



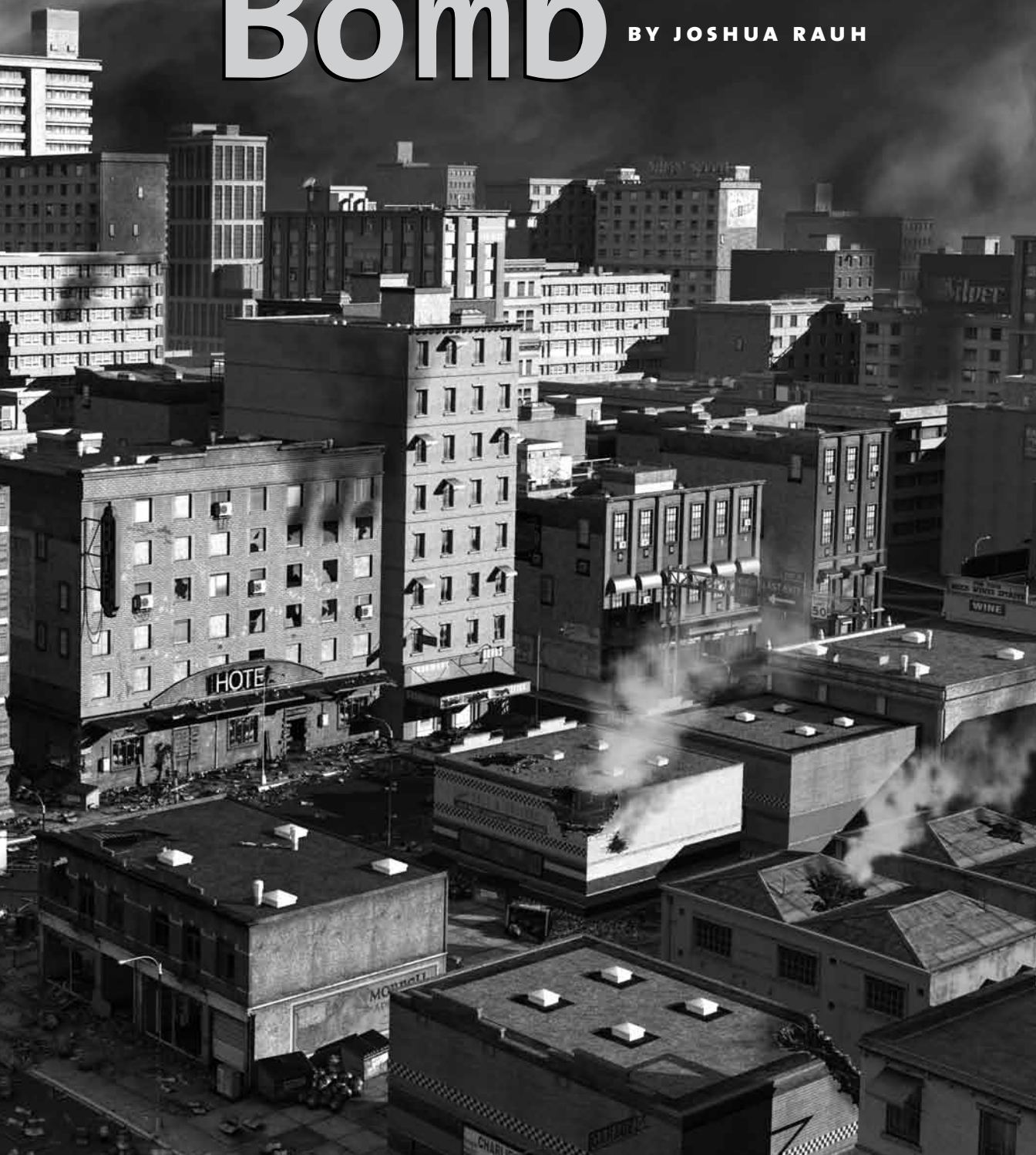
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THE Pension Bomb

BY JOSHUA RAUH



THE PENSION BOMB

Uncle Sam may be able to run budget deficits with impunity, at least for a while. But almost all state and local governments face legal restrictions on the extent to which they can register deficits and issue debt. These rules, are, of course, designed to prevent politicians from spending money now and leaving the bills to their successors. But just as companies have ways of issuing debt off their balance sheets (think of Enron, or for that matter, Merrill Lynch), states and localities have ways around the balanced-budget rules. The most pervasive method: increasing public employees' compensation by promising them larger pensions when they retire.

