7. (3 points)

An actuary is reviewing workers compensation indemnity loss experience for a rate level indication analysis. Given the following information:

- A benefit change having an impact of +5.0% applies to all indemnity losses for accidents occurring after July 1, 2011.
- A benefit change having an impact of +2.0% applies to indemnity losses on policies written after October 1, 2012.
- No other benefit changes are expected within the next few years.
- The annual impact on benefits due to wage inflation has been +2.0% and is expected to continue.
- The proposed effective date for revised loss costs is July 1, 2013.
- Policies are annual.
- Revised loss costs would be in effect for one year.
- Losses occur uniformly throughout the year.

Accident Year	Estimated Ultimate Losses at Pre-July 1, 2011 Benefit Levels ($000s)
2010	$1,875
2011	$1,875
2012	$2,000

Calculate the 2010, 2011, and 2012 accident year projected ultimate losses to be used in the rate level indication.

CONTINUED ON NEXT PAGE

Exam 5 Question #7

Proposed effective date 7/1/2013 for annual pols in effect 1 year to avg loss date of 7/1/2014

AY	Loss (000)	Trend	Benefit Changes*	ULT Losses (0001)
2010	1,875	$(1.02)^4$	(1.05)(1.02) = 1.071	2,173.7
2011	1,875	$(1.02)^3$	(1.05)(1.02)	2,131.0
2012	2,000	$(1.02)^2$	(1.05)(1.02)	2,228.5

*since all losses are reported at pre July 2011 benefit levels all years need both the 2% and 5% adjustment

In both the written response and diagram, several candidates received no credit for describing the gap as happening when both the claims-made and occurrence policies were effective at the same time, rather than in a subsequent year.

As with part D, candidates did demonstrate a strong understanding of what was being asked, but some provided responses that were more involved than needed.

7. This question was a straightforward calculation. The most challenging part for candidates was the part of the question where it stated that losses given were prior to the 7/1/11 benefit change, and that all accident years needed to adjusted by the both benefit changes (the full amounts) for full credit.

   The majority of candidates missed this subtlety and approached the question by adjusting each accident year by a different amount. A common mistake among these candidates was to treat the 7/1/11 benefit change as applying to policies written on or after 7/1/11 (question stated that it applied to losses on or after) and/or treat the 10/1/12 benefit change as applying to losses on or after 10/1/12 (question stated that it was applied to policies written on or after).

   Several candidates correctly calculated the average benefit level for losses in each of the given accident years, but then multiplied the given losses by the average benefit level (rather than using the average benefit level to calculate a benefit level adjustment factor before applying).

8. Only a very small number of candidates received the full credit. One of the most popular mistakes is the incorrect trending periods. Very few candidates got it right. A significant portion of candidates missed the assumption that "All policies are annual and written on January 1" and therefore calculated the total trending period as incorrect 3.5 years. Another common mistake is the application of one step trending without any adjustment. Most candidates did not use two step trending or one step trending plus onetime adjustment to account for the underwriting guidelines change. Regarding the loss development part, most candidates got it correct. A small percentage of candidates misread the ultimate LDFs provided in the question as age-to-age factors. Almost all candidates understood the correct trend factor calculation (freq*sev) ^ trend period. They also understood the projected ultimate loss is calculated by multiply the incurred loss by the loss development factor to ultimate and trend factor. About 10% of all candidates did not attempt the question (having a blank or almost blank answer sheet).

9.

   a. Many candidates received full credit for this question. When there was an error committed, candidates either used the permissible loss ratio as the experience loss ratio or flipped the variable and fixed expense percentages.

   b. Many candidates had trouble with this question. The answer was a verbalization of part a of this question. Many didn’t realize this and tried to define fixed and expense rather than stating how reflecting fixed impacted indication.