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**MEASURING INTEREST MARGINS --
PART 2 -- MEASURING INVESTMENT RESULTS**

Moderator: ESTHER H. MILNES
Panelists: FREDERICK M. BORCHARDT*
SCOTT S. HARTZ
SUE W. OGDEN
Recorder: ESTHER H. MILNES

- o What information on current segment performance is available to the actuary for fixed-income assets and for equity holdings?
 - Investment income?
 - Investment expenses?
 - Default costs?
 - Market values of assets?
- o What information on future segment performance is available to the actuary, and what is the source?
 - Maturity and call structure?
 - Asset quality evaluations?
 - Anticipated yields of future acquisitions?
 - Current commitments?
- o How timely is the information provided?
- o How finely are data subdivided to be attributed to different blocks of business supported by a segment?
- o How is segment information used for models and forecasts, particularly for satisfying New York's Regulation 126?
- o How useful are accounting techniques in measuring investment results?

MS. ESTHER H. MILNES: In Part 1 of this series, we talked about selecting assets and allocating them among segments. We'll be talking now in this part of the series about measuring results of the asset portfolios created by the segmentation process. The measurement process involves gathering data and determining methods for summarizing the data. There are variations in method depending on asset type and characteristics. We also have transaction-related concerns, such as what to do with capital gains.

Sue Ogden from the Prudential Asset Management Company will be talking about measuring investment results for group annuity contracts. Scott Hartz from the John Hancock will be talking about measuring investment results for retail life insurance products. We also have Fred Borchardt who is KPMG Peat Marwick's partner in charge of banking practice in Chicago. He'll be talking about some of the problems in accounting for investment results of banks. We'll have a chance to see how some concepts

- * Mr. Borchardt, not a member of the sponsoring organizations, is a Partner in Charge of Banking at KPMG Peat Marwick in Chicago, Illinois.

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which the accountants and bankers are grappling with may have a bearing on the way we want to measure investment results for certain types of assets, such as collateralized mortgage obligations (CMOs) and real estate mortgage investment conduits (REMICs).

Sue Ogden will begin our panel. Sue has been with Prudential Asset Management Company since 1978. She received her FSA in 1970 and MBA in 1975 and is currently working on her chartered financial analyst (CFA) designation. Her discussion will cover measuring investment results for group annuity business. She's also had assignments involving solvency testing for New York Regulation 126 and for internal management purposes. Sue has worked closely with investment areas to get investment results, and also analyzed results to determine experience interest rates on group annuity contracts.

MS. SUE W. OGDEN: I'm going to discuss investment data: what it looks like, where it comes from, and how we use it in our group pension operations at the Prudential Asset Management Company.

To set the scene, let me describe briefly the products that I'm dealing with: first, non-participating annuities and GICs; second, participating defined contribution plans; and finally, participating defined benefit plans.

Each of these three product lines has a separate asset segment. The Prudential segmented its group pension operations first in 1978 and again in 1984, and we hope to do again shortly. The investment strategies for each of these segments is defined to match the particular structure of its products.

I have identified four general categories of uses where the actuary will find investment information useful in one form or another. First, I'll give you a brief description of each of the uses. I intend to put more emphasis on the last two categories, when I get into the detailed analysis, because that's where we found investment information to be of greatest use to us. Of course, the amount of detail that you find useful will depend on the priorities you establish and the availability of data within your own company systems.

1. For earnings analysis, whether for GAAP or for STAT:
Investment information including net investment income and capital gains is an integral part of actual and projected earnings. What the actuary needs to know is how to test the credibility of the numbers that he receives.
2. For pricing purposes:
The actuary needs to understand the investment market in order to establish effective products. I mean marketable, profitable products. Related to this is a responsibility to maintain open communications between the investment area and the product area, so that the investment and product strategies are in sync.
3. For experience rate crediting:
This is the art of translating the data that you receive from your accounting and investment areas into experience crediting rates for participating business. The experience accumulation in our operations is the basis for dividends payable for deferred annuities and deposit administration contracts, and experience credits for

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immediate participation guarantee (IPG) contracts: It is also used as a basis for determining future interest guarantees on defined contribution plans.

4. For solvency analysis:

You may call this C-3 risk analysis, cash-flow testing, or Regulation 126 testing. It involves a long-term projection of asset and liability cash flows under a variety of interest rate scenarios and other relevant assumptions.

EARNINGS ANALYSIS

Let's return to the first use that I identified, earnings analysis. We project full-year earnings for each segment quarterly. The investment departments project full-year net investment income and anticipated capital gains and losses by segment. They consider the existing asset base, expected sales and maturities as well as how these funds will be reinvested in making this projection. The actuary on the opposite side projects reserve related numbers, in particular, tabular interest. In our case the actuaries assemble the earnings figures and review them for O.E.D. lists are rare -- reasonableness is preferred. If the investment numbers seem to be out of line from what we expect, we question the assumptions that have been used. We also question our own estimate of tabular interest. Our basis for determining the reasonableness of the net investment income projection is net gain from interest -- the difference between net investment income and tabular interest.

