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## INVESTMENT VEHICLES TO COPE WITH INFLATION

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Long term inflation poses a serious threat to the ability of pension funds and insurance companies to adequately fund their obligations. This session will focus on those investment strategies which have been and are being used to cope with inflation.

1. Uses of traditional investment vehicles
2. New approaches and types of investments
3. The role of traditional real assets, such as real estate
4. The role of non-traditional real assets, such as commodities, collectibles, etc.

MR. JAMES S. RUBIE, JR.: I'd like to demonstrate by means of an example the importance of the role of investments in the funding of long-term obligations of either a pension fund or an insurance company. Table A is an "actuarial balance sheet" for a pension fund.

TABLE A  
Conventional Pension Plan Balance Sheet  
(All items discounted to the present time at 8% interest)

Assets	Liabilities
Trust Fund Assets	Present Value of Benefits to
\$ 7,738,000	be paid to:
Present Value of Future	- Present retired
Contributions for Present	participants and
Participants:	their beneficiaries \$ 1,378,000
- Future service 2,196,000	- Vested terminations 275,000
- Past service <u>4,796,000</u>	- Currently active
Total	participants <u>13,077,000</u>
\$14,730,000	\$14,730,000

\*Mr. Bushre, not a member of the Society, is treasurer of the State of Alaska.

\*\*Mr. Hale, not a member of the Society, is manager of employee benefits for Fruehauf Corporation in Detroit.

\*\*\*Mr. Keating, not a member of the Society, is vice president, group pensions, with the Travelers Insurance Company.

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On the "asset" side it shows the present fund assets and the actuarial present value of future contributions for present participants, split between future service and past service. On the "liability" side it shows the actuarial present value of future benefits to be paid to present retirees, vested terminated employees and currently active participants. In obtaining the actuarial present values, the future contributions and benefit payments are discounted at 8% interest. This doesn't really give you a good feel for the role of investment return, so we also have a balance sheet prepared for the same plan except future contributions and future benefits are not discounted (Table B).

TABLE B  
An Alternative Pension Plan Balance Sheet  
(No interest discounts; future investment earnings shown as an asset)

Assets	Liabilities
Trust Fund Assets	\$ 7,738,000
Future Contributions for Present Participants:	Benefits to be paid:
- Future service	- Present retired participants and their beneficiaries
- Past service	- Vested terminations
Future Investment Earnings (8%)	- Currently active participants
Total	Total

Note that there is a new element - future investment earnings. At 8% future investment earnings equal \$88,742,000 which is quite a staggering amount. The bottom line on the first balance sheet was \$14,730,000. On the second balance sheet it was \$109,376,000. The difference is quite great and it's due to investment return. This illustration demonstrates that the role of investment is far greater than most of us assume, whether we are dealing with insurance company liabilities or pension plan liabilities.

We have a very distinguished panel of investment experts and our first speaker is Mr. Robert Zuccaro. Mr. Zuccaro has 14 years of experience in investments as a securities analyst and portfolio manager. He is also the president of the Axe-Houghton Mutual Fund. The second speaker is Mr. Richard Hale. His responsibilities as the manager of employee benefits of Fruehauf Corporation include benefit administration and management of pension investments. His company has U. S. pension assets totaling \$260 million. Mr. Hale is also a member of the executive board of the Michigan Chapter of the Midwest Pension Conference. The third speaker is Mr. Thomas Keating of the Travelers Insurance Company. He is executive vice-president of Travelers Investment Management Company, a member of the Traveler's asset allocation committee and the real estate portfolio committee. Our fourth speaker is Mr. Peter Bushre. Mr. Bushre has complete responsibility for the investment of all funds of the State of Alaska which involve about \$5½ billion of assets, and also include the two state pension funds of about \$1 billion. He authored and led the successful lobbying effort for legislation in 1980 which gives the state the power to invest in alternatives to the traditional investments of stocks and bonds. Mr. Bushre purchased two metric tons of gold for the Alaska retirement funds after that legislation was passed.

MR. ROBERT ZUCCARO: During 1976 to 1980, the rate of inflation as measured by the Consumer Price Index (CPI) steadily accelerated from an average of 5.7% in 1976 to 13.5% in 1980. Inflation peaked at 14.7% on a trailing 12-month basis in March of 1980. Since then, the U. S. economy has been in a disinflationary economic environment. The CPI has now dropped to a 7.7% annual rate for the past twelve months.

It is a bit paradoxical talking about traditional investment vehicles to cope with inflation when inflation is coming down. So for our purposes of discussion, I will address my remarks both from the standpoints of inflation and disinflation.

Further, for purposes of discussion, let's define traditional investment vehicles as stocks, bonds, and cash. The proxy for stocks will be the Standard & Poor's (S&P) 500, including the reinvestment of dividends, or total return. The proxy for bonds will be Salomon Brothers Hi-Grade Bond Index, including reinvestment of interest, again total return. The proxy for cash short-term investments will be 90-day Treasury Bills.

The following table shows rates of return for stocks, bonds, and cash in various intervals during the period of 1926 to 1980, the year that inflation peaked.

There has been essentially a zero real rate of return earned on cash over the 1926 to 1980 period. The annualized rate of return was 2.8% for cash and the annualized increase in the CPI was 2.9% over this 55-year interval. When inflation accelerates, like from 1970 to 1980, and 1975 to 1980, real rates of return on cash are typically negative.

There has been a real rate of return of less than 1% per year in bonds during 1926 to 1980, when the total return from bonds was 3.3% per year and the CPI advanced at a 2.9% annual rate. When inflation accelerates, real returns from bonds are typically negative. When inflation dramatically accelerates, nominal total rates of return can be negative. Starting in 1977 coupons on Moody's AAA bonds have moved from 9% to 16% currently. On a total return basis, investors have lost money in bonds in every year since 1977. Salomon Brothers Bond Index declined .1% in 1978, 4.2% in 1979, 2.6% in 1980, and 1.1% last year. One major investment banker, probably looking at the same numbers as we are, labeled bonds as "certificates of confiscation."

There has been a real rate of return on stocks of about 6 percentage points per year during 1926 to 1980. Stocks provided a rate of return of 9.4% per year, while the CPI advanced at a 2.9% annual rate. Stocks are regarded as a proven hedge against inflation. Everybody says that stocks are a hedge against inflation, but they don't say why.

Why then are stocks a hedge against inflation? There is a real growth factor of roughly 2% in corporate profits. If you look at the upper right hand part of the table, you will see that corporations have increased their profits faster than inflation over each interval. When inflation was low during 1950 to 1980, the CPI advanced at 4.3% annually and corporate profits grew at 5.7% per year. When inflation was highest in 1975-1980, profits grew at 13.2% per year and the CPI increased by 9.2% per year.

