

**FALL 2012**

**EXAM ERM**

**Enterprise Risk  
Management**

**CASE STUDY**



## ERM Case Study

### Introduction and Recommendations

This case study presents information for five companies:

- Lyon Corporation of Canada (a holding company);
- Simple Life (a life insurance company);
- AHA Health (a health insurance company);
- Active Choice (a health insurance company); and
- Pryde P&C (a general, that is, property and casualty, insurance company).

When you register for the ERM exam, you will select from one of six reading extensions. Information presented in this case study will be used in questions appearing on the one-hour extension-specific portion of the ERM exam. Please note that for those who are pursuing an FSA, the extension selected for this exam need not match the track selected for fellowship.

You are encouraged to read this case study before you read the recommended study materials, to become familiar with the information that is provided and to assist you in putting syllabus readings in context.

In any event:

- (a) Candidates who elect the Individual Life and Annuities Extension will answer questions based on information about Simple Life;
- (b) Candidates who elect the Group and Health Extension will answer questions based on information about AHA Health and Active Choice;
- (c) Candidates who elect the General Insurance Extension will answer questions based on information about Pryde P&C;
- (d) Candidates who elect the Retirement Benefits Extension will answer questions based on information about the pension plans sponsored by Simple Life and AHA Health;
- (e) Candidates who elect the Investment Extension will answer questions based on investment information for Simple Life and about the pension plans sponsored by Simple Life and AHA Health; and
- (f) Candidates who elect the General Corporate ERM Extension will answer questions based on information presented for all five companies, except that the questions will be related to general risk management rather than specific requirements related to insurance companies or pension plans.

It is important that you become familiar with the information presented in the case study that pertains to the extension-specific questions you will attempt in the exam.

Exam booklets will contain an exact copy of this case study. You will not be allowed to bring your copy of this case study into the exam room.

The following table of contents should assist you in locating information that is pertinent to your selected extension. As noted above, however, you are encouraged to become familiar with the entire case study.

This and the following pages contain tables for the standard normal distribution. These tables will be available with this case study at the examination and are for use in solving all problems on the examination, including those not related to the case study.

**TABLES FOR THE STANDARD NORMAL DISTRIBUTION**

Values of  $z$  for selected probabilities that  $Z \leq z$ .

Pr( $Z \leq z$ )	0.800	0.850	0.900	0.950	0.975	0.990	0.995
$z$	0.842	1.036	1.282	1.645	1.960	2.326	2.576

Table for  $N(x)$  when  $x \geq 0$ . Use interpolation with these tables. For example,  $N(0.6278) = N(0.62) + 0.78[N(0.63) - N(0.62)] = 0.7324 + 0.78(0.7357 - 0.7324) = 0.7350$ .

x	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0.5000	0.5040	0.5080	0.5120	0.5160	0.5199	0.5239	0.5279	0.5319	0.5359
0.1	0.5398	0.5438	0.5478	0.5517	0.5557	0.5596	0.5636	0.5675	0.5714	0.5753
0.2	0.5793	0.5832	0.5871	0.5910	0.5948	0.5987	0.6026	0.6064	0.6103	0.6141
0.3	0.6179	0.6217	0.6255	0.6293	0.6331	0.6368	0.6406	0.6443	0.6480	0.6517
0.4	0.6554	0.6591	0.6628	0.6664	0.6700	0.6736	0.6772	0.6808	0.6844	0.6879
0.5	0.6915	0.6950	0.6985	0.7019	0.7054	0.7088	0.7123	0.7157	0.7190	0.7224
0.6	0.7257	0.7291	0.7324	0.7357	0.7389	0.7422	0.7454	0.7486	0.7517	0.7549
0.7	0.7580	0.7611	0.7642	0.7673	0.7704	0.7734	0.7764	0.7794	0.7823	0.7852
0.8	0.7881	0.7910	0.7939	0.7967	0.7995	0.8023	0.8051	0.8078	0.8106	0.8133
0.9	0.8159	0.8186	0.8212	0.8238	0.8264	0.8289	0.8315	0.8340	0.8365	0.8389
1.0	0.8413	0.8438	0.8461	0.8485	0.8508	0.8531	0.8554	0.8577	0.8599	0.8621
1.1	0.8643	0.8665	0.8686	0.8708	0.8729	0.8749	0.8770	0.8790	0.8810	0.8830
1.2	0.8849	0.8869	0.8888	0.8907	0.8925	0.8944	0.8962	0.8980	0.8997	0.9015
1.3	0.9032	0.9049	0.9066	0.9082	0.9099	0.9115	0.9131	0.9147	0.9162	0.9177
1.4	0.9192	0.9207	0.9222	0.9236	0.9251	0.9265	0.9279	0.9292	0.9306	0.9319
1.5	0.9332	0.9345	0.9357	0.9370	0.9382	0.9394	0.9406	0.9418	0.9429	0.9441
1.6	0.9452	0.9463	0.9474	0.9484	0.9495	0.9505	0.9515	0.9525	0.9535	0.9545
1.7	0.9554	0.9564	0.9573	0.9582	0.9591	0.9599	0.9608	0.9616	0.9625	0.9633
1.8	0.9641	0.9649	0.9656	0.9664	0.9671	0.9678	0.9686	0.9693	0.9699	0.9706
1.9	0.9713	0.9719	0.9726	0.9732	0.9738	0.9744	0.9750	0.9756	0.9761	0.9767
2.0	0.9772	0.9778	0.9783	0.9788	0.9793	0.9798	0.9803	0.9808	0.9812	0.9817
2.1	0.9821	0.9826	0.9830	0.9834	0.9838	0.9842	0.9846	0.9850	0.9854	0.9857
2.2	0.9861	0.9864	0.9868	0.9871	0.9875	0.9878	0.9881	0.9884	0.9887	0.9890
2.3	0.9893	0.9896	0.9898	0.9901	0.9904	0.9906	0.9909	0.9911	0.9913	0.9916
2.4	0.9918	0.9920	0.9922	0.9925	0.9927	0.9929	0.9931	0.9932	0.9934	0.9936
2.5	0.9938	0.9940	0.9941	0.9943	0.9945	0.9946	0.9948	0.9949	0.9951	0.9952
2.6	0.9953	0.9955	0.9956	0.9957	0.9959	0.9960	0.9961	0.9962	0.9963	0.9964
2.7	0.9965	0.9966	0.9967	0.9968	0.9969	0.9970	0.9971	0.9972	0.9973	0.9974
2.8	0.9974	0.9975	0.9976	0.9977	0.9977	0.9978	0.9979	0.9979	0.9980	0.9981
2.9	0.9981	0.9982	0.9982	0.9983	0.9984	0.9984	0.9985	0.9985	0.9986	0.9986
3.0	0.9987	0.9987	0.9987	0.9988	0.9988	0.9989	0.9989	0.9989	0.9990	0.9990
3.1	0.9990	0.9991	0.9991	0.9991	0.9992	0.9992	0.9992	0.9992	0.9993	0.9993
3.2	0.9993	0.9993	0.9994	0.9994	0.9994	0.9994	0.9994	0.9995	0.9995	0.9995
3.3	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9996	0.9996	0.9997
3.4	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9998
3.5	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998
3.6	0.9998	0.9998	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999
3.7	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999
3.8	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999
3.9	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Table for  $N(x)$  when  $x \leq 0$ . Use interpolation (entries are for the row value *minus* the column value). For example,  $N(-0.1234) = N(-0.12) - 0.34[N(-0.12) - N(-0.13)] = 0.4522 - 0.34(0.4522 - 0.4483) = 0.4509$ .

z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0.5000	0.4960	0.4920	0.4880	0.4840	0.4801	0.4761	0.4721	0.4681	0.4641
-0.1	0.4602	0.4562	0.4522	0.4483	0.4443	0.4404	0.4364	0.4325	0.4286	0.4247
-0.2	0.4207	0.4168	0.4129	0.4090	0.4052	0.4013	0.3974	0.3936	0.3897	0.3859
-0.3	0.3821	0.3783	0.3745	0.3707	0.3669	0.3632	0.3594	0.3557	0.3520	0.3483
-0.4	0.3446	0.3409	0.3372	0.3336	0.3300	0.3264	0.3228	0.3192	0.3156	0.3121
-0.5	0.3085	0.3050	0.3015	0.2981	0.2946	0.2912	0.2877	0.2843	0.2810	0.2776
-0.6	0.2743	0.2709	0.2676	0.2643	0.2611	0.2578	0.2546	0.2514	0.2483	0.2451
-0.7	0.2420	0.2389	0.2358	0.2327	0.2296	0.2266	0.2236	0.2206	0.2177	0.2148
-0.8	0.2119	0.2090	0.2061	0.2033	0.2005	0.1977	0.1949	0.1922	0.1894	0.1867
-0.9	0.1841	0.1814	0.1788	0.1762	0.1736	0.1711	0.1685	0.1660	0.1635	0.1611
-1.0	0.1587	0.1562	0.1539	0.1515	0.1492	0.1469	0.1446	0.1423	0.1401	0.1379
-1.1	0.1357	0.1335	0.1314	0.1292	0.1271	0.1251	0.1230	0.1210	0.1190	0.1170
-1.2	0.1151	0.1131	0.1112	0.1093	0.1075	0.1056	0.1038	0.1020	0.1003	0.0985
-1.3	0.0968	0.0951	0.0934	0.0918	0.0901	0.0885	0.0869	0.0853	0.0838	0.0823
-1.4	0.0808	0.0793	0.0778	0.0764	0.0749	0.0735	0.0721	0.0708	0.0694	0.0681
-1.5	0.0668	0.0655	0.0643	0.0630	0.0618	0.0606	0.0594	0.0582	0.0571	0.0559
-1.6	0.0548	0.0537	0.0526	0.0516	0.0505	0.0495	0.0485	0.0475	0.0465	0.0455
-1.7	0.0446	0.0436	0.0427	0.0418	0.0409	0.0401	0.0392	0.0384	0.0375	0.0367
-1.8	0.0359	0.0351	0.0344	0.0336	0.0329	0.0322	0.0314	0.0307	0.0301	0.0294
-1.9	0.0287	0.0281	0.0274	0.0268	0.0262	0.0256	0.0250	0.0244	0.0239	0.0233
-2.0	0.0228	0.0222	0.0217	0.0212	0.0207	0.0202	0.0197	0.0192	0.0188	0.0183
-2.1	0.0179	0.0174	0.0170	0.0166	0.0162	0.0158	0.0154	0.0150	0.0146	0.0143
-2.2	0.0139	0.0136	0.0132	0.0129	0.0125	0.0122	0.0119	0.0116	0.0113	0.0110
-2.3	0.0107	0.0104	0.0102	0.0099	0.0096	0.0094	0.0091	0.0089	0.0087	0.0084
-2.4	0.0082	0.0080	0.0078	0.0075	0.0073	0.0071	0.0069	0.0068	0.0066	0.0064
-2.5	0.0062	0.0060	0.0059	0.0057	0.0055	0.0054	0.0052	0.0051	0.0049	0.0048
-2.6	0.0047	0.0045	0.0044	0.0043	0.0041	0.0040	0.0039	0.0038	0.0037	0.0036
-2.7	0.0035	0.0034	0.0033	0.0032	0.0031	0.0030	0.0029	0.0028	0.0027	0.0026
-2.8	0.0026	0.0025	0.0024	0.0023	0.0023	0.0022	0.0021	0.0021	0.0020	0.0019
-2.9	0.0019	0.0018	0.0018	0.0017	0.0016	0.0016	0.0015	0.0015	0.0014	0.0014
-3.0	0.0013	0.0013	0.0013	0.0012	0.0012	0.0011	0.0011	0.0011	0.0010	0.0010
-3.1	0.0010	0.0009	0.0009	0.0009	0.0008	0.0008	0.0008	0.0008	0.0007	0.0007
-3.2	0.0007	0.0007	0.0006	0.0006	0.0006	0.0006	0.0006	0.0005	0.0005	0.0005
-3.3	0.0005	0.0005	0.0005	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0003
-3.4	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002
-3.5	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
-3.6	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
-3.7	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
-3.8	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
-3.9	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

## Table of Contents

1	Lyon Corporation of Canada.....	9
1.1	Overview.....	9
1.2	Mission Statement .....	9
1.3	Structure.....	9
1.4	Simple Life .....	10
1.5	AHA Health .....	10
1.6	Pryde P&C.....	10
1.7	Lyon Board of Directors.....	11
1.7.1	Mandate of the Board .....	12
1.7.2	Executive Committee .....	12
1.7.3	Audit Committee .....	12
1.7.4	Compensation Committee .....	13
1.7.5	Related Party and Conduct Review Committee .....	13
1.7.6	Governance and Nominating Committee .....	13
1.7.7	Code of Conduct and Business Ethics.....	14
1.8	Credit Rating.....	14
1.9	Oversight of Lyon Companies.....	14
2	Simple Life Insurance Company (SLIC) .....	15
2.1	Board of Directors .....	15
2.2	Officers .....	15
2.3	Employee Benefits.....	16
2.4	Capitalization .....	16
2.5	Reinsurance .....	16
2.6	Investment Policy and Strategy.....	16
2.7	Specified Risk Policies.....	17
2.7.1	Credit Risk.....	17
2.7.2	Market Risk.....	17
2.7.3	Liquidity Risk.....	17
2.7.4	Operational Risk .....	18
2.8	Economic Capital Model.....	18
2.9	Stress Testing.....	19
2.10	Risk Management Committee.....	19
2.11	Product Distribution: .....	20
2.12	Product Descriptions .....	20
2.12.1	30-Year Term Insurance with Level Premium .....	20
2.12.2	Variable Annuity with GMAB.....	21
2.12.3	Universal Life .....	23

2.12.4	Single Premium Immediate Annuity.....	24
2.13	Balance Sheets.....	26
2.14	Portfolio Summary .....	27
2.15	Historical Market Data .....	28
2.16	SLIC Disaster and Business Continuity Program .....	29
2.17	SLIC Salaried Pension Plan.....	29
2.17.1	Pension Plan - Benefit Provisions and Financial Information.....	30
2.17.2	Statement of Funding Policies and Procedures - Simple Life .....	41
2.17.2.1	Allocation of Responsibilities .....	41
2.17.2.2	Funding Policy Principles .....	41
2.17.2.3	Management of Risks .....	42
2.17.2.4	Funding Target.....	42
2.17.2.5	Funding Risks .....	42
2.17.2.6	Statement of Investment Policies and Procedures - Excerpts .....	43
2.17.2.7	Investment Risk .....	43
2.17.2.8	Allocation of Responsibilities .....	43
2.17.2.9	Investment Objectives.....	44
2.17.2.10	Rate of Return Objectives .....	44
2.17.2.11	Asset Allocation Guidelines .....	45
2.17.2.12	Passive Management Objectives.....	45
2.17.2.13	Rebalancing .....	45
2.17.2.14	Related Party Transactions.....	45
2.17.2.15	Appendix - Economic Data .....	47
3	Health Insurance Companies.....	49
3.1	Background.....	49
3.2	Employee Benefits.....	49
3.3	Product Lines .....	49
3.4	Product Structure .....	49
3.5	Provider Networks & Medical Management.....	50
3.6	Operations.....	50
3.7	Management/Culture.....	51
3.8	Healthcare Reform & Other Regulatory Issues .....	52
3.9	Going Forward .....	52
3.10	AHA Financial Statements .....	53
3.11	Financial Statements for Active Choice .....	55
3.12	Correspondence .....	57
3.12.1	Memorandum - Bigger Actuarial Consulting - LTC Acquisition .....	58
3.12.2	AHA Internal Memorandum - Confidential - Active Choice Acquisition .....	59
3.12.3	AHA Internal Memorandum - Confidential - Pension Plan Funding.....	60
3.12.4	AHA E-Mail - Underwriting Procedural Changes .....	61
3.12.5	AHA E-Mail - New Claims Administration Update.....	62



3.13	AHA Salaried Pension Plan .....	63
3.13.1	Pension Plan - Benefit Provisions and Financial Information.....	63
3.13.2	Statement of Funding Policies and Procedures - AHA Health.....	74
3.13.2.1	Allocation of Responsibilities .....	74
3.13.2.2	Funding Policy Principles .....	74
3.13.2.3	Management of Risks .....	74
3.13.2.4	Funding Target.....	75
3.13.2.5	Funding Risks .....	75
3.13.3	Statement of Investment Policies and Procedures - Excerpts .....	77
3.13.3.1	Investment Risk .....	77
3.13.3.2	Allocation of Responsibilities .....	77
3.13.3.3	Investment Objectives.....	78
3.13.3.4	Rate of Return Objectives .....	78
3.13.3.5	Asset Allocation Guidelines .....	78
3.13.3.6	Passive Management Objectives.....	79
3.13.3.7	Rebalancing .....	79
3.13.3.8	Related Party Transactions.....	79
3.13.4	Appendix: Economic Data .....	81
4	Pryde Property & Casualty .....	83
4.1	Overview.....	83
4.2	Employee Benefits.....	83
4.3	Production .....	84
4.4	Target Markets .....	84
4.5	Regional Spread.....	85
4.6	Exited Markets.....	85
4.7	Underwriting Results.....	86
4.8	Investment Income.....	86
4.9	Catastrophe Exposure .....	87
4.10	Reinsurance .....	87
4.11	Property Risks.....	87
4.12	Casualty Risks .....	88
4.13	Total Available Capital .....	89
4.14	Rating Agency Review .....	89
4.15	Economic Capital Model.....	89
4.16	Appendix.....	90
4.16.1	Consultant's Report- Executive Summary 9/30/10.....	91
4.16.1.1	Observations.....	94
4.16.2	Consultant's Report - Background, Terminology, Considerations .....	95
4.16.2.1	Degree of Protection .....	95
4.16.2.2	Time Horizon Considerations of Capital Needs.....	95
4.16.2.3	Uncertainty vs. Volatility .....	97

4.16.2.4	Consideration of Risk Transfer .....	98
4.16.2.5	Correlation and Diversification.....	98

# 1 Lyon Corporation of Canada

## 1.1 Overview

Lyon Corporation of Canada (Lyon Corporation) is a diversified public holding company with interests in the financial industries. The holding company is registered in Toronto and undertakes business in USA, Canada and United Kingdom.

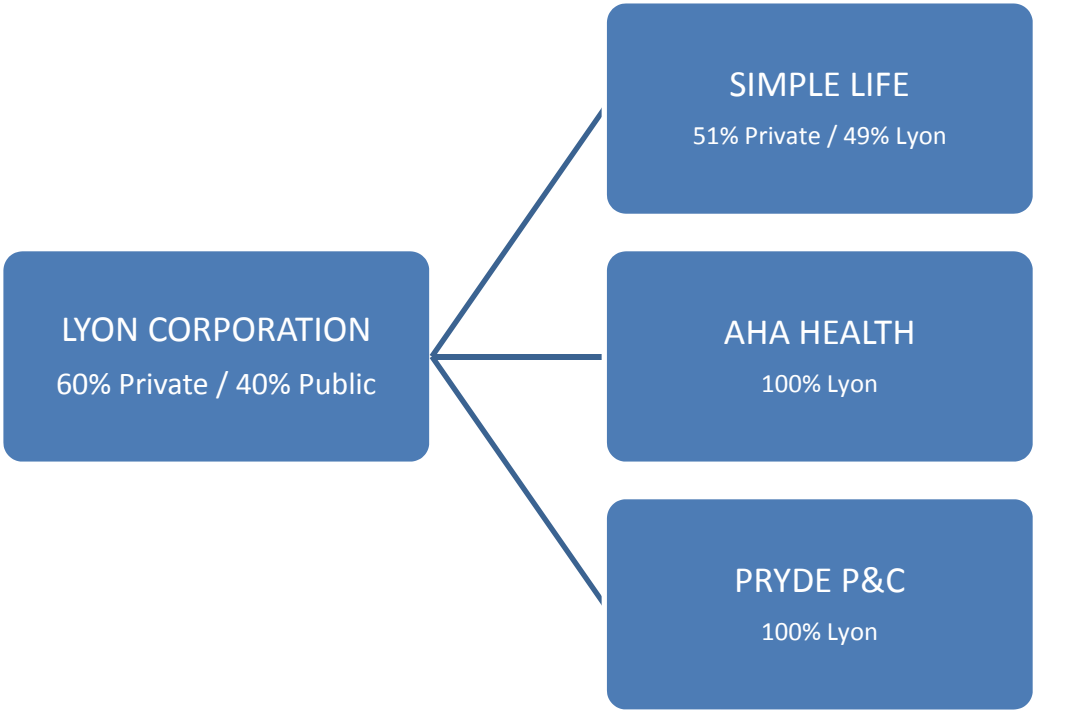
## 1.2 Mission Statement

Lyon Corporation is committed to enhancing shareholder value through the active management of long-term investments and responsible corporate citizenship. It is of the view that these objectives are best achieved and risks minimized through geographic diversification.

