



Historical Experience of the Five Ohio Retirement Systems Since 1998

Ohio Retirement Study Council

April 11, 2024



ORSC Direction, November 9, 2023

- ▶ Number of pending bills regarding the state retirement systems.
- ▶ Comprehensive historical report.
- ▶ Include review of incoming contribution rates (employer and employee contributions and investment gains), outgoing benefits (both vested and non-vested), exercise of board authority, and resulting funding levels.
- ▶ Include an executive summary and guidance on future legislation.
- ▶ ORSC direction 11/9/2023; Data confirmation and request sent to systems 12/8/2023; Data received from systems 2/6/2024; First draft to systems 3/14/2024; Comments incorporated through 4/4/2024


General Approach and Beginning Point of 1998

Why begin in 1998?

- 1) Investment authority changes in 1998;
- 2) 30-Year Amortization begins in 1997;
- 3) Funding levels in the 1998-2001 period exceeded 90% for all the systems. 100% is fully-funded and, therefore, reflects a relatively even and healthy funded status to begin the report.

Approach taken is an historical review of the “what” during the 1998-2022 period, including actions that caused deterioration or improved the funding condition of the systems. Staff focused on what it found to be the most dominant contributors to the recent history to the systems. It focused on parts of that history that are under the control of the General Assembly or state retirement systems, particularly as we understood the report to be intended as a starting point for further policy discussions.

The report is not meant to preclude discussions of other considerations or perspectives.



At no point between 1998-2022 have any of the five state retirement systems failed to provide a statutory monthly benefit due to insufficient funds.

Approximately **2,323,663** people have a direct association with Public Employees Retirement System (PERS), State Teachers Retirement System (STRS), School Employees Retirement System (SERS), Ohio Police & Fire Pension Fund (OP&F), and State Highway Patrol Retirement System (HPRS).

\$17.1 Billion of pension benefits in 2022

2022 Pension Benefits (in millions)	
PERS	\$7,038.0
STRS	\$7,123.0
SERS	\$1,328.0
OP&F	\$1,559.5
HPRS	\$78.7

Average Annual Benefit, 2022			
	Age and Service	Disability	Survivor, Beneficiary
PERS	\$31,195	\$34,401	\$15,434
STRS	\$48,166	\$38,907	\$30,770
SERS	\$16,164	\$18,360	\$9,732
OP&F	\$54,052	\$44,943	\$12,114
HPRS	\$48,148	\$38,050	\$19,519
Social Security	\$21,902 (retired worker)		

Generally higher benefit with earlier retirement eligibility than Social Security

Review Topics

- 1) Funding and Liability Growth;
- 2) Pension Reform (2013) and Exercise of Board Authority;
- 3) Cost-of-Living Adjustments;
- 4) Provision of Health Care;
- 5) Investment Returns and Assumed Rates of Return.



