

## Pension Cheat Sheet Series

# Pension System Maturity



The **Pension Cheat Sheet** series presents short fact sheets by a board of editors and authors who are active with public pensions throughout the United States. The goal is to

offer “facts-in-a-pill” to elevate the discussion and understanding in states where pension funding threatens local city and state finances.

**Craig McCrohon** is a corporate attorney in Chicago and a Trustee at the Illinois State Universities Retirement System. He serves on the investment committee, and served as investment chair from 2013 to 2017.

## The Pension Maturity Graphs

One of the often neglected pension issues is plan maturity. That is, what is the ratio the number of retirees taking money from a pension to the number of active workers contributing money to the pension.

This is a global phenomena. From Japan to the UK, population pyramids are becoming inverted for the first time.

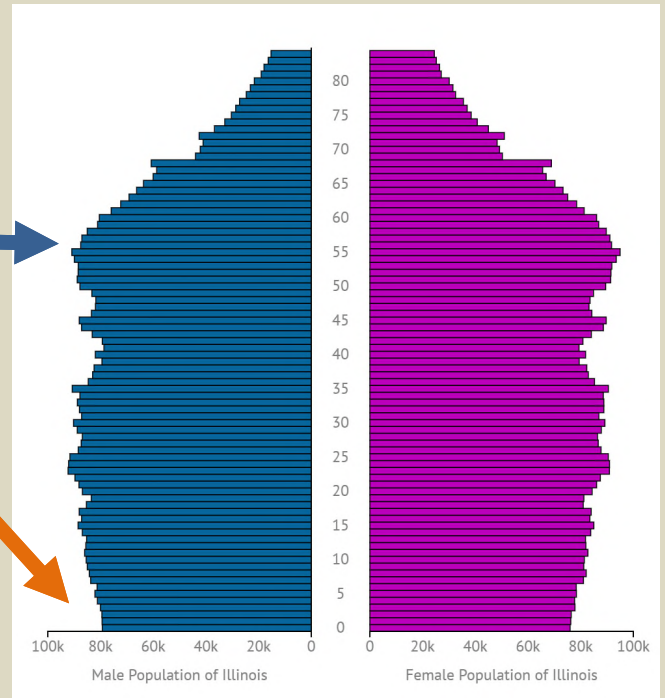
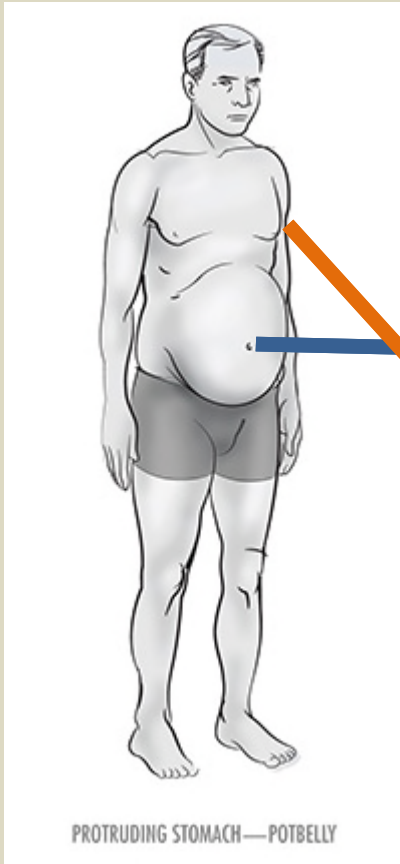
For under-funded pensions, the short-falls from mismatched young/old populations become punishing. Even tiny shortfalls pressure underfunded pensions, while well-funded pensions can shrug off the problems with investment returns and employer funding.

## Talking Points

- Pension maturity problems have only seriously affected Illinois pension systems in about the last twenty years – about the time when the State first encountered funding problems. The “ramp” and the 2010 creation of Tier II both coincided with the inversion of certain state employment populations.
- Population pyramids and maturity is actually only the first tremor. The second tremor, which is a lot stronger, is the reduction in younger staff. This is especially problematic in universities and some school districts. The actual earthquake is the increasing “financial maturity” of a plan. Pension funding formulas and plan design can delay or accelerate the underfunding that results from pension plan maturity.
- In other words:
  - First, declining overall population; then
  - Declining State staff to serve smaller population; then
  - Declining State staff due to poor service problems, or residents choosing non-State services; then
  - Declining pension funding ratios.

