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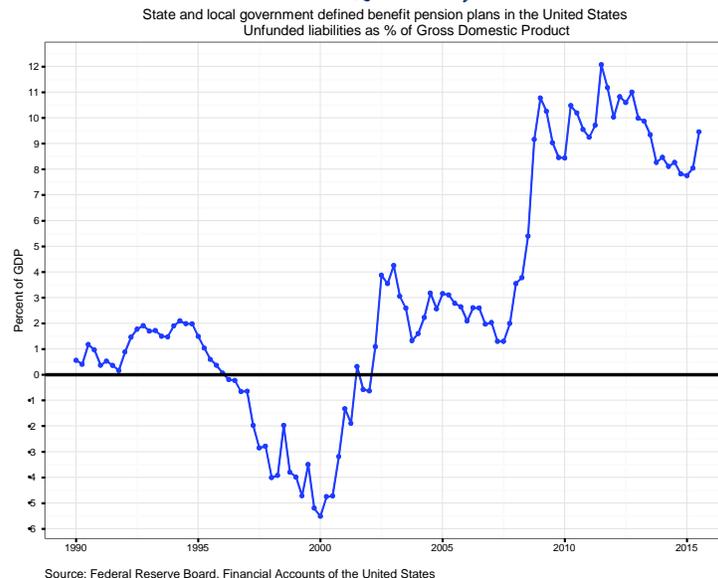
**State and Local Government Unfunded Pension Liabilities
Rise by \$268 billion in the Third Quarter of 2015**

Donald J. Boyd and Yimeng Yin

Taxpayers, citizens, and other stakeholders in government are the backstop to state and local pension funds. When pension investments fall short, government contributions rise, leading to tax increases or spending cuts and sometimes even to cuts in promised benefits for workers and retirees. When pension investments exceed expectations, government pension contributions are lower, allowing taxes to be lower or spending to be higher.

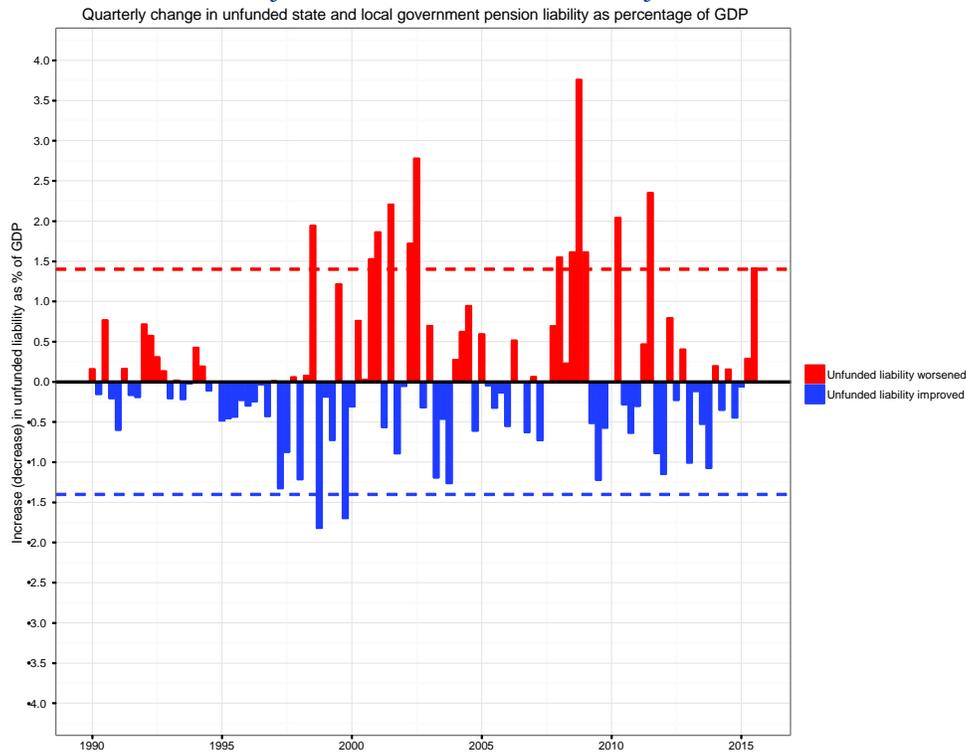
Investment shortfalls in the July-September quarter of 2015 caused unfunded state and local government pension liabilities to increase by \$268 billion, reaching \$1.7 trillion, according to data from the Federal Reserve Board. These estimates differ from those of actuaries and in the current environment are higher.¹ The increase was 1.4 percent of the nation’s gross domestic product (GDP), bringing unfunded liabilities to 9.5 percent of GDP – undoing about one and a half years of improvement (*Figure 1*).

