

RISK MANAGEMENT

THE REINS ON RISK

Many financial executives are tight-lipped about their risk-management programs (if they even have them), especially since the derivatives bullet dropped several big-name companies to their knees. But, here, four risk-management pros divulge how they forge the risk-taking rules in their companies — and how they inspire their colleagues to abide by them.

THE RESPONSIBLE PARTY

by David A. Rusate
Assistant Treasurer
General Electric
Fairfield, Connecticut

If you're the treasurer of a company that deals in derivatives, are you comfortable with your role in managing the exposure? In GE's treasury department, we take on the risk-management responsibility using six approaches. First, we help our business units understand both their direct and indirect currency exposures. Second, we provide technical and fundamental analyses to the business units. The fundamental analysis is our macro-economic view of a country and its currency and interest-rate environments; the technical analysis is our detailed look at the technical support and resistance levels for particular cur-

rencies, since hedge funds are so systems-driven.

We also recommend hedging strategies to our businesses, and then we execute the strategies. By centralizing the exposures, we leverage the purchasing power of GE, get better control and realize more efficiencies.

The GE treasury staff manages the company's positions. Every day, we mark to market our exposures — and we can do so even more frequently if a currency significantly moves during the day. We outsource our foreign-exchange confirmation process to a vendor that electronically confirms our trades on a real-time basis with our 10 foreign-exchange banks.

Finally, we identify internal offsets and netting opportunities. For example, if our NBC affiliate has a yen receivable and our appliances group has a yen payable, we'll consider an internal offset.

GE's risk-management policies are

fairly typical. We're risk averse, and we don't speculate. We use the FASB's definition to avoid speculation: Are we hedging without a firm commitment? Are we overhedging, or doubling up, a position? Are we managing the position? We believe if we're managing a position with an instrument other than a hedge (for example, a stop/loss order), that's not speculation.

We use a portfolio approach, combining 50 percent forward contracts, 25 percent currency options and 25 percent stop/loss take-profit orders, although we do adjust the formula slightly if we have a strong view on a currency, a larger margin on a particular product or a different competitive situation.

The forward contract is an agreement with a bank — a derivative — that allows us to sell the bank our future yen flow, for example. The bank in turn pays us in dollars, because that's our functional currency, on a future date. No monies

change hands on day one. The bank gives us an exchange rate for the future date, which is the interest-rate differential between the U.S. dollar and the Japanese yen for a specified time period. One caution here: The forward rate we get from the bank is not the bank's forecast. Some companies have this misconception.

More complex than forward contracts, currency options offer tremendous flexibility. For instance, if you hedge your yen receivable at 100 yen per dollar with a forward contract, you'll get \$1 for every 100 yen you deliver to the bank in, say, six months. If you hedge your yen receivable with a put option at 100 yen per dollar and, at the option expiration date, the market-exchange rate is 92 yen per dollar, you'd let the option mature while you convert your yen to dollars at 92 yen. This would result in more dollars for you because it would require eight fewer yen to buy that \$1. Note, however, that you do need to pay a premium upfront for the option, but you can amortize it over the life of the exposure or expense it in the month you incur the cost.

Some U.S. companies find it cheaper to borrow in a foreign currency and convert the proceeds to U.S. dollars. We've evaluated that approach but believe, in general, that the markets are so perfectly arbitrated that unless we can pinpoint particular market inefficiencies, we'll spend more time chasing those opportunities than managing our exposure. On the other hand, we have taken that tack in emerging markets, like Indonesia, if we see an arbitrage opportunity.

When we can identify a trending market, we like to use stop/loss take-profit orders and have done so successfully with the Japanese yen over the last two years. We forecast

We don't want to spend more time chasing foreign-currency borrow-then-convert opportunities than we spend managing our exposure.

the yen would continue to strengthen and applied this to our portfolio approach to managing currencies by placing a stop/loss order. Here was our reasoning: If the yen spot rate was 125, which it was on January 1, 1993, and we received a customer's purchase order to create a yen receivable, we would place our stop/loss order at 127 yen per dollar. If the yen moved down, say to 100, our stop/loss order would never execute because it trailed the market. But if the yen weakened initially and rose to 128, we would have purchased, at 127, a forward contract or an option to hedge the yen receivable.