Now that it's been demonstrated that stocks are a hedge against inflation, what types of stocks should be used in the portfolios of pension plans to

ANNUALIZED RATES OF GROWTH

	<u>CPI</u>	<u>90 Day T-Bills</u>	<u>Salomon Hi-Grade Bond Index</u>	<u>S&amp;P 500 Index*</u>	<u>S&amp;P 500 EPS</u>
1926-80	2.9%	2.8%	3.3%	9.4%	4.7%
1930-80	3.4	2.8	3.5	9.5	5.8
1940-80	4.7	3.4	2.7	11.5	8.2
1950-80	4.3	4.4	2.8	10.9	5.7
1960-80	5.5	5.5	3.3	8.3	7.8
1970-80	8.1	6.8	4.2	8.5	11.2
1975-80	9.2	7.9	2.2	14.0	13.2

ANNUALIZED RATES OF RETURN  
DURING PERIODS OF DECLINING AND STABLE INTEREST RATES

	<u>Moody's AAA Corp. Yields</u>		<u>S&amp;P 500 Index*</u>	<u>Salomon Hi-Grade Bond Index</u>	<u>90 Day T-Bills</u>
	<u>Start of Period</u>	<u>End of Period</u>			
1930-40	4.6%	2.8%	1.8%	6.5%	0.3%
1930-50	4.6	2.6	7.4	4.5	0.4
1932-46	9.3	3.1	11.5	5.3	0.2
1938-50	5.8	3.2	10.1	2.8	0.4
1930-60	4.6	4.4	10.3	3.6	1.0
1931-68	4.9	4.7	12.4	3.4	1.5
1937-56	3.3	3.4	14.4	2.2	0.9
1926-67	6.3	6.2	10.2	3.5	1.6

\*Includes reinvestment of dividends or interest.

attain superior investment returns? If corporations are astute enough to keep their profits growing faster than inflation, it stands to reason that those companies able to keep their earnings growing faster than corporate profits should generate superior investment returns.

Many studies have been done on the stock market. A lot of theories have been advanced such as the Efficient Market Theory which holds that no amount of analysis can produce superior returns because the market in its collective wisdom is smarter than everybody else. Studies have been done which show that low Price/Earnings (P/E) stocks outperform high P/E stocks. Studies have been done which show that small companies outperform big companies. Surprisingly little work has been done on the correlation between earnings growth and stock prices.

There was an obscure study done by Latane and Tuttle on 48 randomly selected Value Line stocks during 1950 through 1963. It was a simple study but a good illustration. The 48 stocks achieved annualized price appreciation of 12% per year over the 14 years. The biggest 8 earnings growers achieved rates of return of 30% while the worst 8 earnings growers achieved rates of return of a mere 1%.

At E. W. Axe & Co., we do a lot of our own internal work on the stock market. We dissect our portfolios at the end of each year to see how we achieved the rates of return that resulted. One of the things we do is look at earnings growth and price performance. The stock market was up in 1978, 1979, and 1980. In each of these years there was a strong correlation between earnings growth and prices. What we did for each year was to arrange the 40 to 60 stocks that were in the portfolio by descending order of earnings growth and price performance. This means that the faster earnings growers were at the top and the slowest at the bottom of the list, and that the best price performers were at the top and the worst at the bottom of the list. There was a remarkably high correlation between the top 25 companies in each of these three years -- 22 of the 25 were among the fastest earnings growers and best price performers in each of the three years. In 1981, when the market was down -- the S&P 500 Index declined 9.7% -- there was less correlation between earnings growth and stock price performance. This generally happens in down market years.

Another thing we did was to look at the largest 100 companies in the S&P 500 in 1976. Over the four year period 1976 to 1980, the S&P 500 Index advanced 27% while S&P 500 earnings increased 52%. We looked at those companies with earnings growth of less than the S&P 500 and found that for those companies with earnings growth of less than 50% from 1976 to 1980, this group of stocks declined an average of 27%. For companies whose earnings increased more than 50% over the same four year period, the average appreciation in price was 53%. The very rapid earnings growers -- with earnings growth more than twice the S&P 500 or over 100% -- achieved a remarkable 99% gain in price on the average.

What are the appropriate investments for a pension fund in a period of inflation? If you believe inflation is going higher, buy stocks. If you believe that inflation will remain stable and so will interest rates, buy stocks. Let's look at what happened during periods of stable interest rates in the table. It can be seen that during four periods of stable interest rates, 1930-60, 1931-68, 1937-56, and 1926-67 -- even though the periods overlap -- stocks did substantially better than bonds and cash. So in a period of stable interest rates, you want to be in stocks.

Most investors assume that in a period of declining interest rates more money will be made in bonds than in stocks. This may be true in a given year or two, but not over any lengthy period of time. Looking at the table you will see in the middle of the page the four periods of most dramatic declines in rates since 1926. The sharpest percentage drop in rates occurred in 1932-46. The yield on Moody's AAA corporates dropped by two-thirds, from 9.3% in 1932 to 3.1% in 1946. Over this 14-year span the annualized rates of return were 11.5% and 5.3% for stocks and bonds, respectively.

Some investors believe that they can successfully time the market by moving from stocks to bonds to cash, and back to stocks again, and so on. But it probably cannot be done. The economy, bond market, and stock market no longer work in the old classical ways. The typical economic cycle used to be made up of about 2½ years of economic expansion followed by ten months of contraction or recession. In 1979, 1980, and 1981, our economy experienced one quarter of negative real growth in each of these years. We experienced the shortest recession since World War II in 1980 followed by the shortest recovery. We're currently looking at unprecedented real rates of return in the bond market. The stock market used to discount the turn in the economy, as measured by corporate profits, by about 5 months in advance. In 1980, corporate profits peaked for this cycle in the first quarter. The prime rate hit a record 21% in April. In 1980, the S&P 500 Index advanced 26%, on a total return basis it was up 32.4%, marking the second best year in 25 years in the stock market.

The people from the Becker Survey, which is the largest survey of pension funds and pension fund managers in the country, tell me that of about 600 managers that are professed market timers, perhaps 3 or 4 have demonstrated a good track record as market timers over the past ten years.

In summary, stocks should continue to provide higher rates of return than bonds or cash. One million dollars invested in Salomon Brothers Bond Index in 1930 would have grown to \$5 million by 1980. The same million dollars invested in the S&P 500 Index in 1930 would have grown to more than \$90 million by 1980.

The conclusion is that regardless of the level of inflation, and regardless of the direction of inflation, stocks should be a far higher percentage of pension plan assets than the approximate 50% that stocks comprise of pension plan assets today.

MR. RUBIE: Thank you, Bob. As I understand what you are saying, I ought to be fully invested in stocks and not bother with cash, bonds or anything else. At the same time, I hear you saying that I'm not going to be able to successfully time my investments. Does that mean when I have cash available I should buy the best stocks available for my fund?

MR. ZUCCARO: Rick Hale and I were discussing the fact that when stocks and bonds are on the bargain counter nobody wants to step up, because the economic news is bleak. Conversely, if you go back to 1980, it was a very good year. There was new direction in this country. There was in prospect the most positive legislation for business than at any time in the past 40 years. The market was humming along and the outlook was good. Since then the stock market has declined by about 20%. I suspect that the best way to manage your money is to put investment people in a vacuum and not have them ever read the

newspaper. When fundamentals are bleak, you're looking at low valuations and you should be buying. When valuations are high, the outlook appears all too rosy. I suggest that given the next 12- to 18-month time frame, you're going to do very well in both stocks and bonds.

MR. SAMUEL ECKLER: I've been hearing and reading that the stocks have been off for the last 10 or 12 years and statistics do indicate that. As I look at your table, you've seemed to demonstrate conclusively that they're been pretty good for the last 10 years. The end of 1980 was a pretty good market. Would the table be just as attractive if you used different periods?

