

COI Increases

I. UL Charges, the types

UL is an unbundled product, somewhat like a checking account.

If the account has a negative balance at month end, the policy has insufficient funds and the insurance company will start their cancellation process. This is reversible, but the process will begin.

Types of charges that reduce the account balance are:

Percentage of premium loads, useful in paying commissions and premium taxes

Flat amounts per month, useful in covering insurance company expenses

COI charges, useful in funding mortality costs at the carrier level

Events that increase the policy balance are:

Premium payments

Interest crediting

II. COI's; What are they?

COI's are usually the largest monthly expense, as the charges reflect mortality patterns. COI's are charged against the policy "Net Amount at Risk (NAR)". Net Amount at Risk is the amount of money that the insurance company would have to pay out to complete a death claim. This is basically (Life Insurance Face Amount) less (Policy Account Value) = NAR. If the company puts your account value together with their NAR, the resulting dollar = Face Amount and they can pay the full claim. This is why NAR is important in calculating the monthly costs of a UL policy.

COI's generally increase each year on the policy anniversary, as the insured is another year older and the underlying mortality is assumed to have increased due to aging.

III. Carriers increasing COI's; why is this possible?

Carriers are required by statute to charge COI's at a rate that matches or falls below a guaranteed level. These guaranteed maximum rates are from a very conservative mortality

table and traditionally current charges are a fraction of the maximum. A parallel example is seen in the adjustable mortgage market, where new mortgages are offered at rates consistent with current market conditions, but with a lifetime maximum rate that provides protection to the lender against runaway inflation. Guaranteed COI's provide room for the carrier to increase COI's in the event that mortality experience becomes "runaway". For example, avian flu or AIDS or some other pandemic are typically thought of as the type of event that would drive COI increases to cover the dramatically higher mortality experience.

The regulatory concept of allowing both current COI's and maximum guaranteed COI's is that the insurance company can reflect current experience (which is generally declining) at their current level, while having the peace of mind that substantial deterioration in experience can be recognized by moving up toward the guaranteed maximum charges. This should result in lower current charges for policyholders as carrier risks are reduced, as well as providing greater comfort as regards company solvency for the company and the regulators.

IV. What does it take for a carrier to raise COI's?

Until recently, this had almost never happened and on the few occasions when it did, the insurance company was in serious financial difficulties. The COI increases were seen as a stop gap measure by a company that did not particularly care about its new business; at least not in comparison to their continued existence.

Our understanding has been that for a carrier to raise COI's, they must show the regulator that they are suffering financially and that the increases are intended to cover future shortfalls; but not to make up for past shortfalls. We would expect the increases to reflect increasing mortality . . . increases in actual claims beyond expectations . . . so that profitability would be restored.

This requires a filing at the state insurance department(s), explaining the issues the company is experiencing and how the COI increase meets the above requirements. The company must increase the charges for everyone in a class, which is a somewhat loosely defined term. But think of insureds who were 50 – 59 when issued, who bought a policy under the carrier's intermediate underwriting protocol, such as was applied to policies of size \$250,000 - \$999,999. This would be one example of a valid class.

V. Why these increases surprise us

As mentioned, we would expect a COI increase by a carrier that is experiencing poor mortality. But generally all carriers are experiencing good mortality and it is getting slowly better by the year. Mortality *improvement* is the common expectation, not worsening mortality. So, that is surprise #1. Mortality based charges are being increased by a few carriers in the face of better mortality trends.

Second, some of the increases have been on just the largest policies. These are the ones for which the carriers applied the most stringent underwriting possible. They are also the group that is nationally experiencing the lowest mortality. Not the highest mortality, but the lowest. Now that is not to say that the carrier is not also charging these insureds their lowest cost of insurance rates; they well might be. But it seems counter intuitive to raise charges on your best customers.

As a third point, many of the company communications on the topic have referenced the carrier's reduced investment margins. Most UL policies have a guaranteed minimum interest rate; 3% per year and 4% per year are common guarantees. To credit 4%, a company probably wants to earn 5.5% on their bonds and they cannot do that in this investment environment. So, it is understandable that carriers are seeking ways to offset investment losses. However, it appears to us that they are attempting to do so by raising COI's on policies that as closely as they can identify match the Life Settlement profile. This is ironic, as these LS policies have the *lowest* account values possible. This means that the LS owner is voluntarily minimizing the company's exposure to investment risk. That is not good enough for the carrier evidently.

