



TCDRS Retirement Presentation

FY2020 Budget Workshop

Benefits Provided

Deposit Rate	7%
Matching Rate	200%*
Vesting Period	8 years
Retirement Eligibility	
<ul style="list-style-type: none">• Age 60 & 8 years of service (Vesting)• At any age with 30 years of service• Age + years of service = 75	
Guaranteed Interest Rate	7%

*for employee contributions made on or after 1/1/2011

County Comparison

County	Employee Contribution %	County Match %	Years of Service for Vesting	Retirement Eligibility Rule	Most Recent Retiree COLA	Type and Rate of Retiree COLA	Group Term Life Benefit
Collin	7	200	8	75	2018	CPI 40%	Active & Retiree
Bexar*	7	200	8	75	2018	CPI 10%	No
Dallas	7	200	10	80	-	-	No
Denton*	7	225	8	75	2017	CPI 80%	Active
El Paso*	7	250	8	75	2016	Flat 1%	No
Fort Bend	7	200	8	75	2014	CPI 10%	No
Harris	7	225	8	75	-	-	No
Hidalgo*	7	200	8	75	2019	Flat 2%	No
Montgomery	6	250	8	75	2017	CPI 10%	No
Tarrant	7	200	8	75	2019	Flat 1%	No
Travis	7	225	8	75	2019	CPI 50%	No
Williamson	7	250	8	75	2019	Flat 1%	No

*Allows 20 years of service for retirement at any age, all others require 30 years of service for retirement at any age.

City Comparison

City	Employee Contribution %	City Match %	Years of Service for Vesting	Retirement Eligibility Rule	Rate of Retiree COLA**	Retiree Death Benefit
Allen	7	200	5	Age 60+5 yrs.	CPI 70%	Active & Retiree
Frisco	7	200	5	Age 60+5 yrs.	CPI 70%	Active & Retiree
McKinney	7	200	5	Age 60+5 yrs.	CPI 70%	Active & Retiree
Plano	7	200	5	Age 60+5 yrs.	CPI 70%	No
Richardson*	7	200	5	Age 60+5 yrs.	CPI 50%	No
Wylie	7	200	5	Age 60+5 yrs.	CPI 70%	Active & Retiree

*Requires 25 years of service for retirement at any age, all others only require 20 years of service.