MR. ZUCCARO: Parenthetically I would add that a point-to-point comparison is often meaningless. If you look at a five year period of stocks versus bonds, or stocks versus the CPI, stocks did very well for a five-year period ending 1980, returning 14% per year. If you look at the last five year period and the last ten year period ending in 1981, you see that while stocks have not done as well as the CPI, they've done better than bonds. And that's why it is really more important to focus on a longer time frame. Timing is important. I think very few of us as equity managers really keep stocks in the portfolio long enough to let management work its wonders. It is very difficult against the pressures of looking at economic events which are turning increasingly negative to maintain that patience, but if one does have the wherewithal to do that, he will be rewarded.

MR. DAVID E. GOODING: Bob, did you do that study on correlation between earnings growth and price change by industry?

MR. ZUCCARO: No, but I'm sure if you did, you would find industries which did substantially well through 1980, such as the oil service industry and the oil industry. If you looked at the automobile industry, it wouldn't have done so well.

MR. WILFRED A. KRAEGEL: One of the things you mentioned was that the prices followed earnings fairly consistently and, yet, to the more casual observer, it seems that about 10 years ago price-to-earnings ratios were generally very high and currently they are much lower. Do you think that the ratios 10 years ago were the more realistic or are the ratios today more realistic?

MR. ZUCCARO: In some cases with rapidly growing companies, the attrition of the price-to-earnings ratio was more than compensated for by the increase in earnings. In terms of your evaluation of the market, if you look at the market as a whole there are two things we look at. Price-to-earnings ratios over the last 15 years have averaged about 14 whether you use the Dow or the S&P. Currently you're going to find the P/E ratios are about half of what they had been historically. In terms of price-to-book, which is probably a better barometer of the market, but which is not as widely used as price-to-earnings ratios, price-to-book values are outstanding by comparison now. The Dow Jones is selling at a 20% discount to book value currently. Book value is about \$1,000 and the Dow is a little over \$800. It has only been below book value three times in the past 100 years -- 1932 during the depression, 1942 when nobody knew if the country was still going to be here, and 1948 when the war was over and everybody thought we were heading back into another depression. So that is the second part of the answer. Stocks are cheap. Bonds are cheap.

MR. RICHARD G. HALE: Primarily due to high interest and inflation, much has been written the past year in the investment trade publications about a fixed-income investment strategy known as a "Dedicated Bond Portfolio" (DBP). This strategy has been hailed by some people to be the panacea that will reduce pension costs and unfunded liabilities, and condemned by others who say that there is no "free lunch." As with many controversial subjects, there is no right answer - it depends on the facts and circumstances.

We should begin by defining a DBP. Bond dedication is a strategy of determining a known stream of future benefit payments (for active and/or retired employees) and purchasing fixed-income securities of varying maturities such that the combination of coupon income and maturities will match the scheduled benefit payments. For example, a plan sponsor could request his actuary to provide a projected stream of annual benefit payments for a closed group of retirees. This schedule would then be given to an investment manager who would construct (dedicate) a portfolio of fixed-income securities so that sufficient funds will be available each January 1 to make the scheduled benefit payments for that year.

With the recent high interest rates, the result of purchasing the DBP would be to buy the stream of benefit payments at a discounted rate of return of about 15% with liquidity and a relatively high degree of certainty. (In constructing the portfolio, one generally wants to emphasize strong credit, liquidity, and call protection - which leads to a portfolio that consists of many U.S. Treasury issues and federal agency issues). Another result for some plan sponsors (with the concurrence of their actuary) is to value the liability for benefits that have been covered by the DBP at the rate of return of the portfolio - instead of the valuation rate.

The reasons for isolating certain liabilities and funding them with a DBP are many and varied. Before reviewing some of these reasons I would like to stress that few, if any, plan sponsors have identical "facts and circumstances" with regard to their plans, plan investments and corporate cash requirements. A DBP is no panacea but it has features that can be very useful for the plan sponsor (working together with his actuary) who wants to help solve certain problems. Some of the major reasons for purchasing a DBP are:

1. LOCK IN HIGH RATE OF RETURN - Viewing the spectrum of asset categories, the fixed-income returns are at historically high levels, and the DBP presents an investment opportunity to lock-in current high yields. If this were the only reason for purchasing a DBP, the decision would be strictly an investment decision.
2. RISK CONTROL - Should a DBP be purchased for a retired life group, the assets for the retired group are isolated and matched with the retired liability so that the plan sponsor has a high degree of confidence that these retirees are taken care of. The overall plan risk is reduced as a portion of the assets are set aside in a low-risk investment. The balance of the plan assets can be managed somewhat differently (perhaps more aggressively) as these assets would, in this example, be those allocated to active employees where the time frame is extended and a greater degree of risk can usually be taken.

3. LIQUIDITY - In some mature plans, the pension payments equal or exceed the pension contribution which makes it necessary in some cases to sell plan assets to pay pension benefits. With a DBP for retired lives, the pension contribution would be available for investment -- instead of being used to pay pensions.
4. FLEXIBILITY - The above three reasons could also be reasons for purchasing a Guaranteed Investment Contract (GIC) from an insurance company. A GIC generally offers a higher rate of return than a DBP but unlike a GIC, a Dedicated Bond Portfolio can be liquidated at any time. If long-term interest rates fall and bond prices rise, the DBP could be sold to realize the gain to the plan.

In addition, unlike most GIC's where the rate is set at the time of purchase, a DBP is semi-actively managed and can easily be rebalanced if long-term interest rates rise. In this case, the manager sells many of the existing DBP issues and purchases different issues with higher yields, The net result of the rebalancing is to obtain a higher rate and since less present money is needed at a higher discount rate, a surplus can be released from the DBP.

5. LOWER CURRENT PENSION COSTS - The ultimate pension costs cannot necessarily be reduced with a DBP but the current costs can be. This can be illustrated by the example of where a DBP is purchased for all retirees with a 15% return with the plan's valuation interest being 6%.

If the plan sponsor chooses and the actuary agrees, the actuary could agree to value the retired liability at 15% (as it is essentially "locked-in"). This would result in a blended actuarial interest rate that is higher than the 6% rate. This higher assumed rate would decrease unfunded liabilities and decrease pension costs. The primary difference between using the blended rate with a DBP and simply raising the current assumed rate would be that a specific pool of assets has, in fact, been allocated to (or matched with) a liability group.

If the assumed interest rate is not increased because of the DBP, costs may still decrease as actuarial returns on the DBP could be higher than on the assets not in the DBP and to that extent an actuarial gain would arise.

6. TO HELP SOLVE FUNDING PROBLEMS - For plan sponsors who have plans with funding problems (that is, high unfunded liabilities) and who cannot afford to accelerate funding to mitigate these problems, the purchase of a DBP can help solve the funding problem. Instead of using the actuarial gain created by the DBP to reduce current costs, the plan sponsor (with the concurrence of the actuary) could use the gain to accelerate the past service funding period.

For example, a plan with a valuation interest rate of 6% purchases a DBP for retirees for \$20 million (at 15%). At the 6% rate, this liability was \$30 million. If the liability is "written down" by \$10 million, at a 6% assumed interest rate and 15 year amortization of actuarial gains, the result would be an annual \$1 million

reduction in cost. Instead of applying the \$1 million actuarial gain to reduce cost, an additional \$1 million is applied to the past service payment. The net effect of this process is that pension costs are not reduced but the additional past service payments has the effect of reducing the past service funding period from 30 years to something less than 20 years.

