

# EBRI

Statement on

Joint Trusteeship of Pension Plans and its Impact on Market  
Performance: A Further Examination Based on EBRI and Form 5500 Data

Hearings on Joint Trusteeship of Pension Plans

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by

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**Joint Trusteeship of Pension Plans and its Impact on Market  
Performance: A Further Examination Based on EBRI and Form 5500 Data**

**by Jack L. VanDerhei, Ph.D.**

**Summary**

- Single-employer defined benefit plans invest a larger percentage of their portfolio in equities than multiemployer plans
- Multiemployer plans have a higher percentage of retirees compared to their total participant population than do single-employer defined benefit pension plans
- The purpose of this research is to investigate whether the more mature cohort affects the investment allocation of multiemployer plans by analyzing the asset allocation of multiemployer plans and single-employer defined benefit plans with similar demographic characteristics
- In general, single-employer defined benefit plan sponsors follow the expected tendency of investing less of their portfolio in stocks as the plan participant population matures; no such trend is evident for the multiemployer plans
- Single-employer defined benefit plan sponsors also follow the expected tendency of increasing their investment in safer asset classes (bonds) as the participant population matures; multiemployer plans again show no systematic relationship of this type
- Therefore, the more conservative asset allocation decisions made by multiemployer plan sponsors does not appear to be due to the more mature participant population
- When the asset allocation of multiemployer plans is overlaid on the single-employer defined benefit plans and investment results are simulated based on historical returns, these latter plans experience a loss of total assets due to the lower investment return

## **Joint Trusteeship of Pension Plans and its Impact on Market Performance: A Further Examination Based on EBRI and Form 5500 Data**

### **Introduction**

In earlier testimony submitted by EBRI on the joint trusteeship of pension plans, author Jennifer Davis<sup>1</sup> provided estimates on the additional amount of net contributions that would have been required by single-employer plan sponsors if nonjointly trustee defined benefit plans had achieved the lower rate of return that was achieved by jointly trustee defined benefit plans over the previous seven years. Her testimony points out that one of the primary reasons that additional single-employer contributions would be required under a joint trusteeship scenario results from the difference in asset allocation between the two plan entities. Davis's analysis was based on EBRI's *Quarterly Pension Investment Report* (QPIR), which allows detailed breakdowns of investment results by plan entity (e.g., single-employer versus multiemployer plans), but provides no demographic information. This additional testimony will further examine the implications of joint trusteeship through an analysis of Form 5500 data intended to examine the motivations in asset allocation of jointly trustee plans.

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<sup>1</sup>Jennifer Davis, "Joint Trusteeship of Pension Plans and its Impact on Market Performance: An Analysis of EBRI Data," Statement for the Hearings on Joint Trusteeship of Pension Plans Before the U.S. House Education and Labor Subcommittee on Labor Management Relations, 21 February 1990.

Using QPIR data, Davis's testimony shows that single-employer defined benefit pension plans have a significantly higher percentage of their portfolio invested in equity than do their multiemployer counterparts. Moreover, single-employer defined benefit plan sponsors had a significantly lower percentage of their portfolio invested in bonds. Given that the rate of return realized on equities over the sample period was greater than that realized on bonds (a result consistent with long term historical results),<sup>2</sup> her analysis suggests that an additional \$87 billion would need to be contributed to make up for the shortfall in investment income.

Davis (pp. 6-8) discusses several reasons for this observed difference in asset allocations between single-employer and multiemployer plans. Included in this discussion was the argument that:

multiemployer plans have, on average, older employees with longer tenure which prompts the board of trustees to invest in bonds to preserve investment performance of the past, preserving the monies for the benefits that will need to be paid in the near future. Single-employer plans with an overall younger workforce could invest more in equities which over many years would even out fluctuations in the market.

The purpose of this testimony is to provide an empirical examination of this hypothesis. The results are important to the current debate because any documentation that the lower rate of return experienced due to the asset allocation typical of

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<sup>2</sup>Based on historical results from 1926 to 1986, the average one-year rates of return on the major asset classes were: common stocks, 12.1%; small stocks, 18.2%; long-term corporate stocks, 5.3%; long-term government bonds, 4.7%; and U.S. Treasury bills, 3.5%. See Roger Ibbotson and Rex A. Sinquefeld, *Stocks, Bonds, Bills and Inflation: The Past and the Future*, Charlottesville, Virginia: Financial Analysts Research Foundation, 1987.

multiemployer plans is actually attributable to legitimate differences in investment strategies would weaken the argument put forth that a joint trusteeship scenario would be unnecessarily expensive for single-employer plan sponsors.