Although the give and take in the quarterly review process has rarely resulted in a change in the current quarter's investment income projections, nonetheless, over time, we have seen rather significant improvements in the projection processes that we've developed, both in the net investment income area and in the tabular interest.

But what's far more important to me, is that this process has provided us with another opportunity to discuss the interrelationships between the product guarantees and the investment strategies from another perspective: from the perspective of current-year impact on surplus, i.e., earnings.

At year-end, if actual net investment income is significantly different from the last projection, we ask the investment areas to explain the difference and find out what can be done to avoid the disparity in the future.

PRICING

The second use of investment data is for pricing. The pricing actuary needs to have investment information to determine the crediting or pricing rates for contracts with prospective guarantees. This involves nonparticipating business, both the annuities and the GICs, and participating business, primarily the defined contribution plans.

On the nonpar side, our rates are based on spot interest rates which reflect the expected liability cash flow under the contract. Actually, the investment people determine the interest rates, and the product manager, the actuary, determines the liability flows. The investment department provides us with standard GIC interest rates each Monday for illustrative purposes. Before any formal offer is made, the product manager confirms that this rate structure is still in effect. More complex structures, particularly single sum

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annuities, are reviewed with the investment manager on a case-by-case basis. Turn-around time is critical, both in getting timely offers to the clients and in getting acceptances back, since all offers expire within a few hours. In this arena, the pricing actuary and the investment manager depend on operating procedures that have been carefully developed to expedite the exchange of information without a loss of data integrity.

The determination of crediting rates for existing defined contribution funds depends heavily on the results emerging from the experience crediting procedure. For guarantees on new contributions to defined contribution plans, the actuary and the investment manager discuss the pertinent issues: What's the current interest rate market? What are the trends in the market? What are the risks involved in selecting one level of guarantees versus another? The marketing person associated with our defined contribution plans also has a significant input to this discussion. Now this is a discussion of specific cases, or specific guarantees. Periodically the actuaries and the investment managers meet to review fundamental investment strategies and the pricing procedures, so that they don't lose sight of this grand design of the forest, while they're planting their trees.

EXPERIENCE CREDITING

The third major use of investment income data is for experience crediting purposes. For us, this involves the determination of interest and rollover rates by investment year (IY). Our experience recordkeeping system is on a declining balance, IY basis. As I use the term IY throughout this discussion, I am talking about the investment year, the year the investment was purchased.

Here are the types of investment information that we have available in our company's basic financial reporting system.

- o the beginning of year, book and market value of assets;
- o the end of year, or end of period, book and market value of assets;
- o gross and net investment income (yes, the difference does represent investment expenses);
- o capital gains (capital gains are provided to us on a realized and unrealized basis); and
- o asset activity information (new investment acquisitions, maturities and sales and any other change that might affect the end of period, book value of assets).

Each item is broken down by major asset type within segment and branch. This information is available quarterly, two to three months after the end of each quarter.

For experience purposes, even though we have numbers on a market value basis, we zero in on the book value of assets, the net investment income and capital gains and losses for that particular year. Although we have capital gains and losses reported, we do not attempt to measure default costs specifically. We do incorporate a default risk into our experience crediting process, with the use of a contingency reserve that operates similarly to the mandatory securities valuation reserve (MSVR).

Most of our assets are in bonds and mortgages. Information on these types of assets is provided by IY. We also get information by individual investment within IY for these

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assets. This helps us to track any unusual changes in the IY rates from year to year. I've selected two investment years, 1968 and 1970, to illustrate the level of information we're getting. Effective yield is probably the most important information. This is the effective yield to maturity determined at purchase. It amortizes the discount or the premium of a bond over its lifetime so that the bond's experience rate is a level rate of return. That also comes into play when we do solvency analysis. (See Chart 1.)

For the most part, if the IY rates do change from year to year we can trace the change back to a decline in the holdings, either from maturities or sales. If that isn't the explanation, then we have to get back to the investment managers to find out what was really happening. This has been less of a problem since we segmented the general account. Before that we often had to contend with the allocation to branch process. We spent considerable time tracing weird changes to IY rates back to weird adjustments in the branch allocation process.

Non-IY assets -- that is, the equity investments, real estate and short term -- because of their relatively small size, i.e., within our branches do not receive the same level of scrutiny that the bonds and mortgages do. We do analyze unusual shifts in the average non-IY investment rates using first the information from our basic financial systems and then people who are familiar with these particular assets.

SOLVENCY ANALYSIS

The final general category where we need investment data is solvency analysis: C-3 risk analysis, or Regulation 126 work. We prepare solvency tests for all group pension business, separately for each of the general account segments, and for separate accounts providing fixed dollar annuity guarantees. Our tests are based on selected interest rate scenarios. We have seven for the New York submission and four or five more for internal purposes. Over the last several years we have worked closely with our investment areas to develop cash-flow systems that provide us with the asset information we need. The difficult they've given us rather quickly. The impossible has taken a little longer, and indeed we're still working on it.

Detailed cash-flow information by investment year is provided on each segment's holdings, separately, within the broad asset categories shown in Chart 2. The principle and interest information in the first and last column is based on the particulars of each investment. This information is stored within the investment database.