The beauty of the stop/loss order is many of our businesses have views on currencies and, because we're a decentralized company, we want to make them owners of the currency-management process. So we've helped the businesses develop strategies to justify the margin of the transaction — in this case, at 127 yen per dollar, by allowing two

yen of flexibility, we could potentially gain 10 or more yen. As the yen moves down to, say, 115 and becomes stronger, we trail the stop/loss, adjusting it to 120. The stop/loss order costs nothing, and the banks follow it 24 hours a day, passing it through their branch networks. If there's a catastrophe while you sleep, you have a safety net protecting you.

And our final risk-management policy, typical of most firms, is to manage transaction exposures.

So what's the safe-and-sound approach? Conventional theory tells us to avoid all risk by transacting in U.S. dollars — bill in dollars and take payment in dollars. Period. The fallback is to bill customers in their local currency and hedge 100 percent of it with a forward contract. But isn't that speculation? You'll either hit a homerun or strike out. There's no middle ground. If you're wrong on a significant exposure, you could severely damage your business.

Say you were selling widgets in Japan in yen. Your competition in the United States was also selling widgets in Japan in yen. As your company's resident expert, you chose to hedge your yen receivables. Your spot rate was 125 on January 1, 1993. If you had hedged, you could have had a forward rate of 124.85, giving you a slight benefit because the yen is a premium currency. If you're 100 percent unhedged, the average rate for the yen dollar was 111.05. So you would have added incremental net income to your company's balance sheet.

The point? If your competitor went unhedged, used stop/loss orders or used put options to hedge

its yen exposure, it now has additional margin to come after your market share.

TAKING IT FROM THE TOP

by Errol Harris
Assistant Treasurer
AT&T

Berkeley Heights, New Jersey

At AT&T, our board of directors establishes the risk-management policies and controls for our foreign-exchange and interest-rate derivatives. But because the board isn't involved in AT&T's day-to-day operation, the responsibility for executing the strategy falls to the treasurer and the assistant treasurers.

AT&T has about \$3 billion in gross foreign-exchange exposures and an annual trade-in of \$15 billion to \$20 billion in the foreign-exchange marketplace. We have approximately 25 business units and, in the last 10 years, our operations have grown globally. Because this growth means more individuals are involved in risk management, we decided to develop and distribute to all business units and divisions a policy letter that explicitly states the roles and responsibilities of both the treasury organization and our operational managers. For example, we direct all of the units and divisions to report any exposure above \$1 million to the treasury organization, because the decision about what we hedge and how we hedge rests with treasury, not the operational managers.

We hedge only transactions we're very certain about and focus on hedging transaction exposures

instead of translation exposures, primarily because we view the latter as long term. For instance, when we invest in another country, those investments are long term, so we're not as concerned about fluctuations in foreign currencies. And if we realize a loss or a gain, it's reflected in the equity account, not the income statement.

Our foreign-exchange manager told his employees to assume the office was closed the next day and to manage the operations from home.

Neither do we hedge any bottom-line, profit-and-loss number. We will, however, cover any related exposures; for instance, if we incur expenses that are obviously components of the income-statement number, we'll hedge the various components but won't hedge the bottom line as a total.

We strongly believe in avoiding speculation, and we must have an underlying business reason to engage in the marketplace.

Our risk-management guidelines for foreign exchange focus on internal controls. First, we distinguish between the individuals who execute transactions in the marketplace and those who confirm and settle the transactions. Second, we

have frequent internal audits and call on our external auditors to ensure that our foreign-exchange group is following the policies and procedures we've established. And, third, we have judicious approval levels: The foreign-exchange manager can approve transactions of up to \$50 million, but I must approve those above \$50 million, and the treasurer must approve those above \$100 million.

A good example of our internal focus is in contingency planning. One night several months ago, our foreign-exchange manager called his employees to tell them to assume the office was closed the next day and they were responsible for managing the operations from home. We do this periodically to verify our staff members have data and tools that they can readily use in the marketplace if something were to happen at AT&T.

