Ohio Retirement Study Council

ISSUE BRIEF

Revised May 2024

Cost of Living Adjustments

*Cost-of-Living Adjustments (COLAs) are any type of post-retirement benefit increase beyond the base retirement benefit. **The exclusive purpose of a COLA is to reduce the effect of inflation on a retirement benefit**.*

Inflation, Fixed Benefits, and Cost-of-Living Adjustments

According to the "1978 ORSC Principles Governing Pensions," post-retirement benefits in Ohio should be "adequately maintained" and have a plan for prefunding that benefit.[1] The method to "adequately maintain" post-retirement benefits in Ohio is a prefunded COLA.

Inflation and Fixed Benefits

When a member of a state retirement system retires, the member receives a benefit based on years of service and final average salary. Because that benefit is fixed at the time of retirement, inflation erodes the amount of goods and services that can be purchased during retirement, effectively depreciating the benefit over time. This is measured by the changing *purchasing power* of that benefit. This loss of purchasing power can reduce the sufficiency of benefits during retirement.

The amount of this loss depends on the rate of inflation and the amount of time that the benefit has been fixed. The higher the inflation, the more loss of purchasing power. Similarly, the greater amount of time the benefit has been fixed, the more loss of purchasing power. The table below demonstrates varying losses of purchasing power (in dollars and percent loss) of $100 across 30 years:

Inflation rate	Purchasing power at 5 years	Purchasing power at 10 years	Purchasing power at 20 years	Purchasing power at 30 years
2%	$91 (-9%)	$82 (-18%)	$67 (-33%)	$55 (-45%)
3%	$86 (-14%)	$74 (-26%)	$55 (-45%)	$41 (-59%)
4%	$82 (-18%)	$68 (-32%)	$46 (-54%)	$31 (-69%)

While modest to begin, given enough time, inflation can severely undercut a fixed benefit. Because the deleterious effects of inflation are well understood, COLAs remain quite common in most pension designs.

Availability of COLAs in Public and Private Sectors

Within the public sector, COLAs continue to be provided by most, but not all, public defined benefit retirement systems.[2] In the broader economy, Social Security[3] provides a COLA based on CPI-W; because of this tie to CPI-W, since 1980 Social Security has provided COLAs as low as 0% and as high as 14.3% (in 1980).[4] It is important to note that Social Security represents about 30%[5] of the income of people over age 65, meaning that Social Security's COLA maintains the purchasing power of only a portion of the retiree's post-retirement income.

Complete information on private retirement plans is not available, but with only 15% of private workforce covered under a defined benefit plan in 2022, it is fair to say that a typical private sector employee receives a COLA only by means of Social Security.[6] Still, with the vast majority of U.S. workers participating in Social Security, most receive a COLA on some portion of their retirement benefit.

"COLAs continue to be provided by most, but not all, public defined benefit retirement systems"

Because Ohio's public employees do not participate in Social Security for their state and local employment, Ohio public employees do not receive COLAs through Social Security for that service. Purchasing power is instead supported either through their own savings or by means of a COLA provided under a state retirement system. The exclusive purpose of a COLA is to reduce the effect of inflation on a retirement benefit. ORSC staff cannot find any example of a COLA from any state retirement plan in the United States whose purpose or intent is to completely offset the decline in purchasing power.

COLA Designs

While COLAs are quite common, their design can vary significantly. This is likely because there is no perfect balance to the three challenges that arise in any COLA design: 1) Ensuring the COLA is prefunded; 2) Ensuring that the COLA treats all members fairly; and 3) Ensuring, as its primary purpose, that the purchasing power of retirees is adequately maintained. A COLA that is too generous will deplete a plan's funds; a COLA with little flexibility can result in retirees being treated unfairly across time; and a COLA not tied to external markers in the economy may not achieve its purchasing power goals. Prioritizing these three challenges is a policy decision.

"Designing a COLA is extraordinarily difficult"

The following sections illustrate how, and the extent to which, some of the most common types of COLAs increase a retiree's benefit.[7] They also demonstrate the imperfect nature of COLAs, either from a funding, fairness, or purchasing power standpoint. Designing a COLA is extraordinarily difficult because we cannot see the future; the retirement systems make assumptions that are more or less accurate across time.