This hidden profligacy is a fiscal disaster in the making, one that will eventually force states and localities to choose among the unpalatable options of cutting services, raising taxes or wriggling out of solemn promises to employees. Their best hope for a soft landing is to focus on measures that stop the growth of unfunded liabilities, and then renegotiate existing untenable pension obligations. This won't be easy. But Washington could make it a bit easier by offering tax subsidies to help pay for compromises with public employees – and by preparing the way for the orderly restructuring of state debts if those compromises are not forthcoming.

THE MONSTER IN THE BOX

If a government promises deferred compensation in the form of pensions to employees when they retire, but does not set aside sufficient funds to honor those promises, it is effectively borrowing from future taxpayers. As a result, the definition of “sufficient funds” is crucial to determining whether governments

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are evading their responsibilities to pay for today's services today.

Government accounting procedures allow pension plan managers to claim that a pension is fully funded as long as the expected returns on the assets in the pension fund's portfolio would be adequate to meet the pension obligations. Today, the assets in state and local pension funds are typically allocated among publicly traded stocks (about 50 percent) and bonds (30 percent) with the remainder in other investments ranging from real estate to hedge funds to private equity. Typically, plan actuaries assume that the expected return on their portfolios will be about 8 percent, and then measure the adequacy of assets to meet liabilities based on that expected return.

But this procedure contrasts sharply with private sector accounting methods, as well as financial logic. It completely ignores the role of risk – the reality that a wide range of investment outcomes are possible – and, more specifically, the fact that future taxpayers will have to make up any shortfalls if the fund's assets fail to generate the expected 8 percent return.

State and local governments have \$2.6 trillion worth of debt (mostly in the form of bonds) on their books, and, under their own accounting rules, another \$1.3 trillion of unfunded pension liabilities. But, as you've no doubt guessed, the unfunded pension figure is unrealistic. Using valuation methods and accounting practices that parallel those of the private sector, Robert Novy-Marx of the University of Rochester and I have calculated that these unfunded liabilities actually amount to over \$3 trillion. And each day that public pension systems continue to ignore risk in their pension budgeting, this debt is likely to grow.

Many pension systems are rapidly approaching a day of reckoning. The assets of the systems in seven states and six big cities

are likely to be insufficient to pay for promised benefits past the year 2020. Another 20 states and 24 localities have a solvency horizon of 2025 or sooner. This means that substantial contributions to the funds will be needed over the next 15 years to pay for legacy liabilities – that is, to pay for public workers’ services performed long ago.

If governments end up trying to cover the unfunded portion of pension bills from current revenues, benefit checks will consume a crushing 20 to 50 percent of general tax revenues. And without very significant tax increases, pension payments of this magnitude would make it virtually impossible for state and local governments to provide essential services and to service their other debts.

THE GREAT ESCAPE

As late as the 1970s, the great majority of retirement plans, private as well as public, were defined-benefit plans. That is, if you worked for an enterprise that offered a retirement plan, you received a promise that the employer would give you a specified annual payment in retirement. The amount of the promised payment increased with both the number of years you worked at the firm and with your salary. So if you stayed with the same employer for your whole career, you might well have received a defined-benefit pension that was not much below your salary during your working years.

But times have changed. For better or worse, only 15 percent of non-unionized private sector workers are offered defined-benefit plans today. Indeed, an entire generation of private sector employees is only familiar with a newer kind of retirement scheme, the 401(k) plan, named for the enabling provision in the Internal Revenue Code. With these plans, employees set aside a portion of their wages in tax-deferred savings accounts – sometimes