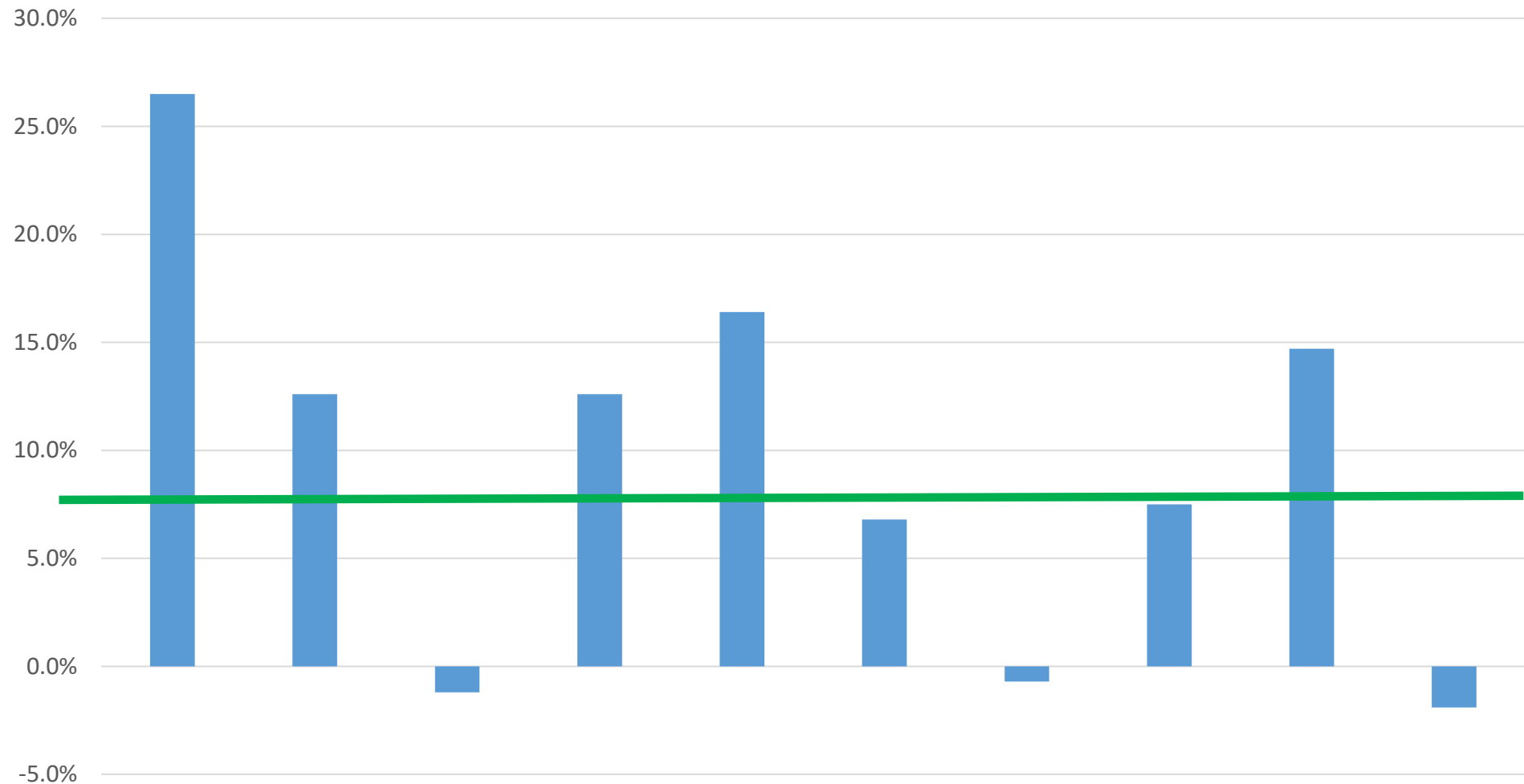
**All surveyed cities have adopted a repeating COLA that remains in effect until recinded

Portfolio Rate of Return - TCDRS

Year	Return
2009	26.5%
2010	12.6%
2011	-1.2%
2012	12.6%
2013	16.4%
2014	6.8%
2015	-0.7%
2016	7.5%
2017	14.7%
2018	-1.9%

Total fund return as of 12/2018	
1 year	-1.9%
3 years	6.6%
5 years	5.1%
10 years	9.0%
20 years	6.4%
30 years	8.0%

Rate of Return (Illustration Only) - TCDRS



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Rate of Return	26.5%	12.6%	-1.2%	12.6%	16.4%	6.8%	-0.7%	7.5%	14.7%	-1.9%

