



# BUREAU OF BUSINESS & ECONOMIC RESEARCH

## Comparison of ERB and PERA Contributions & Benefits, 1958 - 2048

---

PRESENTED TO NM LEGISLATURE INVESTMENTS & PENSION OVERSIGHT COMMITTEE

RESEARCH FUNDED BY THE NEW MEXICO EDUCATION RETIREMENT BOARD

RESEARCH BY JEFFREY MITCHELL, PH.D AND JULIAN BACA, M.A.

[JEFFM@UNM.EDU](mailto:JEFFM@UNM.EDU)

[JBACA63@UNM.EDU](mailto:JBACA63@UNM.EDU)

OCTOBER 6, 2020

# Objectives and Purpose

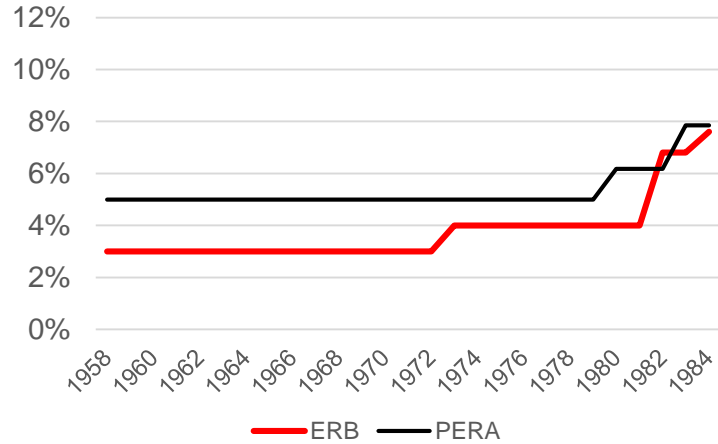
- ERB and PERA retirement plan contributions and benefits are determined by multiple variables: **a)** employee and employer contribution rates, **b)** required years of service, **c)** multipliers (e.g. 2.35% for current ERB), **d)** Final Average Salary period, **e)** COLA rates and conditions and (of course) **f)** salaries.
- Both ERB and PERA have made many changes to variables since 1958.
- This presentation compares ERA and PERA career contributions and lifelong retirement benefits for ‘typical employees’ for each plan.
- Comparisons are for 4 ‘cohorts’ corresponding to periods of employment (1958-83, 1978-2003, 1998-2023, 2018-2048 (projected using current terms)).
- Values (\$) are adjusted for inflation for comparability.
- Questions about fund performance, solvency and related questions are beyond the scope of the study.

# Assumptions and Data

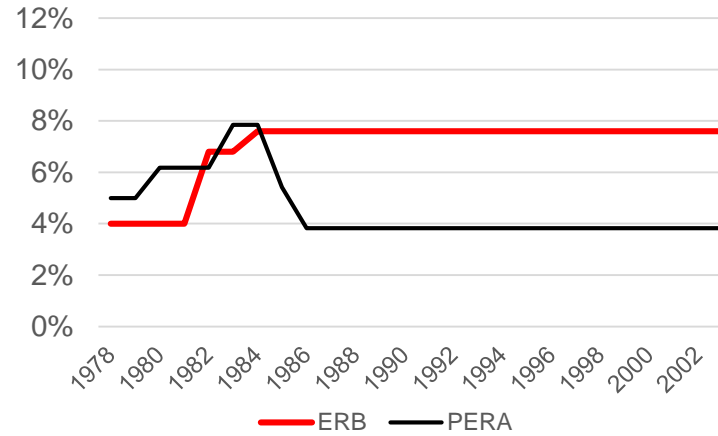
- Classes of employees included are Primary & Secondary school teachers (ERB) and Financial Analyst Advanced (PERA – chosen because of similar educational requirements)
- Employees were assumed to retire as soon as eligible.
- All hypothetical PERA employees considered in this analysis are in the State General Plan(s), and no other PERA plans are considered.
- Used blended male/female life expectancies for ERB members (and same expectations for PERA members for comparability).
- 2003-2019: Public Education Department and State Personnel Office annual salary data.
- 1958 - 2003: U.S. Census Annual Survey of Public Employment & Payroll data (provided by the State to the US Census Bureau). BBER checked data for consistency with State agency data for 2003-2018).
- Historical pension benefit data provided by PERA and ERB (contribution rates, multipliers, COLA rates).

# Employee Contribution Rates

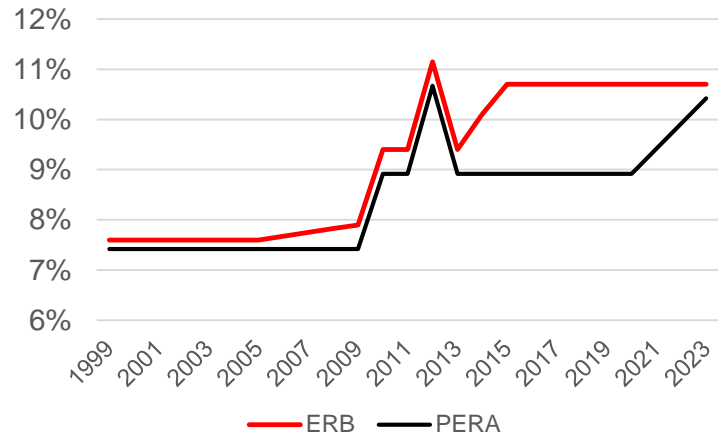
## 1958-1983



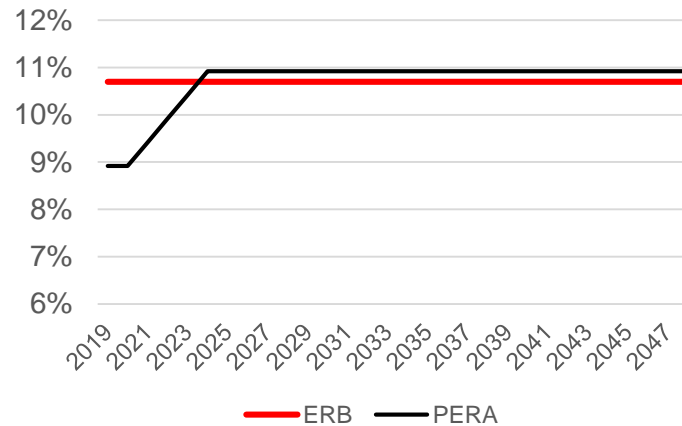
## 1978-2003



## 1998-2023



## 2018-2048



## Employee contributions

- ERB employee contributions (EC) have exceeded PERA EC since early-1980s to present.
- With recent changes, PERA EC will slightly exceed ERB EC beginning 2024.

## Multiplier

- The multiplier for ERB was increased from 2.0% for 1958 cohort to 2.35% for 1978, 1998 and 2018 cohorts.
- The multiplier for PERA was increased from 2.0% for 1958 cohort to 3.0% for 1978 and 1998 cohorts, and was reduced to 2.5% for the 2018 cohort.

