AARP IN THE STATES

SNAPSHOT: Ohio Public Employees Retirement System

The Ohio Public Employees Retirement System (OPERS) provides benefits to qualifed public employees. These employees are not covered by Social Security.

The OPERS Pension Works for Ohio Stakeholders

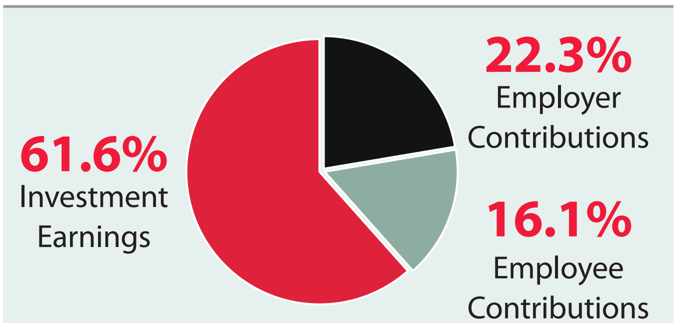
Defined benefit (DB) pensions help recruit and retain effective and experienced public employees, which is essential to delivering high quality service to citizens.

The spending by retired public employees from pension checks supports jobs, greater tax revenues and economic growth in our communities.

Pensions offer employees the best path to retirement security. They are cost-effective and provide modest lifetime income that will not run out.

Taxpayers Only Pay a Small Part of Pension Costs

The funding of public employee pensions is shared by employees and employers. New OPERS employees contribute 10% of their pay into the plan. Over time, investment income earned by the fund does most of the work. In fact, between 1993 and 2014, taxpayers paid only 22.3% of the cost of benefits.



Pensions Cost Half as Much as a 401(k) Plan

Pensions can provide the same benefit as a 401(k) retirement account at about half the cost because of the following key factors:

10% cost savings from pooling longevity risk + **11%** cost savings from optimal asset allocation + **27%** cost savings due to higher returns and lower fees = **48%** **total cost savings**

AARP Real Possibilities

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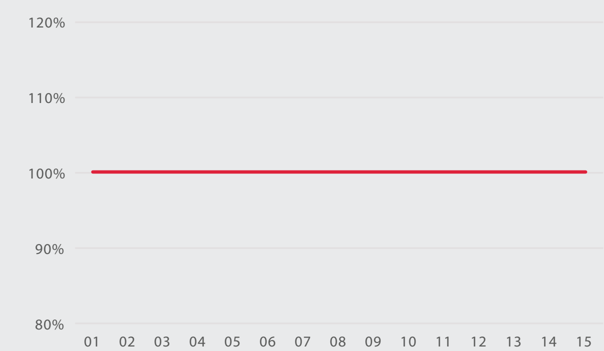
- Ohio OPERS serves 327,705 active employees and 207,917 retired members and survivor beneficiaries.
- New employees contribute 10% of pay into the plan.
- Employers contribute 14% to the fund for employees.
- The average monthly retirement benefit for members is $2,238.
- After a 30-year career, OPERS will replace 66% of final average salary.

Historical OPERS Funding Experience

Ohio established long-term funding policies to provide for the cost of public pension benefits. The employee contribution is set by law and the actuary calculates the employers' contributions each year. As of the end of its 2016 year, OPERS had $80.3 billion in assets in the fund.

The Actuarially Determined Contribution (ADC) is the amount needed to fund benefits earned in the year and to pay down the plans' unfunded actuarial accrued liability. Paying the full ADC each year is important to ensure that the fund becomes financially sound over time.

Ohio Paid 100% of Weighted Average Percent of ADC from FY2001-FY2015 for PERS



Ohio Made Plan Changes to OPERS in Recent Years

Following the global stock market crash in 2008-2009, Ohio policymakers proactively made changes to PERS to ensure long-term sustainability. These included:

- Lowering the cost of living adjustment (COLA) beginning in 2019.
- Reducing retirement benefits by increasing the requirements for early and normal retirement and the actuarial reduction for early retirement benefits.

