A Strategic Risk Analysis

for

Sample Company

Prepared by

SIGMA Actuarial Consulting Group, Inc.

Strategic Risk Analysis
for the purposes of
Analyzing Surplus Requirements
for
Sample Company
by
SIGMA Actuarial Consulting Group, Inc.

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Purpose

The purpose of this analysis is to advise the Board of *Sample Company* regarding the surplus needed to stabilize the cost of property and casualty insurance. *Sample Company*, a captive insurance company, writes the property and casualty coverage for an affinity group with operations in the United States.

To establish a surplus policy, the following issues must be addressed:

- How much surplus is needed to support the existing base of insureds?
- What are reasonable benchmarks based on insurance industry standards?
- How much will be needed over the next few years if:
    - Claims experience is consistent with recent years?
    - Claims experience varies, up or down, from current projections?
- How will a dividend program affect the amount of surplus?
- How will surplus be affected in case of unforeseen events such as:
    - Claims expenses in excess of reasonably expected variations?
    - Calamitous events like the loss of reinsurance, or changes in legal climates?

These questions will be addressed using SIGMA's *Strategic Risk Analysis (SRA)*. The *SRA* includes a financial forecast that measures the sensitivity of surplus to variations in the retained losses, operating expenses and other variables. The range of forecasts in the *SRA* will provide the quantitative support for the Board's decisions.

Qualifying Statements

1. We have relied without audit or verification on historical data and qualitative information supplied by *Sample Company*. It is our understanding we have been provided with all information which would materially affect the analysis, and that all information furnished to us has been accurate and complete.

2. We have assumed there are no factors which would cause patterns in the financial statements provided to be unrepresentative of the current or future situation.

3. The *SRA* is based on financial statement projections using input from *Sample Company*'s financial statements, and assumptions developed in conjunction with *Sample Company's* management.

4. The *SRA* is intended for use as a planning model. The forecasts can be refined based on changes in input data. The *SRA* can also be used in negotiations with underwriting partners and regulators to demonstrate the *Sample Company's* stability under a variety of loss and expense structures.

This report should be released only in its entirety. SIGMA's staff will be available for consultation should any individual reviewing this report have questions or require further analysis.

Definition and Uses of Surplus

Surplus is the difference in total assets and total liabilities. This figure is net of premiums and losses ceded to reinsurers for losses excess of *Sample Company's* retentions.

For other entities, the difference in assets and liabilities can be known as *capital and surplus, policyholders' surplus,* or *paid in capital and retained earnings*. To be consistent with the terms used by *Sample Company*, the term *surplus* will be used throughout this report.

Surplus does not mean funds excess of those needed to pay expected losses and operating expenses. Instead, *surplus* should be viewed as a factor in supporting the operations by:

- Cushioning against claims expenses excess of those accrued for expected losses (This is demonstrated in the variable loss scenarios in the SRA)
- Supporting programs like the dividends that share operating profits and lower the cost of risk for all the insureds of *Sample Company*
- Increasing retentions if warranted by market conditions
- Writing additional lines of coverage
- Subsidizing premiums when predatory competitors threaten the base of insureds.

Establishing Goals for Surplus

Sample Company is a captive insurance company formed to provide a risk sharing mechanism for the members of the affinity group. It files financial statements and plans of risk management with its domicile's regulators, but is not regulated in the same manner as a commercial insurer. The National Association of Insurance Commissioners provides guidelines for surplus and other financial measurements for commercial insurance companies. The state insurance commissioners' roles include assuring the solvency of insurance companies licensed in their state. The commissioners use Insurance Regulatory Information Systems (IRIS) ratios and Risk Based Capital (RBC) requirements as guidelines for solvency and financial strength to assure that policyholders' claims will be paid. The benchmarks set by *Sample Company's* domicile are sufficient to comply with licensing requirements, but might not be sufficient to fit *Sample Company's* risk profile. The Board of *Sample Company* needs to establish benchmarks that reflect its risk profile and growth objectives.

Goals

The first step in establishing a policy for *Surplus* is to set goals against which to measure the forecasts. The goals suggested in this report are based on standards used by state insurance commissioners to evaluate the solvency of regulated insurance companies.

Risk Based Capital

Risk Based Capital (*RBC*) sets out a minimum level of capital (*Surplus*) that will help maintain solvency and support the various risks assumed by an insurance company. *RBC* is estimated by actuarial formulae and reflects the level of risk the company has assumed. Specifically, *RBC* considers risks such as:

- Reserve development
- Rate adequacy
- Investment risk
- Credit risk (receivables from insureds and reinsurers)

The *RBC* estimate considers the mix of lines of business and the relative volatility of the reserves and loss potential associated with those coverages. The mix of equities and fixed income investments is a factor in the *RBC* estimate. The impact of ceded reinsurance and other credit risks is also considered.

It is important to understand that *RBC* is an estimate of the minimum capital needed to support a company's risk, **not** the recommended amount of *Surplus.*

When *RBC* is estimated for an insurance company, regulators will view this calculation and the amount of surplus held by the carrier in the following way:

Surplus as % of RBC estimate	**Regulatory action**
100% or greater	No action required
75-100%	Recommended that company take action to increase surplus
50-75%	Regulators will recommend steps to increase surplus
35-50%	Regulators are authorized to take control of the company
Under 35%	Regulators are **required** to take control of the company

RBC Adapted **for** ***Sample Company***

SIGMA estimated *Sample Company's RBC* based on the factors described in the previous section. Because *Sample Company* is not specifically required to file an NAIC annual statement, (also known as a yellow blank or book) this is not a formal *RBC* calculation. The calculation for *Sample Company* will be referred to as *Adapted RBC.*

Based on the forecast as of June 30, 2013, the *Adapted RBC* estimate for *Sample Company* is $11 million. The *Surplus* is $13.8 million or approximately 125% of the *Adapted RBC* estimate.

There is no firm rule concerning the "target" relation of surplus to the *RBC* amount calculated. The $11 million should be viewed as the minimum *Surplus* needed based on RBC standards. *Sample Company* should maintain surplus excess of the minimum. This helps withstand the impact of adverse events such as unexpected losses, loss of reinsurance, or loss of part of the investment portfolio.

Consideration should also be given to the risk appetite of *Sample Company,* particularly as it relates to assessments or other surplus raising mechanisms that would need to be implemented should the *Surplus* approach the *Adapted RBC* figure.