Ad Hoc Increases

An ad hoc benefit increase is one that occurs irregularly. It could be either in the form of an increase in the base benefit, increasing all future annual COLAs, or it could be in the form of a single payment, such as the "13th Check" provided by STRS in the 1980s and 1990s.

In Ohio, ad hoc increases to the base benefit were quite common in the late 60s and 70s and could be quite substantial.[8] The following table demonstrates how a theoretical ad hoc increase would affect a retirement benefit over a five-year period. Notice that, with ad hoc increases, the random year in which a retiree retires could result in significant discrepancies between retiree's benefit depending on the regularity of the ad hoc increases. In the following theoretical example, a person retiring in year 4 (with a $10 ad hoc increase) rather than year 5 (with a $2.50 ad hoc increase) would have a different benefit, possibly without any underlying economic reason.

Ad hoc increases that are irregular and not based on some external metric treat retirees unequally; however, they may be better at addressing specific depreciations that occur over time, such as a temporary period of extreme inflation. Because they are irregular and unplanned, they cannot be reasonably pre-funded, as envisioned by the 1978 ORSC Principles Governing Pensions. They would also leave retirees at the mercy of unpredictable changes to their purchasing power and would make retirees' financial planning more challenging. The following uses a base benefit of $100 for comparisons.

Year	Benefit increase	Total benefit
1	$5	$105
2	$2.50	$107.50
3	$0	$107.50
4	$10	$117.50
5	$2.50	$120

Fixed Increases, Non-Compounding or Compounding

A fixed increase benefit is one that occurs at regular intervals, typically annually. It can be set as either a dollar amount or as a set percentage of the benefit. A percentage increase can be set either as a compounding or non-compounding benefit. A compounding benefit will increase exponentially, as all future increases are used in calculating the new benefit. This accelerates the benefit increase but more accurately tracks inflation (which is itself a compounding process). Non-compounding benefits have linear growth, increasing by the same amount each year. Ohio provided a fixed (non-compounding) 3% COLA for roughly 10 years, from 2002-2013. Prior to that, the retirement systems provided a COLA at a lesser rate but included a complicated "COLA bank" that permitted COLA increases of up to 3% for certain retirees. Ohio has never provided a compounding COLA.

Fixed increases have the advantage of treating all members equally, but during periods of high or low inflation they may not accurately reflect changes in purchasing power. For instance, the following table assumes 3% inflation. If inflation were 1% the COLA may be too generous, and at 4% inflation the COLA may not protect purchasing power. The table below shows a non-compounding and compounding fixed benefit with the same base benefit of $100 as used above.

Year	Percent Increase	Non-Compounded (% increase)	Compounded (% increase)
1	3%	$103 (3%)	$103 (3%)
5	3%	$115 (15%)	$116 (16%)
10	3%	$130 (30%)	$134 (34%)
15	3%	$145 (45%)	$156 (56%)
20	3%	$160 (60%)	$181 (81%)
Total increase		$60 (60% increase)	$81 (81% increase)

CPI-Indexed Increases

A CPI-index increases the benefit based on some external marker of inflation, typically using CPI-U or CPI-W.[9] These figures are developed by the U.S. Department of Labor and measure changes in the costs of certain goods and services in the wider economy. CPI-U and CPI-W net similar rates across time. These increases are typically capped and not negative. An increase based on CPI has the benefit of tracking the experience of an economy and increasing a retiree's income relative to that economy rather than linking to an artificial figure. The following chart averages inflation between 1999-2023 into five different periods. Over time, even a COLA that tracks the price of goods and services in the economy falls behind if it is non-compounding. CPI-based increases have the benefit of treating all retirees equally by tracking an objective measure of purchasing power. The chart below demonstrates that a retiree's COLA would increase at a lesser rate when inflation is lower and a higher rate when inflation is higher. Most of Ohio's five retirement systems have a COLA cap and none of the COLAs compound.

