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## Editor's Notes

*by Thomas Nace*

This issue of the *Financial Reporter* represents a lot of firsts. It is the first issue in what people are referring to as the new millennium. It is the first issue of the newsletter started under the leadership of the Section's new chairperson, Mike McLaughlin, and it is my first issue as editor of the newsletter.

In terms of the latter, I would like to thank Tom Mitchell for the help he has provided me during the transition of the editorial responsibilities of this newsletter. The newsletter provides a valuable means of communicating to the members of the Section, the activities taking place that affect us all as financial actuaries. This includes activities of the Section itself, its members and the committees and projects that will mold the framework within which we will perform our job. As such, I hope to uphold the tradition of high quality that my preceding editors have established through their work on this newsletter.

Already the position of editor has afforded me the opportunity to interact with many new people, whom I probably would not have come in contact with otherwise. I believe that you too will appreciate what these authors have to offer in the articles that they have so graciously agreed to provide in this issue.

One of our articles, "Demutualization: Filling the 'GAAP' in Accounting" by Patricia Matson and Darryl Wagner, was provided on a volunteer basis without solicitation. I encourage others to follow suit, if you believe the information you have gained from your work or from a particular project would be of interest to your fellow Section members. The newsletter can only be informative to our readers if people are willing to take the time to contribute to it.

Also in this issue are several articles related to seminars that our members have been involved with. Ed Robbins highlights a seminar held in Mexico; Michelle Chong Tai-Bell reviews a Caribbean seminar; Tom Mitchell details the activities of the recent Toronto seminar dealing with segregated funds; John Bevacqua provides a preview of

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## *An Actuarial Analysis of FAS 133 (Part 1)*

***by Anson J. Glacy, Jr.***

In June of 1998, after long years of contentious debate, the Financial Accounting Standards Board issued its new standard on derivatives, Statement No. 133, *Accounting for Derivative Instruments and Hedging Activities.* The goal of the new Statement is to resolve the many inconsistencies that have haunted derivatives accounting. It will dramatically change the way hedging relationships are reported and create earnings and capital volatility that is virtually unavoidable. The principles embodied in FAS 133 are complex and controversial, especially as they relate to insurers using derivatives to hedge capital market risks. Part 1 of this article summarizes the key provisions of FAS 133 from the perspective of an insurance company, while Part 2 (in the next issue) will explore its implications for actuaries. Please note that this analysis is not a substitute for a comprehensive assessment of how the Statement may affect your organization.

### Background

The FASB believes that once remaining conceptual and measurement issues are resolved, all financial instruments are to be carried on the balance sheet at fair value. Like FAS 115 before it, FAS 133 thus is an interim step toward the FASB's ultimate goal. While certain traditional insurance contracts are excluded under FAS 133, many insurers, after experiencing the standard's thorny implementation and compliance challenges, may long for the ability to simply present all financial instruments at fair value.

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## *In this Issue*

**An Actuarial Analysis of FAS 133 (Part 1)**
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The key changes FAS 133 introduces are:

- All derivatives are recorded on the balance sheet and carried at fair value.
- A type of hedge accounting continues, but the treatment varies according to the type of hedge: fair value, cash flow or net investment in a foreign operation.
- Because all derivatives are now on the balance sheet, the mechanics of the new hedge accounting for fair value hedges require adjusting the carrying values of other accounts on the balance sheet (that is, the hedged items) in order to preserve the hedging effect in the income statement.
- Portions of the hedge considered ineffective are recognized in earnings and not deferred, creating volatility in earnings.
- Gains or losses on derivatives that qualify as cash flow hedges are initially recognized in other comprehensive income (OCI), creating additional volatility in equity.
- New and potentially onerous criteria to qualify for hedge accounting are established.
- The new rules are more flexible for foreign currency hedging, allowing the use of a broader range of hedging instruments and hedge strategies that previously were disallowed.
- Derivatives are now defined based on distinguishing characteristics rather than by reference to specific types of instruments. This results in some new classes of instruments now being considered derivatives.
- Disclosure requirements are modified significantly.

## Scope

FAS 133 is effective for years beginning after June 15, 2000, but companies may early-adopt as of the beginning of any fiscal quarter. The Statement requires that the documentation of existing hedging relationships be completed before the date of initial adoption. Many insurers will likely delay adopting FAS 133 until the year 2001.

The Statement excludes certain traditional insurance and financial guarantee contracts whereby the holder of the contract is to be compensated only if, as a result of an identifiable insurable event (other than a change in price), the holder incurs a liability or there is an adverse change in the value of a specific asset or liability for which the holder is at risk. However, the FASB finds that some insurance contracts may contain derivative-like features, and these contracts receive unique accounting treatment.

## Overview

FAS 133 defines a derivative to be a financial instrument with four distinguishing characteristics:

- The instrument has an *underlying* variable (like a stock price or interest rate) that causes fluctuations in its cash flows or fair value.
- The instrument has a *notional amount* which, when combined with movements in the underlying, determines the settlement amount(s) of the derivative. Note that the parties involved do not invest in or purchase the notional amount.
- The instrument does not require a significant net investment.
- The instrument permits net settlement in cash rather than by delivery of the notional amount.