For companies required to file an NAIC annual statement, *RBC* is calculated each year-end as part of the financial statement filing process. The *RBC* amount for a company should not change significantly from year to year **IF** the company's risk profile is stable. If a company makes a significant change such as writing a new line of business or retaining additional exposure, the calculated *RBC* and implied surplus need will likely increase. It makes sense that the *RBC* amount would increase in these situations. The company is taking more risk and needs more surplus to support the additional risk. Should the risk profile for *Sample Company* change, the *Adapted RBC* amount should be re-calculated.

Net Written Premium: Surplus

Net Written Premium: Surplus is a traditional measure of leverage for an insurance company. The goal of this statistic is identify the amount of surplus needed to support existing and future premiums. The benchmark for the *SRA* for *Sample Company* is 2: 1; i.e., Net Written Premiums should not be more than twice the surplus.

Reserves: Surplus

Another goal for *Surplus* is the ratio of net unpaid loss reserves to *Surplus*. This is important because unexpected increases in the reserves could cause declines in surplus. The goal used for *Reserves to Surplus* is 3.00; i.e., reserves should not be more than three times the *Surplus*.

Summary of Goals

Goals for the SRA will be:

Adapted RBC - $11,049,206 as of June 30, 2013. This figure is increased two percent per year after that. This assumes no significant changes in *Sample Company's* operating philosophy going forward. This is consistent with other assumptions within the SRA.

Net Written Premium: Surplus—Less than 2: 1

Reserves: Surplus - Less than 3.00.

Assumptions

Variable Claims Experience

The most variable element of risk for *Sample Company* is the amount of retained losses. Future losses are estimated using actuarial techniques supported by historical claims and exposure data. While these techniques, and the supporting data, are sound, they will likely vary from the forecasted amount because of the fortuitous nature of property and casualty claims. The amounts by which they can vary, the *volatility,* is different for each line of coverage. For example, forecasts for automobile physical damage will be much less volatile than the estimates for property or workers compensation. The unique nature of each line of coverage and the relative mix of the risks must be considered when estimating the effect of variable claims costs on *Surplus*.

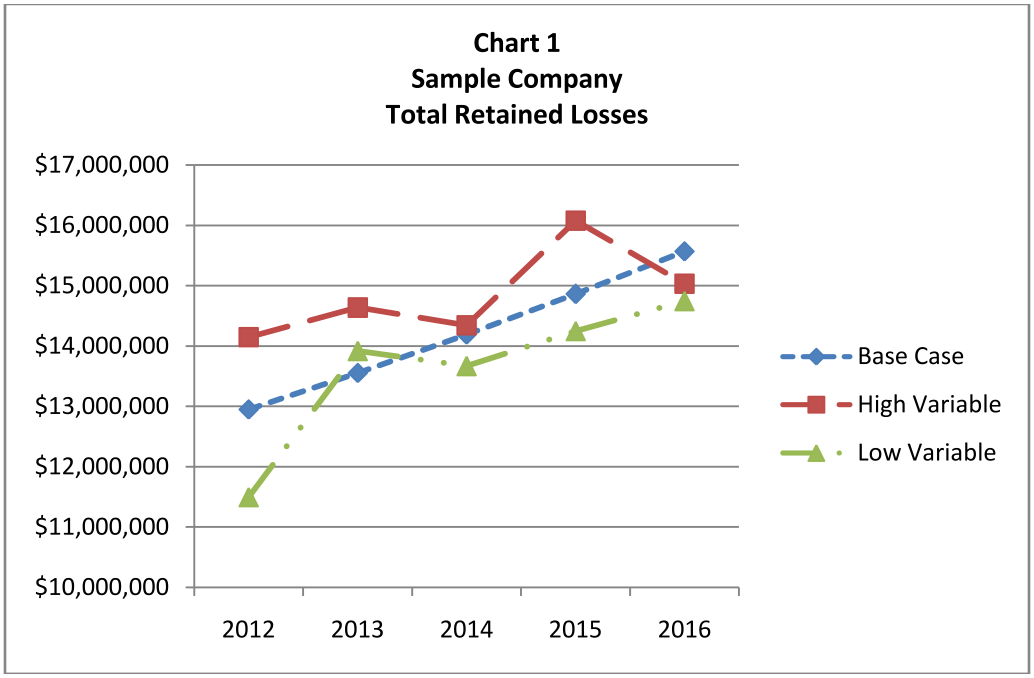
For the SRA, claims expenses were simulated to produce a range of claims based on the historical variability of *Sample Company's* retained losses. The losses were simulated 10,000 times for each line, for each of the five years, to produce an array of possible claims costs. The five years 2012-2016 were summed to create the range of total claims costs for the analysis.

Three claims cost scenarios were used in the first phase of the forecasts:

- *Base Case*
- *High Variable, and*
- *Low Variable*

The *Base Case* scenario assumes each year's loss experience will be "expected" or equal to the annual forecast. Actual losses will vary from the "expected" number. The *Low Variable* and *High Variable* scenarios represent the 10^{th} and 90^{th} percentiles of the total five year losses, respectively. These scenarios show how the financial statements, **and** the *Surplus*, will be affected when the claims vary from the "expected" level. This range of losses is based on the historical variability of both the frequency and severity of *Sample Company's* claims history. This produces realistic forecasts of the surplus under a variety of loss conditions.

Chart 1 is a graph of the total annual retained losses for each scenario. This demonstrates the random nature of the claims costs. For example the total losses in the *Low Variable* are higher than the *Base Case* in 2013 and the losses in the *Base Case* are greater than the *High Variable* in 2016.