## COLA increases

- PERA COLA has been above inflation (e.g. 3% early-1980s-2013), whereas ERB COLA has been fixed to inflation.
- PERA retirees have received increases 2 years after retirement, compared to increases to ERB retirees at 65 years of age and at 67 years for the 2018 cohort.
- Thus, PERA employees have received COLA increases for an average of 31.7 years, compared to 20.7 years for ERB employees.

# Three Worker Comparisons

1. Average PERA State Employee (ALL Classified and Exempt) ↔ Average Education Worker
  - Includes Elementary, Secondary, and Post Secondary workers.
2. Education Administrator-Operational (PERA) ↔ Average Teacher (ERB)
  - Minimum requirement of a Bachelor's degree in Education.
3. Education Administrator-Advanced (PERA) ↔ Average Teacher (ERB)
  - Minimum requirement of a Bachelor's degree in Education with preference for a Masters degree in Education – starting average salary higher than Operational position.
  - Over half of Elementary and Secondary teachers in U.S. have a Master's degree or higher in the U.S. (BLS, 2018)

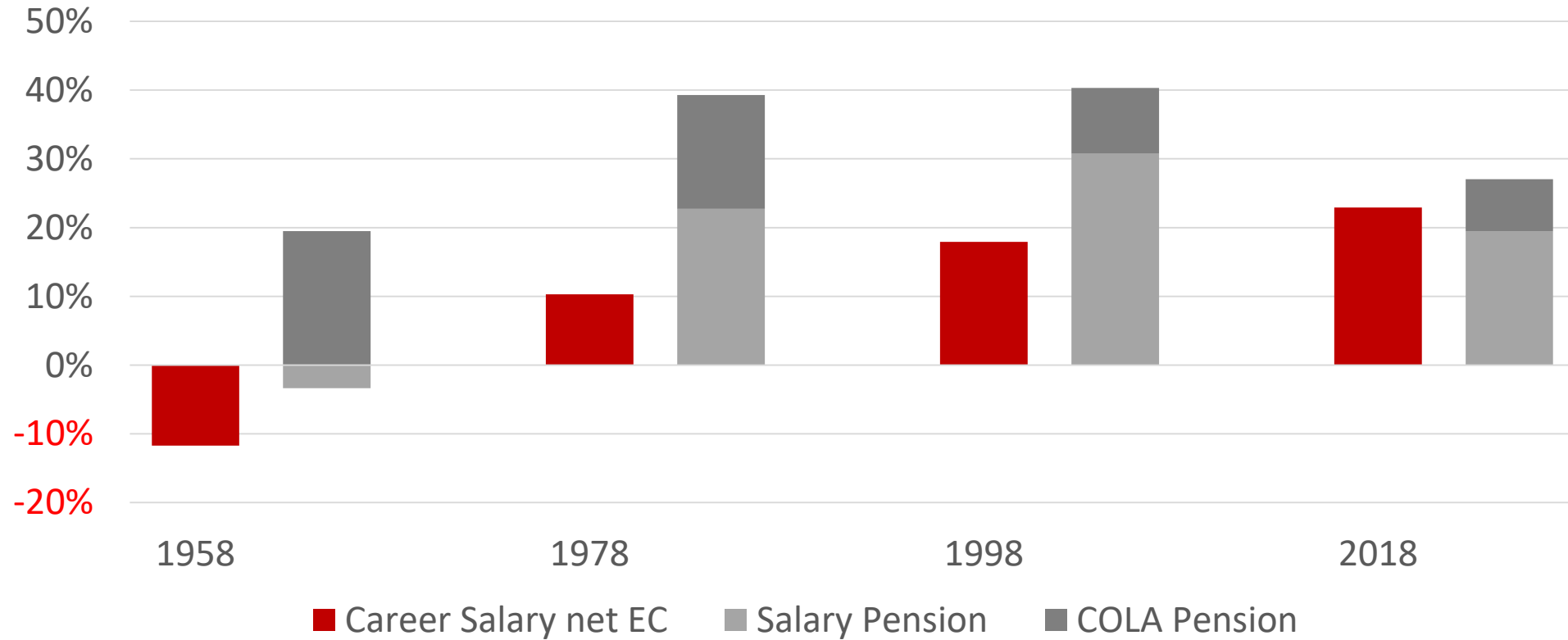
# Worker Type Comparison #1:

ALL Classified & Exempt State

and

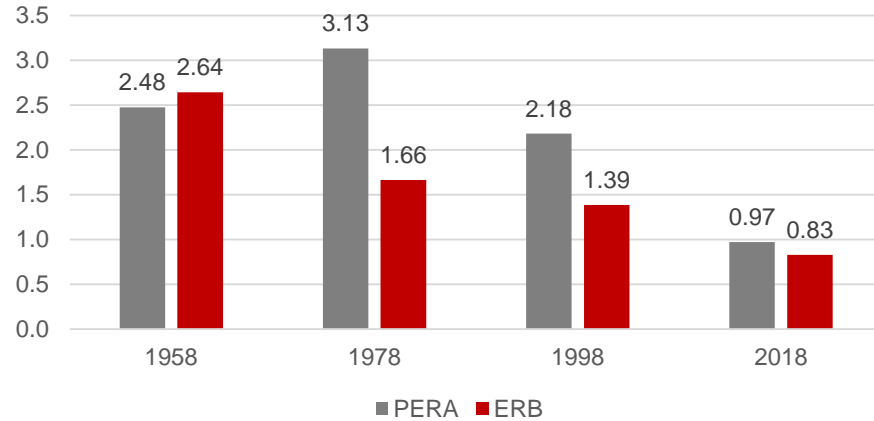
ALL Education Workers

# Differential in Career Salary Earnings (Red) and Pension Benefits (Grey)

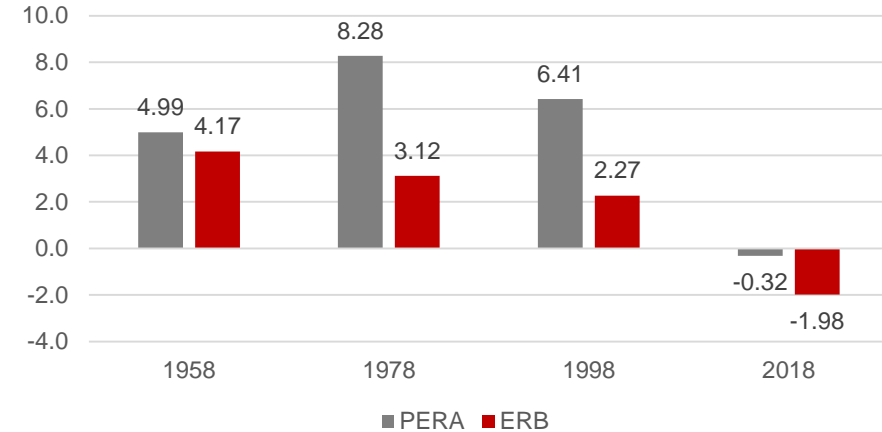


# Comparison of Key Ratios and Program Parameters

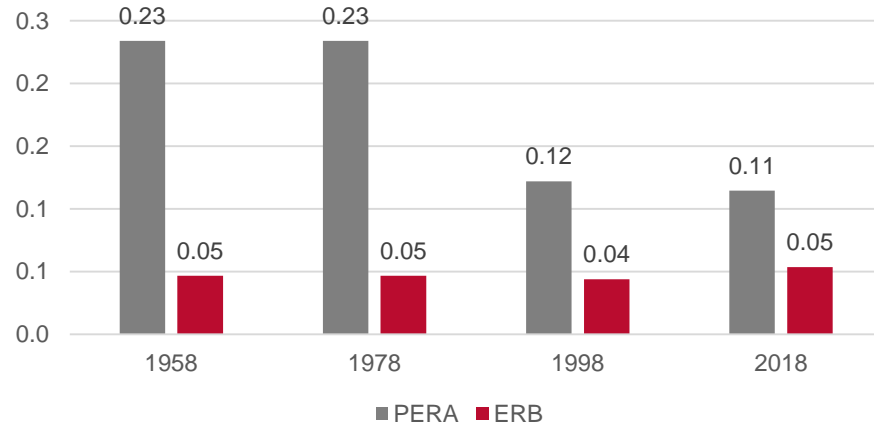
## Pension/ Employee Contributions



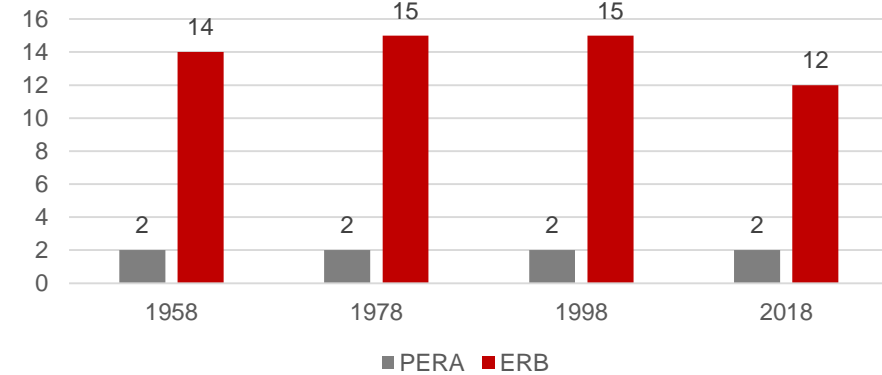
## Pension/ Avg. Career Salary (net of EC)



## COLA/Total Pension



## Wait Period to Receive COLA (Years)





# Key Metrics and Parameters, 1958 & 1978

1958	PERA	ERB	Diff.
Cum. Career Salary*	1,139,086	1,236,890	(97,804)
Employee Contributions	153,303	120,396	32,907
Cum. Career Salary Net of Employee Contributions (EC)	985,782	1,116,494	(130,712)
Cum. Career Salary + Cum. Pension - Employee Contributions	1,365,369	1,434,857	(69,487)
<b>Retirement Benefits**</b>			
COLA Payments	88,819	14,847	73,972
Pension Net of COLA	290,768	303,516	(12,748)
Pension	379,587	318,363	61,224
Pension - Employee Contributions	226,284	197,967	28,317
<b>Salary, Multiplier, COLA and Other Inputs*</b>			
Average COLA	2.92%	1.72%	1.20%
COLA Deferral Period	2 years	Age 65	-
Years Receiving COLA	29	17	12 years
Multiplier	2.00%	2.00%	-
Years of Service	25	26	1
Average Salary over Career	45,375	47,530	(2,155)
Average Annual Pension	36,021	27,375	8,646
<b>Key Ratios</b>			
Pension/Employee Contributions	2.48	2.64	-
Pension Net EE Contrib/Avg Career Salary	4.99	4.17	-
Annual Pension/Annual Salary	0.79	0.58	-
COLA/Total Pension	0.23	0.05	-

1978	PERA	ERB	Diff.
Cum. Career Salary*	1,177,010	1,110,569	66,441
Employee Contributions	183,175	209,563	(26,388)
Cum. Career Salary Net of Employee Contributions (EC)	993,835	901,006	92,829
Cum. Career Salary + Cum. Pension -Employee Contributions	1,567,647	1,249,301	318,346
<b>Retirement Benefits**</b>			
COLA Payments	109,178	14,152	95,026
Pension Net of COLA	464,634	334,142	130,491
Pension	573,812	348,295	225,518
Pension - Employee Contributions	390,637	138,731	251,906
<b>Salary, Multiplier, COLA and Other Inputs*</b>			
Average COLA	1.63%	1.46%	0.16%
COLA Deferral Period	2 years	Age 65	-
Years Receiving COLA	32	20	12 years
Multiplier	3.00%	2.35%	0.65%
Years of Service	25	25	-
Average Salary over Career	47,171	44,536	2,636
Average Annual Pension	50,638	28,994	21,644
<b>Key Ratios</b>			
Pension/Employee Contributions	3.13	1.66	-
Pension Net EE Contrib/Avg Career Salary	8.28	3.12	-
Annual Pension/Annual Salary	1.07	0.65	-
COLA/Total Pension	0.19	0.04	-

# Key Metrics and Parameters, 1998 & 2018

1998	PERA	ERB	Diff.
Cum. Career Salary*	1,335,015	1,158,816	176,198
Employee Contributions	291,174	273,529	17,645
Cum. Career Salary Net of Employee Contributions (EC)	1,043,841	885,287	158,553
Cum. Career Salary + Cum. Pension -Employee Contributions	1,679,067	1,264,344	414,723
<b>Retirement Benefits**</b>			
COLA Payments	77,477	16,637	60,840
Pension Net of COLA	557,749	362,419	195,330
Pension	635,227	379,056	256,170
Pension - Employee Contributions	344,052	105,528	238,525
<b>Salary, Multiplier, COLA and Other Inputs*</b>			
Average COLA	1.38%	1.44%	-0.06%
COLA Deferral Period	2 years	Age 65	
Years Receiving COLA	35	23	12 years
Multiplier	3.00%	2.35%	0.65%
Years of Service	25	25	-
Average Salary over Career	53,646	46,455	7,191
Average Annual Pension	54,503	31,460	23,043
<b>Key Ratios</b>			
Pension/Employee Contributions	2.18	1.39	-
Pension Net EE Contrib/Avg Career Salary	6.41	2.27	-
Annual Pension/Annual Salary	1.02	0.68	
COLA/Total Pension	0.12	0.04	0%

