Case Study

FALL 2023/SPRING 2024

Foundations of CFE Exam

EXAM CFE FD

CFEFD

The following *t* table should be used as needed for examination questions:

	Confidence Interval (Two-Tail *t* distribution)										
Degrees of Freedom	75.00%	77.50%	80.00%	82.50%	85.00%	87.50%	90.00%	92.50%	95.00%	97.50%	99.00%
1	2.41	2.71	3.08	3.55	4.17	5.03	6.31	8.45	12.71	25.45	63.66
2	1.60	1.73	1.89	2.06	2.28	2.56	2.92	3.44	4.30	6.21	9.92
3	1.42	1.52	1.64	1.77	1.92	2.11	2.35	2.68	3.18	4.18	5.84
4	1.34	1.43	1.53	1.65	1.78	1.94	2.13	2.39	2.78	3.50	4.60
5	1.30	1.38	1.48	1.58	1.70	1.84	2.02	2.24	2.57	3.16	4.03
6	1.27	1.35	1.44	1.54	1.65	1.78	1.94	2.15	2.45	2.97	3.71
7	1.25	1.33	1.41	1.51	1.62	1.74	1.89	2.09	2.36	2.84	3.50
8	1.24	1.31	1.40	1.49	1.59	1.71	1.86	2.05	2.31	2.75	3.36
9	1.23	1.30	1.38	1.47	1.57	1.69	1.83	2.01	2.26	2.69	3.25
10	1.22	1.29	1.37	1.46	1.56	1.67	1.81	1.99	2.23	2.63	3.17
11	1.21	1.29	1.36	1.45	1.55	1.66	1.80	1.97	2.20	2.59	3.11
12	1.21	1.28	1.36	1.44	1.54	1.65	1.78	1.95	2.18	2.56	3.05
13	1.20	1.27	1.35	1.43	1.53	1.64	1.77	1.94	2.16	2.53	3.01
14	1.20	1.27	1.35	1.43	1.52	1.63	1.76	1.92	2.14	2.51	2.98
15	1.20	1.27	1.34	1.42	1.52	1.62	1.75	1.91	2.13	2.49	2.95
16	1.19	1.26	1.34	1.42	1.51	1.62	1.75	1.90	2.12	2.47	2.92
17	1.19	1.26	1.33	1.42	1.51	1.61	1.74	1.90	2.11	2.46	2.90
18	1.19	1.26	1.33	1.41	1.50	1.61	1.73	1.89	2.10	2.45	2.88
19	1.19	1.25	1.33	1.41	1.50	1.60	1.73	1.88	2.09	2.43	2.86
20	1.18	1.25	1.33	1.41	1.50	1.60	1.72	1.88	2.09	2.42	2.85
21	1.18	1.25	1.32	1.40	1.49	1.60	1.72	1.87	2.08	2.41	2.83
22	1.18	1.25	1.32	1.40	1.49	1.59	1.72	1.87	2.07	2.41	2.82
23	1.18	1.25	1.32	1.40	1.49	1.59	1.71	1.86	2.07	2.40	2.81
24	1.18	1.25	1.32	1.40	1.49	1.59	1.71	1.86	2.06	2.39	2.80
25	1.18	1.24	1.32	1.40	1.49	1.59	1.71	1.86	2.06	2.38	2.79
26	1.18	1.24	1.31	1.39	1.48	1.59	1.71	1.85	2.06	2.38	2.78
27	1.18	1.24	1.31	1.39	1.48	1.58	1.70	1.85	2.05	2.37	2.77
28	1.17	1.24	1.31	1.39	1.48	1.58	1.70	1.85	2.05	2.37	2.76
29	1.17	1.24	1.31	1.39	1.48	1.58	1.70	1.85	2.05	2.36	2.76
30	1.17	1.24	1.31	1.39	1.48	1.58	1.70	1.84	2.04	2.36	2.75

The following Standard Normal Table should be used as needed for examination questions:

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	0.5040	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

Disclaimer

The companies and events depicted in this Case Study are fictitious. Any similarity to any event, corporation, organization, or person living or dead is merely coincidental. Some narrative material utilizes real locations and real news organizations to make the Case Study seem real. The Associated Press, Wall Street Journal, Standard & Poor's, A.M. Best and others used in this context have never actually commented on any of the fictitious companies. The case study should be read critically, with the understanding that it depicts hypothetical organizations with some good policies and some flaws; it is not a representation of best practices.

List of Excel Functions That May Be Useful on CFE/ERM Exams

Below, find a list of Excel functions that may be useful when taking the exams on Corporate Finance and ERM track (ERM, Foundations of CFE, and Strategic Decision Making). This reading is not required, but questions for this track have been developed assuming candidates are familiar with these Excel functions. Candidates may also use other functions. Many times, Excel offers multiple functions and tools that can be used to perform the same task.

In the descriptions below, an array is one-dimensional, while a range can be two-dimensional (multiple rows and columns). Logical values are either True or False. Some Excel functions require that the arrays be in the same direction (SUMPRODUCT), but most do not. Other function inputs are variables. Some variables have limitations (a value between 0 and 1); others do not.

This document will be available to candidates when taking the exam. An Excel file, accessible on the exam study page, provides examples of most of the functions below. The Excel file will not be available to candidates during the exam.

AVERAGE(range1, [range2], …) – returns the arithmetic mean of the cells in a range (ignores blank cells)

range1 is the first range, cell reference, or number for which you want in the average
range2, … are additional ranges, cell references, or numbers for which you want to include in the average

BINOM.DIST(number_s, trials, probability_s, cumulative_logical_value) – returns the individual term binomial distribution probability when there are a fixed number of tests or trials, when the outcomes of any trial are only success or failure, when trials are independent, and when the probability of success is constant throughout the experiment

number_s is the number of successes
trials is the number of trials
probability_s is the probability of success for each trial
cumulative_logical_value is the logical values that determines the form of the function. If TRUE, the cumulative distribution function is returned, which is the probability that there are at most number_s successes; if FALSE, the probability mass function is returned, which is the probability that there are number_s successes

BINOM.INV(trials, probability_s, alpha) – returns the smallest value for which the cumulative binomial distribution is greater than the criterion value (or the number of successful trials for a cumulative binomial distribution based on a criterion value)

trials is the number of trials

probability_s is the probability of success for each trial

alpha is a criterion value from 0 to 1 that determines the number of successful trials

CORREL(array1, array2) – returns the correlation coefficient of two data sets

array1 is an array of cell values

array2 is a second array of cell values

COUNTIF(range1, criteria) – returns the number of cells in a given range that meet the criteria

range1 is a range of cells that could include values or formula results

criteria is the criteria to be met such as ">0" or "=15"

COVARIANCE.P(array1, array2) – returns the population covariance, the average of the products of deviations for each data point pair in two data sets (for a complete population, uses N in the denominator)

array1 is the first array of cell values

array2 is the second array of cell values

COVARIANCE.S(array1, array2) – returns the sample covariance, the average of the products of deviations for each data point pair in two data sets (for a sample, uses N-1 in the denominator)

array1 is the first array of cell values

array2 is the second array of cell values

MMULT(range1, range2) – returns the matrix product of arrays into an range with the same number of rows as range1 and the same number of columns as range2

range1 and **range2** contain the arrays to be multiplied. The number of columns in range1 must be the same as the number of rows as range2, and both ranges must contain only numbers. As an example, if both ranges are 2x2, the top left cell in the output will equal the sumproduct of the array in the top row in the first range and the array in the left column of the second range. To produce the output, the range of the output table must be highlighted, then the formula entered, and then cntl/shift/enter hit

NORM.DIST(x, mean, standard_dev, cumulative_logical_value) – returns the normal distribution for the specified mean and standard deviation

x is the value for which you want the distribution

mean is the arithmetic mean of the distribution

standard_dev is the standard deviation of the distribution

cumulative_logical_value is the logical value that determines the form of the function. If TRUE, the cumulative distribution function is returned; if FALSE, the probability density function is returned

NORM.INV(probability, mean, standard_dev) – returns the inverse of the normal cumulative distribution for the specified mean and standard deviation

probability is a probability corresponding to the normal distribution (a number between zero and one inclusive)

mean is the arithmetic mean of the distribution

standard_dev is the standard deviation of the distribution

NORM.S.DIST(z, cumulative_logical_value) – returns the standard normal distribution (has a mean of zero and a standard deviation of one)

z is the value for which you want the distribution.

cumulative_logical_value is the logical value that determines the form of the function. If TRUE, the cumulative distribution function is returned; if FALSE, the probability mass function is returned

NORM.S.INV(probability) – returns the inverse of the standard normal cumulative distribution (has a mean of zero and a standard deviation of one)

probability is a probability corresponding to the normal distribution (a number between zero and one inclusive)

PERCENTILE(range, k) – returns the k^{th} percentile of the values in a range, interpolating if necessary

range is the array or range of data from which the percentile should be found; the data does not need to be sorted

k is the percentile value in the range 0 to 1 inclusive. 0 returns the lowest value; 1 returns the highest value

RANK(number, range, [order]) – returns the rank of a number in a list of numbers.

number is the number whose rank you want to find

range is the range that includes the list of numbers from which to find the rank of the number

order (optional) is ascending when the value is 1 and descending when the value is 0

SQRT(number) – returns a positive square root

number is the number for which a square root is desired

STDEV.P(range1, [range2], …) – calculates standard deviation based on the entire population given as arguments (ignores logical values and text; uses N in the denominator)

range1 is the first range, cell reference, or number corresponding to the population for which you want the standard deviation

range2, … are additional ranges, cell references, or numbers corresponding to the population for which you want to include in the standard deviation

STDEV.S(range1, [range2], …) – estimates standard deviation based on a sample (ignores logical values and text in the sample; uses N-1 in the denominator)

range1 – is the first range, cell reference, or number corresponding to the population for which you want the standard deviation

range2, … are additional ranges, cell references, or numbers corresponding to the population for which you want to include in the standard deviation

SUM(range1, [range2]) – adds all the numbers in a range of cells

range1 is the first range, cell reference, or number for which you want to include in the sum

range2, … are the additional ranges, cell references, or numbers for which you want to include in the sum

SUMPRODUCT(array1, [array2], [array3], …) – returns the sum of the products of corresponding arrays

arrays1, array2, array3,… are 2 to 255 arrays which the user wants to multiply and then add components. All arrays must have the same dimensions, vertical or horizontal

TRANSPOSE(array) – converts a vertical range of cells to a horizontal range, or vice versa

array is a range of cells on a worksheet or an array of value that the user wants to transpose (for example, to use in the SUMPRODUCT function). When using the TRANSPOSE function in another function, the formula must be entered and then cntl/shift/enter hit. When using the TRANPOSE function to produce output, the range of the output table must be highlighted, then the formula entered, and then cntl/shift/enter hit

VLOOKUP(lookup value, table_range, column_ index_number, logical_value) – looks for a value in the leftmost column of a table and then returns a value in the same row from a column specified by the user

lookup_value is the value to be found in the first column of the table. It can be a value, a reference, or a text string

table_range is a table of text, numbers, or logical values in which data is retrieved

column_index_number is the column number in table_range from which the matching value should be returned

logical_value is a logical value to find the next lowest match in the first column (must be sorted in ascending order) when equal to TRUE or omitted; or an exact match when equal to FALSE

Assumptions

The companies that are part of the Case Study are assumed to be operating in the following economic environment:

After a major financial crisis 15 years before the present time, interest rates dropped to historically low levels and remained at those levels for 13 – 14 years. Approximately 18 months ago, the inflation rate began increasing due to supply shortages in some sectors and excess consumer cash from stimulus payments. Interest rates began rising and global inflation levels have risen about 8 percentage points from their prior lows.

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1 RPPC Corporation

1.1 RPPC Corporation History

RPPC was established in 2005 with head offices in Luxembourg by four founding partners. The corporation's name is derived from the four founders' surnames - Ruiz, Petrov, Patel, and Chan. They had ambitious goals to grow the corporation to become a business dynasty respected throughout the world. From the beginning, and still to this day, the focus has been to meet the needs of a globally-mobile clientele. The corporation in its early years expanded to hold a diverse group of businesses. More recently it has divested several holdings to focus on the financial sector.

The business roots began with the coffee shop, owned by the Ruiz family since 1995.

In 2005, Jose Ruiz and Meiying Chan formed a partnership. The Chan family had owned and operated a small business since 2000. Soon thereafter, two other entrepreneurs, Sanjay Patel and Yelena Petrov, were brought in to expand the brand. Over the next year, RPPC developed its vision of future global expansion across diverse businesses.

In 2006, to increase access to capital in support of the company's expansion, RPPC made the decision to incorporate.

In 2007, with the guidance of Sanjay Patel, a Bank group was formed. The expansion required a significant amount of capital, which was made possible by the earlier decision to incorporate.

In 2013, RPPC took a controlling interest in an airline to appeal to the growing global mobility of the group's clientele. The airline had previously taken a majority interest in a tire company in 2009 to create a synergy with its airline business. RPPC put the airline acquisition through a restructuring initiative to better fit into the group's vision.

In 2015, RPPC was presented with an opportunity to obtain a life insurance group, which it hoped would expand the wealth management capabilities of the bank operations.

In 2016, RPPC decided to spin off the coffee company and the airline in order to concentrate on the financial businesses. Those two companies, Frenz and Blue Jay Air, continue to operate as independent organizations. RPPC continues to own the banking group, Big Ben Bank, and the life insurance group, Darwin Life.

1.2 RPPC Corporation Overview

1.2.1 Mission

Provide high quality and uniquely tailored financial services to families or businesses that are globally active.

1.2.2 Executive Team

CEO –Gilroy Clyde (since inception)
CFO –Lamar Smith (five years)
CRO –Julia Reich (recently appointed)
COO –Jane Mulroney (since incorporation; has served as default CRO)

1.2.3 Governance

RPPC has the following Executive Committees:

1. Operations Committee
2. Audit Committee
3. Finance Committee
4. Risk Committee
5. Governance Committee

1.2.4 Cost of Capital – RPPC and Peer Industries

	RPPC	Reliable Insurance	Too Big Bank
Expected Cost of Debt	8%	6%	3%
Expected Cost of Equity	14%	11%	12%
Debt-to-Value Ratio	40%	40%	60%

1.2.5 Tax Rate for Conglomerate

RPPC's current tax rate is 20%.

1.3 RPPC Risk Management Framework

1.3.1 Vision Statement

We are exposed to a variety of risks that are inherent in carrying out our business activities. *Having an integrated and disciplined approach to risk management is key to the success of our business*.

Strengths and Value Drivers

- A Risk Appetite that shapes business strategies and is integrated into our decision-making processes. Risk management is considered a profit-generating activity. We believe preventing our organization from experiencing the loss inflicted on our competitors is as beneficial as creating new profit streams from new arenas.
- A unified and strong risk culture that is embedded across the enterprise. This leads to a consensus opinion on the value and purpose of risk management.

Challenges

- Continued volatility in global economic conditions, causing heightened marketplace uncertainty. This is both a risk as well as an opportunity.

Our Path to Differentiation

- Within our independent oversight framework and the limits of our risk appetite, contribute to the enterprise's customer focus.
- Ensure that risk awareness is pervasive throughout the organization, at all levels, and all functions.
- Ensure that the risk-for-reward trade-off is applied effectively and consistently in all levels of decision-making.

1.3.2 Key Objectives and Recent Achievements

A key objective is to continue embedding our strong risk culture across the enterprise:

- Emphasize and ensure that risk management is in a process of continual improvement at RPPC.
- Reinforce our risk independence and our three-lines-of-defense approach to managing risk across the enterprise.

Recent Achievements

Rolled out our value-based approach to enterprise risk management:

- Protect our reputation
- Diversify
- Maintain strong capital and liquidity
- Optimize Risk-Return

Established and formalized the role of **Risk Champion** to ensure strengthened engagement between the office of the CRO and Business operating groups.

1.3.3 Strategic Considerations

RPPC is considering investing in InsurTech either organically, through acquisition, or both. Big Ben and Darwin have strategic initiatives regarding cryptocurrency and implementing blockchain technology operationally. The executive team has discussed how the futures of InsurTech and

blockchain technology are reminiscent of the internet and e-commerce and the inevitable impact those advances had on brick-and-mortar-based businesses. RPPC is aware that blockchain technology is being applied broadly in insurance and finance, as well as in supply chain management, cybersecurity, and investment transactions and settlements. The possibility that Star InsurTech might become available for sale recently came to RPPC's attention.

1.3.4 Value-Based Enterprise Risk Framework

RPPC risk governance has three pillars.

I. The first line of defense at RPPC is the Business operating groups, which are responsible for ensuring that products and services adhere to the approval process and profit guidelines of their businesses.

II. The second line of defense is the office of the CRO, along with Enterprise Risk Officers (EROs) and Subject Matter Experts (SMEs) assigned for specific risk categories. These provide oversight, challenge and independent assessment of risk.

III. The third line of defense is the Corporate Audit Division, which will provide assessment as to the effectiveness of internal controls, risk management, and governance processes that support Enterprise objectives and the Board of Directors' discharge of its responsibilities.

RPPC Board

Board Risk Committee	**CEO**			**Board Audit Committee**
Risk Management Committee	*Operating Groups*	*ERM & Portfolio Management*	*EROs and SMEs*	*Corporate Audit Group*
• Capital Management • Reputational Risk • Operational Risk	1st line of defense	2nd line of defense	2nd line of defense	3rd line of defense

1.3.5 Risk Culture

Every employee is responsible for risk management at RPPC. The three lines of defense model promotes engagement and dialogue between the Business Operating Groups (first line) and the risk office (second line). The key facilitator of this engagement process is the Risk Champion. The role of the Risk Champion is to ensure that there is buy-in to the process among both business managers and risk officers, and ultimately that enterprise risk management (ERM) is successful.

1.3.6 Risk Principles

All material risks to which the enterprise is exposed are identified, measured, managed, monitored, and reported. Risk awareness must be demonstrated to drive all decision-making within the enterprise. Economic Capital is used to measure and aggregate all risks.

1.3.7 Risk Appetite

RPPC's risk appetite is at the center of our value-based enterprise risk management approach. The clear communication of risk appetite at all levels within each line of business is critical to effective risk-taking in decision-making. This is achieved with business-specific risk appetite statements that are aligned with the RPPC risk appetite statement approved by our Board of Directors.

The following RPPC Risk Appetite Statement is a clear articulation of the value creation principles of RPPC. The Board of Directors of RPPC and its executive officers declare that the business operating groups, with the support of risk officers, will:

- Avoid risks that are opaque, not well understood, or not manageable.
- Limit exposure to low probability tail event risks that could jeopardize RPPC's credit rating, capital position or reputation.
- Subject all new products or services to a rigorous review and approval process.
- Ensure that the performance management system incorporates risk measures.
- Maintain strong capital and liquidity and funding positions that exceed regulatory requirements.
- Maintain compliance standards, controls and practices that prevent regulatory exposures that could adversely affect our reputation.

Key Indicators and Risk Appetite

The business management of RPPC is governed by Key Performance Indicators (KPI) and Key Risk Indicators (KRI). All officers of the company will have their compensation dependent on the following:

- For any risk, the return on its economic capital must exceed the cost of the capital acquired to fund that risk.

- The payback period on capital invested in a business operating group must not exceed 10 years from the date that capital is first employed. Each operating group CEO must report

KRIs that indicate for the aggregate of all risk underwritten that the business group capital can withstand twice the loss of a 1-in-100 year tail event. This redundant capital is critical to RPPC's market discipline because client relationship management and sustainability is promoted over price leadership.

- Through the identification of KPIs and KRIs, the business management indicates whether the risk being underwritten is within the group's risk appetite. The KPIs and KRIs are recommended by the business CEO and are approved by a Risk Appetite Consensus Meeting.

When reporting KPIs, financial projections must be based on a complete business cycle inclusive of severe market conditions rather than simply best estimate assumptions.

When reporting KRIs, scenario results and any stress testing must be demonstrated in the context of the business and directly related to its business driver.

When communicating KRI impacts, severity is assessed when economic events or business impacts are more than three standard deviations from the average.

1.3.8 Risk Review and Approval Policy

This policy outlines the procedures for the development, review, and approval of new products and services within the RPPC conglomerate. The policy balances the goal of delivering new products in a timely and efficient manner with the need to manage pricing and product development risk.

This policy requires the establishment of product pricing guidelines that describe profit targets for RPPC and performance metrics that must be calculated for all new products and services.

This policy involves the following stages:

Feasibility – For all new products and services, a report assessing the feasibility of the new product or service must be created. This report will provide high-level business rationale and risk assessment for the product or service and must be presented to the product pricing committee before any further development is undertaken.

Product Assessment – All aspects of the product design must be assessed including the marketing analysis and supporting research, the distribution plan, pricing estimates, sales projections, risk adjusted return on capital, and tax implications.

Risk Assessment – All risks of the product or service must be assessed, including exposures and ratings as compared to the risk appetite statement. The assessment should

also include a summary of the appropriate procedures and controls required to manage the new product or service once it is launched.

Sign-off and Approval – Sign-off and approval of the new product or service is required by the office of the CRO, the product pricing committee, and the operational head of the business unit.

Documentation – An official record must be kept of the feasibility study, product and risk assessments, and the approval and sign-off forms.

Role of Risk Champion

The Risk Champion is a critical role which facilitates the Risk Review and Approval Process (RRAP). The Risk Champion is responsible for identifying the relevant business managers, risk managers and SMEs who are needed to complete the required risk assessment and risk analysis

1.3.9 Risk Monitoring

There are three disciplines to the risk monitoring approach:

- Post-implementation review
- Risk-based capital assessment
- Stress testing

Post implementation review is the core discipline within the engagement approach that embodies our three lines of defense model. Whenever a business operating group has launched an initiative, the group business managers are obligated to develop and report KPI and KRI that are specifically related to the initiative and that speak directly to the risk appetite of the enterprise.

The assessment of risk-based capital within an Economic Capital framework is one of the key metrics in the measurement and communication of any risk undertaken. Economic capital is determined by the Risk Management Committee and is underpinned by the Redundant Capital philosophy. Capital is determined to withstand one 1-in-100 year event, after which the capital position is still sufficient to meet another 1-in-100 year event (essentially twice the 1-in-100 year event's loss). Economic capital is also compared with regulatory capital to ensure compliance.

Allied with the Economic Capital framework, stress testing involves quantifying and communicating the impact of specified scenarios on the financial results of a given business operation.

1.3.10 Risk Management Models

There are several models used by risk management at the conglomerate level due to RPPC's diverse industries.

- Inflation model
- Interest Rate model
- Foreign Currency model
- Economic model – More general than the interest rate and foreign currency models, this model is used to predict demand for RPPC's products as well as predicting the state of the market.
- Liquidity model
- Financial Projection model – This model projects the anticipated 5-year plan of the conglomerate and reports out key financial data.
- Economic Capital model – This model calculates the loss due to a 1-in-100 year tail event. Economic capital is determined at the conglomerate level but may not be explicitly calculated at lower levels of the organization.

1.3.11 Model Risk Management Framework

Because of the many diverse models used both at the conglomerate level and within the various companies, RPPC considers it important to have a standard for vetting the models to avoid common model errors.

Before a model is used for decision-making, the model owner should document the following:

- How the model parameters and assumptions were calibrated
- Limitations on the use of the model for the business
- Reasonableness checks that were performed on the model
- Results from stress testing and backtesting the model

It is also required that the risk management team review the model and sign off before model implementation. Future model changes should also be documented.

2 Blue Jay Air

Other services are customer-oriented. The airline industry is increasingly anti-consumer. It's become a real hassle to travel. That is our opportunity - as long as we are given a chance to compete fairly.

2.1 Commercial Airline Industry Profile

2.1.1 Operations

The commercial airline industry provides air transportation for passengers and cargo. The United States (U.S.) has an extensive commercial air transportation network. Its passenger air transportation market is a thriving industry, taking individuals around the North American continent and around the globe. All U.S. passenger airline companies are privately owned.

Airports, on the other hand, are usually constructed and operated by local governments. Thus, most government air travel subsidies go to airport operations rather than to the passenger airline industry.

There is currently no government regulation on ticket pricing, although the federal government retains jurisdiction over aircraft safety, pilot training, and accident investigations through the Federal Aviation Administration and the National Transportation Safety Board.

