



State & Local Government DB Plans

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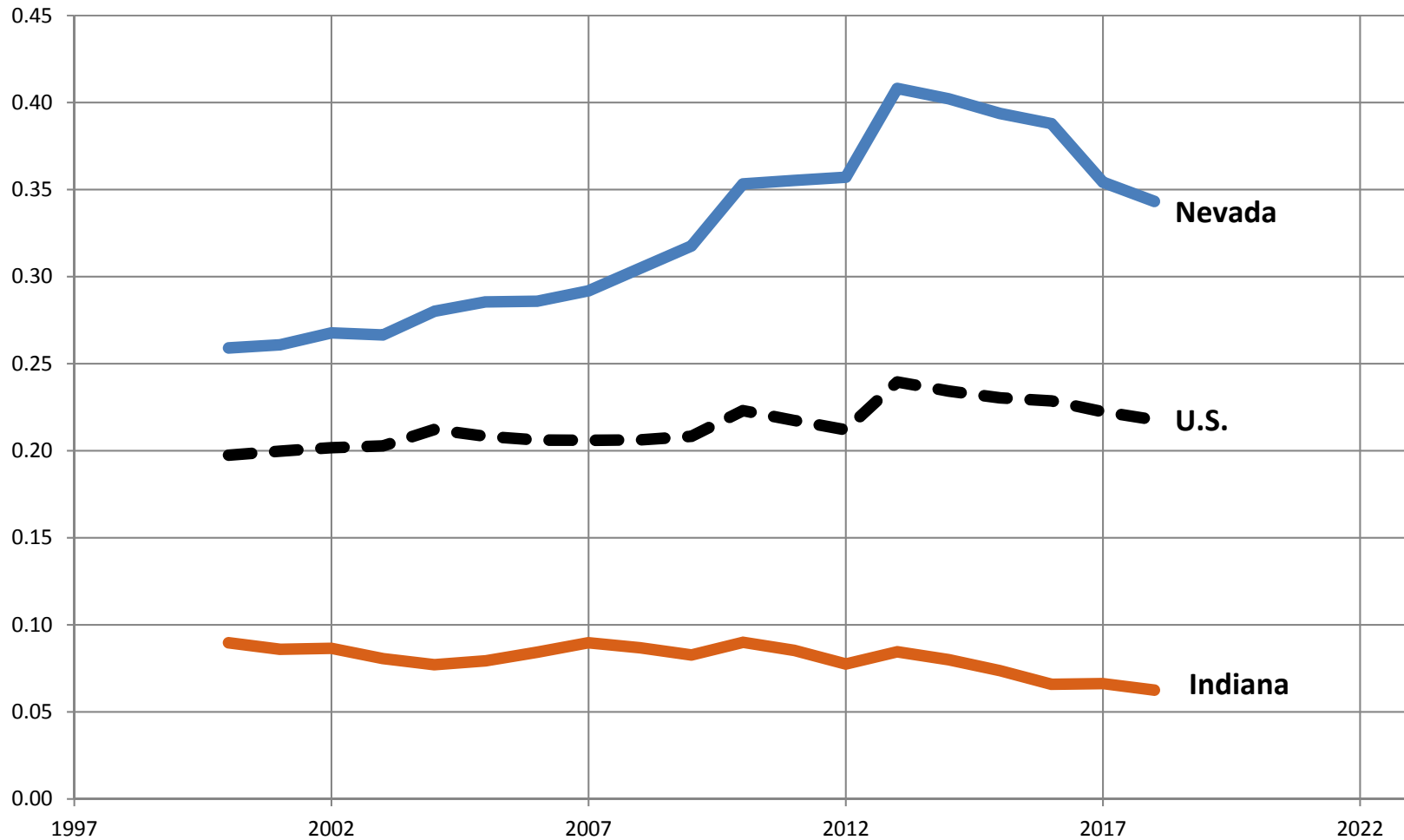
Major Subnational Fiscal Issue