This application strengthens the funding of the plan with no additional employer cost. It is what I think of as using an asset situation to help solve a liability problem. Hopefully this type of application will encourage the plan sponsor to bring together the actuary and the investment manager on at least an occasional basis to review the liability and asset sides of the plan with each other.

There are probably other uses of the Dedicated Bond Portfolio not already mentioned but I hope that the reasons and uses we have reviewed provide an indication that a DBP is not just a device to reduce pension costs.

An area that provides the opportunity for substantial additional income to the pension funds and significantly reduces administrative problems is the Master Trust. Basically defined, a Master Trust is a trust arrangement whereby a plan sponsor uses one trust agreement to fund multiple employee benefits plans - usually involving several investment managers. The master trust arrangement generally provides that one trustee holds the total assets of all the sponsor's pension plans - instead of having multiple trustees. Accounting is provided on two bases:

1. INVESTMENT ASSET ACCOUNTING - A separate account is established for each investment manager and the sponsor is provided reports on the investment activity of all assets by manager.
2. PLAN ACCOUNTING - Since the master trust is essentially like a mutual fund where assets are combined for investment purposes, each plan holds units in the master trust. The master trustee provides accounting by plan (usually called equitable share accounting or unit value accounting) which indicates beginning and ending book and market values as well as contributions, income, realized gains and losses, unrealized appreciation or depreciation, pension payments, expenses, and transfers.

The administrative advantages of a master trust arrangement can be well illustrated by "before" and "after" slides with our situation at Fruehauf. Prior to our consolidation of assets into a master trust, we had six different trustees (asset custodians), five investment managers and 25 pension plans with the assets of most plans being held by two different trustees. This presented problems from both the administrative and financial accounting bases. With each plan having two "pots" of assets, it was necessary to combine the results of each to determine the plan asset activity for the year. From an investment management viewpoint, we would receive asset reports in six different formats (with six different trustees) and then have to consolidate them manually to see the big picture. It was like combining apples and oranges to get lemons.

Effective September 1, 1981, we consolidated all assets into a master trust at Citibank and hired two additional investment managers. Now all seven

investment managers are investing on behalf of all plans and each plan has units of the total assets. We receive accountings for each investment manager (in a uniform format) and a consolidated asset statement - in addition to the plan accounting.

The change to a master trust has resulted in a net savings for us because of several features of the master trust. These major areas of cost savings are:

1. FAIL FLOAT INCOME - In the normal course of security trading, all trades are supposed to "settle" five business days after the date a security is bought or sold. By "settle" we mean that the seller must deliver the security and the purchaser must deliver the funds. The great majority of trades settle on this settlement date. In many cases, however, the purchaser cannot deliver the funds and the trade fails. In this case, if the trust fund were to sell a \$1 million bond, the fund would not be credited with the proceeds until the funds are delivered - which may be several days beyond the settlement date. The result would be a loss of interest on these proceeds.

With a master trust, the trust fund will be credited with the proceeds on the settlement date - even if the trustee does not receive the proceeds until later. The interest earned on these advanced proceeds is fail-float income. It is also a two-way street so that when the trust fund buys a security and the seller cannot deliver the security by the settlement date, the fund is debited for the cost on the settlement date. On balance the sell fails generally exceed the buy fails resulting in additional income to the trust.

This crediting on the due date also applies to dividends and interest and the master trustee credits the trust fund on the date the dividend or interest payment is due - even if it has not yet been received.

2. ZERO BALANCE CHECKING ACCOUNT - With regard to pension benefit payments, we pay pension checks "in-house." Prior to the master trust we would make estimates as to when the pension checks would clear for payment and set up a schedule for funds to be transferred from the trust fund to the checking account on which the checks were drawn. Once the funds were transferred to the checking account, no interest was earned on the funds.

With the change to the master trust, we have established a "zero balance" checking account with Citibank so that funds are transferred almost each day to the checking accounts but only to cover the checks presented for payment on the previous day. As a result, all funds are earning interest for the plans every day possible. We have found, as have others, that the average pension check is not presented for payment until about 14 days after it has been received by the retiree. The interest on this 14 day "float" is significant additional income to the plans.

3. SHORT-TERM INVESTMENT FUND (STIF) INTEREST - Generally the uninvested cash of a pension fund is invested in the trustee's STIF fund earning

daily interest until needed by the investment manager for investment. In our master trust study, we were surprised to find that the returns on the STIF funds varied significantly by trustee. A 50-basis point (1/2%) difference was not uncommon. At the time of our study, we had about \$35 million invested in the various trustee's STIF funds. Since the STIF fund return for our master trustee was about 50 basis points higher than our other trustees, the annual additional income that the cash would earn with the master trustee was \$175,000 - more than covering the master trust fee!

4. SECURITIES LENDING - Additional income to the trust is earned by lending out the securities of the trust and investing cash collateral. I will go into this in more detail later.

In addition to the administrative and income advantages, a master trust can also provide an extremely helpful service in doing investment performance and portfolio analysis for a sponsor's funds. The services are basically computer-generated and provide the sponsor with much information that would be difficult to obtain otherwise. This information helps a sponsor understand how performance was obtained and provides the basis for a good dialogue between the sponsor and the investment manager.

Securities lending has been in existence for many years but was not available to private pension funds until January 1, 1981 when the Department of Labor issued an exemption for all private pension funds. It is a means of generating income to a pension fund with minimal risk.

First, what is securities lending? Securities lending is a process where certain entities (primarily brokerage firms) cannot deliver a security to complete a transaction and must either borrow the security from someone else or break the trade. In borrowing the security, the broker posts and maintains collateral equal to at least 100% of the market value of the borrowed security. This cash collateral is then invested in interest-bearing issues and the interest earned is shared.

The primary reasons why a broker needs to borrow securities are:

1. FAILS - Due to one of many reasons (one of the biggest being paperwork), the broker (or seller) cannot deliver the security on time to the purchaser. About 70% of all securities borrowed are to prevent fails.
2. SHORT SALES - The broker (and/or his customer) sells a security short and almost by definition of a short-sale (selling an unowned security in anticipation of buying it back at a lower price), this requires the borrowing of the security.
3. SPECIAL SITUATIONS - This would include arbitrage situations.

Lendable securities are common and preferred stock, corporate bonds, and U. S. Treasury issues. Entities that lend securities include endowment funds, foundations, insurance companies, savings banks, mutual funds, brokerage houses (which hold many client's securities in the "street name") and now pension funds.

While it is difficult to try to fully cover all of the details of securities

lending in a short period of time, hopefully an example of a transaction and a summary of the advantages and disadvantages will be helpful.

In our example there are three involved parties - the broker, the securities lending agent and the pension fund. The broker contacts the agent and says he needs to borrow 1,000 U. S. Treasury bonds of a certain issue with a current price of \$1,000 so that the market value is \$1 million. The agent (in our case, our master trustee) searches his pension accounts with whom he has a securities lending agreement and finds the required 1,000 bonds. The broker provides the agent with \$1 million cash collateral and the agent gives the broker the bonds. This collateral is invested by the agent and each day the agent "marks to market" - that is, reviews the market price of the loaned securities. If the price has fallen, the agent requires additional collateral immediately so to maintain collateral at least equal to 100% of market value. If the price increases the excess collateral can be returned to the broker. (In our case we require 102% cash collateral.)

