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INVESTMENT PERFORMANCE MEASUREMENT FOR INSURANCE COMPANIES

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This session will address the work of an industry group that is developing total return benchmarks and universes for the measurement of insurance company investment performance.

- How can one appropriately measure portfolio performance?
 - Origination-based measures: acquisition bases
 - Accounting-based measures: yield
 - Economic-based measures: total return
- What benchmarks and universes are available for performance measurement?
- Can total return take account of the constraints under which insurance companies operate?
 - Asset categories
 - Liability classes
 - Asset allocation
 - Asset/liability matching
- How can intercompany differences in methodology be resolved?

MR. SCOTT S. HARTZ: This panel will discuss the problems resulting from measuring insurance companies' investment performance, and we will describe a recent survey that was created to address some of these problems.

Each speaker has devoted quite a bit of time wrestling with the issue of insurance company investment performance measurement. First up we have Edwin McCausland from Massachusetts Mutual Life Insurance Company. Edwin is a vice president and managing director in the investment management division at Massachusetts Mutual. He is also a Chartered Financial Analyst (CFA). He is primarily responsible for working with the line of business personnel in developing investment policies and investment strategies. Edwin will address the problems that Massachusetts Mutual encountered in trying to assess its investment performance using annual statements and other publicly available data. The frustrations arising from this process led Massachusetts Mutual to contact three other insurance companies (Aetna, CIGNA, and John Hancock) to talk about creating an intercompany survey to provide better investment performance data for comparison.

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RECORD, VOLUME 20

Next up will be Joe Buff, a principal in the New York office of Tillinghast. He's the firm's national practice leader for asset/liability management. Prior to joining Tillinghast in 1987, he spent two years at Morgan Stanley and six years at Guardian Life. Joe is the consultant we brought into the process to initially help us design the survey and then to gather each companies' information, process it, and produce a finished product. He will describe his role in the process and describe the survey in more detail. Joe also is an FSA.

Finally, we'll hear from Dave Kuplic of IDS Financial Services. Dave is a portfolio manager responsible for IDS's \$10 billion mortgage-backed securities portfolio. He is also the director of their quantitative asset/liability management group. Prior to joining IDS in 1990, he spent several years at Piper Jaffray and at First Bank Systems. Like Edwin and I, Dave is a CFA. Dave was not involved in the creation of the survey, but IDS has since signed on as a participant. Dave will describe why IDS decided to participate, what they expect to get out of the survey, and what systems problems they have encountered in submitting data.

MR. EDWIN P. MCCAUSLAND, JR.: At Massachusetts Mutual, we embarked on an odyssey over two years ago that has taken us in some new directions with some new partners. I am pleased to be able to share with you a synopsis of the journey that has brought us to this place in benchmarking general account investment performance.

Obviously, it takes some serious motivation to undertake a task such as this. Given prior unsuccessful attempts to understand the relative goodness of one's investment performance within the insurance industry context, this project had been described by some as a fool's errand. Not knowing whether I was the fool or the errand boy, but understanding that our top management was frustrated by the inability to get relative investment performance data that were meaningful, we embarked on this exercise.

Everyone recognized that there were significant data problems that I will review shortly. I'm sure that everyone in this room recognizes that a major element in improving the relative performance of general account products is improving the underlying investment performance on a relative basis. Regardless of the future inroads that variable products make in diverting new general account business, a meaningful portion of our assets still drive the policy returns for a block of business that we hope to retain for many years.

The question that none of us could answer was how good is your investment performance versus other companies?

We felt very good about the quality of reporting for variable products and separate accounts. Through the use of Lipper, Piper, Morningstar and others, we knew how well each of these variable accounts stacked up versus the competition. We also knew how well they were performing versus an appropriate market benchmark. All the pieces were in place—except for the general account—to answer this basic question. For the general account, we had the ability to measure performance versus market indices, but not versus other companies.

INVESTMENT MEASUREMENT FOR INSURANCE COMPANIES

Table 1 is meant to illustrate some of the differences between general account information and that available for other portfolios that we manage. All of this is old news to most of you; however, it is worth reviewing because it forms the basis for an approach that we believe has some merit.

TABLE 1
INSURANCE GENERAL ACCOUNT VERSUS OTHER INVESTMENT PORTFOLIOS

INSURANCE	OTHER
<ul style="list-style-type: none"> ● Liability mix 	<ul style="list-style-type: none"> ● Similar liabilities
<ul style="list-style-type: none"> ● Varying objectives 	<ul style="list-style-type: none"> ● Similar objectives
<ul style="list-style-type: none"> ● Custom indices can be constructed 	<ul style="list-style-type: none"> ● Indices readily available
<ul style="list-style-type: none"> ● Comparative performance cannot be measured from available data 	<ul style="list-style-type: none"> ● Peer group performance data readily available
<ul style="list-style-type: none"> ● Statutory reporting <ul style="list-style-type: none"> — Timing differences — Book return 	<ul style="list-style-type: none"> ● Market-value reporting <ul style="list-style-type: none"> — Time weighted — Total return

We spent a great deal of time reviewing the body of publicly available data on insurance companies in an effort to develop some meaningful comparative performance data. Annual statements, annual reports, rating agency reports, research reports, etc. were all part of the review. In all of this research, there were few, if any, meaningful correlations among mix of business and asset mix, yield, duration, etc. What was missing? The liabilities and their link to the assets.

The liabilities are key elements in this puzzle. What are they? What is their duration? What asset risk profile does a company want to assume for participating policies? Is it different for nonparticipating products? What was the timing when they were added to the company's balance sheet? Does the company engage in active trading or buy-and-hold strategies? The answer to each of these questions, plus others, is important in the understanding of statutory data. For each of our nongeneral account portfolios, we have "liabilities" that are stated in terms of an investment objective and we have the ability in each case to eliminate the time factor from the analysis because all returns are reported on a time-weighted basis.