2018	PERA	ERB	Diff.
Cum. Career Salary*	1,717,946	1,425,023	292,923
Employee Contributions	633,661	542,921	90,740
Cum. Career Salary Net of Employee Contributions (EC)	1,084,286	882,102	202,183
Cum. Career Salary + Cum. Pension -Employee Contributions	1,699,642	1,331,019	368,623
<b>Retirement Benefits**</b>			
COLA Payments	70,422	24,006	46,416
Pension Net of COLA	544,934	424,910	120,024
Pension	615,356	448,917	166,440
Pension - Employee Contributions	(18,304)	(94,004)	75,700
<b>Salary, Multiplier, COLA and Other Inputs*</b>			
Average COLA	1.38%	1.44%	0.06%
COLA Deferral Period	2 years	Age 67	
Years Receiving COLA	31	22	9 years
Multiplier	2.50%	2.35%	0.15%
Years of Service	30	30	-
Average Salary over Career	57,265	47,499	9,765
Average Annual Pension	52,917	37,850	15,067
<b>Key Ratios</b>			
Pension/Employee Contributions	0.97	0.83	-
Pension Net EE Contrib/Avg Career Salary	-0.32	-1.98	-
Annual Pension/Annual Salary	0.92	0.80	
COLA/Total Pension	0.11	0.05	-

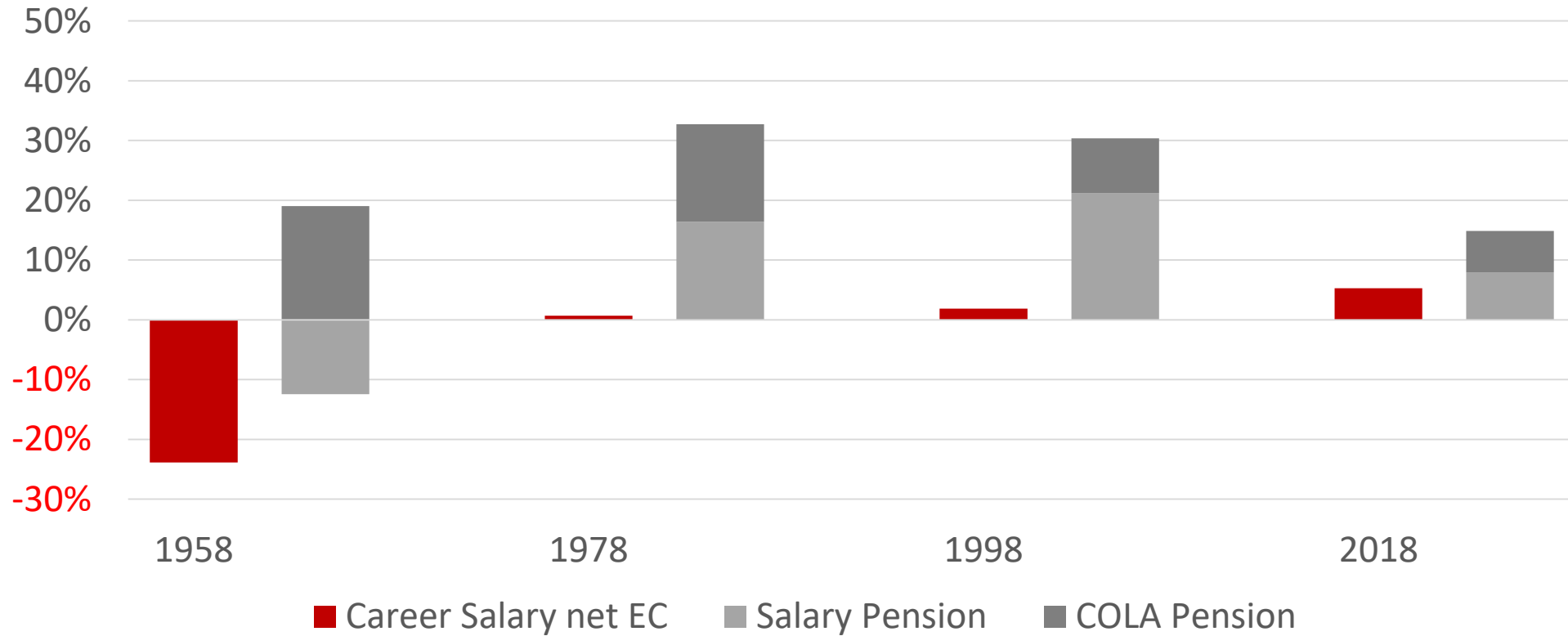
# Worker Type Comparison #2:

Education Administrator-Operational (PERA)

and

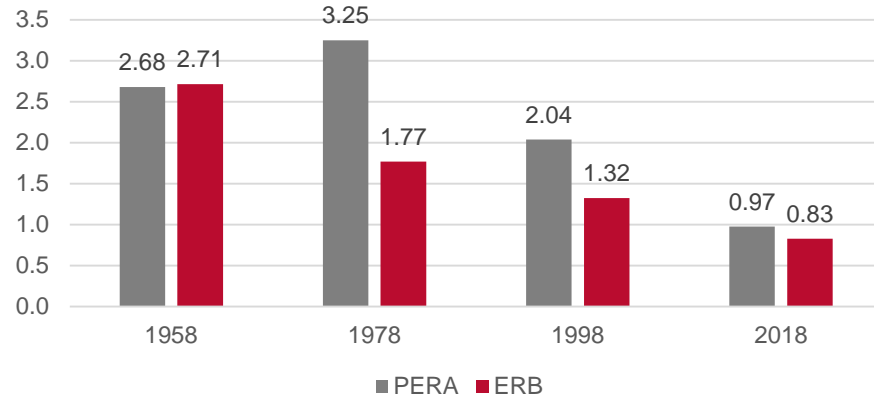
Average Teacher (ERB)