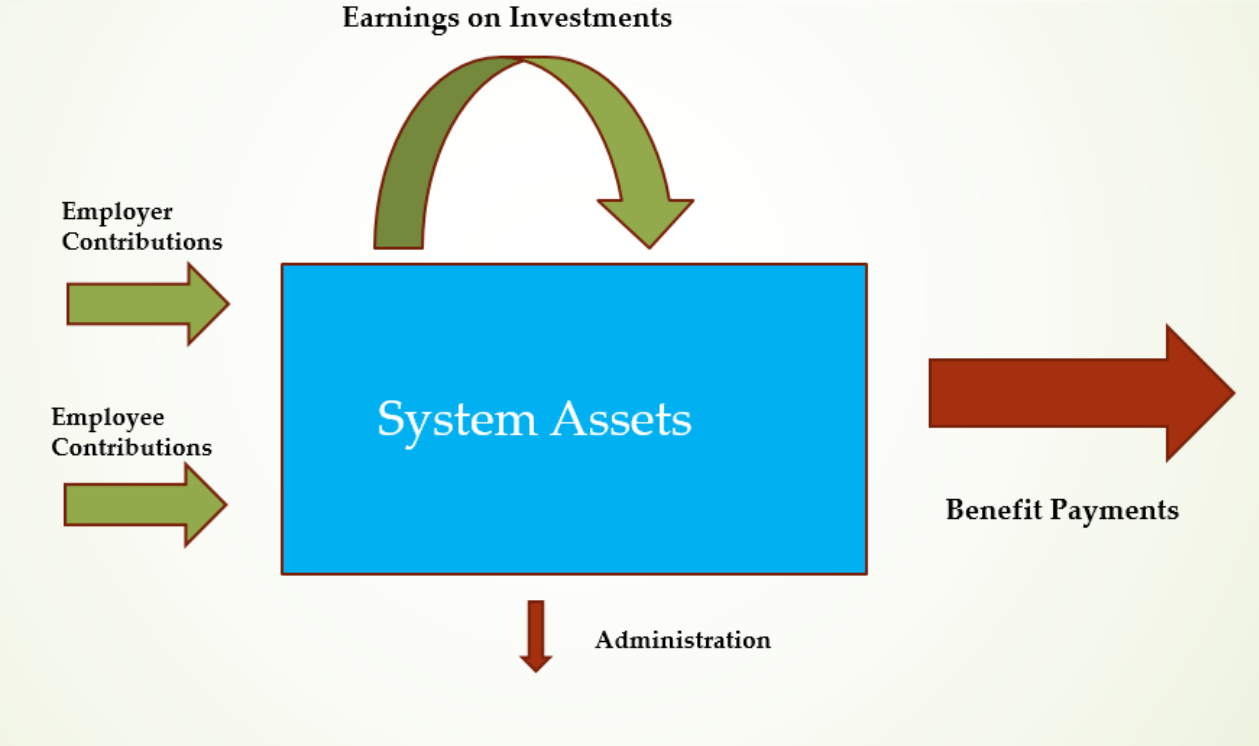
Key Takeaways

- 1) 1998-2001, the Ohio retirement systems reached or surpassed a 90% funded ratio.
- 2) Both liability and unfunded liability increased markedly in the 1998-2011 period.
- 3) The 2000s included both a “tech bubble” and the Great Financial Crisis (GFC) that greatly contributed to unfunded liability growth, but decisions under control of the General Assembly and retirement systems also contributed.
- 4) Changes made under pension reform (2012-2013) were necessary to address this unfunded liability growth and have improved the funding statuses of all the systems.
- 5) Board authority utilized by STRS, SERS, and HPRS has likewise improved the funding statuses of the systems. PERS lacks any board authority and OP&F has limited board authority.

Funding and Liability Growth: 1998-2022

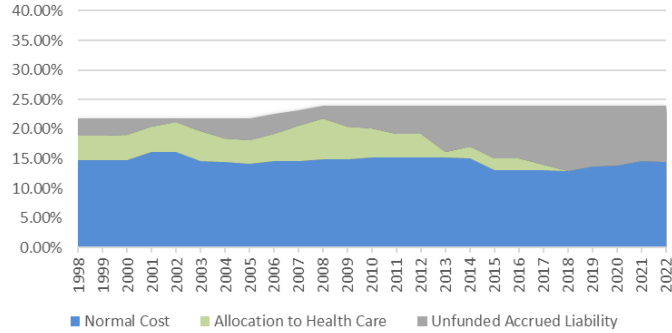
$$C+I = B+E$$

C (Contributions) + I (Investments) = B (Benefits) + E (Expenses)

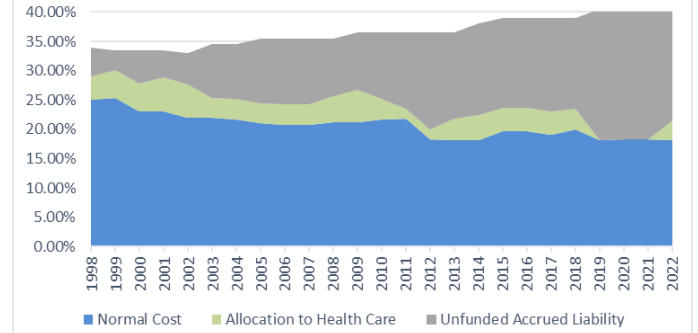


System	Employee Rate	Employer Rate
PERS State and Local	10.00%	14.00%
PERS-Law Enforcement	13.00%	18.10%
PERS-Public Safety	12.00%	18.10%
STRS	14.00%	14.00%
SERS	10.00%	14.00%
OP&F Police	12.25%	19.50%
OP&F Fire	12.25%	24.00%
HPRS	14.00%	26.50%

