

Casualty Loss Reserve Seminar

Reserving 101: Medical Professional Liability

Aria Hotel

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Death, Disability, and Retirement (DD&R) Coverage

- Brief History/Explanation
- Accounting Treatment
- Reserving Methodology
- Example

DD&R Brief History/Explanation

- Outgrowth of claims made coverage
- Extended reporting endorsement
- Initially a marketing tool - “Free tail coverage”
- Not actually “free” – portion of premium is allocated to pay for it
- Often involves waiting or vesting period
 - May vary by decrement

Accounting Treatment – SSAP 65, paragraph 8

- “...policy reserve required to assure that premiums are not earned prematurely...”
- “...amount of reserve should be adequate to pay for all future claims arising from these coverage features...”
- “...after recognition of future premiums to be paid by current insureds for these benefits...”
- “...‘extended reporting endorsement policy reserve’ shall be classified as component part of the unearned premium reserve...”

Accounting Treatment – Annual Statement and SAO

- Reported in Underwriting and Investment Exhibit – Part 1A – Recapitulation of All Premiums
- Report in Schedule P Interrogatory 1 for medical professional liability only
 - Limitation to MPL coverage began in 2008
- 2010 Practice Note from CPLFR responded with instruction to continue including all extended loss and expense reserves
 - Exhibit B, Disclosure 12 should now include extended loss and expense reserves for all P&C lines

Accounting Issues – What is a DD&R Reserve For?

- It is a premium reserve, not a loss reserve
 - Intent is to avoid earning premiums too quickly for future coverage company has promised to provide

- Going concern vs ability to pay
 - It is not clear that this reserve is consistent with going concern approach (GAAP) or solvency approach (SAP)

- St. Paul withdrawal from MPL market in 2001
 - Carried DD&R reserve in excess of \$100M
 - Decided to not renew all MPL policies with few exceptions
 - Eventually paid only a small percentage of DD&R reserve

DD&R Reserving Methods - Background

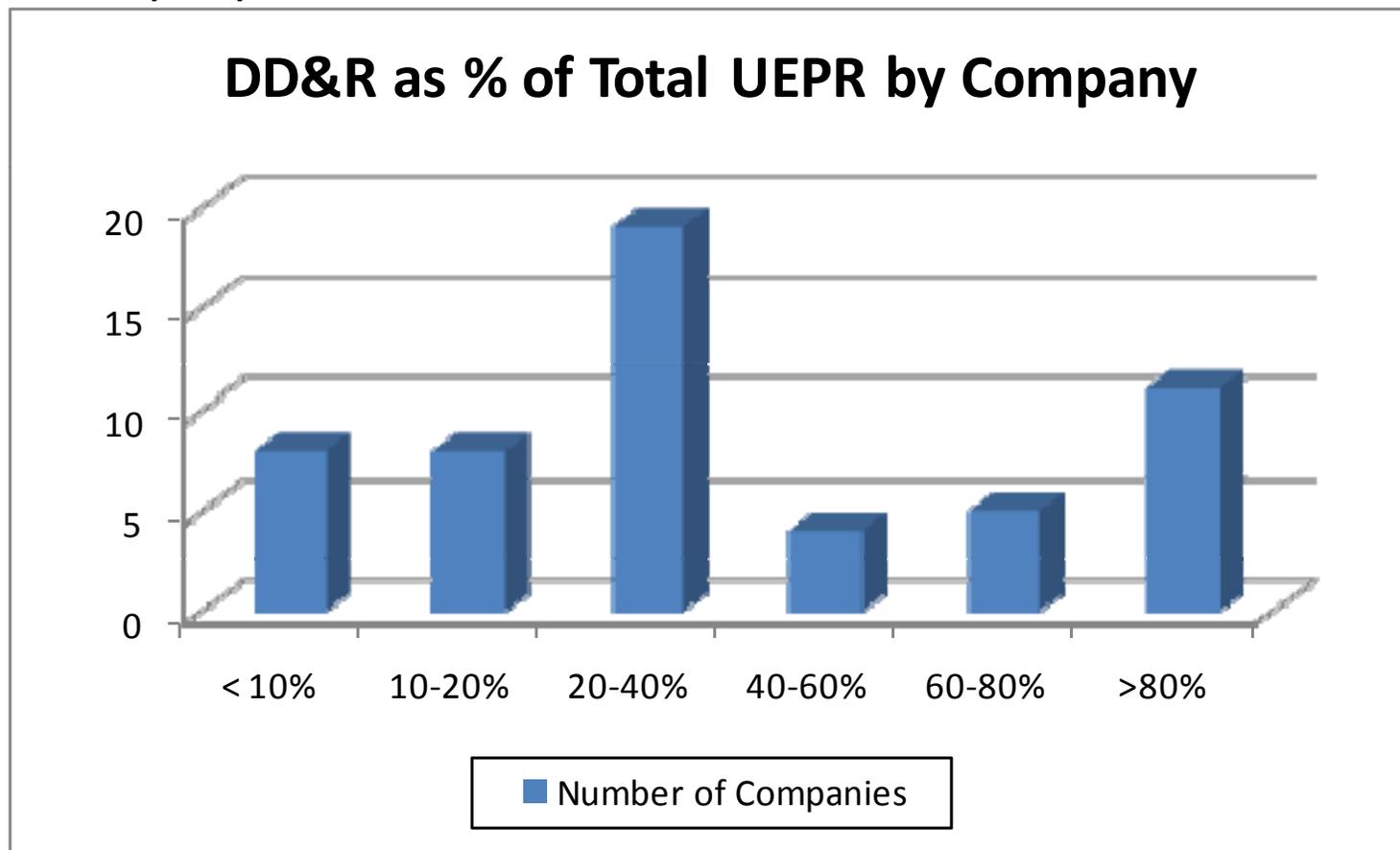
- *“Death, Disability, and Retirement Coverage: Pricing the “Free” Claims Made Tail”, 1996, Walker and Skrodenis*
- *“A Dynamic Approach to Modeling Free Tail Coverage”, 1999, Walling*

