



# Case Study

**FALL 2018/SPRING 2019**  
Foundations of CFE Exam  
EXAM CFE FD

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The following T-Table should be used as needed for examination questions:

Degrees of Freedom	Confidence Interval (Two-Tail t-distribution)										
	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.

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# **RPPC Dynasty Corporation: A BOX FULL OF GROWTH**

## **1 RPPC Dynasty Corporation**

### **RPPC Dynasty Corporation**

To: Strategic Review Team  
Re: Enclosed Packet

Strategic Review Team,

Enclosed in the following packet is an overview of RPPC Dynasty and its subsidiaries. The corporate team has gathered financial and strategic information that should provide a good starting point for your more detailed site reviews in the coming weeks. Each subsidiary has also provided communications deemed of strategic importance, regarding either current strategies or possible future endeavors.

Do not hesitate to ask the corporate team or key subsidiary contacts for further information as you conduct your review. They have committed to making responding to your questions a priority during your onsite visits.

Thank you for your efforts,  
Gilroy Clyde

## **1.1 RPPC Dynasty Corporation History**

RPPC Dynasty was established in 2000 with head offices in Bermuda by four founding partners. The corporation's name is derived from the four founders' surnames - Ruiz, Putin, Patel and Chan. They had ambitious goals to grow the corporation to become its namesake – 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 holds a diverse group of businesses.

The business roots began with the coffee shop; owned by the Ruiz family since 1990.

In 2000, Mr. Ruiz and Mrs. Chan formed a partnership. The Chan family had owned and operated a small business since 1995. Soon thereafter, two other entrepreneurs were brought in to expand the brand.

In 2001, with the guidance of Mr. Patel, a Bank group was formed. The expansion required a significant amount of capital and, coupled with the vision of future global expansion across diverse businesses, led to RPPC's decision to incorporate.

In 2003, shares equal to 30% ownership of the coffee business were offered to the public to bring in additional capital.

In 2005, due to the influence of the mariner background of Mrs. Putin, RPPC acquired 80% ownership of a P&C Insurer. This P&C group is a leader in personal and commercial marine insurance.

In 2009, the financial crisis presented an opportunity to obtain a life insurance group to expand the wealth management capabilities of the bank operations.

In 2010, RPPC took a controlling interest in an airline to appeal to the growing global mobility of the group's clientele. The airline has been put through a restructuring initiative to better fit into the group's vision. The airline had previously taken a majority interest in a tire company to create a synergy with its airline business.

## **1.2 RPPC Dynasty Corporation Overview**

### **1.2.1 Mission**

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

*Our family is your family, come experience our difference that is so familiar to you!!*

### 1.2.2 Vision

To provide our customers the comfort of a family friend when they are away from home. We are your family away from home!!

### 1.2.3 Executive Team

CEO – Mr. Gilroy Clyde (since inception)

CFO – Mr. Houben Huang (5 yrs)

CRO – Mrs. Julia Reich (recently appointed)

COO – Miss Jane Mulroney (since incorporation; serves as default CRO)

### 1.2.4 Quick Strategy Overview by Business Line

Airline *New customer focus; market expansion into international routes*

Tire *Niche; challenged; needs investment or will be sold*

Coffee *Market leader; cash cow; growth focused*

P&C *Cash cow; niche (Marine (UK), Pet (Canada), Liability, Commercial, Catastrophic); looking to expand to the US*

Bank *Customer-oriented wealth management focus; growth by M&A integration*

Insurance *Long-term interest risk (VA, LCOI); regulatory changes*

### 1.2.5 Governance

RPPC has the following Executive Committees:

1. Operations Committee
2. Audit Committee
3. Finance Committee
4. Risk Committee
5. Compliance & Legal Committee

### 1.2.6 Cost of Capital – RPPC and Peer Industries

	RPPC Dynasty	Omega Airline	Tasty Coffee	Reliable Insurance	Trendy Clothiers	Too Big Bank
Expected Cost of Debt	8%	10%	7%	6%	8%	3%
Expected Cost of Equity	14%	12%	13%	11%	14%	12%
Debt-to-Value Ratio	40%	65%	50%	40%	75%	60%

### 1.2.7 Tax Rate for Conglomerate

RPPC's current tax rate is 35%.

## 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.* In order to achieve prudent and measured risk-taking that aligns with our business strategy, we are guided by a risk management framework that is embedded in our daily business activities and planning process.

#### *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 Priorities*

- Broaden and strengthen risk capabilities, including enhancing our stress testing functions to deliver better insights to both our risk and business groups. We believe strongly in assessing risk through a variety of lenses, not simply looking at past performance.

#### *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, including newly acquired businesses:

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



### *Recent Achievements*

Achieved the roll-out of our five-step message on our value-based approach to enterprise risk management:

- Understand and manage
- Protect our reputation
- Diversify; limit tail risk
- 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 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. Their mandate is to pursue suitable business opportunities within the Risk Appetite, and to adopt strategies and practices to optimize return on capital employed. RPPC officers must act within delegated risk-taking authority and must have effective processes and controls in place to enable the businesses to operate within their delegated risk authorities and limits.
- II. The second line of defense is the office of the CRO, along with Enterprise Risk Officers (EROs) and Subject Matter Experts (SMEs) as assigned for specific risk categories or sub categories. These provide oversight, challenge and independent assessment of risk.
- III. The third line of defense is the Corporate Audit Division, which, in conducting the internal audit process, will provide assessment as to the effectiveness of internal controls including control, risk management and governance processes that support the Enterprise, its objectives and the Board of Directors' discharge of its responsibilities.

The CEO is responsible for the business operating groups (the first line of defense). The second line is made up risk officers (EROs and SMEs) who work collaboratively with the business operating groups and are engaged through corporate policies that support ERM & Portfolio Management (EPM). These risk officers are governed by the CRO and the risk management committee. The second line has a direct line to the Board and therefore meets "in camera" with the Board. The third line, the Audit officers, also has an "in camera" with the Board.

RPCC Board				
<b>Board Risk Committee</b>	<b>CEO</b>			<b>Board Audit Committee</b>
<i>Risk Management Committee</i>	<i>Operating Groups</i>	<i>ERM &amp; Portfolio Management</i>	<i>EROs and SMEs</i>	<i>Corporate Audit Group</i>
<ul style="list-style-type: none"> <li>• Capital Management</li> <li>• Reputational Risk</li> <li>• Operational Risk</li> </ul>	1st line of defense	2nd line of defense	2nd line of defense	3rd line of defense

**1.3.4 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) within the protocols of the Corporate policies that support EPM. The key facilitator of this engagement process is the Risk Champion. The role of the Risk Champion is critical to ensuring that there is buy-in to the process among both business managers and risk officers, and ultimately that enterprise risk management (ERM) is successful. This engagement is central to a value-based ERM approach as it promotes understanding and alignment with our risk appetite leading to sound decision making.

In support of an overarching goal of continual improvement, the company has two human resource corporate policies that improve risk management:

- (1) Two-way rotation policy (TWRP): allows employees to rotate between risk roles and business management roles;
- (2) Continued professional development policy (CPDP): obligates employees to attend training on risk management principles and techniques at least once every two years.

### 1.3.5 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. For any risk, a risk-based approach is used to calculate its reported Economic Capital. Economic Capital is used to measure and aggregate all risks.

### 1.3.6 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:

- Not take risks that are opaque, not well understood or that cannot be well managed.
- Identify and quantify low probability tail events.
- 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.
- Protect and enhance the RPPC brand by exceeding expectations in the products and services that we deliver to our clients.
- Promote focused differentiation on products and services that leverage RPPC's core competencies to build client trust and to surpass expectations.
- 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 CEO of each business operating group must identify and report KPI that indicate that this requirement is being met.
- 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 KRI that indicate for the aggregate of all risk underwritten, that if the business group were to suffer one 1-in-100 year tail event that the capital thereafter would still be able to withstand another 1-in-100 year tail event (essentially twice the 1-in-100 year event's loss). This is referred to as redundant capital and is critical to RPPC's market discipline because client relationship management and sustainability is promoted over price leadership.
- Through the identification of KPI and KRI, the business management indicates whether the risk being underwritten is within the group's risk appetite. The KPI and KRI are recommended by the business CEO and are approved by a Risk Appetite Consensus Meeting that includes the business executives, CRO, the appropriate risk and business Subject Matter Experts (SME's).

When reporting business plans and KPI, the financial projection must be based on a complete business cycle inclusive of severe market conditions rather than simply best estimate assumptions.

When reporting KRI, scenario results and any stress testing must be demonstrated in the context of the business and directly related to its business driver. Such KRI value-based results must be reported, well-understood, and actionable at all levels of management within each business group. Scenarios and stress tests are based on transparent deterministic scenarios recommended by the Business and approved by the Risk team.

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

### **1.3.7 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. Pricing and product development risk is the risk of financial and/or reputational loss as a result of the unexpected performance of a product or where the costs incurred are greater than those assumed in the pricing of the product.

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 also requires the establishment of a product pricing committee that meets periodically to examine the profitability of current and future sales as compared to the product pricing guidelines.

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. In this phase, all key stakeholders must be identified and interviewed, and any key issues would be identified and further information may be required before proceeding with development.

**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 aspects of the 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 to be implemented, or already in place, that are 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. This approval is gained through initial feasibility study, the product and risk assessments, and any subsequent discussion and analysis.

**Documentation** – An official record must be kept of the feasibility study, product and risk assessments, and the approval and sign-off forms. These could be reviewed by the internal audit function, external auditors, or regulators as evidence of appropriate due diligence and compliance with internal procedures, as well as providing the rationale for the assessments and decision making.

### *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 which are needed to complete the required risk assessment and risk analysis. In this way, the Risk Champion serves the role of arbitrator for finding the appropriate forum to resolve areas of dispute between the business and the risk review. The purpose of fostering dialogue and collaboration is to build and maintain the buy-in of all stakeholders throughout the RRAP. The Risk Champion is the key communication bridge between the first line and the second line of defense in the risk framework.

### **1.3.8 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, strong risk management and good business management relies on identifying "what-ifs". Stress testing involves quantifying and communicating the impact of specified scenarios on the financial results of a given business operation.

### **1.3.9 Risk Management Models**

There are several models used by risk management at the conglomerate level due to RPPC's diverse industries. Information from these models is shared with the appropriate businesses:

- Inflation model – The inflation model is a robust model due to its many needs. Not only is general inflation information needed for the financial products, but inflation of specific commodities must be modeled as well. The inflation rates for fuel, general consumer goods, and specific raw materials are modeled across the countries in which the specific businesses are located.
- Interest Rate model – This model is especially important for the financial businesses.
- Foreign Currency model – The foreign exchange rate has a large impact, not only on the bank and insurance operations, but also on the consumer goods sold across international borders, such as coffee.

- Economic model – More general than the interest rate and foreign currency models, this model is used to predict demand for RPPC’s diverse consumer goods and services as well as predicting the state of the market for the financial products.
- Liquidity model – All of the diverse industries could experience liquidity crunches of some form or another, although it is not expected that they would all be 100% correlated. This model is intended to give RPPC an idea of liquidity needs under various scenarios, both economy-wide and business-specific.
- 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.

### **1.3.10 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 preferred, although not 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 Background**

Blue Jay Air was originally incorporated in the United States in the early 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 over the last 40 years. The company has transformed from a focused high-end regional company to an expanded price-competitive commercial carrier, covering the full geographical region of United States as well as major cities in Canada.

During the past 30 years, the airline industry has gone through several significant business cycles, with each earning cycle trending lower than the preceding cycle. This resulted in significant pressure on the business margins and profits. In addition, with the deregulation in the airline industry during the Reagan administration, the number of commercial carriers has exploded exponentially, thereby materially decreasing the consumer prices and reducing the service level of the airline industry. 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 have 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. RPPC taking a controlling interest was viewed positively by shareholders and investors. In 2010, the Wall Street Journal quoted that "RPPC's action is a step forward for Blue Jay Air". John Feather, who has over 20 years of airline experience, is viewed as a "turnaround" CEO by the industry. Thus, RPPC has high expectations of John's new strategic vision.