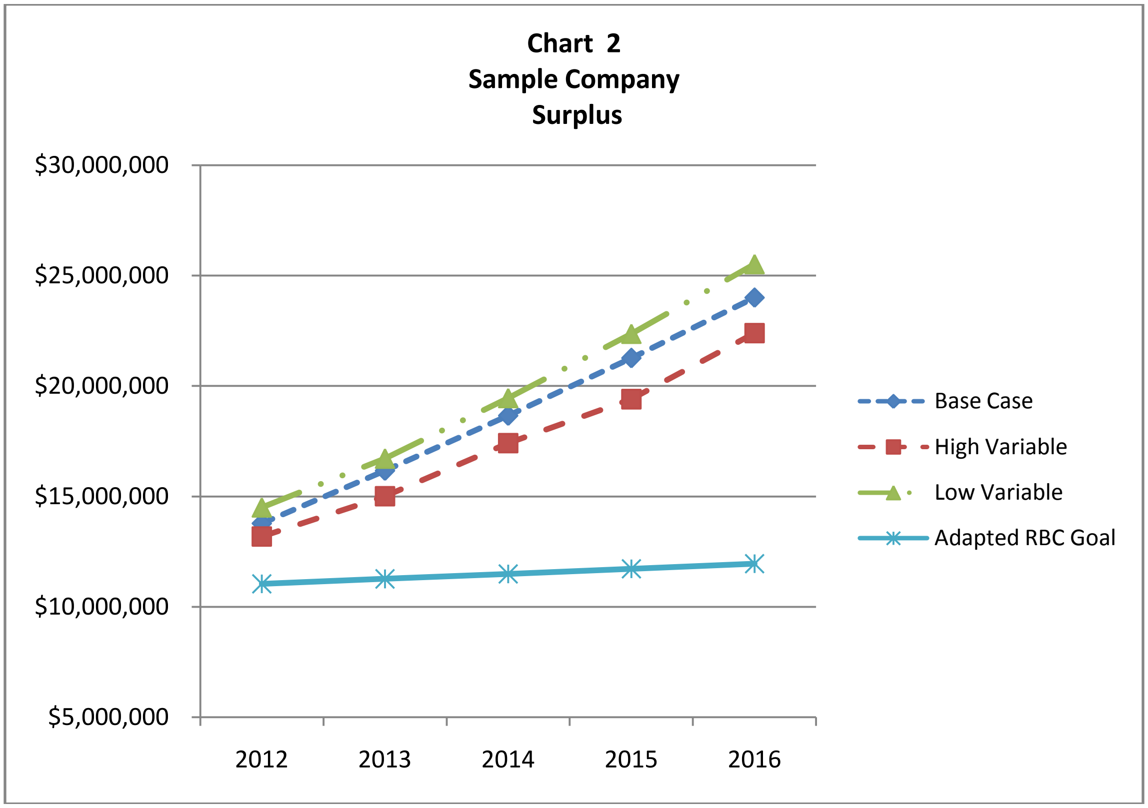
Total Retained Losses **Year beginning July 1**	2012	2013	2014	2015	2016
Base Case	$12,949,061	$13,553,293	$14,190,075	$14,861,372	$15,569,805
High Variable	$14,150,222	$14,639,652	$14,346,022	$16,078,509	$15,033,136
Low Variable	$11,498,410	$13,918,702	$13,668,718	$14,248,639	$14,746,322

Other Key Assumptions

Assumption	**Rationale**
Investment rate 2%	Two percent return on invested funds was used for the SRA forecasts because of the current and expected level of interest rates
Operating expenses	Increased two percent per year from the year end as of June 30, 2012
Surplus goal	$ 11,049,206, as of June 30, 2013. This goal is increased two percent per year to account for increase in exposures and claims costs.
Dividend Expense	50% of underwriting profit—(NWP minus claims and operating expenses) **Excludes investment income**

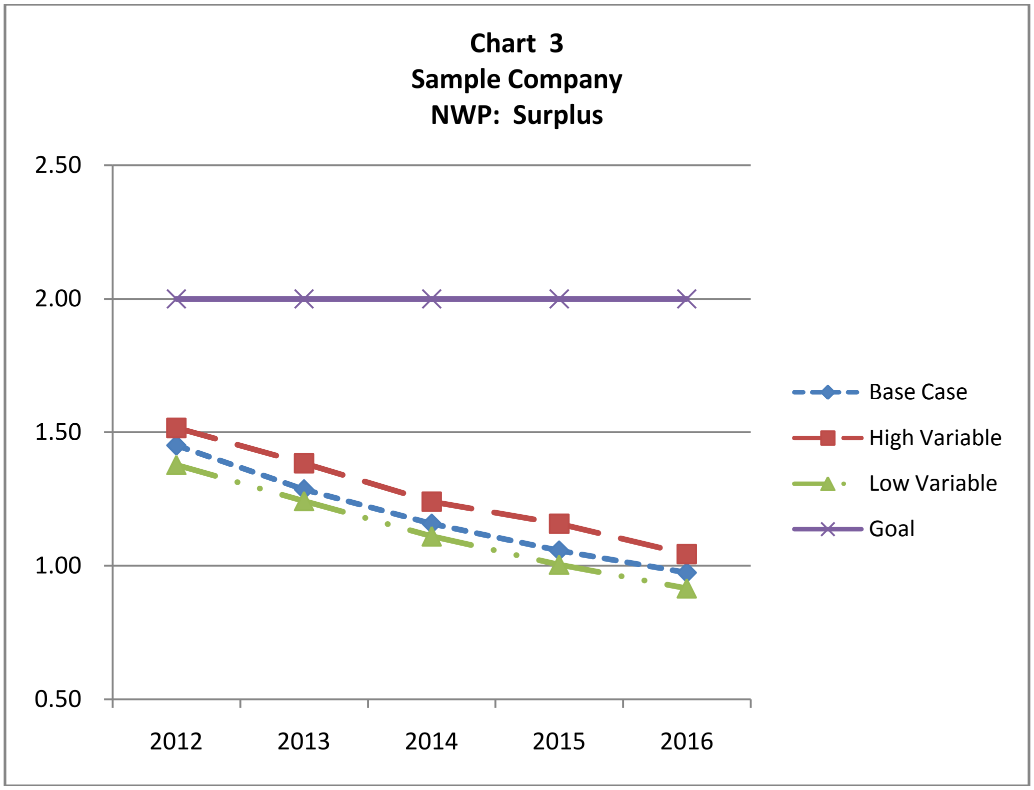
Analysis

Chart 2 shows that the *Surplus* exceeds the *Adapted RBC* goal in each year of the forecast. In these scenarios, the dividend is equal to fifty percent of underwriting profit. Thus, the accumulation of the remaining underwriting profit and investment income allows surplus to grow and exceed the goal.



