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PENSION INVESTMENTS

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MR. GREGG L. SKALINDER: I would like to introduce our panelists. Bill Solomon, an actuary with Johnson & Higgins, Willis Faber Ltd. in Toronto, will talk about retrospective studies of pension fund performance. Gary Pines, who is a vice-president of Meidinger & Associates, Inc. in Chicago, will discuss cash flow projections. Our third speaker, Richard Ennis, is a Chartered Financial Analyst and vice-president of A.G. Becker, Inc. in Chicago. He will discuss the formulation of an investment policy statement.

MR. WILLIAM B. SOLOMON: Although my remarks today will be based on my experiences in the Canadian environment, I am certain the results are similar in the United States. In Canada at present there are two principal institutions which offer investment measurement services to pension fund sponsors: Wood Gundy Limited and A. G. Becker (Canada) Limited. These performance measurement services have been offered on a subscription basis to both financial institutions and pension plan sponsors for approximately 10 years.

*Mr. Ennis, not a member of the Society, is vice-president of A. G. Becker in Chicago, IL.

The stimulus to development of these services can be attributed to the study of methods to evaluate pension fund performance by the Bankers Administration Institute (BAI) in the United States during the late 1960's. The BAI methodology, or derivatives of it, are essentially applied under both the A. G. Becker and the Wood Gundy measurement services. Prior to the BAI study, very little attention was given to the measurement of pension fund performance.

The great emphasis by measurement services on the subject of relative performance has had considerable impact on the shortening of time horizons of pension investment managers in their quest to perform well against the "pack" on each and every performance ending date. Since pension fund liabilities are generally long term in nature, obvious areas of conflict have emerged with respect to the total management of the pension fund. Long-term assets and long-term liabilities are analyzed using short-term measurement results. There are disturbing stories of pension fund sponsors who, based on inferior relative performance over a relatively short period of time, fire their fund manager only to find later that the performance of the fired manager blossomed to outperform the new manager.

The services in Canada have very large data bases (approximately 400 funds in each service) but, unfortunately, the subscribing plan sponsors are not provided with details on the nature of the underlying liability characteristics, objectives, and constraints of the different pension funds that are being measured. Generally, the services analyze the funds in terms of their major asset classes and the weightings between asset classes. However, they do not attempt to analyze the performance of the fund, for example, by component of the equity fund, or by the type of bond or mortgage that is being held. Therefore, the subscriber does not learn very much from the service about the reason why his fund manager achieved particular results over given ending dates using different time horizons.

Our own studies at Johnson & Higgins on pooled pension funds (in which case we know the names of the investment managers) recognize that pension investment managers do have different investment philosophies, policies and management styles and lend support to our view that performance results for particular ending dates in certain types of markets can be expected to vary considerably by the investment manager. For example, an investment manager who employs a long-term time horizon in the decision-making process may be expected to have inferior short-term results relative to a large sample of funds.

For a number of years these fund services were offered for "soft dollars". The term "soft dollars" refers to payment in the form of securities commission business to the broker. The plan sponsor instructs his investment manager to direct 'x' dollars of commission to the designated broker which is providing the service. This practice continued for a number of years with the result being that the performance measurement service was "free" to the plan sponsor, albeit the investment manager had less commission to allocate to stockbrokers for investment research and other purposes. However, this "free" aspect of the payment for the service has now disappeared and for the last five years the measurement services have been available only on a subscription basis. Since they must be paid for with hard dollars, a number of fund sponsors have been examining the value of continuing these services. Many of the subscribers after a cost/benefit analysis have decided to continue with the services.

The two established comparative measurement services are packaged products, and through the use of charts, graphs, and tables their semi-annual reports compare the financial yields of each plan sponsor's fund to all the other funds in the sample.

The data used is historic and has little if any predictive value. A recent study by the University of Sherbrooke discovered that there is no correlation between performance results in one time period and the results in the succeeding time period. The plan sponsor relates his investment returns for various time horizons to the different quartile rankings and from this, he draws some conclusions about how well his fund did compared to the other pension funds in the sample.

Both Becker and Wood Gundy apply beta theory which is controversial and at best is of questionable value to the user. There is also a limited attempt to try to separate the funds by the style of the different investment managers.

Both Wood Gundy and Becker stress relative performance results using time weighted and, to a lesser extent, internal rates of annualized compound return. Many investment managers have been content to have their performance results measured on a relative basis in which their policies and management styles have been hidden from view by being included in a large relative performance sample containing funds with different characteristics and constraints. Relative performance in down markets, whether it be of stocks or fixed income securities, tends to ignore the probability of loss (risk). The relative performance tends to stress short-term results partially because the user of the service has not been able to interpret the results properly. Investment managers with short time horizons tend to promote relative performance as a basis for continued employment and advocate that their clients adopt services which stress relative performance.

Along with the packaged results of the relative performance services, you receive the services of the consultant who interprets the results for you. Of necessity, this consultation role must be restricted to drawing conclusions in quantitative form relative to the results of the other users who are included in the sample.

Both services avoid making comments on philosophies, policies and management styles of the investment management supplier. In our opinion, this is the fundamental issue of money management, namely, the style of the money manager that is employed.

