



RESEARCH REPORT

Understanding the Growth in Government Contributions to New York State's Public Pension Plans

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Introduction

New York State has some of the best-funded public pension plans in the nation (Pew Charitable Trusts 2015). Data from plan actuaries show that the retirement plans covering the state's public school teachers, state and local public safety workers, and general state and local government employees held enough assets in 2014 to cover 92 percent of future pension obligations.¹ However, retirement benefits for state and local government employees have become increasingly costly for New York State's taxpayers over the past decade (State Budget Crisis Task Force 2012). Nationally, contributions by state and local governments to public employee retirement plans increased 133 percent in inflation-adjusted dollars between 2002 and 2014. In New York State, by contrast, total government contributions increased 609 percent over the same period, the second-largest increase in the nation.² This surge in government contributions has created financial problems for local governments and raised questions about the sustainability of the state's retirement plans, prompting some observers to advocate cutting retirement benefits for public employees (McMahon and Barro 2010).

The appropriate response, however, depends on why costs have been rising. Are pensions too generous?³ Or have costs been rising because the state and local governments contributed too little to the plan in earlier years (AFSCME 2012), forcing them to contribute more recently to make up for past shortfalls, or because risky investment strategies did not pay off? The first explanation suggests policymakers should cut benefits, raise mandatory employee contributions, or fundamentally change the retirement plan design. The latter explanations suggest policymakers should tighten funding rules or investment policies, but not necessarily change benefits.

This report explores the increase in government contributions to the pension plan for New York State's government employees, examining the retirement benefits offered to employees and how they are financed. We focus on the New York State and Local Employees Retirement System (ERS), which covers general state and local government employees in the state, excluding teachers and public safety workers. Our analysis simulates the level and distribution of annual and lifetime pension benefits, shows how they have changed over time, and compares average benefits in New York to average benefits in other states. We also report changes in plan revenues over time. Our results indicate that the recent surge in government contributions to the plan was driven primarily by plan investment losses as well as the plan's practice of adjusting government contributions to offset unexpectedly high or low investment returns. Significant reductions in employer contribution rates in the past when the fund earned healthy investment returns also contributed to recent rate increases. Current retirees receive

more generous benefits than in nearly all other states, but recent cutbacks will sharply curtail future retirement benefits for new hires. As a result, relatively few new hires will get much out of the plan.

How Are Pension Benefits Calculated?

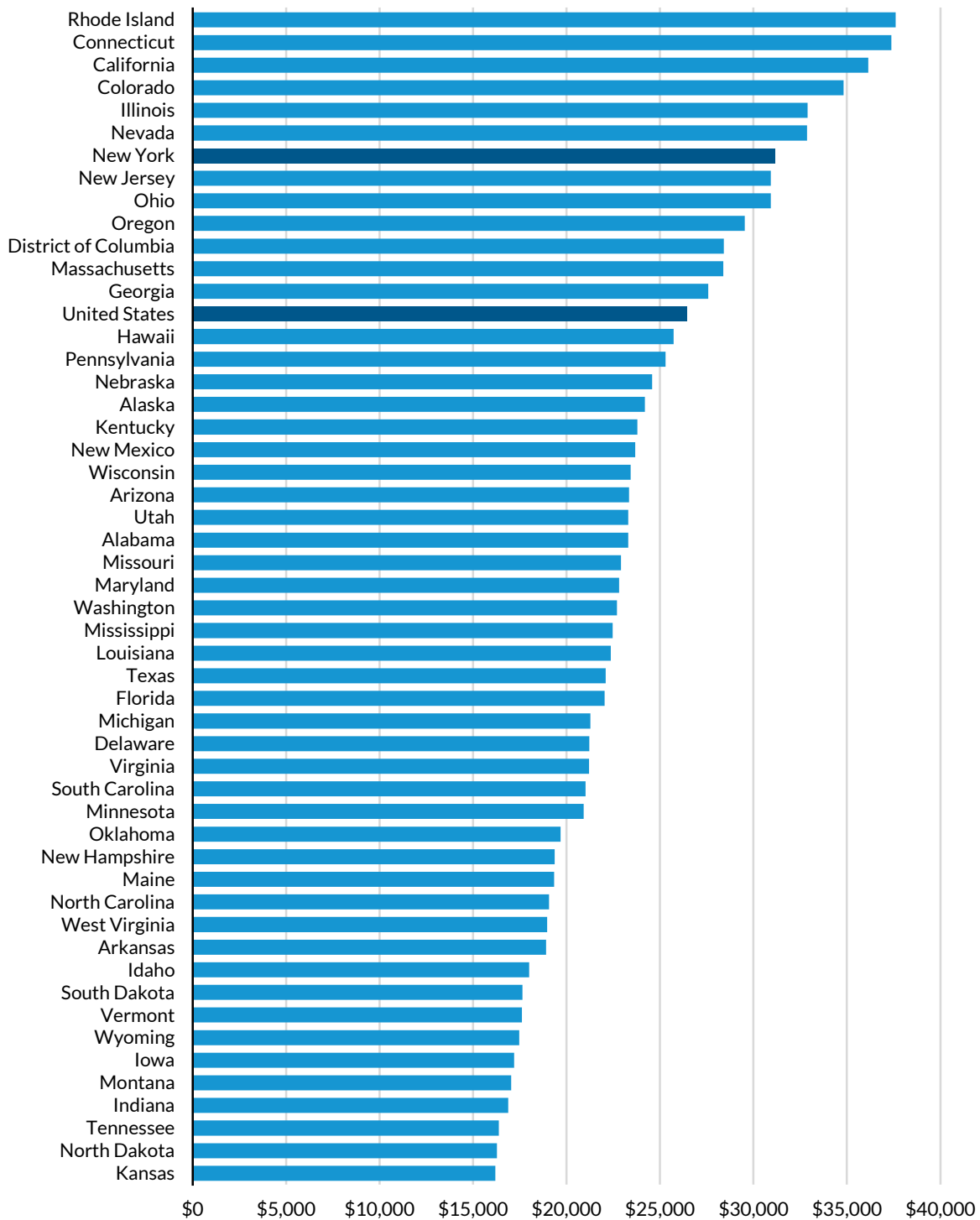
In 2014, average pension benefits received by retired public-sector employees in New York State exceeded the national average by 18 percent (\$31,300 compared with \$26,500) (figure 1). Only six states—Rhode Island, Connecticut, California, Colorado, Illinois, and Nevada—paid higher average pension benefits to their government employees than New York. New York’s relatively large pensions at least partly reflect the high salaries the state pays to its public-sector employees. Average salaries paid to New York’s state government employees are 35 percent higher than the national average (\$46,200 compared with \$34,200).⁴ Only five states—Connecticut, Massachusetts, Washington, Hawaii, and Alaska—paid higher average salaries to their state government employees in 2014.

Although figure 1 includes state and local government pensions paid by all public plans in New York, most of our analysis focuses on the ERS plan, which provides pensions to general state and local government employees and their beneficiaries. It excludes public school teachers and public safety workers. New York City employees are covered by a separate plan and do not participate in the state-administered plan. During the year that ended March 31, 2015, ERS paid \$8.9 billion in pensions to 397,000 retirees and other beneficiaries (New York State and Local Retirement System 2015a). The plan covers another 492,000 active employees and 117,000 inactive members.

Government employees in New York receive lifetime pensions equal to a share of final average salary multiplied by completed years of service. Plan rules have changed several times over the past four decades, but members already enrolled in the plan when the changes were implemented were generally grandfathered under existing plan rules. Thus, the formula used to calculate pensions depends on when employees were hired.

FIGURE 1

Average Annual Benefits Paid to Annuitants Receiving State and Local Government Pensions, 2014



Source: Authors' calculations based on data from the US Census Bureau (2015).

At present, the plan includes six tiers by date of employee hire with different benefit and member contribution rules (table 1). Employees hired after 2012 are enrolled in tier 6 of the plan. Final average salary is calculated over an employee's three highest-compensated years of service. For members with less than 20 service years, pensions are computed as 1.66 percent of final average salary per year of completed service. For members with 20 or more service years, the percentage equals 1.75 percent for each of the first 20 years and 2 percent for all subsequent years.

Tier-6 members may begin collecting full benefits at age 63 if they have completed 10 years of service, the tier's vesting requirement. Reduced early retirement benefits are available at age 55 after 10 years of service. These early benefits are actuarially reduced to offset the increased number of benefit checks received by early retirees, so expected lifetime payments are about the same regardless of when members begin collecting benefits. The early retirement reduction equals 6.5 percent for each year beneficiaries collect their pensions before age 63. Members who begin collecting at 55 receive 48 percent of their full annual pension. Retirees who are at least 62 years old and have been retired for at least five years receive cost-of-living adjustments equal to one-half the change in the consumer price index. However, the cost-of-living adjustment may never fall below 1 percent or exceed 3 percent.

In exchange for these benefits, tier-6 members must make annual contributions to the retirement plan. The required contribution begins at 3 percent of salary for employees earning less than \$45,000 per year and gradually rises with salary until it reaches 6 percent of salary for employees earning more than \$100,000 per year. Contributions are refunded with 5 percent interest if a member leaves the plan before completing 10 years of service. However, contributions may not be withdrawn once a member has completed 10 years of service.

Government employees hired before 2012 receive more generous pensions (table 1). For example, employees hired before 2010 contribute to the plan for no more than 10 years, and those hired before 1976 do not contribute at all. Earlier hires may begin collecting their pensions at younger ages than tier 6 members, and benefits for employees hired before 2010 vest after only five years of service. In addition, the formula that determines pensions applies a smaller multiplier to certain years of service for tier-6 members than for members of earlier tiers and averages final salary over more years of service.

