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## State of Public Sector Pension

### **Public Sector Pensions in the U.S**

#### I. Background and History of Pension Plans in the U.S

From the Book: A History of Public Sector Pensions in the United States, Clark, Craig and Wilson

This book talks about how pension plans were first created in the United States and how it is grown to be established today's pension plans. It has been noted in the book that many of the early pensions were military pensions. From early on, the American colonies provided pensions to disabled men who were injured by defending their colonies (Clark, Craig and Wilson, p. 2). The Continental Congress established pensions for its army and navy forces. Military pensions were continuously provided in one form or another, throughout the nineteenth century. "History of army pension plan is much smoother, as this pension system was always financed on a pay-as-you go basis from general revenues" (Clark, Craig and Wilson p.3). In the late days, the "pension plans provided performance incentives, helped attract new recruits, provided retirement and disability income to loyal workers, and were often linked with mandatory retirement to achieve desired patterns of retirement" (Clark, Craig and Wilson p. 3). Not till the 19<sup>th</sup> century, retirement plans were extended to state and local employees. But many public workers were not offered pensions until after World War I.

After 1850, several large cities began providing disability and retirement benefits to employees in their police and fire departments. Some states began to establish pension plans for state employees but most of them were for teachers. Massachusetts established the first retirement pension plan for general state employees in 1911 (Clark, Craig and Wilson p.4). It has been studied that after 1920, pension coverage was relatively widespread in the public sector. The authors state that pension plans are an important part of compensation because many employers use pensions to attract, retain, motivate, and retire workers.

There are two basic types of pension plans

- Defined Benefit Plans

This plan promises workers a specified benefit at retirement based on years of service, annual earnings, and/or position in the organization.

- Defined Contribution Plans

On this plan, employer and the worker make periodic contributions to a pension account. There are based on contributions and the investment returns accrued during the work life.

In the book, it talks about some lessons learned from the Early Development of Public Pensions

1. “Monitoring costs played a crucial role in the timing and characteristics of public sector pensions”.
2. “There was little precedent for managing a pension fund”.
3. “Impact of the dramatic increase in public sector pension coverage in the early 20<sup>th</sup> century”. (Clark, Craig and Wilson p. 218-220)

## II. Recent Articles on Pension Plans

In the last two decades, benefit pension plans were major headlines because of the investment losses in the stock market. Critics think the pension plans are significantly underfunded and seem to see this as the main cause for the current financial crisis in which state and local governments find themselves, along with the nation's difficulties in achieving an economic recovery. But, on the other side, some are arguing that the financial crisis is caused from the economic downturn proportions, not because of pension funding requirements.

Brainard (2010) suggests that pension fund investment losses are significant for two reasons:

1. A large number of Americans rely on DB pension plans to provide income during retirement years and
2. The losses place heavier tax and contribution burdens on future generations.

It has been noted that growing budget pressures will continue to challenge state and local governments' abilities to provide adequate contributions to help sustain their pension plans and ensure a secure retirement for current and future employees.

The article, *Wage-Pension Trade-Offs in Collective Agreement*, by Morley Gunderson, Douglas Hyatt, and James E Pesando talks about a study that was done by the authors that analyzed 98 matched collective agreements and flat benefit pension plans in Ontario in 1984. From this study, they have found that there is a significant trade-off between wages and an actuarially constructed summary measure of the expected future pension costs for employers.

Features of the pension plans that affect pension benefits for employees and have cost implications for employers are: (these are all from pages 149-150)

- Early retirement features- can retire and draw an immediate but reduced annual pension benefit. This means that it's designed to compensate for the fact that it is received earlier and for a longer period of time.
- Special retirement features- employee can retire early and draws an immediate and unreduced annual pension benefit. This option requires more stringent set of eligibility conditions than the early retirement plan.
- Delayed Pension Benefits
  - Right to continue to accrue additional years of service, which enhance pension benefits through the pension benefit formula. This is beneficial to employees and costly to employers.
  - Possibility of an “actuarially fair” adjustment whereby annual pension benefits are adjusted upward to exactly compensate for the fact that they are received later and for a shorter period of time. This is benefits employees.

If retirement is postponed, there are four adjustments that can be made:

1. No service accruals and no actuarial adjustment
2. No service accruals but an actuarial adjustment
3. Service accruals but no actuarial adjustment
4. Service accruals and an actuarial adjustment

Employers want to discourage postponed retirement and hence do not want the pension benefits to be greater if retirement is postponed.

In the summary it states that the strongest trade-off the authors found is between wages and the main measure of pension benefits, the flat benefit rate, which is usually the subject

matter of negotiations in flat benefit plans. They have found no general trade-off between wages and provisions for early retirement or postponed retirement.

