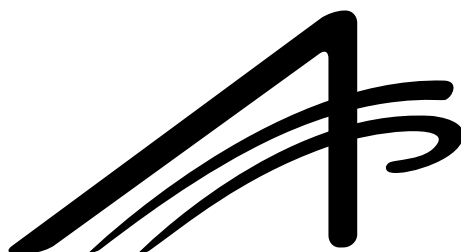


The Impact of FAS 133 on the Risk Management Practices of End Users of Derivatives

Report of Survey Results

September 2002



***Association for
Financial Professionals***

Introduction

Background

The Financial Accounting Standards Board (FASB) issued new accounting rules for derivatives and hedging transactions (Financial Accounting Statement 133, or FAS 133) in June 1998 that were effective on June 15, 2000. Most companies, however, did not implement the standard until the first quarter of 2001. Because the transition from the previously accepted accounting treatment was dramatic and controversial, many reporting entities — along with FASB and the Securities and Exchange Commission (SEC) — were concerned about the impact that these new rules might have on the hedging activities of corporations. To gain a clearer perspective on the impact of FAS 133, the Association for Financial Professionals (AFP) surveyed its members in January 2001.

This original survey had several major conclusions. First, two-thirds of respondents believed that FAS 133 had imposed an “excessive burden” on reporting companies. Second, a quarter of respondents indicated that they expected to apply regular derivatives accounting—as opposed to applying special hedge accounting — to a significant portion of their derivatives holdings. Third, the new accounting requirements fostered a small reduction in hedging activity. Fourth, only a quarter of respondents believed that FAS 133 imposed a beneficial discipline on risk management activities.

The 2001 survey was conducted in early January, just a few months after companies started complying with FAS 133 requirements, but since then, FAS 133 has continued to evolve. FASB has posted additional guidance on its web site (<http://www.fasb.org>); and on May 1 2002, released a new exposure draft containing proposed amendments to FAS 133. AFP decided to survey its membership again, to see whether companies have altered their use of derivatives two years after the effective date of FAS 133.

Survey Methodology

AFP mailed an eight-page questionnaire to select corporate practitioner members¹ in May 2002 and received 175 valid responses. Respondents represented a wide variety of companies throughout the United States, with respondents typically working for company with annual revenues between \$1 and \$5 billion

Treasury and finance professionals of varying job titles completed the questionnaire. Most survey respondents identified themselves as treasurers (29 percent), assistant treasurers (25 percent), CFOs (19 percent), and risk managers (10 percent). Respondents also identified the person charged with overall responsibility for FAS 133 implementation as controller/comptrollers (25 percent), CFOs (20 percent), treasurers (19 percent) and assistant treasurers (15 percent).

¹ Surveys were sent to corporate members holding titles of CFO, treasurer, or controller and to members who identified any of the following as one of their five primary job responsibilities: accounting/financial reporting, hedging, risk management, and financial risk management.

Significantly fewer respondents identified financial reporting officers, assistant controllers/comptrollers, risk managers and auditors as the key person tasked with carrying out FAS 133 implementation.

Both the 2001 and 2002 surveys were conducted by AFP's research department with the assistance of Ira Kawaller, under the direction and guidance of the Financial Accounting and Investor Relations Task Force (FAIR) of AFP's Government Relations Committee. Dr. Kawaller developed the survey and performed the analysis for this report. He is the founder of Kawaller & Company, LLC, which is a consulting organization that specializes in assisting commercial enterprises in the use of derivatives instruments. He is also a member of FASB's Derivatives Implementation Group (DIG), an advisory panel that offers guidance to FASB on FAS 133 implementation issues. He holds a Ph.D. in economics from Purdue University and is a frequent contributing author to *AFP Exchange* and other AFP publications.