In five days the broker no longer needs the borrowed securities and he returns them to the agent and the agent returns the collateral. In this five day period the \$1 million collateral has earned interest of \$2,000 (about 14%). The agent rebates a portion of this interest to the broker, keeps a portion of it for his fee and the balance is income to the pension fund.

The only advantage for a pension fund to lend securities is that it will produce additional income to the fund. Estimates on income are difficult because it depends upon the supply and demand in the marketplace, interest rates and the types of securities held in a portfolio (bonds and lower-capitalization stocks are in more demand). For our purposes we are estimating an annual return of 5 basis points of our total lendable portfolio of \$200 million - about \$100,000 per year.

Since cash collateral is maintained equal to at least 100% of the market value of the loaned securities daily, the primary risk with securities lending is that two events may happen at almost the same time. The agent has 100% cash collateral of a security based upon the market price at the close of the previous business day - for example, \$100,000 for 2,000 shares of XYZ Corporation of \$50 per share. That day XYZ stock jumps \$10 a share. The next morning the agent calls the broker and requests \$20,000 additional cash collateral (2,000 shares x \$10) and is informed that the brokerage house is bankrupt and cannot post the additional collateral. In this event the pension fund has lost \$20,000 - not \$120,000 because the agent already has the \$100,000 collateral.

This potential problem is substantially mitigated if the agents deal with only the top 10 brokerage firms where a bankruptcy is extremely unlikely.

From the plan sponsor viewpoint, securities lending presents us with an incremental return at minimal risk.

MR. NORMAN W. CLAUSEN: Mr. Hale, you mentioned that one of the apparent advantages of a dedicated bond portfolio was that by locking in a higher yield, the actuary could liberalize his assumptions. Couldn't one argue that by locking up the money in bonds rather than equities one ought to make the assumptions more conservative?

MR. HALE: If you buy a U. S. Treasury issue you have virtually 100% certainty that that is your return.

MR. ZUCCARO: In the dedicated bond portfolio you can guarantee that those specific liabilities will be paid regardless of what happens to the bond market. If you were to fund it with stocks, there's total uncertainty. You may think you will get the expected rates of return, but you won't know with certainty until the period is complete.

MR. WILLIAM OAKES: It appears that with zero balance checking you could save a lot of money by not writing checks at all. It costs a lot of money to have someone write a check and process it. Electronic funds transfer (EFT) might create huge savings if you write many checks.

MR. HALE: No question about it, but the trouble with electronic funds transfer is that elderly people just aren't using modern day processes. They want that check in their hands. We don't have EFT, but we've tried to have checks mailed to banks to make it more convenient and we find that 80% of our people want the actual check. It certainly would be advantageous for everybody to have EFT but I think it's going to take a generation or so to evolve. People who are working today are used to getting their paycheck by EFT and will be more used to it when they're retired.

MR. DALE B. WOLF: You suggested that there were two advantages in using a dedicated bond portfolio as opposed to a guaranteed investment contract to immunize your liability stream. One is that if rates should drop you can take your gain immediately on the market value increase and the second was that if long-term rates rise, you could sell and go longer. Isn't the second one essentially something you didn't want to do in the first place, which is take more risk? You go long because rates are higher and you have eliminated your immunization.

MR. HALE: We had a situation where we made some purchases in June, 1981 at a 14% yield. In early February of this year we rebalanced at a 15% yield - on the same retired liability stream. We ended up spinning off over \$300,000 in surplus assets.

MR. WOLF: Why would you want to sell if rates do rise? Presumably your income stream is then lowered and you end up in the same place. Is it an inefficient market?

MR. HALE: No. You're doing this for a long-term purpose. But it would be nice to see the bond prices go way up and you can terminate this with a 30% or 40% gain.

MR. WOLF: But assuming that you're funding a fixed stream of liabilities you're going to have to use that gain to pay those liabilities.

MR. HALE: Part of it.

MR. WOLF: On the fail float income, where is that coming from? I find it troublesome to think that the banks are just giving that away.

MR. HALE: I think they're probably hammering the brokerage people. They monitor this. It's to their advantage to monitor this negative float.

MR. LEONARD J. BARDSLEY: I'm associated with the Dupont Company pension plan. About 75% of the 40,000 benefit recipients are paid by EFT and it works extremely well. We don't have lost check problems or many of the accounting problems.

I share the concern about the use of dedicated bond portfolios to raise the assumed interest rate. What you're doing in many cases is going into a class of assets with a prospective return 300 to 400 basis points below equities and a little lower than real estate and using that to rationalize a reduction in the present value of benefits simply because you've sawed off a chunk of the liabilities and matched an asset to it. I think the proper place for those portfolios is in the context of the asset/liability mix and the liquidity needs of the fund. You can saw off your liquidity needs for a significant period of time which may let you become more aggressive and hunt for higher prospective returns with the rest of the fund. That's where the real payoff is, not with some calculations on paper that purport to show a favorable difference, when you've actually gone in the direction of what may be a less favorable investment strategy.

MR. HALE: I agree. In fact, many publications claim that the most significant reason for doing it is to reduce cost. That is why I tried to emphasize liquidity and flexibility.

MR. THOMAS E. KEATING: The use of retirement plan assets to purchase real estate is one of the most important developments in the retirement investment areas in many years. Pension managers began to buy properties in the early seventies. Since 1975, retirement plan ownership of real estate has increased from \$1 billion to over \$12 billion. According to a 1982 study by Greenwich Research Associates, one-third of all pension funds now own real estate - that's more than double the percentage shown in the 1979 study. Originally, plans with over \$1 billion in assets did most of the buying. But most of the increase in buying in the past two years came from plans with \$50 to \$500 million in assets. The growth of investment in real estate by retirement plans has been unprecedented in the history of the Greenwich study - but future demand looks just as strong.

Why has there been such a tremendous growth in real estate investment by retirement plans? We think that several major factors caused the growth. The first factor is the belief that the United States is going to have a built-in high level of inflation for a long time. Declining rates of productivity, dependence upon foreign energy sources and lack of real economic growth did much to reinforce that belief. Secondly, real estate, unlike other capital markets, has a built-in sensitivity to inflation.

Pension plan liabilities and the underlying compensation levels that influence those liabilities are pushed by inflation. Real estate gives you an opportunity to beat inflation. In addition, ERISA forced plan sponsors to diversify plan assets to fulfill their fiduciary responsibilities. The final kicker for the turn to real estate was the failure of stocks and bonds to produce real returns during the 1970's.

The bull market that began in 1953 made people think that common stocks were an excellent inflation hedge. That faith collapsed in 1973 and 1974. Stocks not only failed to produce returns that were competitive with inflation, but lost nearly half of their value. That performance, coupled with increased short-term volatility, caused a flight from common stocks to the assumed safe haven of bonds.

But bonds were a major disappointment to investors. Investors were looking for competitive capital market returns that would cushion some of the stock market volatility. They found Kauffman's chaos instead. Ever increasing levels of inflation, uncertain government and federal policies, and huge government deficits sent interest rates soaring to record levels. Bond investments not only failed to provide a real rate of return, they actually turned out to be more volatile than the stock market.

