

Retirement on the Brink? Public Pension Underfunding and Implications for State Budgets



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A *(very)* Short History of US Public Pensions



- UK had disability pensions for militia during Colonial period.
- During the Revolution, Continental Congress set up Army/Navy disability plans. Fed gov't later converted them to veterans' old-age pensions.
- **U.S. cities provided pensions to teachers, firemen, police officers in mid-19th century.** Prompted by civil service reforms (public employment converted from patronage to merit).



Clark, Craig, Wilson: History of Public Pensions in the US



State Retirement Plans Filled a Void...

- 1935 Social Security Act: for corporations; excluded public sector.
- 1950's SS amendments *allowed* public sector coverage: governmental units could enter/withdraw.
- By 1961: most states had own ret. plans (x Idaho, Neb., N. & S. Dakota, Oklahoma).
- 1983: right to withdraw from SS eliminated.
- Today: 7 states not in SS: *Alaska, Colorado, Louisiana, Maine, Massachusetts, Nevada, and Ohio*; and some Local govt ee groups: *California, Connecticut, Illinois, Kentucky, Missouri, and Texas*. ~ 1 in 4 public ees.

Clark, Craig, Wilson: History of Public Pensions in the US

Two Main Types of Pensions:

Defined Benefit (DB):

Benefit formula promised

e.g. $B_t = 2\% * (\text{Final Pay}) * (\text{Years Service})$

Ex: most US S&L pensions, Social Security, Euro systems

Defined Contribution (DC):

Contribution amount specified:

e.g. $C_t = 6\% * \text{current pay}$

Ex: US 401(k) plans, a few states, Australia, Sweden, Chile



→ A few hybrids combine both...₄

Today:

- Only a few Defined Contribution (DC):
 - ✓ DC only: 2 states (AK & MI)
 - ✓ Some offer choice, some combo DB & DC
- Comparison w/ private sector difficult:
 - Few DB plans remain in private sector;
 - Job skills/risks not very comparable (incl. job security);
 - Govt jobs more secure;
 - No ERISA, no std regulation/accounting/information.
- Much “pension envy.” RR for 30-yr ee 56% in state DB plans (66% if no SS); only 46% for private DB (Clark) and most have no DB.

ClarkWilsonCraigHistoryPublicPensions
Munnell/Aubry/Muldoon CRR Nov 2008 Fin Crisis and Private DB plans

Why Fund a pension promise?

Pension Assets = EPV Benefits

Pros

- Can reduce uncertainty re future contributions and benefits.
- Portfolio diversification.
- Permits portability.
- May deepen K mkt & spur growth.

Cons

- Admin costs may be higher (?).
- Must handle fund governance.
- Requires ‘paying twice:’ to cover retirees + save for yourself!



Why are DB plans underfunded?

- ✓ Assets = Contributions (Er&Ee) plus investment returns (- losses)



- ✓ Liabilities = EPV accrued retirement benefits

$$= B_0 + B_1/(1+r) + \dots + B_{89}/(1+r)^{89} + B_{90}/(1+r)^{90}$$

→ Assumptions needed *re* turnover, wage growth, mortality, and discount rate

- Plan can be overfunded ($A > L$) or underfunded ($A < L$)!
 - If ER bankrupt and $A < L$, retirees may get no benefits (Pritchard AL)

Explanations?



- Market crash
 - Discount rates plummeted!
 - Politicians: short time horizons.
 - Taxpayers & others (active/retirees) uninformed and not paying attention.
 - Bond rating entities mostly ignored public plans.
 - Result:
 - *States failed to contribute for many years.*
 - *Plans discounted liabilities too heavily.*
 - *Assets too heavy in equity.*
- ➔ Some won't be able to pay all promised benefits.

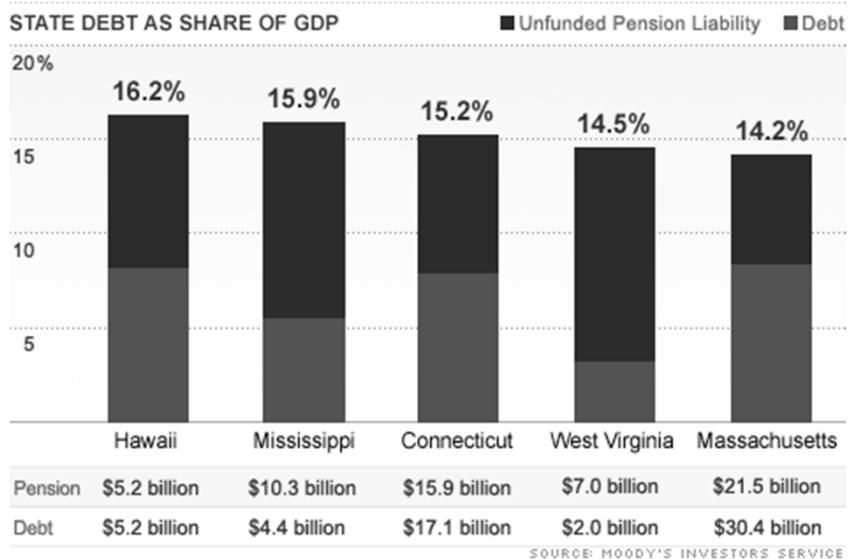
State DB Underfunding *WORSE than reported*

	<i>UF Liab</i>		<i>% St Tax Revenue</i>
	<i>Reported</i>	<i>Adjusted</i>	
Oh	\$83	\$167	632%
Co	29	57	596
Ill	85	176	525
Or	15	38	519
SC	22	43	511
RI	7	14	503
Ala	21	40	445
Miss	16	29	424
NM	13	24	424

→ I~\$3 Trillion at Treasury rates as of 2010; now \$4-4.5 trillion!