### **2.2 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.



John 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 finding could stem from the fact that the company was originally a commercial passenger carrier catering to business travelers and so its relationship with the business community is deep-rooted. In fact, the expansion to leisure travel over the last 15 years did not 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 improve the company's profitability over time.

Under RPPC's influence, 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 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.

## **2.3 Risk Management**

As a highly-leveraged capital-intensive company, Blue Jay Air has significant exposure to interest rate volatility. 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.

Since RPPC Dynasty took a controlling interest, Blue Jay Air has established a risk management committee headed by a well-known risk manager, Jim Peters. Jim was formerly the Chief Risk Officer (CRO) of a major Canadian bank and he was recruited by John based on the recommendation of Howard Creston, former CRO of RPPC Dynasty. Jim was a hedge fund manager before he became the CRO of the bank and has extensive knowledge in implementing risk management strategies. Over the last two years, Jim has put together a dynamically hedged portfolio that handles the commodity exposures that the company has been facing as well as interest rate risks.

In addition, Jim 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 Elaine Saunders who was a former Treasurer of a New York-based investment bank. Elaine has a significant network with venture capitalists, pension fund managers, and private equity fund managers. Elaine has also worked in the investor relations area of a major US 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, she has implemented a liquidity model and a credit model to monitor the company's ongoing liquidity and credit needs.

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.

## **2.4 Operations**

### **2.4.1 Planes**

The current fleet of planes is starting to age and 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 will require capital injection or debt guarantees from RPPC Dynasty as Blue Jay Air alone cannot bear these costs without jeopardizing 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 again will require additional funding and support from RPPC Dynasty.

(See exhibit 4 for more information.)

## **2.4.2 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 entail a progressive bonus point system as flight frequency increases over a short period of time. 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 partnering the loyalty card with Big Ben Bank's bank credit and debit cards to introduce a combined credit card with an "enhanced air points" reward system. This partnership should further increase the value of the loyalty program.

A modification to the existing application form is required to accommodate the expansion of this new enhanced loyalty program. The current application form is an online form which is an electronic version of a paper form. The paper form is currently five pages long with 30 different questions related to the customers' personal information and preferences. The customer data is crucial for current and future marketing analysis. However, the current completion rate is much lower than the target rate due to the extensive information requested.

## **2.4.3 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 also automatically link up with the loyalty system and credit cards for ease of use of loyalty points. It 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.

## **2.4.4 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, free internet access and amenities such as gourmet French 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.

#### **2.4.5 Baggage and Baggage System**

Blue Jay Air will incorporate a charge for each piece of checked luggage, consistent with their competitors' pricing. Since most business travelers do not check-in 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.

#### **2.4.6 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 the company will establish direct business relationships with its business client base. 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 Miscellaneous**

#### **2.5.1 Financial Statements**

Detailed financial statements are shown in Section 2.6, Exhibits 1 to 3. (These statements exclude any impact from Blue Jay Tire on Blue Jay Air's overall financial position.)

#### **2.5.2 Strategic Information: Fleet Upgrade Proposals**

Research into leasing vs. buying the new international planes, as well as costs of upgrading the current fleet, is shown in Section 2.6, Exhibit 4.

#### **2.5.3 Strategic Models used by Blue Jay Air**

##### *Black-Scholes Hedging Model*

Jim Peters, 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 the interest rate risks. He uses Black-Scholes models in this hedging work.

*Loyalty Program Model*

To properly account for the potential costs of the new loyalty program, a statistical regression model has been created to show the correlation between frequency of travel and passenger revenue vs. current loyalty program benefits. From there, the enhanced business loyalty program results have been extrapolated.

## 2.6 Blue Jay Air Exhibits

**Exhibit 1**  
**Blue Jay Air Corporation**  
**NON-CONSOLIDATED STATEMENTS OF OPERATIONS**  
**(US Dollars in millions)**

Fiscal Year Ended	Dec 31, 2017	Dec 31, 2016	Dec 31, 2015
Operating revenues:			
Passenger	1,544	1,235	1,074
Other	291	242	207
<b>Total revenues</b>	<b>1,835</b>	<b>1,477</b>	<b>1,281</b>
Operating expenses:			
Aircraft fuel	574	462	401
Wages, salaries and benefits	359	289	251
Capacity purchase agreements	172	138	120
Airport and navigation fees	158	127	110
Depreciation, amortization & impairment	96	77	67
Aircraft maintenance	110	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	27	23
Other	19	15	13
<b>Total operating expenses</b>	<b>1,684</b>	<b>1,356</b>	<b>1,176</b>
<b>Net Operating income</b>	<b>150</b>	<b>121</b>	<b>105</b>
Non-operating income (expenses)			
Foreign exchange gain(loss)	15	10	(29)
Interest income	5	5	5
Interest expense	(44)	(36)	(31)
Interest capitalized	2	1	(5)
Net financing expense relating to employee benefits	(2)	(2)	(15)
Loss on financial instruments recorded at fair value	(3)	(7)	(33)
Other	(1)	(2)	(19)
<b>Total non-operating expense</b>	<b>(28)</b>	<b>(31)</b>	<b>(127)</b>
<b>Income (loss) before income taxes</b>	<b>122</b>	<b>90</b>	<b>(22)</b>
Income taxes	(43)	(32)	8
<b>Net income (loss)</b>	<b>79</b>	<b>59</b>	<b>(14)</b>

**EXHIBIT 2**  
**Blue Jay Air Corporation**  
**NON-CONSOLIDATED STATEMENT OF FINANCIAL POSITION**  
**(US Dollars in millions)**

Fiscal Year Ended	Dec 31, 2017	Dec 31, 2016	Dec 31, 2015
<b>ASSETS</b>			
Current:			
Cash and Cash equivalents	150	140	136
Short-term investments	210	182	83
Total cash & Short-term investments	360	322	219
Restricted cash	15	15	15
Accounts receivable	200	160	127
Aircraft fuel inventory	91	63	48
Spare parts and supplies inventory	120	80	33
Prepaid expenses & other current assets	150	100	70
<b>Total current assets</b>	<b>576</b>	<b>418</b>	<b>293</b>
Property and equipment	545	509	474
Intangible assets	21	21	21
Goodwill	31	31	31
Deposit and other assets	9	7	1
<b>Total assets</b>	<b>1,542</b>	<b>1,308</b>	<b>1,039</b>
<b>LIABILITIES</b>			
Current:			
Account payable & accrued liabilities	150	107	70
Advance ticket sales	310	250	181
Current portion of long-term debt & finance leases	110	80	61
<b>Total current liabilities</b>	<b>570</b>	<b>437</b>	<b>312</b>
Long-term debt and finance leases	470	450	320
Pension & other benefit liabilities	545	556	580
Maintenance provisions	60	55	60
Other long-term liabilities	50	48	43
<b>Total liabilities</b>	<b>1,695</b>	<b>1,546</b>	<b>1,315</b>
<b>EQUITY</b>			
Shareholders' equity			
Share capital	90	90	90
Contributed surplus	30	25	45
Deficit	(273)	(352)	(411)
<b>Total shareholders' equity</b>	<b>(153)</b>	<b>(238)</b>	<b>(276)</b>
<b>Total liabilities &amp; equity</b>	<b>1,542</b>	<b>1,308</b>	<b>1,039</b>

**EXHIBIT 3**  
**Blue Jay Air Corporation**  
**NON-CONSOLIDATED STATEMENT OF CASH FLOW**  
**(US Dollars in millions)**

<b>Fiscal Year Ended</b>	<b>Dec 31, 2017</b>	<b>Dec 31, 2016</b>	<b>Dec 31, 2015</b>
Cash Flows from (used for)			
Operating:			
<b>Net income (loss)</b>	<b>79</b>	<b>59</b>	<b>(14)</b>
<b>Adjustments to reconcile to net cash from operations:</b>			
Adjust for non-cash items:			
Depreciation, amortization & impairment	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	(11)	(24)	24
Change in maintenance provisions	5	(5)	5
Other	(50)	(30)	(20)
<b>Net cash flow from operating activities</b>	<b>95</b>	<b>77</b>	<b>5</b>
<b>Financing</b>			
Proceeds from borrowings	150	100	125
Reduction of long-term debt obligations	(63)	64	(104)
Reduction of finance lease obligations & Distributions related to aircraft special purpose leasing entities	(35)	(10)	(74)
Contributed Surplus	6	(20)	35
<b>Net cash flows used in financing activities</b>	<b>58</b>	<b>134</b>	<b>(18)</b>
<b>Investing</b>			
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)	(4)	(3)	7
Other	2	(1)	0
<b>Net cash flows used in investing activities</b>	<b>(162)</b>	<b>(214)</b>	<b>(33)</b>
<b>Decrease in cash &amp; cash equivalents</b>	<b>(10)</b>	<b>(4)</b>	<b>(46)</b>
Cash & cash equivalents, beginning of year	155	151	105
Cash & cash equivalents, end of year	165	155	151



**EXHIBIT 4**  
**Fleet Upgrade Proposals**

**E4.1 Lease Proposal for International Plane Fleet**

Lease term:	5 years
Initial Five-year Lease Expenditure:	\$500M
Additional Annual Expenses beyond those included in Lease Expenditure:	\$60M
Annual Expected Revenue from New Route (First 5 Years):	\$270M

**E4.2 Purchase Proposal for International Plane Fleet**

Initial Purchase Price:	\$1.75B
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

**E4.3 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%

## **3 Blue Jay Tire Co**

### **3.1 Background**

#### **3.1.1 Early History**

The Durable Tire Corporation (also referred to as Durable) has been operating in Canada since 1926. 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 2003, 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.

#### **3.1.2 Under Blue Jay Air since 2004**

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 2004, 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 2009, having successfully met and surpassed the 5-year plan objectives set out in 2001, 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 seven years from the purchase date of every tire. Since inception, this tire warranty program has been well received.

BJT-USA surpassed its sale targets each and every year from 2009-2017. BJT-USA, despite its size, achieved a 3<sup>rd</sup> place market position in tire sales for compact cars and small SUV vehicles in the

southern U.S.A. By 2011 BJT dominated the earnings of the Blue Jay Air group. In early 2017, BJT accounted for 20% of the revenue and an astounding 43% of the profit of the Airline group. BJT management was heralded by the executive team, the board and its shareholders as the “star” of the Airline group.

### **3.1.3 Financials**

Detailed 5-year financial statements are shown in Section 3.4, Exhibits 1 to 3.

## **3.2 Risk Factors**

The following risk factor excerpts are taken from the 2017 Annual Report:

### **3.2.1 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 has typically been able to pass on those increased costs to their 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 just pay contractual penalties to the new car manufacturers and pass on the full cost increases.

### 3.2.2 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:

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

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.

### 3.2.3 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 2019. 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.

### **3.2.4 Legal Risk**

The possibility of class-action lawsuits exists, particularly in the US. 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.

### **3.2.5 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.

### **3.2.6 Insurance Risk**

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

### **3.2.7 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.

### **3.2.8 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 experienced increased sales during the financial crisis (2008 – 2010). It is 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. BJT experienced market share growth from 5% to 8% during the financial crisis. Economic risk for BJT is considered medium. However, with recent volatility in gasoline prices, it is difficult to anticipate whether such trend will continue.

### **3.2.9 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.

<b>Media channel</b>	<b>Positive/negative ratio</b>
Blog	1.8
Internet Forum	2.0
Newspaper	2.3
Online newspaper	2.2
Associated Press (AP) Newswire	3.7
All media combined	2.2

If the outlier of 3.7 corresponding to the AP Newswire is omitted, then the average positive/negative ratio is 2.1 with a standard deviation of 0.2. Pro-BJT information is generally about twice as persuasive as con-BJT messages. The ratio has grown from 1.8 to 2.2 since BJT began monitoring its brand. This is held to be a sign of BJT's growing reputation in its chosen market. Reputational risk is considered to be low.