The Economic Impact of Ohio Pensions:

$20.1 billion in economic output generated by retirees' spending from public pensions in Ohio.

137,048 jobs paying $6.3 billion in wages supported by retirees spending from public pensions in Ohio.

$3.6 billion in federal, state, and local tax revenues generated by retiree benefits and spending in Ohio.

All data come from Ohio, Public Plans Data, or the National Institute on Retirement Security.

AARP IN THE STATES

BY THE NUMBERS: Ohio Public Employees Retirement System

The **Ohio Public Employees Retirement System (OPERS)** provides a defined benefit (DB) pension for public employees who do not participate in Social Security. It offers a modest but stable monthly income over a retiree's life. DB pensions help to recruit and retain experienced employees to better serve taxpayers. DB pension payments also support the state's economy.

Key facts about the plan and its benefits:

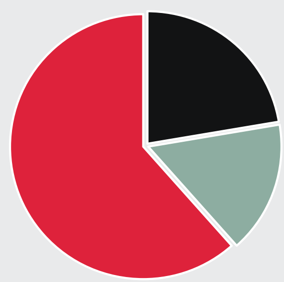
327,705
Total active members of the Ohio Public Employees Retirement System.

66%
After a 30-year career, OPERS will replace 66% of an employee's pre-retirement income —and no Social security benefits.

$2,238
Typical pension benefit paid to retired OPERS members each month.

Pensions are a good deal for taxpayers:
Funding of public employee pensions is shared by employees and employers. New OPERS employees contribute 10% of their pay into the plan. Over time, investment income earned by the fund does most of the work. In fact, between 1993 and 2014, taxpayers (employer contributions) paid only 22.3% of the cost of pension benefits.

61.6% Investment Earnings



22.3% Employer Contributions

16.1% Employee Contributions

The spending from the pension checks of the 207,917 retired public employees helps support:

$20.1 billion
in economic output in Ohio.

137,048 jobs
paying those workers in Ohio $6.3 billion in income.

$3.6 billion
in federal, state, and local tax revenues based on benefits and spending in Ohio.

Pension benefits are a good deal for the economy too:

Each dollar "invested" by Ohio taxpayers (employers) in these plans supported $6.56 in total economic activity in the state.

$1.00 **$6.56**

All data come from Ohio, Public Plans Data, or the National Institute on Retirement Security.

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AARP IN THE STATES

SNAPSHOT: School Employees Retirement System of Ohio

The School Employees Retirement System of Ohio (SERS) provides benefits to qualifed school employees. These employees are not covered by Social Security.

The SERS Pension Works for Ohio Stakeholders

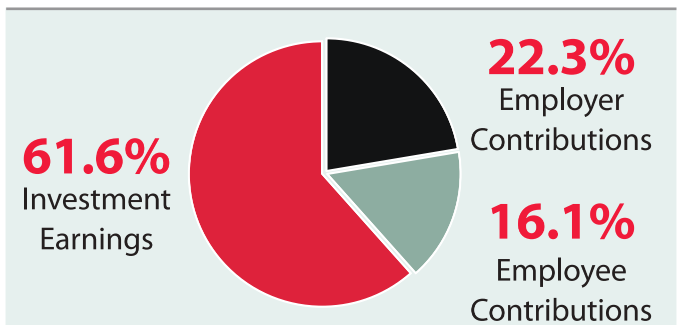
Defined benefit (DB) pensions help recruit and retain effective and experienced public employees, which is essential to delivering high quality service to citizens.

The spending by retired public employees from pension checks supports jobs, greater tax revenues and economic growth in our communities.

Pensions offer employees the best path to retirement security. They are cost-effective and provide modest lifetime income that will not run out.