FAS 133 requires all derivatives to be recorded on the balance sheet at fair value (as defined in FAS 107, *Disclosures about Fair Value of Financial Instruments*) and establishes "special (or hedge) accounting" for three different types of hedges: hedges of changes in the fair value of assets, liabilities or firm commitments (referred to as fair value hedges); hedges of the variable cash flows of forecasted transactions (cash flow hedges); and hedges of net investments in foreign operations. Though the accounting treatment and criteria for each of the three types of hedges are different, all three require that the effective portion of gains or losses from the hedging instrument and from the hedged item be recognized in earnings in the same period. Gains and losses that are not effective in a hedging relationship are recorded in current-period earnings. Changes in the fair value of derivatives that do not meet the criteria of one of these three categories of hedges are also included in current-period earnings.

Under FAS 133's new form of hedge accounting, hedges of changes in the fair value of existing assets, liabilities, or firm commitments result in the recognition in earnings, in the period that a change in value occurs, of gains or losses from a derivative designated as the hedging instrument. Simultaneously, changes in the fair value of the hedged item, to the extent they are attributable to the risk designated as being hedged (for example, market interest rate risk or credit risk), are recognized in earnings and as an adjustment to the carrying value of the hedged item. Changes in fair value of derivatives designated as cash flow hedges are recorded in other comprehensive income (a separate component of stockholders' equity) until the forecasted transaction affects earnings, at which time it is also recognized in earnings. In a cash flow hedge, no adjustment is made to the carrying amount of the hedged item.

## Embedded Derivatives

FAS 133 significantly expands the definition of a derivative to include many items that were not previously considered to be derivatives. The FASB believed it important to prevent an entity from avoiding the requirements of FAS 133 by embedding a derivative instrument in a non-derivative financial instrument or other contract. Therefore, in addition to financial instruments traditionally called derivatives (swaps, futures, forwards, options, swaptions, caps, collars, floors, etc.), certain *embedded derivatives* are included in the scope of FAS 133 if, were they freestanding, they would be considered derivatives under FAS 133. Instruments that contain embedded derivatives are referred to as *hybrid instruments.*

FAS 133 defines an embedded derivative as implicit or explicit terms within a contract, which does not in itself meet the definition of a derivative instrument, that affect the contract in a manner similar to a derivative instrument. In other words, an embedded derivative is a derivative wrapped inside another contract which is not a derivative. For example, a bond that may be converted into stock of the issuer is a debt instrument that contains an embedded derivative. While traditional insurance contracts are excluded from the Statement, insurers will find that many new-generation products such as equity-indexed annuities and variable products with certain ancillary guarantees contain embedded derivatives.

FAS 133 requires that in certain circumstances embedded derivatives be *bifurcated* (or separated) from the *host contract* and measured separately. Embedded derivatives that are required to be bifurcated and measured separately are treated in the same manner as freestanding derivatives under FAS 133. In determining whether a hybrid instrument contains an embedded derivative that warrants bifurcation, FAS 133 focuses on whether the economic substance of the potential embedded derivative is *clearly and closely related* to the economic substance of the host contract.

## Hedge Criteria

"Special" hedge accounting can only be obtained for permissible hedgeable risks and for specific items or transactions that qualify. Permissible hedgeable risks under FAS 133 for financial instrument-related exposures are:

- Market price risk
- Market interest rate risk
- Foreign exchange risk
- Credit (default) risk

The hedged item can be the entire item or a percentage of the entire item, or pools of similar items (or specific portions thereof). Such items can include selected cash flows. However, risks cannot be hedged on an enterprise-wide or "macro" basis.

To qualify as either a fair value or cash flow hedge, the hedge relationship must meet the following principle criteria:

- Formal documentation of the hedging relationship and its objective must be maintained.
- Hedging effectiveness is required to be demonstrated whenever earnings are reported.
- The hedged item is one that could affect reported earnings.

There can be simultaneous fair value and cash flow hedging of the same item only if different risks are being hedged. For instance, a cash flow hedge can hedge the market interest rate risk associated with the variable interest payments on an investment in a debt security, while a fair value hedge is used to hedge the default risk.

## Fair Value Hedges

Fair value hedges address risks that arise in investments or liabilities due to terms that are fixed or known. Fair value hedges can also be used to hedge firm commitments, which are transactions that will take place in the future where all the terms are fixed in advance. Fair value hedges allow entities to mitigate the risks arising from changing market conditions when they are bound to a fixed price or rate. For relationships that qualify as fair value hedges, the effective portion of the gain or loss on the hedging instrument as well as an offsetting loss or gain on the hedged item attributable to the risk being hedged are recognized in current-period earnings in the same accounting period. Provided the hedge qualifies as "highly effective," the portion of the change in fair value of the derivative that is deemed "ineffective" is recognized in earnings without an offsetting adjustment in the hedged item.