The services include in their survey many types of plans: profit sharing plans, pension plans, career average plans, final pay plans, mature plans, young plans, plans with heavy positive cash flow, plans in different industries, plans in industries that are growing rapidly and in industries with fairly narrow profit margins. This is a mixed assortment of plans which is clouded even further by the retention of numerous investment managers who follow different philosophies, policies, and styles. A number of funds in the sample have constraints placed on them by the plan sponsors, with different investment objectives. The investment implications of an investment manager's style are hidden from the user of the investment measurement service.

There are funds in the sample which do not belong in the sample, such as non-tax sheltered plans. There are funds which should not be measured because of the management style adopted by the fund manager. The story is told in Canada of a fund, the foreign equity content of which outperformed all other funds in the survey. Many users wanted to know who the fund manager was so they could hire him. As it turned out, the investment manager had only two stocks in the foreign equity portfolio neither of which had been traded. This fund is lumped in with all of the other actively and passively managed funds. Broad samples conceal information which may be vital to a plan sponsor for assessing the investment results of his money manager.

There are distortions built into the investment measurement services. Pooled pension funds are included in the sample along with separately managed funds. These funds usually accrue income at their valuation date resulting in its inclusion in the performance results, whereas income under segregated funds is usually reported on a cash basis. This distortion can be important in the comparison of bond and mortgage components of a segregated fund since the spread between the best and the worst of these funds tends to be quite narrow.

There have been instances where the cash equivalent component of a pooled bond fund has not been categorized as such and separated from the total commitment to equities, which may misstate the investment performance of the equity component. Semi-annual reports provided by the services can be delivered up to four months after the reporting data has been provided. This delay in receiving the results can be of benefit to the money manager but it is probably too late for the plan sponsor to take any remedies in the event of major personnel or policy changes that might have occurred in the investment manager's organization. It is a matter of closing the barn door after the horse is gone.

Most investment management organizations measure their pension fund accounts internally on their own system or on one of these commercially available systems. Measurement figures are available to plan sponsors from their own investment manager if they are interested in the internal rates of return. Many investment managers have established elaborate monitoring systems to evaluate performance internally.

Let me summarize my perceptions of the limitations of these services. The services do not recognize that pension investment managers have different policies, philosophies, decision-making processes (including time-horizons) and management styles. Pension investment managers adhering to the same style may not hold the same philosophy. The investment decision-making process is largely determined by the investment philosophy and policies. The results of a well-structured decision-making process with a defined time horizon should be more or less predictable in various types of markets. It is important that plan sponsors understand the investment implications of their particular manager's philosophy and management style.

The services do not provide the size of each fund in the sample, their constraints and investment objectives, or any indication whether or not the investment objectives set by that plan sponsor have been met. The services provide no indication as to the degree of risk assumed by the fund in the

sample. While both services provide volatility and beta values using standard deviation techniques, this tool does not measure the probability of loss. The services do not provide pertinent and material financial information on the funds, such as the size of the plan sponsor, the secular profitability trends of both the company and the industry, and other information related to the plan sponsor. The services do not provide any indication of the industry weightings of the common stock component or the bond component, nor do they recognize the different types of mortgage loans. The services make no analysis or criticism of investment managers and/or with respect to fund objectives. In summary, the services provide considerable statistical information which is interesting but unfortunately what they do not tell you is even more important. Inaccurate conclusions can be drawn from incomplete information.

Having said all this, do I have a better idea? Yes, I do. With the advent of ERISA, many of the larger corporations in both the United States and Canada have already recognized the limitations of pension fund comparative measurement services. Vital information in factual form is necessary to draw conclusions but a comparison of relative results does not tell the observer nearly enough about the funds or the investment managers. The larger corporations in the United States are now moving to in-house measurement and, in some cases, have developed measurement standards which are meaningful and appropriate to their particular pension fund. Pension funds tend to be different and therefore monitoring programs have to be tailored to the requirements of each pension fund. For medium sized pension funds, it should be necessary to develop only a simple and easily understood monitoring program. As the fund grows in size and matures, the monitoring program can be expanded to provide greater detail.

Before the monitoring program is established, it is important to understand the capabilities of the investment manager, to develop expected long-term investment objectives in absolute and quantitative form, with perhaps minimum absolute rates of return as warranted under the circumstances, and to develop expected short-term investment objectives in relative form against appropriate standards developed to meet the particular circumstances to serve as an early warning to identify unfavorable trends.

The monitoring program should go well beyond performance measurement figures. In dealing with the subject of performance measurement figures, the values can be produced at very little cost. The corporate trustee should be able to provide the necessary values with respect to total fund, equity component, bond component, mortgage component and cash equivalent. These values on a quarterly basis can be applied to a simple computer program to develop time-weighted and internal rates of return for various time periods. The present manager may already be doing this for many of the plan sponsors.

The monitoring program just outlined can be carried out within the cost currently being paid to the outside measurement services. In short, the investment manager should be managed by the plan sponsor.

MR. SKALINDER: What would you recommend to a plan sponsor who wants to know how he can tell whether he has a good investment manager? One of your suggestions is to monitor the investment manager's ability to comply with an investment policy goal as stated by the company. But is there a way to

go beyond that and answer the question: Are we getting good investment advice?

MR. SOLOMON: The plan sponsor has to decide what he is looking for. Many plan sponsors are heavily interested in the so-called comfort and security aspect. Is my fund manager communicating with me? Do we hold regular meetings? Am I happy with what he is doing with my funds even if the results may not appear as good in the short term as those of other funds? Another aspect is the involvement of the fund's sponsor in the decision as to how the assets are to be invested, i. e. whether the sponsor and the investment manager discussed the investment strategy of the fund in advance. The process is the same as judging an employee: are you happy with the job he is doing for you, not compared to other employees, but with respect to the particular assignment you have for him?