Most airlines operate using a "hub and spoke" model such that passengers go through a centralized location, the hub, to transfer to their downline destination, i.e., the spoke city. This system gives the predominant airline in a given airport a strong competitive position as it maximizes the number of passengers on each flight. The model offers a very efficient means of relating supply to demand through a centralized distribution hub.

Most commercial airlines operate on a scheduled basis, flying regular routes even if the planes are not full. Airlines that operate on a non-scheduled basis usually fly during off peak hours and have more flexibility in the choice of airport, flight times and load factors. Non-scheduled carriers typically offer charter passenger flights, cargo/freight transport, and other flying services such as crop dusting and rescue operations.

Based on February 2019 U.S. Passenger Airline Employment data published by the U.S. Department of Transportation, there are 443,058 full-time equivalent (FTE) employees working for scheduled passenger airlines. This is the highest February employment total since February 2003, which indicates that the airline industry is well on its way to recovery following the recession of 2008 - 2009.

2.1.2 Risk/Success Factors

The airline industry faces the following significant risks:

(1) Economic and Geopolitical Volatility

As most airline companies now operate in a global market, exposures to the political relationship and tensions as well as economic relationship and business cycle changes are increasingly significant. These external factors could have a major impact on the sustainable long-term growth of the airline industry.

Trade dispute and economic slowdown post a major threat to the usage of the commercial airline transportation.

(2) Supply Chain Risk

The number of manufacturers of commercial aircrafts is limited. Thus, timely aircraft deliveries could become a major issue for airline companies wishing to renew their fleets. In addition, as supply is limited, cost increase is very possible.

Continually advancing technology may result in airplanes not being tested thoroughly before delivery by suppliers, leading to possible lower quality control.

As new technology is introduced, older planes are phased out, generally after about ten years. Once a plane is over six years old, availability of replacement parts becomes limited and expensive.

(3) Oil Price Increases

Profit margins for airline companies could be negatively impacted by increases and volatility in oil prices.

(4) Unpredictable and Malicious Acts

Three areas of unpredictable and malicious threats are:

- Cyber incidents and data breaches – concerns over privacy and safety
- Insider threats – workplace violence, exfiltration of information, physical security compromise, sabotage, terrorism, physical property theft
- Supply chain disruption – outsourcing can further increase risk of supply-chain disruption.

(5) Increased Regulation

The airline industry currently must comply with regulations on aircraft design, maintenance, pilot training activities, and safety requirements. These regulations are crucial in setting safety standards but can result in significant costs for the airline industry.

Airline companies own significant amounts of intellectual property (IP), consisting of patents, unpatented know-how data, software, and trademarks. These are valuable assets to companies

but may be complicated to manage as they can be subject to different regulations in different countries.

(6) Accidents/Fatalities

When a plane crash event occurs, the airline industry could suffer severe reputational risks, especially if the event is not properly handled in areas of communication, investigations, and recoveries.

(7) Foreign currency and commodity price fluctuations

As many airline companies operate on an international basis, currency fluctuations could cause undue financial strains when the earned revenue and expenses are in different currencies.

In addition, financial performance of the airline companies could be impacted by price fluctuations in key commodities or raw materials, such as aluminum, titanium and composites that affect the airline industry's supply chain profitability.

(8) Capacity to Innovate

As new technologies are being introduced, it becomes more costly for airlines to keep up with the necessary technological changes that their customers demand.

Key success factors for the airline industry include:

(1) Business Success Factors:
- Company's market position, including its route and hub network
- Business alliances and partnerships
- Company's market share
- Service standard/quality and reputation
- Fleet profiles – quality, age, and capacity
- Company's operating management including human resource management/labor relations

(2) Financial Success Factors:
- Management philosophy, strategy, and financial risk policies
- Hedging and other risk mitigation policies
- Capital structure and liability management
- Shareholder support and commitment

2.1.3 Competitive Environment

The competitive environment for the U.S. airline industry intensified since the Airline Deregulation Act of 1978. New carriers rushed into the market with new routes post deregulation, which resulted in

declining fares as competition and number of customers increased. Some major carriers, such as Pan American and TWA, which had dominated during the middle portion of the 20th century, began to collapse in the wake of competition. Such carriers disappeared completely following the Gulf War and subsequent recession of the early 1990s. Code sharing agreements (described further below) became widespread within the airline industry beginning in the 1990s.

During the early 2000s, the industry suffered setbacks due to economic downturns, fuel cost increases, and the 9/11/2001 attacks in the U.S. Profitability didn't return until 2006. The financial crisis in 2008 resulted in air traffic in the U.S. declining at rates of 10% to 24%, depending on the airport. The drop in customers prompted rapid consolidation and mergers of all of the nation's largest carriers. The combination of consolidation, mergers and code sharing alliances has dampened competition and caused an upward pressure on airline fares. Profitability has returned to the airline industry since 2009. Over 80% of the U.S. domestic market share is now dominated by the top seven largest domestic airlines as of March 31, 2019.

2.2 Company Profile

Blue Jay Air was originally incorporated in the United States in the mid-1980s. It was a small local commercial passenger carrier, operating only in the Eastern region of the United States. Its target market was high-end business clientele located in major cities along the east coast of the United States. Since then, Blue Jay has gone through three mergers and two significant acquisitions. The company has transformed from a focused high-end regional company to an expanded price-competitive commercial carrier, covering the full geographical region of the United States as well as major cities in Canada.

Due to reduced margins, most companies have severely curbed operating costs by reducing staff levels or restraining salary increases. As a result, labor disputes and disruptions have become a major concern in the industry. The negative impact on the industry has been compounded by an aging workforce and insufficient training for the new staff, especially for the pilots. Frequency of accident occurrences has trended upwards due to lack of qualified manpower and insufficient compensation levels.

Despite all the perils in the industry, Blue Jay Air was resilient in surfing the destructive waves through various reorganization and restructuring efforts. From 2013 through part of 2016, Blue Jay Air was owned by RPPC. In 2016, it was spun off and now operates as an independent organization again. Susan Feather, who has over 20 years of airline experience, is viewed as a "turnaround" CEO.

2.3 Strategies

Blue Jay Air's new strategic vision is to become the most customer-oriented airline company in the world, providing the best services to the marketplace. Comfort, punctuality, and safety are the three important virtues that the company has adopted. Thus, the number one priority for Blue Jay is to rebrand the company and image. In order to successfully rebrand the company, the company has done an extensive study on its customer base and identified its customers. Susan believes that understanding

and knowing the customers is an important step to improving profitability for the company in the long run.

Based on the customer base study, the company found that more than 55% of its customers are travelling for business reasons. This could stem from the fact that the company was originally a commercial passenger carrier catering to business travelers; thus, its relationship with the business community is deep-rooted. In fact, the expansion to leisure travel over the last 15 years did not initially increase the profit margin as the number of business travelers declined from over 80% to 55% due to reduced services. The rebranding and the change to the business model may be contributing to the improved profitability seen in recent years.

The company reconsidered its market operations, including the expansion to international operations due to increased demand for international travel caused by globalization of the business world. In order to make this strategy possible, the company has been negotiating with international airport authorities in several European and Asian financial centers and major cities over the last two years to secure a boarding space. Some of these negotiations are close to fruition.

Cost control is a key element in this industry. Labor relationship management is a key cost control element for Blue Jay Air as the labor force is not currently unionized. Blue Jay requires an effective management team that will foster a cultural change without damaging the relationship with the employees and will ensure that their needs are addressed to reduce the desire to unionize. In the past few decades, the company has implemented profit sharing schemes, regular salary scale and benefits reviews, frequent employee networking events, employee suggestion boxes and an employee diversity and inclusion team to foster communication and pay equity between management and regular staff. These efforts have been working as unionization has not materialized. Thus, the company would like to maintain its current employee relationship strategy. The only caveat is that in order to stay competitive, the company has to continue taking significant expense control measures particularly in the areas of staff count, staff expenses and information technology expenditures. As a result, the company has started to cut back on most training programs, other than the current pilot and safety training programs needed to foster its vision of being the “safest” airline in the industry. The company also imposes tougher standards to qualify for the “top-scaled commercial pilot” category in order to ensure Blue Jay pilots are of highest quality.

2.4 Risk Management

As a highly-leveraged capital-intensive company, Blue Jay Air has significant exposure to interest rate risk. Ability to raise debt and service the debt is crucial to the survival of the company. Therefore, a key risk management objective is to maintain the credit rating of the company within the investment grade categories, i.e., BBB- or higher.

Blue Jay Air has in place a risk management committee headed by a well-known risk manager, Ruth Green. Ruth was formerly the Chief Risk Officer (CRO) of a major Canadian bank. Ruth was a hedge fund manager before she became the CRO of the bank and has extensive background in implementing

risk management strategies. Over the last two years, Ruth has put together a dynamically hedged portfolio that handles the commodity exposures that the company has been facing as well as partially hedging interest rate risks.

Since Blue Jay Air requires a constant supply of oil and gas to run its airline business, it is exposed to fluctuations in fuel prices. The company policy is to eliminate as far as possible any market price variability through hedging. The maximum acceptable unexpected earnings volatility from any related fuel pricing hedging activities has been set at $5 million.

Blue Jay Air has entered into a staggered series of forward commitments with different suppliers. This has substantially reduced oil and gas supply risks, unless there is a world-wide supply chain disruption.

In addition, Ruth has established a Treasury role under the risk management committee to centralize long-term and short-term fund-raising activities and deal with liquidity and credit risks. This role is headed by Elmer Saunders who was a former Treasurer of a New York-based investment bank. Elmer has a significant network with venture capitalists, pension fund managers, and private equity fund managers. Elmer has also worked in the investor relations area of a major U.S. commercial bank and thus has dealt with credit rating agencies such as Standard & Poor's, Moody's, A.M. Best, and Fitch. Over the last two years, he has implemented a liquidity model and a credit model to monitor the company's ongoing liquidity and credit needs.

Ruth has proposed that Blue Jay Air create a more formal Risk Appetite Statement. After reviewing policies already in effect at BJA, her staff produced the following starting draft:

Guiding Principles:

- Cost control is key to the success of BJA. All products and services must be justified through a stringent cost/benefit analysis.
- BJA strives to be the safest airline in the industry. All initiatives must be reviewed with this goal in mind.
- Maintaining an adequate, well-trained labor force is critical to meeting our objectives.
- BJA must be able to access the capital markets. Therefore, the company must maintain its credit rating at BBB- or higher.

Specific Risk Tolerances

- The maximum acceptable unexpected earnings volatility from any related fuel pricing hedging activities is $5 million.
- Maintain a liquidity ratio of at least 150% under the likely scenario and at least 100% under the stressed scenario, based on quarterly liquidity modeling.
- Maintain average age of aircraft at no more than 3.5 years.

The Risk Management roles and functions are still in the process of refinement and adjustment. The staffing requirement in these areas is highly specialized so it will take time to establish a full staff

complement. As a result, the staff workload is currently intensive, and the turnover rate is slightly higher than in other areas.

2.5 Operations

2.5.1 Planes

The current fleet of planes is starting to age, with an average age of about five years. Parts needed to maintain these outdated models are becoming scarce and, thus, more expensive. BJA's current plan is to replace or update 15% of its current fleet every year in order to keep the maintenance costs at an acceptable level. These replacement costs are funded by long-term loans. However, since there are limited suppliers of commercial airplanes, there is exposure to price increases for the new planes. Delivery of the planes can also be subject to delays and tariffs.

The existing fleet is not suitable for international flights. In order to implement an international expansion strategy, the company will have to order or lease planes with updated features such as Wi-Fi, expanded business classes, flat beds, bars, and additional safety features, to be delivered over the next few years. These planes are designed for added comfort, safety and shorter flight time. They are the ideal planes for international travel. However, the costs of these new planes are significant and increasing debt to finance these planes could jeopardize the credit rating of the company.

Even for the short haul planes, the current fleet requires updates such as Wi-Fi capability, individual TV screens and more fuel-efficient engines to provide additional comfort for business travelers. This will also require additional funding.

(See Exhibit E for more information.)

2.5.2 Booking System Enhancements

With the technological advancements over the last few decades, Blue Jay Air is considering revamping its booking system to enhance its internet booking capability as well as introducing different mobile phone apps for the major mobile phone systems.

The new system will include tracking of flight schedules, weather systems, time zones, and other pertinent information. It will incorporate many added features that will make business travel enjoyable.

2.5.3 Business Lounges

Blue Jay Air will renovate all of its business lounges in major cities to enhance the competitiveness of its business travel. New business lounges will offer free Wi-Fi and amenities such as gourmet Frenz coffee and specialty teas, snacks, massage chairs with music selection and flat beds. The goal is to make business travelers as comfortable as possible while waiting for their flights.

Blue Jay Air is considering two possible upgrades for its lounges. The first is a renovation that will bring Blue Jay Air more in line with competitors, with an initial cost of $10 million that is expected to produce an after-tax return on invested capital of 12.5%, with annual after-tax profits expected to be realized equally in perpetuity. The second is the acquisition of Luxury Lounges, a public company that has particular expertise in creating the most comfortable lounges for travelers. The current market price of Luxury Lounges stands at $35 million, and the acquisition is expected to produce $4 million of after-tax profits a year.

2.5.4 Baggage and Baggage System

Blue Jay Air will incorporate a charge for each piece of checked luggage, consistent with its competitors' pricing. Since most business travelers do not check their luggage, this is not expected to be a negative in Blue Jay's target market. Free luggage check-in will no longer be available except for international flights, for which Blue Jay Air will reduce its free luggage check-in policy from two pieces to one piece with no change to the current weight limit. The current baggage tracking system seems to be adequate and Blue Jay Air has no plan to upgrade its systems.

2.5.5 Other Cost Measures

Blue Jay Air has decided to discontinue its travel agency programs as part of the continuing effort to keep the company as cost-efficient as possible. Instead, Blue Jay Air will negotiate direct contractual arrangements with its business clients in order to customize client needs and leverage long-term client relationships.

A referral program will also be offered to business clients in order to expand its customer base in the most direct and efficient manner. This referral program will be combined with the loyalty program to optimize value for existing customers.

2.5.6 Financial Statements

Detailed financial statements are shown in Section 2.7, Exhibits A, B, and C, with notes to the financial statements in Exhibit D. (These statements exclude any impact of Blue Jay Tire on Blue Jay Air's overall financial position.)

2.6 Strategic Considerations

2.6.1 Strategic Information: Fleet Upgrade Proposals

Research into buying the new international planes and the costs of upgrading the current fleet is shown in Section 2.7, Exhibit E.

2.6.2 Strategic Models used by Blue Jay Air

Black-Scholes Hedging Model

Ruth Green, as part of Blue Jay Air's risk management, has put together a dynamically hedged portfolio that handles the commodity exposures that the company has been facing as well as partially hedging the interest rate risks. She uses Black-Scholes models in this hedging work.

2.6.3 Strategic Initiative: Loyalty Program

Blue Jay Air would like to change its marketing strategy to target frequent business travelers. It is considering a business travel loyalty program that would eventually entail a progressive bonus point system as flight frequency increases. In addition, Blue Jay Air would like to expand its reward systems by partnering with other business partners and its affiliated companies. This will substantially increase the incentive for travel by business executives.

For example, Blue Jay Air is considering partnering with Big Ben Bank's bank credit and debit cards to introduce a combined loyalty credit card with an "enhanced air points" reward system. This partnership should further increase the value of the loyalty program.

To gain valuable information about the customers for the loyalty program, a modification to the existing application form is required. The current application form is five pages long with 30 different questions related to the customers' personal information and preferences. The current completion rate is much lower than the target rate due to the extensive information requested, and the information gathered is not sufficient to make credible assumptions about customer behaviors.

Loyalty Program Strategic Model

To properly account for the potential costs of the new loyalty program, a basic model for a representative customer has been created. The customer will earn a certain number of points for each paid flight. After accumulating enough points, the customer can choose to redeem for a free flight at any time. The free flight doesn't earn points. For each paid flight the loyalty program gets a percentage of the ticket price as a fee and will pay the cost of the redeemed flight when it occurs. The loyalty program will invest the cash it has in short-term government bonds.

Since business travelers are the targeted clientele, the model uses the following assumptions about a typical business traveler:

- Frequency of flying and points earned per flight are fixed
- Time to redemption after accumulation of sufficient number of points follows a lognormal distribution

The model also makes assumptions for these factors:

- Flight price
- % of the flight price that loyalty program receives as a fee
- Cost of a redemption
- Points needs for a redemption

- Expense of the loyalty program as a % of the fee charged
- Investment rate
- Initial fixed cost for each customer
- Discount rate for cash flow

All factors above are assumed to be fixed. Blue Jay Air also assumes all its existing customers will join the loyalty program.

The projection period for the model is 10 years. The model will calculate the value of future benefits to be paid, future revenue and surplus of the program.

The enhanced business loyalty program will be designed based upon finding a favorable combination of factors that will result in the model producing the desired surplus target. Details of the new program are expected to be released in the next six months.

2.7 Blue Jay Air Exhibits

EXHIBIT A

NON-CONSOLIDATED STATEMENT OF OPERATIONS

(US Dollars in millions)

Fiscal Year Ended		**Dec 31, 2022**	**Dec 31, 2021**	**Dec 31, 2020**
Operating revenues:				
Passenger		1,544	1,235	1,074
Other		298	238	207
Total revenues		**1,841**	**1,473**	**1,281**
Operating expenses:				
Aircraft fuel		576	461	401
Wages, salaries and benefits		361	289	251
Capacity purchase agreements		173	138	120
Airport and navigation fees		158	127	110
Depreciation, amortization & impairment		96	77	67
Aircraft maintenance		111	89	77
Sales & Distribution costs		73	59	51
Aircraft rent		49	39	34
Food, beverages and supplies		42	33	29
Communications and Information technology		33	26	23
Other		19	15	13
Total operating expenses		**1,691**	**1,352**	**1,176**
Net Operating income		**151**	**121**	**105**
Non-operating income (expenses)				
Foreign exchange gain(loss)	[Note 3]	15	10	(29)
Interest income		5	5	5
Interest expense		(41)	(38)	(37)
Interest capitalized	[Note 2]	2	1	(5)
Net financing expense relating to employee benefits	[Note 2]	(2)	(2)	(15)
Loss on financial instruments recorded at fair value	[Note 1]	(3)	(7)	(33)
Other	[Note 2]	(1)	(2)	(19)
Total non-operating Income		**(25)**	**(33)**	**(133)**
Income (loss) before income taxes		**126**	**88**	**(28)**
Income taxes		**(9)**	**(13)**	**2**
Net income (loss)	**[Note 1]**	**117**	**75**	**(26)**
Earnings per share (Basic)		**1.00**	**0.60**	**(0.22)**
Earnings per share (Diluted)		**0.95**	**0.59**	**(0.22)**

EXHIBIT B
NON-CONSOLIDATED STATEMENT OF FINANCIAL POSITION
(US Dollars in millions)

Fiscal Year Ended		Dec 31, 2022	Dec 31, 2021	Dec 31, 2020
ASSETS				
Current:				
Cash and Cash equivalents		180	101	30
Short-term investments		290	262	163
Total cash & Short-term investments		**470**	**363**	**193**
Restricted cash		15	15	15
Accounts receivable		265	225	192
Aircraft fuel inventory		141	113	98
Spare parts and supplies inventory		180	140	93
Prepaid expenses & other current assets		205	155	125
Total current assets	**[Note 1]**	**1,276**	**1,011**	**716**
Property and equipment	[Note 4]	545	509	474
Intangible assets		21	21	21
Deferred tax assets	[Note 7]	17	19	22
Goodwill	[Note 5]	31	31	31
Deposit and other assets		34	76	109
Total assets	**[Note 1]**	**1,924**	**1,667**	**1,373**
LIABILITIES				
Current:				
Account payable & accrued liabilities		150	107	70
Advance ticket sales		310	250	181
Current portion of long-term debt & finance leases		98	75	58
Total current liabilities		**558**	**432**	**309**
Long-term debt and finance leases	[Note 6]	721	757	673
Pension & other benefit liabilities		205	230	246
Maintenance provisions		60	55	60
Deferred tax liabilities	[Note 7]	132	68	20
Other long-term liabilities		49	48	43
Total liabilities	**[Note 1]**	**1,725**	**1,590**	**1,351**
EQUITY				
Shareholders' equity				
Share capital		200	200	200
Contributed surplus		30	25	45
Deficit		(31)	(148)	(223)
Total shareholders' equity		**199**	**77**	**22**
Total liabilities & equity		**1,924**	**1,667**	**1,373**

EXHIBIT C

NON-CONSOLIDATED STATEMENT OF CASH FLOW

(US Dollars in millions)

Fiscal Year Ended		**Dec 31, 2022**	**Dec 31, 2021**	**Dec 31, 2020**
Cash Flows from (used for)				
Operating				
Net income (loss)		**117**	**75**	**(26)**
Adjustments to reconcile to net cash from operations:				
Adjust for non-cash items:				
Deferred income tax	[Note 7]	66	50	(1)
Depreciation, amortization & impairment	[Note 4]	96	77	67
Fuel & other derivatives		(20)	(11)	14
Adjust for Changes in non-cash working capital items:				
Change in inventories		(68)	(62)	(32)
Change in account receivable		(40)	(33)	(59)
Change in Account Payable		43	37	(37)
Change in advance ticket sales		60	69	57
Change in pension & other benefit liabilities		(25)	(16)	24
Change in maintenance provisions		5	(5)	5
Other		(50)	(30)	(20)
Net cash flow from operating activities		**185**	**151**	**(9)**
Financing				
Proceeds from borrowings		150	100	125
Reduction of long-term debt obligations	[Note 6]	(63)	64	(104)
Reduction of finance lease obligations	[Note 6]	(35)	(10)	(74)
Contributed Surplus		5	(20)	35
Net cash flows used in financing activities		**57**	**134**	**(18)**
Investing				
Short-term investments		(28)	(99)	(8)
Additions to property, equipment & intangible assets		(136)	(114)	(36)
Proceeds from sale of assets		4	2	4
Foreign exchange gain(loss)	[Note 3]	(4)	(3)	7
Other		2	(1)	0
Net cash flows used in investing activities		**(162)**	**(215)**	**(33)**
Increase in cash & cash equivalents		**80**	**70**	**(60)**
Cash & cash equivalents, beginning of year		116	45	105
Cash & cash equivalents, end of year		195	116	45

EXHIBIT D

EXCERPTS OF NOTES TO THE NON-CONSOLIDATED FINANCIAL STATEMENTS

1 Accounting Basis

Classification

Blue Jay Air classifies its financial assets and financial liabilities in the following measurement categories:

i) those to be measured subsequently at fair value and
ii) those to be measured at amortized cost.

For assets and liabilities measured at fair value, gains and losses are recorded in profit or loss. Blue Jay Air reclassifies financial assets only when its business model for managing those assets changes. Financial liabilities are not reclassified.

Blue Jay Air has implemented the following classifications:

- Cash and cash equivalents, Short-term investments, and Restricted cash are classified as assets at fair value through profit and loss.

- Accounts receivable and other deposits are classified as assets at amortized cost and are measured using the effective interest rate method.

- Accounts payable, credit facilities, and long-term debt are classified as other financial liabilities and are measured at amortized cost using the effective interest rate method. Interest expense is recorded in the consolidated statement of operations, as applicable.

2 Revenues

Passenger revenues are recognized when the transportation is provided. Airline passenger advance sales are deferred and included in Current liabilities.

Blue Jay Air has formed alliances with other airlines encompassing loyalty program participation, interline agreements and code sharing and coordination of services including reservations, baggage handling and flight schedules. Revenues are allocated based upon formulas specified in the agreements and are recognized as transportation is provided. Passenger revenue also includes certain fees and surcharges and revenues from passenger-related services such as seat selection and excess baggage which are recognized when the transportation is provided.

Blue Jay Air disaggregates air transportation service revenue according to geographic market segments.