— 8% return required to cover guaranteed return

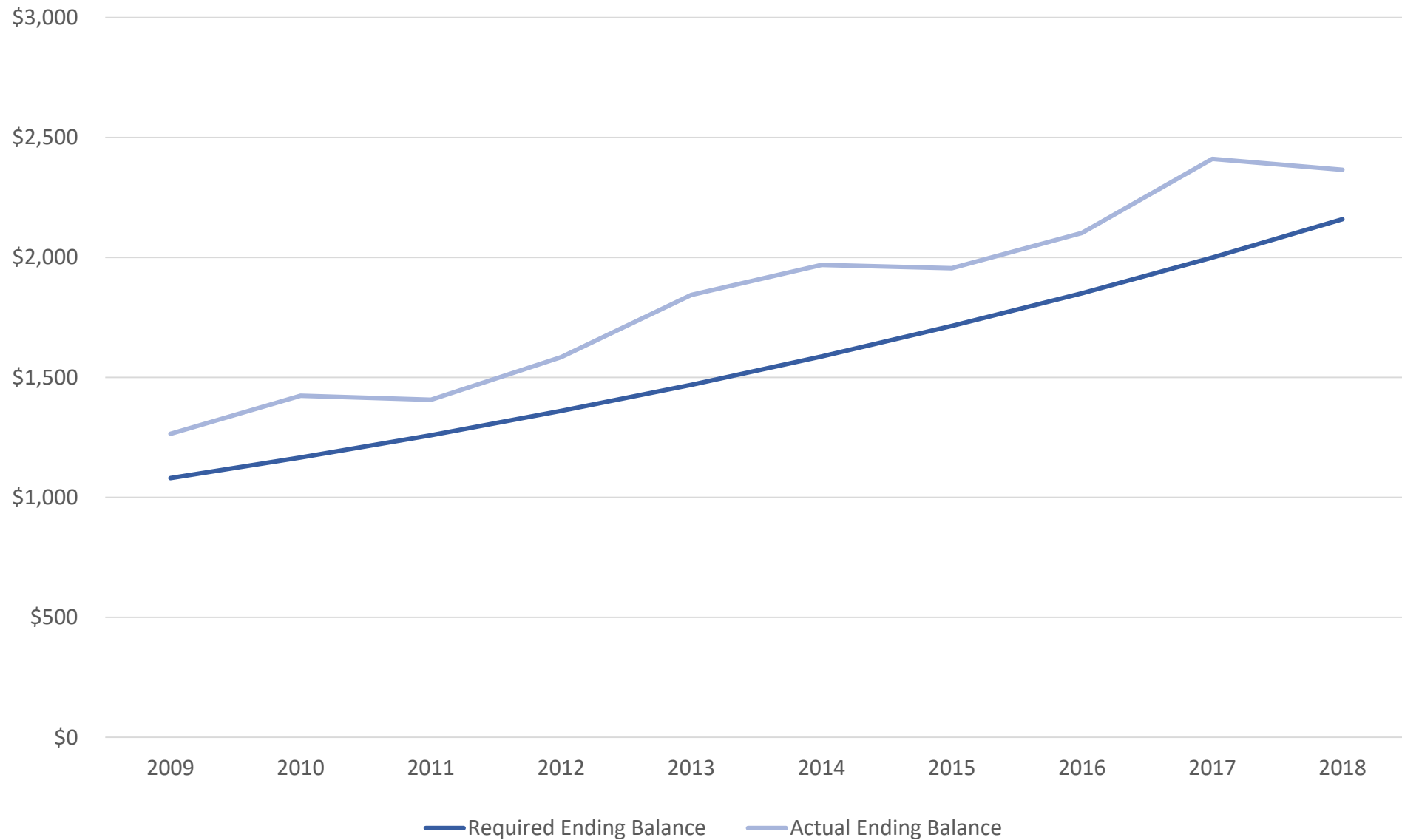
10 Year Rate of Return (Illustration Only) - TCDRS

Year	Required Account Value	Required Rate of Return	Required Ending Balance	Actual Account Value	Actual Rate of Return	Actual Ending Balance
2009	\$1,000	\$80	\$1,080	\$1,000	\$265	\$1,265
2010	\$1,080	\$86	\$1,166	\$1,265	\$159	\$1,424
2011	\$1,166	\$93	\$1,259	\$1,424	-\$17	\$1,407
2012	\$1,259	\$101	\$1,360	\$1,407	\$177	\$1,584
2013	\$1,360	\$109	\$1,469	\$1,584	\$260	\$1,844
2014	\$1,469	\$118	\$1,587	\$1,844	\$125	\$1,969
2015	\$1,587	\$127	\$1,714	\$1,969	-\$14	\$1,955
2016	\$1,714	\$137	\$1,851	\$1,955	\$147	\$2,102
2017	\$1,851	\$148	\$1,999	\$2,102	\$309	\$2,411
2018	\$1,999	\$160	\$2,159	\$2,411	-\$46	\$2,365