We also regularly review our foreign-exchange results through a sophisticated internal system that allows us to track our positions daily. I review the reports biweekly and the treasurer reviews them monthly.

And we carefully select our intermediaries. AT&T deals primarily with 12 foreign-exchange institutions, and five of those institutions have about 75 percent of our business. Because our internal credit committee looks at our exposures across the entire treasury function, not just those in our foreign-exchange operation, we can set general exposure limits based on the credit ratings of different institutions. Based on those limits, we assign specific dollar amounts to the foreign-exchange group; the corporate-finance group, which may be

focusing on derivatives; the money-market group; and the overnight funds we leave with several banks.

Finally, as an internal-control measure, we rotate our foreign-exchange employees within the treasury organization, so no one has a single type of responsibility for a long time.

Why do we use interest-rate derivatives at AT&T? To reduce our cost of funds and to restructure our debt portfolio. To get a lower cost of funds, we hedge structured notes; for

example, we might execute a transaction in the commercial paper market, the medium-term note market or the debt market and attach derivatives to it. We focus on the integrated instrument and the net liability that entails — and always make sure the debt is completely hedged by the derivative. As a result, we can always apply hedge accounting treatment to those transactions. With a general objective to have a liability portfolio mix of 70 percent fixed debt and 30

percent floating debt, we may use derivatives to reach that goal.

But, of course, using derivatives poses some risks. The value of your portfolio of derivatives may change with changes in the marketplace. However, companies like AT&T use derivatives to achieve an end; if we try to eliminate the market risk and focus on only the net liability of the debt and derivative together, then the risk becomes no different than what we face with a straight-debt

HOW GE TEACHES ITS BUSINESS UNITS TO TALK THE TALK

At GE, it's the treasury's job to educate all of the company's businesspeople — whether they're in accounting, the legal department, purchasing or sales — about risk management. For instance, we encourage our business units to bill in premium currencies and receive invoices in discount currencies. The reciprocal of premium currencies, discount currencies are from countries in which interest rates are higher than in the United States, such as Spain and Italy.

Say you're quoting a job in Japan with a three-year delivery. Your management wants no currency risk, so you quote in dollars. The Japanese love this. They'll take your offer before the words are out of your mouth, because their currency appreciated by 28 percent in both 1993 and 1994 and is off to a roaring start in 1995. So quote your business in yen, and buy a forward contract if you're completely risk averse. You eliminate your risk and increase your margin by 7 percent.

Here's an example of how the process worked at GE: We were bidding \$4.3 million for a turbine order. Our Japanese competition had a yen bid. We instructed our business to also bill in yen at the day's spot rate of 98.75, which would convert our \$4.3 million bid into 431 million yen. We told the GE unit to contact us immediately when it got the purchase order from the customer, so we could transact forward contracts for the unit. We subsequently could guarantee the unit \$4.6 million. That's a \$300,000 additional margin enhancement at no risk. (One note: Just be aware that, if the yen appreciates significantly beyond the forward rates, you may have sacrificed an opportunity cost.)

The purchasing side offers a slightly different twist on the same theme. For instance, when GE located an Italian supplier for laundry pumps, the treasury department first educated the purchasing manager on how to close the deal. We told him to explain to the supplier that we're a dollar company and

don't understand Italian lira (after all, our representative in the transaction is a purchasing manager, not a treasury person), so we want the price in dollars.

Then we told the manager to drive the price in dollars as low as he can. When the purchasing manager hits a rock-bottom price, he should look for items on the other side of the ledger he hasn't been able to get thus far, such as a better delivery time or a "bell and whistle" on the product. At that point, the manager should disarm the supplier by offering to take the billing in lira if we get this bell or whistle — in return for the risk we're taking, of course.

We tell the manager to then reach into his briefcase for a copy of *The Wall Street Journal* and ask, "Why don't we just use today's exchange rate to convert that dollar price to lira?" The exchange rate in the newspaper is the spot price. Because the Italian supplier's representatives are sales managers, not currency experts, they're ready to sign the purchase order. — DAR

transaction in a changing market.

On the other hand, we have the credit risk that our derivatives counterparty may default. Because this risk isn't a part of straight-debt transactions, we have to always know the exact cost of the risk and incorporate that cost in our analysis.