Lyon Corporation believes that the future belongs to corporations having a well-defined strategic vision anchored in strong core values. These principles guide the Corporation in all of its investment decisions.

## 1.3 Structure

Lyon Corporation is public company (LCC: NYE and TSX) with a significant shareholder, Lyon Family, which owns about 60% of the outstanding shares. The holding company has the following structure:



Percentages denote equity interest and voting rights.

## **1.4 Simple Life**

The Simple Life Insurance Company is owned by its Chairman, President and CEO, R. Tomas Lyon III, who owns 51% of the voting shares, and Lyon, which owns 49% of the voting shares. Simple Life is a US life insurance company located in Boston, Massachusetts with four lines of business: Universal Life (UL), 30-year Term Insurance with level premiums, Single Premium Immediate Annuities (SPIA) and Variable Annuities with a Guaranteed Minimum Accumulation Benefit. Simple Life issues its products only in the US. Simple Life provides basic life, health and disability benefits to its employees while they are employed by the company. These benefits do not continue after employees leave the company.

Simple Life sponsors a company-paid final-average-earnings defined benefit pension plan for its employees.

## **1.5 AHA Health**

AHA Health Insurance Company (AHA) is a large national insurer located in California with its home office in Los Angeles. AHA is wholly owned by Lyon.

AHA Health provides basic life, health and disability benefits to its employees while they are employed by the company. These benefits do not continue after employees leave the company.

AHA Health sponsors a company-paid final-average-earnings defined benefit pension plan for its employees.

## **1.6 Pryde P&C**

Pryde P&C is an Omaha, Nebraska- based US writer with commercial and personal lines products that target niche market customers. The split between commercial and personal lines is 66.7%/33.3% respectively. Pryde is licensed in all 50 states and its products are sold through a unified sales force, led by sales directors responsible for selecting the product, managing the agency delivery system and serving the business in their territory. Pryde P&C is wholly owned by Lyon.

Pryde P&C provides basic life, health and disability benefits to its employees while they are employed by the company. These benefits do not continue after employees leave the company.

Pryde P&C does not sponsor any pension or savings plans for its employees.

## **1.7 Lyon Board of Directors**

The Lyon Board consists of 12 members, 6 of whom are directly or indirectly represent the Lyon family interest. Three board members are Chief Executive Officers or Board Chairmen in leading public companies in US and the other three board members are the board chairmen of Simple Life, AHA Health and Pryde P&C.

The following are the directors:

George Bell is the Chief Executive Officer of Rocket Aerospace Inc., the largest manufacturer of civil aircraft in the world. He is a qualified professional mechanical engineer. He is also a director of Rocket Aerospace Inc. He has been a director since 2005.

Sarah Hanrahan is the Chief Executive Officer of Transworld Optics, a leading edge and global company in manufacturing of fiber optics. She is a software engineer. She has been a director since 2009.

Andrew Lyon is the Deputy Chairman of the Board and Co-Chief Executive Officer of Lyon Corporation. He is a lawyer by profession. He has been a director since 2001.

Patrick Lyon is Co-Chief Executive Officer of Lyon Corporation. He is an investment banker by profession. He has been a director since 2002.

R. Tomas Lyon III is Founder and Chairman of the Board of Lyon Corporation, and Chairman of the Executive Committee. He has no professional qualifications but has significant business experience. He has been a director since inception of the Corporation.

Jeremy Orr is a director of Lyon Corporation. He is retired CEO and currently Chairman of Canada Aqua limited, the largest supplier of natural water in the Canadian marketplace. Mr. Orr has no professional qualifications but has significant business experience. He has been a director since 1998.

Albert Montgomery is the Chairman, President and Chief Executive Officer of Northern Oil Sands Limited, one of Canada's largest oil sands company. He is a qualified professional engineer. He is also a director of Canadian Commercial Bank. He became a director in 2011.

John Ritchie is a director of Lyon Corporation since 2009. He is a retired lawyer and a senior advisor to Henderson & Henderson law firm. Mr Ritchie serves as a director of several companies in Canada.

Donald Rae is a director of Lyon Corporation. He is retired businessperson. He was the founder, CEO and Chairman of Rae Communications Inc, a leading provider of cable and communications in North America. He has served as board member since inception of the Corporation.

R. Tomas Lyon IV has been a director of Lyon Corporation since 1996. He was an insurance broker and President of Risky Life Insurance Company.

Jerry Graham is the Chairman and CEO of AHA Health. He is a medical doctor and was the Chief Administrator Officer for Networks 'R' US prior to joining AHA Health as the CEO for AHA Health in 2009. He became the Chairman of AHA Health in 2010.

Robert James is the Chairman and CEO of Pryde Property & Casualty Company. He is an actuary and worked as an insurance consultant for a major consulting firm prior to joining Pryde in 2010. He became Chairman of Pryde in 2010.

### **1.7.1 Mandate of the Board**

The mandate of the Board, which it discharges directly or through one of the five Board Committees, is to supervise the management of the business and affairs of the Corporation, and includes responsibility for approving strategic goals and objectives, review of operations, disclosure and communication policies, oversight of financial reporting and other internal controls, corporate governance, Director orientation and education, senior management compensation and oversight, and Director nomination, compensation and assessment.

### **1.7.2 Executive Committee**

The Executive Committee has and may exercise all or any of the powers vested in and exercisable by the Board, except approval of the annual strategic plan. The Executive Board comprises of:

- R. Tomas Lyon III ( Chairman)
- R. Tomas Lyon IV
- Patrick Lyon
- Jeremy Orr
- John Ritchie

### **1.7.3 Audit Committee**

The primary mandate of the Audit Committee is to review the financial statements of the Corporation and public disclosure documents containing financial information and to report on such review to the Board, to be satisfied that adequate procedures are in place for the review of the Corporation's public disclosure documents that contain financial information, to oversee the

work and review the independence of the external auditors, and to review any evaluation of the Corporation's internal control over financial reporting. The Audit Committee comprises of:

- George Bell (Chairman)
- Sarah Hanrahan
- Albert Montgomery
- John Ritchie

#### **1.7.4 Compensation Committee**

The primary mandate of the Compensation Committee is to approve compensation policies and guidelines for employees of the Corporation, to approve compensation arrangements for executives of the Corporation, to recommend to the Board compensation arrangements for the Directors and for the Co-CEOs, to oversee the management of incentive compensation plans and equity compensation plans, and to review succession plans for senior management. The Compensation Committee comprises of:

- Andrew Lyon(Chairman)
- Jeremy Orr
- Sarah Hanrahan
- Donald Rae

#### **1.7.5 Related Party and Conduct Review Committee**

The primary mandate of the Related Party and Conduct Review Committee is to recommend to the Board procedures for the consideration and approval of transactions with related parties of the Corporation and to review and, if deemed appropriate, to approve such transactions. The Committee comprises of:

- Patrick Lyon ( Chairman)
- George Bell
- Albert Montgomery
- Donald Rae

#### **1.7.6 Governance and Nominating Committee**

The primary mandate of the Governance and Nominating Committee is to oversee the Corporation's approach to governance issues, to recommend to the Board corporate governance practices consistent with the Corporation's commitment to high standards of corporate governance, to assess the effectiveness of the Board of Directors, of Committees of the Board and of the Directors, and to recommend to the Board candidates for election as Directors and for appointment to Board Committees.

- R. Tomas Lyon III ( Chairman)
- R. Tomas Lyon IV
- Andrew Lyon
- John Ritchie
- Jeremy Orr

The following table summarises committee memberships for Lyon’s Board of Directors:

	Executive	Audit	Compensation	Related Review and Conduct Review	Governance and Nominating
R. Tomas Lyon III	C				C
R. Tomas Lyon IV	M				M
Patrick Lyon	M			C	
Jeremy Orr	M		M		M
John Ritchie	M	M			M
George Bell		C		M	
Sarah Hanrahan		M	M		
Albert Montgomery		M		M	
Andrew Lyon			C		M
Donald Rae			M	M	

### 1.7.7 Code of Conduct and Business Ethics

The Board of Directors has adopted a Code of Business Conduct and Ethics to promote and maintain a culture of integrity throughout the Corporation. The Code is applicable to Directors, officers and employees of the Corporation.

## 1.8 Credit Rating

Lyon Corporations has a rating of BBB+ (Successful). The rating reflects the weakened capital position of Simple Life and recent acquisition failures at AHA Health offset by Pryde’s improved financial results and niche presence.

## 1.9 Oversight of Lyon Companies

Lyon, Simple Life, AHA Health and Pryde P&C are all managed professionally by an executive team (comprising of the CEO, CFO and COO and 4 - 6 other executives). Each CEO reports directly to his respective board. Simple Life, AHA Health and Pryde P&C all have independent Board of Directors.

The remainder of this document presents information about the companies in which Lyon has a financial interest.



## **2 Simple Life Insurance Company (SLIC)**

The Simple Life Insurance Company (SLIC) is 51% owned by R. Tomas Lyon III, and 49% owned by Lyon Corporation.

SLIC is a life insurance company with four lines of business: Term Life, Universal Life, Single Premium Immediate Annuities, and Variable Annuities.

The Company, founded as Term Life Insurance Company, made its name selling term life insurance and this continues to be a hallmark of the company today. The Company is at a crossroads where competition has required significant compression of margins. Therefore, the Company is attempting to diversify its earnings by offering new products with higher value and yielding higher margins. The goal is to capture a portion of the asset build-up within the 'baby boomer' generation as they find that term insurance is insufficient for their needs and change their desired insurance products. To widen the Company's appeal and to reflect the expanded product offering, the Company was renamed and rebranded as Simple Life Insurance Company at the end of 2009.

### **2.1 Board of Directors**

R. Tomas Lyon III - Chairman, President and CEO, age 92, term expires September 2014.

Karl Palomino - former CFO, SLIC (retired September 2009), age 62, term expires September 2013.

Jeanne Holstein-Palomino - Philanthropist, former administrative assistant, SLIC, age 30, term expires September 2013.

Ivan X. Salmon - former Chief Legal Counsel, SLIC (retired September 2009), age 58, term expires September 2013.

Hermione Dauphin - former accounting partner for Dollars 'R Us, former insurance regulator for Insurance Department of Illinois, age 52, term expires September 2012.

### **2.2 Officers**

R. Tomas Lyon III, Chairman of the Board, President, CEO

Henri Jay, EVP - Operations

Open, SVP & Chief Financial Officer

Mindy Wren, SVP & Chief Counsel

Odette Bird, SVP - Variable Annuity

George Lyon, SVP - Universal Life

William Xu, SVP - Term Life

Danielle Wolfe - VP - Chief Marketing Officer

## **2.3 Employee Benefits**

SLIC provides basic life, health, and disability benefits to its employees while they are employed by the company. These benefits do not continue after employees leave the company. SLIC also sponsors a company-paid final-average-earnings defined benefit pension plan.

## **2.4 Capitalization**

The company operates without any long-term debt.

## **2.5 Reinsurance**

SLIC utilizes a coinsurance agreement with facultative support with Conservative Reinsurance for their Universal Life Insurance business.

## **2.6 Investment Policy and Strategy**

The investment department manages the general account investments. The Chief Investment Officer (CIO) reports to the CFO. Investment policy and strategy is reviewed and approved by an internal management committee consisting of the CEO, CFO, CIO, and SVPs (or VPs) of its four main business lines. Internal management committee decisions are subject to review by the board's investment committee. The internal management committee meets quarterly and is responsible for reviewing investment results and approving the use of new investment instruments. Day-to-day decision-making authority is delegated to the CIO, up to specified limits. The CIO may delegate approval authority to his or her subordinates. Transactions in excess of the CIO's approval limit require approval by the CEO and CFO.

The company's general account is invested primarily in fixed-income assets. Variable annuity investment accounts are held in a separate (segregated) account and are managed by a third-party investment advisor.

Within the general account, there are separate investment portfolios for each of the four main product lines. The corporate surplus (net equity) is allocated to the four portfolios.

## **2.7 Specified Risk Policies**

### **2.7.1 Credit Risk**

The company only invests in investment grade quality bonds (S&P at or above BBB-).

Fixed-income securities in the general account have exposure limits at individual obligor (issuer) and sector levels. Obligor-level limits vary according to asset type and credit quality, as determined by external rating agencies. The investment department monitors compliance of the exposure limits.

For each portfolio, there are weighted average credit quality targets. Portfolio credit quality is measured by converting each asset's external credit rating into a numerical score. Scores are a linear function of credit ratings (AAA = 1, AA = 2, etc.). Sub-category ratings (i.e. + or -) are ignored in the scale. The company prefers to maintain a score above 3.5 for each line of business.

### **2.7.2 Market Risk**

Semi-annually within each block of business, the company measures the Macaulay duration of the assets and liabilities. If the asset and liability durations are further apart than 0.5, the asset portfolio is rebalanced such that its new Macaulay duration equals that of the liabilities.

Exceptions to the above are:

1. Any assets or liabilities associated with the VA rider hedging are excluded from this calculation, and
2. For 30-Year Term, premiums are excluded from the calculation. There are significant negative cash flows in the early years of the contract and their inclusion generates extremely high durations.

The VA hedging program uses a semi-static hedge updated for market factors monthly and for inforce changes quarterly. The key risk measures are delta and rho. The program purchases ten-year at-the-money equity and interest rate floors so that at least 80% of liability delta and rho are hedged. Existing hedges are not sold if the hedge ratio exceeds 80%. Vega is self-insured due to system complexity, the expense of implied volatility hedges, and the tendency of equity volatility to mean revert. The implied volatility assumed in the liability fair value is 20%, which equals the 20-year daily average of 10-year at-the-money equity floors. Reports are produced and hedges adjusted approximately six-weeks following each quarter end. Hedge effectiveness is measured using a rolling twelve-month average of program gains and losses.

### **2.7.3 Liquidity Risk**

The liquidity policy requires it to hold sufficient liquid assets to meet demands for cash in a liquidity crisis. Cash demands are quantified using a liquidity stress-test scenario. The scenario

focuses on a reputational liquidity crisis basis where markets continue to operate normally and the liquidity crunch affects only the company. The liquidity stress test anticipates situations where the company's ability to sell assets to meet cash needs from its liability products is hindered by the market taking advantage of the company during the crisis. In addition, testing periodically considers a scenario where the entire market is not able to sell assets at a reasonable value. However, its liquidity policy does not require it to hold sufficient liquid assets to be able to meet cash demands in such a scenario, since it expects regulatory relief in such a systemic crisis.

#### **2.7.4 Operational Risk**

The CRO will be responsible for collecting and disseminating risk information. A report will be prepared monthly and distributed to executive management.

### **2.8 Economic Capital Model**

SLIC has implemented an economic capital model tailored to its own company-specific risks. The intent is to quantify the risks to the company's net equity (on a market-consistent basis) using a one-year 99.5% Value at Risk (VaR) measure. The model quantifies exposure to interest rate risk, equity price risk, credit risk, and mortality risk.

Interest rates are modeled stochastically using a single-factor model calibrated to monthly historical data for 10-year US Treasury yields from 1994. Equity returns are modeled stochastically using a regime-switching lognormal distribution and is calibrated to thirty years of daily S&P 500 equity index returns.

For the GMAB, the VaR is calculated with liabilities net of hedging assets and derivatives. Implied volatility is derived from current exchange-traded 10-year at-the-money equity floors. As an approximation, the test assumes expiring derivatives can be replaced with current at-the-money instruments at current prices.

For credit risk, the model assumes that fixed income assets are sold immediately if they fall below investment grade. Therefore, the company does not quantify the risk of credit default or loss given default. Credit risk is modeled through the stochastic simulation of credit ratings migration. The calibration uses ten years of historical data for corporate bond ratings migrations and yield spreads. Since the company has a buy and hold investment strategy, credit spreads are only considered to be a risk factor if and when assets are downgraded below investment grade. SLIC calculates the risk of fluctuations in market value due to credit spread movements in the absence of ratings downgrades but excludes the results since its statutory surplus is based upon asset book value and it has a buy and hold investment strategy.

Mortality risk is modeled on a stochastic basis using an internally developed mortality risk generator calibrated to a combination of industry and general population data. Deviation in mortality experience is attributed to underwriting error, volatility, catastrophe, and trend.

At this point, the Company does not have an operational risk model and, therefore, operational risk is estimated to be 10% of the fair value of liabilities.

Procedurally, each risk is calculated for each line of business. Each risk is then summed for the company. The risks are then aggregated using a correlation matrix derived from the prior ten years of market movements. All negative correlations are floored at zero. Insurance and operational risks are assumed to have zero correlation with other factors.

## 2.9 Stress Testing

Stochastic testing is supplemented with deterministic scenario-based stress tests, performed annually. Each test is applied as an instantaneous shock to the economic conditions as of the valuation date. Interest rates have a floor of 0.10%.

	Stress A	Stress B	Stress C
<b>Government Rates</b>			
0.25	+2.00%	-3.00%	-4.00%
0.5	+1.50%	-3.00%	-4.00%
1	+1.00%	-2.00%	-4.00%
5	+0.75%	-1.50%	-2.00%
10	+0.75%	-1.00%	0%
20	+0.50%	-0.75%	0%
30	+0.50%	-0.75%	0%
<b>Corporate Spreads</b>			
AAA	0%	+1.00%	+0.50%
AA	0%	+1.50%	+0.75%
A	0%	+2.00%	+1.00%
BBB	0%	+4.00%	+2.00%
BB	0%	+6.00%	+3.00%
<b>Equity</b>			
Prices	-10%	-30%	+30%
Implied Volatility (10 yr)	+10%	+30%	+10%

## 2.10 Risk Management Committee

The committee meets on a regular quarterly basis during the year. Meetings focus on reviewing internal risk reports and interviews with key employees in finance, systems, and audit.

At its third quarter meeting, the committee unanimously recommended the hiring of a Chief Risk Officer (CRO), who will create and lead an independent Enterprise Risk Management (ERM)

department. The CRO will be responsible for developing and implementing a comprehensive company-wide ERM program and serve as the risk liaison across various business segments to address significant emerging concerns. The committee also recommended that the CRO report on risk-related issues at its quarterly meeting.

However, during the debate of this recommendation with the Board, Mr. Lyon expressed the opinion that the Risk Management Committee would be redundant once the CRO started. His preference was that the CRO report to the EVP-Planning as someone with significant experience who knew the company well and could serve as a guide to the CRO. Mr. Lyon recommended that the new CRO become an officer of the company following three to five years experience at the company. The Board concurred with Mr. Lyon and the Risk Management Committee will be disbanded on the date the CRO becomes an officer of SLIC.

## **2.11 Product Distribution:**

The Company distributes its product through an independent brokerage system. The Company supplies marketing materials and product descriptions. Brokers are responsible for their own training. The Company has relied upon its distribution system to clarify and explain the change in name of the Company.

## **2.12 Product Descriptions**

### **2.12.1 30-Year Term Insurance with Level Premium**

The term life insurance product is payable on death up to maturity of the contract. It has guaranteed level premiums and no cash value. The product is non-convertible.