- State and Local governments face serious restrictions on their ability to run deficits and accumulate debt
 - Balanced budget requirements varying in strength
 - Borrowing typically limited to short-term smoothing and capital projects
- But implicit liabilities are excluded from these restrictions
 - Has encouraged a shift in form of compensation, exacerbated by the agency problem

Claims to benefits accrued

Relative to wages and salaries, state & local government



Considerable Recent Attention



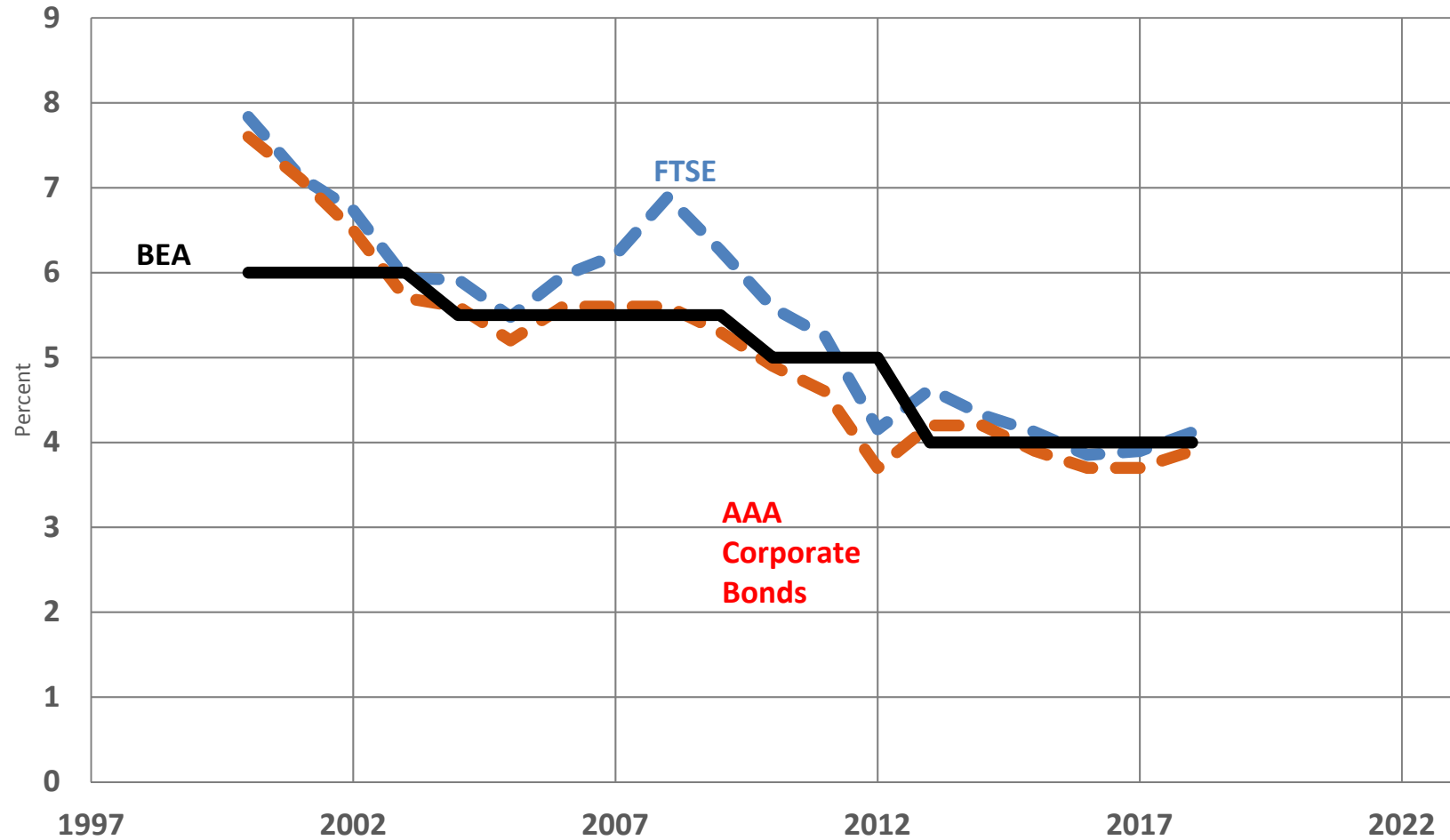
- In the scholarly literature (e.g. Novy-Marx and Rauh, *JEP*, 2009) as well as in the popular press about state and local fiscal pressures
- Various assumptions required to estimate value of unfunded liabilities
 - Perhaps the most important is the chosen discount rate
 - Basic principles of finance suggest use of a rate of return on fairly certain obligations, but this is generally not the practice