Executive Summary

The 2002 survey asked many detailed questions concerning the use of derivative tools and the impact of FAS 133 on company behavior. The principal findings and conclusions are as follows:

- Sixty-three percent of companies report that they use derivatives to address interest rate and currency exposures, respectively. However, only a third of responding companies indicate that they hedge commodity or raw material price exposures.
- Respondents report lower levels of hedging activity for the vast majority of derivatives tools and strategies, compared to levels reported in last year's survey.
- Despite this reduced hedging activity, seven out of 10 respondents claim that their company's use of derivatives has not changed as a result of FAS 133.
- Some of the decline in hedging activity may be due to a perception that market conditions have mitigated the need for hedging activities over the past year. This perception was likely based on relatively lower interest rates, mild currency fluctuations and smaller commodity price swings.
- Even after the process of initial implementation of FAS 133 accounting had been completed — a process that imposed special, one-time time start-up costs — nearly half of the respondents still report that complying with FAS 133 rules is “excessively burdensome.” This result is especially significant in that it comes despite an overwhelming reliance and preference for the simplest, most plain vanilla derivatives.
- Almost a quarter of the respondents say that their company has decided to forgo hedge accounting on “significant portions” of derivative positions as a result of FAS 133.
- Companies generally use hedge accounting. However, when they decide to avoid hedge accounting, it is because either they feel it is not necessary (i.e., the cost and effort outweigh the benefits) or that the companies' exposures are not eligible for hedge accounting.
- Significant portions of companies who were eligible for special accounting treatments described in DIG issues G20 and H15 — treatments that would likely lead to less income volatility — choose not to avail themselves of this opportunity. This choice may reflect a perception that more onerous documentation and valuation requirements are associated with these treatments.

Overview of the Impact of FAS 133

General Attitudes About FAS 133 Implications

Companies tend to use derivatives to hedge their exposures in three major areas: interest rates, currency exchange rates, and, to a lesser degree commodity/raw material prices. Sixty-five companies (63 percent) report that they use derivatives to address interest rate and currency exposures, respectively. However, only a third of responding companies indicate that they hedge commodity or raw material price exposures. The markedly lower usage of hedges for commodity risk may be due, in part, to the fact that many of the respondents in the sample population incur little or no commodity risk, but a higher proportion bear currency and interest rate risk.

FAS 133's Impact on Companies' Use of Derivatives (Percentage Distribution)

	Increased	Remained the same	Decreased	Don't know
Use of derivatives for interest rate exposures has...	7%	69%	21%	3%
Use of derivatives for currency exposures has...	12	74	13	1
Use of derivatives for commodity or raw material price exposures has...	7	71	15	7

Two years after its effective date, over a quarter of respondents claim that FAS 133 influenced their company's use of derivatives. The effect, however, differs depending upon whether the application was in connection interest rate, commodity, or currency risk. Respondents are three times as likely to report lower use (versus higher use) of interest rate hedges with a two-to-one ratio for commodity hedges. For currency hedgers, on the other hand, the response is more balanced, with comparable numbers reporting lower and higher use, respectively. The larger number of currency hedgers who indicate a greater reliance on derivatives can likely be attributed to the fact that FAS 133 allows for hedge accounting when forward contracts are applied to uncommitted, anticipated foreign currency transactions, where pre-FAS 133, these applications were not granted hedge accounting treatment.

Degree to Which Companies Agree that FAS 133 Has Imposed an Excessive Burden on Reporting Companies (Percentage Distribution)

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
16%	32%	34%	14%	5%

Nearly half of all respondents believe FAS 133 imposes an “excessive burden” on their company. This percentage is down significantly from the original survey results in 2001. In 2002, 48 percent of respondents believe that FAS 133 imposed an excessive burden on their company compared to 67 percent of respondents from last year’s survey. The decline might have been expected given that the 2001 survey was conducted as companies were implementing FAS 133; and implementation imposed a special, one-time “cost.” Since the implementation phase is now complete for most companies, this year’s survey reflects a perception that the ongoing compliance with FAS 133 remains burdensome.

A quarter of the respondents say their company forgoes hedge accounting on "significant portions" of derivative positions as a result of FAS 133. Forgoing hedge accounting means that many companies are prepared to show a higher level of income volatility that hedge accounting would otherwise mitigate. This judgment reflects a view that the resulting income volatility would be sufficiently small to be acceptable because (a) hedge positions are limited, (b) underlying prices/interest rates/exchange rates are expected to be relatively stable over the impending hedge horizon(s), and/or (c) the costs of complying with FAS 133 do not outweigh the potential benefits of complying with the requirements.