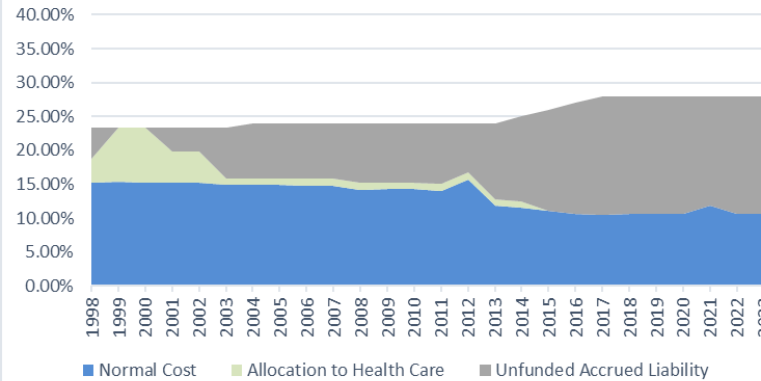
PERS Contribution Allocation: 1998-2022



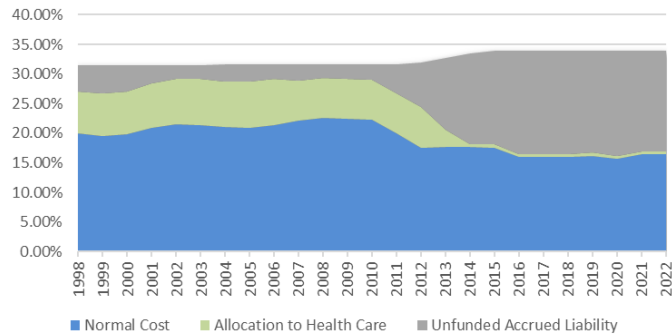
HPRS Contribution Allocation: 1998-2022



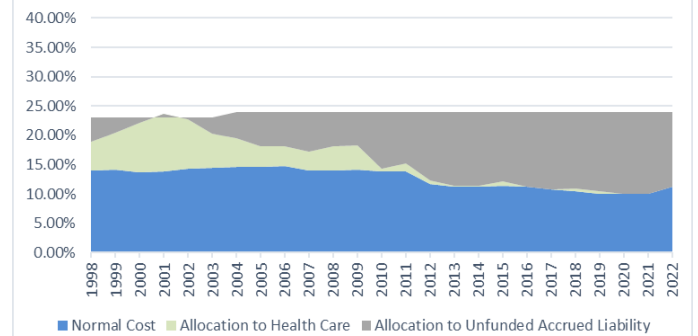
STRS Contribution Allocation: 1998-2023



OP&F Contribution Allocation: 1998-2022



SERS Contribution Allocation: 1998-2022



2022 Retirement System Funding Status (millions)

System (Assumed Return)	Total Liability	UAAL	Funded Ratio	Amortization Period
PERS (6.90%)	\$122,463	\$19,611	84%	16
STRS (7.00%)	\$105,264	\$20,122	81%	12
SERS (7.00%)	\$22,371	\$5,484	75%	22
OP&F (7.50%)	\$25,363	\$7,605	70%	27
HPRS (7.25%)	\$1,264	\$329	74%	21

Liability Growth: 1998-2011 and 2011-2022

	1998-2011	2011-2022
PERS	124%	45%
STRS	102%	7%
SERS	132%	37%
OP&F	93%	55%
HPRS	96%	21%

UAAL Growth: 1998-2011 and 2011-2022

	1998-2011	2011-2022
PERS	--	3%
STRS	460%	(51%)
SERS	830%	(6%)
OP&F	426%	26%
HPRS	1,743%	(22%)

Pension Reform (2012) and Exercise of Board Authority

Amount and Percent of Liability Reduction from Pension Reform in 2012		
	Liability Reductions	As Percent of Total Liability
PERS	\$3.228 billion	3.80%
STRS	\$15.662 billion	14.70%
SERS	\$0.222 billion	1.30%
OP&F	\$0.781 billion	4.80%
HPRS	\$0.117 billion	11.20%

Retirement System	Cost-of-Living Adjustments (COLA)	Employee Contribution Range	Increase Employer Contribution Rate	Adjust Eligibility Requirements (YOS or age)	Time Limits on Authority	Standard to Adjust
PERS	No, 3% (Group A) CPI-W not greater than 3% (Groups B and C)	8-10%	No	No	N/A	N/A
STRS	Yes, may provide new COLAs without a cap	Maximum contribution of 14%	No	Yes	No	Adjustment must “preserve” or “not materially impair” the “fiscal integrity of the fund”
SERS	Yes, may provide a 0%-CPI-W (not to exceed 2.5%)	8-10%	No	Yes	No	Various
OP&F	No, 3% or CPI-W not greater than 3%, based on years of service as of 2013	May adjust up or down	No	Yes	Yes, “following each quinquennial actuarial valuation” (2017, 2022, etc.)	Adjustment must “preserve” or “not materially impair” the “fiscal integrity of the fund”
HPRS	Yes, may provide new COLAs from 0-3%	10-14%	No	No	No	Based on compliance with 30-Year amortization

