

Discussion of “Mismatch Risk, Government Guarantees, and Financial Instability: The Case of the U.S. Pension System”

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The topic of Zvi Bodie’s paper is fitting for a conference in honor of Ben Friedman, who has always been interested in how financial markets and institutions impact the economy more generally. As a graduate student, I found Ben an ideal advisor for looking at the impact of the financial sector on economic activity and in fact was assisting him in research on pensions in the early 1980s (Friedman 1983) when he introduced me to Zvi, who was also doing work in the area. In this discussion of Zvi’s paper, I will focus on two of his main points: that the risk of investing in stocks does not necessarily decrease with the time horizon of the investment and that pension policy should pay close attention to asset-liability mismatches, funding requirements, and insurance premiums.

I am grateful to both Ben and Zvi for inspiring me to do research on pension issues in the early part of my career. In 1984, when defined-benefit plans were flush with assets, I wrote an article on the implications of pension overfunding for corporate behavior (Estrella 1984). The analytical framework of that article is a variant of the Merton model on which Zvi bases his present analysis. Ironically, just a few years later, I coauthored an article on pension underfunding and its implications for the Pension Benefit Guaranty Corporation (PBGC) (Estrella and Hirtle 1988), after fortunes in the pension sector had taken a decidedly more negative turn.

Perhaps those turns of events in the 1980s were related to one of the main points in Zvi Bodie’s paper for this conference: that it is dangerous to assume that the risk of investing in equities decreases

with the time horizon of the investment. Today, as in the 1980s, defined-benefit pension funds in the United States routinely invest most of their asset holdings in the stock market. A standard rule of thumb for pension asset allocation has been “60-40,” meaning that 60 percent of assets is invested in stocks and 40 percent in fixed income. One argument advanced for this rule is that pension liabilities have a long duration and are well matched with equity investments that are thought to provide high returns with low risk in the long run.

Many pension funds employ professional investment managers who go beyond these simple-minded rules and apply sophisticated techniques to address asset allocation. However, the fact is that U.S. pension portfolios remain heavily invested in the stock market and are therefore susceptible to the risks that Zvi highlights here. For example, the Federal Reserve’s Flow of Funds Database suggests that U.S. private pension funds in the first quarter of 2011 held about 54 percent of their assets in equities.¹

Although I fully agree with Zvi about the dangers of blindly falling in line with simple rules of thumb and following loosely structured arguments, I think it is also important to avoid overreacting to the dangers of equity investments and excluding that segment of the market altogether from pension portfolios. If we consider pension obligations as simple nominal future payments, it may seem plausible to adopt an extreme risk-averse strategy that matches carefully the nominal assets and liabilities of pension plans. In practice, such schemes are betrayed by the fact that both pension assets of all types and pension liabilities are subject to many risks. On the liabilities side, there are life contingencies, changes in laws, and uncertainty about the future financial health of employers, among others. On the asset side, issuer or counterparty risk is unavoidable, and we have seen that not even the debt of powerful sovereigns is exempt from doubts and uncertainties.

A fundamental principle of investments is that diversification helps, and equity constitutes an important component of any well-diversified pension portfolio. Is the aggressive proportion of equities traditionally held by U.S. pension plans appropriate? When

¹Direct equity holdings were 33.5 percent of the total, and holdings of mutual funds, which in turn hold about 60 percent equities, were another 34.3 percent.

confronted with the analysis put forth by Zvi in his paper, any thoughtful investment manager should have ample reason to reconsider before following the observed norm. However, even after careful recalibration, a significant investment in equities may be prudent and certainly not out of the question.

A second theme in Zvi's paper is a set of guidelines for pension fund regulation, focusing on asset-liability matching, funding requirements, and insurance premiums. Although Zvi frames these ideas specifically in the context of pension regulation, I would argue that they could just as easily apply to the management and regulation of other financial intermediaries and instruments, such as collateral agreements, margin requirements, and bank capital regulation.

The topic of matching is closely related to Zvi's point about the long-term risks of equity investments, and we will not belabor the issue. Suffice it to say that asset allocation is a difficult but tremendously important topic for the management of any type of financial institution. We need only observe that international banking regulators have struggled mightily for decades to come to grips with the risk implications of a varied assortment of asset classes, and there is still much work ahead for them.

Pension funding requirements pertain essentially to the solvency of pension plans and are as important to pension plan participants as they are to the PBGC and, by extension, to taxpayers at large. As Zvi notes, regulation is concerned not only with the appropriate level of funding to be maintained by each pension plan but also with the time frame over which the plan is allowed to correct any funding deficiencies. Funding requirements are similar to capital requirements for banks, though pension funds in most instances have the luxury of not being subject to liquidity pressures of the same magnitude as banks. The seven or more years available for pension funds to amortize funding shortfalls would seem completely unthinkable in the case of banks, although at some level of generality the governing principles are not altogether different.

Finally, Zvi's focus on insurance premiums in regulation is a helpful way to quantify the overall risks inherent in a pension fund or other type of financial institution. Estimation of probabilities of loss or insolvency may also be useful, but they abstract from the size and time profile of the possible losses. An insurance premium is a form

of expected present value, and thus has the potential to translate an amalgam of future probabilities and losses into a monetary amount comparable with the current valuation of pension assets. In banking, premiums are frequently discussed in connection with deposit insurance, but the general concept of insurance premium could be extended to other phases of bank risk management and regulation, as Zvi does here for pensions.

In summary, Zvi has provided in his paper a number of thoughtful insights regarding risk management and regulation of pension funds, and these points could easily be extended for application to other types of financial institutions. His analysis is a useful complement to work that Ben Friedman has both contributed and stimulated in the field of pensions.

References

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