# Group & Health Finance & Valuation Canada Exam

Case Study

Spring 2020

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# Case Study – Group & Health Finance & Valuation Exam

### Introduction

In this case study, you are the President at the Skyfall Actuarial Consulting firm (Skyfall or Firm). The case study will outline the characteristics of the Firm and provide details regarding the various current clients and prospective clients of Skyfall.

All numbers found in this case study are for illustrative purposes only and are not representative of true costs or actual relationships. Any similarities with actual company results are coincidental. Plan design and plan limitations for a given plan year may not be in compliance with current year guidance, regulations, or laws.

# Firm Description

Skyfall is a medium-sized consulting firm that was founded in 1965 in London, Texas and provides actuarial services to life and health insurance companies, state and federal regulatory agencies, and employers. The Firm's staff consists of over 50 actuaries that are located in the United States. The firm employs several actuarial students, who assist in daily tasks and client management. Skyfall is committed to the development and training of future actuaries, and this can be seen in the level of training and types of projects that actuarial students assist with.

Additionally, Skyfall has a location in London, Ontario, which provides actuarial services to clients, employers and insurance carriers in Canada. The Canadian office consists of over 25 actuaries that are located throughout Canada.

The Firm's areas of expertise include:

- Individual and Small Group Major Medical Plans
- Large Group Major Medical Plans
- Medicare Advantage and Part D Plans
- Medicaid Plans
- Retiree Health Benefit Plans
- Group Disability Plans
- Individual and Small Group Dental Plans
- Large Group Dental Plans
- Group Life
- Group Long-Term Care.

The corporate goal is to provide affordable and quality actuarial services to its clients to ensure that they have the tools to be successful in their business endeavors. Skyfall aims to build long-lasting client relationships and strives to provide excellent services for its clients. Due to its size, the Firm caters to individual client's unique needs and aims to exceed the client's expectations.

# Skyfall's Clients

### mantum Health Insurance Company (Quantum)

Quantum Health Insurance Company provides individual and small group coverage to its policyholders. Since its inception in 1975, Quantum has provided health care services to individuals and small groups and actively seeks to improve the overall health of its members. Skyfall's services include the development and pricing of its products, regulatory compliance guidance, and valuation services.

### **Individual and Small Group Major Medical Plans**

Quantum is actively selling individual and small group health insurance products in most states in the US. Quantum offers various benefit plan design structures; some of which are compliant with the Affordable Care Act (ACA). The products are sold through brokers and agents.

Quantum offers several types of major medical plans, such as HMOs, PPOs, and High Deductible Health Plans (HDHP), and some are still available for new business, while others are not. The closed block (no longer actively sold) is called Quantum Legacy III. The products that are actively being sold are the HMO and PPO products that are ACA-compliant.

Skyfall has been the opining actuary for Quantum and has been calculating the reserves for all blocks of business. The following exhibits are various tables used in the last reserve calculation exercise. The Company provided the paid claims data incurred between July 2018 and December 2019 with paid data through December 2019. These exhibits are various steps in the reserve calculation process.

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						İ				hly Claims Ex										
								(	Quantum Le	gacy III - Indi										
										Paid Mont										
		Jul-2018	Aug-2018	Sep-2018	Oct-2018	Nov-2018	Dec-2018	Jan-2019	Feb-2019	Mar-2019	Apr-2019	May-2019	Jun-2019	Jul-2019	Aug-2019	Sep-2019	Oct-2019	Nov-2019	Dec-2019	Total
	Jul-2018	31,000	725,000	590,000	217,000	152,000	38,000	23,000	20,000	24,000	11,000	10,000	2,000	0	0	0	0	0	0	1,843,000
	Aug-2018	0	54,000	652,000	749,000	246,000	80,000	17,000	16,000	12,000	19,000	14,000	7,000	5,000	0	0	0	0	0	1,871,000
	Sep-2018	0	0	56,000	763,000	965,000	338,000	74,000	33,000	34,000	14,000	9,000	3,000	4,000	5,000	0	0	0	0	2,298,000
	Oct-2018	0	0	0	44,000	755,000	920,000	287,000	31,000	61,000	44,000	12,000	3,000	2,000	8,000	18,000	0	0	0	2,185,000
	Nov-2018	0	0	0	0	43,000	844,000	1,035,000	214,000	160,000	67,000	14,000	19,000	9,000	19,000	8,000	4,000	0	0	2,436,000
	Dec-2018	0	0	0	0	0	47,000	725,000	668,000	216,000	75,000	16,000	11,000	1,000	5,000	5,000	11,000	2,000	0	1,782,000
타	Jan-2019	0	0	0	0	0	0	31,000	625,000	591,000	258,000	290,000	23,000	8,000	7,000	39,000	6,000	1,000	9,000	1,888,000
Month	Feb-2019	0	0	0	0	0	0	0	19,000	483,000	398,000	97,000	42,000	15,000	16,000	46,000	9,000	1,000	5,000	1,131,000
M p	Mar-2019	0	0	0	0	0	0	0	0	19,000	810,000	521,000	156,000	50,000	15,000	16,000	33,000	2,000	7,000	1,629,000
rrec	Apr-2019	0	0	0	0	0	0	0	0	0	34,000	367,000	383,000	226,000	137,000	29,000	50,000	13,000	13,000	1,252,000
ıcn	May-2019	0	0	0	0	0	0	0	0	0	0	23,000	432,000	432,000	405,000	133,000	32,000	17,000	15,000	1,489,000
긔	Jun-2019	0	0	0	0	0	0	0	0	0	0	0	29,000	306,000	306,000	338,000	138,000	188,000	16,000	1,321,000
	Jul-2019	0	0	0	0	0	0	0	0	0	0	0	0	43,000	349,000	375,000	283,000	76,000	40,000	1,166,000
	Aug-2019	0	0	0	0	0	0	0	0	0	0	0	0	0	42,000	451,000	453,000	200,000	84,000	1,230,000
	Sep-2019	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,000	527,000	568,000	232,000	1,400,000
	Oct-2019	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37,000	383,000	560,000	980,000
	Nov-2019	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66,000	803,000	869,000
	Dec-2019	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	499,000	499,000
	Total	31,000	779,000	1,298,000	1,773,000	2,161,000	2,267,000	2,192,000	1,626,000	1,600,000	1,730,000	1,373,000	1,110,000	1,101,000	1,314,000	1,531,000	1,583,000	1,517,000	2,283,000	27,269,000

