



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

January 1, 2020 | COLA Fund Report

<b>Actuarial Certification</b>	<b>3</b>
<b>Executive Summary</b>	<b>5</b>
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
<b>Assets Information</b>	<b>11</b>
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
<b>COLA Asset and Liability</b>	<b>19</b>
Summary of Assets Available for Benefits	19
Summary of Liabilities	20
<b>COLA Measurements</b>	<b>21</b>
COLA Fund Table Amount	21
Determination of Net Cumulative Experience Positon (Preliminary)	22
<b>Plan Provisions</b>	<b>23</b>
<b>Actuarial Assumptions</b>	<b>26</b>
<b>Other Measurements</b>	<b>30</b>
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 1/1/2020. The purpose of this report is to communicate the following results of the valuation:

- 10/1/2019 Asset Information;
- 1/1/2020 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:

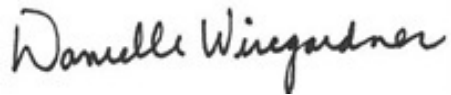
- plan experience differing from that anticipated by the economic or demographic assumptions;
- changes in economic or demographic assumptions;
- increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period 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.

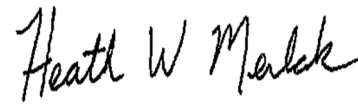
The undersigned are compliant with the continuing education requirements of the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States.

Nyhart



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Danielle Winegardner, FSA, EA, MAAA



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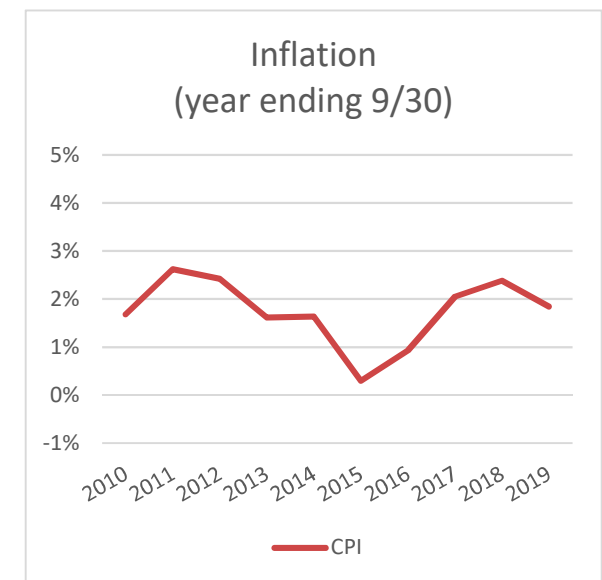
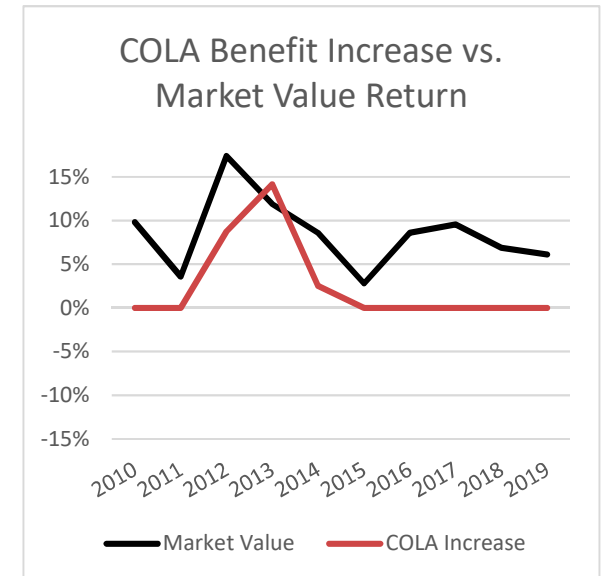
Heath W. Merlak, FSA, EA, MAAA

