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City of Miami Fire Fighters' and Police Officers' Retirement Trust

January 1, 2021 | COLA Fund Report

Actuarial Certification	3
Executive Summary	5
Summary Results	5
Changes Since Prior Valuation and Key Notes	6
Historical Valuation Summary	7
Plan Maturity Measures	8
Identification of Risks	9
Reviewing Results under Various Test Scenarios	10
Assets Information	11
Market Value Reconciliation	11
Membership and Benefits Cost-of-Living Adjustments Account Summary	12
Investment Results	13
Actuarial Value of Assets	15
Development of Actuarial Asset Value for COLA Transfer	16
Rate of Return on COLA Transfer Actuarial Asset Value	17
Excess Investment Return	18
COLA Asset and Liability	19
Summary of Assets Available for Benefits	19
Summary of Liabilities	20
COLA Measurements	21
COLA Fund Table Amount	21
Determination of Net Cumulative Experience Positon (Preliminary)	22
Plan Provisions	23
Actuarial Assumptions	26
Other Measurements	30
Florida State Requirements	30
GASB 5 For COLA Fund	42

At the request of the plan sponsor, this report summarizes the COLA Fund for the City of Miami Fire Fighters and Police Officers as of 1/1/2021. The purpose of this report is to communicate the following results of the valuation:

- 10/1/2020 Asset Information;
- 1/1/2021 COLA Fund Amounts.

This report has been prepared for the above purposes. Consequently, it may not be appropriate for other purposes. Please contact Nyhart prior to disclosing this report to any other party or relying on its content for any purpose other than that explained above. Failure to do so may result in misrepresentation or misinterpretation of this report.

The results in this report were prepared using information provided to us by other parties. The census information has been provided to us by the Plan Administrator. Asset information has been provided to us by the Plan Administrator. We have reviewed the provided data for reasonableness when compared to prior information provided, but have not audited the data. Where relevant data may be missing, we have made assumptions we believe to be reasonable. We are not aware of any significant issues with and have relied on the data provided. Any errors in the data provided may result in a different result than those provided in this report.

The funding method, interest rates and mortality used in determining the COLA fund were determined by the Board. Evaluation of the reasonableness of these methods and assumptions was outside the scope of our assignment. In our opinion, all other actuarial assumptions and methods are individually reasonable and in combination represent our best estimate of anticipated experience of the plan.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following:

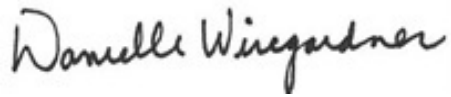
- plan experience differing from that anticipated by the economic or demographic assumptions;
- changes in economic or demographic assumptions;
- increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and
- changes in plan provisions or applicable law.

We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement. This report has been prepared in accordance with generally accepted actuarial principles and practice.

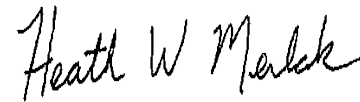
Neither Nyhart nor any of its employees have any relationship with the plan or its sponsor which could impair or appear to impair the objectivity of this report. To the extent that this report or any attachment concerns tax matters, it is not intended to be used and cannot be used by a taxpayer for the purpose of avoiding penalties that may be imposed by law.

The undersigned are compliant with the continuing education requirements of the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States.

Nyhart



Danielle Winegardner, FSA, EA, MAAA



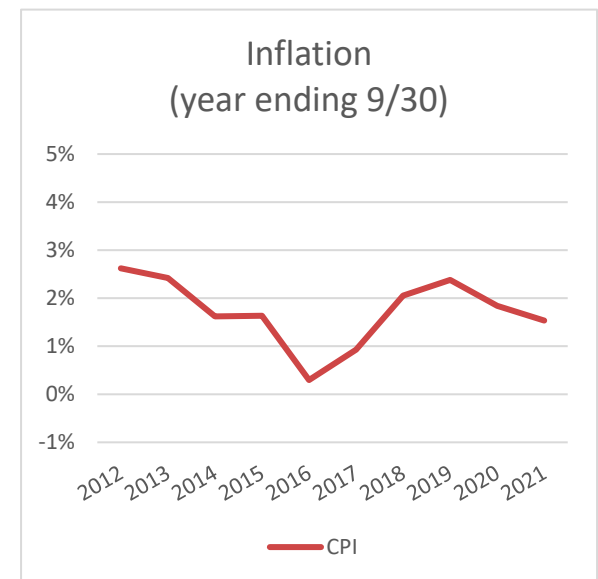
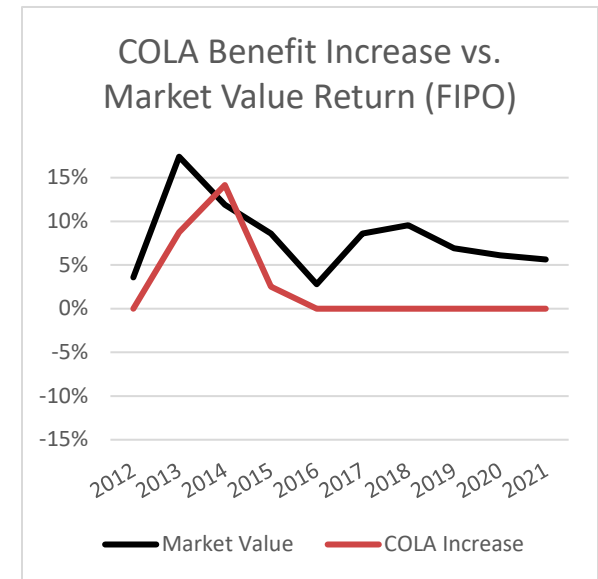
Heath W. Merlak, FSA, EA, MAAA

December 10, 2020

Date

Summary Results

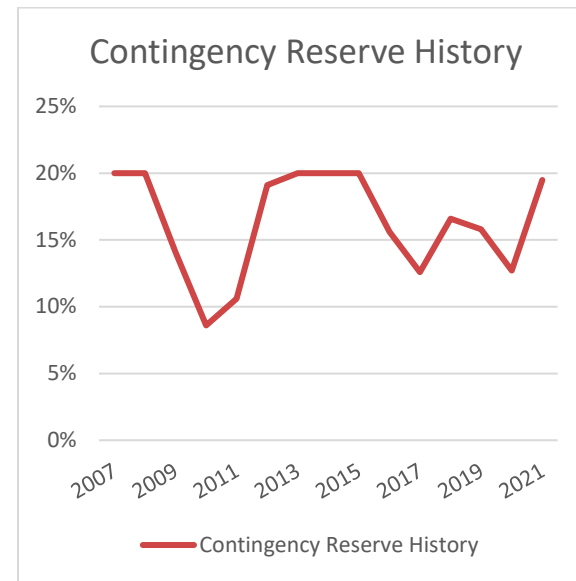
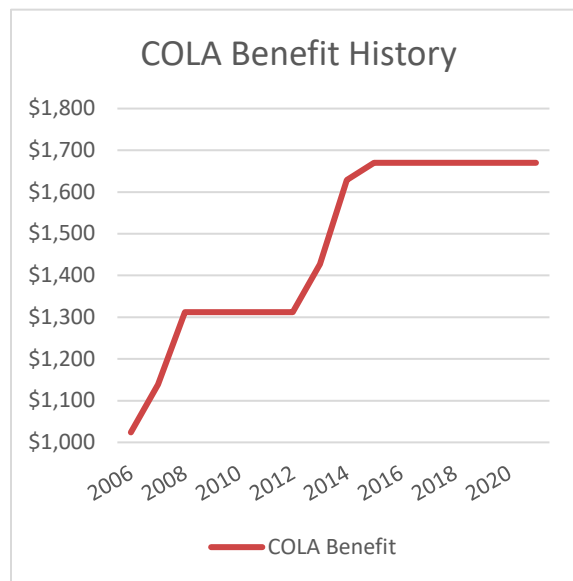
	October 1, 2019	October 1, 2020 [Proposed]
COLA Table Amount	\$1,670	\$1,670
Asset Performance		
Market Value of Assets	\$1,149,117,960	\$1,150,108,084
Actuarial Value of Assets	\$1,189,509,806	\$1,202,122,694
Actuarial Asset Value Return	6.48%	6.25%
COLA Fund Asset Value Return	1.20%	5.80%
COLA Information		
Current COLA Assets	\$412,090,602	\$416,022,491
Future Contributions (discounted)	100,496,275	104,516,121
Assets for COLA	\$512,586,877	\$520,538,612
COLA Liability	\$447,248,968	\$418,988,989
Net Reserve	12.7%	19.5%
Target Reserve (20% of Asset Value)	\$102,517,375	\$104,107,722
Actual Reserve	\$65,337,909	\$101,549,623
Participant Information		
Active	2,003	1,931
Retirees and Beneficiaries	2,072	2,108
Disableds	121	115
Terminated Vesteds	13	26
Terminated, Due a Refund	115	117
Total	4,324	4,297