	Exhibit 1 (con't) - Monthly Claims Experience																			
								H	MO - Individ	ual (ACA-Co										
	Paid Month																			
$\perp$		Jul-2018	Aug-2018	Sep-2018	Oct-2018	Nov-2018	Dec-2018	Jan-2019	Feb-2019		Apr-2019	May-2019	Jun-2019	Jul-2019	Aug-2019	Sep-2019	Oct-2019	Nov-2019	Dec-2019	Total
	Jul-2018	14,000	321,000	299,000	102,000	49,000	19,000	9,000	9,000	6,000	5,000	14,000	1,000	0	0	0	0	0	0	848,000
	Aug-2018	0	32,000	427,000	364,000	177,000	50,000	15,000	12,000	7,000	15,000	13,000	3,000	1,000	0	0	0	0	0	1,116,000
	Sep-2018	0	0	21,000	276,000	389,000	128,000	30,000	14,000	9,000	6,000	4,000	4,000	1,000	5,000	0	0	0	0	887,000
	Oct-2018	0	0	0	13,000	240,000	301,000	94,000	9,000	23,000	16,000	6,000	1,000	1,000	3,000	4,000	0	0	0	711,000
	Nov-2018	0	0	0	0	14,000	312,000	354,000	67,000	74,000	27,000	6,000	7,000	4,000	11,000	5,000	2,000	0	0	883,000
	Dec-2018	0	0	0	0	0	17,000	331,000	312,000	100,000	17,000	7,000	5,000	3,000	1,000	4,000	7,000	1,000	0	805,000
됩	Jan-2019	0	0	0	0	0	0	14,000	304,000	295,000	125,000	162,000	11,000	3,000	4,000	21,000	4,000	1,000	5,000	949,000
<b>Jonth</b>	Feb-2019	0	0	0	0	0	0	0	13,000	297,000	277,000	67,000	15,000	7,000	3,000	9,000	10,000	1,000	4,000	703,000
Σ	Mar-2019	0	0	0	0	0	0	0	0	11,000	450,000	292,000	84,000	25,000	7,000	6,000	14,000	8,000	3,000	900,000
ETE	Apr-2019	0	0	0	0	0	0	0	0	0	18,000	220,000	244,000	151,000	113,000	16,000	33,000	16,000	10,000	821,000
ıcı	May-2019	0	0	0	0	0	0	0	0	0	0	13,000	241,000	250,000	254,000	72,000	12,000	11,000	10,000	863,000
긔	Jun-2019	0	0	0	0	0	0	0	0	0	0	0	19,000	183,000	213,000	237,000	103,000	140,000	8,000	903,000
	Jul-2019	0	0	0	0	0	0	0	0	0	0	0	0	28,000	246,000	280,000	208,000	58,000	28,000	848,000
	Aug-2019	0	0	0	0	0	0	0	0	0	0	0	0	0	27,000	317,000	346,000	151,000	49,000	890,000
	Sep-2019	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41,000	324,000	352,000	153,000	870,000
	Oct-2019	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18,000	205,000	339,000	562,000
	Nov-2019	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70,000	882,000	952,000
	Dec-2019	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	470,000	470,000
	Total	14,000	353,000	747,000	755,000	869,000	827,000	847,000	740,000	822,000	956,000	804,000	635,000	657,000	887,000	1,012,000	1,081,000	1,014,000	1,961,000	14,981,000

	Exhibit 2 - Monthly Claims Experience											
	PPO - Individual (ACA-Compliant)											
		Paid Claims		Paid								
		Through Dec 2019	Enrollment	PMPM								
	Jul-2018	409,000	1,980	206.57								
	Aug-2018	491,000	1,980	247.98								
	Sep-2018	382,000	1,860	205.38								
	Oct-2018	294,000	1,620	181.48								
	Nov-2018	362,000	1,620	223.46								
	Dec-2018	347,000	1,620	214.20								
th	Jan-2019	403,000	1,620	248.77								
Incurred Month	Feb-2019	289,000	2,040	141.67								
1 M	Mar-2019	371,000	2,100	176.67								
rrec	Apr-2019	357,000	2,040	175.00								
ıcn	May-2019	370,000	2,040	181.37								
I	Jun-2019	400,000	2,100	190.48								
	Jul-2019	371,000	2,100	176.67								
	Aug-2019	395,000	2,100	188.10								
	Sep-2019	376,000	2,280	164.91								
	Oct-2019	246,000	2,280	107.89								
	Nov-2019	203,000	2,400	84.58								
	Dec-2019	102,000	2,640	38.64								
	Total	6,168,000										

Exh	ibit 3 - Enrollment -	Individual	
	Quantum Legacy	HMO (ACA -	PPO (ACA -
Month	III	Compliant)	Compliant)
Jul-2018	11,100	4,000	1,980
Aug-2018	11,700	3,800	1,980
Sep-2018	11,400	3,750	1,860
Oct-2018	11,400	3,750	1,620
Nov-2018	11,400	3,750	1,620
Dec-2018	11,400	4,050	1,620
Jan-2019	11,800	4,100	1,620
Feb-2019	11,800	4,050	2,040
Mar-2019	12,000	4,100	2,100
Apr-2019	12,000	4,150	2,040
May-2019	12,700	4,200	2,040
Jun-2019	12,700	4,150	2,100
Jul-2019	11,700	4,450	2,100
Aug-2019	11,900	4,450	2,100
Sep-2019	12,100	4,600	2,280
Oct-2019	12,300	4,850	2,280
Nov-2019	12,300	4,850	2,400
Dec-2019	12,500	4,600	2,640

	Exhibit 4 - Percent of Ultimate Losses by Lag Month												
	Quantum Legacy III - Small Group												
			Lag Month										
		1	2	3	4	5	6	7	8	9	10	11	12
	Jul-18	0.016	0.465	0.694	0.804	0.910	0.924	0.934	0.944	0.963	0.969	0.999	1.000
	Aug-18	0.036	0.356	0.835	0.922	0.953	0.964	0.969	0.977	0.977	0.993	0.998	1.000
	Sep-18	0.026	0.447	0.783	0.879	0.916	0.933	0.966	0.973	0.979	0.989	0.992	1.000
Incurred Month	Oct-18	0.029	0.445	0.790	0.959	0.946	0.957	0.971	0.980	0.982	0.986	0.993	1.000
Mo	Nov-18	0.029	0.397	0.856	0.904	0.948	0.962	0.966	0.975	0.980	0.985	0.994	1.000
ed ]	Dec-18	0.041	0.451	0.739	0.880	0.957	0.967	0.971	0.974	0.980	0.989	0.999	1.000
urr	Jan-19	0.027	0.416	0.711	0.836	0.947	0.964	0.970	0.979	0.990	0.994	0.994	1.000
Inc	Feb-19	0.017	0.422	0.758	0.809	0.865	0.880	0.911	0.988	0.998	0.999	1.000	
	Mar-19	0.006	0.483	0.739	0.876	0.905	0.920	0.946	0.973	0.997	1.000		
	Apr-19	0.040	0.411	0.592	0.755	0.923	0.948	0.980	0.998	1.000			
	May-19	0.030	0.413	0.705	0.865	0.970	0.987	0.993	1.000				

	Exhibit 4 (con't) - Percent of Ultimate Losses by Lag Month												
	HMO - Small Group (ACA-Compliant)												
	Lag Month												
		1	2	3	4	5	6	7	8	9	10	11	12
	Jul-18	0.017	0.375	0.740	0.862	0.931	0.961	0.973	0.984	0.991	0.998	0.999	1.000
	Aug-18	0.025	0.385	0.727	0.889	0.948	0.959	0.971	0.978	0.995	0.997	0.999	1.000
1 . [	Sep-18	0.023	0.306	0.760	0.932	0.966	0.980	0.986	0.992	0.995	0.995	0.999	1.000
onth	Oct-18	0.019	0.329	0.780	0.891	0.927	0.963	0.986	0.991	0.992	0.993	0.995	1.000
Mo	Nov-18	0.013	0.350	0.763	0.841	0.928	0.967	0.973	0.984	0.987	0.993	0.995	1.000
	Dec-18	0.020	0.426	0.836	0.946	0.973	0.986	0.994	0.993	0.994	0.994	0.999	1.000
ntr	Jan-19	0.012	0.316	0.628	0.768	0.950	0.960	0.964	0.966	0.991	0.994	0.995	1.000
Incurred	Feb-19	0.017	0.445	0.797	0.908	0.937	0.950	0.954	0.978	0.991	0.992	1.000	
	Mar-19	0.015	0.517	0.858	0.938	0.967	0.976	0.979	0.995	0.996	1.000		
	Apr-19	0.022	0.275	0.630	0.818	0.896	0.920	0.968	0.985	1.000			
	May-19	0.013	0.266	0.558	0.870	0.956	0.971	0.988	1.000				

	Exhibit 5 - Age-to-Age Factors											
	PPO - Small Group (ACA-Compliant)											
Incurred						Lag N	Ionth					
Month	1	2	3	4	5	6	7	8	9	10	11	12
Jul-18	12.039	1.655	1.299	1.090	1.114	1.013	1.004	1.027	1.014	1.116	1.003	-
Aug-18	12.231	2.112	1.199	1.200	1.015	1.013	1.020	1.002	1.026	1.037	1.057	-
Sep-18	23.283	1.894	1.191	1.190	1.020	1.021	1.014	1.011	1.028	1.044	1.037	-
Oct-18	5.845	1.593	1.171	1.183	1.025	1.031	1.013	1.001	1.014	1.070	1.078	-
Nov-18	11.674	2.469	1.806	1.033	1.086	1.004	1.050	1.001	1.109	1.026	1.071	-
Dec-18	12.605	1.516	1.163	1.117	1.093	1.022	1.002	1.004	1.032	1.056	1.005	-
Jan-19	14.917	1.581	1.121	1.240	1.022	1.004	1.031	1.025	1.026	1.019	1.048	-
Feb-19	17.920	1.936	1.173	1.115	1.014	1.022	1.124	1.029	1.024	1.031	-	-
Mar-19	42.812	1.940	1.152	1.011	1.017	1.004	1.005	1.009	1.005	-	-	-
Apr-19	7.140	2.985	1.104	1.174	1.021	1.031	1.009	1.008	-	-	-	-
May-19	5.167	1.936	1.301	1.106	1.258	1.046	1.009	-	-	-	-	-

### Society of Actuaries - Case Study, Group & Health Finance & Valuation Canada Exam

# \*\*Quantum Email 1\*\*

From: Dominic Greene < DGreene@quantum.com>

To: You <JB007@Skyfall.com>

Sent: April 20, 2020

Subject: 2019 YE Financial Statements

We have finished our financial statements. I have enclosed several of the key pages. Let me know if you have any questions.

