

*Discussion:*

*Developing More-Realistic Analysis of  
the Interplay Between Public-Pension  
Finances and Governmental Finances*

Laura D. Quinby  
Research Economist  
Center for Retirement Research at Boston College

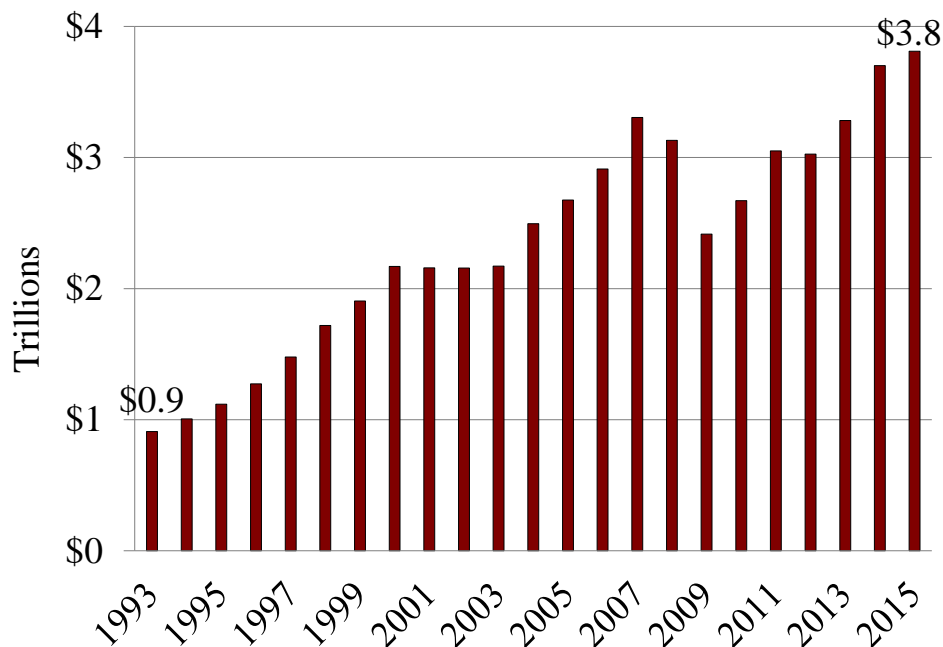
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Yin and Boyd (2018) show that pension contribution requirements grow when governments have the least revenue.

- Sponsors are more vulnerable to pension pressures when they rely on an income tax rather than a sales tax.
- Funding policies that amortize unfunded liabilities over a long horizon shift risk from current governments to future taxpayers and pension members.

# The analysis highlights the increasingly procyclical nature of pension assets.

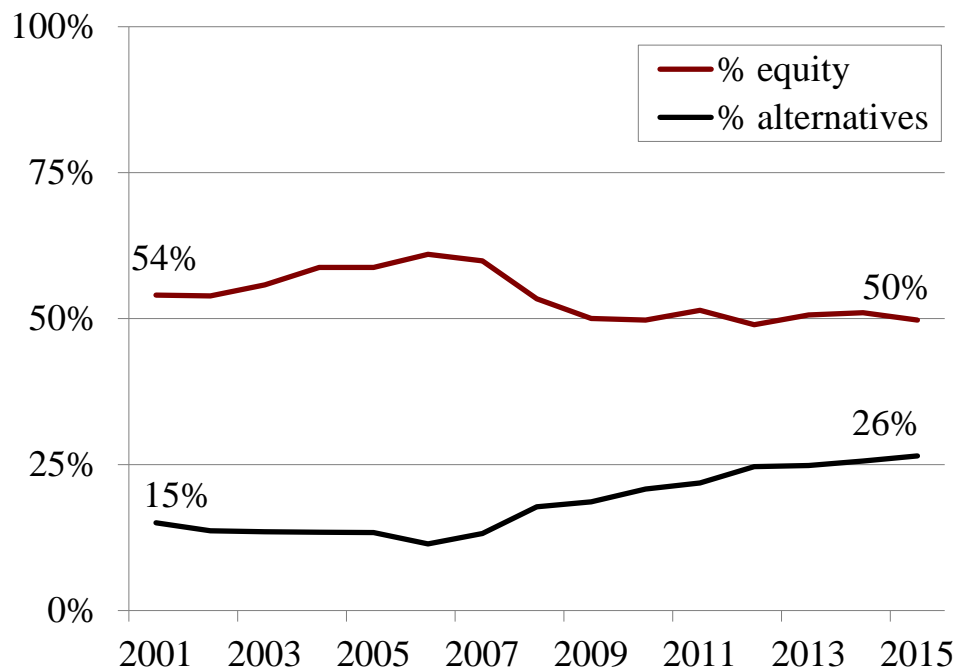
Assets in State and Local Pension Funds, 1993-2015



Source: the U.S. Census Bureau's *Employee Retirement Systems Dataset*, 1993-2015.

