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

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

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.

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Pension Maturity
Actives Per Annuitant
National Average Since 1993

Number of Actives per Annuitant, 1993 - 2017

- State-Level Systems
- Municipal-Level Systems

Fiscal Year

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Illinois State-Level Systems

Averages Based on Comparable Plan Types

IMRF

Number of Actives per Annuitant, 2001-2017

SERS

Number of Actives per Annuitant, 2001-2017

SURS

Number of Actives per Annuitant, 2001-2017

TRS

Number of Actives per Annuitant, 2001-2017

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Illinois Local Systems
Averages Based on Comparable Plan Types

Cook County ERS

Chicago Teachers

Chicago Police

Chicago Municipal

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California Systems
Averages Based on Comparable Plan Types

CalPERS

![Graph showing the number of actives per annuitant for CalPERS from 2001-2016.](image)

CalSTRS

![Graph showing the number of actives per annuitant for CalSTRS from 2003-2017.](image)
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

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Average Actives Per Annuitant

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

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