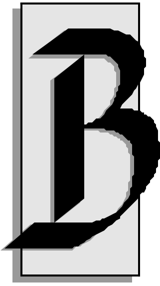

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NOTE ON PROPOSED CHANGE IN ASSUMED INTEREST RATE FOR DEFINED BENEFIT PENSION PLANS

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The Brookings Institution

February 2002

In a defined benefit pension plan, the present value of future benefits generally affects the amount a company must contribute to the plan. The Employee Retirement Income Security Act (ERISA) generally requires companies to contribute the amount necessary to fund future projected benefits earned in a given year.[2] This amount is sensitive to the interest rate used to discount the future benefits: The higher the assumed interest rate, the less a company must contribute to its defined benefit plan. Furthermore, if the assets in a defined benefit plan fall below 90 percent of the so-called current liability, a company must make an additional contribution to its plan. The assumed interest rate also affects these additional contributions: The higher the assumed interest rate, the less likely it is that a plan will be considered underfunded and be required to make additional contributions.

To reduce its contributions, a company may be tempted to assume a higher interest rate than would be prudent. Such a strategy, however, increases the probability that the plan will not have sufficient funds to finance benefits when they are due. For this reason, ERISA sets a range of assumed interest rates that a plan is permitted to use in computing the present value of future benefits. Currently, this range is between 90 and 105 percent of the weighted average of the yields of 30-year Treasury bonds over the previous four years.

The Treasury Department recently announced that it would cease issuing 30-year bonds, which raised the price of these bonds and therefore reduced their yields. The decline in 30-year bond yields forces some companies to make higher contributions to their employee's defined benefit plan than they would otherwise have had to make. As the ERISA Industry Committee

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[2] All plans that did not fully fund their current liability in the preceding plan year must make quarterly payments during the plan year equal to "the lesser of (1) 90 percent of the amount required to be contributed for the current plan year or (2) 100 percent of the amount required to be contributed for the preceding plan year." The Joint Committee on Taxation, "Technical Explanation of the Economic Security and Worker Assistance Act of 2001," JCX-91-01, December 19, 2001.

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argues, "Due to the Government buyback and subsequent discontinuance of 30-year Treasury bonds, rates for the long term debt instrument are no longer a stable or appropriate benchmark for plan funding. As a result, required contributions to pension plans have skyrocketed. In some cases plan sponsors will face a ten-fold increase over last year's contributions solely because of the artificial drop in the long term bond rate."[3] Partly to address such concerns, a provision in the Economic Security and Worker Assistance Act of 2001 would raise the upper-bound on the assumed interest rate from 105 percent to 120 percent of the four-year weighted average 30-year bond yield for plan years 2002 and 2003.

This note examines the impact of the Treasury announcement that it would discontinue sales of the 30-year bond.[4] The market reaction to the Treasury announcement on October 31 does not justify the magnitude of the proposed increase in the maximum assumed interest rate. The average 30-year yield over the five days before the Treasury's announcement was 5.27 percent (see graph below). Over the five-day period beginning with the date of the morning announcement, 30-year Treasury yields averaged 4.87. This five-day average reflects the market's valuation of the new information regarding the future supply of 30-year Treasury bonds. The difference between the five-day average before the announcement and the five-day average after the announcement was 39.6 basis points (.396 percentage points). Even if this entire difference is attributed to the announcement itself, Treasury's decision lowered 30-year bond yields by about 40 basis points.

To be sure, other factors may have prevented the yield from dropping more than it did, but the opposite is more likely true.[5] It is also possible to argue that the market had partly anticipated the Treasury's announcement, and that the overall interest rate effect is therefore larger than the amount observed at the time of the announcement itself. This argument, however, appears to be inconsistent with the surprise and attention surrounding the Treasury's announcement. Our conclusion is thus that the Treasury decision to eliminate the 30-year bond caused no more than a 40 basis point decline in the 30-year yield. Furthermore, since the range for permitted interest rates is based on an average of the previous four years, the immediate effect for defined benefit plans of that 40 basis point shift is muted -- and the full impact (even if the 40 basis point shift is permanent) would not manifest itself for several years.