# Asset volatility stems from risky investments, most recently in alternatives.

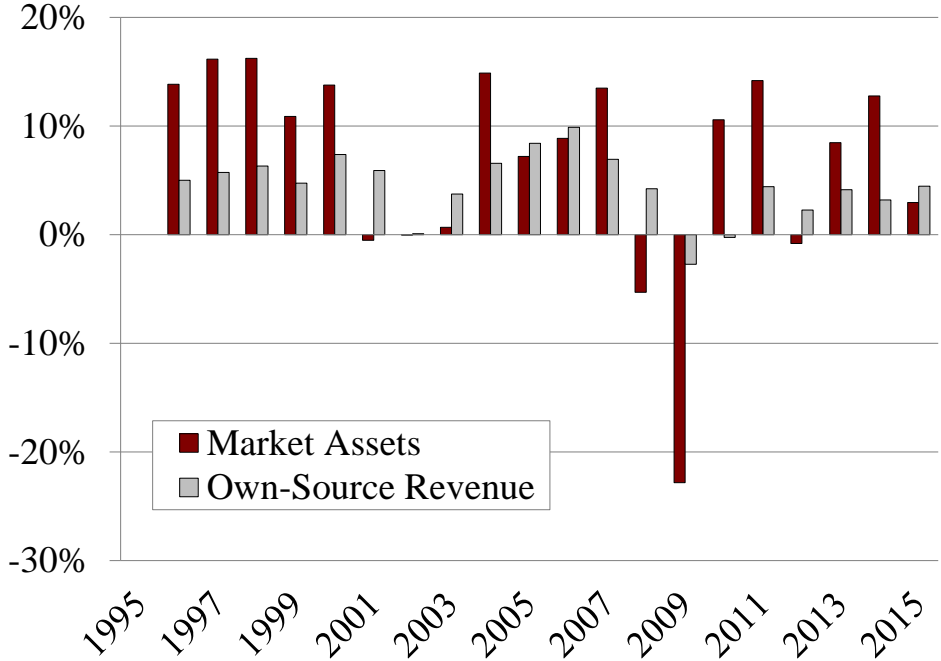
Percentage of Assets Invested in Equity and Alternatives, 2001-2015



Source: Author's calculations from *Public Plans Database*, 2001-2015.

# Pension assets now follow the same path as government revenue.

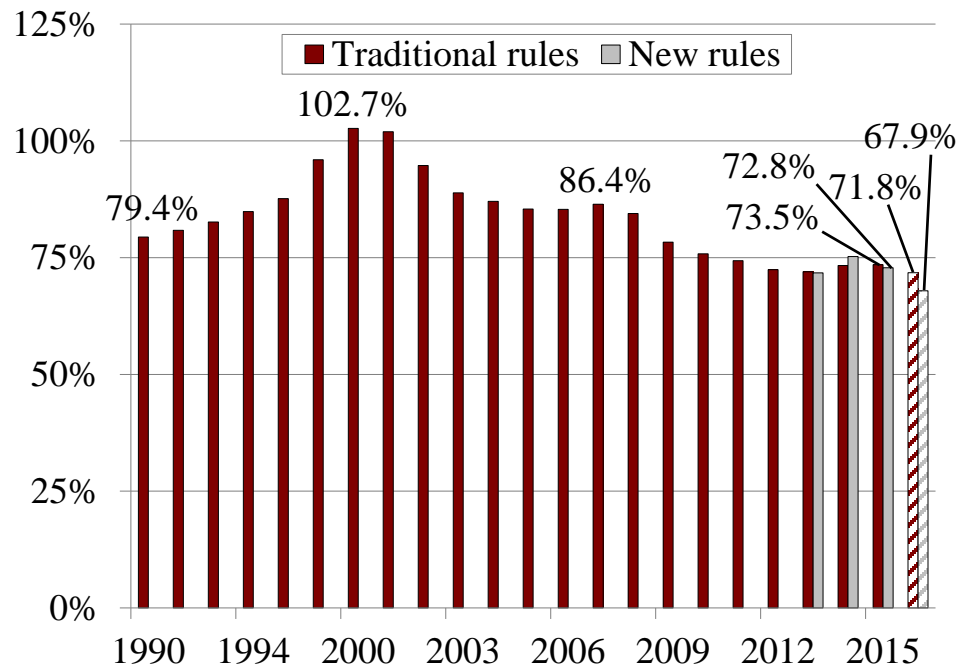
Growth in Pension Assets and Own-Source Revenue, 1996-2015



Sources: Author's calculations from the U.S. Census Bureau's *Employee Retirement Systems Database* (1995-2015) and *Government Finance Database* (1995-2015).