Actuarial Calculation of DD&R Reserve

- Setting DD&R reserve as a percent of UEPR can lead to problems
- DD&R reserve adequacy will react to premium changes
- What is an appropriate percentage?

Actuarial Calculation of DD&R Reserve

- Based on the 55 MPL companies that held a DD&R reserve as of 12/31/10



Actuarial Calculation of DD&R Reserve

- $PV \text{ of Future Benefits} - PV \text{ of Future Premiums} = DD\&R \text{ Reserve}$
- Some similarities to pension funding
- Project future benefits and premiums by cohort
- Cohorts can be based on variety of factors
- Grouping cohorts by age and number of years as a policyholder is common

DD&R Reserve Parameter Inputs

- “Vesting” or waiting period required for each covered decrement
- Premium Load – generally a percent of premium collected
- Cost of providing tail coverage
- Number of insureds by cohort
 - Not always available by characteristics in your model

DD&R Reserve Parameter Assumptions

- Mortality and Disability tables
 - Industry sources
- Retirement table
- Lapse rate table
 - Overall lapse rate usually obtained from company
 - Lapse rate by age or cohort can be more difficult
- Loss trend
- Discount rate

DD&R Reserve Model Results

- Model produces overall required DD&R reserve
- DD&R reserves are also produced by cohort
 - DD&R funding as a percentage of premium produces subsidies
 - Developing reserves by cohort allows a better understanding of those subsidies

DD&R Reserve Model – Age 55, Entry Year 0 Cohort

<u>Age at</u> <u>Beginning</u> <u>of Year</u> (1)	<u>Years of</u> <u>insured</u> <u>Risk</u> (2)	<u># of</u> <u>insureds</u> (3)	<u>Disability</u> <u>Rates</u> (4)	<u>Mortality</u> <u>Rates</u> (5)	<u>Retirement</u> <u>Rate</u> (6)	<u>Expected</u> <u># of</u> <u>DD&R</u> <u>Utilized</u> (7)	<u>Lapse</u> <u>Rate</u> (8)	<u>Expected</u> <u># of</u> <u>lapses</u> (9)
		81						
55	0	81	0.858%	0.322%	2.500%	0	7.00%	9
56	1	72	0.943%	0.360%	2.500%	0	6.50%	7
57	2	65	1.036%	0.406%	5.000%	0	6.00%	8
58	3	57	1.137%	0.460%	5.000%	0	5.50%	7
59	4	50	1.247%	0.509%	5.000%	3	5.00%	3
60	5	44	1.367%	0.564%	10.000%	5	4.50%	2
61	6	37	1.497%	0.640%	10.000%	4	4.00%	1
62	7	31	1.638%	0.711%	10.000%	4	3.50%	1
63	8	26	1.779%	0.812%	10.000%	3	3.00%	1
64	9	22	1.920%	0.903%	10.000%	3	2.50%	1
65	10	19	2.061%	1.000%	20.000%	4	2.00%	0
66	11	14	2.202%	1.133%	20.000%	3	1.80%	0
67	12	11	2.343%	1.242%	20.000%	2	1.60%	0
68	13	8	2.484%	1.310%	20.000%	2	1.40%	0
69	14	6	2.624%	1.413%	20.000%	1	1.20%	0