Dominic

Enclosures:

Exhibit 6 - Financial Statements		
Income Statement		
(In thousands) For	the Years End	ling December 31,
Revenue	2019	2018
Premiums	85,128	94,429
Individual HMO	22,637	18,257
Individual PPO	6,407	5,377
Individual Grandfathered	18,780	32,298
Total Individual	47,823	55,932
Small Group HMO	14,860	11,750
Small Group PPO	7,699	6,013
Small Group Grandfathered	14,747	20,734
Total Small Group	37,305	38,497
Administrative fees Income	32	22
Miscellaneous income	1,703	1,889
Total operating revenue	86,863	96,340
Net investment income	1,340	1,079
Total Revenues	\$ 88,203	\$ 97,419
Expenses		
Benefit expense	71,916	76,845
Individual HMO	19,500	14,372
Individual PPO	5,574	4,799
Individual Grandfathered	15,860	25,950
Total Individual	40,934	45,120
Small Group HMO	11,363	9,354
Small Group PPO	6,164	4,820
Small Group Grandfathered	13,455	17,551
Total Small Group	30,983	31,725
Commissions	1,541	757
General insurance expenses	9,534	10,293
Insurance taxes, licenses, and fees, excluding federal income tax	1,703	1,889
Write-in	752	576
Total expenses	\$ 85,446	\$ 90,359
Income before income tax expense	2,757	7,059
Income tax expense	937	2,400
Net Income	\$ 1,820	\$ 4,659

Exhibit 6 (continue	ed) - Financial Statements	
	ance Sheet	
(In thousands)		
Assets	December 31, 2019	December 31, 2018
Current Assets		
Cash and cash equivalents	11,931	11,308
Bonds	2,535	2,695
Real Estate	2,835	2,748
Investment income due and accrued	201	159
Premium Receivables	13	11
Other receivables	995	995
Other	1,712	1,712
Electronic data processing equipment	859	859
Total current assets	21,081	20,487
Long-term investments	17,505	17,831
Net property, plant, and equipment	906	880
Goodwill	151	163
Other intangible assets	395	396
Other noncurrent assets	253	245
Total Assets	\$ 40,291	\$ 40,002
Liabilities and Shareholder's Equity		
Liabilities		
Current Liabilities:		
Policy liabilities:		
Accident and health contracts	9,535	9,478
Reserves for future policy benefits	59	59
Other policyholder liabilities	201	202
Total policy liabilities	9,795	9,739
Unearned Income	82	81
Accounts payable and accrued expenses	3,129	3,299
Current portion of long-term debt	67	84
Other current liabilities	1,594	1,594
Total current liabilities	14,667	14,797
Drafts outstanding	533	632
Payable for securities	655	938
Remittances	3,102	2,987
Other noncurrent liabilities	815	787
Total Liabilities	19,772	20,141
Shareholder's Equity		
Common capital stock	6,500	6,500
Retained earnings	13,597	12,951
Unassigned funds (surplus)	422	410
Total Shareholder's Equity	20,519	19,861
Total Liabilities and Owner's Equity	\$ 40,291	\$ 40,002

# ing Daylights Life and Health Insurance Company (Living Daylights)

Living Daylights Life and Health Insurance Company has been a client for over 20 years. Living Daylights provides group coverage to its Canadian policyholders. Since its inception in 1975, Living Daylights has been providing services within Canada and actively seeks to provide a variety of plans to meet their policyholders needs while pooling the risk across an increasing number of members.

Skyfall Canada services include the pricing and development of its products, regulatory compliance guidance, and valuation services as the Appointed Actuary.

### **Supplemental Medical Plans**

Living Daylights provides supplemental health benefits not covered by provincial medical plans to various companies within Canada. The summary of key benefit provisions provided by each of the plans is outlined in Exhibit 1 below:

	Exhibit 1 - Benefits											
	Basic	Enhanced 1	Enhanced 2	Enhanced 3								
Prescription Drug	70%	70%	75%	90%								
Coverage	(\$1,000 annual OOP max)*	(\$1,000 annual OOP max)*	(\$1,000 annual OOP max)*	(\$1,000 annual OOP max)*								
Hospital Room												
Semi-Private	Not covered	100% (\$150/day max)	100% (\$150/day max)	100% (\$150/day max)								
Private	Not covered	Not covered	100% (\$200/day max)	100% (\$200/day max)								
Paramedical	80%	90%	90%	100%								
Coverage	(\$200 per calendar year per	(\$500 per calendar year per	(\$500 per calendar year per	(\$1,000 per calendar year								
	practitioner max)	practitioner max)	practitioner max)	per practitioner max)								
Emergency Out of	60 travel days	180 travel days	180 travel days	180 travel days								
Country Coverage	(\$1,000,000 annual max)	(\$1,000,000 annual max)	(\$1,000,000 annual max)	(\$1,000,000 annual max)								
Vision	Not covered	100%	100%	100%								
Coverage		(\$300 per 24 months max)	(\$300 per 24 months max)	(\$300 per 24 months max)								
Dental Coverage												
Preventive & Basic	80%	80%	100%	100%								
Major	Not covered	50%	50%	50%								
Orthodontic	Not covered	Not covered	50%	50%								
			(\$2,000 lifetime max)	(\$3,500 lifetime max)								

<sup>\*</sup> OOP max = Out-of-pocket maximum

Living Daylights has faced many challenges throughout the years but most challenging is the increased cost of prescription drugs and rising dental costs. There are currently no incentives in place for choosing generic over brand name drugs and there is currently no maximum annual or lifetime caps set for dental coverage, except for orthodontic coverage.

Exhibit 2 - Annual Trend Data										
	2016-2017		2017-	2018	2018-2019					
Category	Utilization	Cost	Utilization	Cost	Utilization	Cost				
Prescription Drug	5.0%	2.0%	4.1%	3.9%	1.2%	2.4%				
Dental & Ortho	7.3%	3.0%	5.1%	1.5%	4.4%	1.5%				
Vision	3.2%	1.9%	2.9%	1.2%	3.0%	1.5%				
Emergency OOC Coverage	3.1%	4.7%	2.7%	1.1%	1.6%	1.8%				
Other Medical	6.7%	3.5%	6.3%	-0.6%	3.5%	2.1%				

The Financial Statements for Living Daylights are seen in Exhibit 3.