A reconciliation of the total amounts reported by geographic region for Passenger revenues on the consolidated statement of operations is as follows:

Passenger Revenue	**Dec 31, 2022**	**Dec 31, 2021**	**Dec 31, 2020**
United States	695	494	322
Canada	540	494	483
Atlantic	77	49	32
Pacific	154	124	54
Others	77	74	183
Total	1,544	1,235	1,074

3 Foreign Currency Translation

The functional currency of Blue Jay Air is the U.S. dollar. Monetary assets and liabilities denominated in foreign currencies are translated into U.S. dollars at rates of exchange in effect at the date of the consolidated statement of financial position. Non-monetary assets and liabilities and revenues and expenses arising from transactions denominated in foreign currencies, are translated at the historical exchange rate or the average exchange rate during the period, as applicable. Adjustments to the U.S. dollar equivalent of foreign denominated monetary assets and liabilities due to the impact of exchange rate changes are recognized in Foreign exchange gain (loss).

4 Property and equipment

Property and equipment are valued using the cost model. Blue Jay Air allocates the amount initially recognized in respect of an item of property and equipment to its significant components and depreciates separately each component.

Property and equipment are depreciated to estimated residual values based on the straight-line method over their estimated service lives:

- Aircraft frames and engines are depreciated over periods not exceeding 25 years, with residual values initially estimated at 10% of original cost and updated for changes in estimates over time.

- Spare engines and related parts are depreciated over the average remaining useful life of the fleet to which they relate with residual values initially estimated at 10%.

- Cabin interior equipment and modifications are depreciated over the lesser of eight years or the remaining useful life of the aircraft.

- Major maintenance costs are capitalized and amortized over the average expected life between major maintenance events.

- Buildings are depreciated on a straight-line basis over their useful lives not exceeding 50 years or the term of any related lease, whichever is less.

Residual values and assumed useful lives are reviewed at least annually, and depreciation rates are adjusted accordingly on a prospective basis. Gains and losses on disposals of property and equipment are determined by comparing the proceeds with the carrying amount of the asset and are included as part of non-operating gains and losses in the consolidated statement of operations.

5 Goodwill

Goodwill is tested at least annually for impairment. For the purpose of impairment testing, goodwill is tested for impairment using the fair value less cost to dispose model at the operating segment level.

In assessing the goodwill for impairment, Blue Jay Air compares the aggregate recoverable amount consisting of the sum of its quoted equity market capitalization and the fair value of its debt to the carrying value of its net assets excluding long term debt. An impairment charge is recognized to the extent that the carrying value exceeds the recoverable amount.

6 Long-term Debt and Financial Leases

The following table summarizes types of outstanding long-term debt of BJA.

Long Term Debt and Financial Leases:

	Maturity	Weighted Average Interest Rate (%)	2022	2021
Aircraft Financing				
Floating Rate	2023-2033	4.39	266	225
Fixed Rate	2023-2034	3.84	190	262
Senior Secured Notes	2028	4.75	190	187
Senior Unsecured Notes	2028	7.75	114	75
Long-term Debt		**4.85**	**761**	**749**
Finance Lease obligations	2024-2036	9.27	57	83
Total Debt and Finance Leases		**5.16**	**819**	**832**
Current portion			-98	-75
Long-term debt and issuance cost			**721**	**757**

Cash flows from financing activities

Information on the change in liabilities for which cash flows have been classified as financing activities in the statement of cash flows is presented below.

	Cash Flows				Non-Cash Changes			
	1-Jan-22	Borrowing	Repayment	Financing Fees	Foreign Exchange Adjustments	Amortization of Financing Fees	Other Non-Cash Adjustments	31-Dec-22
Long-term Debt	749	150	(63)		(75)	0	0	761
Lease Liabilities	83	0	(35)		9	0	0	57
Total Liabilities from financing activities	**832**	**150**	**(98)**		**(66)**	**0**	**0**	**819**

7 Income Tax

Income Tax Expense

Income tax recorded in the consolidated statement of operations is presented below.

	31-Dec-22	31-Dec-21	31-Dec-20
Current income tax	57	37	1
Deferred income tax	(66)	(50)	1
Income tax (expense) recovery	(9)	(13)	2

The income tax expense differs from the amount that would have resulted from applying the statutory income tax rate to income before income tax expense as follows:

	31-Dec-22	31-Dec-21	31-Dec-20
Income before income taxes	**126**	**88**	**(28)**
Statutory income tax rate based on combined federal and provincial rates	21.00%	21.00%	21.00%
Income tax expense based on statutory tax rates	**(26)**	**(18)**	**6**
Adjustment to tax basis:			
Non-taxable (non-deductible) portion of capital gains (losses)	(5)	10	4
Unrecognized deferred income tax assets on capital losses	15	(10)	(3)
Non-deductible expenses	(5)	(4)	(6)
Recognition of previously unrecognized deferred income tax assets	13	9	0
Other	0	1	1
Income tax (expense) recovery	**(9)**	**(13)**	**2**
Effective tax rate	**-7.04%**	**-14.41%**	**-6.86%**

Deferred Income Tax

Deferred income tax assets are recognized only to the extent that it is probable that future taxable income will be available to realize them. During 2022, Blue Jay Air determined that it was probable that substantially all of the deferred income tax assets, which include non-capital losses, would be realized.

The significant components of deferred income tax assets and liabilities were as follows:

	31-Dec-22	31-Dec-21	31-Dec-20
Deferred tax asset			
Non-capital losses	39	77	103
Post-employment obligations	100	87	75
Accounting provisions not currently deductible for tax	10	9	8
Investment tax credits and recoverable taxes	20	18	15
Other	5	5	4
Total	**175**	**195**	**205**
Deferred tax liabilities			
Property, equipment and technology-based intangibles	(289)	(241)	(201)
Other	(1)	(2)	(3)
Total	**(290)**	**(243)**	**(204)**
Net recognized deferred income tax assets (liabilities)	**(115)**	**(49)**	**1**
Balance sheet presentation			
Deferred income tax assets	17	19	22
Deferred income tax liabilities	(132)	(68)	(20)
Net recognized deferred income tax assets (liabilities)	**(115)**	**(49)**	**1**

EXHIBIT E
Fleet Upgrade Proposals

Exhibit E.1 Purchase Proposal for International Plane Fleet

Initial Purchase Price:	$1,750M
Annual Projected Maintenance Costs of New Fleet:	$ 2M
Additional Annual Expenses beyond those included in Purchase/Maintenance:	$ 60M
Annual Expected Revenue from New Route (First 5 Years):	$ 270M
Annual Depreciation for Fleet:	$ 100M

Exhibit E.2 Upgrade of Current Fleet Proposal

Initial Upgrade Expenditure:	$100M
Favorable Additional Revenue:	$18M first year, growing at 2% thereafter
Probability Favorable State:	60%
Unfavorable Additional Revenue:	$0M all years
Probability Unfavorable State:	40%

EXHIBIT F

Blue Jay Air Corporation's Balanced Scorecard Framework

	Objectives	Measurements	Targets	Initiative
Financial	Revenue Growth Frequent Business Travels Expense Reduction Asset Utilization	Total Revenues Business Class Load Factor Total Operating Expense Higher Tangible Assets	35% Annual Growth 95% 2% Annual Decrease Increase Service Capacity	 Refurbish/Purchase
Customer	Frequent Business Travel Enhance Loyalty Program Rebranding / Image	% Business Traveler Number of Participants Business Traveler Ranking	85% 25% Annual Growth #1	
Internal	Booking System Enhancements Enhance Comfort and Service Turnaround	Utilization Internet, Mobile Increase Business Class Capacity On Time Departure	50% Annual Growth 80% of Fleet 85%	
Innovation and Learning	Labor Relationship Management Labor Efficiencies Safety	Employee Satisfaction Decrease Staff Expenses Industry Safety Index Rank	Top 10% of Industry 10% Decline over next 5 years #1	

3 Blue Jay Tire Co

3.1 Tire Industry Profile

The tire industry supplies tires for new vehicles and replacement tires for existing vehicles. Its market includes passenger vehicles and trucks, in all size ranges. Tire manufacturers need to source materials used in production, particularly natural or synthetic rubber and various types of plastics and metal components. Tire manufacturers sell to wholesalers, automobile manufacturers, and retail dealers.

Risks to the industry include:

- Volatile raw material prices
- Rising competition from low-cost imports

Factors that can lead to success include maintaining strong industry relations (with suppliers and customers), aggressive marketing, and the rising demand in the replacement tires market.

The competitive environment for tire manufacturers has been characterized by several major established tire companies, competing fairly evenly for the business available in North America. However, more recently, new emerging companies from lower-cost regions of the world have been extending their reach into the lucrative North American markets. These new competitors may have more direct access to raw materials and lower labor costs, enabling them to compete effectively.

3.2 Company Profile

3.2.1 Early History

The Durable Tire Corporation has been operating in Canada since 1946. The company founders, the Eastern family, were originally farmers. The Easterns always focused on providing the best quality tires that would live up to the family name and brand. The company has a small and loyal customer base in rural areas. The high-quality products proved to be very well suited to the rugged Canadian frontier. Durable built farm vehicle and small plane tires. These tires were intended for dirt roads or off-road on farms and in small community towns. Durable also manufactured specialty tires sold in niche markets.

When the family patriarch passed away in 2008, the family decided to sell its interest in the company to Blue Jay Air (BJA). BJA had been one of Durable's clients for specialty tires in small aircraft that flew in the Northern reaches of Canada.

3.2.2 Under Blue Jay Air since 2009

The BJA group felt that it could leverage the capabilities of the manufacturing process to develop a broader range of tires. The tire company was re-branded within the BJA group to become Blue Jay Tire (BJT). In 2009, the BJA team put in place a 5-year plan to expand the sales and distribution reach into commercial vehicles across the USA.

The BJA management team increased its focus and oversight toward the BJT venture and its ever-improving financial results, particularly as Blue Jay Air's struggles worsened due to increased competition and squeezed margins.

In 2014, having successfully met and surpassed the 5-year plan objectives set out in 2009, the BJA Board directed BJT to pursue an even more ambitious growth strategy. With funding, BJT purchased two manufacturing plants in the southern USA and re-fitted the operation with direction from the Canadian operations. An executive team under the banner of Blue Jay Tire USA (BJT-USA) was setup by the BJA Board. This company operated with oversight from its Canadian head office. BJT-USA engineers were asked to set targets at double their pre-acquisition production levels or about triple the level of the Canadian manufacturing plant. At the same time, BJT introduced a tire warranty program that helped to enhance the tire sales and establish the tire brand. With a premium of about 50% of the tire costs, the warranty program provides free tire replacement for five years from the purchase date of every tire. Since inception, this tire warranty program has been well received.

BJT-USA surpassed sale targets each year from 2014-2019. BJT-USA, despite its size, had achieved a 3rd place market position in tire sales for compact cars and small SUVs in the southern U.S. by 2020.

3.2.3 Tire Recall

Sales in 2021 and 2022 were impacted by a tire recall. The following news item was reported in several major newspapers across the southern U.S.

Associated Press – August 2, 2020: *The Blue Jay Tire Co (BJT) reported in May 2020 that a tire defect that caused a single car accident was an isolated incident. BJT's CEO issued a statement saying "Blue Jay Tire has a long history of manufacturing excellence. But on behalf of our employees, we extend our condolences to the Franklin family for their loss. We regret that a BJT tire was responsible for this accident. On behalf of our engineers, line managers and production team, I can assure the Franklins and any family in the USA that we do everything in our power to ensure our tires represent the highest quality on the road".*

The tire involved was the RU42WD model. Over 40 million of these tires have been sold in the USA. The official report on the accident disclosed that the defective tire exploded, causing a sudden loss of driver control. While the company claimed that the accident was an isolated incident, our reporter uncovered a number of email records alluding to defects in the BJT's manufacturing process for the RU42WD tire.

As a result of the publicity, BJT made the decision in September 2020 to recall and replace all RU42WD tires. This incident resulted in a significant hit to BJT's financials and the company's reputation.

3.2.4 Financials

Detailed 5-year financial statements are shown in Section 3.5, Exhibits A, B, and C.

3.3 Risk Profile

The following risk factor excerpts are taken from the 2022 Annual Report:

3.3.1 Commodity Risk

Although there is a large amount of synthetic rubber used in the manufacturing process, the company still depends a great deal on natural rubber that is sourced in countries somewhat less stable than the developed world. Natural rubber production is also subject to weather related risks. In the tire industry, rubber represents 52% of total manufacturing purchases. A $0.10 per kilogram increase in natural rubber prices would lead to an estimated $0.5M increase in manufacturing costs. However, as long as commodity prices rise gradually over time, BJT is typically able to pass on those increased costs to the company's ultimate customers.

BJT has maintained the same supplier for over 30 years. The relationship is very strong and BJT benefits from stable pricing. In the past decade, BJT has achieved the lowest prices on its commodity purchases because its growth strategy has also benefited the supplier. Volume discounts have been passed on to BJT in the form of better pricing. For BJT, rubber now represents only 48% of company purchases, down from 60% at the start of the millennium. Commodity risk is considered to be lower for BJT than its competitors.

However, due to contracts with new car manufacturers, BJT will be unable to pass on increased commodity costs, should those costs rise quickly. In order to protect against this risk, Almond Bank, a financial intermediary, has proposed selling BJT a one-year contract for $5 million that pays $100 million if the cost of rubber at the end of the year is more than 15% higher than it was at the start of the year. The contract pays nothing if the cost of rubber has increased by less than 15% by the end of the year.

BJT has considered this proposal but deems it to be too big of an outlay at this time. BJT is more concerned about annual rate increases starting at 10%. If raw material costs increase by 15% or more, BJT will pay contractual penalties to the new car manufacturers and pass on the full cost increases.

As an alternative, BJT is considering catastrophe insurance coverage that would pay if supplies were disrupted more than one month due to natural disasters or pandemic. BJT is carrying an inventory of natural rubber sufficient to meet requirements for one month.

BJT is also considering blockchain-based supply chain and logistics management platforms, smart contracts, and applications. An increasing number of global retailers and suppliers have already successfully implemented pilot programs. A blockchain task force has been preparing a proposal to present to Ruth Green, Risk Committee Chair.

3.3.2 Manufacturing Risk

The process of making tires involves chemicals and flammable ingredients. This process poses concerns for the workers, and the risk of fire is large. In addition, the size of the finished product increases the risk of worker disabilities.

A lost-time injury is defined as an occurrence that results in a fatality, permanent disability or time lost from work of one day/shift or more. The Lost Time Injury Frequency Rate (LTIFR), the number of lost-time injuries per million hours worked, is calculated as:

$$LTIFR = \frac{\text{Number of lost-time injuries x 1,000,000}}{\text{Total hours worked in accounting period}}$$

Overall, the BJT manufacturing plants have reported a LTIFR of between 2.16 and 2.69 in recent years. This compares reasonably well to the industry average of 2.38. In particular, the LTIFR for the Canadian BJT plant has had best in class safety records at less than 2.0 since inter-company surveys began. In comparison, the U.S. plants have been between 2.56 and 2.99 since being acquired by BJT.

The manufacturing process had been established by the company founders and has had proven success over many decades. The same process and standards are used in both Canadian and U.S. plants. The core competencies for quality assurance have been developed in the people who manage the process, and the culture of quality management is passed on within the operations team from experienced staff to new associates. Quality management is considered by Executive Management to be a grass-roots competency of the company.

Manufacturing risk is currently considered at or below industry average. Management focus recently has been to return to the historical Canadian operational level of 1.92. A program recently implemented invites retired Canadian and former BJT plant operators to conduct quality management training for existing staff.

3.3.3 Labor Risk

Tire manufacturing plants typically have unionized labor forces, which can lead to contentious labor issues.

Historically, the Canadian operation has not had unionized labor. However, 35% of the employees working in the two U.S. plants are union members. The current union contract expires in 2024. After normalizing for standard of living differentials between geographical locations, the labor cost in the Canadian operation is 20% lower than similar operations in the U.S.

There has not been any disruption in the workforce at any of the plants. Labor risk is currently considered by Executive Management to be low. However, the number of staff that elect for union representation has been increasing.

BJT tracks the number of days employees miss work for other than paid sick time or vacation days. These absences can be caused by injuries on the job that do not count against the employee's sick time, but can also be due to union strike days, extended illnesses, or even just an unreliable employee. All teams are monitored and if a particular employee or team shows a significant increase in this number, Executive Management is alerted that there might be a situation needing attention.

3.3.4 Legal Risk

The possibility of class-action lawsuits exists, particularly in the U.S. A large risk stems from the chance of paying out large claims or having wide-spread product recalls. BJT has not experienced any litigation action in its history.

3.3.5 Distributor Risk

BJT sells almost all of its tires through independent distributors. BJT has long-standing relationships with several Canadian car dealerships as their sole or primary tire supplier.

3.3.6 Product Liability Risk

The key risks in a tire operation are product liability and product recall. Some companies use a captive insurance company to handle this exposure. Historically BJT has retained its entire product liability risk. The BJT Board has requested a feasibility report to examine solutions to effectively mitigate this exposure.

3.3.7 Environmental Risk

Tires are an easy target for environmental groups. Billions of tires are produced each year and billions are discarded. The materials to produce tires and the manufacturing process can be the subject of environmental concerns. BJT maintains a recycling plant for the rubber in its discarded tires. This plant is able to support only the operations in Canada, due partly to subsidies available from the Canadian government. Efforts in the U.S. for a similar plant are not likely to be economical. Environmental risk is considered to be low due to operation size and overall market share.

3.3.8 Economic Risk

The number of miles driven has a large impact on the demand for tires. The state of the world economy has a direct impact on the company's ability to grow and expand. BJT has chosen to target compact cars and small SUVs, which have proven to be popular in recent years. BJT has anticipated that increased gasoline prices will continue the trend towards the small vehicles. This strategy has been proven to be effective as a counter-cyclical impact on sales, and BJT experienced market share growth from 5% to 8%. Economic risk for BJT is considered medium. However, with recent volatility in gasoline prices and the overall economic situation, it is difficult to anticipate whether such trend will continue.

3.3.9 Reputational Risk

One of the company's primary strengths is its brand name. BJT must constantly assure that its products are of the highest quality and must invest in research and development to continually improve its products. BJT has growing brand awareness within the U.S. market. BJT uses social media monitoring tools to assess its brand awareness. Brand awareness is considered to be a critical determinant of BJT's growing presence in its chosen target market. BJT monitors five media channels for their positive/negative ratio. This ratio had been showing steady improvement in recent years until 2020, when BJT experienced the tire recall.

At the current time reputational risk is considered to be an area that needs attention and improvement.

3.3.10 Political Risk

The company is exposed to political risk through import/export quotas and price controls. The North American Free Trade Agreement (NAFTA) between U.S.A., Canada and Mexico gave birth to the U.S. operations of BJT. Some U.S. interest lobby groups have recently demanded stronger nationalist policies. The previous U.S. administration's negative view of NAFTA has led to revisions to trade agreements among the three nations, resulting in the USMCA (United States-Mexico-Canada Agreement) and further uncertainty for the future. BJT is exposed to future changes in this agreement.

The supply chain is also exposed to political risk due to the geographical location of the suppliers, which are primarily in Malaysia.

Political risk is considered a medium risk for BJT as a small Canadian firm operating in the U.S.

3.3.11 Currency Risk

Manufacturing costs and the revenue generated are in different currencies, resulting in a possible loss. BJT Canadian operations and sales are in Canadian dollars and the U.S operations and sales are in U.S. dollars. 85% of the raw materials are sourced from Malaysia.

3.3.12 Risk Tolerance

Due to Blue Jay Air's recent focus on developing a formal Risk Appetite Statement, Ruth Green, the head of the BJA risk committee, has directed BJT to also propose risk tolerances for its business. BJT's initial statements are as follow:

- The company has no appetite for any safety risk exposure that could result in injury or loss of life to either customers, public or its workforce. Safety targets should always be met regardless of the circumstances and should only improve from year to year.
- The overall company average of number of days an employee misses work not due to paid sick time or vacation days shall not exceed five days per year.

- The company will avoid any risks to reputation due to defective products or inappropriate marketing practices.
- Raw material costs will be controlled such that annual increases in unit costs will be no greater than 10%.

3.4 Possible Product Expansion

BJT is looking to expand its operations into non-road tires (primarily specialized construction equipment tires and agricultural tires). Because the tires are so specialized, the margins are high, but the volumes are dependent upon the state of world-wide construction and agricultural industries. Construction is in turn, highly correlated to the economy.

BJT is looking at two possibilities for entering the market. The first is to develop its own capabilities, building off of its current tire business. The second alternative is to buy a company that is already in the market.

BJT management is evaluating the potential costs of developing their own capabilities to enter the construction equipment and agricultural tires market. Specialized machines are needed to produce construction equipment and agricultural tires, and management would need to decide whether to purchase or lease these specialized machines. If BJT builds the new production facility, it would also need to determine the level of capacity at which to operate.

Alternatively, BJT management has identified True North Tire Company (TNT), a company domiciled in the United States, as an acquisition target to enter the construction equipment and agricultural tires market. TNT entered the specialty tires market ten years ago and has quickly established a strong presence selling tires in the United States and Canada due to its low production costs in Eastern Asia. TNT would be a wholly owned subsidiary of BJT, but BJT would not interfere with TNT's operations given its successful past.

Whitewall Consulting (WC) has been hired to create a stochastic model of future profitability, which will help inform the decision of which alternative, if any, to pursue.

WC estimates that:

- BJT could acquire TNT for $100M.
- Since BJT would leave the current operations untouched, TNT could produce profits in the first year of BJT's ownership.
- Profitability depends on the state of the world economy.
- Average profits would be $10M per year.

In contrast, if BJT builds its own specialty tire plant:

- WC estimates a two-year construction timeline with costs of $85M.
- However, since the design would be newer, WC forecasts that a BJT-built plant would be more efficient to run, generating average profits of $12M per year.

