GUARANTEED VOLATILITY
PENSION COSTS AND STATE AND LOCAL STAFFING LEVELS

Stephen Eide
Senior Fellow
About the Author


Eide was previously a senior research associate at the Worcester Regional Research Bureau. He holds a B.A. from St. John's College in Santa Fe, New Mexico, and a Ph.D. in political philosophy from Boston College.
Contents

Executive Summary ........................................................................................................... 4
I. Public Pension Debt and the Economic Recovery .................................................. 5
II. Servicing Pension Debt Makes Governments Less Efficient ............................. 11
III. Conclusion ............................................................................................................ 11
Endnotes ..................................................................................................................... 13
Executive Summary

America’s ongoing debate over public pension reform has mainly focused on benefit levels. But equally important is how governments finance pension benefits. In recent years, states and cities have seen pension costs continue to rise even as pension benefits have become less generous. This paper highlights the problem of volatile pension costs by examining their relationship with state and local staffing levels.

Since the end of the Great Recession in June 2009, U.S. state and local governments have faced pension costs that are rising at a rate above revenues; state and local governments have also faced diminished staffing levels. By 2016, U.S. private-sector job levels had long returned to pre-financial-crisis totals. Yet state and local government staffing remains lower than it was in 2008. Pension costs are high, and rising, because state and local governments’ pension debt remains at historic levels and has continued to expand even as economic conditions have improved.

Key findings include:

- Private payrolls began growing in March 2010; in February 2014, they surpassed their prerecession peak and have since grown by 5 million. State and local payrolls only stopped declining in 2013; state and local governments currently employ over 500,000 fewer workers than they did in 2008.

- Part of the problem has to do with escalating public pension costs. If governments’ pension costs had stayed flat, relative to general revenues, since 2008, the state and local workforce would now likely total 19.5 million, or about 200,000 more than their current level. If pension costs had remained at their 2002 level, America’s state and local workforce would now total at least 19.8 million, the prerecession peak.

- Public pension costs are not rising because benefits are becoming more generous. The problem is the trillions in existing benefit promises that are not backed by assets on hand, coupled with an aggressive financial strategy that requires the economy to have a great year, not simply a good one. Even when public pension funds grow in value, failure to meet their annual 7 percent—8 percent benchmark requires governments to divert more revenues from services in order to pay back pension debt.

- Because pension benefits enjoy substantial legal protections, “pension reform” is mainly a question of how to restructure benefits not yet earned. But in the near term, the challenge for states and cities involves funding benefits that have already been promised: pension reform, by most any definition, will therefore not bring stability to government budgets or workforces.

Escalating pension costs—which, in effect, mean higher spending on past services—make it difficult to measure governments’ size by staffing levels and/or spending on current services. Yet the larger issue is not state and local governments’ magnitude but whether they have the administrative flexibility to address current and future challenges. Because fiscal volatility can limit governments’ capacity to respond to changing citizen concerns, the current approach to financing public pension debt weakens state and city services.
I. Public Pension Debt and the Economic Recovery

Over the last half-century, U.S. public- and private-sector labor markets have rarely moved at exactly the same rate. This should be expected, given differences between the occupations out of which each workforce is composed. Productivity gains and changes in demand for goods and services will cause differences in how public- and private-sector employers respond to overall economic trends.

During the 1960s and 1970s, state and local governments added jobs at a much faster rate than that of the private sector. In the 1980s and 1990s, states and localities added jobs at a rate closer to the rate of population growth and below the private-job rate. During 2010–15, the private-sector workforce expanded by over 11 percent, and the state and local workforce contracted by 1.5 percent. At no time during the last half century has private-job growth so far outpaced government job growth (Figure 1).