At AT&T, we use a model developed internally that quantifies the expected average value of a transaction. It includes three components: the credit rating of the institution, the length of the transaction and the average expected exposure. By doing this, we establish a credit premium, which when added to the underlying transaction enables us to compare the economic cost of the derivative transaction with the cost of a regular debt market transaction. Each month, the treasurer receives information about our current exposures — the mark-to-market value of a transaction or the portfolio — as well as the expected average exposure and credit premium. With all of this information, we monitor our exposures to previously established thresholds for our counterparties. Additionally, we've established a policy to never execute any transactions with a company rated BBB or below.

If you're using derivatives, you also have to consider your operational risks. At AT&T, the board's finance committee receives quarterly information about the company's derivatives exposures. An assistant treasurer must approve any interest-rate hedge, and at least two individuals within the corporate-finance group must sign off on all transactions. We also have a separate back-office staff to handle derivatives accounting, tracking and payment verification.

To curb our legal risks, we execute

International Swaps and Derivatives Association master agreements with many institutions, both those we're currently working with and those we think we'll use later. With these in

If the person handling your confirmations doesn't understand derivatives, do you really have independent risk-management oversight?

place, we have the flexibility to move quickly in the marketplace. However, an assistant treasurer must sign a confirmation of specific transactions prior to the start date of the hedge.

Our other positions on risk management include re-examining a transaction if there's a material change in the credit rating of an institution after a merger and, when it's appropriate, asking for a guarantee of the counterparty's obligations from its parent organization.

CHOOSING SOLDIERS AND SYSTEMS

*by Paul Collier
Director, Capital Markets
Baxter International
Deerfield, Illinois*

How do you avoid getting burned by derivatives? While the Group of 30's recommendations for using

derivatives focused primarily on the impact for financial intermediaries, it did offer some guidelines for companies that aren't in the business of trading derivatives. For instance, your senior management needs to set policy for your firm's use of derivatives, and you need a knowledgeable, trained staff suitable for that use (don't hire a rocket scientist if you want to do simple interest-rate hedges — people like to use their talents). You also should "stress test" your transactions, use master netting agreements with your counterparties, and watch your credit risk, because you've just shifted your rate exposure to a credit exposure.

I think the two key recommendations from the Group of 30 are the most important. First, you must have independent risk-management oversight. At Baxter, we have two and one-half people working with derivatives. (I say one-half because one person is always coming up to speed.) Given the level of hedging we do, that number is appropriate, but it does make independent oversight tougher.

If you have only one or two people in your firm who truly understand your derivative transactions, you may have a case where the same person originates a trade and effectively manages the "back office." Even if you have someone outside of treasury who handles trade confirmations and payments, if that person doesn't understand derivatives, do you really have independent risk-management oversight? I think you can — if you follow several simple guidelines.

First, spread the expertise. Baxter sends people from our internal-audit staff and our accounting, tax and

legal departments to "derivatives" training, because we want other people within the company to understand the financial instrument.

Also, make many of your decisions by consensus, as we do at Baxter. This may mean that you sometimes miss an opportunity when the market moves because decision-making takes longer, but ultimately you'll do only those transactions that people in other departments are comfortable with. That's a good check-and-balance system.

At Baxter, we also share a lot of

information with our investment bankers, and we insist on benchmarking transactions with more than one bank, all of which understand our business and our goals. This approach won't fit every company, in particular those that prefer to keep their financial institutions at arm's length. But I think developing long-term relationships with your bankers is important because they become yet another source of checks and balances. You can be sure if one bank has a "great idea" for you, the other banks will try to poke holes in it.

Another possibility for establishing independent risk-management oversight is to hire an independent risk-management advisory firm to give you an unbiased view of your activities and the proposals you receive, although typically this is expensive. Or you can ask for your outside auditor's help.

The second recommendation from the Group of 30 I think is very important is to use appropriate computer systems. What should you look for in a system to support your interest-rate derivatives activity, assuming you do

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THE HUMAN ELEMENT

When *Financial Executive* informally polled a small group of executives at a recent conference, we found that, out of 41 respondents, 44 percent admitted that their treasury people either didn't understand their risk-management strategies or understood them only somewhat. [See the chart at right.]