[See Pension Maturity Graphs](#)

# Pension Maturity Explained



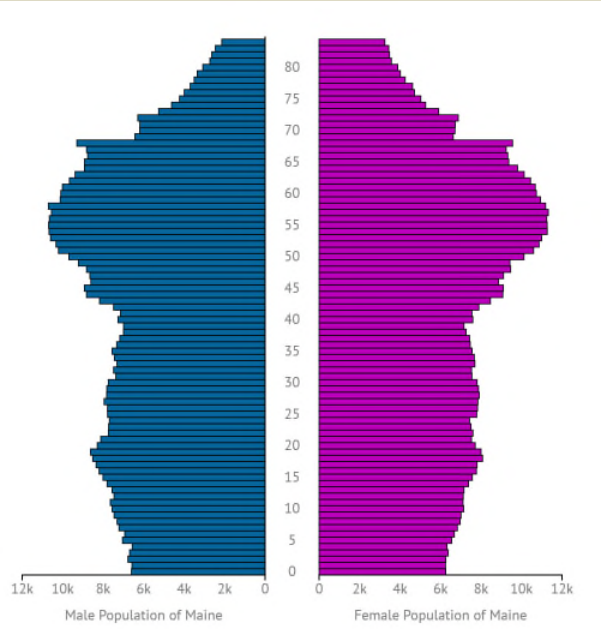
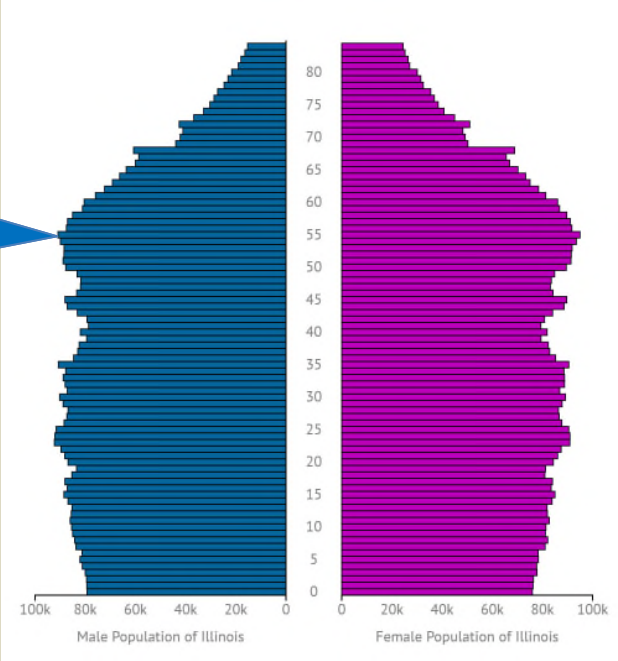
Implications: The larger the top of the population/staff pyramid, the more money out to retirees, the less money coming in from active workers.

Demographic Maturity – more older workers or retirees to younger active workers.

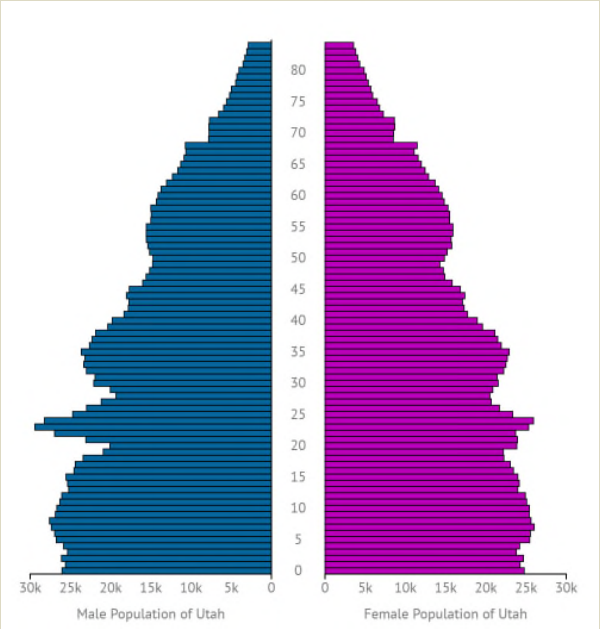
When the ratio of retirees to active workers inverts and exceeds 1:1, more financial pressure on pensions.

# Comparison of Selected State Population Maturity Levels

Illinois - one of the older population pyramids.