Degree to Which Companies Agree that the Restrictions on Netting Practices for Internal Derivatives Has Forced a Significant Change in Their Risk Management Approach
(Percentage Distribution)

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
16%	32%	34%	14%	5%

Eleven percent of respondents believe that the restrictions on netting practices for internal (inter-company) derivatives have forced a significant change in their risk management approach. This issue is most relevant to companies that have associated international entities. FAS 133 added very specific requirements for these firms to qualify for hedge accounting — such as, rules that impose specific constraints on central treasuries that manage worldwide exposures. These new requirements appear to have caused a relatively small number of companies to modify their approach.

Risk Management Practices

Hedging Activity by Risk Exposures

(Percent of Respondents)

	2002 Survey	2001 Survey
Interest Rate Exposures		
Recognized variable rate assets	17%	31%
Recognized variable rate liabilities	46	52
Recognized fixed rate assets	15	27
Recognized fixed rate liabilities	26	38
Prospective investment purchases	11	25
Prospective debt issuances	18	35
Currency Exposures		
Expenses or revenues denominated in a non-functional currency	16	34
Prospective purchases or sales (no firm commitment involved)	28	30
Prospective purchases or sales (a firm commitment is involved)	43	52
Recognized assets denominated in a currency other than the functional currency	32	46
Borrowing or lending in a currency other than the functional currency	25	39
Raw Material Exposures		
Net investment in foreign operations	15	24
Prospective purchases or sales	19	39
Inventory price risk	6	19

Over the past year, hedging activity for all types of risk exposures declined across-the-board. Still, the most frequently hedged exposures continue to be those relating to variable interest rate liabilities and prospective currency transactions (when firm commitments are in place). In the 2001 survey, both of these exposures were hedged by just over half of the respondents; in the 2002 survey the percentages dropped to somewhat under half.

There are several potential reasons for the decline in reported hedging activity. **One is that FAS 133 itself has led to a decline in the use of derivatives.** As reported above, nearly half of all respondents agree with the assessment that implementing FAS 133 puts an excessive burden on companies and that a sizeable minority of companies report choosing to forgo hedging activity.

Still, since both surveys were conducted after the effective date for FAS 133, all of the reported reductions in hedging activity may not necessarily be attributable to the accounting standard, per se.

Another possible explanation for the declines may be that some companies believe that market conditions over the past year lessen the perceived need for hedging. This perception of reduced risk exposure is based on relatively lower interest rates, mild currency fluctuations and smaller commodity price swings. Additionally, although some companies may have responded to both surveys, the reported decline in hedging activity might be due — in some part — to differences in the characteristics of the companies responding to the survey.

Risk Management Tools

Top Three Derivatives Tools Used by Companies

(Ranking by Exposures)

Interest rate exposures	Currency rate exposures	Commodity and/or raw material prices
1. Swaps (forward rate agreements)	1. Forwards	1. Forwards
2. Caps or floors	2. Plain vanilla options	2. Futures
3. Futures	3. Collars or corridors	3. Plain vanilla options

This year's survey reveals similar preferences of derivative tools as those found in last year's survey: Companies tend to prefer "plain vanilla" derivatives tools over those that are more sophisticated or complicated.

Interest rate swaps continue to be the most popular derivative tool for companies that hedge interest rate exposures. Independent caps and/or floors (not in combination) run a distant second, while the other alternatives are used by a very small percentage of hedgers. Among currency exposures, forward contracts are the favored derivative tool. Plain vanilla options (akin to caps or floors for interest rate exposures) are a distant second, while option combinations (such as collars, corridors, or options with other, more exotic features) are the third most widely cited tool.

For commodity and raw material exposures, forward contracts again are the favored vehicle. Additionally, futures contracts seem to be used with a greater frequency for managing commodity exposures than they are for risks associated with interest rates or currencies.