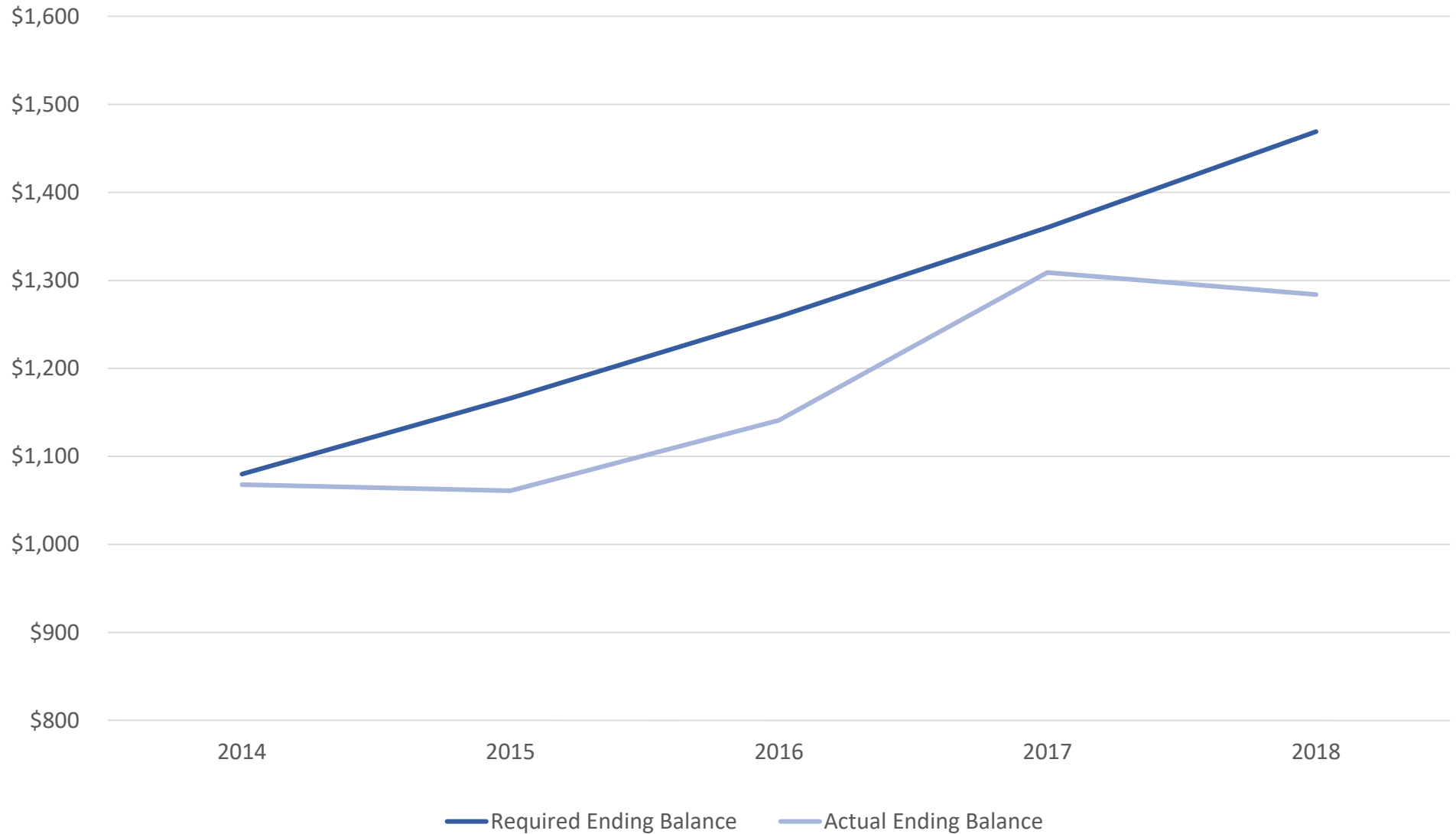
5 Year Rate of Return (Illustration Only) - TCDRS

Year	Required Account Value	Required Rate of Return	Required Ending Balance	Actual Account Value	Actual Rate of Return	Actual Ending Balance
2014	\$1,000	\$80	\$1,080	\$1,000	\$68	\$1,068
2015	\$1,080	\$86	\$1,166	\$1,068	-\$7	\$1,061
2016	\$1,166	\$93	\$1,259	\$1,061	\$80	\$1,141
2017	\$1,259	\$101	\$1,360	\$1,141	\$168	\$1,309
2018	\$1,360	\$109	\$1,469	\$1,309	-\$25	\$1,284