December 4, 2019

Date

Summary Results

	October 1, 2018	October 1, 2019
<b>COLA Table Amount</b>	\$1,670	\$1,670 [Proposed]
<b>Asset Performance</b>		
Market Value of Assets	\$1,140,506,121	\$1,149,117,960
Actuarial Value of Assets	\$1,172,416,575	\$1,189,509,806
Actuarial Asset Value Return	6.66%	6.48%
COLA Fund Asset Value Return	6.00%	1.20%
<b>COLA Information</b>		
Current COLA Assets	\$426,176,255	\$412,090,602
Future Contributions (discounted)	96,631,033	100,496,275
Assets for COLA	\$522,807,288	\$512,586,877
COLA Liability	\$440,222,258	\$447,248,968
Net Reserve	15.8%	12.7%
Target Reserve (20% of Asset Value)	\$104,561,458	\$102,517,375
Actual Reserve	\$82,585,030	\$65,337,909
<b>Participant Information</b>		
Active	1,998	2,003
Retirees and Beneficiaries	2,072	2,072
Disableds	130	121
Terminated Vesteds	14	13
Terminated, Due a Refund of Employee Contributions	112	115
<b>Total</b>	<b>4,326</b>	<b>4,324</b>



### Changes Since Prior Valuation and Key Notes

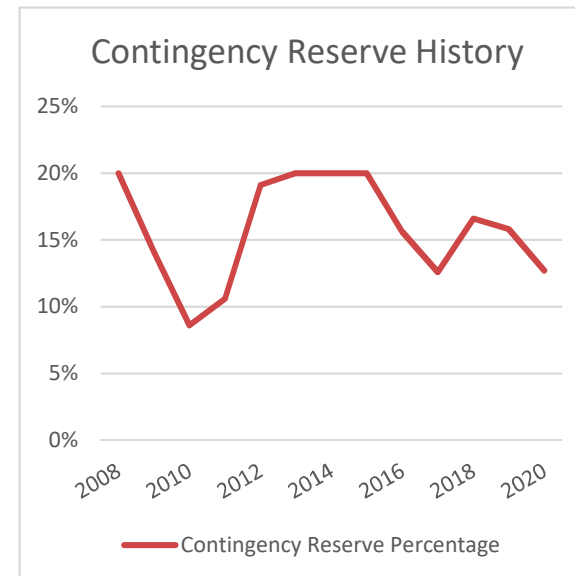
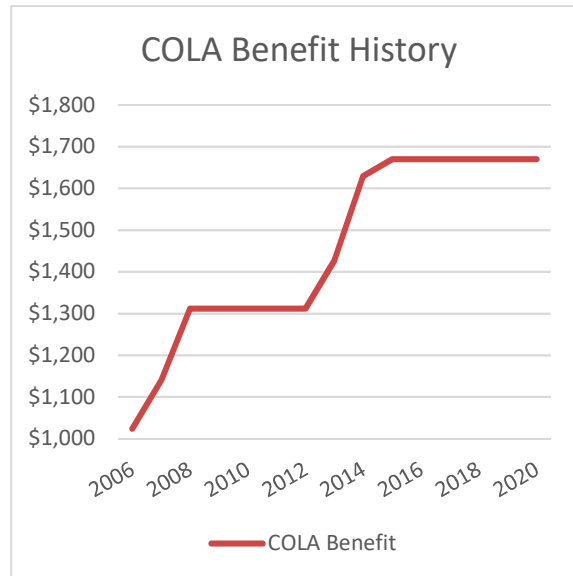
We recommend maintaining the COLA table at its current level (i.e. \$1,670) as of January 1, 2020. The contingency reserve is 12.7%, a decrease from the prior year's 15.8%. A ten-year historical graph of the COLA table level and contingency reserve amount are below.

This report reflects the settlement agreements that were approved by the city commission in October 2018. Plan provisions have been partially restored to the provisions that existed prior to 10/1/2010 as follows:

- Retroactively restore and uncap the FIPO pension plan benefits that were in effect prior to September 27, 2010, for all bargaining unit members who were vested in that plan before September 27, 2010; and
- Retroactively grandfather the select group of retirees that the FIPO Trust began payment to in January 2018, and assume the ongoing obligations for payment to those retirees based on their pension plan benefits to those that were in effect prior to September 27, 2010.

The mortality assumption was updated to match a recent change to the Florida Retirement System mortality for special risk members' pre-retirement mortality. The pre-retirement mortality was changed to apply the Combined Healthy tables rather than the Annuitant tables.

The withdrawal and disability assumptions were changed in accordance with the recent experience study dated December 2017.



