



Retirement Research & Planning Division

2014 Retirement Trend Report

Abstract

The CalPERS Board of Administration believes that a retirement plan should include a defined benefit (DB) component reflecting each employee's years of service, age, and earnings, and provide an adequate allowance for full-career employees. Multiple factors impact the planning, timing, and security of a worker's retirement. This paper analyzes 15 years of CalPERS new retiree data, highlighting trends for five broad member groups: State non-safety, State safety, Public Agency (PA) non-safety, PA Safety, and School. This paper also analyzes demographic trends and policy and economic changes that may have impacted members' retirement decisions. Researchers found that DB allowance, years of service, retirement age, final compensation, and DB replacement rate varied by member group, with years of service demonstrating a strong correlation to DB allowance replacement rate. Researchers also found the aging public sector workforce had the greatest impact on retirement rates.

Introduction

The CalPERS Board of Administration firmly believes that a retirement plan should include a DB component that ensures “lifetime retirement benefits reflect each employee’s years of service, age, and earnings and are adequate for full-career employees.”¹

After a full-career, Americans deserve retirement security. Historically, many retired Americans have relied on some combination of pensions, personal savings, and Social Security. The percentage of private sector workers with access to pensions has diminished over time, whereas the majority of public sector workers continue to have access to DB pension plans.² Workers without a pension depend more on personal savings and Social Security, or Social Security alone, while workers with a pension augment their DB allowance with either personal savings, Social Security, or both.

Multiple factors impact the planning, timing, and security of a worker’s retirement. Employers, sometimes through collective bargaining agreements, decide the balance of salaries and benefits they offer employees. Employees decide who they work for (private or public employers), how much they save, how long they work, and when they retire. For public employees, legislative decisions and contract negotiations drive DB pension benefit formulas and wages.

While Americans deserve retirement security after a full-career, pension administrators must understand decision triggers and plan for changes to ensure sustainability. CalPERS researchers analyzed annual new retiree data from Fiscal Years (FY) 1999 through 2013.³ Researchers studied the following related to these “new” retirees:

- Initial monthly DB allowance
- DB allowance elements: years of service, retirement age, benefit formula, and final compensation
- New retirements
- DB allowance replacement rates

CalPERS defined benefits

Terms of employment for public employees, including DB formulas, are set through legislation and contract negotiations. The State of California and more than 3,000 public employers currently contract with CalPERS to administer their DB plans. CalPERS has nearly 1.7 million members, 575,000 of whom are retirees. These members fall into five distinct groups:

- State non-safety — State of California and the California State University System
- State safety
- Public Agency (PA) non-safety — cities, counties, and special districts
- PA safety
- School districts (School)⁴

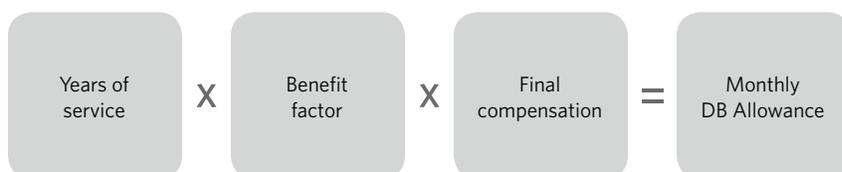
The non-safety member groups include miscellaneous and industrial employees. These members often administer public programs, develop public policy, or provide customer service. Safety members generally hold law enforcement and fire fighter positions.

Upon retirement, CalPERS calculates each vested employee’s DB allowance using the employee’s:

- Years of service
- Benefit factor, based on retirement age and benefit formula
- Final compensation⁵

Figure 1 illustrates the DB allowance elements:

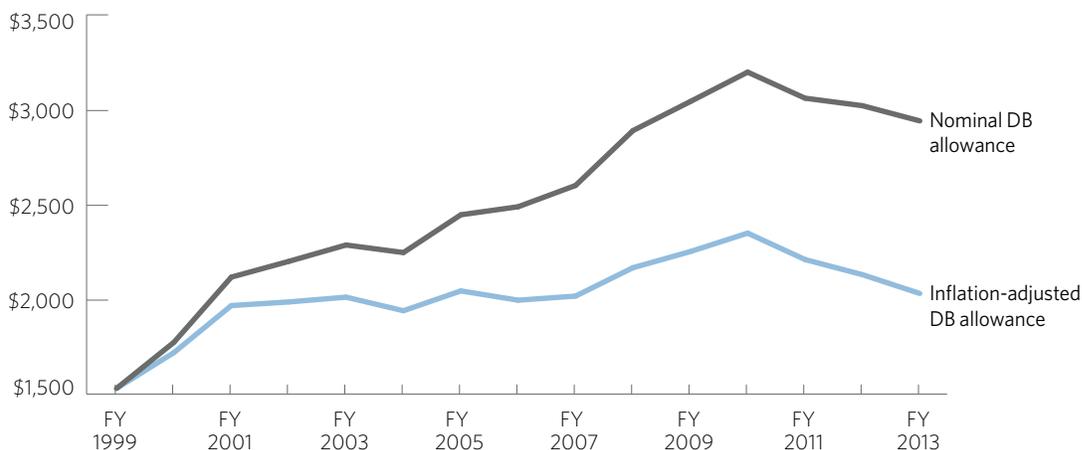
Figure 1: Elements of the DB allowance



Defined benefit allowance

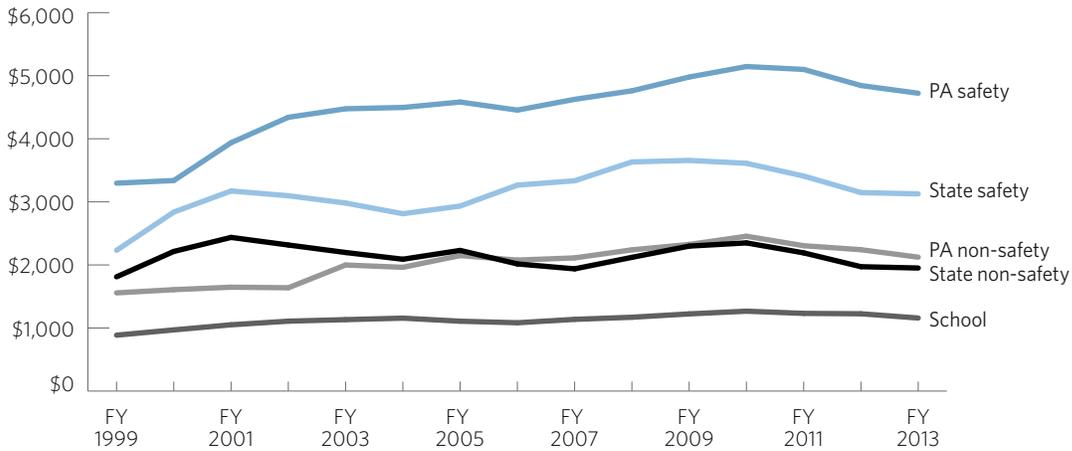
This section examines CalPERS retirees’ average initial monthly DB allowance and the impact of inflation on the DB allowance. Inflation is a sustained increase in the general cost of goods and services that erodes the value of a dollar. As a result, compensation must increase over time to maintain the same purchasing power. To demonstrate the impact of inflation, researchers calculated the overall CalPERS DB allowance both nominally and adjusting for inflation.⁶ Figure 2 shows the average nominal and inflation-adjusted DB allowance for CalPERS new retiree population:

Figure 2: Average initial monthly CalPERS DB allowance



CalPERS retirees' average initial monthly DB allowance increased during the study period. The overall average initial monthly DB allowance increased nominally from \$1,534 to \$2,945 between FY 1999 and 2013. When adjusted for inflation, however, initial average monthly DB allowance increased to \$2,035. Inflation eroded the value of the dollar by approximately 2.5 percent per year. To create a consistent comparison, all dollar figures in the remainder of this study are inflation-adjusted. *Figure 3* shows each retiree group's average initial monthly inflation-adjusted DB allowance from FY 1999 to 2013:

Figure 3: Average CalPERS inflation-adjusted DB allowance, by retiree group



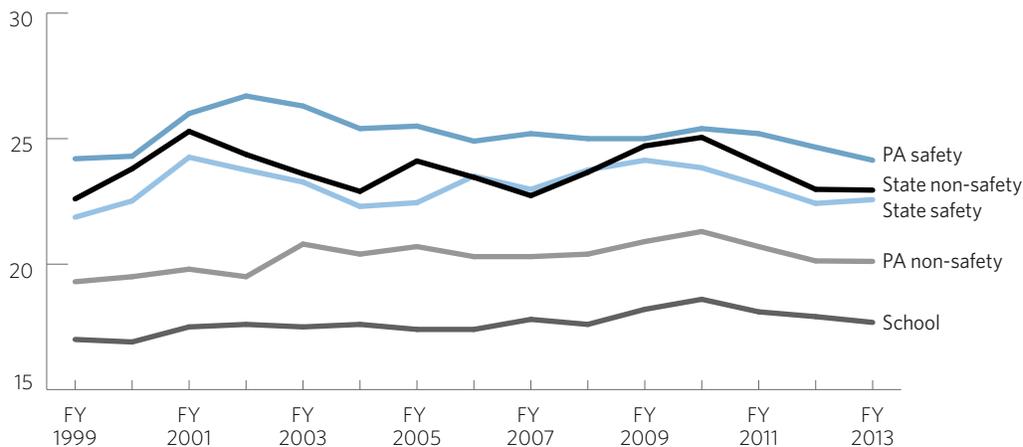
Over the study period, all retiree groups experienced fluctuations in DB allowances, with variation between retiree groups. PA safety retirees realized the greatest increase in inflation-adjusted DB allowance, while State non-safety retirees realized the smallest increase.

Years of service, retirement age, benefit formula, and final compensation are the elements that impact a retiree's DB allowance. The following sections examine the changes in these elements over time.

Years of service

Years of service vary by retiree, reflecting their independent decisions to enter and leave public service. In general, retirees with more years of service receive larger DB allowances than their peers who retire at the same age, with the same benefit formula, and with the same final compensation.⁷ *Figure 4* shows each retiree group's average years of service from FY 1999 through 2013:

Figure 4: Average years of service, by retiree group



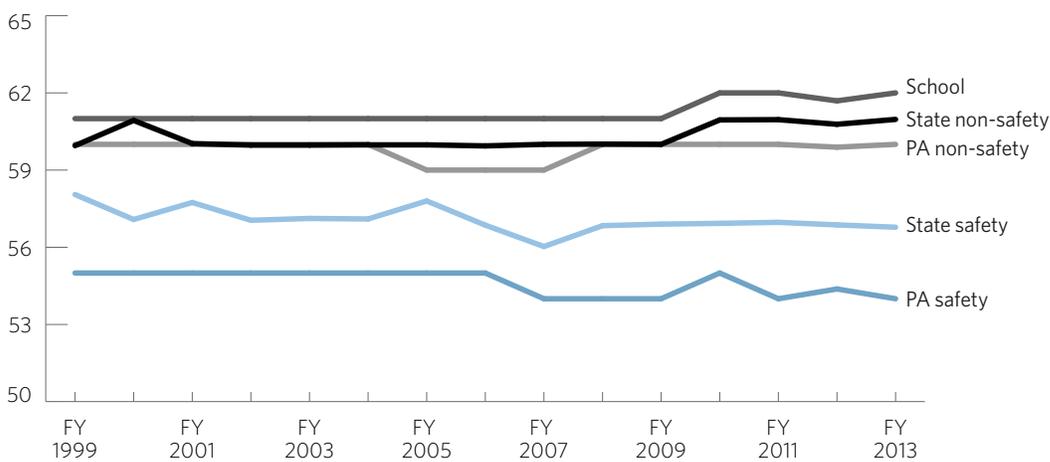
Over time, there is little variation in the years of service for CalPERS retiree groups. State non-safety retirees had the greatest fluctuation in years of service, varying 2.7 years from its low in FY 1999 at 22.6 years, to its peak in FY 2001 at 25.3 years.