The database however does not contain call information, at least not yet. It's one of the impossible pieces of information we're still looking for. As a consequence the value for "Called Principle," the middle column, is formula driven. The formula was developed in discussions between the investment area and the actuarial area, and has emerged and evolved over time to reflect changes in the process. The formula is a function of the prevailing interest rate in the scenario, the coupon rate, the remaining years to maturity, and the quality rating of the investment. For particular types of investments, specifically for Treasuries and privates, we also take into consideration the year in which they were issued. For example, all Treasuries are assumed to be noncallable. Under the private

Inforce Report – 12–31–xx
BONDS – US
PORTFOLIO 001

YEAR ACQ	DESCRIP	MAT DATE	PAR VALUE	BOOK VALUE	COUP RATE	EFFECT YIELD	INCOME
1968	BASF	Feb-91	5,000,000	5,000,000	7.800%	7.800%	390,000
1968	JAM	Dec-90	1,139,894	1,139,894	6.125%	6.125%	69,819
1968	TIDE	Mar-95	2,928,963	2,928,963	9.590%	9.590%	280,888
YEAR TOTAL			9,068,857	9,068,857			740,706
YEAR ACQ	DESCRIP	MAT DATE	PAR VALUE	BOOK VALUE	COUP RATE	EFFECT YIELD	INCOME
1970	CHURCH	Dec-2007	27,318,600	27,318,600	7.750%	7.750%	2,117,192
1970	KAISER	Jul-93	1,346,160	1,342,001	9.875%	10.054%	134,922
YEAR TOTAL			28,664,760	28,660,601			2,252,114

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CHART 1

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CHART 2

C 3 CASH FLOWS AS OF 01/01/90
FOR CLOSED INVESTMENTS AND COMMITMENTS SEPARATELY
BY SEGMENT FOR YEARS 1990 THROUGH 2040

BONDS	Principal	Called Principal	Interest
Treasury Strips	x	-	-
Other Treasuries	x	-	x
Mortgage Backed Sec	x	x	x
Other Publics	x	x	x
Total Public	x	x	x
LBO Debt	x	x	x
Other Privates	x	x	x
Total Non-Public	x	x	x
MORTGAGES	Principal	Called Principal	Interest
Commercial	x	x	x
Residential	x	x	x
Other Mortgages	x	x	x
Total Mortgages	x	x	x

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placements, we recognize that the call protection features that we've introduced in recent years on our privates will significantly reduce the risk of call. We've actually defined certain categories in certain years of issue of these investments to be noncallable.

The split of the information by asset type is provided to allow the segment cash flow to be allocated into branch and product cash flows. This is needed for those segments where more than one branch exists, or where separate cash flows are needed by product line.

The split by asset type is also useful to test the sensitivity of cash flows to major shifts in the distribution of assets. This is particularly relevant if the cash flows were to be run off a 9/30 in force instead of a 12/31 in force. We are considering doing this for our Regulation 126 studies to ease the pressure at year-end.

We also receive a summary report, based on the same database (Chart 3). This holdings report provides us with a summary of par, book and cost values, broken down by the same asset types we have for the cash flows. We also show holdings organized by the NAIC's MSVR codes. We use these data to develop average default charges for Regulation 126 purposes. We also reconcile the par values with the sum of the principle amounts in the cash-flow reports.

We receive a second summary report containing the same information, except the quality split reflects rating agency quality codes for publics and Prudential's comparable ratings for privates. We use this information to develop the default charges for our internal studies. There is a considerable difference between the default charges we use for Regulation 126 and the ones we use for internal purposes.

I've given you a sense of the types of investment data that are available within our organization, and where we use them. These data evolved out of existing systems, with a great deal of discussion, commitment and compromise among the many parties involved. While the availability of this information is valuable, the more important change that I've seen over the last 10 years is the expanded verbal communication, between the investment area and the product areas. It is the better understanding by both groups of each other's business responsibilities, and the sharing of common business goals, that has enabled us to move as effectively as we have. As we continue to clarify our needs and expand our understanding of current investments and the systems that support them, whether in sessions like this or continued interaction with our own investment people, we expect to see improvements in the investment data we have, and equally important, improvements in how we put the data to use.

MS. MILNES: Scott Hartz will discuss measuring investment results for retail life insurance products. Scott joined John Hancock in 1983 and became an FSA in 1987. Since 1987 he's been in the investment policy and research area, where he works on asset/liability management for both group and individual insurance products, trades futures and options, and participates in general investment research.

**C 3 HOLDINGS SUMMARY AS OF 12/31/89
FOR CLOSED INVESTMENTS AND COMMITMENTS SEPARATELY
BY SEGMENT**

BONDS	Quality	Par Value	Cost Value	Book Value
Treasury Strips	GOVT/YES	x	x	x
Other Treasuries	GOVT/YES	x	x	x
Mortgage Backed Sec	AAA/YES	x	x	x
Other Publics	*	x	x	x
Total Public		x	x	x
LBO Debt	*	x	x	x
Other Privates	*	x	x	x
Total Non-Public		x	x	x
MORTGAGES	Quality	Par Value	Cost Value	Book Value
Commercial	*	x	x	x
Residential	*	x	x	x
Other Mortgages	*	x	x	x
Total Mortgages		x	x	x

* For the NAIC MSVR holdings report, these lines are shown broken down between YES, NO, NO*, NO**

For the Quality code holdings report, these lines are shown broken down between the standard rating agency quality codes for public bonds and Prudential's equivalent quality codes for private placements.