10 Year Rate of Return (Illustration Only) - TCDRS



5 Year Rate of Return (Illustration Only) - TCDRS

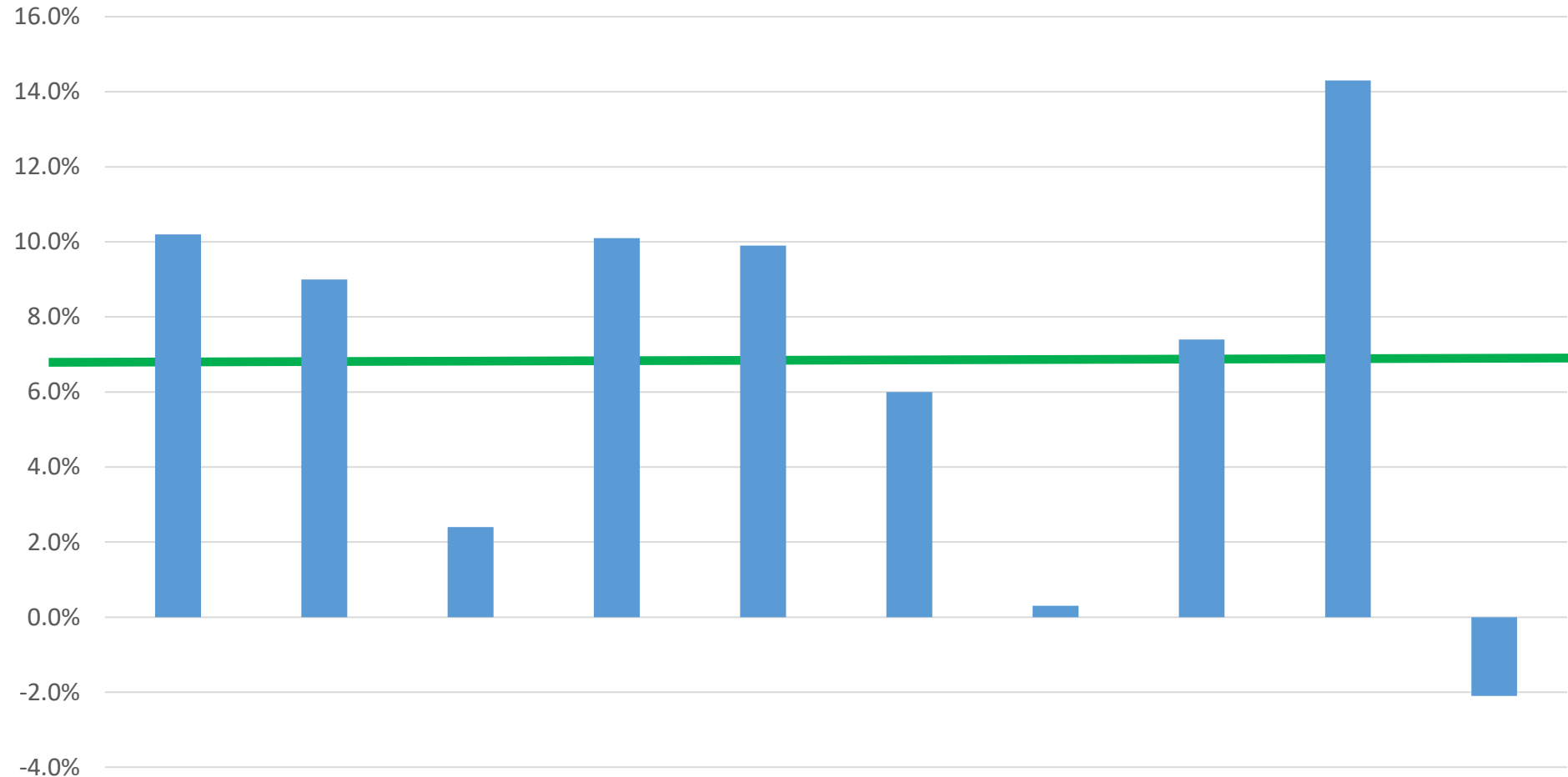


Portfolio Rate of Return - TMRS

Year	Return
2009	9.0%
2010	10.2%
2011	2.4%
2012	10.1%
2013	9.9%
2014	6.0%
2015	0.3%
2016	7.4%
2017	14.3%
2018	-2.1%