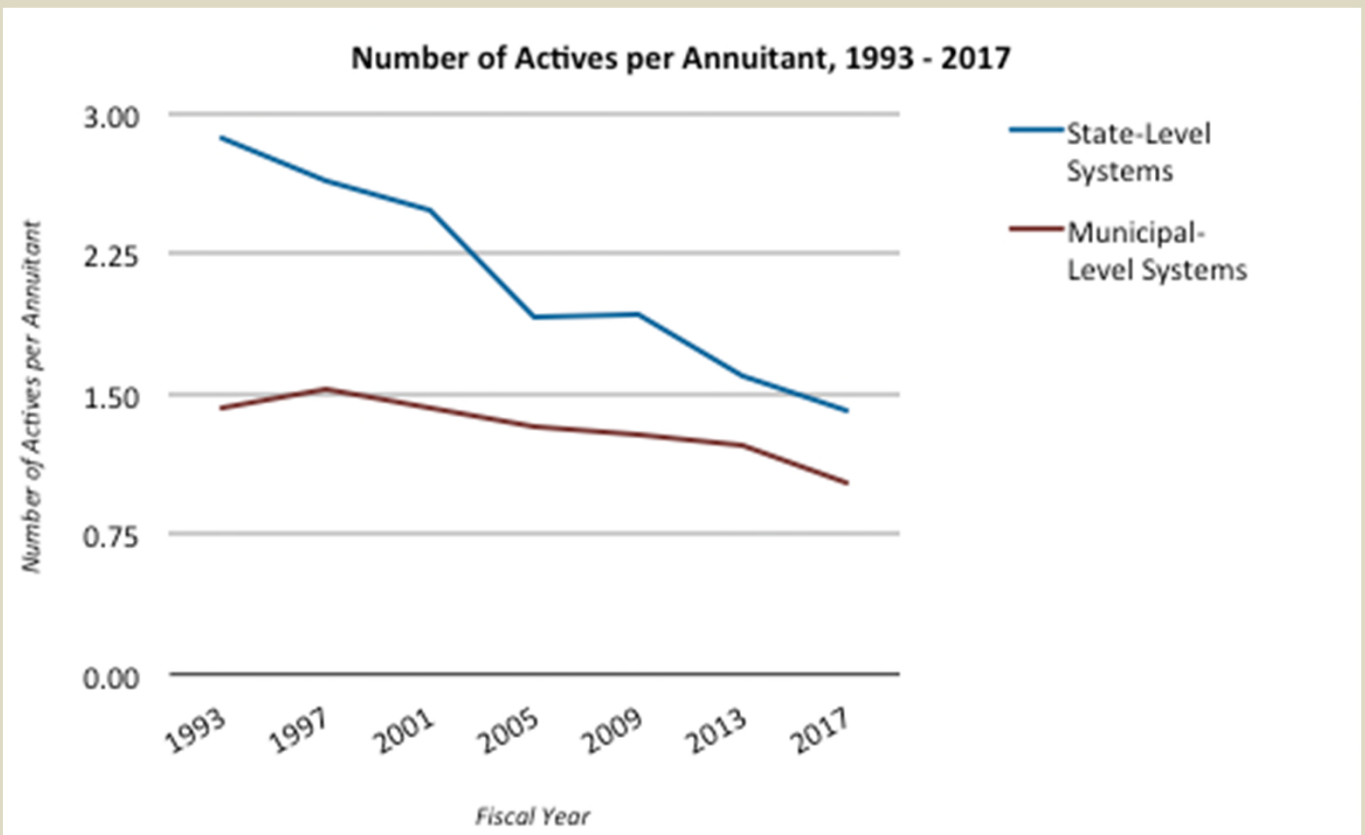


Maine – oldest population pyramid.



Utah – youngest population pyramid.

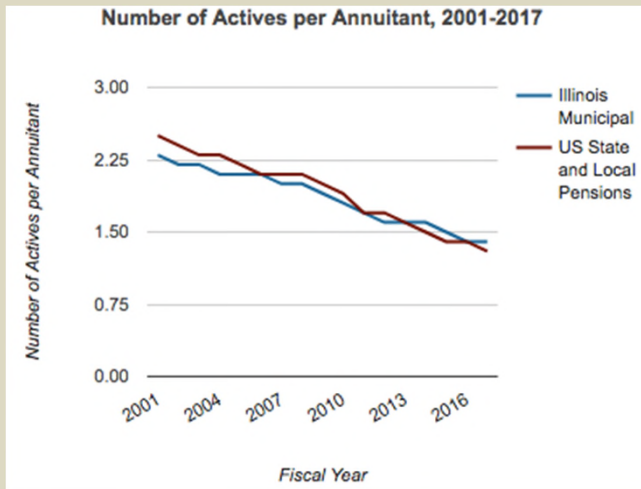
# Actives Per Annuitant National Average Since 1993