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MR. SCOTT S. HARTZ: I'd like to discuss with you the investment management information which we at the Hancock have found useful in managing retail life insurance products.

About 10 years ago now, we decided the advantages of segmentation outweighed the disadvantages. Our general account now has seven segments. When we went through the process of segmentation, we decided we needed a process to make sure that a correct investment policy was set for each segment and that investment policy was implemented. We formed working groups with people from the asset side and people from the liability side. The asset people were investment managers from each investment department; each segment would have, say, a bond portfolio manager, a mortgage portfolio manager, a real estate portfolio manager, etc. On the liability side we would have the profits center manager, who is really the customer in this relationship, the pricing actuary, and the person responsible for financial reporting. We needed someone to coordinate this process, to initiate discussions, to make sure that group reached agreement, to act as an arbitrator, and to disseminate information. At the Hancock we call that person the portfolio coordinator. In the department where I work, one of our main responsibilities is coordinating these investment working groups.

Different segments allow for different investment policies. How investment policies are set for various retail insurance products is an important topic, which is beyond the scope of what I'd like to cover. Rather, I will discuss what information is helpful in implementing these investment policies. Segmentation also allows for more accurate reporting of financial results, in which investment performance plays a large role. I'll focus on three areas where investment information and projections play a major role: pricing, dividend formulation, and bottom line financial results.

The information needs for pricing products, setting dividends, and managing the bottom line are similar and I'll address them momentarily. First, however, let's examine the information needed for implementing investment policy. Among other things, investment policy addresses the appropriate asset mix, average life, and quality of the account. It is important to monitor all this information on both a total portfolio as well as new acquisition basis. We look at the total portfolio on an annual basis, noting any changes from the previous year and then setting targets for acquisitions in the current year. Then, new acquisition activity is summarized monthly. These days there is quite a bit of attention to the quality issue, so let me focus briefly on how we track quality.

Each year, a report of the quality of the fixed-income portfolio of each segment is compiled. The rating agency categories of AAA, AA, A, BAA, etc., are used. Public bonds are obviously rated by the rating agencies and present no problem. Private placements have always been rated by our bond department and hence also fit neatly into this system. Mortgages are tougher as, until recently, they were not rated by our mortgage department. For about the last five years, however, the new mortgages have been rated. Older mortgages are generally assumed to be of BAA quality, unless they are in trouble, in which case they are rated lower. Each year the average quality of each portfolio is determined and compared to the prior year's quality. We also keep track of the bond portfolio based on NAIC code and the number of problem mortgages. In addition, the monthly acquisition reports track the quality of new investments.

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Now let's turn to the information useful for pricing, dividend policy, and managing financial results. Our actuaries look for two major pieces of information: new-money rates and portfolio rates (or net investment income). I'll start with new-money rates, which are important both as an input to calculating net investment income and in pricing new products.

There are four major variables which determine the new-money rate: outstanding commitments, cash flow, allocation of cash flow, and interest rates. Outstanding commitments are investments on which the terms have already been agreed upon (particularly the interest rate), but which have not yet been funded. Private placements and commercial mortgages generally have between a 4- and 12-week delay between time of commitment and time of funding. Occasionally, particularly for real estate, the delay can be significantly longer. Because of this delay, rates on acquisitions usually reflect two-month-old rates. It is important to keep track of these outstanding commitments for projecting current-year, new-money rates.

Acquisitions will consist of both current outstanding commitments and future commitments based on cash-flow estimates. Estimates of cash flow should include insurance, tax, and investment flows. From our commitment database, we know the interest rate on acquisitions of outstanding commitments; the tricky part is determining the interest rate on cash flow yet to be committed. As an example, consider an expected \$400 million of cash flow in 1990. Acquisitions thus far amount to \$100 million with an average interest rate of 10%, and there are \$100 million of outstanding commitments with an average interest rate of 10.5%. The remaining \$200 million of cash flow is yet to be committed. The first question we must answer is what type of investments do we expect to make? Equity investments will generally have a lower yield than fixed-income investments and fixed-income investments will have different yields based on their quality.

Once the general nature of new investments is determined -- typically BAA-quality fixed-income investments -- interest rates must be projected. At the Hancock, we employ an economist who projects interest rates, both expected rates and a range of plausible rates. Most of the brokerage houses produce an economic forecast, and there are numerous newsletters which give "consensus" economic forecasts. You could also assume interest rates stay the same and probably be correct as often as any economist. In addition to projecting the level of Treasury rates, economists forecast the spread of BAA rates over Treasury rates. Typically, one expects these spreads to widen as the economy slows down. The interest rate projection obviously becomes very difficult as one projects out over several years.

