

DELAWARE COMPENSATION RATING BUREAU, INC.

Internal Rate Of Return Model

The attached pages present exhibits and a description of the internal rate of return model used in deriving the Bureau's loss ratio (including loss adjustment expenses and loss based assessments) and provision for profit and contingencies.

## **DELAWARE COMPENSATION RATING BUREAU, INC.**

### **DELAWARE LOSS COST FILING**

#### **Internal Rate of Return Analysis**

The following pages present results of an economic analysis establishing the following items:

- The appropriate rate of return for writing workers compensation business, and
- The loss ratio (including loss adjustment expenses and loss-based assessments) which will allow the realization of that target rate of return in current economic conditions, based on current expense needs for stock carriers and cash flows for losses and expenses attendant with Delaware workers compensation insurance.

Internal Rate of Return Table I shows Inputs, Assumptions and Outputs underlying the analysis.

Internal Rate of Return Tables II - VII show the various cash flows projected for the underwriting of Delaware workers compensation business based on the inputs to the Internal Rate of Return model, assuming a base standard premium at Bureau level of \$1 million.

Exhibits titled "Delaware Pre & Post Tax Returns" and "Delaware Cost of Capital" present the derivation of the appropriate current target rate of return, which is 9.14 percent. Both Capital Asset Pricing Model ("CAPM") and Discounted Cash Flow ("DCF") analyses have been applied to the derivation of this target rate, producing results of 9.15 and 9.13 percent respectively. The selected target rate of return, 9.14 percent, is the average of these two separate indications.

INTERNAL RATE OF RETURN ANALYSIS  
STATE OF DELAWARE  
TABLE I: INPUTS, ASSUMPTIONS & OUTPUTS

Section 1: Inputs & Assumptions		
(1) Commissions *		6.94
(2) Other Expenses		6.24
(2A)	Other Acquisitions *	2.03
(2B)	General Expenses *	3.83
(2C)	Other Tax **	0.38
(3) State Premium Taxes		
(3A)	Tax1 - Premium Tax **	2.00
(3B)	Tax2 - None	0.00
(3C)	Tax3 - Workers Compensation Fund **	4.50
(4) Premium Discount ***		10.42
(5) Deviations		0.00
(6) Dividends to Policyholders		0.00
(7) Premium Written		1,000,000
(8) Premium Collected		895,800
Investment Income		
(9A)	Pre-Tax Return on Assets	4.90
(9B)	Investment Income Tax Rate	1.11
(9C)	Post-Tax Return on Assets	3.79
(10) Reserve to Surplus Ratio		2.87
(11) Internal Rate of Return (Cost of Capital)		9.14
* Applies to standard premium at Bureau level (before premium discount)		
** Applies to net premium at company level ( after deviations and premium discounts)		
*** Applies to standard premium at company level (after deviations)		

Section 2: Outputs	
(1) Loss Ratio - including loss adjustment expense & loss based assessments	73.47
(2) Profit & Contingencies	-3.57

**INTERNAL RATE OF RETURN ANALYSIS  
EXPLANATORY NOTES**

**TABLE II: CASH FLOW PATTERNS**

Column (1)	Premium Collection pattern provided by DCRB based on Delaware workers compensation data.
Column (2)	Policy Year Loss Payout pattern provided by DCRB based on Delaware workers compensation data.
Column (3)	Other Expense Payout pattern as follows: All expenses except Commission and 1/2 General Expense flowing with earned premium. Commission flows with collected premium, and 1/2 General Expense flows with written premium.
Column (4)	Tax 1 flow assumes even quarterly payment of state premium taxes.
Column (5)	No tax 2 provision is included in this IRR model.
Column (6)	Tax 3 flow assumes even quarterly payment of Security Fund assessments.
Column (7)	No dividend provision is included in this IRR model.

INTERNAL RATE OF RETURN ANALYSIS  
STATE OF DELAWARE

TABLE II: CASH FLOW PATTERNS

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
		POLICY YR						
TIME INTERVAL		PREMIUM	LOSS	OTHER	TAX1	TAX2	TAX3	DIVIDENDS
FROM	TO	COLLECTED	PAYOUT	EXPENSES				PAID
-1.00	-0.75	0.0000	0.0000	0.0000	0	0.0000	0	0
-0.75	-0.50	0.0003	0.0000	0.0000	0	0.0000	0	0
-0.50	-0.25	0.0008	0.0000	0.0000	0	0.0000	0	0
-0.25	0.00	0.0012	0.0000	0.0000	0	0.0000	0	0
0.00	0.25	0.2135	0.8090	22.4316	25	0.8090	25	0
0.25	0.50	3.3439	1.6180	19.7959	25	1.6180	25	0
0.50	0.75	9.0451	2.4270	21.5130	25	2.4270	25	0
0.75	1.00	14.4599	3.2360	20.9150	25	3.2360	25	0
1.00	1.25	20.9919	5.8875	6.7132	0	5.8875	0	0
1.25	1.50	16.3648	5.8875	4.7952	0	5.8875	0	0
1.50	1.75	13.6339	5.8875	2.8771	0	5.8875	0	25
1.75	2.00	9.1761	5.8875	0.9590	0	5.8875	0	25
2.00	2.25	4.9981	3.9350	0.0000	0	3.9350	0	25
2.25	2.50	2.7160	3.9350	0.0000	0	3.9350	0	25
2.50	2.75	1.8088	3.9350	0.0000	0	3.9350	0	0
2.75	3.00	0.9484	3.9350	0.0000	0	3.9350	0	0
3.00	3.25	0.5077	2.2775	0.0000	0	2.2775	0	0
3.25	3.50	0.3019	2.2775	0.0000	0	2.2775	0	0
3.50	3.75	0.1950	2.2775	0.0000	0	2.2775	0	0
3.75	4.00	0.1141	2.2775	0.0000	0	2.2775	0	0
4.00	4.25	0.0574	1.4300	0.0000	0	1.4300	0	0
4.25	4.50	0.0975	1.4300	0.0000	0	1.4300	0	0
4.50	4.75	0.1441	1.4300	0.0000	0	1.4300	0	0
4.75	5.00	0.1277	1.4300	0.0000	0	1.4300	0	0
5.00	6.00	0.0692	3.8700	0.0000	0	3.8700	0	0
6.00	7.00	0.1204	2.8100	0.0000	0	2.8100	0	0
7.00	8.00	0.2105	2.1600	0.0000	0	2.1600	0	0
8.00	9.00	0.1800	1.7500	0.0000	0	1.7500	0	0
9.00	10.00	0.0463	1.4900	0.0000	0	1.4900	0	0
10.00	11.00	0.0412	1.3200	0.0000	0	1.3200	0	0
11.00	12.00	0.0421	1.2000	0.0000	0	1.2000	0	0
12.00	13.00	0.0422	1.1100	0.0000	0	1.1100	0	0
13.00	14.00	0.0000	1.0600	0.0000	0	1.0600	0	0
14.00	15.00	0.0000	1.0100	0.0000	0	1.0100	0	0
15.00	16.00	0.0000	0.9800	0.0000	0	0.9800	0	0
16.00	17.00	0.0000	0.9600	0.0000	0	0.9600	0	0
17.00	18.00	0.0000	0.9400	0.0000	0	0.9400	0	0
18.00	19.00	0.0000	0.9200	0.0000	0	0.9200	0	0
19.00	20.00	0.0000	0.9000	0.0000	0	0.9000	0	0
20.00	21.00	0.0000	0.8900	0.0000	0	0.8900	0	0
21.00	22.00	0.0000	0.8800	0.0000	0	0.8800	0	0
22.00	23.00	0.0000	0.8700	0.0000	0	0.8700	0	0
23.00	24.00	0.0000	0.8500	0.0000	0	0.8500	0	0
24.00	25.00	0.0000	0.8400	0.0000	0	0.8400	0	0
25.00	26.00	0.0000	0.8300	0.0000	0	0.8300	0	0
26.00	27.00	0.0000	0.8200	0.0000	0	0.8200	0	0
27.00	28.00	0.0000	0.8000	0.0000	0	0.8000	0	0
28.00	29.00	0.0000	0.7900	0.0000	0	0.7900	0	0
29.00	30.00	0.0000	0.7800	0.0000	0	0.7800	0	0
30.00	31.00	0.0000	0.7600	0.0000	0	0.7600	0	0
31.00	32.00	0.0000	0.7500	0.0000	0	0.7500	0	0
32.00	33.00	0.0000	0.7400	0.0000	0	0.7400	0	0
33.00	34.00	0.0000	0.7200	0.0000	0	0.7200	0	0
34.00	35.00	0.0000	0.7100	0.0000	0	0.7100	0	0
35.00	36.00	0.0000	0.7000	0.0000	0	0.7000	0	0
36.00	37.00	0.0000	0.6800	0.0000	0	0.6800	0	0
37.00	38.00	0.0000	0.6700	0.0000	0	0.6700	0	0
38.00	39.00	0.0000	0.6500	0.0000	0	0.6500	0	0
39.00	40.00	0.0000	0.5800	0.0000	0	0.5800	0	0
		100.0000	100.0000	100.0000	100	100.0000	100	100