Given the varying objectives that companies may have for their general account, each driven by answers to the above questions, the statutory data are not very useful. Clearly we can construct custom indices against which we can measure the performance of segments of our general account for internal purposes. These will give us a clear picture of how well we are doing versus "the market." However, they don't do much for us in terms of determining how well we are doing versus our peers.

This led us to the conclusion that we needed to get inside the liabilities to find a way to look at asset allocation by liability segment as well as asset-type performance. We felt that working alone we would be unable to answer management's question.

RECORD, VOLUME 20

The initial step in this process was to retain an outside consultant, Tillinghast, to help us find a solution to the problem. We then recruited three additional companies, Aetna, CIGNA and John Hancock, to work with us in the development of a method to gather and evaluate the necessary information to find the answer to our question.

At our first meeting, we spent a considerable amount of our time discussing why previous efforts had fallen short of the mark. The conclusion was that in general, they were too detailed and died of their own weight. The amount of data sought were either too great or too detailed to be meaningful. In addition, the efforts frequently focused on book returns.

We came away from that meeting with the goal of using total rate of return measures, recognizing that this might be a new or difficult concept for some participants to adopt. However, it seemed to us to be the only way to break out of the trap of book returns. Our second, and perhaps more meaningful conclusion was to "work around the edges." We did not seek to answer every question, but rather to gather data that would be meaningful to participants as they began to seek answers to questions about their investment performance. Asset allocation, asset-type returns, duration mismatch and credit risk are among the areas in which we have attempted to gather new information from all participants. Much of this information is broken down by liability segment. We believe that by building on some early successes, we can, over time, create an even more meaningful study.

The project we will be describing has been and will be viewed as work-in-progress. It is not a final, definitive study by any means. Many changes have already been made in response to new participant needs/suggestions. However, as stewards of a process, we have been committed to several principles that have served as useful guides. The four guiding principles are: convergence, use of industry standards, high materiality threshold and resistance to permutations.

CONVERGENCE

The concept here is that while it would be nice, in an ideal world to have all participants use the same methodologies from the start, it would be an entry barrier for many. We agreed on a range of acceptable methodologies with the idea that we would seek convergence on common methodologies over time.

USE OF INDUSTRY STANDARDS

Wherever possible, we have avoided developing new methodologies and have used industry standards such as Frank Russell National Council of Real Estate Investment Fiduciaries (NCREIF) and the Association for Investment Management Research (AIMR) Performance Presentation Standards.

HIGH-MATERIALITY THRESHOLD

For the first year, we have attempted to keep data generation from becoming burdensome by keeping asset and liability groupings rather large. In the future, we expect to move towards finer distinctions.

RESISTANCE TO PERMUTATIONS

Embodied in this concept is what was discussed earlier as working around the edges. In the future, more boxes as shown in Chart 1 on page 88 will be filled in. The

INVESTMENT MEASUREMENT FOR INSURANCE COMPANIES

goal is not to fill in every box. Rather, we will add data when they are both available and valuable to participants.

MR. JOSEPH J. BUFF: The previous speakers have explained our reasons for organizing this new survey. I will spend a few minutes discussing the specifications and procedures for actually implementing the survey of 1993 data. The survey is intended to provide an additional tool for insurance companies to compare investment results with other insurers. The survey will provide information to help companies review practices and results between participants, identify their own strengths and weaknesses, and do performance attribution relative to a universe of institutional investors with similar liability constraints and regulations. The reports are highly confidential—they are only available to companies who actually participate in the survey by submitting data, and the reports may only be used by each company for internal management purposes.

The 1993 Intercompany Investment Performance survey applies to both life and property/casualty insurers—we are concentrating on U.S. business. The scope is general account investments, but we are also including separate account assets for fixed guarantee liabilities such as traditional guaranteed investment contract (GICs).

We are only looking at "managed" invested assets. In other words, we are excluding some things considered to be invested assets for statutory purposes where the insurance company does not really have buy/sell-type management control, such as policy loans and home office real estate. We are including assets managed by outside asset management firms, if they are for the general account or fixed-guarantee separate account liabilities where the outside firm exercises buy/sell control for the company.

One key topic of the survey is asset allocations. Asset allocation is a big determinant of overall investment performance. An understanding of mixes by asset class is important to analyzing a company's results relative to other companies. Asset allocation data is being gathered for the whole general account and also broken down by line of business, on both a book-value and market-value basis.

Total returns are defined as cash income plus change in price, both realized and unrealized. We are gathering this information for each asset class for the general account, and also in the aggregate for each line of business. We are not, for this first survey year 1993, attempting to gather total returns on asset class within the line of business—this may come in later years.

We chose total return because this measure captures the key factors of economic performance in an integrated way, with appropriate weighting to different things like new money investing and credit experience in proportion to their financial impact on the company. Total return, unlike "yield" statistics based on amortized cost, can be readily compared between different companies.

In addition to asset allocations and total returns, other information is needed to properly analyze investment outcomes and compare results for different investors. The survey is collecting information on a number of items, including quality, duration,

and portfolio rollover (active trading) rates, which form key elements of performance attribution.

All the participants of the 1993 survey recognize that the development of the survey is evolutionary, and the data for 1993 will not be perfectly comparable between companies. To address these issues, assure maximum consistency in the data, provide interpretative information on practices and methodologies, and create a forum for convergence of technical standards, the survey includes a series of questions on approaches and techniques used by each participant to be filled out on the data questionnaire. This information will be reviewed by Tillinghast and an overview will be provided with the survey reports. Individual data items that are not reasonably consistent with the standards established in the survey's formal documentation will be excluded from the report. Tillinghast will discuss material issues with each participant privately during the validation of the inputs. The participants expect that the data for 1993 will still provide valuable information in an area where up to now there has been a vacuum.

During the survey design phase in 1993, the Working Group (Aetna, CIGNA, Mass-Mutual, and John Hancock) collaborating with Tillinghast defined a series of classifications for assets and liabilities for the survey. These are consistent with general practices and financial reporting rules in the insurance industry. In some cases we have suggested a preferred approach where we knew company practices vary. Listed below are the basic asset classes being used in the survey.