# Yet, funded ratios are not improving even when the economy performs well.

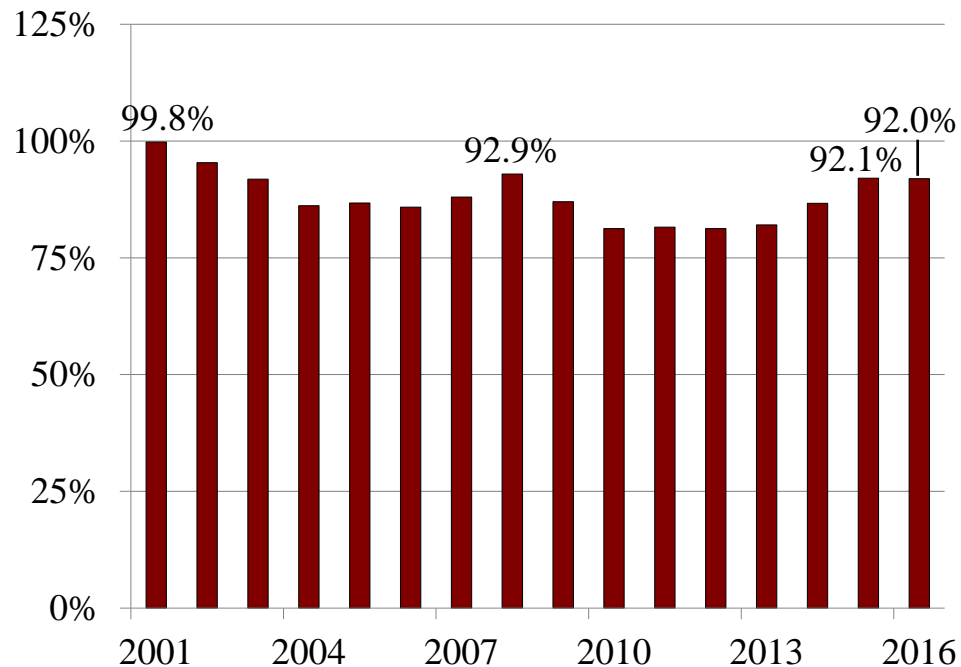
State and Local Pension Funded Ratios, FY 1990-2016



Source: Jean-Pierre Aubry, Caroline V. Crawford, and Alicia H. Munnell. 2017. "State and Local Pension Plan Funding Sputters in FY 2016." *State and Local Plans Issue in Brief* 56. Center for Retirement Research at Boston College.

# One reason is that sponsors have not paid the full ARC since the late 1990s.

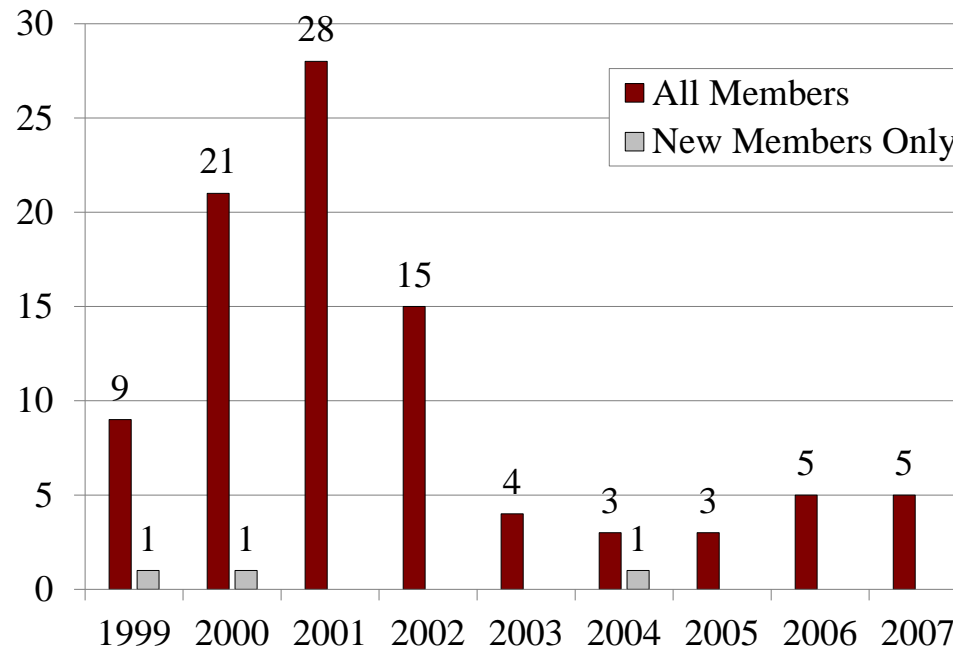
Percentage of Aggregate Required Contribution Paid, FY 2001-2016