Since they couldn't get satisfactory returns from the stock and bond markets, the pension community turned to the third major capital market for investment. The income producing real estate market is currently estimated at \$4 trillion. That's more than the bond and stock markets combined. In spite of the size of the market, real estate didn't become popular as a third asset class in the United States until recently. One reason is because we have had a relatively low level of inflation in the United States for a number of years. And pension people didn't understand real estate as an investment medium. Finally, the real estate investment community didn't offer a product.

Real estate is a suitable investment for pension funds for several reasons. Values of real estate have moved in a way that's similar to the obligations that are being funded. Equity real estate ownership provides the stable income of a bond portfolio and the inflation protection of a real asset. The income stream from a diversified real estate portfolio has, over time, been a source of income similar to a fixed investment. But there's a significant difference: As the leases expire, they are renewed at current market rates. That provides an attractive growth in income in inflationary times and also low inflation periods if available space is low. Likewise, the market values of real estate have been influenced by a number of inflation sensitive factors including construction costs and rent levels. In short, real estate offers high current income plus inflation protection. And real estate is not as volatile as stocks or bonds.

To realize the advantages I've been talking about, the investor has to give up something. And that something is liquidity. But pension funds, because of the long-term nature of their liabilities, are in a strong position to sacrifice some measure of liquidity in exchange for real estate's superior risk/return characteristics.

The question of how much real estate is appropriate for a portfolio really depends on the investors comfort with its relative illiquidity. Real estate may in fact compose 50% of a total portfolio and produce very desirable results on the overall volatility and return. Many European funds have already taken that direction. The Travelers generally limits real estate to 20% of our discretionary clients total assets and many plans are at a 5% to 10% level.

The opportunities in real estate are numerous and diverse. Real estate is a highly fragmented and inefficient market. Local analysis is vital. You have to understand the area, local supply/demand factors, demographic trends, economic conditions, and growth potential when you're evaluating any buying opportunity. Those external factors are just as important in the long-term performance of a property as its internal characteristics. Internal factors include lease structure, tenants, energy efficiency, general appearance (both internal and external) and engineering. Attention to those factors is critical in evaluating the long-term value of any property.

Equally important to the success of a real estate investment program is ongoing property management. Professional property management with strong controls and reporting capability is the key to getting the ultimate value from real estate. Supervision of each property manager with regular on site inspections is vital. At the Travelers, we have property managers in our regional field offices. Those managers supervise the contracted local property managers. They pay regular visits, often unannounced, to each property and chart the monthly flow of income and expenses. We want each property manager to recognize that he should be managing the properties as much for our client's benefit as for the existing tenants. We review and update a property budget and each lease with the manager each year. Capital expense items are also reviewed and approved when we think they are necessary to maintain the property's quality or to improve overall value. You can improve the overall return from a property 2% to 3% annually with strict attention to property management.

Can the growth of retirement plan investments in real estate be expected to change the characteristics of the real estate market?

More and more we hear that real estate is overbuilt and that many funds are operating on the greater fool theory. If, in fact, the United States is going into a deep or prolonged recession, what will happen to values of equity real estate?

There is little doubt that pension funds' buying of real estate has already had an effect on the real estate market. Pension funds have always been a large supplier of capital. But now, they've gone from major mortgage lenders to 100% equity ownership. High interest rates have made real estate ownership almost prohibitively expensive to all except the cash buyer. But real estate prices are still governed by supply and demand factors between tenants and existing space, not between the buyer and seller. There are still plenty of opportunities for the pension dollar. A building with a 50% vacancy rate is simply not going to appreciate in price. Most real estate investors are rational people who pay primarily for current and future earnings power, not for hoped for appreciation.

Good, quality real estate doesn't run up or collapse in price. Sure . . . there are dangers in real estate investing and soft markets will develop - look at downtown Atlanta in the early to mid 70's. But even in soft markets attractive opportunities exist for the careful investor. That's simply because of the inefficient nature of real estate. If you invest in a fund with broad diversification by geographic location and property type, you can reduce the specific risks associated with individual property weakness to an acceptable level. You have to be careful to pick a manager with both experience and understanding of the local real estate markets. That's vital in the real estate investment process.

Real estate is not a required investment for every retirement plan. But I think that every plan sponsor, from a fiduciary standpoint, would be prudent to at least consider using real estate. The plan sponsor's challenge is to develop investment objectives and then act on policy decisions on asset allocation that will meet those objectives.

In my mind, real estate appears to be a logical decision. It has many desirable characteristics: long-term appreciation, potential stable income level, inflation sensitivity and low volatility. I believe real estate is

an investment that the retirement community will become even more familiar and comfortable with in the years ahead.

MR. RUBIE: Tom, I have a question that relates to what has impressed me about the real estate funds sponsored by insurance companies. I've seen very little in the way of withdrawals. I know a lot of fund sponsors say the funds do well because they can crank up the value every year and nobody ever takes their money out, so who knows whether they're really getting the yields they claim.

MR. KEATING: There have not been many sales of property but those properties that have been sold have come in under the valuation at which the property has been carried. The withdrawals are starting to happen.

I think we will have, just like in the stock and bond area, a changing of managers. That's starting to happen more in the real estate area. The problem in the real estate area is that there are probably about 15 solid organizations in the business. But because of the interest on the part of pension plans based on the Greenwich studies, everybody is claiming to be a real estate expert. That's where the danger lies, and I think that could be a problem for us in the future.

MR. PETER A. BUSHRE: In his best-selling novel, Catch-22, Joseph Heller creates a seemingly irreconcilable paradox of men at war: anyone certified as insane is, by definition, unfit for military service; yet no sane human being, knowing what he was getting into, would ever volunteer for military service. The book goes on to develop the theme that war takes seemingly rational men and women and turns them into raving lunatics - otherwise normal people who would butcher their fellow man without blinking an eye. Under such conditions, the line between sanity and insanity is very thin; which is the reason I used it as the introduction to an address on the subject of alternative investments. In the investment business, the lines between sanity and insanity can be very thin.

In the world of 1982 it is no longer prudent to be "prudent" as the term is usually defined. It is no longer "prudent" to invest in the traditional and accepted manner because the traditional and accepted manner offers little if no chance of combating skyrocketing inflation. In this day and age it seems that the only way to be "prudent" is either by taking chances that traditionally are thought of as being imprudent or, lately, by sticking to ridiculously short maturities. The new "prudence" has been labeled alternative investing for want of a better term. In reality it is a true paradox - a "Catch-22" situation if you will - a situation in which we find otherwise sober-minded portfolio managers considering such "prudent" investments as old masters paintings, diamonds, and venture capital financing. Yet, how can today's institutional fund manager make normal investment decisions in a world where the returns on 90-day Treasury Bills, constantly rolled over, have beaten the returns of the best quality stocks and bonds for the last ten years? How can he assess the various risks and rewards of the traditional investment media when none of them have produced a real rate of return in more than a decade?