Changes Since Prior Valuation and Key Notes

Based on a target reserve of 20%, we recommend keeping the COLA table at its current level of (\$1,670) as of January 1, 2021. The contingency reserve is 19.50%, an increase from the prior year's 12.7%. A historical graph of the COLA table level and contingency reserve amount are below.

The mortality assumption was updated to match the recent change to the Florida Retirement System (FRS) mortality tables. The 2018 FRS mortality tables were based on the RP-2000 mortality tables, with future mortality improvements reflected using mortality improvement Scale BB. The 2019 FRS mortality tables were based on the Pub-2010 Mortality Tables for public sector retirement plans and MP-2018 generational improvements. The tables were developed from data collected for 2008-2013. This change decreased the COLA liability.



Historical Valuation Summary

	10/1/2014	10/1/2015	10/1/2016	10/1/2017	10/1/2018	10/1/2019	10/1/2020
COLA Table Amount	\$1,670	\$1,670	\$1,670	\$1,670	\$1,670	\$1,670	\$1,670
Asset Performance (FIPO)							
Market Value of Assets	\$1,136,462,242	\$1,090,944,360	\$1,109,146,744	\$1,131,066,046	\$1,140,506,121	\$1,149,117,960	\$1,150,108,084
Actuarial Value of Assets	\$1,151,016,531	\$1,147,334,950	\$1,150,653,520	\$1,161,585,161	\$1,172,416,575	\$1,189,509,806	\$1,202,122,694
Actuarial Asset Value Return	7.20%	6.20%	6.50%	6.76%	6.66%	6.48%	6.25%
COLA Information							
Current COLA Assets	\$394,567,656	\$381,440,561	\$392,859,018	\$420,284,415	\$426,176,255	\$412,090,602	\$416,022,491
Future Contributions (discounted)	\$80,826,996	\$84,972,329	\$88,371,217	\$91,906,070	\$96,631,033	\$100,496,275	\$104,516,121
Assets for COLA	\$475,394,652	\$466,412,890	\$481,230,235	\$512,190,485	\$522,807,288	\$512,586,877	\$520,538,612
COLA Liability	\$370,959,121	\$393,512,220	\$420,490,548	\$427,229,145	\$440,222,258	\$447,248,968	\$418,988,989
Net Reserve	21.97%	15.60%	12.60%	16.60%	15.80%	12.70%	19.50%
Target Reserve (20% of Asset Value)	\$95,078,930	\$93,282,578	\$96,246,047	\$102,438,097	\$104,561,458	\$102,517,375	\$104,107,722
Actual Reserve	\$95,078,930	\$72,900,670	\$60,739,687	\$84,961,340	\$82,585,030	\$65,337,909	\$101,549,623
Participant Information							
Active	1,482	1,650	1,869	1,943	1,998	2,003	1,931
Retirees and Beneficiaries	2,098	2,088	2,062	2,052	2,072	2,072	2,108
Disableds	149	147	143	136	130	121	115
Terminated Vesteds	12	15	15	16	14	13	26
Terminated, Due a Refund				97	112	115	117
Total	3,741	3,900	4,089	4,244	4,326	4,324	4,297

Plan Maturity Measures – October 1, 2020

Each pension plan has a distinct life-cycle. New plans promise future benefits to active employees and then accumulate assets to pre-fund those benefits. As the plan matures, benefits are paid and the pre-funded assets begin to decumulate until ultimately, the plan pays out all benefits. A plan's maturity has a dramatic influence on how risks should be viewed. The following maturity measures illustrate where the COLA Fund of the City of Miami Fire Fighters' and Police Officers' Retirement Trust falls in its life-cycle.

Duration of Liabilities: 10.80

Duration is the most common measure of plan maturity. It is defined as the sensitivity of the liabilities to a change in the interest rate assumption. The metric also approximates the weighted average length of time, in years, until benefits are expected to be paid. A plan with high duration is, by definition, more sensitive to changes in interest rates. A plan with low duration is more susceptible to risk if asset performance deviates from expectations as there would be less time to make up for market losses in adverse market environments while more favorable environments could result in trapped surplus from gains. Conversely, high duration plans can often take on more risk when investing, and low duration plans are less sensitive to interest rate fluctuations.

Demographic Distribution - Ratio of Actively Accruing Participants to All Participants: 44.90%

A plan with a high ratio is more sensitive to fluctuations in salary (if a salary-based plan) and statutory changes. A plan with a low ratio is at higher risk from demographic experience. Such a plan should pay close attention to valuation assumptions as there will be less opportunity to realize future offsetting gains or losses when current experience deviates from assumptions. Plans with a low ratio also have limited opportunities to make alterations to plan design to affect future funded status.

Asset Leverage - Ratio of Payroll for Plan Participants to Market Value of Assets: 14.30%

Younger plans typically have a large payroll base from which to draw in order to fund the plan while mature plans often have a large pool of assets dedicated to providing benefits to a population primarily consisting of members no longer on payroll. Plans with low asset leverage will find it more difficult to address underfunding, as the contributions needed to make up the deficit will represent a higher percentage of payroll than for a plan with high asset leverage.

Benefit Payment Percentage - Ratio of Annual Benefit Payments to Market Value of Assets: 6.31%

As a plan enters its decumulation phase, a larger percentage of the pre-funded assets are paid out each year to retirees. A high percentage is not cause for alarm as long as the plan is nearly fully funded. However, such a plan is more sensitive to negative asset performance, especially if cash contributions are not an option to make up for losses.

Identification of Risks

The results presented in this report are shown as single point values. However, these values are derived using assumptions about future markets and demographic behavior. If actual experience deviates from our assumptions, the actual results for the plan will consequently deviate from those presented in this report. Therefore, it is critical to understand the risks facing this pension plan. The following table shows the risks we believe are most relevant to the COLA fund of the City of Miami Fire Fighters' and Police Officers' Retirement Trust. The risks are generally ordered with those we believe to have the most significance at the top. Also shown are possible methods by which a more detailed assessment of the risk can be performed.

Type of Risk	Method to Assess Risk
Investment Return	Scenario Testing; Asset Liability Study
Interest Rates	Scenario Testing; Asset Liability Study
Participant Longevity	Stress Testing; Scenario Testing
Early Retirement	Stress Testing; Scenario Testing

Reviewing Results under Various Test Scenarios

To help the Board better understand how the COLA results are impacted by assumption changes and changes to the COLA, the following test scenarios were completed. The scenarios are not recommendations and are only intended to identify how valuation results change based on inputs to the valuation.

Scenario 1 – Interest Rate lowered by 25 basis points.

Scenario 2 – Standard COLA increase from 2019 to 2020, future COLA growth declines by 10%

Scenario 3 – Standard COLA increase from 2019 to 2020, future COLA growth declines by 50%

Note the COLA table has built in scheduled increases for each year the retiree is in retirement. For example, a retiree with 25 years of service at retirement and has been retired for 22 years, the monthly amount would increase \$84 (\$1,670 to \$1,754). In the indicated scenarios where a future COLA growth declines, it means there would still be growth but at a smaller amount. For example, under the “COLA growth declines by 10%” scenario, instead of the standard COLA growth of approximately \$84 per month, it would be approximately \$76 increase per month.