### **3.2.10 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. BJT is exposed to future changes in this agreement. During the financial crisis and again in the recent presidential election, U.S. interest lobby groups demanded stronger nationalist policies. The current administration's negative view of NAFTA could lead to NAFTA being revisited.

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.

### **3.2.11 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 Recall**

### **Recent Tire Recall Issue**

Below are the headline news article and a series of emails uncovered by the investigative journalist that led to the recent tire recall.

**Blue Jay Tire quality or quantity, you decide  
by Jennifer Truth**

Smallville, Arizona (Associated Press – August 2<sup>nd</sup> 2017): The Blue Jay Tire Co (BJT) reported in May 2017 that a tire defect which caused a single car accident was an isolated incident. Bradley Johnson, 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 are the highest quality on the road”.

The tire involved on that day in May 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.

In July, this reporter uncovered a number of email records related to RU42WD tires in BJT’s manufacturing process.

In an email dated Aug 8<sup>th</sup> 2013, the BJT (Canada) head engineer, Paul Gosling indicated reservations with the speed of the production line resulting in uneven rubber density to a BJT (USA) executive, Jack Tavares. The follow-up responses indicate that some corrective action was taken to redress the situation. When contacted, the BJT (USA) head engineer, Chris Carpenter, at the time reported to this paper: “The production process always ran within its design limits. But we did notice tire density variations. We never did test the possible impact of low density tires on automobiles travelling at speed. Instead we relied on the fact that the tire thread wear tests were always within the tolerances commonly used by all tire companies at the time”. Chris Carpenter now works for a rival firm.

BJT (USA) refused to comment when contacted about these internal memos and the comments of Mr. Carpenter.

*Below are the series of emails that were uncovered by AP journalists:*

From: Paul Gosling  
To: Jack Tavares  
Date: August 8, 2013  
Subject: Sticky valves and rubber density on tires

Jack,  
After visiting BJT-USA plant, I do not feel that enough Quality Assurance is in place. In general, I think production is too fast to match demand and not enough checks are being made. Specifically, I have noticed two items: sticky valves on model RU42WR and uneven rubber density on RU42WD. I recommend that the line managers monitor these issues more closely and tighten the allowed defects – even though this may slow production – so as to correct these issues. Although the valve is mostly a

nuisance, the density is more of a safety issue. However, to be clear, the low density areas are still within prescribed density limits – there are just some noticeable variations within the tires.

I will keep you posted.

Paul Gosling  
Head Engineer  
Blue Jay Tire (Canada)

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From: Jack Tavares  
To: Paul Gosling  
Date: August 12, 2013  
Subject: RE: Sticky valves and rubber density on tires

Paul,  
Good catch – I will follow up with Chris regarding both RU42WR and RU42WD.  
Hope you enjoyed your visit.

Jack Tavares  
Chief Risk Officer  
Blue Jay Tire (USA)

---

From: Chris Carpenter  
To: Jack Tavares  
Date: September 9, 2013  
Subject: Tire production

Jack,  
This is to summarize our calls over the past month.  
I think we have both issues solved: as I mentioned on the phone, the sticky values on RU42WR were easily fixed by increasing the lubricant on the silicon machine. RU42WD required more effort and took longer. We discovered a small inconsistency on the centrifuge console. My staff recalibrated it and we have eliminated the density issue. We also increased our spec inspections from 1-in-200 to 1-in-20 until we were confident the fix took.

We are back up to regular production levels again. We are actually considering increasing the product speed.

Thanks again,  
Chris

Chris Carpenter  
Head Engineer  
Blue Jay Tire (USA)



### 3.4 Blue Jay Tire Exhibits

**EXHIBIT 1**  
**Blue Jay Tire Corporation**  
**NON-CONSOLIDATED STATEMENTS OF OPERATIONS**  
**(US Dollars in millions)**

<b>FISCAL YEAR ending 12/31/YYYY</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>
<b>Total Gross Sales</b>	<b>317</b>	<b>296</b>	<b>277</b>	<b>259</b>	<b>242</b>	<b>230</b>
Cost of Sales (1)						
Cost of Raw Materials	(16)	(15)	(14)	(13)	(12)	(12)
Production Costs (2)	(32)	(30)	(28)	(26)	(24)	(23)
Depreciation & Amortization	(20)	(20)	(20)	(20)	(20)	(5)
Shipping Costs	(7)	(6)	(5)	(4)	(3)	(3)
Other	(4)	(5)	(6)	(7)	(8)	(4)
<b>Total Costs of Sales</b>	<b>(79)</b>	<b>(76)</b>	<b>(73)</b>	<b>(70)</b>	<b>(67)</b>	<b>(46)</b>
<b>Net Revenue</b>	<b>239</b>	<b>221</b>	<b>204</b>	<b>189</b>	<b>175</b>	<b>184</b>
<b>Operating Expenses</b>						
Research Development	19	21	22	23	24	25
Selling General & Administrative (3)	51	47	43	40	37	35
Non-Recurring (4)	62	70	66	23	27	17
Foreign Exchange Gain(Loss)	11	(6)	(8)	15	20	14
Other (5)	60	49	50	80	27	10
<b>Total Operating Expenses</b>	<b>203</b>	<b>180</b>	<b>173</b>	<b>181</b>	<b>135</b>	<b>101</b>
<b>Operating Income or Loss</b>	<b>36</b>	<b>41</b>	<b>32</b>	<b>8</b>	<b>40</b>	<b>83</b>
<b>Income from Other Revenue and Continuing Operations</b>						
Other Revenue – Warranty program	79	74	69	65	61	58
Other Revenue – Book Sales	13	10	9	8	7	5
Tire Replacement Expenses	(40)	(37)	(35)	(32)	(30)	(29)
<b>Total Other Income/Expenses Net (6)</b>	<b>53</b>	<b>47</b>	<b>44</b>	<b>40</b>	<b>37</b>	<b>34</b>
Earnings Before Interest & Taxes	88	88	75	48	77	116

Interest Expenses	32	32	28	28	24	18
Income Before Taxes	56	56	47	20	53	99
Income Taxes	11	11	9	4	11	20
<b>Net Income from Continuing Ops</b>	<b>45</b>	<b>45</b>	<b>38</b>	<b>16</b>	<b>42</b>	<b>79</b>

**Notes:**

- (1) Includes cost of material & production with overhead
- (2) Includes salaries & overheads 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 guide books

**EXHIBIT 2**  
**Blue Jay Tire Corporation**  
**NON-CONSOLIDATED STATEMENT OF FINANCIAL POSITION**  
**(US Dollars in millions)**

<b>FISCAL YEAR ending 12/31/YYYY</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>
<b>ASSETS</b>						
<b>Current Assets</b>						
Cash and Cash Equivalents	74	68	63	57	52	49
Short Term Investments	113	82	80	84	89	111
Receivables	21	10	9	9	8	3
Inventory	61	60	53	58	48	37
<b>Total Current Assets</b>	<b>269</b>	<b>220</b>	<b>205</b>	<b>207</b>	<b>198</b>	<b>201</b>
Long Term Investments	1,249	1,250	1,100	1,109	1,004	940
Property Plant and Equipment	100	120	140	160	180	50
Accumulated Amortization	-	20	40	-	-	-
Intangible Assets	25	25	25	25	25	5
Other Assets	122	64	68	42	33	53
<b>TOTAL ASSETS</b>	<b>1,765</b>	<b>1,699</b>	<b>1,578</b>	<b>1,543</b>	<b>1,439</b>	<b>1,248</b>
<b>LIABILITIES and EQUITY</b>						
<b>Current Liabilities</b>						
Accounts payable	6	4	4	4	2	2
Short/Current Term Debt	6	6	5	5	5	-
Other Current Liabilities	4	2	4	3	3	2
<b>Total Current Liabilities</b>	<b>15</b>	<b>13</b>	<b>13</b>	<b>11</b>	<b>10</b>	<b>3</b>
Long Term Debt	542	534	457	465	380	250
Other Liabilities	45	34	35	32	30	18
<b>TOTAL LIABILITIES</b>	<b>603</b>	<b>581</b>	<b>505</b>	<b>508</b>	<b>420</b>	<b>271</b>
<b>Equity</b>						
Retained Earnings	1,112	1,067	1,023	985	969	927
Capital	50	50	50	50	50	50
<b>TOTAL EQUITY</b>	<b>1,162</b>	<b>1,117</b>	<b>1,073</b>	<b>1,035</b>	<b>1,019</b>	<b>977</b>
<b>TOTAL LIABILITIES and EQUITY</b>	<b>1,765</b>	<b>1,699</b>	<b>1,578</b>	<b>1,543</b>	<b>1,439</b>	<b>1,248</b>

**EXHIBIT 3**  
**Blue Jay Tire Corporation**  
**NON-CONSOLIDATED STATEMENT OF CASH FLOW**  
**(US Dollars in millions)**

<b>FISCAL YEAR ending 12/31/YYYY</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>
<b>Net Income</b>	<b>45</b>	<b>45</b>	<b>38</b>	<b>16</b>	<b>42</b>	<b>79</b>
<b>Operating Activities, Cash Flows Provided By or Used In</b>						
Depreciation	20	20	20	20	20	5
Amortization of deferred expenses	20	20	20	0	0	0
Adjustments To Net Income:						
Changes In Accounts Receivables	(11)	(1)	(1)	(1)	(4)	(1)
Changes In Liabilities/Account Payables	2	(0)	1	1	1	(4)
Changes In Inventories	(1)	(7)	4	(9)	(11)	3
Changes In Other Operating Activities	0	0	(60)	0	0	0
<b>Total Cash Flow From Operating Activities</b>	<b>75</b>	<b>77</b>	<b>22</b>	<b>27</b>	<b>48</b>	<b>83</b>
<b>Investing Activities, Cash Flows Provided By or Used In</b>						
Capital Expenditures	0	0	0	0	(170)	(10)
Investments	(32)	(1)	3	6	22	(91)
Foreign exchange gain(loss)	0	0	0	0	0	(2)
Other Cash flows from Investing Activities	(56)	(146)	(17)	(114)	(44)	0
<b>Total Cash Flow From Investing Activities</b>	<b>(88)</b>	<b>(147)</b>	<b>(14)</b>	<b>(109)</b>	<b>(192)</b>	<b>(103)</b>
<b>Financing Activities, Cash Flows Provided By or Used In</b>						
Dividends Paid	0	0	0	0	0	0
Sale Purchase of Stock	0	0	0	0	0	0
Net Borrowings	7	79	(8)	85	135	22
Other Cash Flows from Financing Activities	13	(3)	5	2	14	5
<b>Total Cash Flow From Financing Activities</b>	<b>20</b>	<b>76</b>	<b>(3)</b>	<b>87</b>	<b>148</b>	<b>26</b>
Cash & cash equivalents, beginning of year	68	63	57	52	49	42
Cash & cash equivalents, end of year	74	68	63	57	52	49
<b>Change In Cash and Cash Equivalents</b>	<b>6</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>7</b>

## **4 Frenz Corporation**

### **4.1 Background**

Frenz Corporation (referred to as “Frenz”) is a subsidiary of RPPC Dynasty, with RPPC holding a 70% controlling interest and minority shareholders owning the remaining interests. 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. Its main competitors in the coffee houses market include Starbucks, McDonald’s, Douwe Egberts, Delta Cafés, Genovese Coffee, and Markus Coffee. Its household brand’s main competitors include Nescafé, Folgers, Maxwell House, Jacobs, Douwe Egberts, and Starbucks. 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.

#### **4.1.1 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 our objective of being the most recognizable coffee brand in the world.