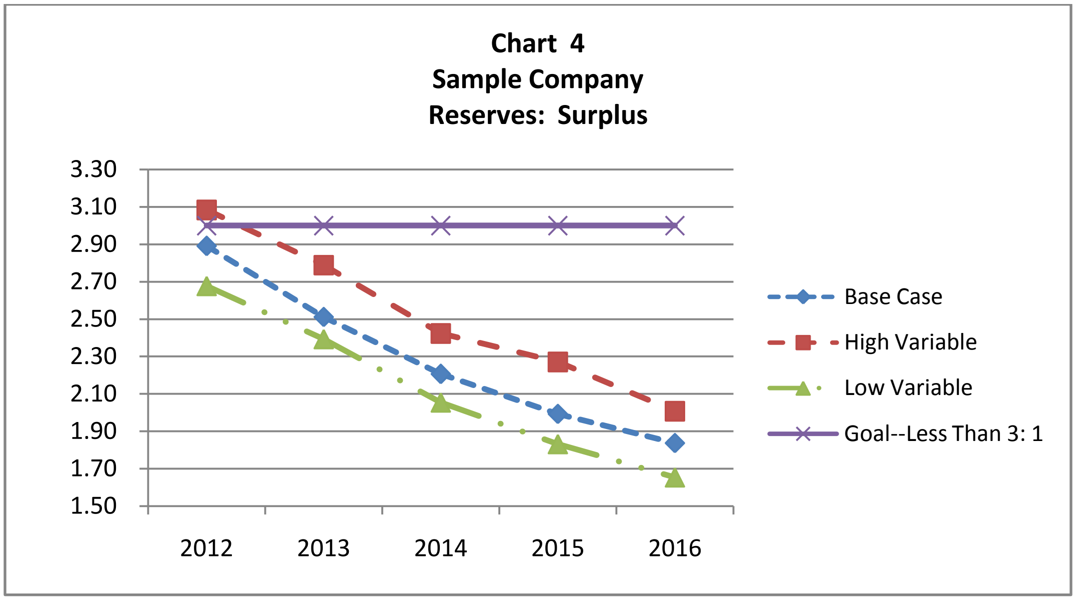
Surplus	**2012**	**2013**	**2014**	**2015**	**2016**
Base Case	$13,784,761	$16,165,852	$18,655,840	$21,263,850	$24,006,557
High Variable	$13,186,346	$15,015,840	$17,416,530	$19,411,192	$22,401,483
Low Variable	$14,507,347	$16,716,991	$19,460,115	$22,373,483	$25,527,697
Adapted RBC Goal	$11,049,206	$11,270,190	$11,495,594	$11,725,506	$11,960,016

Chart 3 shows that the NWP: *Surplus* goal of less than 2: 1 is attained in all years.



NWP: Surplus	2012	2013	2014	2015	2016
Base Case	1.45	1.29	1.16	1.06	0.97
High Variable	1.52	1.38	1.24	1.16	1.04
Low Variable	1.38	1.24	1.11	1.00	0.92
Goal	2.00	2.00	2.00	2.00	2.00

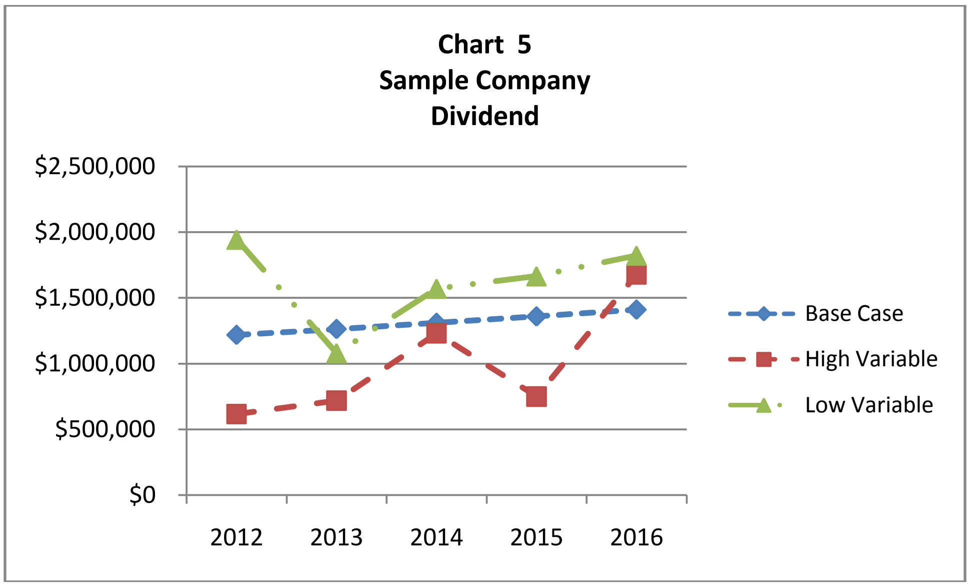
Chart 4 shows the *Reserves: Surplus* statistic for all scenarios.



Reserves: Surplus	2012	2013	2014	2015	2016
Base Case	2.89	2.51	2.21	1.99	1.84
High Variable	3.08	2.79	2.42	2.27	2.01
Low Variable	2.68	2.39	2.05	1.83	1.65
Goal--Less Than 3: 1	3.00	3.00	3.00	3.00	3.00

The goal is achieved in every year except 2012, in the High Variable Scenario. After 2012, the goal is achieved, even when retained losses are greater than expected.

The Dividend program is relatively new. It is intended to encourage the acceptance of adequate premiums and attention to loss control efforts. Dividends are paid annually to reinforce both the importance of profits and the service provided by *Sample Company*. Chart 5 Shows the Dividend expense, equal to fifty percent of underwriting profit for each year. For the five years, the total dividends range from $5 to $8 million, depending on the operating results for each year. This demonstrates that the forecasted operating results for *Sample Company* will support the dividend program, even when claims are greater than the expected amount. This expense is included in the forecasted income statements.



Dividend	2012	2013	2014	2015	2016	**Total**
Base Case	$1,218,859	$1,263,641	$1,310,479	$1,359,562	$1,411,026	$6,563,567
High Variable	$618,278	$720,462	$1,232,505	$750,993	$1,679,361	$5,001,600
Low Variable	$1,944,184	$1,080,937	$1,571,157	$1,665,928	$1,822,768	$8,084,975

Based on these projections, *Sample Company* will return between $5 and $8 million to its insureds in dividends over the five year period. This can be a valuable feature for attracting new insureds and retaining the existing customer base.

Summary of Variable Retained Loss Scenarios

As shown in the preceding charts, *Sample Company* should have sufficient surplus to serve its existing accounts. The established benchmarks are met even when losses vary reasonably from projected or "expected" losses.

It should be noted that the dividend formula does not include investment income. If investment income is less than the 2% assumed in the projections, surplus could be less than predicted.