Key terms are as follows:

- Face Amount offered from \$25,000 to \$25,000,000
- Annual Premium based upon 150% of expected mortality, an annual lapse rate of 5% and a discount rate of 4%
- Underwriting: guaranteed issue to all lives
- No cash value is offered
- First year commission equals 100% of premium
- Sales bonuses expected to equal 100% of commissions
- Expected mortality is 100% of 2001 US Smoking Ultimate Table

Sales have been extraordinary, in part due to competitive pricing, 100% first year compensation, and a strong advertising campaign. The company's nearest competitor has premiums more than 20% higher and pays its sales commission as 35% of premium for the first three years.

The Company has very few concerns with its Term product, as this product is much simpler than other products sold by the company. Hence, executive management would prefer its financial professionals focus their time and effort on its other product lines.

The Company is considering reinsurance due to the high volume and high face amounts requested from its clients but the reinsurance rates from both Conservative Re and from Aggressive Re both exceeded the gross premium level.

Recent mortality experience has been poor but the company has taken steps to reduce anti-selection by terminating the contracts of a few aggressive agents who had been selling policies to people entering hospital for major surgery. Product lapse rates to date have been consistently under 2%.

Since the product is selling well and the Company sees limited downside risk in this plain-vanilla product, the product pricing review will be postponed until in 2013.

### **2.12.2 Variable Annuity with GMAB**

The Variable Annuity with Guaranteed Minimum Accumulation Benefit (GMAB) rider has a ten-year maturity. It offers a collection of eight proprietary mutual fund choices (seven domestic and one foreign) and a fixed fund invested in the general account. The GMAB rider benefit is a return of premium at maturity if the account value is less than the initial deposit. No deposits are permitted after issue.

Key terms are as follows:

- 2.40% annual fee charged against account balance
  - 1.40% M&E, 0.75% for rider, 0.25% net investment fee
- 5% of premium one-time first year commission to salesperson
- Surrender charge =  $(10-Y)\%$  of account value, where Y = completed years from issue
- Death Benefit = Greater of initial deposit and the account balance
- On the tenth anniversary, the maturity benefit is the greater of the account value and the initial deposit
- Partial withdrawals are not allowed
- An annual policy lapse rate of 5% is assumed if the account value is greater than the initial deposit less four times the surrender charge; otherwise, no lapses assumed
- Expected mortality assumed to follow the 2000 Domestic Annuity Table

Compared to prior years, sales are significantly lower. There is no real differentiation from competitors with the current product (other than competitors offer a wider range of funds and rider options). To avoid the lengthy and expensive market research and product development

cycles, the Company has decided to be a 'fast-follower' and copy successful designs it sees in the market place.

Over the prior year, National Bank has begun selling a product to compete with GMAB written by the insurance industry. The product is a rider on an S&P 500 mutual fund that guarantees return of principle for a 2% fund fee. The rider has no specific death benefit but has no surrender charges and allows a reset on each anniversary of the deposit. National Bank has numerous branches throughout the country and seems to have a strong marketing department.

Proposed Improvements:

First, the marketing team believes that adding a wider range of investment fund options would attract new customers and help to retain existing clients. Therefore, the company plans to add new fund families over the next six months. As part of this expansion, the company is considering adding index funds from Brazil, Russia, India, and China and possibly on a currency-hedged basis. These funds will be managed by a third-party investment advisor.

Second, Marketing also believes additional guaranteed benefit riders similar to those that competitors have added over the past several years would boost sales. Therefore, the company is considering an enhanced product called VA Plus, adding an enhanced Guaranteed Minimum Death Benefit (GMDB) rider and a Guaranteed Minimum Income Benefit (GMIB) rider. These riders are under development and are expected to be available in nine months.

For GMDB, the death benefit is defined as of the prior anniversary and is the greater of a voluntary annual reset of the fund level and a return of cumulative premium accumulated at 5% per annum. The company expects this feature to be affordable since this benefit only pays out upon the rare combination of the insured dying and the market performing below historical average.

For the GMIB, the company will use the same 5% accumulation of premium assumption to buy annuity payments at its current purchase price assumptions.

For both the GMDB and GMIB riders, two alternate withdrawal bases were discussed:

1. Under 'dollar-for-dollar', the benefit is reduced by the amount of the partial withdrawal. For example,  $\text{adjusted DB} = \text{original DB} - \text{PW}$ , where DB = death benefit and PW = partial withdrawal.
2. Under 'proportional', the benefit is reduced in proportion to the account value. For example,  $\text{adjusted DB} = \text{original DB} * (\text{AV} - \text{PW})/\text{AV}$ , where AV is the account value at the time of withdrawal.



Under VA Plus, partial withdrawals will be allowed and handled on a dollar-for-dollar basis.

SLIC will be fast-tracking the product development process to design and price the new Project GMXB embedded options resulting in a very aggressive time schedule. The administrative system needs additional programming to handle an increased slate of fund and rider offerings.

### **2.12.3 Universal Life**

The universal life product is an adjustable premium product with a level face amount for the life of the contract. The policy will terminate if the account value reaches zero.

Key terms are as follows:

- Face Amount offered from \$25,000 to \$25,000,000
- Death Benefit = greater of Face Amount and 110% of Account Value
- Target Premium = \$25 per thousand payable for 20 years
- Renewal premiums will be accepted in any year up to twice the target premium
- Policies only issued to non-smoking males age 40 to 50
- Underwriting is full medical for all contracts
- First year commission equals 50% of the lesser the target premium and premium paid
- Renewal commissions are 10% of the premium paid
- Sales bonuses expected equals 100% of commissions
- Surrender charge for lapses in first ten years equal to the target premium in first two years, grading down to zero in year 10
- Partial surrenders are allowed once a year, in the amount of 25% of cash value
- Cost of Insurance (deducted from account balance annually in advance) = 120% of expected mortality, which is currently 80% of the 2002 US Basic ANB Mortality Table, and is applied to the net amount of risk
- The underlying mortality table is adjustable at the company's discretion but only based upon changes in expected mortality. The mortality rate shall be changed only on a class basis and with the approval of the regulator
- Policy maintenance is \$60 paid annually, in advance
- Credited rate on accumulation fund = greater of the underlying portfolio rate less 2% and the five year government bond rate plus 0.25% but never less than 3%. The credited rate is determined on each policy anniversary and is applicable for the following policy year.
- The company has full discretion in the investment of the policy accumulation funds
- The investment plan used for pricing was a rolling fund of five-year AA corporate paper yielding 6%
- Voluntary policy surrender rate is assumed to be 3.00% per year

Launch sales have been much lower than expected but the company is anticipating that the 3% floor on investment returns will become more attractive and result in higher sales. For the UL product, like VA, the Company has decided that 'fast-follower' is the preferred product development method for the near future.

The administrative system needs additional programming to handle some product features that are now available to the client. To date these features selections have been tracked through electronic notes in the policy file.

Three of the Company's competitors in the UL market have recently formed an administrative services only company, called UL Admin Co, to administer their universal life contracts. UL Admin Co performs all of the UL administrative tasks for the three companies – policy administration, valuation, and cash flow and reserve projections for planning and risk purposes. In recognition of the expense savings achieved, the three companies have given an extra-contractual benefit to their policyholders by cutting the annual policy maintenance charge by \$30.

Conservative Re has agreed to reinsure the mortality risk on a 50% coinsurance basis at the same price as the Company's COI charges with unlimited capacity. Conservative Re is the Company's preferred reinsurance partner as they put no capacity limits on any of their treaties with all of their clients. Conservative Re also provides excellent off-site educational sessions in exotic locations that help meet the Company's employees continuing educational requirements. SLIC considers Conservative Re to be an important strategic partner.

Policy issuance as a percentage of applications has been much lower than expected. Lapse rates in the first year are lower than anticipated in pricing. Recent mortality experience has been approximately equal to expected but SLIC has little exposure to date.

Due to the current low level of interest rates, the Company has revised the investment plan to be a mix of ten-year BBB corporate debt, high yielding sovereign paper of mixed maturity periods, and some exclusive opportunities in the private equity area.

#### **2.12.4 Single Premium Immediate Annuity**

The single premium immediate annuity is a straight life annuity with no certain period or death benefit.

- Single Premium = 110% of present value of expected payments discounted at 4%
- Straight Life Annuity (no certain period)
- Issued to all ages 65 and over
- No death benefit
- Expected mortality equals 100% of the 2000 US Annuity Table with Projection Scale X
- Commission equals 5% of premium
- Sales bonuses expected to equal 20% of commissions

Initial sales have been slow but have been strengthening recently as interest rates have fallen. Through interviews with select brokers, SLIC has noticed an odd correlation - it seems many of the Company's annuitants have also taken out term life insurance contracts with 'We-Serve-the-Healthy' Life in amounts equal to the annuity single premium.

Recent mortality experience has been approximately equal to expected but mortality improvement seems to be higher than expected.

The product is selling well, but decreasing interest rates is a matter of concern. In response, higher yielding investments will be utilized to meet the required 150 basis point profit margin.

Further, the company's Chief Economist has given assurances that, in the long run, interest rates are mean reverting towards higher long term historical averages and, therefore, the company will have sufficient earnings over the lifetime of the contract. As a future agenda item, the committee needs to decide how many years it will wait for interest rates to revert to 'normal' levels before repricing the product.

## 2.13 Balance Sheets

The following are the company's balance sheet (\$ billion) as of Dec 31, 2011:

<b>Statutory Balance Sheet</b>	SPIA	Term	UL	VA	Total
Cash and Investments (Book Value)	18.1	9.3	18.4	1.5	47.3
Deferred Tax Asset	-	-	-	-	-
Separate Account Assets	-	-	-	6.2	6.2
<b>Total Assets</b>	<b>18.1</b>	<b>9.3</b>	<b>18.4</b>	<b>7.7</b>	<b>53.5</b>
<i>Best Estimate Liability</i>	<i>16.4</i>	<i>4.7</i>	<i>14.0</i>	<i>-0.2</i>	<i>34.9</i>
<i>Implicit Margin</i>	<i>-0.7</i>	<i>2.1</i>	<i>2.7</i>	<i>0.3</i>	<i>4.4</i>
Statutory Reserve	15.6	6.8	16.7	0.1	39.3
Deferred Tax Liability	-	-	-	-	-
Separate Account Liabilities	-	-	-	6.2	6.2
<b>Total Liabilities</b>	<b>15.6</b>	<b>6.8</b>	<b>16.7</b>	<b>6.4</b>	<b>45.5</b>
Surplus	2.5	2.5	1.7	1.4	8.0
<b>Total Liabilities and Surplus</b>	<b>18.1</b>	<b>9.3</b>	<b>18.4</b>	<b>7.7</b>	<b>53.5</b>
<b>Risk Based Capital</b>	<b>0.6</b>	<b>0.6</b>	<b>0.4</b>	<b>0.3</b>	<b>1.7</b>
Diversification Benefit	-	-	-	-	-0.2
Actual to Required Capital	417%	417%	425%	467%	471%
<b>Economic Balance Sheet</b>	SPIA	Term	UL	VA	Total
Cash and Investments (Market Value)	18.1	9.4	18.3	1.5	47.3
Deferred Tax Asset	0.5	-	-	-	0.5
Separate Account Assets	-	-	-	6.2	6.2
<b>Total Assets</b>	<b>18.6</b>	<b>9.4</b>	<b>18.3</b>	<b>7.7</b>	<b>54.1</b>
<i>Best Estimate Liability</i>	<i>16.4</i>	<i>4.7</i>	<i>14.0</i>	<i>-0.2</i>	<i>34.9</i>
<i>Explicit Margin</i>	<i>0.7</i>	<i>0.7</i>	<i>0.9</i>	<i>0.0</i>	<i>2.3</i>
Economic Reserve	17.1	5.4	14.8	-0.2	37.2
Deferred Tax Liability	-	0.5	0.6	0.1	1.3
Separate Account Liabilities	-	-	-	6.2	6.2
<b>Total Liabilities</b>	<b>17.1</b>	<b>5.9</b>	<b>15.5</b>	<b>6.2</b>	<b>44.7</b>
Equity	1.5	3.5	2.9	1.5	9.4
<b>Total Liabilities and Surplus</b>	<b>18.6</b>	<b>9.4</b>	<b>18.3</b>	<b>7.7</b>	<b>54.1</b>
<b>Economic Capital Requirement</b>	<b>1.8</b>	<b>2.3</b>	<b>1.0</b>	<b>2.6</b>	<b>6.4</b>
Diversification Benefit	-	-	-	-	-1.4
Actual to Required Capital	83%	152%	290%	58%	147%

## 2.14 Portfolio Summary

The following is a breakdown by asset class of the market value of SLIC's general account investment portfolios (\$ million), excluding derivatives and variable annuity separate (segregated) accounts.

Portfolio	U.S. Treasuries	U.S. Agencies	U.S. Mortgage Backed Securities	U.S. Corporate Investment Grade	Short-Term	Total
Immediate Annuity	6,657	4,921	2,605	3,184	724	18,091
30-Year Term	377	282	94	8,661	0	9,414
Universal Life	6,331	4,624	3,202	2,916	1,246	18,320
Variable Annuity	0	0	0	1,342	149	1,491
Total	13,365	9,827	5,901	16,103	2,118	47,315

Other portfolio characteristics are as follows:

	Avg Duration	Avg Book Yield	Avg Quality*
Immediate Annuity	8.4	5.04%	1.0
30-Year Term	12.0	5.45%	2.7
Universal Life	6.5	4.94%	1.0
Variable Annuity	4.5	5.05%	3.1

\*Quality Ratings: Aaa=1, Aa=2, A=3, Baa=4

## 2.15 Historical Market Data

In preparation for a review of its economic capital model assumptions, SLIC has compiled the following summary of historical index returns for various asset classes.

### Summary of Monthly Index Returns, 3/31/1992 to 3/31/2012

	Barclays Capital U.S. Bond Indices						Equity Indices		
	Treasuries	Agencies	Mortgage Backed Securities	Corporate Investment Grade	Corporate High Yield	Aggregate	Long Treasuries	S&P 500	MSCI EAFE
Compound Annual Return	6.43%	6.24%	6.47%	7.15%	8.11%	6.63%	8.84%	8.55%	5.92%
Annualized Volatility	4.61%	3.68%	2.84%	5.59%	9.00%	3.73%	9.81%	15.05%	16.88%
Skewness	-0.22	-0.15	-0.06	-0.71	-1.17	-0.28	0.17	-0.69	-0.59
Kurtosis	4.00	4.22	4.89	7.56	12.54	3.93	4.96	4.22	4.29
<b>Correlations</b>									
Treasuries	1.00								
Agencies	0.95	1.00							
Mortgage Backed Securities	0.84	0.89	1.00						
Corporate Investment Grade	0.67	0.76	0.70	1.00					
Corporate High Yield	-0.10	0.05	0.10	0.54	1.00				
Aggregate	0.92	0.96	0.91	0.87	0.22	1.00			
Long Treasuries	0.94	0.86	0.75	0.64	-0.09	0.86	1.00		
S&P 500	-0.15	-0.05	0.02	0.27	0.62	0.06	-0.15	1.00	
MSCI EAFE	-0.18	-0.08	-0.03	0.29	0.62	0.04	-0.17	0.79	1.00
<b>Bond Index Data as of 3/31/2012</b>									
Duration	5.61	3.66	3.32	6.84	4.19	5.01	15.90		
Convexity	0.70	0.01	-2.02	0.91	0.00	-0.16	3.54		
Yield to Maturity	1.19%	1.26%	2.74%	3.41%	7.73%	2.23%	3.11%		
OAS to Treasuries	0.00%	0.36%	0.52%	1.76%	5.76%	0.64%	0.00%		

Source: Barclays Capital, Bloomberg

## **2.16 SLIC Disaster and Business Continuity Program**

Each department within SLIC maintains a Business Continuity Policy (BCP) under the direction and advice of the Business Buoyancy Department (BBD). As part of this process, SLIC senior management has designated business continuity coordinators for each of their respective departments. These coordinators maintain and update business continuity plans, keep inventories of vital records and establish an appropriate record retention schedule. Each quarter, the business continuity coordinators are required to complete a check-box report to senior management to indicate that they have fulfilled their duties.

In addition to complying with the program developed by the BBD, each department is encouraged to institute and maintain a Risk Mitigation Policy (RMP) to help SLIC rebuild in the event of a catastrophe. The RMP includes development and maintenance of rebuild instructions and management succession instructions. The RMP is reviewed and updated on an annual basis.

Periodic disaster recovery exercises are performed where SLIC personnel (with the exception of senior management) are required to work from an offsite location. SLIC has contracted out this offsite service from a third-party, Disasters-R-Us™, that specializes in providing shared disaster recovery capabilities.

Although Disasters-R-Us™ is located a fair distance from SLIC and Disasters-R-Us™ contracts out the same equipment to multiple clients on a first-come, first-serve basis, SLIC senior management felt that the price was affordable.

SLIC also practices each year a fire drill exercise where SLIC personnel (with the exception of senior management) are required to leave the building, meet at nearby pre-determined rallying points and wait for instructions. Those employees with SLIC-issued laptops are required to take their laptops with them, proceed to a nearby coffee shop, purchase a small coffee with the unlimited refill option and continue work by connecting to the coffee shop's Wi-Fi hotspot.

Each year, SLIC senior management participates in an offsite workshop to review all of the operating policies in the disaster and business continuity program as well as the effectiveness of the most recent disaster recovery and fire drill exercises.

## **2.17 SLIC Salaried Pension Plan**

The following pages contain financial and demographic information about the SLIC Salaried Pension Plan, as well as information about the Statement of Funding Policies and Procedures for the Plan and the Statement of Investment Policies and Procedures for the Plan.

SLIC, through its Board of Directors, has delegated responsibility for the day-to-day management of the Plan to the Vice-President, Human Resources and the Chief Financial Officer. The CFO's focus is on financial reporting and cash contribution requirements, the VP HR is largely responsible for all other activities.

#### **2.17.1 Pension Plan - Benefit Provisions and Financial Information**

The information on the following pages enumerates the current provisions of the Pension Plan and provides certain historical financial information. Historical financial information is not available prior to January 1, 2007.