## **Data**

**Investment Returns --** The investment returns used in this analysis are based on the five-year results reported in Table 2 of Davis (attached). This time horizon is the longest reported in QPIR and was chosen to smooth out temporary market fluctuations. The annualized returns for single-employer defined benefit plans over this period were 22.5% in equities and 12.6% in bonds. Based on 1985<sup>3</sup> year-end asset allocations for these plans, a rate of return for all other assets of 16.9% was imputed.

**Demographic Information --** Since the maturity of the participant population is central to the argument explained earlier, a proxy for classifying plans into various categories of participant population maturity was needed. Using information on the 1985 Form 5500 Sample Tape, ratios of retirees to total participants were computed for all single-employer and multiemployer defined benefit pension plans.

**Asset Allocation --** Given the need to limit the analysis to the asset categories reported in testimony submitted by Davis, all general investments (including cash)

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<sup>3</sup>The reason for selecting this year is explained below.

reported on the 1985 Form 5500 Sample Tape were classified into one of the following: stocks, bonds, or "other." Stocks include all corporate stocks, both preferred and common. Bonds include state and municipal securities as well as long-term U.S. government securities and long-term corporate debt instruments.

## **Results**

**Maturity of Participant Populations** -- Chart 1 suggests that the argument that multiemployer plans have, on average, older employees is indeed true. After categorizing each plan into one of ten classifications based on the ratio of retirees to total participants, the total general investments (including cash) were aggregated and the distribution of total assets was computed. Chart 1 shows that, on a dollar-weighted basis, multiemployer plans have much higher percentages of retirees with a median value in the 25 to 30 percent classification, as opposed to a median value in the 15 to 20 percent classification for single-employer plans.

**Asset Allocation Results as a Function of Plan Maturity** -- Chart 2 demonstrates that, in general, single-employer defined benefit plan sponsors follow the expected tendency of investing less of their portfolio in stocks as the plan participant population matures (i.e., a higher ratio of retirees). However, no such trend is evident for the multiemployer plans, with the exception of those plans with more than 40 percent of their participants already retired.

Chart 3 shows that single-employer defined benefit plan sponsors also follow the expected tendency of increasing their investment in safer asset classes (i.e., bonds) as the participant population matures. The multiemployer plans again show no systematic relationship between percentage of retirees and asset allocation decisions.

**Differential Investment Results** -- One method of measuring the impact of the tendency to invest more cautiously as the participant population matures is to compute the difference between two types of investment results for single-employer defined benefit plans assuming a joint trusteeship scenario was imposed. The implicit assumption is that the investment managers hired by the single-employer defined benefit sponsors will continue to have the same performance results within their asset allocation; however the overall asset allocation of the sponsor will be modified to those historically chosen by multiemployer plan sponsors.

The first measurement uses the five-year rates of return for the three asset classes reported above and computes an overall rate of return for single-employer and multiemployer defined benefit plan asset allocations using the 1985 year-end asset allocations computed from the Form 5500 tape. This results in an "uncorrected" aggregate rate of return of 17.98% and 16.83% for single-employer and multiemployer asset allocations, respectively. When the difference of 117 basis points is multiplied by the QPIR estimate of 1985 year-end assets for single-employer defined benefit plans, a one year loss of \$6.25 billion is obtained.

The second measurement proceeds essentially along the same lines as the first; however the differences in aggregate rates of return are computed within each of the ten plan participant maturity classifications first. At that point a weighted average, based on percentage of total assets (chart 1), is computed for the ten differences. This "corrected" differential aggregate rate of return of 119 basis points is actually larger than the uncorrected rate reported above resulting in a one year loss (based on 1985 asset levels) of \$6.46 billion.

## **Conclusion**

Although expected decreases in investment income from mandating a joint trusteeship scenario for single-employer pension plans is only one consideration in the current debate, some observers have discounted the estimated losses due to perceived differences in the manner in which these assets are invested. The purpose of this testimony is to assist decision makers in their attempt to gauge the true financial impact of such a change by controlling for the most likely source of differences in investment income.

Similar to the testimony previously submitted by Davis, this research estimates the potential reduction in investment income for single-employer pension plans assuming that a joint trusteeship mandate would result in a modification of asset allocation decisions. Unlike her testimony however, this methodology controls for the possibility that differences in asset allocations are a natural result of the fact that multiemployer plan



participant cohorts are generally more mature, as measured by the proportion of retirees in the participant population. After correcting for these demographic differences, the estimated one year loss for single-employer defined benefit pension plans in 1985 from the joint trusteeship mandate actually increased from \$6.25 billion to \$6.46 billion. Thus the actual cost of imposing this structure on single-employer pension plans would appear to be larger than those previously reported.