TABLE 1

Benefit Formula Details, by Tier

	1	2	3 and 4	5	6
Covered employees date of hire	Before July 1, 1973	On or after July 1, 1973, but before July 27, 1976	On or after July 27, 1976, but before January 1, 2010	On or after January 1, 2010, but before April 1, 2012	On or after April 1, 2012
Years of service needed to vest	5	5	5	10	10
Years included in final average salary calculation	3	3	3	3	5
Plan multiplier, by years of service	<20: 1.66% 20+: 2% ^a	<20: 1.66% 20+: 2% ^a	<20: 1.66% 20–30: 2% 31+: 1.5%	<20: 1.66% 20–30: 2% 31+: 1.5%	<20: 1.66% 20: 1.75% 21+: 2%
Normal retirement eligibility	Age 55 and 5 YOS	30 YOS; age 62 and 5 YOS	30 YOS; age 62 and 5 YOS	62 and 5 YOS	63 and 5 YOS
Early retirement penalty	Not applicable	6% for each of first 2 years before age 62, 3% for each additional year	6% for each of first 2 years before age 62, 3% for each additional year	6.7% for each of first 2 years before age 62, 5% for each additional year	6.5% for each year before age 63
Employee contribution as percent of salary	0%	0%	3% for first 10 YOS; 0% for later years	3% for all YOS	Rises with annual salary, from 3% (<\$45,000) to 6% (>\$100,000)

Source: Plan documents available at <http://www.osc.state.ny.us/retire/>.

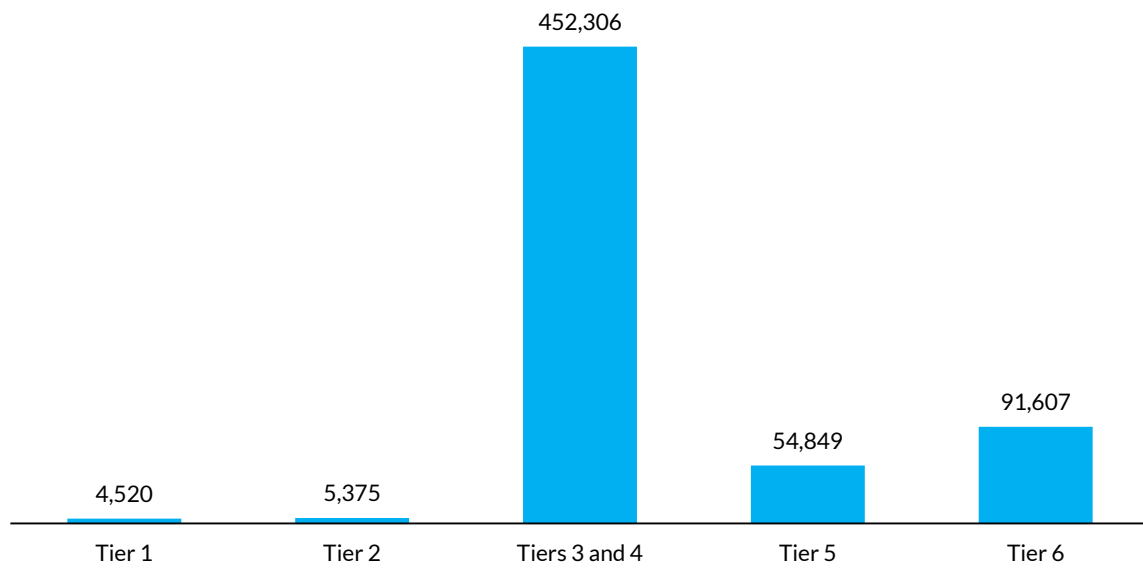
Notes: For all tiers, cost-of-living adjustments equal one-half the change in the consumer price index, but may never fall below 1 percent per year or exceed 3 percent. YOS = years of service.

^a Pensions under this formula are capped at 75 percent of final average salary. Members in tiers 1 and 2 with 25 or more years of service may instead elect a pension equal to 50 percent of final average salary plus 1.66 percent of final average salary for each year of service in excess of 25 years.

Seventy-four percent of active employees covered by the retirement plan in 2015 belong to tiers 3 and 4 (figure 2). Only 15 percent belong to tier 6—the least generous of all the tiers—and 9 percent belong to tier 5. No tier-5 or tier-6 members received pensions in 2015, because employees must complete five years of service to qualify, and these members were not hired until 2010 or later. Thus, current retirees will receive pensions that replace a larger share of their salary than future retirees, although future retirees may receive larger pensions because of real salary growth and inflation.

FIGURE 2

Distribution of Active Employees in New York ERS by Retirement Plan Tier, 2015



Source: Authors' calculations based on data from New York State and Local Retirement System (2015a).

How Do We Project Future Pension Benefits?

To gauge the generosity of New York’s retirement plan, we examined the level and distribution of pension benefits newly hired state employees will receive over their lifetimes and at age 75. We also simulated the pensions new hires would receive under the benefit formulas that apply to earlier tiers to assess how plan generosity has changed over time. Employees were assumed to earn the average salary for new entrants to the state and local workforce in New York State (calculated using data from the US Census Bureau’s American Community Survey). Following the plan actuaries, we assumed salary growth varies by tenure, increasing, for example, 10.3 percent per year after 1 year of service, 5.05 percent per year after 10 years of service, and 3.6 percent per year after 30 or more years of service (New York State and Local Retirement System 2015b). Our simulations projected final service years by applying separation probabilities that vary by age and years of service as estimated by the plan actuaries. We assumed plan participants discount future benefits by 7.5 percent per year and prices increased 2.7 percent per year, the same rates adopted by the plan trustees. All financial amounts are expressed in constant 2014 dollars.

We computed annual pension benefits by applying the benefit formula to our assumed salary histories. Our calculations assumed all plan participants receive their payments as single-life annuities—forgoing survivor benefits for any spouses—and that they begin collecting their pensions at the age that maximizes the lifetime value of their benefits. We computed the value of lifetime benefits by summing all future annual payments, discounting them by 7.5 percent per year and by the probability that employees will die before they can collect. The value of lifetime benefits was measured at the year plan participants leave public employment. Mortality probabilities were derived from unisex life tables compiled by the Social Security Administration.

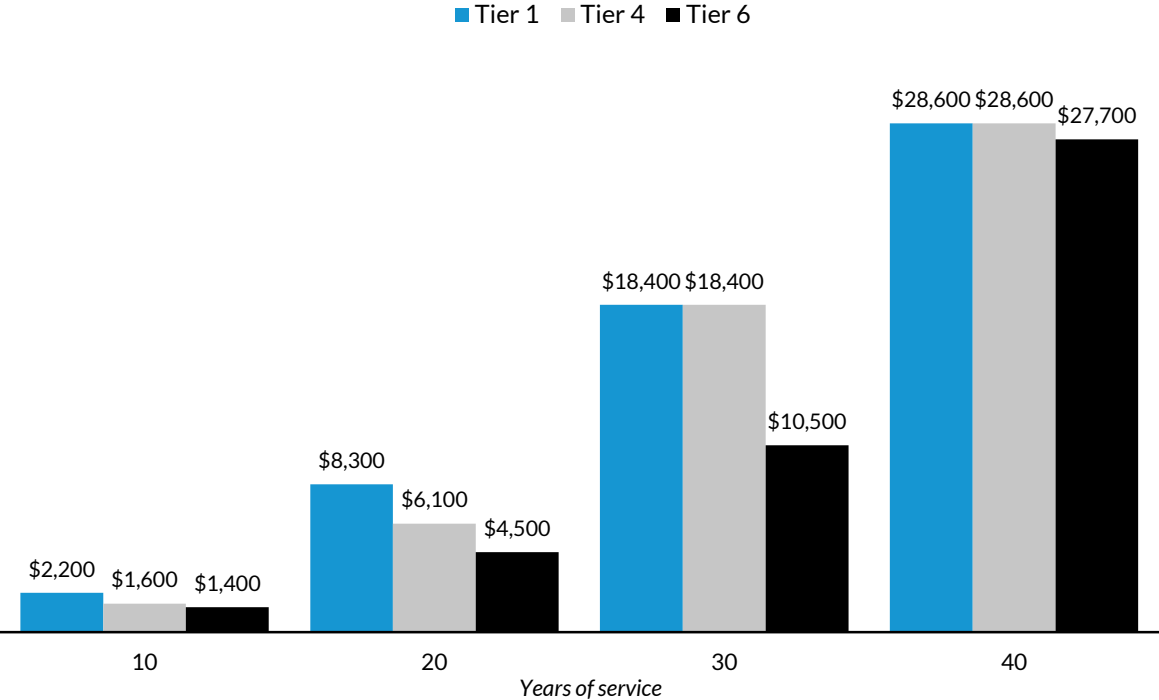
In addition to projecting total lifetime benefits, we simulated lifetime benefits net of employees’ contributions, which indicates how much employees gain from enrolling in the mandatory plan. The simulated value of members’ lifetime plan contributions assumes that those contributions would earn 7.5 percent annual returns if invested outside the pension plan. This assumption corresponds to an inflation-adjusted annual return of 4.8 percent, which is similar to the historical average return between 1926 and 2013 for a portfolio split evenly between stocks and bonds, after adjustments for investment fees.⁵ When we estimated the value of lifetime benefits, we further assumed that plan participants

would elect to have their contributions refunded instead of receiving pensions if the refunds were worth more.

How Much Will Retirees Receive?

