

Swiss Re



Post-level premium term experience

Actuaries' Club of the Southwest

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Lapse study results

Mortality study results

Policy Consider

Conclusions

What's next?



Discussion topics

- Lapse study results
- Mortality study results
- Additional considerations

Recent Swiss Re lapse studies

Post-level term lapse experience study cohorts (T10 plan only)

	Swiss Re Industry Study	Swiss Re Reinsured Experience
Companies (min 200 lapses)	17	32
Calendar years of exposure	2001 – 2008	2007 – 2009
Exposure number	357,000	265,000
Exposure amount	\$ 77 b	\$ 15 b
Total lapses	124,000	136,000
		exposure amounts based on SR share

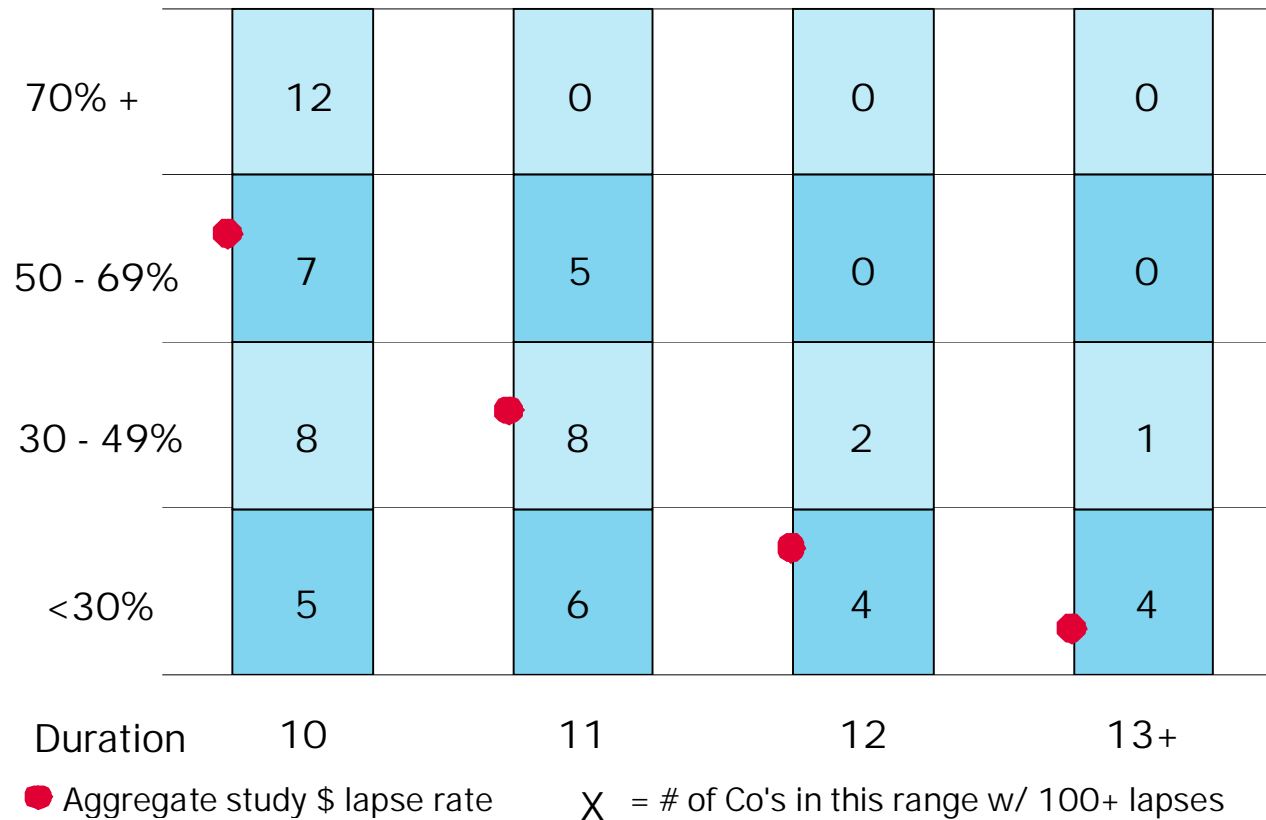
Duration 10 begins nine years after the date of issue. Premiums typically increase substantially in the 11th duration for a level premium T10 plan.