Assets:

- Public bonds:
 - Treasuries versus corporates
 - Private placements
 - Tax exemptions
 - Securitized assets
 - Commercial mortgages
- Foreclosed real estate
- Investment real estate
- Common equity
- Cash and short-term assets
- Other managed assets

Practices vary considerably from company to company in the definition of segmentation, that is the separation of assets and liabilities into separate portfolios within the general account for purposes of investment strategy and pricing. We were forced to begin with a series of "standard" line of business classifications that are neither too broad nor too narrow (listed below). We tried to choose definitions that grouped together products that have similar investment needs or are often managed together. The design phase paid considerable attention to this issue and we expect to reexamine it for surveys for 1994 and later. We have basic guidelines for companies to follow when their lines of business for investment performance tracking differ from ours: if one of your segments straddles two or more of ours, prorate the asset allocations by the reserves or liabilities as they fall in each of our segments. If two of your segments fall within one of ours, add yours to get numbers for the questionnaire. Weight total returns by asset allocations—if one of your segments has to be split and prorated, assume the same total return was achieved by the separate pieces of each asset class.

INVESTMENT MEASUREMENT FOR INSURANCE COMPANIES

Lines of Business:

- Individual life/health
- Individual deferred annuities
- Group life/health
- Nonparticipating annuities:
GIC versus "other"
- Participating pension
- Surplus funds—life
- Property/casualty commercial lines
- Property/casualty personal lines
- Surplus funds—property/casualty

We want companies to be able to join the survey without facing hurdles due to the limitations of their current systems and data-tracking procedures. After careful discussion, the Working Group decided to make some of the data input items optional, at least for the 1993 survey. The core data that we want to get from everyone includes optional items such as total return on mortgages and real estate, bond total return on bonds broken down by duration and quality, and other items as indicated in the survey questionnaire. For 1993, all participants will receive the full report even if they cannot supply all the optional input data.

An important part of the utility of the survey is a set of procedures to assure maximum consistency and validity of the data submitted. The design phase prepared a white paper and questionnaire guidebook explaining the reasoning behind some basic decisions we had to make last year. In particular, the guidebook lists a series of "required" and "recommended" standards for asset allocation, market value, total return, and duration statistics.

Wherever possible we have followed existing industry standards. These include Association for Investment Management Research (AIMR) formulas for reporting total return, Society of Actuaries standards for reflecting credit quality in fixed-income assets, and the Russell-NCREIF definitions of total return for real estate. Again, we view the survey project as a vehicle for discussion of standards and methodologies. We hope that, over time, approaches will converge to enhance the quality of investment performance data for everyone. The Working Group has shared information with the American Council of Life Insurance (ACLI) about investment survey procedures. We are looking forward to the results of industry initiatives to standardize pricing and total return data for private placements and real estate. These should become good sources for some of the inputs for the Intercompany Investment Performance survey's coverage of overall asset allocations, total returns, and supporting information. For 1993, we are using time-weighted total returns, which ignore the incidence of liability cash flows and the relative magnitude of investable funds during the year. This facilitates comparisons between companies. However, in the future we might also look at dollar-weighted returns, which are a bit more complicated to develop but better reflect the dollar amount of investment return to the bottom line during the period.

The work on the 1993 survey was underway during the first half of 1994. We have already sent participants a flash report overviewing some of the methods being used to prepare the input data. We will review each company's submittal for reasonable compliance with the survey standards, and we will query and resolve any important issues that arise. Each company is required to submit documentation to Tillinghast identifying areas where it has departed from our established standards. Again, data entries that do not properly comply may be excluded from the statistics in the reports.

The reports will include commentary by Tillinghast about data standards issues, and will suggest how to use the reports as a management tool. If there are enough (at least ten) valid entries for a particular data item, we will publish the range of results in the form of percentiles: 10th percentile, median, 90th percentile, etc. Entries that are not valid or for which exposure is not deemed material will be excluded. To protect the confidentiality of individual companies' entries, outliers beyond the 10th or 90th percentiles will not be published. We will also provide various summary statistics, such as rankings, sample sizes, means, standard deviations, etc., even if there are not enough entries to publish ranges. In addition, we will publish scatter diagrams between key items such as total return and duration, but with individual data entries grouped to avoid disclosing values for particular companies. Each company will receive its own special version of the report, which will plot its own entries against the ranges in the survey universe. Other than this, no entries will be identified by name. In fact, to preserve confidentiality, each company's report is identified by a "secret code number" rather than by the name of the company printed on each page. Each report will include graphs generated by *Excel*, along with tables of the pivotal points of the graphs, summary statistics, and participants' own values for the items they submit.

Activities for the survey will be conducted year-round. In the second half of 1994 we will hold user seminars, review how to improve the survey for 1994, and recruit participants for the 1994 survey. Any data items that cannot be resolved on a timely basis will be put on hold so we can get the report out in July. Companies are invited to enter the 1993 survey as late entrants, which will be accommodated by publishing, if necessary, a second version of the 1993 report later in 1994.

Twenty-two companies are participating in the survey for 1993—all for life business and 11 for property/casualty (P&C) as well. You can in Table 2 see we have covered a broad spectrum in terms of stock or mutual, product mix, geographic location, etc.

We consultants play several roles in the survey. For one thing, we have participated in the activities of the design phase and worked hard to recruit companies to join the survey. In particular we serve as an intermediary for individual companies' data, to preserve the confidentiality of the numbers and to avoid antitrust problems. Attorneys from Tillinghast and the working group reviewed the project at each stage and will continue to do so. A letter agreement covering data ownership, confidentiality, and other issues, is signed by each participant after review by their own attorney. Each company owns its own data. The working group owns the "copyright" on the survey itself because it cofunded the design phase with Tillinghast in 1993. As mentioned above, Tillinghast is responsible for preparing procedural and questionnaire documentation, reviewing and validating inputs, helping each company fill out the questionnaire, preparing the flash report and the final reports from the input data, checking audit letters and reviewing answers to the supplemental/methodology questions, conducting the user seminars, interfacing with the working group, etc. Consequently, Tillinghast and the working group feel the survey should be viewed more as a service than as a product. The cost of Tillinghast's work for each participant for 1993 is \$16,000 based on 22 participants. This per participant cost would decline slightly if more companies joined the 1993 survey.