Total fund return as of 12/2018	
1 year	-2.1%
3 years	6.3%
5 years	5.0%
10 years	6.6%

Rate of Return (Illustration Only) - TMRS



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Rate of Return	10.2%	9.0%	2.4%	10.1%	9.9%	6.0%	0.3%	7.4%	14.3%	-2.1%

— 6.75% return required to cover guaranteed return

Cost

Year	Normal Rate (%)	UAAL Rate (%)	COLA Rate (%)	Total (%)	County Contribution (%)
Made a lump sum payment of \$5,000,000 in October 2010*					
2011	9.38	3.43	.08	12.89	13.50 (original)
2011	7.59	2.92	.08	10.59	13.50 (revised)
Made a lump sum payment of \$35,500,000 in October 2011*					
2012	7.57	2.90	.07	10.54	13.50 (original)
2012	7.57	0.00	.07	7.64	7.70 (revised)
Made a lump sum payment of \$2,045,000 in October 2012*					
2013	7.56	0.45	.05	8.06	8.50 (original)
2013	7.56	0.00	.05	7.61	8.50 (revised)
Made a lump sum payment of \$11,608,062 in November 2013*					
2014	7.55	0.51	.00	8.06	8.50 (original)
2014	7.55	0.00	.00	7.55	8.50 (revised)
2015	7.43	-1.22	.00	6.21	8.00
2016	7.44	-1.73	.00	5.71	8.00
2017	7.08	-0.86	.00	6.22	8.00
Made a lump sum payment of \$2,471,616 in December 2017*					
2018	7.09	-0.32	.00	6.77	8.00
Made a lump sum payment of \$1,160,641 in October 2018*					
2019	6.94	0.01	.00	6.95	8.00 (budgeted)
2020	6.93	0.91	.00	7.84	
* Lump sum payments were made to reduce the unfunded actuarial liability and/or fund an adopted COLA					

County Rate Comparison

County	2019 Required Rate	2019 Elected Rate	2020 Required Rate
Collin	6.95%	8.00%	7.84%
Bexar *	13.51%	13.61%	13.86%
Dallas	12.43%	N/A	13.36%
Denton	13.16%	N/A	13.78%
El Paso	16.97%	N/A	17.90%
Fort Bend	11.86%	N/A	12.49%
Harris	14.19%	15.10%	14.92%
Hidalgo	11.91%	N/A	12.73%
Montgomery	10.81%	12.27%	11.23%
Tarrant	13.92%	19.50%	14.11%
Travis *	14.92%	14.91%	16.19%
Williamson	13.90%	N/A	14.53%

* If an elected rate is lower than a required rate, the entity must contribute at least the required rate.

City Rate Comparison

City	2019 Required Rate	2020 Required Rate
Allen	14.18%	14.15%
Frisco	14.34%	14.20%
McKinney	15.20%	15.03%
Plano	16.67%	16.71%
Richardson	14.44%	14.72%
Wylie	14.96%	14.86%

TMRS does not have elected rates. Cities contribute the required rate but have the option to make additional payments during the year.

Employer Contributions

Calendar Year	Payment Type	Total Employer Deposits	Contributing Employees	Cost Per Employee
2009	Standard Payment Lump Sum Payment	\$11,642,578 \$1,130,000	1786	\$6,519 \$633
2010	Standard Payment Lump Sum Payment	\$11,770,220 \$5,000,000	1755	\$6,707 \$2,849
2011	Standard Payment Lump Sum Payment	\$11,699,770 \$35,500,000	1790	\$6,536 \$19,832
2012	Standard Payment Lump Sum Payment	\$6,702,402 \$2,045,000	1811	\$3,701 \$1,129
2013	Standard Payment Lump Sum Payment	\$7,437,259 \$11,608,062	1824	\$4,077 \$6,364
2014	Standard Payment	\$7,222,299	1848	\$3,908
2015	Standard Payment	\$7,368,276	1854	\$3,974
2016	Standard Payment	\$7,652,829	1898	\$4,032
2017	Standard Payment Lump Sum Payment	\$8,045,603 \$2,471,616	1943	\$4,141 \$1,272
2018	Standard Payment Lump Sum Payment	\$8,721,011 \$1,160,641	1943	\$4,488 \$597
2009-2018	Total Payments	\$147,177,566	1845	\$79,771