MR. GARY A. PINES: I would like to make a comment about the process of selecting an investment manager. There seems to be a bandwagon effect: based on performance figures, certain managers look good and so everyone hires them. Four years later, their performance is poor, and a new generation of managers is in vogue.

Bill, how should performance figures be used in selecting managers, if at all?

MR. SOLOMON: When a plan sponsor is seeking to hire a fund manager, the question always comes up: What are his results like? So the plan sponsor looks at performance measurements. My hope is that they will look beyond past performance and ask about the type of organization they are buying, about its investment style and philosophy. If you hire an aggressive fund manager who takes risks and presumably does well in an up market, are you prepared to go down with him when the market is down?

I already referred to the recent University of Sherbrooke report which found little correlation between performance in one time period and performance in a subsequent time period. So I personally place very little faith in these numbers as a basis for making an intelligent selection of a fund manager.

MR. RICHARD ENNIS: Does Johnson & Higgins offer a commercially available alternative to these services in Canada?

MR. SOLOMON: In Canada, Johnson & Higgins does provide a service which provides information on fund managers for pooled funds in Canada. Included in this information are investment results over different time periods. There are sections on investment styles and philosophies adopted by the organizations, as well as an analysis of their industry weighting in bonds and mortgages.

MR. PINES: Most plan sponsors use some form of performance measurement. How should these performance results be used by the corporate layman who is not that familiar with the financial aspects of performance measurement, but who is responsible for selecting and reviewing pension investments and managers?

MR. SOLOMON: Very carefully. They should realize that there is more to consider than the performance figures alone. They must go through the entire process of establishing objectives for a pension plan, having them accepted by corporate management and having a pension investment committee within the company so that more than one individual is regularly reviewing these objectives. The process is similar to that which a company would undertake with its own corporate plan. The company should establish and periodically review the corporate plan for the pension fund.

MR. SKALINDER: Thank you Bill. Now that we learned all about the past, Gary Pines will tell us about the future.

MR. PINES: I will discuss a procedure that is variously called cash flow projections, actuarial modeling, or dynamic projections. I will talk about the practical aspects of this process without getting into any technical discussions or illustrations. My experience in the actuarial modeling area spans two years. My responsibility has been to decide which models to run, run the models, assess the output, relate the results to client needs, present them to clients and, finally, relate them to investment policies.

What is the purpose of actuarial modeling? It is merely a tool to help plan for the future. We are all familiar with the actuarial valuation process whereby each year you do a valuation, present it to the client, and discuss what happened for that year and in the past. Actuarial modeling attempts to take off the blindfold and reveal what can happen in the future to your pension plan costs and liabilities. Modeling is a tremendous planning tool to let plan sponsors know the entire range of future possibilities: the best as well as the worst.

Today I will try to show how the modeling process can bridge the gap between the liability side of a pension plan and the asset side -- how to move into the investment side, how to talk to investment managers or consultants, and how to coordinate the liability and asset sides of a pension plan.

Let me read to you a single employer's planning objective which was developed as part of a modeling study. "It is the goal of the plan sponsor to keep contributions at no greater than 7% of payroll and to provide average pay increases of 8% for the next five years." The personnel director or financial vice president expects annual salary increases will average 8%. Given these two constraints, 7% of payroll for contributions and 8% salary increases, what does the investment manager have to earn? A model might show a required rate of return of 12%, 15%, or even 20% which, of course, the investment manager may not be able to achieve. But such a study is a starting point for communication with the investment manager, to say to him that our goal requires an x% rate of return and ask him how he can achieve it.

Here is an example of a plan objective for a multi-employer plan. Given that the number of participant hours will decline by 5% per year down to some specified level and that the contribution rate will remain at \$1 per hour, what investment rate of return will support the benefits? With modeling, you can determine such an investment rate of return. This determination is the key to plan solvency.

What do actuarial modeling projections or cash flow projections show? They show the needs of the plan. What are the needs of a plan? The first need is the level of contributions. Each financial officer looks into the future and knows what his budget is now and has a goal for the future. He must also know what the constraints are and what level of contribution will be financially damaging.

The second need is liquidity, the cash flow needed to pay current benefits, expenses, etc. The investment manager needs to know liquidity requirements in order to invest his funds. If the liquidity needs are great, you may need some assets in a liquid form of investment.

The third need is the one most often written about in the press: coverage of the vested liability. The vested liability is basically a funding guide, unless there is a real possibility of a plan termination. Plan sponsors want to be comfortable with the vested liability coverage.

So the projections focus on the level of contributions, liquidity needs, and coverage of vested liabilities. Through these measures we try to educate plan sponsors and investment advisors about the needs of the plan and what is required to satisfy these needs.

There are four basic ways of doing projections.

The easiest method, and one that can be used in many instances, is the back of the envelope method. Under this method the actuary looks at the ceiling, counts the dots, and gives his answer. An actuary who is experienced in this kind of work can do a reasonable job without going through the full computer process of doing projections. The problem with the back of the envelope method is that some plan sponsors need the feeling of comfort that comes with a computer printout that backs up everything the actuary has said.