But this number doesn't faze David A. Rusate. "Given the losses we've seen on derivatives over the last year and through benchmarking exercises and informal discussions I've had with my peers in the treasury field, I'm not surprised," says the assistant treasurer of GE. The good news is, according to Rusate, companies are interpreting the horror stories they see in the press as a "wake-up call" to review their risk-management procedures and controls.

What is surprising to Rusate is that nearly one-third of the same companies don't establish controls that give their compliance officers

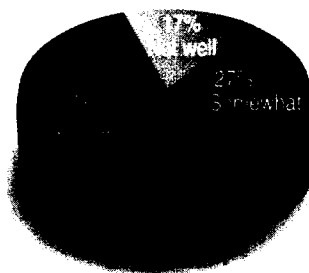
(or their equivalents) "complete independence" from the company's hands-on risk managers.

"That's probably why the problems occur," says Rusate. "Remember, this subject isn't easy to understand, and sometimes people put off dealing with topics they feel they can't tackle."

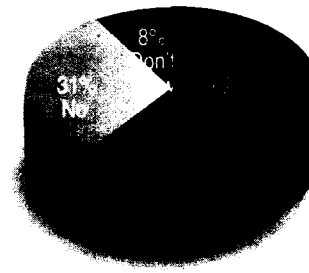
Some other well-founded con-

cerns that turned up in the survey: One respondent warns that he sees "a wide variation in the level of understanding of these instruments among our bankers." Another points out that his firm is quickly developing risk-management controls "as our board of directors recognizes the risks — and the potential directors' liability." ♦ — RCC

Question: How well do the appropriate treasury and other key financial personnel within your firm understand the nature of your firm's risk-management strategies, instruments used, control procedures and level of exposure?



Question: Does the person in charge of compliance at your company have complete independence from those executing risk-management transactions?



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only a few transactions a month?

Because you want to be able to project your interest costs into the future, you need a system that uses the forward interest-rate yield curve in a model. The model also should project the variation around the future

yield curve and compare alternatives for your current or projected portfolio of debt instruments. This information will help you set your hedging strategy.

The system should give you an idea of your credit exposure (that is, the mark-to-market value), too, and an estimate of the cost of your hedging strategy.

Important to note is that most companies can continue to perform derivatives accounting and transaction processing, such as the end-of-the-month payments on swaps, using stand-alone spreadsheets. Since each transaction is a little different, asking a mainframe computer system to process them all won't pay off unless you have a high volume of transactions.

If your derivatives are in the foreign-exchange area, your systems approach will be very different. Quantifying your underlying exposures is your most important task. To do this, your first priority is to establish a database to store and update a record of current and projected exposures. Second, you should use the database to report the impact of these exposures to your management (projecting movements in foreign-exchange rates) and to calculate the accounting gains and losses on your hedge instruments.

Finally, you should have a bid-tracking feature in your system if you're making foreign-exchange

our initial concentration on disclosure. Over the past few years, we've seen a series of developments in

accounting disclosure. The FASB's Statement 105 covers disclosing information about financial instruments, not just derivatives, that

Merck's anecdotal evidence suggests that detailed derivatives disclosure isn't a key concern to our shareholders and analysts.

trades, even if they're simple swaps or options. In this way, you can evaluate bidders on the screen and avoid mix-ups at critical times in the bid process.

WHAT THE REGULATORS HAVE IN MIND

by A. John Kearney
Assistant Treasurer, Global Capital Markets
Merck & Co.
Whitehouse Station, New Jersey

There are two aspects of reporting on derivatives to shareholders: disclosure and accounting treatment. How to account for derivatives has been the subject of a long, arduous project led by the Financial Accounting Standards Board with active participation by the SEC staff, industrial companies, the financial-services industry, public-accounting firms and others. These groups have studied a wide range of alternatives but, to date, we seem to have more problems than answers.