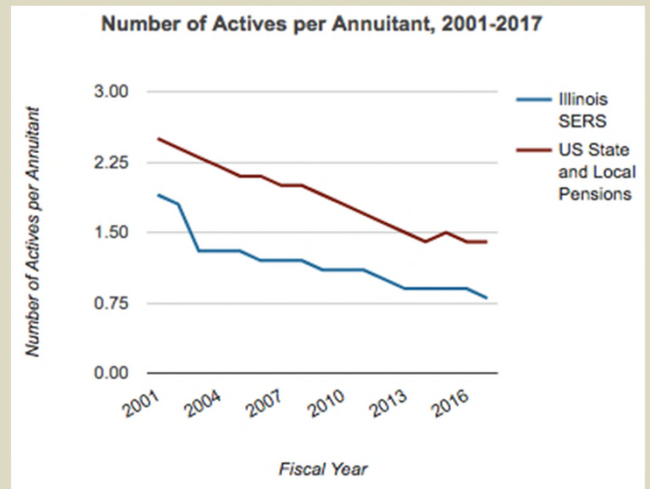
# Illinois State-Level Systems

Averages Based on Comparable Plan Types

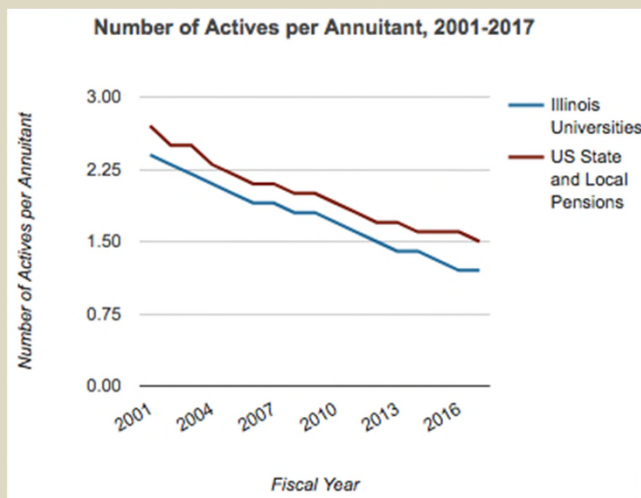
## IMRF



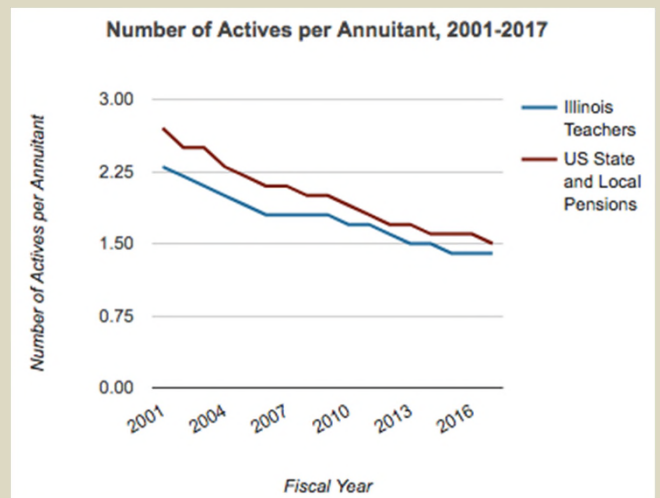
## SERS



## SURS



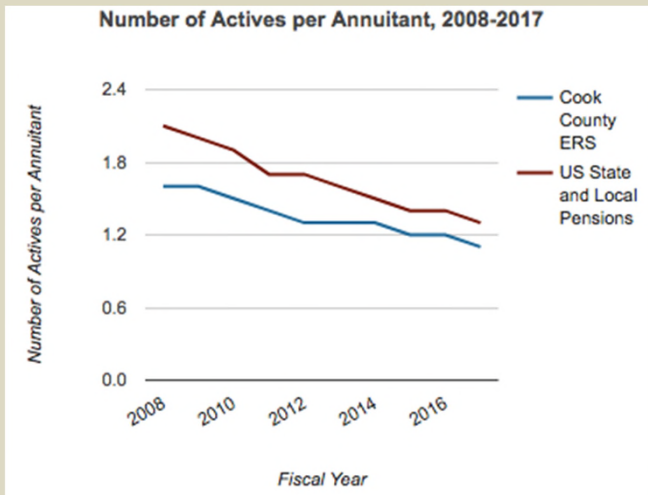
## TRS



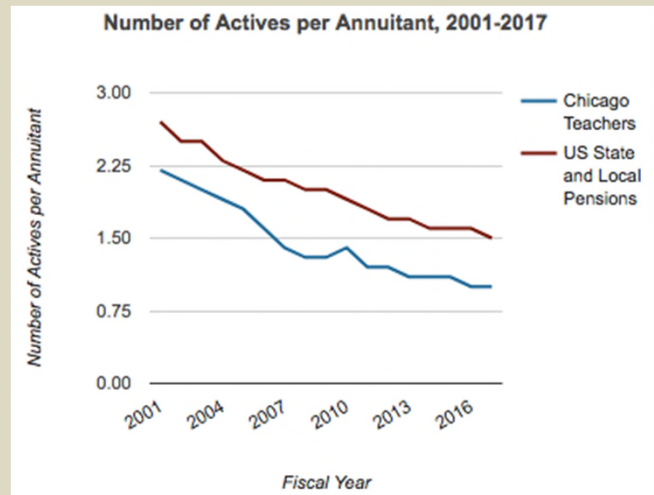
# Illinois Local Systems

Averages Based on Comparable Plan Types

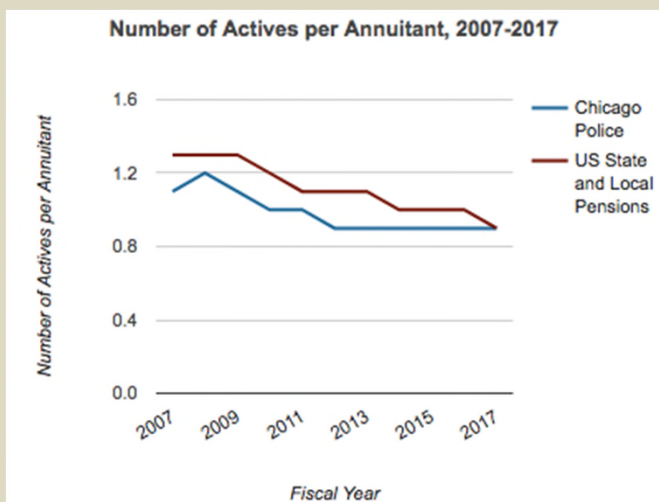
## Cook County ERS



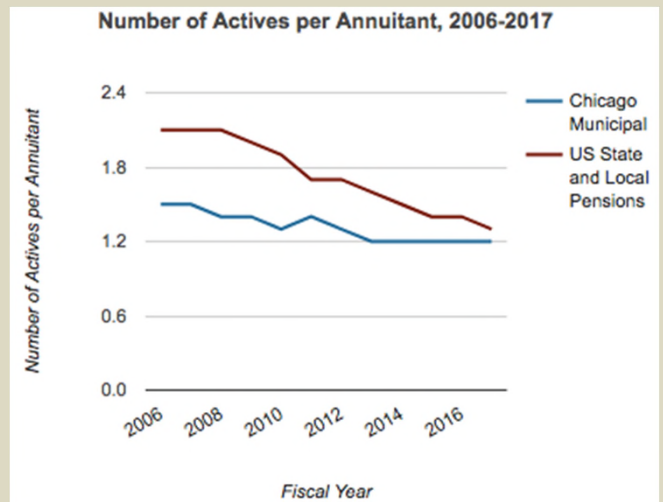
## Chicago Teachers



## Chicago Police



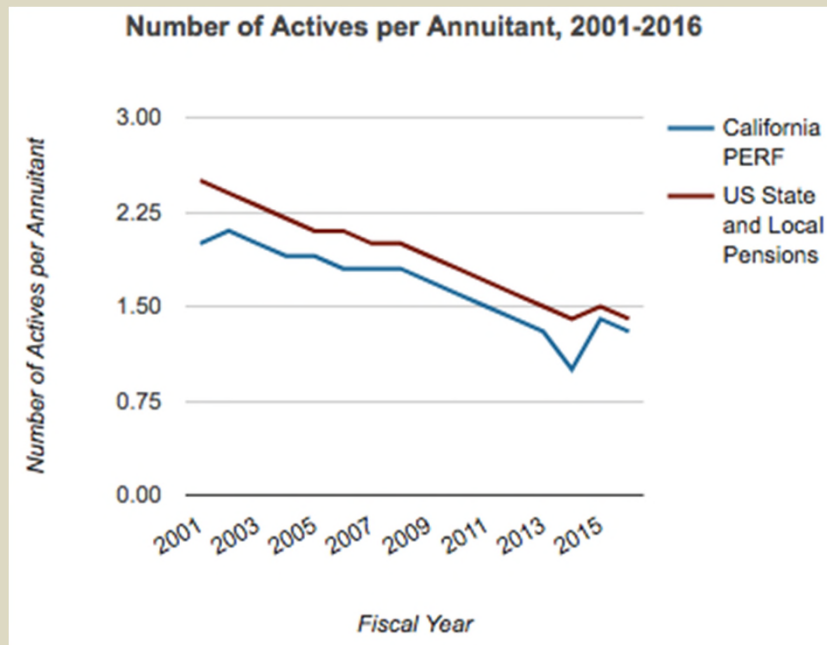