#### **4.1.2 Board of Directors**

Frenz’s Board consists of 8 members. Three board members are Chief Executive Officers or Board Chairmen in leading public companies in Belgium, two are Board members of RPPC Dynasty, and the remaining Board members are executive officers of Frenz. More information on committee structure is included in Section 4.3, Exhibit 1.

In recent years RPPC, the holding company of Frenz, has adopted a global company risk management mandate in order to ensure consistent and unified risk management policies, strategies and processes among the conglomerate’s group of companies. In conjunction with the new mandate, RPPC recently hired a Global Chief Risk Officer to oversee implementation. In response to the new risk management

strategy, Frenz's Board hired an experienced Chief Risk Officer, Robert Kaplan, to develop the risk management strategies for Frenz and to ensure that these strategies fit in RPPC's global risk management mandate. Robert Kaplan's responsibilities include proper integration of risk management strategies and policies with the global strategies and policies, smooth and controlled implementation of these strategies, and cultivation of an acceptable risk management culture for Frenz.

The new global risk mandate has caused disagreement about which board committee should oversee Kaplan's work. Some believe the Audit Committee's role should be expanded to include it. Other board members argue that the new mandate involves significant strategic changes and belongs under the Executive Committee. A few think the Related Party and Conduct Review Committee would be best since the mandate includes significant related-party transactions. The board has requested that Robert Kaplan consult with the Global CRO and provide a recommendation.

#### **4.1.3 Marketing Strategies**

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'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.

Frenz is also exploring 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.

#### **4.1.4 Risk Profiles**

Frenz faces significant supply-chain risks, such as commodity price risks and shipping costs, and demand risks, such as significant competitive pressures and change in consumer markets. It also faces operational risks, litigation and reputational risks, and other market risks, including foreign currency exchange risk, equity security prices, and interest rate risk. Each of these risks is described in detail in Section 4.3, Exhibit 2.

#### **4.1.5 Financial Statements**

Detailed financial statements are shown in Section 4.3, Exhibits 3 and 4.

## **4.2 Growth**

Growth is never easy, as the following examples of external and internal growth pains illustrate.

### **4.2.1 External Challenges**

During the financial crisis in 2008, Frenz suffered significant losses due to reduced market demand and significant investment losses. Some Board members were unhappy with the geographical market concentration, which exacerbated Frenz's losses. The Marketing Vice President, Anthony Pirot, is being empowered to implement the recent marketing strategic goals set by the Board. Anthony's first priority is to expand into the fast-growing Asian market. He 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.

### **4.2.2 Internal Challenges**

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 conglomerate mandated threshold.

### **4.2.3 Growth Strategies**

Anthony 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, that 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. However, through market research Frenz has determined that its customers often cannot distinguish between the premier super-premium coffee bean, *Costa Rica Finca Palmilera*, and its cousin the *Vietombia Finca Palmilera*, whose popularity is not as great, but whose flavor is considered comparable to *Costa Rica Finca Palmilera*.

The Asian country of Vietombia is the largest producer of *Vietombia Finca Palmilera*. The historical statistics on Vietombia are summarized in Section 4.3, Exhibit 5a. Although Vietombia is a major producer of coffee, its domestic consumption is very small. Vietombia has a growing, export-driven economy. Until recently, the Vietombian economy was unstable due to a corrupt government and weak laws. Two years ago, the political party in power was overthrown and a new party, focused on growth and economic stability, came into power. Unfortunately, it will take many more years to implement stronger laws, remove corrupt officials, and build a financially stable country.

Despite Vietombia's increased participation in international trade, 10 years ago Vietombia put in place a policy to peg its currency to that of its neighboring countries. (This practice has continued under the new political party in power.) The effect of the currency peg has been to effectively deflate the value of Vietombia's currency, the *Rubiaceae*, and as a consequence bolster Vietombia's export-driven economy. Independent economic analysis has suggested the deflation of Vietombia's currency has been instrumental to the growth of the Vietombia economy. However, the banking system in Vietombia has been slow in modernizing, and all domestic banks primarily engage in domestic thrift activity, and as a consequence their risk management and hedging programs are in their early stages. Further, the central banking system performs largely a symbolic role.

As a result of the Vietombia government's eagerness to stabilize its economy, the government is willing to give an exclusive dealership of the premium coffee beans produced there to Frenz provided Frenz sets up an exclusive production facility for these super-premium coffee beans in Vietombia. This presents a significant opportunity for Frenz to gain favorable access to its key ingredient not easily duplicated by competitors, to reduce its reliance on other coffee suppliers, and to control costs as well as influence and control the quality of future coffee bean production.

However, this vertical integration strategy presents significant upfront cost requirements which may substantially increase the company's leverage ratio and lower the overall credit rating for Frenz. Details of the deal are given in Section 4.3, Exhibit 5b.



## 4.3 Frenz Exhibits

### EXHIBIT 1 Frenz Corporation Board of Directors

Felix Hermans is the Chief Executive Officer of Genie Bank of Belgium. He holds a Master of Science in Business Econometrics/Operations Research from Tilburg University and has completed professional programs at the Netherlands Institute for Banking, Amsterdam Institute of Finance, Oxford University and INSEAD. He is currently the Chairman of the Frenz Board and has been a director since 2008.

Fred Coppens is the Chief Executive Officer of Vedegu Chocolate, which is a chocolate manufacturer in Belgium. He holds a Master of Science in automation engineering and has been a director since 2012.

Abram Lemaire is a Vice Chairman, Chief Executive Officer, Managing Director and a Member of Management Board at VESET Group SA, an affiliate of Ora Construction Industries Company. He has been a director since 2000.

Gilroy Clyde is the Chief Executive Officer of RPPC, the holding Company of Frenz. He has been a director since 2000.

Olivier Collignon is the Deputy Chairman of the Board of RPPC. He has been a director since 2000.

Julien Jacobs joined Frenz in April 2000 and has served as Chief Executive Officer since October 2008. Prior to that, he was the CEO of Frenz US, a subsidiary of Frenz, from April 2006 to October 2008. He has been a director since 2006.

David Gillet has been the Chief Executive Officer of Frenz US since 2008. Prior to that role, he served as president of Frenz China and Asia Pacific, a subsidiary of Frenz, from November 2006 until October 2008. He has been a director since 2008.

Vincent Jansen is the Chief Financial Officer of Frenz Corporation and has been a director since 2008.

There are no family relationships among any directors or executive officers. The mandate of the Board was established at the time of incorporation to supervise management of the business and affairs of the Corporation on a broad scale rather than to be involved in daily management. Its responsibilities include:

- approving strategic goals and objectives,
- reviewing operations, disclosure and communications policies,
- overseeing financial reporting and other internal controls,
- corporate governance,
- director orientation and education,
- senior management compensation and oversight, and
- director nomination, compensation and assessment.

In order to ensure that these responsibilities are carried out in a cohesive manner, the Board has established the following sub-committees:

#### ***Executive Committee***

The Executive Committee has and may exercise all or any of the powers vested in and exercisable by the Board, including approval of the annual strategic plan. Currently the Executive Board comprises five board members with the Chairman of the Board, Felix Hermans, also acting as Chairman of this Committee. It has the following additional Board members:

- Fred Coppens
- Olivier Collignon
- Abram Lemaire
- Julien Jacobs

#### ***Audit Committee***

The primary mandate of the Audit Committee is to review the financial statements of the Corporation and public disclosure documents containing financial information and to report on such review to the Board; to be satisfied that adequate procedures are in place for the review of the Corporation's public disclosure documents that contain financial information; to oversee the work and review the independence of the external auditors; and to review any evaluation of the Corporation's internal control over financial reporting.

The Audit Committee comprises four Board members with Vincent Jansen, the CFO of Frenz, acting as the Chair of this Committee. It has the following additional Board members:

- Gilroy Clyde
- Abram Lemaire
- David Gillet

#### ***Compensation Committee***

The primary mandate of the Compensation Committee is to approve compensation policies and guidelines for employees of the Corporation; to approve compensation arrangements for executives of the Corporation; to recommend to the Board compensation arrangements for the Directors; to oversee the management of incentive compensation plans; and to review succession plans for senior management. The current Chair of this Committee is Gilroy Clyde, with the following three additional Board members:

- Felix Hermans
- Abram Lemaire
- Olivier Collignon

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

The primary mandate of the Related Party and Conduct Review Committee is to recommend to the Board procedures for the consideration and approval of transactions with related parties of the Corporation and to review and, if deemed appropriate, to approve such transactions. Fred Coppens is the Chair of this Committee, with the following three additional Board members:

- Olivier Collignon
- David Gillet
- Vincent Jansen

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

The primary mandate of the Governance and Nominating Committee is to oversee the Corporation's approach to governance issues; to recommend to the Board corporate governance practices consistent with the Corporation's commitment to high standards of corporate governance; to assess the effectiveness of the Board of Directors, of Committees of the Board, and of the Directors; and to recommend to the Board candidates for election as Directors and for appointment to Board Committees. This Committee is also responsible for making recommendations to the Board regarding the "Code of Business Conduct and Ethics" policies that ensure a culture of integrity throughout the Corporation. This Code is applicable to Directors, officers, and employees of the Corporation.

Julien Jacobs, the current CEO of Frenz, is the Chair of this Committee and the Committee is composed of the following additional Board members.

- Olivier Collignon
- Gilroy Clyde
- David Gillet

## **EXHIBIT 2**

### **Risk Profiles**

#### **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 over recent years have eroded Frenz's profit margin.

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.

#### **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, to include products from other sister companies in the conglomerate group.

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 runs for conglomerate reporting. It is intended to be a simplified, more intuitive model that can aid Frenz in its ongoing operations and strategy without the complex interrelationships and assumptions of RPPC's model.

### **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 negatively 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 has caused significant costs in operation due to timing differences.

### **Equity Security Risk**

Frenz has investments in equity markets, and equity market volatility has significantly impacted the investment margins of Frenz.

### **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.

### **Capital Risk**

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

**EXHIBIT 3**  
**Financial Statements and Supplementary Data**  
**Frenz Corporation Ltd.**  
**CONSOLIDATED STATEMENTS OF EARNINGS**  
(In millions, except per share data)

<b>Fiscal Year Ended</b>	<b>Dec 31, 2017</b>	<b>Dec 31, 2016</b>	<b>Dec 31, 2015</b>	<b>Dec 31, 2014</b>	<b>Dec 31, 2013</b>
Net revenues:					
Company-operated stores	\$1,214	\$1,056	\$ 960	\$ 890	\$ 650
Licensed stores	127	110	100	85	50
CPG, foodservice and other	134	117	106	88	60
<b>Total net revenues</b>	<b>1,475</b>	<b>1,283</b>	<b>1,166</b>	<b>1,063</b>	<b>760</b>
Cost of sales including occupancy costs	583	535	495	445	375
Store operating expenses	423	393	366	355	320
Other operating expenses	49	45	40	29	25
Depreciation/ amortization expenses	58	55	52	51	50
General & administrative expenses	75	70	65	56	30
Restructuring charges	0	0	0	53	100
<b>Total operating expenses</b>	<b>1,188</b>	<b>1,098</b>	<b>1,018</b>	<b>989</b>	<b>900</b>
Gain on sale of properties	112	55	30	0	0
Income from equity investments	33	22	18	15	10
<b>Operating income</b>	<b>320</b>	<b>207</b>	<b>196</b>	<b>89</b>	<b>(130)</b>
Interest income and other, net	15	14	11	5	5
Interest expense	(5)	(3)	(3)	(3)	(3)
<b>Earnings before income taxes</b>	<b>330</b>	<b>218</b>	<b>204</b>	<b>91</b>	<b>(128)</b>
Income taxes	(73)	(54)	(63)	(28)	14
<b>Net earnings (loss)</b>	<b>\$258</b>	<b>\$163</b>	<b>\$141</b>	<b>\$63</b>	<b>\$(114)</b>
Earnings per share—basic	\$0.52	\$0.33	\$0.28	\$0.13	\$(0.23)
Cash dividends declared per share	\$0.005	\$0.005	\$0.005	\$0.000	\$0.000
<b>Cash Dividends Paid</b>	<b>\$2.50</b>	<b>\$2.50</b>	<b>\$2.52</b>	<b>\$0.00</b>	<b>\$0.00</b>