Rauh 2010 12

State pension debt: BIG gaps are a challenge



http://money.cnn.com/2011/01/27/news/economy/pension_debt_liabilities/index.htm

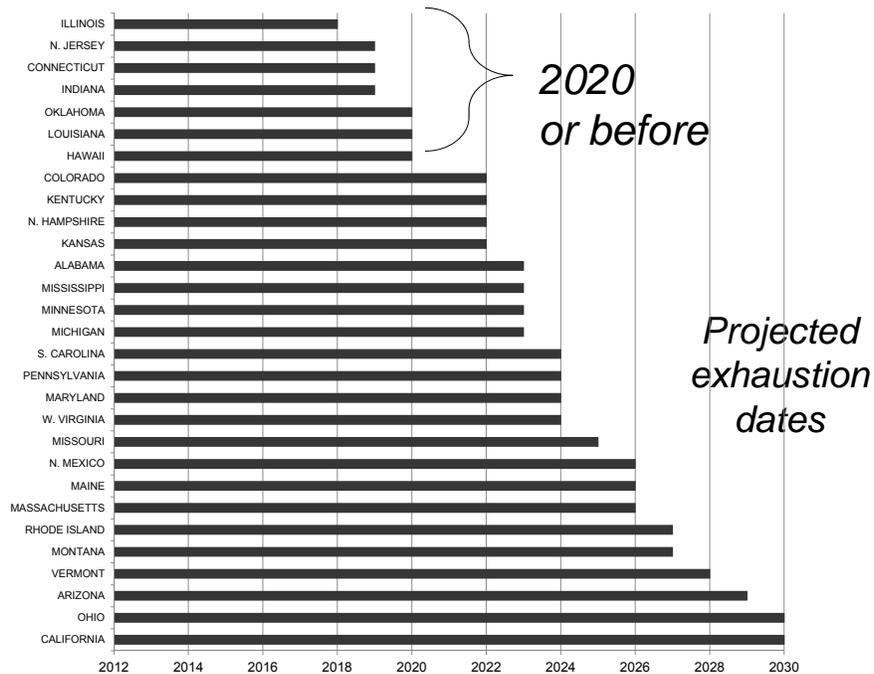
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Impacts on state budgets?

- Public pension contributions will need to rise > three-fold -- to 14% of public sector revenue, to achieve full funding over the next 30 years.
 - ✓ Average contributions ↑ to 41% of payroll.
 - ✓ Per-household average tax ↑ of \$1,400 per year.
- Also uneven:
 - >20% of general state transfers/revenues in Illinois *currently* required to pay for pensions;
 - NJ + NY would need to pay over \$2,200/yr more; CA + Ill \$1,900; but Indiana \$330.

Novy-Marx/Rauh

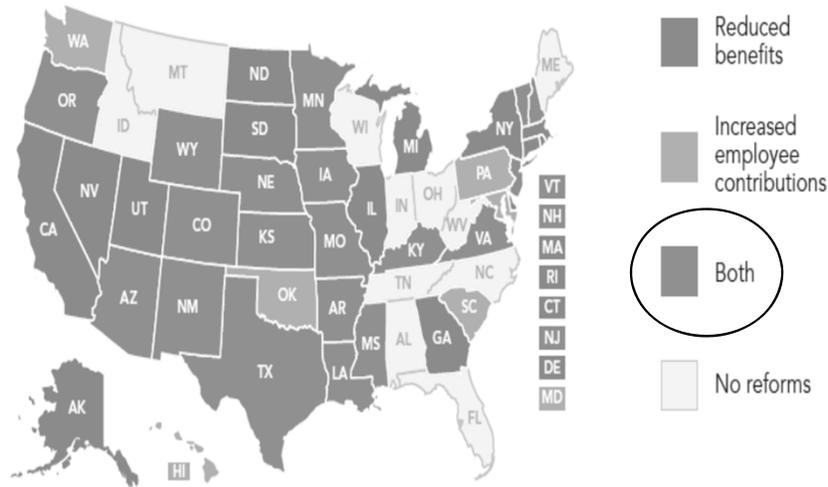
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States haven't been standing still...

State pension reforms: 2001 to 2010



Pew Center on the States (rev2019)

But options are unattractive to many:

- Changing rules for current Ees is difficult:
 - Constitution, statutes, case law, and union contracts.
- Tinker with formulas?
 - Raise contributions;
 - Benefit cuts: formula, vesting, retirement ages, COLA.
- Switch from DB to DC?
 - Doesn't solve legacy costs;
 - Will cost less later but impact is far off.



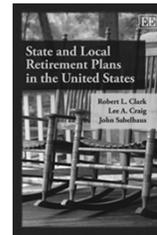
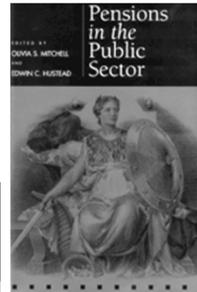
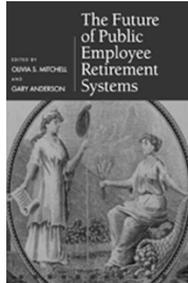
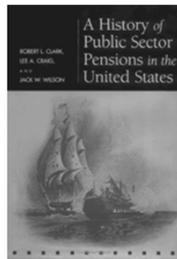
And not easy politically... WI public sector workers protest.

Scott olson/Getty, www.miamiherald.com/2011/03/06/2100243/actually-employee-pensions-arent.html

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For more information:

<http://www.pensionresearchcouncil.org/>



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