### III. Union Roles In The Public Pension Benefits

First, I will summarize what the book “State and Local Retirement Plans in the United States” by Robert L. Clark, Lee A. Craig and John Sabelhaus had about union roles in public pensions. And then, I will also summarize the article, *Unions and Public Pension Benefits*, by Alicia H. Munnell, Jean-Pierre Aubry, Josh Hurwitz, and Laura Quinby and how they see union roles in public pensions.

The impact of public sector unionization on the generosity of the states’ public sector pension plans has changed over time. “In the early 1980s, unionization had a positive impact on pension replacement rates, presumably reflecting the greater bargaining power associated with a greater incidence of unionism in the public sector. Swings in the unionization of only a few percentage points had relatively large implications for the differences in plan generosity” (Clark, Craig and Sabelhaus p. 102). But, at the end of it states that by 2006, the effect of union has changed and today it actually has a negative effect on state’s replacement rates.

But, the article studies about how unions affect the pension benefits and other factors on benefit levels, wages, and employment. It starts by saying how state and local pensions have been headline news since the 2008 financial collapse because it reduced the value of their assets, leaving a substantial unfunded liability. Some actions that were taken were that legislatures reduced pension benefits- primarily for new employees and increased employer and employee contributions (p. 1). Here, governors view unions as responsible for pushing up state and local pension benefits. But, this article points out and supports that unions have no measurable effect

on plan generosity or rate growth in pension benefits, but do have a quantifiable impact on wage levels and perhaps the number of workers.

The results of the studies show that public sector union membership does not have any effects on the impact of generosity of the benefit formula. And, they state that “this is likely reflects the fact that pensions are legislated, not bargained, and the power to influence legislators depends more on articulateness and political acumen of the lobbyists than on union membership figures” (p. 7). One interesting point from the article was that union membership has a significant impact on wage. It states that if they increase the percent unionized from one-third to one half, it raises the ratio of public to private wages by about 3 percentage points (p. 8).

### **Data on the Generosity of State Pension Plans and Pension Formulas**

My professor asked me to collect each state’s pension formula from their public pension websites. Below, are the formula and the link where I got it from.

#### I. Each state pension formula

##### **1. Alabama**

Average of the three highest salaries in the last 10 years x Years of Service x .020125 = Annual *Retirement* Income

[http://www.valic.com/AL-DROP-RSA-Benefit\\_82\\_17903.html](http://www.valic.com/AL-DROP-RSA-Benefit_82_17903.html)

##### **2. Alaska**

Pension benefit = NA, defined contribution plan

[http://legis.wisconsin.gov/lc/publications/crs/2010\\_retirement.pdf](http://legis.wisconsin.gov/lc/publications/crs/2010_retirement.pdf)

##### **3. Arizona**

Retirement Benefit= (Years of Service) x (Avg. Monthly Compensation) x (2.1%-2.3%)

[http://www.hr.arizona.edu/07\\_sep/retire/retcalc.php](http://www.hr.arizona.edu/07_sep/retire/retcalc.php)

**4. Arkansas**

Annual Benefit = Years of Service x Final Average Salary x Adjusted Multiplier of 2% + .5% for years of service over 28 years

[http://www.aseaar.org/Arkansas State Employees Association/Foms files/state%20employee%20benefits%20review%202011.pdf](http://www.aseaar.org/Arkansas_State_Employees_Association/Foms_files/state%20employee%20benefits%20review%202011.pdf)

**5. California**

Step 1. Years of Service x % Per year based on age of Retirement = % of Final Compensation

Step 2.

Service coordinated with Social Security: Final Compensation x % of Final Compensation (Step 1) = Monthly Unmodified Allowance

Service not coordinated with Social Security: Final Compensation x % of Final Compensation (Step 1) = Monthly Unmodified Allowance

[http://www.calstatela.edu/univ/hrm/docs/CalPERS\\_55.pdf](http://www.calstatela.edu/univ/hrm/docs/CalPERS_55.pdf)

**6. Colorado**

Annual Benefit = Years of Service x Final Average Salary x Adjusted Multiplier of 2.5%

[http://legis.wisconsin.gov/lc/publications/crs/2010\\_retirement.pdf](http://legis.wisconsin.gov/lc/publications/crs/2010_retirement.pdf)

**7. Connecticut**

The following formula will determine your normal Tier II/IIA retirement benefit, prior to any early retirement reduction (if applicable):

.0133	X	<b>AVERAGE SALARY</b>
<i>Plus (+)</i>		
.005	X	<b>AVERAGE SALARY ABOVE THE BREAKPOINT</b>
<i>Times (X)</i>		
<b>YEARS OF CREDITED SERVICE TO MAXIMUM OF 35 YEARS</b>		
<b>AND (+)</b>		
.01625	X	<b>AVERAGE SALARY</b>
	X	<b>YRS of Service above 35</b>

divide By 12 ( /12)

<http://www.osc.ct.gov/empret/tier2summ/workshop/benindex.htm>

## 8. Delaware

### Step 1:

Add your highest three years of salary and divide by three to determine your Final Average Yearly Compensation.