**Extracts of Retirement Benefits Provisions and Financial Information**Simple Life Salaried Pension Plan

Eligibility	Immediate
Vesting	100% after 5 years of plan membership
Normal Retirement Age	65
Early Retirement Age	55 with 5 years of plan membership
Best Average Earnings	Average annual earnings during 60 consecutive months in which earnings were highest
Earnings	Base pay, excluding overtime and bonuses
Normal Retirement Benefit	2% of best average earnings times years of service, subject to tax system maximum
Accrued Benefit	Benefit calculated as under the normal retirement benefit formula using best average earnings and service as of date of calculation
Early Retirement Benefit	Accrued benefit reduced by 0.25% per month that early retirement precedes age 62 for active participants and actuarial equivalent for terminated vested participants
Form of Benefit	If with spouse, 60% joint & survivor benefit, without reduction. If without spouse, single life annuity
Optional Forms of Benefit	None
Indexing	None
Termination Benefit	(1) Lump sum value equal to actuarial present value of accrued pension payable at age 65; or (2) Deferred pension

Pre-Retirement Death Benefit		Lump sum value equal to actuarial present value of accrued pension payable at age 65 to named beneficiary
Disability Benefit		Accrual of service while on long term disability and immediate pension without a reduction upon permanent and total disability

<b>Simple Life Salaried Pension Plan</b>					
<i>Historical Actuarial Valuation Results</i>					
	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
<b>Participant Summary - January 1</b>					
<i>Active Participants</i>					
(a) count	975	966	959	950	933
(b) average age	50.9	51.2	51.2	51.4	52.0
(c) average service	17.3	17.5	17.7	17.8	17.8
(d) average future working lifetime	11.0	11.0	11.0	11.0	11.0
(e) average plan earnings (prior year)	95,000	95,100	95,200	95,000	94,900
<i>Deferred Vested Participants</i>					
(a) count	-	-	-	-	-
<i>Pensioners (incl beneficiaries)</i>					
(a) count	915	915	916	916	921
(b) average age	74.2	74.2	73.9	73.5	73.0
(c) average annual benefit	47,500	47,600	47,700	47,700	47,500
<b>Plan Assets (numbers in \$000's) *</b>					
<i>Change in Plan Assets during Prior Year:</i>					
Market Value of Assets at January 1 of prior year	-	664,572	679,902	486,055	584,132
Employer Contributions during prior year	-	14,800	16,664	66,946	46,599
Benefit Payments during prior year	-	(44,763)	(44,654)	(45,693)	(45,393)
Expenses during prior year	-	-	-	-	-
Investment return during prior year	-	45,293	(165,856)	76,824	58,886
Market Value of Assets at January 1 of current year	664,572	679,902	486,055	584,132	644,224
Rate of return during prior year	0%	7%	-25%	15%	10.1%
<i>Average Portfolio Mix During Prior Year:</i>					
(a) Domestic Large Cap Equities	0%	40%	39%	33%	36%
(b) Domestic Small Cap Equities	0%	20%	20%	15%	16%
(c) Domestic Fixed Income	0%	30%	30%	42%	39%
(d) International Equities	0%	4%	4%	5%	4%
(e) Real Estate	0%	4%	4%	2%	3%
(f) Cash	0%	2%	2%	3%	2%
(g) Total	0%	100%	100%	100%	100%
<i>Asset Class Returns during Prior Year:</i>					
(a) Domestic Large Cap Equities	0%	5%	-37%	26%	15%
(b) Domestic Small Cap Equities	0%	9%	-45%	28%	5%
(c) Domestic Fixed Income	0%	7%	5%	6%	7%
(d) International Equities	0%	16%	-6%	-17%	13%
(e) Real Estate	0%	6%	-63%	51%	29%
(f) Cash	0%	5%	2%	0%	0%
<i>* numbers may not add due to rounding</i>					

**Simple Life Salaried Pension Plan**  
**Historical Actuarial Valuation Results**

<b>Actuarial Valuation - January 1 (numbers in \$000's) *</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
<b>1. Actuarial Accrued Liability:</b>					
(a) Active participants	256,032	278,310	279,745	288,114	298,850
(b) Deferred vested participants	-	-	-	-	-
(c) Pensioners	395,509	405,052	406,347	415,085	437,475
(d) Total	651,541	683,362	686,091	703,199	736,325
<b>2. Actuarial Value of Assets</b>	664,572	679,902	486,055	584,132	644,224
<b>3. Unfunded Actuarial Accrued Liability: (1d)-(2)</b>	(13,031)	3,460	200,036	119,067	92,101
<b>4. Normal Cost (beg. Of year)</b>	14,800	15,903	15,805	16,186	16,789
<b>5. Change in Unfunded AAL during prior year:</b>					
(a) Unfunded AAL at prior valuation date	-	(13,031)	3,460	200,036	119,067
(b) Adjustment for Interest	-	(880)	225	13,002	7,739
(c) Normal Cost w/interest less contributions	-	499	(268)	(52,290)	(30,875)
(d) (Gain)/Loss on investment	-	(1,446)	209,140	(44,539)	(20,878)
(e) (Gain)/Loss on salary increases less than expected	-	(17,013)	(17,797)	(18,771)	(19,031)
(f) (Gain)/Loss on assumption changes	-	27,971	-	7,876	30,342
(g) (Gain)/Loss on all other factors	-	7,358	5,276	13,753	5,737
(h) Unfunded AAL at current valuation date	(13,031)	3,460	200,036	119,067	92,101
<b>6. Actuarial Basis</b>					
(a) Interest	6.75%	6.50%	6.50%	6.50%	6.00%
(b) Salary scale	3.75%	4.00%	4.00%	4.00%	3.50%
(c) Consumer Price Index	3.00%	3.00%	3.00%	3.00%	2.50%
(d) Mortality	UP 1994 AA15	UP 1994 AA15	UP 1994 AA15	1994 Uninsured Pensioner Mortality - Generational	1994 Uninsured Pensioner Mortality - Generational
(e) Turnover	None				
(f) Retirement age	Age 62				
(g) Proportion married and age difference	80% married, husbands 3 years older than wives				
(h) Expenses	Assume all expenses paid by company				
(i) Asset Valuation Method	Market value of assets				
(j) Actuarial Cost Method	Projected unit credit				
<i>* numbers may not add due to rounding</i>					

**Simple Life Salaried Pension Plan**  
**Historical Actuarial Valuation Results**

<b>Expense Valuation - January 1 (numbers in \$000's) *</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
<b>1. Reconciliation of funded status at valuation date:</b>					
(a) Accrued Benefit Obligation (ABO)	(474,781)	(457,113)	(472,403)	(498,565)	(521,877)
(b) Projected Benefit Obligation (PBO)	(730,433)	(703,251)	(726,773)	(767,023)	(802,888)
(c) Fair Value of Assets	664,572	679,902	486,055	584,132	644,224
(d) Funded Status: (a) + (b)	(65,861)	(23,349)	(240,718)	(182,891)	(158,664)
(e) Unamortized net actuarial (gain)/loss	56,088	17,601	241,333	211,784	203,307
(f) Accrued benefit asset/(liability)	(9,773)	(5,748)	616	28,893	44,643
<b>2. Pension Expense:</b>					
(a) Service Cost (beg. of year)	17,759	16,645	17,313	18,558	19,249
(b) Interest Cost	41,734	43,598	43,274	43,866	41,971
(c) Expected return on assets	(48,719)	(49,943)	(37,251)	(43,855)	(45,138)
(d) Amortization of past service cost	-	-	-	-	-
(e) Amortization of net actuarial (gain)/loss	-	-	15,332	12,280	11,183
(f) Pension Expense for year	10,774	10,300	38,669	30,849	27,266
<b>3. Actuarial Basis and Supplemental Data</b>					
(a) Discount rate	5.75%	6.25%	6.00%	5.75%	5.25%
(b) Return on assets	7.50%	7.50%	7.50%	7.50%	7.00%
(c) Salary scale	3.75%	3.50%	3.50%	3.50%	3.00%
(d) Consumer Price Index	3.00%	3.00%	3.00%	2.50%	2.50%
(e) Mortality	UP 1994 AA15	UP 1994 AA15	UP 1994 AA15	1994 Uninsured Pensioner Mortality - Generational	1994 Uninsured Pensioner Mortality - Generational
(f) Turnover	None				
(g) Proportion married and age difference	80% married, husbands 3 years older than wives				
(h) Retirement age	Age 62				
(i) Expenses	Assume all expenses paid by company				
(j) Asset Valuation Method	Market value of assets				
(k) Actuarial Cost Method	Projected unit credit				
(l) Employer contributions	14,800	16,664	66,946	46,599	46,599
(m) Benefit payments	(44,763)	(44,654)	(45,693)	(45,393)	(45,393)
<i>* numbers may not add due to rounding</i>					

**Simple Life Salaried Pension Plan  
Reconciliation of Plan Participants (2007 - 2011)**

	<b>Active</b>	<b>Pensioners/ Beneficiaries</b>	<b>Total</b>
<b>1. Participants as of January 1, 2007</b>	<b>975</b>	<b>915</b>	<b>1,890</b>
- New Entrants/Rehires	9	-	9
- Terminated Nonvested	(3)	-	(3)
- Terminated Vested (Lump Sum Cashout)	(8)	-	(8)
- Retirement	(7)	7	-
- Death w/ Beneficiary	-	3	3
- Deaths	-	(10)	(10)
- Net change	(9)	-	(9)
<b>2. Participants as of January 1, 2008</b>	<b>966</b>	<b>915</b>	<b>1,881</b>
- New Entrants/Rehires	11	-	11
- Terminated Nonvested	(3)	-	(3)
- Terminated Vested (Lump Sum Cashout)	(7)	-	(7)
- Retirement	(8)	8	-
- Death w/ Beneficiary	-	3	3
- Deaths	-	(10)	(10)
- Net change	(7)	1	(6)
<b>3. Participants as of January 1, 2009</b>	<b>959</b>	<b>916</b>	<b>1,875</b>
- New Entrants/Rehires	9	-	9
- Terminated Nonvested	(3)	-	(3)
- Terminated Vested (Lump Sum Cashout)	(7)	-	(7)
- Retirement	(7)	7	-
- Death w/ Beneficiary	(1)	7	6
- Deaths	-	(14)	(14)
- Net change	(9)	-	(9)
<b>4. Participants as of January 1, 2010</b>	<b>950</b>	<b>916</b>	<b>1,866</b>
- New Entrants/Rehires	4	-	4
- Terminated Nonvested	(2)	-	(2)
- Terminated Vested (Lump Sum Cashout)	(7)	-	(7)
- Retirement	(11)	11	-
- Death w/ Beneficiary	(1)	7	6
- Deaths	-	(13)	(13)
- Net change	(17)	5	(12)
<b>5. Participants as of January 1, 2011</b>	<b>933</b>	<b>921</b>	<b>1,854</b>



<b>Rate</b>	<b>Actives</b>	<b>Pensioners</b>	<b>Total</b>
6.00%	298,849,923	437,475,000	736,324,923
5.50%	319,436,841	455,140,469	774,577,310
6.50%	280,175,145	420,993,205	701,168,350
<b>Duration</b>	13.1	7.8	10.0
<b>Convexity</b>	255.9	108.2	168.2
<b>Year</b>	<b>Actives</b>	<b>Pensioners</b>	<b>Total</b>
2012	5,600,670	40,799,463	46,400,134
2013	8,525,590	40,568,359	49,093,948
2014	10,148,918	40,220,391	50,369,308
2015	13,658,505	39,805,118	53,463,622
2016	17,996,745	39,173,346	57,170,091
2017	19,296,552	38,587,266	57,883,819
2018	19,627,982	37,501,184	57,129,166
2019	21,455,346	36,099,262	57,554,609
2020	23,345,377	35,155,749	58,501,126
2021	26,285,265	34,136,889	60,422,154
2022	26,643,799	33,004,995	59,648,794
2023	26,246,781	31,765,434	58,012,215
2024	26,642,429	30,466,485	57,108,914
2025	27,511,396	29,068,892	56,580,289
2026	27,013,015	27,583,158	54,596,173
2027	26,644,970	26,023,762	52,668,732
2028	26,173,107	24,403,253	50,576,360
2029	26,071,680	22,745,122	48,816,802
2030	26,020,589	21,065,702	47,086,291
2031	25,493,792	19,375,040	44,868,832
2032	24,761,933	17,685,325	42,447,259
2033	24,033,134	16,006,991	40,040,125
2034	23,957,982	14,353,396	38,311,379
2035	22,959,638	12,746,004	35,705,642
2036	22,419,813	11,195,787	33,615,600
2037	21,426,336	9,721,192	31,147,528
2038	20,399,010	8,347,283	28,746,293
2039	19,284,589	7,081,414	26,366,003
2040	18,109,218	5,931,503	24,040,721



<b>Year</b>	<b>Actives</b>	<b>Pensioners</b>	<b>Total</b>
2041	16,928,547	4,904,023	21,832,570
2042	15,767,657	4,001,726	19,769,384
2043	14,600,642	3,221,909	17,822,551
2044	13,351,399	2,555,852	15,907,251
2045	12,197,317	1,995,055	14,192,372
2046	11,027,844	1,533,577	12,561,421
2047	9,939,448	1,158,949	11,098,397
2048	8,901,269	858,898	9,760,167
2049	7,921,292	624,477	8,545,769
2050	7,008,643	444,750	7,453,392
2051	6,167,913	309,449	6,477,361
2052	5,398,442	210,845	5,609,286
2053	4,698,791	140,448	4,839,238
2054	4,065,395	91,376	4,156,772
2055	3,498,809	58,334	3,557,143
2056	2,995,228	36,411	3,031,640
2057	2,547,124	22,139	2,569,263
2058	2,147,672	13,159	2,160,831
2059	1,797,391	7,604	1,804,996
2060	1,494,435	4,266	1,498,700
2061	1,232,571	2,324	1,234,895
2062	1,005,312	1,227	1,006,539
2063	810,199	606	810,805
2064	645,954	310	646,264
2065	508,877	150	509,027
2066	393,899	73	393,972
2067	298,442	36	298,479
2068	221,736	18	221,754

<b>Year</b>	<b>Actives</b>	<b>Pensioners</b>	<b>Total</b>
2069	161,158	9	161,167
2070	114,020	5	114,024
2071	78,079	0	78,079
2072	51,809	0	51,809
2073	33,072	0	33,072
2074	20,420	0	20,420
2075	12,154	0	12,154
2076	6,991	0	6,991
2077	3,888	0	3,888
2078	2,098	0	2,098
2079	1,098	0	1,098
2080	555	0	555
2081	273	0	273
2082	132	0	132
2083	0	0	0
2084	0	0	0
2085	0	0	0
2086	0	0	0
2087	0	0	0
2088	0	0	0
2089	0	0	0
2090	0	0	0
2091	0	0	0
2092	0	0	0
2093	0	0	0
2094	0	0	0

### **2.17.2 Statement of Funding Policies and Procedures - Simple Life**

The Company has prepared a Statement of Funding Policies and Procedures (“Statement”) to document the governance of the Plan. The Company has also prepared a Statement of Investment Policies and Procedures. Extracts of the Statement are provided below followed by a summary of the Statement contents.

#### ***2.17.2.1 Allocation of Responsibilities***

The Company has delegated the management of Plan funding as follows:

The Company, acting through Management, will:

- Establish, review and amend, as required, the Statement of Funding Policies and Procedures;
- Select the Pension Consultant and the Actuary;
- Review funding reports prepared by the Actuary regarding the funding of the Plan; and
- Be responsible for the assumption or delegation of any responsibilities not specifically mentioned.

The Pension Consultant and Actuary will:

- Assist, as required, the Company in the preparation of the Statement of Funding Policies and Procedures;
- Present to the Company, as required by the Statement of Funding Policies and Procedures, reviews and reports regarding the funding of the Plan; and
- Comment to the Company on any changes in plan design, contribution flow or pension legislation that may affect the funding of the Plan.

#### ***2.17.2.2 Funding Policy Principles***

The Company is the primary risk bearer under the Plan. As a result, the funding objective of the Company is the accumulation of assets which will secure the Plan’s benefits in respect of service already rendered. The accumulation of assets should be reasonable, without significant volatility or further recourse to the Company’s assets.

The Company believes management of the Plan on a going concern basis is the most suitable means to achieve these objectives.

### **2.17.2.3 Management of Risks**

The Company has adopted the following policies to mitigate their risks:

- Going-concern valuations are to be prepared using best estimate assumptions adjusted to include margins for adverse deviation. The Company will consult with the Pension Consultant and Actuary regarding the adoption of margins for adverse deviation.
- Emerging experience will differ from the assumptions made for going-concern purposes. The Pension Consultant and Actuary will monitor emerging experience and recommend revisions to the going-concern assumptions as appropriate.
- Plan provisions are managed to mitigate, to the extent possible, demographic and economic risks. Benefit improvements under the Plan will be made with due regard to the Plan's funded status.
- Investment activity will be carried out with due regard to the liability structure of the Fund, to the cash flow requirements of the Fund, and to the risks and rewards inherent in the defined benefit investments. The Statement of Investment Policies and Procedures documents the Company's policies regarding investment risk.

### **2.17.2.4 Funding Target**

The funding target for the Plan is to have a funded ratio (assets divided by liabilities) of 100% on a going-concern basis.

### **2.17.2.5 Funding Risks**

The Company bears the following funding risks:

- The Plan's demographic experience may differ from best-estimate assumptions. The Plan provides for subsidized early retirement provision and bears the risk of overutilization of the provision by the Plan membership.
- The Plan's economic experience may differ from best-estimate assumptions. In addition to investment risks, the Company bears the risks associated with providing a final average earnings benefit.
- The Plan's liabilities are debt-like in nature and have a long term to maturity. As a result of the current investment strategy and nature of the Plan's liabilities, there is the risk of an asset-liability mismatch.

\* \* \* \* \*

The contents of the Statement follow:

- PURPOSE
- BACKGROUND, PLAN TYPE AND LIABILITIES

- ALLOCATION OF RESPONSIBILITIES
- FUNDING POLICY PRINCIPLES
- FUNDING RISKS
- MANAGEMENT OF RISKS
- FUNDING TARGET
- ELIMINATION OF DEFICITS
- UTILIZATION OF EXCESSES
- FREQUENCY OF VALUATIONS
- COMMUNICATION
- APPENDIX 1 – Summary of Roles
- APPENDIX 2 – Summary of Liabilities, Assets and Membership Data
- APPENDIX 3 – History of SFP&P Review and Amendments

***2.17.2.6 Statement of Investment Policies and Procedures - Excerpts***

Following are excerpts from the Statement of Investment Policies and Procedures for the Simple Life Insurance Company’s Pension Plan.

***2.17.2.7 Investment Risk***

- Investment risk is borne by the Company
- Going-concern surplus, subject to any legislative restrictions, can be applied against the Company’s Normal Actuarial Cost

***2.17.2.8 Allocation of Responsibilities***

The Company, acting through Management, will:

- Establish, review and amend, as required, the Statement of Investment Policies and Procedures;
- Select one or more fund managers (“Fund Managers”), the Pension Consultant and the Actuary;
- Select the Custodian to hold pension fund assets;
- Review the performance of the Fund and the Fund Managers at least annually; and
- Be responsible for the assumption or delegation of any responsibilities not specifically mentioned.

The Fund Managers will:

- Manage the asset mix and select securities within each Investment Fund Option, subject to applicable legislation and the constraints set out in this Statement.

The Pension Consultant and Actuary will:

- Assist, as required, the Company in the preparation of the Statement of Investment Policies and Procedures; and
- Comment to the Company on any changes in plan design or contribution flow that may affect the investment of assets.

The Custodian will:

- Fulfil the regular duties required by law of the Custodian in accordance with the Plan;
- Participate in annual reviews of the Statement of Investment Policies and Procedures;
- Present to the Company, at least annually, reviews and reports of investment performance of the Fund Managers;
- Provide the Company with monthly updates on the performance of the Fund Managers;
- Provide the Company with information, on an ongoing basis, about changes at the Fund Managers that could affect investment performance;
- Present to the Company, at least annually, reviews and reports of all investment Fund assets and transactions for the period;
- Monitor actual investments as appropriate to ensure compliance with the Pension Benefits Act; and
- Rebalance the Plan portfolios as requested by the Company.

#### ***2.17.2.9 Investment Objectives***

- to preserve the capital;
- to provide sufficient funds to meet payments as they become due; and
- to maintain sufficient assets over actuarial requirements to meet unforeseen liabilities.

#### ***2.17.2.10 Rate of Return Objectives***

- (a) to achieve an average annual rate of return, net of investment expenses, of at least the funding valuation rate of return (currently 6.0%) per year, measured over moving, four-year periods;
- (b) to achieve top third performance, relative to the peer group of fund managers, measured over moving, four-year periods;
- (c) to exceed the passive benchmark for the Pension Fund by 1.00% per annum, measured on a four-year moving average basis; and
- (d) to achieve at least the increase in the Consumer Price Index plus 3%, on a four-year moving average basis.

#### **2.17.2.11 Asset Allocation Guidelines**

The following normal policy allocation, and associated range for strategic deviation at any time, has been adopted by the Company:

<b>Percentages of Fund at Market Value</b>	<b>Normal</b>	<b>Minimum</b>	<b>Maximum</b>
Domestic Equities	40%	30%	50%
International Equities	20%	15%	25%
Domestic Fixed Income	30%	15%	45%
Real Estate (Private)	4%	0%	8%
Private Equity	4%	0%	8%
Cash	2%	0%	4%

Within the ranges noted above, the Fund Managers may actively vary the asset mix in an effort to achieve the investment objectives of the Company.