Calamitous Events

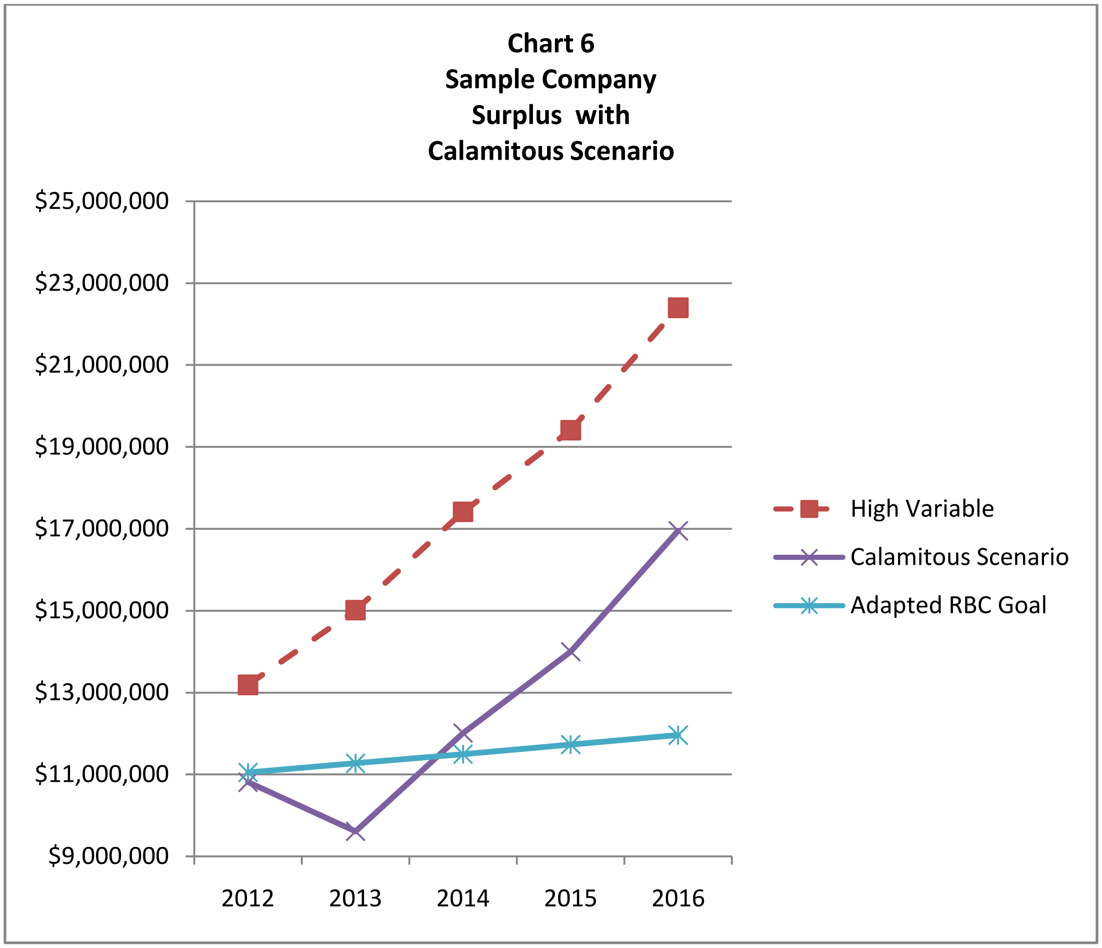
The forecasted surplus accumulation described above is dependent on losses being reasonably predictable. Surplus policy should also consider the possibility of costs that could reduce *Surplus* and impede the mission of *Sample Company*. In the SRA, these are called *Calamitous Events*—*random events that are potentially very costly and cannot be controlled.* A *Calamitous Event* could be:

- Adverse loss reserve development
- Claims that exceed the upper bounds of the scenarios
- Insolvency of a reinsurer
- Class action suits

The *Calamitous Events* examines the effect of two of these possibilities. In these forecasts, the following claims expenses were added to the *High Variable* scenario:

- In 2012 it is assumed that the casualty reinsurer became insolvent. Ceded reinsurance claims of $2 million were added to General Liability and $1 million to the automobile line.
- In 2013, $3.75 million in general liability claims were added due to a class action lawsuit

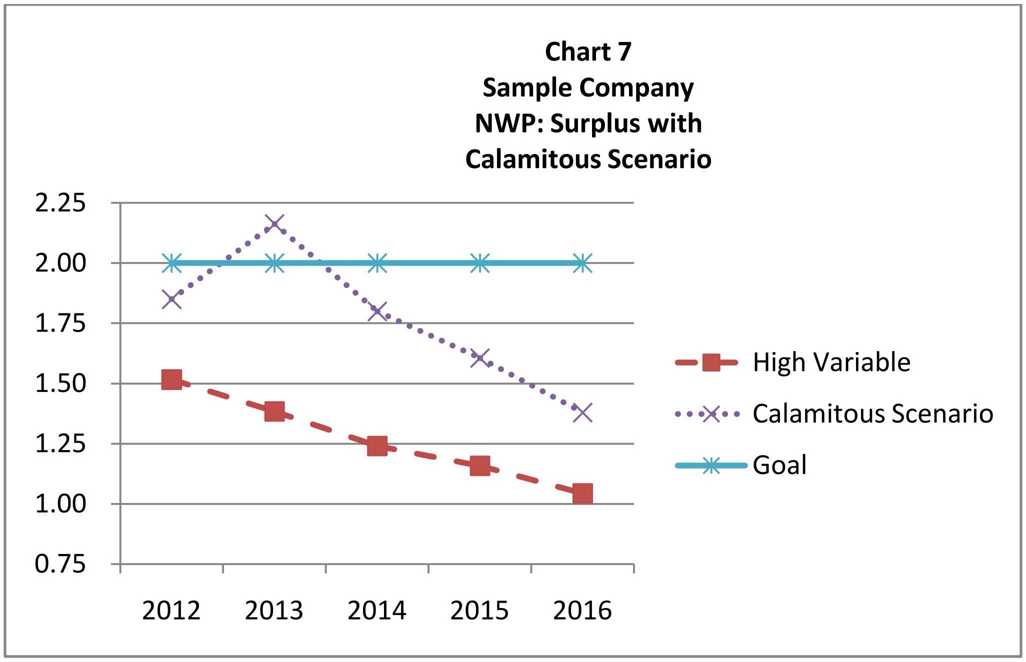
Chart 6 shows the estimated surplus in the *Calamitous* scenario compared to the *High Variable* and the *Adapted RBC* goal.