Taxpayers Only Pay a Small Part of Pension Costs

The funding of public employee pensions is shared by employees and employers. New SERS employees contribute 10% of their pay into the fund. Over time, investment income earned by the fund does most of the work. In fact, between 1993 and 2014, taxpayers paid only 22.3% of the cost of benefits.



Pensions Cost Half as Much as a 401(k) Plan

Pensions can provide the same benefit as a 401(k) retirement account at about half the cost because of the following key factors:

10% cost savings from pooling longevity risk **+** **11%** cost savings from optimal asset allocation **+** **27%** cost savings due to higher returns and lower fees **=** **48% total cost savings**

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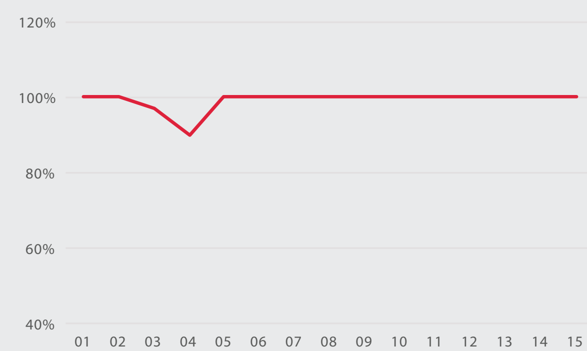
- Ohio SERS serves 124,540 active employees and 76,280 retired members and survivor beneficiaries.
- New employees contribute 10% to SERS.
- Employers contribute 14% to the fund for employees.
- The average monthly retirement benefit for members is $1,184.
- After a 30-year career, SERS will replace 66% of final average salary.

Historical SERS Funding Experience

Ohio established long-term funding policies to provide for the cost of public pension benefits. The employee contribution is set by law and the actuary calculates the employers' contributions each year. As of the end of its 2016 year, SERS had $12.5 billion in assets in the fund.

The Actuarially Determined Contribution (ADC) is the amount needed to fund benefits earned in the year and to pay down the plans' unfunded actuarial accrued liability. Paying the full ADC each year is important to ensure that the fund becomes financially sound over time.

Ohio Paid 99.2% of Weighted Average Percent of ADC from FY2001-FY2015 for SERS



Ohio Made Plan Changes to SERS in Recent Years

Following the global stock market crash in 2008-2009, Ohio policymakers proactively made changes to SERS to ensure long-term sustainability. These included:

- Reducing the benefit for new employees by increasing age and service requirements for normal and early retirement and adjusting the actuarial factors for early benefits.
- Reducing the benefits for active members with less than 25 years of service by changing the normal and early retirement ages.

The Economic Impact of Ohio Pensions:

$20.1 billion

in economic output generated by retirees' spending from public pensions in Ohio.

137,048 jobs

paying $6.3 billion in wages supported by retirees spending from public pensions in Ohio.

$3.6 billion

in federal, state, and local tax revenues generated by retiree benefits and spending in Ohio.

All data come from Ohio, Public Plans Data, or the National Institute on Retirement Security.

AARP IN THE STATES

BY THE NUMBERS: School Employees Retirement System of Ohio

The **School Employees Retirement System of Ohio (SERS)** provides a defined benefit (DB) pension for public employees who do not participate in Social Security. It offers a modest but stable monthly income over a retiree's life. DB pensions help to recruit and retain experienced employees to better serve taxpayers. DB pension payments also support the state's economy.

Key facts about the plan and its benefits:

124,974

Total active members of the Ohio School Employees.

66%

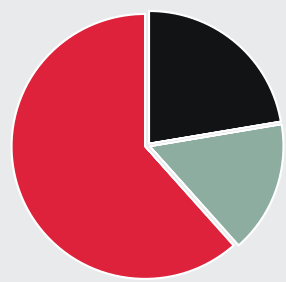
After a 30-year career, SERS will replace 66% of an employee's pre-retirement income — and no Social security benefits.

$1,184

Typical pension benefit paid to retired SERS members each month.