### Change in Total Jobs, State and Local Governments and Private Sector, 1955–2015

<table>
<thead>
<tr>
<th>Period</th>
<th>State and Local (%)</th>
<th>Private (%)</th>
<th>Gap (Private–State/Local)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1955–60</td>
<td>28.7</td>
<td>4.8</td>
<td>-23.9</td>
</tr>
<tr>
<td>1960–65</td>
<td>26.5</td>
<td>10.6</td>
<td>-15.9</td>
</tr>
<tr>
<td>1965–70</td>
<td>27.6</td>
<td>15.1</td>
<td>-12.6</td>
</tr>
<tr>
<td>1970–75</td>
<td>21.5</td>
<td>6.7</td>
<td>-14.8</td>
</tr>
<tr>
<td>1975–80</td>
<td>12.1</td>
<td>19.1</td>
<td>7.1</td>
</tr>
<tr>
<td>1980–85</td>
<td>1.1</td>
<td>9.2</td>
<td>8.2</td>
</tr>
<tr>
<td>1985–90</td>
<td>12.6</td>
<td>12.5</td>
<td>0.1</td>
</tr>
<tr>
<td>1990–95</td>
<td>8.3</td>
<td>7.5</td>
<td>-0.8</td>
</tr>
<tr>
<td>1995–00</td>
<td>8.7</td>
<td>13.5</td>
<td>4.8</td>
</tr>
<tr>
<td>2000–05</td>
<td>6.4</td>
<td>0.9</td>
<td>-5.5</td>
</tr>
<tr>
<td>2005–10</td>
<td>2.3</td>
<td>-3.9</td>
<td>-6.2</td>
</tr>
<tr>
<td>2010–15</td>
<td>-1.5</td>
<td>11.3</td>
<td>12.9</td>
</tr>
</tbody>
</table>

Source: Bureau of Labor Statistics
America’s last recession ended in June 2009. Figure 2 shows that private-sector job growth has since consistently outpaced public-sector job growth. Private payrolls began growing in March 2010, surpassed their prerecession peak (115.9 million jobs) in February 2014, and have subsequently added more than 5 million jobs. By contrast, state and local payrolls only stopped declining in 2013. Even now, more than six years into the recovery, state and local governments employ 528,000 fewer workers than their prerecession employment peak in August 2008. At 19.3 million, the state and local government workforce is now approximately where it was in 2006.

Most of the public-sector job losses came in the K–12 (local education) sector: that is the largest sector, by far, in state and local government workforces. Among the four employee cohorts listed in Figure 3, only higher education has returned to prerecession levels—though that cohort represents a fairly small proportion (12.5 percent) of total state and local employment.

Figure 4 contrasts the U.S. state and local labor market’s recent experience with that of the three other recessions since the early 1980s. In those three recessions, unlike the most
recent, total public-sector employment had rebounded within five years of the recession’s end.

At 18 months, the Great Recession lasted longer than any other U.S. downturn since the Great Depression. The unique severity of America’s most recent downturn could account for why state and local jobs have been slower to bounce back than after the dotcom or 1990–92 recessions; but the harshness of the downturn does not explain the huge gap between private and government payroll rates of growth.

Instead, consider the role of rising retirement-benefit costs. Some 84 percent of state and local workers have access to defined-benefit pensions, compared with only 18 percent of private-sector employees. Public-pension plans assume a 7 percent—8 percent rate of return on investments. Nationwide, 73 percent of public retirement-system funds are in high-yield, high-risk classes: equities, alternative investments, and real estate. Earnings on investments now compose three-fourths of total revenue. By guaranteeing employees fixed payments during their retirement years, state and local employers make taxpayers responsible for rising spending on pensions when assets fall short. Relying on high-yield investments is intended to minimize taxpayers’ costs—in more recent years, however, this has meant increased costs.

The ongoing rise in pension costs began more than a decade ago, following the dotcom crash. In 2002, the average plan boasted a funded ratio of 93.2 percent; but in 2013, only 71.0 percent. According to Census Bureau data, plan assets grew from $2.2 trillion to $3.3 trillion during 2002–13. Yet that was not enough to recoup investment losses and keep pace with annual growth in liabilities. Indeed, as the Obama administration has noted in recent editions of its “Economic Report of the President,” state and local pension debt relative to government revenues is at a 50-year high.

