New Accounting Rule – To DAC or Not To DAC?

Effective this year, insurers must comply with a new Federal Accounting Standards Board (FASB) rule, “Accounting for Costs Associated with Acquiring or Renewing Insurance Contracts” or ASU 2010-26. The update clarifies which costs can be amortized as deferred acquisition costs (DAC).

Changing the Definition of “Acquisition Costs”

Life insurers incur up-front acquisition expenses that can amount to multiples of the policy’s first-year premium. The FASB allows companies to capitalize these costs and amortize them over a schedule dependent on the products being marketed. The resulting DAC can be a substantial asset on carriers’ GAAP balance sheets.

Earlier accounting language defined DAC vaguely, describing such costs as those that “vary with and are primarily related to the acquisition of insurance contracts.” Companies were left to interpret which expenses qualified for deferral, leading to a broad range of expenses being categorized as DAC. Such costs have included producer compensation and bonus programs, underwriter compensation, medical exams, product development, office rent and supplies, training, new producer allowances, and marketing materials.

ASU 2010-26 addresses concerns that the ambiguity of DAC-able costs opened the DAC asset to abuse. The update also attempts to create comparability within the life insurance industry. This is similar to the FASB’s accounting rules for banks and their costing structure for loan activity.

ASU 2010-26 introduces two important changes:

The successful acquisition of new business. With the update, companies now may only defer costs associated with successful placement of business. In the past, carriers may have grouped all sales-related costs under DAC irrespective of placement, as declines
were seen as integral to the sales process. Now, costs associated with not-takens or even insurer declines do not qualify as a DAC asset.

**Directly attributable costs.** Many insurers incur high fixed back-office costs to write new business. Underwriting is perhaps most notable, but other costs include product development, marketing and strategic planning. Under ASU 2010-26, only the portion of these costs that can be directly linked to top-line sales can be allocated as a DAC asset.

**Business Implications**

**Earnings and Equity.** ASU 2010-26 can affect business on both a look-back and going-forward basis. The rule allows for retrospective application to prior reporting years. In investment calls in late 2011 and early 2012, many prominent carriers announced that they would restate earnings for at least 2011.

Because many carriers are adjusting prior earnings reports to reflect DAC under ASU 2010-26, other companies may feel pressure to amend their past statements as well. Otherwise, the company will need to be able to explain the DAC, earnings and capital discrepancies between 2011 and 2012.

Retrospective application will require write-offs of DAC assets, some of which will be substantial. As executives have pointed out in earnings calls, this is not a cash charge: the costs being written off were incurred in the past. However, as the insurer has carried these costs as an asset on its balance sheet, it must write off a similar amount of capital and surplus. The liabilities do not change.

Going forward, more costs will be applied directly against the bottom line of the income statement under general expenses as fewer costs are capitalized. As a result, life insurer earnings could be lower and more volatile.

**Sales.** Commissions are paid only as sales are placed, so it would appear that most, but not necessarily all, producer sales compensation remains DAC-able (Figure 1). But the home office now will require information from the field on unsuccessfully placed cases as well as on those that were placed. This may require producers to spend more time on reporting paperwork and limit their time actually generating sales. Technology improvements can help in reporting (placement rates are captured in underwriting systems), but reporting procedures and codes for sales and accounting systems likely will need to be developed or updated.

A by-product of this may be increased producer selectivity in prospecting. This can be a double-edged sword: while producers may focus on more promising sales prospects, they also may avoid opportunities that are not as obvious. Both agents and their carriers could consequently lose business.

**Underwriting.** The underwriting department similarly will come under increased pressure. As mentioned above, an underwriter’s compensation is effectively a fixed cost. Defining their worth on the number or percentage of cases placed can be a shortsighted strategy. Increased focus on placement could introduce pressure on the underwriting team to stretch criteria beyond acceptable parameters or to increase the number of underwriting decisions. An effective underwriter, in fact, may have a lower-than-average

<table>
<thead>
<tr>
<th>Figure 1: What Is DAC-able? Before and After</th>
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<tbody>
<tr>
<td><strong>Cost</strong></td>
</tr>
<tr>
<td>Agent Commissions/Total Compensation</td>
</tr>
<tr>
<td>Producer Bonuses/Incentives/Rewards</td>
</tr>
<tr>
<td>Agency Manager Compensation</td>
</tr>
<tr>
<td>Agency Office Expenses/Rent</td>
</tr>
<tr>
<td>Marketing/Product Information</td>
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<tr>
<td>Medical Exams, Parameds, etc.</td>
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<tr>
<td>Underwriter Compensation</td>
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Costs that were commonly capitalized now have conditions set on them. Figure 1 illustrates some of the changes possible under ASU 2010-26 which will require greater cost accounting at the policy application level.
placement rate due to conservative and reasonable application of the firm’s underwriting rules.