Pensions are a good deal for taxpayers:

Funding of public employee pensions is shared by employees and employers. New SERS employees contribute 10% of their pay into the fund. Over time, investment income earned by the fund does most of the work. In fact, between 1993 and 2014, taxpayers (employer contributions) paid only 22.3% of the cost of pension benefits.



61.6% Investment Earnings

22.3% Employer Contributions

16.1% Employee Contributions

The spending from the pension checks of the 76,280 retired public employees helps support:

$20.1 billion

in economic output in Ohio.

137,048 jobs

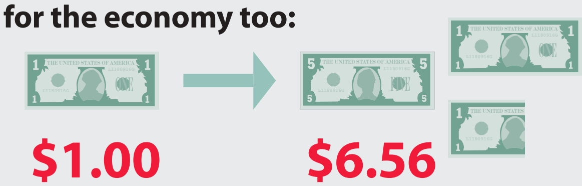
paying those workers in Ohio $6.3 billion in income.

$3.6 billion

in federal, state, and local tax revenues based on benefits and spending in Ohio.

Pension benefits are a good deal for the economy too:

Each dollar "invested" by Ohio taxpayers (employers) in these plans supported $6.56 in total economic activity in the state.



$1.00 **$6.56**

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AARP IN THE STATES

SNAPSHOT: State Teachers Retirement System of Ohio

The State Teachers Retirement System of Ohio (STRS) provides benefits to qualified teachers. These employees are not covered by Social Security.

The STRS Pension Works for Ohio Stakeholders

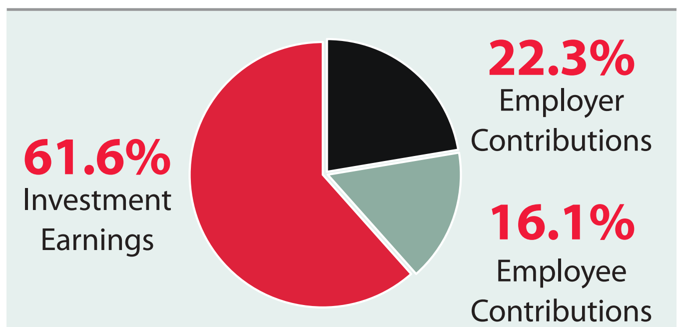
Effective teachers are the cornerstone of education quality, but teachers are underpaid. Pensions help schools keep teachers and compensate for low pay.

Retaining experienced midcareer teachers boosts student performance. Pensions help keep effective midcareer teachers in the classroom, increasing education quality.

Pensions offer teachers the best path to retirement security. They are cost-effective and provide modest lifetime income that will not run out.

Taxpayers Only Pay a Small Part of Pension Costs

The funding of public employee pensions is shared by employees and employers. New STRS employees contribute 14% of their pay into the fund. Over time, investment income earned by the fund does most of the work. In fact, between 1993 and 2014, taxpayers paid only 22.3% of the cost of benefits.



Pensions Cost Half as Much as a 401(k) Plan

Pensions can provide the same benefit as a 401(k) retirement account at about half the cost because of the following key factors:

10% cost savings from pooling longevity risk **+** **11%** cost savings from optimal asset allocation **+** **27%** cost savings due to higher returns and lower fees **=** **48%** **total cost savings**

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STRS Key Facts

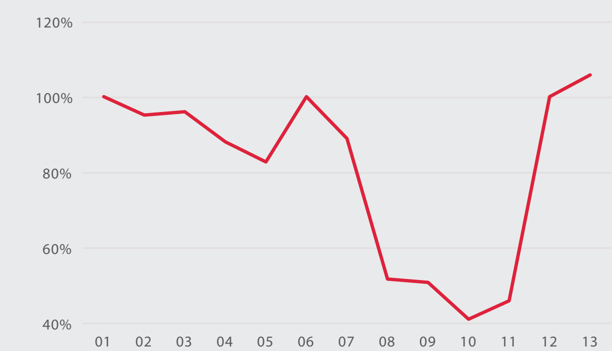
- Ohio STRS serves 169,212 active employees and 157,938 retired members and survivor beneficiaries.
- New employees contribute 14% to STRS.
- Employers contribute 12% to the fund for employees.
- The average monthly retirement benefit for members is $3,639.
- After a 30-year career, STRS will replace 66% of final average salary.