**INTERNAL RATE OF RETURN ANALYSIS  
EXPLANATORY NOTES**

**TABLE III: CASH FLOW FOR LOSS AND UNEARNED PREMIUM RESERVES**

Column (1) Premium Collected based on collection pattern from Table II, Column (1).

Example:  $\$895,800 \times .000023 = \$20.60$

Column (2) Agents' Balances reflects the difference between Written Premium and Collected Premium. Written Premium pattern provided by DCRB for Delaware workers compensation insurance.

Example: Written Premium, First Quarter =  $.25 \times \$895,800 = \$223,950.00$   
Collected Premium =  $(.000023 + .002135) \times \$895,800 = \$1,933.14$   
Written - Collected =  $\$222,016.86$  (round)

Column (3) Overdue Agent's Balances are all Agents' Balances due after the end of the 24-month period in which earnings of policy year premium occurs.

Column (4) Admitted Agents' Balances reflect all Agents' Balances due prior to the end of the 24-month period in which earnings of policy year premium occurs.

Column (5) Losses Incurred is computed by applying the loss ratio for the business to earned premiums at Bureau level (i.e., before premium discounts). Premium earning pattern provided by DCRB for Delaware workers compensation insurance.

Example:  $.7347 \times \$1,000,000 \times .03125 = \$22,960.63$

Column (6) Unearned Premiums is computed as Collected Premiums plus Agents' Balances (either Admitted or Nonadmitted) less Premium Earned.

Example:  $\$1,933.14 + \$222,016.86 - (\$895,800 \times .03125) = \$195,956.25$

Column (7) Total Premium Net of Reserves is computed as Collected Premium plus Admitted Agents' Balances less Losses Incurred less Unearned Premium Reserves.

Example:  $\$1,933.14 + 222,016.86 - 22,960.63 - 195,956.25 = \$5,033.13$

Column (8) Premium Net of Reserves is the periodic change in Column (7).

Example:  $\$20,132.50 - 5,033.13 = \$15,099.37$  (round)

INTERNAL RATE OF RETURN ANALYSIS  
STATE OF DELAWARE  
TABLE III: CASH FLOW FOR LOSS AND UNEARNED PREMIUM RESERVES

TIME INTERVAL FROM	(1) TO	(1) PREMIUM COLLECTED	(2) AGENTS BALANCES	(3) OVERDUE AGENTS BALANCE	(4) ADMITTED AGENTS BALANCES	(5) LOSSES INCURRED	(6) UNEARNED PREMIUMS	(7) TOTAL PREM NET OF RESERVES	(8) PREMIUM NET OF RESERVES
-1.00	-0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-0.75	-0.50	2.69	-2.69	0.00	-2.69	0.00	0.00	0.00	0.00
-0.50	-0.25	9.85	-9.85	0.00	-9.85	0.00	0.00	0.00	0.00
-0.25	0.00	20.60	-20.60	0.00	-20.60	0.00	0.00	0.00	0.00
0.00	0.25	1933.14	222016.86	0.00	222016.86	22960.63	195956.25	5033.13	5033.13
0.25	0.50	31887.79	416012.21	0.00	416012.21	91842.50	335925.00	20132.50	15099.38
0.50	0.75	112913.80	558936.20	0.00	558936.20	206645.63	419906.25	45298.13	25165.63
0.75	1.00	242445.58	653354.42	0.00	653354.42	367370.00	447900.00	80530.00	35231.88
1.00	1.25	430491.02	465308.98	0.00	465308.98	528094.38	251943.75	115761.88	35231.88
1.25	1.50	577086.90	318713.10	0.00	318713.10	642897.50	111975.00	140927.50	25165.63
1.50	1.75	699219.38	196580.62	0.00	196580.62	711779.38	27993.75	156026.88	15099.38
1.75	2.00	781418.88	114381.12	0.00	114381.12	734740.00	0.00	161060.00	5033.13
2.00	2.25	826191.86	69608.14	69608.14	0.00	734740.00	0.00	91451.86	-69608.14
2.25	2.50	850521.79	45278.21	45278.21	0.00	734740.00	0.00	115781.79	24329.93
2.50	2.75	866725.02	29074.98	29074.98	0.00	734740.00	0.00	131985.02	16203.23
2.75	3.00	875220.79	20579.21	20579.21	0.00	734740.00	0.00	140480.79	8495.77
3.00	3.25	879768.76	16031.24	16031.24	0.00	734740.00	0.00	145028.76	4547.98
3.25	3.50	882473.18	13326.82	13326.82	0.00	734740.00	0.00	147733.18	2704.42
3.50	3.75	884219.99	11580.01	11580.01	0.00	734740.00	0.00	149479.99	1746.81
3.75	4.00	885242.10	10557.90	10557.90	0.00	734740.00	0.00	150502.10	1022.11
4.00	4.25	885756.29	10043.71	10043.71	0.00	734740.00	0.00	151016.29	514.19
4.25	4.50	886629.70	9170.30	9170.30	0.00	734740.00	0.00	151889.70	873.41
4.50	4.75	887920.54	7879.46	7879.46	0.00	734740.00	0.00	153180.54	1290.85
4.75	5.00	889064.48	6735.52	6735.52	0.00	734740.00	0.00	154324.48	1143.94
5.00	6.00	889684.37	6115.63	6115.63	0.00	734740.00	0.00	154944.37	619.89
6.00	7.00	890762.92	5037.08	5037.08	0.00	734740.00	0.00	156022.92	1078.54
7.00	8.00	892648.58	3151.42	3151.42	0.00	734740.00	0.00	157908.58	1885.66
8.00	9.00	894261.02	1538.98	1538.98	0.00	734740.00	0.00	159521.02	1612.44
9.00	10.00	894675.77	1124.23	1124.23	0.00	734740.00	0.00	159935.77	414.76
10.00	11.00	895044.84	755.16	755.16	0.00	734740.00	0.00	160304.84	369.07
11.00	12.00	895421.97	378.03	378.03	0.00	734740.00	0.00	160681.97	377.13
12.00	13.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	378.03
13.00	14.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
14.00	15.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
15.00	16.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
16.00	17.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
17.00	18.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
18.00	19.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
19.00	20.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
20.00	21.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
21.00	22.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
22.00	23.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
23.00	24.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
24.00	25.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
25.00	26.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
26.00	27.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
27.00	28.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
28.00	29.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
29.00	30.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
30.00	31.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
31.00	32.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
32.00	33.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
33.00	34.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
34.00	35.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
35.00	36.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
36.00	37.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
37.00	38.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
38.00	39.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00
39.00	40.00	895800.00	0.00	0.00	0.00	734740.00	0.00	161060.00	0.00

