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# Lapse Experience Under Lapse-Supported Products

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Companies in the United States have been struggling to develop best-estimate lapse assumptions for lapse-supported products, such as universal life with no-lapse guarantees and return of premium term, given the lack of available experience for these products. The financial implications of over-estimating ultimate lapse rates can be significant.

At the same time, rating agencies have expressed concern about the lapse rates assumed in pricing lapse-supported products. For example, in its August 2005 report “2005 Credit Issues and Trends for U.S. Life and Health Insurance,” Moody’s stated that “Moody’s believes that the price-competitive fight occurring in the no-lapse UL market is one of the more serious long-term credit issues that the life insurance industry currently faces” in part due to the persistency assumptions used in pricing.

This article provides a review of the available lapse experience for lapse-supported products. The results of the following three studies are presented:

- 1) “Lapse Experience Under Lapse-Supported Policies,” Canadian Institute of Actuaries, October 1999. <http://www.actuaries.ca/publications/1999/9954e.pdf>
- 2) “Lapse Experience Under Universal Life Level Cost of Insurance Policies,” Canadian Institute of Actuaries, June 2003. <http://www.actuaries.ca/publications/2003/203052e.pdf>
- 3) “Long-Term Care Insurance Persistency Experience,” LIMRA International and Society of Actuaries, 2004. <http://www.soa.org/ccm/content/areas-of-practice/health/experience-studies/long-term-care-insurance-persistency-experience/>



The 1999 study focused on term to 100 products and excluded universal life level cost of insurance products and will be referred to as the term to 100 study in this article.

### **Universal Life Level Cost of Insurance Products sold in Canada:**

Similar to U.S. universal life with no-lapse guarantee products in that this product is frequently sold for the lowest price that will keep the policy in force until the policyholder’s death. Cost of insurance charges are level and guaranteed.

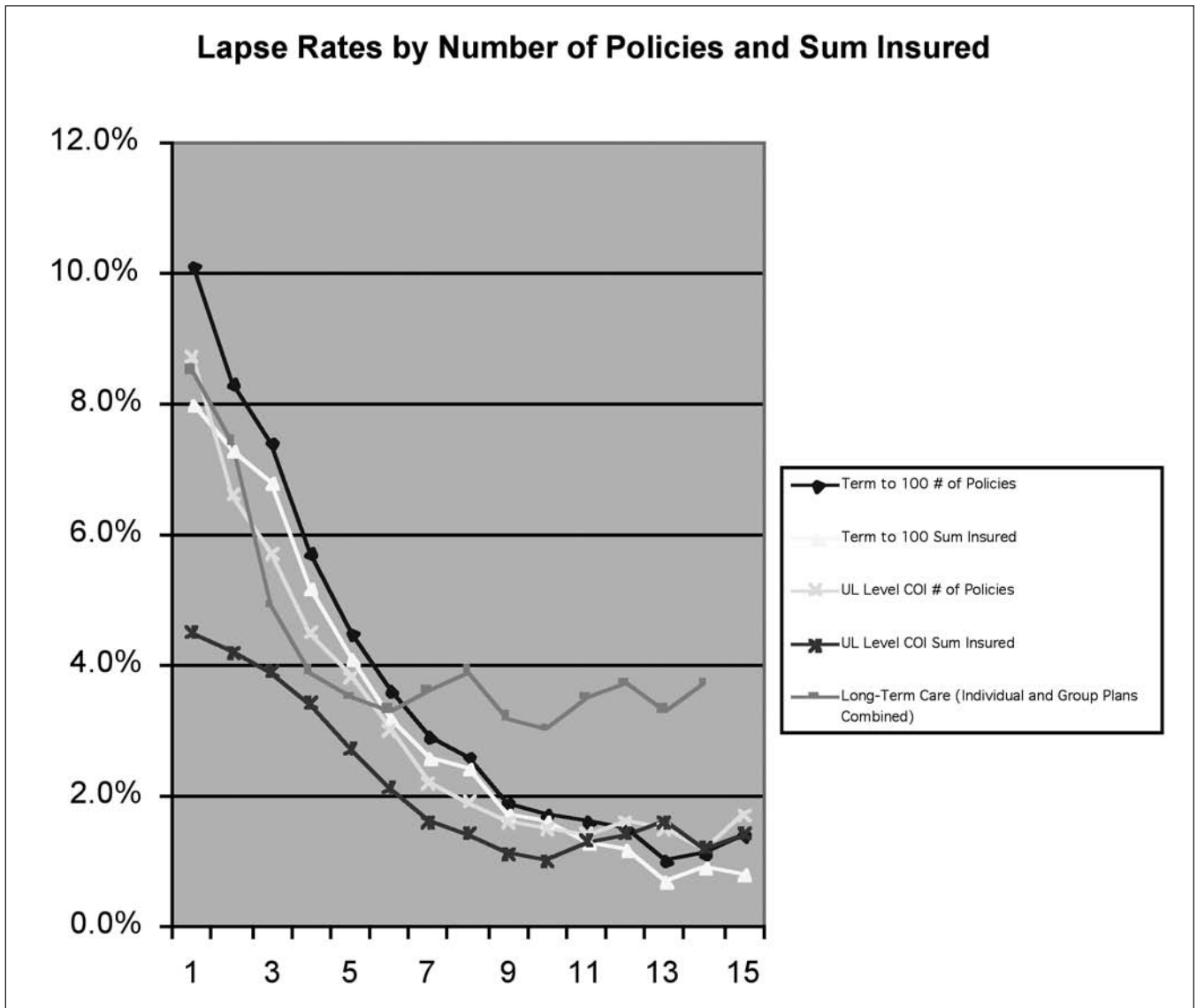
### **Term to 100 Products sold in Canada:**

Guaranteed level premium whole life products without cash values.