Post-2012 Board Actions

PERS	No plan design changes subsequent to pension reform and no authority to do so	
STRS	FY2018-22	0% COLA
	FY2023	3% COLA and elimination of age 60 requirement
	FY2024	1% COLA, delay of 35-year service requirement
OP&F	No plan design changes subsequent to pension reform; note that OP&F does not have the authority to modify future COLAs	
SERS	FY2018	Eligible for COLA on 4th Anniversary of Retirement
	FY2018-20	0% COLA
	FY2021	0.5% COLA
	FY2022-24	2.5% COLA
HPRS	2014	Employee rate 11.5%; COLA reduced to 1.5%
	2015-2018	Employee rate to 12.50%; COLA reduced to 1.25%
	2019-2021	Employee rate to 14%; COLA reduced to 0%
	2022	3% COLA
	2023	Employee rate to 13%; 3% COLA
	2024	Employee rate to 14%; 0% COLA

Summary of Fiscal Effect of Pension Benefit Changes to State Retirement Systems (in billions)

	Liability Reductions from 2012 Reform	As Percent of total Liability in 2012	Reductions from direct Board actions post-2012-2023
PERS	\$3.228	3.80%	\$0 – No board authority provisions
		Total liability: \$84.325	
STRS	\$15.662	14.70%	\$12.770
		Total liability: \$106.302	
SERS	\$0.222	1.30%	\$1.356
		Total liability: \$16.755	
OP&F	\$0.781	4.80%	\$0, limited board authority
		Total liability \$16.347	
HPRS	\$0.117	11.20%	\$0.032
		Total liability \$1.048	



Cost-of-Living Adjustments (COLA)

Between 1998-2022, COLAs have gone from an intermittent and variable increase, to an annual and stable benefit, back to a more intermittent and variable increase.

COLAs are now experienced very differently by different retirement groups, both between systems and within them.

COLAs are traditionally designed to help mitigate the loss of purchasing power that occurs in retirement. COLAs are not designed to completely negate the loss of purchasing power.

Example of Annual, Non-Compounding COLAs Between 2004-2013

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Base Benefit	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100
3% COLA		\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3
3% COLA			\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3
3% COLA				\$3	\$3	\$3	\$3	\$3	\$3	\$3
3% COLA					\$3	\$3	\$3	\$3	\$3	\$3
3% COLA						\$3	\$3	\$3	\$3	\$3
3% COLA							\$3	\$3	\$3	\$3
3% COLA								\$3	\$3	\$3
3% COLA									\$3	\$3
3% COLA										\$3
Total Benefit	\$100	\$103	\$106	\$109	\$112	\$115	\$118	\$121	\$124	\$127
2004 Purchasing Power	-	\$100	\$99	\$100	\$98	\$101	\$101	\$102	\$101	\$102

Summary of Statutory COLA Provisions

	Percentage Rate	Age Requirement	Waiting Period
PERS	3% or CPI-W	No	1 Year
STRS	Board determined	No	5 Years
SERS	Board determined, not greater than 2.5%	No	4 Years
OP&F	3% or CPI-W	Age 55	1 Year
HPRS	Board determined, not greater than 3%	Age 60	1 Year

COLA Grants to New STRS Retiree: 2014-2024

STRS	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Base Benefit	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100
COLA wait period		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
COLA wait period			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
COLA wait period				\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
COLA wait period					\$0	\$0	\$0	\$0	\$0	\$0	\$0
No new COLA						\$0	\$0	\$0	\$0	\$0	\$0
No new COLA							\$0	\$0	\$0	\$0	\$0
No new COLA								\$0	\$0	\$0	\$0
No new COLA									\$0	\$0	\$0
3% COLA										\$3	\$3
1% COLA											\$1
Total Benefit	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$103	\$104
2014 Purchasing Power	-	\$100	\$99	\$96	\$94	\$93	\$91	\$89	\$83	\$81	\$81

COLA Grants to SERS Retirees: 2014-2024

SERS	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Base Benefit	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100
3% COLA		\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3
3% COLA			\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3
3% COLA				\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3
No new COLA					\$0	\$0	\$0	\$0	\$0	\$0	\$0
No new COLA						\$0	\$0	\$0	\$0	\$0	\$0
No new COLA							\$0	\$0	\$0	\$0	\$0
0.5% COLA								\$0.5	\$0.5	\$0.5	\$0.5
2.5% COLA									\$2.5	\$2.5	\$2.5
2.5% COLA										\$2.5	\$2.5
2.5% COLA											\$2.5
Total Benefit	\$100	\$103	\$106	\$109	\$109	\$109	\$109	\$109.5	\$112	\$114.5	\$117
2014 Purchasing Power	-	\$103	\$105	\$105	\$103	\$101	\$99	\$98	\$93	\$90	\$89