## Chicago Municipal



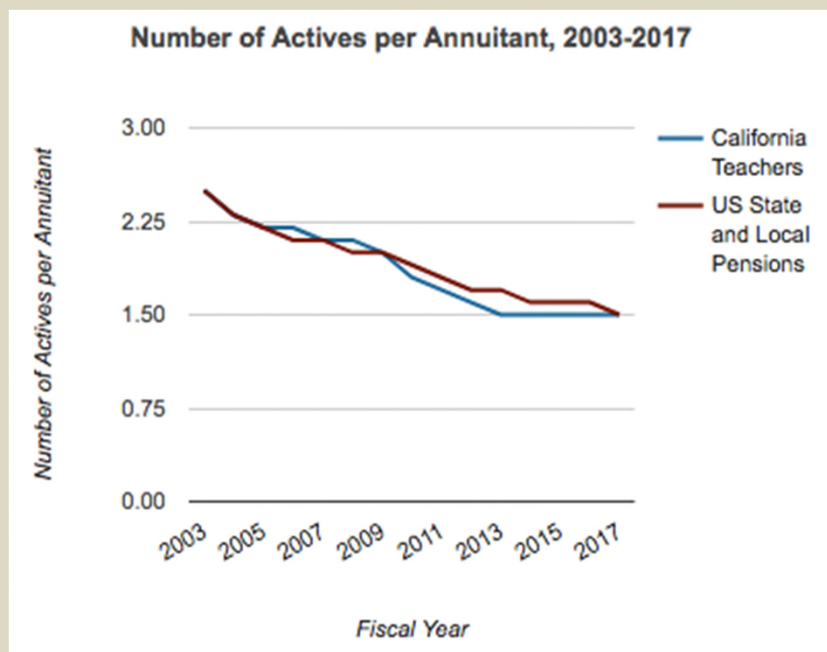
# California Systems

Averages Based on Comparable Plan Types

## CalPERS



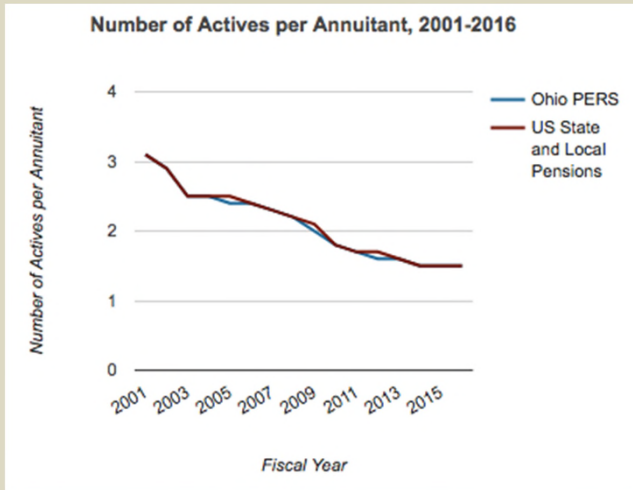
## CalSTRS



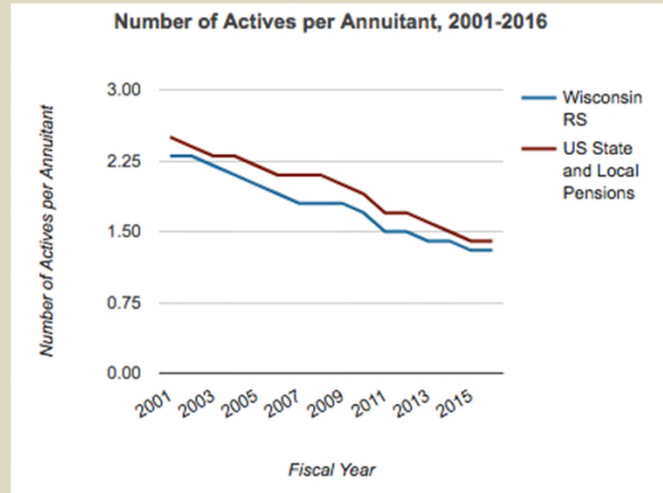
# Midwest Systems

Averages Based on Comparable Plan Types

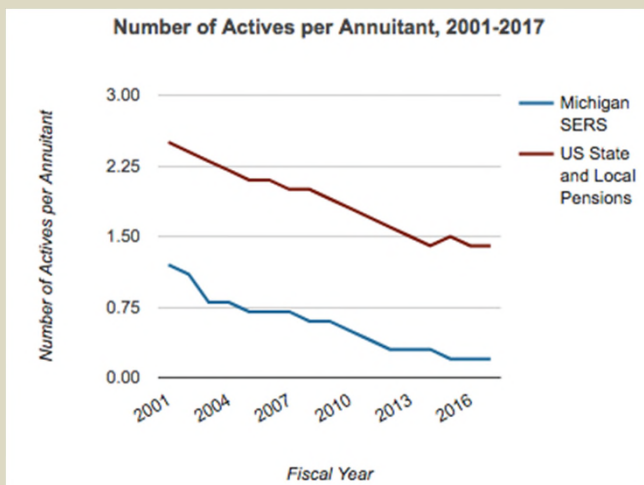
## Ohio PERS



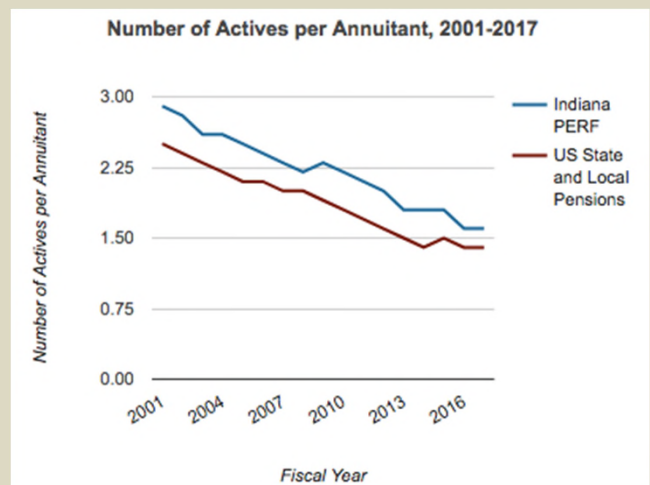
## Wisconsin Retirement System



## Michigan SERS



## Indiana PERS

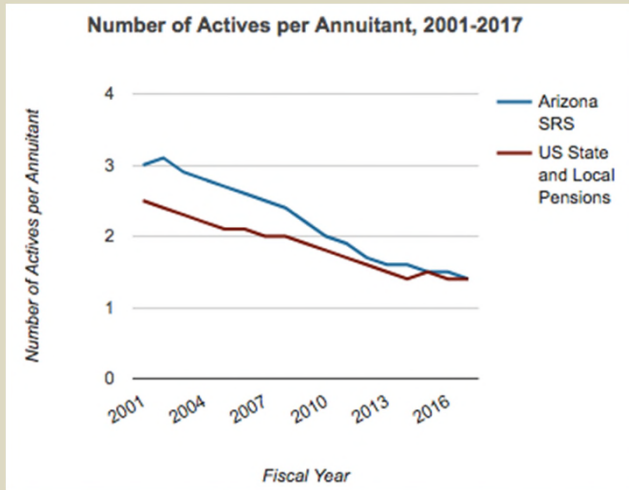