### Step 2:

Final Average Monthly Compensation (FAC) = Divide Step by 12 months

### Step 3:

Multiply Step 2 by Years of service x .0185

<http://www.dsea.org/Pensions/CalculatePension.html>

## 9. Florida

Years of Creditable Service x 1.85% x Average Salary.

[http://www.myfrs.com/portal/server.pt/community/comparing\\_the\\_plans/235/benefit\\_calculation](http://www.myfrs.com/portal/server.pt/community/comparing_the_plans/235/benefit_calculation)

## 10. Georgia

Formula Salary x 2% x Credible Service = Maximum Benefit Plan

[http://legis.wisconsin.gov/lc/publications/crs/2010\\_retirement.pdf](http://legis.wisconsin.gov/lc/publications/crs/2010_retirement.pdf)

## 11. Hawaii

For most employees, ERS uses a service credit multiplier of either 1.25 percent (non-contributory plan), or 2.0 percent (contributory and hybrid plans).

Pension Benefit Formula = Final Average Salary x Years of Service x Service Credit Multiplier

[http://www.afscme.org/issues/pension-security/resources/state-pension-fact-sheets/document/Hawaii\\_Employees\\_Retirement\\_System.pdf](http://www.afscme.org/issues/pension-security/resources/state-pension-fact-sheets/document/Hawaii_Employees_Retirement_System.pdf)

## 12. Idaho

Highest Average Monthly Salary During 42 Consecutive Month Base Period x 2% x Months of Service = Annual Benefit ÷ 12 = Monthly Benefit

[http://www.persi.idaho.gov/members/service\\_retirement.cfm](http://www.persi.idaho.gov/members/service_retirement.cfm)

## 13. Illinois

**Covered:** 1.67% for each year of service

**Non-Covered:** 2.2% for each year of service



**Covered Example:**

The member is covered under Social Security, is 60 years old, has 30 years of credited service, and a final average compensation of \$3,600 per month.

30 years x 1.67% = 50.1% • 50.1% x \$3,600 FAC = \$1803.60 per month, or \$21,643.20 annually.

**Non-Covered Example:**

The employee is not covered by Social Security, is 60 years old, has 30 years of credited service, and a final average compensation of \$3,800 per month.

30 years x 2.2% = 66% • 66% x \$3,800 FAC = \$2,508.00 per month, or \$30,096.00 annually.

[http://www.state.il.us/srs/sers/retireben\\_sers.htm](http://www.state.il.us/srs/sers/retireben_sers.htm)

**14. Indiana**

Benefit Formula = 1.1% x Avg. High 5 Yr. Salary x Yrs. Service (plus ASA)

[http://www.in.gov/inprs/files/PMOC\\_2012\\_INPRS\\_Update.pdf](http://www.in.gov/inprs/files/PMOC_2012_INPRS_Update.pdf)

**15. Iowa**

2% (first 30 years); 1% (next five years) x final average covered wage x years of service ÷ applicable years of service denominator = yearly benefit amount.

[https://www.legis.iowa.gov/DOCS/LSA/Legis\\_Guide/2012/LGEGC000.PDF](https://www.legis.iowa.gov/DOCS/LSA/Legis_Guide/2012/LGEGC000.PDF)

**16. Kansas**

Final average salary x statutory multiplier x years of service = annual benefit

<http://www.kpers.org/membershipguidekpers.pdf>

**17. Kentucky**

Final Compensation x (1.1%-1.75%) x Years of Service = Annual Benefit.