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Lapse rates by number of policies and sum insured are presented in Chart 1 below. Ultimate lapse rates range from 1 to 2 percent for the Canadian studies and from 3 to 4 percent for the long-term case study.

Chart 1

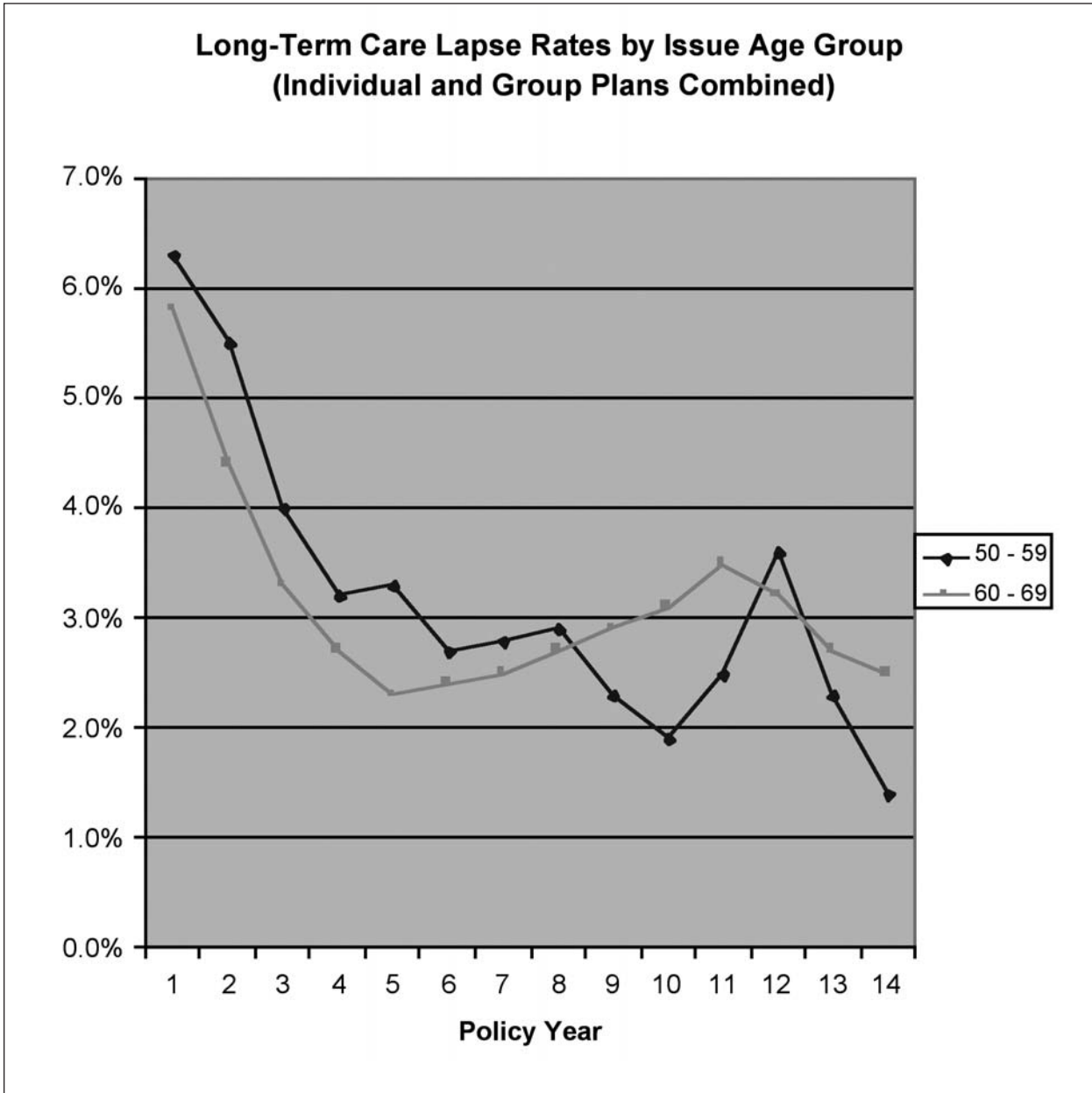


## Lapse Experience Under Lapse-Supported Products

Long-term care practitioners generally do not use the results of the above long-term care lapse study for all issue ages combined (shown in Chart 1) to set ultimate lapse assumptions. Instead a more granular review leads to results more similar to the