3.5 Blue Jay Tire Exhibits

EXHIBIT A

Blue Jay Tire Corporation

NON-CONSOLIDATED STATEMENTS OF OPERATIONS

(US Dollars in millions)

FISCAL YEAR ending 12/31/YYYY	2022	2021	2020	2019	2018	2017
Total Gross Sales	**385**	**366**	**458**	**428**	**400**	**380**
Cost of Sales (1)						
Cost of Raw Materials	(65)	(81)	(102)	(67)	(55)	(59)
Production Costs (2)	(96)	(92)	(114)	(107)	(100)	(95)
Depreciation & Amortization	(45)	(43)	(43)	(41)	(40)	(38)
Shipping Costs	(6)	(5)	(7)	(6)	(6)	(6)
Other	(4)	(5)	(6)	(7)	(8)	(4)
Total Costs of Sales	(216)	(226)	(272)	(228)	(209)	(201)
Net Revenue	**170**	**140**	**186**	**200**	**191**	**179**
Operating Expenses						
Research Development	12	11	14	13	12	11
Selling General & Administrative (3)	75	75	78	77	76	75
Non-Recurring (4)	12	20	70	8	7	5
Other (5)	15	11	10	40	10	8
Total Operating Expenses	**114**	**117**	**172**	**138**	**105**	**100**
Operating Income or Loss	**56**	**24**	**14**	**62**	**86**	**79**
Income from Other Revenue and Continuing Operations						
Other Revenue – Warranty program	58	55	69	64	60	57
Other Revenue – Book Sales	8	7	9	9	8	8
Tire Replacement Expenses	(39)	(37)	(46)	(43)	(40)	(38)
Foreign Exchange Gain/(Loss)	(10)	6	8	(15)	(20)	(14)
Net Investment Income	5	5	5	5	5	6
Total Other Income/Expenses Net (6)	**22**	**36**	**45**	**20**	**13**	**19**
Earnings Before Interest & Taxes	78	60	59	82	99	98
Interest Expense	41	40	38	38	36	35
Income Before Taxes	36	21	20	44	63	63
Income Taxes	8	4	4	9	13	13
Net Income from Continuing Ops	**29**	**16**	**16**	**35**	**50**	**50**

Notes:

(1) Includes cost of material & production with overhead
(2) Includes salaries & overhead directly related to production
(3) Includes salaries other than production related
(4) Includes operational process upgrades
(5) Predominantly injury claims
(6) Performance of the tire warranty program and Sales from travel & restaurant guidebooks

EXHIBIT B

Blue Jay Tire Corporation

NON-CONSOLIDATED STATEMENT OF FINANCIAL POSITION

(US Dollars in millions)

FISCAL YEAR ending 12/31/YYYY	2022	2021	2020	2019	2018	2017
ASSETS						
Current Assets						
Cash and Cash Equivalents	96	139	157	128	77	100
Short Term Investments	82	74	66	77	75	77
Receivables	113	108	105	103	100	100
Inventory	300	256	196	192	187	187
Total Current Assets	**591**	**577**	**524**	**500**	**439**	**464**
Long Term Investments	85	76	75	62	50	50
Property Plant and Equipment	647	622	643	661	672	562
Intangible Assets	50	50	50	50	50	50
Other Assets	46	45	41	35	35	28
TOTAL ASSETS	**1,419**	**1,370**	**1,333**	**1,308**	**1,246**	**1,154**
LIABILITIES and EQUITY						
Current Liabilities						
Accounts payable	148	149	140	137	126	108
Short/Current Term Debt	70	61	60	55	48	38
Other Current Liabilities	26	26	24	23	21	16
Total Current Liabilities	**244**	**236**	**224**	**215**	**195**	**162**
Long Term Debt	615	600	580	570	550	540
Other Liabilities	179	166	163	158	156	142
TOTAL LIABILITIES	**1,038**	**1,002**	**967**	**943**	**901**	**844**
Equity						
Retained Earnings	156	142	141	140	120	85
Capital	225	225	225	225	225	225
TOTAL EQUITY	**381**	**367**	**366**	**365**	**345**	**310**
TOTAL LIABILITIES and EQUITY	**1,419**	**1,370**	**1,333**	**1,308**	**1,246**	**1,154**

EXHIBIT C

Blue Jay Tire Corporation
NON-CONSOLIDATED STATEMENT OF CASH FLOW
(US Dollars in millions)

FISCAL YEAR ending 12/31/YYYY	**2022**	**2021**	**2020**	**2019**	**2018**	**2017**
Net Income	**29**	**16**	**16**	**35**	**50**	**50**
Operating Activities, Cash Flows Provided By or Used In						
Depreciation	45	43	43	41	40	38
Adjustments To Net Income:						
Changes In Accounts Receivables	(5)	(3)	(2)	(3)	0	(1)
Changes In Liabilities/Account Payables	(1)	11	4	13	23	(4)
Changes In Inventories	(44)	(60)	(4)	(5)	0	3
Changes In Other Operating Activities	0	0	0	0	0	0
Total Cash Flow From Operating Activities	**24**	**7**	**57**	**81**	**113**	**86**
Investing Activities, Cash Flows Provided By or Used In						
Capital Expenditures	(70)	(22)	(25)	(30)	(150)	(10)
Investments	(17)	(9)	(2)	(14)	2	(21)
Foreign Exchange Gain/(Loss)	2	(2)	(1)	3	(3)	2
Other Cash flows from Investing Activities	(3)	(2)	(5)	(3)	(4)	(1)
Total Cash Flow From Investing Activities	**(88)**	**(35)**	**(33)**	**(44)**	**(155)**	**(30)**
Financing Activities, Cash Flows Provided By or Used In						
Dividends Paid	(15)	(15)	(15)	(15)	(15)	(15)
Sale Purchase of Stock	0	0	0	0	0	0
Net Borrowings	24	21	15	27	20	30
Other Cash Flows from Financing Activities	13	3	5	2	14	5
Total Cash Flow From Financing Activities	**22**	**9**	**5**	**14**	**19**	**20**
Cash & cash equivalents, beginning of year	139	157	128	77	100	24
Cash & cash equivalents, end of year	96	139	157	128	77	100
Change In Cash and Cash Equivalents	**(42)**	**(19)**	**29**	**51**	**(23)**	**76**

EXHIBIT D

Blue Jay Tire Corporation

SELECT FINANCIAL INFORMATION BY COUNTRY (US Dollars in millions)

FISCAL YEAR ending 12/31/YYYY	**2022**	**2021**	**2020**
BJT - Canada	35	29	43
BJT-USA	135	111	143
Net Revenue	**170**	**140**	**186**
BJT - Canada	24	25	39
BJT-USA	90	92	133
Total Operating Expenses	**114**	**117**	**172**
BJT - Canada	404	391	381
BJT-USA	1,015	979	952
Total Assets	**1,419**	**1,370**	**1,333**
Cost of Capital			
BJT - Canada	12%	12%	12%
BJT-USA	10%	10%	10%
Tax Rates			
Canada	15%		
USA	21%		

ADDITIONAL INFORMATION BY COUNTRY

CALENDAR YEARS	**2021-2022**
BJT - Canada	25,000
BJT-USA	75,000
Employees	100,000
BJT - Canada	1
BJT-USA	2
Manufacturing Plants	**3**

4 Frenz Corporation

4.1 Coffee Shops Industry Profile

4.1.1 Operations

Companies in the coffee shop industry sell coffee drinks and other food and beverages for consumption on the premises or for takeout. Coffee shops are part of the specialty eatery industry, which also includes outlets specializing in products such as bagels, donuts, and ice cream. Some coffee chains operate worldwide, primarily through licensing agreements. The world's largest coffee consumers include the U.S., Brazil, Germany, and Japan.

4.1.2 Risk/Success Factors

Key drivers of demand for premium coffee and snack products include:

- Disposable income: consumption increases and decreases with disposable income
- Coffee prices: since coffee beans are the primary input in the value chain, the volatile prices of coffee beans determine market costs and profitability margins
- Attitudes toward health: a shift toward healthy eating could be a potential threat to the industry
- Demographics: as an example, millennials drink more espresso, iced, frozen, and branded coffee drinks than older consumers do

4.1.3 Competitive Environment

The profitability of individual companies depends on the ability to secure prime locations, drive store traffic, and deliver high-quality products. Large companies have advantages in purchasing, finance, and marketing. Small companies can compete effectively by offering specialized products, serving a local market, or providing superior customer service.

Coffee shops compete with businesses such as convenience stores, gas stations, quick-service and fast-food restaurants, gourmet food shops, and donut shops.

This industry is in a mature stage with a medium level concentration.

4.2 Frenz Company Profile

Frenz Corporation was originally a subsidiary of RPPC, but since 2016, has been an independent public company. Frenz is a global premier roaster, marketer, and retailer of specialty coffee in the European and American countries, incorporated in Belgium. It has operations in most major cities of Europe and the Americas, including all developed countries and some developing countries. In addition to company-operated stores, Frenz also sells a variety of coffee and tea products and licenses its

trademarks through many other channels such as licensed stores, groceries, private clubs, hotels, cruise ships and national foodservice accounts.

Frenz is one of the most recognized and respected brands in the "premier" coffee houses as well as a household brand in the developed world. Two of its main objectives are to maintain its competitive standing and to continue its disciplined expansion of the store base, primarily focused on growth in developing countries.

Frenz is dominant in the high-end specialty coffee market, especially through its premier coffee house outlets which have over a 40% market share in Europe. However, its market shares in North America, Latin America, developing countries and household coffee constitute only about 18%, 11%, 5% and 16%, respectively. There is significant growth potential in those countries where the customer base is still expanding and there is a chance to increase market share without the pressure to take customers from competitors.

Frenz reports its financial results in accordance with the International Financial Reporting Standards (IFRS).

Mission Statement

Frenz's mission statement is:
One person, one cup, one community, one world. We care about our family.

This mission statement focuses on the objective to be the most recognizable coffee brand in the world.

Board of Directors

Frenz's Board consists of eight members. Three Board members are Chief Executive Officers or Board Chairmen in leading public companies in Belgium, two are Board members of RPPC, and the remaining Board members are executive officers of Frenz.

4.3 Risk Profile

Supply-Chain Risks

Commodity price risk is the primary supply-chain risk for Frenz. Price volatility of key ingredients, such as green coffee, tea leaves and dairy products, presents a substantial exposure to the stability of the product prices as well as profit margins. This is mitigated somewhat by the ability to keep coffee and tea for long periods of time, thus reducing storage costs.

In addition, oil prices have a direct impact on shipping costs. Frenz incurs substantial shipping costs in transporting the key ingredients to its worldwide retail outlets. Therefore, oil price increases can erode Frenz's profit margins.

Supply and price can be affected by multiple factors in the producing countries, including weather and political and economic conditions. The price for coffee is also impacted by trading activities in the Arabica coffee futures market, including hedge funds and commodity index funds.

Furthermore, green coffee prices may be affected by actions of certain organizations and associations that have historically attempted to influence prices through agreements establishing export quotas, increased tariffs, embargoes, and customs restrictions or by restricting coffee supplies. Similar influences also exist for prices of tea leaves.

Relationships with the producers (coffee, tea, and dairy), outside trading companies, suppliers and exporters are also pertinent in assessing the risk of non-delivery on purchase commitments and the quality of ingredients delivered. Currently, Frenz has not negotiated any trade credit agreements with any of its suppliers.

The COVID 19 pandemic highlighted weaknesses in the supply chain beyond Frenz's typical focus (coffee, tea, dairy). In particular, Frenz experienced shortages and disruptions in the supply of durable goods.

The awareness of additional supply chain vulnerabilities led Frenz to begin to analyze and document its supply chain risks. Frenz extended the discussion beyond core products (coffee, tea, dairy) and beyond basic supply and price considerations. Frenz looked at the global supply of products and whether any products had a risk of an absolute shortage, and for each supplier, Frenz started asking whether it was at risk of going out of business (defaulting).

Frenz's initial review indicates that tea and non-paper durable goods (e.g., straws) have plenty of supply. Frenz has multiple sources, and durable goods can be stored for long periods.

In the case of coffee, Frenz works with a small number of major growers and distributors. Disruption (low crop yields, extreme weather events, political upheaval) could affect Frenz's ability to obtain large enough quantities of coffee to supply the stores. Frenz mitigates this risk to a degree by maintaining a three-month supply in storage.

In the case of dairy products, Frenz sources most dairy products locally through a series of coops and other distributors. However, storing dairy products for long periods poses challenges. In addition, localized effects could be significant and lead to small dairy shutdowns. That is, Frenz's stores in a small area may all struggle to source dairy products while dairy supply remains unaffected for the rest of Frenz's stores.

Frenz stores use a lot of paper cups, which are customized for Frenz. To keep costs down, Frenz centralized cup production and distribution with a single supplier. During the pandemic certain varieties of cups were unavailable, sometimes for a few weeks at a time. Frenz stores had to acquire cups locally, often at high prices. The cups were not quite the same sizes and shapes as the custom branded cups, resulting in slower drink preparation and longer wait times. When shortages occurred, profitability was moderately damaged at the affected stores.

Demand Risks

Competition can be fierce as the capital required to enter the industry is low. The company is facing competition not only from the specialty beverage shops such as Starbucks, Timothy's, and Second Cup, but also from quick-service restaurants such as McDonald's, donut shops such as Tim Hortons, dessert shops, high-end restaurants, and other specialty retailers. Thus, the need for the company to keep expanding and differentiating its product lines and to venture into unfamiliar territories is becoming inevitable.

Customer loyalty is pertinent in this business. As a result, the company will continue to expand its popular loyalty card program, which has been effective in preventing other companies from stealing away Frenz's customers.

Customer dissatisfaction, due to either poor service or inconsistent product quality, can drive customers to other providers.

Adverse economic conditions may cause declines in general consumer demands for these high-end products, driving the increase in costs and pressure for reduced quality of products, which in turn, may increase impacts from negative publicity.

Negative publicity regarding business practices or health effects of consuming products may lead to reduction in demand and profitability and an increase in litigation.

Supply-Demand Risk Model

Due to risks on both the supply and demand sides of the operation, Frenz developed a supply-demand economic model to evaluate its business strategy and risk profile. This model is not as detailed as the economic models RPPC had run for conglomerate reporting. It is intended to be a simplified, more intuitive model that can aid Frenz in its ongoing operations and strategy.

Operational Risks

Risks are associated with each of the expansion plans that Frenz is exploring. Implementation of these plans can be very challenging and risky as these plans are disruptions to the ongoing business.

Delays in store openings, exposure to increased construction costs associated with new store openings, and lack of availability of desirable real estate locations would also negativity impact the net revenues and profit margins.

The degree to which Frenz is able to negotiate appropriate terms and conditions as it enters into, maintains, and develops commercial and other agreements could have significant impact on company financing and operation.

Loss of key personnel, difficulties in recruiting and retaining qualified personnel, labor discord, political instability and natural disasters could cause significant business interruption which, in turn, adversely impacts the business and financial results.

Adverse public or medical opinions about health effects, food tampering, food contamination, and regional or global health pandemics could severely and adversely impact the company's business.

Due to Frenz's heavy reliance on information technology, any material inadequacy, interruption, or security failure of the technology could harm the ability to effectively operate the business.

Litigation and Reputation Risks

Success depends substantially on the value of the brands, especially in the specialty business. Thus, the company has to maintain product quality and be able to consistently deliver a positive consumer experience. It must engage in corporate social responsibility programs to enhance the company reputation. Brand value is based, in part, on consumer perceptions on a variety of subjective qualities. Even isolated business incidents that erode consumer trust, such as contaminated food or privacy breaches, can significantly reduce brand value, particularly if the incidents receive considerable publicity or result in litigation.

Reputation may be harmed by actions taken by third parties that are outside of the company's control. Third parties may include business partners, licensees, suppliers, vendors, and any business associates with whom the company engages.

Proper handling of customers' complaints is very important in protecting the company's reputation and preventing potential litigation.

Foreign Currency Risk

Because Frenz has operations in many different countries, currency exchange risk exists due to having differing currencies generated from the revenue and expense sides. Currency volatility could lead to volatility in earnings.

Interest Rate Risk

Frenz has significant debt issuances and also has investments in bond markets. Therefore, interest rate volatility has significantly impacted the investment margins of Frenz. The Frenz Board has determined that the maximum impact on operating income given a 100bp parallel shift in rates is 5%.

Capital Risk

In order to maintain the company's growth rate, Frenz is now facing increasing capital risks.

4.4 Strategic Initiatives

Marketing Strategies

Frenz's current marketing strategies are as follows:

- Continue its dominant market position in the coffee houses by organic expansion of its company-operated coffee houses in the developed countries through building more of these company-operated coffee houses in financial districts and high socio-economic areas.
- Further nurture relationships with and loyalty from other distributors such as high-end hotels, private clubs, universities, cruise-lines and upscale grocery and retail outlets such as bookstores and department stores.
- Expand into more developing countries through acquisition of local coffee house chains, franchising, and organic growth into more cities and financial districts of the developing countries, especially the fast-growing Asian market.
- Target local advertising in certain countries to expand its household brand recognition and add more endorsements in conjunction with certain significant events such as the World Cup, the Olympics, the World Exhibition, and events of religious significance.
- Maintain a significant budget devoted to Frenz's renowned marketing capability, which, due to investments over many years, has achieved significant economies of scale.
- Further enhance the company's ability to quickly develop and roll out new and innovative products, which helps defend against potential coffee substitutes and serves to further differentiate Frenz from its competitors.
- Explore vertical integration by owning and controlling its sources of key ingredients, such as coffee bean and tea plantations. This would provide enhanced quality control and allow for development of its own niche products.

Expansion Strategy

Some Board members are unhappy with the geographical market concentration, which they feel has reduced Frenz's net income. The Marketing Vice President, Jade Phan, is being empowered to implement the recent marketing strategic goals set by the Board. Jade's first priority is to expand into the fast-growing Asian market. She currently leads a team of twenty experienced marketing staff whose experience is predominantly targeting the higher socio-economic clientele in the developed countries in Europe and the United States.

This expansion strategy will require significant capital. The new Chief Risk Officer, Robert Kaplan, is uneasy with the expansion strategy as cash flow in Frenz will be greatly strained without additional debt financing. This, in turn, could increase Frenz's leverage ratio above the company's internal limit.

Jade is expanding certain of Frenz's product lines, such as the super-premium coffee market, bubble teas, specialty fruit drinks, and mixed coffee and tea drinks, which have given Frenz a reputation as a product innovator in the market. To this end, Frenz is exploring offering coffee made from exotic coffee beans and special tea leaves. There are very few areas that can produce such high-quality premium coffee beans. The best coffee beans are from Costa Rica, the *Finca Palmilera*, but they are very expensive.

4.5 Frenz Exhibits

EXHIBIT A

Overhead Allocation -- Email Correspondence

To: Kitty Dunn, Chief Accounting Officer, Frenz

From: Jeff Bemowski, Division Head of Non-Coffee Product Marketing

Subject: Overhead Allocation

Date: April 14, 2023

We are allocating overhead in a way that punishes our most successful store managers. Total overhead should be allocated equally to each Frenz store. Better yet, allocate Corporate overhead to each Frenz store based on smoothed, budget amounts. That way store managers know just how much Corporate overhead they have to cover at the start of each year.

The problem with the current method is that most non-coffee products cost more than a cup of coffee. When Frenz runs a commercial, we are advertising the whole brand. We want to get customers to come into our stores to have the whole Frenz experience. Customers come in regularly for coffee. Sometimes they buy another product, like a music CD, in addition to their coffee. That one CD shouldn't be charged more overhead than all those cups of coffee.

Regards,
Jeff

To: Jeff Bemowski, Division Head of Non-Coffee Product Marketing

From: Kitty Dunn, Chief Accounting Officer, Frenz

Subject: Overhead Allocation

Date: April 13, 2023

Our policy for allocating corporate overhead is straightforward and hasn't changed in several years. Overhead costs such as corporate advertising, executive salaries, Frenz store operating expenses, and the rent on our home office building, are accumulated. Then that accumulated corporate overhead is spread over all sales on a uniform basis. Each product gets an allocation of corporate overhead based on its standard price. That keeps it the same from market to market, where prices might be different, and it negates the impact of sales and discounts on items. That seems like a fair system to me.

We have been successful in keeping our overall corporate overhead under control. Every summer, we review the overhead allocation ratio, and it has gone down every year. I think this is the mark of a successful allocation method.

What is your proposal for how to change it?

Kitty Dunn

To: Kitty Dunn, Chief Accounting Officer, Frenz

From: Jeff Bemowski, Division Head of Non-Coffee Product Marketing

Subject: Overhead Allocation

Date: April 12, 2023

We need to change the way corporate overhead is allocated. The non-coffee products, such as music CDs, greeting cards, coffee mugs, etc., are at a disadvantage. As you know, bonuses for the store managers are dependent on the profits of their stores. However, my bonus is based on the profits from just the non-coffee products. I've been pushing our store managers to sell these non-coffee products, but the allocation method for corporate overhead penalizes these products and disguises the true profitability of this part of the operation.

Regards,
Jeff

EXHIBIT B
Frenz Financial Statements
INCOME STATEMENT

	Projected	*Projected*	*Projected*	*Actual*	*Actual*	*Actual*
Euros in thousands	**2025**	**2024**	**2023**	**2022**	**2021**	**2020**
Sales	626,696	568,306	515,482	461,802	412,632	378,654
Cost of Sales	55,381	49,368	43,992	48,631	60,165	31,145
Store Operating Expenses	291,754	272,908	255,279	233,150	209,474	193,254
Depreciation	31,770	28,061	24,601	21,379	18,443	15,662
General and Administrative Expenses	64,902	61,398	58,229	55,008	52,058	50,019
Impairment of Goodwill	0	0	0	0	10,447	0
Total Operating Expenses	443,807	411,735	382,100	358,169	350,587	290,081
Operating Income	182,889	156,571	133,381	103,634	62,045	88,573
Interest Expense	8,664	8,144	7,623	8,317	5,921	4,919
Income Tax Expense	43,556	37,107	31,440	23,829	14,031	20,914
Net Income	130,668	111,321	94,319	71,488	42,092	62,741

BALANCE SHEET

	Projected	*Projected*	*Projected*	*Actual*	*Actual*	*Actual*
Euros in thousands	**Dec 31, 2025**	**Dec. 31, 2024**	**Dec. 31, 2023**	**Dec. 31, 2022**	**Dec. 31, 2021**	**Dec. 31, 2020**
Current Assets:						
Cash	32,573	27,139	22,271	15,330	10,551	22,870
Accounts Receivable	5,000	5,000	5,000	5,000	5,000	5,000
Inventory	14,660	12,999	11,518	10,198	8,739	6,934
Total Current Assets	52,234	45,137	38,789	30,528	24,291	34,804
Long-term Assets:						
Long Term Investments	282,367	250,214	220,308	192,330	166,605	142,960
Goodwill	67,897	56,617	46,387	37,109	28,796	31,816
TOTAL ASSETS	402,498	351,969	305,485	259,967	219,692	209,580
Current Liabilities:						
Accounts Payable	10,000	10,000	10,000	10,000	10,000	10,000
Current Borrowing	8,200	8,500	8,800	9,100	9,400	9,700
Total Current Liabilities	18,200	18,500	18,800	19,100	19,400	19,700
Long-term Debt	143,280	134,400	125,520	116,640	107,760	98,880
Total Liabilities	161,480	152,900	144,320	135,740	127,160	118,580
Equity						
Paid-in Capital	25,000	25,000	25,000	25,000	25,000	25,000
Retained Earnings, accumulated	216,018	174,069	136,165	99,227	67,532	66,000
Total Equity	241,018	199,069	161,165	124,227	92,532	91,000
TOTAL LIABILITIES AND EQUITY	402,498	351,969	305,485	259,967	219,692	209,580

STATEMENT OF CASH FLOWS

	Projected	*Projected*	*Projected*	*Actual*	*Actual*	*Actual*
Euros in thousands	**2025**	**2024**	**2023**	**2022**	**2021**	**2020**
Operating Activities:						
Net Income	130,668	111,321	94,319	71,488	42,092	62,741
Adjustments						
Depreciation	31,770	28,061	24,601	21,379	18,443	15,662
Accounts Receivable	0	0	0	0	0	0
Inventory	(1,661)	(1,481)	(1,320)	(1,459)	(1,805)	(934)
Accounts Payable	0	0	0	0	0	0
Impairment of Goodwill	0	0	0	0	10,447	0
Net Cash Provided by Operating Activities	**160,777**	**137,901**	**117,600**	**91,408**	**69,178**	**77,469**
Investing Activities:						
Purchases of investments	(75,203)	(68,197)	(61,858)	(55,416)	(49,516)	(45,438)
Sales of investments	0	0	0	0	0	0
Net Cash Used by Investing Activities	**(75,203)**	**(68,197)**	**(61,858)**	**(55,416)**	**(49,516)**	**(45,438)**
Financing Activities:						
Change in Current Borrowing	(300)	(300)	(300)	(300)	(300)	(300)
Proceeds from Issuance of Long-Term Debt	13,200	13,200	13,200	13,200	13,200	13,200
Repayments of Long-Term Debt	(4,320)	(4,320)	(4,320)	(4,320)	(4,320)	(4,320)
Cash Dividends	(88,719)	(73,417)	(57,381)	(39,793)	(40,560)	(62,741)
Net Increase in Cash from Financing Activities	(80,139)	(64,837)	(48,801)	(31,213)	(31,980)	(54,161)
Net increase in Cash and Cash Equivalents	5,435	4,867	6,941	4,779	(12,318)	(22,130)
Cash and Cash Equivalents:						
Beginning of Period	27,139	22,271	15,330	10,551	22,870	45,000
End of Period	32,573	27,139	22,271	15,330	10,551	22,870

5 Big Ben Bank

5.1 Industry Profile

A commercial bank performs several financial functions for consumers and businesses, such as accepting deposits, offering checking accounts, making loans, and offering basic financial products like certificates of deposit (CDs) and savings accounts. Commercial banks make money by providing loans and earning interest income on those loans. The types of loans a commercial bank can issue include mortgages, auto loans, business loans, and personal loans.

Customer deposits, such as checking accounts, savings accounts, and CDs, provide banks with the capital to make loans. Customers who deposit money into these accounts effectively lend money to the bank and are paid interest. However, the interest rate paid by the bank on the money "borrowed" is usually less than the rate charged on money loaned. This interest spread is a source of profit for commercial banks.

Private banking consists of personalized financial services and products offered to high-net-worth individuals. It includes a wide range of wealth management services including investing and portfolio management, tax services, insurance, trusts, and estate planning. Banks charge fees for managing clients' assets and the other wealth management services provided.