<https://kyret.ky.gov/archive/publications/Sumpln.pdf>

**18. Louisiana**

[Years of Service] x [2.5 %] x [36-month High Average Salary] = Annual Retirement Benefit

[http://www.lsusystem.edu/index.php/faculty-staff/employee\\_benefits/retirement-plans/lasers/](http://www.lsusystem.edu/index.php/faculty-staff/employee_benefits/retirement-plans/lasers/)

**19. Maine**

Annual Benefit = 2% X years of creditable service X average of highest three years compensation

[http://www.mainebers.org/pdfs/qdro/qdro\\_explanation.pdf](http://www.mainebers.org/pdfs/qdro/qdro_explanation.pdf)

## 20. Maryland

Average Final Compensation (AFC) = Three highest consecutive years of earnings  
÷ 3

(A) AFC × .012 × Years of Service to 6/30/98

\_\_\_\_\_ × .012 × \_\_\_\_\_

PLUS

(B) AFC × .018 × Years of Service after 6/30/98

\_\_\_\_\_ × .018 × \_\_\_\_\_

DIVIDED BY 12 EQUALS Monthly Basic Allowance \$ \_\_\_\_\_

<http://www.sra.state.md.us/Participants/Members/Downloads/Worksheets/Worksheet-EmployeeTeacher-Pension-AlternateContributory.pdf>

## 21. Massachusetts

Retirement Allowance = Your Benefit Rate x Highest Three Year Average Annual  
Rate of Regular Compensation x Your Credible Service

<http://www.mass.gov/perac/guide/retirementguide.pdf>

## 22. Michigan

Annual Benefit = Final Average Compensation x 1.5% x Years of Service

<http://www.michigan.gov/orsstatedb/0,4654,7-208-30584---,00.html>

## 23. Minnesota

Monthly Retirement Benefit = Monthly Average Salary x Years of Service at 1.7%

<http://www.msrs.state.mn.us/gerp/LevelFrm.htmls>

## 24. Mississippi

Retirement benefits= 2 percent of your average compensation x creditable service  
years up to 25 or 30 (based on your Retirement Tier). Add to that any additional  
years multiplied by 2.5 percent of your average compensation.

[http://www.pers.state.ms.us/pdf/memberservices/handbooks/Member\\_Handbook\\_2011\\_2.pdf](http://www.pers.state.ms.us/pdf/memberservices/handbooks/Member_Handbook_2011_2.pdf)

## 25. Missouri

	Final Average Pay
x	Years and Full Months of Credited Service
x	Multiplier
=	Monthly Base Benefit

[http://www.mosers.org/archive/active/newsletters/PensionsPlus\\_Fall05\\_section10.asp](http://www.mosers.org/archive/active/newsletters/PensionsPlus_Fall05_section10.asp)

## 26. Montana

Average compensation of the member's 3 highest consecutive years of service  
(highest average compensation or HAC) X years of service X 1.785%.

[http://leg.mt.gov/content/Committees/Interim/2009\\_2010/State\\_Administration\\_and\\_Veterans\\_Affairs/Staff\\_Reports/primer-retirement-systems-11-8-10.pdf](http://leg.mt.gov/content/Committees/Interim/2009_2010/State_Administration_and_Veterans_Affairs/Staff_Reports/primer-retirement-systems-11-8-10.pdf)

**27. Nebraska**

Benefit Formula= 2.0% x Years of Service X Annual Average Salary

<https://npers.ne.gov/whalecomfb0318c98356c576f7c4/whalecom0/SelfService/public/howto/handbooks/handbookSchool.pdf>

**28. Nevada**

Service Credit Earned Before July 1, 2001 x 2.5% = Service Time Factor 1

Service Credit Earned On or After July 1, 2001 x 2.67% = Service Time Factor 2

Service Time Factor 1 + Service Time Factor 2 = Total Service Time Factor x  
Average Compensation = Service Retirement Allowance (Your benefit when you  
are fully eligible to retire based on service credit and age.)

<http://www.nvpers.org/public/gbeEstimator/index.jsp>

**29. New Hampshire**

60-64 age: [Average Final Compensation](#) divided by 60 multiplied by [Creditable Service](#) = approximate annual pension amount

65 and older: [Average Final Compensation](#) divided by 66 multiplied by [Creditable Service](#) = approximate annual pension amount

[http://www.nhrs.org/Members/Service\\_GroupI\\_Before.aspx](http://www.nhrs.org/Members/Service_GroupI_Before.aspx)

**30. New Jersey**

(Years of Service/55) x Final Average Salary = Final Retirement Allowance

<http://www.ncsl.org/issues-research/labor/state-retirement-plans-public-safety-tables.aspx>

**31. New Mexico**

Benefit Formula= 2.0%-3.5% x Years of Service X Final Average Salary

<https://perass.state.nm.us/SelfService/SSSABenefitScratchpad.do?event=Instruction>

**32. New York**

Benefit Formula= (1.5%-2%) x Years of Service X Final Average Salary

<http://www.ocfs.state.ny.us/ohrd/materials/27866.pdf>

**33. North Carolina**

Benefit Formula= 1.85% x Years of Service X Final Average Salary

<http://www.osp.state.nc.us/divinfo/employ.htm>

**34. North Dakota**

Benefit Formula= (FAS x 2.00% x Service Credit)