Throughout the course of my remarks, I will assume that all of us want to earn real inflation-adjusted rates of return. Any portfolio that does not earn a real return is self-liquidating and will ultimately be worthless unless it is restored by fresh infusions of capital. What good is a trust,

or pension fund, or endowment fund if the principal isn't worth anything when it's needed? What good is an annuity payment that can't preserve the recipient's standard of living? The answer is, of course, nothing. If we do not produce real rates of return, we miss the very point for which these funds are invested: to preserve capital and produce income. We have a responsibility as trustees and fiduciaries to invest accordingly.

Today the world is characterized by high interest rates and declining national productivity. Inflation - although it is still perking along at rates that would double the cost of living within the decade - has come down substantially. The most successful game in town these days is the money market fund - the ultra-short term maturity - but it is nothing more than "hot" money and how long will it be able to hold the limelight (i.e., how long inflation will remain low) remains to be seen. If the administration in Washington is going to be successful in spurring economic recovery with tax cuts and budget cuts, interest rates will have to come down. But all that Federal debt has to be financed and the options appear limited. If the Federal Reserve does not monetize the debt, Federal borrowing will smother the needs of the private sector and the recovery will be aborted. If the Federal Reserve does monetize the debt, inflation will explode. It seems that we must choose between killing the patient to cure the disease or allowing the patient to live by ignoring the disease. We forget that the disease itself is terminal.

Inflation is the culprit that has been ruining the corporate equity market and destroying the long-term bond market. Because of inflation corporate profits that should have been going to capital improvements and inventory went instead to the government in taxes. Because of inflation, investors large and small have refused to purchase bonds with maturities of fifteen years or more. Before inflation took hold in the late 60's, the total return on stocks had averaged 9% a year for more than 40 years, while AAA bonds rarely paid more than 4%. Today it doesn't matter - neither one can match the inexorable rise in the cost-of-living. Is it any wonder that alternatives have come into vogue? Even the most loyal Wall Streeter would have to agree that portfolios that can't deliver the goods ought to be rearranged.

So in place of stocks and bonds come variable rate mortgages, guaranteed insurance contracts, traded options and interest rate futures. Capital assets like office buildings and shopping centers have been turned into financial assets and now grace pension funds - including Alaska's. Works of art, jewelry, precious metals, and foreign currency denominated securities, with all their individual risks and rewards, are now added to institutional portfolios with the same objective in mind as we once purchased shares of IBM: to earn a real rate of return. Granted, some of these alternatives produce no income. The fact that such investments are being seriously considered is a clear illustration of the desperation today to preserve value - even if it means sacrificing income. After all, you wouldn't quibble over the opportunity loss of premiums to pay fire insurance unless you believed that no danger of fire exists. What many institutional managers are coming to realize is that staying where they are also has a certain risk and reward attached, and they don't like the odds. Quite simply, the reward seems slight while the risk appears devastating. The house just might catch fire after all.

When you stop and think about it, it's no wonder that our stock and bond markets have done so poorly when compared to other nations. Stocks and bonds are a reflection of the productivity of a society and we just haven't been as productive as certain other nations for many, many years. Government has taken too large a slice of the gross national product and lately it has literally strangled the ability of private industry to raise capital. The traditional investments represent the production of real wealth or the use of real wealth to finance the activities of government. We can't expect productive assets to represent real value when they are being destroyed by inflation and progressive taxation and we can't expect them to be effective investments. We have to look elsewhere.

Modern portfolio theory teaches us that the risk in any individual investment is significant only insofar as it affects the portfolio's overall level of risk. What matters is total return. In 1979 the U. S. Department of Labor formally adopted this principle in regulations governing the administration of private pension funds. Now the measurement of overall portfolio risk is primarily a result of interrelationships between investment returns rather than a result of individual riskiness. Managers of ERISA funds are encouraged to find balance among investments. The thinness and illiquidity of the real estate market is then manageable when the exposure is kept relatively small. Gold becomes a necessary member of the investment list unless one is convinced that there is absolutely no chance that the economic and political conditions which dominated the late seventies will ever occur again. Financial futures can be recognized and used for what they are: a highly useful tool which can be used to manage the risk of adverse price volatility. When some bright person saw the lack of correlation between the debt and equity markets of the major industrialized powers, it became possible to use diversification into other currencies as a means of actually lowering risk. And when some bright person (maybe the same one) also found that some other nations have been very productive during this same period of time and that their debt and equity securities have appreciated accordingly, it also became possible to enhance the overall return on invested funds by some - not necessarily much - diversification between economies.

We do not live in a rational investment world anymore; we live in a world gone mad with volatility and events which happen too fast for an effective shift of the investment mix to meet them. Today the only prudent course is to be ready for anything. The exact proportion of alternative investments and traditional investments -- I strongly emphasize the latter -- must be a function of each portfolio manager's subjective assessment of the outlook for real rates of return in all investment media. When we adopt this approach we will begin to do what the Europeans have done for generations; we will at least acknowledge that things really could go gunnysack in America, but that the need to preserve value and produce real income goes on, irrespective of what happens around us. We will at last begin to really diversify.

MR. RUBIE: How big a role do you think alternative investments should play?

MR. BUSHRE: As I see it, Jim, the role of alternative investments versus traditional investments depends entirely on what the future holds economically and politically. It's all based on the theory that what is good for today is not necessarily good for tomorrow and what was good for yesterday may not be the best investment for today. Investments are directly influenced by the economic and political conditions which prevail at the time they are

made. If we have a period of relative disinflation such as we're going through now and it continues for an appreciable length of time, we're going to see some of the more traditional investments holding the limelight and performing very well in relation to the alternatives. Strangely enough, in my particular case, once we were able to obtain legislation authorizing these alternative investments, we had a change of administration in Washington, a change in political and economic policy in this country, inflation came down, and all at once, some of the older investments started performing better. Right now our best performer is the short-term debt security - Treasury bills, bankers acceptance, and all the money market instruments.

MR. CLAUSEN: There was an article in the Wall Street Journal mentioning that you used some financial techniques to protect the fund against a drop in the value of gold. Could the application of that technique apply to other alternative investments?

MR. BUSHRE: I would preface my remark by saying that the same technique can apply to just about any investment that you make. I purchased two tons of gold beginning in the late summer, early fall of 1980. As you recall, that was the election year. The price of gold reached its peak in late November, early December, and by Christmas time I could see that this market was definitely headed south. I hedged the entire position by selling it forward with futures contracts. If you're not familiar with them, futures contracts are simply an obligation to deliver a stated commodity or instrument at a certain date in the future. You agree on the price today. It is, however, a negotiable instrument, and, as time passes, it too has a value and can be marked to market. So while the price of gold had continued to decline ever since January, 1981, the price of these futures contracts has appreciated. Theoretically, the two offset one another. In actual practice, we have a slight edge right now over the decline in the value of gold versus the appreciation in the value of the futures contract due to the relative difference in the interest rates between the time the futures contracts were entered and today. They do offer the manager certain flexibility and certain options that aren't available on a strict buy-and-sell decision. For example, last year we were able to roll over some of these forward contracts and realize a profit in them.

MR. KRAEGEL: I would like to know where we would see equity positions. By this I mean the ability of the investor to tie into a developmental project and have a share of it. That isn't what you would get on the stock market but it would be an equity position in the development project. Instead of taking out a mortgage, for example, to have a part of it.

