



Benefits and Services Committee

Item Number 4 – Open Session

Subject: Trends in CalSTRS Demographics

Presenter(s): David Lamoureux and Jordan Fassler

Item Type: Information

Date & Time: January 10, 2024 – 20 minutes

Attachment(s): None

PowerPoint(s): Trends in CalSTRS Demographics

Item Purpose

The purpose of this item is to address a request to provide the board with information regarding trends in the number of teachers. This item focuses on historical and projected trends in CalSTRS member demographics and discusses potential long-term implications of these trends on CalSTRS operations, investments and liquidity needs.

Recommendation

None

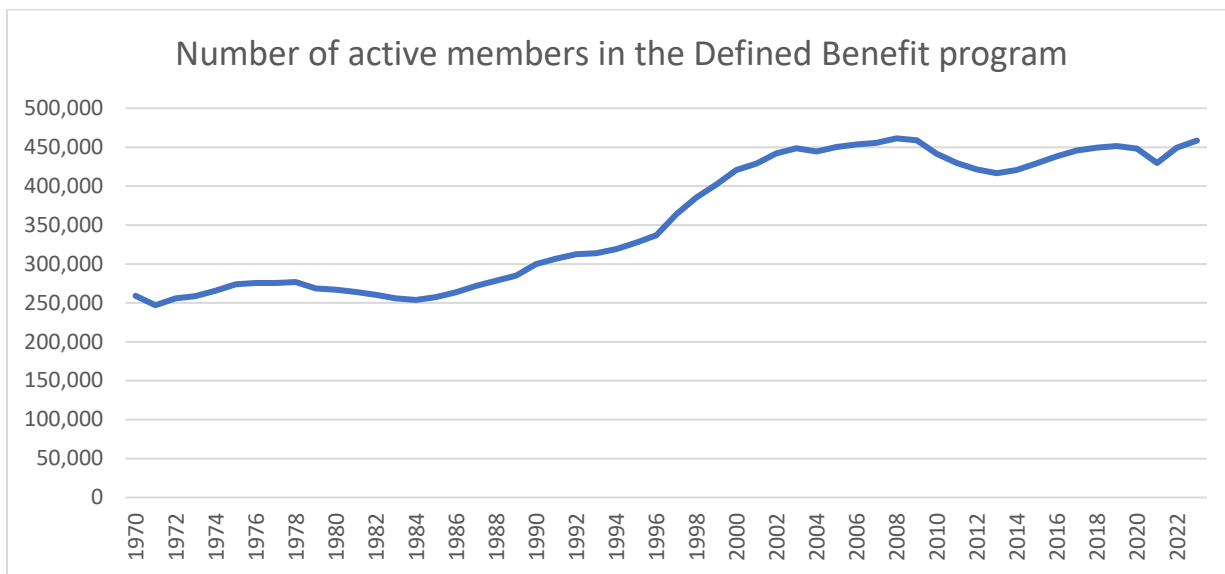
Discussion

Demographic trends impact all aspects of CalSTRS operations. The number of active and retired members and their age distribution will directly influence CalSTRS ability to fund the defined benefit program, the liquidity needs of the investment portfolio, and the operational planning for the numbers of retirements the system can expect.

This item will focus on two specific aspects of CalSTRS demographic trends: the growth in active members that occurred in the second half of the 1990s and the resulting increase in active members that will be eligible to retire in the coming decade.

Trends in active membership

The following chart shows the historical number of active members participating in the Defined Benefit Program going back to 1970.



Several interesting observations can be made from this chart regarding the CalSTRS active member population. First, the number of active members was relatively stable throughout the 1970 and early 1980s followed by steady growth from the mid-1980s through the mid-1990s. There was an average annual growth of 2.2% from 1984 through 1996.

The big change occurs starting in 1996. This coincides with the passage of Senate Bill 1777 which provided incentives to districts to reduce class sizes for grades K-3 to a ratio of no more than 20 to 1. From 1996 to 2002 the number of active members in CalSTRS increased from about 337,000 active members to about 442,000 active members, averaging about 4% growth per year in that span. According to research by the California Department of Education in 2002 and [summarized by EdSource](#) the number of K-3 teachers increased by 46% from 1996 through 1999 in response to increasing enrollment and the class size reductions.