Given the pressures on sales and underwriting, we expect increased focus on placement rates. Overweighted focus on placement as a gauge of producer/underwriter performance could impair the quality of a block of business. Determining the right balance between placement and product performance could be a challenge.

**Not All Bad News**

Investment analysts have zeroed in on the effects that this rule change will have on the balance sheet. This is understandable, given the magnitude of restating capital and earnings to accommodate a retroactive application of the rule (Figure 2).

From a business perspective, though, a number of benefits may emerge. Peer analysis across the industry should become much easier, allowing stakeholders to have a clearer view of a firm’s performance. Company/industry expense studies and benchmarks may become more accurate and useful. Additionally, companies that have used DAC conservatively likely will see less capital and earnings disruption than those carriers that applied more liberal approaches.

Companies also will be allowed to realize immediately part of the costs that they previously amortized. While DAC is a valuable asset to many carriers, the deferred nature in itself depreciates the present value of these costs. DAC is a non-cash asset and does not earn income or interest. It is reported in current dollars, which are worth less than last year’s dollars. Reporting the cost in the period it is incurred marginalizes this implicit discount rate.

New strategies may be implemented to help maintain an acceptable placement rate that does not harm the quality of business being written. For example, on the sales side we may see increased worksite marketing due to the ability to sell many products in one sitting. Companies may pursue more transaction-based products that cut turnaround time and improve applicant acceptance. Carriers may review producer compensation and incentives to recognize the value of persistency.

Underwriters actively look for opportunities to reduce the intrusion, time and cost of today’s fully underwritten processes without impairing risk classification. ASU 2010-26 may accelerate efforts to identify new mortality markers, leading to more collaboration between life insurers, reinsurers, labs and other vested partners.

**Conclusion**

The changes incorporated in ASU 2010-26 will bring more consistency to DAC, but with a price. For companies retroactively applying the rule to prior reporting years, the value of both the DAC asset and company equity will be affected substantially. Ongoing challenges will center on technologies to improve reporting and ensure compliance. Monitoring producer and underwriter results to ensure that the performance of the block remains within expected parameters also will be an ongoing effort.

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**Disagreement Persists on Definition of Acquisition Costs**

It’s possible that the DAC requirements outlined in this article will be short-lived. ASU 2010-26 was issued during a time of significant activity in global insurance accounting. If the FASB continues to harmonize its rules with International Financial Reporting Standards (IFRS), DAC guidance may change again. Presently, the boards of the FASB and the IASB do not see eye to eye on the definition of acquisition costs. In the FASB view, only costs related to successful acquisition efforts are deferrable. In the IASB view, acquisition costs would not be separated into successful and unsuccessful efforts. However, if the FASB position holds, ASU 2010-26 may become the global template and not just a temporary adjustment for US insurers.

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**Figure 2: New DAC’s Impact on Carrier Financials, 2012**

<table>
<thead>
<tr>
<th>Company</th>
<th>Balance Sheet Impact</th>
<th>Earnings Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% DAC Written Off</td>
<td>% Equity</td>
</tr>
<tr>
<td>A</td>
<td>-13.9</td>
<td>-5.7</td>
</tr>
<tr>
<td>B</td>
<td>-20.0</td>
<td>-11.1</td>
</tr>
<tr>
<td>C</td>
<td>-9.5</td>
<td>-5.4</td>
</tr>
<tr>
<td>D</td>
<td>-26.0</td>
<td>-10.1</td>
</tr>
<tr>
<td>E</td>
<td>-23.3</td>
<td>-7.0</td>
</tr>
<tr>
<td>F</td>
<td>-45.5</td>
<td>-14.1</td>
</tr>
<tr>
<td>G</td>
<td>-22.3</td>
<td>-24.9</td>
</tr>
<tr>
<td>H</td>
<td>-42.5</td>
<td>-11.9</td>
</tr>
<tr>
<td>I</td>
<td>-12.5</td>
<td>-1.3</td>
</tr>
<tr>
<td>J</td>
<td>-12.7</td>
<td>-7.5</td>
</tr>
</tbody>
</table>

The companies in this sample vary in size and business mix. The average DAC asset estimated to be written off this year is 22.8 percent, with an average decline in equity of 9.9 percent. (Source: “Insurance Primer 2012,” Morgan Stanley Research. Dec. 29, 2011.)
Estimating future trends in mortality plays a significant part in life (re)insurers’ product development and portfolio valuation. Like other business metrics, there are many ways to study and view mortality trends. For example, mortality trends viewed over the past 10 years, the past 50 years or projected over the next 30 years likely will show very different results. To support prudent decisions, analysis of only a single view of past or future trends is insufficient. It requires selecting and matching an appropriate view for a specific purpose.