Swiss Re lapse experience results

Shock lapse rates vary widely by company

Company dispersion of lapse rates (by \$) by duration





Swiss Re lapse experience results

How shock lapse rates vary

Lapse rates

- are very sensitive to premium jumps
- increase as the issue age increases
- higher for preferred classes
- higher for larger policies
- slightly higher for males



SOA survey

Newer products have higher premium jumps

Premium Ratio - Current Products vs. Inforce Products							
R=GP _{L+1} /GP _L Falls within the Indicated Range							
Nonsmoker	Issue	Current Products			Inforce Products		
Risk Class	Age	R<=5	5< R<=10	R>10	R<=5	5< R<=10	R>10
Best Preferred	35	2	1	15	6	5	2
	45	0	4	14	6	6	1
	55	0	2	16	6	6	1
Standard	35	5	11	2	13	3	0
	45	5	11	2	13	3	0
	55	0	12	6	10	6	0

Source: 2007 SOA Survey

- The most common response from the 2009 survey showed a guaranteed ultimate premium rate of at least 200% of the 2001 CSO ultimate table
- 60% of 2009 survey respondents stated that their product only have guaranteed rates or current rates = guaranteed rates



SOA survey compared to SR study

Current assumptions lower than emerging experience

2009 SOA Survey

Direct company assumptions (T10)	Annual lapse rate assumption by duration			Cumulative lapse	
	10	11	12	10-11	10-12
Minimum	40%	5%	5%	45%	48%
20 th percentile	68%	10%	10%	79%	83%
Median	80%	25%	15%	86%	87%
80 th percentile	90%	53%	25%	94%	95%
Maximum	95%	90%	50%	98%	99%

Swiss Re reinsured experience study

	Annual lapse rate assumption by duration			Cumulative lapse	
	10	11	12	10-11	10-12
SR experience overall	62%	43%	26%	78%	84%
SR experience 10+ prem jumps	88%	55%	15%	95%	95%

- Emerging experience suggests lapse assumptions may be too low for products with high premium jumps.

Key consideration:

How do you reflect the impact of premium jumps in your assumptions?

Recent Swiss Re mortality studies

Post-level term mortality experience study cohorts (T10 plan only)

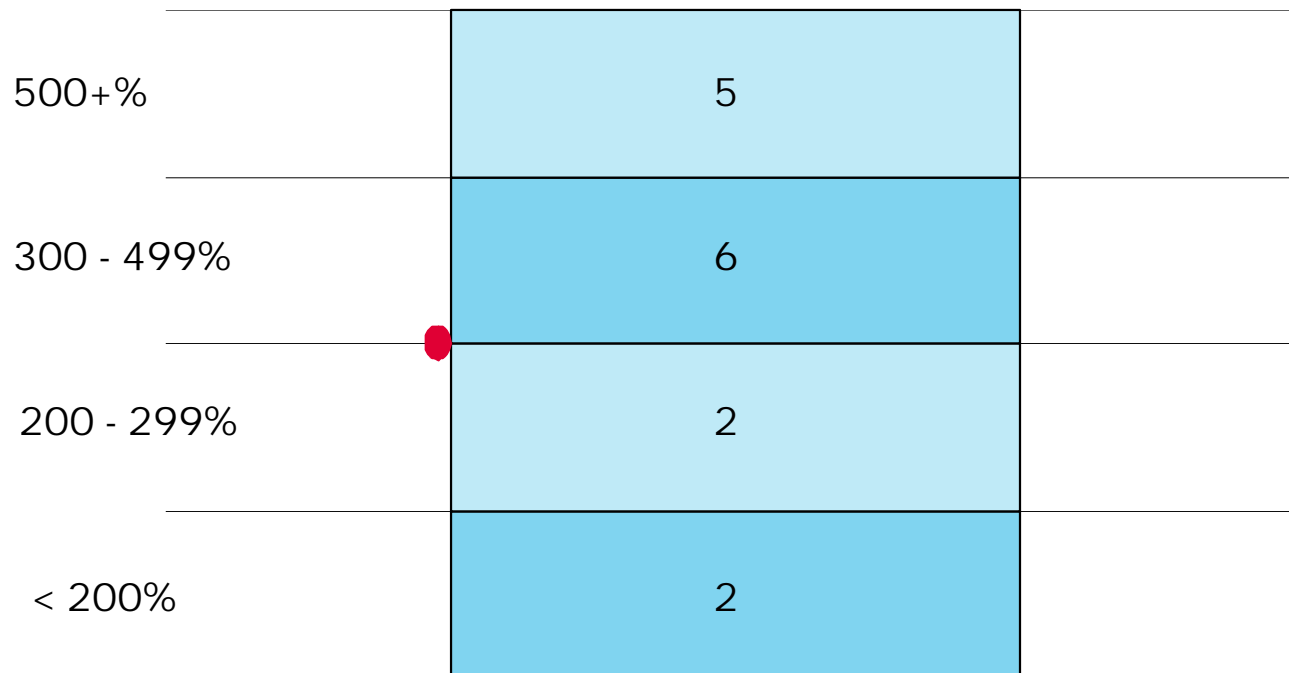
	Swiss Re industry study	Swiss Re reinsured experience
Companies (min 10 claims)	7	15
Calendar years of exposure	2001 – 2008	2007 – 2009
Exposure number	91,000	136,000
Exposure amount	\$ 38 b	\$ 6 b
Total claims	575	834
		exposure amounts based on SR share