THE VERY BAD NEWS

STATE	PENSION ASSETS (\$ BILLION)	LIABILITIES	UNFUNDED LIABILITIES	
		USING TREASURY RATES (\$ BILLION)	PERCENT OF ANNUAL TAX REVENUE	PERCENT OF GROSS STATE PRODUCT
Ohio	\$114.7	\$281.4	632%	35%
Colorado	28.8	86.2	596	23
Illinois	65.7	233.0	525	26
Oregon	42.9	80.7	519	23
South Carolina	20.3	63.5	511	28
Rhode Island	6.6	20.5	503	29
Alabama	21.4	61.8	445	24
Mississippi	15.5	44.2	424	31
New Mexico	15.9	39.8	424	30
Kentucky	21.1	63.4	420	27
New Jersey	67.2	191.2	405	26
Missouri	33.1	75.2	384	18
Wisconsin	58.4	114.6	373	23
Connecticut	20.1	69.1	367	23
New Hampshire	4.3	12.5	362	14
Arizona	24.8	73.5	355	20
Oklahoma	15.8	45.9	355	21
South Dakota	5.6	10.3	354	13
Louisiana	18.4	54.8	331	16
Maine	8.3	20.1	321	24
Texas	126.1	268.4	319	12
California	329.6	699.7	315	20
Georgia	53.1	110.1	314	14
Pennsylvania	64.3	164.5	312	18
Hawaii	8.1	24.2	312	25
Minnesota	35.9	91.0	301	21
Montana	5.3	12.4	287	20
Nevada	18.8	36.3	285	13
Kansas	10.2	30.3	279	16
Utah	14.7	31.2	278	15
Maryland	28.6	72.1	277	16
Virginia	41.3	89.6	262	12
Michigan	39.5	103.1	257	17
Florida	96.5	186.3	251	12
Wyoming	4.4	9.8	249	15
Massachusetts	32.7	86.9	247	15
Iowa	18.0	35.0	247	13
Washington	43.5	86.4	239	13
West Virginia	7.2	18.3	228	18
Idaho	8.7	16.6	216	15
Arkansas	14.6	30.4	209	16
New York	192.8	325.7	203	12
Indiana	19.6	49.8	203	12
Tennessee	26.4	49.6	201	9
Delaware	5.8	10.9	175	8
North Carolina	64.0	101.8	166	9
North Dakota	2.7	6.3	156	12
Nebraska	5.5	11.6	144	7
Vermont	2.4	5.7	129	13
Alaska	12.4	21.7	110	19

SOURCE: the author

with matching contributions from their employers. They get to see the cash accumulate in their accounts as they earn it, but are left with the responsibility to decide how much to

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contribute and how to invest the nest egg.

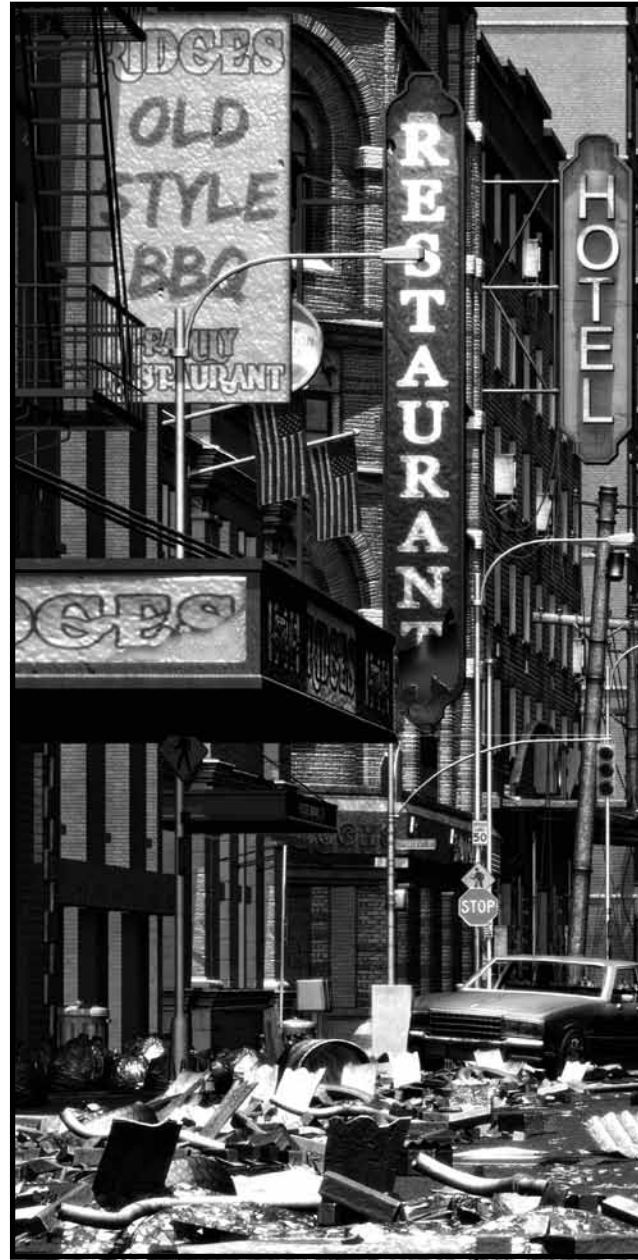
Why this sea change? Because the shareholders of publicly traded firms came to recognize that managers did not always have the understanding (or the incentives) to properly account for defined-benefit-plan obligations. By the same token, the owners of privately held firms decided that they were better at running their core businesses than at managing the financial assets set aside to fund pension liabilities. For while defined-benefit plans arguably provide more retirement security to employees, they pose significant financial challenges for the plans' sponsors.