**INTERNAL RATE OF RETURN ANALYSIS  
EXPLANATORY NOTES**

**TABLE IV: TAX CREDITS AVAILABLE FROM UNDERWRITING OPERATIONS  
PAGE 1**

Column (1) The net written premium underlying the model, i.e., \$1 million less premium discounts, or \$895,800.00.

Column (2) The periodic change in the Unearned Premium Reserve shown in Table III, Column (6).

Example:  $\$447,900.00 - 0 = \$447,900.00$

Column (3) The sum of the products of the expense flows shown in Table II and their associated expense provisions as shown on Table I, multiplied times the premium base.

Example:

Item	Provision (%)	Year 1 Expense Flow	Year 1 Expense Ratio %	Premium Base	Year 1 Expense \$
	(a)	(b)	(c)=(a)*(b)	(d)	(e)=(c)*(d)
Commission	6.94	0.002706	0.018780	1,000,000	18,779.64
General Expense	3.83	0.007500	0.028725	1,000,000	28,725.00
Other Acquisition	2.03	0.010000	0.020300	1,000,000	20,300.00
Other Tax	0.38	0.010000	0.003800	895,800	3,404.04
Tax 1:	2.00	0.010000	0.020000	895,800	17,916.00
Tax 3:	4.50	0.010000	0.045000	895,800	40,311.00
Total					129,435.68 (round)

Column (4) & Column (5) The Losses Paid for Accident Years 1 and 2, respectively, are based on payout patterns provided by the DCRB for Delaware workers compensation insurance. Each Accident Year is assigned one-half the total policy year payout.

Example: Accident Year 1, Year 2 Payout

$$.1618 \times .7347 \times \$1,000,000 / 2 = \$59,437.23 \text{ (round)}$$



**INTERNAL RATE OF RETURN ANALYSIS  
EXPLANATORY NOTES**

**TABLE IV: TAX CREDITS AVAILABLE FROM UNDERWRITING OPERATIONS  
PAGE 2**

Column (6) The IRS Discount Factors are a tabulation of discount factors published for carriers by the Internal Revenue Service.

Column (7) & Column (8) The Losses Discounted for Accident Years 1 and 2, respectively, are the change in discounted reserves for each accident year implied by the loss ratio, premium earnings pattern and IRS discount factors incorporated into the model.

Example: Accident Year 1, Year 2 Losses Discounted

Accident Year 1 incurred at End of Year 2: \$367,350.00

Accident Year 1 Paid Through Year 2:

$\$59,440.47 + 92,577.24 = \$152,017.71$

Accident Year 1 Undiscounted Reserve, Year 2:

$\$367,350.00 - 152,017.71 = \$215,332.39$

IRS Discount Factor: .8471

Accident Year 1 Discounted Reserve, Year 2:

$\$215,332.39 \times .8471 = \$182,407.98$

Accident Year 1 Incurred at End of Year: \$367,350.00

Accident Year 1 Paid Through Year 1: \$59,440.47

Accident Year 1 Undiscounted Reserve, Year 1:

$\$367,350.00 - 59,440.47 = \$339,413.20$

IRS Discount Factor: .8317

Accident Year 1 Discounted Reserve, Year 1:

$\$339,413.20 \times .8317 = \$282,282.96$

Change in Discounted Reserves, Year 1 to 2:

$\$182,382.72 - 256,045.74 = (\$73,656.98)$  (round)

Column (9) Tax Credits are computed as follows:

Underwriting Tax Rate x

( - Written Premium  
+ 0.8 x Change in Unearned Premium  
+ Expenses Paid  
+ Losses Paid  
+ Change in Discounted Loss Reserve )