There is, however, a relative difference between retiree groups. Over the study period, PA safety retirees retired with the most years of service on average, while School retirees consistently had the fewest years of service. Some School members start their careers later and work part-time.⁸

Retirement age

Retirement age also varies by retiree, reflecting each individual's circumstances, including health and financial status. In general, those who retire at an older age receive larger DB allowances than their peers who retire with the same years of service, benefit formula, and final compensation. This is because benefit factors increase with age until the member reaches the maximum benefit factor. *Figure 5* shows each retiree group's average retirement age from FY 1999 through 2013:

Figure 5: Average retirement age, by retiree group



Over time, there is little variation in the average retirement age for CalPERS retiree groups. State safety retirees had the greatest fluctuation in retirement age, varying two years from their peak in FY 1999 at 58 years, to their low in FY 2007 at 56 years.

There is, however, a relative difference between retiree groups. Over the study period, School retirees' average retirement age was highest, while PA safety retirees consistently retired the youngest.

Benefit formula

The California Legislature and employer contract negotiations with unions determine benefit formulas which often vary depending on the type of work performed. In 2000, California implemented Senate Bill (SB) 400 which retroactively enhanced benefit formulas for State and School members and allowed, but did not require, contracting PAs to enhance benefit formulas for their safety members.⁹ In 2002, California implemented Assembly Bill (AB) 616 allowing contracting PAs to elect similar benefit formula enhancements for their non-safety employees. *Figure 6* shows each retiree group's two most common CalPERS benefit formulas during the study period:

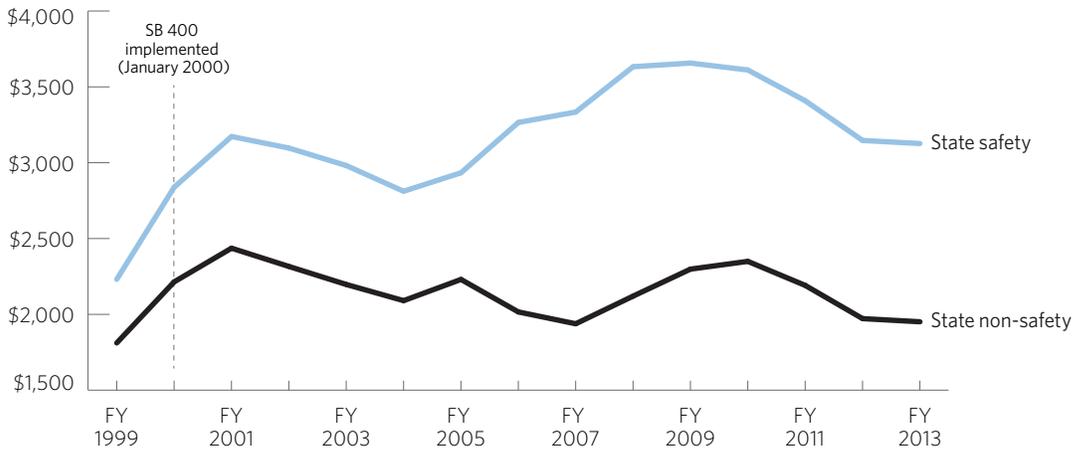
Figure 6: Common CalPERS benefit formulas

	Most Common Benefit Formula	Percent Participation	2nd Most Common Benefit Formula	Percent Participation
State non-safety	2% @ 55	91%	2% @ 60	7%
State safety	3% @ 50	46%	2.5% @ 55	32%
PA non-safety	2% @ 55	51%	2.7% @ 55	20%
PA safety	3% @ 50	72%	2% @ 50	17%
School	2% @ 55	95%	2% @ 60	5%

In FY 1999, prior to SB 400, 95 percent of State non-safety retirees had the 2% at 60 benefit formula and 50 percent of State safety retirees had the 2.5% at 55 benefit formula. After SB 400, 94 percent of State non-safety retirees had the 2% at 55 benefit formula and 47 percent of State safety retirees had the 3% at 50 benefit formula.