But states and localities didn't follow the trend away from defined-benefit plans. About 85 percent of state and local government employees still have access to defined-benefit plans. Consider the irony: while they no longer receive defined-benefit pensions through their own employers, taxpayers are still promising defined-benefit pensions to their own "employees" – teachers, police officers, firefighters, administrators and the like. If the assets that government sets aside prove insufficient, future taxpayers will be obliged to come to the rescue.

IGNORING RISK

Government accounting standards do not assign any cost to this taxpayer guarantee. In 1994, the Government Accounting Standards Board issued Ruling 25, which stipulated that public pension liabilities were to be discounted at the expected rate of return on pension assets. No great surprise there: the ruling only codified the approach already being used by most public systems.

As noted earlier, system trustees typically choose to assume returns of around 8 percent, based on the past returns of portfolios similar to theirs. For example, based on past average



performance of the stock market, a pension system might operate under the expectation that its domestic equity investments would return 11 percent annually. Thus, a portfolio with 65 percent of investments in equities and 35 percent in bonds that yielded 2.5 percent would be expected to return 8 percent.

PATRICK TURNER



Government accounting rules allow the pension systems to consider their promises fully funded simply by assuming that the actual return will be identical to the expected return. But as every boilerplate financial disclaimer puts it, past performance is no guarantee of future performance.

Indeed, researchers in finance have shown conclusively that the distribution of returns on risky investments is skewed. This implies that an investment with a prospective average return of 11 percent is more likely to fall short of 11 percent than it is to achieve 11 percent. The mean return is still 11 percent, because of

THE PENSION BOMB

the potential for extremely high returns – albeit with very low probability.

The reality that discounting at the expected return on assets distorts government pension accounting quickly becomes apparent when one applies this logic to private sector financial promises. Imagine you are an underwater homeowner – you own a house worth \$200,000 on which you have a \$300,000 mortgage. You also have \$40,000 in a money market account. If you have no other assets, then by any reasonable calculation, your liabilities exceed your assets and your net worth is a negative \$60,000. If you decide to sell the money market funds and buy stock, nothing changes; you are still \$60,000 in the red. Reducing your cash holdings and increasing your stock market exposure has no impact on your wealth today.

But under the logic of the Government Accounting Standards Board, moving your cash into stocks, while having no effect on the value of your assets, would magically reduce your net liabilities. Since the financial assets you own now (stocks rather than cash) have a higher expected return, you can mark down your mortgage on your personal balance sheet. The board effectively says that by moving some savings from your left pocket to your right pocket you instantly make yourself richer. So if you take on enough risk, you can claim positive net worth – and might even qualify for a second mortgage on the same home!

The Government Accounting Standards Board brushes aside the reality that the calculation of a net financial obligation has nothing to do with the allocation of the debtor's assets. Yet if a state wanted to pay an investor (say, an insurance company) to take over its pension liability, the amount the investor demanded would not depend on the state's asset allocation. All this implies that if a state tells

its employees that their pensions are secure – not subject to risk like stocks – then it should use the yields on safe government securities such as Treasury bonds to calculate the pension fund's net position.