Source: Jean-Pierre Aubry, Caroline V. Crawford, and Alicia H. Munnell. 2017. "State and Local Pension Plan Funding Sputters in FY 2016." *State and Local Plans Issue in Brief* 56. Center for Retirement Research at Boston College.

# Sponsors also viewed low costs in the late 1990s as a chance to enhance benefits.

Number of State and Local Pensions Enhancing Benefits, 1999-2007

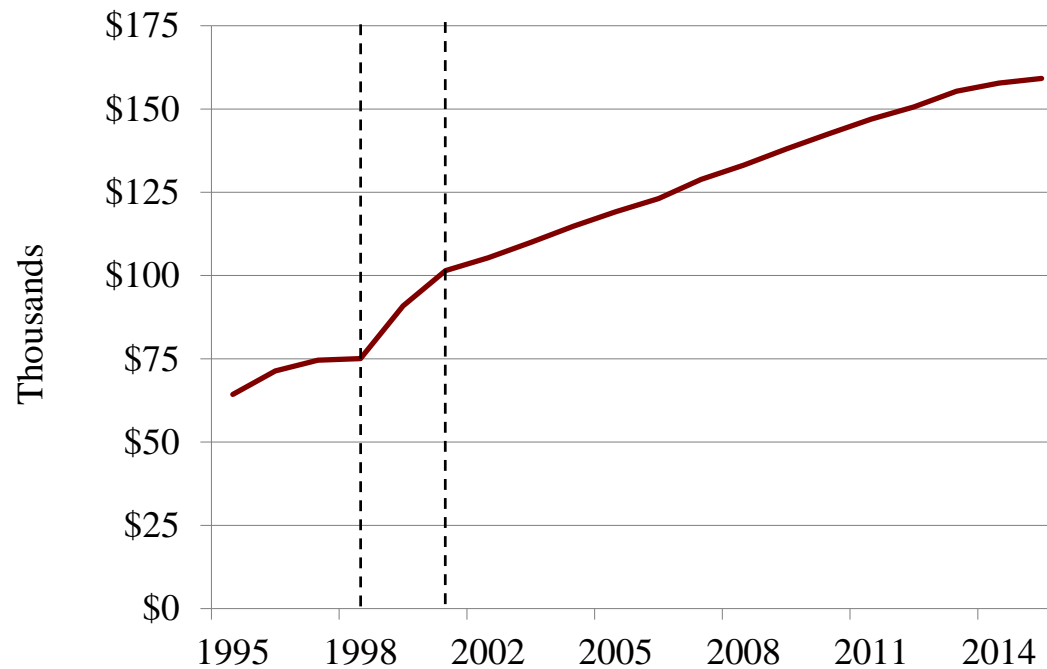


Source: Author's calculations from the National Conference of State Legislatures's *Pension Database* (1999-2007).