Scenario	Baseline	Lower Interest Rate	Standard 2021 COLA Increase, COLA Growth Declines by 10% After 2021	Standard 2021 COLA Increase, COLA Growth Declines by 50% After 2021
Interest Rate	7.34%	7.09%	7.34%	7.34%
Summary of Test Scenario Results				
Assets Available:	\$520,538,612	\$524,249,683	\$520,538,612	\$520,538,612
Total Cola Liability	\$418,988,989	\$433,244,567	\$398,697,490	\$300,239,107
Net Reserve	19.50%	17.40%	23.40%	42.30%
Target Reserve (20% of Asset Value)	\$104,107,722	\$104,849,937	\$104,107,722	\$104,107,722
Actual Reserve	\$101,549,623	\$91,005,116	\$121,841,122	\$220,299,505

Market Value Reconciliation

The amount of assets backing the pension promise is the most significant driver of volatility and future costs within a pension plan. The investment performance of the assets directly offsets the ultimate cost.

	September 30, 2020	
	Membership and Benefit Accounts	COLA Account
1. Market value – beginning of prior year	\$1,149,117,960	\$412,090,602
2. Book value – beginning of prior year	\$965,414,471	\$346,211,829
3. Income		
(a) City contributions	\$60,633,239	\$6,931,175
(b) Member contributions	15,820,796	0
(c) Other contributions	0	0
(d) Interest and dividends	19,130,703	6,713,833
(e) Net realized gains (losses)	135,587,006	48,390,479
(f) Securities lending income	351,747	123,653
(g) Rental and other income	201,280	70,376
(h) Income transfer	0	0
(i) Total	<u>\$231,724,771</u>	<u>\$62,229,516</u>
4. Disbursements		
(a) Benefit payments and refunds	\$138,186,681	\$26,230,313
(b) Custodial and investment expenses	4,902,955	1,735,631
(c) Administrative expense	2,210,096	0
(d) Other expense	0	0
(e) Securities lending fees	87,875	30,892
(f) Building depreciation	14,981	5,393
(g) Total	<u>\$145,402,588</u>	<u>\$28,002,229</u>
5. Book value – beginning of current year [(2)+(3i)-(4g)]	\$1,051,736,654	\$380,439,116
6. Net change in unrealized gains (losses)	(\$85,332,059)	(\$30,295,398)
7. Unrealized gains (losses)	\$98,371,430	\$35,583,375
8. Market value – beginning of current year [(1)+(3i)-(4g)+(6)]	\$1,150,108,084	\$416,022,491
9. Current year allocation to COLA II (discounted)	\$0	N/A
10. Net market value – beginning of current year	<u>\$1,150,108,084</u>	<u>\$416,022,491</u>

Membership and Benefits Cost-Of-Living Adjustment Account Summary

		September 30, 2020	
		Market	Book
1.	Investments		
	(a) Bill, bonds, notes	\$392,118,825	\$382,603,882
	(b) Domestic stocks	514,274,743	485,797,116
	(c) International stocks	306,712,000	267,639,281
	(d) Private equity	183,008,109	168,604,272
	(e) Money market fund and time deposit	12,195,492	8,743,460
	(f) Mutual fund	126,274,230	87,240,583
	(g) Real estate	2,075,138	2,075,138
	(h) Securities lending adjustment	0	0
	(i) Total investment	<u>\$1,536,658,537</u>	<u>\$1,402,703,732</u>
2.	Cash	\$30,136,737	\$30,136,737
3.	Receivables		
	(a) City contributions	\$0	\$0
	(b) Member contributions	0	0
	(c) Accounts receivable	5,648	5,648
	(d) Accrued interest and dividend	2,521,699	2,521,699
	(e) Securities sold	10,945,195	10,945,195
	(f) Total receivables	<u>\$13,472,542</u>	<u>\$13,472,542</u>
4.	Payables:		
	(a) Budget advance	\$0	\$0
	(b) Accrual expense	0	0
	(c) Transfer	0	0
	(d) Tax withheld	0	0
	(e) Accounts payable	10,759,526	10,759,526
	(f) Securities purchased	3,377,715	3,377,715
	(g) Total payables	<u>\$14,137,241</u>	<u>\$14,137,241</u>
5.	Total [(1i)+(2)+(3f)-(4g)]	\$1,566,130,575	\$1,432,175,770
6.	COLA account	\$416,022,491	\$380,439,116
7.	Current year COLA transfer	\$0	\$0
8.	Membership & benefits account [(5)-(6)-(7)]	\$1,150,108,084	\$1,051,736,654

Investment Results - Membership and Benefits Accounts

September 30, 2020

	<u>Dollar Return</u>	<u>Market Return</u>	<u>Book Return</u>
<u>Membership and Benefits Accounts</u>			
Interest	\$11,822,307	1.0%	1.3%
Dividends	7,308,396	0.6%	0.8%
Rental and Other Income, less Depreciation	186,299	0.0%	0.0%
Realized Gains	135,587,006	11.8%	14.5%
Securities Lending (Net)	263,872	0.0%	0.0%
Increase in Unrealized Gains	(85,332,059)	(7.4%)	(9.1%)
Custodial and Investment Expenses	(4,902,955)	(0.3%)	(0.5%)
	<u>\$64,932,866</u>	<u>5.7%</u>	<u>7.0%</u>

Investment Results - COLA I and II Accounts

September 30, 2020

COLA Accounts

	<u>Dollar Return</u>	<u>Market Return</u>	<u>Book Return</u>
Interest	\$4,139,883	1.0%	1.2%
Dividends	2,573,950	0.6%	0.8%
Rental and Other Income, less Depreciation	64,983	0.0%	0.0%
Realized Gains	48,390,479	12.0%	14.4%
Securities Lending (Net)	92,761	0.0%	0.0%
Increase in Unrealized Gains	(30,295,398)	(7.5%)	(9.0%)
Custodial and Investment Expenses	(1,735,631)	(0.3%)	(0.5%)
	<u>\$23,231,027</u>	<u>5.8%</u>	<u>6.9%</u>

Actuarial Value of Assets

September 30, 2020

1.	Expected actuarial value of assets	
	(a) Actuarial value of assets – beginning of prior year	\$1,189,509,806
	(b) City Contributions	60,633,239
	(c) Member Contributions	15,820,796
	(d) Benefits payments and refunds	138,186,681
	(e) Expected return	87,349,186
	(f) Expected actuarial value of assets – beginning of current year	<u>\$1,215,126,346</u>
2.	Market value of assets – beginning of current year	\$1,150,108,084
3.	Present value of COLA transfers	
	(a) Current year	\$0
	(b) Next year	0
	(c) Total	<u>\$0</u>
4.	Market value net COLA transfer [(2)-(3)]	\$1,150,108,084
5.	Amount subject to phase in [(4)-(1f)]	(\$65,018,262)
6.	Phase in of asset gain loss [(5)x20%]	(\$13,003,652)
7.	Preliminary actuarial value of assets – beginning of current year [(1f)+(6)]	\$1,202,122,694
8.	80% of Market value of assets	\$920,086,468
9.	120% of Market value of assets	\$1,380,129,700
10.	Adjusted actuarial value of assets	\$1,202,122,694
11.	Contribution surplus account balance	\$0
12.	Final actuarial value of assets – beginning of current year [(10)-(11)]	\$1,202,122,694
13.	Return on actuarial value of assets	6.25%