Surplus	2012	2013	2014	2015	2016
High Variable	$13,186,346	$15,015,840	$17,416,530	$19,411,192	$22,401,483
Calamitous Scenario	$10,809,450	$9,610,728	$12,008,219	$13,994,837	$16,948,796
Adapted RBC Goal	$11,049,206	$11,270,190	$11,495,594	$11,725,506	$11,960,016

The *Surplus* goal is not achieved in 2012 and 2013 in the *Calamitous Scenario*. *Surplus* begins to increase in 2014.

Chart 7 shows the NWP: Surplus estimates for the both the *High Variable* and *Calamitous* scenarios compared to the goal of 2: 1.



NWP: Surplus	2012	2013	2014	2015	2016
High Variable	1.52	1.38	1.24	1.16	1.04
Calamitous Scenario	1.85	2.16	1.80	1.61	1.38
Goal	2.00	2.00	2.00	2.00	2.00

The 2: 1 goal is not met in 2013, but recovers in 2014. The surplus goals were not met in all years in the *Calamitous* scenario, but were in subsequent years. These forecasts will help the board decide whether not meeting goals requires them to take action to build surplus or whether the forecast of recovered surplus give them enough comfort to not make any changes.

Summary and Recommendations

The forecasts in the *SRA* show that the current *Surplus* and expense structure will achieve surplus goals. When claims costs vary according to reasonably predictable patterns, the surplus goal is achieved. In the case of unforeseen events (*Calamitous* scenario), the goals are not met for one year, but the surplus recovers in a short time frame.

When formulating surplus policy, the Board should consider the possibility of a *Calamitous Event* and its effect on *Surplus*. The primary use of surplus for *Sample Company* is to stabilize the cost of risk by:

- Paying claims that exceed the accident year claims fund (this is demonstrated in the variable loss scenarios in the SRA)
- Supporting the dividend program to encourage safety and lower the cost of risk for all insureds
- Increasing retentions if market conditions warrant
- Writing additional lines of coverage
- Subsidizing premium contributions when predatory competitors threaten the membership

The *Surplus* should be sufficient to support these goals and to rebuild it in a reasonable time frame in the case of unexpected operating loss.

Appendix A - Income Statement and Balance Sheet - Base Case

INCOME STATEMENT
Sample Company - BASE Model

Year beginning July 01,	*2012*	*2013*	*2014*	*2015*	*2016*
Written Premium	25,615,476	26,622,320	27,678,486	28,787,025	29,951,696
Earned Premium	25,615,476	26,622,320	27,678,486	28,787,025	29,951,696
Reinsurance Charges	5,618,556	5,839,399	6,071,061	6,314,211	6,569,672
Net Earned Premium	19,996,920	20,782,921	21,607,425	22,472,815	23,382,024
Loss Experience:					
Paid Losses	11,856,452	12,803,068	13,633,034	13,647,123	13,826,445
Change in Loss Reserve	1,092,608	750,226	557,041	1,214,249	1,743,361
Loss & LAE Incurred	12,949,061	13,553,293	14,190,075	14,861,372	15,569,805
Underwriting Gain (Loss)	7,047,859	7,229,628	7,417,350	7,611,443	7,812,218
Underwriting Investment Income	811,875	841,754	856,191	875,332	906,404
Underwriting Profit	7,859,735	8,071,382	8,273,541	8,486,774	8,718,622
Operating Expenses:					
Brokerage fees	2,551,444	2,602,473	2,654,522	2,707,613	2,761,765
Administration	1,222,277	1,246,722	1,271,657	1,297,090	1,323,032
Dividend	1,218,859	1,263,641	1,310,479	1,359,562	1,411,026
Legal and Accounting	325,175	331,678	338,312	345,078	351,979
Office Expenses	179,769	183,365	187,032	190,773	194,588
Consulting and Professional Fees	141,007	143,827	146,704	149,638	152,631
Travel and Meeting Expense	60,871	62,088	63,330	64,597	65,889
Depreciation	52,134	53,176	54,240	55,325	56,431
Bad Debt	51,263	52,288	53,334	54,401	55,489
Other	26,203	26,727	27,261	27,807	28,363
Total Operating Expenses	5,829,001	5,965,986	6,106,871	6,251,881	6,401,192
Pretax Operating Income	2,030,734	2,105,396	2,166,670	2,234,893	2,317,430
Income on Capital	230,471	275,695	323,317	373,117	425,277
Net Income	2,261,205	2,381,091	2,489,987	2,608,010	2,742,707
Addition to Retained Earnings	2,261,205	2,381,091	2,489,987	2,608,010	2,742,707

BALANCE SHEET
Sample Company - BASE Model

Year beginning July 01,	*2012*	*2013*	*2014*	*2015*	*2016*
Assets:					
Cash and Cash Equivalents	20,486,735	23,662,834	26,756,700	30,628,042	35,165,574
Investments	34,378,815	34,378,815	34,378,815	34,378,815	34,378,815
	54,865,550	58,041,650	61,135,516	65,006,857	69,544,390
Accrued Interest and Dividends	297,552	297,552	297,552	297,552	297,552
Premiums Receivable	841,746	841,746	841,746	841,746	841,746
Reinsurance Recoverables	36,808	36,808	36,808	36,808	36,808
Furniture, Fixtures & Equipment	215,461	215,461	215,461	215,461	215,461
Prepaid Expenses and Other Assets	319,293	319,293	319,293	319,293	319,293
Total Assets	56,576,410	59,752,510	62,846,376	66,717,717	71,255,250
Liabilities:					
Loss Reserves	39,844,508	40,594,734	41,151,775	42,366,024	44,109,385
Adjustment Expense Reserve	178,826	178,826	178,826	178,826	178,826
Unearned Premium Reserve	454,252	454,252	454,252	454,252	454,252
Accounts Payable and Accrued Expenses	1,095,204	1,095,204	1,095,204	1,095,204	1,095,204
Dividend Payable	1,218,859	1,263,641	1,310,479	1,359,562	1,411,026
Total Liabilities	42,791,649	43,586,657	44,190,536	45,453,867	47,248,693
Capital:					
Retained Earnings	13,784,761	16,165,852	18,655,840	21,263,850	24,006,557
Surplus	13,784,761	16,165,852	18,655,840	21,263,850	24,006,557
Total Liabilities & Equity	56,576,410	59,752,510	62,846,376	66,717,717	71,255,250