# The enhancements increased total liabilities immediately.

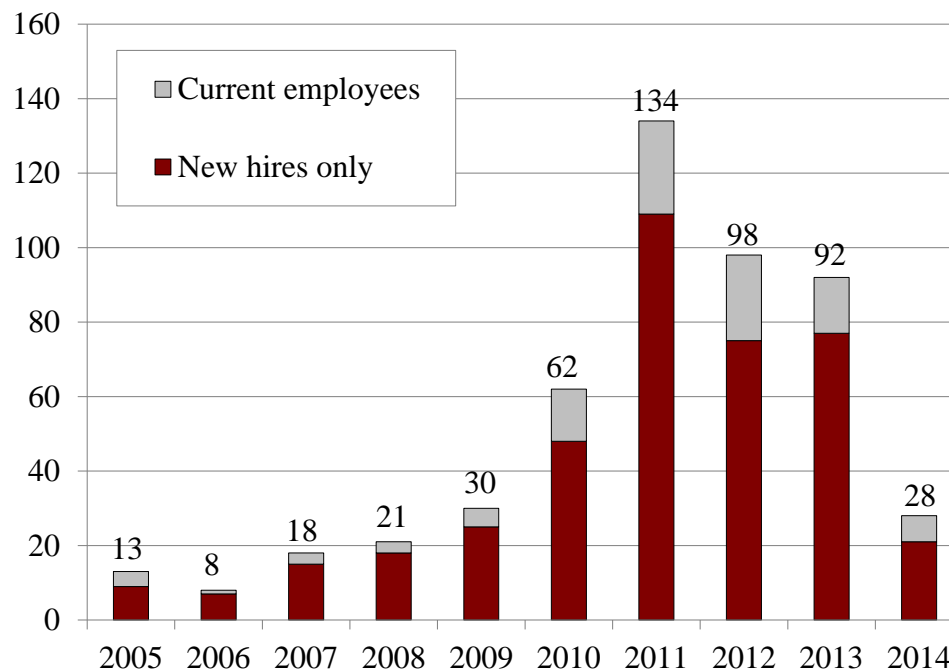
Total Liabilities per Member, 1995-2015



Sources: Author's calculations from Paul Zorn. 1990-2000. *Survey of State and Local Government Retirement Systems: Survey Report for Members of the Public Pension Coordinating Council*. Government Finance Officers Association; and *Public Plans Database* (2001-2015).

# Two subsequent recessions prompted a wave of cuts, but state statutes protected current members.

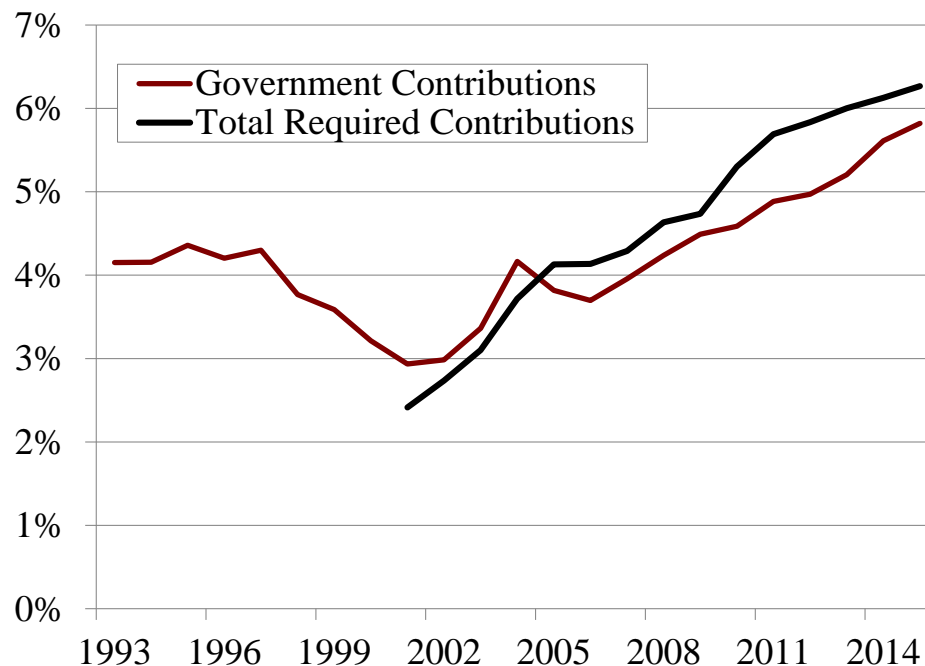
Number of Benefit Cuts by Type of Employee Affected, 2009-2014



Source: Author's calculations from various AVs and CAFRs, 2009-2014.

# As a result, required contributions are at their highest levels since the early 1990s.

Contributions Relative to Own-Source Revenue, 1993-2015



Sources: Author's calculations from the U.S. Census Bureau's *Employee Retirement Systems Database* (1993-2015); and the *Public Plans Database* (1993-2015).

# Conclusion

- Heavy investment in risky assets leads to counter-cyclical funding requirements.
- Yin and Boyd (2018) present a novel finding that states reliant on income tax revenue are most at risk of cyclical stress.
- Considerations for future work:
  - Adding alternative investments to the model.
  - Relaxing the assumption that sponsors pay the full ARC.
  - Allowing pension liabilities to react to economic conditions.