Development of Actuarial Asset Value for COLA Transfer

		September 30, 2020		
		<u>9/30/2018</u>	<u>9/30/2019</u>	<u>9/30/2020</u>
1.	Book Value	\$984,859,741	\$965,414,471	\$1,051,736,655
2.	Market Value	\$1,140,506,121	\$1,149,117,960	\$1,150,108,084
3.	[(2)/(1)]	1.1580391	1.1902846	1.0935324
4.	3 year average of book to market value			1.1472854
5.	Adjusted market value [(1)x(4)]			\$1,206,642,109
6.	Contribution surplus			\$0
7.	80% of Adjusted market value, net of contribution surplus			\$920,086,468
8.	120% of Adjusted market value, net of contribution surplus			\$1,380,129,700
9.	Adjusted actuarial value of assets			\$1,206,642,109
10.	Present value of next year COLA transfer			\$0
11.	Final actuarial asset value [(9)+(10)]			\$1,206,642,109

Rate of return on COLA Transfer Actuarial Asset Value

	September 30, 2020
1. Actuarial asset value – beginning of prior year	\$1,121,917,907
2. Contributions	
(a) City contributions	\$60,633,239
(b) Member contributions	15,820,796
(c) Total	<u>\$76,454,035</u>
3. Benefits and refunds	\$138,186,681
4. Present value of COLA transfer	\$0
5. Contribution surplus	\$0
6. Actuarial asset value – beginning of current year	\$1,206,642,109
7. Net return on investment [(6)+(5)-(4)+(3)-(2)-(1)]	\$146,456,848
8. Rate of return	13.06%

Excess Investment Return

September 30, 2020

1. Expected return on actuarial asset value	
(a) Actuarial asset value as of beginning of prior year	\$1,121,917,907
(b) City Contributions	\$60,633,239
(c) Member Contributions	\$15,820,796
(d) Benefits paid and refunds	\$138,186,681
(e) Expected return at 7.34% ¹	\$82,387,940
(f) Base amount for expected return [(e)/7.34%]	\$1,122,451,499
2. Actual return on actuarial asset value	\$146,456,848
3. Excess return on assets [(2)-(1e)]	\$64,068,908
4. Amount to be transferred to COLA fund (limited to cumulative experience position)	
(a) Excess return	
(i) First 2.5%	\$28,061,287
(ii) Next 2.5%	28,061,287
(iii) Next 2.5%	7,946,334
(iv) Total	\$64,068,908
(b) Potential COLA Transfer	
(i) 75% of (4a)(i)	\$21,045,965
(ii) 50% of (4a)(ii)	14,030,644
(iii) 25% of (4a)(iii)	1,986,583
(iv) Total	\$37,063,192
(c) Cumulative Experience Gain (Loss):	(\$377,364,830)
(d) Transfer of Excess Investment Income ² :	\$0

¹Assumes mid-year member contributions and benefits and beginning of year City contributions.

²Excess returns can only be transferred if the Plan is in a Net Positive Experience Position. Due to the Cumulative Experience Loss, the amount of assets transferred to the COLA fund is limited to \$0.

Summary of Assets Available for Benefits

October 1, 2020

1.	COLA Accounts	\$416,022,491
2.	Transfers of Excess Investment Income	
	(a) Current year	\$0
	(b) Next year	0
	(c) Total	\$0
3.	Minimum City Contributions	
	(a) Expected contributions	\$7,796,629
	(b) Permanent, discounted annuity [1/1.0734 ^{2.25} ∞]	11.6169029
	(c) Expected future contributions [(a)x(b)]	\$90,572,682
4.	Discounted City Contribution	
	(a) \$7,208,422 due on January 1, 2021	\$7,081,900
	(b) \$7,496,759 due on January 1, 2022	6,861,539
	(c) Total	\$13,943,439
5.	Assets available [(1)+(2)+(3)+(4)]	\$520,538,612

Summary of Liabilities

October 1, 2020

1.	Present value of existing COLA benefits	
	(a) COLA for inactives	344,902,080
	(b) Reserve for current actives	64,423,399
	(c) Reserve for future actives [(15% of (b))]	9,663,510
	(d) Total	<u>\$418,988,989</u>
2.	Contingency reserve [20% of assets available]	\$104,107,722
3.	Unallocated reserve	(\$2,558,099)
4.	Total Liability [(1d)+(2)+(3)]	\$520,538,612

COLA Fund Table Amount

	October 1, 2020
1. Assets available for COLA benefits	\$520,538,612
2. Liability based on current table	
(a) COLA II for inactives	\$344,513,992
(b) Reserve for current actives	64,423,399
(c) Reserve for future actives	9,663,510
(d) Sub-Total	\$418,600,901
(e) COLA I for inactives	\$388,088
(f) Total	\$418,988,989
3. 20% Contingency reserve	\$104,107,722
4. Unallocated reserve (not greater than \$0)	(\$2,558,099)
5. Available assets [(1)-(2)-(3)-(4)]	\$0
6. Excess investment income transfer, discounted	\$0
7. Net available assets [(5)-(6)]	\$0
8. Increase ratio [(7)/(2d)]	0.000000
9. Prior year COLA	\$1,670
10. Potential table increase [(8)x(9)]	\$0
11. Potential new table amount [(8)+(9)]	\$1,670

COLA Measurements

Determination of Net Cumulative Experience Position (Preliminary)

	October 1, 2020
1. Expected unfunded actuarial liability	
(a) Expected unfunded actuarial liability – beginning of prior year	\$341,328,497
(b) Entry age normal cost – payable by employer	15,471,280
(c) Assumption changes	(50,483,637)
(d) Plan Provisions	0
(e) Contributions	(60,633,239)
(f) Interest on prior year unfunded actuarial liability	48,931,287
(g) Expected unfunded actuarial liability – beginning of current year	<u>\$294,614,188</u>
2. Entry age reserve ¹	
(a) Active	\$452,516,251
(b) Inactive	1,421,585,461
(c) Total	<u>\$1,874,101,712</u>
3. Actuarial asset value	\$1,202,122,694
4. Actual unfunded actuarial liability [(2)-(3)]	\$671,979,018
5. Cumulative experience gain (loss) [(1g)-(4)]	(\$377,364,830)
Future Transfers of Excess Investment Income	
Contribution for current year, discounted	\$0
Contribution for next year, discounted	\$0
Preliminary transfer	\$0
Final transfer – if cumulative loss, then 0	<u>\$0</u>

¹The assumptions and plan provisions used can be found in the October 1, 2019 Valuation Report.

Plan Status

January 1, 1994 amended January 1, 1995

Eligibility for Participation

All inactive members in Miami Firefighters' and Police Officers' Retirement Trust

Available Assets:

Existing COLA assets as of January 1, 1995; beginning with the 1991/92 fiscal year, a percentage of excess investment return on FIPO assets (75% of first 2.5%, 50% of next 2.5%, 25% of next 2.5%), subject to a minimum City contribution of \$2.5 million, increasing 4% annually.

Allocated Assets:

Current COLA assets as of September 30, 2020, plus present value of \$2.5 million minimum guarantee. The 4% future annual increases is not pre-allocated. A contingency reserve of 20% has been established for adverse experience.

COLA Benefits:

In addition to prior COLA, benefits are based on attached table, with \$1,670 monthly benefit for 25 years of creditable service and 22 completed years of retirement (after age 46). The \$1,670 amount is reduced by 5% for each year of retirement less than 22 and each year of creditable service less than 25 and increased similarly for years of retirement greater than 22 and years of creditable service greater than 25.

Benefits are based on the FIPO option elected. Tabular amounts are adjusted, based on the FIPO adjustments at the time of FIPO benefit commencement, for options other than Option 8 (Joint & 40%). Surviving spouses receive the percentage of the table amount determined under the FIPO election.

Service-incurred and accidental disabilities and deaths receive benefits based on the greater of 25 years or actual creditable service.

Creditable Service

For Vesting and Benefit Accrual

Service credited under Retirement System; military service (maximum of four years) during wartime for which Member makes contributions; maternity leave (maximum of 180 days for each leave) for which Member makes contributions; up to 5 years, without member contributions, if member was an employee before period of military service.

Accumulated leave balances may be transferred into system immediately prior to retirement to purchase up to 3 whole years of additional Creditable Service, on an actuarially equivalent basis.