COLA Grants to HPRS Retirees: 2014-2024


HPRS	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Base Benefit	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100
1.25% COLA		\$1.25	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25
1.25% COLA			\$1.25	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25
1.25% COLA				\$1.25	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25
1.25% COLA					\$1.25	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25
No new COLA						\$0	\$0	\$0	\$0	\$0	\$0
No new COLA							\$0	\$0	\$0	\$0	\$0
No new COLA								\$0	\$0	\$0	\$0
3% COLA									\$3	\$3	\$3
3% COLA										\$3	\$3
No new COLA											\$0
Total Benefit	\$100	\$101.25	\$102.50	\$103.75	\$104	\$104	\$104	\$104	\$107	\$110	\$113
2014 Purchasing Power	-	\$101	\$101	\$100	\$98	\$97	\$94	\$93	\$89	\$86	\$86

COLA Grants to PERS Group A and OP&F Retirees: 2014-2024

PERS Group A and OP&F	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Base Benefit	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100
3% COLA		\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3
3% COLA			\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3
3% COLA				\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3
3% COLA					\$3	\$3	\$3	\$3	\$3	\$3	\$3
3% COLA						\$3	\$3	\$3	\$3	\$3	\$3
3% COLA							\$3	\$3	\$3	\$3	\$3
3% COLA								\$3	\$3	\$3	\$3
3% COLA									\$3	\$3	\$3
3% COLA										\$3	\$3
3% COLA											\$3
Total Benefit	\$100	\$103	\$106	\$109	\$112	\$115	\$118	\$121	\$124	\$127	\$130
2014 Purchasing Power	-	\$103	\$105	\$105	\$106	\$107	\$107	\$108	\$103	\$99	\$99

Portion of Benefit Attributed to COLA Benefit Increases (Average)