Figure 3 projects annual pension income at age 75 for state and local government employees hired in 2013 who earn average salaries throughout their careers. It also shows what new hires would receive if their pensions were calculated using the tier-1 or tier-4 benefit formulas instead of the existing tier-6 formula. New hires, especially those who retire after completing between 20 and 30 years of service, would receive more generous pensions in the earlier tiers. For example, newly hired employees who retire with 30 years of service would collect 75 percent more benefits at age 75 if their pensions were computed under the rules for tiers 1 or 4 instead of those for tier 6. However, the between-tier differences in annual pension benefits are small for retirees who complete 40 years of service.

FIGURE 3
Annual Pension Benefits at Age 75 in New York ERS, Tier 6, for Age-25 Hires
Constant 2014 dollars



Source: Authors' calculations based on plan documents and actuarial reports.
Note: Estimates assume benefits are collected at the age that maximizes the value of lifetime payments.

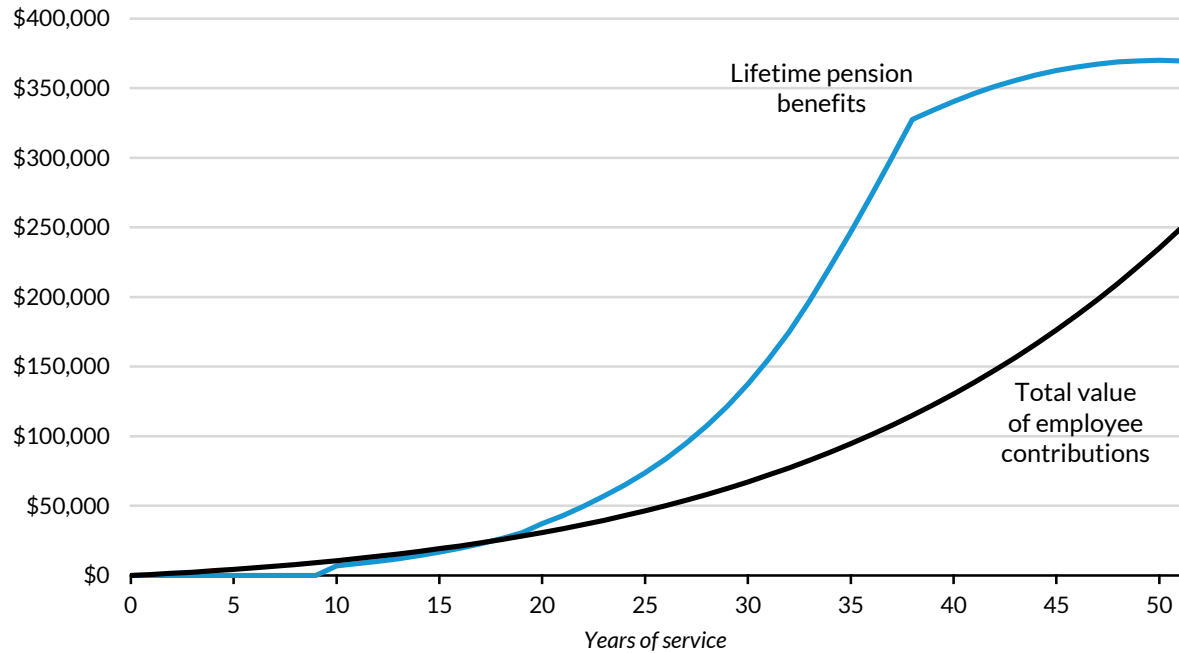
Under all plan tiers, benefits increase sharply with years of service. In tier 6, an employee hired at age 25 who completes 10 years of service receives annual benefits at age 75 equal to only \$1,400 (in constant 2014 dollars). Those annual benefits increase to \$4,500 after 20 years of completed service and \$10,500 after 30 years. Annual pension benefits rise to \$27,700, however, for employees who spend 40 years in public service. The state pension backloads payments late in employees' careers because the benefit formula directly ties payments to years of service. Final average salary also increases with tenure, so the earnings base partially replaced by the plan grows as employees work longer. Moreover, the multiplier increases as employees work longer. Future retirement benefits erode over time when employees separate before they may begin receiving payments because the benefit is not adjusted for inflation in the interim.

Comparing annual pension payments by years of completed service can be misleading because employees who begin collecting at relatively young ages receive more benefit checks over their lifetimes than those who begin collecting at older ages. For example, 25-year-old hires who retire after 30 years of service collect payments for 10 more years than those who retire after 40 years of service. How well the state retirement plan serves employees depends on how much they receive over their lifetimes, not in a single year.

Figure 4 shows how the value of lifetime pension benefits increases with years of service for state and local employees who are covered by tier 6 and were hired at age 25. Employees who separate before completing 10 years of service do not receive any pension benefits because they have not yet vested in the plan. Moreover, they do not receive many benefits over their lifetimes immediately after they vest at age 35—their lifetime benefits are worth only about \$10,000 in 2014 dollars—because they must wait 25 years to begin collecting, and their benefits are based on the relatively low salaries they earned in their mid-30s. Additional years of service, however, raise lifetime benefits at an increasing rate. They rise to \$37,000 after 20 years of service, \$137,000 after 30 years, and \$341,000 after 40 years. The lifetime value of benefits grows more slowly after 38 years of service, once the employee has reached age 63 and qualifies for unreduced retirement benefits. The annual payment increase of 2.0 percent of final average salary is largely offset by the benefit checks lost by working additional years.

FIGURE 4

Value of Employee Contributions and Future Benefits in New York ERS, Tier 6, for Age-25 Hires
Constant 2014 dollars



Source: Authors' calculations based on plan documents and actuarial reports.

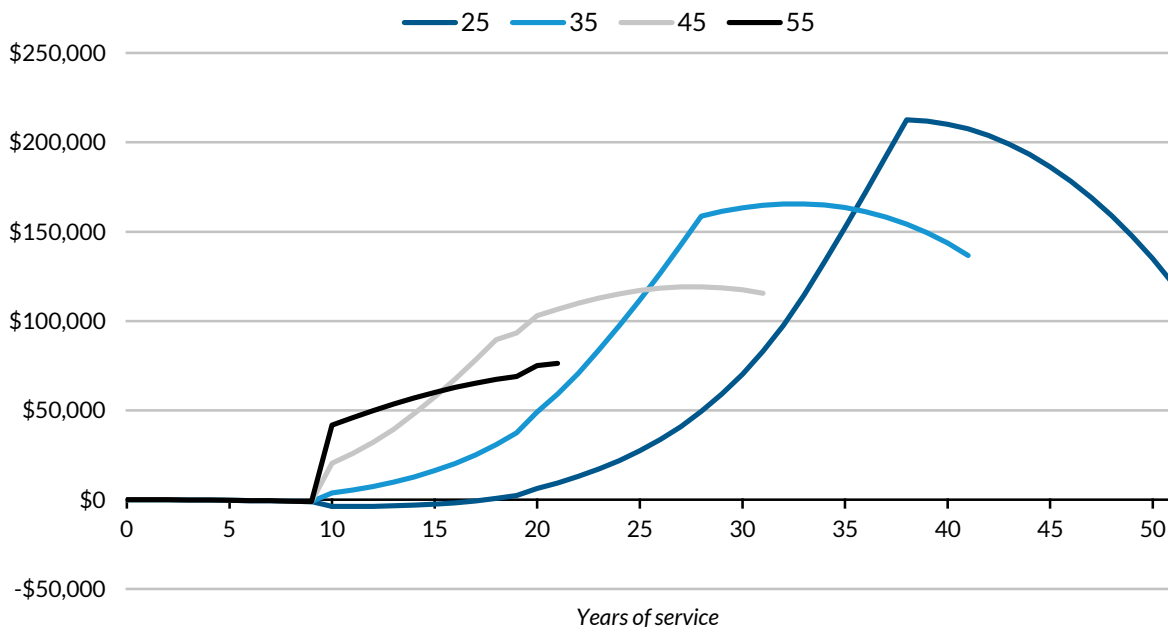
Note: Future benefits are discounted at 7.5 percent and the annual inflation rate is assumed to be 2.7 percent, the rates adopted by the state retirement system.

Government employees must contribute between 3 and 6 percent of their salaries to the retirement plan, depending on how much they earn. For 25-year-old hires earning average salaries over their careers, those contributions are worth \$11,000 after 10 years of service, under the assumption they would earn investment returns of 7.5 percent per year, the same returns assumed by the plan trustees. The value of required contributions would total \$31,000 after 20 years of service, \$67,000 after 30 years of service, and \$130,000 after 40 years of service. The pension received by a 25-year-old hire who separates after 20 years of service is financed mostly by employee contributions; the government pays for only 17 percent of the pension. The share of lifetime benefits financed by the government rises with years of service, however, because the value of lifetime benefits grows more rapidly than the value of employee contributions. For example, municipalities and the state finance 51 percent of the pension received by a retiree with 30 years of completed service and 62 percent of the pension received by a retiree with 40 years of service. Nonetheless, state and local employees hired at age 25 must work for 18 years before their pension is worth more than the value of their required plan

contributions. Those who separate earlier lose money by participating in the plan and essentially subsidize the large pensions received by longer-tenured employees.

Figure 5 shows how the expected value of lifetime pension benefits net of employee contributions changes with years of service for employees hired at ages 25, 35, 45, and 55. Age-25 hires who separate before completing 18 years of service lose money by participating in the mandatory retirement plan because their future pension benefits are worth less than the value of their required contributions. However, the net value of their expected lifetime benefits increases rapidly with additional years of service, reaching \$27,000 at 25 years of completed service, \$59,000 at 30 years of completed service, and \$152,000 at 35 years of completed service. Net lifetime benefits peak at \$213,000 after 38 years of completed service and then fall sharply, because the increment in lifetime benefits from additional work is not enough to offset the additional plan contributions required of employees who remain at work and the benefit checks they forego by remaining on the payroll. Relative to their peak value, net lifetime benefits fall 13 percent for age-25 hires who remain employed for 45 years and 37 percent for those who remain employed for 50 years.