The Use of Hedge Accounting

Application of Hedge Accounting — Most Widely Hedged Exposures (Percent of Respondents)

Exposure	Derivative Tools	Usage ²
Interest Rate	Recognized variable rate liabilities	83%
	Recognized fixed rate liabilities	82
	Interest rate expenses or revenues dominated in non-functional currency	74
Currency Rate	Currency exchanges for prospective purchases/sales, with firm commitment	75
	Currency exchanges for prospective purchases/sales, with no firm commitment	72
	Recognized assets or liabilities denominated in a currency other than the functional currency	65
Commodity/Raw Materials	Prospective purchases or sales	85
	Inventory values	79

As might be expected, a high proportion of companies that qualify for hedge accounting elect to opt for this treatment for at least most — but not all — of their exposures. For interest rate exposures, more than eighty percent of companies that hedge such exposures use hedge accounting for hedges of their fixed and variable liabilities. A slightly lower percentage of companies with exposures in prospective purchases or sales of commodities and raw materials use hedge accounting.

Not all companies, however, make this election. **The most widely reason cited for eschewing hedge accounting is that respondents feel the special hedge treatment is not necessary.** This response could be interpreted to mean that the effort to apply hedge accounting is too great for the benefit that would be derived. Presumably, companies that come to this conclusion may believe that the consequent income volatility is acceptable, given the time, effort, and possible expense of satisfying the prerequisite requirements for getting the hedge accounting treatment. Another reason why hedge accounting might not be deemed necessary is that normal accounting frequently yields the intended matching of gains or losses on an exposure with compensating derivative results. This outcome arises, for example, when entities use derivatives to hedge the currency risk of assets or liabilities that are denominated in a foreign currency — the category with the lowest frequency of all, to apply hedging accounting. Offsetting gains and losses are recorded in current income making the application of special hedge accounting unnecessary.

² Uses hedge accounting for at least some of their hedged exposures.

Technical Discussion

The following section looks at the technical aspects of hedge accounting for those companies that apply such techniques.

Hedge Effectiveness Testing

Methods Used for Hedge Effectiveness Testing (Percentage Distribution)

	Always	Sometimes	Never	Not applicable to my company
Dollar offset calculations/scenario analysis	32%	16%	10%	42%
Regression	10	17	27	46
Value at risk calculations	13	13	27	48

In testing for hedge effectiveness, several alternative methodologies are available; including dollar offset calculations, regression, and value at risk calculations. For those companies where hedge effectiveness tests are relevant, dollar offset calculations are the favorite methodology for satisfying the testing requirements. Over 80 percent of respondents who conduct hedge effectiveness testing use this method at least some of the time, and most of these companies making such calculations do so with reference to individual period changes, as opposed to cumulative changes. About half of respondents who conduct hedge effectiveness testing report using the regression methodology while half of respondents (not necessarily mutually exclusive) also use “value at risk” calculations.

The preference for the dollar offset ratio is likely due to its relative simplicity. That is, dollar offset ratios can be calculated quickly and easily. In contrast, the use of regression analysis or value-at-risk techniques requires a much higher level of technical expertise and also a greater reliance on more extensive data sets. However, these alternatives generally will preserve uninterrupted hedge accounting. In contrast, dollar offset ratios often fall out of acceptable bounds when small price changes are observed, thereby fostering a termination of the use of hedge accounting because offset ratios.

Interest Rate Swaps

Sixty-five percent of respondents report that they use interest rate swaps for managing interest rate risks, a figure that represents about 92 percent of all companies that hedge interest rate exposures. Respondents also reflect a preference for the “shortcut treatment” for interest rate swaps is used, which it obviates the need to measure hedge effectiveness.

³ See Kawaller, I.G., "The 80/125 Problem," *Derivatives Strategy*, March 2001 for a more detailed discussion on this point.

This survey addressed two questions in regard to the use of interest rate swaps: first, what is the importance of the shortcut treatment? Second, which of the three allowable methods for measuring hedge effectiveness is used when shortcut treatment is not used?