In addition to the class size reduction initiative, the population of teachers increased through the 1990s and early 2000s in response to the growth in the overall population in California. California experienced a 22% increase in population between 1990 and 2005 based on Department of Finance and census data.

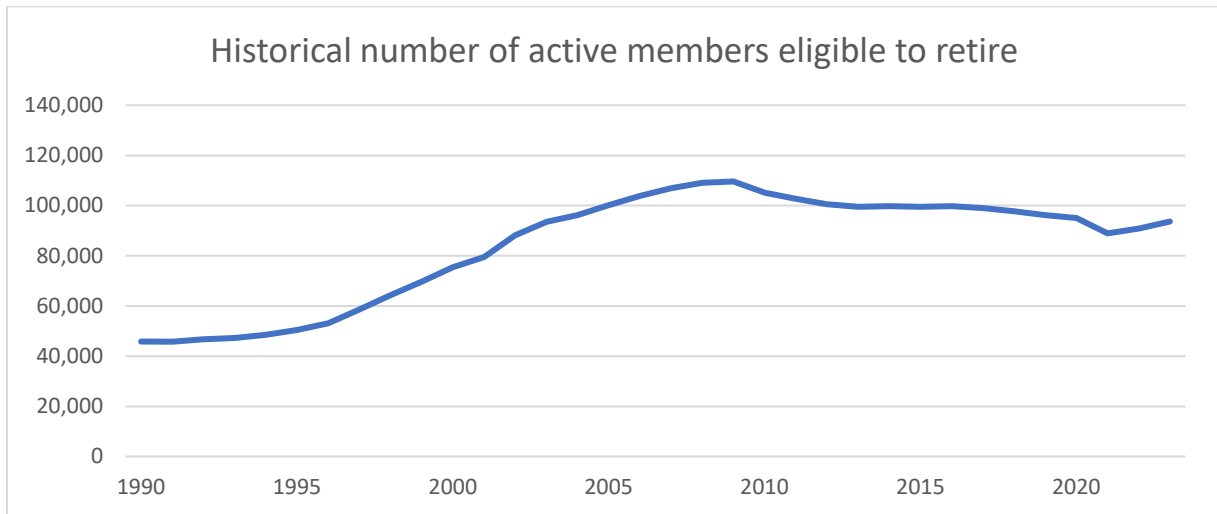
Following that rapid growth, the number of active members has hovered between 420,000 and 460,000, dropping to the lower end of that range following the great recession and the COVID-19 pandemic. As of June 30, 2023 the number of actives was about 458,000.

Increases in active members eligible to retire

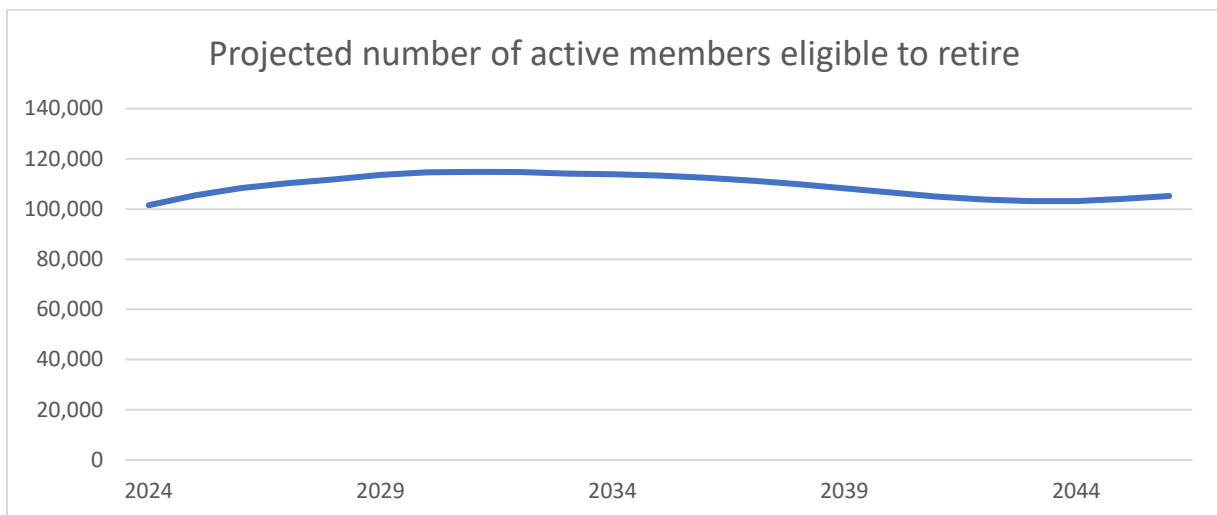
In addition to studying the total numbers of active members, it is instructive to consider the age distribution of that membership, how it has changed over time, and what implications that will have for the future. It has been almost thirty years since the rapid growth in membership that started in the 1990s. Many of the teachers that were hired during that time are either approaching retirement age or already eligible to retire. As of June 30, 2023, there were about 93,000 active