INTERNAL RATE OF RETURN ANALYSIS  
STATE OF DELAWARE  
TABLE IV: TAX CREDITS AVAILABLE FROM UNDERWRITING OPERATIONS

YEAR	(1)	(2)	(3)	(4)		(5)	(6)	(7)		(8)	(9)
	PREMIUM WRITTEN (POST-DEV)	CHANGE IN UNEARNED PREMIUM	EXPENSES	ACCIDENT YEAR 1	ACCIDENT YEAR 2	DISCOUNT FACTOR	LOSSES DISCOUNTED ACCIDENT YEAR 1	ACCIDENT YEAR 2	LOSSES DISCOUNTED ACCIDENT YEAR 2	TAX CREDITS	
-1	0	0	1.5962	0	0	0	0	0	0	0.55867	
1	895800.00	447900.00	129437.35	59440.47	0.00	0.8317	256089.90	0.00	0.00	-32379.30	
2	0.00	-447900.00	51330.69	92577.24	80454.03	0.8471	-73674.02	238613.95	10843.66	10843.66	
3	0.00	0.00	7267.08	63995.85	51652.22	0.8524	-53399.65	-39331.91	10564.26	10564.26	
4	0.00	0.00	776.38	27332.33	39602.49	0.8514	-23418.50	-32500.38	4127.31	4127.31	
5	0.00	0.00	296.13	17633.76	24393.37	0.8432	-15886.83	-20959.21	1917.03	1917.03	
6	0.00	0.00	48.02	12270.16	16164.28	0.8531	-9417.24	-15035.36	1410.45	1410.45	
7	0.00	0.00	83.56	9147.51	11498.68	0.8505	-8026.77	-8278.15	1548.69	1548.69	
8	0.00	0.00	146.09	7200.45	8669.93	0.8523	-5980.53	-7750.50	799.91	799.91	
9	0.00	0.00	124.92	5951.39	6906.56	0.8620	-4374.29	-5638.00	1039.70	1039.70	
10	0.00	0.00	32.13	5143.18	5804.45	0.8849	-2906.82	-3759.07	1509.85	1509.85	
11	0.00	0.00	28.59	4628.86	5069.71	0.9085	-2632.56	-1687.67	1892.43	1892.43	
12	0.00	0.00	29.22	4261.49	4555.39	0.9326	-2478.18	-1375.12	1747.48	1747.48	
13	0.00	0.00	29.29	3967.60	4188.02	0.9566	-2413.28	-1190.69	1603.33	1603.33	
14	0.00	0.00	0.00	3820.65	3967.60	0.9726	-2851.31	-1202.67	1307.00	1307.00	
15	0.00	0.00	0.00	3636.96	3783.91	0.9726	-3537.37	-2002.21	658.45	658.45	
16	0.00	0.00	0.00	3563.49	3636.96	0.9726	-3465.91	-3537.37	69.01	69.01	
17	0.00	0.00	0.00	3490.02	3563.49	0.9726	-3394.45	-3465.91	67.60	67.60	
18	0.00	0.00	0.00	3416.54	3490.02	0.9726	-3322.99	-3394.45	66.19	66.19	
19	0.00	0.00	0.00	3343.07	3416.54	0.9726	-3251.52	-3322.99	64.78	64.78	
20	0.00	0.00	0.00	3306.33	3306.33	0.9726	-3215.79	-3215.79	63.38	63.38	
21	0.00	0.00	0.00	3269.59	3269.59	0.9726	-3180.06	-3180.06	62.67	62.67	
22	0.00	0.00	0.00	3232.86	3232.86	0.9726	-3144.33	-3144.33	61.97	61.97	
23	0.00	0.00	0.00	3196.12	3196.12	0.9726	-3108.60	-3108.60	61.26	61.26	
24	0.00	0.00	0.00	3122.65	3122.65	0.9726	-3037.14	-3037.14	59.86	59.86	
25	0.00	0.00	0.00	3085.91	3085.91	0.9726	-3001.41	-3001.41	59.15	59.15	
26	0.00	0.00	0.00	3049.17	3049.17	0.9726	-2965.68	-2965.68	58.45	58.45	
27	0.00	0.00	0.00	3012.43	3012.43	0.9726	-2929.94	-2929.94	57.74	57.74	
28	0.00	0.00	0.00	2938.96	2938.96	0.9726	-2858.48	-2858.48	56.33	56.33	
29	0.00	0.00	0.00	2902.22	2902.22	0.9726	-2822.75	-2822.75	55.63	55.63	
30	0.00	0.00	0.00	2865.49	2865.49	0.9726	-2787.02	-2787.02	54.93	54.93	
31	0.00	0.00	0.00	2792.01	2792.01	0.9726	-2715.56	-2715.56	53.52	53.52	
32	0.00	0.00	0.00	2755.28	2755.28	0.9726	-2679.83	-2679.83	52.81	52.81	
33	0.00	0.00	0.00	2718.54	2718.54	0.9726	-2644.10	-2644.10	52.11	52.11	
34	0.00	0.00	0.00	2645.06	2645.06	0.9726	-2572.63	-2572.63	50.70	50.70	
35	0.00	0.00	0.00	2608.33	2608.33	0.9726	-2536.90	-2536.90	50.00	50.00	
36	0.00	0.00	0.00	2571.59	2571.59	0.9726	-2501.17	-2501.17	49.29	49.29	
37	0.00	0.00	0.00	2498.12	2498.12	0.9726	-2429.71	-2429.71	47.88	47.88	
38	0.00	0.00	0.00	2461.38	2461.38	0.9726	-2393.98	-2393.98	47.18	47.18	
39	0.00	0.00	0.00	2387.91	2387.91	0.9726	-2322.52	-2322.52	45.77	45.77	
40	0.00	0.00	0.00	2130.75	2130.75	0.9726	-2072.40	-2072.40	40.84	40.84	
	895800		189631.04	394371.695	340368.305					1	

SOURCES: COL. 1: TABLE IV  
COL. 2: COL. 1  
COL. 3: COLS. 3, 4, 5, 6 & 7, TABLE III; AND TABLE IV  
COLS. 4 & 5: WEIGHTS FOR ACCIDENT YEAR DISTRIBUTION:  
SEE ACCIDENT YEAR DISTRIBUTION

COL. 6: U. S. INTERNAL REVENUE SERVICE DISCOUNT FACTORS  
COLS. 7 & 8: CHANGE IN DISCOUNTED OUTSTANDING USING IRS FACTORS  
COL. 9: .35 x (COL. 1 - (.8 x COL. 2)) - COL. 4 - COL. 5 - COL. 7 - COL. 8)

**INTERNAL RATE OF RETURN ANALYSIS  
EXPLANATORY NOTES**

**TABLE V: NET CASH FLOWS FROM UNDERWRITING**

- Column (1) The Premium Flow Net of Reserves is Column (8) of Table III.
- Column (2) Tax Credits from Underwriting is a quarterly flow of those credits in Column (9) in Table IV.
- Column (3) Expenses show a quarterly flow of Expenses prepared in the same fashion as the annual flows in Column (3) of Table IV.
- Column (4) Dividends are not used in this model as no provision has been made for dividends in this analysis.
- Column (5) Net Cash Flow from Underwriting is computed by adding Column (1) and Column (2) and subtracting Column (3)

INTERNAL RATE OF RETURN ANALYSIS  
STATE OF DELAWARE  
TABLE V: NET CASH FLOWS FROM UNDERWRITING

TIME INTERVAL FROM	TO	(1) PREMIUM FLOW NET OF RESERVES	(2) TAX CREDITS FROM UNDERWRITING	(3) EXPENSES	(4) DIVIDENDS	(5) NET CASH FLOW FROM UNDERWRITING
-1.00	-0.75	0.00	0.14	0.00	0.00	0.14
-0.75	-0.50	0.00	0.14	0.21	0.00	-0.07
-0.50	-0.25	0.00	0.14	0.56	0.00	-0.42
-0.25	0.00	0.00	0.14	0.83	0.00	-0.69
0.00	0.25	5033.13	-8094.82	28579.54	0.00	-31641.24
0.25	0.50	15099.38	-8094.82	29133.40	0.00	-22128.85
0.50	0.75	25165.63	-8094.82	34162.63	0.00	-17091.83
0.75	1.00	35231.88	-8094.82	37561.78	0.00	-10424.73
1.00	1.25	35231.88	2710.92	18757.44	0.00	19185.35
1.25	1.50	25165.63	2710.92	14349.36	0.00	13527.18
1.50	1.75	15099.38	2710.92	11257.24	0.00	6553.05
1.75	2.00	5033.13	2710.92	6966.65	0.00	777.39
2.00	2.25	-69608.14	2641.06	3468.68	0.00	-70435.76
2.25	2.50	24329.93	2641.06	1884.90	0.00	25086.09
2.50	2.75	16203.23	2641.06	1255.31	0.00	17588.99
2.75	3.00	8495.77	2641.06	658.19	0.00	10478.64
3.00	3.25	4547.98	1031.83	352.34	0.00	5227.46
3.25	3.50	2704.42	1031.83	209.52	0.00	3526.73
3.50	3.75	1746.81	1031.83	135.33	0.00	2643.31
3.75	4.00	1022.11	1031.83	79.19	0.00	1974.75
4.00	4.25	514.19	479.26	39.84	0.00	953.61
4.25	4.50	873.41	479.26	67.66	0.00	1285.00
4.50	4.75	1290.85	479.26	100.01	0.00	1670.10
4.75	5.00	1143.94	479.26	88.62	0.00	1534.57
5.00	6.00	619.89	1410.45	48.02	0.00	1982.32
6.00	7.00	1078.54	1548.69	83.56	0.00	2543.68
7.00	8.00	1885.66	799.91	146.09	0.00	2539.48
8.00	9.00	1612.44	1039.70	124.92	0.00	2527.22
9.00	10.00	414.76	1509.85	32.13	0.00	1892.48
10.00	11.00	369.07	1892.43	28.59	0.00	2232.90
11.00	12.00	377.13	1747.48	29.22	0.00	2095.40
12.00	13.00	378.03	1603.33	29.29	0.00	1952.07
13.00	14.00	0.00	1307.00	0.00	0.00	1307.00
14.00	15.00	0.00	658.45	0.00	0.00	658.45
15.00	16.00	0.00	69.01	0.00	0.00	69.01
16.00	17.00	0.00	67.60	0.00	0.00	67.60
17.00	18.00	0.00	66.19	0.00	0.00	66.19
18.00	19.00	0.00	64.78	0.00	0.00	64.78
19.00	20.00	0.00	63.38	0.00	0.00	63.38
20.00	21.00	0.00	62.67	0.00	0.00	62.67
21.00	22.00	0.00	61.97	0.00	0.00	61.97
22.00	23.00	0.00	61.26	0.00	0.00	61.26
23.00	24.00	0.00	59.86	0.00	0.00	59.86
24.00	25.00	0.00	59.15	0.00	0.00	59.15
25.00	26.00	0.00	58.45	0.00	0.00	58.45
26.00	27.00	0.00	57.74	0.00	0.00	57.74
27.00	28.00	0.00	56.33	0.00	0.00	56.33
28.00	29.00	0.00	55.63	0.00	0.00	55.63
29.00	30.00	0.00	54.93	0.00	0.00	54.93
30.00	31.00	0.00	53.52	0.00	0.00	53.52
31.00	32.00	0.00	52.81	0.00	0.00	52.81
32.00	33.00	0.00	52.11	0.00	0.00	52.11
33.00	34.00	0.00	50.70	0.00	0.00	50.70
34.00	35.00	0.00	50.00	0.00	0.00	50.00
35.00	36.00	0.00	49.29	0.00	0.00	49.29
36.00	37.00	0.00	47.88	0.00	0.00	47.88
37.00	38.00	0.00	47.18	0.00	0.00	47.18
38.00	39.00	0.00	45.77	0.00	0.00	45.77
39.00	40.00	0.00	40.84	0.00	0.00	40.84