"CPI-based increases have the benefit of treating all retirees equally by closely tracking purchasing power"

Year	Percent increase (Annual Average)	Non-compounded	Compounded
1999-2003	2.4%	$112	$113
2004-2008	3.3%	$129	$132
2009-2013	1.7%	$138	$144
2014-2018	1.3%	$145	$153
2019-2023	4.1%	$167	$187
Total increase (%)		$67 (67%)	$87 (87%)

Summary of COLA Designs

Regardless of the COLA design selected, there are certain commonalities. All COLAs increase the cost of a benefit to a retirement system. On the flip side, all COLAs add value to the retirees' benefit by supporting purchasing power. In each of the designs there is a tension between the three objectives of COLAs. Resolving those tensions is a policy decision. Ohio's recent policy has prioritized the funding statuses of the systems by implementing CPI-based COLAs or even suspensions of new COLAs.

In 2024, Ohio's five retirement systems provide the COLAs on page 6. Ohio law provides that COLAs may be granted annually. The trend in Ohio is to provide a COLA based on CPI, however STRS, SERS, and HPRS have suspended COLAs to support funding goals. Neither PERS or OP&F may suspend COLAs.

Trends in COLA

Changes to Ohio's COLA design are well in line with recent changes across the country.

The trend in Ohio is to provide a COLA based on a capped CPI and subject to funding goals

COLA benefits were broadly reduced in state retirement plans after the Great Financial Crisis (2007-2008). This was done in a variety of ways, including suspending, reducing, or cancelling COLAs. Since 2009, 17 states have made changes to COLAs affecting current retirees, eight states have addressed current employees' benefits, and seven have changed the COLA structure only for future employees.[10] The variety of COLA legislation was immense, with the only clear trend being that COLAs were reduced or constrained in some way. Some states did, however, include provisions that would enable COLAs to increase should inflation grow or funding improve.

System	COLA Benefit
PERS	For recipients of benefits beginning not later than January 7, 2013, 3%. For recipients of benefits beginning after January 7, 2013, any increase in the Consumer Price Index, not to exceed 3% (2024 COLA is 2.3%). R.C. 145.323
STRS	For those receiving an allowance or benefit on or after August 1, 2013, five years must pass before the first COLA is applied to an allowance or benefit, unless retirement is immediately preceded by a disability benefit. STRS Board may adjust the COLA if the Board's actuary determines that an adjustment does not materially impair the fiscal integrity of the retirement system or is necessary to preserve the fiscal integrity of the system. (FY2024 COLA is 1%). R.C. 3307.67
SERS	COLA of any change in CPI, not to exceed 2.5%, beginning on the fourth anniversary of retirement. SERS Board may adjust the COLA if the actuary determines that an adjustment does not materially impair the fiscal integrity of the retirement system or is necessary to preserve the fiscal integrity of the retirement system (2024 COLA is 2.5%). R.C. 3309.374
OP&F	(1) Annual COLA of 3% for those who have at least 15 years of service credit on or before July 1, 2013. (2) Annual COLA of the lesser of 3% or the increase in the CPI, if any, for all others. COLA is provided only to recipients who have attained age 55 and have received the pension or benefit for one year, except that disability recipients who are permanently and totally disabled do not have to have attained age 55. R.C. 742.3716
SHPRS	Authorizes the Board to grant a COLA of no more than 3%, except that the Board is to grant a COLA of 3% to a recipient age 65 whose benefit is less than 185% of the federal poverty limit for a family of two. (2024 COLA is 0%) A recipient of a retirement, disability, or survivor pension whose pension effective date is on or after January 7, 2013, will not be eligible for a COLA until age 60. R.C. 5505.174
Social Security	Based on increases in the CPI-W (compounding COLA; 2024 COLA is 3.2%)

Retiree Purchasing Power

The following chart provides the purchasing power of today's Ohio retirement system retirees based on year of retirement. The purchasing power of most retirees decreased in retirement, as is expected.

Change in Purchasing power of 2022 (STRS FY2023) benefit based on selected year of retirement[11]

System	1985	1990	1995	2000	2005	2010	2015	2020	2022
PERS	-19%	-11%	-5%	1%	-2%	-1%	-3%	-9%	0%
STRS	-29%	-24%	-21%	-17%	-16%	-16%	-19%	-16%	-2%
SERS	-25%	-20%	-16%	-11%	-10%	-10%	-13%	-14%	0%
OP&F	-40%[12]	-22%	-14%	-8%	-2%	-3%	-13%	-11%	0%
SHPRS	-24%	-20%	-15%	-12%	-15%	-15%	-17%	-13%	0%

Cost of COLA to Retirement Systems

Simply put, COLAs are expensive.