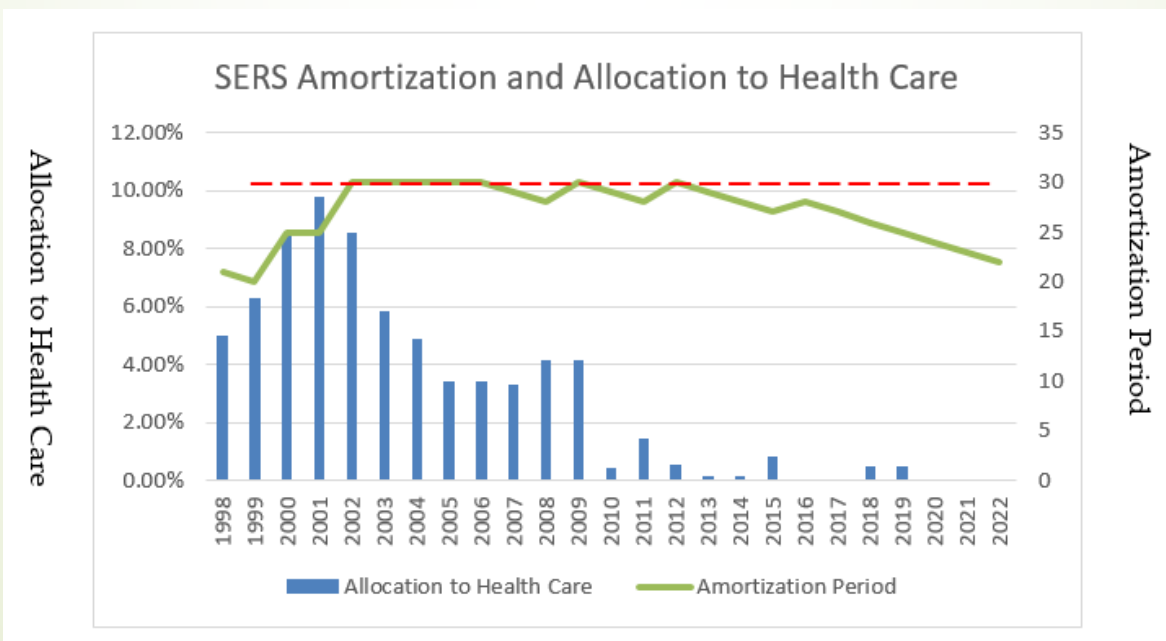
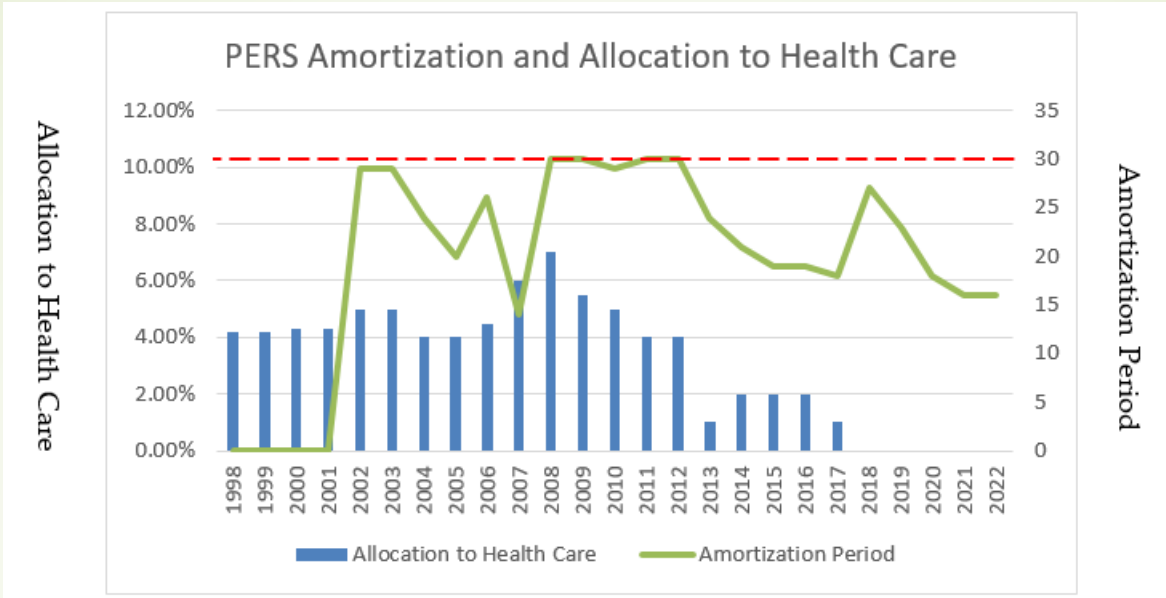
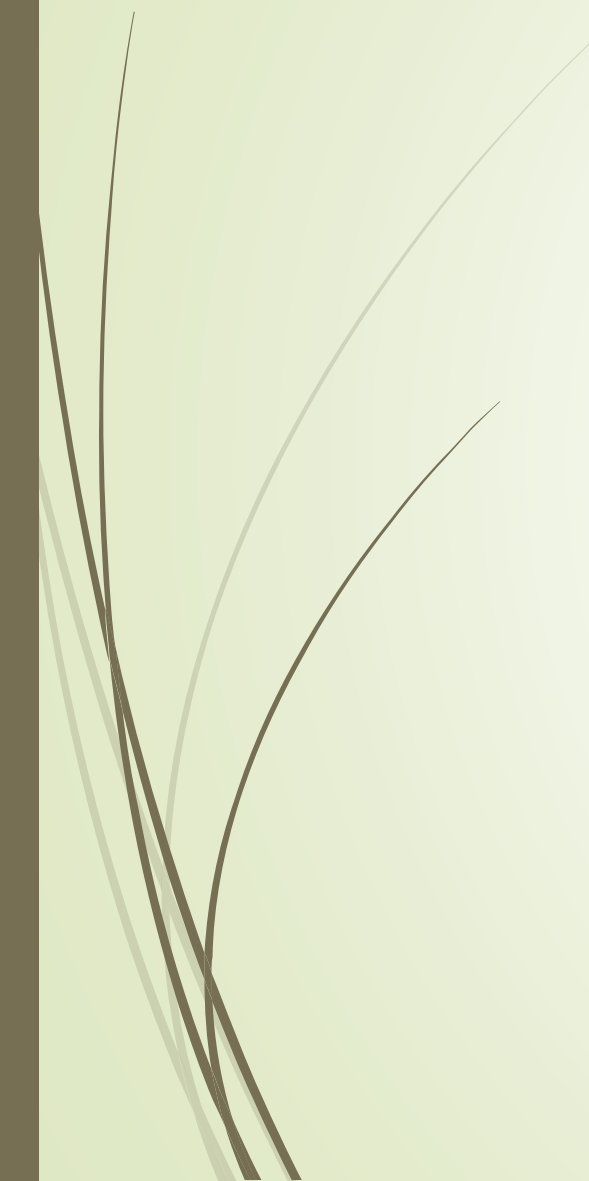
	PERS	STRS	OP&F	SERS	HPRS
2000	20.9%	16.4%	*	*	*
2005	19.7%	18.8%	16.60%	*	*
2010	19.9%	20.0%	21.60%	20.90%	19.50%
2015	21.6%	20.2%	25.20%	21.00%	21.90%
2020	24.0%	19.3%	27.50%	17.60%	20.30%
2022	24.3%	18.5%	26.60%	16.50%	19.00%