To service this debt, additional budgetary appropriations have been necessary. In 2013, the most recent year for which Census Bureau data exist, state and local employers’ pension bill was $108.9 billion. That sum represents a 175.6 percent increase since 2002, a period during which state and local general revenues grew by only 59.7 percent. Pension costs now represent 4 percent of states’ and localities’ general revenues, up from 3.4 percent in 2008 and 2.3 percent in 2002 (Figure 5).

An increase of 1.7 percentage points may seem insignificant. But those census figures should be put into context. First, for some localities, such as Chicago, Providence (Rhode Island) and certain counties in California, pension costs as a share of revenue are well into the double digits.

Second, when a “fixed” cost, such as pensions, rises more rapidly than revenues, that diminishes whatever “profit” a government budget may have available, in new revenues, to expand services or keep up with other rising costs.

Third, growing pension costs mean more spending on past services. The part of the annual bill that has been rising is the payment associated with pension system’s unfunded liabilities, or debt. Independent of salary growth, benefits have not been increasing. Indeed, as a result of reforms passed in the wake of the Great Recession, benefits nationwide have become less generous, even while costs have surged. A pension plan’s normal cost—how much an employer contributes to workers’ pension plans in compensation for that year’s labor—is one measure of plan generosity. It is ex-

FIGURE 5.
State and Local Pension Costs as Share of General Revenue, 1993–2013

Source: Census Bureau and author’s calculations
pressed as a share of payroll and roughly equivalent to an employer sponsor’s annual contribution in a defined-contribution plan. During 2002–13, the average plan’s normal cost declined from 7.6 percent of salary to 7.2 percent.¹¹

Fourth, a difference of several percentage points represents billions in spending nationwide. During 2008–13, had pension costs grown at the same rate as general revenues, an additional $17.4 billion would have been available to states and cities (Figure 6). Had pension costs in 2013 stood in the same proportion to general revenues as in 2002 (2.3 percent), governments would have had $45.8 billion more to spend on services in 2013 (Figure 7).

What if the aforementioned sums had been devoted entirely to staffing? Using National Compensation Survey figures on average hourly compensation, an extra $17.4 billion would have meant 201,277 more full-time employees than states and localities actually employed in 2013; and an extra $45.8 billion would have meant 542,461 more full-time employees (Figure 8).¹²

Had pension costs been stable since 2002, state and local government workforces would have nearly exceeded their 2008 peak by 2013—and, surely, would have surpassed the 2008 peak by 2016. (Between December 2013 and December 2015, state and local governments added about 200,000 jobs.)

### FIGURE 6.
**What if Pension Costs Had Grown at the Same Rate as Revenues During 2008–13?**

![Graph showing the difference between actual and theoretical 2008–13 payrolls.]

*Thousands
Source: Census Bureau and author’s calculations

### FIGURE 7.
**What if Pension Costs Had Grown at the Same Rate as Revenues During 2002–13?**

![Graph showing the difference between actual and theoretical 2002–13 payrolls.]