INVESTMENT MEASUREMENT FOR INSURANCE COMPANIES

TABLE 2
COMPANIES PARTICIPATING IN 1993 SURVEY

● Aetna (p/c)	● International Nederlanden (p/c)
● Allianz (p/c)	● John Hancock (p/c)
● Allstate (p/c)	● Lincoln National (p/c)
● Central of Iowa	● Lutheran Brotherhood
● CIGNA (p/c)	● MassMutual
● Farmers Group (p/c)	● Merrill Lynch Life
● Fortis (p/c)	● Mutual of America
● General American	● Northwestern Mutual
● Great West	● Northwestern National
● Hartford Group (p/c)	● Paul Revere
● IDS	● Prudential (p/c)

Note: (p/c) denotes those companies representing both property/casualty and life business.

To summarize, the Working Group and Tillinghast established certain working principles for the initial efforts of the Intercompany Investment Performance survey:

1. We will not try to gather total returns broken down by asset class within line of business in order to avoid overly burdensome input requirements at the outset. In other words, we will only fill in the totals along the "edges" of a matrix that has asset classes for rows and lines of business for columns (Chart 1).
2. We will follow existing industry standards, wherever possible, for issues like total return calculation methodologies.
3. Our basic decisions during the design phase were based on materiality. We paid very careful attention to key issues, and recognized that we needed to make practical compromises on some of the finer details that had less impact on the real utility of the survey.
4. The standards of the survey will be refined and raised as time passes. Initially, we wanted to accommodate companies' existing software and procedures for gathering the data needed by the survey.

As you see, the design phase developed a framework for conducting the survey and will have four elements:

1. The data for each company is owned by that company and will be kept confidential in the survey process.
2. The companies will provide documentation to Tillinghast on how they prepared their data, in the form of answers to various methodology and supplemental questions along with an "audit letter." The audit letter will indicate where the company had to depart from the preferred standards for the data for the 1993 survey. Tillinghast will follow up privately on material issues with each

- company, and will overview the kinds of procedures used to fill out the data questionnaires in a narrative section of the survey reports.
3. The work during the design phase was carefully monitored for antitrust issues. The survey reports will not identify results for individual companies (other than each company's own data in its own copy of the report). Answers to different questions and data items will generally not be cross-correlated. For those limited items where cross-correlations are of high interest to participants, grouping of data will be used to disguise individual identities. This is intended to prevent a company from identifying specific data from any other company in the survey.
 4. A governance process for the survey is necessary to assure continuing high quality of the consultant's work and to resolve issues of policy and procedure among all the participants. The working group of Aetna, CIGNA, John Hancock, and Massachusetts Mutual retains ownership of the "copyright" of the survey and will review survey scope, design, and process as time passes.

CHART 1
 WORKING AROUND THE EDGES
Lines of Business/Liabilities

Asset Characteristics												

As mentioned, the working group of Aetna, CIGNA, John Hancock, and Massachusetts Mutual, jointly "own" the survey. They will continue, as an "outside board of directors, to review basic policy issues and assure the quality of Tillinghast's work. We all hope that the survey becomes a recurring annual process. We have received a number of suggestions on how to improve the survey for 1994, and will give them careful consideration. We welcome additional suggestions from companies whether or not they join the survey. In summary, this is the first year for the Intercompany Investment Performance Survey and the effort is truly a work in progress at this point. We have assembled a good group of participants who are working actively to help

INVESTMENT MEASUREMENT FOR INSURANCE COMPANIES

develop an important and useful new tool. Our goal is to provide information and understanding, within appropriate confidentiality and antitrust procedures, to help insurance companies better manage their investments and their liabilities. We are doing this by generating a universe of institutional investors that is most relevant as a comparison tool, given the special liability constraints and regulations of the life and property/casualty industries. That universe, of course, is a representative population of other insurance companies.

MR. DAVID M. KUPPIC: As Scott mentioned, IDS was not one of the companies involved in establishing this survey. In fact, I'm not sure we were even one of the first 12 companies to sign up. But as we learned and thought more about participating, we came to realize that our involvement would provide several benefits, and that these benefits exceed the time and cost involved.

Like others, the primary reason that we are participating is to be able to compare our life insurance companies performance to a meaningful peer group. We have been doing that type of comparison for some time with our mutual funds; however, lacking a valid benchmark, we haven't been able to do so for our life insurance company. Consequently we haven't known how our life companies investment performance has compared to others. We believe knowing this will allow us to determine how good our asset allocation and asset selection decisions have been and enable us to make better decisions in the future.

There are two other reasons we decided to sign up. First, we realized others had spent more time on life insurance company investment performance measurements than we had and we felt that by participating, we could move up the learning curve faster. Also, we felt that the asset allocation and liability mix information that's part of the survey would be helpful in understanding how our portfolio was structured relative to similar companies in the industry.

In preparing our response, we found that we were able to provide all of the required information and almost all of the optional information. Due to some systems issues, we weren't able to segment the investment performance of one of our smaller lines of business, and for our commercial real estate holdings. We also didn't do some of the optional breakdowns.

Also, we chose not to consolidate two of our smaller life subsidiaries this first go around. The reason for this is that these subsidiaries are reasonably similar to the main life company and our goal was to do a great job on 90%, rather than risk doing a lesser job on 100%.

I won't spend much time on the methodologies that we used, other than to say that of the acceptable methodologies, we were always able to find one that worked well for us. An example of this is that we calculated our return numbers quarterly (yearly and monthly were also options). We chose to use the Modified-Dietz formula to value the cash-flow component of our total return numbers. Again these are just examples of choices that we made.