There are at least three important factors in framing an appropriate view of mortality trends:

- **Time frame** (10-year period, 30-year period, etc.)
- **Methodology** (average annual change, moving average change, etc.)
- **Certainty** (deterministic or stochastic)

Without clarifying these basic factors, a mortality trend may be misinterpreted and/or used inappropriately. The following information addresses the certainty factor, and the role of deterministic and stochastic views of past mortality.

### A Deterministic View

Figure 1 represents a sample of US population mortality from 1933-2007 by five-year age groupings. This view reflects what has already happened and cannot change. Therefore, it is a *deterministic* view. Examples of observations from this view include:

- Mortality improvement over time varied dramatically by age group
- For ages 95 and older, there was no significant improvement over the entire period as a whole
- A post-war cohort effect may have caused a more significant mortality decrease for age groups younger than 40

Without appropriate context, it is difficult to translate these conclusions into appropriate pricing and valuation assumptions.

**Semi-deterministic View.** To better understand and quantify long term trends, we developed a regression model (or a trend line) using the following formula:

\[ q_t = q_0 \cdot e^{(b \cdot t)} \]

where \( t \) is time, \( q \) is mortality, and parameter \( b \) approximates the annual improvement.

This approach allows us to define and measure average annual mortality improvement and to use it to better represent the mortality trend. According to this analysis, the US population age 35-69 mortality trends improved approximately 1.3 percent annually from 1950 to 2007 (\( b = -0.013 \), Figure 2). The negative value of \( b \) indicates mortality is declining in general. (Similar analysis can be done for any age group.)

We call this type of trend view “semi-deterministic,” because while the analysis is based on deterministic experience, the choice of a regression model, the definition of trend and number of years of data to be covered can vary and alter the conclusion. For instance, if we use data from 1970-2007 rather than 1950-2007 for the mean calculation, the annual improvement would be about 1.5 percent instead of 1.3 percent.

This view has a clearly defined time frame, methodology and semi-deterministic nature. The big question is: Can we assume future mortality improvement will be consistent with what we see here?

### A Stochastic View

Because of the uncertainty of future events, any forecast has a chance of being incorrect, and this applies equally to mortality trend predictions. Therefore, a stochastic view of future mortality improvement can better reflect (and remind us about) the uncertain nature of forecasting.
A stochastic view associates each forecast with a statistically calculated probability that the forecast will become reality. For example, for mortality portfolio reserving or capitalization purposes, actuaries need to estimate the minimum future mortality improvement. We can formulate an estimate by applying appropriate statistical theories to analyzing the US population data (Figure 3).

Meaningful insights can be obtained from this stochastic view of future mortality improvement. For illustrative purposes, let’s assume that (1) the insured population will have the same future mortality improvement as the general population and (2) the mortality improvement assumption is the major factor driving our capital needs. The following observations can be made:

- **The best-estimate mortality improvement has a 50 percent chance of over-estimating future improvement:** Actuaries use past average improvement (Column A) to serve as their best estimate of future improvement. The 50 percent confidence level means that the probability that the population will have an annual mortality decrease on average at least 1.26 percent is one-in-two. However, the probability of mortality decreasing less than 1.26 percent is also 50 percent (1-confidence). A mortality portfolio reserved by assuming a minimum 1.26 percent annual mortality decline would have a 50-50 chance that the portfolio was under-reserved.

- **Match pricing/valuation assumptions with risk appetite:** A company with a conservative risk appetite may require at least 90 percent confidence on all assumptions used. In such an instance, its actuaries may choose the estimated improvements associated with 90 percent confidence level (1 percent in total, Column E), rather than the best estimate (1.26 percent in total), as their improvement assumptions for pricing or valuation. This concept can also be applied to other assumption choices and for setting mortality provisions for adverse deviation (PADs) or solvency capital.

- **Meeting new regulatory requirements:** Unlike statutory requirements, new regulations such as PBA and Solvency II measure risks by using concepts or measurements like VaR(99.5%) (Value at Risk) or TVaR(90%) (Tail Value at Risk). These are essentially risk forecasts associated with specified confidence levels. They are stochastic views of risks. When forecasts are derived as in Figure 3, they deliver various levels of VaRs for mortality trends.