	Exhibit 3 - Financial Statements								
Living Day lights			Income Statement						
(In thousands)			For the Years Ending December 31,						
Revenue		2019	2018						
	Premiums	\$7,660	\$7,223						
	Other revenue	1,542	1,254						
	Total operating revenue	9,202	8,477						
	Net investment income	351	546						
	Net realized gains (losses) on investments	321	423						
	<b>Total Revenues</b>	\$9,874	\$9,446						
Expenses									
	Benefit expense	\$5,193	\$5,921						
	Commissions	1,149	1,083						
	General and administrative expense	735	587						
	Premium Taxes	153	144						
	Interest Expense	50	45						
	Amortization of other intangible assets	298	287						
	Total Expenses	\$7,579	\$8,068						
	Income before income tax expense	2,295	1,378						
	Income tax expense	1,251	1,253						
Net Income		\$1,044	\$125						

E	xhibit 3 - Financial Sta	atements (continued)				
Living Daylights			<b>Balance Sheet</b>			
(In thousands)						
Assets		December 31, 2019	December 31, 2018			
Current Assets			,			
Cash and cash equivalents	3	\$1,729	\$2,210			
Investments available-for-						
Fixed maturity securit	ies (amortized cost)	9,564	8,456			
Equity securities		1,835	1,515			
Accrued investment incor	ne	159	149			
Premium Receivables		3,858	3,748			
Other receivables		995	897			
Other current assets		1,712	1,829			
Assets held for sale		859	901			
Total Current Assets		\$20,711	\$19,705			
Long-term investments		\$2,102	\$2,055			
Net property, plant, and equi	ipment	1,811	1,729			
Goodwill		1,423	2,012			
Other intangible assets		5,005	3,025			
Other noncurrent assets		458	299			
Total Assets		\$31,510	\$28,825			
Liabilities and Shareholde	r's Equity					
Liabilities						
Current Liabilities						
Policy Liabilities:						
Claims Payable		\$1,232	\$1,354			
Reserves for future po	olicy benefits	2,082	2,180			
Total Policy Liabilities		\$3,314	\$3,534			
Unearned Income		811	875			
Accounts payable and acc	crued expenses	3,299	2,975			
Short-term borrowings		856	701			
Other current liabilities		1,594	1,647			
Total Current Liabilities		\$9,874	\$9,732			
Long-term debt, less current p	portion	5,468	4,868			
Deferred tax liabilities, net		2,987	2,857			
Other noncurrent liabilities		1,442	1,556			
Total Liabilities		\$19,771	\$19,013			
Shareholder's Equity						
Paid-in capital - Common Sto	ock	\$5,416	\$3,215			
Retained earnings 6,323 6,59						
Total Shareholder's Equity		\$11,739	\$9,812			
Total Liabilities and Owne	r's Equity	\$31,510	\$28,825			

# Casino Royale Health & Life Insurance Company (Royale Health)

### Large Group Products/Administrative Services Only

Royale Health, incorporated in 1980, offers coverage options for large group employers, including fully insured options and administrative services only (ASO) options. Health coverage plan options offered by Royale Health include medical and prescription plans, which are marketed primarily through agents and brokers. Royale Health has been successful in establishing its own preferred provider networks in the Midwestern states and has the second largest market share in the large group market of the Midwest Region. The medical plan portfolio includes PPO plans and qualified high deductible health plans (HDHP), which can be combined with a Health Savings Account (HSA). Royale Health also administers Health Reimbursement Arrangements (HRA) offered by employers. Royale Health 's Board has expressed interest in expanding the company into new product markets. Royale Health has recently participated in preliminary discussions with a Canadian company, Pinewood Insurance Company about a potential merger.

#### \*\*Royale Health Email 1\*\*

From: Le Chiffre < lechiffre @RoyaleHealth.com>

To: You <JB007@Skyfall.com>

Sent: March 9, 2020 Subject: Potential Merger

I have been approached by the CEO of Pinewood Insurance Company (Pinewood), located in Canada, for a possible merger. They are interested in expanding into the U.S., and we could gain from their product expertise. While we do have some overlap in product offerings, Pinewood has experience in some additional markets that we have no experience with.

As you can imagine, this potential merger is highly confidential. As we begin to explore this opportunity, I would like your help through the due diligence and, if necessary, negotiations of this possible merger. I have attached Pinewood's financial information for your review. To provide you with some background, I have also summarized below some of the information on Pinewood that I have thus far:

Pinewood is a large insurance company operating exclusively in Canada. Its corporate vision is similar to ours: to be a leader in the insurance industry, to earn a competitive return for its stockholders, to offer good value to its policyholders while operating in a financially sustainable way, and to attract and retain valuable employees.

Pinewood's primary product offerings include:

- Supplemental medical benefits.
- Group life,
- Disability insurance, and
- Ancillary products, including dental and vision.

Pinewood employs 2,000 people throughout Canada. From what I've gathered so far, Pinewood seems to have a strong reputation in their markets. However, they are interested in growing into other markets and possibly internationally.

I have attached Pinewood's financial information for your review. Please let me know what additional information you think we should seek out.

Thanks,

Le Chiffre

Exhibit 1 - 2019 Annual Report								
Pinewood Insurance Company	Consolidated S	Statement of (	Operations					
(In thousands, except per share data)	For the Years End	-						
Revenue	2019	2018	2017					
Premium Income								
Supplemental Medical	4,023	3,784	3,129					
Group Life	5,888	6,071	6,211					
Disability	2,572	3,420	5,280					
Ancillary Products	1,234	967	957					
Administrative fees Income	2,553	3,118	3,011					
Other revenue	-	-	-					
Total operating revenue	16,270	17,360	18,588					
Net investment income	3,178	5,348	5,707					
Net realized gains (losses) on investments	-	-	-					
Total Revenues	\$19,448	\$22,708	\$24,295					
Expenses								
Benefit expense								
Supplemental Medical	3,359	3,123	2,583					
Group Life	3,592	3,946	3,913					
Disability	1,517	2,120	3,326					
Ancillary Products	963	725	794					
Commissions	1,941	2,233	2,671					
General and administrative expense	4,084	4,315	4,859					
Premium Taxes	274	285	312					
Interest Expense	350	323	345					
Amortization of other intangible assets	265	274	260					
Total Expenses	\$16,345	\$17,344	\$19,063					
Income before income tax expense	3,103	5,364	5,232					
Income tax expense	621	1,073	1,046					
Net Income	\$2,482	\$4,291	\$4,186					
Not in come non all and								
Net income per share	<b>\$2.66</b>	¢4.22	ф2. <b>7</b> 2					
Basic	\$2.66	\$4.33	\$3.73					
Diluted	\$2.70	\$4.73	\$3.84					
Average Exchange Rates*								
U.S. dollars	0.74	0.76	0.80					
Euro	0.69	0.67	0.66					
* e.g., on 12/31/2017, \$1 Can = \$0.80 US								

Exhibit 1 - 2019 Annual Report (continued)  Pinewood Insurance Company  Consolidated Balance Sheet								
Pinewood Insurance Company (In thousands)	Consolid	ated Balance Sheet						
Assets	December 31, 2019	December 31, 2018						
Current Assets	, , , , , , , , , , , , , , , , , , , ,	, , , , ,						
Cash and cash equivalents	\$9,880	\$8,770						
Premium Receivables	8	8						
Investments available-for-sale, at fair value								
Fixed maturity securities (amortized cost)	1,169	1,097						
Equity securities	256	242						
Other invested assets, current	693	722						
Other receivables	827	745						
Income taxes receivable	53	54						
Net due from subsidiaries	867	1,197						
Securities lending collateral	583	854						
Deferred tax assets, net	250	248						
Other current assets	250	240						
Total Current Assets	\$14,587	\$13,938						
Long-term investments								
Fixed maturity securities	\$534	\$234						
Equity securities	\$6	\$7 \$7						
Other invested assets, long-term	\$456	\$495						
Property and equipment, net	4	3						
Deferred tax assets, net, non-current	234	227						
Investment in subsidiaries	5,544	3,456						
Other noncurrent assets	114	37						
Total Assets	\$21,479	\$18,397						
Total Assets	\$21,479	\$10,397						
Liabilities and Shareholder's Equity	December 31, 2019	December 31, 2018						
Liabilities								
Actuarial and Policy Liabilities	\$8,230	\$7,564						
Amounts on deposit	678	876						
Deferred Gains	4	5						
Long-term debt	345	456						
Other Liabilities	795	856						
Total Liabilities	\$10,052	\$9,757						
Shareholder's Equity								
Preferred stock	0	ſ						
Common stock	5	5						
Additional paid-in capital	326	109						
Retained earnings	1,865	1,777						
Accumulated Income	9,231	6,749						
Total Shareholder's Equity	\$11,427	\$8,640						

### Society of Actuaries - Case Study, Group & Health Finance & Valuation Canada Exam

### \*\*Royale Health Email 2\*\*

From: Le Chiffre <lechiffre@RoyaleHealth.com>

To: You <JB007@Skyfall.com>

Sent: March 17, 2020

Subject: Royale Health Financial Information

Hi – I have attached our latest financial information for this past year. Also of note, Royale Health had 444,902,956 common/preferred shares outstanding at YE2019. Our current tax rate is 21.0%.