**EXHIBIT 4**  
**Frenz Corporation Ltd.**  
**CONSOLIDATED BALANCE SHEETS**  
(In millions, except per share data)

Fiscal Year Ended Dec 31, YYYY	2017	2016	2015	2014	2013
<b>ASSETS</b>					
Current assets:					
Cash and cash equivalents	\$187	\$159	\$138	\$116	\$90
Short-term investments —available-for-sale securities	115	98	85	24	15
Short-term investments —trading securities	35	22	25	15	5
Accounts receivable, net	53	40	84	30	35
Inventories	102	98	45	44	67
Prepaid expenses & current assets	35	28	45	16	20
Deferred income taxes, net	20	21	25	30	35
<b>Total current assets</b>	<b>548</b>	<b>465</b>	<b>447</b>	<b>275</b>	<b>267</b>
Long-term investments —available-for-sale securities	95	66	10	19	10
Equity and cost investments	138	88	37	34	15
Property, plant and equipment, net	450	300	235	245	205
Goodwill	25	25	25	25	25
Other intangible assets	10	10	5	5	5
Other assets	56	48	20	23	5
<b>Total Assets</b>	<b>\$1,322</b>	<b>\$1,003</b>	<b>\$779</b>	<b>\$626</b>	<b>\$532</b>
<b>LIABILITIES AND EQUITY</b>					
Current liabilities:					
Accounts payable	\$45	\$33	\$24	\$28	\$35
Accrued compensation & related cost	42	39	36	40	35
Accrued occupancy costs	17	13	15	17	20
Accrued taxes	10	10	10	10	5
Insurance reserves	15	15	15	15	15
Other accrued liabilities	28	30	32	26	22
Deferred revenue	42	49	43	41	40
<b>Total current liabilities</b>	<b>199</b>	<b>189</b>	<b>175</b>	<b>177</b>	<b>172</b>
Long-term debt	177	140	120	110	95
Other long-term liabilities	71	62	52	45	38
<b>Total liabilities</b>	<b>\$447</b>	<b>\$391</b>	<b>\$347</b>	<b>\$332</b>	<b>\$305</b>
Shareholders' equity:					
Common stock (\$0.001 par value) — authorized, 500M shares; issued & o/s	\$0.5	\$0.5	\$0.5	\$0.5	\$0.5
Additional paid-in capital	44.8	44.8	44.8	44.8	44.8
Other additional paid-in-capital	55	50	34	34	34
Retained earnings	763	508	347	209	146
Accum. other comprehensive income	11	8	5	6	2
<b>Total shareholders' equity</b>	<b>\$875</b>	<b>\$612</b>	<b>\$432</b>	<b>\$294</b>	<b>\$227</b>
<b>TOTAL LIABILITIES AND EQUITY</b>	<b>\$1,322</b>	<b>\$1,003</b>	<b>\$779</b>	<b>\$626</b>	<b>\$532</b>



## EXHIBIT 5

### Vietombia

#### 5a) Historical Information

<b>INFRASTRUCTURE</b>	
<b>Economy</b>	
GDP (2017)	USD 70.1 billion
% exports (2017)	USD 62.9 billion FOB 89.73%
<b>Population and employment</b>	
Total population	86 million
Total employment in the coffee industry	600,000 coffee growers
% adult literacy	30%
Average school level for workers in the coffee industry (farms)	Grade 6
% of workers who are landowners	n/a
Number of workers associated to a cooperative	20,000
% workers with permanent contract	5%
<b>Forms of workers representation</b>	
Association of coffee providers	None
% of employees who are part of a trade union	None
<b>Geographical aspects</b>	
Total area of production (hectares)	Cultivated area: 506,000 ha
Number of farms	300,000
<b>History of the coffee industry</b>	
Date of creation	First coffee plantation in 1857 in French colony
Management system/style	n/a
Number of owned farms	n/a
Number of owned threshers	n/a
Economic indicators of coffee industry (net profit, sales, etc.)	Total production: 57.6 million bags (2017) Total exports: 53.8 million bags (2017)
Exports (total exports, % exports against total production)	Total production 961 million tons (2017) Total export 897 million tons (2017) % participation of exports in total production: 93.34%

### 5b) Vietombia Proposal

- Exclusive production agreement with government of Vietombia
- Gives Frenz rights to purchase all coffee grown in Vietombia
- Frenz must build production facility in Vietombia, but would own and run the facility
- Potential competitive advantage due to exclusive supply of high quality coffee beans

Initial Cost	100M
Additional expected annual net earnings from exclusive beans	10M
Current Cost of Debt for Frenz (net of tax)	7%
Current Cost of Capital for Frenz	8%
Cost of Capital for Project	20%

Risk of Losses from Coffee Price Fluctuation		
Percentile	Current Loss	Loss with Vietombia Deal
99	100	60
98	85	50
95	50	30
90	25	15

## 5 Blue Ocean P&C Company

### 5.1 Background

#### 5.1.1 Mission

Our mission is to strengthen the brand identity as a dominate innovator in the UK market and maximize sustainable long-term growth in shareholder value.

#### 5.1.2 History

RPPC acquired 80% of Blue Ocean, the 5<sup>th</sup> largest property and casualty insurance company in the United Kingdom (UK), in 2009. This acquisition gave RPPC access to Blue Ocean’s lucrative insurance market in the UK and continental Europe. Products included marine, property catastrophe and retrocession. Since then, Blue Ocean has continued to expand and develop its insurance businesses worldwide. In September 2014, Blue Ocean began writing Pet and Travel insurance business in North America. As of the beginning of 2018, the capital base stands at \$3 billion.

#### 5.1.3 Rating

Guided by experienced management and backed by an impressive team of underwriters, actuaries and catastrophe risk modelers, Blue Ocean earned an A.M. Best rating of A (Excellent) and quickly established itself as a market leader.

#### 5.1.4 Management team

		CEO		
		Edward Blue		
		CFO		
		Michael Tan		
EVP Chief Actuary	EVP CLO	EVP CRO	EVP Business Ops	EVP CAO
Anne Green	Jerome Black	Geoff Olive	Andrew Grey	Michelle Rouge

#### 5.1.5 Strategy

The traditional business arena for Blue Ocean has been the marine insurance market. This focus has been very successful in the company’s traditional geographical market, the United Kingdom. Currently, Blue Ocean has a 2% market share in the entire Atlantic Ocean region thanks to its success in the UK market. Its exposure to loss is proportional to its market share.

With the post-acquisition expansion into a new region, the company management team decided to expand its focus into Pet and Travel Insurance. In keeping with its mission to be an innovate leader, the executives are also considering an offering within the emerging Renewable Energy sector.

Within the Pet and Travel insurance lines, the goal is to establish a dominant market share in this relatively young insurance field. The financial goals are to generate as much profit and premium from this new risk arena as Blue Ocean currently earns in the core Marine business.

#### 5.1.6 Financial Summary (in millions)

	2017 Premium income	2017 reported profit
Marine	250	18.0
Pet	50	3.1
Travel	100	10.0

#### 5.1.7 Projected 2018 Financials (in millions)

	Premium Income	Claims	Profit
Marine	320	250	25.0
Pet	65	52	5.0
Travel	120	90	17.0

Blue Ocean's hurdle rate is 12%. It defines its ROE as Expected Profit/Required Capital. Blue Ocean's corporate tax rate is 35%.

#### 5.1.8 Blue Ocean Required Capital

Blue Ocean calculates the required capital for each line of business separately. Required capital for each line of business is calculated as VaR 99 – VaR 95.

#### *Expected Loss Distributions by Line of Business (in millions)*

Percentile	Marine Claims	Pet Claims	Travel Claims
50.0%	250	52	90
75.0%	275	58	95
90.0%	550	100	130
95.0%	800	125	150
99.0%	1,000	150	163
99.5%	1,150	165	175
99.9%	1,400	175	180

## 5.2 Opportunity

### 5.2.1 Renewable Energy Insurance Business profile

Renewable energy is an emerging industry. Renewable energy suppliers face uncertainty predicting their income generation capabilities. There are two key sources of uncertainty:

- 1) production: the number of units of energy produced
- 2) price: market price of units of energy sold

Our proposed insurance solution for this industry is to offer protection on the income generated by energy suppliers.

Blue Ocean's renewable energy lines of business are segmented into:

1. Types
  - a. Solar
  - b. Wind
  - c. Water
2. Commercial and personal

### 5.2.2 Overview of Personal Lines Solar Energy Insurance

The target homeowner for this insurance program has over 1,000 sq. ft. available roof space for mounting solar panels. The typical client has purchased solar panels that can generate from 7,000 to 12,000 kilowatt hours (kWh) of energy per year. The client can be enticed into a fixed contract to sell the energy generated for between \$0.30 to \$0.60 per kWh.

Under a solar insurance contract, Blue Ocean would purchase solar energy from the client and provide one of the following guarantees:

- 1) guarantee the number of units of energy generated per year at 7000 kWh or greater
- 2) guarantee the sale price per unit at rates from \$0.30 - \$0.60 per kWh
- 3) guarantee both the number of units of energy generated per year at 4000 kWh or greater and the sale price per unit at a rate of \$0.40

In exchange, Blue Ocean would receive the actual units of energy generated and would sell them in the energy market through electrical utilities with which it has contracted. The electric utilities could be either investor owned or government owned.

There is a growing trend in North America for families to purchase personal solar grids. Blue Ocean's five-year plan is to become the premier insurance provider to this group.

*Main Risk Factors:*

Weather

Mechanics

Default rate

Energy conversion ratio

Counterparty

### 5.2.3 Blue Ocean Feasibility Study

Blue Ocean hired *Able Energy Consulting Group*. Exhibit 5.3 provides *Market Data* on the number of detached homes in the U.S., energy production per solar panel, and electric company seasonal prices and volatilities.

*Business Case*

Below is an excerpt from the business plan pro-forma that was created to gain funding approval to enter this line of business.

	2018	2019	2020	2021	2022
No. of homes insured	1,200	2,600	4,200	6,000	8,000
No of electric utility contracts	5	11	17	25	33
Energy (kWh) generated per home	9,000	13,500	20,250	30,375	45,563
Avg, price paid to homeowners per kWh	\$0.60	\$0.50	\$0.40	\$0.30	\$0.20
Avg. Price received from electric utilities per kWh	\$0.80	\$0.70	\$0.60	\$0.50	\$0.40
Reserve (MM)	\$1.08	\$1.62	\$2.43	\$3.65	\$5.47
Target capital (MM)	\$2.16	\$7.02	\$17.01	\$36.45	\$72.9

### 5.2.4 Reserving Methodology Used in Business Case

Projected reserves calculated above were quickly developed by Jay Brown (the head Valuation Actuary) on his own. He leveraged the travel insurance reserve calculation engine to build his valuation model and built only in the development environment, not in a production environment.

The model assumptions were based on data supplied by Able Energy Consulting Group. However, this data is limited as this is an emerging industry. Therefore, some assumptions have been made based on wind farm data, for which more robust data is available. Parameters are currently estimated roughly, but will be more fully developed as actual customer data is amassed.

The only risk factors in the model are those listed in the overview. Should the business case for the Solar Personal Energy Insurance go forward, Jay would like detailed peer review of the reserve model conducted by both inside and outside experts as he wants to ensure that the model construction is sound and no programming errors exist. Additionally, more detailed specification of the uses of the model would be needed as only projected reserve results were required for the business case.