members over the age of 55. That number is projected to grow to almost 115,000 in about ten years. As a result, retirements from active members are expected to increase significantly over the next five to ten years.

The following chart shows the number of active members that were eligible to retire in a given year going back to 1990. As illustrated, there was a significant increase in members eligible to retire coinciding with the large increase in overall membership that occurred throughout the 1990s.



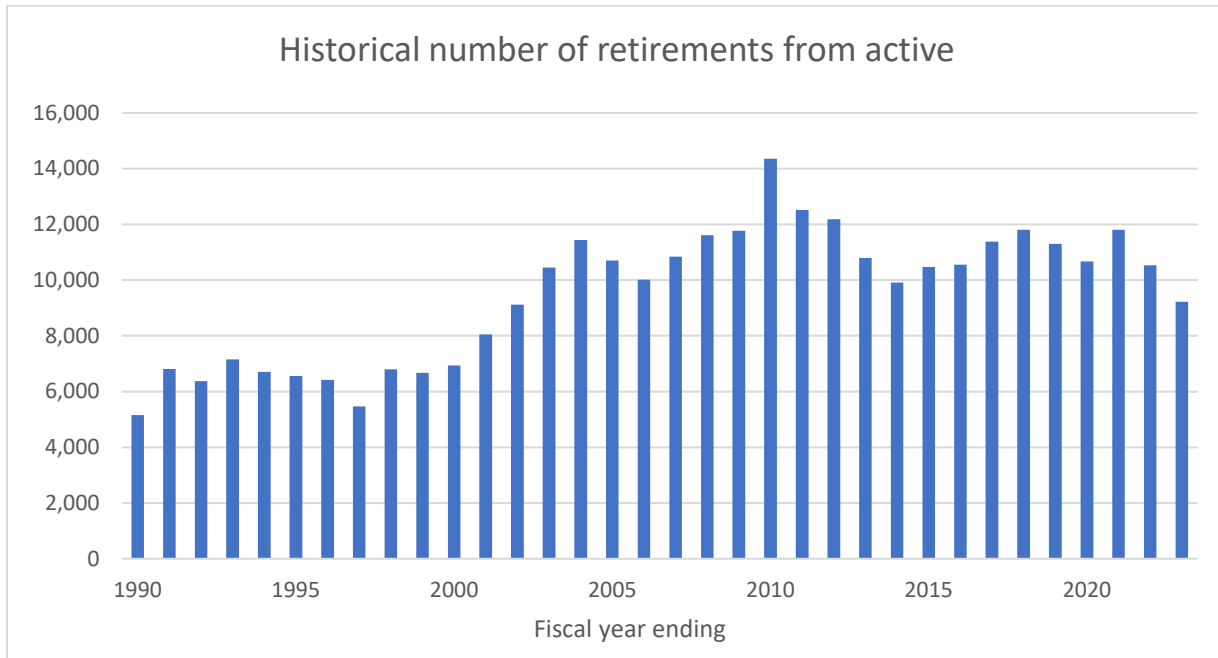
Using the new actuarial assumptions being recommended for adoption to the board at the January 2024 regular meeting, CalSTRS actuarial staff performed demographic projections to estimate how many active members are expected to be eligible to retire in any given year in the future. The chart below shows the expected number of active members that will be eligible each year between 2024 and 2046.



