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# Disability Income Insurance Research: A Health Section Specialty!

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As part of its mission, the Health Section has strived to advance the work of disability income insurance practitioners. Members who specialize in disability income insurance have been integral to the success of the well-attended and informative sessions at the Society of Actuaries' (SOA's) annual health meetings. As well, these members have been instrumental in launching and helping to oversee a number of important disability-related research efforts that have pushed the boundaries of actuarial practice. In this article, I wanted to highlight one such recent effort and solicit your ideas for new disability-related research projects. As always, your ideas are the key to delivering worthwhile and beneficial research material!

As an example of disability-related research, in 2010 the Health Section sponsored a two-phase research effort conducted by Robert Beal, of Milliman, Inc., that explored the offset of benefits for group long-term disability (LTD) plans. The first phase detailed data from a number of carriers on LTD claimants who are receiving disability benefits from other sources that offset their LTD benefits. The second phase presented the results of a survey focused on how LTD carriers reflect benefit offsets in the valuation of their reserves. Both phases were overseen by a group of LTD experts.

The following are key conclusions from the first phase relating to data on Social Security, workers' compensation and pension benefit offsets:

- The percentages of LTD claimants with primary Social Security benefit offsets increase by duration of disablement, exceeding 83 percent by the fifth year of disablement and ultimately reaching 90 percent.
- During each of the first eight years of disablement, the percentage of LTD claimants with primary Social Security benefit offsets generally increases with the age of disablement until age 65.
- The percentages of LTD claimants with primary Social Security benefit offsets do not vary materially by pre-disability annual income levels until annual income levels exceed \$200,000.
- Percentages of LTD claimants with primary Social Security benefit offsets exhibit similar increasing patterns among many industries.
- There are material differences by diagnosis in the percentage of LTD claimants with primary Social Security benefit offsets during the first 60 months of disablement, with disabilities related to circulatory, the nervous system, respiratory, genitourinary, dementia and AIDS exhibiting the highest percentages. The differences tend to narrow among the various diagnoses for disabilities lasting longer than five years.
- Noticeable differences in the percentage of LTD claimants with primary Social Security benefit offsets by state occur in the durations in excess of 60 months. Florida, Michigan, North Carolina, Pennsylvania and Tennessee have high percentages in these later durations.
- The average ratio of primary Social Security benefits to pre-disability earned income for LTD claimants receiving Social Security benefits is 33 percent. There appear to be few material differences in this ratio among ages of disablement 35 and older, except there is considerable variation based on the amount of pre-disability earned income.
- Although only about 4 percent of LTD claimants receive workers' compensation benefits, the average workers' compensation benefit is approximately one-third higher than the average primary Social Security benefit relative to the pre-disability earned income.
- The percentage of LTD claimants with workers' compensation benefit offsets decreases after age 44 at most durations of disablement.
- Disabilities at the younger ages may be more likely due to injuries affecting the back or muscles. Disabilities due to cancer and circulatory, which are more likely to occur at the older ages, are less likely to be attributable to events at the worksite.
- There are wide variations in the incidence of workers' compensation claims by industry. Communications, public administration, and electric, gas & sanitary services industries exhibit some of the highest incidence of workers' compensation claims.
- There are significant differences in the percentages of LTD claimants with workers' compensation benefit offsets by state, reflecting differences in the distribution of industries and workers' compensation regulations and practices among the

states. New York, South Carolina and Washington have some of the highest incidence of workers' compensation claims among LTD claimants, while Tennessee, Illinois and Ohio have some of the lowest incidence.

- Certain diagnosis categories, such as Other Musculoskeletal, Back and Other Injury, have significantly higher percentages of LTD claimants with workers' compensation benefit offsets, while others such as Circulatory, Cancer and Genitourinary have very low percentages.
- The proportion of LTD claimants with pension benefit offsets is higher than the proportion with workers' compensation benefit offsets.
- The proportion of LTD claimants with pension benefit offsets increases sharply with the age at disablement.
- The average pension benefit as a percent of the pre-disability earned income is 0.304, which is close to the average primary Social Security benefit but lower than the average workers' compensation benefit.
- There is a very wide range of percentages of LTD claimants with pension benefit offsets by industry, reflecting the relative prevalence of pension plans among industries.

The following are takeaways from the second phase survey:

- All 12 participating companies reduce LTD reserves for known benefit offsets and estimated Social Security disability benefits. Only a few companies estimate other benefit offsets.
- All but one of the participating companies base estimated benefit offsets on their own company experience, rather than on other sources, such as industry or government statistics.
- Generally, companies estimate Social Security benefit offsets for claims that have not received approval up to the third or fourth year of disablement.
- All of the participating companies estimate Social Security disability benefit offsets using the probabilities of receiving approval and approximating the Social Security disability benefit amounts. Some of the companies also estimate the retroactive lump-sum payment and/or use separate end dates for the primary and dependent Social Security disability benefits.

- Most participating companies estimate the primary and dependent Social Security benefit offsets separately. However, three companies estimate the primary and dependent benefit offsets together, while two companies only estimate the primary benefit.
- Most companies reflect the estimated Social Security disability benefit offset in the LTD reserves by multiplying the estimated Social Security disability benefit by the probability of approval and then subtracting the product from the gross benefit.
- Three of the participating companies use different methods or assumptions for estimating the Social Security disability benefit offsets for statutory and GAAP reserves.
- One of the participating companies differentiates claim termination rates between claimants who have been approved for Social Security disability benefits and those who have not.
- There is a wide range of reserving practices among LTD companies with respect to reflecting the estimated future recovery of overpayments of LTD benefits due to the Social Security retroactive.

I would encourage you to read the full reports at: <http://www.soa.org/research/research-projects/disability/default.aspx>. A potential follow-up to this project is targeted for 2012.

And, as mentioned earlier, if you have ideas for new disability-related projects, we'd love to hear them. Please contact me at [ssiegel@soa.org](mailto:ssiegel@soa.org) with any thoughts or comments. ■

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