Historical STRS Funding Experience

Ohio established long-term funding policies to provide for the cost of public pension benefits. The employee contribution is set by law and the actuary calculates the employers' contributions each year. As of the end of its 2016 year, STRS had $70.1 billion in assets in the fund.

The Actuarially Determined Contribution (ADC) is the amount needed to fund benefits earned in the year and to pay down the plans' unfunded actuarial accrued liability. Paying the full ADC each year is important to ensure that the fund becomes financially sound over time.

Ohio Paid 73.5% of Weighted Average Percent of ADC from FY2001-FY2015 for STRS



Ohio Made Plan Changes to STRS in Recent Years

Following the global stock market crash in 2008-2009, Ohio policymakers proactively made changes to STRS to ensure long-term sustainability. These included:

- Increasing employee contributions to 14% of salary.
- Suspending cost of living adjustment (COLA) for a year, reducing COLAs for existing retirees, and delaying COLAs for future retirees.
- Reducing retirement benefits by increasing normal retirement, lowering the multiplier, and adjusting the average final salary calculation.

The Economic Impact of Ohio Pensions:

$20.1 billion

in economic output generated by retirees' spending from public pensions in Ohio.

137,048 jobs

paying $6.3 billion in wages supported by retirees spending from public pensions in Ohio.

$3.6 billion

in federal, state, and local tax revenues generated by retiree benefits and spending in Ohio.

All data come from Ohio, Public Plans Data, or the National Institute on Retirement Security.

AARP IN THE STATES

BY THE NUMBERS: State Teachers Retirement System of Ohio

The **State Teachers Retirement System of Ohio (STRS)** provides a defined benefit (DB) pension for teachers who do not participate in Social Security. It offers a modest but stable monthly income over a retiree's life. DB pensions help to recruit and retain experienced teachers, who provide quality education for our children. DB pension payments also support the state's economy.

Key facts about the plan and its benefits:

124,540

Total active members of Ohio State Teachers Retirement System.

66%

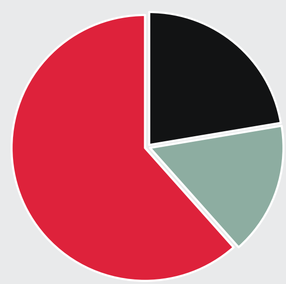
After a 30-year career, STRS will replace 66% of an employee's pre-retirement income — and no Social security benefits.

$3,639

Typical pension benefit paid to retired STRS members each month.

Pensions are good deal for taxpayers:

Funding of teacher pensions is shared by employees and employers. New STRS employees contribute 14% of their pay into the fund. Over time, investment income earned by the fund does most of the work. In fact, between 1993 and 2014, taxpayers (employer contributions) paid only 22.3% of the cost of pension benefits.



The spending from the pension checks of the 157,938 retired public employees helps support:

$20.1 billion

in economic output in Ohio.

137,048 jobs

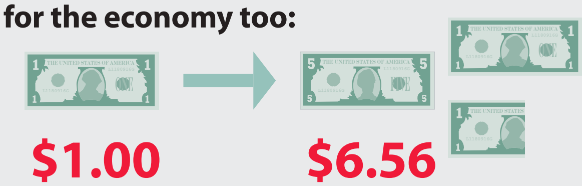
paying those workers in Ohio $6.3 billion in income.

$3.6 billion

in federal, state, and local tax revenues based on benefits and spending in Ohio.

Pension benefits are a good deal for the economy too:

Each dollar "invested" by Ohio taxpayers (employers) in these plans supported $6.56 in total economic activity in the state.