Benefit formula changes have the potential to influence DB allowances and members' retirement decisions. Researchers only examined the impact of these changes on State retirees because they were impacted uniformly. PA retirees experienced these changes sporadically, over multiple years. *Figure 7* shows the State retiree groups' average initial monthly DB allowance before and after SB 400 implementation:

Figure 7: Average CalPERS inflation-adjusted DB allowance, by State retiree group



SB 400 benefit enhancements may have initially resulted in higher DB allowances, increasing:

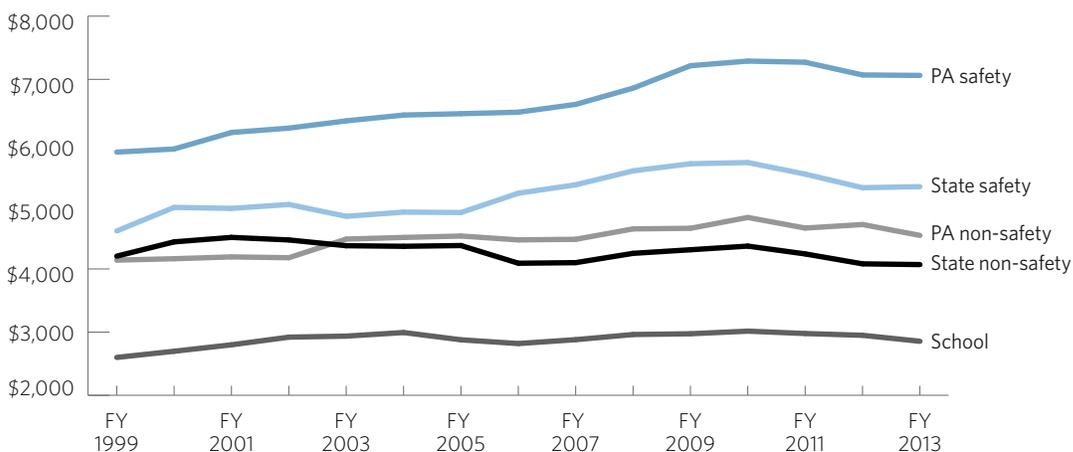
- State non-safety from \$1,812 in FY 1999 to \$2,436 in FY 2001, then fluctuating down to \$1,951 by FY 2013
- State safety from \$2,231 in FY 1999 to \$3,173 in FY 2001, then fluctuating for the remainder of the study to \$3,126 in FY 2013

After the initial impact of SB 400, DB allowances seemed to moderate over the remainder of the study period, particularly for State non-safety retirees.

Final compensation

In general, CalPERS retirees with higher final compensation receive larger DB allowances than their peers who retire with the same years of service, at the same age, and with the same benefit formula. *Figure 8* shows each retiree group’s average final compensation from FY 1999 through 2013:

Figure 8: Average CalPERS inflation-adjusted final compensation, by retiree group



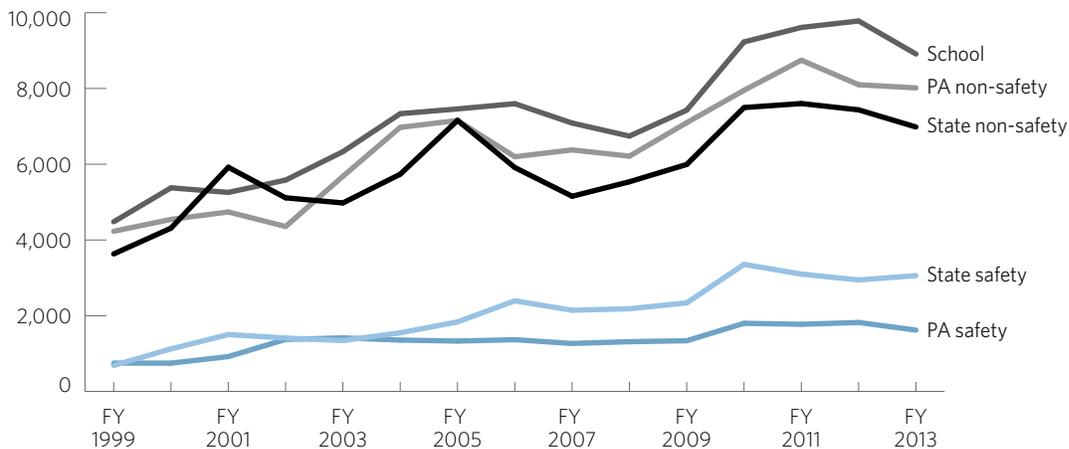
During the study period, inflation-adjusted final compensation fluctuated for all CalPERS retiree groups:

- PA safety retirees from \$5,849 to \$7,062
- State safety retirees from \$4,601 to \$5,302
- State non-safety retirees from \$4,202 to \$4,069
- PA non-safety retirees from \$4,140 to \$4,531
- School retirees from \$2,600 to \$2,856

New retirements

Eligible employees ultimately decide when to retire. Service retirement eligibility is based on age and vesting requirements. Almost 77 million Americans were born between 1946 and 1964.¹⁰ Research shows the public sector employs a higher percentage of this demographic, called Baby Boomers (Boomers), than the private sector.¹¹ The public sector may experience greater impact than the private sector from this aging population as these individuals retire. *Figure 9* shows the number of new retirements for each retiree group from FY 1999 to 2013:

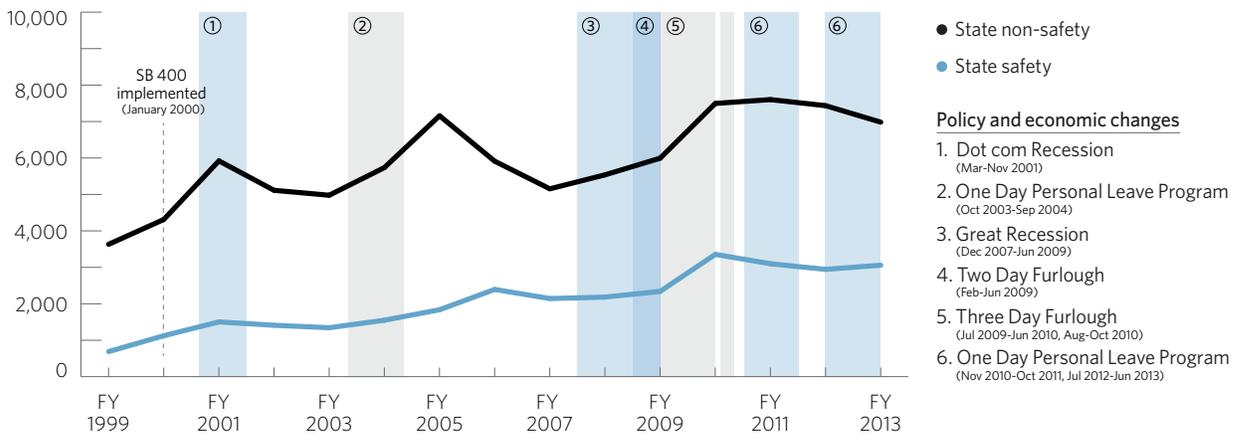
Figure 9: CalPERS new retirements, by retiree group



Total annual retirements more than doubled from 13,780 retirees in FY 1999 to 28,588 in FY 2013. Boomers had a continuing influence on retirements as many aged into and through various milestones, including full retirement, Social Security eligibility, and the maximum benefit factor. Over the study period, Boomers accounted for approximately 60 percent of retirements. The remaining active Boomers will continue to impact retirements for years to come.