*Thousands
Source: Census Bureau and author’s calculations

### The Effect of Lower Pension Costs on State and Local Payrolls

<table>
<thead>
<tr>
<th></th>
<th>Actual 2013 Payroll</th>
<th>Theoretical 2013 Payroll</th>
<th>Actual December 2015 Payroll</th>
<th>July 2008 Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>If pension costs had stayed at their 2002 level</td>
<td>19,078,700</td>
<td>19,621,161</td>
<td>19,273,200</td>
<td>19,800,700</td>
</tr>
<tr>
<td>If pension costs had stayed at their 2008 level</td>
<td>19,078,700</td>
<td>19,279,977</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Author’s calculations using Census Bureau and Bureau of Labor Statistics data
Even if pension spending, relative to revenue, had stayed at 2008 levels (3.4 percent), government payrolls would now likely total 19.5 million, instead of their current 19.3 million. These are conservative estimates, based as they are on average compensation costs for full-time state and local workers. They reflect, in essence, how many full-time employees governments could have retained instead of having to lay them off to pay for pensions. Governments could have hired far more new full-time employees at the same level of expenditure, since new hires cost less in salary than experienced employees. (The public sector workforce has a relatively long median tenure—7.4 and 7.9 years for state and local employees, respectively, compared with 4.6 years for private-sector workers. This increases the gap between average and entry-level compensation.)

For reasons discussed later, it is important to avoid assuming that state and local pension expenditures in 2002 represented their “natural” or “appropriate” level. Governments should have paid more for pensions in 2002, though the problem of under-contributing has since gotten worse.

The main issue is how fiscal volatility leads to administrative inflexibility. Pension costs—not only voters’ will, administrative prerogative, or service needs—will continue to shape workforce levels. Clearly, governments have more than a revenue problem: pension costs have been growing relative to revenues.

At the same time, the Great Recession’s historically severe impact on state and local revenues must be acknowledged: across all major revenue sources, growth has been stagnant, making it harder for governments to keep pace with rising costs (Figure 9 and Figure 10). Figure 11 shows that revenues—though nearly as high as they’ve been at any point in the last three decades—have fallen slightly, relative to GDP.

The depth of the total revenue drop during the Great Recession is partly a function of states’ increased reliance on income taxes, a notoriously volatile source of revenue. Over the last 40 years, income-tax receipts rose from 15 percent to 20 percent of total state revenues. (The significance of this development will, of course, depend on a given state or locality’s reliance on income taxes.) Because of administrative factors, such as assessment cycles, property-tax revenues generally take at least 18 months to reflect economic changes. All things being equal, city budgets that depend heavily on property taxes will therefore take longer to feel a recession’s full impact but will recover more slowly, too.

### Average Annual Change in State and Local Revenue Sources, 1980–2013

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Property Tax</td>
<td>5.9</td>
<td>6.6</td>
<td>2.2</td>
</tr>
<tr>
<td>Sales and Gross Receipts Tax</td>
<td>5.7</td>
<td>6.4</td>
<td>2.0</td>
</tr>
<tr>
<td>Individual Income Tax</td>
<td>6.7</td>
<td>7.4</td>
<td>2.5</td>
</tr>
<tr>
<td>General Revenue Own Source</td>
<td>6.1</td>
<td>6.9</td>
<td>1.6</td>
</tr>
<tr>
<td>General Revenue</td>
<td>6.1</td>
<td>6.8</td>
<td>2.1</td>
</tr>
</tbody>
</table>

*Source: Census Bureau

### Change in General Revenues, Four Years After Conclusion of Recession

<table>
<thead>
<tr>
<th>Recession</th>
<th>Change (%)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 1981–November 1982</td>
<td>23.4</td>
</tr>
<tr>
<td>July 1990–March 1991</td>
<td>15.8</td>
</tr>
<tr>
<td>March 2001–November 2001</td>
<td>11.5</td>
</tr>
<tr>
<td>December 2007–June 2009</td>
<td>2.0</td>
</tr>
</tbody>
</table>

*Real dollars

*Source: Author’s calculations and Census Bureau
Though governments can exercise some influence over revenues through tax policy—as property sales and income taxes do not move in perfect harmony (Figure 9)—the overriding factor is the business cycle. No state or local tax policy, or economic-development policy, will fully shield budgets from a national recession. By contrast, governments have, in principle, total influence over what form of retirement benefits to offer employees.