FIGURE 5
Value of Lifetime Benefits Net of Employee Contributions in New York ERS, Tier 6, by Starting Age
Constant 2014 dollars



Source: Authors' calculations based on plan documents and actuarial reports.

Note: Future benefits are discounted at 7.5 percent and the annual inflation rate is assumed to be 2.7 percent, the rates adopted by the state retirement system.

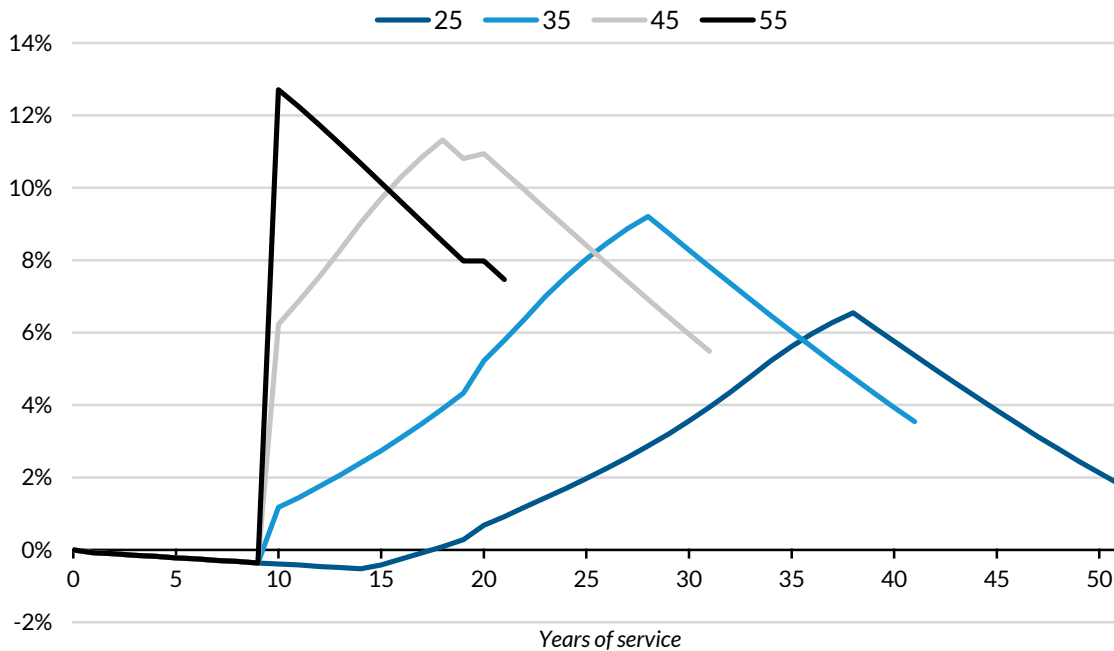
Lifetime pension benefits net of employee contributions grow at similar rates for employees hired at older ages, except that benefits accumulate more quickly for older hires and fall sooner. For example, net lifetime benefits reach \$50,000 after 20 years of service for employees hired at age 35, after 14 years of service for employees hired at age 45, and after 12 years of service for employees hired at age 55. Net lifetime benefits begin falling after 33 years of service for employees hired at age 35 and after 28 years of service for employees hired at age 45.

An alternative to measuring the expected value of lifetime benefits net of employee contributions in dollars is to express that value as the portion of salary that employers would have to set aside each year to finance (with employee contributions) the stream of future benefits employees will receive once they retire. These calculations show how much retirement benefits supplement employee salaries, averaged over their careers, assuming employee contributions earn 7.5 percent nominal returns, the rate assumed by the plan trustees.

The current New York State retirement plan for new hires reduces salaries for employees enrolled at age 25 who separate before completing 18 years of service because, as we saw earlier, future pension benefits for employees with less seniority are worth less than their required contributions. For age-25 hires who leave after completing 14 years of service, for example, the pension plan reduces their salaries by 0.5 percent each year they worked (figure 6). The plan supplements salaries for those who remain on the job for at least 18 years, but how much they benefit depends on how long they stay. For instance, the plan supplements salaries 0.7 percent each year for those who separate after 20 years of service, 3.6 percent each year for those who separate after 30 years of service, and 6.6 percent for those who separate after 38 years of service. The annual supplement then falls each year that age-25 hires remain on the job beyond 38 years, declining to 3.9 percent after 45 years of service.

FIGURE 6

Career-Average Employer Cost as Percentage of Salary in New York ERS, Tier 6, by Starting Age



Source: Authors' calculations based on plan documents and actuarial reports.

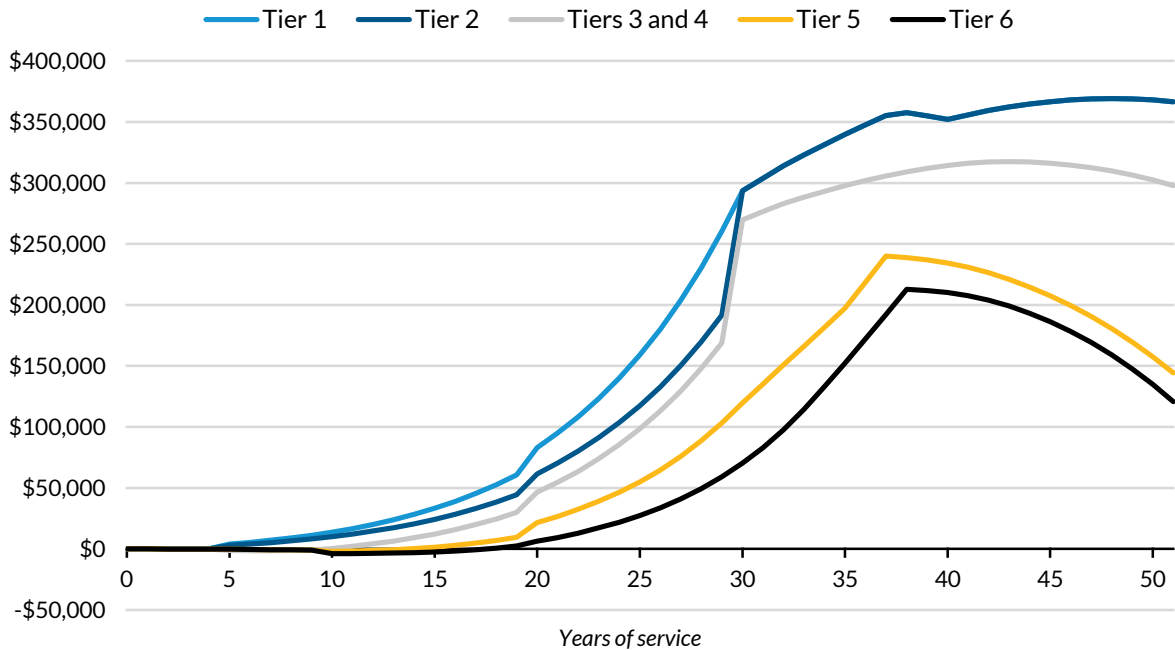
Notes: The figure reports the fixed percentage of employees' salaries that employers would have to contribute each year to finance promised benefits. Future benefits are discounted at 7.5 percent and the annual inflation rate is assumed to be 2.7 percent, the rates adopted by the public employee retirement system.

Employees hired at older ages get much more out of the plan for each year of service than those hired at younger ages. For example, the plan supplements salaries 10.9 percent each year for age-45 hires who separate after 20 years of service and 12.7 percent each year for age-55 hires who separate after only 10 years of service. This disparity in what public servants get from the plan violates the principle of equal pay for equal work. A fairer plan would supplement salaries by about the same percentage regardless of hire age or completed years of service.

Successive plan changes enacted over the past four decades have significantly reduced the generosity of retirement benefits received by state and local employees. Figure 7 shows the expected value of lifetime benefits net of employee contributions for age-25 hires under each of the plan's six tiers. Calculations for each tier assume employees earn average salaries over their careers, based on the plan actuaries' projections for 2014 hires. Expected lifetime benefits fall with each successive tier. For example, members of tier 6 who separate with 40 years of completed service receive only 60 percent as many benefits (net of their contributions) as in tier 1, which covers employees hired before July 1973, and only 67 percent as much as in tiers 3 and 4, which covers employees hired between 1976 and 2009.

Tier-6 members who separate after 20 years of service fare even worse; their net lifetime benefits are worth only 8 percent as much as in tier 1, 14 percent as much as in tiers 3 and 4, and 29 percent as much as in tier 5, which covers employees hired between January 2010 and March 2012.

FIGURE 7
Value of Lifetime Benefits Net of Employee Contributions in New York ERS for Age-25 Hires, by Tier
Constant 2014 dollars



Source: Authors' calculations based on plan documents and actuarial reports.