Now, let's turn to the projection of investment income, which is probably the most critical piece of investment information for the actuary. For our nonparticipating Universal Life (UL) product, projections of net investment income, and hence a portfolio rate, help set the credited rate. For participating products it is important for setting in-force dividend scales as the interest credit is typically the largest portion of the dividend. Also, net investment income is particularly critical for setting financial goals. Typically, investment income is much larger than net operating income. Therefore, small changes in investment income are leveraged into large changes in operating income. So, in setting goals for the retail life profit center, an accurate projection of investment income

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is key. Since it is so critical, incentive compensation for investment professionals is also tied to actual versus expected investment income.

Now, let me describe the sort of information our accounting department has developed to help us track investment income. Each quarter it produces an earned income report which details gross investment income, investment expenses, investment taxes, and depreciation by asset type by investment segment. Investment income on a cash basis is produced on a monthly basis, but it is less helpful as discrepancies from projections could be simply due to timing differences. It's important to start with the information that is available from accounting because it gives you feedback during the year as to how close actual investment income is matching up to projections. If the projections are set up in the same format as the accounting reports, comparisons and modifications to the projections are easier.

So how do we project investment income? The projection is broken down into three pieces: fixed-income investments, equity investments, and other nuances. First, let's start with fixed-income investments. Bond, mortgage, and preferred stock information is kept on a database which contains contractual rates of interest and principal repayment dates. From this information, one can project the income that should be received from the beginning of year assets. However, bonds and mortgages don't always pay principal and interest as expected. Principal is often paid back early to the detriment of the lender. We all learned this painful lesson in the mid-1980s when interest rates fell and borrowers refinanced at lower rates. Many of our assets are call protected, but we need to project prepayments on those that are not. A call projection is more of an art than a science, and the projection can get very fancy, using stochastic projections and a variety of hurdle rates. Invariably, however, interest rates change in ways we don't expect, totally throwing off the projection. A simple projection method is to estimate the total prepayments and assume they occur uniformly over the year with an average interest rate 200 basis points over current rates.

Bonds, particularly public bonds, may also be sold. If the interest rate on the sold bond is different from current rates, a capital gain or loss will result, and the income on the reinvested proceeds will differ from the projected income. If your company has a plan to generate gains or losses, this could be significant and should be taken into account.

The most significant reason that bond and mortgage income will differ from projections is that borrowers don't always fulfill their end of the bargain. Bonds default and mortgages become delinquent. The key variables which determine these default levels are the economic climate and the portfolio quality. We rely on our in-house economist for guidance on the economy, and we continually track, as mentioned earlier, the quality of the portfolio. Typically, with a BAA-quality portfolio one expects about 30 basis points of defaults. Of course, the 30 basis points are not all income loss; in fact much of that amount, particularly for bonds, materializes as capital losses. We've estimated that for bonds only one-third of the losses manifest as income losses, and about two-thirds for mortgages. Your company experience may differ, especially for mortgages. Good historical records should help determine both the total loss level expected and the portion attributable to income losses.

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Then we need to project income from new investments. Cash flow from operations, both the amount and the timing, is the most important piece. Fortunately, cash flow from our retail life business has been fairly stable, but for other accounts, particularly group insurance, cash flow is very difficult to project. Accounting gives us monthly feedback on cash flow by segment which we then use to first update the cash flow and then update investment income projections. Finally, we use the new-money rate projection for fixed-income projections. Finally, we use the new-money rate projection for fixed-income investments to calculate income from new acquisitions.

Next, we'll focus on the smaller, but more volatile, nonfixed-income investments. We're talking about common stock, real estate, and BA assets. BA assets are those investments on the BA schedule of the annual statement. They are often called "other investments," and I'll describe them in more detail. As a first cut at investment income on equities, you should start with the prior year's net investment income by asset type and adjust for anticipated turnover and new investments. Income on common stock may be projected fairly accurately this way. Real estate and BA income, however, is much more volatile and needs to be analyzed investment by investment. It's imperative to get the portfolio managers involved because they are much closer to the investments.

BA assets deserve some additional explanation and attention. Some BA assets have fixed coupons such as leases and secondary GICs. Other BA assets such as joint ventures and limited partnerships should be examined closely. Venture capital funds will often produce no income or even negative income for many years as the fund invests in start-up companies. Then, as the fund sells companies we hope it produces extraordinary profits sporadically. While these profits are in the nature of capital gains, they are booked as income because of the pass-through nature of a venture capital fund. By assuming income for these ventures will stay the same from year to year, your projection could be off substantially. I learned this the hard way. It is imperative to get the portfolio manager involved in an investment-by-investment assessment.

Finally, there are other miscellaneous considerations when projecting investment income. State income taxes are often considered investment taxes and hence are a charge against investment income. State income taxes change dramatically from year to year, so it's helpful to have the tax department provide these projections. Another consideration is loaned securities. If your treasury department lends out securities, generally cash is received as collateral. Most of the earnings on this collateral cash is rebated to the borrower and is generally considered an investment expense. Thus, a securities lending program will inflate both gross earnings and expenses and will provide the account with a small amount of net earnings. Borrowings are another item which must be accounted for. Interest on borrowings are treated as negative investment income.