457 balances of Firefighters may be transferred into System at retirement to purchase up to 3 whole years of additional Creditable Service for multiplier purposes.

Payment Forms

Normal Form

For Police Officers who have reached Rule of 64 by 9/30/2010 or Fire Fighters who reached Rule of 64 by 9/30/2009 or members who were vested at 9/27/2010: Joint and 40% Contingent Survivor with a minimum 10 years Certain and Life

For Fire Fighters who have reached Rule of 68 by 9/30/2010: Joint and 40% Contingent Survivor with a minimum of 10 years Certain and Life

For all others:

Benefits based on service prior to 10/1/2010: Joint and 40% Contingent Survivor with minimum of 10 years Certain and Life

Benefits based on service after 9/30/2010: 10 years Certain and Life

Optional Forms

Option 1 – Cash refund annuity based on Present Value at retirement

Option 2 – Joint and 100% Contingent Annuity

Option 3 – Joint and 50% Contingent Annuity

Option 4 – Joint and Contingent Annuity approved by the Board

Option 5 – Determined by Board due to incapacity of member

Option 6 – Withdrawal of member contributions with interest and benefit that is ½ of normal level.

Changes since prior valuation

There have been no changes to the plan provisions from the prior valuation report.

Cost Method

Accrued Benefit Cost Method, based on benefits granted to date

Asset Valuation Method

Market Value, plus present value of future minimum City contributions

Interest Rates

7.34% net of investment expenses

Support for the discount rate assumption has been provided in the experience study report dated December 2017.

Annual Pay Increases

3.25% inflation and 1.5% for promotions and other increases plus salary merit scale below

<u>Service</u>	<u>Police</u>	<u>Fire</u>
0-6	5.0%	5.0%
7	2.5%	5.0%
8-9	5.0%	5.0%
10-14	1.0%	0.0%
15-16	1.25%	2.5%
17-21	1.0%	1.0%
22+	0.0%	0.0%

There is no additional increase at retirement.

The annual pay increases are based on a study of actual experience for the plan during 2015-2017. See the experience study report dated December 2017.

Expense

None assumed

Compensated Absence Balance Transfers

No liabilities or costs are included for the provision to transfer compensated absence balances into FIPO to purchase additional creditable service, based on our understanding that assets will be transferred immediately prior to retirement to cover 100% of the liability for the additional service.

Marital Status and Ages

100% of Members are assumed to be married. Female spouses assumed to be 3 years younger than male spouses.

Mortality Rates

Pre-Retirement: Pub-2010 Generational using scale MP-2018; Females, Headcount Weighted Safety Employee Female Table, set forward 1 year; Males, Headcount Weighted Safety Below Median Employee Male Table, set forward 1 year.

Post-Retirement: Pub-2010 Generational using scale MP-2018; Females, Headcount Weighted Safety Healthy Retiree Female Table, set forward 1 year; Males, Headcount Weighted Safety Below Median Healthy Retiree Male Table, set forward 1 year

Disabled: Pub-2010; Females, 80% Headcount Weighted General Disabled Retiree Female Table / 20% Headcount Weighted Safety Disabled Retiree Female Table; Males, 80% Headcount Weighted General Disabled Retiree Male Table / 20% Headcount Weighted Safety Disabled Retiree Male Table.

The mortality rate assumptions were set in accordance with the Florida Retirement System Valuation report dated December 2019. The board adopted the new mortality tables for the October 1, 2019 valuation.

Retirement Rates

If eligible for Retirement, the following decrements apply, based on service.

<u>Years of Service</u>	<u>Police %</u>	<u>Fire %</u>
<20	0	0
20	10	10
21-24	3	3
25-29	40	5
30-34	50	25
35	100	25
36		25
37		100

All Members are assumed to elect a 5-year BackDROP when they reach five years following first retirement eligibility.

The assumed retirement rates are based on a study of actual experience for the plan during 2015-2017. See the experience study report dated December 2017.

Withdrawal of Employee Contributions

It is assumed that employees do not withdraw their contribution balances upon employment termination or retirement.

Disability Rates

100% of the disabilities are expected to be accidental with the following probabilities. No recovery is assumed.

<u>Age</u>	<u>Rates</u>
35	0.1425%
40	0.1950%
45	0.4000%
50	0.6050%

The disability rates are based on a study of actual experience for the plan during 2015-2017. See the experience study report dated December 2017.

Withdrawal Rates

Based on Years of Creditable Service using the rates below

<u>Age</u>	<u><2</u>	<u>Between 2 to 5</u>	<u>5+</u>
30	3.60%	2.40%	1.92%
35	3.60%	2.40%	1.92%
40	2.70%	1.80%	1.44%
45	1.80%	1.20%	0.96%
50	0.00%	0.00%	0.00%

The withdrawal rates are based on a study of actual experience for the plan during 2015-2017. See the experience study report dated December 2017.

Changes since prior valuation

The mortality assumption was updated to match a recent change to the Florida Retirement System mortality for the July 1, 2019 valuation report.

The actuarial report also shows the necessary items required for plan reporting and the any state requirements.

- ✓ Florida State Requirements
 - Comparative Summary of Principal Valuation Results
 - Separation for Police & Fire
 - Comparison of payroll growth, salary increases and investment returns
 - Requirements under Florida Statute 112.664 and F.A.C. 60T-1.0035
- ✓ COLA GASB 5 information

Information to Comply with Florida 60T-1.003(4)(i)

Comparative Summary Of Principal Valuation Results

	10/1/2020 7.34% (Assumption Changes)	10/1/2020 7.34% (prior methods & assumptions)	10/1/2019 7.34%
Participant Data			
Active members	1,931	1,931	2,003
Total annual payroll	\$176,635,568	\$164,077,644	\$156,240,315
Members in DROP	149	149	122
Total annualized benefit	\$274,404	\$274,404	\$209,457
Retired members and beneficiaries	1,959	1,959	1,950
Total annualized benefit	\$25,583,663	\$25,583,663	\$25,054,084
Disabled members receiving benefits	115	115	121
Total annualized benefit	\$2,677,828	\$2,677,828	\$2,796,202
Terminated vested members	26	26	13
Total annualized benefit	\$17,124	\$17,124	\$14,649
Assets			
Actuarial value of assets	\$520,538,612	\$520,538,612	\$512,586,877
Market value of assets	\$416,022,491	\$416,022,491	\$412,090,602

Information to Comply with Florida 60T-1.003(4)(i)

Comparative Summary Of Principal Valuation Results
(continued)

	10/1/2020 7.34% (Assumption Changes)	10/1/2020 7.34% (prior methods & assumptions)	10/1/2019 7.34%
Liabilities, present value of all future expected benefit payments			
Active members			
Retirement benefits	\$58,647,893	\$61,812,655	\$64,561,743
Vesting benefits	\$2,915,836	\$3,031,263	\$2,969,132
Disability benefits	\$2,552,230	\$2,527,261	\$2,525,620
Death benefits	\$307,440	\$461,986	\$457,535
Return of contribution	0	0	0
Reserve for future actives	9,663,510	10,174,975	10,577,105
Total	\$74,086,909	\$78,008,140	\$81,091,135
Terminated vested members	\$646,916	\$688,769	\$578,580
Retired members and beneficiaries	\$321,272,472	\$345,989,381	\$341,139,233
Disabled members	\$22,982,692	\$23,529,615	\$24,440,020
Total	\$418,988,989	\$448,215,905	\$447,248,968
Liabilities due and unpaid	\$0	\$0	\$0
Actuarial accrued liability	N/A	N/A	N/A
Unfunded actuarial accrued liability	N/A	N/A	N/A

Information to Comply with Florida 60T-1.003(4)(i)

Comparative Summary Of Principal Valuation Results
(continued)