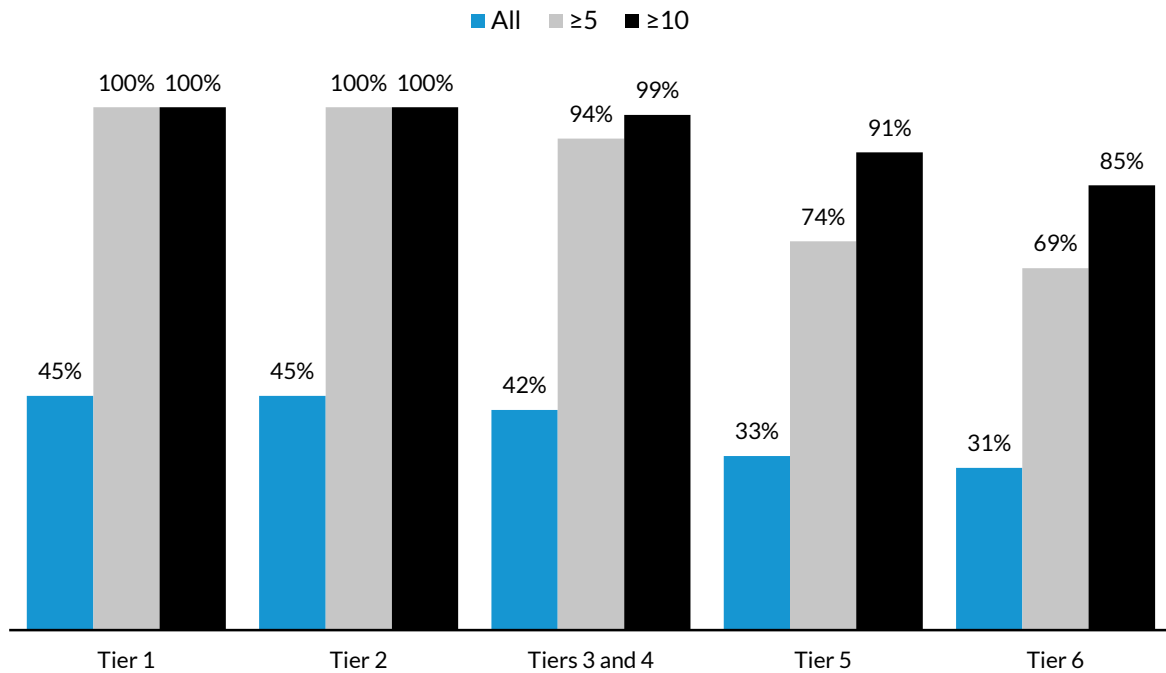
Note: Future benefits are discounted at 7.5 percent and the annual inflation rate is assumed to be 2.7 percent, the rates adopted by the state retirement system.

Fewer than one-third of newly hired tier-6 members work long enough to receive pensions worth more than the value of their mandatory plan contributions (figure 8). Most newly hired employees would have fared better financially if they could have opted out of the mandatory tier-6 retirement plan and invested their plan contributions outside of the plan. Member contributions are refunded to employees who separate before completing the 10-year vesting period, but they receive less interest on their contributions than they could have earned outside the plan. Some vested employees also could have done better financially by opting out of the plan, because the pension they will eventually receive is worth less than the value of their required contributions. Employees who lose by participating in the plan generally spend only a few years in public employment. Nonetheless, 31 percent of tier-6 members

with at least 5 years of completed service and 15 percent with at least 10 years of completed service get less from the plan than they put in.

FIGURE 8

Percentage of Employees in New York ERS Whose Lifetime Pension Is Worth More Than Their Required Contributions, by Tier and Completed Service Years



Source: Authors' calculations based on plan documents and actuarial reports.

Note: Future benefits are discounted at 7.5 percent and the annual inflation rate is assumed to be 2.7 percent, the rates adopted by the state retirement system.

Members of earlier tiers are more likely to benefit from the plan. Among employees who complete at least five years of service, for example, 94 percent of tier-3 and tier-4 members and 100 percent of tier-1 and tier-2 members receive pensions worth more than the value of their contributions. However, less than half of all plan members remain employed for at least five years, and these short-term members all lose financially by participating in the plan. Overall, then, less than half of all plan members in all the tiers benefit financially from the retirement plan.

In summary, the average pension benefit received today by New York's state and local government workers appears relatively large, although pensions are unevenly distributed across the workforce. Public servants who have retired from long government careers receive substantial benefits, but the majority of plan members have relatively short careers, and those employees receive little, if anything,

from the retirement plan. In addition, the state has significantly cut retirement pensions for employees hired after April 2012. Depending on how long they remain employed, these new hires will receive pensions that are only 10 to 60 percent as large as the pensions received by their counterparts hired four decades ago.

How Are Benefits Funded?

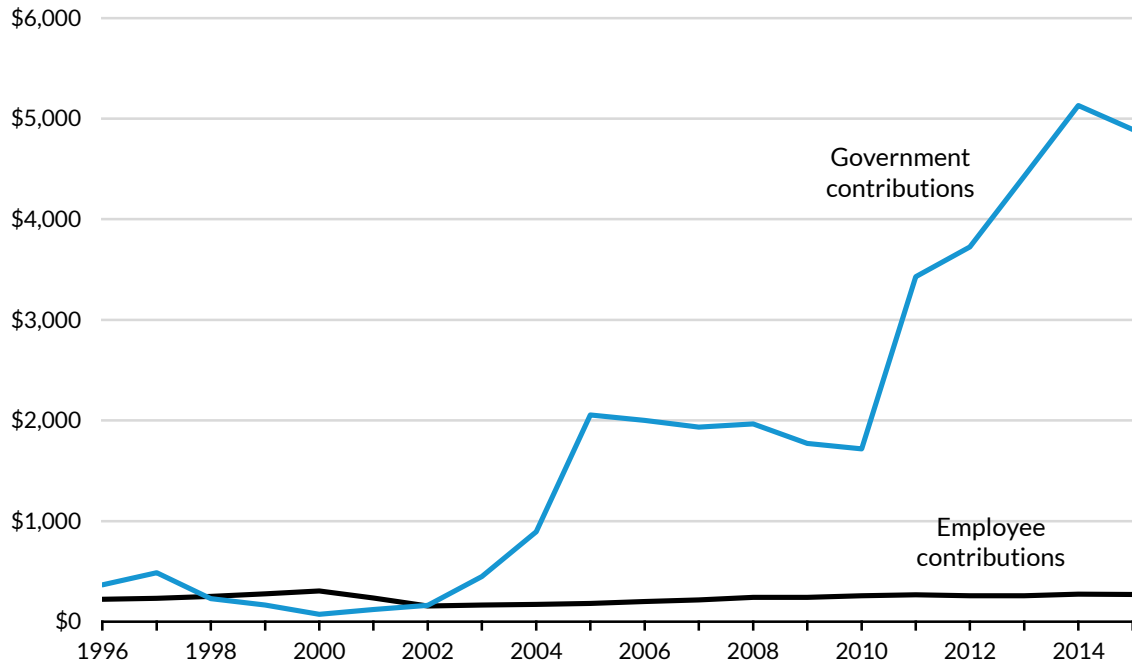
We now examine ERS's funding practices to gauge their impact on the recent rise in government contributions to the plan. New York's pension benefits are funded by contributions from members and their employers and by earnings on plan assets invested in the Common Retirement Fund, which also holds the assets of the New York State and Local Police and Fire Retirement System and the Public Employees' Group Life Insurance Plan. The ERS portion of the Common Retirement Fund held \$168 billion in assets as of March 31, 2015 (New York State and Local Retirement System 2015a). The fund's assets are invested in equities, fixed income, and real estate, as well as alternative investments described as "opportunistic assets."

Every year, the fund pays plan benefits and administrative expenses. In the fiscal year ending March 31, 2015, ERS payouts totaled \$8.9 billion, of which \$8.7 billion went to pay retirement allowances. The ERS fund took in \$15.9 billion that year, with \$4.9 billion coming from employer contributions and only \$272 million coming from member contributions. Except for the period between 1998 and 2002, income from employer contributions far exceeded employee contributions (figure 9). Employee contribution rates for all tiers are less than the employee portion of the Social Security tax rate, currently 6.2 percent of payroll. As noted above, tier-1 and tier-2 members do not contribute to the plan at all, while tier-3 and tier-4 members contribute 3 percent of salary for their first 10 years of service but nothing in subsequent years. This plan feature significantly affects aggregate employee contributions to the plan, because most active employees belong to tiers 3 and 4. Members of tier 5, by contrast, pay the 3 percent contribution rate for every year of service, while those in tier 6 contribute between 3 and 6 percent, depending on their salary, for every service year. Overall, only 19 percent of active employees in the plan today belong to the two tiers (5 and 6) that contribute throughout their careers.