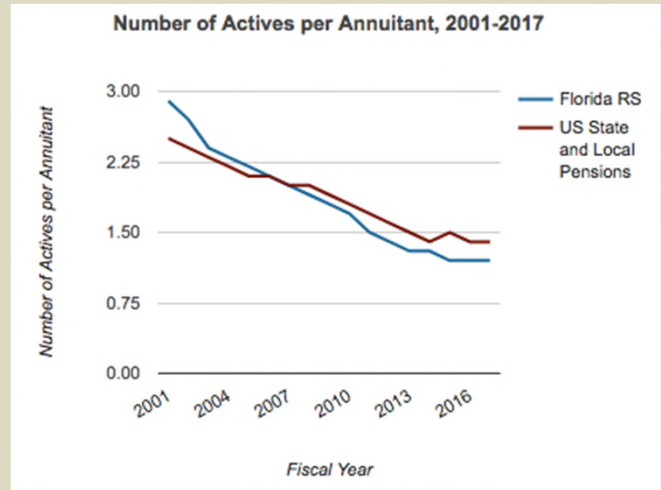
# Sun Belt Systems

Averages Based on Comparable Plan Types

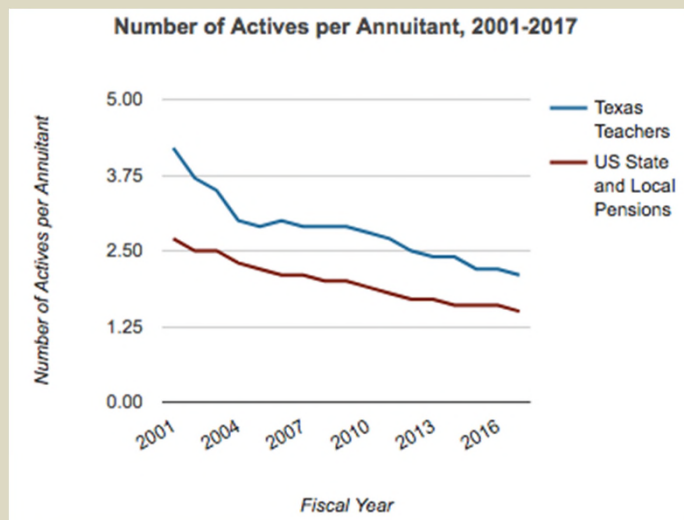
## Arizona SRS



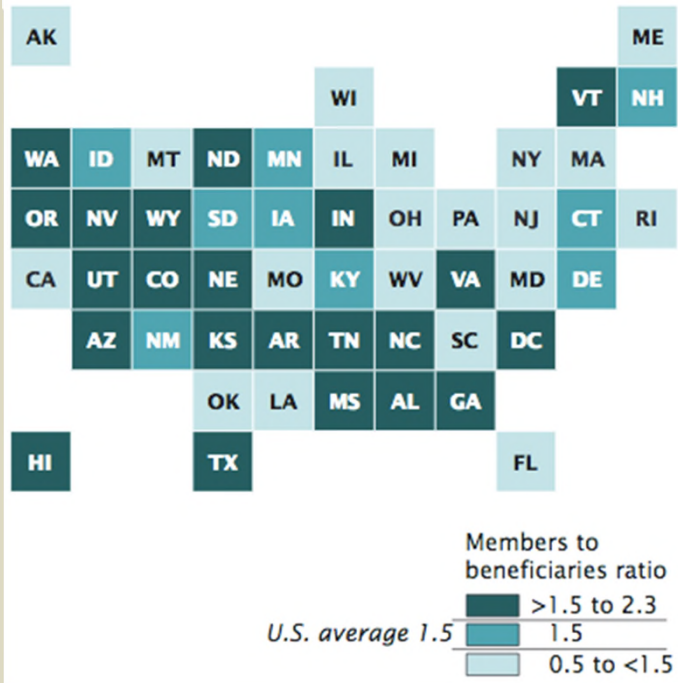
## Florida Retirement System



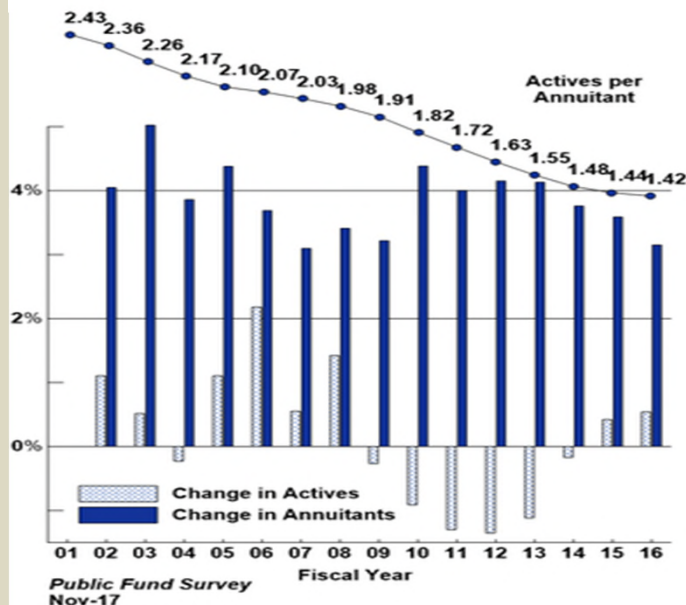
## Texas Teachers



## Average Actives Per Annuitant State-by-State (2015)



## Average Actives Per Annuitant National (2017)



Sources of data:  
Boston College Public Plans Database  
U.S. Census Bureau  
NASRA Public Fund Survey

# Pension Cheat Sheet Series

**Pension360 has, or will receive from its board of authors, cheat sheets on the following topics:**

State Comparison of Constitutional Pension Protections

List of State Pension Reforms Nationally

Summary of Illinois Constitutional and Legal Arguments Protecting Pensions

Risk-Mitigating Investment Strategies for Pensions Before the Next Big Crash

Personal Pensions Perspectives – Term of Employee Pensions - Illinois

Personal Pensions Perspectives – Terms of Employee Pensions - California

Personal Pensions Perspectives – Terms of Employee Pensions - New Jersey

Illinois Pension Crowding Out - The Numbers

Who Get's What - Graphs of Annual Pension Payments

Pension Population Politics - When Will Tier II Members Exceed Tier I Members

Pension Asset Transfers

Pension Buyouts - Worth the Risk and Trouble?

Pension Particulars - Ways to Raise or Lower Funding Without Spending a Dollar

Illinois Pension Dashboards

Chicago and Cook County Pension Dashboards

Pension Funding – California – Tax Base and Cash Flow

Pension Funding – Illinois – Tax Base and Cash Flow