One carrier, Banner Life, has cited the experience of its term conversion business as the reason for a COI increase. It is certainly a reasonable premise that insureds only convert from term insurance to permanent insurance when they have a poor health profile and this presumably does show up in the Banner Life experience. We think that the poor experience is a function of having chosen to sell term insurance, not attributable to the UL conversion itself. We feel that the term conversion mortality excess should be charged back to the term product line, not to the UL product.

In hallway conversations, knowledgeable people talk of the high persistency of LS policies as perhaps part of the reason for COI increases. The ideas here would be that surrender charge profits are reduced by the absence of lapses and that the company's high age COI charges are insufficient to cover the risk associated by 90 and 95 year old insureds. This might be partially true, although we note that carriers are not allowed to create lapse supported pricing structures, so this should not be valid. And isn't it just wrong to say, in effect, "we never intended for you to stay around long enough to have a claim"?

VI. What is the relationship between these various charges?

One of the questions that we are often asked is "Just how bad are these COI increases?" Will they hurt a little or a lot? To address that, we've taken a very basic UL policy and increased the various loads one by one so that they can be compared.

Percent of premium loads were increased by 2.5% per year

COI's were increased by 15% per year and

Interest rates were dropped by 1% per year.

Technically, it probably isn't possible for interest rates to be reduced by another 1%, as they are likely already at the policy floor. However, by measuring this change . . . which carriers probably would like to make but are not allowed to . . . we can measure the relative impact of the various pricing components.

To illustrate the effects of these various changes, we have modelled a generic, vanilla UL policy experiencing changes to each set of charges independently. The table below shows the approximate changes in premiums that result from each change in the base assumptions. The changes modelled are:

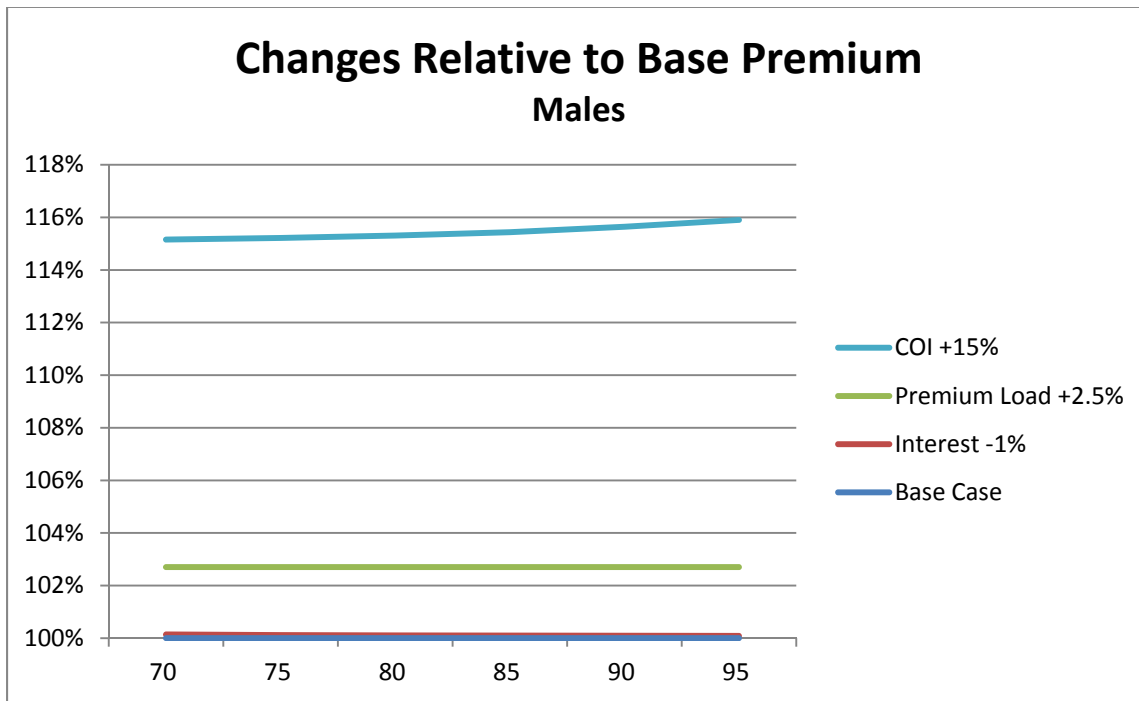
- Interest rates down 1% - This is a simulation of dropping the crediting rate from 4% to 3% or even more dramatically from 3% to 2%. While this change cannot be made (rates would be below guarantees), low interest rates is one of the reasons cited by carriers that have made COI changes. So, by implication they would *like to* reduce interest rates, so we have reflected this change to get a measure of the magnitude of the premium change that would result from an interest rate reduction.
- Premium loads up 2.5% - This is a simulation of increasing the load on new premiums from 5% to 7.5%. A 50% increase in this particular pricing component, which seemed to us to be a material change.
- COI's up by 15% - For example, if a policy rate was \$40 per \$1,000 of NAAR, this would be an increase to \$46. A 15% increase is at the low end of COI increases seen, so this should be something that you are aware of as you consider the consequences of these potential carrier events.