<http://www.nd.gov/ndpers/employers/docs/retirement-presentation.pdf>

**35. Ohio**

Benefit Formula= 2.3%-3.0% x Years of Service X Final Average Salary

[http://www.afscme.org/issues/pension-security/resources/state-pension-fact-sheets/document/Ohio\\_Public\\_Employees\\_Retirement\\_System.pdf](http://www.afscme.org/issues/pension-security/resources/state-pension-fact-sheets/document/Ohio_Public_Employees_Retirement_System.pdf)

**36. Oklahoma**

Benefit Formula= 2.0% x Years of Service X Final Average Salary

[http://www.ok.gov/TRS/Retirement\\_Benefits/Retirement\\_Formula.html](http://www.ok.gov/TRS/Retirement_Benefits/Retirement_Formula.html)

**37. Oregon**

Annuity Benefit = Final Average Monthly Salary x Length of PERS credible service x 1.67%-2.0%

<http://oregonpers.info/library/Download.aspx?docid=53>

**38. Pennsylvania**

Benefit Formula= 2.0% x Class of Service Multiplier x Years of Service X Final Average Salary

<http://www.portal.state.pa.us/portal/server.pt?open=512&objID=14371&mode=2>

**39. Rhode Island**

Benefit Formula= Multiplier x Years of Service X Final Average Salary

<https://www.ersri.org/public/howto/aboutPublicRtrmt/>

**40. South Carolina**

Benefit Formula= 0.182 x Years of Service X Final Average Salary

<http://www.retirement.sc.gov/scrs/active/serviceretirement/general.htm#annuityformula>

**41. South Dakota**

**Enhanced Benefit**

1.625% X Final Average Compensation X Credited Service before July 1, 2002

**PLUS**

**Base Benefit**

1.55% X Final Average Compensation X Credited Service after July 1, 2002

<http://www.sdrs.sd.gov/publications/docs/aamanual.pdf>

**42. Tennessee**

Benefit Formula= Benefit Rate x Years of Service X Final Average Salary

<http://treasury.tn.gov/tcrs/PDFs/disability.pdf>

**43. Texas**

Benefit Formula= 2.3% x Years of Service X Final Average Salary

[http://legis.wisconsin.gov/lc/publications/crs/2010\\_retirement.pdf](http://legis.wisconsin.gov/lc/publications/crs/2010_retirement.pdf)

**44. Utah**

1.) TOTAL your three highest years of salary\* \$ \_\_\_\_\_

2.) DIVIDE line 1 by 36, this is your final average monthly salary \$ \_\_\_\_\_

3.) MULTIPLY your years of service by 2% (.02) \_\_\_\_\_

4.) MULTIPLY line 2 by line 3 for your TOTAL \$ \_\_\_\_\_

5.) ADJUSTED AMOUNT after any early retirement reduction \$ \_\_\_\_\_

<https://www.urs.org/pdf/RetirementSystems/noncontrib.pdf>

**45. Vermont**

Benefit Formula= Group A Service x .0167 x AFC

<http://www.vermonttreasurer.gov/retirement/teachers-group-a>

**46. Virginia**

Benefit Formula= 1.5% x Average Final x Years of Credited Salary Service

[http://www.arlingtonva.us/departments/Retirement/pdf\\_chapter35/about\\_va\\_ret\\_system.pdf](http://www.arlingtonva.us/departments/Retirement/pdf_chapter35/about_va_ret_system.pdf)

**47. Washington**

Benefit Formula= 2% x Years of Service X Final Average Salary

Your average final compensation is the average of your 24 consecutive highest-paid service credit months.

**Monthly retirement income** = 2% x service credit years x average final compensation ÷ 12 months

<http://www.washington.edu/admin/hr/benefits/retirement/plans/pers/pers1.html>

**48. West Virginia**

2% x Years of Service x FAS = Annual Straight Life Retirement Benefit

<http://www.wvretirement.com/PERS%20Plan%20Description.html>

**49. Wisconsin**

$.0057 \times \text{Years of Credited Service} \times \text{Benefit Basis} / 12 = \text{Full Monthly Benefit at age 65 for Life} *$

<http://www.welsbpo.net/pension/calculator.asp#formula>

## 50. Wyoming

Benefit Formula = 2.125% of your highest average salary for your first 15 years of service, added to 2.25% of your highest average salary for each year over 15 years.

<http://retirement.state.wy.us/publications/index.html> Public Employee Handbook PDF

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