Many of you may be wondering, as we did, how difficult would it be to complete this survey. Well if your company is like ours, you'll find the biggest challenge to be

RECORD, VOLUME 20

getting all of your information organized. With a few exceptions, most of the information requested was on one of several computer systems or was contained in accounting reports. The most time consuming task was pulling it all together in an efficient, yet reliable fashion. We did this by creating a separate database and populating it with the various fields of information. This process involved much data editing as some of our source information was incomplete or inconsistent.

Going into the survey, we also thought that certain items, such as market values and durations might present a problem. Like many of you our portfolio is diverse and includes many types of assets, some of which make valuing or calculating good durations difficult. As it turned out, we either had the information, were able to calculate it, or we obtained it from an outside source.

Once the data issues were worked through, the total return calculations were straightforward. The only thing that we needed to do was re-sort the database as needed for each report. It was reasonably easy to provide answers to most of the supplemental questions.

From an overall time perspective, we estimate that it took us about 170 hours to complete the survey. Of this, about 25 hours was spent getting organized. We needed to bring several people into the project, determine what we would provide and determine how we would pull it all together. The bulk of our time, about 120 hours, was spent on the more mundane tasks of pulling and editing data for completeness and accuracy, doing some calculations, and storing the data in a database. The final 25 hours were spent sorting the information and completing the survey form. Aside from this process, we have also spent some time comparing our investment results to a variety of market indices.

What have we learned so far? Well as we've gone through this, we've learned a few things that will help us during the next go-around. As simple as it may sound, we've learned how to pull all the performance information together.

We know which fields of information we have to check and we've established procedures so that there will be fewer omissions or inconsistencies in the future. We've also decided to compute our returns after the end of each quarter rather than waiting until year-end. These changes should substantially reduce the overall amount of time needed in the future, while increasing accuracy.

We've also learned much about our investment performance for 1993. We now better understand what drove our returns and how we compare to market indices.

While I won't go into any details, the process of breaking out our returns by sector, by duration and by quality gave us the ability to pinpoint where our investment calls had paid off. While the overall results were in line with what we had expected, it was useful to see the exact magnitude by which each subsector contributed to our total investment return.

We have also been able to see how our performance for these sectors compared against market indices. While these comparisons can be misleading, given that life

INVESTMENT MEASUREMENT FOR INSURANCE COMPANIES

insurance companies have much more investment constraints than the overall market, they gave us another view on how well we had done.

In the near future, we are looking forward to seeing how our investment results compare to other insurance companies. Given the number of companies participating this year, we believe that we will get a reasonably good picture of how our performance compared to the industry. We're also looking forward to finding out what methods other insurance companies used to complete the survey. As Edwin and Joe said earlier, we view this as a process and we hope to learn more as we continue through it.

Over the long term, we believe that the survey will become more refined and that the involvement of additional insurance companies will both improve it and turn it into an industry benchmark. It is our hope that some day we too can definitely respond to the question brought up earlier, "How good is your investment performance versus other insurance companies."

MR. HARTZ: So now we've heard from Edwin about the motivations for putting this survey together and Joe has given us a feel for the details in the survey and its time frame. Finally, we heard from Dave who gave us a different perspective of someone who wasn't involved in creating the survey, but is a late entrant on the list of participants. At this point we'd like to open it up to questions either specifically about the survey or more generally about investment performance issues.

FROM THE FLOOR: How can I get a copy of the survey and maybe join the list of participants?

MR. BUFF: The only way to obtain a copy of the report including the real data is to be a participant. Several organizations such as asset management firms have asked us if they can "buy" a copy of the report when it's ready, but it's absolutely confidential and all of the companies are signing a specific agreement letter drafted by attorneys from the working group and Tillinghast which forbids the report from being used for anything other than internal management purposes within each participant company. If you are an insurance company, you can join. There are, in fact, some discussions going on with asset management firms which might bring on board some of their clients. In this case we would treat the asset management firm as if it were the "external" investments department of the smaller company for which it's managing money. But we discussed this and we've made it clear that in that situation the insurance company must be the participant for all of its assets. There must be a Chinese wall between the asset management firm and its client company so that any discussion and any other uses of the data are prohibited. If you are with an insurance company and interested in participating, just get in touch with Edwin or me or people from the working group, such as Mike Millette from the Hancock, Bob Burgess from CIGNA or Wayne Moore from Aetna, all of whom are other primary workers on the governing board of directors.

MR. HARTZ: There is a rather large package of information that outlines the project, the output, and what the requirements were for this year. Background information and a sample of what this might look like, based on the work that we did last year, is available from Joe Buff.

MR. GREGORY M. MATEJA: I was interested in knowing what the plans are with respect to liability benchmarking because learning about investment performance is important. If two companies both earn 9% on their portfolio, the one that has the lower cost of funds is perhaps the better-run company. Do you care to comment on that?

MR. BUFF: Yes, that is a good question because it is the difference between the two, obviously, which produces a profit for the company. However, this survey is currently emphasizing a tool to compare investment performance and asset allocations with that of other companies that are in the same businesses.

At the beginning of our discussions with Massachusetts Mutual, we did have some ideas about bringing in the liability side. We're going to look at that carefully going forward, and we may expand the survey in that sense or perhaps include a module that is optional for those companies that don't want to go that far. Another idea was to look at some sort of liability-based index of which there are some good thoughts around the industry. There's one or two *Transactions* papers that one can refer to. Another notion was to look at the behavior of the liabilities once they're put on a readily available, consistent market to market basis. If you think about it, it's the pricing of assets at market that let you calculate total return without much greater effort. Oh, boy, is that an oversimplification. But if we were to do that on the liability side and have good prices for our liabilities, and then look at the intervening cash flows, we'd be able to look at a liability total return. At that point, put the two together and you'd have a very powerful survey tool. Maybe Edwin wants to mention some of these refinements.