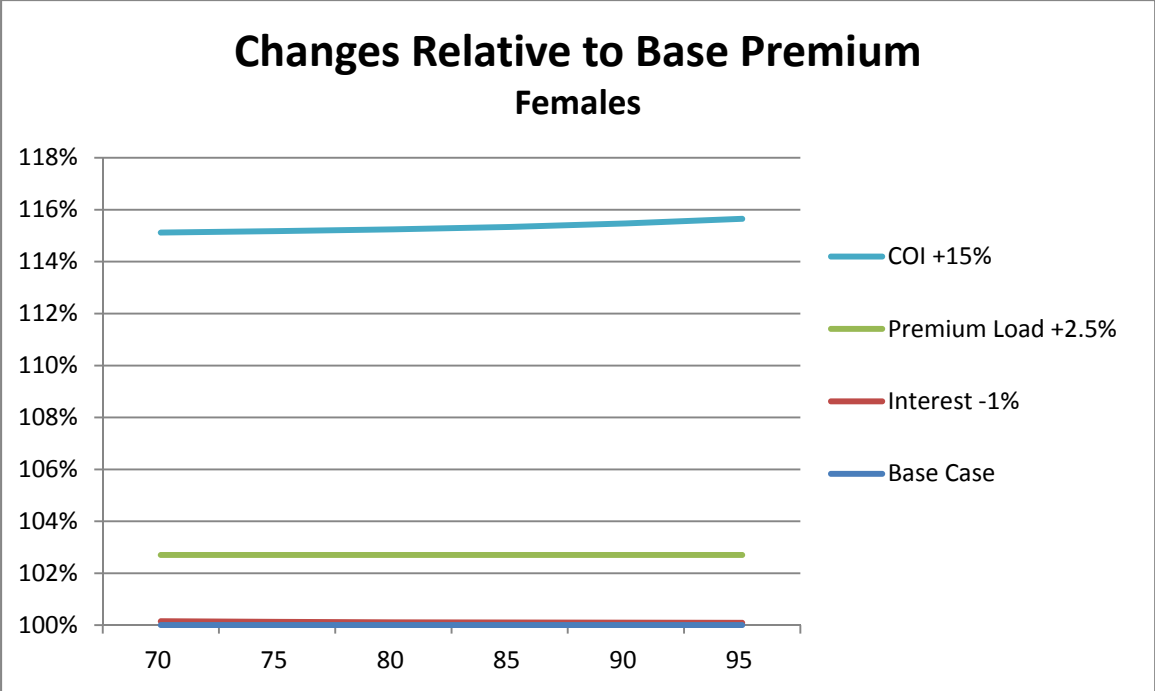
Male Non-Smokers, Attained Age						
	70	75	80	85	90	95
Base Policy Premiums	100%	100%	100%	100%	100%	100%
Interest rates down 1%	+1.4%	+1.2%	+1.0%	+1.0%	+0.9%	+0.9%
Premium Loads up 2.5%	+2.7%	+2.7%	+2.7%	+2.7%	+2.7%	+2.7%
COI's up 15%	+15.2%	+15.2%	+15.3%	+15.4%	+15.6%	+15.9%