Collectively, COLAs constitute roughly 1/5 of *all the liabilities* of the retirement systems; put differently, 20% of the retirement system's liabilities are a reflection of increases beyond the base value of the retirement benefit, as seen in the following chart. "Present value of 2022 COLA" reflects the additional liability that was added to the retirement system for granting the 2022 COLA (i.e., the cost of increasing a benefit in one year (2022) plus the cost of maintaining that increased benefit in future years).[13]

System	Total liability	Present value of 2022 COLA	Liability of all granted and future COLA increases	Percent of all liability attributed to COLAs
PERS (2022)	$122.5 Billion	$1.6 Billion	$32.0 Billion	26.1%
STRS (FY2023)	$105.2 Billion	$460 Million (1%)	$13.2 Billion	12.5%
SERS	$23.1 Billion	$205 Million (2.5%)	$4.2 Billion	18.2%
OP&F	$25.4 Billion	$225 Million	$6.2 Billion	24.4%

[1]The ORSC's 1978 Principles Governing Pensions also states that the increase should follow some valid economic indicator and should avoid increases based on factors which offset the effects of age, service, and salary.

[2]National Association of State Retirement Administrators, "NASRA Issue Brief: Cost-of-Living Adjustments" (June 2023), available online at: (https://www.nasra.org/files/Issue%20Briefs/NASRACOLA%20Brief.pdf).

[3]Ohio public employees are not eligible for Social Security based on their public employment in Ohio.

[4]Generally, inflation is measured in the broad economy by using one of two indexes: the Consumer Price Index-Urban Wage Earners and Clerical Workers (CPI-W) or the Consumer Price Index-All Urban Consumers (CPI-U). CPI-W is a more specialized index that more heavily weighs changes in food, apparel, transportation, and other goods and services while providing a slightly lower weight to housing, medical care, and recreation. As with Social Security, the state retirement systems use CPI-W for their calculations. National Association of State Retirement Administrators, "NASRA Issue Brief: Cost-of-Living Adjustments" (June 2023), available online at: (https://www.nasra.org/files/Issue%20Briefs/NASRACOLA%20Brief.pdf).

[5]Social Security Fact Sheet (2024); available online at: (https://www.ssa.gov/news/press/factsheets/basicfact-alt.pdf).

[6]David Zook, "How do retirement plans for private industry and state and local government workers compare?" (U.S. Bureau of Labor Statistics, January 2023). Available online at: (https://www.bls.gov/opub/btn/volume-12/how-do-retirement-plans-for-private-industry-and-state-and-local-government-workers-compare.htm).

[7]This issue brief only addresses very broad styles of COLA design. There can be any number of nuances, including Performance based (based on plan level funding; i.e., only at 100% funded or other figure); Delayed-onset (provided only after a period of time, such as five years); or limited benefit (the percent increase is only applied to a portion of the benefit (i.e., the first $10,000)).

[8]In 1974, H.B. 1476 provided a base benefit increase of up to 33% to retirees of PERS, STRS, and SERS.

[9]It is well understood that CPI does not represent the true cost-of-living changes for retirees. Whether it over or understates inflation is a matter of debate. Burdick, Clark and Lynn Fisher "Social Security Cost-of-Living Adjustments and the Consumer Price Index (Social Security Bulletin, Vol. 67, No. 3, 2007), available online at: (https://www.ssa.gov/policy/docs/ssb/v67n3/v67n3p73.html).

[10]National Association of State Retirement Administrators, "NASRA Issue Brief: Cost-of-Living Adjustments" (June 2023), available online at: (https://www.nasra.org/files/Issue%20Briefs/NASRACOLA%20Brief.pdf).
Some states that did not modify their COLAs, such as Wisconsin, have such a different benefit structure that they are less comparable to the defined benefit programs of other states (Wisconsin's is a hybrid model providing COLAs based on investment return, with some years previous year's COLA being removed, much like a defined contribution system would function).

[11]Purchasing power changes calculated by the state retirement systems.

[12]Annual increases for those retiring before 7/24/1986 were a fixed dollar amount (rather than a percent of benefit). Comparing the 1985 OP&F percentages to the other systems is, therefore, problematic.

[13]Figures provided by the state retirement systems. HPRS figures are unavailable.