#### **2.17.2.12 Passive Management Objectives**

The rate of return expected to be achieved through passive management of the assets in the Plan Fund will be based on the normal allocation of assets. The passive return shall be set equal to the sum of:

- (a) 45.0% of the S&P 500 Index return for the year;
- (b) 20.0% of the MSCI EAFE Index return for the year; and
- (c) 35.0% of the Barclays Capital Aggregate Bond Index return for the year.

#### **2.17.2.13 Rebalancing**

The Company will direct the re-balancing of the assets in the component pooled funds, when it deems rebalancing to be appropriate.

#### **2.17.2.14 Related Party Transactions**

A "Related Party" is:

- (a) the Company, acting as Plan Administrator,
- (b) an officer, director or employee of the Company,
- (c) the funding agent or person responsible for investing the assets of the Plan, or any officer, director or employee thereof,
- (d) an association or trade union representing employees of the Company, or an officer or employee thereof,
- (e) an employer who participates in the Plan, or an employee, officer or director thereof,
- (f) the Plan Participant,

- (g) a person (including spouse or child) directly or indirectly holding more than 10% of the voting shares of the Company,
- (h) the spouse or child of (a) to (g),
- (i) an affiliate of the Company,
- (j) a corporation directly or indirectly controlled by a person in (a) to (h),
- (k) an entity in which a person in (a), (b), (e) or (g), has a substantial investment (where “substantial investment” means more than 25% of the ownership interests in an unincorporated entity, more than 10% of the voting rights of a corporation or more than 25% of the shareholders’ equity in a corporation) or,
- (l) an entity with substantial investment in the Company.

“Related Parties” excludes government or a financial institution holding Plan assets if not the administrator.

The Company, acting as Plan Administrator, shall not, directly or indirectly:

- (a) lend the assets of the Plan to a Related Party or invest those assets in the securities of a Related Party; or
- (b) enter into a transaction with a Related Party on behalf of the Plan, subject to a minimum limit of \$50,000 per transaction and a cumulative limit of \$250,000 in a Plan’s fiscal year.

Related Party transactions are acceptable provided they are necessary for the operation of the Plan and are purchased on terms and conditions that are at least as favourable for the Plan as are otherwise available.



**2.17.2.15 Appendix - Economic Data**

The investment consultant for SLIC's DB Plan has supplied the following economic data:

SLIC DB Plan	Market Value (\$000)	Duration	KRD 1 Yr	KRD 3 Yr	KRD 5 yr	KRD 10 Yr	KRD 20 Yr	KRD 30 Yr
Plan Actives	298,850	13.1	0.05	0.25	1.08	3.60	4.50	3.62
Plan Pensioners	437,475	7.8	0.20	0.52	1.35	2.85	2.22	0.66
Plan Total Liabilities	736,325	10.0	0.15	0.42	1.25	3.16	3.15	1.87

	Equity Indices		Barclay's Capital U.S. Bond Indices	
	S&P 500	MSCI EAFE	Aggregate	Aggregate 10+ Year Maturity
Expected Returns	6.50%	8.00%	2.30%	3.00%
Annualized Volatility	15.05%	16.88%	3.73%	10.02%
Duration	0.00	0.00	5.01	14.19
Skewness	-0.67	-0.77	-0.41	0.03
Kurtosis	4.22	4.51	4.82	5.56

Correlations	Equity Indices		Barclay's Capital U.S. Bond Indices	
	S&P 500	MSCI EAFE	Aggregate	Aggregate 10+ Year Maturity
S&P 500	1.00			
MSCI EAFE	0.79	1.00		
Aggregate	0.06	0.04	1.00	
Aggregate 10+ Year Maturity	-0.10	-0.05	0.90	1.00

**SLIC DB PLAN: Top 10 Equity Holdings**

Rank	Name	Beta	Rank	Name	Beta
1	General Electric	1.60	6	Caterpillar	2.00
2	Citigroup	0.99	7	Berkshire Hathaway	0.48
3	Exxon Mobil	0.49	8	Costco	0.79
4	Mead Johnson	0.75	9	Procter & Gamble	0.46
5	AT&T	0.60	10	Cisco Systems	1.18

**SLIC DB Plan:**

Portfolio Managers US Fixed Income	Current % Allocation	Expected Tracking Error	TE Volatility
Manager A	50%	1.2%	4%
Manager B	50%	2.0%	4%
Benchmark	0%	0%	0%

Portfolio Managers US Equity	Current % Allocation	Expected Tracking Error	TE Volatility
Manager C	50%	3.6%	6%
Manager D	50%	2.4%	6%
Benchmark	0%	0%	0%

### **3 Health Insurance Companies**

#### **3.1 Background**

AHA Health Insurance Company (AHA) is a large national insurer located in California with its home office in Los Angeles. AHA is wholly owned by Lyon.

AHA Health provides basic life, health and disability benefits to its employees while they are employed by the company. These benefits do not continue after employees leave the company.

AHA Health sponsors a company-paid final-average-earnings defined benefit pension plan for its employees.

Active Choice Insurance Company (Active Choice) is a small local health insurance company domiciled in New York with its home office in Albany. Active Choice is a potential acquisition target for AHA.

#### **3.2 Employee Benefits**

AHA Health provides basic life, health and disability benefits to its employees while they are employed by the company. These benefits do not continue after employees leave the company.

AHA Health sponsors a company-paid final-average-earnings defined benefit pension plan for its employees.

Active Choice provides basic life, health and disability benefits to its employees while they are employed by the company. These benefits do not continue after employees leave the company.

Active Choice does not sponsor any pension or savings plans for its employees.

#### **3.3 Product Lines**

AHA sells individual and group insurance in California and 14 other states. It is in both the small and large group markets in all states. In addition, AHA has a small block of long term care (LTC) business with policyholders located all over the country.

Active Choice is in the small and large group markets in the state of New York.

#### **3.4 Product Structure**

AHA's policies include comprehensive major medical coverage of hospital services, physician services, and prescription drugs. In addition, the group policies include dental coverage.

Active Choice's products include comprehensive major medical coverage of hospital services, physician services, dental services, and prescription drugs.

### **3.5 Provider Networks & Medical Management**

AHA has staff that negotiates with physician and hospital providers in each state in which it is licensed and continually monitors these provider networks. It has contracted with Networks R' Us to use its provider networks when members need services outside of states in which it is licensed. In addition, AHA has contracted with Carefree Rx, a nationwide drug plan, to manage and administer its prescription drug coverage. Finally, AHA has a contract with Painless Dental to manage and administer its dental plans.

AHA has its own centralized medical management staff which administers its medical management policies consistently in all states in which it is licensed. AHA's staff continually reviews and revises policies to keep costs down and to keep up with the latest developments. Its vendors, Networks 'R' Us, Carefree Rx, and Painless Dental, work with AHA to make sure their medical management policies do not conflict with those of AHA.

Active Choice has contracted with Networks 'R' Us to use their provider networks for physician and hospital services. It also has contracts with Carefree Rx and Painless Dental to manage and administer their prescription drug and dental plans, respectively. In order to lower costs, it periodically puts its network contracts out to bid. While this may lower premiums it has been disruptive to members in the past.

Active Choice uses the standard medical management from its vendors. The company has a medical management staff that coordinates with the vendors medical managers to ensure that the vendors meet New York requirements and that their policies are consistent with the Active Choice product language.

### **3.6 Operations**

AHA has a claims system developed and maintained by a well-known and well-respected national vendor. AHA maintains a close relationship with this vendor in order to make sure that the system meets all of its needs. On the other hand, Active Choice has a "home grown" system that has performed well over the years. However, modifications are difficult and take time which has resulted in payment errors.

Both companies are subject to Sarbanes-Oxley requirements. Needless to say, their controls in many areas differ and some are drastically different.

Both companies underwrite small business coverage, but their procedures are very different. The advent of healthcare reform will bring their underwriting processes closer together. Both companies use credibility rating but have different points for determining whether a group is fully credible.

AHA is diligent in collecting data. Their information is categorized in a number of different ways that allows all parts of the company to use the same data base. For example, Medical Management can use the corporate database to determine which of its initiatives have been successful. Their data are used for research, forecasting, group reporting, and financial reporting. The group reports have proved helpful in showing groups how to lower their costs. Also, it is easy for AHA to do ad hoc financial analyses if problems arise. Active Choice stores its data mainly at the group level and use categories that allow it to do some detailed reporting to groups, pricing, monthly financial reporting and, of course, statutory reporting.

### **3.7 Management/Culture**

Lyon Corporation management has little experience in health insurance. As result, they are content to allow the AHA management a great deal of autonomy and this arrangement has worked well in the past.

AHA's management tends to be aggressive and willing to take risks. The fact that their business is spread over a large membership base in 15 states may give them a sense of security. On the other hand, the management of Active Choice appears to be more conservative. However, since their company covers the entire state of New York, they are adept at dealing in diverse markets (rural to cosmopolitan). Both management teams have generous incentive plans but requirements for receiving incentive payments differ. Finally, there are substantial cultural difference between the southern California AHA and the northeastern Active Choice management teams.

Neither company has a CRO. AHA has a risk committee with limited scope and authority and different senior managers take on a CRO role as needed.

Both organizations have incentive plans. AHA's plan criteria include membership growth, profitability, and quality of care. AHA's plan covers management staff from top management to frontline management. The goal is to have all management focused on the key drivers of success. Active Choice's plan only covers senior management and the incentives cover the direct responsibilities of each executive (e.g., the chief marketing officer is responsible for growth and the CFO is responsible for profitability). The goal of this plan is to make sure senior executives focus on their responsibilities and do not get sidetracked. Also, this type of plan ensures that management in the rest of the company does not make decisions directly affecting a given executive's area of the business.

### **3.8 Healthcare Reform & Other Regulatory Issues**

AHA's staff has been following healthcare reform since its inception and has developed and updated detailed implementation plans. These include timelines and requirements for additional staff. The new staff members need to be hired in time to get at least 6 months of training. At this time, the funds for the new staff have not been approved so hiring has been put on hold.

The management of Active Choice has been following healthcare reform and has decided to use a vendor to help with the implementation. This will leave the current staff free to concentrate on the current business. Currently, Active Choice is negotiating with several vendors.

Next year, AHA will undergo its triennial audit by the California Department of Insurance. Management anticipates that there will not be any problems but this audit entails a substantial effort from Finance, Internal Audit, Actuarial, and other areas.

### **3.9 Going Forward**

The corporate CFO of AHA is interested in hedging the LTC risk and has called together a team from AHA's finance and actuarial areas plus the corporate finance and investment areas to see how to move ahead with this idea. It would seem that the timing on this initiative is very apropos because the management of AHA is looking into purchasing a block of LTC business.

In addition, AHA management is looking into purchasing Active Choice. This driving force behind this acquisition is to help AHA enter a new market without having to build a lot of infrastructure. Initially, the Active Choice management will remain in place to run the company and integration will proceed over several years. AHA management is putting together a due diligence team including staff from corporate and AHA finance, actuarial, marketing, and medical management.

### 3.10 AHA Financial Statements

#### Balance Sheet

	Amount
Assets	
1. Cash and invested assets	414,963,714
2. Accident and health premiums due and unpaid	17,312,324
3. Amounts recoverable from reinsurers	0
4. Net credit for ceded reinsurance	0
5. All other admitted assets (balance)	<u>19,244,535</u>
6. Total assets	451,520,574
Liabilities, Capital and Surplus	
7. Claims unpaid	67,001,064
8. Accrued medical incentive pool and bonus payments	150,101
9. Premiums received in advance	83,523,009
10. Funds held under reinsurance treaties	0
11. Reinsurance in unauthorized companies	0
12. All other liabilities (balance)	<u>12,944,261</u>
13. Total liabilities	<u>163,618,435</u>
14. Total capital and surplus (line 6 minus line 13)	287,902,138
15. Total liabilities, capital and surplus (line 13 + line 14)	451,520,574

#### Transactions with Providers

	Direct Medical Expense Payment
Capitation Payments	
1. Medical groups	0
2. Intermediaries	32,085,262
3. All other providers	<u>0</u>
4. Total capitation payments	32,085,262
Other Payments	
5. Fee-for-service	37,327,794
6. Contractual fee payments	417,889,211
7. Bonus/withhold arrangements - fee-for-service	0
8. Bonus/withhold arrangements - contractual fee payments	0
9. Non-contingent salaries	0
10. Aggregate cost arrangements	104,695,966
11. All other payments	<u>0</u>
12. Total other payments	<u>559,912,972</u>
13. TOTAL (line 4 + line 12)	591,998,234

**Premiums, Enrollment and Utilization**

	Comprehensive Hospital & Medical		LTC Policies	Total
	Individual Policies	Group Policies		
<b>Total Members at the end of:</b>				
1. Prior Year	98,379	65,586	5,000	168,965
2. First Quarter	97,069	62,625	5,104	164,798
3. Second Quarter	98,127	62,106	6,245	166,478
4. Third Quarter	96,696	60,435	6,451	163,582
5. Current Year	99,713	61,551	7,000	168,264
6. Current Year Member Months	1,186,413	746,172	74,503	2,007,088
<b>Total Member Ambulatory Encounters for Year:</b>				
7. Physician	972,489	694,635	347	1,667,471
8. Non-Physician	58,020	40,014	3,995	102,030
9. Total	1,030,509	734,649	4,342	1,769,500
10. Hospital Patient Days Incurred	18,072	15,060	376	33,508
11. Number of Inpatient Admissions	4,280	3,891	39	8,210
<b>Premiums, Written and Earned</b>				
12. Health Premiums Written	435,230,710	334,792,854	8,357,012	778,380,576
13. Life Premiums Direct	0	0	0	0
14. Property/Casualty Premiums Written	0	0	0	0
15. Health Premiums Earned	435,230,710	334,792,854	8,357,012	778,380,576
16. Property/Casualty Premiums Earned	0	0	0	0
<b>Claims, Paid and Incurred</b>				
17. Amount Paid for Provision of Health Care Services	327,434,869	261,947,895	2,615,470	591,998,234
18. Amount Incurred for Provision of Health Care Services	326,019,971	260,815,977	2,604,168	589,440,116
<b>Member Ambulatory Encounters for Year - per 1,000:</b>				
7. Physician	9,836	11,171	56	9,969
8. Non-Physician	587	644	644	610
9. Total	10,423	11,815	699	10,580
10. Hospital Patient Days Incurred	183	242	61	200
11. Number of Inpatient Admissions	43	63	6	49
<b>Premiums, Written and Earned - PMPM</b>				
12. Health Premiums Written	366.85	448.68	112.17	387.82
13. Life Premiums Direct	-	-	-	-
14. Property/Casualty Premiums Written	-	-	-	-
15. Health Premiums Earned	366.85	448.68	112.17	387.82
16. Property/Casualty Premiums Earned	-	-	-	-
<b>Claims, Paid and Incurred - PMPM</b>				
17. Amount Paid for Provision of Health Care Services	275.99	351.06	35.11	294.95
18. Amount Incurred for Provision of Health Care Services	274.79	349.54	34.95	293.68



### 3.11 Financial Statements for Active Choice

#### Balance Sheet

	Amount
Assets	
1. Cash and invested assets	22,336,400
2. Accident and health premiums due and unpaid	3,657,368
3. Amounts recoverable from reinsurers	0
4. Net credit for ceded reinsurance	0
5. All other admitted assets (balance)	<u>16,789,563</u>
6. Total assets	42,783,332
Liabilities, Capital and Surplus	
7. Claims unpaid	6,414,705
8. Accrued medical incentive pool and bonus payments	56,922
9. Premiums received in advance	742,796
10. Funds held under reinsurance treaties	7,149
11. Reinsurance in unauthorized companies	0
12. All other liabilities (balance)	<u>17,642,927</u>
13. Total liabilities	<u>24,864,498</u>
14. Total capital and surplus (line 6 minus line 13)	17,918,833
15. Total liabilities, capital and surplus (line 13 + line 14)	42,783,332

#### Transactions with Providers

	Direct Medical Expense Payment
Capitation Payments	
1. Medical groups	0
2. Intermediaries	0
3. All other providers	<u>0</u>
4. Total capitation payments	0
Other Payments	
5. Fee-for-service	35,692,088
6. Contractual fee payments	16,039,025
7. Bonus/withhold arrangements - fee-for-service	26,878
8. Bonus/withhold arrangements - contractual fee payments	23,011
9. Non-contingent salaries	0
10. Aggregate cost arrangements	0
11. All other payments	<u>765,690</u>
12. Total other payments	<u>52,546,694</u>
13. TOTAL (line 4 + line 12)	52,546,694

**Premiums, Enrollment and Utilization**

	Comprehensive Hospital & Medical Group Policies
Total Members at the end of:	
1. Prior Year	22,872
2. First Quarter	13,365
3. Second Quarter	13,748
4. Third Quarter	12,227
5. Current Year	10,829
6. Current Year Member Months	154,034
Total Member Ambulatory Encounters for Year:	
7. Physician	47,414
8. Non-Physician	43,245
9. Total	<u>90,659</u>
10. Hospital Patient Days Incurred	2,997
11. Number of Inpatient Admissions	735
Premiums, Written and Earned	
12. Health Premiums Written	60,731,510
13. Life Premiums Direct	0
14. Property/Casualty Premiums Written	0
15. Health Premiums Earned	61,445,826
16. Property/Casualty Premiums Earned	0
Claims, Paid and Incurred	
17. Amount Paid for Provision of Health Care Services	52,546,694
18. Amount Incurred for Provision of Health Care Services	48,664,560
Member Ambulatory Encounters for Year - per 1,000:	
7. Physician	3,694
8. Non-Physician	3,369
9. Total	<u>7,063</u>
10. Hospital Patient Days Incurred	233
11. Number of Inpatient Admissions	57
Premiums, Written and Earned - PMPM	
12. Health Premiums Written	394.27
13. Life Premiums Direct	-
14. Property/Casualty Premiums Written	-
15. Health Premiums Earned	398.91
16. Property/Casualty Premiums Earned	-
Claims, Paid and Incurred - PMPM:	
17. Amount Paid for Provision of Health Care Services	341.14
18. Amount Incurred for Provision of Health Care Services	315.93

### **3.12 Correspondence**

The memos and emails on the following pages provide some information about the AHA's activities. Some of the correspondence relates to a potential acquisition of a closed block of long term care business, while other correspondence relates to Active Choice.

### **3.12.1 Memorandum - Bigger Actuarial Consulting - LTC Acquisition**

Date: April 30, 2011

Subject: LTC Acquisition

To: B. G. Bucks, CFO AHA

From: Joe Cool, FSA, MAAA

I have done a preliminary investigation of your acquisition target and have the following observations:

- This is a large closed block of LTC business which is close to the same size as AHA's block of LTC.
- The block is administered using a home grown system and we need to make sure that it is compatible with the AHA system.
- Many of the products generate cash values.
- In addition to the purchase price, AHA will need to make sure that policy and claims reserves are adequate and that the assumption underlying cash value calculations are reasonable.
- The current owner of the block has not filed for a rate increase since the inception of the product.

Please let me know how you would like to proceed.

### **3.12.2 AHA Internal Memorandum - Confidential - Active Choice Acquisition**

Date: May 15, 2011

Subject: Active Choice Acquisition

To: B. G. Bucks, CFO AHA

From: G. O. Getter, MBA, Project Manager

I have been working with our consultant and broker on this project and I believe it is an important and exciting opportunity for our organization. Our consultant's actuaries and financial folks asked that I pass along several minor details that they have found while digging around in the publically available data and financials. They say they need to look at these areas more closely during due diligence.

- The company is winding down its large group business.
- They think the medical loss ratio is low.
- Broker fees and administrative costs are a bit high.
- Low surplus backed by illiquid assets.

None of these items are insurmountable, especially considering our financial strength and marketing expertise. As a result, I do not see any deal breakers here.

