The California State Teachers’ Retirement System (CalSTRS) has been grossly underfunded for the past decade. By its actuaries’ 2013 calculations, CalSTRS holds enough assets to fund only 67 percent of the pension benefits promised to the state’s public school teachers (Milliman 2014). State policymakers have responded by cutting plan benefits for new hires and raising teachers’ required plan contributions. Additional reforms will likely be necessary to balance the plan. Yet little attention has been paid to how much retirement security the plan provides to California’s public school teachers—who are not covered by Social Security—or how its benefits are distributed across the teacher workforce.

This brief reports findings from our in-depth analysis of retirement benefits received by California teachers (Johnson and Southgate 2014). We find that teacher pensions vary widely depending on when teachers begin their careers and how long they teach. Teachers who spend their entire careers in the plan receive large pensions. However, teachers who join the plan at relatively young ages and spend less than full careers in the classroom accumulate few retirement benefits, and those benefits are often worth less than the value of the teachers’ required plan contributions. As policymakers address CalSTRS’s funding problems, they should consider altering the plan’s benefit formula to more equitably distribute pension benefits across the workforce.
How Are Benefits Distributed?

Retired teachers with at least five years of completed service qualify for pensions beginning at age 55 equal to a multiple of their final average salary times years of completed service. The multiplier that enters the benefit formula depends on when a teacher begins collecting payments, rising from 1.16 percent for teachers who first collect at age 55 to 2.4 percent for those who wait until age 65. After retirement, pensions automatically increase 2 percent a year. Teachers must contribute a portion of their salaries to CalSTRS to defray part of their pension costs. The mandatory contribution rate was 8 percent in 2013–14, but it will gradually increase to 9.205 percent over the next three years for those hired after 2012. The calculations shown here apply the higher teacher contribution rate to all service years for those hired after 2012. Upon termination, teachers may elect a refund of their contributions, with interest, instead of collecting a pension. The annual interest rate on refunded contributions is currently 4.5 percent, less than the 7.5 percent annual return that the CalSTRS trustees assume the plan assets will earn.

How well California’s existing retirement plan serves public school teachers depends crucially on when teachers were hired and how long they taught. Teachers who spend a full career in the plan receive large pensions. For example, teachers hired today at age 25 who earn average salaries over their careers will receive pensions worth $90,200 a year at age 75 (in 2014 constant dollars) if they remain employed for 40 years. Over a lifetime, those benefits are worth $1.3 million when measured in constant 2014 dollars at the time teachers separate from public employment. Teachers’ required contributions finance more than half of those lifetime benefits. Nonetheless, in this example the portion that school districts and the state fund is worth $523,000.

However, teachers who join the plan when they are relatively young and who spend less than a full career in the classroom accumulate few retirement benefits. For example, a 25-year-old hire who joins the plan today and separates after 20 years of service would receive $11,900 in annual pension benefits at age 75. These benefits are worth $123,000 over a lifetime, less than the value of his or her required plan contributions. Age-25 hires must remain employed for at least 28 years to collect benefits worth more than the value of their plan contributions. Teachers who separate earlier lose money in the mandatory plan; they would have better financial outcomes if they had the opportunity to opt out of the plan and invest their contributions elsewhere. These teachers—many of whom taught for more than 20 years—essentially subsidize the large pensions received by the longest-tenured teachers.

To measure how much teachers benefit from the retirement plan, we computed the annual contributions that school districts and the state would have to set aside each year to finance the stream
of future pension benefits that teachers will receive once they retire (figure 1). These calculations show how much retirement benefits supplement teacher salaries, averaged over their careers, assuming that teacher contributions earn 7.5 percent nominal returns, the rate assumed by the plan trustees.

FIGURE 1
Career-Average Annual Employer Cost As Share of Teacher Salary

The plan significantly reduces salaries for teachers hired at age 25 who separate before completing 28 years of service because future pension benefits for teachers with less seniority are worth less than their required contributions. For age-25 hires who leave after completing 22 years of service, for example, the pension plan reduces their salaries by 2.6 percent each year they work. The plan supplements salaries for teachers who remain on the job for at least 28 years, but how much they benefit depends on how long they stay. For instance, the plan supplements salaries 1.1 percent each year for those who separate after 29 years of service and 7.1 percent each year for those who separate after 40 years of service. The annual supplement then falls each year that age-25 hires remain on the

Source: Authors’ calculations based on plan documents and actuarial reports.
job beyond 40 years, declining to 5.1 percent after 43 years of service and 3.7 percent after 45 years of service.

Teachers 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 12.7 percent each year for age-45 hires who separate after 20 years of service and 16.8 percent each year for age-55 hires who separate after only 10 years of service. This disparity in what teachers 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.

Relatively few California public school teachers remain employed long enough to benefit much from their retirement plan. Half of all newly hired teachers complete no more than 11 years of service, and only a quarter complete at least 20 years of service. As a result, the median age-75 pension benefit for today’s new hires will total only $5,900 a year. Only 35 percent of all new hires and only 47 percent of teachers who remain employed for at least five years will receive pensions worth more than the value of their required plan contributions.

Another drawback of the existing retirement plan for California teachers is that it penalizes teachers who continue to work at older ages. Teachers who remain employed after they may begin collecting their pensions forgo a year of benefits for every year they remain on the job, cutting their total compensation; these losses create strong incentives to retire. For age-25 hires, for example, the value of lifetime benefits net of teacher contributions is only half as high for those who separate after 47 years as for those who separate after 40 years. The value of net lifetime benefits falls because additional service years do not raise annual payments enough to offset the decline in the number of checks continuing workers receive and the additional contributions they must make. Such disincentives are increasingly problematic as the workforce ages.

Policy Options

Various plan changes could distribute benefits more evenly across the workforce and make teaching more appealing to both younger and older adults. For example, the state could switch to a cash balance plan, which could treat all teachers fairly because school districts and the state could contribute the same share of a teacher’s salary to all teacher retirement accounts, regardless of a teacher’s age or years of service. Moving to a 401(k) plan, either to replace the traditional defined benefit plan or to supplement it, could also help equalize retirement benefits among teachers. 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 would continue to grow until they begin collecting benefits, even after they leave public employment. Such changes, however, would expose teachers to some investment risk, in that their pensions could shrink if interest rates or equity returns fall.

Alternatively, CalSTRS could distribute benefits more equitably across the workforce by altering the benefit formula. For example, policymakers could change the computation of final average salary so that the measure on which benefits are based increases each year that separated teachers wait to collect, allowing pensions to grow—instead of remaining frozen—during that period. Tying the plan multiplier to years of service instead of benefit take-up age would reduce benefits for teachers hired at older ages, because they do not accumulate many years of service and would not experience the benefit boost provided to teachers who separate before becoming eligible to collect benefits. Policymakers could also raise benefits for older, experienced teachers by increasing the plan multiplier for those who retire after the normal retirement age. Combined, such changes would make employment in public education more appealing to younger adults who spend less than a full career in the classroom and older adults who wish to prolong their careers.

References


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