Risks to the industry include the following:

<u>Strategic/Business Risks</u>

- Significant competition in the rapidly evolving global financial services industry, resulting in downward pressure on asset management fees

- Reputational risk

<u>Profitability and Liquidity Risks</u>

- Risks relating to models and assumptions
- Credit risk from failure of customers or counterparties to meet their financial or contractual obligations when due
- Liquidity risk that the bank may be unable to raise funds on a timely basis or at a reasonable cost to fund asset growth or settle liabilities
- Risk of adverse changes in market risk factors such as interest rates, credit spreads, foreign exchange rates, equity prices, mortgage rates and mortgage liquidity

<u>Operational Risk</u>

- Inadequate or failed internal processes and systems
- Compliance
- Regulatory capital risk due to increasing stringency of banking regulations
- Fraud or conduct risk due to detrimental practices

- Technology
    - Misalignment between business and IT strategies
    - Risk that technology becomes obsolete or uncompetitive, limiting resiliency
    - IT program execution risk
- Competition and disruption emerging from new financial technology firms which develop new services and products based on innovative technologies including cloud, big data analytics, internet of things and digital payments processes
- Cyber-security breaches

Factors that can lead to success include:

- Strong positive relationships with clients
- Significant Assets Under Management (AUM)
- Superior investment results, leading to high net investment spread
- Effective risk management function so that risk exposures are within acceptable limits.

Regulatory Challenges

In the years since 2010, a number of measures have been taken that impact the banking system. In the U.S., in July 2010, President Obama signed the Dodd-Frank Act. Dodd-Frank aimed to improve the regulation of financial markets, better evaluate measures of systemic risk, and improve consumer protection. Part of Dodd-Frank is the Volcker Rule which put limits on how much banks could invest in risky assets (i.e., private equity and hedge funds).

In the 10 years after the 2008 financial crisis, the U.S. economy performed well and equity markets reached record levels. Proponents of Dodd-Frank say that it has helped prevent the economy from a crisis like that in 2008. Critics of Dodd-Frank say that the burden of complying with the law has made U.S. banks less competitive compared to their foreign counterparts. In May 2018, President Trump signed a law that eased the Dodd-Frank regulations except for a few of the largest banks.

In December 2010, the Basel Committee issued the Basel III rules text, which presents the details of global regulatory standards on bank capital adequacy and liquidity agreed by the Governors and Heads of Supervision and endorsed by the G20 Leaders at their November 2010 Seoul summit.

The rules text presents the details of the Basel III Framework, which covers both micro-prudential and macro-prudential elements. The Framework sets out higher and better-quality capital, better risk coverage, the introduction of a leverage ratio as a backstop to the risk-based requirement, measures to promote the build-up of capital that can be drawn down in periods of stress, and the introduction of two global liquidity standards.

In December 2017, the Basel Committee finalized additional standards which are often referred to as Basel IV. A key component of Basel IV is the revised credit risk calculation used to determine capital requirements. Banks will need to calculate capital requirements using a standard approach and can

also calculate capital requirements using internal models. If the internal models approach produces a lower capital requirement, the lower figure will be the capital requirement, subject to a "capital floor". The "capital floor" will be a percentage of the standardized capital calculation.

For most banks, it is expected that the internal models approach will produce lower capital requirements than the standardized approach. Therefore, most banks will want to build robust models to calculate capital requirements using internal models but will also need to calculate capital requirements using the standardized approach to determine the "capital floor". This may create challenges for banks with respect to data and IT architecture.

Basel IV is targeted to be phased in from 2022 through 2027, with the "capital floor" increasing over that time period. Basel IV will likely lead to banks having to hold higher amounts of capital. With higher capital requirements, banks will likely review business strategies and investment portfolios. Investments that may have been attractive in the past may no longer be attractive with the new capital requirements.

5.2 Big Ben Bank Company Profile

5.2.1 Background

Big Ben is a mid-sized full-service bank domiciled in London, United Kingdom. It was formed in 2007 under the directorship of Sanjay Patel. Patel gained his wealth as a self-directed fund manager using fundamental asset selection and key insights into the business models of his investments. The initial focus of Patel's banking group was finding best-in-class funds for its high-net-worth clients. Patel's fund management business was formed in 1998 and its success was primarily built within European financial centers.

Big Ben acquired a small commercial bank in 2010 in an attempt to diversify its services beyond fund management. In 2021, an impairment of goodwill was triggered based on a revised profit outlook from this acquisition.

RPPC decided to acquire an insurance group (Darwin Life Insurance Company) in 2015, with the hope of creating synergies between the bank and the insurer.

5.2.2 Products / Services

Asset Management
Big Ben Bank is a world leader in the exchange-traded fund (ETF) market and has a strong brand and a loyal investor base. Big Ben's asset management products cover a comprehensive list of asset classes including equities, fixed income, real estate, private equity, and sustainable investments. In addition to ETFs, Big Ben offers mutual funds and separately managed accounts.

Advisory teams manage client relationships, provide advice, and enable clients to access Big Ben's asset management products and services. Service is individually tailored for Big Ben's high-net-worth clients

who have their own dedicated advisors. Big Ben also markets its offerings through its Commercial Banking division.

Commercial Banking
The Commercial Banking division's clients are individuals (retail banking) and small businesses. Products offered are checking account services; business, personal and mortgage loans; credit and debit cards; and basic financial products such as certificates of deposit (CDs) and savings accounts. The operational model of the commercial banking division is primarily online, rather than through physical branches. This approach was meant to meet the needs of a globally mobile clientele. The physical distribution model is almost non-existent and cannot support broad-based banking.

Big Ben's Private Banking group provides a suite of services to high-net-worth individuals designed to grow wealth. In addition to the traditional commercial banking services, Big Ben provides custom-designed investment, tax, and estate planning solutions. The Private Banking group makes use of Big Ben's Asset Management products as part of its financial planning services.

Investment Banking
Big Ben has a small investment banking division which provides services related to the creation of capital for companies, governments, and other entities. Big Ben underwrites new debt and equity securities, aids in the sale of securities, facilitates mergers and acquisitions, and provides guidance to issuers regarding the issue and placement of stock.

5.3 Risk Profile

Risk Management Process

Big Ben prides itself on a strong risk culture and has had an active risk management function. Big Ben actively complies with the RPPC Risk Management Framework.

Big Ben uses various models to manage market risks and to provide insight into decision-making. The three most important ones are as follows:

i) A model to capture the correlation between mortgage prepayment rate and interest rates using statistical best fit techniques
ii) Black-Scholes option pricing model based on the underlying asset price, the strike price, and assumptions on asset price distributions in the hedging program
iii) Short-cut bond price model based on assumptions about yield movements to provide quick estimates

Big Ben uses frequency tests to validate VaR risk models based on the number of losses exceeding VaR and a significance level.

Big Ben conforms with the documentation standards of RPPC's model risk management framework.

Risk Appetite Statement

Risk appetite defines how much risk Big Ben is willing to take. Big Ben is willing to accept risks that align with its strategic goals and provide a high level of risk-adjusted returns.

Risk Appetite Dashboard	
Metric	**Risk Tolerance level**
ROE	10%–15%
New Loan Growth (per quarter)	3%–5%
New Deposit Growth (per quarter)	4%–6%
Unexpected Earnings Volatility	<10%
Liquidity Ratio	110%-160%
Lending Business Credit Risk	<0.5% current loan balance
% Customer Satisfaction	>85%
# of Significant Legal, Ethical, and Reputational Events	0
# of Significant Compliance Issues	0

Stress Testing

Big Ben has an internal stress testing model to measure the amount that could be lost in a crisis situation. The modeled scenario is similar to the 2008/2009 financial crisis. The model calculates losses over a one-year period and is run annually. Results are shared with senior managers in all departments. A key output from the model is the percentage of mortgage loan defaults in the scenario.

Model backtesting of after-tax profits is performed on a baseline scenario. The model has been deemed to have passed the backtesting because recent tests have shown that after-tax profits are not systematically under- or overestimated.

Capital Management

Currently, Big Ben uses regulatory capital at the corporate level and division level as the capital management metric. The Asset Management and Investment Banking divisions also use economic capital (EC) as a second metric. EC measures the risk of unexpected losses in income or value of portfolios up to a given confidence level (99.95%) over a one-year time horizon. It assumes that expected losses are a cost of doing business and are already reflected in loan loss provisions and product pricing.

Capital allocation for each division is decided in the annual budget meeting. The hurdle rate is set at 15% for all divisions.

Investment Limits and Triggers

Criteria	Instructions	Limit per issuer
Fixed Income	Permitted	20% of portfolio MV
Real Estates	Permitted	10% of portfolio MV
Equities	Permitted	20% of portfolio MV
Derivatives*	Permitted	15% of portfolio MV

FI Category	Limit (% of portfolio Market Value)
Treasury / Agency	100%
Sovereign Treasury	100%
Corporate / Credit <= BBB	10%
Corporate / Credit > BBB	50%

*Derivative Financial Instruments written:

- Forward Contract
- Interest Swap
- Currency Swap
- Put/Call Option

5.4 Strategic Initiatives

New Product – Cryptocurrency

A cryptocurrency is a digital currency used as a medium of exchange. Cryptocurrencies use cryptography to secure transactions, control the money supply and verify the transfer of funds.

Big Ben is considering offering two new innovative, cryptocurrency related products:

<u>Cryptocurrency Savings Account</u>

- Personal banking customers will have the option to open a secondary savings account that holds cryptocurrencies
- Customers can purchase, sell or transfer cryptocurrencies within their accounts online or using the mobile app
- Customers will pay monthly fees to maintain the accounts and a transaction fee when purchasing or selling cryptocurrencies
- Big Ben will guarantee the storage of the cryptocurrencies

<u>Cryptocurrency Exchange Traded Fund (ETF)</u>

- The ETF will allow investors to diversify within the cryptocurrency industry

- The ETF will be managed to ensure a consistent mix of the largest cryptocurrencies
- Due to the operating expenses of this strategy, the asset management fee is 2%, which is higher than most of Big Ben's other ETFs.

Cryptocurrency banking products are not currently offered by Big Ben's traditional banking competitors.

Solar Energy Financing Business Opportunity

A new U.S. government program has been created to:

- Provide subsidies for solar panel purchases
- Provide incentives to electric utilities

Big Ben is exploring the opportunity to provide financing arranged by solar panel service providers who participate in the program. Other participants in the program are homeowners and electric utilities.

Solar Panel Service Providers

- Responsible for solar panel installation, maintenance, and repair
- Arrange financing for homeowners

Homeowners

- Purchase solar panels that provide 50% - 100% more capacity than needed to provide energy for the home using funds from financing arranged by solar panel service providers
- Sell excess energy to participating electric utilities and use proceeds to repay debt

Electric Utilities

- Participate in the program via one-year contracts which they are not obligated to renew
- Receive incentives to source 10% of their energy from solar energy from this program
- Must purchase energy units at 3x their normal retail sales rate in order to receive the incentives
- Can purchase energy units at their normal retail sales rate if they do not participate in the program

Big Ben would provide 20-year financing for the purchase of solar panels. Homeowners are expected to repay the loans in equal payments over 20 years with the proceeds from their sales of excess energy to utility companies. However, if in any year, the proceeds from the sale of the excess energy are not sufficient to make the full loan repayment, then Big Ben receives only the amount of the excess energy proceeds in that year. Based on the projected loan payments from homeowners and the government subsidies, Big Ben expects to receive attractive long-term returns on the loans it makes.

Big Ben has identified the following risk factors:

Weather (number of sunny days)
Solar panel installation issues
Solar panel equipment failure
Solar panel performance (energy conversion rate)
Utility participation
Demand for electricity

Based on feedback from consultants about the distribution of the above risk factors, Big Ben produced financial projections for the opportunity. Information about the projections is shown in Exhibits B, C, and D. The exhibits include analysis of several deterministic scenarios and also a stochastic analysis.

5.5 Big Ben Bank Financial Exhibits

Exhibit A
Statement of Income

in millions of pounds sterling	**Projected 2023**	**2022**	**2021**	**2020**
Interest income	575	449	481	681
Interest expense	190	147	170	310
Net interest income	**385**	**301**	**312**	**372**
Provision for credit losses	0	14	48	20
Net interest income after provision for credit losses	**385**	**288**	**263**	**352**
Commissions and fee income	320	296	255	257
Net gains (losses) on financial assets/liabilities at fair value through profit or loss	0	82	67	5
Net gains (losses) on financial assets available for sale	0	6	17	7
Net income (loss) from equity method investments	0	3	3	3
Other income (loss)	0	(2)	(4)	(18)
Total noninterest income	**320**	**385**	**338**	**254**
Compensation and benefits	290	282	283	301
General and administrative expenses	295	292	277	331
Impairment of goodwill and other intangible assets	0	0	0	28
Restructuring activities	0	7	13	17
Total noninterest expenses	**585**	**581**	**573**	**678**
Income (loss) before income taxes	**120**	**92**	**28**	**(71)**
Income tax expense	**30**	**24**	**11**	**71**
Net income (loss)	**90**	**68**	**17**	**(142)**

Balance Sheet

in millions of pounds sterling	**Projected Dec 31, 2023**	**Dec 31, 2022**	**Dec 31, 2021**	**Dec 31, 2020**
Assets:				
Cash and central bank balances	5,200	5,190	4,492	3,719
Interbank balances (w/o central banks)	200	198	247	260
Central bank funds sold and securities purchased under resale agreements	230	226	231	373
Securities borrowed	0	2	0	12
Financial assets at fair value through profit or loss				
Trading assets	2,800	2,767	2,917	2,997
Positive market values from derivative financial instruments	9,000	8,101	9,283	8,998
Financial assets designated at fair value through profit or loss	2,500	2,408	2,069	2,349
Total financial assets at fair value through profit or loss	14,300	13,277	14,269	14,344
Financial assets available for sale	500	783	1,509	1,230
Equity method investments	30	29	24	25
Loans	13,000	12,738	11,540	11,617
Property and equipment	150	150	150	133
Goodwill and other intangible assets	184	184	182	190
Other assets	3,000	2,805	2,984	2,983
Assets for current tax	40	33	27	25
Deferred tax assets	170	168	164	162
Total assets	**37,004**	**35,784**	**35,818**	**35,072**
Liabilities and equity:				
Deposits	17,000	16,318	15,352	15,465
Central bank funds purchased and securities sold under repurchase agreements	50	20	63	84
Securities loaned	0	1	46	7
Financial liabilities at fair value through profit or loss				
Trading liabilities	1,500	1,479	1,198	1,002
Negative market values from derivative financial instruments	8,000	7,760	8,859	8,554
Financial liabilities designated at fair value through profit or loss	1,600	1,580	1,259	1,360
Investment contract liabilities	15	15	14	15
Total financial liabilities at fair value through profit or loss	11,115	10,834	11,330	10,931
Other short-term borrowings	100	109	96	141
Other liabilities	2,650	2,643	3,087	2,918
Provisions	70	71	66	71
Liabilities for current tax	16	16	16	18
Deferred tax liabilities	14	14	15	15
Long-term debt	4,000	3,905	4,031	3,688
Trust preferred securities	25	14	36	54
Total liabilities	**35,040**	**33,945**	**34,137**	**33,392**
Total shareholders' equity	**1,694**	**1,568**	**1,481**	**1,510**
Additional equity components	224	224	157	126
Noncontrolling interests	46	46	43	44
Total equity	**1,964**	**1,839**	**1,681**	**1,680**
Total liabilities and equity	**37,004**	**35,784**	**35,818**	**35,072**

Exhibit B
Solar Financing Opportunity – Deterministic Scenarios

Summarized Deterministic Output

Sensitivity Analysis - Deterministic Scenarios

Utilities participation = YES

Scenario description	Base Case - Normal weather	Bad weather	Good weather
Scenario number	1	2	3
Initial Investment	10,000,000	10,000,000	10,000,000
Government rebate	2,500,000	2,500,000	2,500,000
Energy produced over life of loan (kWh)	110,688,162	88,407,123	125,275,068
Energy consumed by homeowners (kWh)	63,250,378	63,250,378	63,250,378
Excess energy to be sold (kWh)	47,437,784	25,156,745	62,024,690
Average Rate for selling excess energy	0.36	0.36	0.36
Proceeds from selling excess energy	17,077,602	9,056,428	22,328,889
Cumulative loan payments due	16,048,517	16,048,517	16,048,517
Cushion/(shortfall) of energy sale proceeds	1,029,085	(6,992,089)	6,280,371
Cumulative loan payments received	16,048,517	9,056,428	16,048,517
Total cash payments received	18,548,517	11,556,428	18,548,517
After-tax IRR	5.97%	1.23%	5.97%

Utilities participation = NO

Scenario description	Normal weather	Bad weather	Good weather
Scenario number	4	5	6
Initial Investment	10,000,000	10,000,000	10,000,000
Government rebate	2,500,000	2,500,000	2,500,000
Energy produced over life of loan (kWh)	110,688,162	88,407,123	125,275,068
Energy consumed by homeowners (kWh)	63,250,378	63,250,378	63,250,378
Excess energy to be sold (kWh)	47,437,784	25,156,745	62,024,690
Average Rate for selling excess energy	0.12	0.12	0.12
Proceeds from selling excess energy	5,692,534	3,018,809	7,442,963
Cumulative loan payments due	16,048,517	16,048,517	16,048,517
Cushion/(shortfall) of energy sale proceeds	(10,355,983)	(13,029,708)	(8,605,555)
Cumulative loan payments received	5,692,534	3,018,809	7,442,963
Total cash payments received	8,192,534	5,518,809	9,942,963
After-tax IRR	-1.56%	-4.25%	-0.05%

Exhibit C

Solar Financing Opportunity - Stochastic Analysis Returns

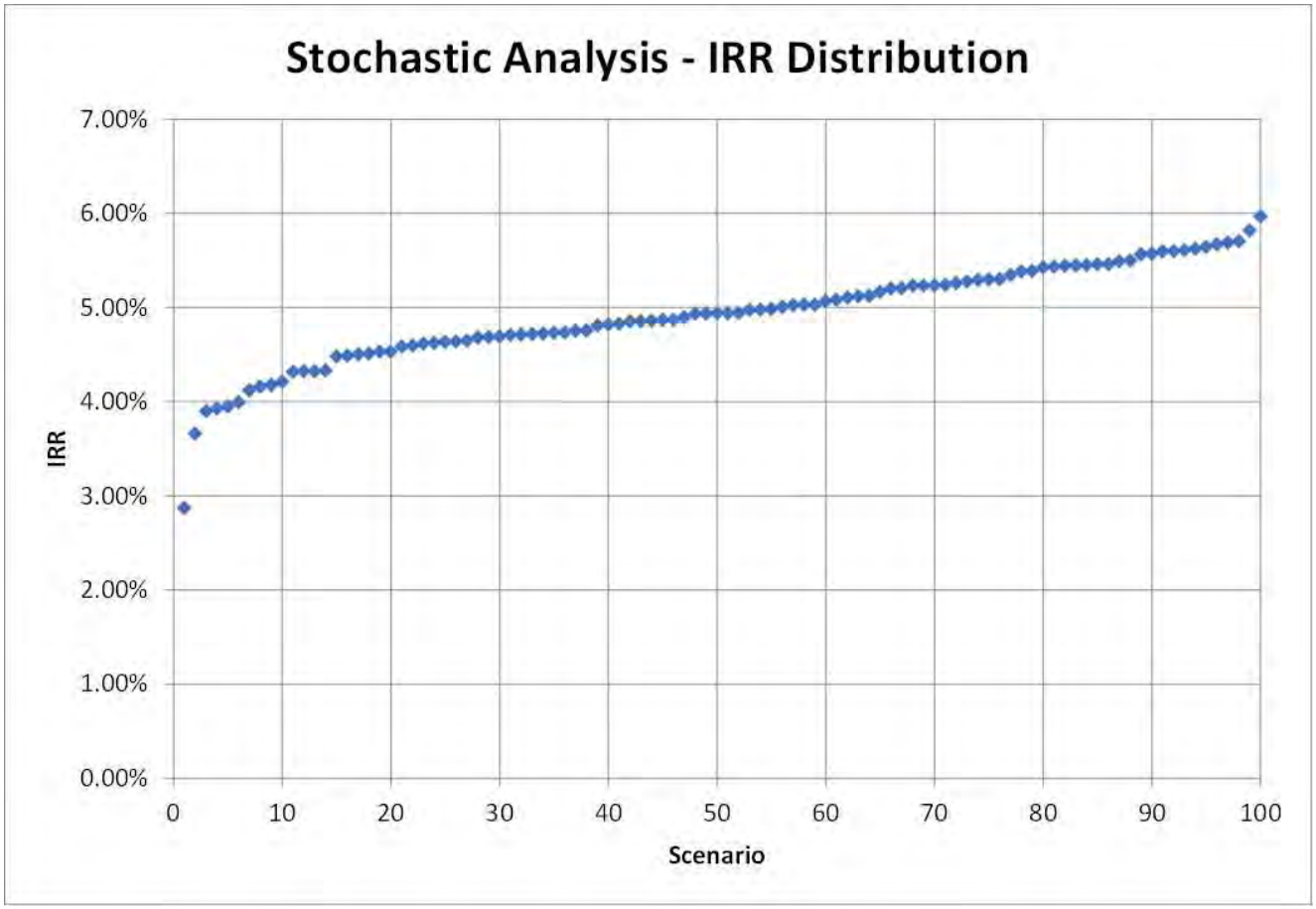

Exhibit D
Solar Financing Opportunity - Key Model Assumptions

Below are some of the key model assumptions that were used by the consultants to analyze the solar financing opportunity:

- Term of loan is 20 years
- Loan interest rate is 5%
- Government rebate to Big Ben Bank is 25% of the initial loan
- Normal retail sales rate for energy is constant for the next 20 years
- Personal consumption of energy in constant for the next 20 years
- For any given year, the probabilities for good weather conditions, normal weather conditions, and bad weather conditions are 10%, 80%, and 10%
- For any given year, the probability that utility companies do not participate in the program is 10%. This impacts that rate at which excess energy can be sold.

6 Darwin Life Insurance Company

6.1 Industry Profile

The life insurance and annuity industry mainly provides three types of financial products to its clients:

- Insurance policies that protect against mortality and morbidity, for example, term or whole life insurance
- Wealth accumulation products that help clients achieve their financial goals, for example, universal life
- Income generating products that provide retirement income for clients, for example, payout annuities

Current trends in the life insurance industry include:

- As baby boomers retire, they have a need for products that provide lifetime income. The shift from life protection and pre-retirement accumulation to post-retirement income protection and retirement asset management will accelerate.
- As the focus of protection moves from pre-mature death to longevity, there are opportunities for companies with product, distribution, and service (trust, process, and advice). Variable deferred annuities have transformed from tax-deferred mutual fund investments to guaranteed retirement income vehicles. For insurance companies, protection is the normal differentiator versus other financial services (e.g., 85% of all variable annuity sales have living benefit riders).
- To improve investment margins insurers have invested in higher yielding assets and diversified away from holding only investment grade corporate bonds. Often, insurance companies are the leading investors in mortgages, private placements, leveraged loans, high yield bonds, and emerging market debt. These investments introduce new forms of risk, such as foreign exchange and liquidity risk.

Success Factors

Successful companies will have well-positioned defensible market positions, pricing power, advanced technology and systems to enhance service and processes, and lower costs. They will exhibit operational efficiencies, experienced management, high-quality financial reporting and corporate governance, strong asset-liability management, investment and risk management, a focused and balanced growth strategy, the ability to innovate products and distribution by partnering with other services (financial planners, estate attorneys, tax experts, and healthcare advisors), and the ability to build customer relationships.

Risk Factors

There are three primary groups of risks associated with the insurance business:

1. Insurance Risk – When underwriting insurance policies, an insurance company undertakes mortality, longevity, morbidity, and lapse risk.

2. Investment Risk – Like many financial institutions, insurance companies are exposed to interest rate, credit, market, liquidity, and foreign exchange risks. Also, since the liability is usually sensitive to interest rate, the asset portfolio needs to have similar interest rate sensitivity. Such asset/liability mismatch could expose insurance companies to large loss and therefore needs to be managed.
3. Operational Risk – Like all businesses, insurers rely on various systems and processes to run their business. There are risks associated with their operations.

Competitive Environment

The insurance industry is highly competitive. Within the industry, there are a large number of companies offering similar products. Differentiation comes from product features, pricing, service, and reputation. Regarding wealth management products, insurers also have to compete with banks and mutual fund companies, who could be advantaged or disadvantaged under different regulatory frameworks.