MR. MCCAUSLAND: I think when we talked about this earlier we tried to be inclusive, so people wouldn't be put off by the burden of trying to calculate some new things that they had never done before. Because this group was primarily dominated by asset-type people, we thought it would be easier to calculate total returns on assets rather than liabilities, and actually, Joe concurred. But we thought that over time we might very well move toward the kind of methodology that Joe was talking about. A good way to do that is to experiment and provide it as optional information.

MR. STEPHEN T. MORGAN: In the initial survey, I noticed that of the 22 participating companies, there were a few P&C companies that have reinsurance operations. Did you address trying to get any of the top three or five reinsurance companies to participate?

MR. BUFF: Yes, that's a good question which begs the broader question of, why didn't companies participate? We've covered why the companies that did participate felt it would be useful to them. And there it differed noticeably between the life companies and the property/casualty companies. Actually I had some discussions and meetings with some of the P&C reinsurers, but let's start with life and then we'll turn to P&C companies.

On the life side the only overwhelming reason given was that companies just did not have the data to support the core requirements. They could not give us a meaningful, auditable total return number for their publicly traded bonds during, say, 1993.

INVESTMENT MEASUREMENT FOR INSURANCE COMPANIES

That could be a clue that they didn't perhaps care about that sort of measure or they preferred for good business reasons to keep it to themselves for the moment. We talked to a few companies, but the ones I'm thinking of were companies that are sophisticated and produced good results and felt, for them, total return was not the most important measure. We tried to stress that total return is a measure that has to be distinguished from a style or a strategy. A buy-and-hold company can still get much information out of total return by comparing itself to other companies. Those were the primary reasons on the life side.

On the P&C side I guess the broadest observation we could offer is that in the area of investment performance measure, perhaps like in asset/liability management in general, the P&C industry has not done as many things as the life companies have because their liabilities are sensitive to different econometric measures. In many P&C companies, inflation rates of wages, medical bills, and things of that sort are an issue much more than the term structure of interest rates. Some of the property/casualty companies also balked at the cost of the survey which, for the 22 participants, is \$16,000 each for this year; that's not a trivial amount. These companies felt it was too much money and had other priorities for this year. Some of the other property/casualty companies said that they would like to see some other features built into the survey and have it redesigned to take account of their special needs. For instance, taxes are a very important issue for P&C companies while life companies can look at many things on a pretax basis, which is exactly what we're doing for this year. Reinsurance, in particular, has a very unusual product mix, and even if reinsurers are in the same lines of business as these other companies, they're doing different things in those lines. And there were several of them who said they would love to be in the survey if these four other companies were in it. So the reinsurers and financial guaranty companies, in general, are not participating this year, although we'd love to get them in eventually.

MR. JAMES F. REISKYTL: My company is a participant company, but I haven't participated in many of the discussions that have occurred. We have been trying for a long time to get a handle on our investment performance. I really applaud this effort and, although liabilities may be interesting to others, I personally don't have much interest in them because we do much of our own asset and liability work. How well the industry does is of modest interest to me. I'm more interested in what kind of investment performance we really have. You really have to measure it against someone else and I'm not sure how liabilities make much difference in that comparison. What I'm really hoping to answer is the basic question you have proposed which is how good is your investment performance? My question really relates to two aspects of that. Are you trying to measure the performance by type of investment or are you trying to measure how much risk you took and how lucky you were relative to that risk? Obviously, you are getting two totally different things. Are you trying to say we should be 50/50 in equities or fixed income or are you trying to say I invested in category five bonds and it did not work out well. You clearly get different answers. So when you say how good your investment performance is, I wonder if you are trying to answer both questions or one of them. It sounds like you're trying to measure the performance in a line. Frankly, I don't care too much about that. It's somewhat interesting, but what I really want to know is how did our investment people do when they made a particular investment? Say we made a bet. We went 50/50 into bonds and stocks and we chose various risks to take. How well did they

do given that decision? Could you respond to that, and then I'll ask you my second question.

MR. MCCAUSLAND: I guess we did look at it that way. In fact, that was a very early discussion at Mass Mutual. When we were laying the groundwork to move forward with this, we asked the various internal constituents whether we were going to attempt to measure the correctness of the investment policy decisions, or whether we were going to attempt to measure only the investment performance. What we're attempting to do is measure the investment performance. Whether right or wrong, the policy decisions may not be in the hands of the investment managers. They may be in the hands of those that are running the liabilities, depending on the structure of the company. What we hope to be able to learn are some of the things that Dave was talking about. Over time, we might begin to do some performance attribution work that will then help us to be able to understand where we are adding performance. Then, each participant can learn for themselves where they're adding performance. Over time, we would envision that companies would probably move to an area where they feel that they have a special or unique skill or ability to add performance and perhaps move away from some other areas. We haven't really figured out yet how to get to the question about the goodness of the asset allocation decision.

MR. BUFF: Let me add a comment before we get to Jim's second question. There are different levels at which the asset information can be used and to some degree we do serve the different purposes that you're raising. For instance, if you look at the total return for all the bonds of two companies and one does better than another, is it because one was a better investor or because one had a better asset allocation? We do provide the breakdown of the results into publics, privates, tax exempts, and securitized so that you can start to look at the asset allocations there. Some of the optional information we are going to get from a number of companies, although certainly not all of them, is the total return broken down within those bond categories by duration ranges (less than one year, one to three years, etc). We'll also split the returns by National Association of Insurance Commissioners (NAIC) quality grades so that you can start to probe deeper to determine where the interplay is between the asset allocation and the skill in investing. You will, however, run into the usual actuarial problem of small data cells. If you look at say NAIC six bonds with a duration of five to ten years and compare the total return of ten different companies, it does tell you something about their skill within that cell. The more you subdivide the smaller the cells are; it's similar to studying mortality. However, actuaries are used to dealing with that problem and we think the survey will be robust in that respect as the data matures and we get more companies into it.