Again, I cannot stress enough the fact that this is an important and exciting opportunity.

### **3.12.3 AHA Internal Memorandum - Confidential - Pension Plan Funding**

Date: September 30, 2011

Subject: Pension Plan Funding

To: B. G. Bucks, CFO AHA

From: I. M. Caring, VP HR

As you know, AHA sponsors a company-paid final-average-earnings defined benefit pension plan for its employees, whereas Active Choice does not sponsor any pension or savings plans for its employees.

Historically, assets in the AHA Salaried Pension Plan fund have been invested in the same manner as assets in the Simple Life Salaried Pension Plan fund.

Reports from the AHA Salaried Pension Plan's actuary indicate that, over the past five years:

- (a) Unfunded actuarial liabilities have been somewhat volatile, ranging from approximately \$10.7 million to \$60.8 million (the most recent actuarial report indicated unfunded actuarial liabilities of \$23.7 million. Unfunded actuarial liabilities must be amortised, in accordance with government regulations, by cash contributions.
- (b) Pension expense, which is reported on the company's financial statements, has also been somewhat volatile, ranging from \$15.5 million to \$30.0 million. Pension Expense for the most recent fiscal year was \$28.3 million.

As mentioned above, Active Choice does not sponsor any pension or savings plans for its employees. At this point, we have not had any discussions about how to deal with Active Choice employees, should AHA decide to acquire Active Choice.

### **3.12.4 AHA E-Mail - Underwriting Procedural Changes**

Date: June 30, 2011

Subject: Underwriting Procedural Changes

To: B. G. Bucks, CFO AHA

From: Rick Averse, U/W Manager

As you know, the Underwriting staff is stretched pretty thin due to our involvement in new initiatives and the hold on hiring. As a result, we have come up with some ways to try to keep things moving without increasing our risk.

- The actuarial department will give us trend assumptions and benefit relativities. We will not accept this data from other sources. We are seeing a lot of new benefit designs so the actuaries will be doing more for us than in the past. Also, I have not spoken with them about this since I wanted your opinion and support first.
- We will use discretion on rating cases.
- During busy time, we will have marketing do field underwriting on some of our simpler cases. The marketing staff is very enthusiastic about this idea.

Please let me as soon as you can if we can move ahead. Thanks.

### **3.12.5 AHA E-Mail - New Claims Administration Update**

Date: September 30, 2011

Subject: New Claims Administration System Update

To: B. G. Bucks, CFO AHA; Ace Ventura, FSA, AHA Valuation Actuary; Sal Bidness, AHA Chief Marketing Office

From: Bob Smith, AHA VP Operations

Installation of the new claims system is going as well as can be expected. We have gotten a bit behind since some of the IT folks have been reassigned and our vendor found a software problem which will take a couple of weeks to fix.

I just wanted to remind all of you that the last time we performed maintenance on our system, we were unable to pay claims for 2 weeks. As a result, I have approved overtime for the claims processors so that we can bring down our claims inventories as much as possible before we move to the new system. There will probably still be some delay in payments but we think we have minimized the impact.

We had hoped that we would be able to run dual systems so as not to disrupt our operations, but that will not be feasible.

Let me know if you have any questions.



### **3.13 AHA Salaried Pension Plan**

The following pages contain financial and demographic information about the AHA Salaried Pension Plan, as well as information about the Statement of Funding Policies and Procedures for the Plan and the Statement of Investment Policies and Procedures for the Plan.

AHA, through its Board of Directors, has delegated responsibility for the day-to-day management of the Plan to the Vice-President, Human Resources and the Chief Financial Officer. The CFO's focus is on financial reporting and cash contribution requirements, the VP HR is largely responsible for all other activities.

#### **3.13.1 Pension Plan - Benefit Provisions and Financial Information**

The information on the following pages enumerates the current provisions of the Pension Plan and provides certain historical financial information. Historical financial information is not available prior to January 1, 2007.

**Extracts of Retirement Benefits Provisions and Financial Information**AHA Salaried Pension Plan

Eligibility	Immediate
Vesting	100% after 5 years of plan membership
Normal Retirement Age	65
Early Retirement Age	55 with 5 years of plan membership
Best Average Earnings	Average annual earnings during 60 consecutive months in which earnings were highest
Earnings	Base pay, excluding overtime and bonuses
Normal Retirement Benefit	1% of best average earnings times years of service, subject to tax system maximum
Accrued Benefit	Benefit calculated as under the normal retirement benefit formula using best average earnings and service as of date of calculation
Early Retirement Benefit	Accrued benefit reduced on an actuarial equivalent basis for all members
Form of Benefit	Single life annuity
Optional Forms of Benefit	None
Indexing	None
Termination Benefit	(1) Lump sum value equal to actuarial present value of accrued pension payable at age 65; or (2) Deferred pension

Pre-Retirement Death Benefit		Lump sum value equal to actuarial present value of accrued pension payable at age 65 to named beneficiary
Disability Benefit		Accrual of service while on long term disability and immediate pension without a reduction upon permanent and total disability

<b>AHA Salaried Pension Plan</b>					
<i>Historical Actuarial Valuation Results</i>					
	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
<b>Participant Summary - January 1</b>					
<i>Active Participants</i>					
(a) count	3,759	4,197	5,017	4,826	5,027
(b) average age	37.8	37.9	39.2	40.3	40.6
(c) average service	7.5	6.9	6.0	6.0	5.9
(d) average future working lifetime	20.0	20.0	20.0	20.0	20.0
(e) average plan earnings (prior year)	61,800	63,400	72,900	75,000	80,500
<i>Deferred Vested Participants</i>					
(a) count	-	-	-	-	-
<i>Pensioners (incl beneficiaries)</i>					
(a) count	237	251	262	277	315
(b) average age	76.8	76.8	74.2	74.5	74.8
(c) average annual benefit	15,400	15,500	16,100	16,000	16,200
<b>Plan Assets (numbers in \$000's) *</b>					
<i>Change in Plan Assets during Prior Year:</i>					
Market Value of Assets at January 1 of prior year	-	96,024	110,852	92,799	133,829
Employer Contributions during prior year	-	12,408	16,706	31,980	26,461
Benefit Payments during prior year	-	(4,550)	(5,791)	(7,218)	(5,532)
Expenses during prior year	-	-	-	-	-
Investment return during prior year	-	6,969	(28,969)	16,269	14,531
Market Value of Assets at January 1 of current year	96,024	110,852	92,799	133,829	169,289
Rate of return during prior year	0%	7%	-25%	15%	10.1%
<i>Average Portfolio Mix During Prior Year:</i>					
(a) Domestic Large Cap Equities	0%	40%	39%	33%	36%
(b) Domestic Small Cap Equities	0%	20%	20%	15%	16%
(c) Domestic Fixed Income	0%	30%	30%	42%	39%
(d) International Equities	0%	4%	4%	5%	4%
(e) Real Estate	0%	4%	4%	2%	3%
(f) Cash	0%	2%	2%	3%	2%
(g) Total	0%	100%	100%	100%	100%
<i>Asset Class Returns during Prior Year:</i>					
(a) Domestic Large Cap Equities	0%	5%	-37%	26%	15%
(b) Domestic Small Cap Equities	0%	9%	-45%	28%	5%
(c) Domestic Fixed Income	0%	7%	5%	6%	7%
(d) International Equities	0%	16%	-6%	-17%	13%
(e) Real Estate	0%	6%	-63%	51%	29%
(f) Cash	0%	5%	2%	0%	0%
<i>* numbers may not add due to rounding</i>					

<b>AHA Salaried Pension Plan</b>					
Historical Actuarial Valuation Results					

Actuarial Valuation - January 1 (numbers in \$000's) *	2007	2008	2009	2010	2011
<b>1. Actuarial Accrued Liability:</b>					
(a) Active participants	76,035	92,741	114,322	121,670	144,470
(b) Deferred vested participants	-	-	-	-	-
(c) Pensioners	30,658	33,458	39,229	41,218	48,479
(d) Total	106,694	126,200	153,551	162,888	192,949
<b>2. Actuarial Value of Assets</b>	96,024	110,852	92,799	133,829	169,289
<b>3. Unfunded Actuarial Accrued Liability: (1d)-(2)</b>	10,669	15,347	60,753	29,059	23,660
<b>4. Normal Cost (beg. Of year)</b>	10,138	13,441	19,054	20,278	24,486
<b>5. Change in Unfunded AAL during prior year:</b>					
(a) Unfunded AAL at prior valuation date	-	10,669	15,347	60,753	29,059
(b) Adjustment for interest	-	720	998	3,949	1,889
(c) Normal Cost w/interest less contributions	-	(2,005)	(2,935)	(12,727)	(5,725)
(d) (Gain)/Loss on investment	-	(223)	36,529	(9,432)	(5,152)
(e) (Gain)/Loss on salary increases less than expected	-	(908)	10,432	(1,310)	4,153
(f) (Gain)/Loss on assumption changes	-	9,875	-	7,656	1,697
(g) (Gain)/Loss on all other factors	-	(2,782)	381	(19,829)	(2,261)
(h) Unfunded AAL at current valuation date	10,669	15,347	60,753	29,059	23,660
<b>6. Actuarial Basis</b>					
(a) Interest	6.75%	6.50%	6.50%	6.50%	6.00%
(b) Salary scale	3.75%	4.00%	4.00%	4.00%	3.50%
(c) Consumer Price Index	3.00%	3.00%	3.00%	3.00%	2.50%
(d) Mortality	UP 1994 AA15	UP 1994 AA15	UP 1994 AA15	1994 Uninsured Pensioner Mortality - Generational	1994 Uninsured Pensioner Mortality - Generational
(e) Turnover				None	
(f) Retirement age				Age 65	
(g) Proportion married and age difference				Not Applicable	
(h) Expenses				Assume all expenses paid by company	
(i) Asset Valuation Method				Market value of assets	
(j) Actuarial Cost Method				Projected unit credit	
* numbers may not add due to rounding					

<b>AHA Salaried Pension Plan</b>					
<i>Historical Actuarial Valuation Results</i>					
<b>Expense Valuation - January 1 (numbers in \$000's) *</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
<b>1. Reconciliation of funded status at valuation date:</b>					
(a) Accrued Benefit Obligation (ABO)	(84,575)	(82,030)	(114,300)	(121,289)	(134,195)
(b) Projected Benefit Obligation (PBO)	(130,116)	(126,200)	(175,847)	(186,598)	(206,454)
(c) Fair Value of Assets	96,024	110,852	92,799	133,829	169,289
(d) Funded Status: (a) + (b)	(34,091)	(15,347)	(83,048)	(52,769)	(37,165)
(e) Unamortized net actuarial (gain)/loss	42,093	20,299	90,715	62,417	45,445
(f) Accrued benefit asset/(liability)	8,002	4,951	7,667	9,647	8,280
<b>2. Pension Expense:</b>					
(a) Service Cost (beg. of year)	13,048	13,441	22,545	23,994	26,635
(b) Interest Cost	8,453	8,888	11,687	12,470	13,244
(c) Expected return on assets	(7,497)	(8,723)	(7,888)	(10,822)	(12,583)
(d) Amortization of past service cost	-	-	-	-	-
(e) Amortization of net actuarial (gain)/loss	1,454	384	3,657	2,188	1,240
(f) Pension Expense for year	15,459	13,990	30,000	27,829	28,536
<b>3. Actuarial Basis and Supplemental Data</b>					
(a) Discount rate	6.00%	6.50%	6.00%	6.00%	5.75%
(b) Return on assets	7.50%	7.50%	7.50%	7.50%	7.00%
(c) Salary scale	3.75%	3.50%	3.50%	3.50%	3.00%
(d) Consumer Price Index	3.00%	3.00%	3.00%	2.50%	2.50%
(e) Mortality	UP 1994 AA15	UP 1994 AA15	UP 1994 AA15	1994 Uninsured Pensioner Mortality - Generational	1994 Uninsured Pensioner Mortality - Generational
(f) Turnover			None		
(g) Proportion married and age difference			Not Applicable		
(h) Retirement age			Age 65		
(i) Expenses			Assume all expenses paid by company		
(j) Asset Valuation Method			Market value of assets		
(k) Actuarial Cost Method			Projected unit credit		
(l) Employer contributions	12,408	16,706	31,980	26,461	26,461
(m) Benefit payments	(4,550)	(5,791)	(7,218)	(5,532)	(5,532)
<i>* numbers may not add due to rounding</i>					

**AHA Salaried Pension Plan****Reconciliation of Plan Participants (2008 - 2011)**

	<b>Active</b>	<b>Pensioners/ Beneficiaries</b>	<b>Total</b>
<b>1. Participants as of January 1, 2007</b>	<b>3,759</b>	<b>237</b>	<b>3,996</b>
- New Entrants/Rehires	617	-	617
- Terminated Nonvested	(73)	-	(73)
- Terminated Vested (Lump Sum Cashout)	(87)	-	(87)
- Retirement	(17)	17	-
- Death w/ Beneficiary	(2)	-	(2)
- Deaths	-	(3)	(3)
- Net change	438	14	452
<b>2. Participants as of January 1, 2008</b>	<b>4,197</b>	<b>251</b>	<b>4,448</b>
- New Entrants/Rehires	1,385	-	1,385
- Terminated Nonvested	(269)	-	(269)
- Terminated Vested (Lump Sum Cashout)	(285)	-	(285)
- Retirement	(11)	11	-
- Death w/ Beneficiary	-	3	3
- Deaths	-	(3)	(3)
- Net change	820	11	831
<b>3. Participants as of January 1, 2009</b>	<b>5,017</b>	<b>262</b>	<b>5,279</b>
- New Entrants/Rehires	271	-	271
- Terminated Nonvested	(269)	-	(269)
- Terminated Vested (Lump Sum Cashout)	(163)	-	(163)
- Retirement	(26)	26	-
- Death w/ Beneficiary	(4)	3	(1)
- Deaths	-	(14)	(14)
- Net change	(191)	15	(176)
<b>4. Participants as of January 1, 2010</b>	<b>4,826</b>	<b>277</b>	<b>5,103</b>
- New Entrants/Rehires	459	-	459
- Terminated Nonvested	(122)	-	(122)
- Terminated Vested (Lump Sum Cashout)	(88)	-	(88)
- Retirement	(44)	44	-
- Death w/ Beneficiary	(4)	2	(2)
- Deaths	-	(8)	(8)
- Net change	201	38	239
<b>5. Participants as of January 1, 2011</b>	<b>5,027</b>	<b>315</b>	<b>5,342</b>





<b>Rate</b>	<b>Actives</b>	<b>Pensioners</b>	<b>Total</b>
6.00%	144,470,323	48,478,500	192,948,823
5.50%	161,562,552	50,274,659	211,837,211
6.50%	129,537,476	46,794,590	176,332,066
<b>Duration</b>	22.2	7.2	18.4
<b>Convexity</b>	597.9	92.6	470.9
<b>Year</b>	<b>Actives</b>	<b>Pensioners</b>	<b>Total</b>
2012	608,306	4,972,119	5,580,424
2013	659,117	4,893,203	5,552,320
2014	739,643	4,819,995	5,559,638
2015	793,763	4,684,331	5,478,094
2016	863,792	4,509,215	5,373,007
2017	939,489	4,391,359	5,330,848
2018	1,227,547	4,264,091	5,491,639
2019	2,334,476	4,122,705	6,457,181
2020	2,816,972	3,967,869	6,784,842
2021	3,169,404	3,805,616	6,975,019
2022	4,178,708	3,631,040	7,809,749
2023	4,713,177	3,445,455	8,158,632
2024	7,174,608	3,250,668	10,425,276
2025	8,540,701	3,048,248	11,588,949
2026	11,494,151	2,841,128	14,335,280
2027	15,144,946	2,631,349	17,776,296
2028	16,238,783	2,420,166	18,658,949
2029	16,517,694	2,209,101	18,726,795
2030	18,055,491	1,999,458	20,054,948
2031	19,646,023	1,792,905	21,438,928
2032	22,120,051	1,592,123	23,712,174
2033	22,421,771	1,398,483	23,820,254
2034	22,087,665	1,214,289	23,301,954
2035	22,420,618	1,042,672	23,463,290
2036	23,151,887	884,550	24,036,437
2037	22,732,480	740,913	23,473,393
2038	22,422,756	612,569	23,035,325
2039	22,025,666	499,862	22,525,527
2040	21,940,311	402,454	22,342,765

<b>Year</b>	<b>Actives</b>	<b>Pensioners</b>	<b>Total</b>
2041	21,897,315	319,255	22,216,571
2042	21,453,996	249,205	21,703,201
2043	20,838,109	191,561	21,029,671
2044	20,224,797	144,766	20,369,563
2045	20,161,554	107,286	20,268,840
2046	19,321,409	78,004	19,399,413
2047	18,867,126	55,554	18,922,680
2048	18,031,077	38,654	18,069,731
2049	17,166,543	26,337	17,192,880
2050	16,228,716	17,544	16,246,259
2051	15,239,596	11,414	15,251,010
2052	14,246,016	7,287	14,253,303
2053	13,269,084	4,548	13,273,632
2054	12,286,996	2,765	12,289,761
2055	11,235,711	1,644	11,237,354
2056	10,264,506	950	10,265,456
2057	9,280,350	533	9,280,883
2058	8,364,424	290	8,364,714
2059	7,490,756	153	7,490,910
2060	6,666,069	76	6,666,145
2061	5,898,039	39	5,898,078
2062	5,190,533	19	5,190,552
2063	4,542,994	9	4,543,003
2064	3,954,211	5	3,954,216
2065	3,421,185	2	3,421,187
2066	2,944,381	1	2,944,382
2067	2,520,599	1	2,520,599
2068	2,143,502	0	2,143,502

<b>Year</b>	<b>Actives</b>	<b>Pensioners</b>	<b>Total</b>
2069	1,807,348	0	1,807,348
2070	1,512,573	0	1,512,573
2071	1,257,624	0	1,257,624
2072	1,037,256	0	1,037,256
2073	846,008	0	846,008
2074	681,813	0	681,813
2075	543,595	0	543,595
2076	428,239	0	428,239
2077	331,481	0	331,481
2078	251,151	0	251,151
2079	186,599	0	186,599
2080	135,620	0	135,620
2081	95,952	0	95,952
2082	65,707	0	65,707
2083	43,599	0	43,599
2084	27,831	0	27,831
2085	17,184	0	17,184
2086	10,228	0	10,228
2087	5,883	0	5,883
2088	3,271	0	3,271
2089	1,765	0	1,765
2090	924	0	924
2091	467	0	467
2092	230	0	230
2093	0	0	0
2094	0	0	0

### **3.13.2 Statement of Funding Policies and Procedures - AHA Health**

The Company has prepared a Statement of Funding Policies and Procedures (“Statement”) to document the governance of the Plan. The Company has also prepared a Statement of Investment Policies and Procedures. Extracts of the Statement are provided below followed by a summary of the Statement contents.

#### ***3.13.2.1 Allocation of Responsibilities***

The Company has delegated the management of Plan funding as follows:

The Company, acting through Management, will:

- Establish, review and amend, as required, the Statement of Funding Policies and Procedures;
- Select the Pension Consultant and the Actuary;
- Review funding reports prepared by the Actuary regarding the funding of the Plan; and
- Be responsible for the assumption or delegation of any responsibilities not specifically mentioned.

The Pension Consultant and Actuary will:

- Assist, as required, the Company in the preparation of the Statement of Funding Policies and Procedures;
- Present to the Company, as required by the Statement of Funding Policies and Procedures, reviews and reports regarding the funding of the Plan; and
- Comment to the Company on any changes in plan design, contribution flow or pension legislation that may affect the funding of the Plan.

#### ***3.13.2.2 Funding Policy Principles***

The Company is the primary risk bearer under the Plan. As a result, the funding objective of the Company is the accumulation of assets which will secure the Plan’s benefits in respect of service already rendered. The accumulation of assets should be reasonable, without significant volatility or further recourse to the Company’s assets.