MR. BUSHRE: Your question would fall under the heading of alternatives to the traditional investments of stocks and bonds. It's something that pension funds and other institutional funds don't do in the majority. If they do, it's to a very limited extent or very limited percentage of their total assets. It sounds very much like a form of venture capital financing which is definitely one of the alternative investments.

MR. KRAEGEL: Usually investments - stock, bonds, real estate - have a utility which is productive but some of the alternatives that you mentioned aren't productive in nature. They are things that people like to have. Could you comment on their long-term utility in comparison to the more traditional utility type investments.

MR. BUSHRE: I alluded to that briefly in my comments and I agree with you 100%. These alternative investments on the whole are not productive investments. Financial futures aren't an investment at all, it's simply a means of hedging or protecting other investments. I believe that when productivity declines, productive investments must decline with them. And if they decline with productivity, they will be less attractive. People will be seeking other havens. They may look to the productive investments of other countries where productivity is not declining and that is why you have pension funds diversifying into other currencies. They are buying into economies like Japan, for example, which is a very productive society. Their gross national product is growing by leaps and bounds each year. That growth has been reflected in the appreciation of its shares in its major industries. It's also reflected in the appreciation of its currency in the last decade. When the investments we have at home can't deliver the goods, we have two choices: we can either stay where we are and hope for the best or we can look around for alternatives.

MR. MICHAEL WINTERFIELD: Could someone comment on any future possibilities for floating rates in the corporate debt area? I'm particularly interested in this as a possibility in the future for annuity products where we have been gravitating more towards the shorter-term guarantees.

MR. BUSHRE: I have no idea what the future holds in that area. We're just beginning to see variable rates coming into the home mortgage area, but whether or not it's here to stay depends on a lot of factors, primarily the volatility of future interest rates.

MR. ZUCCARO: There might be some of this on the horizon. One of our corporate clients for whom we manage a portion of their pension plan assets has not seen any ability to predict interest rates. On long-term financing, when rates drop 100 or 150 basis points on the long end, they are actually averaging down on rates whether they need the money or not. It may be a harbinger of floating rates.

MR. KEATING: An area we haven't discussed today is the options area which is somewhat akin to the futures area except that you're using real leverage. The Greenwich study data suggests that it's probably the second most active area of plan sponsor interest and more firms are buying protective puts to protect the down side. It's much akin to buying insurance against a loss in the S&P. The question is how much is the insurance; what is the premium to buy these protective puts. The number of contracts that can be held has been increased and increased again. You hear strategy such as 90/10 - 90% of your money goes into T-Bills and 10% to buy calls. We've been doing it for a while as a pilot and it has outperformed the S&P over 27 months quite significantly, on the average about 350 to 400 basis points better than the S&P. There is less risk because 90% of your assets are in T-Bills. The options area is very interesting and more firms are moving into that area.

MR. ARNOLD J. SHELL: What is the role of participating mortgages and joint venture types of arrangements as a way to invest in real estate?

MR. KEATING: We're hearing more and more about participating mortgages. The participating mortgages are acceptable to builders when interest rates are high. I have a feeling that they're not so acceptable to builders when interest rates are lower and they can handle their own leverage. In exchange for a lower interest rate, the builders allow lenders the opportunity to

participate. There are a couple of insurance companies that have come out with funds - and we have a debt component of our real estate fund where we could do that. I haven't seen market demand, which is one of the reasons we haven't done more of that and I have a feeling it's going to be a fleeting kind of thing. We do joint ventures right now in our real estate equity fund, and most of the larger pooled funds do joint ventures, some to a limited degree.

MR. DAVID S. WILLIAMS: With regard to a real estate portfolio, one of the interesting questions is how you periodically value your holdings, particularly if it's unitized. It's quite important and obviously there have to be a number of approaches. I'm wondering if there is always a fear that you won't realize the value at sale which you're actually placing on the property while you're maintaining it in your portfolio. Is there a uniform method by which real estate in a portfolio like this is valued and do you value it periodically?

MR. KEATING: Most of the larger pools are valued somewhat similarly. If you were to ask twelve appraisers to appraise a building across the street, I would say you will get twelve different prices. On the other hand, if you asked twelve appraisers to appraise a portfolio comprised of a hundred investments, they would be closer together, but not on any single investment. We appraise each property twice a year. Ideally you should do it daily if you're unitizing and people are buying in and getting out on that unitized value, but you can't do it, it's too expensive. We bring in an outside appraiser to review our appraisal once a year. He has the right to either raise or reduce that value. I really think that for the most part the organizations try to reflect fair market value. They cannot reflect, however, the fire sale cost. That's too difficult to do. What we try to do is determine what the sale price would be given today's market conditions. This is much like what happens in the stock market. We probably spend an inordinate amount of time discussing valuations because the true value is unknown. A lot of dollars are spent in that area which may not be very productive dollars.

MR. R. FRED RICHARDSON: On the subject of appraisals, when you are selling individual contracts as opposed to group pension contracts, then you really do have to have a value. The British system has evolved over the last 10 or 15 years. They do a once a year appraisal, as you do, but, in addition, they do a desk appraisal every two weeks. Also, they use the whole portfolio, income flows and most recent markets, sales and purchases. I think it's a very effective system and it comes out very well.

MR. KEATING: The British do a couple of other things. They only have about seven appraisal firms in the whole country. They look at the value of the piece of property as the amount required to replace it today. They're somewhat adamant in their approach to valuing and I don't disagree with them. In this country we are being forced to spend more and more time on this appraisal process and I'm not sure that it has proven worthwhile. I'm not sure that the client is getting the best value on the dollars that we are spending on this valuation process. All the organizations which have sold property have come in very, very close to the valuations they've been carried at. I am not sure that it is always going to be true but all we can look at is what has happened to date.

MR. JAMES J. DONOFRIO: Looking over the list of six advantages for a dedicated bond portfolio it appears to me that the first four of them would equally

apply to an undedicated bond portfolio and that the other two depend on the actuary changing his assumptions. Can you tell me what is distinctive about a dedicated bond portfolio that would distinguish it from any other fixed income portfolio?

MR. HALE: First of all you are attempting to match an asset with a liability. That would be different from just buying bonds or a GIC investment. Another reason would be a very high degree of certainty of meeting the requirements. In structuring a dedicated bond portfolio you are looking for call protection, high liquidity, and obviously the best possible credit. That's different from a regular fixed income portfolio. You can't look at assets separately and you can't look at liabilities separately. The plan sponsor has an obligation to look at assets and liabilities together and the dedicated bond portfolio is one way of attempting to do this on a long term basis. In particular cases, it's not the best thing for everybody.

MR. RUBIE: If the fund's investments were such that they weren't generating enough income, when added to the contribution, to make the benefit payouts, then you would be forced to liquidate certain assets to meet your benefit payouts. By liquidating certain of those assets and in turn buying selected bond issues, the cash flow that they generate matches up with the projected benefit payout stream. This takes care of the liquidity needs. You've eliminated this fire sale of assets to meet benefit payouts so you have the freedom to invest your incoming contributions a bit more aggressively. That's a distinct difference. I think that's really an investment decision that requires actuarial input. It has nothing to do with the assumptions.

MR. HALE: Bob mentioned earlier that he felt too many pension funds are being too conservative in equities. By using a dedicated bond portfolio you can take care of the retirees and then free up the rest of the money for the actives if you wanted to take more risk with the equities.

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