Pension plans' discount rates



	2000	2018
6.50 or less	1	20
6.51 to 7.00	3	47
7.01 to 7.50	15	95
7.51 to 8.00	63	19
8.01 to 8.50	33	0
8.51 or more	5	0
Liability-weighted average	7.99	7.05
Number of pension plans	120	181

Discount rates



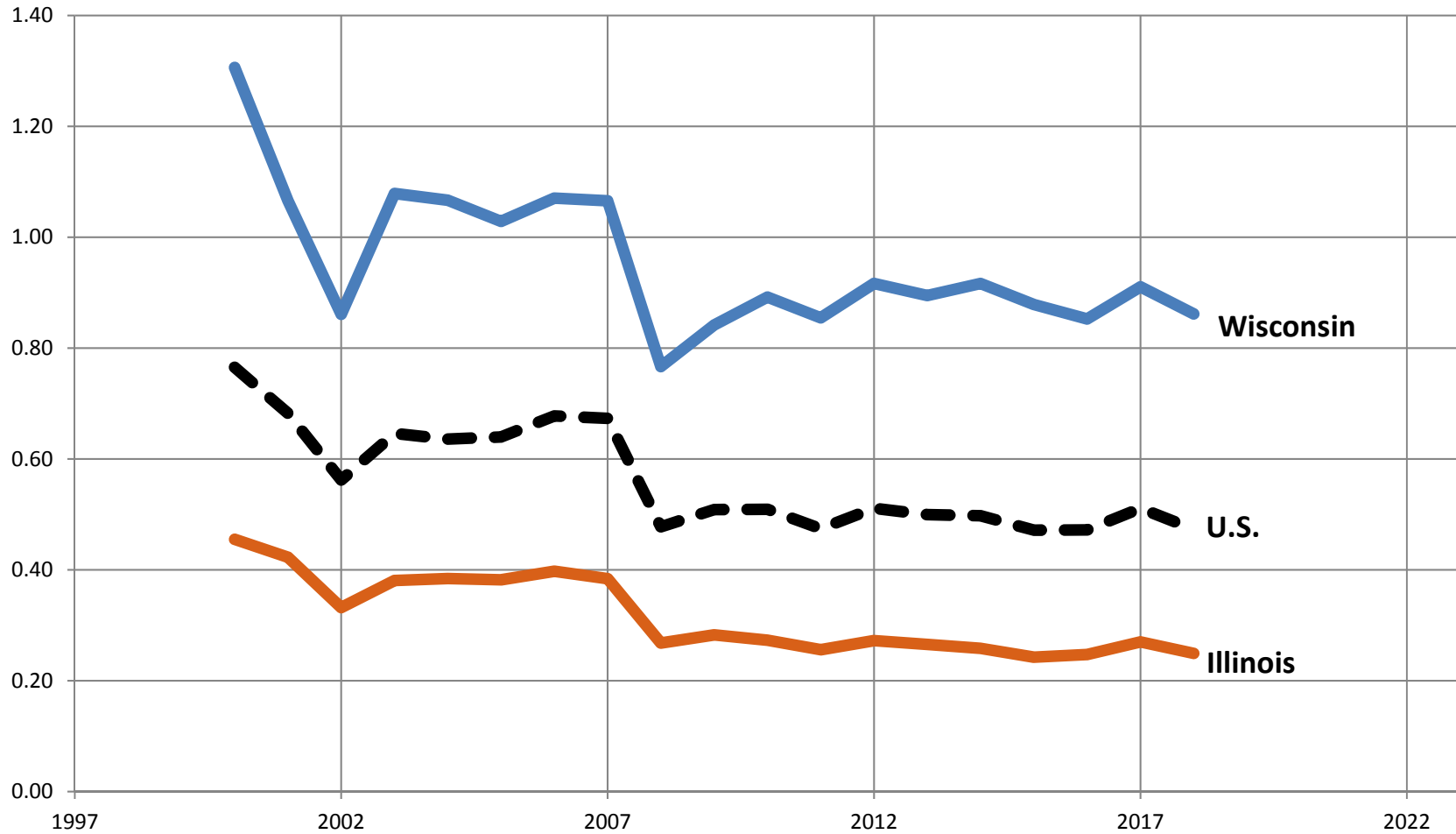
Implications



- With a reasonable discount rate, state and local plans are severely underfunded
- The condition has generally worsened as the discount rate has fallen

Funded ratio

Pension fund assets relative to benefit entitlements



Interpreting the Accounts



- Accrual accounts structured to balance receipts and expenditures
- But the balance is provided by residual imputations of
 - Employer contributions to meet new accruals
 - Interest on existing claims to keep up with their growing value



Table 7.24. Transactions of State and Local Government Defined Benefit Pension Plans

[Billions of dollars] Last Revised on: July 30, 2019

Line		2015	2016	2017	2018
1	Current receipts, accrual basis	680.1	719.8	766.3	780.4
2	Output ¹	13.6	14.9	16.8	18.6
3	Contributions	442.1	463.6	486.4	493.8
4	Claims to benefits accrued through service to employers	217.8	222.2	223.3	225.9
5	Actual employer contributions	134.1	139.9	151.1	166.9
6	Imputed employer contributions	48.0	43.4	32.1	19.0
7	Actual household contributions	49.3	53.8	56.8	58.7
8	Less: Pension service charges ¹	13.6	14.9	16.8	18.6
9	Household pension contribution supplements ²	224.3	241.4	263.1	267.9
10	Income receipts on assets (including plans' claims on employers)	224.3	241.4	263.1	267.9
11	Interest	193.0	208.0	223.4	225.0
12	Monetary interest	43.2	44.1	53.6	62.2