Female Non-Smokers, Attained Age						
	70	75	80	85	90	95
Base Policy Premiums	100%	100%	100%	100%	100%	100%
Interest rates down 1%	+1.5%	+1.3%	+1.1%	+1.0%	+0.9%	+0.9%
Premium Loads up 2.5%	+2.7%	+2.7%	+2.7%	+2.7%	+2.7%	+2.7%
COI's up 15%	+15.1%	+15.2%	+15.2%	+15.3%	+15.5%	+15.6%

It appears that the most modest of COI increases would be sufficient to cover all interest rate deficiencies and a doubling of any expense margins, while still having dollars left over to provide additional mortality margin for the carrier. It does not seem likely to us that carriers have deficiencies of this magnitude in their interest margins and expense margins. By extension, if we are correct in this summary, the carriers are tacitly declaring that they need to provide for more than interest rate and expense coverage. This implies that they are experiencing sub-par mortality results for the blocks that being raised. This is surprising, in light of the general trends in life insurance mortality.

The table above shows that the relative impacts of various changes to the policy pricing structure. Since “a picture is worth a 1,000 words”, we also present the same results in the graphs below.





VII. What is the impact on value from these various charges?

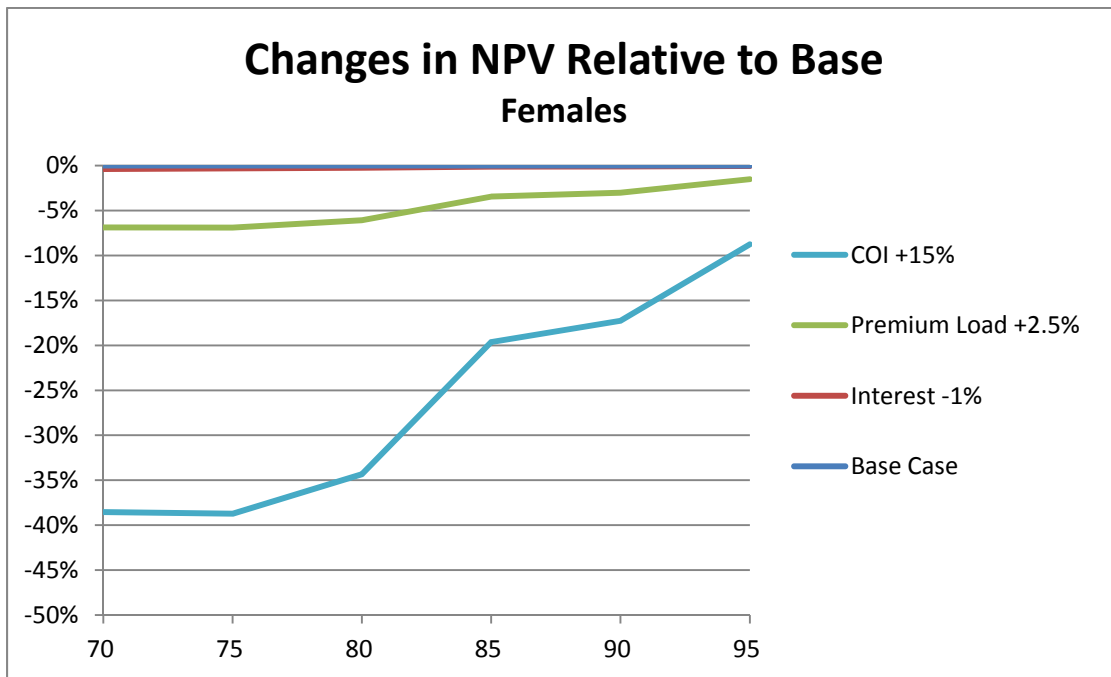
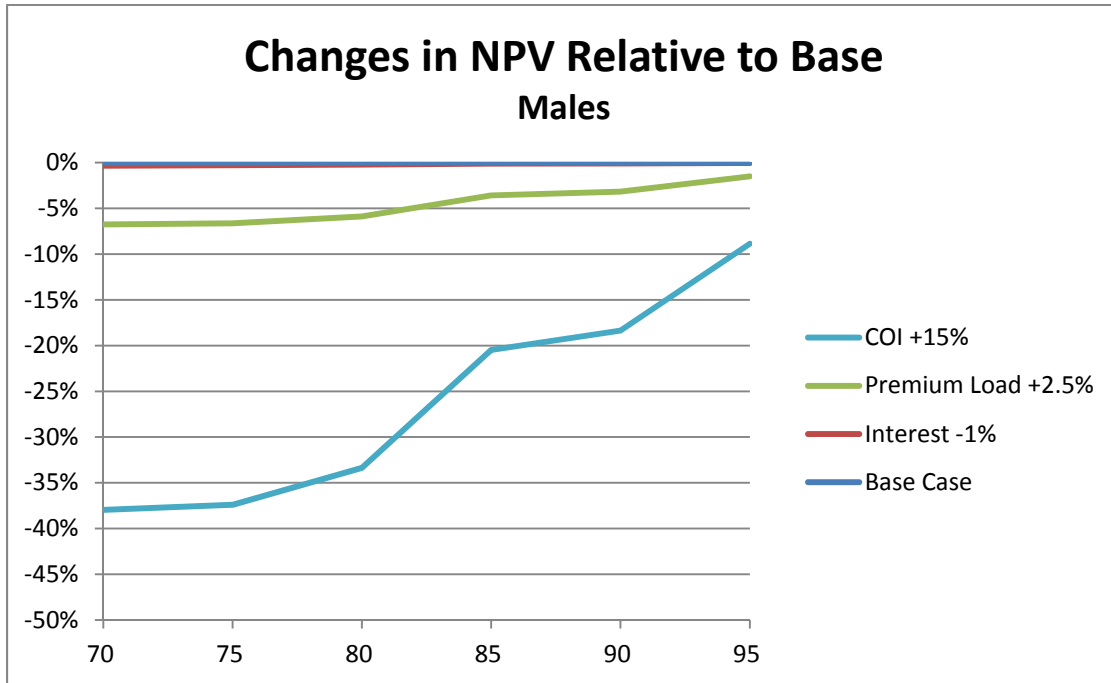
While the effects on premium for the various charges that we have modelled are fairly constant, the effects on value are not. For purposes of calculating a simple baseline, we have modelled a \$1,000,000 UL policy whose insured is expected to experience mortality of 150% of the 2008 VBT. A material level of excess mortality, certainly, but far from an extreme case.