Under the Government Accounting Standards Board rules, state and local pension plans are underfunded by “only” \$1.3 trillion. But if you don't believe that moving funds from cash into stocks would increase your net worth, you can't believe the \$1.3 trillion figure. The true unfunded liability, using Treasury rates as the expected return on assets, is over \$3 trillion. In other words, the lump sum that would be required today to pay off all the legacy pension liabilities of states and localities is over \$3 trillion.

To put the number in context, \$3 trillion is more than \$20,000 per American household. Of course, that calculation implicitly assumes that these legacy liabilities will be shared equally by all taxpayers. In Illinois, though, the liability per household is close to \$40,000. And, it is safe to say, politicians in more fiscally responsible states would not welcome a bailout that spread the pain equally.

WHAT CAN STATE AND LOCAL GOVERNMENTS DO?

The first step that state and local governments need to take is to acknowledge the scale of the problem by changing the accounting standards that got us where we are today. As long as governments can continue to fund additional promises using an 8 percent discount rate, the \$3 trillion-plus unfunded liability will, more likely than not, continue to grow.

Governments should be required to disclose the magnitude of their unfunded liabilities using discount rates that reflect the fact that pensions constitute a solemn promise to pay and that taxpayers backstop the guarantee. A transparent starting point for discount-

ing would be the Treasury yields matched to the dates the pensions must be paid. One might justify a bit higher discount rate because part of the reason Treasury securities trade at exceptionally low yields is that they are highly liquid. By the same token, though, if pension benefits are adjusted for inflation, the appropriate discount rate would be the yield on inflation-indexed Treasuries – which, as this is being written, is below zero!

Once the true pension debt is recognized, it will become apparent that it is large in terms of the public's will and ability to pay. This leads to the question of what measures could be taken to reduce either the current debt or its rate of growth.

One approach that has gained traction recently is to reduce benefits – either for all state employees still on the job or for all members of the retirement systems, including retirees. For example, Colorado and Minnesota are attempting to reduce the annual cost-of-living adjustments that retirees receive. New Jersey is attempting to raise retirement ages as part of a cost-reducing package of measures.

But while these methods could save the taxpayers some money, they do not get to the root of the problem – the ongoing growth of unfunded liabilities. Moreover, since about half the total liabilities are owed to people who have already retired, cuts aimed at saving big bucks would have to affect current pensioners. For example, an increase in the retirement age by one year would reduce liabilities by just 3 percent. In contrast, a cost-of-living adjustment reduction of one percentage point that covered current as well as future retirees would save 10 percent.

As two economists, Jeffrey Brown of the University of Illinois and David Wilcox of the Federal Reserve, have pointed out, benefit cuts face major legal obstacles. In seven states

THE VERY BAD NEWS, PART II

STATE	PENSION LIABILITIES (ABO), TREASURY RATE (\$ BILLION)	UNFUNDED LIABILITY AS SHARE OF OWN ANNUAL REVENUE	UNFUNDED LIABILITY PER HOUSEHOLD (\$)
Chicago	\$66.6	763%	\$41,966
New York City	214.8	276	38,886
San Francisco City and County	22.6	306	34,940
Boston	11.0	430	30,901
Detroit	11.0	402	18,643
Los Angeles	49.3	378	18,193
Philadelphia	13.0	290	16,690
Cincinnati	3.2	321	15,681
Baltimore	6.4	260	15,420
Milwaukee	6.7	687	14,853
Fairfax County VA	11.1	169	14,415
Hartford	1.6	249	14,333
St Paul MN School District	2.2	464	13,686
Jacksonville	6.0	278	12,994
Dallas	10.8	298	12,856
Contra Costa County CA	8.7	425	12,771
Santa Barbara County	3.3	329	11,995
Kern County CA	5.6	612	11,919
San Jose	7.5	321	11,391
Houston	16.4	356	10,804
Nashville & Davidson County	4.1	151	10,048
Arlington County VA	2.0	103	10,000
Miami	3.3	318	9,689
San Mateo County CA	4.1	413	9,415
Seattle	3.6	165	9,125
San Joaquin County CA	3.8	525	9,119
Tacoma	1.4	198	9,082
Sacramento County	8.9	452	8,582
Memphis	4.6	291	8,432
Fresno County	5.1	843	8,401
Sonoma County	2.6	397	8,394
Orange County	15.6	604	8,233
Ventura County CA	4.9	352	8,195
Montgomery County MD	5.1	91	8,118
Alameda County CA	8.0	353	7,579
Los Angeles County	60.0	367	7,473
Fort Worth	3.3	300	7,212
Anne Arundel County MD	2.4	111	7,081
San Bernardino County CA	9.6	407	6,716
Stanislaus County CA	2.4	486	6,698
Baltimore County	3.5	113	6,577
San Diego County	13.4	631	6,329
DeKalb County GA	2.3	186	4,873
Cook County IL	14.3	365	4,112
Tulare County CA	1.4	392	4,068
Fresno City	2.4	172	3,647
Fulton County GA A26	2.1	142	3,276
San Antonio	3.4	140	3,201
Phoenix	3.3	111	3,176
Tampa	2.0	57	2,309
Total	681.0		