## 5.3 Solar Energy Statistics

### SOLAR ENERGY STATISTICS (SOUTHERN USA)

Year	2007	2008	2009	2010	2011	2012
<b>Weather Related</b>						
Number of Rainy days	71	84	79	67	76	97
Number of severe weather (storms)	19	27	9	29	31	67
<b>Political Support</b>						
States with energy rebate programs	1	1	1	2	2	3
% of voters considered candidates record on environmental issue	1%	1%	2%	3%	5%	10%
<b>Manufacturing Base</b>						
Number of panel provider companies	0	1	4	8	10	15
Number of panel manufacturers	1	1	2	3	3	4
Cost of photovoltaic cells (key component)	113	103	90	70	66	63
Energy production capacity 10sq.ft.panel (kWh)	426	679	893	951	1235	1678
Components reported defective as rate per active units	10%	10%	9%	8%	10%	7%
<b>Consumer Reports</b>						
Cost of 10 kWh panel system (USD 000's)	125	110	105	95	90	85
Number of homes with more than 1000 sq. ft. roof	45,129	55,891	67,901	75,462	105,087	129,971
<b>Electric Company Solar energy usage</b>						
Average purchase rate for solar energy per kWh (cents)	70	85	57	87	80	105
% of Total grid energy that is Solar powered	1%	2%	1%	3%	3%	5%

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**SOLAR ENERGY STATISTICS (SOUTHERN USA)**

<b>Year</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
<b>Weather Related</b>					
Number of Rainy days	84	83	79	81	77
Number of severe weather (storms)	39	14	37	40	35
<b>Political Support</b>					
States with energy rebate programs	3	6	6	7	7
% of voters considered candidates record on environmental issue	12%	13%	15%	17%	20%
<b>Manufacturing Base</b>					
Number of panel provider companies	20	22	23	25	27
Number of panel manufacturers	5	5	5	6	7
Cost of photovoltaic cells (key component)	62	50	49	47	45
Energy production capacity 10sq.ft.panel (kWh)	1931	2391	2538	2897	3256
Components reported defective as rate per active units	6%	8%	6%	5%	4%
<b>Consumer Reports</b>					
Cost of 10 kWh panel system (USD 000's)	80	75	70	65	60
Number of homes with more than 1000 sq. ft. roof	145,923	170,798	189,321	190,908	195,133
<b>Electric Company Solar energy usage</b>					
Average purchase rate for solar energy per kWh (cents)	88	65	81	85	77
% of Total grid energy that is Solar powered	5%	5%	6%	6%	7%

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## **6 Big Ben Bank**

### **6.1 Overview**

The banking group was formed in 2004 under the directorship of Mr. Patel. Mr. 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 Mr. Patel's banking group was finding best-in-class funds for its high-net-worth clients. Mr. Patel's fund management business was formed in 1993 and its success was primarily built within European financial centers.

The key growth differentiator in the initial years was an existing network of relationships in Mr. Patel's fund management business circle. This circle had significant wealth and Assets Under Management (AUM). The banking group grew quickly.

However, the financial crisis presented some unexpected challenges. The AUM fell dramatically and some of the investors experienced hardships in their own businesses. The fund performance was dramatically negative and the subsequent increase in redemptions severely impacted overall AUM and forced a revision in the strategic approach.

The executive group, following strong direction from the four partners, has been asked to re-engineer the business focus away from fund performance towards holistic wealth management and financial planning.

As a result, the holding company decided to acquire an insurance group in 2009.

#### **6.1.1 Revised strategy**

As part of re-engineering the business focus, the executive group lowered the minimum investable assets requirement for participation in the services that had been traditionally offered exclusively to the Bank's high net worth customers. The bank will also offer more holistic wealth management and financial planning services.

Mr. Patel articulated Big Ben's revised strategy in the following excerpt from a recent speech: "Our vision is to be the wealth management solutions provider of choice, and to expand the Bank's client base by expanding our retail banking and wealth management divisions, as well as our crossover products with the Insurance group. We will also build new global platforms to support this new growth. Our path to differentiation is through delivery of a personalized, unique financial planning experience to our clients, and through building a culture of innovation."

#### **6.1.2 Products / Services**

Since inception the critical profit driver has been the excess of the MER (management expense ratio) charged on the AUM over the operational costs of fulfilling the fund management mandate. Big Ben

Bank is a world leader in the exchange-traded fund (ETF) market and has a strong brand and a loyal investor base. But MERs for ETF's are coming under increased downward pressure as more competitors come into this fund arena.

Traditional personal and commercial banking has been a smaller, but significant, component of the revenue pie. The operational model is primarily online rather than physical branches. In particular, the approach was meant to meet the needs of a globally-mobile clientele. Fund transfer and foreign exchange transactions were once the majority of transactions but the travelers' check business is slowing. Transfers and transactions are now dominated by an ultra-high limit credit card program. Foreign exchange transactions and "best rates" are an attractive feature of the credit card program.

The physical distribution model is almost non-existent and cannot support broad-based banking but expertise exists on emerging technologies and connectivity with a time-critical customer base.

### **6.1.3 Risk Management**

Big Ben Bank has from the beginning prided itself on a strong risk culture and has had an active risk management function. During the 2008 financial crisis, bank capital was somewhat strained, but Big Ben has regained a good capital position in recent years.

With a greater focus on innovation-based solutions and wealth management solutions intertwined with the Insurance group, the risk management function will need to evolve and adapt its strengths to a more agile environment.

The Executive mindset has been to increase focus on the financial planning sales approach, to leverage the wealth management capabilities within insurance contracts, and to formulate a one-stop shopping interface to our globally mobile clientele.

Big Ben Bank 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 Bank 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.

*The keys are still our private club, our brand, and our family!!*

#### **6.1.4 Regulatory Challenges**

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.

Through authorities provided in the Dodd-Frank Act, the Federal Reserve Board (FRB) regulates at the holding company level a number of companies that are primarily life insurers. The Dodd-Frank Act also authorized the FRB to supervise nonbank financial companies designated as systemically important by the Financial Stability Oversight Council (FSOC), some of which may be insurers. In addition, Section 171 (the Collins Amendment) of the Dodd-Frank Act authorizes the FRB to establish capital standards for these insurance companies.

The FRB exercised these new authorities on June 7, 2012, issuing three proposed rules which collectively implement Basel III capital standards and Section 171 of the Dodd-Frank Act.

#### **6.1.5 Capital Management**

Big Ben divides its business into the following four business divisions:

- (1) personal and commercial,
- (2) wealth management,
- (3) asset management and
- (4) investment banking.

Currently, Big Ben uses regulatory capital at the corporate level and division level as the capital management metric. Within its four main business divisions, the asset management and investment banking divisions also use economic capital as second set of measuring metrics.

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

Big Ben has come a long way in a short period of time. The strategy to focus on the very-high-net-worth, globally-active business traveler has proven to be a wise choice. However, there is concern that the growth trajectory is about to slow simply because the number of potential clients in this market is small. Therefore, Big Ben is also looking for potential new services that can sustain the growth of Big Ben's businesses and other markets that can be penetrated by leveraging the existing operational systems and distribution to grow organically. Big Ben also has to be aware of any emerging financial crisis or regulatory changes that might be a hindrance to future plans.

## 6.2 Big Ben Bank Exhibits

### EXHIBIT 1 Big Ben Bank Financial Data

#### I. Year End Balance Sheet

	2017 \$million	2016 \$million
<b>Assets</b>		
<b>Advances and investments</b>		
Cash and balances at central banks	4,736	3,272
Loans and advances to banks	6,598	5,206
Loans and advances to customers	2,638	2,436
Investment securities held at amortised cost	549	483
	14,521	11,397
<b>Assets held at fair value</b>		
Investment securities held available-for-sale	7,979	7,097
Financial assets held at fair value through profit or loss	2,483	2,702
Derivative financial instruments	6,793	4,786
	17,255	14,585
<b>Other assets</b>	4,392	4,074
<b>Total assets</b>	36,168	30,056
<b>Liabilities</b>		
<b>Deposits and debt securities in issue</b>		
Deposits by banks	6,548	5,037
Customer accounts	3,758	3,699
Debt securities in issue	6,128	4,085
	16,434	12,822
<b>Liabilities held at fair value</b>		
Financial liabilities held at fair value through profit or loss	2,160	2,268
Derivative financial instruments	6,893	4,713
	9,053	6,981
<b>Subordinated liabilities and other borrowed funds</b>	3,272	3,116
<b>Other liabilities</b>	5,152	4,938
<b>Total liabilities</b>	33,910	27,857
<b>Equity</b>	2,258	2,199
<b>Total liabilities and shareholders' funds</b>	36,168	30,056

## II. Liquidity Risk Policy

The following data are the three liquidity measures the bank has used to monitor their liquidity exposures for the past five years.

<b>Measure</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
Liquidity Index (%)	80%	82%	88%	89%	90%
Financing Gap (\$mm)	\$1,500mm	\$1,050mm	\$813mm	\$1,392mm	\$750mm
Net Liquidity (\$mm)	-\$1,250mm	-\$750mm	\$1,187mm	\$608mm	\$1,250mm

The bank also has a liquidity crisis plan that outlines the roles and responsibilities of each executive during a liquidity crisis. Furthermore, the plan also defines a mandatory decision-making process and communications that need to take place during the crisis. The plan also defines the criteria to trigger the liquidity crisis plan. These are the only measures or tools the bank has used to manage and monitor liquidity risk up to this point.

The bank came out from the 2008 financial crisis unscratched. The bank stayed solvent and did not have severe liquidity problems. The executives of the bank are very happy with the performance of the bank after looking at these historical measures and are comfortable with the current liquidity risk mitigation policy.

## III. Investment Limits and triggers

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

<b>FI Category</b>	<b>Limit (% of portfolio Market Value)</b>
<b>Treasury / Agency</b>	100%
<b>Sovereign Treasury</b>	100%
<b>Corporate / Credit &lt;= B+</b>	10%
<b>Corporate / Credit &gt; B+</b>	50%

\*Derivative Financial Instruments written:

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

## 7 Darwin Life Insurance Company

### 7.1 Background

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 under new leadership ten years ago, which 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 offered fixed and variable annuities, there was no focus on asset accumulation products, specifically variable annuities, or 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 mid 2000's caught the eye of RPPC Dynasty. RPPC thought Darwin was an attractive property, and it became affordable when the market, and financial industry stocks in particular, nose-dived. In hindsight the acquisition was a bargain. At the time there had been much heated debate. 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. As a result, not enough resources have been devoted to infrastructure or in force management. Resources are devoted to new products and new business and priority placed on customer service and growth in distributions. Dedicated resources to manage in force business have been insufficient. 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.

## **7.2 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 also introduced UL with secondary guarantees.

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 2011 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 human answers the phone within 4 rings 95% of the time. This attention on customer focus and attention to service 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 over the past 5 years. In an industry with flat life sales, Darwin's life sales grew at a 30% rate. IVA sales for the industry rebounded following the financial crisis, but have since declined each year since 2011. Darwin had not been a player pre-crisis but in the years immediately after the crisis, IVAs became attractive and reasonable. Pre-crisis companies had aggressively priced products with rich benefits by, in the view of many, taking on too much risk. The crisis resulted in many companies exiting or greatly reducing the benefits. Darwin took advantage of the climate by offering modest guarantees for higher fees than were seen pre-crisis. However, distribution has 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).

### **7.3 Financial Analysis**

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, lower interest coverage and lower liquidity. It favorably has higher return on capital and lower expenses. Relative to its peer group, Darwin has had a lower operating income margin and a lower net income margin, a higher investment yield, a higher expense ratio, higher growth in life insurance inforce, higher growth in equity, and average mortality and persistency.

Financial Statements for Darwin for the current year, 2017, as well as projections for future years, are shown in section 7.8, Exhibits 1-4

### **7.4 The Industry**

The U.S. population is living longer and aging. The number of people age 65+ grew from 35 million in 2000 to over 50 million in 2016. That number is expected to exceed 70 million by 2030. For a couple aged 65, there is a 50% chance that at least one of them will survive to age 94.