## Cash Flow Hedges

Cash flow hedges address risks that arise in investments or liabilities due to terms that are variable in nature. Cash flow hedges can also be used to hedge forecasted transactions whose terms are not fixed in advance. Cash flow hedges allow entities to mitigate risks arising from changing market conditions to which they would otherwise be exposed. For relationships that qualify as cash flow hedges, the effective portion of the gain or loss on a derivative instrument is reported as a component of other comprehensive income and later reclassified into earnings in the same period when the hedged forecasted transaction affects earnings. The effective portion can be determined by comparing the cumulative change in fair value of the derivative with the cumulative change in the present value of the expected cash flows of the item being hedged. To the extent that the cumulative change in the derivative exceeds the cumulative change in the present value of expected cash flows, the excess is recognized in current-period earnings. But the difference between the two cannot be so great as to cause the derivative to no longer be "highly effective."

## Transition Considerations

Early adoption of FAS 133 is permitted as of the beginning of any fiscal quarter, but must be applied to all derivatives. Retroactive application is not permitted. At adoption, an insurer will recognize the cumulative transition effect on both income and other comprehensive income based on the nature of the particular hedge relationships (fair value vs. cash flow) to which it is a party.

Because of changes in the rules for hedging investments, the transition provisions of FAS 133 permit held-to-maturity securities under FAS 115, *Accounting for Certain Investments in Debt and Equity Securities,* to be reclassified at the date of adoption as either available-for-sale or trading without the entire held-to-maturity portfolio being tainted. Further, available-for-sale securities may be reclassified as trading.

At adoption, companies may either (a) recognize as an asset or liability all embedded derivatives that are required to be separated from their host counterparts pursuant to the Statement, or (b) select either January 1, 1998, or January 1, 1999, as the transition date for embedded derivatives. Thus, an insurer can choose not to apply the bifurcation provisions of FAS 133 to embedded derivatives on hand prior to adoption date and could continue to account for these instruments as it did prior to FAS 133. This provision must be applied to all embedded derivatives and cannot be selectively applied. As of adoption, all embedded derivatives entered into after December 31, 1998, must be accounted for as required under FAS 133.

***(continued on page 7, bottom of page)***

Table I

| **Balance Sheet** | Beginning of Year | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Closed Block Assets | $427,601 | $350,855 | $269,970 | $184,706 | $94,806 | $0 |
| Deferred Acquisition Costs | 8,791 | 6,067 | 3,769 | 1,952 | 674 | 0 |
| Other Open Block Assets | 63,608 | 68,061 | 72,825 | 77,923 | 83,378 | 89,214 |
| Closed Block Liabilities | | | | | | |
| Benefits | $445,182 | $362,990 | $277,509 | $188,609 | $96,154 | $0 |
| PDO | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | $445,182 | $362,990 | $277,509 | $188,609 | $96,154 | $0 |
| Equity | $54,818 | $61,994 | $69,056 | $75,971 | $82,704 | $89,214 |
| **Income Statement** | Year | | | | | |
| | 1 | 2 | 3 | 4 | 5 | Total |
| Interest on Open Block Assets | $4,453 | $4,764 | $5,098 | $5,455 | $5,836 | $25,606 |
| Contribution from Closed Block | | | | | | |
| Interest Earned on Assets | $29,932 | $24,560 | $18,898 | $12,929 | $6,636 | $92,956 |
| Benefits | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 500,000 |
| Dividends | 6,678 | 5,445 | 4,163 | 2,829 | 1,442 | 20,557 |
| Amortization of DAC | 2,724 | 2,298 | 1,817 | 1,278 | 674 | 8,791 |
| Change in Benefit Reserve | (82,193) | (85,480) | (88,900) | (92,456) | (96,154) | (445,182) |
| Change in PDO | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Contribution | $2,724 | $2,298 | $1,817 | $1,278 | $674 | $8,791 |
| Total Profit | $7,176 | $7,062 | $6,915 | $6,733 | $6,510 | $34,396 |

*Some amounts may not reconcile due to rounding.*

***(continued on page 8, column 1)***

**An Actuarial Analysis of FAS 133 (Part 1)**
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## Implementation

The Statement's breadth and complexity will make the implementation effort daunting. Hedge relationships must now be documented at adoption date and most companies will need system modifications to develop and track the required changes in fair value, hedge effectiveness and related accounting entries. Also, while the Statement specifically excludes certain traditional insurance contracts from its scope, some products that previously were considered as insurance products instead have to be accounted for in whole or in part as derivatives under FAS 133. While the FASB's recent decision to delay the required adoption date effectively to January 1, 2001, provides some desperately needed breathing room for most insurance companies, systems and business process changes may take between 3 and 12 months to effectuate. Many insurers will need to work around events such as Year 2000 black-out periods, the 1999 year-end financial reporting cycle, business acquisitions and other activities.

From a systems perspective, the following checklist identifies minimal functional requirements for a FAS 133 compliant implementation:

- Manage formal hedge documentation at FAS 133 adoption and at hedge inception
- Manage hedge designations
- Measure hedge effectiveness
- Attribute gains and losses to risk factor
- Manage OCI accounting
- Perform mark-to-market of hedges and, where necessary, hedged items

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