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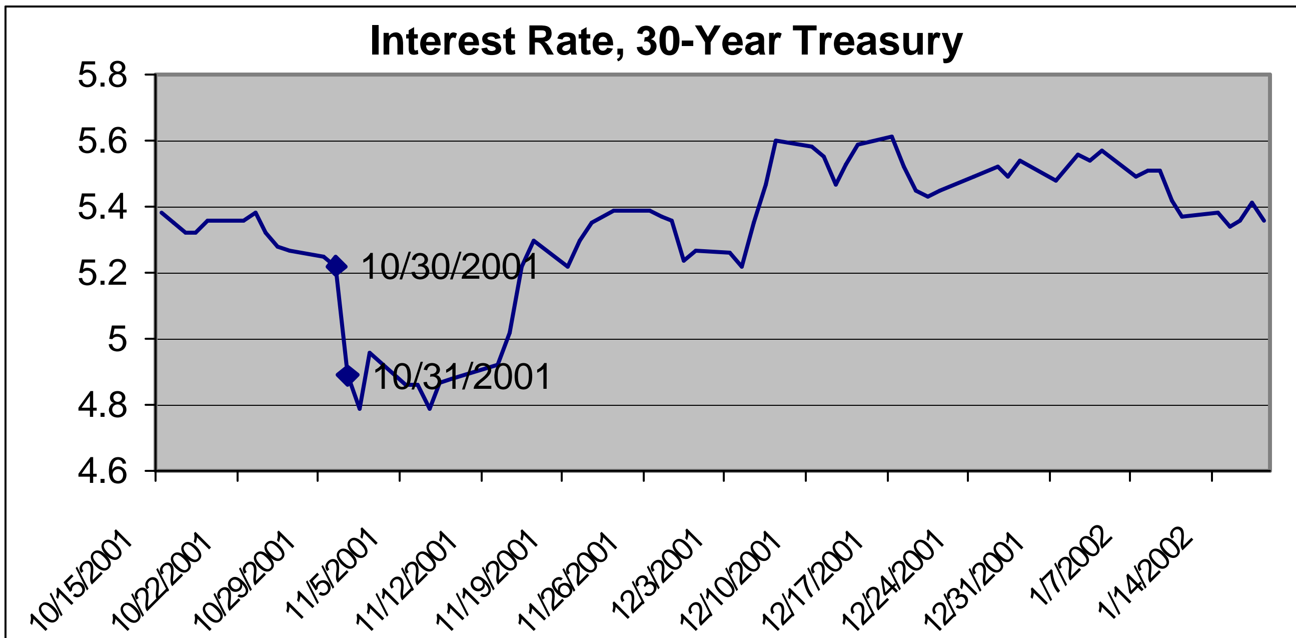
[3] http://www.eric.org/testimony/010902.htm.

[4] The impact from projected reductions in government debt (as opposed to the announcement that the 30-year bond would be discontinued) is not examined for two reasons. First, recent budgetary and economic projections suggest a dramatic deterioration in the budget outlook, which is likely keeping long-term rates *higher* than they would otherwise be. See Peter R. Orszag, "The Budget and the Economy," U.S. Senate Committee on the Budget, January 29, 2002. Furthermore, the shift toward budget discipline in the late 1990's affected a variety of interest rates, not just the 30-year bond. It does not seem appropriate to make adjustments to the assumed interest rate for defined benefit plans in response to general economic shifts, as opposed to shocks specific to one financial instrument (like the Treasury announcement).

[5] For example, yields on 10-year securities did not rise in the week following the announcement, as one would have expected if some other event was masking some of the negative effect on 30-year yields from the Treasury announcement. In addition, the Federal Reserve reduced its target for the Federal funds rate by 50 basis points on November 6, four business days after the Treasury announcement, which may have put some downward pressure on interest rates even at the long end of the maturity spectrum.



The Economic Security and Worker Assistance Act of 2001 would increase the maximum interest rate by 15 percent, an amount that far exceeds the decrease in interest rates attributable to Treasury's decision. Even with only a 5 percent interest rate, the Economic Security and Worker Assistance Act would increase the maximum assumed interest rate by 75 basis points – significantly more than even the long-term impact from the elimination of the 30-year bond, let alone the immediate impact.[6]

The proposed change could, if perpetuated, substantially reduce required contributions: given the power of compound interest, small changes in the assumed interest rate can have significant effects on the amount required today to pay a given amount of benefits in the future. Consider, for example, a plan that must fund $100 in benefits to be paid 30 years in the future. If the assumed interest rate is 5 percent, the company must contribute $23 to the employee's plan today. Increasing the assumed interest rate to 5.75, as the Economic Security Act would allow, means that the company would have to contribute $18.70 today, about 19 percent less than if the assumed interest rate were 5 percent.

Conclusion

Given the elimination of 30-year bond sales, the current statutory approach to determining liabilities under defined benefit plans needs to be reformed. Furthermore, the amendment proposed in the Act would change the rules only temporarily, while sponsors and regulators explored alternatives to the current system. It is crucial that if the proposed change is adopted, it remain temporary.

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[6] Furthermore, since 30-year yields declined in 2000 and remained at those lower levels in 2001, the four-year average would be higher than 5 percent, and therefore the permitted increase would exceed 75 basis points. In particular, the average annual yield on the 30-year bond was 5.6 percent in 1998, 5.9 percent in 1999, 5.9 percent in 2000, and 5.5 percent in 2001.

The approach promulgated in the Economic Security and Worker Assistance Act, however, is highly problematic. It dramatically overcompensates defined benefit plan sponsors for the immediate impact of the Treasury Department's recent announcement to stop issuing 30-year bonds (and even overcompensates for the long-term impact of that announcement). Furthermore, it represents a dangerous precedent. Over the longer run, adjusting the permitted interest rate upward when market rates decline would introduce a dangerous asymmetry in the funding rules for defined benefit plans: Plan sponsors would benefit through reduced contributions when market rates increased, but would not face higher contributions when market rates declined. The risk of insufficient plan assets when benefits come due would then necessarily be shifted elsewhere.