SOURCE: the author

(including the especially problematic states of Illinois, New York, Michigan and Louisiana), the states' constitutions stipulate that pension



benefits for public employees may not be diminished or impaired. Thus, any cost-saving measures acknowledged as benefit cuts would likely prove impossible. Even in states whose constitutions are not explicit on the subject, historical precedent and political reality suggest that, in local public-finance crises, already-promised pension benefits will be honored.

A more productive approach would be to focus more on stopping the growth of the unfunded liabilities, as opposed to renegeing on past promises. I see two possible means to that end.

The first would be to fund pension promises using assets with maturities that match the promised benefit payouts. This would largely involve funding plans with government bonds, although two economists, Ste-

ven Zeldes of Columbia University and Deborah Lucas of MIT, have shown it might make sense to include stocks in such a portfolio as a way to hedge the risks associated with future changes in public employee wages.

The idea of matching assets with liabilities, called asset-liability management, is not new. It has long been used by insurance companies and other financial intermediaries. Funding defined-benefit obligations using a liability-matched portfolio of bonds looks expensive in current cash terms because bond yields are so low. But, it is truly no more expensive than a strategy of coping with underfunding by investing in riskier assets and hoping that high future returns will cover pension obligations when they come due.

The second method would be to freeze



pension promises at current levels, and shift future outlays to defined-contribution plans – that is, to 401(k)-like individual retirement accounts. By definition, defined-contribution plans create no new unfunded liabilities – what employees see today is what they get. However, defined-contribution plans do expose the employees to risks they did not previously face.

Such changes would need to be enacted in a way that gives public employees a solid opportunity to amass adequate retirement benefits. Today, 30 percent of state and local government employees are not enrolled in Social Security. (Governments have the right to opt out if the government provides pension coverage.) And this leaves employees' retirement income totally exposed to the risks incurred

by their public systems. Therefore, all new public employees should be brought into Social Security.

In creating defined-contribution plans for state and local workers, the plan given to federal employees (called the Federal Thrift Savings Program), along with the best private sector plans, should be used as models. At a minimum, defined-contribution plans should include automatic enrollment, matching employer contributions, low fees, good investment choices, sensible default allocations for account owners who don't want to do it themselves and the option to convert nest eggs to fixed annuities at competitive market terms upon retirement. Ideally, the plans would also give account owners access to professionally managed retirement fund

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pools – moving the system closer to the collective defined-contribution plan model used in the Netherlands, among other places.

To stop the growth of liabilities completely, the freeze of defined-benefit plans would have to affect all workers – not just new ones. So under this approach, a mid-career worker

the promised benefits – in particular by raising retirement-eligibility ages and reducing cost-of-living adjustments. Meanwhile, states and localities might ease the pain of raising the trillions in unfunded liabilities that will doubtless be left by selling very-long-term bonds. Convincing investors that it would be safe to lend money for this purpose might not

Unless states and localities get serious about dealing with underfunded pension plans soon, municipal bond investors will likely deny them access to any credit at any price.

would see a defined-benefit plan frozen (with accrued benefits guaranteed at retirement age) and would begin to accumulate money in a 401(k)-style defined-contribution account. Many employees would no doubt view this freeze-and-switch as a cut in compensation and oppose it. On the other hand, younger employees might prefer the certainty of defined-contribution accounts to taking their chances in a defined-benefit system whose promises are no more credible than the ability of states and localities to pay their bills decades down the road. Still, in the end, governments may have to compromise by limiting the freeze only to new workers (a “soft freeze”), or by giving current employees some offsetting compensation.