Figure 1: Unfunded Liabilities Increased by 1.4 Percent of GDP, to 9.5 Percent of GDP, in the Third Quarter of 2015



Because state and local pension funds are heavily invested in equity-related assets, large swings are now frequent. Historically, large increases in unfunded liabilities have been more common than large decreases: In the last twenty-five years, unfunded liabilities have increased by 1.4 percent or more of GDP in thirteen quarters, while these liabilities have fallen by 1.4 percent or more in two quarters (*Figure 2*).

Figure 2: Unfunded Liabilities Have Increased by 1.4 Percent of GDP Thirteen Times in the Last Twenty-Five Years, and Have Fallen by 1.4 Percent Two Times



Source: Federal Reserve Board, Financial Accounts of the United States

How big is 1.4 percent of GDP? It is the equivalent of 50 percent of all of the property taxes levied by all of the state and local governments in the nation in a single year, or of a full year of spending by all state and local governments on police, fire protection, and corrections combined, or of two and a half years of highway capital outlays. So it is a lot. It is always possible that good returns will balance out bad returns, and vice versa, but there is no guarantee of that.

Shortfalls and overages do not cause immediate changes in contributions, nor are they reflected all at once. Pension funds generally revise contribution calculations annually. If the July-September shortfall were spread over thirty years, it would be roughly equivalent in size to a 3.9 percent surcharge on state and local income taxes for thirty years, or a 15 percent cut in highway capital outlays for the same period.

Taxpayers and citizens may or may not want this risk taken on their behalf, but they have little say in the matter. And they have no easy way out: If they want pension funds to take less risk, they'll have to increase government contributions by even more than contributions have gone up already. The Rockefeller Institute of Government is examining the potential consequences of pension fund volatility in its [Pension Simulation Modeling Project](#). These issues are particularly important given the significant stock market declines since the start of the year, suggesting that further substantial increases in unfunded liabilities are likely.

1 The data are reported in [Table L.120.b](#) of the Financial Accounts of the United States. The Federal Reserve Board uses pension liability estimates from the Bureau of Economic Analysis (BEA). These estimates use a market-based discount rate to measure liabilities, and are greater than pension funds' own estimates but lower than estimates developed by some economists. Another but smaller difference from actuaries' estimates is that BEA bases liability estimates on an accumulated benefit obligation concept. For details, see David G. Lenze, *Accrual Measures of Pension-Related Compensation and Wealth of State and Local Government Workers*, Bureau of Economic Analysis Working Paper WP2009-03 (Washington, DC: Bureau of Economic Analysis, 2009), https://www.bea.gov/papers/pdf/accrual_measures_of_pension_related_compensation_and.pdf; David G. Lenze, *State and Local Government Defined Benefit Pension Plans: Estimates of Liabilities and Employer Normal Costs by State, 2000-2011* (Washington, DC: Bureau of Economic Analysis, December 2013), <http://192.149.12.20/papers/pdf/State-and-Local-Government-Defined-Benefit-Pension-Plans.pdf>; "Irina Stefanescu and Ivan Vidangos, "Introducing Actuarial Liabilities and Funding Status of Defined-Benefit Pensions in the U.S. Financial Accounts," FEDS Notes, Board of Governors of the Federal Reserve Board, October 31, 2014, <http://www.federalreserve.gov/econresdata/notes/feds-notes/2014/introducing-actuarial-liabilities-funding-status-defined-benefit-pensions-us-financial-accounts-20141031.html>.