Please let me know if you need anything else or need help finding anything.

Thanks,

Le Chiffre

Exhibit 2 - Financial Statements						
Royale Life Insurance Company	Income S	<b>Income Statement</b>				
(In thousands)	For the Years Endi	ng December 31,				
Revenue	2019	2018				
Premiums	\$66,599	\$57,686				
Administrative fees Income	5,050	4,152				
Other revenue	45	79				
Total operating revenue	71,694	61,917				
Net investment income	749	755				
Net realized gains (losses) on investments	321	423				
<b>Total Revenues</b>	\$72,764	\$63,095				
Expenses						
Benefit expense	\$57,230	\$49,252				
Commissions	1,541	1,591				
General and administrative expense	9,246	8,143				
Premium Taxes	1,332	1,154				
Interest Expense	752	598				
Amortization of other intangible assets	298	287				
Total Expenses	\$70,399	\$61,025				
Income before income tax expense	2,365	2,070				
Income tax expense	1,251	1,253				
Net Income	\$1,114	\$817				

Exhibit 2 - Financial Statements (continued)								
Royale Life Insurance Company		<b>Balance Sheet</b>						
(In thousands)	D 1 21 2010	D 1 21 2010						
Assets	<b>December 31, 2019</b>	<b>December 31, 2018</b>						
Current Assets								
Cash and cash equivalents	\$1,729	\$2,210						
Investments available-for-sale, at fair value								
Fixed maturity securities (amortized cost)	16,950	15,913						
Equity securities	1,835	1,515						
Accrued investment income	159	149						
Premium Receivables	3,858	3,748						
Other receivables	995	897						
Other current assets	1,712	1,829						
Assets held for sale	859	901						
Total Current Assets	\$28,097	\$27,162						
Long-term investments	\$2,102	\$2,055						
Net property, plant, and equipment	1,811	1,729						
Goodwill	15,971	15,942						
Other intangible assets	7,931	7,955						
Other noncurrent assets	458	299						
Total Assets	\$56,370	\$55,142						
		,						
Liabilities and Shareholder's Equity	December 31, 2019	<b>December 31, 2018</b>						
Liabilities								
Current Liabilities								
Policy Liabilities:								
Medical claims payable	\$6,058	\$6,095						
Reserves for future policy benefits	59	55						
Other policyholder liabilities	2,023	2,125						
Total Policy Liabilities	\$8,140	\$8,275						
		, , , , ,						
Unearned Income	811							
Unearned Income Accounts payable and accrued expenses	811 3,299	875						
		875 2,975						
Accounts payable and accrued expenses	3,299	875 2,975 212						
Accounts payable and accrued expenses Short-term borrowings	3,299 389	875 2,975 212						
Accounts payable and accrued expenses Short-term borrowings Current portion of long-term debt	3,299 389 467	875 2,975 212 489 1,647						
Accounts payable and accrued expenses Short-term borrowings Current portion of long-term debt Other current liabilities	3,299 389 467 1,594	875 2,975 212 489 1,647						
Accounts payable and accrued expenses Short-term borrowings Current portion of long-term debt Other current liabilities Total Current Liabilities	3,299 389 467 1,594 \$14,700	875 2,975 212 489 1,647 \$14,473						
Accounts payable and accrued expenses Short-term borrowings Current portion of long-term debt Other current liabilities  Total Current Liabilities Long-term debt, less current portion Reserves for future policy benefits, noncurrent	3,299 389 467 1,594 \$14,700 11,253 655	875 2,975 212 489 1,647 \$14,473 12,121 661						
Accounts payable and accrued expenses Short-term borrowings Current portion of long-term debt Other current liabilities  Total Current Liabilities Long-term debt, less current portion	3,299 389 467 1,594 \$14,700 11,253	875 2,975 212 489 1,647 \$14,473 12,121						
Accounts payable and accrued expenses Short-term borrowings Current portion of long-term debt Other current liabilities Total Current Liabilities Long-term debt, less current portion Reserves for future policy benefits, noncurrent Deferred tax liabilities, net	3,299 389 467 1,594 \$14,700 11,253 655 2,987	875 2,975 212 489 1,647 \$14,473 12,121 661 2,857 895						
Accounts payable and accrued expenses Short-term borrowings Current portion of long-term debt Other current liabilities  Total Current Liabilities Long-term debt, less current portion Reserves for future policy benefits, noncurrent Deferred tax liabilities, net Other noncurrent liabilities  Total Liabilities	3,299 389 467 1,594 \$14,700 11,253 655 2,987 787	875 2,975 212 489 1,647 \$14,473 12,121 661 2,857 895						
Accounts payable and accrued expenses Short-term borrowings Current portion of long-term debt Other current liabilities  Total Current Liabilities Long-term debt, less current portion Reserves for future policy benefits, noncurrent Deferred tax liabilities, net Other noncurrent liabilities  Total Liabilities  Shareholder's Equity	3,299 389 467 1,594 \$14,700 11,253 655 2,987 787 \$30,382	875 2,975 212 489 1,647 \$14,473 12,121 661 2,857 895 \$31,007						
Accounts payable and accrued expenses Short-term borrowings Current portion of long-term debt Other current liabilities  Total Current Liabilities Long-term debt, less current portion Reserves for future policy benefits, noncurrent Deferred tax liabilities, net Other noncurrent liabilities  Total Liabilities  Shareholder's Equity Paid-in capital - Common Stock	3,299 389 467 1,594 \$14,700 11,253 655 2,987 787 \$30,382	875 2,975 212 489 1,647 \$14,473 12,121 661 2,857 895 \$31,007						
Accounts payable and accrued expenses Short-term borrowings Current portion of long-term debt Other current liabilities Total Current Liabilities Long-term debt, less current portion Reserves for future policy benefits, noncurrent Deferred tax liabilities, net Other noncurrent liabilities Total Liabilities Shareholder's Equity Paid-in capital - Common Stock Retained earnings	3,299 389 467 1,594 \$14,700 11,253 655 2,987 787 \$30,382	875 2,975 212 489 1,647 \$14,473 12,121 661 2,857 895 \$31,007						
Accounts payable and accrued expenses Short-term borrowings Current portion of long-term debt Other current liabilities Total Current Liabilities Long-term debt, less current portion Reserves for future policy benefits, noncurrent Deferred tax liabilities, net Other noncurrent liabilities Total Liabilities Shareholder's Equity Paid-in capital - Common Stock Retained earnings Accumulate other comprehensive income	3,299 389 467 1,594 \$14,700 11,253 655 2,987 787 \$30,382	875 2,975 212 489 1,647 \$14,473 12,121 661 2,857 895 \$31,007						
Accounts payable and accrued expenses Short-term borrowings Current portion of long-term debt Other current liabilities Total Current Liabilities Long-term debt, less current portion Reserves for future policy benefits, noncurrent Deferred tax liabilities, net Other noncurrent liabilities Total Liabilities Shareholder's Equity Paid-in capital - Common Stock Retained earnings	3,299 389 467 1,594 \$14,700 11,253 655 2,987 787 \$30,382	875 2,975 212 489 1,647 \$14,473 12,121 661 2,857 895 \$31,007						

# the Thunderball Corporation (Thunderball)

The Thunderball Corporation is a large insurance company operating in the United States and Canada. The corporate vision is to be a comprehensive provider of long term insurance products. Thunderball seeks to offer competitive products earning reasonable return for stockholders while growing at a financially sustainable rate. Thunderball offers Group Long-Term Disability, Group Life, and Group and Individual Long-Term Care.

