

## **Employer Contribution Rates**

### **Data Collection Methods**

The goal of this research was to collect data on teacher retirement contributions across all 50 states from 1995-2018. The first step in this process was to review the retirement system website for each state to gather information about the structure of the pension system. Through reading guides and handbooks published on the website, information was collected on tier hire dates and contribution rate calculations (i.e., whether the rate was set in statute or set by the Board of Trustees). The second step was to obtain data on employee and employer contribution rates for years 1995-2018. Some states featured historical rates on their website but, for many states, obtaining this data required pulling information from annual reports, actuarial reports, and financial reports.

A spreadsheet was created containing the following information for each state:

- School year
- Tier hire dates
- Employee and employer contribution rates
- Notes on employee and employer rate calculations
- Links to the state retirement website
- Links to sources containing historical contribution rates
- State contribution rates, if applicable

Once this spreadsheet was populated, a condensed version was created with only the variables we use in the analysis: state, school year, and employer contribution rate. When contribution rates vary by tier (a function of employee hire dates), we use the tier and rate that is likely to cover the majority of employees during our study period. In all but two of the states with rates that vary by tier, tier 2 rates are introduced in 2008 or later, in which case we use tier 1 rates. We only use tier 2 rates for the two states that introduced tier 2 rates earlier, in 1989 and 1990.

Employer contribution rates were not available all the way back to fiscal year 1995 for all states. Our final dataset includes 33 states with rates going back to 1995, increasing to 39 states with rates back to 2000, 46 states with rates back 2005, and we have rates for all states back to 2008. These state counts include 5 states with employer contribution rates of zero for the full period, because employers in these states do not contribute to teacher pensions. The limiting factor in collecting historical rates is the earliest archived state financial report, and the earliest year included in that report's historical tables.

### **Variation in Rates across States and over Time**

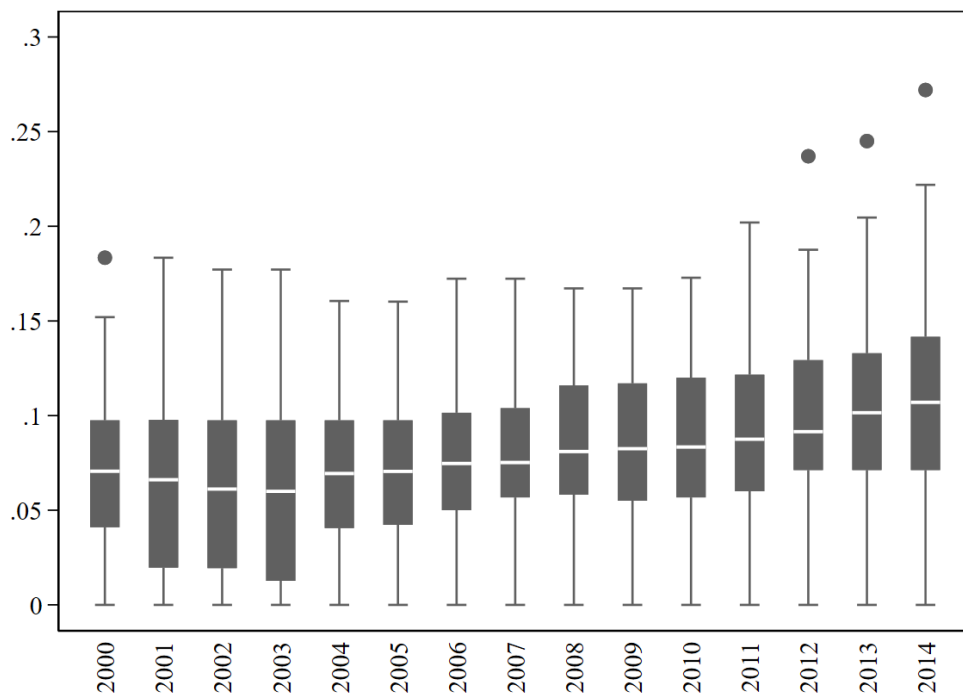
Of the 45 states that have positive employer contribution rates, they vary in terms of what institution sets the rates. In some states, the Board of Trustees of the pension system has control over rates. In other states the legislature must approve the Board's recommendation, or the legislature itself sets rates in statute. Regardless of which institution has control, most states hire an actuarial firm to determine what levels of contribution are necessary to keep the pension plan in a fiscal position to meet future obligations.