	10/1/2020 7.34% (Assumption Changes)	10/1/2020 7.34% (prior methods & assumptions)	10/1/2019 7.34%
Actuarial present value of accrued benefits			
Statement of actuarial present value of all accrued benefits			
Vested accrued benefits			
Inactive members and beneficiaries	\$344,902,080	\$370,207,765	\$366,157,833
Active members	31,287,984	32,801,176	36,319,825
Total value of all vested accrued benefits	\$376,190,064	\$403,008,941	\$402,477,658
Non-vested accrued benefits	246,048	311,959	(113,450)
Total actuarial present value of all accrued benefits	\$376,436,112	\$403,320,900	\$402,364,208
Statement of changes in total actuarial present value of all accrued benefits (ASC 960)			
Actuarial present value of accrued benefits, beginning of year	\$402,364,208	\$402,364,208	\$398,633,417
Increase (decrease) during year			
Benefits accumulated	(\$1,400,920)	(\$1,400,920)	(\$1,266,417)
Plan amendment	0	0	4,110,496
Changes in actuarial assumptions	(26,884,788)	0	(1,826,760)
Interest	28,587,925	28,587,925	28,335,996
Benefits paid	(26,230,313)	(26,230,313)	(25,622,524)
Other changes	0	0	0
Net increase (decrease)	(\$25,928,096)	\$956,692	\$3,730,791
Actuarial present value of accrued benefits, end of year	\$376,436,112	\$403,320,900	\$402,364,208

Information to Comply with Florida 60T-1.003(4)(i)

**Comparative Summary Of Principal Valuation Results
(continued)**

	10/1/2020 7.34% (Assumption Changes)	10/1/2020 7.34% (prior methods & assumptions)	10/1/2019 7.34% (Plan & Assumption Changes)
Pension cost			
Normal Cost	N/A	N/A	N/A
Member contributions	\$0	\$0	\$0
Expected plan sponsor contribution	\$7,208,422	\$7,208,422	\$6,931,175
As % of payroll	4.08%	4.08%	4.44%
Member Contributions as % of payroll	0.00%	0.00%	0.00%
Past contributions	10/1/2020	10/1/2020	10/1/2019
Required plan sponsor contribution	\$6,931,175	\$6,931,175	\$6,664,591
Required member contribution	\$0	\$0	\$0
Actual contributions made by:			
Plan's sponsor	\$6,931,175	\$6,931,175	\$6,664,591
Members	\$0	\$0	\$0
Other	\$0	\$0	\$0
Net actuarial gain (loss) (if applicable)	N/A	N/A	N/A
Other disclosures (where applicable)			
Present value of active member			
Future salaries at entry age	\$2,250,999,455	\$2,246,712,058	\$1,953,813,872
Future contributions at entry age	\$0	\$0	\$0

Information to Comply with Florida 60T-1.003(4)(i)

Hypothetical City Contribution Requirement for 2019/2020 Fiscal Year

	Police	Fire	Total
Unfunded actuarial accrued liability	N/A	N/A	N/A
Liabilities, present value of all future expected benefit payments			
Active members			
Retirement benefits	\$35,227,795	\$23,420,098	\$58,647,893
Vesting benefits	1,788,936	1,126,900	2,915,836
Disability benefits	1,628,660	923,570	2,552,230
Death benefits	144,008	163,432	307,440
Return of contribution	0	0	0
Reserve for future actives	5,818,410	3,845,100	9,663,510
Total	\$44,607,809	\$29,479,100	\$74,086,909
Terminated vested members	\$558,772	\$88,144	\$646,916
Retired members and beneficiaries	\$189,452,522	\$131,819,950	\$321,272,472
Disabled members	\$19,684,605	\$3,298,087	\$22,982,692
Total	\$254,303,708	\$164,685,281	\$418,988,989
Entry age reserve			
Active	\$20,487,228	\$15,008,881	\$35,496,109
Inactive	209,695,899	135,206,180	344,902,079
Total	\$230,183,127	\$150,215,061	\$380,398,188
Actuarial asset value ¹	\$314,983,639	\$205,554,973	\$520,538,612

¹Allocated based on Entry Age Reserve

Information to Comply with Florida 60T-1.003(4)(i)

Hypothetical City Contribution Requirement for 2019/2020 Fiscal Year (continued)

	Police	Fire	Total
Normal cost			
Total present value of future benefits	\$254,303,708	\$164,685,281	\$418,988,989
Present value of future member contributions	\$0	\$0	\$0
Actuarial asset value	(\$314,983,639)	(\$205,554,973)	(\$520,538,612)
Unfunded actuarial accrued liability	\$0	\$0	\$0
Present value of future normal costs	\$0	\$0	\$0
Present value of future payrolls	\$1,322,310,048	\$928,689,407	\$2,250,999,455
Administrative expense ¹	\$0	\$0	\$0
Current payroll	\$102,135,190	\$74,500,378	\$176,635,568
Interest rate	7.34%	7.34%	7.34%
Current normal cost at end of year	\$0	\$0	\$0
As a percentage of payroll	0.00%	0.00%	0.00%
Hypothetical Total			0

¹Allocated based on Entry Age Reserve

Information to Comply with Florida 60T-1.003(4)(i)

September 30, 2019

Historical Salary Increases and Asset Performance

Year Ending	Payroll Growth	Salary Growth	Expected Salary Growth	Asset Return (Market)	Asset Return (Actuarial)	Asset Return (Expected)
9/30/2020	5.10%	11.71%	7.72%	5.65%	6.25%	7.34%
9/30/2019	0.83%	8.21%	7.74%	6.11%	6.48%	7.34%
9/30/2018	5.27%	7.39%	7.85%	6.90%	6.66%	7.34%
9/30/2017	6.32%	7.02%	7.85%	8.24%	6.76%	7.42%
9/30/2016	25.22%	10.46%	7.85%	8.42%	6.51%	7.42%
9/30/2015	13.42%	12.60%	7.79%	2.80%	6.18%	7.42%
9/30/2014	10.00%	1.38%	7.72%	8.60%	7.18%	7.50%
9/30/2013	3.70%	3.64%	7.77%	11.20%	6.95%	7.50%
9/30/2012	0.10%	(0.75%)	7.92%	17.40%	5.98%	7.50%
9/30/2011	2.50%	7.14%	7.48%	3.60%	3.98%	7.50%
Averages						
3-year				6.22%	6.46%	
5-year				7.06%	6.53%	
10-year	7.25%			7.82%	6.29%	

Information to Comply with Florida 112.664 and Florida Administrative Code 60T-1.0035¹

	October 1, 2020			
	Valuation	- 200 bp ¹	Funding Rate ¹	+ 200 bp ¹
	7.34%	5.34%	7.34%	9.34%
Total pension liability				
Service Cost	\$2,805,339	\$2,805,339	\$2,805,339	\$2,805,339
Interest	29,052,186	29,052,186	29,052,186	29,052,186
Benefit changes	0	0	0	0
Difference between expected and actual experience	(4,059,900)	(4,059,900)	(4,059,900)	(4,059,900)
Changes in assumptions	0	74,334,697	(27,285,293)	(96,875,308)
Benefit payments	(26,230,311)	(26,230,311)	(26,230,311)	(26,230,311)
Contribution refunds	0	0	0	0
Net change in pension liability	\$1,567,315	\$75,902,012	(\$25,717,979)	(\$95,307,993)
Total pension liability, beginning of year	\$406,116,168	\$406,116,168	\$406,116,168	\$406,116,168
Total pension liability, end of year	\$407,683,483	\$482,018,180	\$380,398,189	\$310,808,175
Plan fiduciary net position				
Contributions - Employer	\$6,931,175	\$6,931,175	\$6,931,175	\$6,931,175
Contributions - State	0	\$0	\$0	\$0
Contributions - Member	0	\$0	\$0	\$0
Net investment income	23,267,311	23,267,311	23,267,311	23,267,311
Benefit payments	(26,230,311)	(26,230,311)	(26,230,311)	(26,230,311)
Contribution refunds	0	0	0	0
Administrative expense	0	0	0	0
Other	(36,285)	(36,285)	(36,285)	(36,285)
Net change in plan fiduciary net position	\$3,931,890	\$3,931,890	\$3,931,890	\$3,931,890
Plan fiduciary net position, beginning of year	\$412,090,602	\$412,090,602	\$412,090,602	\$412,090,602
Plan fiduciary net position, end of year	\$416,022,492	\$416,022,492	\$416,022,492	\$416,022,492
Net pension liability/(asset)	(\$8,339,009)	\$65,995,688	(\$35,624,303)	(\$105,214,317)
Funded ratio	102.05%	86.31%	109.37%	133.85%
Years that Assets support expected benefit payments	35	24	100	100
Estimated city contribution				
Annual dollar value	\$7,208,422	\$7,208,422	\$7,208,422	\$7,208,422
Percentage of payroll	3.89%	3.89%	3.89%	3.89%