The Company believes management of the Plan on a going concern basis is the most suitable means to achieve these objectives.

#### ***3.13.2.3 Management of Risks***

The Company has adopted the following policies to mitigate their risks:

- Going-concern valuations are to be prepared using best estimate assumptions adjusted to

include margins for adverse deviation. The Company will consult with the Pension Consultant and Actuary regarding the adoption of margins for adverse deviation.

- Emerging experience will differ from the assumptions made for going-concern purposes. The Pension Consultant and Actuary will monitor emerging experience and recommend revisions to the going-concern assumptions as appropriate.
- Plan provisions are managed to mitigate, to the extent possible, demographic and economic risks. Benefit improvements under the Plan will be made with due regard to the Plan's funded status.
- Investment activity will be carried out with due regard to the liability structure of the Fund, to the cash flow requirements of the Fund, and to the risks and rewards inherent in the defined benefit investments. The Statement of Investment Policies and Procedures documents the Company's policies regarding investment risk.

#### **3.13.2.4 Funding Target**

The funding target for the Plan is to have a funded ratio (assets divided by liabilities) of 100% on a going-concern basis.

#### **3.13.2.5 Funding Risks**

- The Company bears the following funding risks:
- The Plan's demographic experience may differ from best-estimate assumptions.
- The Plan's economic experience may differ from best-estimate assumptions. In addition to investment risks, the Company bears the risks associated with providing a final average earnings benefit.
- The Plan's liabilities are debt-like in nature and have a long term to maturity. As a result of the current investment strategy and nature of the Plan's liabilities, there is the risk of an asset-liability mismatch.

\* \* \* \* \*

The contents of the Statement follow:

- PURPOSE
- BACKGROUND, PLAN TYPE AND LIABILITIES
- ALLOCATION OF RESPONSIBILITIES
- FUNDING POLICY PRINCIPLES
- FUNDING RISKS
- MANAGEMENT OF RISKS
- FUNDING TARGET
- ELIMINATION OF DEFICITS
- UTILIZATION OF EXCESSES

- FREQUENCY OF VALUATIONS
- COMMUNICATION
- APPENDIX 1 – Summary of Roles
- APPENDIX 2 – Summary of Liabilities, Assets and Membership Data
- APPENDIX 3 – History of SFP&P Review and Amendments

### **3.13.3 Statement of Investment Policies and Procedures - Excerpts**

Following are excerpts from the Statement of Investment Policies and Procedures for the AHA Health Insurance Company's Pension Plan.

#### **3.13.3.1 Investment Risk**

- Investment risk is borne by the Company
- Going-concern surplus, subject to any legislative restrictions, can be applied against the Company's Normal Actuarial Cost

#### **3.13.3.2 Allocation of Responsibilities**

The Company, acting through Management, will:

- Establish, review and amend, as required, the Statement of Investment Policies and Procedures;
- Select one or more fund managers ("Fund Managers"), the Pension Consultant and the Actuary;
- Select the Custodian to hold pension fund assets;
- Review the performance of the Fund and the Fund Managers at least annually; and
- Be responsible for the assumption or delegation of any responsibilities not specifically mentioned.

The Fund Managers will:

- Manage the asset mix and select securities within each Investment Fund Option, subject to applicable legislation and the constraints set out in this Statement.

The Pension Consultant and Actuary will:

- Assist, as required, the Company in the preparation of the Statement of Investment Policies and Procedures; and
- Comment to the Company on any changes in plan design or contribution flow that may affect the investment of assets.

The Custodian will:

- Fulfil the regular duties required by law of the Custodian in accordance with the Plan;
- Participate in annual reviews of the Statement of Investment Policies and Procedures;
- Present to the Company, at least annually, reviews and reports of investment performance of the Fund Managers;
- Provide the Company with monthly updates on the performance of the Fund Managers;
- Provide the Company with information, on an ongoing basis, about changes at the Fund Managers that could affect investment performance;

- Present to the Company, at least annually, reviews and reports of all investment Fund assets and transactions for the period;
- Monitor actual investments as appropriate to ensure compliance with the Pension Benefits Act; and
- Rebalance the Plan portfolios as requested by the Company.

**3.13.3.3 Investment Objectives**

- to preserve the capital;
- to provide sufficient funds to meet payments as they become due; and
- to maintain sufficient assets over actuarial requirements to meet unforeseen liabilities.

**3.13.3.4 Rate of Return Objectives**

- (a) to achieve an average annual rate of return, net of investment expenses, of at least the funding valuation rate of return (currently 6.0%) per year, measured over moving, four-year periods;
- (b) to achieve top third performance, relative to the peer group of fund managers, measured over moving, four-year periods;
- (c) to exceed the passive benchmark for the Pension Fund by 1.00% per annum, measured on a four-year moving average basis; and
- (d) to achieve at least the increase in the Consumer Price Index plus 3%, on a four-year moving average basis.

**3.13.3.5 Asset Allocation Guidelines**

The following normal policy allocation, and associated range for strategic deviation at any time, has been adopted by the Company:

<b>Percentages of Fund at Market Value</b>	<b>Normal</b>	<b>Minimum</b>	<b>Maximum</b>
Domestic Equities	40%	30%	50%
International Equities	20%	15%	25%
Domestic Fixed Income (duration of 5)	30%	15%	45%
Real Estate (Private)	4%	0%	8%
Private Equity	4%	0%	8%
Cash	2%	0%	4%

Within the ranges noted above, the Fund Managers may actively vary the asset mix in an effort to achieve the investment objectives of the Company.



### **3.13.3.6 Passive Management Objectives**

The rate of return expected to be achieved through passive management of the assets in the Plan Fund will be based on the normal allocation of assets. The passive return shall be set equal to the sum of:

- (a) 45.0% of the S&P 500 Index return for the year;
- (b) 20.0% of the MSCI EAFE Index return for the year; and
- (c) 35.0% of the Barclays Capital Aggregate Bond Index return for the year.

### **3.13.3.7 Rebalancing**

The Company will direct the re-balancing of the assets in the component pooled funds, when it deems rebalancing to be appropriate.

### **3.13.3.8 Related Party Transactions**

A "Related Party" is:

- (a) the Company, acting as Plan Administrator,
- (b) an officer, director or employee of the Company,
- (c) the funding agent or person responsible for investing the assets of the Plan, or any officer, director or employee thereof,
- (d) an association or trade union representing employees of the Company, or an officer or employee thereof,
- (e) an employer who participates in the Plan, or an employee, officer or director thereof,
- (f) the Plan Participant,
- (g) a person (including spouse or child) directly or indirectly holding more than 10% of the voting shares of the Company,
- (h) the spouse or child of (a) to (g),
- (i) an affiliate of the Company,
- (j) a corporation directly or indirectly controlled by a person in (a) to (h),
- (k) an entity in which a person in (a), (b), (e) or (g), has a substantial investment (where "substantial investment" means more than 25% of the ownership interests in an unincorporated entity, more than 10% of the voting rights of a corporation or more than 25% of the shareholders' equity in a corporation) or,
- (l) an entity with substantial investment in the Company.

"Related Parties" excludes government or a financial institution holding Plan assets if not the administrator.

The Company, acting as Plan Administrator, shall not, directly or indirectly:

- (a) lend the assets of the Plan to a Related Party or invest those assets in the securities of a Related Party; or
- (b) enter into a transaction with a Related Party on behalf of the Plan, subject to a minimum limit of \$50,000 per transaction and a cumulative limit of \$250,000 in a Plan's fiscal year.

Related Party transactions are acceptable provided they are necessary for the operation of the Plan and are purchased on terms and conditions that are at least as favourable for the Plan as are otherwise available.

### 3.13.4 Appendix: Economic Data

The investment consultant for AHA's DB Plan has provided the following information:

AHA DB Plan	Market Value (\$000)	Duration	KRD 1 Yr	KRD 3 Yr	KRD 5 yr	KRD 10 Yr	KRD 20 Yr	KRD 30 Yr
Plan Actives	144,470	22.2	0.01	0.04	0.15	2.00	7.30	12.70
Plan Pensioners	48,479	7.2	0.20	0.55	1.40	2.75	1.90	0.40
Plan Total Liabilities	192,949	18.4	0.05	0.15	0.45	2.20	5.95	9.60

	Equity Indices		Barclay's Capital U.S. Bond Indices	
	S&P 500	MSCI EAFE	Aggregate	Aggregate 10+ Year Maturity
Expected Returns	6.50%	8.00%	2.30%	3.00%
Annualized Volatility	15.05%	16.88%	3.73%	10.02%
Duration	0.00	0.00	5.01	14.19
Skewness	-0.67	-0.77	-0.41	0.03
Kurtosis	4.22	4.51	4.82	5.56

Correlations	Equity Indices		Barclay's Capital U.S. Bond Indices	
	S&P 500	MSCI EAFE	Aggregate	Aggregate 10+ Year Maturity
S&P 500	1.00			
MSCI EAFE	0.79	1.00		
Aggregate	0.06	0.04	1.00	
Aggregate 10+ Year Maturity	-0.10	-0.05	0.90	1.00

AHA DB Plan:

Portfolio Managers Fixed Income	Current % Allocation	Expected Tracking Error	TE Volatility
Manager E	50%	1.50%	3%
Manager F	50%	2.00%	4%
Benchmark	0%	0%	0%
Portfolio Managers Equity	% Allocation	Expected Tracking Error	TE Volatility
Manager G	50%	4.00%	5%
Manager H	50%	3.50%	7%
Benchmark	0%	0%	0%

## 4 Pryde Property & Casualty

### 4.1 Overview

Pryde is an Omaha, Nebraska-based U.S. writer with commercial and personal lines products that target niche market customers. The split between commercial and personal lines is 66.7%/33.3% respectively. Pryde is licensed in all 50 states and its products are sold through a unified sales force, led by sales directors responsible for selecting the product, managing the agency delivery system and serving the business in their territory. The company has approximately \$1.0 billion in assets and \$287 Million in Capital and Surplus.

ADMITTED ASSETS	12/31/2011	12/31/2010
Bonds	521,896	388,171
Preferred stock	23,475	21,205
Common stock	9,938	6,870
Cash & short-term invest	38,759	54,641
Other non-affil inv asset	10,846	10,220
Investments in affiliates	28,663	23,397
Total invested assets	633,577	504,504
Premium balances	239,342	148,913
Accrued interest	6,459	4,920
All other assets	152,628	73,999
Total assets	1,032,006	732,337
LIABILITIES & SURPLUS	12/31/2011	12/31/2010
Loss & LAE reserves	318,776	228,254
Unearned premiums	226,121	191,026
Conditional reserve funds	202	39
All other liabilities	200,090	49,614
Total liabilities	745,190	468,933
Total Policyholder Surplus	286,816	263,404

### 4.2 Employee Benefits

Pryde provides basic life, health and disability benefits to its employees while they are employed by the company. These benefits do not continue after employees leave the company.

Pryde does not sponsor any pension or savings plans for its employees.

### **4.3 Production**

Business is produced through independent agents and general agents, as well as exclusive career agents on a national basis. Pryde's strategy is centered on serving highly focused customer segments in both personal and commercial lines of business. Customer service is rated highly as evidenced in consistently high customer retention levels.

### **4.4 Target Markets**

The commercial business unit focuses on three defined groups of customers:

- School Districts
- Municipalities
- Non-Profit Social Clubs

Of the three markets, School Districts make up the largest portion of the commercial business at approximately 85%, with Municipalities, and Non-Profit Social Clubs comprising 10% and 5% respectively, of the commercial business. The three major lines of business written are:

- Commercial Multi-Peril ("CMP")
- Workers Compensation
- Commercial Auto

The personal lines business unit currently focuses on the major market segment of individuals affiliated with School Districts. Homeowners and Standard Automobile are the major lines of business that make up the personal lines segment. The company writes standard automobile coverage for both customer groups within this relationship market, which consist of total abstainers from alcohol and "responsible choice" households.

Pryde writes approximately \$700 Million of Gross Written Premium.

Line	Written Premium Direct	Written Premium Net	% of NPW	Pure Loss Ratio	Loss & LAE Reserves
Commercial MultiPeril	294,650	213,671	41.8	66.5	184,973
Workers' Comp	77,111	74,269	14.5	77.2	100,566
Private Pass Auto Liability	72,350	71,861	14.1	39.4	-7,171
Auto Physical	59,953	59,610	11.7	43.7	-2,814
Homeowners	41,622	30,363	5.9	40.6	7,445
Other Liability Occur	32,620	27,932	5.5	34.9	13,720
Commercial Auto Liability	25,849	24,189	4.7	55.0	15,056
Allied Lines	75,132	4,576	0.9	42.4	730
All Other	17,289	4,153	0.8	46.6	6,272
<b>Totals</b>	<b>696,575</b>	<b>510,623</b>	<b>100.0</b>	<b>56.8</b>	<b>318,776</b>

#### 4.5 Regional Spread

Pryde's direct business is geographically spread throughout the United States with its largest state (California) representing 17% of total premium volume. The next largest states include Texas, (6.0%); Georgia (5.5 %); Florida (5.4%); Mississippi (5.3%); 46 other jurisdictions, (61.3%).

#### 4.6 Exited Markets

Beginning in 2005, Pryde's previous management team followed a growth and acquisition strategy and decentralization of its operations, which led to rate inadequacy and significant adverse loss reserve development. Pryde seeks to develop and expand its total insurance relationship by cross-selling tailored products and services to its targeted customer groups. Pryde experimented with a specialty market, which included non-standard automobile, recreational vehicle and specialty homeowners business, but subsequently exited the specialty market since it was not consistent with Pryde's targeted customer groups. The specialty markets contained customer groups whose nature was to purchase a single product at a time, often based on price.

Prior to 2009, Pryde had experienced a significant reduction in its capital and surplus position. The reduction was due primarily to a decline in underwriting performance from aggressive growth in these specialty lines of business, followed by significant loss reserve charges. The costs associated with buying and subsequently selling or discontinuing those businesses further contributed to the reduction. Exiting the specialty markets resulted in significant improvement in earnings in 2010, driven by an improvement in underwriting results, despite reporting continued adverse loss reserve development.

## 4.7 Underwriting Results

Year	Net UW Income (\$000)	Loss Ratios			Expense Ratios			Div. Pol.	Comb Ratio
		Pure Loss	LAE	Loss& LAE	Net Comm	Other Exp.	Total Exp.		
2007	-48,325	67.5	13.5	81.0	9.8	20.5	30.3	0.0	111.3
2008	-83,108	77.0	19.6	96.6	3.9	22.8	26.6	0.0	123.2
2009	-64,932	74.9	15.1	90.0	6.8	20.7	27.5	0.0	117.5
2010	-3,336	57.0	14.6	71.6	8.3	18.0	26.3	0.1	97.9
2011	-646	56.8	13.1	69.9	11.7	16.5	28.1	0.1	98.1
5-Yr Avg		66.2	15.0	81.2	8.4	19.5	27.9	0.0	109.1

Pryde has been challenged by significant adverse loss reserve development in recent years. This has impacted both non-continuing and continuing books of business.

	Original Loss Reserves	Developed Through 2011	Developed to Orig (%)
2006	289,253	366,439	26.7%
2007	284,434	364,107	28.0%
2008	207,151	291,178	40.6%
2009	174,612	200,808	15.0%
2010	204,842	210,589	2.8%
2011	290,194	290,194	

## 4.8 Investment Income

Pryde has generally produced favorable investment yield from a pre-dominantly fixed income portfolio that has outperformed industry composite averages. Invested assets are comprised primarily of a bond portfolio diversified among corporate, tax-exempts, and US Government Obligations. The company's stated investment strategy is simple: preserve capital while maintaining the predictability of return on investment without incurring undue risk. Hence, the strategy focuses on fixed income rate investments held for long term investment. Affiliated investments relate to Pryde Services, a wholly owned entity that provides services for Pryde Property & Casualty.



Asset Class	Assets (3000)
Long-Term bonds	521,896
Stocks	33,413
Affiliated Investments	28,663
Other Inv Assets	56,064
Total	640,036

Asset Class	% of Total Bonds	Mkt Val to Stmt Val(%)	Avg. Maturity (Yrs)	Class 1 - 2 (%)	Class 3 - 6 (%)	Struc. Secur. (%)	Struc. Secur. (% of PHS)
Governments	22.3	1.8	4.7	100.0	...	...	...
States, terr & poss	28.8	1.0	7.1	100.0	...	71.1	37.2
Corporates	48.9	1.6	5.7	98.5	1.5	6.5	5.8
Total all bonds	100.0	1.5	5.9	99.2	0.8	23.6	43.0

## 4.9 Catastrophe Exposure

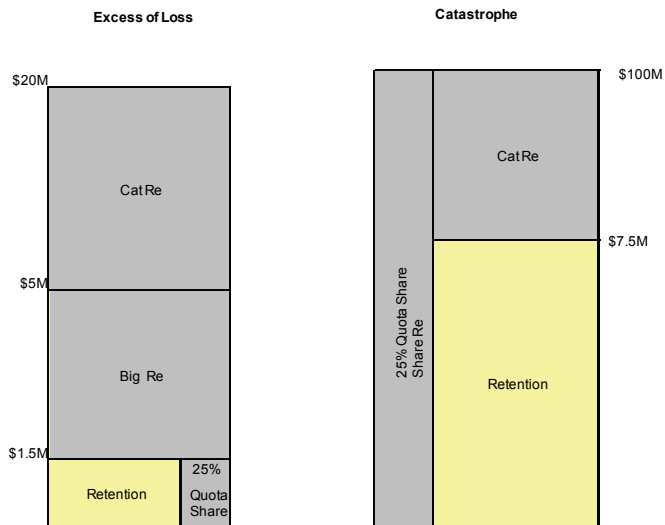
The group's primary catastrophe exposure stems from both hurricanes and earthquakes. However, these exposures are mitigated through excess of loss reinsurance, as well as catastrophe protection that has enabled the group to improve its net catastrophe leverage to a very manageable level. As a result, the group's net probable maximum losses (PML) stemming from a combined 250-year hurricane and a 250-year earthquake depicted in a PML analysis represents approximately 5% of capital and surplus.

## 4.10 Reinsurance

Pryde reinsures with high-quality reinsurers utilized by the company.

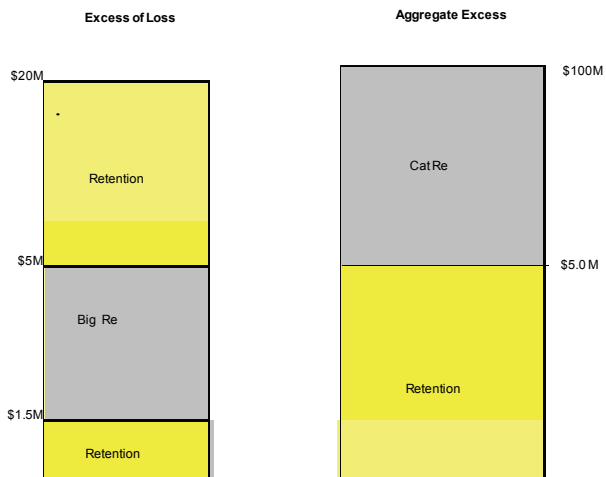
## 4.11 Property Risks

Pryde cedes away 25% of the ground-up first \$1.5 Million/Claim via a quota-share reinsurance treaty with SHARE Re. In addition Pryde owns a multi-line working layer excess-of loss reinsurance treaty with BIG Re, where Pryde cedes each \$3.5 Million excess of \$1.5 Million claim for property risks subject to a \$7.5 Million per occurrence aggregate limit. Protection is further supplemented with both an additional excess layer and a property catastrophe cover with CAT Re for \$92.5 Million in excess of \$7.5 Million per Occurrence Aggregate Limit.



## 4.12 Casualty Risks

Working layer treaty reinsurance with Big Re includes one multi-line \$3.5 Million excess of \$1.5 Million for casualty risks and \$3.5 Million per occurrence. An aggregate excess of loss treaty with Cat Re covers losses excess of \$5.0 Million.