**INTERNAL RATE OF RETURN ANALYSIS  
EXPLANATORY NOTES**

**TABLE VI: DERIVATION OF FUNDS IN SURPLUS ACCOUNT**

Column (1) Loss and Loss Adjustment Reserves is the difference between Losses Incurred (Column (5), Table III) and Losses Paid (Columns (4) and (5), Table IV).

$$\text{Example: } \$367,370.00 - 59,440.47 = \$307,929.53$$

Column (2) Unearned Premium Reserves is Column (6) of Table III.

Column (3) Admitted Agents Balances is Column (4) of Table III.

Column (4) Cash Level is computed by adding Columns (1) and (2) and subtracting Column (3).

$$\text{Example: } \$307,929.53 + 447,900.00 - 653,354.42 = \$102,475.12$$

Column (5) Funds in Surplus Account is derived by adding Columns (1) and (2) and dividing that total by the reserve-to-surplus ratio used in the model, in this case 2.87.

$$\text{Example: } (\$307,929.53 + 447,900.00) / 2.87 = \$263,355.24$$

INTERNAL RATE OF RETURN ANALYSIS  
STATE OF DELAWARE  
TABLE VI: DERIVATION OF FUNDS IN SURPLUS ACCOUNT

TIME INTERVAL		(1)	(2)	(3)	(4)	(5)
FROM	TO	LOSS AND RESERVES	UNEARNED PREMIUM RESERVES	ADMITTED AGENTS BALANCES	CASH LEVEL	FUNDS IN SURPLUS ACCOUNT
-1.00	-0.75	0.00	0.00	0.00	0.00	0.00
-0.75	-0.50	0.00	0.00	-2.69	2.69	0.00
-0.50	-0.25	0.00	0.00	-9.85	9.85	0.00
-0.25	0.00	0.00	0.00	-20.60	20.60	0.00
0.00	0.25	17016.58	195956.25	222016.86	-9044.04	74206.56
0.25	0.50	74010.36	335925.00	416012.21	-6076.85	142834.62
0.50	0.75	170981.35	419906.25	558936.20	31951.39	205884.18
0.75	1.00	307929.53	447900.00	653354.42	102475.12	263355.24
1.00	1.25	425396.09	251943.75	465308.98	212030.86	236006.91
1.25	1.50	496941.40	111975.00	318713.10	290203.30	212165.99
1.50	1.75	522565.46	27993.75	196580.62	353978.58	191832.48
1.75	2.00	502268.26	0.00	114381.12	387887.15	175006.36
2.00	2.25	473356.25	0.00	0.00	473356.25	164932.49
2.25	2.50	444444.23	0.00	0.00	444444.23	154858.62
2.50	2.75	415532.21	0.00	0.00	415532.21	144784.74
2.75	3.00	386620.19	0.00	0.00	386620.19	134710.87
3.00	3.25	369886.48	0.00	0.00	369886.48	128880.31
3.25	3.50	353152.78	0.00	0.00	353152.78	123049.75
3.50	3.75	336419.08	0.00	0.00	336419.08	117219.19
3.75	4.00	319685.37	0.00	0.00	319685.37	111388.63
4.00	4.25	309178.59	0.00	0.00	309178.59	107727.73
4.25	4.50	298671.81	0.00	0.00	298671.81	104066.83
4.50	4.75	288165.03	0.00	0.00	288165.03	100405.93
4.75	5.00	277658.25	0.00	0.00	277658.25	96745.03
5.00	6.00	249223.81	0.00	0.00	249223.81	86837.56
6.00	7.00	228577.61	0.00	0.00	228577.61	79643.77
7.00	8.00	212707.23	0.00	0.00	212707.23	74114.02
8.00	9.00	199849.28	0.00	0.00	199849.28	69633.90
9.00	10.00	188901.65	0.00	0.00	188901.65	65819.39
10.00	11.00	179203.09	0.00	0.00	179203.09	62440.10
11.00	12.00	170386.21	0.00	0.00	170386.21	59368.02
12.00	13.00	162230.59	0.00	0.00	162230.59	56526.34
13.00	14.00	154442.35	0.00	0.00	154442.35	53812.66
14.00	15.00	147021.47	0.00	0.00	147021.47	51226.99
15.00	16.00	139821.02	0.00	0.00	139821.02	48718.13
16.00	17.00	132767.52	0.00	0.00	132767.52	46260.46
17.00	18.00	125860.96	0.00	0.00	125860.96	43853.99
18.00	19.00	119101.35	0.00	0.00	119101.35	41498.73
19.00	20.00	112488.69	0.00	0.00	112488.69	39194.67
20.00	21.00	105949.51	0.00	0.00	105949.51	36916.20
21.00	22.00	99483.80	0.00	0.00	99483.80	34663.34
22.00	23.00	93091.56	0.00	0.00	93091.56	32436.08
23.00	24.00	86846.27	0.00	0.00	86846.27	30260.02
24.00	25.00	80674.45	0.00	0.00	80674.45	28109.57
25.00	26.00	74576.11	0.00	0.00	74576.11	25984.71
26.00	27.00	68551.24	0.00	0.00	68551.24	23885.45
27.00	28.00	62673.32	0.00	0.00	62673.32	21837.39
28.00	29.00	56868.88	0.00	0.00	56868.88	19814.94
29.00	30.00	51137.90	0.00	0.00	51137.90	17818.09
30.00	31.00	45553.88	0.00	0.00	45553.88	15872.43
31.00	32.00	40043.33	0.00	0.00	40043.33	13952.38
32.00	33.00	34606.25	0.00	0.00	34606.25	12057.93
33.00	34.00	29316.13	0.00	0.00	29316.13	10214.68
34.00	35.00	24099.47	0.00	0.00	24099.47	8397.03
35.00	36.00	18956.29	0.00	0.00	18956.29	6604.98
36.00	37.00	13960.06	0.00	0.00	13960.06	4864.13
37.00	38.00	9037.30	0.00	0.00	9037.30	3148.89
38.00	39.00	4261.49	0.00	0.00	4261.49	1484.84
39.00	40.00	0.00	0.00	0.00	0.00	0.00