¹Based on valuation assumption with the following changes
-Interest Rate (as noted)

Information to Comply with Florida 112.664 and Florida Administrative Code 60T-1.0035¹

October 1, 2020

Sustainment of Expected Benefit Payments

Mortality Interest Valuation Mortality 7.34%

<u>Year</u>	<u>Market Value of Assets</u>	<u>Investment Return</u>	<u>Benefit Payments</u>	<u>Year</u>	<u>Market Value of Assets</u>	<u>Investment Return</u>	<u>Benefit Payments</u>
1	\$416,022,492	\$29,546,565	\$27,447,439	30	\$220,761,337	\$14,863,626	\$37,177,490
2	418,121,618	29,676,155	28,126,675	31	198,447,473	13,222,452	37,270,054
3	419,671,098	29,770,270	28,670,830	32	174,399,871	11,456,251	37,300,747
4	420,770,538	29,833,224	29,163,056	33	148,555,375	9,560,350	37,270,666
5	421,440,706	29,865,097	29,643,421	34	120,845,059	7,529,950	37,172,530
6	421,662,382	29,865,240	30,090,788	35	91,202,479	5,359,980	37,011,795
7	421,436,834	29,834,258	30,490,974	36	59,550,664	3,044,515	36,796,038
8	420,780,118	29,770,491	30,922,705	37	25,799,141		36,527,480
9	419,627,904	29,668,929	31,393,976				
10	417,902,857	29,526,010	31,846,160				
11	415,582,707	29,341,979	32,227,056				
12	412,697,630	29,116,964	32,594,621				
13	409,219,973	28,849,249	32,940,093				
14	405,129,129	28,536,754	33,279,276				
15	400,386,607	28,177,608	33,585,659				
16	394,978,556	27,769,695	33,889,728				
17	388,858,523	27,310,706	34,160,963				
18	382,008,266	26,798,261	34,428,262				
19	374,378,265	26,228,841	34,688,394				
20	365,918,712	25,598,395	34,952,336				
21	356,564,771	24,902,698	35,205,241				
22	346,262,228	24,137,750	35,447,745				
23	334,952,233	23,299,071	35,684,205				
24	322,567,099	22,381,140	35,930,036				
25	309,018,203	21,377,575	36,181,804				
26	294,213,974	20,281,845	36,434,216				
27	278,061,603	19,088,305	36,654,903				
28	260,495,005	17,791,215	36,868,543				
29	241,417,677	16,384,720	37,041,060				

Information to Comply with Florida 112.664 and Florida Administrative Code 60T-1.0035¹

October 1, 2020

Sustainment of Expected Benefit Payments

Mortality Interest Florida Retirement System Generational Mortality 5.34%

<u>Year</u>	<u>Market Value of Assets</u>	<u>Investment Return</u>	<u>Benefit Payments</u>
1	\$416,022,492	\$21,494,875	\$27,349,153
2	410,168,214	21,170,095	27,810,643
3	403,527,666	20,806,787	28,140,905
4	396,193,548	20,407,599	28,427,249
5	388,173,898	19,971,882	28,710,626
6	379,435,154	19,498,395	28,970,085
7	369,963,464	18,986,814	29,189,924
8	359,760,354	18,435,202	29,446,649
9	348,748,907	17,839,271	29,747,176
10	336,841,002	17,195,916	30,030,743
11	324,006,175	16,504,881	30,245,341
12	310,265,715	15,765,789	30,448,420
13	295,583,084	14,976,917	30,631,323
14	279,928,678	14,136,271	30,809,686
15	263,255,263	13,242,043	30,956,439
16	245,540,867	12,292,229	31,103,125
17	226,729,971	11,284,670	31,219,132
18	206,795,509	10,217,156	31,333,509
19	185,679,156	9,086,624	31,444,263
20	163,321,517	7,889,589	31,563,276
21	139,647,830	6,622,422	31,676,839
22	114,593,413	5,281,629	31,786,390
23	88,088,652	3,863,295	31,899,459
24	60,052,488	2,362,717	32,030,267
25	30,384,938		32,176,962

Information to Comply with Florida 112.664 and Florida Administrative Code 60T-1.0035¹

October 1, 2020

Sustainment of Expected Benefit Payments

Mortality Florida Retirement System Generational Mortality
Interest 7.34%

<u>Year</u>	<u>Market Value of Assets</u>	<u>Investment Return</u>	<u>Benefit Payments</u>	<u>Year</u>	<u>Market Value of Assets</u>	<u>Investment Return</u>	<u>Benefit Payments</u>
1	\$416,022,492	\$29,550,109	\$27,349,153	30	\$391,390,328	\$27,543,201	\$32,866,645
2	418,223,448	29,695,022	27,810,643	31	386,066,884	27,149,522	32,948,156
3	420,107,827	29,821,429	28,140,905	32	380,268,250	26,722,597	32,984,368
4	421,788,351	29,934,457	28,427,249	33	374,006,479	26,263,331	32,974,707
5	423,295,559	30,034,870	28,710,626	34	367,295,103	25,773,105	32,908,444
6	424,619,803	30,122,716	28,970,085	35	360,159,764	25,253,721	32,787,776
7	425,772,434	30,199,394	29,189,924	36	352,625,709	24,706,924	32,615,715
8	426,781,904	30,264,234	29,446,649	37	344,716,918	24,134,584	32,389,215
9	427,599,489	30,313,411	29,747,176	38	336,462,287	23,538,597	32,114,531
10	428,165,724	30,344,750	30,030,743	39	327,886,353	22,920,826	31,789,908
11	428,479,731	30,360,062	30,245,341	40	319,017,271	22,283,231	31,418,327
12	428,594,452	30,361,161	30,448,420	41	309,882,175	21,627,899	30,997,147
13	428,507,193	30,348,163	30,631,323	42	300,512,927	20,957,295	30,522,840
14	428,224,033	30,320,949	30,809,686	43	290,947,382	20,274,165	29,996,317
15	427,735,296	30,279,785	30,956,439	44	281,225,230	19,581,539	29,414,339
16	427,058,642	30,224,831	31,103,125	45	271,392,430	18,882,896	28,773,992
17	426,180,348	30,156,182	31,219,132	46	261,501,334	18,182,156	28,073,133
18	425,117,398	30,074,038	31,333,509	47	251,610,357	17,483,538	27,313,642
19	423,857,927	29,977,600	31,444,263	48	241,780,253	16,791,560	26,493,901
20	422,391,264	29,865,657	31,563,276	49	232,077,912	16,111,087	25,615,172
21	420,693,645	29,736,957	31,676,839	50	222,573,827	15,447,168	24,680,892
22	418,753,763	29,590,621	31,786,390	51	213,340,103	14,804,990	23,694,016
23	416,557,994	29,425,375	31,899,459	52	204,451,077	14,189,972	22,655,547
24	414,083,910	29,239,062	32,030,267	53	195,985,502	13,607,701	21,570,887
25	411,292,705	29,028,899	32,176,962	54	188,022,316	13,063,729	20,446,741
26	408,144,642	28,792,072	32,336,714	55	180,639,304	12,563,513	19,290,103
27	404,600,000	28,526,732	32,479,927	56	173,912,714	12,112,369	18,108,772
28	400,646,805	28,231,092	32,631,812	57	167,916,311	11,715,306	16,913,949
29	396,246,085	27,903,486	32,759,243	58	162,717,668	11,376,934	15,715,380