Note, by the way, that switching to defined-contribution plans might well mean increases in current contributions – not decreases. That’s because most defined-benefit plans are using outrageously high (you guessed it: 8 percent) expected returns on their portfolios to keep down current contributions.

Once the growth of unfunded liabilities is stopped, someone will still have to deal with the \$3 trillion-plus unfunded legacy liability. It might be trimmed by renegotiating some of

be easy – but it would be a lot easier if states and localities pulled up their socks and passed balanced budgets to fund other services.

WASHINGTON TO THE RESCUE?

It would be tempting to let the profligate states and localities solve their own fiscal problems. But the financial market uncertainty created by a slew of defaults would be likely to raise the cost of credit to fiscally prudent governments as well. And, in any event, federal taxpayers would be on the hook for part of the cost because more federal cash would flow automatically to hard-hit states under programs ranging from unemployment insurance to Medicaid. Moreover, failures could have broader, unwanted consequences for the economy as a whole. For example, businesses that pulled up stakes in the wake of a state fiscal crisis in order to avoid higher taxes and lower-quality government services might choose to move operations to, say, China or India, rather than a low-tax state.

All this suggests that the federal government has a major stake in a soft landing – and provides good reason to create incentives for pension reform. A wide range of incentives should be considered, including both carrots

and sticks. The key idea is that some portion of federal aid should be contingent on the states and localities getting their off-balance-sheet liabilities under control.

One promising approach in this regard relates to the tax treatment of bonds that could be used to fund pensions. Under current law, bonds floated by states for this purpose would be fully taxable. As a result, such debt would be considerably more expensive than muni bonds qualifying for tax-exempt status or the new Build America Bonds, on which the federal government directly reimburses the states for 35 percent of interest payments.

This creates a potential leverage for Washington to drive a deal with states. In a plan I developed with Professor Novy-Marx, a state would be allowed to issue tax-subsidized bonds for the purpose of pension funding for the next 15 years if (and only if) it agreed to cost-cutting measures. Specifically, the state would have to close its defined-benefit plans to new workers, fund existing defined-benefit plans on an actuarially sound basis, enroll all its employees in Social Security and provide a decent defined-contribution plan to the new employees.

While the cost of this tax subsidy could eventually total hundreds of billions of dollars, the enrollment of state and local workers into Social Security would allow the federal government to achieve substantial cost savings in that underfunded program. Including gains to the Social Security system, we calculate that the net cost to the federal government of subsidizing bonds to cover all unfunded pension liabilities would be \$75 billion. And by our lights, it would constitute a bargain, a deal that would prevent a multi-trillion-dollar crisis from overwhelming the country.

The feds might also introduce a framework for restructuring state debt in the event of defaults. In the wake of Greece's fiscal crisis, the European Union is considering re-

writing its treaties to include a mechanism for troubled European governments to default on their debts. The goal: send the message that the EU will not permanently backstop all debt issued by member countries.

Washington could send a similar message to the states by defining the legal procedures to be followed if a state government defaults. The creation of such a framework would likely be met by sell-offs in state-bond markets and higher borrowing costs for financially weak states. Indeed, in Europe, the yields on the sovereign debt of Greece, Portugal and Ireland all rose sharply in response to the proposals for debt-default mechanisms.

However, putting the bond markets on notice might not be a bad thing, even if it raised the states' costs of borrowing. It would increase the credibility of federal claims that the states would not have access to limitless bailouts. And the downside for the states would be more bearable than the consequences of letting politicians and state employees imagine that, in a pinch, Uncle Sam will be there to rescue them.

Unless states and localities get serious about dealing with underfunded pension plans soon, municipal bond investors will likely deny them access to any credit at any price. And dealing with state fiscal problems after bond markets panic would be much more difficult than restoring balance while the markets are still calm.

* * *

Solving a fiscal problem of this magnitude and complexity – a problem that few politicians, public employers, taxpayers or investors are yet aware of – is bound to be difficult and messy. But the alternative – ignoring the problem until the credit markets take notice – is a recipe for disaster. The time for decisive action is now. **M**