It is important to have accounting provide a detailed breakdown of investment income and expenses. If sundry interest is shown, have accounting that interest break down into its components. Investigate any items which you do not understand, because it is always that one item which you assume will remain unchanged that comes back to haunt you.

In conclusion, remember that investment earnings have become a more important part of a competitive product and a healthy bottom line. Hence, information on investment

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performance and projected investment performance is critical in running a successful business. I've mentioned a few specifics to keep in mind, and I'd like to close with the reminder that it is crucial to actively involve the investment professionals in this process.

MS. MILNES: Our next speaker is Fred Borchardt. Fred has been with KPMG Peat Marwick since 1972. He is the partner in charge of the Chicago office banking practice, and is responsible for the efforts direction and service delivery of the banking practice including its audit, tax, and management consulting functions. He's going to talk about measuring investment results from a bank accounting prospective.

MR. FREDERICK M. BORCHARDT: Accounting for the many new instruments that we're seeing in the marketplace has become very complex over the last several years. I plan to discuss what we see happening in the financial institution industry and the pressures that we're seeing. Within our practice, we consider the insurance industry as one of those financial institutions. I plan to talk a little bit about what we're seeing in practice, why it's taking place, and what some of those pressures are. Then I'll zero in a little bit on this concept of FAS 91. I hope to relate to experiences that you've probably had in looking at investment portfolios.

Sue and Scott made some interesting comments and covered some concepts that I'll also try to cover from the accounting perspective. Those include:

- o the book values of assets;
- o mortgages and CMOs, how FAS 91 relates;
- o effective yields in the accounting discipline, and how that relates to what you consider to be an effective yield;
- o managing the bottom line (we hate to see our clients and ourselves surprised with respect to accounting for an investment situation that is totally contrary to what the initial expectations were);
- o what rates to use for measuring future investment results, the whole issue of hedging investment portfolios and the use of options and futures and other types of contracts and derivative products;
- o compensation for the investment advisors measuring their investment results, and comparing what they're doing versus what good sound investment strategy may be.

So a lot of those concerns that you experience from an actuarial standpoint are issues that we experience as well from an accounting standpoint.

Let me first discuss some of the problems and concerns about measuring investment results from an accounting standpoint. There has been a lot of abuse in accounting for investment activities. We've all read and heard about what has taken place in the savings and loan industry, and what has taken place in the area of investments in junk

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bonds. There is also concern about the strategy of gain trading that many financial institutions have followed. By that I mean a strategy of trading assets with embedded gains in order to continue to show profitable results of operations.

Market volatility has been a major concern in accounting for investment results. Again we've all seen what's happened to the yield curve over the last two years. The problems that can result from yield curve shifts are significant in terms of accounting for hedge portfolios, and other investment strategies and maintenance types of programs.

New investment products have inundated the accounting profession. The people in our executive office in New York keep track of the new investment products which are developed by the investment bankers. The list of new products now is about eight pages, single spaced. Keeping up on the accounting side is a real challenge. With these new instruments comes a lack of liquidity and a lack of marketability. That is adding more risk to the whole scheme of investment activities.

The accounting profession has operated in a very static environment compared to the investment marketplace. The old accounting model of historical cost accounting is being pushed aside. There is increased pressure to change, and to adapt more to the economics of the environment. We'll continue to see a lot of changes in accounting. But again, the investment banker seems to be staying at least one step ahead of us, and change is slow to come about in the accounting profession, in part simply because of confusion. There are a number of different interest groups that are involved among the banking industry, the savings and loan industry, the insurance industry, mortgage banking and the like. So change has been slow.

Let me discuss some of the recent activities that we've seen related to investment accounting. The Securities and Exchange Commission is taking a very aggressive role in reviewing reported financial results of financial institutions, again particularly as related to their investment practices. The SEC is looking very closely at gain recognition on sales of securities, particularly for banks and savings and loans. It wants to see whether institutions are simply keeping themselves afloat from profit recognition on sales of appreciated assets. The SEC has increased its review force significantly, and institutions across the country are going to face a number of inquiries from the SEC regarding the accounting basis for those types of investment transactions.

That concern is really a major accounting issue for the various investments: Do you account for them at their historical cost basis, or do you account for them at what's referred to as lower of cost or market, or do you account for them at market value? What is the book value? Sometimes that is very difficult to ascertain.

The Financial Accounting Standards Board is the authoritative governing body for the accounting profession. It has recently issued a new statement (FAS 105) entitled "Disclosure of Information About Financial Instruments with Off Balance Sheet Risk and Financial Instruments with Concentrations of Credit Risk." This document is the first phase of a long-term project that the FASB has undertaken with respect to financial instrument risk and off balance sheet risk. This process is going to continue, and it's going to add rather extensive disclosure requirements for financial institutions.

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The Office of Thrift Supervision, which is the new governing body for the savings and loan industry, has a very significant proposal with respect to savings and loans activities, their abilities to invest and requirements for monitoring their portfolios of assets. The proposal covers the types of assets that S&Ls can hold if they want to preserve historical basis accounting, that is, accounting for an asset at the cost that you acquired that asset for. The proposal also has some rather severe restrictions on the investment portfolio and how to monitor that portfolio. This proposal was to be effective April 1, but has been postponed. When it goes into effect, it severely restricts investments for savings and loans.

