study.
Each question should be answered independently.*

1. (6 points)

- (a) (3 points) With respect to options that Zoolander grants to its policyholders:
- (i) Identify options by line of business.
 - (ii) Describe the effect of the options identified in (i) above on policyholder behavior.
 - (iii) Explain which ones Zoolander might make less generous for new business, and describe how making such changes would likely affect Zoolander's competitive positions.
- (b) (3 points) With respect to options that are granted to Zoolander by its policyholders:
- (i) Identify the options by line of business.
 - (ii) Describe the effect of the options identified in (i) above on policyholder behavior.
 - (iii) Explain which ones Zoolander might strengthen, and describe how making such changes would likely affect Zoolander's competitive positions.

*Questions 1 – 4 pertain to the Case Study.
Each question should be answered independently.*

2. (9 points) In your role as CFO, you have decided to use the OSFI regulatory framework to review the risk profile of the Term Life block at Zoolander.

(a) (3 points) Using Zoolander company-specific data, complete the following two tables.

Inherent Risks

Risk Types Identified in OSFI Risk Matrix Framework	Define and Describe	Exposure Category (High, Medium, Low)	Justification for Category Choice
Credit Risk			
Insurance Risk			
Operational Risk			
Liquidity Risk			

Control Functions

OSFI Risk Management Control Functions	Responsibilities	Effectiveness Category (Strong, Acceptable, Weak)	Justification for Category Choice
Internal Audit			
Senior Management			
Board of Directors			
Operation Management			

- (b) (1 point) Describe the OSFI Net Risk assessment approach.
- (c) (2 points) Apply the OSFI approach to derive the Net Risk assessment for Zoolander’s Term Life block.
- (d) (2 points) Based on the three-pillar framework (policies, methodologies, and infrastructure), identify best practices you would recommend for a typical term life block. You are to exclude asset considerations in your response.
- (e) (1 point) For each of the three pillars, recommend one best practice identified in (d) that is not currently in place for the Zoolander Term Life block, and justify your choice.

**Questions 1 – 4 pertain to the Case Study.
Each question should be answered independently.**

3. (10 points) You are reviewing Zoolander’s capital needs and reinsurance options.

(a) (3 points) Complete the chart below by describing approaches available to Zoolander to address the risks inherent in the Term Life block.

Risk	Reduce	Transfer	Manage
C1			
C2			
C3			

(b) (2 points) With respect to each of the following reinsurers, compare and contrast the ways that reserve credits would be recognized if Zoolander enters into the following reinsurance arrangements for its inforce Term Life block:

Reinsurers:

- Aquamarine Re
- Turquoise Re

Reinsurance Arrangements:

- Quota share coinsurance
- Modified coinsurance
- Funds withheld coinsurance

(c) (2 points) With respect to Emerald Re’s proposal to reinsure Zoolander’s Term Life block, calculate the initial expense allowance and the dollar impact on Zoolander’s surplus position on January 1, 2009.

(d) (3 points) Recommend and explain risk-management practices Zoolander should establish for monitoring its reinsurance program given that Zoolander would like to improve its position with respect to Kelly’s rating criteria. Kelly follows Standard & Poor’s ERM rating criteria in this regard.

Questions 1 – 4 pertain to the Case Study.
Each question should be answered independently.

- 4.** (8 points) You are preparing a presentation to the Risk Management Committee of Zoolander's Board of Directors on the company's proposed Derivative Trading Operation.
- (a) (2 points) Describe sources of operational risk for Zoolander's Derivative Trading Operation and the degree of exposure to such risks.
 - (b) (2 points) Explain why relying on the COSO framework as the basis of its risk management could cause the risk management of Zoolander's Derivatives Trading Operation to be insufficient.
 - (c) (4 points) With respect to Zoolander's Derivatives Trading Operation, outline to what extent:
 - (i) it reflects the lessons learned from the Barings Bank incident;
 - (ii) the Operation meets the Group of 30 recommendations;
 - (iii) Zoolander has applied the 6 Guiding Principles for Operations Risk.

5. (18 points) During a recent meeting of your investment club, you fail to convince your friend Antonio that BrewCo stock will outperform the market in the coming year. You are so confident that BrewCo stock will outperform the market that you offer to restore Antonio's initial investment in one year's time if he invests in BrewCo and it falls below the current stock price of \$50. Antonio accepts your offer and purchases one share of BrewCo. In exchange for your guarantee, your friend pays you \$9.95.

The stock returns for BrewCo follow a lognormal process with a mean return of 10% per annum and a standard deviation of 55%. The risk-free rate is 3%.