**INTERNAL RATE OF RETURN ANALYSIS  
EXPLANATORY NOTES**

**TABLE VII: NOMINAL CASH FLOWS TO INVESTORS**

- Column (1) Net Cash Flow Underwriting is Column (5) of Table V.
- Column (2) Cash Pre-Tax Income is computed by multiplying the pre-tax investment yield rate times the periodic average Cash Level from Column (4), Table VI.  
Example:  $(\$31,951.39 + 102,475.12) / 2 = \$67,213.26$   
 $\$67,213.26 \times .0489503 / 4 = \$822.53$
- Column (3) Cash Income Taxes is computed by multiplying the investment income tax rate times the periodic average Cash Level from Column (4), Table VI.  
Example:  $(\$31,951.39 + 102,475.12) / 2 = \$67,213.26$   
 $-\$67,213.26 \times .011063 / 4 = -\$185.89$
- Column (4) Net Flow from Surplus is the periodic change in Surplus Balance posted in Column (5) of Table VI.  
Example:  $\$205,884.18 - 263,355.24 = (\$57,471.06)$
- Column (5) Surplus Pre-Tax Income is computed by applying the pre-tax investment yield to average periodic surplus balance computed from Column (5) of Table VI.  
Example:  $(\$205,884.18 + 263,355.24) / 2 = \$234,619.71$   
 $\$234,619.71 \times .0489503 / 4 = \$2,871.18$
- Column (6) Surplus Income Taxes is the product of the investment income tax rate and the average periodic surplus balance computed from Column (5) of Table VI.  
Example:  $(\$205,884.18 + 263,355.24) / 2 = \$234,619.71$   
 $\$234,619.71 \times .011063 / 4 = \$648.89$
- Column (7) Net Cash Flow is the sum of Columns (1) through (6) and represents the net flows to investors which result in a rate of return of 12.94 percent to investors in the insurance company as required by the Internal Rate of Return Model.  
Example:  $-\$10,424.73 + 822.53 - 185.89 - 57,471.06 + 2,871.18 - 648.89 = -\$65,036.86$  (round)

INTERNAL RATE OF RETURN ANALYSIS  
STATE OF DELAWARE  
TABLE VII: NOMINAL CASH FLOWS TO INVESTORS

TIME INTERVAL FROM	TO	(1) NET CASH FLOW FROM UNDERWRITING	(2) CASH PRE-TAX INCOME	(3) CASH INCOME TAXES	(4) NET FLOW FOR SURPLUS ACCOUNT	(5) SURPLUS PRE-TAX INCOME	(6) SURPLUS INCOME TAXES	(7) NET CASH FLOW
-1.00	-0.75	0.14	0.00	0.00	0.00	0.00	0.00	0.14
-0.75	-0.50	-0.07	0.02	0.00	0.00	0.00	0.00	-0.06
-0.50	-0.25	-0.42	0.08	-0.02	0.00	0.00	0.00	-0.36
-0.25	0.00	-0.69	0.19	-0.04	0.00	0.00	0.00	-0.55
0.00	0.25	-31641.24	-55.21	12.48	-74206.56	454.05	-102.62	-105539.10
0.25	0.50	-22128.85	-92.52	20.91	-68628.06	1328.03	-300.14	-89800.63
0.50	0.75	-17091.83	158.32	-35.78	-63049.56	2133.74	-482.23	-78367.34
0.75	1.00	-10424.73	822.53	-185.89	-57471.06	2871.18	-648.89	-65036.86
1.00	1.25	19185.35	1924.40	-434.92	27348.32	3055.49	-690.54	50388.10
1.25	1.50	13527.18	3073.06	-694.52	23840.92	2742.28	-619.76	41869.17
1.50	1.75	6553.05	3941.61	-890.81	20333.52	2471.98	-558.67	31850.68
1.75	2.00	777.39	4539.32	-1025.89	16826.11	2244.61	-507.28	22854.26
2.00	2.25	-70435.76	5269.77	-1190.97	10073.87	2080.01	-470.08	-54673.16
2.25	2.50	25086.09	5615.83	-1269.18	10073.87	1956.73	-442.22	41021.12
2.50	2.75	17588.99	5262.01	-1189.22	10073.87	1833.45	-414.36	33154.75
2.75	3.00	10478.64	4908.20	-1109.26	10073.87	1710.17	-386.50	25675.13
3.00	3.25	5227.46	4628.90	-1046.14	5830.56	1612.86	-364.51	15889.14
3.25	3.50	3526.73	4424.12	-999.86	5830.56	1541.51	-348.38	13974.68
3.50	3.75	2643.31	4219.34	-953.58	5830.56	1470.15	-332.26	12877.53
3.75	4.00	1974.75	4014.56	-907.29	5830.56	1398.80	-316.13	11995.25
4.00	4.25	953.61	3847.89	-869.63	3660.90	1340.73	-303.01	8630.49
4.25	4.50	1285.00	3719.31	-840.57	3660.90	1295.93	-292.88	8827.68
4.50	4.75	1670.10	3590.73	-811.51	3660.90	1251.13	-282.76	9078.59
4.75	5.00	1534.57	3462.15	-782.45	3660.90	1206.33	-272.63	8808.87
5.00	6.00	1982.32	12895.52	-2914.40	9907.47	4493.21	-1015.47	25348.65
6.00	7.00	2543.68	11694.26	-2642.91	7193.80	4074.66	-920.88	21942.60
7.00	8.00	2539.48	10800.52	-2440.93	5529.75	3763.25	-850.50	19341.57
8.00	9.00	2527.22	10097.38	-2282.02	4480.12	3518.25	-795.13	17545.84
9.00	10.00	1892.48	9514.74	-2150.34	3814.50	3315.24	-749.25	15637.38
10.00	11.00	2232.90	9009.42	-2036.14	3379.29	3139.17	-709.46	15015.20
11.00	12.00	2095.40	8556.25	-1933.72	3072.08	2981.27	-673.77	14097.51
12.00	13.00	1952.07	8140.85	-1839.84	2841.68	2836.53	-641.06	13290.23
13.00	14.00	1307.00	7750.62	-1751.65	2713.67	2700.56	-610.33	12109.88
14.00	15.00	658.45	7378.37	-1667.52	2585.67	2570.86	-581.02	10944.82
15.00	16.00	69.01	7020.51	-1586.64	2508.87	2446.17	-552.84	9905.09
16.00	17.00	67.60	6671.65	-1507.80	2457.67	2324.62	-525.37	9488.37
17.00	18.00	66.19	6329.97	-1430.58	2406.47	2205.57	-498.46	9079.16
18.00	19.00	64.78	5995.49	-1354.99	2355.26	2089.02	-472.12	8677.45
19.00	20.00	63.38	5668.20	-1281.02	2304.06	1974.98	-446.35	8283.26
20.00	21.00	62.67	5346.31	-1208.27	2278.46	1862.83	-421.00	7921.00
21.00	22.00	61.97	5028.01	-1136.33	2252.86	1751.92	-395.94	7562.49
22.00	23.00	61.26	4713.31	-1065.21	2227.26	1642.27	-371.15	7207.74
23.00	24.00	59.86	4404.01	-995.31	2176.06	1534.50	-346.80	6832.31
24.00	25.00	59.15	4100.10	-926.63	2150.46	1428.60	-322.87	6488.82
25.00	26.00	58.45	3799.78	-858.75	2124.86	1323.97	-299.22	6149.08
26.00	27.00	57.74	3503.06	-791.70	2099.26	1220.58	-275.85	5813.10
27.00	28.00	56.33	3211.74	-725.86	2048.06	1119.07	-252.91	5456.44
28.00	29.00	55.63	2925.81	-661.24	2022.46	1019.45	-230.40	5131.71
29.00	30.00	54.93	2643.48	-597.43	1996.85	921.07	-208.16	4810.74
30.00	31.00	53.52	2366.55	-534.84	1945.65	824.58	-186.36	4469.10
31.00	32.00	52.81	2095.01	-473.47	1920.05	729.97	-164.97	4159.39
32.00	33.00	52.11	1827.06	-412.92	1894.45	636.61	-143.87	3853.44
33.00	34.00	50.70	1564.51	-353.58	1843.25	545.13	-123.20	3526.81
34.00	35.00	50.00	1307.36	-295.46	1817.65	455.52	-102.95	3232.11
35.00	36.00	49.29	1053.80	-238.16	1792.05	367.18	-82.98	2941.17
36.00	37.00	47.88	805.63	-182.07	1740.85	280.71	-63.44	2629.56
37.00	38.00	47.18	562.86	-127.21	1715.25	196.12	-44.32	2349.88
38.00	39.00	45.77	325.49	-73.56	1664.05	113.41	-25.63	2049.53
39.00	40.00	40.84	104.30	-23.57	1484.84	36.34	-8.21	1634.54