Another process I have not used myself is the use of standard models -- that is, to have projections for 30 or 40 typical types of plans and then attempt to fit your plan into one of these standard models.

A third process is to project present values. Since Gregg has used this method, he will cover it briefly now.

MR. SKALINDER: At Gary's invitation, I will just talk briefly about the present value method that he mentioned. We have used the present value projection method for one of our clients. The method depends on an algorithm for projecting the present values that enter into valuations. It is considerably more difficult to work out a reasonable algorithm for an accrued benefit method than for a projected benefit method. It is necessary to predict for a particular group what the effect of a benefit increase will be on the present value of benefits. Another complexity is to determine how the present value of compensation will change under various assumptions for actual as compared to expected salary increases. However, with a little thought you can build a good projection model that will allow you to examine the effect of changes in a variety of variables at considerably less expense than is possible using individual data or even aggregations of data.

MR. PINES: The method with which I am most familiar involves actually doing an actuarial valuation each year into the future. This method could be called the most precise method, if you can call any of this science precise. However, the method is costly. We feel that we have some computer methods that have greatly reduced the cost.

Different methods will be appropriate for different plan sponsors and different circumstances. Cost is likely to be a factor -- but the plan sponsor may also want to see the liabilities projected on as precise a basis as possible.

What are the ingredients that go into these projection models? The first ingredient is the actuarial assumptions. Although you can change the assumptions during the projection period, I prefer to retain the original assumptions and alter the expected experience. If the assumptions, whether implicit or explicit, are successfully doing their job of budgeting for the future, I do not want to change them.

The experience is most often the key variable in the model. You can model the investment rate of return, projecting it to be as high as 20%, 25%, 30% or as low as -5% or -10% and determine the effects on the plan sponsor's pension cost and liability. What about salary increases? You might anticipate 8%, but they may really be 12%. What will that mean? What will be the growth of the number of participants in the plan? What will happen if the growth is 3% or 5% a year? Typically, growth means lower cost as a percentage of payroll, or lower dollar cost per participant. What will happen if there is a participant decrease? What about early retirement experience, if early retirement is subsidized? What will happen if, as a result of the age discrimination law, more employees defer retirement? You may also want to test the effect of cost-of-living adjustments for retirees. The plan sponsor may want to do something for his retirees, but it costs too much. How can the sponsor balance plan design objectives versus cost problems?

These are some of the types of questions that can be answered using a projection model. What it comes down to is the need to communicate effectively with the plan sponsor.

Another ingredient of projection models is the actuarial cost methods. If you use the frozen initial liability method, what will the aggregate method or the unit credit method mean in your budgeting of plan costs? The plan sponsor may also want to examine new benefit formulas, providing higher benefits, or more coordination with Social Security.

Let us now consider further the practical side -- how these projections can be used. As Richard is going to discuss and I have mentioned, actuarial modeling is used in setting investment policy. It is very important to thoroughly understand the liability side before you can get into the asset side. The model is also an educational tool for the plan sponsor. Many plan sponsors do not really understand the actuarial process and some do not want to understand the actuarial process. But when we have to explain it to them, this approach can be quite effective. The projections can also serve an audit function. You can run a projection for 5 years and then, each year in the future as you do an actuarial valuation, you can compare your current actuarial valuation to the projection.

The last point I want to make concerns communication of the projection results. We can go through all of our actuarial aids and all of our technical modeling and incorporate a variety of methods and assumptions, but how are we to communicate all this to the client? If you are doing any actuarial modeling, you must be able to communicate in terms that the plan sponsor understands. You must present the results as simply as possible without too much actuarial jargon.

MR. SKALINDER: One problem is not widely perceived by the consumers of these projection models. Many of the projection variables are not independent while the assumption is typically made that they are. For example, pay increases are likely to be correlated with the bond rate of return, because both are driven by inflation. To ignore this in a projection is risky, particularly when you are doing a probabilistic study of investment rates of return for various mixes of fixed income and equity securities. You must at least keep in mind that the assumption of independence is not only incorrect in the area of rates of return, but also incorrect in the area of future benefit increases. Inflation experience and the level of investment return will affect future benefit increases. The correlations are ignored because it is too complicated to do otherwise, but it is a serious problem that affects my confidence in the results.

When you look at the variables studied in projections, it is not obvious that the plan sponsor really can control the level of changes. Is there freedom of action in the area of future pay increases? In the areas of future benefit increases in negotiated plans? What about participant growth -- would anyone really do anything about the size of a business because of pension fund consideration? Can plan sponsor decisions really affect the investment performance of the fund?

How can this planning tool serve as a basis for making decisions? Such projections are widely used as an item of input into setting investment policy. They are useful in providing the educational background necessary to determine the sponsor's objectives which underlie an investment policy. But I do not believe that they have much use otherwise because of the uncontrollability of the variables and the uncertainty as to the dependence or independence of the variables.

MR. PINES: I do not agree fully with Gregg's remarks. The process of budgeting is never a scientific process. This tool must be considered an aid in helping the plan sponsors budget for the future. I have found it to be very helpful.

MR. SOLOMON: What are you using for your source of economic input for salaries and inflation for the periods of your projection? Do you use outside economic input? How do you come up with your forecast?

MR. PINES: In most cases, we do not go outside for economic forecasts. The key is to select the extremes -- the worst case and the best case. In discussing the projection with the plan sponsor prior to doing any of these models, ask him what he thinks is going to happen. His response may lead you into the economic sector, or he may respond that he had already considered this factor for other purposes. Your point is well made, but I have not found that clients want sophisticated economic forecasts.