Information to Comply with Florida 112.664 and Florida Administrative Code 60T-1.0035¹

October 1, 2020

Sustainment of Expected Benefit Payments

Mortality Florida Retirement System Generational Mortality
Interest 9.34%

<u>Year</u>	<u>Market Value of Assets</u>	<u>Investment Return</u>	<u>Benefit Payments</u>	<u>Year</u>	<u>Market Value of Assets</u>	<u>Investment Return</u>	<u>Benefit Payments</u>
1	\$416,022,492	\$37,607,802	\$27,349,153	30	\$1,468,733,653	\$135,679,108	\$32,866,645
2	426,281,141	38,544,889	27,810,643	31	1,571,546,116	145,278,071	32,948,156
3	437,015,387	39,532,388	28,140,905	32	1,683,876,031	155,768,031	32,984,368
4	448,406,870	40,583,279	28,427,249	33	1,806,659,694	167,236,467	32,974,707
5	460,562,900	41,705,714	28,710,626	34	1,940,921,454	179,779,540	32,908,444
6	473,557,988	42,907,609	28,970,085	35	2,087,792,550	193,502,810	32,787,776
7	487,495,512	44,199,336	29,189,924	36	2,248,507,584	208,521,450	32,615,715
8	502,504,924	45,589,494	29,446,649	37	2,424,413,319	224,961,387	32,389,215
9	518,647,769	47,083,514	29,747,176	38	2,616,985,491	242,960,170	32,114,531
10	535,984,107	48,689,781	30,030,743	39	2,827,831,130	262,667,974	31,789,908
11	554,643,145	50,422,737	30,245,341	40	3,058,709,196	284,248,951	31,418,327
12	574,820,541	52,298,034	30,448,420	41	3,311,539,820	307,882,561	30,997,147
13	596,670,155	54,330,437	30,631,323	42	3,588,425,234	333,765,315	30,522,840
14	620,369,269	56,535,791	30,809,686	43	3,891,667,709	362,112,202	29,996,317
15	646,095,374	58,931,909	30,956,439	44	4,223,783,594	393,158,397	29,414,339
16	674,070,844	61,538,120	31,103,125	45	4,587,527,652	427,161,329	28,773,992
17	704,505,839	64,375,452	31,219,132	46	4,985,914,989	464,402,706	28,073,133
18	737,662,159	67,467,030	31,333,509	47	5,422,244,562	505,190,564	27,313,642
19	773,795,680	70,836,844	31,444,263	48	5,900,121,484	549,861,696	26,493,901
20	813,188,261	74,510,677	31,563,276	49	6,423,489,279	598,784,369	25,615,172
21	856,135,662	78,516,780	31,676,839	50	6,996,658,476	652,361,029	24,680,892
22	902,975,603	82,886,628	31,786,390	51	7,624,338,613	711,031,412	23,694,016
23	954,075,841	87,654,228	31,899,459	52	8,311,676,009	775,276,139	22,655,547
24	1,009,830,610	92,855,751	32,030,267	53	9,064,296,601	845,620,426	21,570,887
25	1,070,656,094	98,530,153	32,176,962	54	9,888,346,140	922,637,979	20,446,741
26	1,137,009,285	104,720,248	32,336,714	55	10,790,537,378	1,006,955,450	19,290,103
27	1,209,392,819	111,474,331	32,479,927	56	11,778,202,725	1,099,257,330	18,108,772
28	1,288,387,223	118,845,474	32,631,812	57	12,859,351,283	1,200,291,158	16,913,949
29	1,374,600,885	126,892,011	32,759,243	58	14,042,728,492	1,310,873,313	15,715,380

GASB 5 – COLA Fund

Funding Status and Progress as of September 30, 2020 and 2019	2019	2020
1. COLA Fund Table	\$1,670	\$1,670
2. Pension benefit obligation (in millions)		
a. Retirees and beneficiaries receiving benefits and terminated members not yet receiving	366.1	\$344.9
b. Current Employees		
Accumulated employee contributions including interest	0	0
Employer-financed vested	0	0
Employer-financed nonvested	81.1	\$74.1
c. Total pension benefit obligation (a+b+c)	\$447.2	\$419.0
3. Net assets available for benefits	\$412.1	\$416.0
4. Unfunded pension benefit (obligation)/asset [(3)-(2)]	(\$35.1)	(\$3.0)

The pension benefit obligations were determined as part of actuarial valuations at January 1, 2021 and January 1, 2020, based on data and asset information at September 30, 2020 and September 30, 2019. Significant actuarial assumptions used include (a) a rate of return on the investment of present and future assets of 7.34% per year compounded annually, (b) post retirement COLA benefits based on the table in effect at January 1, 2021 and January 1, 2020. All plan provisions and other assumptions not listed above can be found in the January 1, 2021 COLA Fund Report.

GASB 5 – COLA Fund

Contributions required and contributions made

The funding policy provides for annual employer contributions from January 1, 1994. The amount of the contribution was \$2.5 million, beginning January 1, 1994, increasing 4% per year each year thereafter, and reduced (but not below zero) by any excess investment income transfer due on the same date.

The excess investment income transfer consists of a portion of gains due to investment return exceeding the 7.34 percent assumption

Analysis of funding progress

Fiscal Year	(1) Net Assets Available for Benefits ⁽¹⁾	(2) Pension Benefit Obligation ⁽²⁾	(3) Percent Funded	(4) Unfunded PBO (2)-(1)	(5) Annual Covered Payroll	(4)/(5)
	(\$)	(\$)	(%)	(\$)	(\$)	(%)
2011	310.0	303.6	102	(6.4)	82.2	(8)
2012	350.3	312.6	112	(37.7)	82.2	(46)
2013	378.7	320.0	118	(58.7)	85.2	(69)
2014	394.6	371.0	106	(23.6)	93.7	(25)
2015	381.4	393.5	97	12.1	106.3	11
2016	392.9	420.5	93	27.6	133.1	21
2017	420.3	427.2	98	6.9	141.5	5
2018	426.2	440.2	97	14.0	148.9	9
2019	412.1	447.2	92	35.1	168.1	21
2020	416.0	419.0	99	3.0	176.7	2

⁽¹⁾ Excluding future City minimum contributions

⁽²⁾ Excluding new increment and contingency reserves

GASB 5 – COLA Fund

Revenues and Expenses

Fiscal Year	Revenues by Source			
	Employee Contributions	Employer Contributions	Investment Income	Total
	(\$)	(\$)	(\$)	(\$)
2011	0	4,869,751	25,484,227	30,353,978
2012	0	5,064,541	21,399,142	26,463,683
2013	0	5,267,123	27,293,996	32,561,119
2014	0	5,477,808	30,812,622	36,290,430
2015	0	5,696,920	26,665,405	32,362,325
2016	0	5,924,797	13,261,430	19,186,227
2017	0	6,161,789	26,980,778	33,142,567
2018	0	6,408,261	19,212,430	25,620,691
2019	0	6,664,591	16,086,759	22,751,350
2020	0	6,931,175	55,298,341	62,229,516

Expenses by Type

Fiscal Year	Expenses by Type			Total
	Benefits	Administrative Expenses	Refunds	
	(\$)	(\$)	(\$)	
2011	17,363,841	1,321,324	0	18,685,165
2012	17,747,481	1,456,098	421	19,204,000
2013	19,522,271	1,604,698	0	21,126,969
2014	22,188,409	1,483,762	0	23,672,171
2015	23,563,734	1,190,614	0	24,754,348
2016	24,344,325	1,286,086	0	25,630,411
2017	24,882,453	1,202,695	0	26,085,148
2018	25,279,985	1,758,350	0	27,038,335
2019	25,622,524	1,477,166	0	27,099,690
2020	26,230,313	1,771,916	0	28,002,229