DD&R Reserve Model – Age 55, Entry Year 0 Cohort

<u>Premium Collected</u> (13)	<u>PV Premium Collected</u> (14)	<u>DD&R Utilized</u> (15)	<u>PV DD&R Utilized</u> (16)	<u>Discounted Value of Future DD&R loss</u> (17)	<u>Discounted Value of Future DD&R Prem</u> (18)	<u>Year End UPR</u> (19)
183,366	183,366	0	0	121,253	54,058	67,196
172,033	167,023	0	0	124,891	47,648	77,243
162,089	152,784	0	0	126,751	41,510	85,240
149,146	136,490	0	0	130,553	35,793	94,760
137,792	122,427	11,476	10,196	122,994	30,434	92,560
127,808	110,249	18,741	16,166	107,943	25,380	82,563
112,417	94,148	16,742	14,021	94,439	20,893	73,546
99,253	80,702	15,017	12,210	82,255	16,886	65,369
87,954	69,432	13,544	10,692	71,179	13,287	57,892
78,204	59,937	12,244	9,384	61,070	10,034	51,036
69,777	51,920	19,566	14,559	43,336	7,078	36,258
55,365	39,997	15,674	11,323	28,963	4,706	24,257
43,921	30,805	12,542	8,797	17,289	2,796	14,493
34,844	23,727	10,022	6,824	7,787	1,253	6,533
27,655	18,283	8,020	5,302	0	0	0

DD&R Reserve Model Results

Indicated UPR By Entry Year and Age

Age	Entry Year					
	<u>0</u>	<u>1</u>	<u>2</u>	<u>7</u>	<u>8</u>	<u>9 & Greater</u>
38	(48,957)	(46,663)	(40,325)	(32,147)	(35,783)	(212,527)
39	(50,675)	(48,158)	(41,478)	(32,942)	(36,669)	(217,788)
40	(44,707)	(42,289)	(36,251)	(28,637)	(31,877)	(189,326)
41	(27,556)	(25,876)	(22,006)	(17,238)	(19,188)	(113,964)
42	(17,950)	(16,628)	(13,939)	(10,744)	(11,959)	(71,029)
43	(15,206)	(13,678)	(11,081)	(8,214)	(9,143)	(54,304)
44	(6,633)	(5,325)	(3,712)	(2,207)	(2,457)	(14,592)
45	1,399	2,449	3,118	3,320	3,696	21,949
46	9,849	10,840	10,679	9,611	10,698	63,538
47	17,834	20,424	19,286	16,748	18,642	110,724
48	23,437	25,632	25,312	21,645	24,093	143,100
49	31,636	33,715	32,533	28,950	32,225	191,395
50	37,447	39,266	37,317	32,734	36,437	216,413
51	42,175	43,742	41,142	35,725	39,766	236,183
52	71,640	77,069	71,942	62,013	69,028	409,981
53	59,636	63,543	61,341	52,580	58,528	347,620
54	53,802	60,391	57,869	51,172	56,961	338,309
55	67,196	74,756	75,143	66,052	73,523	436,682
56	55,405	61,147	61,017	56,081	62,425	370,765
57	67,210	81,297	80,588	73,611	81,937	486,655
58	52,808	63,511	68,518	62,244	69,285	411,507
59	63,519	75,937	81,484	80,124	89,188	529,718

Total	8,516,504
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Other Considerations

- Changes in Policyholder Retention Levels – Impacts number of insureds “vesting”
- Shifts in Policyholder Population – Shifts in policyholder age due to market disruption can increase need for higher accrual



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Thank You!

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