Defined-contribution plans, now dominant in private industry, have no volatility: the employer’s annual cost is fixed as a percent of salary. For defined-benefit plans, however, employer-contribution rates depend on the stock market. Such volatility will be more burdensome for state governments, such as Illinois, in which some, or all, employees are not enrolled in Social Security. In such systems, employer-sponsored benefits are proportionately more generous. The less the benefit is shouldered by the federal government—and other Social Security participants—the more exposed state and local government employers will be to stock-market volatility. Figure 12 uses Census Bureau data to break down workforce reductions by occupation.
II. Servicing Pension Debt Makes Governments Less Efficient

Whether a city truly needs more cops or teachers can only be determined case by case. But as a general matter, the public is accustomed to an amply staffed municipal workforce. Given the public’s strong support for low class sizes, a backlash should be expected if student-teacher ratios continue to rise. Demand is now strong, in many cities, for improvements in police-community relations, which are easier to facilitate via increases in uniformed officers—community policing and foot patrols, for example, are labor-intensive activities. Governments should possess the flexibility to manage staffing levels as needed; but less fiscal flexibility, thanks to high pension costs, means more administrative inflexibility.

Fiscal challenges can force governments to become more efficient and/or innovative. The years following the early 1990s recession saw the emergence of charter schools, privatization/managed competition, and public-private partnerships, all of which have become permanent fixtures of the state and local policy landscape. But there is little evidence to suggest that the severity of the Great Recession prompted an equally dramatic wave of government reinvention. Budget pressure stemming from pension debt service makes governments less efficient: even if public-service quality remains constant, taxpayers are spending more to guarantee benefits already promised for work that retirees and employees performed years ago.

Because of pension debt—the costs of the past—reduced staffing does not necessarily connote smaller government. The cost of state and local government, a more useful measure of size than staffing, will have to remain high for as long as governments must grapple with massive pension debt burdens. Particularly when subject to a balanced-budget requirement, it is reckless for governments to cut taxes without radical pension reform: unfunded retirement-benefit liabilities have a tendency to expand even in good—to say nothing of bad—years.

Governments have no choice but to service their pension debt as faithfully as they do their bonded obligations; truly radical pension reform is legally impossible in most states. Across America, pension benefits enjoy substantial legal protections that can be adjusted only in bankruptcy. In most cases, “pension reform” has meant making changes to benefits that have not yet been earned—and, in many cases, for workers yet to be hired. The problem, in the near term, is how to pay for the promises that have already been made. Postponing payments will only increase the burden on future generations. Past lapses in contributing in accordance with actuaries’ recommendations are central to the struggles of state governments (Illinois, Connecticut, and New Jersey) with the deepest underfunding problems. As the gap has grown between actual contributions and what their actuaries have recommended that they contribute, governments’ record on servicing pension debt has worsened in recent years.

Even if the economy continues to expand, turbulence in the financial markets will exacerbate pressure on budgets. In 2015, American employers added 2.65 million jobs, the best tally since 1999. But investment returns in 2015 were 0.36 percent for the median government retirement system, the worst showing since 2008, according to Wilshire Trust Universe Comparison Service. Though flat is better than negative, pension systems are structured such that whenever investments fail to meet the assumed 7 percent–8 percent benchmark, greater taxpayer contributions are necessary to keep pace with existing funding schedules. On account of earning only 3.15 percent return in FY15, New York City must spend an additional $730 million over the next four fiscal years.

In the past, governments have kept budgetary appropriations artificially low by relying on aggressive assumptions about investment return. In recent years, public plans have moved to lower these assumptions. The average assumed rate of return was 8.0 percent in 2002 and 7.6 percent in 2013. (Though, as Andrew Biggs of the American Enterprise Institute has noted, the gap between plans’ assumed rates of return and “risk-free” rates has grown larger.) Lowering the 7 percent–8 percent benchmark further, as many financial economists recommend, or requiring systems to address any shortfalls within a few years, as private plans must do, would lead to still less revenue available for staffing, infrastructure, and other public-service needs.