**Table 2**  
**Rates of Return, Ending September 30, 1989**

Plan Type and Indices	Period			
	Quarter 89Q3	1 Year 88Q4-89Q3	3 Year <sup>a</sup> 86Q4-89Q3	5 Year <sup>a</sup> 84Q4-89Q3
<b>All Assets</b>				
Single Employer DB Plans	7.4%	22.9%	16.5%	18.1%
Single Employer DC Plans	9.7%	24.6%	15.8%	17.3%
All Multiemployer Plans	5.3%	18.9%	12.4%	15.5%
Consumer Price Index	0.7%	4.3%	4.3%	3.4%
<b>Equity</b>				
Single Employer DB Plans	11.0%	33.6%	20.9%	22.5%
Single Employer DC Plans	12.3%	33.9%	20.9%	23.3%
All Multiemployer Plans	11.6%	34.1%	21.3%	22.5%
S&P 500	10.7%	32.9%	18.6%	20.3%
<b>Bonds</b>				
Single Employer DB Plans	0.8%	11.8%	8.7%	12.6%
Single Employer DC Plans	1.8%	17.5%	10.5%	13.7%
All Multiemployer Plans	0.9%	12.2%	8.8%	14.0%
Shearson/Lehman <sup>b</sup>	0.9%	11.3%	8.1%	13.2

Source: EBRI *Quarterly Pension Investment Report*, third quarter 1989, revised.

<sup>a</sup>Three- and five-year returns are expressed as annualized rates.

<sup>b</sup>Shearson Lehman Brothers Kuhn Loeb Government/Corporate Bond Index.