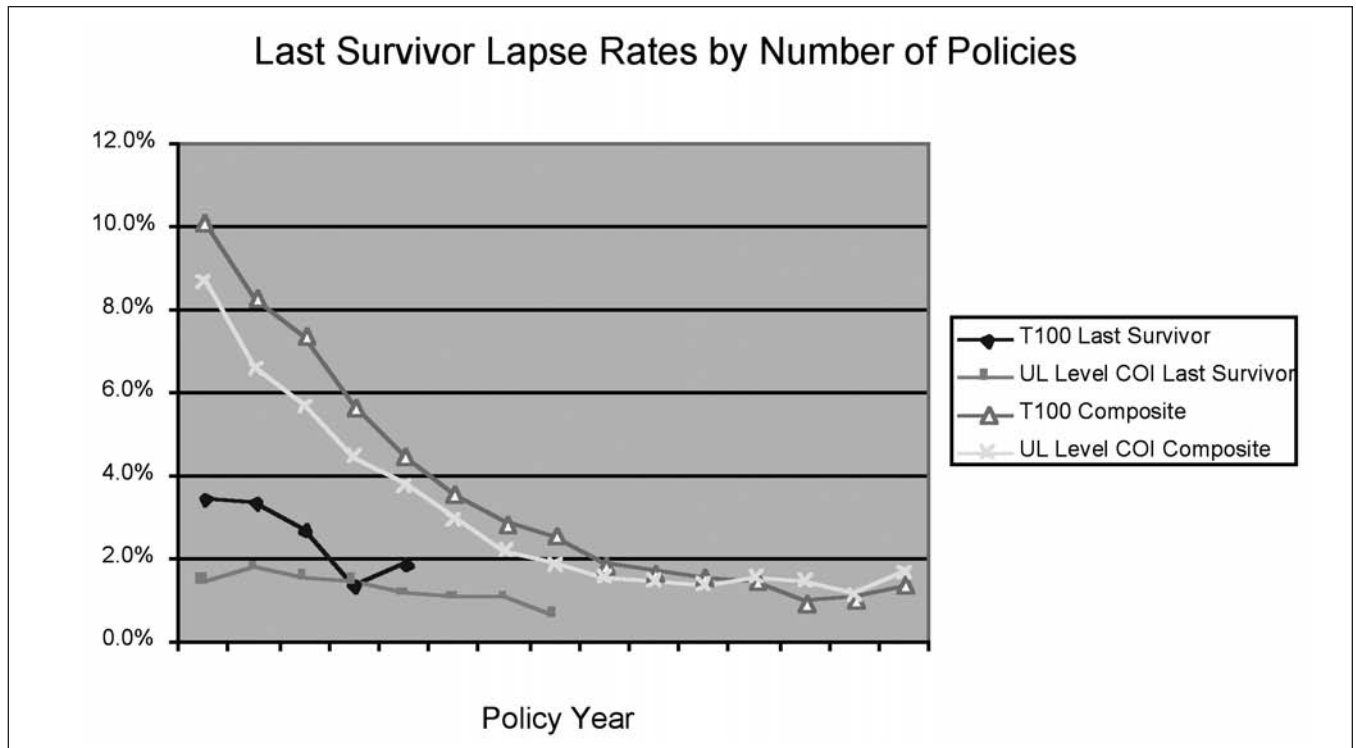
study for issue age groups 50 to 59 and 60 to 69, where ultimate lapse rates are in the range of 1.5 percent to 2.5 percent, which are expected to be more indicative of future experience. The results for these two age groups are shown in Chart 2 below.

### Chart 2



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Chart 3



Last survivor (joint second-to-die) lapse rates appear to be significantly lower than composite lapse rates in the Canadian studies as shown in Chart 3 above, possibly reflecting a more educated sale.

The results of these studies indicate that the Canadian and U.S. long-term care markets are not unsophisticated. Rather these markets understand the value of the options in lapse-supported products and the significant internal rates of return that are foregone upon lapse. It would seem reasonable to assume that the U.S. secondary guarantee UL and return of premium term markets also are (or will be) sophisticated and to therefore use the lapse study results as a reference point to set lapse rates. Adjustments could then be made for product, distribution and market differences such as the presence of cash values, commission patterns and the growth of the secondary settlement market.

Although it is difficult to ignore the level of ultimate lapse rates, it should be noted that lapse rates may not be statistically credible in later durations. In particular, care is

required in interpreting the lapse rates in Charts 2 and 3 where the number of policies exposed for these segments is lower.

The three studies provide additional information such as scope, methodology, limitations, contributing companies and additional results broken down along multiple criteria. The reader is encouraged to read each study.

The Canadian Institute of Actuaries is currently collecting lapse data and will be releasing new term to 100 and universal life level COI lapse study results in 2006. The new study will have a larger exposure base and will include later policy durations.

Until lapse studies are available for lapse-supported products, such as universal life with no-lapse guarantees and return of premium term, the appropriate level of the ultimate lapse assumption to be used for pricing, cash flow testing, embedded value and GAAP reporting will continue to be debated, but actuaries should be aware of the available experience, since the financial impact of overestimating ultimate lapse rates can be significant. □



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