FIGURE 9

Inflation-Adjusted Employee and Government Contributions to New York State Retirement Plans, 1996–2015

Millions of 2015 dollars

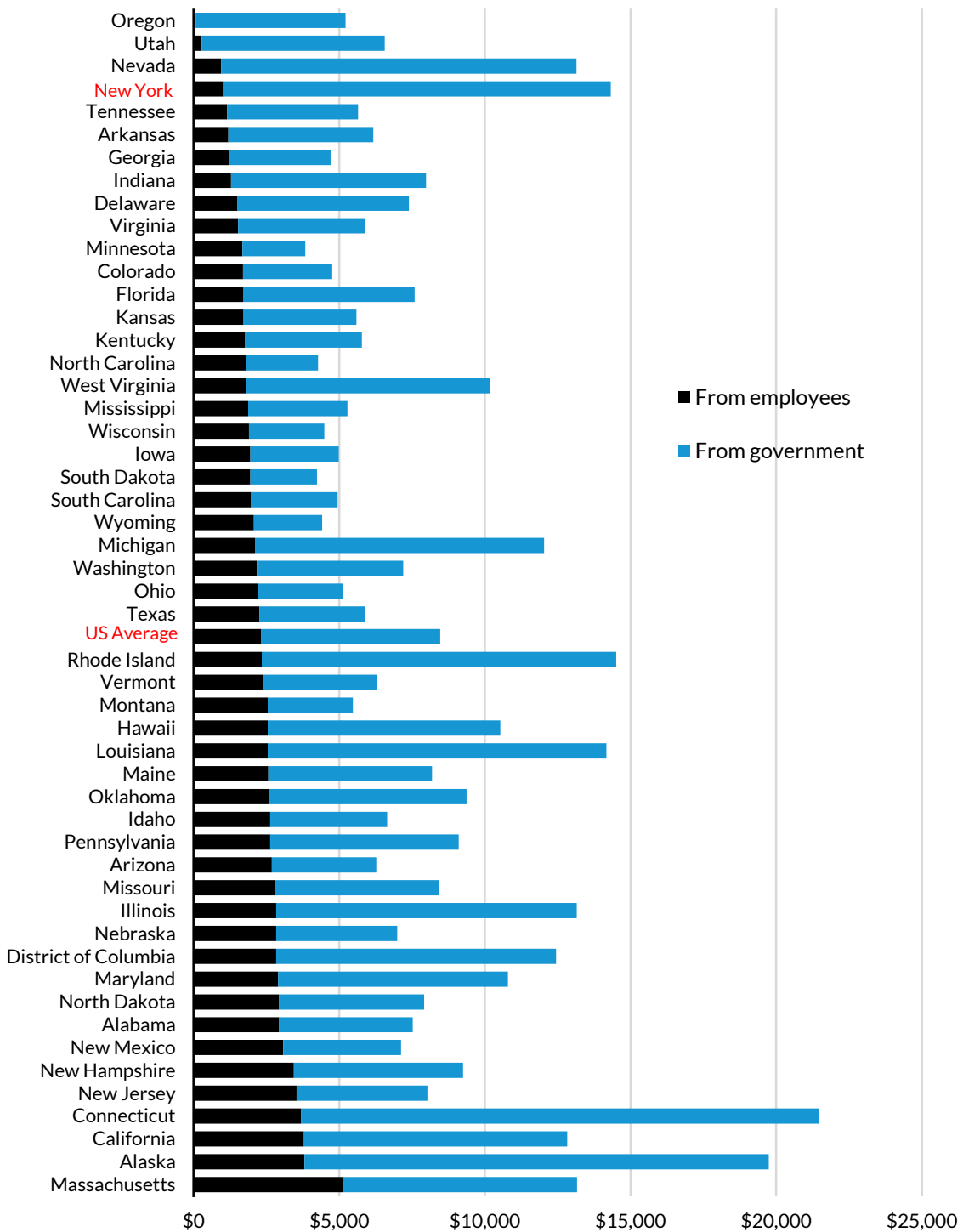


Source: Authors' calculations based on data from New York State and Local Retirement System (2005, 2015a).

New York's relatively low reliance on employee contributions is apparent when we compare public plan financing across states. According to 2014 US Census data on all state and local government retirement systems, employee pension plan contributions to all public plans in New York—not just the state's ERS plan—average only \$1,104 per active member, the fourth-lowest contribution in the nation, surpassing only Oregon, Utah, and Nevada (figure 10). The national average is \$2,314 per member, more than twice New York's average. However, New York's government contributions per member averaged \$13,310 in 2014, higher than in any other state except Connecticut and Alaska and more than double the national average of \$6,154.

FIGURE 10

Contributions to State Retirement Plans per Active Member by State, 2014



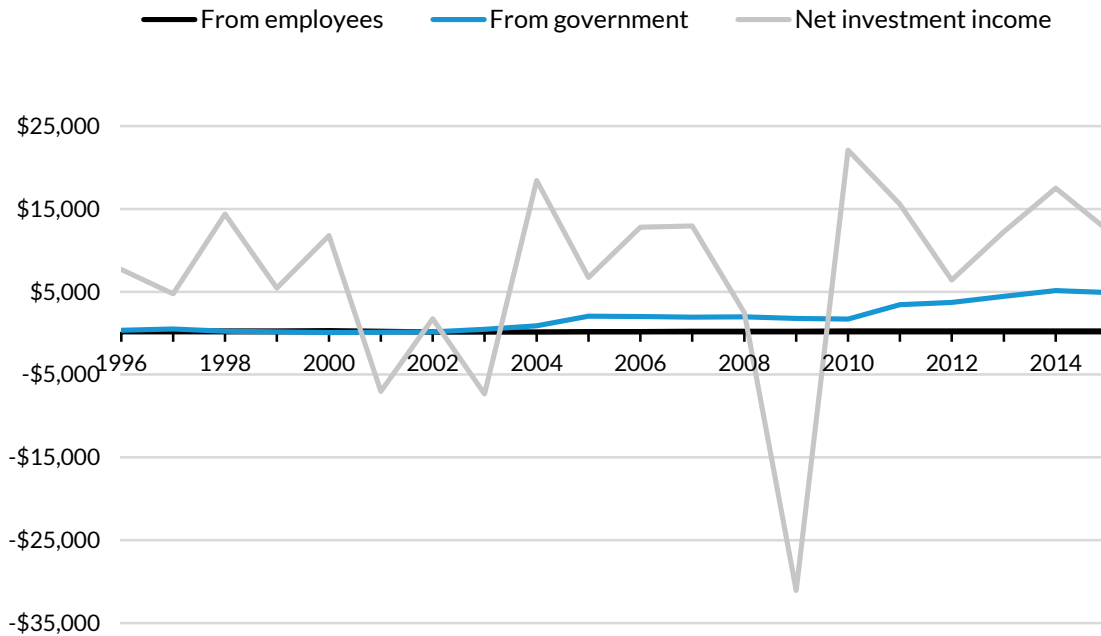
Source: Authors' calculations based on data from US Census Bureau (2015).

Because New York’s ERS plan has always been well funded, the existing stock of plan assets is large relative to annual plan contributions and expenses. Although employer contributions cover a large share of paid benefits, income from existing assets and appreciation of those assets can easily exceed other sources of plan revenue when investment returns are strong. Annual investment gains or losses of more than \$20 billion dwarf funding from employer contributions, which despite steady and dramatic growth since 2000 did not exceed \$5 billion in 2015 (figure 11).

FIGURE 11

Plan Revenue by Source for New York ERS, 1996–2015

Millions of constant 2015 dollars

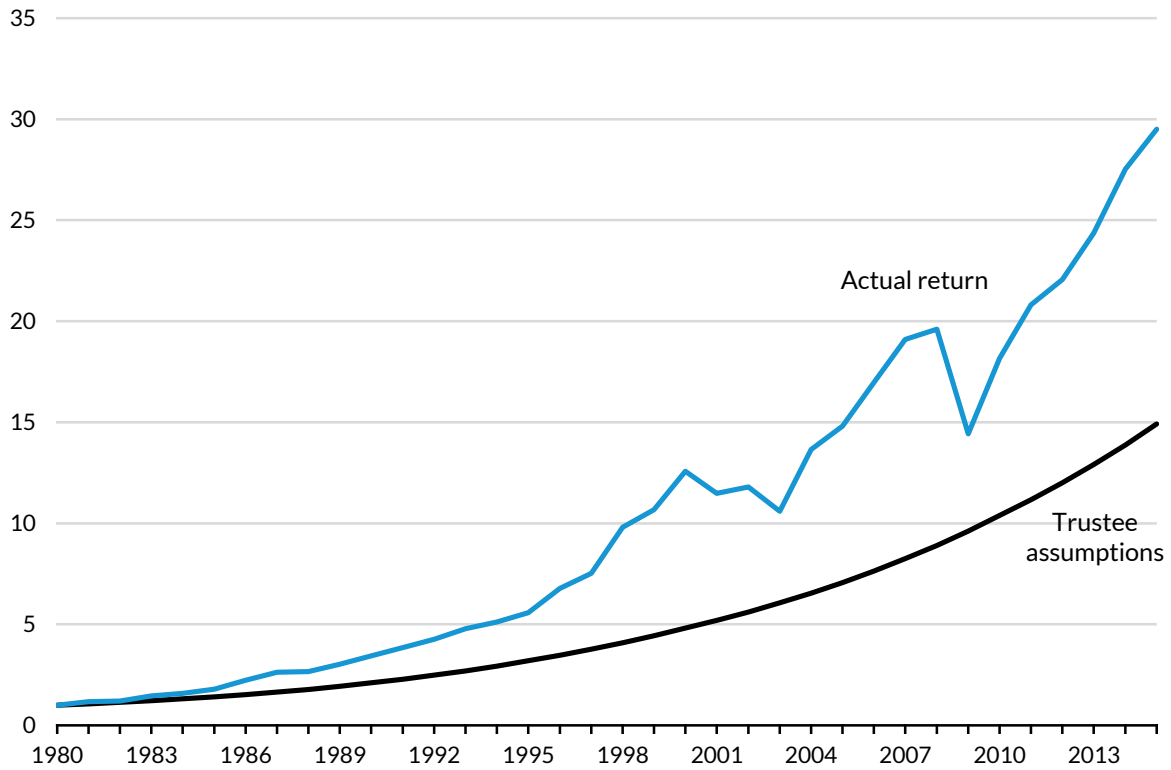


Source: Authors’ calculations based on data from New York State and Local Retirement System (2005, 2015a).

Since 1980, the plan has benefitted from impressive asset returns (figure 12). The plan’s investments have significantly outperformed expectations—as expressed by the rate of return assumed for actuarial reporting purposes—over the past 35 years. In fact, a dollar invested in the plan in 1980 would now be worth double the equivalent investment in a fund that returned the actuarial expectation every year. Plan management, then, appears to have generally avoided the temptation to employ systematically overoptimistic forecasts of the rate of return on their assets.