MR. ENNIS: At A. G. Becker we do investment policy consulting based on the use of such actuarial modeling. I have a question that is rather complex. Gregg stated that the most likely place to make effective use of this technique is in the area of investment policy setting. I take a somewhat different view, that as a general educational tool we have found projections to be exceedingly useful. Most corporate sponsors of pension plans do not have any idea about the trend of future contributions as a percentage of payroll or whether the gap between vested benefits and assets is going to grow or narrow. We find it useful as an educational tool to help plan sponsors frame basic financial objectives and help them become as comfortable with the implications of the future for their pension plan as they are in other areas of their business.

However, some recent events in the financial world have made us question just how much a plan sponsor ought to rely on the use of these models for the purpose of setting investment policy. The concept of developing a pension plan investment policy in light of the emerging liability presumes a closed system consisting of the assets and liabilities. We understand the interaction between the two. A change in liabilities may bring about a different pension funding pattern, and thus the pension fund will be a function of the liability. The opposite, of course, is not true. An increase or decline in the value of the assets does not mean that there will be any change in liabilities in a defined benefit plan.

With the advent of ERISA it seems to us that this closed system of the assets and the liabilities of the plan no longer exists. The liabilities of the pension plan have become genuine financial liabilities of the corporation. Now that the liabilities are genuine liabilities of the corporation, it means that the assets are effectively assets of the corporation. There is no question that the assets are held in trust for the exclusive benefit of the beneficiaries. However, if they decline sharply or disappear overnight, the sponsor has to replace them. If they double in value unexpectedly, there is a reduction in the future sponsor contributions.

You have to ask about the importance of the liabilities from the standpoint of the sponsor making an investment decision. As a crude analogy, you could say that the vested benefits of the pension plan (or all of the accrued benefits) are bonds issued to the beneficiaries by the corporation, which then accumulates assets to repay this indebtedness. When a corporation issues a debenture and takes in money, does the corporation invest that money in the light of the fact that its balance sheet shows x dollars due in 1990 or does it just know that it owes that amount and invest the money in light of working capital needs? Perhaps the situation has changed with the advent of ERISA. It may be inappropriate to base the investment policy for a defined benefit pension plan on the liabilities without viewing the pension fund as a corporate asset.

MR. SKALINDER: I fundamentally agree with you but would distinguish between financial realities and accounting realities. Much of a plan sponsor's concern centers around reasonable product pricing, competitive product pricing with others in the same market, and the fluctuation of pension contributions over a period of time due to investment gains and losses. The investment policy adopted may be designed along with the actuarial method and asset valuation method to produce a particular

accounting result which may not take into consideration the long-term financial reality or, to prejudice the issue, the termination financial reality.

Bill Solomon's dispatch of the past and Gary Pines' discourse on the future have now brought us to the point where there is nothing left to talk about except the realities of the present. Richard Ennis will cover the process of setting an investment policy.

MR. ENNIS: Our outline identifies three major areas: the need for statements on investment policy, the structure and contents of statements of investment policy, and the decision-making process for developing statements of investment policy. I will try to organize my remarks along those lines.

My comments are similarly directed toward a defined benefit ERISA-type pension plan. Although most of my experience is in the large corporate pension fund area, the concepts and the precepts are universally applicable and would also be applicable in the public fund area and for other non-ERISA or non-defined benefit types of plans.

ERISA has done much to clarify the need for statements of pension fund investment policy. The recently issued regulations by the Labor Department with respect to fiduciary standards strongly imply that the plan sponsor is responsible for developing the statement of investment policy. They imply that the sponsor should do the kind of cash flow or actuarial modeling Gary described since the investment policy should be closely related to the actuarial requirements of the plan.

There is another reason why I think it is important to have a statement of investment policy and that reason is closely related to my view about who bears the risk in a defined benefit pension plan fund. The corporate sponsor bears all of the risk. Prior to the passage of ERISA, the assets could be turned over to the trustee, and plan provisions permitted the sponsor to walk away from the plan if either the sponsor or the plan got into serious financial trouble. That no longer is the case. The PBGC has a substantial claim on the net worth of the corporation, creating a situation whereby the corporation is in effect the financial owner of the pension fund. In cases where this sum of money may equal or exceed the net worth of the company, the corporate board of directors would be foolish not to see that there is a sensible plan for investing the funds.

Given the need, what should be the content of the statement of investment policy? What should it not contain? In simplest terms, the statement of pension fund investment policy is the communication of a risk tolerance to the fund's investment manager. It should be an unambiguous statement as to the degree of risk that the sponsor is willing to undertake with the pension fund.

Policy is the key word. It should be distinguished from investment objective and investment strategy. If you spend much time in the pension fund investment area, you hear sponsors talking interchangeably about policy, objective, goal, or strategy. These words represent different concepts. By policy, I mean a course of action that can be implemented, such as limiting the investment in common stocks to 70% of the fund. An

objective, on the other hand, does not describe a course of action, but rather a desired result, such as exceeding the S&P 500. It is more important for the sponsor to decide how much risk he is willing to assume and to express that tolerance as his policy, for example by specifying the maximum commitment permitted in common stocks or requiring volatility in common stocks to be no greater than that of the market. Once an investment manager knows this, he can comply with that policy and produce what is the common objective of all pension funds -- to earn the highest rate of return commensurate with the risk that the sponsor is willing to assume.