### **Long-Term Disability**

Thunderball has experienced steady growth in Long-Term Disability sales. The following tables show the reserve factors for various ages and durations. Tables 1 & 2 are the newest tables created by the internal team, and Tables 3 & 4 are the tables that have been used for many years.

					1 - Claim						
		-	Benefit to Age				_				
hree Moi		on Period,	24 Month Ov	wn Occupat		5.0% Disc	ount Rate				
	Duration				Duration				Duration		
Age	(Months)	Male	Female	Age	(Months)	Male	Female	Age	(Months)	Male	Female
27	4	24.70	27.90	35	4	34.22	37.74	43	4	40.68	42.48
27	9	42.20	46.40	35	9	53.96	58.00	43	9	59.66	61.74
27	18	60.60	64.90	35	18	71.40	77.06	43	18	74.16	78.54
27	27	70.10	74.50	35	27	79.62	86.02	43	27	80.02	85.24
27	48	100.60	105.20	35	48	103.08	111.04	43	48	94.04	100.74
27	60	106.10	110.20	35	60	106.26	114.04	43	60	94.24	100.78
28	4	25.89	29.13	36	4	35.41	38.97	44	4	41.36	42.86
28	9	43.67	47.85	36	9	55.43	59.45	44	9	60.12	61.88
28	18	61.95	66.42	36	18	72.75	78.58	44	18	74.17	78.28
28	27	71.29	75.94	36	27	80.81	87.46	44	27	79.69	84.63
28	48	100.91	105.93	36	48	103.39	111.77	44	48	92.43	98.78
28	60	106.12	110.68	36	60	106.28	114.52	44	60	92.23	98.41
29	4	27.08	30.36	37	4	36.60	40.20	45	4	42.04	43.24
29	9	45.14	49.30	37	9	56.90	60.90	45	9	60.58	62.02
29	18	63.30	67.94	37	18	74.10	80.10	45	18	74.18	78.02
29	27	72.48	77.38	37	27	82.00	88.90	45	27	79.36	84.02
29	48	101.22	106.66	37	48	103.70	112.50	45	48	90.82	96.82
29	60	106.14	111.16	37	60	106.30	115.00	45	60	90.22	96.04
30	4	28.27	31.59	38		37.28	40.58	46	4	42.72	43.62
30	9	46.61	50.75	38		57.36	61.04	46	9	61.04	62.16
30	18	64.65	69.46	38		74.11	79.84	46	18	74.19	77.76
30	27	73.67	78.82	38	27	81.67	88.29	46	27	79.03	83.41
30	48	101.53	107.39	38	48	102.09	110.54	46	48	89.21	94.86
30	60	106.16	111.64	38	60	104.29	112.63	46	60	88.21	93.67
31	4	29.46	32.82	39	4	37.96	40.96	47	4	43.40	44.00
31	9	48.08	52.20	39	9	57.82	61.18	47	9	61.50	62.30
31	18	66.00	70.98	39	18	74.12	79.58	47	18	74.20	77.50
31	27	74.86	80.26	39	27	81.34	87.68	47	27	78.70	82.80
31	48	101.84	108.12	39	48	100.48	108.58	47	48		
										87.60	92.90
31	60	106.18	112.12	39	60	102.28	110.26	47	60	86.20	91.30
32	4	30.65	34.05	40	4	38.64	41.34	48	4	42.58	42.95
32	9	49.55	53.65	40		58.28	61.32	48	9	59.79	60.36
32	18	67.35	72.50	40		74.13	79.32	48	18	71.50	74.47
32	27	76.05	81.70	40		81.01	87.07	48	27	75.32	79.03
32	48	102.15	108.85	40		98.87	106.62	48	48	82.39	87.22
32	60	106.20	112.60	40		100.27	107.89	48	60	80.29	84.91
33	4	31.84	35.28	41	4	39.32	41.72	49	4	41.76	41.90
33	9	51.02	55.10	41	9	58.74	61.46	49	9	58.08	58.42
33	18	68.70	74.02	41	18	74.14	79.06	49	18	68.80	71.44
33	27	77.24	83.14	41	27	80.68	86.46	49	27	71.94	75.26
33	48	102.46	109.58	41	48	97.26	104.66	49	48	77.18	81.54
33	60	106.22	113.08	41	60	98.26	105.52	49	60	74.38	78.52
34	4	33.03	36.51	42	4	40.00	42.10	50	4	40.94	40.85
34	9	52.49	56.55	42	9	59.20	61.60	50	9	56.37	56.48
34	18	70.05	75.54	42	18	74.15	78.80	50	18	66.10	68.41
34	27	78.43	84.58	42	27	80.35	85.85	50	27	68.56	71.49
34	48	102.77	110.31	42	48	95.65	102.70	50	48	71.97	75.86
34	60	106.24	113.56	42	60	96.25	103.15	50	60	68.47	72.13

				Exhibit	2 - Claim	Reserve	Factors				
\$3,000 Inde	exed Gross	Monthly E	Benefit to Age	e 65, Reserv	es per \$1 B	enefit, No	Diagnosis,				
Six Month	Elimination	Period, 24	Month Own	Occupation	Period, 5.0	% Discou	nt Rate				
	Duration				Duration				Duration		
Age	(Months)	Male	Female	Age	(Months)	Male	Female	Age	(Months)	Male	Female
27	7	40.80	45.30	35	4	52.24	56.50	43	4	57.74	60.02
27	9	45.80	50.20	35	9	57.40	61.80	43	9	62.46	65.00
27	18	62.30	66.80	35	18	72.94	78.72	43	18	75.30	79.84
27	27	74.60	79.20	35	27	83.40	90.16	43		82.54	88.10
27	48	100.60	105.20	35	48	103.08	111.04	43		94.04	100.74
27	60	106.10	110.20	35	60	106.26	114.04	43		94.24	100.78
28	4	42.23	46.70	36		53.67	57.90	44		58.18	60.14
28	9	47.25	51.65	36		58.85	63.25	44		62.82	65.05
28	18	63.63	68.29	36		74.27	80.21	44		75.25	79.53
28	27	75.70	80.57	36		84.50	91.53	44		82.03	87.30
28	48	100.91	105.93	36		103.39	111.77	44		92.43	98.78
28	60	106.12	110.68	36		106.28	114.52	44		92.23	98.41
29	4	43.66	48.10	37	7	55.10	59.30	45		58.62	60.26
29	9	48.70	53.10	37	9	60.30	64.70	45		63.18	65.10
29	18	64.96	69.78	37	18	75.60	81.70	45		75.20	79.22
29	27	76.80	81.94	37		85.60	92.90	45		81.52	86.50
29	48	101.22	106.66	37	48	103.70	112.50	45		90.82	96.82
29	60			37	60			45			
30	7	106.14	111.16	38		106.30	115.00	45		90.22	96.04
30	9	45.09	49.50	38		55.54	59.42 64.75	46		59.06 63.54	60.38
30	18	50.15	54.55	38		60.66					65.15
		66.29	71.27			75.55	81.39	46		75.15	78.91
30	27	77.90	83.31	38		85.09	92.10	46		81.01	85.70
30	48	101.53	107.39	38		102.09	110.54	46		89.21	94.86
30	60	106.16	111.64	38		104.29	112.63	46		88.21	93.67
31	4	46.52	50.90	39	4	55.98	59.54	47		59.50	60.50
31	9	51.60	56.00	39	9	61.02	64.80	47		63.90	65.20
31	18	67.62	72.76	39	18	75.50	81.08	47		75.10	78.60
31	27	79.00	84.68	39	27	84.58	91.30	47		80.50	84.90
31	48	101.84	108.12	39	48	100.48	108.58	47		87.60	92.90
31	60	106.18	112.12	39		102.28	110.26	47		86.20	91.30
32	4	47.95	52.30	40		56.42	59.66	48		57.91	58.67
32	9	53.05	57.45	40		61.38	64.85	48		62.05	63.10
32	18	68.95	74.25	40		75.45	80.77	48		72.35	75.50
32	27	80.10	86.05	40		84.07	90.50	48		76.85	80.85
32	48	102.15	108.85	40		98.87	106.62	48		82.39	87.22
32	60	106.20	112.60	40		100.27	107.89	48		80.29	84.91
33	4	49.38	53.70	41	4	56.86	59.78	49		56.32	56.84
33	9	54.50	58.90	41	9	61.74	64.90	49		60.20	61.00
33	18	70.28	75.74	41	18	75.40	80.46	49		69.60	72.40
33	27	81.20	87.42	41	27	83.56	89.70	49		73.20	76.80
33	48	102.46	109.58	41	48	97.26	104.66	49		77.18	81.54
33	60	106.22	113.08	41	60	98.26	105.52	49		74.38	78.52
34	7	50.81	55.10	42	4	57.30	59.90	50	7	54.73	55.01
34	9	55.95	60.35	42	9	62.10	64.95	50	9	58.35	58.90
34	18	71.61	77.23	42	18	75.35	80.15	50	18	66.85	69.30
34	27	82.30	88.79	42	27	83.05	88.90	50	27	69.55	72.75
34	48	102.77	110.31	42	48	95.65	102.70	50	48	71.97	75.86
34	60	106.24	113.56	42	60	96.25	103.15	50	60	68.47	72.13