As can be seen in the previous chart, the number of active members eligible to retire is expected to surpass 100,000 in 2024 and peak at about 115,000 in 2032.

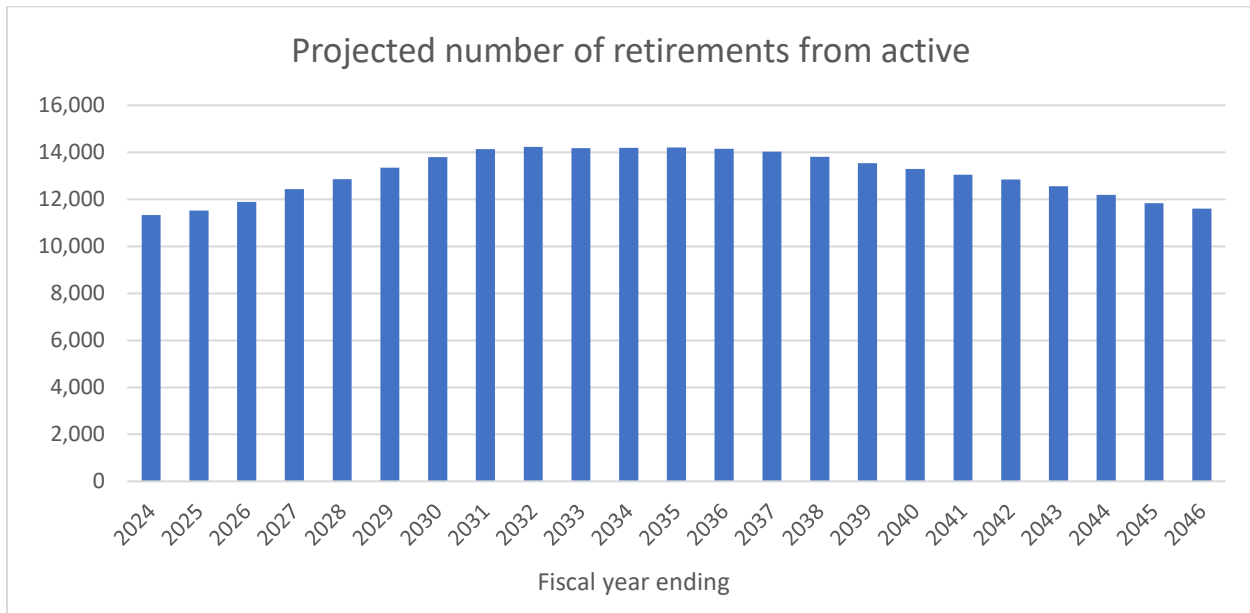
Historical and projected service retirements

Now that we have looked at the population of active members eligible to retire, it is instructive to look at the number of active members who retired each year. The chart below shows the historical number of retirements from active members since 1990.



The chart illustrates that since about 2003 CalSTRS has generally seen between 10,000 and 12,000 retirements from active members each year. In 2010 the number of retirements from active members peaked at a little over 14,000, likely in response to the great recession. This also coincides with the fact that in 2009, about 110,000 active teachers were eligible to retire, the largest even seen to date at CalSTRS.

With the increasing trend in the number of active members eligible to retire, it is anticipated that in about ten years CalSTRS will begin to experience several years where the number of retirements from active members are near that 2010 peak. The following chart shows a projection of the number retirements from active membership.



Starting around 2030, CalSTRS is likely to see close to 14,000 retirements from active members each year for an entire decade. CalSTRS has experienced 14,000 retirements in a single fiscal year only once, in fiscal year 2009-10. Note that these projections are based on the new actuarial assumptions that are being recommended for adoption to the board at the January 2024 regular meeting.

These projected counts of retirements are estimates. In any given year, the actual number of retirements will differ from these and could be higher or lower as actual retirements are often impacted by economic conditions and other external factors. What we know however, is that the aging of the workforce will lead to an increasing trend in the number of retirements over the next 10 to 15 years. This is important information for CalSTRS as it will impact the operational planning and help the system prepare for increasing retirement processing.