# Differential in Career Salary Earnings (Red) and Pension Benefits (Grey)

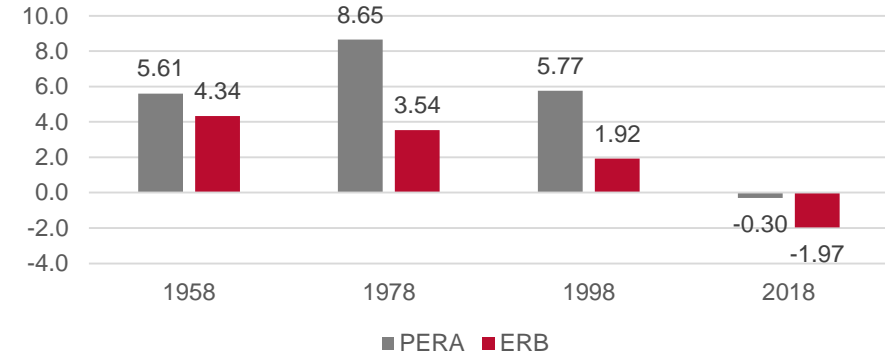


# Comparison of Key Ratios and Program Parameters

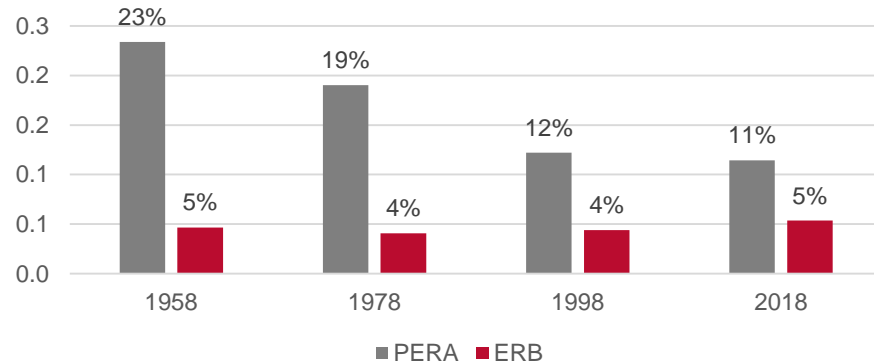
## Pension/ Employee Contributions



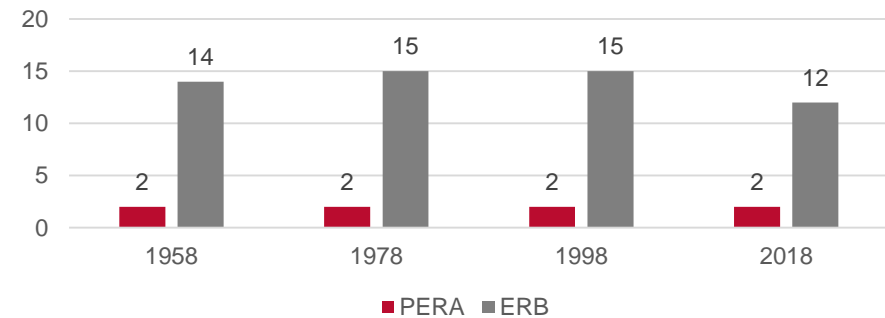
## Pension/ Avg. Career Salary (net of EC)



## COLA/Total Pension



## Wait Period to Receive COLA (Years)



# Key Metrics and Parameters, 1958 & 1978

1958	PERA	ERB	Diff.
Cum. Career Salary*	997,221	1,257,987	(260,766)
Employee Contributions	132,848	122,383	10,465
Cum. Career Salary Net of Employee Contributions (EC)	864,373	1,135,604	(271,231)
Cum. Career Salary + Cum. Pension - Employee Contributions	1,220,042	1,467,746	(247,704)
<b>Retirement Benefits**</b>			
COLA Payments	83,222	15,489	67,733
Pension Net of COLA	272,447	316,652	(44,205)
Pension	355,669	332,142	23,528
Pension - Employee Contributions	222,821	209,759	13,062
<b>Salary, Multiplier, COLA and Other Inputs*</b>			
Average COLA	2.92%	1.72%	1.2%
COLA Deferral Period	2 years	Age 65	-
Years Receiving COLA	29	17	12 years
Multiplier	2.00%	2.00%	0.0%
Years of Service	25	26	(1)
Average Salary over Career	39,749	48,318	(8,569)
Average Annual Pension	33,751	28,388	5,363
<b>Key Ratios</b>			
Pension/EE Contributions	2.68	2.71	-
Pension Net EE Contrib/Avg Career Salary	5.61	4.34	-
Annual Pension/Annual Salary	0.85	0.59	-
COLA/Total Pension	0.23	0.05	-

1978	PERA	ERB	Diff.
Cum. Career Salary*	1,140,327	1,175,543	(35,216)
Employee Contributions	175,585	217,245	(41,660)
Cum. Career Salary Net of Employee Contributions (EC)	964,742	958,298	6,444
Cum. Career Salary + Cum. Pension - Employee Contributions	1,535,432	1,342,355	193,077
<b>Retirement Benefits**</b>			
COLA Payments	108,584	15,605	92,979
Pension Net of COLA	462,106	368,452	93,654
Pension	570,690	384,057	186,633
Pension - Employee Contributions	395,105	166,812	228,292
<b>Salary, Multiplier, COLA and Other Inputs*</b>			
Average COLA	1.63%	1.46%	0.2%
COLA Deferral Period	2 years	Age 65	-
Years Receiving COLA	32	20	12 years
Multiplier	3.00%	2.35%	0.65%
Years of Service	25	25	-
Average Salary over Career	45,676	47,136	(1,461)
Average Annual Pension	50,362	31,971	18,391
<b>Key Ratios</b>			
Pension/Employee Contributions	3.25	1.77	-
Pension Net EE Contrib/Avg Career Salary	8.65	3.54	-
Annual Pension/Annual Salary	1.10	0.68	-
COLA/Total Pension	0.19	0.04	-

# Key Metrics and Parameters, 1998 & 2018

1998	PERA	ERB	Diff.
Cum. Career Salary*	1,260,382	1,262,647	(2,265)
Employee Contributions	280,208	300,611	(20,404)
Cum. Career Salary Net of Employee Contributions (EC)	980,174	962,036	18,139
Cum. Career Salary + Cum. Pension - Employee Contributions	1,550,643	1,359,300	191,343
<u>Retirement Benefits**</u>			
COLA Payments	69,579	17,436	52,143
Pension Net of COLA	500,890	379,828	121,061
Pension	570,468	397,264	173,204
Pension - Employee Contributions	290,261	96,653	193,608
<u>Salary, Multiplier, COLA and Other Inputs*</u>			
Average COLA	1.38%	1.44%	-0.1%
COLA Deferral Period	2 years	Age 65	-
Years Receiving COLA	35	23	12 years
Multiplier	3.00%	2.35%	0.65%
Years of Service	25	25	-
Average Salary over Career	50,314	50,395	(81)
Average Annual Pension	48,947	32,971	15,976
<u>Key Ratios</u>			
Pension/Employee Contributions	2.04	1.32	-
Pension Net EE Contrib/Avg Career Salary	5.77	1.92	-
Annual Pension/Annual Salary	0.97	0.65	
COLA/Total Pension	0.12	0.04	

2018	PERA	ERB	Diff.
Cum. Career Salary*	1,541,211	1,493,055	48,155
Employee Contributions	567,882	568,616	(734)
Cum. Career Salary Net of Employee Contributions (EC)	973,329	924,439	48,890
Cum. Career Salary + Cum. Pension - Employee Contributions	1,525,953	1,394,920	131,033
<u>Retirement Benefits**</u>			
COLA Payments	63,243	25,159	38,084
Pension Net of COLA	489,381	445,321	44,060
Pension	552,624	470,481	82,143
Pension - Employee Contributions	(15,258)	(98,136)	82,878
<u>Salary, Multiplier, COLA and Other Inputs*</u>			
Average COLA	1.38%	1.44%	-0.1%
COLA Deferral Period	2 years	Age 67	-
Years Receiving COLA	31	22	9 years
Multiplier	2.50%	2.35%	0.15%
Years of Service	30	30	-
Average Salary over Career	51,393	49,784	1,609
Average Annual Pension	47,523	39,668	7,854
<u>Key Ratios</u>			
Pension/Employee Contributions	0.97	0.83	-
Pension Net EE Contrib/Avg Career Salary	-0.30	-1.97	-
Annual Pension/Annual Salary	0.92	0.80	
COLA/Total Pension	0.11	0.05	-

