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Aspirin, Not Morphine

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Several long-time participants in the long-term care insurance (LTCI) market recently announced they would no longer be selling the product. One reason? The ongoing low interest rate environment. Clearly, these insurers sought to relieve the pain from what they saw as an insoluble situation by leaving the market. In doing so, they reacted to the interest rate environment by choosing the severe remedy of morphine over the milder one of aspirin—which may have turned out to be perfectly effective.

Interest rate movements (or lack thereof) can present problems for insurers that underwrite and sell LTCI, but only under particular circumstances. To understand the effect interest rates can have on LTCI, it is essential to grasp how LTCI products, and the insurers that offer them, can be affected by inflation, how inflation relates to interest rates, and, finally, how insurers invest their LTCI assets.

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INFLATION AND LTCI BENEFITS

For an insurer offering LTCI, the design of its product offering determines whether it will be vulnerable to inflation. Policies that pay specific, predefined benefits, whether structured as cash or indemnity, are generally not inflation-sensitive, as they are priced for the predetermined payout.

Expense reimbursement policies, however, have periodic (daily or monthly) maximums, and so will be sensitive to inflation. Why? Insurers frequently price their LTCI policies with the assumption that benefit payouts will not reach 100 percent. This is because buyers frequently elect, for the policy, an initial daily maximum that would be close to a reasonable daily room and board cost in a nursing home. Then they opt for care providers with lower per-day costs.

Although LTC insurers tend to incorporate this buyer tendency into their pricing, inflation of LTC facility and home health care costs—an ongoing fact—means insurers could ultimately pay out a total benefit amount that is quite different from what was anticipated when the policy was priced. This is particularly true when policies are designed with an increasing maximum benefit feature.

Many LTC insurers offer an automatic annual increasing benefit maximum feature with their expense reimbursement policies, to compensate for provider cost inflation. When policies have this feature, insurers are less likely to pay out the maximum.

LTCI policies with a 5 percent compound increasing maximum feature can be quite sensitive to cost of care inflation. If the cost of an insured's care has a constant annual inflation rate of 5 percent, the expected ratio for LTC insurers of actual costs to maximum benefits permitted will remain essentially constant.

If the annual rate of economic inflation is less than 5 percent, however, the ratio of actual expenses to the maximum reimbursement will shrink, extending the time benefits may be payable. Extending the time is generally less expensive for the insurer, because fewer claimants will reach maximum payouts.

On the other hand, if the annual inflation rate is greater than 5 percent, the ratio of actual expenses to the maximum reimbursement will increase, and insurers could risk paying out 100 percent of the policy benefits.

This sensitivity to inflation is important to any projections of future liabilities, whether for testing reserve adequacy, deferred acquisition cost (DAC) recoverability, or identifying a need for rate increases. This is particularly true if annual inflation is tied to the assumed interest rate when sensitivity of interest rates is being tested.

INTEREST RATES AND INFLATION RATES

Inflation rates and interest rates are interrelated in two basic ways. Lenders, or suppliers of money, charge at least as much for the use of their money as

the expected cost of waiting either to consume products or to invest in other assets (inflation). In this view, interest rates are determined by inflation rates.

On the other hand, the Federal Reserve may try to manage inflation through monetary policies intended to manage interest rates. Perhaps oversimplifying, a lower cost of money (or interest rate) is expected to increase borrowing demand for the purchase of goods and services, which in turn tends to increase the cost of those goods and services, thereby generating inflation. In this view, inflation follows earlier interest rates.

Both of these scenarios suggest that the cost of money and the rate of inflation undergo some continuous balancing of supply and demand as well as cause and effect, and are correlated over time.

The products and services for which LTCI pays have their own rates of inflation, which must be considered by insurers when pricing LTCI policies. The inflation rate of nursing home care costs has been tracked by the Bureau of Labor Statistics (*http://www.bls.gov/cpi/#tables*) for 12 years, and has turned out to have a positive correlation coefficient of close to 50 percent with Moody's Aaa Seasoned Corporate Bond yield index (*http://www.federalreserve.gov/releases/H15/data.htm*).