A statement of investment policy ought to include three major elements. The first is the distinction between the responsibility of the plan sponsor and the responsibility of the investment manager. Second, it should state the risk tolerance of the sponsor. Third, there should be emphasis on the importance of diversification.

A distinction should be made between policy on the one hand and strategy on the other. The policy or the risk decision is the responsibility of the sponsor. Only the sponsor can decide how much risk he is willing to undertake. Investment strategy represents price decisions like "the stock market looks high today" or "I think interest rates are going up". It presumes a subjective strategic outlook about markets. Presumably the investment manager knows more in this area than the sponsor. Most sponsors would confess that they have no idea about strategy and that is why they have selected an investment manager. Even if the sponsor does have strong ideas in this area, it is undesirable for the sponsor to get involved in specifying a strategy. To confound policy and strategy is very dangerous. For example, it makes it very difficult to have an effective evaluation of investment performance, if it turns out that both the sponsor and the investment manager were engaged in the strategy area. The risk decision of the policy is the responsibility of the sponsor and the investment strategy is the responsibility of the manager.

The second element that should be in the statement of policy is the statement of the risk tolerance. There are a number of ways that the risk tolerance of the sponsor can be stated, but the best way is the simplest way -- to state the maximum allowable percentage of common stocks. The sponsor may also wish to specify a maximum percentage for other risky asset categories, such as international investments or real estate. Although there are a number of ways of getting involved in much more sophisticated methods of measuring risks such as beta coefficients or volatility measures of different asset classes, as a practical matter the most common and most effective way is to prescribe a maximum percentage on equity investments.

The third important element of an investment policy statement is emphasis on diversification. ERISA says that pension assets are to be broadly diversified unless it is clearly prudent not to do so. One of my colleagues remarked that, with respect to diversification, what ERISA is trying to tell us is that some is good, more is better and too much is just right. It is clear that the theme of the investment markets of the late 1960's and 1970's is that having all of your eggs in one basket is perilous. The level of diversification of pension funds has increased dramatically since the late 1960's. A combination of stocks and bonds is one effective way to diversify a portfolio. Owning asset classes whose price movements

are not perfectly correlated brings about diversification. There is more movement into other such asset categories, like real estate and international common stock portfolios. There are also more pension funds in the United States following the Canadian lead in the use of mortgages in pension fund portfolios.

Another major trend in bringing about increased diversification of pension funds is the movement to employ more than one investment manager. Traditionally, there was a single manager of a pension fund who was usually also the trustee. It is now common to have a master trustee who typically invests none of the assets but provides an accounting system to accommodate a stable of managers. Some major pension sponsors have as many as 10 or 15 different investment managers.

What should not be in a statement of pension fund investment policy?

Sometimes, in their effort to be thorough, people who create these statements produce pages of legalese and "do's" and "don'ts". Most of the best statements of investment policy are one page long and contain the three elements that I just mentioned.

The statement should not include any distinction between current income, realized gains, and unrealized gains as components of investment return. There is no economic basis in a tax-exempt fund for these distinctions. It is difficult to account for their persistence, but it may come from the traditional accounting orientation of insurance companies and large banks, where it was necessary to know the book value of the asset. The problem is compounded by the fact that some of the actuarial methods for determining asset values and interest earnings have continued to be based on realized gain income. Instead of focusing on the economic or market value of the assets and their proper composition, people have been focusing on irrelevant accounting considerations.

Another element that does not belong in a statement of a pension fund investment policy is the actuarial interest rate as an investment return objective. We all know that the actuarial interest rate is a relatively arbitrary value chosen in estimating a plan's liability. That liability is determined by the pension promises made by the sponsor and the experience that will occur. The best example that I have for illustrating why it is inappropriate for a defined benefit plan to use the actuarial interest assumption is the case where, for a particular plan you might choose one package of interest and salary scale assumptions of 7% and 7%, reflecting the current anticipated level of inflation; alternatively, you might find that a combination of 3% interest and 2% pay increases would produce identical contributions for that plan. Should, under one circumstance, the investment objective be 7% and under the other, 3%? I do not think so.

Some policy statements are lists of overly restrictive or perfunctory guidelines. These usually result from the sponsor's overenthusiasm for statements he believes will be prudent and helpful to the investment manager. They are designed to foster a broad diversification of the fund. For example, the sponsor will specify that not more than 15% should be invested in any industry and not more than 5% in any one company. He may

specify certain maximum levels of portfolio turnover or particular bond rating. Such a policy tends to be very restrictive for the investment manager. The investment manager knows or should know more about diversifying the fund than the sponsor or else he should not have been hired in the first place. Such guidelines very rapidly tend to become out-dated and arbitrary.

It is very difficult to evaluate the investment performance of the manager if he is hamstrung by guidelines that were created by someone who knows less about investing than the manager. The investment manager should be accorded full discretion for the management of the pension assets within the limits of the policy. If the sponsor limits the investment in common stocks to 50%, that limit should be observed, but the manager should have full discretion to select individual investments and decide on the purchase and timing of investments. He should be able to execute the orders freely. He should be responsible for diversifying the assets. He should be able to make any adjustments to the equity/fixed income ratio that he believes appropriate in light of his strategy. For example, if the maximum equity exposure is 50% and the manager is very bullish, then he ought to be able to be at 50%, but if he is bearish, he should have the discretion to reduce the equity exposure to reflect his outlook for the market.