**INTERNAL RATE OF RETURN ANALYSIS  
EXPLANATORY NOTES**

**DELAWARE PRE & POST TAX RETURNS  
PAGE 1**

- Column (1) Invested Assets  
Categories taken from Best's Aggregates and Averages with values as of December 31, 2001.
- Column (2) 12/31/01 Market Values  
Treasuries, Exempt Bonds, Bonds for Unaffiliated and Affiliated Companies, Preferred Stock for Unaffiliated and Affiliated Companies and Common Stock for Unaffiliated and Affiliated Companies all taken from 2001 Best's Aggregates and Averages, Industry Total Schedule D.
- Column (3) Pre-Tax Return  
Treasuries based on yields by Maturity published in Federal Reserve Statistical Release (June 23, 2003) H. 15 (519), weighted by loss payout pattern provided by DCRB for Delaware workers' compensation insurance.
- Exempt Bonds based on yields by Maturity published in Federal Reserve Statistical Release (June 23, 2003) H. 15 (519).
- Bonds based on yields published in Federal Reserve Statistical Release (June 23, 2003) H. 15 (519).
- Preferred stock yields based on Moody's Bond Record (June 2003 Book), Vol. 70, No. 6, p. 761.
- Common Stock Yield based on three month Treasury Bill rate (Federal Reserve) plus Ibbotson Differential (2002 Ibbotson Yearbook).
- Mortgages & Real Estate Yield based on three month Treasury Bill rate (Federal Reserve) plus Ibbotson Differential (Ibbotson & Seigel, AREUA Journal, Vol 12, No. 3, 1984).
- Cash & Short Term Investment yield based on short-term treasury yield as published in Federal Reserve (June 23, 2003) H. 15 (519).
- Column (4) Investment Gain  
Product of 12/31/01 Market Value times Pre-Tax Return expressed as a decimal value by asset type.

**INTERNAL RATE OF RETURN ANALYSIS  
EXPLANATORY NOTES**

**DELAWARE PRE & POST TAX RETURNS  
PAGE 2**

Column (5) Percent Taxable Treasuries, Unaffiliated Bonds, Mortgages & Real Estate and Cash & Short Term Investments all assumed to be 100 percent taxable.

Exempt Bonds, Bonds in Affiliated Companies and Preferred Stock in Affiliated Companies all assumed to be tax-free.

Preferred Stock in Unaffiliated Companies: 30 percent of dividend income taxable per Tax Reform Act of 1986; all income attributed to dividends for preferred stock.

Common Stock of Unaffiliated Companies: 30 percent of dividend income plus 100 percent of capital gains income taxable per Tax Reform Act of 1986.  $(.30 \times .3613) + (.6387) = .7471$ . Portions of common stock income attributable to dividend and capital gains from Ibbotson Associates, Stocks, Bonds, Bills and Inflation: Red, 2003 Edition, Table 6-7 (arithmetic mean).

Common Stock of Affiliated Companies: 100 percent of capital gains in affiliated companies subject to income tax per Tax Reform Act of 1986. Portion of common stock income (.6387) attributed to capital gains from 1998 A. M. Best's data.

Column (6) Tax Rate  
 $(\text{Percent Taxable} \times .35) + ((1.0 - \text{Percent Taxable}) \times .15 \times .35)$

Column (7) Post Tax Return  
 $\text{Pre-Tax Return} \times (1.0 - \text{Tax Rate})$

INTERNAL RATE OF RETURN ANALYSIS  
STATE OF DELAWARE  
PRE & POST TAX RETURNS

Invested Assets (1)	Assets (2)	Pre Tax Return (3)	Investment Gain (4)	Portion Taxable (5)	Tax Rate (6)	Post Tax Return (7)
Treasuries	95038873	2.23	2118832	1.00000	0.35000	1.449134
Exempt Bonds	241337776	4.35	10498193	0.00000	0.05250	4.121625
Bonds (Unaffil)	186339328	4.93	9186529	1.00000	0.35000	3.204500
Bonds (Affiliated)	2390593	4.93	117856	0.00000	0.05250	4.671175
Prefer Stk (Unaff)	10238905	6.83	699317	0.30000	0.14175	5.861848
Prefer Stk (Affil)	777134	6.83	53078	0.00000	0.05250	6.471425
Common Stk (Unaff)	121774589	9.23	11239795	0.74710	0.27480	6.693596
Common Stock (Affil)	41118015	9.23	3795193	0.63870	0.24250	6.991725
Mortgage Loans	1877363	5.21	97811	1.00000	0.35000	3.386500
Real Estate	9224769	4.80	442789	1.00000	0.35000	3.120000
Cash and ST Invest	43270798	2.23	964695	1.00000	0.35000	1.449134
Average or Total	753388143		39214088			3.990250