				Exhibit	3 - Claim	Reserve	Factors				
\$3,000 Ind	exed Gross	Monthly E	Benefit to Ago	e 65, Reserv	es per \$1 B	enefit, No	Diagnosis,				
Three Moi	nth Eliminati	ion Period,	24 Month O	wn Occupat	ion Period,	5.0% Disc	ount Rate				
	Duration				Duration				Duration		
Age	(Months)	Male	Female	Age	(Months)	Male	Female	Age	(Months)	Male	Female
27	7	44.40	47.20	35	7	52.80	55.52	43	7	58.50	60.54
27	9	68.70	76.00	35	9	76.22	82.72	43	9	78.52	83.32
27	18	95.00	110.80	35	18	98.28	111.12	43	18	94.36	103.40
27	27	108.30	127.50	35		109.34	124.62	43	27	101.26	111.72
27	48	127.50	146.40	35		121.34	136.00	43	48	105.34	114.92
27	60	133.70	151.10	35		123.54	137.10	43	60	103.96	112.72
28	7	45.45	48.24	36		53.85	56.56	44	7	59.10	61.03
28	9	69.64	76.84	36		77.16	83.56	44	9	78.59	83.14
28	18	95.41	110.84	36		98.69	111.16	44	18	93.57	102.10
28	27	108.43	127.14	36		109.47	124.26	44	27	99.87	102.10
28	48	126.73	145.10	36		120.57	134.70	44	48	102.93	111.84
28	60	132.43	149.35	36		120.37	135.35	44	60	101.12	109.24
29	7		49.28	37	7	54.90		44	7	59.70	61.52
		46.50					57.60		· ·		
29	9	70.58	77.68	37	9	78.10	84.40	45	9	78.66	82.96
29	18	95.82	110.88	37	18	99.10	111.20	45	18	92.78	100.80
29	27	108.56	126.78	37	27	109.60	123.90	45	27	98.48	107.66
29	48	125.96	143.80	37	48	119.80	133.40	45		100.52	108.76
29	60	131.16	147.60	37	60	121.00	133.60	45		98.28	105.76
30	7	47.55	50.32	38		55.50	58.09	46		60.30	62.01
30	9	71.52	78.52	38		78.17	84.22	46		78.73	82.78
30	18	96.23	110.92	38		98.31	109.90	46		91.99	99.50
30	27	108.69	126.42	38		108.21	121.87	46		97.09	105.63
30	48	125.19	142.50	38		117.39	130.32	46	48	98.11	105.68
30	60	129.89	145.85	38		118.16	130.12	46	60	95.44	102.28
31	7	48.60	51.36	39	7	56.10	58.58	47	7	60.90	62.50
31	9	72.46	79.36	39	9	78.24	84.04	47	9	78.80	82.60
31	18	96.64	110.96	39	18	97.52	108.60	47	18	91.20	98.20
31	27	108.82	126.06	39	27	106.82	119.84	47	27	95.70	103.60
31	48	124.42	141.20	39	48	114.98	127.24	47	48	95.70	102.60
31	60	128.62	144.10	39	60	115.32	126.64	47	60	92.60	98.80
32	7	49.65	52.40	40		56.70	59.07	48	7	59.59	61.03
32	9	73.40	80.20	40		78.31	83.86	48	9	76.27	79.76
32	18	97.05	111.00	40		96.73	107.30	48	18	87.38	93.83
32	27	108.95	125.70	40		105.43	117.81	48		91.06	98.32
32	48	123.65	139.90	40		112.57	124.16	48		89.77	96.07
32	60	127.35	142.35	40		112.48	123.16	48		86.09	91.72
33	7	50.70	53.44	41	7	57.30	59.56	49		58.28	59.56
33	9	74.34	81.04	41	9	78.38	83.68	49		73.74	76.92
33	18	97.46	111.04	41	18	95.94	106.00	49		83.56	89.46
33	27	109.08	125.34	41	27	104.04	115.78	49		86.42	93.04
33				41		110.16					
	48	122.88	138.60		48		121.08	49	48	83.84	89.54
33	60	126.08	140.60	41	60	109.64	119.68	49	60	79.58	84.64
34	7	51.75	54.48	42	7	57.90	60.05	50		56.97	58.09
34	9	75.28	81.88	42	9	78.45	83.50	50		71.21	74.08
34	18	97.87	111.08	42	18	95.15	104.70	50		79.74	85.09
34	27	109.21	124.98	42	27	102.65	113.75	50		81.78	87.76
34	48	122.11	137.30	42	48	107.75	118.00	50		77.91	83.01
34	60	124.81	138.85	42	60	106.80	116.20	50	60	73.07	77.56