The FASB and the SEC are jointly considering other guidelines and policies on classifying investments. They are considering the intent and the ability of institutions to hold investments and therefore to preserve this historical cost basis in accounting. That could have some significant impact on all financial institutions.

New risk-based capital guidelines that the banking agencies and savings and loan agencies have adopted place a great deal of emphasis on considering how the risk characteristics of assets that those institutions are holding affect capital adequacy. There is a tremendous amount of attention placed on this issue of investments and accounting for them. We're going to see continuing changes in accounting for the investments of financial institutions.

Now I'd like to discuss one specific investment-related accounting standard, FAS 91, "Accounting For Nonrefundable Fees and Costs Associated With Originating or Acquiring Loans and Initial Direct Costs of Leases." FAS 91 represents a major change in the way banks and savings and loans in particular, but also insurance companies, account for loan fees and direct costs in a loan origination process. You might ask, what does it really have to do with the investment side of results? I'll answer that, but first I'll give you a brief overview of FAS 91.

FAS 91 was created to eliminate some of the abuse and inconsistency that existed in the accounting for loan fees. The savings and loan industry was generally more aggressive in terms of recognizing fee income by taking those fees into income almost directly. Banks generally didn't have a comparable level of fee income. However, larger commercial loans, leveraged buyouts and similar instruments are contributing to more of a transactional business in banking; fees are becoming more predominant. Insurance companies in many cases purchased loans, so the fee issue really was not as much of a concern.

FAS 91 was designed to bring consistency to the accounting for fees. Qualifying fees are netted against direct origination costs, and the result is deferred over the life of the loans.

Qualifying fees would be application fees, commitment fees, and "points." Generally I think a very prominent fee was some of these teaser rates that we would see and some of these teaser fees that would come into place, points as you might generally consider them. Fees that were not deferrable were in essence matched third-party fees. There were some debates over some other fees, one of which is survey fees that we see handled differently in practice.

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Those fees were then offset against what was deemed to be direct origination costs: the direct cost of payroll, commissions and benefits, all done on a successful loan origination basis. Using a successful loan origination basis is significant. From the savings and loan practice, this was a change in the area of overhead and marketing. Those expenses were not deferrable. That was no longer allowed. Then you got into what are still some debatable issues in terms of training, vacation and sick leave.

FAS 91 covers a number of other issues:

- o accounting for, particularly, the net fee;
- o adjustable rate mortgages;
- o treatment of prepayment assumptions? (FAS 91 indicated that you should not consider prepayment assumptions unless you had a homogeneous portfolio and you were in fact going to have prepayment experience, and you could reasonably estimate that prepayment experience);
- o accounting for nonstandard cash-flow activities;
- o some prepayment and workout situations, refinancing activities and how the loan fees would roll over;
- o loan sales and loan syndications.

The question now is how does this relate to investment activities? There is a paragraph in FAS 91 that requires the interest method of income recognition to be calculated on an effective yield basis. This provision in FAS 91 has been adopted and carried over into some more of the sophisticated investment vehicles, particularly CMOs, REMICS, and other derivative types of products. It's changed the basic premise of the accounting models, up to this point most accounting changes were treated on a prospective basis.

Let me give you an example. There is an accounting statement, FAS 15, which relates to accounting for troubled debt restructurings. It says if you restructure a loan arrangement, you still account for the future income on a prospective basis, unless you have a loss from your undiscounted cash flows at the time of that restructure. Accounting methodology up to now has been prospective oriented.

Now with respect to FAS 91, it has become point-in-time oriented. FAS 91 has adopted what I refer to as the catch-up method of accounting. What it does, particularly in the CMO environment, is that as of the date of purchase, you calculate your effective yield based on a purchase price and anticipated cash flows in these derivative products. Sue made reference before to looking at your investment yield as of the date of purchase. That's important for CMOs and other derivative products.

Now there is also subsequent period accounting: at each reporting date, generally quarterly, you also need to review the actual results of investment experience. In accounting for a CMO for example, you'll calculate the net investment balance, using

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your effective yield as of the date of the purchase, and allocate your cash flows on that basis, coming up with your net investment balance as of your reporting date. But then because of prepayment activities and fluctuations in cash flows, you go back and recompute what your effective yield is since the last reporting date (if it's the first reporting period, since the date of inception) and come up with a new investment balance. You then compare the newly calculated investment balance to the reported invested balance, using the prior period assumed yield, and you book that adjustment all in one period. That's the catch-up basis that is now at least being proposed with respect to accounting for CMOs. And that's in sharp contrast to some of the accounting theory that had been followed previously.

This whole accounting issue is under review by what's referred to as the Emerging Issues Task Force of the Financial Accounting Standards Board. It's been an issue that's been deliberated on now for I believe about six months. There actually has not been a consensus of opinion reached, but the inclination is that this form of accounting will be adopted. Although I must admit that in the last minutes of the last meeting there was some new discussion about prospective accounting.