Unfunded Liability Update

- Currently there is unfunded liability using the 5-year asset recognition method.
- As of December 2018, our plan has \$13,274,348 of unfunded liability which is a funded ratio of 97.6%.
- Gains or losses that are smoothed are not reflected in the overfunded/unfunded liability. If an immediate asset recognition method were used instead of a delayed asset recognition the unfunded liability would be \$60,434,843, which is a funded ratio of 89.3%.
- The minimum required contribution rate for 2020 is 7.84%.
- TCDRS failed to meet their investment return goal of 8% for 2018. Actual return was -1.9%. Actuarial gains and losses are smoothed over 5 years and will be recognized over time.

Liability History

Calendar Year End	Budget Year	5 Yr. Asset Recognition Unfunded Liability	5 Yr. Asset Recognition Funded Percentage	Immediate Asset Recognition Unfunded Liability	Immediate Asset Recognition Funded Percentage	Notes
Made a lump sum payment of \$1,130,000 in October 2009						
2009	2011	\$40,273,716	84.5%	No Data	No Data	before reduced match
2009	2011	\$36,309,269	85.8%	No Data	No Data	with reduced match
Made a lump sum payment of \$5,000,000 in October 2010						
2010	2012	\$34,553,355	87.5%	No Data	No Data	
Made a lump sum payment of \$35,500,000 in October 2011						
2011	2013	\$2,044,817	99.0%	30,199,573	90%	
Made a lump sum payment of \$2,045,000 in October 2012						
2012	2014	\$2,794,438	99.1%	11,608,062	96%	
Made a lump sum payment of \$11,608,062 in November 2013						
2013	2015	\$(14,704,583)	104.5%	(32,286,282	109.8%	
2014	2016	\$(21,504,628)	106.2%	(27,012,753)	107.8%	
2015	2017	\$(11,689,647)	103.1%	23,468,041	93.7%	
2016	2018	\$(4,076,091)	100.8%	22,292,175	95.5%	
Made a lump sum payment of \$2,471,616 in December 2017*						
2017	2019	\$1,160,641	99.8%	3,114,182	99.4%	
Made a lump sum payment of \$1,160,641 in October 2018						
2018	2020	\$13,274,348	97.6%	60,434,843	89%	

*Lump-sum payment funded COLA for retirees

Unfunded Liability

Actual Unfunded Liability as of 12/31/2017	(\$1,161,000)
Adjustment due to Decrease in Discount Period	(\$93,000)
Scheduled OAAL Drawdown	(\$200,000)
Recognition of Investment Gains and Losses for 2014-2018 (Using the Five-Year Recognition Method)	(\$12,392,000)
Gain due to Additional Employer Contributions (Elected Rate Greater than Required Rate)	\$1,302,000
Gain due to Additional Employer Contributions (Lump Sum Contribution)	\$1,161,000
Loss due to Greater than Expected Salary Increases	(\$1,113,000)
Gain due to Termination and Withdrawal Experience	\$190,000
Gain due to Retirements Different than Expected (Includes Disability)	\$7,000
Loss due to Less than Expected Retiree Mortality	(\$975,000)
Net Actuarial Gains from All Other Sources (Active Death, Proportionate Service, etc.)	\$0
Actual Underfunded Liability as of 12/31/2018	(\$13,274,000)