III. Conclusion

“Pension reform,” by most all definitions, would do little in the short term to reduce pension-related volatility. Even if all 19 million state and local employees were enrolled next year in a defined-contribution plan—a change considered political anathema even in many red states—pension debt would remain. States’ and localities’ most immediate need is a far more conservative approach to funding pension promises. But that would require increasing contributions beyond the current actuarially recommended amount, which is already too burdensome for most governments.
America’s state and local pension debate would be improved by reevaluating the wisdom of prefunding. Prefunding—paying for benefits through a combination of employer and employee contributions and investment return—is, in theory, an effective way to ensure intergenerational equity. Prefunding worked for a long time: systems went from being almost totally unfunded in the 1970s to, in many cases, over-funded by the late 1990s. Yet back then, the balance between “inflows” and “outflows” was different. Now, the number of active members is approaching that of retirees; since 1996, benefit payments leaving pension systems has exceeded the sum of entering contributions from employers and employees. This dynamic magnifies the risk of investment under-performance. More important, prefunding creates moral hazard for politicians. When pension systems are structured to minimize taxpayer cost and maximize benefit to employees, mismanagement becomes the norm.

America’s current economic expansion has lasted 19 months longer than the average post-WWII recovery. As a result, some fiscal-policy experts have warned governments to prepare for the next downturn. The current structure of government retirement-benefit systems exacerbates state and city budgets’ vulnerability to recessions by requiring more funds to backfill liabilities at the same time that revenues are in shorter supply and demand for many services, such as safety-net programs, is on the rise. Pension costs can crowd out room in budgets even when a recession is not under way. Without a major change in how states and cities fund pensions, continued volatility is guaranteed.
Endnotes

1 See http://www.nber.org/cycles.html.


5 See http://publicplansdata.org/quick-fact/national/1investments.


7 Author’s calculation based on Public Plans Data figures. Maintained by the Center for Retirement Research at Boston College, the Public Plans Data contain various plan-specific data for 150 state and local retirement systems. These systems represent 90 percent of public-pension membership and assets nationwide.

8 See https://www.census.gov/govs/retire/ret02t1.html and http://www2.census.gov/govs/retire/g13-aspp-sl.pdf.


11 Author’s calculation based on Public Plans Data figures.

12 This calculation rests on the assumption that all other forms of compensation—most notably, wages and salaries—would not have been affected by lower pension costs. (Governments could have responded in any number of ways to a lower rate of pension-cost growth, including more infrastructure spending, raises for current employees, and/or lower taxes.) In performing the calculation, 2013 National Compensation Survey figures for “retirement and saving” have been adjusted to 2002 levels, to reflect the lower rate of pension spending. The average full-time state and local employee is assumed to have cost $84,452 (salary and benefits) in 2013 had pension costs stayed at the 2002 level, and $86,286 at the 2008 level.


14 See http://publicplansdata.org/quick-facts/national/1costs.


16 Ibid., pp. 14–15.


20 Alicia H. Munnell, Jean-Pierre Aubry, and Mark Cafarelli, “How Did State/Local Plans Become Underfunded?,” Center for Retirement Research at Boston College, January 2015.


24 Author’s calculation based on Public Plans Data figures.


26 Ibid.


Abstract

Since the end of the Great Recession in June 2009, U.S. state and local governments have faced pension costs that are rising at a rate above revenues; state and local governments have also faced diminished staffing levels. By 2016, U.S. private-sector job levels had long returned to pre-financial-crisis totals; yet state and local government staffing remains lower than it was in 2008.

Key Findings

1. Private payrolls began growing in March 2010; in February 2014, they surpassed their prerecession peak and have since grown by 5 million.

2. State and local payrolls only stopped declining in 2013; state and local governments currently employ over 500,000 fewer workers than they did in 2008.

3. Because of pension debt—the costs of the past—reduced staffing does not necessarily connote smaller government; the cost of state and local government, a more useful measure of size than staffing, will have to remain high for as long as governments must grapple with massive pension debt burdens.