# Worker Type Comparison #3:

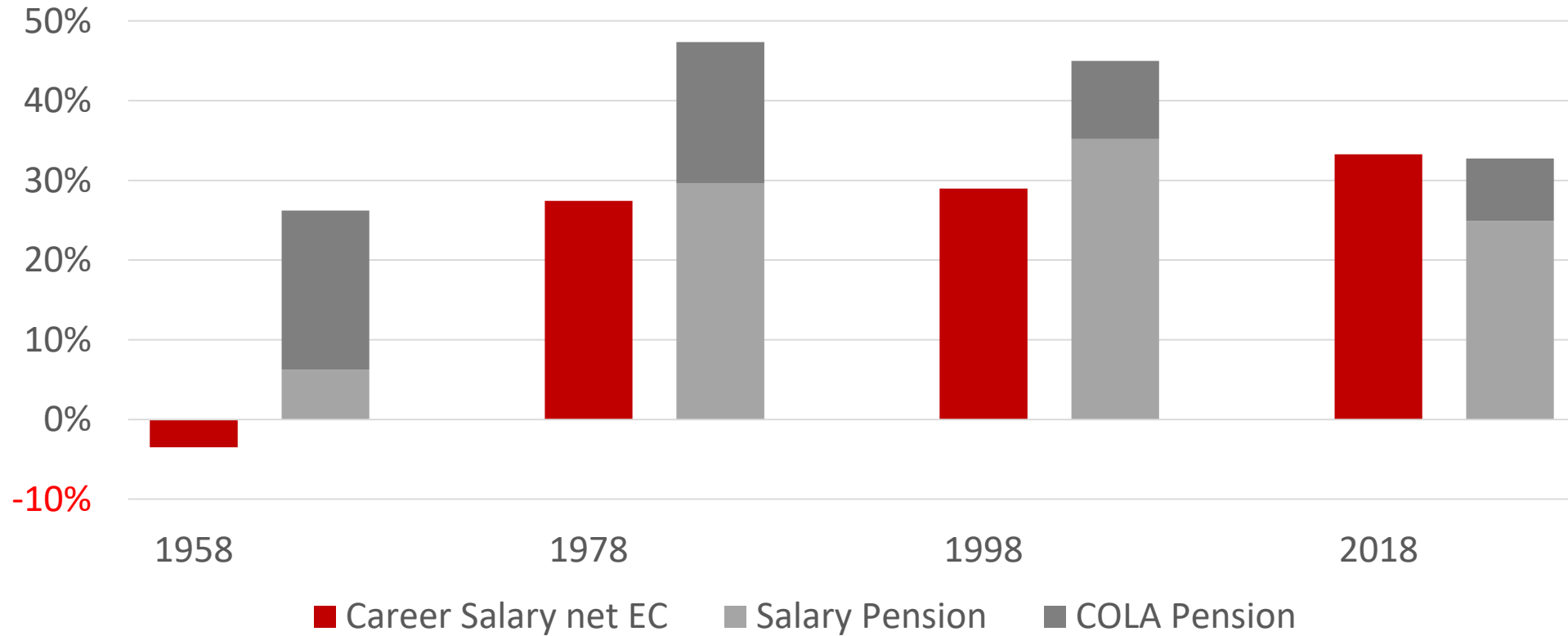
Education Administrator-Advanced (PERA)

and

Average Teacher (ERB)