Policy and economic changes also have the potential to temporarily influence members' retirement decisions. Economic recessions reduced government revenues and eventually caused the state to address budget shortfalls through personnel cost reduction strategies. Strategies such as unpaid time off (e.g., furloughs) reduced members' earnings, but, by design, did not reduce the pay rates CalPERS uses to calculate DB allowances. This approach increased the potential that DB allowances would exceed monthly take home pay for some retirement-eligible members and may have encouraged eligible members to retire sooner. While public agencies often adopted similar policies, the more than 3,000 public agencies adopted these changes sporadically. Researchers only examined the impacts of the cost reduction strategies on State retirees because they were impacted uniformly. *Figure 10* shows the State retiree group's retirements, and policy and economic changes that potentially impacted this trend from FY 1999 through 2013:

Figure 10: Number of new retirements, by State retiree group



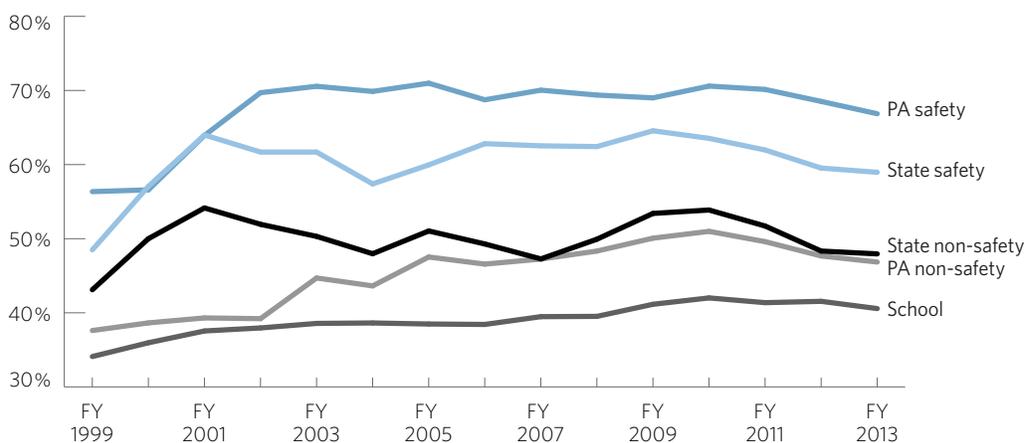
The data show observable increases in retirements initially following the implementation of SB 400 and the state's various personnel cost reduction strategies. State non-safety retirees experienced more notable growth in retirements following these events, whereas the State safety retirees experienced more gradual growth. As these changes coincide with the Boomer population aging into retirement, it is unclear whether the retirement rate increases were due to the cost reduction strategies or the aging workforce.

DB allowance replacement rate

Financial planners often use replacement rate as a measure of retirement income adequacy. Replacement rate is a comparison of pre-retirement earnings to earnings in retirement.

Some CalPERS members may have supplemental savings and Social Security to help increase their retirement income, resulting in a higher replacement rate. For other CalPERS members, DB allowances may be the only source of retirement income, making DB allowance the most important replacement rate consideration. In this study, replacement rate reflects only the DB allowance as it relates to final compensation, actual member experience may vary. *Figure 11* shows each retiree group's average replacement rate from FY 1999 through 2013:

Figure 11: Average CalPERS DB allowance replacement rate, by retiree group



The replacement rate varies more for some retiree groups than others. The PA safety rate is the highest, topping out at more than 70 percent. PA safety retirees typically have a higher benefit formula and retire with more years of service, which contributes to their higher replacement rates. Ninety-seven percent of CalPERS active safety members do not participate in Social Security, likely leaving their DB allowances and supplemental savings as their primary income sources in retirement.¹²

The School replacement rate is the lowest, not exceeding 45 percent in a single year. School retirees often retire at an older age, but with less years of service, which contributes to their lower replacement rate. At least 96 percent of all active School members participate in Social Security, which eventually increases their overall replacement rate.

DB allowance replacement rate is dependent on retiree's age, benefit formula, and years of service at retirement. Though the DB allowance replacement rate can fluctuate as each of these elements increase or decrease, researchers found a strong correlation between this rate and years of service, but no correlation between this rate and retirement age over the study period.¹³

Conclusion

Although typical careers, as measured by years of service and retirement age, showed little variation from FY 1999 to 2013, the number of retirements approximately doubled. Aging Boomers heavily influenced this growth. Policy and economic changes may have also temporarily impacted retirements, but their exact influence is uncertain as they coincided with Boomers reaching retirement milestones in greater numbers.