Appendix B - Income Statement and Balance Sheet - High Variable Claims Expense

INCOME STATEMENT
Sample Company - HIGH VARIABLE Model

Year beginning July 01,	*2012*	*2013*	*2014*	*2015*	*2016*
Written Premium	25,615,476	26,622,320	27,678,486	28,787,025	29,951,696
Earned Premium	25,615,476	26,622,320	27,678,486	28,787,025	29,951,696
Reinsurance Charges	5,618,556	5,839,399	6,071,061	6,314,211	6,569,672
Net Earned Premium	19,996,920	20,782,921	21,607,425	22,472,815	23,382,024
Loss Experience:					
Paid Losses	12,240,476	13,424,347	14,021,404	14,198,677	14,141,523
Change in Loss Reserve	1,909,745	1,215,305	324,618	1,879,832	891,613
Loss & LAE Incurred	14,150,222	14,639,652	14,346,022	16,078,509	15,033,136
Underwriting Gain (Loss)	5,846,698	6,143,270	7,261,402	6,394,305	8,348,887
Underwriting Investment Income	814,041	845,305	867,868	895,338	922,706
Underwriting Profit	6,660,739	6,988,574	8,129,270	7,289,643	9,271,594
Operating Expenses:					
Brokerage fees	2,551,444	2,602,473	2,654,522	2,707,613	2,761,765
Administration	1,222,277	1,246,722	1,271,657	1,297,090	1,323,032
Dividend	618,278	720,462	1,232,505	750,993	1,679,361
Legal and Accounting	325,175	331,678	338,312	345,078	351,979
Office Expenses	179,769	183,365	187,032	190,773	194,588
Consulting and Professional Fees	141,007	143,827	146,704	149,638	152,631
Travel and Meeting Expense	60,871	62,088	63,330	64,597	65,889
Depreciation	52,134	53,176	54,240	55,325	56,431
Bad Debt	51,263	52,288	53,334	54,401	55,489
Other	26,203	26,727	27,261	27,807	28,363
Total Operating Expenses	5,228,420	5,422,807	6,028,897	5,643,312	6,669,527
Pretax Operating Income	1,432,319	1,565,767	2,100,373	1,646,331	2,602,067
Income on Capital	230,471	263,727	300,317	348,331	388,224
Net Income	1,662,790	1,829,494	2,400,690	1,994,662	2,990,291
Addition to Retained Earnings	1,662,790	1,829,494	2,400,690	1,994,662	2,990,291

BALANCE SHEET
Sample Company - HIGH VARIABLE Model

Year beginning July 01,	*2012*	*2013*	*2014*	*2015*	*2016*
Assets:					
Cash and Cash Equivalents	20,104,876	23,251,859	26,489,211	29,882,192	34,692,464
Investments	34,378,815	34,378,815	34,378,815	34,378,815	34,378,815
	54,483,692	57,630,675	60,868,026	64,261,007	69,071,279
Accrued Interest and Dividends	297,552	297,552	297,552	297,552	297,552
Premiums Receivable	841,746	841,746	841,746	841,746	841,746
Reinsurance Recoverables	36,808	36,808	36,808	36,808	36,808
Furniture, Fixtures & Equipment	215,461	215,461	215,461	215,461	215,461
Prepaid Expenses and Other Assets	319,293	319,293	319,293	319,293	319,293
Total Assets	56,194,552	59,341,535	62,578,886	65,971,867	70,782,139
Liabilities:					
Loss Reserves	40,661,645	41,876,950	42,201,569	44,081,400	44,973,014
Adjustment Expense Reserve	178,826	178,826	178,826	178,826	178,826
Unearned Premium Reserve	454,252	454,252	454,252	454,252	454,252
Accounts Payable and Accrued Expenses	1,095,204	1,095,204	1,095,204	1,095,204	1,095,204
Dividend Payable	618,278	720,462	1,232,505	750,993	1,679,361
Total Liabilities	43,008,205	44,325,695	45,162,356	46,560,675	48,380,656
Capital:					
Retained Earnings	13,186,346	15,015,840	17,416,530	19,411,192	22,401,483
Surplus	13,186,346	15,015,840	17,416,530	19,411,192	22,401,483
Total Liabilities & Equity	56,194,552	59,341,535	62,578,886	65,971,867	70,782,139

Appendix C - Income Statement and Balance Sheet - Low Variable Claims Expense

INCOME STATEMENT
Sample Company - LOW VARIABLE Model

Year beginning July 01,	*2012*	*2013*	*2014*	*2015*	*2016*
Written Premium	25,615,476	26,622,320	27,678,486	28,787,025	29,951,696
Earned Premium	25,615,476	26,622,320	27,678,486	28,787,025	29,951,696
Reinsurance Charges	5,618,556	5,839,399	6,071,061	6,314,211	6,569,672
Net Earned Premium	19,996,920	20,782,921	21,607,425	22,472,815	23,382,024
Loss Experience:					
Paid Losses	11,405,110	12,757,302	13,687,052	13,244,554	13,522,788
Change in Loss Reserve	93,300	1,161,400	(18,333)	1,004,085	1,223,534
Loss & LAE Incurred	11,498,410	13,918,702	13,668,718	14,248,639	14,746,322
Underwriting Gain (Loss)	8,498,510	6,864,219	7,938,706	8,224,175	8,635,702
Underwriting Investment Income	809,135	838,559	837,627	858,237	883,977
Underwriting Profit	9,307,645	7,702,779	8,776,334	9,082,413	9,519,679
Operating Expenses:					
Brokerage fees	2,551,444	2,602,473	2,654,522	2,707,613	2,761,765
Administration	1,222,277	1,246,722	1,271,657	1,297,090	1,323,032
Dividend	1,944,184	1,080,937	1,571,157	1,665,928	1,822,768
Legal and Accounting	325,175	331,678	338,312	345,078	351,979
Office Expenses	179,769	183,365	187,032	190,773	194,588
Consulting and Professional Fees	141,007	143,827	146,704	149,638	152,631
Travel and Meeting Expense	60,871	62,088	63,330	64,597	65,889
Depreciation	52,134	53,176	54,240	55,325	56,431
Bad Debt	51,263	52,288	53,334	54,401	55,489
Other	26,203	26,727	27,261	27,807	28,363
Total Operating Expenses	6,554,326	5,783,282	6,367,549	6,558,247	6,812,934
Pretax Operating Income	2,753,320	1,919,497	2,408,785	2,524,165	2,706,745
Income on Capital	230,471	290,147	334,340	389,202	447,470
Net Income	2,983,791	2,209,644	2,743,125	2,913,367	3,154,215
Addition to Retained Earnings	2,983,791	2,209,644	2,743,125	2,913,367	3,154,215