**Conclusion**

Estimating mortality trends is only one consideration in assessing future claim liabilities for mortality/longevity portfolios. Prudent business decisions require appropriate quantification and integration of many other risk factors including random fluctuation, rare events such as pandemics, etc. Statistical analysis and stochastic modeling as introduced in this article are among the techniques for deriving integrated stochastic views of multiple risk factors.

SCOR is committed to using our research and development expertise to help clients make fact-based risk management decisions and fulfill regulatory requirements. For more information please contact the authors. ∞
Direct writers do not always correlate reinsurance purchasing with sales activity. In fact, companies occasionally request requotes to compare prevailing rates for existing products. We saw this most prominently during the “term wars” of the early 2000s. However, the number of requests for quotes over the past year suggests that drivers other than price curiosity are at work. Two over-arching issues have emerged: improvement in current loss ratios and concern over a sustained low interest rate environment.

### Improved Loss Ratios

Many companies have experienced improved loss ratios resulting in operating profits from underwriting gains. At the same time, life insurers during the recession bulked up on capital. As a result, some companies are in a position to retain more risk.

This retention strategy is bolstered from a risk diversification perspective. Under attractive 90-10 reinsurance arrangements, life insurers ceded large portions of mortality risk. This has led some carriers to view their risk portfolio as light on mortality risk and too heavily weighted on other risks (e.g., interest rate risk, policyholder behavior risk). By moving to excess-of-retention reinsurance arrangements, they retain more first-dollar mortality risk while controlling for tail risk.

A higher retention limit may be beneficial in the short term, but if the economy continues to experience little growth, longer-term prospects may be less positive. The financial impact of a couple of million-dollar claims may be reasonable under a 90-10 reinsurance arrangement but introduce unacceptable volatility under a high-level excess-of-retention treaty (Figure 1).

Continued economic uncertainty also introduces increased policyholder behavior risk. While the most important assumption in life insurance pricing is mortality, lapse assumptions are also critical. An uncertain economic future leads to increased selective lapsation. Policyholders most intent on persisting are those who recognize the economic value in the policy – that is, individuals who perceive themselves as a higher risk. Therefore, the greatest lapse risk lies with insureds who believe they can get by without coverage until the economy improves – the specific lives an insurer wishes to retain. This raises the risk of claims frequency and severity that exceed pricing assumptions.

### Interest Rates a Key Concern

The most prominent cause of requoting, though, appears to be the current sustained low interest rate environment and its effect on life insurance products. Low interest rates have an impact on both reserve financing considerations and general account performance.

#### Reserve Financing Perceived as Less Important

Coinsurance allows direct writers to pass on a proportionate amount of their reserve strain to reinsurers. The financing offered through reserve credits drove growth in coinsurance, especially for XXX solutions. Charges for this financing often were less than the interest rates many lenders charged carriers for similar financing, leading to arbitrage opportunities. Because coinsurance financing is an integral component of risk transfer, its duration matches the duration of the redundant reserve liability. A letter of credit (LOC) issued by a bank, on the other hand, may result in duration mismatch and is not guaranteed renewable.

In addition the differences between financing structures, whether through coinsurance or LOCs, has become less pronounced. Since the beginning of the recession, interest crediting rates have converged for life insurers and reinsurers removing arbitrage advantages in XXX coinsurance arrangements. Additionally, the current capital position of many direct writers enables them to assume more reserve strain.

As companies retain more mortality risk and as reserve financing is less a priority, we have seen a decline in first-dollar coinsurance bids. In their place, requests for excess-of-retention YRT quotes have become more prevalent.

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### Figure 1: A Comparison of Losses under Different Reinsurance Structures

<table>
<thead>
<tr>
<th>Claim</th>
<th>Excess-of-Retention ($1m)</th>
<th>90-10 First-Dollar</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3 million</td>
<td>$1 million</td>
<td>$300,000</td>
</tr>
<tr>
<td>$3 million</td>
<td>$1 million</td>
<td>$300,000</td>
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<tr>
<td>$3 million</td>
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<tr>
<td>$5 million</td>
<td>$1 million</td>
<td>$500,000</td>
</tr>
<tr>
<td>$5 million</td>
<td>$1 million</td>
<td>$500,000</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$5 million</td>
<td>$1.9 million</td>
</tr>
</tbody>
</table>

Excess-of-retention lets an insurer participate in a greater share of underlying mortality profits, but a few large claims can create a substantial earnings impact.
Interest Rates Will Affect General Account Asset Returns. A low interest rate environment will affect the general account of both life insurers and reinsurers. Interest-sensitive products experience the greatest exposure as insureds lock into minimum crediting rates that are higher than prevailing interest rates. But even traditional mortality products face challenges if a product’s interest rate assumptions are higher than actual yields for any prolonged time period.