1. Assets, courtesy NCCI, are from the latest Best's A&A, Market Value Dec 31, 2001

2. Yields are from:

- a) Treasuries, Exempt Bonds, Other Bonds, Cash & Short Term Invest  
are from: Federal Reserve H.15(519), June 23, 2003
- b) Preferred Stocks are from: Moody's Bond Record, June 2003,  
Vol. 70, No. 6, p. 761.
- c) Common Stock: 3 month Treasury (0.86) + Ibbotson Differential (8.37%)  
Bill rate from Fed Reserve; Differential from 2003 Ibbotson Yearbook
- d) Real Estate: 3 month Treasury + Ibbotson Differential (3.94)  
Differential from: Ibbotson & Seigel, AREUA Journal, Vol 12,  
No. 3, 1984

PRETAX WEIGHTED PORTFOLIO YIELD - INVEST EXPENSE = 4.895031212

POST TAX WEIGHTED YIELD - POST TAX EXPENSE = 3.788750120

## INTERNAL RATE OF RETURN ANALYSIS EXPLANATORY NOTES

### DELAWARE COST OF CAPITAL

- All data taken from Value Line Investment Survey of March 28, 2003 and May 30, 2003
- All Property/Casualty Companies Selected with limited exceptions, such as reinsurers and carriers without any workers' compensation insurance writings
- Individual carrier inclusions/exclusions from selected list noted as having limited effect on indicated results.
- DCF FORECAST COST OF CAPITAL
  - =  $.0200 \times (1.0 + 0.5 \times .1090) + .1090$
  - =  $.0211 + .1090 = .1301$
- DCF HISTORICAL COST OF CAPITAL
  - =  $.0200 \times (1.0 + 0.5 \times .0328) + .0328$
  - =  $.0203 + .0328 = .0531$
- DCF DIVIDENDS ONLY COST OF CAPITAL
  - =  $.0200 \times (1.0 + 0.5 \times .0701) + .0701$
  - =  $.0207 + .0701 = .0908$
  - Note:  $.0701 = \text{Average } (.0926, .0476)$

INTERNAL RATE OF RETURN ANALYSIS  
STATE OF DELAWARE  
COST OF CAPITAL

COMPANY	BETA	YIELD	DIVIDEND PAST 5 YEARS	EARNINGS PAST 5 YEARS	EARNINGS FORECAST	DIVIDEND FORECAST	RETAINED TO EQUITY FORECAST
Ace Ltd	1.40	2.4	23.5	1.5	26.0	11.5	13.0
AIG	1.30	0.4	12.0	12.5	15.5	13.5	14.0
Allstate	1.00	2.8	11.5	10.0	8.5	9.0	10.5
Amer Fnl	0.95	2.6	1.0	-19.5	21.5	-9.5	12.0
Berkley	0.75	1.0	10.0	0.0	0.0	5.0	11.5
Chubb	1.10	3.0	6.0	-3.0	13.5	3.5	8.0
Cinc Fnl	0.85	2.8	12.0	-2.0	16.5	6.5	5.0
Merc Gen	1.00	3.6	17.0	-1.5	16.0	10.0	10.0
Ohio Cas	0.80	0.0	-8.0	-11.0	15.5	0.0	7.5
Old Rep	1.05	2.5	16.0	10.0	8.0	6.0	8.0
Progressive	1.15	0.2	4.0	0.0	24.0	5.0	12.5
RLI Corp	0.70	1.4	8.0	25.5	12.0	7.5	9.5
Safeco	1.00	2.1	4.5	-25.5	30.5	-7.0	8.0
St Paul	1.20	3.5	6.0	-19.5	29.5	3.5	9.5
Select	0.75	2.4	1.5	-5.0	16.5	3.0	8.5
Trans Atl	0.75	0.6	13.5	1.5	8.0	11.0	13.0
XL Cap	1.00	2.7	19.0	-20.0	39.5	2.5	13.5
	0.99	2.00	9.26	-2.71	17.71	4.76	10.24

SOURCE: VALUE LINE INVESTMENT SURVEY, MAR 28 & MAY 30, 2003

DCF COST OF CAPITAL

FORECAST

A. EARNINGS	17.71
B. DIVIDEND	4.76
C. FUNDAMENT	10.24

FORECAST = (A+B+C)/3 10.90

FORECAST COST OF CAPITAL = 13.01 PERCENT

HISTORICAL

A. EARNINGS	-2.71
B. DIVIDEND	9.26

HISTORICAL = (A+B)/2 3.28

HISTORICAL COST OF CAPITAL = 5.31 PERCENT

DIVIDENDS ONLY (GROWTH & HISTORICAL) 9.08 PERCENT

INTERNAL RATE OF RETURN ANALYSIS  
STATE OF DELAWARE  
COST OF CAPITAL

A) CAPM COST OF CAPITAL	$0.86 + 0.99(8.37) =$	9.15 PERCENT
B) DCF COST OF CAPITAL	$(13.01+5.31+9.08) / 3 =$	9.13 PERCENT
C) COST OF CAPITAL	$(A + B) / 2 =$	9.14 PERCENT

SOURCES:

A: CAPM: BETA - VALUE LINE INVESTMENT SURVEY MAR 28 & MAY 30, 2003

RF - 3 MONTH BILL RATE WEEK ENDED JUNE 20, 2003. FEDERAL RESERVE H. 15 (519)  
(1.73%)

RM - RF = IBBOTSON DIFFERENTIAL (STOCK MARKET TO 3 MONTH BILL  
RATE, 1926 TO 2002 AVERAGE) = 8.37

B: DCF:  $K = Y (1+0.5G) + G$

Y IS THE CURRENT DIVIDEND YIELD (FROM VALUE LINE)

G IS THE DIVIDEND GROWTH RATE (FROM VALUE LINE)

**INTERNAL RATE OF RETURN ANALYSIS  
EXPLANATORY NOTES**

**DELAWARE RESERVE-TO-SURPLUS RATIOS**

Columns (1) – (4) Reserves and policyholder surplus for commercial casualty predomination carriers all taken from Best's Aggregates and Averages with values as of December 31, 2001.

Column (5) Reserve-to-Surplus ratio is the sum of the reserves in columns (1) through (3) divided by the policyholder surplus in column (4)

$$1,449,036,068 + 310,713,035 + 389,002,237 = 2,148,751,340$$
$$2,148,751,340 / 748,910,015 = 2.86917152$$

INTERNAL RATE OF RETURN ANALYSIS  
STATE OF DELAWARE  
RESERVE-TO-SURPLUS RATIO

YEAR	RESERVES			POLICY- HOLDER SURPLUS	RESERVE TO SURPLUS RATIO
	UNPAID LOSSES (1)	UNPAID LAE (2)	UNEARNED PREMIUM (3)		
2001	134206500	28050529	45850118	76059683	2.74
2000	130686933	29119080	42033438	82264557	2.45
1999	132744525	29788017	37316069	82902575	2.41
1998	145071595	32449224	39512433	88468350	2.45
1997	147540039	33235844	39004545	84150270	2.61
1996	147906824	33060559	37194929	70196545	3.11
1995	134340816	29883835	34458634	60055630	3.31
1994	155951006	32126920	36871158	68976142	3.26
1993	162479437	32141903	39114915	72026095	3.25
1992	158108393	30857124	37645998	63810168	3.55
TOTAL	1449036068	310713035	389002237	748910015	2.87
	TOTAL RESERVES	2148751340			
	SURPLUS	748910015			
	RES/SURP RATIO	2.869171592			

Note: Commercial Casualty Predominating, Best's A&A, Courtesy NCCI