Changes in final compensation and average initial monthly DB allowance varied by retiree group. Inflation, however, eroded the value of both measures. After adjusting for inflation, State non-safety retirees' average final compensation was lower in FY 2013 than in FY 1999, which in turn impacted their overall DB allowance.

DB allowance replacement rates also varied by retiree group. Safety groups had the highest replacement rates. Since these groups have low participation in Social Security, they have a higher dependency on their DB allowance for their overall replacement rate. The School retiree group had the lowest DB allowance replacement rates. They have greater participation in Social Security, likely increasing their overall replacement rate. Regardless of retiree group, there was a strong correlation between years of service and DB allowance replacement rate.

Endnotes

- ¹ CalPERS *Pension Beliefs*.
- ² The percent of private sector workers with defined benefit pension plan coverage was 88 percent in 1975 and 33 percent in 2005; For State and local sector, defined benefit coverage was 98 percent in 1975 and 92 percent in 2005. Munnell, Haverstick and Soto, 2.
- ³ CalPERS researchers studied new service retirements from fiscal year (FY) 1998-1999 through FY 2012-2013. Service retirements accounted for 93 percent of all CalPERS retirements. The fiscal year runs from July 1 through June 30. In this paper, all FY references refer to values on June 30 of the given year.
- ⁴ Almost 100 percent of School members are non-safety.
- ⁵ A retiree's "final compensation" is their "final average salary" (their highest average "compensation earnable" or "pensionable compensation" in a 12 or 36 month period of CalPERS-covered employment), and certain items of "special compensation," which are established by law and regulation. Final compensation generally does not include overtime pay, ad hoc payments, final settlement pay, or amounts that are not available to employees in the same group or class of public employment. For more information, see *Vested Rights of CalPERS Members, Protecting the Pension Promises Made to Public Employees*. Since *CalPERS Summary Statistics of Members Who Retired* do not capture final compensation data, researchers used my|CalPERS data for this measure.
- ⁶ Researchers calculated inflation-adjusted values by applying the California Consumer Price Index (CPI-U) to final compensation and DB allowances, using 1999 dollars as the base. This paper reports all final compensation and DB allowance values in average monthly terms.
- ⁷ Some benefit formulas have maximum replacement rates that cannot be exceeded regardless of years of service.
- ⁸ A random sample of 382 out of 106,099 School members revealed this group's average time base is 87 percent.
- ⁹ SB 400 enhanced the State's Tier 1 benefit formula for future service, applied enhancements to previous Tier 1 service and allowed active members to convert Tier 2 service to the new Tier 1 benefit formula. The State non-safety Tier 1 and School benefit formulas increased to 2% at 55 from 2% at 60. The State safety benefit formula increased to 3% at 50 from 2% at 50.
- ¹⁰ In 2011, there were just under 77 million people born between 1946 and 1964. Colby and Ortman, 2.
- ¹¹ The Department of Labor identified several employment categories which represent jobs within the public sector as being hardest hit by Boomer retirements. Some of these include public administration officials, social workers, financial managers, lawyers, police, fire personnel, teachers and other professions. Willett, 27-28.

Works Cited

- ¹² CalPERS captures Social Security participation information for its members' CalPERS-covered employment. CalPERS does not capture Social Security participation for non-CalPERS-covered employment or benefit amount information. As a result, researchers can not quantify Social Security benefit amounts or their exact impact on replacement rates. Researchers calculated active membership participation levels using the 2011 *CalPERS Annual Participant Count* report.
- ¹³ Researchers computed the correlation coefficient to assess the relationship between replacement rate and years of service ($r=0.93$, $p < .0001$) and the relationship between replacement rate and retirement age ($r=-.05$, $p < .0001$).
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Data Sources

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my|CalPERS. Data only includes members with CalPERS service retirements between July 1, 1998 and June 30, 2013. Data excludes Judges' Retirement System and Legislators' Retirement System retirements, as well as all survivors and beneficiaries.

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