The investment manager should be asked to review the policy statement. If he does not find it acceptable, he should not be expected to implement the policy statement. All too frequently, investment managers are not candid enough with the sponsor for fear of losing the business. The investment manager needs to be encouraged to be very candid as to whether or not the policy statement is realistic and sensible.

The last item to be covered in the outline is the decision-making process. The state of the art is the use of actuarial projection models in conjunction with asset simulation models to help the sponsor evaluate the financial implications of various investment policies. On the investment side it is recognized that investment markets are uncertain. We use methods which are basically Monte Carlo simulation techniques to create a frequency distribution of rates of return for different policies. An all-bond policy has a tight distribution about a relatively low expected value and an all-common stock policy has a wide distribution about a higher expected value. In using these kinds of simulation models with actuarial projections, we map rate of return uncertainty into uncertainty of future pension contributions and future assets (which are then related to vested benefits). The sponsor can get a feel for different investment policies. The actuary has a very important role in supporting this type of investment policy decision-making, because of the need for good actuarial projections.

In general, investment managers do not participate in investment policy making. Investment managers have become performance oriented and very concerned about their portfolio of stocks and what the market is going to do. They do not engage very extensively in active investment counseling. The term "money manager" is used much more widely than the term "investment counselor," and that is probably a better term because the focal point of the investment management business clearly is managing of the money. The sponsor must determine how he wants his assets managed before he goes to the investment manager.

MR. SKALINDER: I would disagree somewhat with Richard's remarks about the independence of the liabilities from investment performance. The employer's willingness to grant benefit increases, especially ad hoc increases to current retirees, often depends fairly directly on investment performance and the perceived strength of the fund on the part of the plan sponsor.

MR. PINES: Do you feel there is a need for the investment manager and the actuary to discuss the investment policy?

MR. ENNIS: It would be an ideal, but I think in most cases there is such a vast difference between them that it would not be very effective. The actuary probably is in at least as good a position to assist the sponsor with investment counseling as the investment advisor. It is surprising the extent to which the investment advisor asks for instructions on how the funds should be invested, although some investment advisors are working hard to develop investment counseling methods. Some of the actuarial firms are beginning to offer investment policy consulting. Ideally the sponsor should utilize the insights of both, but he has to know what he wants to accomplish before setting out to do that.

MR. MARTIN LEVENSON: I have a question for Mr. Ennis. In your description of statements of investment guidelines, you separated them into three areas: statements of policy, strategy, and what you call goals or objectives. You addressed the first two in some detail but the third aspect you addressed only in the negative sense of stating that the actuarial return assumption was not an appropriate factor. Do you have any views as to whether there are practical and useful ways of formulating a statement of investment objectives for a fund?

MR. ENNIS: Sponsors traditionally have relied on objectives such as a 10% annual return or a return in excess of the S&P 500. I feel that there has been too much reliance on such objectives and not enough willingness of the sponsor to make a decision on how much risk should be undertaken with the pension fund. It is a little bit like standing on the sidelines jumping up and down saying that we do not want to lose money, that we want to make 10% a year.

Let me give you an example. If we revisit the decade of the 1960's, say 1958 to 1968, and consider in retrospect the rates of return that were earned on institutional portfolios, most people would not have been very happy with an objective of a 9% return. Everyone was earning 15% a year and thought this would continue in the future. Since inflation in that period averaged about 3% a year, 9% would have represented a hefty 6% real return objective. During the next 10 years, of the 3,000 funds we monitor, not one made 9% a year over that decade. Inflation in that period averaged about 6%. My point is that capital markets are unconcerned about what people want. It is more sensible for people to decide what they are willing to live with and to try for the best return commensurate with their risk tolerance, than to aim for an absolute or even a relative objective.

What if the sponsor still insists on a rate of return objective? We must first recognize that the capital markets themselves are uncertain, that the rate of return objective should be relative to some standard, such as the rate of inflation or market indices. To say we want to earn 9%

annually ignores the fact that in many years 9% will not be available. The rate of return objective should be consistent with the investment policy and risk tolerance. If you tell a manager he can invest 100% in common stocks and yet ask for an annual return of 8% or 9%, he will be confused, because he could purchase government bonds or guaranteed investment contracts from insurance companies that presently yield over 10%. Similarly you should not expect a manager to produce a rate of return in excess of the S&P 500 if he can invest only 70% in common stocks.

The concept of time horizon should also be recognized. With a rate of return objective, it is particularly important that a reasonable period of time be allowed for the objective to materialize. This time horizon should be set to one or two market cycles.

MR. MEYER MELNIKOFF: I would welcome the ideas of the panel on how to determine the meaning of the term "risk." How do you evaluate a sponsor's so-called tolerance for risk and put it down in such a way that all will thereafter agree on the meaning of the term? Is the concept of beta helpful?

MR. SOLOMON: We have tried to determine risk in terms of the employer's ability to withstand volatility in his contribution rate. We look at risk not from the point of view of the asset side so much as the contribution rate that would be required and the volatility that would result from certain adverse economic conditions relating to both investment income and salary increases. We try to get plan sponsors to define risk in terms of the maximum that the company is prepared to pay for contributions. In the Canadian environment, it seems to work well. We do not get into the area of defining risk in terms of the beta of the entire portfolio.