FIGURE 12

Assumed and Actual Cumulative Investment Returns on Plan Assets in New York ERS, 1980–2015
Multiple of baseline 1980 value

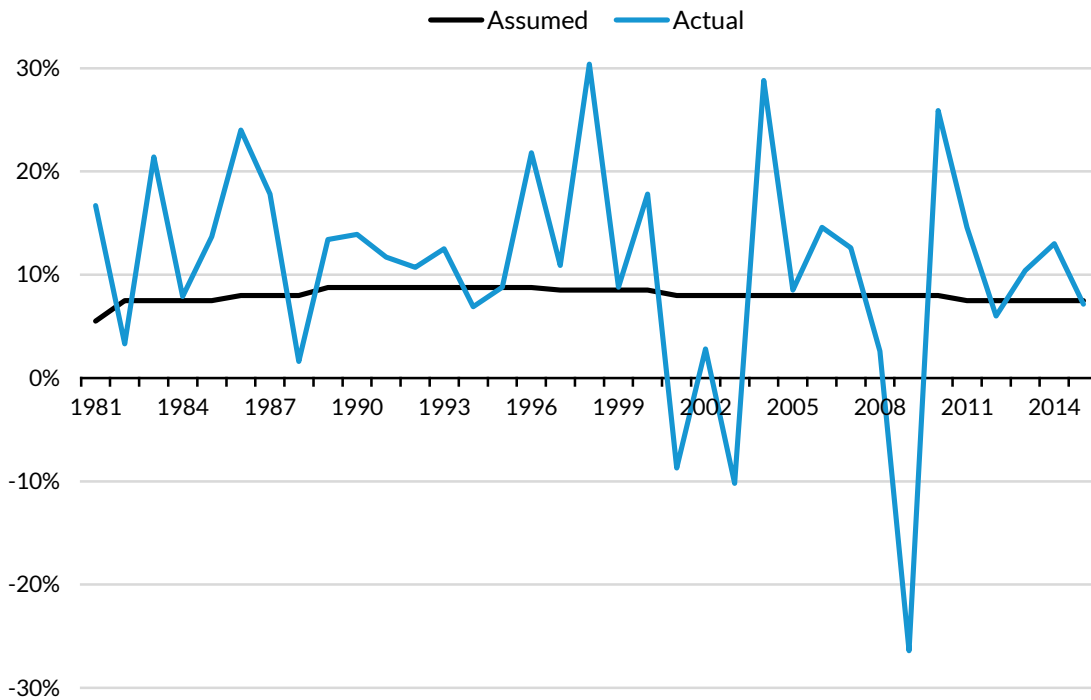


Source: Authors' calculations based on data from New York State and Local Retirement System (2010, 2015b).

However, the plan assumes significant risk by investing in assets that, on average, generate high rates of return. ERS's annual investment rates have fluctuated significantly over the past 35 years, ranging from highs of 30 percent in 1998, 29 percent in 2004, and 26 percent in 2010 to lows of -26 percent in 2009, -10 percent in 2003, and -9 percent in 2001 (figure 13).

FIGURE 13

Assumed versus Actual Annual Investment Returns on Plan Assets in New York ERS, 1981–2015



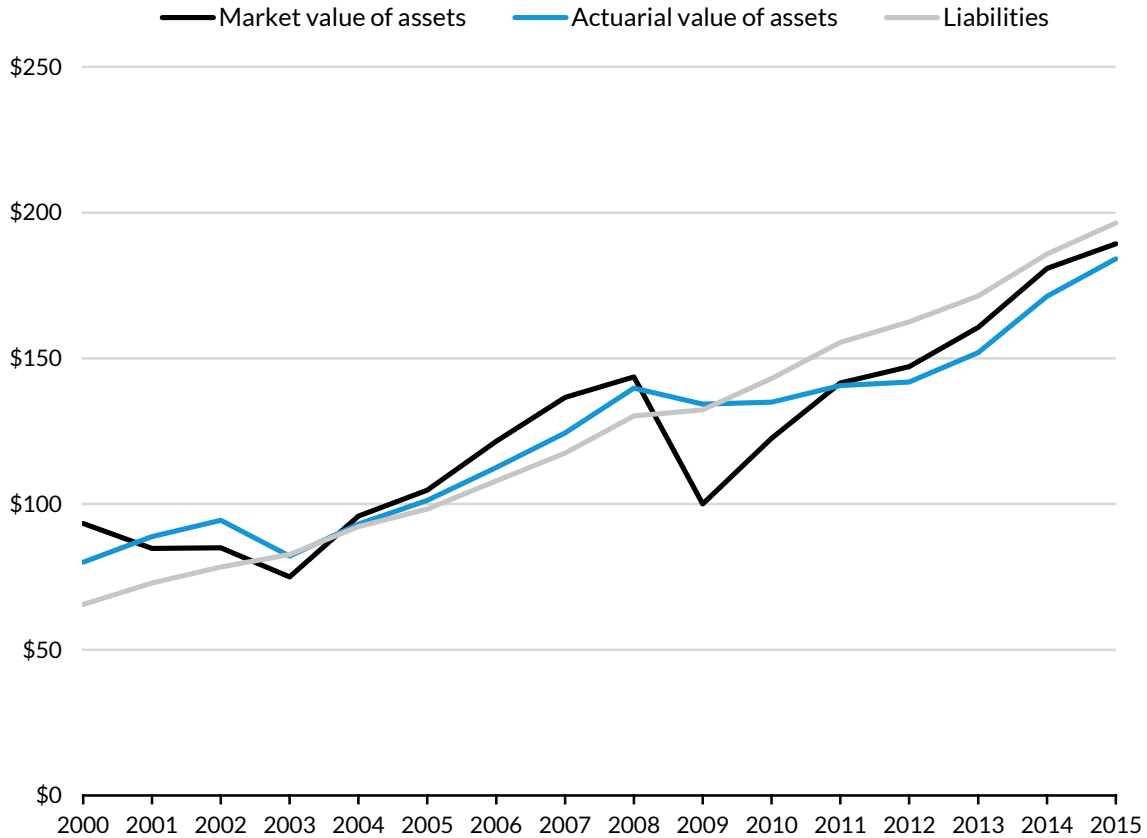
Source: Authors' calculations based on data from New York State and Local Retirement System (2015b).

Asset returns are so volatile that they drive changes in the funding ratio, even after the customary five-year actuarial smoothing window is applied to the series of asset values. Figure 14 shows the degree to which changes in the plan's funding ratio—both positive and negative—over the past 15 years have been driven almost entirely by changes in asset values, relative to the much smoother trend in liabilities. Partly because of the plan's nonstandard actuarial funding method, the volatility of the plan's asset performance has generated significant year-to-year changes in the contributions necessary to maintain adequate funding levels.

FIGURE 14

New York ERS Plan Assets and Liabilities, 2000–15

Billions of constant 2015 dollars



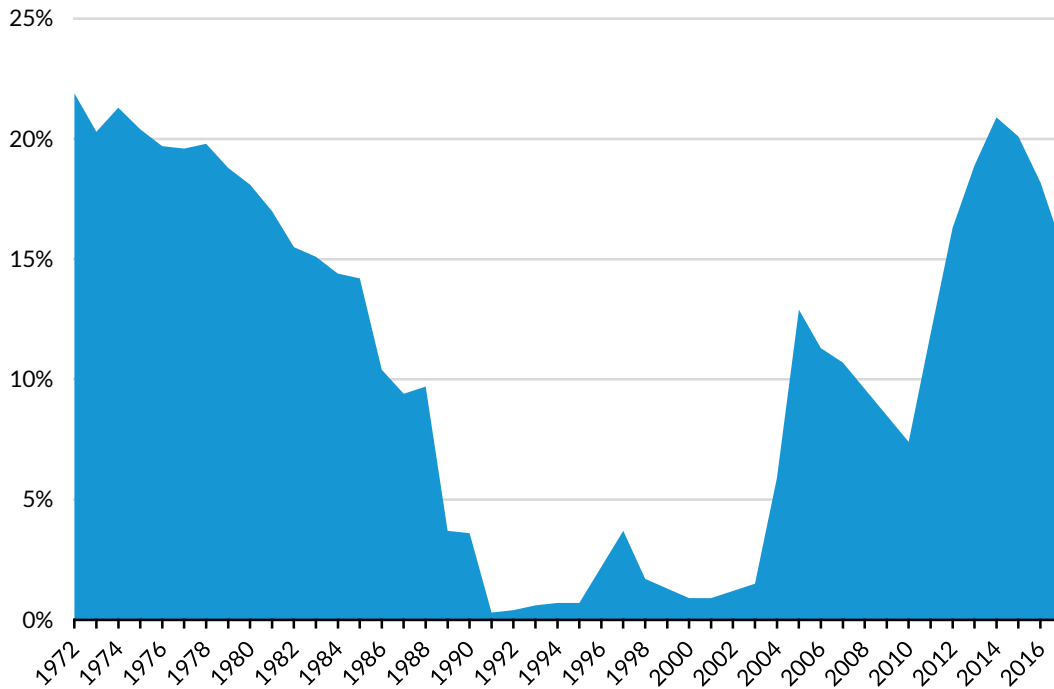
Source: Authors' calculations based on data from New York State and Local Retirement System (2015a).

Note: Liabilities are estimated using the entry age normal method.

Historically, unexpected swings in the plan's asset returns have been largely offset by changes in employer contributions, which have varied dramatically over time (figure 15). The sharp drop in employer contribution rates in the 1980s and the sustained near-zero rates of the 1990s provided a windfall to the system's employers. Subsequent years, however, highlight the downside of asset volatility. Large—sometimes double-digit—increases in the required employer contribution as a share of payroll have proved much less palatable to employers than the equivalent sharp drops in contributions they experienced previously.