MR. HARTZ: I think Mr. Reiskytl made a very good point, and as a portfolio manager in a bond area, those are exactly my concerns. We want to know why the performance is good. Did you simply take more risk? As we heard from Mr. Ross, you can take more risk and outperform over time. We really need to do performance attribution. As Joe pointed out, we will be splitting the returns by duration buckets and by quality buckets and that should give us a feel for where the return is coming from.

INVESTMENT MEASUREMENT FOR INSURANCE COMPANIES

When Edwin put his matrix up it showed that we're really looking at this survey with two cuts in mind. The question you're asking is, how did your assets perform and why are they performed that way. For example, we could be looking at private placement bonds for the entire company and splitting that into subcategories to see *where that return came from*. Then the other cut at the matrix is to look at the liabilities. What was the asset allocation for your single-premium deferred annuities (SPDAs)? Ultimately, we may merge the two to determine how the private placements within the SPDAs perform, but for now that's too big a task.

MR. REISKYTL: I'm very pleased to hear that because once you can truly get a measure, based on the skill of the investment officer, which I find as an actuary particularly exciting, then I can input that into my asset allocation mix. That takes us really to the second question. It's really much shorter but it comes back to the time-weighted versus dollar-weighted issue. You can get a return number, but it may not be as meaningful because maybe you didn't have a flow of cash when interest rates were up, or the stock market was down, or whatever. When did you have the dollars to invest and what opportunities did you have? Maybe one person outperformed the other, but the fact is that person was in a different market in January than someone else was in August. This takes me to my second question which is a much shorter question and relates to the time frame over which one should look at the returns. You seem to suggest perhaps a year, but I would hope that we would view a much longer period because, frankly, I am much more interested in long-term performance than I am in short-term performance, but we will obviously look at both.

MR. MCCAUSLAND: I'm glad you raised the time frame issue. The purpose of getting companies involved in the early stages was so they could see some successes in the near future. We wanted to have some things that were positive in the short run. The emphasis at all of the meetings that we had with companies during the last fall and early into the winter was on a multiyear commitment to a process. This is a commitment. It is a process. We recognize that the first year of data is not going to be as good as the third year of data or the fifth year of data. If you think about it, some of the differences in methodologies will begin to erode in their impact as you begin to look back at the annualized performance over a three-year or a five-year horizon. We really felt early on that you had to get people involved and committed. You try to do both.

MR. CLAUDE DUSSAULT: I was wondering whether the study was limited to the U.S., or whether you were going to address companies in Canada as well.

MR. BUFF: Well, we're concentrating on the U.S. business although some companies from Canada expressed interest in joining and we do have some entities that are owned by non-U.S. parents, for instance, Great Western, ING, and others. I'm not sure if there are others among the 22 that we have that are owned outside the U.S. but they're certainly welcome. We have not gone as far as thinking about making this international although I suppose it's a possibility. Canada is close to the U.S. and many Canadian companies have heavy activities in the U.S. Perhaps we will internationalize the study by including Canada. Perhaps that's something the working group will want to address as an important suggestion for where to go in the future. I don't know if you have any thoughts on that, Edwin?

MR. KUPLIC: That's something to think about. It's a difficult next step if you start dealing with assets that are denominated in different currencies or totally different markets. I'm not sure how comparable they're going to be unless you're talking about dollar-denominated liabilities and assets, in which case I think there wouldn't be a problem.

MR. ROBERT J. MYERS: I guess my question pertains to the issues of confidentiality and I was wondering what, if anything, you hear about pending legislation as far as the industry's antitrust exemption? Do you foresee any changes that would make more companies be less susceptible to take part in this survey?

MR. BUFF: What we've specifically done is design a survey which is, in a sense, immune to the issue of insurance company antitrust from McCarren-Ferguson-type exemptions. The attorneys have looked at this and asked us to imagine that the worst scenario could be that we get into an environment of legislation that is hostile to the historically favored treatment of the insurance industry with respect to antitrust. Develop a tool that will not be exposing participants to potential problems going forward even if the rules change in the future. One of the fundamental rules of our survey is that we only gather retrospective information. We cannot ask companies what they are doing or what they will do. We're taking special measures by establishing agendas. We've kept records of minutes that were reviewed by attorneys for every one of the working group meetings last year to make sure that this does not become a forum for discussions that could have an impact on antitrust issues. Those procedures are presumably very similar to those that the Society of Actuaries follows. These meetings have preapproved materials, clear agendas, and a monitor at every meeting that blows the whistle and runs screaming from the room if anything naughty starts to happen. So we don't think that's going to be a problem, but every company has to look at the material and review the agreement letter, and in all cases attorneys have been involved on each company's behalf.

MR. ROBERT P. CLANCY: I just have a couple of quick questions on the market-value pricing aspect of computing total returns. I presume no one in this study consulted David Askin to get some of his prices. I'd just like a few comments on whether, in general, the market-value pricing across companies seems to be uniform and would not be introducing distortions. What considerations do you think might evolve down the road? What steps might be taken to ensure even more uniform pricing down the road?

MR. BUFF: The results of the responses to the questions themselves are confidential, but I think it's fair to say that there's a sort of medium-level of consistency in practices and sources of information. Clearly, the results this year will tell us all some useful things; on the other hand, they have to be used and controlled very carefully. Partly for that reason most of our recruiting of companies has gone to the chief investment officer or his designates and we have made sure that everyone places a caveat in the reports when they arrive, and our reports will have some caveats in the introductory portion. But issues of source of information and of system used are significant. For instance, a wide variety of investment and accounting systems are out there in the industry. A number of different systems are used at these 22 companies. I talked privately with some people, and their comments were that each of them is, at a very fine level of detail, going to produce different answers for the

INVESTMENT MEASUREMENT FOR INSURANCE COMPANIES

same thing given the relatively complicated issues. Presumably, they're all trying to implement the same basic methodologies and the same accounting rules. How different would the answers be based solely on different investment accounting systems?