The number of companies offering defined benefit pension plans continues to decrease. Among Fortune 500 companies, only 16% offered a defined benefit plan in 2017 compared to 59% in 1998.

The net worth of U.S. households exceeded \$100 trillion in 2018 with about half of this belonging to baby boomers (those born between 1946 and 1964). As the baby boomers continue to age and retire, they will have a need for products that provide lifetime income. The shift from life protection to 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 protection from 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. Protection is the differentiator versus other financial services (e.g., 85% of all variable annuity sales have living benefit riders).

Successful companies will have well-positioned defensible market positions, pricing power, advanced technology and systems to enhance service and process 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.

## **7.5 Investment Policy and Strategy**

The investment department manages the general account investments. The Chief Investment Officer (CIO) reports to the CFO. Investment policy and strategy is reviewed and approved by an internal management committee consisting of the CEO, CFO, CIO, and SVPs (or VPs) of 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).

## **7.6 Risk Management**

Darwin formalized its risk management function with the creation of an ERM Committee in 2010 followed by a new CRO position and establishment of a Risk Management department in 2011. The Committee meets quarterly. The current risk management staff consists of the CRO (Jane Smith), 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 exposure 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 percent loss of Statutory equity in one year is less than 0.5 percent.
- II. Earnings    The probability of negative GAAP earnings in one year is less than 5 percent.
- 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.

### **7.6.1 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.

### **7.6.2 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. 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. US 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.

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.

### **7.6.3 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.

### **7.6.4 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.

### **7.6.5 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%

## **7.7 Strategic Considerations**

### **7.7.1 ULSG**

Management accepted a proposal to expand the offering of life insurance products into ULSG (Universal Life w/ Secondary Guarantee), which will appeal to the middle to upper income clientele. Initial effort of product development indicated that the product will produce a 15% IRR, which is above the hurdle rate of 12% set by the holding company. The new product design includes general account investments supported by a portfolio of investment grade corporate bonds supplemented by interest derivatives and CDS (credit default swaps) to manage the interest and credit risk. The guaranteed provision is competitively priced using moderate assumptions in the shadow account projections. Product development is evaluating ways to reduce the onerous capital requirement.

The newly developed product – ULSG with MVA (market value adjustment) has been modeled using the stochastic models with multiple interest scenarios and dynamic consumer behavior. The result is very promising both in terms of revenue and profit. Product development is now in the process of setting up a comprehensive review from the risk management team’s perspective to investigate the potential risks involved and the magnitude of risk exposures before the product is formally launched. The risk management team will determine if the current model is adequate to capture all the major risk categories and if the additional risk-taking is aligned with corporate risk management strategy and compliant with tolerable risk appetite.

### **7.7.2 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. In essence, 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. In essence, 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 aforementioned trade-off between capital productivity and capital adequacy. To set a target or requirement for the amount of

capital that should be held by an insurance company or group requires a clear vision of the purposes for which capital is held. Effectively defined capital requirements serve several purposes, including, but not limited to:

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

Economic capital will be what Darwin requires for ongoing operations and what it must hold in order to gain the necessary confidence of the marketplace, its policyholders, its investors, and its regulatory supervisors. 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.

## 7.8 Darwin Life Exhibits

### EXHIBIT 1

#### Financial Data: GAAP Income Statement Projections (in 000s)

<b>Total</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
<b>REVENUES</b>						
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
<b>Total Premiums</b>	<b>1,007,670</b>	<b>1,167,350</b>	<b>1,371,110</b>	<b>1,618,870</b>	<b>1,959,780</b>	<b>2,492,010</b>
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
<b>Total Revenues</b>	<b>1,646,990</b>	<b>1,814,040</b>	<b>2,038,710</b>	<b>2,316,490</b>	<b>2,693,400</b>	<b>3,281,190</b>
<b>BENEFITS AND EXPENSES</b>						
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
Inc. in reserves & S/A Transfers	588,460	695,250	835,020	1,052,600	1,320,810	1,776,940
<b>Total Benefits</b>	<b>1,290,670</b>	<b>1,485,050</b>	<b>1,701,170</b>	<b>1,947,570</b>	<b>2,310,390</b>	<b>2,876,050</b>
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)
<b>Total Acquisition Costs</b>	<b>34,550</b>	<b>37,650</b>	<b>44,030</b>	<b>51,710</b>	<b>60,770</b>	<b>72,850</b>
<b>Total Administrative Expenses</b>	<b>69,280</b>	<b>77,220</b>	<b>84,090</b>	<b>91,700</b>	<b>99,740</b>	<b>107,750</b>
<b>Total Benefits and Expenses</b>	<b>1,394,500</b>	<b>1,599,920</b>	<b>1,829,290</b>	<b>2,090,980</b>	<b>2,470,900</b>	<b>3,056,650</b>
<b>EBIT</b>	<b>252,490</b>	<b>214,120</b>	<b>209,420</b>	<b>225,510</b>	<b>222,500</b>	<b>224,540</b>
<b>Interest</b>	<b>18,000</b>	<b>18,000</b>	<b>18,000</b>	<b>18,000</b>	<b>18,000</b>	<b>7,375</b>
<b>Tax</b>	<b>82,100</b>	<b>68,600</b>	<b>67,000</b>	<b>72,600</b>	<b>71,600</b>	<b>76,000</b>
<b>Net Income</b>	<b>152,390</b>	<b>127,520</b>	<b>124,420</b>	<b>134,910</b>	<b>132,900</b>	<b>141,165</b>
<b>Variable Annuities</b>						
	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
<b>REVENUES</b>						
Premium - First Year	561,000	669,800	812,600	1,000,000	1,280,000	1,750,000
Premium - Renewal	-	-	-	-	-	-
<b>Total Premiums</b>	<b>561,000</b>	<b>669,800</b>	<b>812,600</b>	<b>1,000,000</b>	<b>1,280,000</b>	<b>1,750,000</b>
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
<b>Total Revenues</b>	<b>660,500</b>	<b>788,200</b>	<b>951,200</b>	<b>1,169,500</b>	<b>1,483,600</b>	<b>2,001,500</b>
<b>BENEFITS AND EXPENSES</b>						
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

Inc. in reserves & S/A Transfers	474,250	536,300	649,250	807,400	1,038,000	1,464,500
<b>Total Benefits</b>	<b>605,100</b>	<b>726,200</b>	<b>878,900</b>	<b>1,082,100</b>	<b>1,373,650</b>	<b>1,855,300</b>
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)
<b>Total Acquisition Costs</b>	<b>16,800</b>	<b>17,400</b>	<b>22,100</b>	<b>27,600</b>	<b>32,100</b>	<b>38,500</b>
Total Administrative Expenses	14,300	17,400	20,200	24,100	28,200	32,800
<b>Total Benefits and Expenses</b>	<b>636,200</b>	<b>761,000</b>	<b>921,200</b>	<b>1,133,800</b>	<b>1,433,950</b>	<b>1,926,600</b>

<b>EBIT</b>	<b>24,300</b>	<b>27,200</b>	<b>30,000</b>	<b>35,700</b>	<b>49,650</b>	<b>74,900</b>
<b>Interest</b>	-	-	-	-	-	-
<b>Tax</b>	<b>8,500</b>	<b>9,500</b>	<b>10,500</b>	<b>12,500</b>	<b>17,400</b>	<b>26,200</b>
<b>Net Income</b>	<b>15,800</b>	<b>17,700</b>	<b>19,500</b>	<b>23,200</b>	<b>32,250</b>	<b>48,700</b>

<b>Universal Life</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
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<b>REVENUES</b>						
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
<b>Total Premiums</b>	<b>106,370</b>	<b>137,150</b>	<b>171,510</b>	<b>203,270</b>	<b>236,380</b>	<b>270,710</b>
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
<b>Total Revenues</b>	<b>222,990</b>	<b>250,440</b>	<b>285,810</b>	<b>322,490</b>	<b>360,300</b>	<b>403,190</b>

<b>BENEFITS AND EXPENSES</b>	0.36	0.35	0.36	0.36	0.36	0.36
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
<b>Total Benefits</b>	<b>152,370</b>	<b>187,650</b>	<b>222,470</b>	<b>261,770</b>	<b>302,940</b>	<b>346,150</b>
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)
<b>Total Acquisition Costs</b>	<b>8,450</b>	<b>8,450</b>	<b>7,530</b>	<b>6,710</b>	<b>8,270</b>	<b>11,050</b>
Total Administrative Expenses	13,780	14,820	15,990	16,900	17,940	18,850
<b>Total Benefits and Expenses</b>	<b>174,600</b>	<b>210,920</b>	<b>245,990</b>	<b>285,380</b>	<b>329,150</b>	<b>376,050</b>

<b>EBIT</b>	<b>48,390</b>	<b>39,520</b>	<b>39,820</b>	<b>37,110</b>	<b>31,150</b>	<b>27,140</b>
<b>Interest</b>	-	-	-	-	-	-
<b>Tax</b>	<b>16,900</b>	<b>13,800</b>	<b>13,900</b>	<b>13,000</b>	<b>10,900</b>	<b>9,500</b>
<b>Net Income</b>	<b>31,490</b>	<b>25,720</b>	<b>25,920</b>	<b>24,110</b>	<b>20,250</b>	<b>17,640</b>



<b>Traditional Life</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
<b>REVENUES</b>						
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
<b>Total Premiums</b>	<b>88,900</b>	<b>97,100</b>	<b>107,600</b>	<b>118,500</b>	<b>129,500</b>	<b>140,300</b>
Net Investment Income	51,200	50,500	51,700	53,000	54,500	56,700
Other income	-	-	-	-	-	-
<b>Total Revenues</b>	<b>140,100</b>	<b>147,600</b>	<b>159,300</b>	<b>171,500</b>	<b>184,000</b>	<b>197,000</b>

<b>BENEFITS AND EXPENSES</b>						
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
<b>Total Benefits</b>	<b>82,100</b>	<b>91,000</b>	<b>99,700</b>	<b>110,100</b>	<b>120,200</b>	<b>130,400</b>
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)
<b>Total Acquisition Costs</b>	<b>8,800</b>	<b>9,300</b>	<b>10,800</b>	<b>12,500</b>	<b>14,300</b>	<b>16,200</b>
Total Administrative Expenses	9,200	10,300	10,900	11,500	12,200	12,700
<b>Total Benefits and Expenses</b>	<b>100,100</b>	<b>110,600</b>	<b>121,400</b>	<b>134,100</b>	<b>146,700</b>	<b>159,300</b>

<b>EBIT</b>	<b>40,000</b>	<b>37,000</b>	<b>37,900</b>	<b>37,400</b>	<b>37,300</b>	<b>37,700</b>
Interest	-	-	-	-	-	-
Tax	14,000	13,000	13,300	13,100	13,100	13,200
<b>Net Income</b>	<b>26,000</b>	<b>24,000</b>	<b>24,600</b>	<b>24,300</b>	<b>24,200</b>	<b>24,500</b>

<b>Term</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
<b>REVENUES</b>						
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
<b>Total Premiums</b>	<b>59,000</b>	<b>70,300</b>	<b>82,400</b>	<b>95,100</b>	<b>106,900</b>	<b>118,000</b>
Net Investment Income	20,400	20,500	22,000	24,100	26,800	30,100
Other income	-	-	-	-	-	-
<b>Total Revenues</b>	<b>79,400</b>	<b>90,800</b>	<b>104,400</b>	<b>119,200</b>	<b>133,700</b>	<b>148,100</b>

<b>BENEFITS AND EXPENSES</b>						
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
<b>Total Benefits</b>	<b>34,100</b>	<b>40,200</b>	<b>48,400</b>	<b>57,900</b>	<b>68,100</b>	<b>80,800</b>
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)