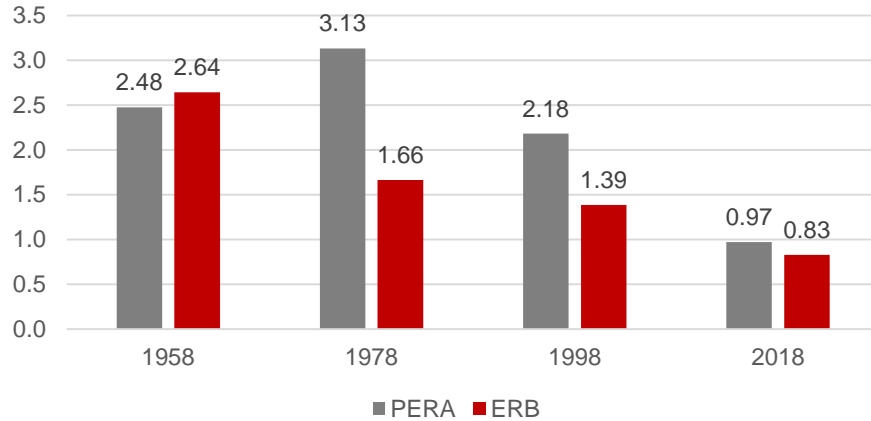


# Differential in Career Salary Earnings (Red) and Pension Benefits (Grey)

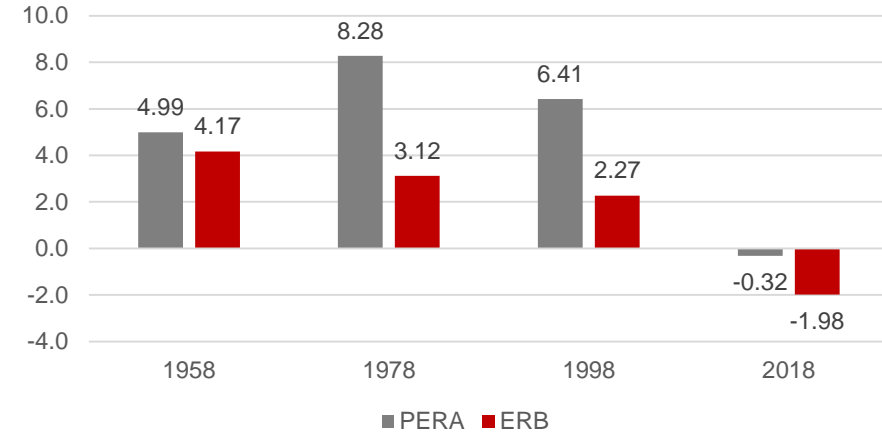


# Comparison of Key Ratios and Program Parameters

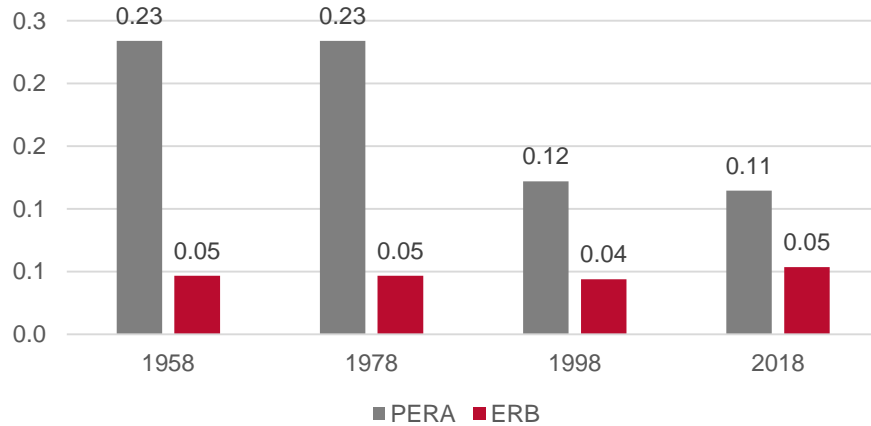
## Pension/ Employee Contributions



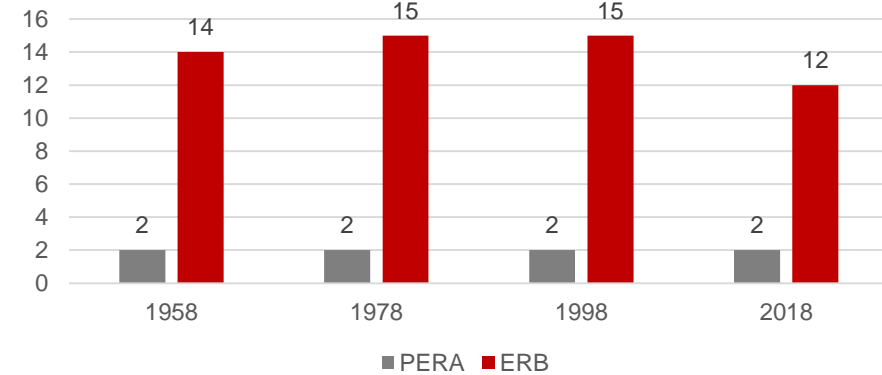
## Pension/ Avg. Career Salary (net of EC)



## COLA/Total Pension



## Wait Period to Receive COLA (Years)



# Key Metrics and Parameters, 1958 & 1978

1958	PERA	ERB	Diff.
Cum. Career Salary*	1,262,141	1,257,987	4,154
Employee Contributions	166,219	122,383	43,836
Cum. Career Salary Net of Employee Contributions (EC)	1,095,922	1,135,604	(39,682)
Cum. Career Salary + Cum. Pension - Employee Contributions	1,546,078	1,467,746	78,332
<u>Retirement Benefits**</u>			
COLA Payments	105,331	15,489	89,842
Pension Net of COLA	344,825	316,652	28,172
Pension	450,156	332,142	118,014
Pension - Employee Contributions	283,937	209,759	74,178
<u>Salary, Multiplier, COLA and Other Inputs*</u>			
Average COLA	2.92%	1.72%	1.20%
COLA Deferral Period	2 years	Age 65	
Years Receiving COLA	29	17	12 years
Multiplier	2.00%	2.00%	-
Years of Service	25	26	(1)
Average Salary over Career	50,837	48,318	2,519
Average Annual Pension	42,718	28,388	14,329
<u>Key Ratios</u>			
Pension/Employee Contributions	2.71	2.71	-
Pension Net EE Contrib/Avg Career Salary	5.59	4.34	-
Annual Pension/Annual Salary	0.84	0.59	
COLA/Total Pension	0.23	0.05	-

1978	PERA	ERB	Diff.
Cum. Career Salary*	1,443,264	1,175,543	267,722
Employee Contributions	222,231	217,245	4,986
Cum. Career Salary Net of Employee Contributions (EC)	1,221,033	958,298	262,736
Cum. Career Salary + Cum. Pension - Employee Contributions	1,950,589	1,342,355	608,234
<u>Retirement Benefits**</u>			
COLA Payments	144,688	15,605	129,083
Pension Net of COLA	584,868	368,452	216,416
Pension	729,556	384,057	345,498
Pension - Employee Contributions	507,325	166,812	340,512
<u>Salary, Multiplier, COLA and Other Inputs*</u>			
Average COLA	1.63%	1.46%	0.16%
COLA Deferral Period	2 years	Age 65	
Years Receiving COLA	32	20	12 years
Multiplier	3.00%	2.35%	0.65%
Years of Service	25	25	-
Average Salary over Career	57,810	47,136	10,673
Average Annual Pension	65,119	31,971	33,148
<u>Key Ratios</u>			
Pension/Employee Contributions	3.28	1.77	-
Pension Net EE Contrib/Avg Career Salary	8.78	3.54	-
Annual Pension/Annual Salary	1.13	0.68	
COLA/Total Pension	0.20	0.04	-