FIGURE 15

Employer Contributions to the Plan as a Percentage of Payroll in New York ERS, 1972–2017



Source: Authors' calculations based on data from New York State and Local Retirement System (2015a).

After the 2000 collapse of the dot-com bubble and the 2008 financial crisis, the state passed ad hoc legislation easing plan funding rules and allowing public employers to make up funding shortfalls gradually over time instead of in a single year. These measures depart from the plan's stated funding procedures and essentially enable public employers to borrow against plan assets. The most recent asset-smoothing exceptions credit the deferred balances at 5 percent interest, a significant subsidy for employers given that the plan trustees assume plan assets earn 7.5 percent annual returns. However, employers who take advantage of the new contribution smoothing rules must accept a contribution floor in the future. Had this provision been in place earlier, it would have prevented the rapid run-down, and subsequent run-up, of contribution rates. Smoothing changes in employer rates over time would limit sharp increases in pension plan outlays by the state and local governments.

Conclusions

The recent surge in government contributions to New York's retirement plan for general state and local government employees was driven primarily by investment losses sustained by the plan as well as the plan's practice of adjusting government contributions to offset unexpected investment gains and losses. The sharp rise in state and local government contribution rates to the ERS plan between 2002 and 2014 followed dramatic declines in the equities market in the wake of the 2000 collapse of the dot-com bubble and the 2008 financial crisis. The impact was especially pronounced because government contribution rates were unusually low for much of the 1990s. Contribution rates in 2013 were similar to those in the early 1970s. Government contribution rates dropped in 2015 and 2016 and are scheduled to drop again in 2017 as the plan's investment returns have continued to improve (New York State and Local Retirement System 2015a).

The volatility in required employer contribution rates to New York's public employee retirement plan highlights the downside of investing pension funds in risky assets. Over the past three decades, public pension plans across the nation have increasingly shifted away from fixed-income investments such as government and high-quality corporate bonds in favor of equities and alternative investments such as hedge funds, real estate, and commodities (Pew Charitable Trusts and Laura and John Arnold Foundation 2014). This strategy often allows plans to meet their target investment returns, but it increases the risk of investment losses in bad years. In New York, those losses forced the state and local governments to increase their contributions to maintain the plan's strong financial standing. Other states confronted with poor investment returns did not raise contributions to their retirement plans and instead allowed the plans' financial status to deteriorate. New York could help protect the budgets of municipalities in the state as well as the finances of the state-administered retirement plan by maintaining the level of required government contribution rates when investment returns are high so rates do not have to rise much when returns fall.

The plan benefit structure did not cause required government contributions to surge over the past decade. Although current retirees from New York's state and local governments receive more generous pensions than government employees in most states, recent cutbacks have significantly reduced pensions for new hires. The state-financed pension benefits received over a lifetime by employees hired since 2012 will be only 10 to 60 percent as large as the benefits they would have received if the benefits rules for 1973 were still in place. Further benefit cuts do not seem warranted.

However, the state should consider restructuring the benefit formula to distribute pensions more fairly across the workforce. Under current rules for new hires, how much retirees benefit from the state retirement plan depends on two seemingly arbitrary factors: when they were hired and how long they served. For example, the retirement plan essentially supplements salaries 11 percent each year for age-45 hires who separate after 20 years of service, but only 0.7 percent for age-25 hires who separate after 20 years. Age-25 hires who remain in government employment for less than 18 years essentially lose money in the plan; they would do better financially if they could opt out of the mandatory plan and invest their required plan contributions elsewhere. This disparity in what public servants get out of the plan violates the principle of equal pay for equal work. A fairer plan would supplement salaries by about the same percentage regardless of hire age or completed years of service.

Various plan changes could distribute benefits more fairly across the workforce. Moving to a 401(k)-type plan, either as a replacement to the traditional defined benefit plan the state now offers or a supplement to it, could help equalize retirement benefits among employees. In a 401(k)-type plan, all participants could receive the same employer contribution relative to their salaries, regardless of age or years of service, and their retirement accounts could continue to grow until they begin collecting benefits, even after they leave public employment. A better option might be a cash balance plan, which combines features of traditional defined benefit plans and 401(k)-type defined contribution plans. Cash balance plans establish notional retirement accounts for each plan member. Employers and employees both contribute to the accounts, which are pooled and professionally managed and earn investment returns each year. The plan benefit is expressed as an account balance, but members may always elect to receive their benefit as a lifetime annuity. Like 401(k) plans, cash balance plans could treat all employees fairly because employers could contribute the same share of a member's salary to all retirement accounts, regardless of a member's age or years of service. Both types of plans would expose government employees to some investment risk, in that their pensions could shrink if interest rates or equity returns fall. However, prudent investing could reduce the risk, especially over the long run, and shifting some investment risk to public employees would free taxpayers from shouldering the entire investment risk themselves.

Notes

1. This estimate is based on data from the New York State and Local Retirement System (2015a) and New York State Teachers' Retirement System (2015). It excludes plans covering New York City employees, which are administered by the city, not the state. Some analysts maintain that estimates such as this one based on financial assumptions developed by plan trustees understate unfunded obligations, because the assumed interest rate they use to discount future benefit payments is too high (Novy-Marx and Rauh 2011).
2. Between 2002 and 2014, inflation-adjusted state and local government contributions to public employee pension plans increased 684 percent in Pennsylvania, faster than in any other state. In New York, government contributions grew from \$2.6 billion to \$18.1 billion, measured in constant 2014 dollars. These estimates are based on our calculations of data from the US Census of Governments' annual survey of public pensions (US Census Bureau 2015).
3. "New York's Pension Bomb," Empire Center for Public Policy, 2014, <http://www.empirecenter.org/pensioncalculator/>
E. J. McMahon, "Why Teacher Pension Costs Will Keep Rising," *Newsday*, July 5, 2012, <http://www.newsday.com/opinion/why-teacher-pension-costs-will-keep-rising-e-j-mcmahon-1.3822627>
4. These estimates are based on our calculations of data from the US Census of Governments' annual survey of public pensions (US Census Bureau 2015). State averages for local government employee salaries are not available.
5. Between 1926 and 2013, the average annual compound growth rate for a portfolio evenly split between stocks and bonds was 5.38 percent (Morningstar 2014).

References

- AFSCME. 2012. "The Truth about the New York Employees' Retirement System." Washington, DC: American Federation of State, County, and Municipal Employees, AFL-CIO. http://www.afscme.org/issues/pension-security/resources/state-pension-fact-sheets/document/New_York_Employees_Retirement_System.pdf.
- McMahon, E. J., and Josh Barro. 2010. *New York's Exploding Pension Costs*. Albany: Empire Center for New York State Policy. <http://www.empirecenter.org/wp-content/uploads/2013/09/PensionExplosion.12.2010.pdf>.
- Morningstar. 2014. *2014 Ibbotson S&P Classic Yearbook: Market Results for Stocks, Bonds, Bills, and Inflation 1926–2013*. Chicago: Morningstar.
- New York State and Local Retirement System. 2005. *Comprehensive Annual Financial Report, Fiscal Year Ended March 31, 2005*. Albany: New York State Office of the State Comptroller. http://www.osc.state.ny.us/retire/word_and_pdf_documents/publications/cafr/cafr_05.pdf.
- New York State and Local Retirement System. 2010. *Annual Report to the Comptroller on Actuarial Assumptions*. Albany: New York State Office of the State Comptroller. http://www.osc.state.ny.us/retire/word_and_pdf_documents/publications/annual_actuarial_assumption_report/actuarial_assumption_2010.pdf.
- New York State and Local Retirement System. 2015a. *2015 Comprehensive Annual Report for Fiscal Year Ended March 31, 2015*. Albany: New York State Office of the State Comptroller. http://www.osc.state.ny.us/retire/word_and_pdf_documents/publications/cafr/cafr_15.pdf.
- New York State and Local Retirement System. 2015b. *Annual Report to the Comptroller on Actuarial Assumptions*. Albany: New York State Office of the State Comptroller. http://www.osc.state.ny.us/retire/word_and_pdf_documents/reports/actuarial_assumption/aa_2015.pdf.
- New York State Teachers' Retirement System. 2015. *Comprehensive Annual Financial Report, Fiscal Year Ended June 30, 2015*. Albany: New York State Teachers Retirement System. <https://www.nystrs.org/Library/Publications/Annual-Report/2015CAFR>.
- Novy-Marx, Robert, and Joshua D. Rauh. 2011. "Public Pension Promises: How Big Are They and What Are They Worth?" *Journal of Finance* 66 (4): 1211–49.
- Pew Charitable Trusts. 2015. "The State Pensions Funding Gap: Challenges Persist." Washington, DC: Pew Charitable Trusts. http://www.pewtrusts.org/~media/assets/2015/07/pewstates_statepensiondebtbrief_final.pdf.
- Pew Charitable Trusts and Laura and John Arnold Foundation. 2014. "State Public Pension Investments Shift over Past 30 Years." <http://www.pewtrusts.org/~media/Assets/2014/06/PensionInvestments06032014.pdf>.
- State Budget Crisis Task Force. 2012. *New York Report: Report of the State Budget Crisis Task Force*. Albany: State Budget Crisis Task Force. <http://www.statebudgetcrisis.org/wpcms/wp-content/images/NY-Report.pdf>.
- US Census Bureau. 2015. "Survey of Public Pensions: State and Local Data." Washington, DC: US Census Bureau. <https://www.census.gov/govs/retire/>.

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