*Chart 1:  
Dollar-Weighted Distribution of Retired Participants by Plan Entity*

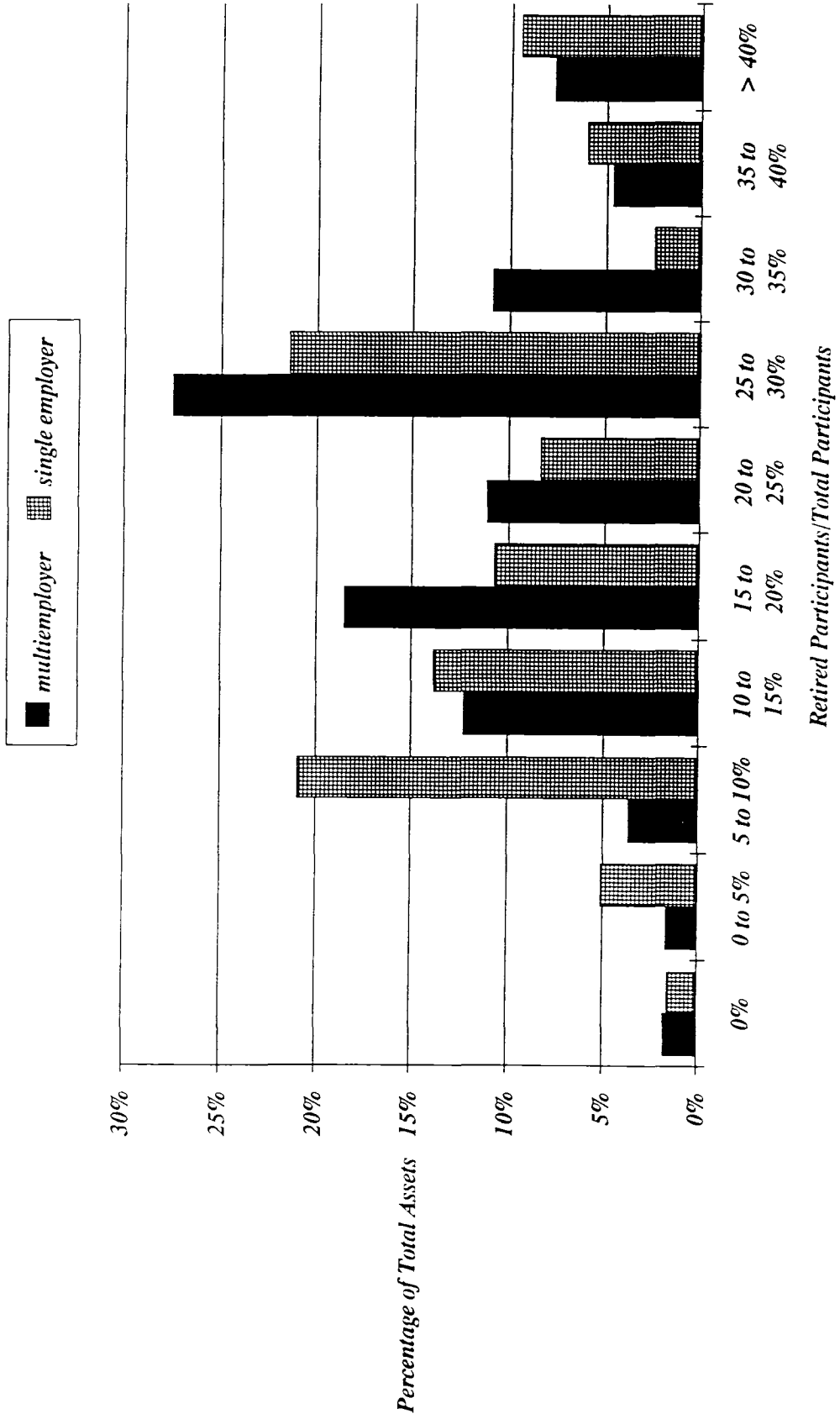


Chart 2:  
 Percentage of Stocks as a Function of Plan Maturity