# Key Metrics and Parameters 1998 & 2018)

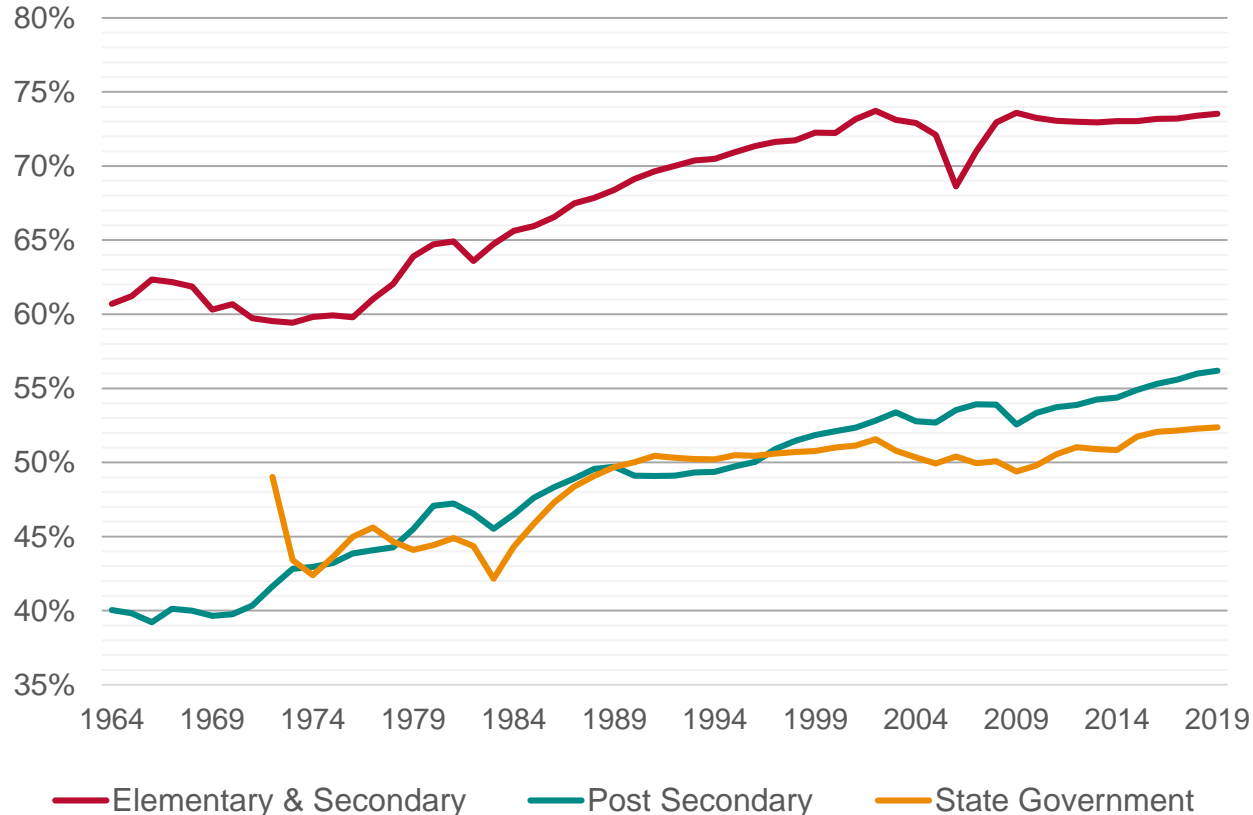
1998	PERA	ERB	Diff.
Cum. Career Salary*	1,595,213	1,262,647	332,566
Employee Contributions	354,647	300,611	54,036
Cum. Career Salary Net of Employee Contributions (EC)	1,240,566	962,036	278,530
Cum. Career Salary + Cum. Pension - Employee Contributions	1,962,584	1,359,300	603,284
<u>Retirement Benefits**</u>			
COLA Payments	88,063	17,436	70,627
Pension Net of COLA	633,955	379,828	254,127
Pension	722,018	397,264	324,754
Pension - Employee Contributions	367,371	96,653	270,718
<u>Retirement Benefits**</u>			
Average COLA	1.38%	1.44%	-0.06%
COLA Deferral Period	2 years	Age 65	0
Years Receiving COLA	35	23	12 years
Multiplier	2.35%	3.00%	-0.65%
Years of Service	25	25	-
Average Salary over Career	63,680	50,395	13,285
Average Annual Pension	61,950	32,971	28,979
<u>Key Ratios</u>			
Pension/Employee Contributions	2.04	1.32	-
Pension Net EE Contrib/Avg Career Salary	5.77	1.92	-
Annual Pension/Annual Salary	0.97	0.65	
COLA/Total Pension	0.12	0.04	

2018	PERA	ERB	Diff.
Cum. Career Salary*	1,950,646	1,493,055	457,591
Employee Contributions	718,744	568,616	150,128
Cum. Career Salary Net of Employee Contributions (EC)	1,231,902	924,439	307,462
Cum. Career Salary + Cum. Pension - Employee Contributions	1,931,334	1,394,920	536,415
<u>Retirement Benefits**</u>			
COLA Payments	80,044	25,159	54,885
Pension Net of COLA	619,389	445,321	174,068
Pension	699,433	470,481	228,952
Pension - Employee Contributions	(19,311)	(98,136)	78,824
<u>Retirement Benefits**</u>			
Average COLA	1.38%	1.44%	-0.06%
COLA Deferral Period	2 years	Age 67	
Years Receiving COLA	31	22	9 years
Multiplier	2.50%	2.35%	0.15%
Years of Service	30	30	-
Average Salary over Career	65,000	49,784	15,216
Average Annual Pension	60,148	39,668	20,479
<u>Key Ratios</u>			
Pension/Employee Contributions	0.97	0.83	-
Pension Net EE Contrib/Avg Career Salary	-0.30	-1.97	-
Annual Pension/Annual Salary	0.93	0.80	
COLA/Total Pension	0.11	0.05	-
*Inflation adjusted \$-dollars.			

\*\*Discounted, present value \$-dollars

# Gender of State Employees

Women as % of Total Employment in Public Education and State Employment in U.S., 1964-2019 (BLS)



- Based on national data from the Bureau for Labor Statistics dating back to the 1960's women have consistently accounted for the majority of Primary & Secondary workers, and this percentage has grown steadily, to 3 in 4 workers in 2019.
- Based on the national data, the majority of ERB members have been historically and presently are female.
- Among State employees nationally, males outnumbered females through the late-1980's but by the early 1990's women accounted for half State workers.

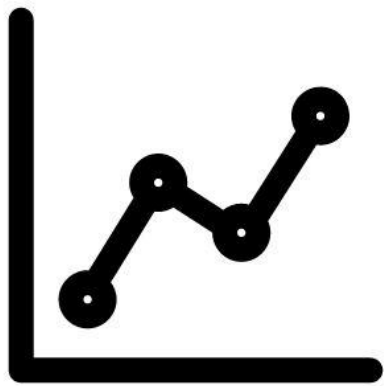
# Conclusions

PERA has paid higher retirement benefits than ERB relative to contributions since the 1978 cohort.

- This has been true for all three worker comparisons – e.g. all members, K-12 Teachers ↔ Education Administrator-Operational, and K-12 Teachers ↔ Education Administrator-Advanced.
- Differences were greatest for cohorts beginning 1978 and 1998, when PERA benefits relative to employee contributions were between 54% and 88% higher than those of ERB.
- Recent changes have been significant – e.g. PERA multiplier reduced from 3.0% to 2.5%; Years of Service increased, in effect, from 25 to 30 years for both PERA and ERB.
- These changes have reduced the differences between PERA and ERB retirees, but under current terms PERA employees hired in 2018 will receive on average 17% more retirement benefits net of employee contributions.
- COLA payments have accounted for much of the difference – PERA COLA increases have been consistently higher and kick in after 2 years (52 y/o, now 57 y/o) vs. ERB at 65 y/o (now 67 y/o).



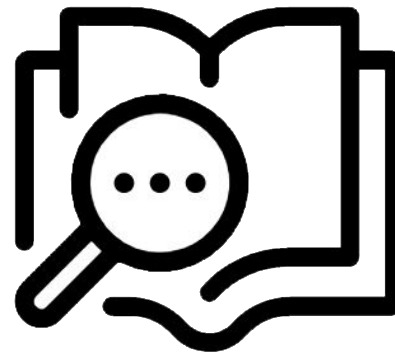
# BUREAU OF BUSINESS & ECONOMIC RESEARCH



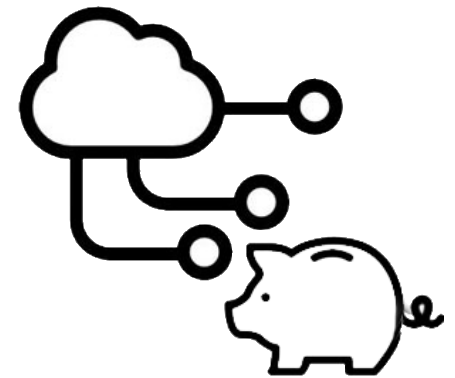
ECONOMIC FORECAST



DATA DASHBOARDS



RESEARCH



DATA BANK