BSP component values under various scenarios:

t	0	0.5
σ	0.55	0.55
r	0.03	0.03
G	50	50
m	0	0
S_t	50	75
d_2	-0.2205	0.8867
$\Phi(-d_2)$	0.5872	0.1876
d_1	0.3295	1.2756
$\Phi(-d_1)$	0.3709	0.1010
$Ge^{-r(T-t)}$	48.5223	49.2556
BSP_t	9.951	1.663

You are provided with the following delta hedging formulae:

$$H(t) = Y_t + S_t \Psi_t$$

$$Y_t = Ge^{-r(T-t)} \Phi(-d_2)$$

$$\Psi_t = -\Phi(-d_1)$$

5. Continued

- (a) (9 points) You are assessing the following three potential hedging strategies by analyzing two stock price scenarios:

Projected Portfolio Value at the End of One Year		
Hedging Approach Description	Stock Price Scenario at the end of 12 months	
	\$75	\$25
Establish a static delta hedge at the beginning of the year and do not rebalance.		
Actuarially hedge using 90% VaR equal to \$22 and invest this amount in BrewCo stock at the beginning of the year.		
Actuarially hedge using 90% VaR equal to \$22 and invest this amount in Treasuries yielding 3%.		

- (i) Compute the value of your portfolio at the end of one year for each of the three hedging approaches and two stock price scenarios. Show your work.
- (ii) Determine whether you would make or lose money after making payment to your friend when payment is required for each of the three hedging approaches and two stock price scenarios. Show your work.
- (b) (3 points) Assuming you are interested in setting up an effective risk management strategy to hedge the guarantee granted to Antonio, assess and rank the three approaches described in (a) above in order of their effectiveness. Justify your ranking.
- (c) (6 points) You decide to dynamically hedge your position using the \$9.95 paid to you, rebalancing your portfolio in six months. Assuming that BrewCo's stock price grows to \$75 at the end of six months and to \$90 at the end of the year:
- (i) Determine the total hedging error at the end of the year (ignoring interest). Show your work.
- (ii) Provide a qualitative description of the effectiveness of your hedge, whether you made or lost money hedging the position and why.

6. (9 points) You are given the following information for Sweet Life's single premium deferred annuity (SPDA) product:

- The SPDA product does not have a market value adjustment feature.
- All policies are identical.
- Currently, book and market value of SPDA assets and liabilities are each equal to \$100 million.
- In total, the duration of assets and duration of liabilities are equal.
- Book value of assets is equal to amortized value.

Asset Class	% of Portfolio (Market Value)	Market/Book Ratio	Key Rate Durations		
			$D(S)$ Short	$D(M)$ Mid	$D(L)$ Long
A	20%	96%	0.1	0.3	0.4
B	40%	120%	0.2	0.5	$D_B(L)$
C	40%	82%	2.0	1.8	1.2
Assets	100%				
Liabilities	100%	100%	0.7	0.8	1.0

The company's investment policy requires maintaining market value of its assets to be at least 99.5% of book value liabilities at any time. Sweet Life has a deal with the government allowing the company to exchange assets of equal book value for securities with the same key rate durations and with market value equal to 90% of book value.

- (a) (2 points) Qualitatively evaluate the impact on each of the following when market interest rates spike upwards after a long period of low interest rates. Consider in your response asset characteristics and policy features that influence the company's exposure and actions available to management.
- (i) Assets values
 - (ii) SPDA liability values
- (b) (1 point) Sweet Life is currently managing the SPDA block by immunization.
- (i) Evaluate the strengths and weaknesses of immunization strategies.
 - (ii) Calculate the third key rate duration for asset class B, $D_B(L)$.

6. Continued

- (c) (4 points) A sudden 100 bp increase in the Short rate occurred immediately after the immunization rebalancing. The Mid and Long rates remained unchanged.

Immediately following the interest rate increase, 30% of policyholders surrendered their contracts at book value, forcing Sweet Life to sell assets. Sweet Life disinvests assets pro-rata across asset classes to satisfy its obligations.

- (i) Demonstrate that, without the government deal, the market value of assets after disinvestment is less than the target of 99.5% of the book value of liabilities.
 - (ii) Calculate the minimum amount of class C assets that Sweet Life should exchange with the government to maintain the desired target.
- (d) (2 points) Define each of the following approaches, and describe the advantages of incorporating each to manage the interest rate risks associated with the SPDAs:
- (i) Option Pricing
 - (ii) Dynamic Hedging
 - (iii) Optimization Techniques

****END OF EXAMINATION****
Morning Session