Unfunded Liability History

	2013	2014	2015	2016	2017
Actual Over/Underfunded Liability as of December 31	(\$14,705,000)	(\$21,505,000)	\$11,690,000	\$4,076,000	(\$1,161,000)
Adjustment due to Decrease in Discount Period	(\$1,323,000)	(\$1,935,000)	\$935,000	\$326,000	(\$93,000)
Scheduled OAAL Drawdown	\$520,000	\$1,076,000	(\$1,248,000)	(\$841,000)	(\$200,000)
Recognition of Investment Gains and Losses for Previous Five Years (Using the Five-Year Recognition Method)	(2,899,000)	\$9,337,000	(\$11,370,000)	(\$2,817,000)	(12,392,000)
Gain/Loss due to Additional Employer Contributions (Elected Rate greater than Required Rate)	(\$979,000)	(\$1,599,000)	\$2,121,000	\$1,737,000	1,302,000
Gain/Loss due to Additional Employer Contributions (Lump Sum Contribution)				\$2,472,000	1,161,000
Gain/Loss due to Adoption of 40% CPI-based COLA				(\$2,472,000)	
Gain/Loss due to Change in Actuarial Assumptions and Methods		\$4,364,000		(\$3,189,000)	
Gain/Loss due to Greater/Less than Expected Salary Increases				(\$605,000)	(1,113,000)
Gain/Loss due to Lower than Expected Payroll Variation			(\$590,000)		
Gain/Loss due to Greater/Less than Expected Withdrawals				\$74,000	
Gain/Loss due to Greater/Less than Expected Terminations and Withdrawals	(\$712,000)	(\$831,000)	\$956,000		190,000
Gain/Loss due to More/Fewer than Expected Terminations (Excluding Withdrawals)				(\$149,000)	
Gains/Losses due to Retirements Different than Expected (Includes Disability)			\$250,000	\$424,000	7,000
Gain/Loss due to Less than Expected Retiree Mortality				(\$197,000)	(975,000)
Gain/Loss due to Greater/Less than Expected Retiree Mortality			\$439,000		
Net Actuarial Gains from All Other Sources (Active Death, Proportionate Service, Etc.)	(\$1,407,000)	(\$597,000)	\$893,000	\$0	\$0
Actual Under/Overfunded Liability as of December 31 the Following Year	(\$21,505,000)	(\$11,690,000)	\$4,076,000	(\$1,161,000)	(13,274,000)

GASB Statement 68

- Requires Collin County to report TCDRS pension liability/assets on the CAFR.
- Reporting requirements do not change how TCDRS plan funding is calculated.
- Repeating Cost of Living Adjustments (COLAs) increase the calculated rate of financial reporting, as they assume annual COLAs for all plan participants continuously into the future and require this pension liability to be reported on the CAFR.
- Any significant volatility experienced in pension liability will be reflected on the CAFR.
- The repeating COLA designation has no effect on the plan funding. It does not impact the plan's funded ratio or the required contribution rate, which are calculated for the purpose of funding the plan.

GASB Statement 75

- Post employment benefits other than pensions (OPEB)
 - Because we covered retirees in 2018, we had a post-employment benefit.
- Our OPEB liability as of December 31, 2018, is \$0, which will be reported on our September 30, 2019, fiscal year-end financials. The OPEB liability for the previous year was \$3,245,484.
- For financial reporting purposes only – does not impact costs.

Cost of Living Adjustment (COLA)

- The TCDRS retirement benefit is a fixed benefit payment.
- The costs of goods and services, such as health care expenses, may go up each year due to inflation.
- A Cost of Living Adjustment (COLA) restores some of the purchasing power that the benefit loses over time.
- Electing a COLA is only effective for one plan year and is reassessed on a year-to-year basis. Court determines if a cost of living increase will be awarded each year. There are three options:
 - **Flat Rate COLA:** Flat percentage increase is applied to all retiree benefits.
 - **CPI-based COLA:** Based on how much inflation has occurred since each employee retired. Adjustments for one retiree could differ from that of another retiree if they retired at different times.
 - **No COLA**

Retiree COLA

- COLAs are funded over a 15-year period.
- Collin County has historically adopted various COLA options including:
 - 40% to 100% of CPI
 - 1% - 8% Flat Rate
 - No COLA
- The last COLA adopted was 40% CPI, which was approved for plan year 2018.
- As of the end of December 2018, there were 802 individuals collecting TCDRS benefits, an increase of 43 since the prior year. 343 active employees were eligible to retire, and 337 additional employees will be eligible to retire in the next 5 years.
- Pre-funded cost to add COLA in 2020:

Type of COLA	Pre-fund Cost
40% of CPI	\$3,080,298
60% of CPI	\$6,991,875
80% of CPI	\$11,311,958
1% Flat Rate	\$2,294,335



Court Determination Budget Information

- Employer contribution rate to remain at 8%
- Payment of any lump sum contribution for unfunded liability
- Determination of any retiree COLA