The point of this is FAS 91 represents a major change in accounting for investment results. It's a change that you need to consider. It demonstrates the importance of trying to understand what the accounting rules are; how these effective yields that you might be looking at have been developed; whether there are differences in accounting for these types of instruments versus other instruments; and how you take those into account in your yield analysis.

I think we'll see continued changes in accounting for investment portfolios and measuring investment income. And all of those will be very important to you in understanding investment results. The accounting process really hasn't caught up with all of these investments; there still remain inconsistencies among different types of investments and different institutions.

MR. STEVEN A. SMITH: One of the reasons to measure investment yield is to decide what interest rate you should fairly credit to, for example, SPDAs in the next period. I don't think that anyone specifically spoke about the question of when you're trying to measure the results. I think you get a different answer depending on whether you're looking at the last reporting period, or the next reporting period, or at a point in time. For example, if last period you were crediting 8% on your SPDAs, but a lot of new money came in at higher or lower rates, you know the average will be either higher or lower next period. When you measure the past results, you're trying to figure out what interest rate you actually earned. There was a lot of discussion during the prepared remarks of comparing actual investment income to projected investment income, or perhaps to interest required, but nothing about comparing the rates. When you're trying to decide what you're going to credit next period, what are the advantages and disadvantages of thinking in terms of next period versus last period, or right now?

MR. HARTZ: I can try to answer that in the context of the retail life insurance products. An analogous situation is setting the current dividend scale. What's done there is to take a blended rate based partly on last year's experience and partly on what

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you project for the current year's experience. You can take into consideration fluctuations from last year's projected to last year's actual. I don't work specifically on the interest sensitive products, but I think setting dividends is similar. Of course, other considerations, such as competition, come into play as well. For example, if you projected income to be very high last year and it came out lower, you then might try to make that up in the next period.

MR. SMITH: I think Scott, that you also indicated that you wanted to get into your investment managers bonuses or salary some measurement of how well they're doing. Do you only measure that in dollar terms? or do you measure the interest rate that they earned versus what they were supposed to get? or what was required by the liabilities? How do you take capital gains into account?

MR. HARTZ: Let me get back to the portfolio rate versus net investment income. I think of them as the same. Once you have net investment income, you can divide by the assets in some way to come up with a portfolio rate. When we project net investment income, we also project portfolio rates. If one is off, the other is apt to be off as well. When we structure and set up compensation systems for the investment professionals, we do typically work off of portfolio rates, and we typically do not bring capital gains into the picture. You have to strike a balance, you can't measure everything just based on incentive compensation programs. The investment managers also have certain marching orders from the investment policy and the investment strategy. If they're going to boost up the bottom line results by taking a lot of capital gains, well we're there meeting with them every two weeks to monitor that kind of activity. What we don't catch in our incentive compensation programs, we hope to catch with the biweekly interaction with the investment professionals.

MR. BORCHARDT: Let me address the investment management process and compensation schemes in a little bit broader scale. I think it depends on what the intention of that trading group or that investment portfolio management group may be. For example, in a banking area or investment banking area, you will have a trading segment of that portfolio management group. That group you'll look at on a capital gains type of treatment or a sales type of treatment. What is the net income that they're able to bring to the bottom line? -- their function is to take speculative positions, while staying within the investment parameters that an investment committee establishes. And I think, as Scott has indicated, if you are in more of an investment portfolio, then generally the compensation schemes are geared around yields rather than gains on that type of trading activity.

MR. SMITH: But how do you figure the gains into the yield?

MR. BORCHARDT: If it's an investment portfolio, then when you look at the performance of the managers, you really try to discount the gains out of the portfolio, because that is not the intent of a pure investment portfolio.

MR. SMITH: A question I'll direct to Sue: you talked about some sort of default reserve, something like the MSVR that you deducted from the yield before comparing to credited rates. Could you elaborate on that formula?

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MS. OGDEN: We look at the MSVR charges that actually are booked to the annual statement, and the distribution of the assets that we have in a particular portfolio. Because the MSVR charges are really companywide, we have to get subsequent information back from the accounting areas that split those charges to branch. We determine what we consider a fair contribution to our security valuation reserve for experience purposes. We take substantially all the capital gains and put them into this account, or capital losses, as the case may be, and then pull out of this security valuation reserve a portion which we want to credit to the policyholder as a capital gain credit. The idea really is to acknowledge that you're going to have twelve to fifteen, or maybe twenty, basis points as an annual default charge. At the same time the capital gains and losses will go in, and we want to credit that back to the contractholder on some fairly level and consistent basis from time to time.

I'd like to add a comment to your question on the SPDAs. We don't specifically have single payment deferred annuities within the group branch, but we do have defined contribution plans. For some of them we set an interest guarantee for all the monies we collect in a given calendar quarter from that time to the end of the next subsequent calendar year. Then we rely on experience analysis to determine the extent to which that new guarantee is going to be in the third calendar year. We do have about 80% of the assets that have been invested available for experience purposes. This is unlike the situation on brand new contributions, where you have really no information except what your investment manager provides for you. We do not try to go through and blend new contributions with old contributions, we actually keep the contributions separate in unique buckets. And we created that part of the design of the product to avoid particular problems of how to allocate investment income back to various levels of contributions.