The issue gets more complex for the assets that are not publicly traded, which includes virtually anything except assets for which there's a closing price on an exchange (i.e., common stock). The problem is that different brokers will give you a different price. They'll even give you a different price depending on how you ask the question. There are, however, some established databases and services. In fact, a great number of them will provide a price on a liquid portfolio. The important thing is to maintain reasonable data and to make sure that you don't change the source of your data without being careful with its effects. For instance, if one organization is using source A and the other is using source B to value its bonds, and they have identical bond inventories at the beginning and at the end of the year, they will have slightly different market values. There will be some differences and some of them will cancel out, but they give different returns if they were priced on different sources even though they're exactly the same security. Presumably whatever biases are in each of those two sources will, to a degree, cancel out because total return reflects the change in price. *Beyond that, it's a problem that we have to deal with.* However, within the whole world of investment performance measurement, (and this applies to mutual funds, pension funds, and variable products), everyone has a different way to price bonds and are doing it on different systems.

One other final thought is on the relatively complex issues behind optionality of securities that are not publicly traded. The major issue is interest rate volatility. Different models use the same number for volatility in different ways and different people, even if they have the same model, will have different opinions as to what volatility is at the same time. So all we can do is agree it's an issue and hope that by working on the survey and other initiatives in the industry we'll achieve more meaningful comparisons as time goes by.

MR. HARTZ: Over the long run these things should wash themselves out. We'll be looking at cash flows only so the market value differences won't matter so much. I agree with Mr. Reiskytl that its more comforting to have the long-run results than with any one year's or one quarter's worth of results. Obviously, we would prefer to have good market values, but they are going to be difficult to obtain in certain areas such as with private placements or the collateralized mortgage obligation (CMO)-type derivatives as Bob referred to. We'll just have to see what we get back in terms of how people are pricing those and try to all converge to a common methodology.

MR. BUFF: I think that the real problem in Mr. Askin's hedge funds wasn't the prices he was giving but the prices he was being given by his brokers once he started to get into liquidity problems.

MR. PAUL M. PEYSER: I'm just wondering whether the numbers that are being reported are gross returns or net returns after investment expenses. It seems to me that this could affect the comparison of the asset types and the companies if the allocation methods differ significantly or if different strategies are involved, such as buy-and-hold versus active trading?

RECORD, VOLUME 20

MR. MCCAUSLAND: Some of us have participated in an investment expense study for a number of years and we recognize that this is a very time-consuming process and really a specialized area. So what we've really attempted to do here is separate out the expense issue and let companies deal with that on their own. The performance data are gross of expenses.

MR. LUKE N. GIRARD: This is a question for any of the panelists. How are you going to handle derivatives such as swaps, financial futures, and caps, either as asset/liability management tools or for asset replication?

MR. BUFF: The approach that we're taking this year is really very simple. We're suggesting that if the derivatives are being used to hedge particular assets or groups of assets, they ought to be included with that asset class within the lines of business. Then we can capture some of the effect of the asset/liability process and the purpose of derivatives. The caveat is that we're not looking so closely at the liabilities, but it's an example of how you cannot escape the liabilities when you start to think about the assets.

We're asking people to put the derivatives in the so-called "other" category, which is a catch-all for many things. This pertains to the asset class results for the entire general account. We're asking people to explain what they are, but we want to distinguish them from the basic assets. At the whole general account level, we wanted to see what the effectiveness or the result of the portfolio management activities are that are going on in the assets themselves, and in that sense to strip away the impact of derivatives on hedging or speculating and leveraging results. We must treat the impact of the derivatives as separate for now. Even before the last month or two, people were asking us to think more about how we handle this. I'm sure that we'll be giving a priority to it and redesigning the survey for 1994. We very much welcome any suggestions or thoughts on how to do that. If you want to drop any of us a line or give us a call and brainstorm a little, we'd be delighted to hear from you. Some of us travel very much, and if we're in your neighborhood, we can get together and exchange some ideas.

MR. REISKYTL: Does anyone know of any other way to judge investment results. We can compare the results to published indices such as the Lehman bond indices. But, other than this survey, I wonder if anyone on the panel or from the audience has come up with another alternative to measuring the performance of your investment departments.

MR. KUPLIC: I think each of us can answer that question separately. We at IDS and Edwin's firm spent some time on a number of different measurements. Frankly, we didn't find anything that really gave us answers that we felt we could use. I can't say it was a completely wasted effort, but in the end, we didn't have anything of significance to show people.

MR. MCCAUSLAND: I think we have seen some other companies that are trying to get at this kind of information and some of those companies are participating with us. They were attempting to work in groups but were too small, in our opinion, to assure confidentiality and too small to provide a broad representation of what was really happening across the industry.

INVESTMENT MEASUREMENT FOR INSURANCE COMPANIES

MR. HARTZ: I'll make one additional comment. The ACLI is currently looking at putting together a total rate of return index for private placement bonds. This would solve only some problems. First, I'm not sure it will happen. It's a long ways away. It would gather raw data in terms of cash flows and quality ratings set by the lead lender, and it would then price all of these things on a common basis which is related to some of Bob Clancy's earlier comments on pricing. It would ensure high quality of data. On the other hand, this only gives you an index. It doesn't give you a universe to put yourself in which is what this survey is attempting to do. So if you beat this index by 50 basis points how good is that? Is that first quartile performance or not? So that's something that may be of interest coming down the road, and I wouldn't be surprised if other things happened as well. I'm a bond person so I'm not sure what's happening on the mortgage and real estate front, but there may be similar efforts and Edwin assures me that there are.

MR. PEYSER: What about yield enhancement techniques like secured lending or mortgage dollar rolls? Is the income from that going to be getting into the yield returns on the forms?

MR. BUFF: When you start to get into the more subtle issues, it becomes less and less clear exactly how the different companies are dealing with these issues. That's one of the things that we're asking people, and I think that's something to explore further. I suspect that when you look at that sort of a question, the practices in the industry will vary in one of several different ways. Some companies may exclude them from these numbers even though they capture them somehow in their own internal reporting. Others may have ways of classifying them so that they do get included in the survey. But that is another good point.