<b>Total Acquisition Costs</b>	<b>(3,000)</b>	<b>(1,500)</b>	<b>(900)</b>	<b>-</b>	<b>900</b>	<b>1,600</b>
Total Administrative Expenses	21,200	23,100	24,800	26,500	28,000	29,500
<b>Total Benefits and Expenses</b>	<b>52,300</b>	<b>61,800</b>	<b>72,300</b>	<b>84,400</b>	<b>97,000</b>	<b>111,900</b>

<b>EBIT</b>	<b>27,100</b>	<b>29,000</b>	<b>32,100</b>	<b>34,800</b>	<b>36,700</b>	<b>36,200</b>
<b>Interest</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Tax</b>	<b>9,500</b>	<b>10,200</b>	<b>11,200</b>	<b>12,200</b>	<b>12,800</b>	<b>12,700</b>
<b>Net Income</b>	<b>17,600</b>	<b>18,800</b>	<b>20,900</b>	<b>22,600</b>	<b>23,900</b>	<b>23,500</b>

<b>Other</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
<b>REVENUES</b>						
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
<b>Total Premiums</b>	<b>192,400</b>	<b>193,000</b>	<b>197,000</b>	<b>202,000</b>	<b>207,000</b>	<b>213,000</b>
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
<b>Total Revenues</b>	<b>544,000</b>	<b>537,000</b>	<b>538,000</b>	<b>533,800</b>	<b>531,800</b>	<b>531,400</b>

<b>BENEFITS AND EXPENSES</b>						
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
Increase in reserves	(23,300)	(17,800)	(29,800)	(8,900)	(11,000)	(20,400)
<b>Total Benefits</b>	<b>417,000</b>	<b>440,000</b>	<b>451,700</b>	<b>435,700</b>	<b>445,500</b>	<b>463,400</b>
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)
<b>Total Acquisition Costs</b>	<b>3,500</b>	<b>4,000</b>	<b>4,500</b>	<b>4,900</b>	<b>5,200</b>	<b>5,500</b>
Total Administrative Expenses	10,800	11,600	12,200	12,700	13,400	13,900
<b>Total Benefits and Expenses</b>	<b>431,300</b>	<b>455,600</b>	<b>468,400</b>	<b>453,300</b>	<b>464,100</b>	<b>482,800</b>

<b>EBIT</b>	<b>112,700</b>	<b>81,400</b>	<b>69,600</b>	<b>80,500</b>	<b>67,700</b>	<b>48,600</b>
<b>Interest</b>	<b>18,000</b>	<b>18,000</b>	<b>18,000</b>	<b>18,000</b>	<b>18,000</b>	<b>7,375</b>
<b>Tax</b>	<b>39,400</b>	<b>28,500</b>	<b>24,400</b>	<b>28,200</b>	<b>23,700</b>	<b>17,000</b>
<b>Net Income</b>	<b>55,300</b>	<b>34,900</b>	<b>27,200</b>	<b>34,300</b>	<b>26,000</b>	<b>24,225</b>

**EXHIBIT 2**  
**Financial Data: Statutory Balance Sheet Projections (in 000s) and Debt**

<b>Total</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
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	-	-	-	-	-	-
<b>Total Assets</b>	<b>12,100,400</b>	<b>12,594,600</b>	<b>13,187,800</b>	<b>14,063,800</b>	<b>15,182,600</b>	<b>16,597,500</b>
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
<b>Total Liabilities</b>	<b>11,456,200</b>	<b>11,941,000</b>	<b>12,524,000</b>	<b>13,385,200</b>	<b>14,505,300</b>	<b>15,931,500</b>
<b>Statutory Equity</b>	<b>644,200</b>	<b>653,600</b>	<b>663,800</b>	<b>678,600</b>	<b>677,300</b>	<b>666,000</b>
<b>RBC</b>	338%	333%	324%	312%	306%	287%
<b>Debt Ratio</b>	35%	34%	34%	33%	33%	11%
<b>Variable Annuity</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
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	-	-	-	-	-	-
<b>Total Assets</b>	<b>2,243,200</b>	<b>2,585,500</b>	<b>2,975,600</b>	<b>3,590,700</b>	<b>4,386,700</b>	<b>5,559,800</b>
Statutory Reserves	2,086,200	2,417,400	2,797,100	3,398,700	4,198,300	5,385,700
<b>Total Liabilities</b>	<b>2,086,200</b>	<b>2,417,400</b>	<b>2,797,100</b>	<b>3,398,700</b>	<b>4,198,300</b>	<b>5,385,700</b>
<b>Statutory Equity</b>	<b>157,000</b>	<b>168,100</b>	<b>178,500</b>	<b>192,000</b>	<b>188,400</b>	<b>174,100</b>
<b>Universal Life</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
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	-	-	-	-	-	-
<b>Total Assets</b>	<b>1,929,200</b>	<b>2,001,900</b>	<b>2,102,300</b>	<b>2,237,100</b>	<b>2,406,800</b>	<b>2,617,100</b>
Statutory Reserves	1,820,000	1,897,500	2,002,200	2,140,700	2,314,200	2,528,600
<b>Total Liabilities</b>	<b>1,820,000</b>	<b>1,897,500</b>	<b>2,002,200</b>	<b>2,140,700</b>	<b>2,314,200</b>	<b>2,528,600</b>
<b>Statutory Equity</b>	<b>109,200</b>	<b>104,400</b>	<b>100,100</b>	<b>96,400</b>	<b>92,600</b>	<b>88,500</b>

<b>Traditional Life</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Cash, Invested and Other Assets	936,000	966,100	1,005,700	1,050,500	1,101,500	1,158,100
Deferred Tax Asset						
<b>Total Assets</b>	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
<b>Total Liabilities</b>	900,000	928,900	967,000	1,010,100	1,059,100	1,113,500
<b>Statutory Equity</b>	36,000	37,200	38,700	40,400	42,400	44,600
<b>Term</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Cash, Invested and Other Assets	442,000	478,800	530,000	598,600	687,600	798,700
Deferred Tax Asset						
<b>Total Assets</b>	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
<b>Total Liabilities</b>	425,000	460,400	509,600	575,500	661,100	768,000
<b>Statutory Equity</b>	17,000	18,400	20,400	23,100	26,500	30,700
<b>Other</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
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						
<b>Total Assets</b>	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
<b>Total Liabilities</b>	6,000,000	6,011,800	6,023,100	6,035,200	6,047,600	6,060,700
<b>Statutory Equity</b>	300,000	300,500	301,100	301,700	302,400	303,100
<b>Corp</b>	250,000	250,000	250,000	250,000	250,000	100,000

### Asset Durations (as of Dec 31, 2017)

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

### Debt Issuance

<b>Issue</b>	<b>Issue Date</b>	<b>Maturity Date</b>	<b>Rate</b>	<b>Face Amount</b>
Senior notes issue	1 Mar 2003	1 Mar 2018	8.50%	150,000
Senior notes issue	15 Jun 2013	15 Jun 2033	7.00%	75,000

### EXHIBIT 3 Sensitivity Tests

#### Term Sensitivities (in 000s)

<b>Baseline</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Sales	21,400	22,700	24,100	25,600	27,200
GAAP Earnings: In force	7,100	6,900	7,100	6,300	5,100
GAAP Earnings: New Business	15,500	17,000	16,400	26,200	28,000
GAAP Total Earnings	22,600	23,900	23,500	32,500	33,100
Statutory Capital	23,100	26,500	30,700	33,765	34,294
<b>Lapse Up 15%</b>					
Sales	21,400	22,700	24,100	25,600	27,200
GAAP Earnings: In force	7,455	7,935	8,875	8,505	7,395
GAAP Earnings: New Business	15,190	15,470	13,776	20,174	19,600
GAAP Total Earnings	22,645	23,405	22,651	28,679	26,995
Statutory Capital	22,638	25,175	27,630	28,363	26,749
<b>Lapse Down 15%</b>					
Sales	21,400	22,700	24,100	25,600	27,200
GAAP Earnings: In force	7,455	5,865	4,615	2,835	1,275
GAAP Earnings: New Business	15,190	16,830	16,400	26,462	28,560
GAAP Total Earnings	22,645	22,695	21,015	29,297	29,835
Statutory Capital	23,793	28,090	33,463	38,154	40,124
<b>Sales Up 15%</b>					
Sales	24,610	26,105	27,715	29,440	31,280
GAAP Earnings: In force	7,100	6,900	7,100	6,300	5,100
GAAP Earnings: New Business	17,825	19,550	18,860	30,130	32,200
GAAP Total Earnings	24,925	26,450	25,960	36,430	37,300
Statutory Capital	23,562	28,090	33,770	38,830	40,810
<b>Sales Down 15%</b>					
Sales	18,190	19,295	20,485	21,760	23,120
GAAP Earnings: In force	7,100	6,900	7,100	6,300	5,100
GAAP Earnings: New Business	13,175	14,450	13,940	22,270	23,800
GAAP Total Earnings	20,275	21,350	21,040	28,570	28,900
Statutory Capital	22,638	25,175	27,630	28,363	26,749

## Variable Annuity Sensitivities (in 000s)

<b>Baseline</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Sales	1,000,000	1,280,000	1,750,000	2,100,000	2,520,000
GAAP Earnings: In force	17,400	17,900	18,200	18,900	19,200
GAAP Earnings: New Business	5,800	14,350	30,500	39,500	50,900
GAAP Total 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
GAAP Earnings: In force	24,000	25,000	25,900	27,200	28,200
GAAP Earnings: New Business	5,800	14,350	30,500	39,500	50,900
GAAP Total Earnings	29,800	39,350	56,400	66,700	79,100
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
GAAP Earnings: In force	10,800	10,800	10,500	10,600	10,200
GAAP Earnings: New Business	5,800	14,350	30,500	39,500	50,900
GAAP Total Earnings	16,600	25,150	41,000	50,100	61,100
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
GAAP Earnings: In force	17,400	17,900	18,200	18,900	19,200
GAAP Earnings: New Business	26,700	37,100	56,000	67,200	80,600
GAAP Total Earnings	44,100	55,000	74,200	86,100	99,800
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
GAAP Earnings: In force	17,400	17,900	18,200	18,900	19,200
GAAP Earnings: New Business	19,720	27,413	41,395	49,640	59,585
GAAP Total Earnings	37,120	45,313	59,595	68,540	78,785
Statutory Capital	193,500	191,820	180,145	187,495	194,875

**EXHIBIT 4**  
**Financial Data: Inforce Statistic Projections**

<b>Total</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Death Benefit Inforce (in 000's)	103,119,763	105,583,877	108,447,334	120,000,000	127,697,000	134,299,000
Policy Contract Count	303,125	332,458	364,656	400,000	420,400	441,844
<b>Variable Annuity</b>						
Death Benefit Inforce (in 000's)	12,355,000	11,843,000	11,519,000	18,000,000	17,297,000	18,055,000
Policy Contract Count	30,053	33,058	36,364	40,000	42,000	44,100
<b>Universal Life</b>						
Death Benefit Inforce (in 000's)	51,830,256	54,421,769	57,142,857	60,000,000	64,800,000	69,984,000
Policy Contract Count	32,652	34,938	37,383	40,000	42,400	44,944
<b>Traditional Life</b>						
Death Benefit Inforce (in 000's)	28,571,000	28,571,000	28,571,000	30,000,000	32,400,000	32,400,000
Policy Contract Count	75,131	82,645	90,909	100,000	105,000	110,250
<b>Term</b>						
Death Benefit Inforce (in 000's)	4,807,507	5,192,108	5,607,477	6,000,000	6,600,000	7,260,000
Policy Contract Count	150,263	165,289	181,818	200,000	210,000	220,500
<b>Other</b>						
Death Benefit Inforce (in 000's)	5,556,000	5,556,000	5,607,000	6,000,000	6,600,000	6,600,000
Policy Contract Count	15,026	16,529	18,182	20,000	21,000	22,050