States also vary in terms of the frequency at which either the board or legislature updates the employer contribution rates. According to the information we collected from state websites, about half of states update these rates periodically or as-needed, rather than on a set schedule (21 out of 45 states). The

remaining states update their rates every year (17 states) or every other year (7 states) based on actuarial valuations. States also differ in the extent to which they smooth changes to their employer contribution rates over time. For example, Kansas has a statutory cap on the percent increase from year to year, and Alabama’s board uses a five-year smoothed valuation of assets to set rates, while some other states allow more volatility.

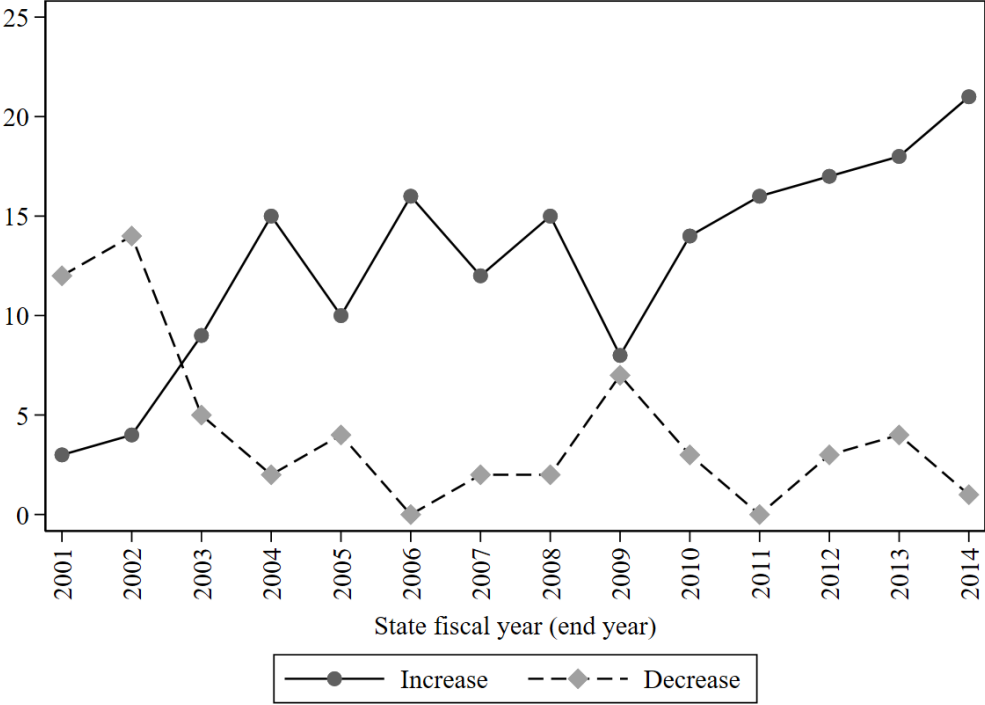
Figures 1 and 2 below illustrate variation in the employer contribution rates from 2000 to 2014 for the 39 states for which we collected rates back to fiscal year 2000. In Figure 1 we see that rates were generally increasing during this period, but that in any given year rates varied from 0 to about 20 percent of teacher payroll, with wider variation in the last few years shown. Figure 2 plots the number of states in the sample that increased or decreased their employer contribution rates in each year. Apart from the first few years, more states increased rates in each year than decreased rates, but in all but two years we observe some states increasing, some decreasing, and some not changing their employer contribution rates from the prior year. We use this variation—states changing their rates differently from other states and differently from year to year—in our analyses.

Figure 1. Distribution of Employer Contribution Rates, by Year, 2000-2014



Note: These box-and-whisker plots show the variation in employer contribution rates in our 39-state sample over the 15-year sample period. The middle point of each box is the median, the outer sides of the boxes are the 25th and 75th percentiles, and then the ends of the whiskers are the last rate within 1.5 of an interquartile range from the end of each side of the box. Data points that fall outside the whisker are outlier rates.

Figure 2. Number of States Increasing or Decreasing the Employer Contribution Rate, by Year, 2001-2014



Note: The lines plot the number of states among the 39 states in the sample that increase or decrease employer contribution rates in each year relative to the previous year.