6.2 Company Profile

Darwin Life is a mid-size life insurer headquartered in Albuquerque, New Mexico with an increasing presence in the domestic U.S. market. Life sales are distributed primarily through an agency system, and annuity sales are distributed primarily through financial institutional channels (e.g., banks and broker-dealers). Darwin has experienced an era of success since embarking on a new strategic direction ten years ago, under the leadership of CEO Gabriela Martinez. The success is tangibly measured by growth in earnings, revenue, and distribution capacity. Recent growth has been fueled by core competencies - distribution relationships and product/service development.

Prior to the strategic change, Darwin lacked focus, with little to no differentiation, high costs and stagnant sales. Prior management's view was that the customer was the agent rather than the policy holders. There was no focus on profitability or growth. Operations lacked discipline, with frequent exceptions to administrative and underwriting standards. Products included traditional whole life, level term, and current assumption Universal Life (UL). Although Darwin also offered fixed and variable annuities, the company did not have a strong focus on marketing these asset accumulation products nor on developing distribution capacity within the financial institutional markets.

Ten years ago, new management shifted strategy to be focused on wealth management and a customer focus targeting middle to upper income individuals, professionals and small business owners with estate planning, tax-deferred accumulation, traditional income preservation and retirement income protection needs.

This strategic focus and management's solid execution through the early 2010's caught the eye of RPPC. RPPC thought Darwin was an attractive property that could benefit from additional access to capital. Darwin's focus on wealth management was a great strategic fit with RPPC's financial division – products, distribution, and development.

Darwin has had high costs partly due to misaligned resources. Legacy products and systems drained resources for several years. Most technology resources are devoted to new products and new business with a priority placed on customer service and growth in distributions. As a result, not enough resources have been devoted to infrastructure or in force management. Darwin has also been slow to recognize increasing concerns with privacy of customer data. There is no technology infrastructure around the management of data privacy.

Darwin was slow relative to its peer group in actively managing the spread compression resulting from low interest rates. Time constraints and lack of expertise in some cutting-edge product areas resulted in less-than-effective back-end operations, including risk mitigation and management, operational monitoring, and reporting. Greater speed is needed to respond to business problems including risk monitoring and escalation. Operational areas are silo-based, resulting in less effective collaboration and cross-functional continuous improvement processes. Darwin is moving towards a disciplined operational focus in underwriting, investments, and diversified competitive products.

Darwin has solid ratings from every major rating agency – A.M. Best, Standard and Poor's, Moody's, Fitch, and Kelly Ratings.

6.3 Product Lines and Distribution

Core product segments are universal life, high cash value traditional life, and individual variable annuities. Non-core segments include group annuities, individual fixed annuities, and term life. Darwin enhanced its universal life products to better suit the consumers' insurance, estate, and business planning needs and introduced UL with secondary guarantees (ULSG). The ULSG product guarantees that the policy will not lapse as long as the policyholder pays premiums at a level that meets stated requirements in the policy, regardless of the interest credited, cost of insurance, and expenses that are applied to the policy account value. The guarantee is to age 120. The ULSG product is considered a lapse-supported product, which means that lower than expected lapse rates will hurt profitability.

Darwin has pursued an aggressive organic growth strategy focusing on individual life and individual variable annuities through expanding and enhancing distribution channel and sales growth. Darwin distributes life products primarily through career agents, banks, and direct marketing channels. The traditional agency channel utilizes a variable cost structure with compensation incentives, which promotes strong persistency. Bank-owned life insurance (BOLI) products are marketed through independent marketing organizations that specialize in the BOLI market. In 2016 Darwin expanded annuity distribution into financial institutions. Darwin's distribution strategy has been to add major new outlets, penetrate existing outlets, and expand the agency distribution by 2 - 3 regional offices per year. Both the agent and institutional distribution expansions required a significant investment.

Agent service remains important. Customer focus creates a change in perspective that is critical in administrative and underwriting practices, which then translates into consumer value and expected higher profits. A disciplined operation strategy was split into separate operational strategies for pricing, underwriting, investments, financial reporting, claims, reinsurance, technology, corporate governance, and risk management.

Over the past decade Darwin has become an innovator in service - providing wealth management solutions to individuals - including expertise in design and distribution of tax-sheltered or tax-minimizing strategies such as estate planning and small business owner succession planning. Darwin has invested in technology and staff to service both the customer and distribution channels (such as new administrative and reporting platforms), implemented an imaging and automated workflow system, and established a team so that a live person will answer the phone within four rings 95% of the time. This attention on customer and distribution sets the company apart from its peer group and supports an aggressive organic growth strategy.

Darwin offers a broad array of competitive products with customization for specific distribution channels. Darwin has not pursued a first-to-market strategy but has developed competency to be a fast follower and replicate new product designs in the market. Darwin sometimes lacks the expertise to replicate processes and infrastructure. The company has invested heavily in front end distributing, issuing, and processing of new business. It has built strong relationships with the agency and institutional distribution channels. Darwin utilizes a variable cost distribution structure and has a sales force that has grown in geographic breadth and depth.

Darwin had tremendous top line growth in its Term, UL, and Individual Variable Annuities (IVAs) over the past 5 years. In an industry with flat life sales, Darwin's life sales grew at a 30% rate. Darwin had not been a player in the IVA market before the 2010s, but early that decade, IVAs became attractive and reasonable. Earlier entrants in this market had aggressively priced products with rich benefits by, in the view of many, taking on too much risk. Eventually many of those companies had to exit the market or greatly reduce benefits. Darwin took advantage of the climate by offering modest guaranteed lifetime withdrawal benefits and a guaranteed death benefit for higher fees. However, distribution has now been pushing for incentives that will distinguish Darwin from other IVA writers. Product development has responded over the last few years by greatly extending the guarantee period and offering a great diversity of mutual funds available for all IVA customers (including some unique funds that would be difficult to duplicate if the customers had to invest on their own). Some of these funds have been consistently outperforming their benchmarks in recent years, thereby attracting more flows into those funds.

6.4 Financial Performance

Darwin has outperformed the industry over the past 10 years in terms of growth in life sales, annuity sales, equity, assets, and distribution capacity. Relative to the industry and similarly rated companies, Darwin unfavorably has higher leverage, higher expenses, lower interest coverage, and lower liquidity. It favorably has a higher return on capital. Relative to its peer group, Darwin has had a lower operating income margin and a lower net income margin, a lower investment yield, a higher expense ratio, higher growth in life insurance inforce, and average mortality and persistency.

Darwin's historical financial statements and projections for future years are shown in section 6.8, Exhibits A - D.

6.5 Investment Policy and Strategy

The investment department manages the general account investments. The Chief Investment Officer (CIO), Ken Huang, reports to the CFO, Alexis Marino. Investment policy and strategy is reviewed and approved by an internal management committee consisting of the CEO (Martinez), CFO (Marino), CIO (Huang), and SVPs (or VPs) of the major 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. Within the general account, there are separate investment portfolios for each of the main product lines. The corporate surplus (net equity) is allocated proportionally. Individual variable and group annuity investment accounts are held in a separate account (segregated).

6.6 Risk Management

Darwin formalized its risk management function with the creation of an ERM Committee in 2015 followed by a new CRO position and establishment of a Risk Management department in 2016. The Committee meets quarterly. The current risk management staff consists of the CRO (Aaliyah Jackson), the chief risk management actuary (John Clark), the hedge manager (Tim Jones), and the supporting staff (4 actuaries, 2 CFAs, and 2 CPAs).

The purpose of the ERM Committee is to build sustainable competitive advantages by fully integrating risk management into daily business activities and strategic planning. Excerpts from its Charter charge the Committee to:

- Increase the enterprise's value through promotion of a robust risk management framework and processes.
- Align risk preferences, appetite, and tolerances with strategy.
- Monitor Darwin's overall risk exposure and ensure risks are measured and well-managed.
- Anticipate risk exposures and recommend action where exposures are deemed excessive or where opportunities exist for competitive advantages.

The Charter also specifies the Committee's Composition, Authority, Meetings and Responsibilities.

Darwin's risk appetite statement is:

I. Capital	The probability of a 15% loss of Statutory equity in one year is less than 0.5%.
II. Earnings	The probability of negative GAAP earnings in one year is less than 5%.
III. Ratings	Maintain an AA financial strength rating. Maintain capital 10% above minimum AA capital requirements. Maintain an A rating on senior unsecured debt.

Risk tolerances are based on the estimated impact of quantified risks on statutory capital, since the core mission is policyholder protection. Market risk, credit risk, underwriting risk, operational risk, strategic and liquidity risks are quantified using a variety of metrics to capture multiple perspectives.

6.6.1 Credit Risk

Darwin only invests in investment grade quality bonds (S&P BBB- or above). 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 below 3.5 for each line of business.

6.6.2 Market Risk

Semi-annually within each block of business, Darwin measures the effective 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 effective duration equals that of the liabilities.

The IVA hedging program uses a semi-static hedge updated for market factors weekly and for in force changes monthly. The key risk measures are the market greeks, and Darwin currently hedges delta and rho based on the benchmarks for each fund. The program purchases derivatives so that at least 90% of liability delta and 50% rho are hedged. Existing hedges are not sold if the hedge ratio exceeds these thresholds. Gamma, vega and cross greeks are self-insured due to system complexity, the cost of hedges, and the tendency of equity volatility to mean revert. U.S. GAAP and Statutory reserves, in and of themselves, are not hedged. There is risk that this may result in insufficient protection on GAAP and Statutory bases.

The hedge program has not yet been integrated into the main legacy system as there is a backlog in getting back-end risk reporting on the system. Currently it is run separately by Tim Ballmer and his risk management team who develop the necessary assumptions for the hedging models. There has been an effort to integrate the assumption-setting process across product development, financial reporting, and risk management, but it is only in the planning stages, as the company culture of silo-based operations has been hard to overcome. The only assumption currently shared across functions is the static policyholder behavior assumption. While hedges are updated weekly, hedge effectiveness, liability attribution, and risk factor calculation are only tested quarterly. Hedge effectiveness has been less optimal in recent years due to an increase in basis risk as several of the more popular funds are outperforming their benchmarks and the hedge program is based on these benchmarks.

Market risk on group annuities with separate accounts and interest rate risk on general account products is currently unhedged. A small portion of the group annuity block has guaranteed minimum death benefits (GMDB) and guaranteed minimum income benefits (GMIB), exposing Darwin to a small amount of unhedged equity risk. However, the risk management team has determined that the capital at risk is within acceptable risk tolerances.

6.6.3 Liquidity Risk

The liquidity policy requires Darwin to hold sufficient liquid assets to meet demands for cash in a liquidity crisis. One scenario considers a reputational liquidity crisis 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. Another scenario considers a crisis in which the entire market is not able to sell assets at a reasonable value.

6.6.4 Operational Risk

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

6.6.5 Risk Management Stress Testing

Stochastic testing is supplemented with deterministic scenario-based stress tests, performed annually. Each test is applied as shocks to the model assumptions (for example, mortality, lapse, and market assumptions). Interest rates have a floor of 0.10%

6.7 Strategic Considerations

6.7.1 Indexed Universal Life

Anne Kofsky, VP Life Insurance Division, has made a proposal to expand the offering of life insurance products into Indexed Universal Life to appeal to the middle to upper income clientele. For this product, the client would have two investment account choices: a fixed rate account and an indexed account.

For the fixed rate account, the return would fluctuate with market rates but never drop below the minimum floor rate (proposed to be 1%, but marketing prefers 2%).

For the indexed account, whenever funds are moved into the indexed account, a new "investment segment" would be created. The return of the investment segment for the next year would be equal to the return of the S&P index over the year, subject to a floor of zero and a cap (proposed to be 10%, but marketing prefers 12%). This would allow customers to participate in the market upside when the S&P does well (subject to the cap) while having the comfort of knowing that their investment accounts would not lose money when the S&P does poorly. To reduce hedging and operational issues, funds would

move into the indexed account only once per month. This would limit the number of investment segments to 12.

Since death claims for the product could be paid out many years into the future, the product is expected to have a long liability duration.

Initial product development efforts indicated that the product will produce a Statutory internal rate of return (IRR) of 15% which is above the hurdle rate set by the holding company. The new product design reflects a general account investment portfolio of investment grade corporate bonds, equities, S&P derivatives, interest derivatives, and credit default swaps (CDS).

There have also been discussions about replacing some of the investment grade corporate bonds with high yield bonds, private placement loans, and commercial mortgages. If these changes were made to the investment portfolio, the expected return of the investment portfolio would be higher and it would increase the IRR of the product. However, there would be additional credit risk and less liquidity in the investment portfolio.

Management would like to manage and report the new IUL product with the Current UL portfolio. Since the risks of both the fixed rate account (IULF) and the indexed account (IULV) are of concern, testing was performed on each account individually and in total as well as with the Current UL portfolio.

In collaboration with the consulting firm working on Darwin's economic capital model (as described in Section 6.7.3), the pricing team estimated the impact of adding the new IUL product to the existing UL portfolio. The results of this testing are shown in the table below.

Statutory Distributable Income (in USD Millions)							
	Current UL	IUL IULF + IULV	IULF	IULV	Current UL + IULF	Current UL + IULV	TOTAL Current UL + IULF + IULV
Average	20.72	20.04	26.83	29.30	21.45	9.90	28.17
Std Dev	5.40	5.05	10.92	13.81	13.53	4.53	9.95
Deviation from Mean (in USD Millions)							
Percentile	Current UL	IUL IULF + IULV	IULF	IULV	Current UL + IULF	Current UL + IULV	TOTAL Current UL + IULF + IULV
Min	(14.07)	(14.98)	(27.62)	(32.20)	(34.42)	(18.17)	(21.57)
0.05	(10.20)	(8.18)	(18.32)	(27.44)	(23.47)	(7.45)	(16.66)
0.10	(6.60)	(5.86)	(12.83)	(18.22)	(18.08)	(5.17)	(11.80)
0.15	(5.68)	(4.45)	(10.41)	(13.88)	(12.93)	(4.58)	(10.11)
0.20	(4.93)	(3.89)	(8.24)	(12.16)	(9.32)	(3.81)	(7.96)
0.25	(3.63)	(3.29)	(7.12)	(8.23)	(8.17)	(2.46)	(6.16)
0.30	(2.57)	(2.50)	(5.60)	(7.20)	(6.22)	(1.99)	(4.49)
0.35	(2.00)	(1.70)	(4.62)	(4.52)	(4.49)	(1.15)	(2.75)
0.40	(1.50)	(1.38)	(2.26)	(2.09)	(3.84)	(0.76)	(1.89)
0.45	(0.63)	(0.49)	(1.27)	(0.18)	(1.77)	(0.09)	(1.00)
0.50	(0.09)	0.05	(0.54)	1.86	(0.68)	0.36	(0.40)
0.55	0.91	0.41	0.16	3.29	0.44	0.69	0.81
0.60	1.70	1.10	1.42	4.70	3.64	1.27	1.93
0.65	2.34	1.40	3.93	6.08	5.56	1.62	2.48
0.70	3.27	2.71	5.66	7.22	7.49	2.14	3.26
0.75	4.17	3.61	8.06	9.37	9.62	2.60	4.82
0.80	5.30	4.26	9.75	11.10	10.79	3.08	6.75
0.85	5.81	5.57	11.49	12.56	14.64	3.79	10.04
0.90	6.91	6.72	13.83	14.70	17.66	5.21	12.34
0.95	8.23	7.43	16.43	22.91	21.76	7.00	15.28
Max	12.05	11.88	28.55	31.80	34.29	11.75	32.45

Below is an e-mail excerpt related to this product.

From: Gabriela Martinez, CEO
Sent: Monday, March 25, 2023 7:36 PM
To: Aaliyah Jackson, CRO
cc: Anne Kofsky, VP
Subject: Re: Indexed Universal Life Product

Anne's report on the proposed Indexed UL product looks very promising in terms of both revenue and profit. I see the actuaries used new stochastic models with multiple interest and equity scenarios and dynamic consumer behavior. Aaliyah, I know your team has been involved and is still reviewing. As aggressive as our 3-year UL sales growth targets are, I don't want to have a misfire on launching a UL product like ABC Life and XYZ did. They withdrew products from the market within a year after introduction. Their agents were not happy.

Following are some questions about this product:

- Could you perform a more comprehensive review than usual to evaluate if the models are adequate to capture all the major risk categories and if the additional risk-taking is aligned with our risk appetite?
- Could you think about Marketing's preferences to increase the interest rate floor for the fixed account and to increase the cap for the indexed account?
- Do you have concerns about the investment proposal to allocate some of the portfolio to high yield bonds, private placement loans, and commercial mortgages?
- For the indexed accounts, we will have 12 "investment segments". Although the hedging theory is the same as with one investment segment, I am wondering if we will have operational issues because of the multiple investment segments. Do you have concerns about this?
- Are we going to be able to manage interest rate risk given the long liability duration?
- Have you settled on new risk metrics and what will be on the risk dashboard?

Also, please note that the target launch is still June 17.

6.7.2 LTC

As the baby boomers in the United States continue to increase the average age of the population, Darwin believes that new opportunities will arise. An aging population increases the demand for skilled care and services to assist the elderly who can no longer perform the minimal level of activities required to take care of themselves. Medicare pays 100% of skilled nursing care only after inpatient hospital confinement for 20-days, provides partial coverage from day 21 through 100, and zero coverage beyond.

Competitors are developing products to address the gap in Long-Term Care (LTC) benefits under Medicare, and potential clients have expressed interest. Therefore, Darwin agents and the marketing department are pressuring the actuarial area to develop products to serve this market.

In response, the pricing department has agreed to develop an optional chronic care rider that can be added to current traditional and universal life products. This rider will allow the death benefit to be accelerated to cover LTC benefits at any time after the policy has been in force for ten years. In addition, to make the product more attractive than competitor products, the maximum LTC benefit will be set at 110% of the death benefit.

However, Darwin does not have expertise in this product. The pricing department has indicated that their models show a large variance in outcomes. Pricing has also noted that the change in timing of cash flows compared to the normal death benefit payout may impact investment strategy. From an operational standpoint, Darwin has no experience with claim adjudication for LTC products. Furthermore, the current administrative and valuation systems handle only traditional death benefits.

6.7.3 Capital Management

Darwin does not currently calculate economic capital. Darwin has been working with the consulting firm Consultants R Us (CRS) on capital measurement and management strategies. Under current consideration is 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. Darwin wishes to gauge the risk adjusted return on capital (RAROC) by segment to aid in its business planning. Darwin's goal is to improve its ability to better manage capital and return.

Underlying this goal, CRS advises on three underlying themes:

- Capital Productivity
- Capital Protection
- Capital Adequacy

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, CRS recommended using a risk adjusted return on required capital (RAROC) approach. This approach considers both how much Darwin 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. CRS argues that RAROC addresses the trade-off between capital productivity and capital adequacy. To set a target or requirement for capital that should be held by Darwin 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 Darwin is able to honor its obligations during adverse contingent events.
- Motivating Darwin 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 will be what Darwin requires for ongoing operations and what it must hold to gain the necessary confidence of the marketplace, its policyholders, its investors, and its regulatory supervisors. At the same time, the operations of Darwin, 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.

6.7.4 Cryptocurrency and Fintech

For several years, Darwin has been considering adding cryptocurrency as an asset class within alternative investments. Darwin has also been considering the use of the underlying technology to support operations and business. The rise of fintech insurers and the recent Federal Reserve decision to pursue a proof-of-concept to implement central bank digital currency, already nicknamed Fedcoin, has prompted Darwin to assess how digital currency and blockchain technology will impact the insurance industry.

Gabriela Martinez has tasked Aaliyah Jackson, CRO, and Ken Huang, CIO, to form an exploratory task force with IT and operations. The task force is charged with developing a proposal for implementing blockchain technology in operational areas such as underwriting, claims, investments, products, and sales. Gabriela wants to know what opportunities Darwin should pursue, what the key success and risk factors are, and what the down-side risks are if they remain on the sidelines. In addition, she wants an immediate recommendation whether Darwin should purchase a nominal amount of cryptocurrency in order to gain a working knowledge of blockchain technology.

6.8 Darwin Life Exhibits

EXHIBIT A

Financial Data: Management Accounting Income Statements (in 000s)

Note: Years 2020-2022 are actual results and years 2023-2025 are forecasts.

Total	2020	2021	2022	2023	2024	2025
REVENUES						
Premium - First Year	784,780	911,720	1,077,880	1,289,710	1,594,260	2,090,450
Premium - Renewal	222,890	255,630	293,230	329,160	365,520	401,560
Total Premiums	**1,007,670**	**1,167,350**	**1,371,110**	**1,618,870**	**1,959,780**	**2,492,010**
Net Investment Income	597,270	595,330	606,450	624,430	647,770	685,240
Other income	42,050	51,360	61,150	73,190	85,850	103,940
Total Revenues	**1,646,990**	**1,814,040**	**2,038,710**	**2,316,490**	**2,693,400**	**3,281,190**
BENEFITS AND EXPENSES						
Claims	100,500	129,890	143,730	168,890	198,370	235,170
Surrender and other benefits	601,710	659,910	722,420	726,080	791,210	863,940
Incr in reserves & S/A Transfers	588,460	695,250	835,020	1,052,600	1,320,810	1,776,940
Total Benefits	**1,290,670**	**1,485,050**	**1,701,170**	**1,947,570**	**2,310,390**	**2,876,050**
Field Compensation	83,650	100,920	119,100	138,800	161,100	193,200
Change in DAC	(49,100)	(63,270)	(75,070)	(87,090)	(100,330)	(120,350)
Total Acquisition Costs	**34,550**	**37,650**	**44,030**	**51,710**	**60,770**	**72,850**
Total Administrative Expenses	**69,280**	**77,220**	**84,090**	**91,700**	**99,740**	**107,750**
Total Benefits and Expenses	**1,394,500**	**1,599,920**	**1,829,290**	**2,090,980**	**2,470,900**	**3,056,650**
EBIT	**252,490**	**214,120**	**209,420**	**225,510**	**222,500**	**224,540**
Interest	**18,000**	**18,000**	**18,000**	**18,000**	**18,000**	**7,375**
Tax	**82,100**	**68,600**	**67,000**	**72,600**	**71,600**	**76,000**
Net Income	**152,390**	**127,520**	**124,420**	**134,910**	**132,900**	**141,165**

Variable Annuities	2020	2021	2022	2023	2024	2025
REVENUES						
Premium - First Year	561,000	669,800	812,600	1,000,000	1,280,000	1,750,000
Premium - Renewal	0	0	0	0	0	0
Total Premiums	**561,000**	**669,800**	**812,600**	**1,000,000**	**1,280,000**	**1,750,000**
Net Investment Income	73,700	85,000	98,000	119,000	142,000	175,000
Other income	25,800	33,400	40,600	50,500	61,600	76,500
Total Revenues	**660,500**	**788,200**	**951,200**	**1,169,500**	**1,483,600**	**2,001,500**
BENEFITS AND EXPENSES						
Claims	16,200	28,800	36,000	46,600	59,200	75,100
Surrender and other benefits	114,650	161,100	193,650	228,100	276,450	315,700
Incr in reserves & S/A Transfers	474,250	536,300	649,250	807,400	1,038,000	1,464,500
Total Benefits	**605,100**	**726,200**	**878,900**	**1,082,100**	**1,373,650**	**1,855,300**
Field Compensation	30,200	38,300	46,400	56,100	69,000	90,800
Change in DAC	(13,400)	(20,900)	(24,300)	(28,500)	(36,900)	(52,300)
Total Acquisition Costs	**16,800**	**17,400**	**22,100**	**27,600**	**32,100**	**38,500**
Total Administrative Expenses	**14,300**	**17,400**	**20,200**	**24,100**	**28,200**	**32,800**
Total Benefits and Expenses	**636,200**	**761,000**	**921,200**	**1,133,800**	**1,433,950**	**1,926,600**
EBIT	24,300	27,200	30,000	35,700	49,650	74,900
Interest	**0**	**0**	**0**	**0**	**0**	**0**
Tax	**8,500**	**9,500**	**10,500**	**12,500**	**17,400**	**26,200**
Net Income	**15,800**	**17,700**	**19,500**	**23,200**	**32,250**	**48,700**