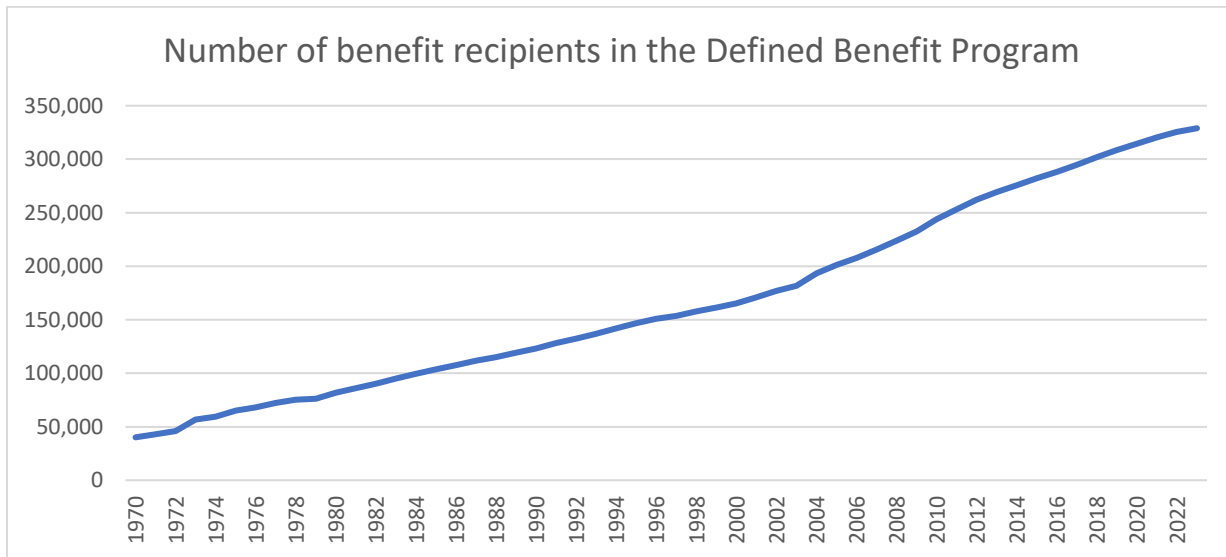
Note that the historical and projected number of retirements presented in this item are for retirements from active membership only. These numbers might not agree with retirement figures provided by CalSTRS in other publications since those number also include retirements from inactive members. Note that in any given fiscal year, between 1,000 and 2,000 inactive members retire and start receiving a CalSTRS benefit.

Long-term impact on cash flows

The demographic trends discussed thus far have many implications for CalSTRS, one of which that was highlighted in the [2023 Review of Funding Levels and Risks report](#) is that these trends are indicative of the continued maturation of the Defined Benefit Program.

This trend can first be observed by looking at the number of CalSTRS benefit recipients. The following chart shows how the total number of benefit recipients has increased from about

40,000 in 1970 to about 329,000 today. Note this chart includes all benefit recipients including beneficiaries and those receiving a disability benefit.