The inconsistencies in accounting for derivatives under the current rules and the difficulty in sorting out the appropriate accounting is, to some extent, responsible for

create off-balance-sheet risk and credit risk from financial transactions. Statement 107 adds a disclosure requirement about the fair market value of financial instruments. And, of course, the recent Statement 119 greatly increases the disclosure requirements for your derivatives activity; it calls for a more detailed explanation of why you use derivatives, the kinds of derivatives you use, how you account for derivatives and such quantitative information by major types as maturity and fair values.

In general, derivative users have accepted these increased disclosure requirements well. So 1994 annual reports contain an explosion of information about derivatives activity — both in the MD&A section and in what is now many companies' longest footnote.

In many annual reports the volume of disclosure about derivative financial instruments is becoming disproportionately greater than the disclosures about other, more significant business risks. For example, in the pharmaceutical industry, research and development is absolutely critical to an enterprise's success and growth. Because of the magnitude and importance of the resources usually devoted to these

activities, such firms' exposure to risk far and away exceeds the exposure that financial instruments create.

In my opinion, this all is a bit of overkill. The anecdotal evidence Merck has — from both individual shareholders and our investor-relations professionals — suggests that this isn't really a key concern to our shareholders and analysts. They're interested in knowing we have a hedging program to manage one of our primary external risks — foreign exchange — but they're not particularly interested in the amount of detail we provide.

On the interest-rate side, we don't have a lot of debt outstanding, but we do have debt that's been swapped into floating-rate U.S. dollars to obtain arbitrage-based, low-cost financing. I'm not sure that spelling out the details of these swaps in terms of notional value and expiration dates provides any meaningful information — however, the data is readily available, so we do.

One aspect of derivatives disclosure I find potentially misleading is the drive to focus solely on derivatives and their valuation without considering them in the context of their use. For our hedging program, we disclose the carrying value, fair value and deferred gains or losses on outstanding hedges. While these amounts (deferrals) haven't been particularly large to date, it's relatively easy to create scenarios in which we might have significant gains deferred (since we primarily use options, the potential losses are limited to the carrying value). Although I don't think it's required, we should be careful to point out that the reason for such gains would be that something

unfavorable has happened to our underlying business.

Similarly, we must disclose the valuation of the swap contracts we

Value-at-risk measures are of dubious value and could be misleading if applied only to derivatives.

enter into as part of integrated transactions to place lower-cost floating-rate debt. We could have large mark-to-market losses on these swaps, which we would disclose, but they would be fully offset by the change in the valuation of the debt.

I'm also uneasy about including a "value-at-risk" or some other calculation of the hypothetical effects of possible changes in market prices on industrial companies. For firms like Merck, that use derivatives primarily for hedging or as part of integrated transactions, such measures are of dubious value and could be misleading if applied only to derivatives. I guess this is an example of an accepted and necessary market practice for financial institutions being applied in a way that might mislead those not actively participating in those markets.

The FASB is indeed struggling mightily with writing rules to cover the diversity of participants, the many uses for derivatives and the dynamic of the overall derivatives market. The board appears to be moving toward a model that classifies derivatives as either "trading" or "other than trading." Derivatives

classified as trading would be accounted for on a mark-to-market basis — that is, changes in valuation would be recognized in earnings in the period in which they occur. Gains and losses on derivatives classified as other than trading would be reported in a separate component of equity until realized. The FASB also is discussing the possibility of a third category, which would allow you to record valuation changes as adjustments to the basis of existing assets and liabilities under specified circumstances.

You would further classify derivatives used for non-trading purposes in three risk categories — interest rate, commodity price and foreign exchange. All derivatives in a category must be accounted for in the same manner: mark to market through equity or deferral as a basis adjustment. At first blush, we're concerned that these rules may be too arbitrary to accommodate the ways corporations actually use derivatives. For example, a company may have foreign-currency assets or liabilities it wants to hedge from a market-value perspective and foreign-currency anticipated transactions it wants to hedge from a cash flow/deferral perspective.

In any event, the FASB's timetable on the hedging project and the way the proposal will eventually roll out are unclear. I think the board is making some progress in terms of identifying (at least in theory) the disciplines to limit and control the application of principles that govern deferral hedge accounting. However, the disciplines discussed so far are very complex and too theoretical to be of any practical use in reaching conclusions. ♦