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Why Pensions Work for Ohio and Teachers

Defined benefit (DB) pensions play a fundamental role in retaining high-quality, experienced teachers in the classroom. These effective, experienced teachers are the most important school-based element that provides quality educational outcomes for our children.

A wide body of academic research on teacher productivity finds that teachers become more effective with experience. These studies demonstrate that experienced teachers have students who achieve at higher levels. In contrast, when experienced, mid-career teachers are replaced by inexperienced teachers, other studies show productivity drops across the school.

DB pensions give schools an effective tool to retain experienced teachers. These benefits provide teachers an incentive to continue delivering quality education to K-12 students.[1] This incentive becomes all the more important over a teaching career as the erosion of teachers' wages, when compared to the wages of similar college educated workers, widens for more experienced teachers.

There are important policy reasons to continue offering teachers DB pensions. Because pensions help attract and retain workers, Ohio can keep teachers in the classrooms and empower students to achieve their highest potential.

Pensions Help to Bridge the Teacher Wage Gap

Overall, teachers experienced an 11% compensation gap in 2015. In Ohio, teachers experience a 20% wage gap when compared to other college graduates in the workforce.[2] A national study of K-12 public school teachers' wages identified a 17 percent pay gap relative to comparable private sector workers in 2015. At the same time, teachers' benefits, including pensions, help bridge that gap and allow states to attract and retain highly qualified educators by reducing that overall gap in compensation to 11 percent.

17% teacher wage gap **offset by...** 6% teacher benefit advantage **reduces...** **the teacher compensation gap to 11%**

Americans understand that teacher pensions play an important role in retaining quality teachers and in offsetting the impact of their lower salaries.

92% 92 percent of Americans say pensions are a good way to recruit and retain qualified teachers.

81% 81 percent of Americans agree that teachers deserve pensions to compensate for lower pay.[3]

Pensions Reduce Teacher Turnover and Save Money

Experienced teachers are better teachers. DB pensions help to retain highly productive teachers longer, as compared with individual defined contribution (DC) accounts. Moreover, the cost of teacher turnover is quite high, both in terms of financial cost and loss of productivity to the school district.[4]

4.9%

Percentage of Ohio teachers who leave education.

862

The number of Ohio teachers retained each year due to the DB pension.

$3.8B to $8.2B

The DB system savings in teacher turnover costs in school districts across Ohio.

STRS Key Facts

- Ohio STRS serves 124,540 active employees and 157,938 retired members and survivor beneficiaries.
- New employees contribute 12% to the fund.
- Employers contribute 14% to the fund.
- The average monthly retirement benefit for members is $3,639.
- STRS has $70.1 billion in actuarial value of assets and $30.64 billion in unfunded actuarial accrued liability.[5]

The Economic Impact of Ohio Pensions

$20.1 billion

in economic output generated by retirees' spending from public pensions in Ohio.

137,048 jobs

paying $6.32 billion supported by retirees spending from public pensions in Ohio.

3.6 billion

in federal, state, and local tax revenues generated by retiree benefits and spending in Ohio.[6]

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[1] Weller, C. 2017. "Win-Win: Pensions Effectively Serve American Schools and Teachers." Washington, DC. National Institute of Retirement Security (NIRS).
[2] Allegretto, S. A. and Mishel, L. 2016. "The Teacher Pay Gap Is Wider than Ever." Washington, DC. Economic Policy Institute.
[3] Oakley, D. and Kenneally, K. 2017, Pensions and Retirement Security 2017: A Roadmap for Policy Makers. Washington, DC. NIRS.
[4] Boivie, I. 2017. "Revisiting the Three Rs of Teacher Retirement Systems: Recruitment, Retention, and Retirement."
[5] All data, unless otherwise noted, as of fiscal year ended 2016.
[6] Brown, J. 2016. "Pensionomics 2016: Measuring the Economic Impact of DB Pension Expenditures." Washington, DC. NIRS.