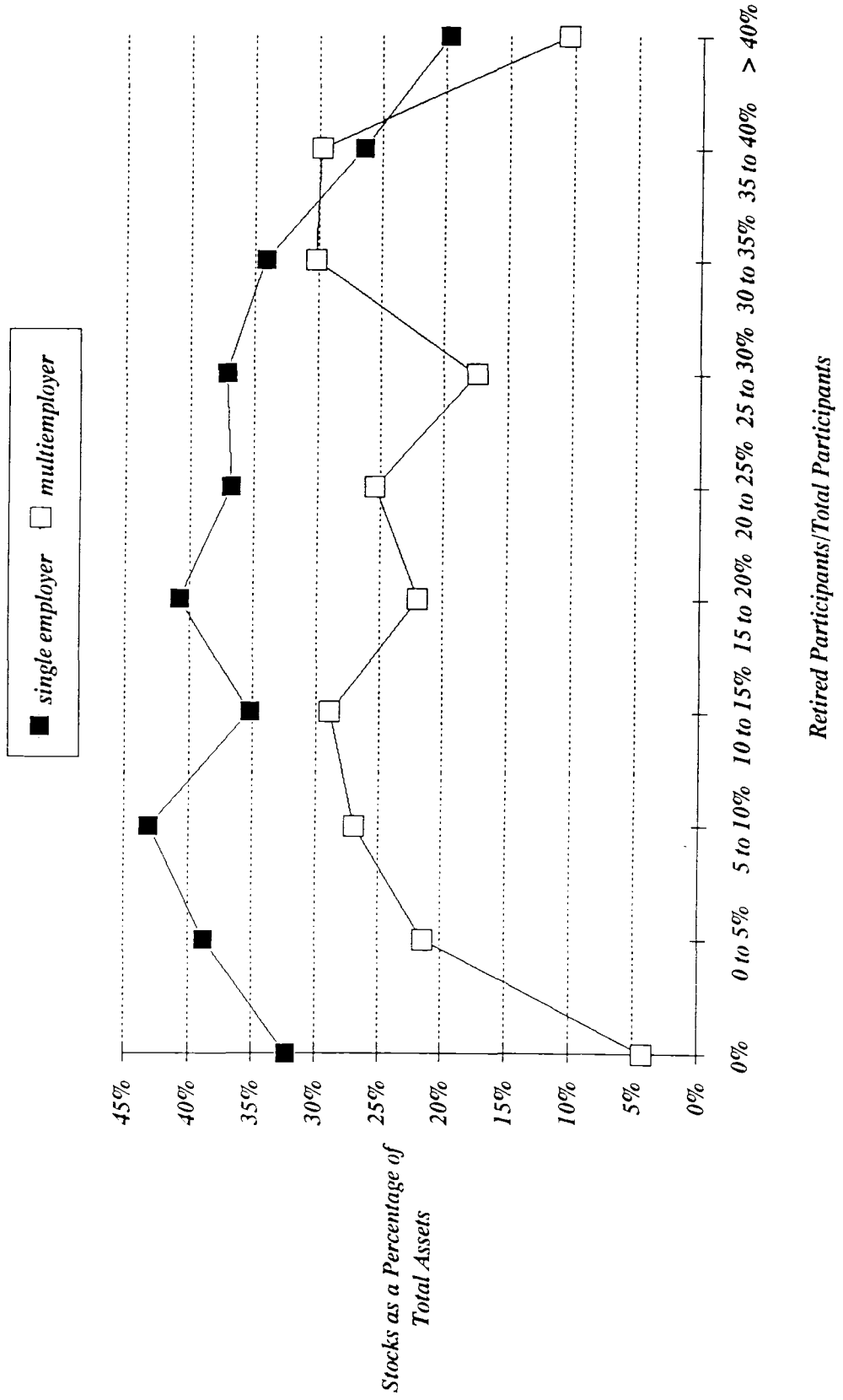
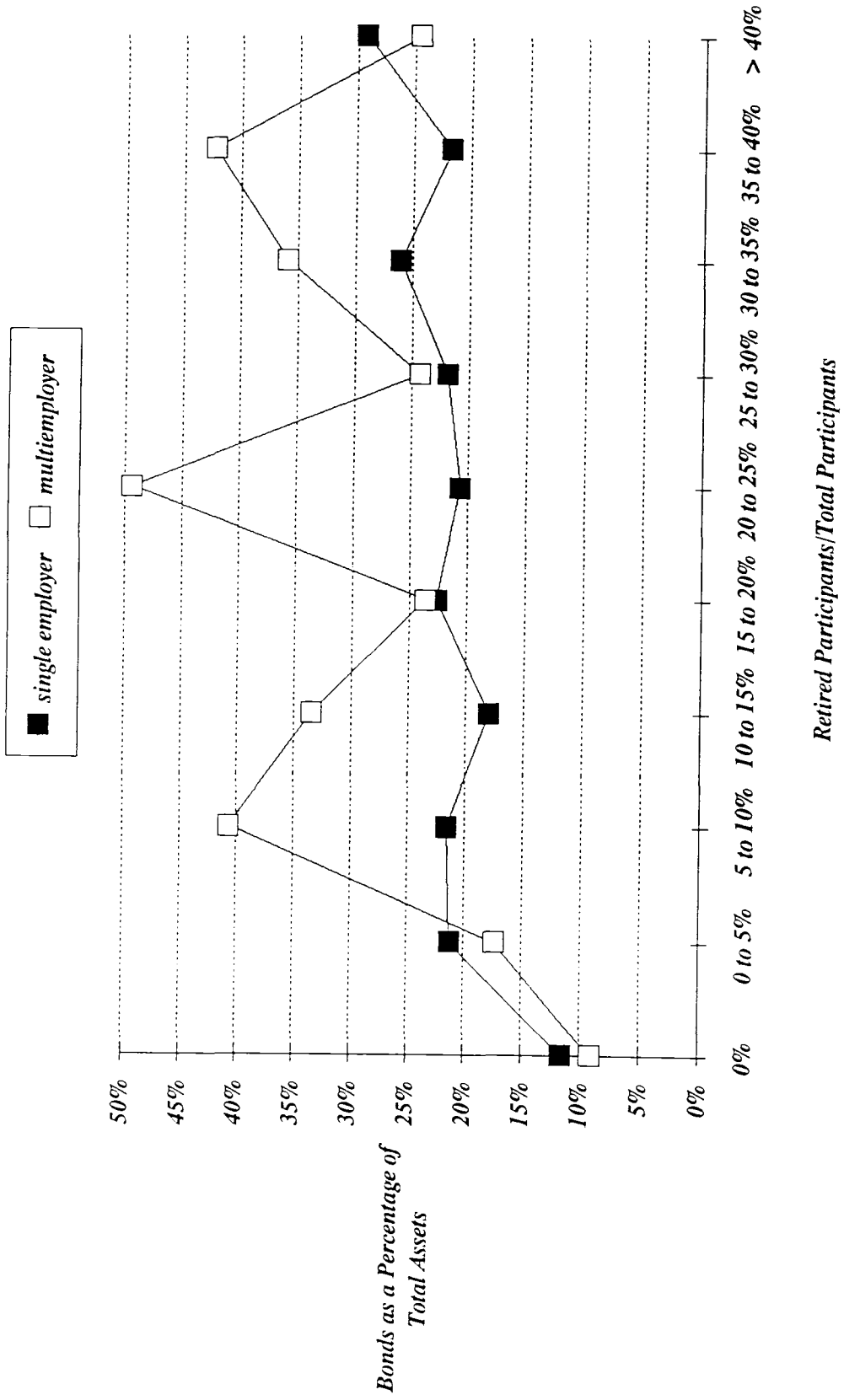


Chart 3:  
 Percentage of Bonds as a Function of Plan Maturity



Retired Participants/Total Participants