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- COLA grants by the Ohio retirement systems have fluctuated in the 1998-2022 period.
 - COLAs are a valuable post-retirement increase.
 - Ohio's previous fixed, non-compounding 3% resulted in retirees purchasing power increasing between 2004-2013.
 - Post-pension reform, COLAs have been experienced very differently by not only the system of retirement, but also the date of retirement—this has resulted in some retirees seeing a significant loss of purchasing power relative to other retirees.
 - A COLA that is clearly and explicitly tied to funding levels may provide a greater sense of stability and rationality to COLA grants, but it is unlikely that any change to future COLA grants will be met positively by the retiree population.

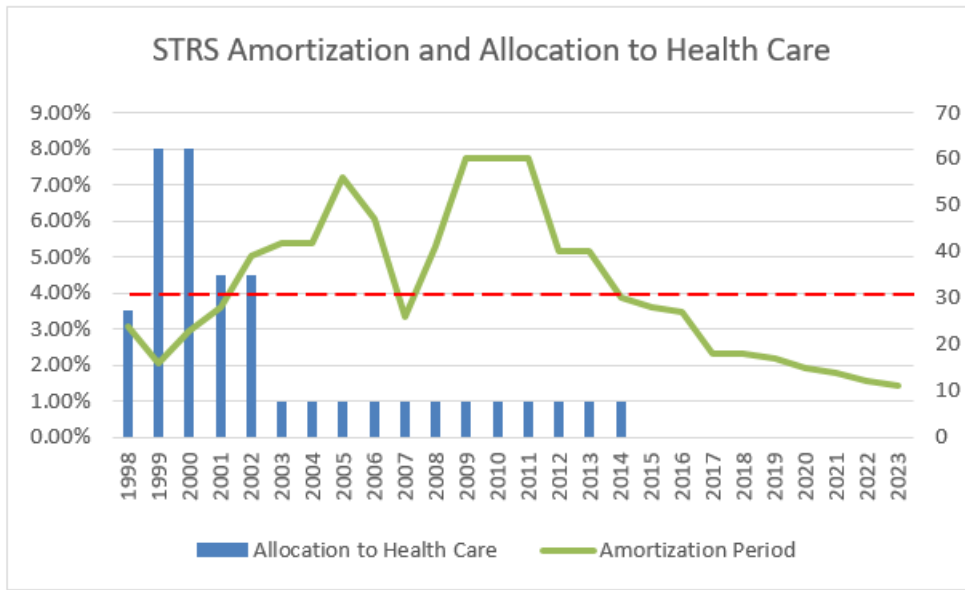
Provision of Health Care

Annual Health Care Expenditures (millions)						
	2000	2005	2010	2015	2022	
	Expenditure	Expenditure	Expenditure	Expenditure	Expenditure	Solvency
PERS	\$560	\$1,153	\$1,568	\$1,823	\$603	29 years
STRS	\$344	\$444	\$592	\$673	\$194	>100 years
SERS	\$141	\$219	\$237	\$200	\$132	38 Years
OP&F	\$112	\$163	\$160	\$213	\$89	24 Years
HPRS	\$5	\$9	\$12	\$14	\$10	11 years

Dollar Value (\$ millions) including investment earnings) of diverted Employer HC Contributions Since 1998					
	PERS	STRS	SERS	OP&F	HPRS
1998-2023	\$27,024	\$13,987	\$5,417	\$6,434	\$218
UAAL (2022)	\$19,611	\$20,203	\$5,484	\$7,605	\$329