Universal Life	2020	2021	2022	2023	2024	2025
REVENUES						
Premium - First Year	58,780	72,420	89,480	106,810	125,360	145,650
Premium - Renewal	47,590	64,730	82,030	96,460	111,020	125,060
Total Premiums	**106,370**	**137,150**	**171,510**	**203,270**	**236,380**	**270,710**
Net Investment Income	110,770	106,530	105,850	109,730	114,170	121,040
Other income	5,850	6,760	8,450	9,490	9,750	11,440
Total Revenues	**222,990**	**250,440**	**285,810**	**322,490**	**360,300**	**403,190**
BENEFITS AND EXPENSES						
Claims	27,300	35,290	33,930	38,090	42,770	47,970
Surrender and other benefits	32,760	32,110	36,270	41,080	45,760	51,740
Increase in reserves	92,310	120,250	152,270	182,600	214,410	246,440
Total Benefits	**152,370**	**187,650**	**222,470**	**261,770**	**302,940**	**346,150**
Field Compensation	21,450	25,220	32,200	38,500	45,100	52,400
Change in DAC	(13,000)	(16,770)	(24,670)	(31,790)	(36,830)	(41,350)
Total Acquisition Costs	**8,450**	**8,450**	**7,530**	**6,710**	**8,270**	**11,050**
Total Administrative Expenses	**13,780**	**14,820**	**15,990**	**16,900**	**17,940**	**18,850**
Total Benefits and Expenses	**174,600**	**210,920**	**245,990**	**285,380**	**329,150**	**376,050**
EBIT	**48,390**	**39,520**	**39,820**	**37,110**	**31,150**	**27,140**
Interest	**0**	**0**	**0**	**0**	**0**	**0**
Tax	**16,900**	**13,800**	**13,900**	**13,000**	**10,900**	**9,500**
Net Income	**31,490**	**25,720**	**25,920**	**24,110**	**20,250**	**17,640**

Traditional Life	2020	2021	2022	2023	2024	2025
REVENUES						
Premium - First Year	34,000	34,000	36,400	38,500	40,200	41,700
Premium - Renewal	54,900	63,100	71,200	80,000	89,300	98,600
Total Premiums	**88,900**	**97,100**	**107,600**	**118,500**	**129,500**	**140,300**
Net Investment Income	51,200	50,500	51,700	53,000	54,500	56,700
Other income	0	0	0	0	0	0
Total Revenues	**140,100**	**147,600**	**159,300**	**171,500**	**184,000**	**197,000**
BENEFITS AND EXPENSES						
Claims	15,800	15,800	17,200	18,800	20,500	22,300
Surrender and other benefits	31,900	29,800	31,200	33,000	34,900	36,800
Increase in reserves	34,400	45,400	51,300	58,300	64,800	71,300
Total Benefits	**82,100**	**91,000**	**99,700**	**110,100**	**120,200**	**130,400**
Field Compensation	18,100	20,500	22,500	25,100	27,500	30,000
Change in DAC	(9,300)	(11,200)	(11,700)	(12,600)	(13,200)	(13,800)
Total Acquisition Costs	**8,800**	**9,300**	**10,800**	**12,500**	**14,300**	**16,200**
Total Administrative Expenses	**9,200**	**10,300**	**10,900**	**11,500**	**12,200**	**12,700**
Total Benefits and Expenses	**100,100**	**110,600**	**121,400**	**134,100**	**146,700**	**159,300**
EBIT	**40,000**	**37,000**	**37,900**	**37,400**	**37,300**	**37,700**
Interest	**0**	**0**	**0**	**0**	**0**	**0**
Tax	**14,000**	**13,000**	**13,300**	**13,100**	**13,100**	**13,200**
Net Income	**26,000**	**24,000**	**24,600**	**24,300**	**24,200**	**24,500**

Term	2020	2021	2022	2023	2024	2025
REVENUES						
Premium - First Year	14,300	17,500	19,400	21,400	22,700	24,100
Premium - Renewal	44,700	52,800	63,000	73,700	84,200	93,900
Total Premiums	**59,000**	**70,300**	**82,400**	**95,100**	**106,900**	**118,000**
Net Investment Income	20,400	20,500	22,000	24,100	26,800	30,100
Other income	0	0	0	0	0	0
Total Revenues	**79,400**	**90,800**	**104,400**	**119,200**	**133,700**	**148,100**
BENEFITS AND EXPENSES						
Claims	22,900	28,600	35,900	44,200	53,000	65,200
Surrender and other benefits	400	500	500	500	500	500
Increase in reserves	10,800	11,100	12,000	13,200	14,600	15,100
Total Benefits	**34,100**	**40,200**	**48,400**	**57,900**	**68,100**	**80,800**
Field Compensation	8,200	10,800	11,700	12,600	12,900	13,100
Change in DAC	(11,200)	(12,300)	(12,600)	(12,600)	(12,000)	(11,500)
Total Acquisition Costs	**(3,000)**	**(1,500)**	**(900)**	**0**	**900**	**1,600**
Total Administrative Expenses	**21,200**	**23,100**	**24,800**	**26,500**	**28,000**	**29,500**
Total Benefits and Expenses	**52,300**	**61,800**	**72,300**	**84,400**	**97,000**	**111,900**
EBIT	**27,100**	**29,000**	**32,100**	**34,800**	**36,700**	**36,200**
Interest	**0**	**0**	**0**	**0**	**0**	**0**
Tax	**9,500**	**10,200**	**11,200**	**12,200**	**12,800**	**12,700**
Net Income	**17,600**	**18,800**	**20,900**	**22,600**	**23,900**	**23,500**

Other	2020	2021	2022	2023	2024	2025
REVENUES						
Premium - First Year	116,700	118,000	120,000	123,000	126,000	129,000
Premium - Renewal	75,700	75,000	77,000	79,000	81,000	84,000
Total Premiums	**192,400**	**193,000**	**197,000**	**202,000**	**207,000**	**213,000**
Net Investment Income	341,200	332,800	328,900	318,600	310,300	302,400
Other income	10,400	11,200	12,100	13,200	14,500	16,000
Total Revenues	**544,000**	**537,000**	**538,000**	**533,800**	**531,800**	**531,400**
BENEFITS AND EXPENSES						
Claims	18,300	21,400	20,700	21,200	22,900	24,600
Surrender and other benefits	422,000	436,400	460,800	423,400	433,600	459,200
Incr in reserves & S/A Transfers	(23,300)	(17,800)	(29,800)	(8,900)	(11,000)	(20,400)
Total Benefits	**417,000**	**440,000**	**451,700**	**435,700**	**445,500**	**463,400**
Field Compensation	5,700	6,100	6,300	6,500	6,600	6,900
Change in DAC	(2,200)	(2,100)	(1,800)	(1,600)	(1,400)	(1,400)
Total Acquisition Costs	**3,500**	**4,000**	**4,500**	**4,900**	**5,200**	**5,500**
Total Administrative Expenses	**10,800**	**11,600**	**12,200**	**12,700**	**13,400**	**13,900**
Total Benefits and Expenses	**431,300**	**455,600**	**468,400**	**453,300**	**464,100**	**482,800**
EBIT	**112,700**	**81,400**	**69,600**	**80,500**	**67,700**	**48,600**
Interest	**0**	**0**	**0**	**0**	**0**	**0**
Tax	**39,400**	**28,500**	**24,400**	**28,200**	**23,700**	**17,000**
Net Income	**73,300**	**52,900**	**45,200**	**52,300**	**44,000**	**31,600**

Corp	2020	2021	2022	2023	2024	2025
Total Revenues	**0**	**0**	**0**	**0**	**0**	**0**
Total Benefits and Expenses	**0**	**0**	**0**	**0**	**0**	**0**
EBIT	**0**	**0**	**0**	**0**	**0**	**0**
Interest	**18,000**	**18,000**	**18,000**	**18,000**	**18,000**	**7,375**
Tax	**(6,200)**	**(6,400)**	**(6,300)**	**(6,400)**	**(6,300)**	**(2,600)**
Net Income	**(11,800)**	**(11,600)**	**(11,700)**	**(11,600)**	**(11,700)**	**(4,775)**

EXHIBIT B
Financial Data: Statutory Balance Sheets (in 000s) and Debt

Note: Years 2020-2022 are actual results and years 2023-2025 are forecasts.

Total	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Cash	1,022,230	1,046,640	1,067,190	1,100,600	1,140,470	1,172,530
Bonds	6,133,380	6,279,840	6,403,140	6,603,600	6,842,820	7,035,180
Mortgages	3,066,690	3,139,920	3,201,570	3,301,800	3,421,410	3,517,590
Subtotal: Cash & Invested Assets	10,222,300	10,466,400	10,671,900	11,006,000	11,404,700	11,725,300
Separate Account Assets	1,878,100	2,128,200	2,515,900	3,057,800	3,777,900	4,872,200
Deferred Tax Asset	0	0	0	0	0	0
Total Assets	**12,100,400**	**12,594,600**	**13,187,800**	**14,063,800**	**15,182,600**	**16,597,500**
Statutory Reserves	11,231,200	11,716,000	12,299,000	13,160,200	14,280,300	15,856,500
Debt	225,000	225,000	225,000	225,000	225,000	75,000
Total Liabilities	**11,456,200**	**11,941,000**	**12,524,000**	**13,385,200**	**14,505,300**	**15,931,500**
Statutory Equity	**644,200**	**653,600**	**663,800**	**678,600**	**677,300**	**666,000**

RBC	338%	333%	324%	312%	306%	287%
Debt Ratio	35%	34%	34%	33%	33%	11%

Variable Annuity	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Cash, Invested and Other Assets	365,100	457,300	459,700	532,900	608,800	687,600
Separate Account Assets	1,878,100	2,128,200	2,515,900	3,057,800	3,777,900	4,872,200
Deferred Tax Asset	0	0	0	0	0	0
Total Assets	**2,243,200**	**2,585,500**	**2,975,600**	**3,590,700**	**4,386,700**	**5,559,800**
Statutory Reserves	2,086,200	2,417,400	2,797,100	3,398,700	4,198,300	5,385,700
Total Liabilities	**2,086,200**	**2,417,400**	**2,797,100**	**3,398,700**	**4,198,300**	**5,385,700**
Statutory Equity	**157,000**	**168,100**	**178,500**	**192,000**	**188,400**	**174,100**

Universal Life	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Cash, Invested and Other Assets	1,929,200	2,001,900	2,102,300	2,237,100	2,406,800	2,617,100
Deferred Tax Asset	0	0	0	0	0	0
Total Assets	**1,929,200**	**2,001,900**	**2,102,300**	**2,237,100**	**2,406,800**	**2,617,100**
Statutory Reserves	1,820,000	1,897,500	2,002,200	2,140,700	2,314,200	2,528,600
Total Liabilities	**1,820,000**	**1,897,500**	**2,002,200**	**2,140,700**	**2,314,200**	**2,528,600**
Statutory Equity	**109,200**	**104,400**	**100,100**	**96,400**	**92,600**	**88,500**

Traditional Life	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Cash, Invested and Other Assets	936,000	966,100	1,005,700	1,050,500	1,101,500	1,158,100
Deferred Tax Asset	0	0	0	0	0	0
Total Assets	**936,000**	**966,100**	**1,005,700**	**1,050,500**	**1,101,500**	**1,158,100**
Statutory Reserves	900,000	928,900	967,000	1,010,100	1,059,100	1,113,500
Total Liabilities	**900,000**	**928,900**	**967,000**	**1,010,100**	**1,059,100**	**1,113,500**
Statutory Equity	**36,000**	**37,200**	**38,700**	**40,400**	**42,400**	**44,600**

Term	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Cash, Invested and Other Assets	442,000	478,800	530,000	598,600	687,600	798,700
Deferred Tax Asset	0	0	0	0	0	0
Total Assets	**442,000**	**478,800**	**530,000**	**598,600**	**687,600**	**798,700**
Statutory Reserves	425,000	460,400	509,600	575,500	661,100	768,000
Total Liabilities	**425,000**	**460,400**	**509,600**	**575,500**	**661,100**	**768,000**
Statutory Equity	**17,000**	**18,400**	**20,400**	**23,100**	**26,500**	**30,700**

Other	2020	2021	2022	2023	2024	2025
Cash, Invested and Other Assets	6,300,000	6,312,300	6,324,200	6,336,900	6,350,000	6,363,800
Deferred Tax Asset	0	0	0	0	0	0
Total Assets	**6,300,000**	**6,312,300**	**6,324,200**	**6,336,900**	**6,350,000**	**6,363,800**
Statutory Reserves	6,000,000	6,011,800	6,023,100	6,035,200	6,047,600	6,060,700
Total Liabilities	**6,000,000**	**6,011,800**	**6,023,100**	**6,035,200**	**6,047,600**	**6,060,700**
Statutory Equity	**300,000**	**300,500**	**301,100**	**301,700**	**302,400**	**303,100**

Corp	2020	2021	2022	2023	2024	2025
Cash, Invested and Other Assets	250,000	250,000	250,000	250,000	250,000	100,000
Deferred Tax Asset	0	0	0	0	0	0
Total Assets	**250,000**	**250,000**	**250,000**	**250,000**	**250,000**	**100,000**
Debt	225,000	225,000	225,000	225,000	225,000	75,000
Total Liabilities	**225,000**	**225,000**	**225,000**	**225,000**	**225,000**	**75,000**
Statutory Equity	**25,000**	**25,000**	**25,000**	**25,000**	**25,000**	**25,000**

Asset Durations (as of Dec 31, 2022)

	Cash	Bonds	Mortgages
Duration	0	10	6
Market to Book Ratio	1	1.08	1.04

Debt Issuance

Issue	Issue Date	Maturity Date	Rate	Face Amount
Senior notes issue	1 Mar 2010	1 Mar 2025	8.50%	150,000
Senior notes issue	15 Jun 2018	15 Jun 2038	7.00%	75,000

EXHIBIT C
Sensitivity Tests

Note: Years 2023-2027 are forecasts.

Term Sensitivities (in 000s)

Baseline	2023	2024	2025	2026	2027
Sales	21,400	22,700	24,100	25,600	27,200
Management Earnings	22,600	23,900	23,500	32,500	33,100
Lapse Rates Up 5%					
Sales	21,400	22,700	24,100	25,600	27,200
Management Earnings	21,569	21,863	20,488	28,538	28,204
Lapse Rates Down 5%					
Sales	21,400	22,700	24,100	25,600	27,200
Management Earnings	23,631	26,040	26,816	37,062	38,980
Sales Up 15%					
Sales	24,610	26,105	27,715	29,440	31,280
Management Earnings	23,114	24,881	24,947	34,414	35,484
Sales Down 15%					
Sales	18,190	19,295	20,485	21,760	23,120
Management Earnings	22,086	22,919	22,053	30,586	30,716

Variable Annuity Sensitivities (in 000s)

Baseline	2023	2024	2025	2026	2027
Sales	1,000,000	1,280,000	1,750,000	2,100,000	2,520,000
Management Earnings	23,200	32,250	48,700	58,400	70,100
Statutory Capital	192,000	188,400	174,100	178,300	181,900
Market Immediate Shock Up 15%					
Sales	1,000,000	1,280,000	1,750,000	2,100,000	2,520,000
Management Earnings	27,100	36,200	52,800	62,600	74,400
Statutory Capital	232,000	230,400	218,200	224,600	230,500
Market Immediate Shock Down 15%					
Sales	1,000,000	1,280,000	1,750,000	2,100,000	2,520,000
Management Earnings	19,300	28,300	44,600	54,200	65,800
Statutory Capital	112,000	104,400	85,900	85,700	84,700
Sales Up 15%					
Sales	1,150,000	1,472,000	2,012,500	2,415,000	2,898,000
Management Earnings	23,800	34,300	52,600	64,800	79,500
Statutory Capital	190,500	184,980	168,055	169,105	168,925
Sales Down 15%					
Sales	850,000	1,088,000	1,487,500	1,785,000	2,142,000
Management Earnings	22,600	30,200	44,800	52,000	60,700
Statutory Capital	193,500	191,820	180,145	187,495	194,875

EXHIBIT D
Financial Data: Inforce Statistics

Note: Years 2020-2022 are actual results and years 2023-2025 are forecasts.

Total	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Death Benefit Inforce (in 000's)	140,197,000	150,663,100	161,769,400	171,796,300	186,797,000	201,583,000
Policy Contract Count	303,125	332,459	364,656	400,000	420,400	441,844
Variable Annuity						
Death Benefit Inforce (in 000's)	11,590,800	13,023,400	14,374,600	15,796,300	17,297,000	18,055,000
Policy Contract Count	30,053	33,058	36,364	40,000	42,000	44,100
Universal Life						
Death Benefit Inforce (in 000's)	51,830,200	54,421,700	57,142,800	60,000,000	64,800,000	69,984,000
Policy Contract Count	32,652	34,938	37,383	40,000	42,400	44,944
Traditional Life						
Death Benefit Inforce (in 000's)	23,145,000	25,713,000	28,571,000	30,000,000	32,400,000	34,344,000
Policy Contract Count	75,131	82,645	90,909	100,000	105,000	110,250
Term						
Death Benefit Inforce (in 000's)	48,075,000	51,921,000	56,074,000	60,000,000	66,000,000	72,600,000
Policy Contract Count	150,263	165,289	181,818	200,000	210,000	220,500
Other						
Death Benefit Inforce (in 000's)	5,556,000	5,584,000	5,607,000	6,000,000	6,300,000	6,600,000
Policy Contract Count	15,026	16,529	18,182	20,000	21,000	22,050

EXHIBIT E
Insurance Industry Financial Information

	Beta	Volatility	Reinvestment Rate	Forward Price-to-Earnings Ratio (1)	Price-to-Book Ratio	Return on Equity	Dividend Yield
ABC Life	1.08	15%	20%	8.5	1.3	9%	5.5%
XYZ Life	1.12	18%	30%	10.3	1.1	8%	3.7%
Yolo Life	1.25	25%	50%	15.0	1.9	12%	2.5%
Industry Average	**1.15**	**19%**	**33%**	**11.3**	**1.4**	**10%**	**3.9%**

(1) Earnings equals Net Income

7 Snappy Life Insurance Company

7.1 Company Profile

Snappy Life Insurance Company is not affiliated with or owned by RPPC. It is a company that might be considered an acquisition target or a competitor for one or more of the RPPC companies.

Snappy Life is a small life insurer domiciled in Wilmington, Delaware. It has been in existence since 2016. Snappy was founded by Frank Veltro, a former general sales agent who learned the business at Epoch Life, a large insurance company. Veltro felt stymied by the conservative underwriting and slow processing of applications at Epoch.

Veltro recruited several like-minded agents and amassed enough funding to capitalize Snappy Life at the required regulatory level. Veltro serves as CEO and President of Snappy. His executive team comes primarily from the original founders of the company, all of whom have a sales or marketing background. In addition, a Chief Information Officer (CIO) was hired from a tech start-up company in California in 2019.

The company is owned by its founders and is not publicly traded. It offered securities through a private placement offering in early 2021 after finalizing its 2020 earnings statements, but no shares ended up being sold.

7.1.1 Products and Services

Snappy has a limited product line, consisting of level term and whole life insurance. Its sales are made exclusively through the internet or by call-in from a phone number displayed in television ads or on the website. Strong advertising with a quirky approach attracts customers.

The company's motto is "Make the sale, every time!" While the company founders had originally worked as agents selling face-to-face, they have now embraced the new technologies and the way it allows them to leverage the time of their associates.

The sales staff is divided into separate internet and phone teams. Snappy encourages healthy competition between the two groups, based on total sales, "close" ratios, and percentage of sales in force after one year. Both teams consist of licensed agents who are compensated on a salaried basis, with additional bonuses available based on team results. They aggressively pursue any leads that come in.

Sales have been robust, enabling the firm to grow steadily since inception of the company.

Snappy uses an internal key performance indicator (KPI), "profitability percentage," which is calculated as: (Present value of gross premiums less present value of benefits and present value of

expenses) divided by gross premiums. The CFO, Corrie Caille, has set the requirement that all products maintain 19% profitability percentage or the product will no longer be sold.

7.1.2 Competitive Advantages

Snappy's processes are extremely automated, allowing it to offer products at low cost. In the three years since the CIO has been on board, the company's systems have been modernized by the tech staff. Underwriting for new sales is based on a simplified medical questionnaire. Artificial intelligence software evaluates all applications for acceptable risks and produces a final "Reject" or "Approve" decision. However, based on the company motto, the software is programmed with a bias toward accepting most risks as long as the precision rate remains over 50%.

7.2 Risk Profile

Pricing

Snappy's priority is to maintain competitive pricing compared to other providers of simplified insurance products. The marketing department has considerable influence with the actuarial and pricing group. Frank Veltro is very much involved with approving final pricing as new product series are rolled out.

The actuarial department produces basic experience studies and profitability analyses. The marketing department produces studies of competitor rates quarterly.

Risk Framework

Snappy does not have a separate corporate risk department, and it does not do any formal risk reporting. Veltro expects his direct reports to inform him of any issues in their departments.

Veltro believes that risk creates opportunities that Snappy can exploit. When risks are identified in a product, his standard response is that "we can sell our way out of this problem". If sales remain strong, he believes that profits will follow.

The company culture instilled by Veltro is to move forward aggressively. The result is that corporate managers are reluctant to point out obstacles.

Capital

Snappy reports earnings on a statutory basis, as required to the state regulators. It measures Risk-Based Capital as required and does not do any further economic capital modeling. The company has maintained its RBC ratio at approximately 250% over the past five years.

As part of the annual planning process, projected earnings and capital figures are developed for the next two years.

7.3 Strategic Issues

Snappy has benefitted from its strong sales and has been fortunate to write business that is profitable overall. However, Caille, the CFO, has recently identified challenges facing the company:

- Snappy's relatively small capital base is limiting future growth. If sales reach the targets set by Veltro, the RBC ratio is likely to drop significantly.

- New competitors are entering the marketplace, with a business model similar to Snappy's. If Snappy continues to compete solely on price, it is likely to start seeing reduced profitability.

- Models for customer data and servicing are state-of-the-art, but the tech area does not have expertise in producing robust financial projections. Snappy does not have the appropriate workforce in place to move the company forward.

- Data breaches have affected several insurance companies over the past two years, particularly those that are heavily dependent on internet sales. The CFO is not sure whether Snappy is sufficiently protected from cyber-risk.

7.4 Financial Exhibits

7.4.1 Financial Statements for Snappy for the past four years are shown below.

Summary of Operations (in 000s)

	2022	2021	2020	2019
Premiums	11,141	6,267	8,356	4,700
Net investment income	1,765	1,165	769	507
Total Revenues	**12,906**	**7,432**	**9,125**	**5,207**
Death Benefits	1,847	1,478	1,182	946
Surrender Benefits	567	510	459	413
Increase in Reserves	4,561	3,013	2,158	1,539
Total Benefits	**6,975**	**5,001**	**3,799**	**2,898**
Sales Expenses	623	555	263	263
General Insurance Expenses	1,110	1,063	681	681
Insurance Taxes, Licenses, and Fees	417	334	267	214
Total Expenses	**2,150**	**1,952**	**1,211**	**1,158**
Net Gain from Operations before FIT	**3,781**	**479**	**4,115**	**1,151**
Federal Income Tax	**945**	**120**	**1,029**	**288**
Net Income	**2,836**	**359**	**3,086**	**863**

Recent earnings were run through the Beneish model and produced an M-score of -1.57.

Balance Sheet (in 000s)

	2022	2021	2020	2019
Assets				
Bonds	29,187	24,213	20,894	18,489
Cash	1,410	1,692	1,949	2,180
Furniture and Equipment	126	130	117	105
Total Assets	**30,723**	**26,036**	**22,960**	**20,774**
Liabilities				
Statutory Reserves	**28,447**	**23,886**	**20,873**	**18,715**
Surplus	**2,276**	**2,150**	**2,087**	**2,059**

7.4.2 Tables 1-3 contain relevant metrics for Snappy Life's life insurance business for 2022 regarding costs and sales that can be directly attributed to a specific product.