### **4.13 Total Available Capital**

The proper assessment of an insurer's true financial strength requires appraisal of its total balance sheet on an integrated basis under a system that depends upon realistic values (economic values), consistent treatment of both assets and liabilities, and that does not generate a hidden surplus or deficit. To convert the statutory capital figures to economic capital levels, adjustments are necessary. Statutory accounting principles deviate from economic valuations in several ways, including, but not limited to, the following:

- Acquisition Costs are not deferred
- Bonds in good standing are valued at amortized value--not market value
- Loss and loss adjustment expense reserves do not reflect the time value of money
- Carried statutory reserves do not reflect inherent reserve margins (e.g. carried reserves being redundant or deficient)

### **4.14 Rating Agency Review**

Best's rates Pryde as an A-, reflecting the company's adequate capitalization, improved operating results and liquidity and its niche market presence. The Company's positive rating also considers its nationally recognized position in its core business. Pryde's strong reputation and dedicated product and service capabilities have enabled it to sustain strong market penetration. The rating also reflects the corrective actions taken by management to improve operating performance and enhance balance sheet strength.

Partially offsetting these positive factors are the company's significant adverse reserve development on prior accident years and its dependence on reinsurance. A.M. Best remains concerned over the potential for additional adverse loss reserve development and its impact on near-term operating performance and overall capitalization.

Pryde's overall capitalization as measured by Best's Capital Adequacy Ratio (BCAR) is adequate for its A- rating.

### **4.15 Economic Capital Model**

Pryde had retained Hawthorne Consulting in 2010 to aid the company in developing a "risk and capital" model that would aid management in gauging the adequacy of overall capitalization of the company and in allocating resultant capital to target lines of business or niche business segments. Pryde wishes to gauge the risk adjusted return on capital (RAROC) by segment to aid in its business planning for 2011 and beyond. In essence, Pryde's goal is to improve its ability to better manage capital and return. Underlying this goal, Hawthorne advises on three underlying themes:

- Capital Productivity
- Capital Protection
- Capital Adequacy

Hawthorne's thought leadership focuses on the notion that there is a trade-off between having enough capital to minimize insurance company failures and having the minimum amount of capital so capital can be deployed. As such, Hawthorne recommended using a risk adjusted return on required capital (RAROC) approach. In essence, this approach considers both how much Pryde is earning on the capital that is committed to the business and how much capital is needed to ensure that policyholders are paid in the event of a stress scenario. Hawthorne argues that RAROC addresses the aforementioned trade-off between capital productivity and capital adequacy. To set a target or requirement for the amount of capital that should be held by an insurance company or group requires a clear vision of the purposes for which capital is held. Effectively defined capital requirements serve several purposes, including, but not limited to:

- Providing funds so Pryde is able to honor its obligations during adverse contingent events.
- Motivating a company to avoid undesirable levels of risk
- Promoting a risk management culture to the extent that capital requirements are a function of actual economic risk

Economic capital should be what Pryde requires for ongoing operations and what it must hold in order to gain the necessary confidence of the marketplace, its policyholders, its investors, and its regulatory supervisors. The operations of Pryde, on the other hand, after the net effect of all the inherent risks, must yield a rate of return deemed reasonable by the providers of the insurer's capital.

#### **4.16 Appendix**

- Consultant's Report - Executive Summary and Recommendations @9/30/10
- Consultant's Report - Background, Terminology, Considerations

#### **4.16.1 Consultant's Report- Executive Summary 9/30/10**

Pryde has asked Hawthorne to consult and help in developing a “risk and capital” model that would aid management in gauging the adequacy of overall capitalization of the company and in allocating capital to target line of business or niche business segments to aid in its business planning for 2011 and beyond.

In considering the trade-off between having enough capital to minimize insurance company failures and having the minimum amount of capital so capital can be deployed, Hawthorne recommends a risk adjusted return on required capital (RAROC) approach in measuring returns. This approach considers both how much Pryde is earning on the capital that is committed to the business and how much capital is needed to ensure that policyholders are paid in the event of a stress scenario.

Economic capital is the capital required to buffer the policyholder from default up to a target solvency or rating standard (e.g. A.M. Best's). We estimated Capital Requirements for Pryde by calibrating overall risk at a 99.4% VaR risk metric (i.e., capital needed to assure that there is only a 0.6% chance all of the capital will be depleted). This is consistent with an A+ rating.

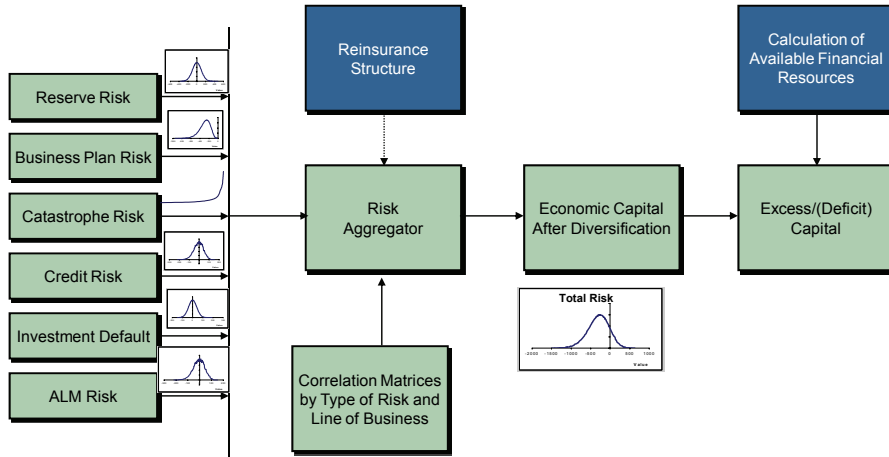
We used the following two risk metrics in gauging Pryde's Capital Needs:

- Value at Risk (VaR)
- Tail Value at Risk (TVaR)

Briefly, the “Value at Risk” (VaR) risk metric measures a percentile of a cumulative probability distribution (e.g., the 95th percentile of the distribution is the value for which there is a 5% probability of exceeding that value).

TVaR is similar to VaR risk metric but considers all possibilities beyond the above VaR threshold in that it reflects the average of all possible values beyond a defined percentile (e.g., TVaR 95% is the arithmetic average of all possible VaRs beyond the 95th percentile of the distribution).

Economic capital assessment was based on a multi-step process beginning with a bottom-up analysis of individual risks.



The first column below reflects how much stand-alone capital is needed per the 99.4% VaR for each risk separately. This totaled a sum of \$377.1M of economic capital. In consideration of correlation and diversification effects, this sum is reduced by 30.5% resulting in a total needed capital of approximately **\$262.2 Million**.

RISK TYPE	STANDALONE ECONOMIC CAPITAL REQUIREMENTS	DIVERSIFIED CAPITAL AS A PERCENT OF STANDALONE	DIVERSIFIED ECONOMIC CAPITAL REQUIREMENTS
RESERVE	\$90.6	73.9%	\$66.9
BUSINESS PLAN	\$112.3	83.5%	\$93.8
CATASTROPHE	\$22.2	51.7%	\$11.5
CREDIT (RECOVERABLES)	\$48.4	75.0%	\$36.4
INVESTMENT	\$22.3	15.6%	\$3.5
ALM	\$81.2	61.8%	\$50.2
<b>TOTAL</b>	<b>\$377.1</b>	<b>69.5%</b>	<b>\$262.2</b>

Upon these adjustments, we estimate the total needed economic capital to be approximately **\$262.2 Million**. This, compared to the available economic capital of \$269.9 Million, places Pryde in a favorable capital position relative to the risk metrics utilized.

Line of business and niche contributions to the overall capital needs of Pryde appear below. The marginal contribution percentages are then used to allocate the overall Pryde capital by line of business and niche. The below exhibit displays the indicated \$262.2 Million allocated to line of business. In addition, the line of business expected RAROCs are computed below. RAROCs are based on expected 2011 profitability per Pryde’s business plan relative to the allocated capital.

Note- The TVaR 98.0% risk metric was used in this approach as we deemed it appropriate to consider the extreme tail in the respective risk distributions in developing the inherent contribution and hence allocation share. As the line of business marginal contributions to the Company’s overall capital needs are sensitive to extreme events, we feel this approach makes sense.

Line of Business	Marginal Capital	Allocated Economic Capital	Economic Profit	Premium	Economic Profit (%Prem)	Marginal Returns	Return on Economical Capital	Premiums to Economic Capital
CPP-Prop	39,454	54,756	641	116,821	0.5%	1.6%	1.2%	2.1
Homewoners	7,407	10,279	540	32,306	1.7%	7.3%	5.2%	3.1
Personal Auto	14,282	19,822	4,035	132,049	3.1%	28.3%	20.4%	6.7
Workers Compensation	34,961	48,521	10,097	75,722	13.3%	28.9%	20.8%	1.6
BAP	9,043	12,550	3,418	28,432	12.0%	37.8%	27.2%	2.3
Umbrella	14,289	19,831	11,564	23,996	48.2%	80.9%	58.3%	1.2
CPP-Liability-Other	25,751	35,738	9,811	53,763	18.2%	38.1%	27.5%	1.5
CPP-Liability-SLC	31,899	44,271	4,795	34,425	13.9%	15.0%	10.8%	0.8
CPP-Liability-SM	11,828	16,415	2,444	11,708	20.9%	20.7%	14.9%	0.7
<b>Total</b>		<b>262,184</b>	<b>47,344</b>	<b>509,221</b>	<b>9.3%</b>		<b>18.1%</b>	<b>1.9</b>

Niche	Marginal Capital	Allocated Economic Capital	Economic Profit	Premium	Economic Profit (% Prem)	Return on Economic Capital	Premiums to Economic Capital
School Districts	107,494	148,100	23,538	246,769	9.5%	15.9%	1.7
Municipalities	18,951	26,110	4,434	36,435	12.2%	17.0%	1.4
Social Clubs	41,357	56,980	14,798	61,662	24.0%	26.0%	1.1
Personal Lines	22,497	30,995	4,574	164,355	2.8%	14.8%	5.3
<b>Total</b>		<b>262,185</b>	<b>47,344</b>	<b>509,221</b>	<b>9.3%</b>	<b>18.1%</b>	<b>1.9</b>

#### **4.16.1.1 Observations**

Social Clubs are providing a greater RAROC than the other three niches. Growing this niche, all other things equal, would contribute to a higher total RAROC.

The optimum target market distribution by niche would be such that the marginal returns are identical by niche, all others things being equal.

1. Pryde is expected to write at a little more than a 1.9 to 1 premium to capital ratio with an 18.1% return on the required capital of \$262.2 Million. The marginal RAROCs suggest that the Company may optimize its overall RAROC by altering its mix by niche, given the current capital structure, specifically by growing in Social Clubs and declining in the others. The optimum equilibrium mix by niche would follow until all of the niches generate the same marginal RAROCs.

*Note –Our analysis considers business plan risk as the uncertainty of deviating from the business plan targets/baselines. Our detailed approach and assumptions are presented in the following sections of the report.*



#### **4.16.2 Consultant's Report - Background, Terminology, Considerations**

Prior to 2007, Pryde had experienced a significant reduction in its surplus position due primarily to a decline in underwriting performance from aggressive growth in non-core lines of business followed by significant loss reserve charges.

Pryde's goal is to improve its ability to better manage capital and return. Underlying this goal, Hawthorne defines three underlying themes:

- Capital Productivity
- Capital Protection
- Capital Adequacy

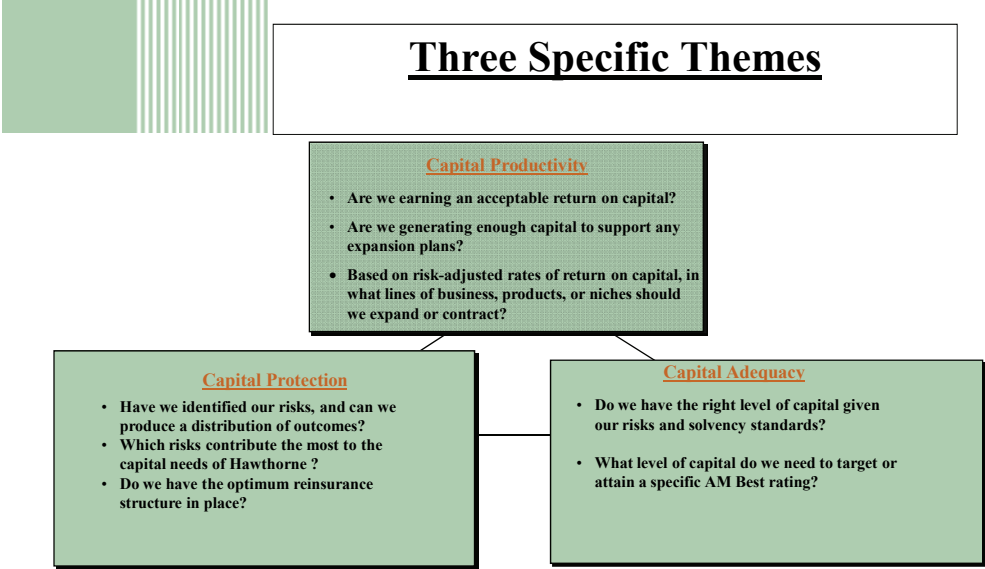
##### ***4.16.2.1 Degree of Protection***

The strength of an insurer's capital can be thought of as the probability that a company's assets backing liabilities, together with capital, will be sufficient to satisfy all of its obligations to its policyholders. It should be noted that it is virtually impossible to have enough capital to totally prevent insurance company failures. Excess capital, while affording perhaps additional solvency protection, would, on the other hand, impede capital investment in insurers because the additional cost of capital may not be compensated for in the pricing of the insurer's policies. Hence excess capital has the potential to either raise the cost of insurance to a company's policyholders or to prevent a market from existing. On the other hand, insufficient capital, in comparison with that deemed necessary by modeling all of the appropriate risk factors at an adequate level of confidence, may result in inadequate pricing and will increase the exposure of the insurer, over time, to the risk of insolvency. Hence there is a constant trade-off between having enough capital to minimize insurance company failures and maintaining the minimum amount of capital so capital can be deployed effectively.

##### ***4.16.2.2 Time Horizon Considerations of Capital Needs***

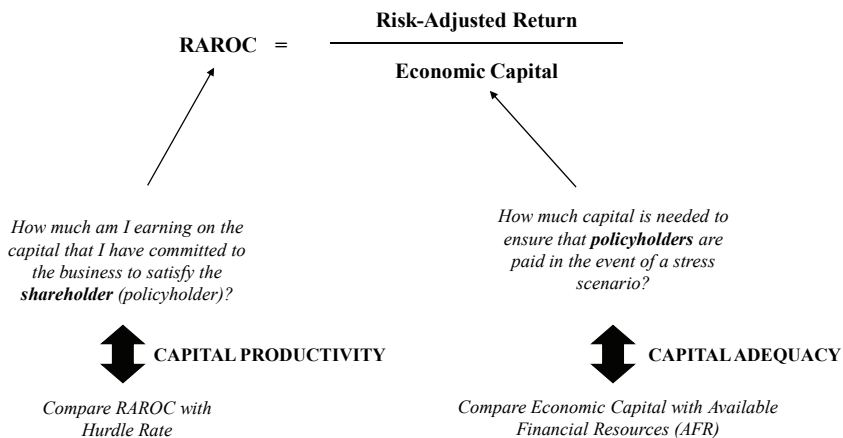
An insurer's financial statements are usually prepared at the end of each fiscal year—a considerable task that requires significant preparation time. Often there is a significant delay of several months between the statement date and the actual finalizations of company financials. This aspect is also followed by the timing and implementation of business plan actions, which may be corrective or opportunistic with regards to company decision-making. In the meantime, during the decision-making phase, the company would continue to operate and conduct business. We suggest an appropriate time horizon for considering an insurer's capital needs as one year from the evaluation date of the existing risk and return profile. This time horizon should not be confused with the full term of all of the assets and obligations of the insurer. The amount of required economic capital must be sufficient with a high level of confidence to meet all obligations for the time horizon as well as the present value at the end of the time horizon of the remaining future obligations.

In the course of this type of analysis, considerations should always be given to the notion that there is a trade-off between having enough capital to minimize insurance company failures and maintaining the minimum amount of capital so that capital can be deployed elsewhere, more effectively. As such, we recommend using a risk adjusted return on required capital (RAROC) approach in measuring returns. Our RAROC approach in essence considers both how much Pryde is earning on the capital that is committed to the business and how much capital is needed to ensure that **policyholders** are paid in the event of a stress scenario. Hence RAROC addresses the aforementioned trade-off between capital productivity and capital adequacy.

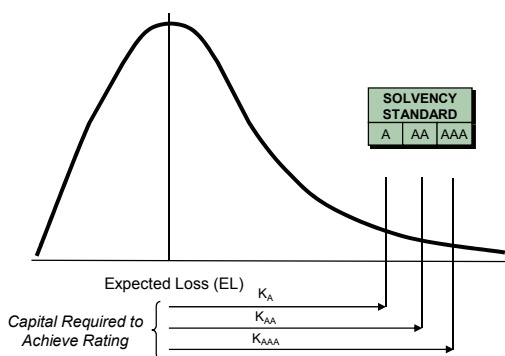


## Risk Adjusted Return on Capital

An economic capital and RAROC framework provides the measures needed to better manage risk and return.



**ECONOMIC CAPITAL** IS DEFINED AS THE AMOUNT OF CAPITAL REQUIRED TO ACHIEVE A TARGET SOLVENCY STANDARD BASED UPON THE FIRM-WIDE LOSS DISTRIBUTION



- Economic capital is the capital required to buffer the policyholder from default up to a target solvency standard (and thus confidence interval)
- For the same risk profile, an institution targeting a better credit rating will need to hold more capital (AA institutions require more capital than single A)

### 4.16.2.3 Uncertainty vs. Volatility

It is generally accepted that uncertainty risk, the risk that models used to estimate claims or other relevant processes are mis-specified, (e.g. best point estimate of loss reserves) must be considered for the full remaining term of the insurance contracts. Uncertainty risk is widely believed to be non-diversifiable since it cannot be relatively reduced by increasing insured

portfolio size. On the other hand, some argue that volatility risk, the risk of random fluctuations in either the frequency or severity, of contingent events, can be ignored in the long run, since these risks can be diversified away in the future. We believe that this notion is not universally true as some volatility risk cannot be diversified away. While true that in fully efficient markets, volatility would not be valued in the calculation of the fair value of a set of projected future cash flows, insurance markets are relatively inefficient. Hence capital supports both types of risk; both volatility and uncertainty. We doubt that every risk can be classified as one or the other in practice, as many types of risk may have both systematic and diversifiable elements. Moreover, this distinction may also depend on insurer size and the characteristics of the markets in which it operates.

#### ***4.16.2.4 Consideration of Risk Transfer***

Last but not least, total capitalization should also take into account risk transfer mechanisms that reduce the risks of the insurer, such as the purchase of reinsurance, hedging, and securitization. Although the role of reinsurance is to transfer underwriting and reserve risks, consideration should still be given to recoverable risk as previously defined. It is also important to analyze the risk transfer structure in any reinsurance contract. Finite risk deals, for example, are structured to provide financing by reinsurers with, at times, a minimal amount of risk transfer.

Hedging can be considered natural or constructed. Natural hedges occur when a company can offset risks in different lines of business. Financial hedges on the other hand, involving the use of derivative instruments, can offset certain financial guarantees with respect to interest rates and or equity markets.

#### ***4.16.2.5 Correlation and Diversification***

Our risk-based approach to required capital treats each source of risk separately (e.g., initial capital amounts are determined in silos). Total Capitalization, however, needs to recognize the relationships among the various risk sources that can affect the company's operations. As such, total capitalization should reflect risk concentration, diversification, and interdependencies.