	-			Exhibit	4 - Claim	Reserve	Factors				
\$3,000 Inde	exed Gross	Monthly E	Benefit to Age	e 65, Reserv	es per \$1 B	enefit, No	Diagnosis,				
Six Month	Elimination	Period, 24	Month Own	Occupation	Period, 5.0	% Discou	nt Rate				
	Duration				Duration				Duration		
Age	(Months)	Male	Female	Age	(Months)	Male	Female	Age	(Months)	Male	Female
27	7	67.80	74.40	35	7	76.44	82.48	43	7	78.36	82.70
27	9	74.40	82.90	35	9	82.16	89.62	43	9	82.78	88.18
27	18	96.90	113.10	35	18	100.02	113.18	43	18	95.58	104.80
27	27	111.60	130.90	35	27	111.76	126.98	43		102.50	112.80
27	48	127.50	146.40	35	48	121.34	136.00	43		105.34	114.92
27	60	133.70	151.10	35	60	123.54	137.10	43		103.96	112.72
28	7	68.88	75.41	36		77.52	83.49	44		78.32	82.40
28	9	75.37	83.74	36		83.13	90.46	44		82.56	87.66
28	18	97.29	113.11	36		100.41	113.19	44		94.71	103.40
28	27	111.62	130.41	36		111.78	126.49	44		100.95	110.60
28	48	126.73	145.10	36		120.57	134.70	44		102.93	111.84
28	60	132.43	149.35	36		122.27	135.35	44		101.12	109.24
29	7	69.96	76.42	37	7	78.60	84.50	45		78.28	82.10
29	9	76.34	84.58	37	9	84.10	91.30	45		82.34	87.14
29	18	97.68		37	18			45			
29	27		113.12	37		100.80	113.20			93.84	102.00
		111.64	129.92	37	27	111.80	126.00	45		99.40	108.40
29	48	125.96	143.80		48	119.80	133.40	45		100.52	108.76
29	60	131.16	147.60	37	60	121.00	133.60	45		98.28	105.76
30	7	71.04	77.43	38		78.56	84.20	46		78.24	81.80
30	9	77.31	85.42	38		83.88	90.78	46		82.12	86.62
30	18	98.07	113.13	38		99.93	111.80	46		92.97	100.60
30	27	111.66	129.43	38		110.25	123.80	46		97.85	106.20
30	48	125.19	142.50	38		117.39	130.32	46		98.11	105.68
30	60	129.89	145.85	38		118.16	130.12	46		95.44	102.28
31	7	72.12	78.44	39	7	78.52	83.90	47		78.20	81.50
31	9	78.28	86.26	39	9	83.66	90.26	47		81.90	86.10
31	18	98.46	113.14	39	18	99.06	110.40	47	18	92.10	99.20
31	27	111.68	128.94	39	27	108.70	121.60	47		96.30	104.00
31	48	124.42	141.20	39	48	114.98	127.24	47		95.70	102.60
31	60	128.62	144.10	39		115.32	126.64	47		92.60	98.80
32	7	73.20	79.45	40		78.48	83.60	48		75.68	78.68
32	9	79.25	87.10	40	9	83.44	89.74	48		79.06	82.91
32	18	98.85	113.15	40		98.19	109.00	48		88.19	94.73
32	27	111.70	128.45	40		107.15	119.40	48		91.44	98.51
32	48	123.65	139.90	40		112.57	124.16	48		89.77	96.07
32	60	127.35	142.35	40		112.48	123.16	48		86.09	91.72
33	7	74.28	80.46	41	7	78.44	83.30	49		73.16	75.86
33	9	80.22	87.94	41	9	83.22	89.22	49		76.22	79.72
33	18	99.24	113.16	41	18	97.32	107.60	49		84.28	90.26
33	27	111.72	127.96	41	27	105.60	117.20	49	27	86.58	93.02
33	48	122.88	138.60	41	48	110.16	121.08	49	48	83.84	89.54
33	60	126.08	140.60	41	60	109.64	119.68	49	60	79.58	84.64
34	7	75.36	81.47	42	7	78.40	83.00	50	7	70.64	73.04
34	9	81.19	88.78	42	9	83.00	88.70	50	9	73.38	76.53
34	18	99.63	113.17	42	18	96.45	106.20	50	18	80.37	85.79
34	27	111.74	127.47	42	27	104.05	115.00	50	27	81.72	87.53
34	48	122.11	137.30	42	48	107.75	118.00	50	48	77.91	83.01
34	60	124.81	138.85	42	60	106.80	116.20	50	60	73.07	77.56

# Amother Day, Inc. (Another Day)

Another Day is a company headquartered in Toronto, Ontario with employees and locations across Canada. Over the past several years, it has experienced rapid growth and now offers benefit coverage to 1,500 active employees and 350 retirees. Its benefit plan (both active and retiree) is fully insured on a non-refund basis, with Another Day fully subsidizing the premiums.

Another Day has employed Skyfall Canada to assist with the design and pricing of its active and retiree benefit plans as well as the preparation of its financial statements for the post-retirement benefit plan.

A summary of the active benefit plan and applicable premium rates is provided in Exhibit 1 below:

Exhibit 1:

Benefit	Coverage Level	Monthly Rate
Basic Life Insurance	2 times annual salary up to \$500,000	\$0.463 per \$1,000
Basic AD&D	Matches Basic Life Insurance volume	\$0.030 per \$1,000
G	<b></b>	h0 550 h40
Short Term Disability	75% of weekly salary up to \$1,000	\$0.660 per \$10
	Taxable Plan, 26 week benefit period	
Long Term Disability	66.67% of monthly salary up to \$5,000	\$2.550 per \$100
	Taxable Plan, 26 week elimination period	T
Extended Health Care		\$95/aingle, \$197/femily
	000/ with \$1,000 applease out of poolest maximum	\$85/single; \$187/family
- Drugs - Paramedical Practitioners	90% with \$1,000 employee out-of-pocket maximum	
	100%; \$500 per practitioner per year	
- Hospital	100% semi-private room	
- Vision	100%; \$200 per 12 months	
- Emergency Out-of-Country	60 day maximum, \$1,000,000 lifetime maximum	
- Other Supplies and Services	100%	
Dental		\$54/single; \$119/family
- Basic	100%, \$2,500 annual maximum (combined with major)	
- Major	50%, \$2,500 annual maximum (combined with basic)	
- Orthodontics	50%; \$1,500 lifetime maximum	
Health Spending Account	\$500 per year	Paid as incurred
	Credit carryforward provision	

Note: All benefits terminate at the earlier of retirement or age 65

A summary of the retiree benefit plan and applicable premium rates is provided in Exhibit 2 below:

Exhibit 2:

Benefit	Coverage Level	Monthly Rate
Basic Life Insurance	Flat \$15,000	\$0.463 per \$1,000
Extended Health Care		\$85/single; \$187/family
- Drugs	90% with \$1,000 out-of-pocket maximum	
- Paramedical Practitioners	100%; \$500 per practitioner per year	
- Hospital	100% semi-private room	
- Vision	100%; \$200 per 12 months	
- Emergency Out-of-Country	60 day maximum, \$1,000,000 lifetime maximum	
- Other Supplies and Services	100%	

Benefits terminate upon death of the retiree with a 24 month extension for surviving spouses. Further, only active employees with a minimum of 5 years of continuous service are eligible at or after age 55.

Summaries of the employees and retirees of Another Day are provided in Exhibit 3 and Exhibit 4 below.

Exhibit 3:

Active Data								
Employee Information			Headcount					
Age	Years of Service	Annual Salary	Single	Family	Total			
25	4	\$50,000	175	50	225			
35	13	\$65,000	100	300	400			
45	23	\$80,000	50	375	425			
53	1	\$85,000	5	10	15			
55	30	\$100,000	50	275	325			
57	3	\$90,000	5	5	10			
65	32	\$105,000	35	40	75			
75	35	\$110,000	20	5	25			
	_		440	1,060	1,500			

Average Family Size: 2.3

Exhibit 4:

Retiree Data						
Retiree	Information	Headcount				
Age	Years Since					
(years)	Retirement	Single	Family	Total		
55	0	50	100	150		
60	4	37	33	70		
65	8	33	30	63		
70	12	30	14	44		
75	16	21	2	23		
		171	179	350		

Average Family Size: 2.0

A summary of Extended Health Care claims experience for both actives and retirees over the period 2017 to 2019 can be found in Exhibit 5 below:

**Exhibit 5: Extended Health Care Claims Experience** 

Active Claims Experience						
Calendar Year		2017	2017 2			2019
Total Paid Claims (Including Pooled) Total Pooled Claims	\$ \$	977,000 77,000	\$ \$	1,512,000 185,000	\$ \$	2,286,000 190,000
Number of Covered Employees - Single - Family		225 475		350 700		440 1060

Premium rates have been held unchanged over the past three years.

Administrative Expenses and Taxes: 12% of paid claims

Pooling Charge: 5.5% of paid claims

Pooling Arrangement: Large Amount Pooling of claims in excess of \$25,000 (inside and outside) per covered individual.

Retiree	Claims	Experience	e
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Calendar Year Total Paid Claims (Including Pooled)	2017		2018		2019
- Under 65	\$ 427,000	\$	457,000	\$	507,000
- 65 and Over	\$ 77,000	\$	88,000	\$	113,000
Total Pooled Claims					
- Under 65	\$ 12,000	\$	43,000	\$	35,000
- 65 and Over	\$ -	\$	-	\$	5,000
Number of Covered Employees					
- Under 65					
- Single	71		75		87
- Family	116		123		133
- 65 and Over					
- Single	55		67		84
- Family	33		35		46

Premium rates have been held unchanged over the past three years.

Administrative Expenses and Taxes: 12% of paid claims

Pooling Charge: 5.5% of paid claims

Pooling Arrangement: Large Amount Pooling of claims in excess of \$25,000 (inside and outside) per covered individual.