Swiss Re mortality experience results

Mortality shock varies widely by company

Company dispersion of mortality jumps
Duration 11-14 / 8-10 mortality jump based on 2008 VBT



Includes only companies with a minimum of 10 claims

● = Average mortality jump



Swiss Re mortality experience results

How mortality ratios vary

Mortality Ratios

- are very sensitive to premium jumps
- increase as the issue age increases
- higher for preferred classes
- higher for larger policies
- higher for males



SOA Survey

Current assumptions lower than emerging experience

2009 SOA survey

Direct company assumptions (T10)	Annual mortality deterioration multiple assumption by duration			
	11	12	13	14
Minimum	115%	115%	115%	115%
20 th percentile	194%	193%	188%	183%
Median	200%	225%	217%	208%
80 th percentile	251%	373%	362%	346%
Maximum	600%	560%	535%	491%

Swiss Re reinsured experience study

	Dur 11-14
SR experience overall	301%

- Emerging mortality experience has been worse than shock mortality assumptions... based on inforce premium jumps much lower than current products.



Additional considerations

Evaluating emerging experience

- Grace period may require adjustments depending on how your system handles termination dates
 - a policy paying no premium in year 11 should be treated as a year 10 lapse even though the grace period expires in duration 11
- Distribution of lapses within shock years is important
 - impacts profitability
 - impacts mortality anti-selection assumption (particularly when lapses occur early in the year following the main shock)
 - varies drastically by payment mode

Additional considerations

Conversions affect mortality anti-selection

- Identify as a separate decrement
- Be aware of conversion options on your inforce experience compared to current policies (may be more liberal now)
- Level of conversions depends on available policyholder options

Hypothetical comparison of level premium vs. post level premium vs. ULSG (policy converts) T10 Male Policy \$500,000 coverage; highly competitive term and ULSG						
Ultimate premium as % of 2001 CSO	Issue age	(A) Level premium*	(B) Duration 11 premium	(B)/(A) Premium jump multiple	(C) Conversion premium**	(C)/(B) Conversion prem vs. duration 11
200%	35	185	2,395	13x	3,556	1.48x
	45	362	5,565	15x	5,547	1.00x
	55	888	15,535	17x	9,555	0.62x
300%	35	185	3,560	19x	3,556	1.00x
	45	362	8,315	23x	5,547	0.67x
	55	888	23,270	26x	9,555	0.41x

*Level premium based on information from Compulife using the average of 8 to 12th best preferred rate

**Conversion premium based on information from Compulife using the average of 8 to 12th best rate

Conclusions

- Shock lapse rates vary widely by company
- Higher premium jumps have experienced higher lapse rates
- Current products generally have larger premium jumps
- These larger premium jumps suggest even higher future shock lapse rates
- Higher shock lapses have driven greater mortality anti-selection
- Relationship of mortality to shock lapses may not be sufficient

Key consideration:

How much of your assumed profits come from the post level term period?



Swiss Re



Questions??

Lapse study
results

Mortality
study results

Also Consider

Conclusions



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