13	Imputed interest on plans' claims on employers ³	149.8	163.9	169.8	162.8
14	Dividends	31.4	33.4	39.6	43.0
15	Current expenditures, accrual basis	680.1	719.8	766.3	780.4



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11	Interest	193.0	208.0	223.4	225.0
12	Monetary interest	43.2	44.1	53.6	62.2
13	Imputed interest on plans' claims on employers ³	149.8	163.9	169.8	162.8
14	Dividends	31.4	33.4	39.6	43.0
15	Current expenditures, accrual basis	680.1	719.8	766.3	780.4



Table 7.22. Transactions of Private Defined Benefit Pension Plans

[Billions of dollars] Last Revised on: July 30, 2019

Line		2015	2016	2017	2018
1	Current receipts, accrual basis	278.8	272.1	255.1	282.7
2	Output ¹	12.8	13.9	14.3	15.3
3	Contributions	167.6	162.6	154.1	166.7
4	Claims to benefits accrued through service to employers	69.2	67.1	67.5	65.9
5	Actual employer contributions	106.0	124.1	143.4	179.4
6	Imputed employer contributions	-24.9	-43.9	-62.5	-99.1
7	Actual household contributions	0.9	0.7	0.9	0.9
8	Less: Pension service charges ¹	12.8	13.9	14.3	15.3
9	Household pension contribution supplements ²	98.4	95.5	86.7	100.8
10	Income receipts on assets (including plans' claims on employers)	98.4	95.5	86.7	100.8
11	Interest	64.6	61.6	52.6	66.9
12	Monetary interest	38.3	36.9	36.5	41.4
13	Imputed interest on plans' claims on employers ³	26.2	24.8	16.2	25.5
14	Dividends	33.8	33.9	34.0	33.9
15	Current expenditures, accrual basis	278.8	272.1	255.1	282.7

New Results by State



- Breakdown very helpful, since considerable heterogeneity with respect to levels and trajectories

Funded ratio

Pension fund assets relative to benefit entitlements