Company Use of the “Shortcut Treatment” for Interest Rate Swaps
(Percentage Distribution)

The shortcut treatment is always employed	24%
The shortcut treatment is sometimes employed	27
The shortcut treatment is never employed	9
Company does not use interest rate swaps to convert from fixed to floating interest rate exposures, or vice versa	41

Application of the short-cut treatment is attractive, in part, because it obviates the need to measure hedge effectiveness. Even so, shortcut treatment is not permitted unless the prerequisite conditions are satisfied. Nearly 40 percent of companies that use interest rate swaps always qualify for and apply the short-cut treatment while fewer than ten percent indicated that they never apply the shortcut.

Methods Used by Companies to Measure Hedge Effectiveness When Not Applying Shortcut Method
(Percentage Distribution)

Method 1 – based on variable cash flows of the swap	7%
Method 2 – based on the results of a hypothetical derivative	5
Method 3 – based on total cash flows of the swap	22
Not applicable to my company	66

When the shortcut is *not* employed, hedge effectiveness must be measured. Derivatives Implementation Issue G7 (DIG Issue G7) sanctions three different measurement methods: the Change in Variable Cash Flows Method (Method 1), the Hypothetical Derivative Method (Method 2), and the Change in Fair Value Method (Method 3). The favored approach, by nearly two-thirds of the responders, is Method 3. About 20 percent of respondents who do not employ the shortcut favor Method 1, while the balance (15 percent) opts for Method 2.

DIG Issues G20 and H15

Accounting Treatment Companies Apply When Hedging with Options (Percentage Distribution)

Company applies G20 and bases hedge effectiveness considerations on total cash flows of the options	24%
Company excludes time value or volatility value from hedge effectiveness assessments	13
Company does not hedge with purchased options	62

When purchased options are used in cash flow hedges, DIG Issue G20 allows the assessment of hedge effectiveness to be based on the total changes in the option's cash flow.⁴ The benefit of the G20 methodology is that can result in less income volatility during the hedging period compared to any alternative treatment. While only about 38 percent of the respondents report using options, the G20 method was favored almost 2:1 among those using options.

Company Use of DIG Issue H15 (Percentage Distribution)

My company always applies DIG Issue H15	7%
My company sometimes applies DIG Issue H15	5
My company never applies DIG Issue H15	22
My company does not hedge prospective purchases or sales from or to foreign suppliers	66

DIG Issue H15 provides for yet another special accounting treatment — this time in connection with currency hedges when specific conditions are met. That is, this treatment may be applied only when the same forward contract is used to hedge the prospective purchase or sale in the non-functional currency and the subsequent currency settlement. The H15 treatment would likely result in less income volatility during the hedging period than would otherwise be the case. Among those companies that face this kind of exposure, only 15 percent of companies that hedge prospective purchases or sales from or to foreign suppliers consistently avail themselves of this treatment. An additional 37 percent of respondents report that their company uses the H15 treatment sometimes; but almost half never elect to apply this procedure.

With both of these issues, FASB somewhat belatedly allowed reporting companies to apply special accounting practices that would likely result in lower reported income volatility than alterna-

⁴ Without G20, companies would likely exclude the option's time value or volatility value from the assessment of effectiveness.

tive treatments. Even so, significant portions of respondents who were eligible for these preferred treatments chose not to use them. In some cases, this election may likely have been due to having previously implemented other procedures before these newer alternatives were authorized. Alternatively, this outcome may also be a reflection of the more onerous valuation and documentation requirements associated with these treatments, relative to alternative procedures.

Conclusion

In the nearly 18 months since AFP conducted its first survey on FAS 133, companies report that they have reduced their hedging activity. This reduction appears to be motivated, in part, by these new rules — particularly for hedgers of interest rate and commodity risks. However, a part of the reported decline in hedging activity may have been due to a perceived reduction in the need for hedging, due to more stable and favorable market conditions.

Readers of this report should appreciate that the response to this year's survey was limited and that some "self-selection bias" may be inherent in the results. As a result, while the findings provide good indication of the attitudes and practices of the subset of firms that participated in the survey, these firms may not necessarily reflect the actions and opinions of the business community at large.