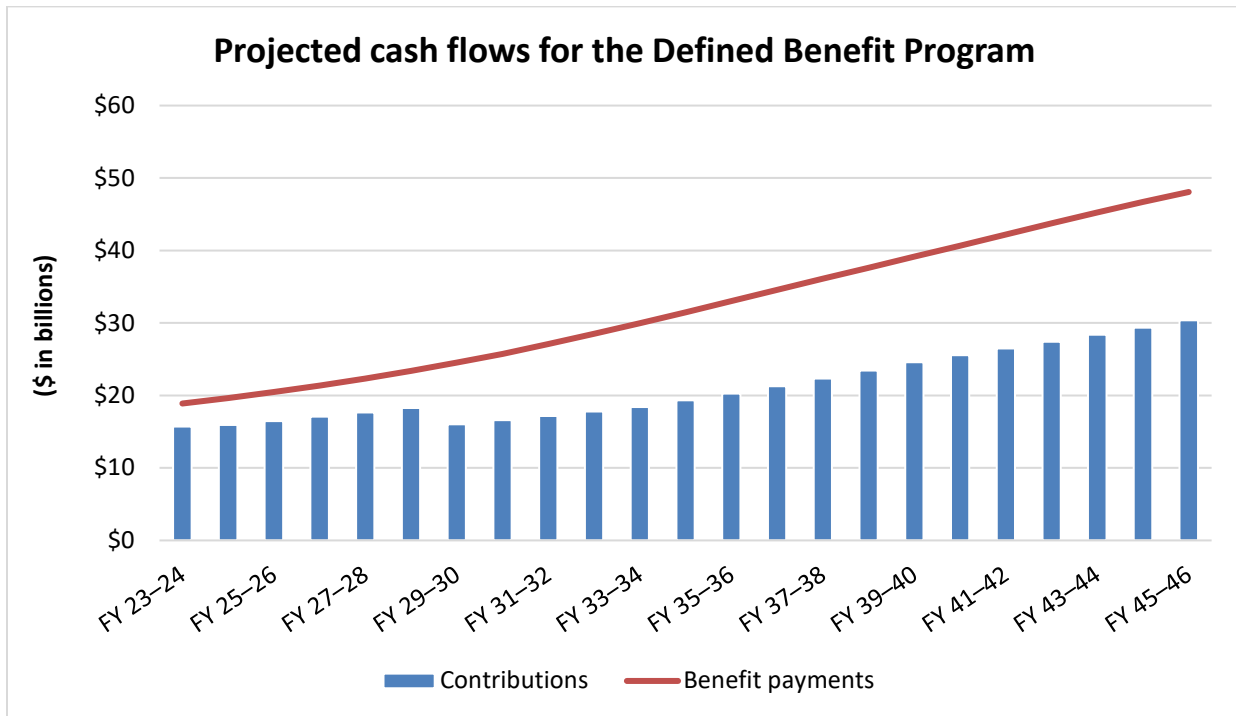


With the increased number of benefit recipients, benefit payments made by CalSTRS to its members and their beneficiaries have also increased steadily over time. In fiscal year 1969-70, CalSTRS paid about \$180 million in benefits. In fiscal year 1985-86, CalSTRS paid more than \$1 billion in benefits for the first time. The benefit payouts continued to increase each year and surpassed \$10 billion for the first time in fiscal year 2010-11. Last fiscal year, CalSTRS paid more than \$18 billion in benefits to its members and their beneficiaries. Benefit payments are expected to more than double over the next 20 years, surpassing \$20 billion in the next 5 years, \$30 billion in the next 10 years and \$40 billion in the next 20 years.

The steady growth in the number of benefit recipients has also resulted in a significant decrease in the ratio of active members to retired members. The ratio of active to retired members for CalSTRS was about 6-to-1 in 1970. The ratio has decreased steadily over time. Today the ratio is about 1.4-to-1. The ratio is projected to approach 1-to-1 over the next 40 years.

A decrease in the ratio of active members to retired members increases the volatility of the contribution rates needed to reach full funding and results in cash flows that are often negative. Negative cash flows mean that the contribution coming into the system are less than the benefit being paid to members and their beneficiaries.

CalSTRS first experienced negative cash flows in 1999. The gap between contributions and benefits paid increased in the years leading up to the CalSTRS Funding Plan. With the passage of the CalSTRS Funding Plan and the increased contributions from members, employers and the state, the gap narrowed for a few years but started once again to increase. With the expected increases in the number of retirements, cash flows will become more negative in the future, putting more pressure on the need to generate investment earnings. The following chart shows the projected cash flows for the defined benefit program.



It is important to note that negative cash flows are natural and expected for a maturing pension plan. Pension plans are designed to pay benefits and negative cash flows do not necessarily imply that the system will have to sell assets to make benefit payments. As was reported in more details in the [2023 Review of Funding Levels and Risks report](#), cash generated from investments such as coupons on bonds, rent on real estate and dividends must be considered as well as the relative size of the cash flows compared to the total assets in the fund. Today, enough cash is being generated from investment income to cover the gap. That is why the cash flows are an important consideration of the asset liability management process and influence how liquidity is managed at CalSTRS.

Strategic Plan Linkage: Goal 1: Ensure a well-governed, financially sound trust fund.

Optional Reference Material:

- [2023 Review of Funding Levels and Risks Report](#)