MR. SKALINDER: I agree that most plan sponsors would tend to define their risk in terms of the accounting reality of the possible volatility of their contributions. They are less concerned with the financial reality, which relates to the volatility of the fund itself and which may be relevant to a termination disaster. That is why I would suggest that a projection study showing them the effect of different variables on their contributions is an important starting point for setting investment policy. It is the only way you can give them an informed opinion as to what a reasonable liability future looks like. You can then apply the Monte Carlo asset simulation model to show them the effect of investment policies not only on the fund itself, but also on their contributions and the relationship to their accounting which affects their relationship to their business competition. I would emphasize again that some thoughtful sponsors are not as concerned about the absolute level of pension contributions as with whether or not they are paying more than their competition for pensions.

MR. ENNIS: I know of no better way to instigate a brawl in a Wall Street tavern than by starting a debate on how to measure investment risk. There are two distinctions that should be made. First, what is the nature of the sponsor's risk? He should be concerned with excessive contribution levels associated with a particular course of action or the probability of a substantial reduction in the funding of vested benefits. That is, he should think of risk in terms of its financial implications. Second, how do you deal with the concept of investment risk? The prevailing theory

of finance that is taught in every major business school has a very well developed notion of risk -- related to the dispersion of returns associated with a particular investment vehicle. We cannot know precisely what the dispersion of returns will be in the future nor can we know for certain what the correlation of the distribution of the returns will be, but the current theory is a fairly sensible way to begin to deal with the notion of investment risk.

MR. ROBERT CLANCY: If a plan sponsor is about to invest or has invested in a pooled fund, he has adopted or is about to adopt the objectives of the investment manager of that fund. You can categorize pooled funds in fairly general terms, such as growth funds, equity funds, bond funds. Is it reasonable to use a performance analysis to compare a particular pooled fund against the population of similarly categorized pooled funds?

MR. SOLOMON: Once again I have to restrict my knowledge of this subject to the Canadian environment. There are probably about 30 pooled funds operated by major trust and insurance companies. With that number of pooled funds available, it is fairly easy to know what the management style and characteristics of the fund manager are. Most of the surveys comparing the results of pooled funds tend to lump them all together. However, if you deal with the industry weightings, you can determine something about the management style of the investment manager, as well as the cash component. Some managers are very defensive and have a high cash component, others are fully invested, while still others vary the amount depending on their perception of the market. To this extent you can try to interpret the results.

MR. ENNIS: Pooled funds of banks and the separate accounts of insurance companies and mutual funds are becoming more attractive vehicles for investments by a number of major pension funds. The separate accounts of Hancock, Prudential, or Morgan Guaranty represent interesting investment opportunities, such as real estate funds, international investment funds, stock funds, and private placement funds. When the sponsor of a large plan decides what his overall investment mix is going to be, he may utilize these funds for easy access to real estate investments, a growth stock philosophy, etc. In that case, the investment objectives of the pooled fund do not become those of the sponsor.

MR. CLANCY: The most logical explanation I have heard for the bandwagon growth of popularity of the performance measurement services over the last few years is the requirement imposed by ERISA for fiduciary responsibility. The fiduciaries involved would like to have some quantifiable analysis that shows they were being prudent in their selection or retention of investment managers.

Do you feel that the performance measurement service represents the best state of the art at the moment and the best hedge that fiduciaries now have available?

MR. ENNIS: I do not know. Certainly our business had grown to a sizeable volume long before the passage of ERISA. Although ERISA does require that any delegated function be evaluated, the sponsors would feel the need to do that in any event. I do not think that ERISA has had a major impact on performance evaluation services. As much as anything, the impetus is due

to the sponsor's concern about these assets. The size of the funds, their tremendous growth, and the sizeable economic and financial cost all affect this concern.

MR. CLANCY: Have any of you noticed in the last few years any increase in interest among plan sponsors to establish a specialized bond portfolio to cover the underlying liability of a closed group, for example retired lives, where this block of assets is designed to immunize the liabilities of the plan sponsor against future market swings or interest rates?

MR. SOLOMON: If there is a liability that a particular plan sponsor wants to immunize and the sponsor is presently in a pooled fund, we would encourage him to withdraw from the pooled fund and invest in a segregated bond portfolio. You can view a pooled bond fund as similar to a pooled equity fund. It is a very liquid investment vehicle. If there is a situation that requires immunization, we would recommend segregation of particular bonds to back that. In Canada, it is more common to use mortgages than bonds because of the similarity of the asset to the liability, being a self-liquidating investment. With interest rates on mortgages exceeding those of bonds in Canada, this has become popular.

MR. PINES: I heard discussion on this topic by plan sponsors and have seen investment managers make proposals which they say are unique because they can do this. The only one that I have seen has been a company that has purchased annuities from life insurance companies to immunize their portfolio.

MR. ENNIS: One of the hottest buzz words in the pension investment business is bond immunization. It is basically the process of constructing a portfolio of fixed income securities that have a high likelihood of locking in a particular rate of return. This is accomplished by controlling the duration of the investments as opposed to strictly their maturity by taking into consideration the incidence of coupon income and principal. Investment managers were chagrined when they realized this technique was developed by actuaries scores of years earlier. It has become an investment novelty and a number of programs have sprung up to immunize a bond portfolio to a particular yield over a particular period of time. The problem is that sponsors usually do not know what magic rate of return should be selected for immunization.