Over the past 12 years, Aaa corporate bond yields tracked by the Moody's index averaged close to 5.8 percent, while nursing home cost inflation averaged less than 4.5 percent. Actual nursing home inflation rates for the same time period varied from 2012's low rate of 2.9 percent to highs of 5.7 percent in 2003 and 2007, the only two years the nursing home cost inflation exceeded 5 percent.

Home health care expense inflation has only been tracked for five years. Those expenses experienced less inflation over the past five years than those for nursing home care. Although having only five years of data points is small and therefore not really a statistically credible measure, it is worth noting that the correlation coefficient for HHC expense inflation with the Moody's index was more than 80 percent. The highest inflation rate recorded was 4.5 percent in 2008 and the lowest, 1.3 percent in 2010, well below the Moody's yields of 5.63 percent and 4.94 percent, respectively.

INVESTING LTCI ASSETS

LTCI assets are often invested to meet cash flow expectations where the projected liabilities are kept constant. This may work for predefined cash benefits, but not for expense reimbursement policies—and especially not for expense reimbursement policies with an inflating maximum feature.

The investment strategy would likely be much different if the projected benefits on expense reimbursement policies were to change along with projected yield assumptions. In fact, a strategy based upon multiple projected inflation-adjusted cash flows could suggest investing for shorter durations than the typical investment strategy for LTC insurance.

Often, the investment strategy for a single set of projected cash flows is to keep the assets invested as long as possible in order to match the assets with a very long average liability duration. This is probably appropriate for predefined cash benefits. But even with such cash benefits, strategies and incentives may be out of sync. Some investment managers may have incentives to produce high short-term returns and take capital gains at a point in time when a manager of LTCI portfolio assets might prefer to see the investments held longer.

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Even if the investment manager and the LTCI business unit have the same fundamental objective with one set of projected cash flows—that is, to keep the assets invested as long as necessary, to match the times when the assets are expected to be needed to pay benefits—this type of matching is now very difficult to do. The volume of 30-year U.S. corporate bonds is now limited, and even when they are available, an investment portfolio's average duration frequently falls well short of when the cash will actually be needed for LTC liabilities.

Some investment strategists have recommended creating synthetic investments by taking a portfolio of corporate bonds and structuring the short- and long-duration components into investment instruments with durations long enough to meet this need. Undertaking this sort of synthetic asset creation, however, is administratively expensive, and reduces an asset manager's strategic flexibility.

Some asset managers have looked at managing interest rate risk by using certain hedging instruments and strategies. These can be appealing, but might not be foolproof. For example, some insurance companies may not be prepared for the swings in earnings that may occur when using hedging instruments and strategies that require collateral, and some asset managers may not hedge the risk as completely as needed (or presented).

MANAGING LTCI ASSETS

An insurance company selling LTCI today would do far better to address these important financial needs by taking the aspirin of improving modeling and pricing, and not the morphine of shutting down the business line entirely.

The aspirin can consist of two strategies: First, integrate the projections of the asset portfolio and the claims liabilities when testing the sensitivity of assumptions or stochastically modeling the product. The needed timing of asset maturities (or the sale of assets) may be different when inflation alters the projected cash flows.

Second, establish a separate asset portfolio for LTCI products, and make sure it has a strong, well-defined, well-documented Investment Policy Statement. An Investment Policy Statement will enable pricing actuaries and investment departments to work together with the same goals and objectives. This will help ensure not only that investment portfolio assets are invested in line with the LTCI pricing actuary's assumptions, but also that LTCI pricing actuaries know which investment assets are planned for purchase before taking the steps of identifying their best estimate investment yield assumptions and then synchronizing them with an inflation assumption on the liability side. ■