Table 1: Term Life (TL) – 2023 Sales – Projected Values

	2023	2024	2025	2026	2027
Premiums	3,736,000	3,303,000	2,872,000	2,298,000	2,011,000
Death Benefits	624,000	765,000	1,006,000	1,147,000	1,640,000
Commissions	2,238,000	126,000	114,000	100,000	87,000
Acquisition Expenses	1,234,000	-	-	-	-
Maintenance Expenses	336,000	192,000	144,000	124,000	103,000
2022 Employee Count	150				
2022 Sales – policy count	2,435				
2022 Sales – face amount	245,132,500				

Table 2: Whole Life (WL) – 2023 Sales – Projected Values

	2023	2024	2025	2026	2027
Premiums	8,570,000	7,345,000	6,121,000	4,958,000	4,224,000
Death Benefits	1,382,000	2,032,000	2,710,000	3,116,000	3,490,000
Commissions	4,338,000	406,000	378,000	326,000	299,000
Acquisition Expenses	2,653,000	-	-	-	-
Maintenance Expenses	633,000	511,000	376,000	317,000	288,000
2022 Employee Count	325				
2022 Sales – policy count	3,275				
2022 Sales – face amount	421,622,500				

Table 3: Single-Premium Whole Life (SPWL) – 2023 Sales – Projected Values

	2023	2024	2025	2026	2027
Premiums	7,875,000	-	-	-	-
Death Benefits	514,000	555,000	685,000	720,000	799,000
Commissions	1,172,000	49,000	45,000	40,000	36,000
Acquisition Expenses	813,000	-	-	-	-
Maintenance Expenses	144,000	116,000	97,000	75,000	61,000
2022 Employee Count	90				
2022 Sales – policy count	2,636				
2022 Sales – face amount	145,565,000				

8 Seaplane Expeditions and Aviation Company (SEA)

8.1 Seaplane Industry Profile

A seaplane is an aircraft designed to take off and land on water. Seaplanes are often used for tourism purposes in coastal or island areas. They also fly commuter routes within those same areas or as transportation in more remote areas.

There has been rising demand for the seaplane services, coincident with rising disposable income in both developed and emerging economies. Steady technological innovations have made the aircraft both safer and more comfortable.

There remain significant risks associated with seaplane operations. In spring 2019, three crashes occurred in Alaska within the space of one week, killing nine people and injuring twelve. Scrutiny from the U.S. National Transportation Safety Board has been increased. Risk factors include:

- Lack of uniform safety standards among seaplane operators and manufacturers
- Disruption to operations due to weather conditions
- Pressure from company management to operate under marginal weather conditions
- Logistical problems with handling passengers and cargo on water

The market for seaplane operators has been improving internationally as more countries become aware of their capabilities and can afford to establish operations. In the U.S. and Canadian markets there is increased demand for seaplane trips but also an increasing amount of competition.

Operators can successfully distinguish themselves in the marketplace based on the following factors:

- Impeccable safety record
- Convenience to passengers, evidenced by frequency of flights and diversity of routes
- High-quality customer service

8.2 SEA Company Profile

Seaplane Expeditions and Aviation (SEA) is a private company, not affiliated with or owned by RPPC. It is a company that might be considered an acquisition target or a strategic partner for one or more of the RPPC companies.

SEA started out as a one-man seaplane operation flying charters in Victoria, British Columbia, Canada in the 1960s. Bob Otterwein soon grew his business enough that he needed more pilots and more planes. By the 1970s, SEA had added a scheduled service flying customers between Victoria and Seattle. Since then, SEA has expanded its operations to include destinations in Alaska, Vancouver, and the many islands of the Pacific Northwest. In the 1980s, SEA acquired Gully Air to add more seaplanes to its fleet. Bob's experience with seaplane maintenance also led to a highly-respected seaplane repair and restoration operation. Bob Otterwein died in 2005, passing the

ownership of SEA to his son Bill who now oversees operations, but does not personally pilot planes as his father had continued to do throughout most of his life.

SEA offers both regularly scheduled service to various destinations as well as charter flights and sightseeing trips. In addition to this tourist and commuter service, SEA offers cargo service to the many small islands of the Pacific Northwest. SEA has a highly skilled seaplane maintenance operation which specializes in restoring and rebuilding seaplanes. SEA also runs a seaplane pilot school to train the next generation of seaplane pilots.

SEA has 25 seaplanes in its fleet and 50 seaplane pilots on staff. It employs an additional 125 at the peak of seaplane tourist season.

SEA's goal is to provide memorable seaplane experiences to its travelers at reasonable prices. SEA also prides itself on its seaplane repair and restoration operation, which is the highest quality operation around. SEA has had no fatal accidents in its six-decade history and is committed to having an impeccable safety record.

8.3 Risk Profile

Reputation Risk

A poor customer reputation could severely impact SEA's competitiveness. A significant portion of SEA's business is tourist flights, either chartered or via scheduled flights to tourist destinations. Positive customer reviews, word-of-mouth referrals, and frequent flyers are important factors in staying ahead of the competition. SEA offers discounts to flyers who purchase multiple fares at once that can then be used as needed throughout the year or transferred to friends or associates to give them the SEA experience. SEA also offers considerable flexibility in its reservation process to keep customers from being forced to use another service in case of last-minute changes to plans.

Regulation Risk

Seaplanes have to abide by both aviation and maritime regulations. Recently, as residential areas have expanded near the waterways that seaplanes operate in, noise complaints regarding seaplane takeoff and landing have resulted in some cities looking to restrict seaplane operations. Currently, no such restriction has impacted SEA's major operating locations. SEA regularly advocates on behalf of other seaplane owners when potential noise ordinances are being considered and continually gives back in the communities it operates in to foster goodwill with residents.

Operational Risk

Seaplanes require far more maintenance than regular aircraft because of the corrosive nature of seawater. SEA has a large maintenance operation which prides itself in its ability to maintain and restore aircraft. The skill of the maintenance team and the capacity in SEA's maintenance hangars allows SEA to efficiently conduct inspections and perform preventative maintenance to keep its fleet

in the air. If SEA were to lose many of its skilled maintenance employees and be unable to replace them with new employees of like caliber, maintenance problems could become more frequent. This could, in turn, lead to aircraft being out of service for longer periods of time, leading to flight cancellations and unhappy customers.

SEA gets many of its new pilots from its own seaplane pilot training school. Commercial seaplane pilots often make flying seaplanes a career, rather than using seaplanes as a stepping stone to flying bigger planes. Many other countries get their seaplane pilots from Canada and the U.S. so there is competition to retain the best seaplane pilots.

Seaplane crashes can be especially damaging to the seaplane business. SEA's fleet consists of mainly two types of seaplanes: the DHC-3 de Havilland Otter and the DHC-2 de Havilland Beaver. Any crash that isn't initially ruled as caused by weather conditions will draw scrutiny to the type of aircraft and whether there is any defect in the plane itself. There is potential that the U.S. National Transportation Safety Board or the Transportation Safety Board of Canada could ground all seaplanes of a specific model should that model be involved in a crash where a plane defect is the suspected cause. In October 2022, the NTSB urgently recommended that the FAA ground DHC-3 Otter planes pending inspections after one crashed off Whidbey Island in Puget Sound killing 10 people on Sept. 4, 2022. The NTSB had determined that a locking ring was missing that caused the actuator to come apart and caused the plane to become unstable and nose-dive into the water. As soon as SEA was made aware of the cause and the concern by the NTSB, it grounded its Otter fleet until visual inspections could be completed on each plane to ensure the locking ring was properly installed. SEA was able to quickly do the inspections and was fortunate to avoid a material break in service. Should either the DHC-2 Beaver or DHC-3 Otter be subject to grounding for an extended period of time, the lost revenue from cancelled flights could impact SEA's viability.

Political Risk

Operating in the Pacific Northwest, SEA constantly flies customers and cargo across the U.S.-Canadian border. If the relationship between the U.S. and Canada were to become strained, it could lead to cancellation of certain services or more cumbersome processes for those customers flying across the border.

8.4 Operations – Competitive Advantages and Limitations

Maintenance Process

All SEA planes are subject to frequent inspection and preventative maintenance in accordance with the schedule designed by the maintenance crew. This schedule has led to minimal aircraft downtime and few surprise maintenance problems. Maintenance also has an electronic log that tracks each aircraft and allows the maintenance staff to note trends in maintenance issues among the same model as well as any aircraft that are experiencing more problems than others of the same model. Aircraft identified to have continued difficulties receive special scrutiny during the slower winter

season and are given more extensive repairs or rebuilds. This proactive step allows SEA to have the aircraft it needs to meet demand during the busy summer season.

Scheduled Service Process

When it comes to scheduled service, not only is SEA competing with other seaplanes to retain customers, it is also competing with ferries and traditional land aircraft. The scenic experience of flying by seaplane combined with the added advantage of better direct transport between certain locations makes flying by seaplane desirable as long as fares aren't considerably higher than the lowest cost alternative and the reservation process isn't too burdensome. Therefore, SEA has continually worked to streamline the customer experience for its scheduled service customers. From online booking, to flexible fares that allow for last minute changes, to last minute reservations at affordable prices, SEA wants to ensure flexibility and ease of use in its reservation process. The booking system has been praised as easy to use by SEA's customers. The employees at check-in understand that many of the customers flying SEA may have never flown on a seaplane before and are experts at guiding first-time flyers through the process. SEA monitors its frequent flyer and multi-fare purchasers' flight bookings to identify any downward trends and reach out with discounts or customer service surveys so as to try to identify service-related issues early and not lose frequent customers.

Charter Process

While the scheduled service customer experience has become more streamlined, chartered service still requires contacting the charter department to reserve a flight. Charters require 30-days' notice of cancellation to receive a full refund. SEA therefore recommends purchasing travel insurance for its more expensive charter flights. However, SEA doesn't have a preferred travel insurer that it can recommend to its customers. SEA has only limited information regarding charters on its website and at its seaplane terminals. Check-in employees are often not as knowledgeable about charter destinations/scenic stops as they are about the scheduled service destinations and will refer itinerary questions back to the charter department. Interest in SEA's charters has been declining of late.

Weather/Safety Management Process

SEA must monitor the weather constantly to ensure appropriate and safe flying conditions for its aircraft. Due to low-altitude flying and take-offs and landings in water, weather conditions must be constantly monitored. SEA tracks weather data from weather stations throughout the Pacific Northwest and along all its flight paths to relay important weather information to its pilots. In addition, pilots are trained to report adverse weather conditions in a consistent and timely manner so that information is shared among all pilots and SEA safety management personnel. SEA is then able to quickly react to changing conditions and delay/cancel flights if needed for the safety of SEA customers and crew. Additionally, pilots, dock crew, and maintenance employees attend regular safety training and are committed to checking that equipment and personnel are all working properly to ensure the safety of SEA's customers and cargo.

Aircraft Restoration Process

In addition to maintaining its own fleet, SEA repairs and rebuilds seaplanes for customers from all over the world. Its renowned service attracts customers who are willing to wait for quality. This provides a steady pipeline of work while allowing the maintenance personnel to take the time needed to rebuild and restore planes to their best condition. The dual work of rebuilding customer planes and maintaining its own fleet keeps the maintenance personnel's skill level high so that they are able to both provide high quality service to repairing customer planes and prevent maintenance problems from occurring in SEA's own fleet.

8.5 Strategic Initiatives

The Pacific Northwest's seaplane industry is highly competitive with many companies offering charters, scheduled flights, and/or cargo service. SEA believes the biggest growth potential for seaplane services will occur in international markets. Asian countries, especially China, have shown great interest in seaplane services recently. China has a large number of waterways in areas without the needed infrastructure for traditional land-based plane service. India and the European Union have conducted seaplane service viability studies. However, SEA would need a large infusion of capital and a partner or consultant with Asian or European business expertise to launch new services internationally.

SEA is focused on setting up partnerships with larger airline companies to provide regional service in the Pacific Northwest. Larger carriers find it expensive to offer consistent service to many of the local destinations SEA services. Their customers from across the U.S. and Canada who need to travel to these smaller destinations will be able to book much more flexible schedules if the larger carriers can transfer them to SEA in Vancouver or Seattle. SEA has set up some agreements with carriers but is looking to solidify a stronger partnership with a larger carrier or carriers in the near future.

8.6 SEA Financials

Net Operating Statement (in CAD 000s)

	2022	2021	2020
Passenger revenues	7,235	7,024	6,820
Freight, charters, aircraft sales, and other	3,685	3,722	3,760
Total operating revenues	**10,920**	**10,746**	**10,580**
Operating expenses:			
Salaries, wages and benefits	3,058	3,009	2,962
Aircraft fuel	2,457	2,128	2,021
Aircraft maintenance, material, repairs, and other	3,362	3,336	3,312
Depreciation and amortization	393	387	381
Other operating expense	1,194	1,159	1,125
Total operating expenses	**10,463**	**10,019**	**9,801**
Operating income	**457**	**728**	**778**
Interest expense, net	(123)	(126)	(129)
Income (loss) before income taxes	334	602	649
Income tax benefit (expense)	(117)	(211)	(227)
Net income (loss)	**217**	**391**	**422**

Balance Sheet (in CAD 000s)

	2022	2021	2020
Cash and Short-Term Investments	1,179	1,161	1,143
Accounts Receivable	890	876	862
Fuel, Parts, and Other Inventory	1,600	1,574	1,550
Total Current Assets	**3,669**	**3,611**	**3,555**
Property, Equipment, and Other Assets	2,883	2,837	2,793
Total Assets	**6,552**	**6,448**	**6,348**
Current Liabilities	2,532	2,458	2,387
Long Term Debt	1,365	1,400	1,436
Total Liabilities	**3,897**	**3,858**	**3,823**
Capital	1,000	976	951
Retained Earnings	1,654	1,614	1,574
Owner Equity	**2,655**	**2,589**	**2,525**

9 Star InsurTech

9.1 InsurTech Industry Profile

InsurTechs are founded on technological innovations that are created and implemented to increase the efficiency and effectiveness of the insurance industry. InsurTechs power the digitalization of the creation, distribution, analytics, and administration of the insurance business.

The insurance business is ripe for disruption by these InsurTechs. Insurance companies have large component based systems and processes, which make it difficult to access and synthesize data. It is challenging to make processes and capabilities more consumer-friendly. InsurTechs, with their digital innovations, on the other hand, are changing consumer behavior and expectations with pricing and servicing advantages.

InsurTech marketplaces are proliferating the most. InsurTechs that focus on making it easier for the consumer to navigate insurance are gaining market share. More insurance companies are taking note and forming strategic partnerships with these InsurTechs.

There are significant risks associated with InsurTech Marketplaces:

(1) Revenue and margins are low or non-existent, and costs are high, such that startups may run unprofitably for several years
(2) Operational risks include
    a. the performance of the technological innovations
    b. connectivity with the insurance companies on the marketplace
    c. cyber risk
(3) Strategic risks include
    a. attracting consumers to these new ways of purchasing insurance
    b. competition from new entrants and from insurers choosing to develop the same processes in-house or to acquire InsurTechs to obtain access to those processes
(4) Regulatory and compliance risks

9.2 SIT Company Profile

Star InsurTech (SIT) is a private company, started in 2017. It is a company that might be considered an acquisition target or a strategic partner for insurance companies.

Nathan Grow is the founder and CEO of SIT, with a strong background in venture capital. To reach the middle market, he focused on simplifying the sales process and the product. SIT started with only term insurance, offering $100,000 to $5 million of coverage, with limited issue ages and risk classes. SIT mainly uses accelerated underwriting. SIT relies heavily on data analytics for target marketing to consumers likely to be heathier and likely to purchase life insurance.

Steven Chau is the Technology Chief and co-founder, with a strong background in insurance technology. Analysts have commented positively on SIT's technology stack as one of the most robust in the industry, allowing SIT to build easy-to-maintain, scalable, digital applications, geared towards the issuance and servicing of these term policies.

Karen Stat is SIT's actuary. She works with SIT's insurer partners.

Life Insurance

First Insurance Company (FIC), SIT's first partner, targets the middle market. In 2020, SIT added a highly rated insurer partner with a strong brand name, Big Brand Insurance Company, which extended SIT's reach onto the online platforms of wirehouses and brokerage firms. SIT gets a marketing and administrative fee of 90% of the first year premium and 10% of the renewal premiums plus 100% of the policy fee.

In July 2021, SIT set up a sales team to help customers make the purchase decision. Artificial intelligence (AI) powers the chatbot that starts the conversation with the customer. The chatbot recognizes when the customer needs its help or needs live assistance from the sales team. This launch coincided with the loss of certain data used in accelerated underwriting and the rising concerns around COVID 19. Since then, the placement rate has increased from 40% to 70%.

Property & Casualty Insurance

In 2021, SIT partnered with a well-known P&C company, Reputable Insurance Company (RIC), to offer pay-by-the-mile auto insurance. With many consumers still working remotely or in a hybrid model, this form of insurance could be a disruptive force in the industry. SIT requires its app to be downloaded to the customer's phone. The app uses telematics to provide higher discounts by tracking driver's behavior like smooth driving, areas frequented, mileage, etc. The initial quote is based on a discount given RIC's data analytics and SIT's telematics requirement. Discounts are then applied monthly based on SIT's telematics data. Renewal quotes are based on more recent customer telematics data. Application and issuance processes are all digital. SIT uses a premium scale that gives higher discounts for risk avoidance technologies, such as having collision avoidance, blind spot assist, adaptive cruise control, and service alerts. SIT uses a conversational chatbot, powered by artificial intelligence, to help consumers with tailored purchase recommendations. SIT also relies heavily on data analytics for target marketing to consumers more likely to prefer the pay-by-the-mile model and to be a safer risk.

SIT handles the administration for the policies issued on SIT's platform, all done digitally. Emergency and roadside assistance is provided. Claims processing is completely digital thru SIT's platform, using the same conversational chatbot as at purchase. SIT has agreements with preferred vendors who receive access to customers needing service and their situational data in real time. The vendors provide preferred queuing and response, including instant quotes, and lower costs. In 70% of the cases, the claims process takes only minutes for a payment to be made.

RIC pays SIT 20% of every premium which covers acquisition, administration and claim processing costs. In addition, RIC and SIT have a 20% profit sharing agreement.

Current State
In 2022, SIT set up its wholly digital insurance company (New Co). SIT is looking to increase its margins on its sales by taking on product exposure through its direct sales and/or thru reinsuring at least 50% of its sales of its partners' products. SIT's finance staff is putting together a valuation analysis of New Co's potential. SIT then plans to work with venture capitalists to increase its valuation for future capital needs. SIT capitalized New Co with $50mn.

In 2021, SIT brought in $2.5 million of first year term premium, a 50% growth from 2020, mostly coming from the second half of 2021. In 2022, SIT is on track to hit $7 million first year premium. SIT brought in $1 million of auto insurance premium in 2021, its first year in the business. Auto insurance sales have jumped to be on track to hit $5 million in 2022.

9.3 Risk Profile

Karen Stat, now the Chief Actuary and Risk Officer for New Co, is pulling together a dashboard to monitor the risk exposures of SIT and New Co. It will also be used to educate and report risk status to senior management and the Board.

Business and Strategic Risk
Very few InsurTech marketplaces are even marginally profitable. Online term insurance sales represent less than 3% of the industry total. 25% of auto insurance sales are made online. Both are highly commoditized products. Marketing and administrative fees are often not enough to cover the high acquisition costs of obtaining consumer data and high IT costs of advancing digital innovations.

New entrants are coming into this space. Large insurers are entering the field by acquiring an InsurTech, and providing it with the needed funding and the needed corporate functional support.

More InsurTechs are looking to increase their profits by setting up their own insurance or reinsurance companies. Capital funding needs increase dramatically.

Since SIT partnered with Big Brand and built a sales team to facilitate online sales, its life insurance growth has increased significantly. SIT has seen much faster success in the auto insurance business. While its expenses still outweigh its revenue, SIT has taken the strategic route of setting up New Co to leverage its technological innovations and to increase its margin through direct sales or through reinsurance from its partners.

Operational Risk
InsurTech marketplaces need to integrate the products of their insurance partners onto their platforms. This is challenging since insurance administration platforms are mostly component based and not easily connected to the InsurTech's tech stack. Interfaces can be used but need to be built almost from scratch for many insurers.

Alternatively, the InsurTechs can issue and administer the product wholly on their digitalized platforms, which allows for better customization of processes to make them friendlier and more holistic for customers. There still needs to be data transfer with the insurer for the exposure it is taking on. Generally, this data transfer is done manually through a secure portal, largely due to the lack of technology capability of the insurance partner.

SIT believes there is less operational risk if there are fewer hand-offs with its insurance partners given the legacy technology of the traditional insurance industry. SIT believes that this approach will ultimately produce a better and lower cost product for the consumer. From the start, SIT has controlled the application, underwriting, issuance, and administration of the product.

SIT is looking to improve the performance of its underwriting and fraud detection capabilities. Regulatory concerns have required removal of some of the data used in accelerated underwriting for life. SIT had been using a third-party predictive analytics model supported by a reinsurer and the analytics show lower performance with the loss of that data. SIT uses machine learning to identify fraud potential, using consumer retail, social media, and insurance data. However, an audit has indicated that there are at least another 5% of fraud cases that are being missed.

SIT has made its auto-insurance offering, a highly differentiated product, and heavily digitalized. SIT has a unique value proposition that is heavily based on data analytics for propensity to buy and propensity for safe driving. It relies on connected devices with customers and partners. Expense risk is high with technology innovations. Premiums have to reach $50 million to offset the initial cost.

Inflation has hit the loss ratio of auto insurance. There is a lag in the pricing of unexpected costs, such as when inflation jumps up very quickly. Supply chain disruption for some auto models and model years are showing up as well, which is hurting margin and customer service.

SIT has just set up its wholly digital insurance company. SIT believes that the digitalization of finance and actuarial functions allows it to optimize the functions and reduce what it views as overhead costs.

Cyber risk is high in a heavily digitalized InsurTech with high dependence on consumer data. SIT has a Chief Information Security Officer (CISO), responsible for managing this risk. SIT has built a cybersecurity framework following industry best practices and meeting regulatory requirements.

Regulatory and Compliance Risk

The increasing growth in the number of InsurTechs and their non-traditional approach to business has attracted interest from regulators. SIT has hired MaryAnn Seer as Chief Compliance Officer in 2021 to develop its regulatory and compliance framework.

Product Risks

More InsurTechs seek to share or own the margins within insurance products to increase their earnings. This comes with the product mortality, morbidity, or property risks and financial risks

such as interest rate risks. With very low capital levels, InsurTechs need to understand and manage the volatility that can come from these risks. Liquidity risks exist when capitalization is low.

9.4 Strategic Initiatives

SIT has three areas of strategic focus.

(1) Increasing sales
(2) Increasing margin
(3) Increasing the performance of its digital assets

Increasing Sales

SIT is increasing the maximum term insurance face amount to $10 million to reach a broader demographic in term insurance. SIT will use accelerated underwriting with additional digital data such as electronic health records. SIT's face amount for using accelerated underwriting is above industry average of $3 – 4 million.

SIT is partnering with a manufacturer who is building risk mitigator devices into its cars. The partnership would allow SIT to install telematics devices into the cars and allow car dealerships to offer the initial insurance as part of the car purchase. SIT and its partners will be able to collect data on customers and their behavior that could lead to more individualized marketing and pricing as well as help in preventing fraud. It would expand SITs distribution platform.

Increasing Margin

SIT needs to increase margins and profitability. Karen Stat, New Co's Chief Actuary and Risk Officer, is working with SIT's insurance partners to increase margins on the products they sell on SIT's platform. She is also building NewCo's products and a product risk management framework.

Increasing Performance of Digital Assets

(1) SIT is working with Big Brand to determine if the addition of electronic health records and increased customer disclosure (using machine learning to reformat the digital application) will offset the performance gap due to the loss of certain data for accelerated underwriting. SIT will need to partner with Big Brand and/or its reinsurer for credible experience data.
(2) With SIT's use of connected devices for auto insurance, it is considering similar technology on the life side, to enable health monitoring and rewarding increasing health. SIT is also working to use more geographical data, social media, and other external situational data to enhance its machine learning program to detect fraud.
(3) On a longer term basis, SIT thinks that blockchain technology to access health care information will be the optimal solution for health care itself and for insurance processes like underwriting, fraud detection and claims reporting. However, addressing the challenges of interoperability of systems across the health care system to exchange data is still in early stages, which must happen as a first step. For auto insurance, blockchain can

help cut down on fraud, by serving as a cross industry, distributed registry of external and customer data, such as police accident reports, authentication of ownership, claims history, etc. Similar challenges exist before this technology is plausible. Steven Chau, Technology Chief, is keeping close tabs on developments. SIT will want to be among the first to tap into this technology.

(4) In digitalizing the functions within New Co, SIT has set up the interoperability of these various functions. It is investigating the use of blockchain technology to further increase efficiency and speed and lower costs in the back office functions.