As interest rates remain low, insurers must either replace maturing fixed income assets with similarly rated (but lower yield) bonds or seek similar returns through riskier instruments. The effect in either scenario is lower product profitability, but so far life insurers have been able to avoid raising premium rates. Because of the size and diversification of an insurer’s investment portfolio, they benefit from a “portfolio lag effect.” When interest rates drop, the size and time horizon of the bond portfolio allow them to continue experiencing appreciable rates of return (Figure 2). This results in company portfolios outperforming current bond yields.

Investment risk for all insurers is gradually increasing. A prolonged low-interest rate environment – especially in a stagnant economy – could weaken a firm’s general account. Most life insurers’ investment portfolios are large and diverse enough to sustain short-term rate drops. Continued historically low rates, however, will erode earnings at an increasing pace and force insurers to review their interest rate assumptions. Of course, this is an industry-wide concern, affecting all financial intermediaries.

In addition, the portfolio lag effect mentioned above will create a detrimental situation for life insurers as the economy improves (Figure 2). Insurer rates of return will be outpaced by market rates for a time, leading to disintermediation risk: policyholders lapse in force policies with marginal crediting rates for financial products bearing greater returns for the same investment risk. Balancing risk and return has started to become an increasing challenge.

Reinsurers Can Share Risk and Knowledge

In a flat sales and uncertain economic environment, maintaining profitability and shareholder value becomes more important as carriers wait for market conditions to improve. But there’s a fine balance between short-term profitability and long-term sustainability.

Life insurers continually assess their reinsurance programs. Reinsurers provide more than simple risk coverage and diversification opportunities. Therefore, regardless of the strategy a carrier pursues, having established relationships with reinsurers in place remains a core risk management strategy – not only to ensure that capacity is readily available if called upon, but also to allow a carrier to access the reinsurer’s risk advisory and assessment capacities.

Even traditional mortality products face challenges in a sustained low interest rate environment.
SCOR’s Mortality Research Means Business
By David Wylde, FSA, MAAA, CLU, ChFC

SCOR researchers continuously capture and analyze experience data to advance our understanding of mortality risk. Our research spans a variety of areas directly related to our vast portfolio of reinsured life business. We are committed to sharing our knowledge with our clients and invite you to contact us to see how our research may benefit your product strategies. Below is a sample of some of our more recent efforts.

Experience Database – Our proprietary database covers exposure years 2004 through 2009, contains $3.7 trillion of exposure and nearly 70,000 deaths, cross-tabulated by policy year, face amount, gender, issue age, underwriting class and product. We can “slice and dice” this data to:

- Review and adjust pricing assumptions inherent in our financial forecasts
- Identify mortality trends and patterns and quickly bring this information to the attention of our clients
- Determine best-estimate pricing assumptions on prospective new business, accounting for deal-specific mortality trends
- Produce internal reports and external communications on topics including capital determination, claims fluctuation, preferred class mortality and mortality improvement

Full Underwriting Mortality Tables – We developed our pricing tables for traditional life insurance from a combination of internal data and third-party sources and use them to determine trends in fully underwritten mortality experience. We place special emphasis on the slope of select mortality and how it merges with long-term patterns during the ultimate/attained age period, particularly at older issue ages. Additional research provides insights on how the wearing off of preferred underwriting discounts is best incorporated into the tables. Finally, we overlaid a secular mortality improvement assumption onto the final set of tables based on long-term trends in the US general population and their impact on insured lives.

Simplified Issue Mortality Tables – We have also developed pricing tables to accompany our VELOGICA® simplified issue solution, accounting for the mortality arising from the combination of a non-medical application and the protective value of prescription database information and motor vehicle reports. We recently updated these tables to include juvenile and older issue age applicants. Ongoing experience analysis on this business allows us to fine-tune these tables on a regular basis.

Cause of Death Studies – We maintain a database for calendar years 2007-2010 that contains approximately 90,000 claims with a total reinsurance accepted liability of $4.6 billion. We regularly use this database to track the distribution of claims by cause of death, with anomalous causes triggering further research. (For an example of such research, please see “The Role of Suicides in Trauma Claims,” in the 1st Quarter 2011 issue of The Messenger.) To learn more about our ongoing mortality studies, please contact David Wylde at 704.344.2816.

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