In a similar order to the impact that these changes would have on premiums, here are the relative changes in policy value that result.

	Male Non-Smokers, Attained Age					
	70	75	80	85	90	95
Base Policy	100%	100%	100%	100%	100%	100%
Interest rates down 1%	-0.4%	-0.3%	-0.2%	-0.1%	-0.1%	-0.0%
Premium Loads up 2.5%	-6.8%	-6.6%	-5.9%	-3.6%	-3.2%	-1.5%
COI's up 15%	-38.0%	-37.4%	-33.4%	-20.5%	-18.4%	-8.9%

	Female Non-Smokers, Attained Age					
	70	75	80	85	90	95
Base Policy	100%	100%	100%	100%	100%	100%
Interest rates down 1%	-0.4%	-0.3%	-0.2%	-0.1%	-0.1%	-0.1%
Premium Loads up 2.5%	-6.9%	-6.9%	-6.1%	-3.5%	-3.0%	-1.5%
COI's up 15%	-38.6%	-38.7%	-34.3%	-19.6%	-17.3%	-8.8%

And in graphic format, the same results are seen below.



At the risk of oversimplifying, a portfolio of insureds with an average age in the lower 80's is likely to lose value relative to a COI increase at a rate of 2:1! The effects would not be quite so extreme for portfolios with particularly high mortality levels, which correspond to particularly short LE's.

The Maple Life companies are paying particularly close attention to this topic and are participating on an industry committee exploring options as this paper goes to press. If you have questions about our thoughts on COI's or on their impact on your portfolio, please let us know.

Steve Boger, FSA, MAAA

Managing Director, MLA

(301) 951-2175

steve.boger@maplelifeanalytics.com