BALANCE SHEET
Sample Company - LOW VARIABLE Model

Year beginning July 01,	*2012*	*2013*	*2014*	*2015*	*2016*
Assets:					
Cash and Cash Equivalents	20,935,337	23,443,134	26,658,145	30,670,369	35,204,957
Investments	34,378,815	34,378,815	34,378,815	34,378,815	34,378,815
	55,314,152	57,821,949	61,036,961	65,049,184	69,583,773
Accrued Interest and Dividends	297,552	297,552	297,552	297,552	297,552
Premiums Receivable	841,746	841,746	841,746	841,746	841,746
Reinsurance Recoverables	36,808	36,808	36,808	36,808	36,808
Furniture, Fixtures & Equipment	215,461	215,461	215,461	215,461	215,461
Prepaid Expenses and Other Assets	319,293	319,293	319,293	319,293	319,293
Total Assets	57,025,012	59,532,809	62,747,821	66,760,044	71,294,633
Liabilities:					
Loss Reserves	38,845,200	40,006,599	39,988,266	40,992,352	42,215,886
Adjustment Expense Reserve	178,826	178,826	178,826	178,826	178,826
Unearned Premium Reserve	454,252	454,252	454,252	454,252	454,252
Accounts Payable and Accrued Expenses	1,095,204	1,095,204	1,095,204	1,095,204	1,095,204
Dividend Payable	1,944,184	1,080,937	1,571,157	1,665,928	1,822,768
Total Liabilities	42,517,665	42,815,819	43,287,706	44,386,562	45,766,936
Capital:					
Retained Earnings	14,507,347	16,716,991	19,460,115	22,373,483	25,527,697
Surplus	14,507,347	16,716,991	19,460,115	22,373,483	25,527,697
Total Liabilities & Equity	57,025,012	59,532,809	62,747,821	66,760,044	71,294,633

Appendix D - Income Statement and Balance Sheet - Calamitous Scenario

INCOME STATEMENT
Sample Company - CALAMITOUS SCENARIO Model

Year beginning July 01,	*2012*	*2013*	*2014*	*2015*	*2016*
Written Premium	25,615,476	26,622,320	27,678,486	28,787,025	29,951,696
Earned Premium	25,615,476	26,622,320	27,678,486	28,787,025	29,951,696
Reinsurance Charges	5,618,556	5,839,399	6,071,061	6,314,211	6,569,672
Net Earned Premium	19,996,920	20,782,921	21,607,425	22,472,815	23,382,024
Loss Experience:					
Paid Losses	12,376,168	13,750,969	14,665,498	15,473,604	15,679,289
Change in Loss Reserve	4,774,054	4,638,682	(319,476)	604,905	(646,153)
Loss & LAE Incurred	17,150,222	18,389,652	14,346,022	16,078,509	15,033,136
Underwriting Gain (Loss)	2,846,698	2,393,270	7,261,402	6,394,305	8,348,887
Underwriting Investment Income	818,867	894,164	972,771	995,461	994,702
Underwriting Profit	3,665,565	3,287,433	8,234,174	7,389,766	9,343,589
Operating Expenses:					
Brokerage fees	2,551,444	2,602,473	2,654,522	2,707,613	2,761,765
Administration	1,222,277	1,246,722	1,271,657	1,297,090	1,323,032
Dividend	-	-	1,232,505	750,993	1,679,361
Legal and Accounting	325,175	331,678	338,312	345,078	351,979
Office Expenses	179,769	183,365	187,032	190,773	194,588
Consulting and Professional Fees	141,007	143,827	146,704	149,638	152,631
Travel and Meeting Expense	60,871	62,088	63,330	64,597	65,889
Depreciation	52,134	53,176	54,240	55,325	56,431
Bad Debt	51,263	52,288	53,334	54,401	55,489
Other	26,203	26,727	27,261	27,807	28,363
Total Operating Expenses	4,610,142	4,702,345	6,028,897	5,643,312	6,669,527
Pretax Operating Income	(944,577)	(1,414,912)	2,205,277	1,746,454	2,674,063
Income on Capital	230,471	216,189	192,215	240,164	279,897
Net Income	(714,106)	(1,198,723)	2,397,491	1,986,618	2,953,959
Addition to Retained Earnings	(714,106)	(1,198,723)	2,397,491	1,986,618	2,953,959

BALANCE SHEET
Sample Company - CALAMITOUS SCENARIO Model

Year beginning July 01,	*2012*	*2013*	*2014*	*2015*	*2016*
Assets:					
Cash and Cash Equivalents	19,974,011	23,413,970	26,724,492	28,834,502	32,070,677
Investments	34,378,815	34,378,815	34,378,815	34,378,815	34,378,815
	54,352,826	57,792,786	61,103,307	63,213,318	66,449,492
Accrued Interest and Dividends	297,552	297,552	297,552	297,552	297,552
Premiums Receivable	841,746	841,746	841,746	841,746	841,746
Reinsurance Recoverables	36,808	36,808	36,808	36,808	36,808
Furniture, Fixtures & Equipment	215,461	215,461	215,461	215,461	215,461
Prepaid Expenses and Other Assets	319,293	319,293	319,293	319,293	319,293
Total Assets	56,063,686	59,503,646	62,814,167	64,924,178	68,160,352
Liabilities:					
Loss Reserves	43,525,954	48,164,636	47,845,161	48,450,066	47,803,913
Adjustment Expense Reserve	178,826	178,826	178,826	178,826	178,826
Unearned Premium Reserve	454,252	454,252	454,252	454,252	454,252
Accounts Payable and Accrued Expenses	1,095,204	1,095,204	1,095,204	1,095,204	1,095,204
Dividend Payable	0	0	1,232,505	750,993	1,679,361
Total Liabilities	45,254,236	49,892,918	50,805,948	50,929,341	51,211,556
Capital:					
Retained Earnings	10,809,450	9,610,728	12,008,219	13,994,837	16,948,796
Surplus	10,809,450	9,610,728	12,008,219	13,994,837	16,948,796
Total Liabilities & Equity	56,063,686	59,503,646	62,814,167	64,924,178	68,160,352