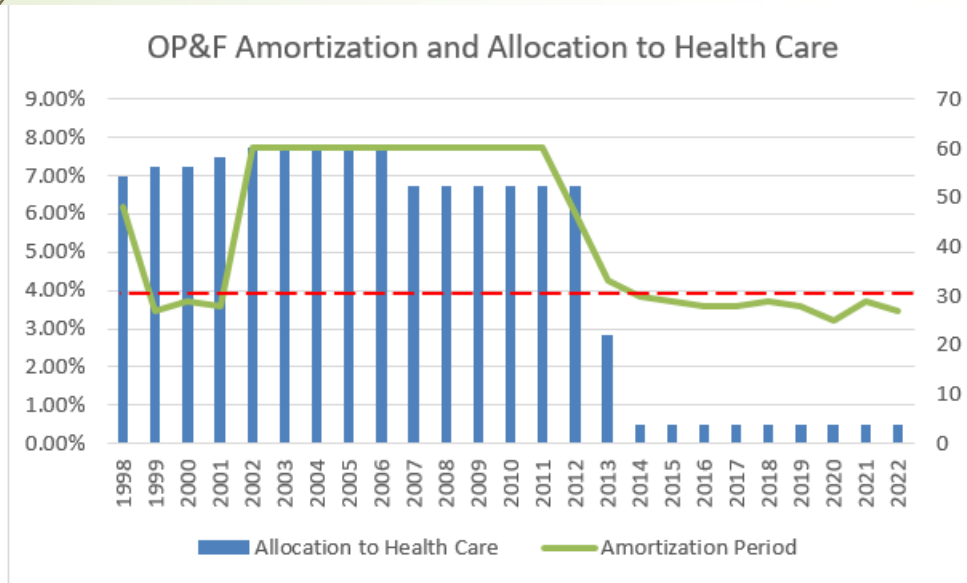


Allocation to Health Care



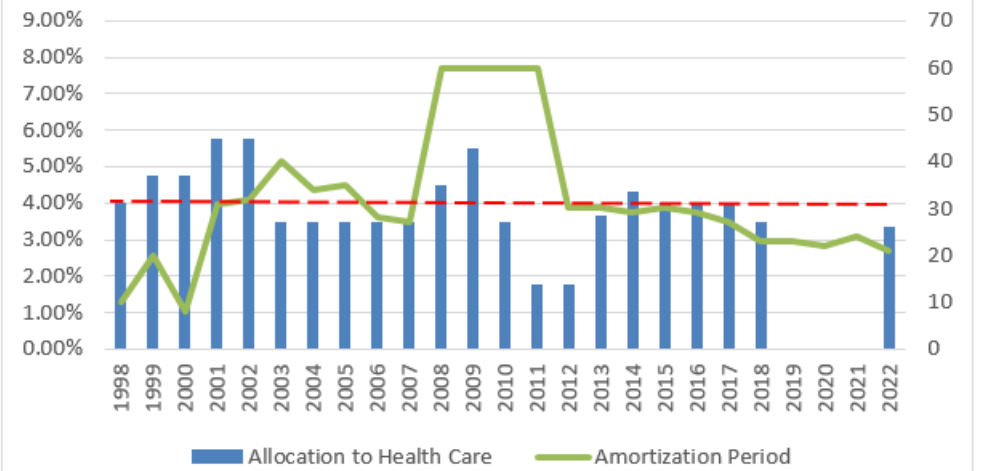
Amortization Period

Allocation to Health Care



Amortization Period


HPRS Amortization and Allocation to Health Care



Amortization Period


Investment Returns and Assumed Rates of Return

Year	PERS	STRS	SERS	OP&F	HPRS		60/40 Portfolio
Current Assumed Rate of Return	6.90%	7.00%	7.00%	7.50%	7.25%		7% (NASRA)
Average Annual Return: 1999-2022	6.14%	6.85%	6.52%	6.76%	5.88%		4.88%
Average Annual Return: 1999-2008	2.91%	3.30%	3.00%	3.33%	2.34%		1.09%
Average Annual Return: 2009-2022	8.50%	9.46%	9.11%	9.28%	8.47%		7.68%



Conclusions and path forward

- 1) While extraordinarily valuable, discretionary benefits, specifically health care benefits, must be subservient to statutory benefits. The diversion of assets to provide discretionary benefits has had a long and consequential tail effect on the systems;
- 2) Board authority has been extremely successful in allowing the retirement boards to maintain the financial health of the systems. This authority should be made uniform among the systems and more clearly defined in statute to improve transparency to system members on why board action must be taken;
- 3) In the long term, it would be valuable for the General Assembly to consider reducing the maximum amortization funding period to something at or below 20 years. It would also be valuable for the boards to consider adopting a closed or declining amortization period.

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- System comments from PERS and OP&F are included in the report.
 - ORSC staff express our appreciation to all the state retirement systems for their help in compiling and correcting data used in the report.