**Historical Valuation Summary**

	10/1/2014	10/1/2015	10/1/2016	10/1/2017	10/1/2018	10/1/2019
<b>COLA Table Amount</b>	\$1,670	\$1,670	\$1,670	\$1,670	\$1,670	\$1,670
<b>Asset Performance</b>						
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
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
Actuarial Asset Value Return	7.20%	6.20%	6.50%	6.76%	6.66%	6.48%
<b>COLA Information</b>						
Current COLA Assets	\$394,567,656	\$381,440,561	\$392,859,018	\$420,284,415	\$426,176,255	\$412,090,602
Future Contributions (discounted)	\$80,826,996	\$84,972,329	\$88,371,217	\$91,906,070	\$96,631,033	\$100,496,275
Assets for COLA	\$475,394,652	\$466,412,890	\$481,230,235	\$512,190,485	\$522,807,288	\$512,586,877
COLA Liability	\$370,959,121	\$393,512,220	\$420,490,548	\$427,229,145	\$440,222,258	\$447,248,968
Net Reserve	21.97%	15.60%	12.60%	16.60%	15.80%	12.70%
Target Reserve (20% of Asset Value)	\$95,078,930	\$93,282,578	\$96,246,047	\$102,438,097	\$104,561,458	\$102,517,375
Actual Reserve	\$95,078,930	\$72,900,670	\$60,739,687	\$84,961,340	\$82,585,030	\$65,337,909
<b>Participant Information</b>						
Active	1,482	1,650	1,869	1,943	1,998	2,003
Retirees and Beneficiaries	2,098	2,088	2,062	2,052	2,072	2,072
Disableds	149	147	143	136	130	121
Terminated Vesteds	12	15	15	16	14	13
Terminated, Due a Refund of Employee Contributions				97	112	115
	3,741	3,900	4,089	4,244	4,326	4,324

## Plan Maturity Measures – October 1, 2019

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: 11.3**

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: 46.3%**

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: 13.6%**

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: 6.22%**

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 – No COLA increase provided from 2019 to 2020, future COLA growth as designed

Scenario 3 – Standard COLA increase from 2019 to 2020, future COLA growth declines by 10%

Scenario 4 – 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	No 2020 COLA Increase, Normal COLA Growth After	Standard 2020 COLA Increase, COLA Growth Declines by 10% After 2020	Standard 2020 COLA Increase, COLA Growth Declines by 50% After 2020
<b>Interest Rate</b>	<b>7.34%</b>	<b>7.09%</b>	<b>7.34%</b>	<b>7.34%</b>	<b>7.34%</b>
Summary of Test Scenario Results					
Assets Available:	\$512,586,877	\$516,155,214	\$512,586,877	\$512,586,877	\$512,586,877
Total Cola Liability	\$447,248,968	\$463,151,951	\$417,524,779	\$411,079,544	\$307,887,934
Net Reserve	12.70%	10.30%	18.50%	19.80%	39.90%
Target Reserve (20% of Asset Value)	\$102,517,375	\$103,231,043	\$102,517,375	\$102,517,375	\$102,517,375
Actual Reserve	\$65,337,909	\$53,003,263	\$95,062,098	\$101,507,333	\$204,698,943

### 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, 2019	
	Membership and Benefit Accounts	COLA Account
1. Market value – beginning of prior year	\$1,140,506,121	\$426,176,255
2. Book value – beginning of prior year	\$984,859,741	\$350,560,169
3. Income		
(a) City contributions	\$56,030,260	\$6,664,591
(b) Member contributions	16,309,563	0
(c) Other contributions	0	0
(d) Interest and dividends	20,688,675	7,241,816
(e) Net realized gains (losses)	24,265,659	8,564,862
(f) Securities lending income	374,604	121,915
(g) Rental and other income	446,467	158,166
(h) Income transfer	0	0
(i) Total	\$118,115,228	\$22,751,350
4. Disbursements		
(a) Benefit payments and refunds	\$131,175,683	\$25,622,524
(b) Custodial and investment expenses	4,148,392	1,448,312
(c) Administrative expense	2,128,469	0
(d) Other expense	0	0
(e) Securities lending fees	93,577	23,722
(f) Building depreciation	14,377	5,132
(g) Total	\$137,560,498	\$27,099,690
5. Book value – beginning of current year [(2)+(3i)-(4g)]	\$965,414,471	\$346,211,829
6. Net change in unrealized gains (losses)	\$28,057,109	(\$9,737,313)
7. Unrealized gains (losses)	\$183,703,489	\$65,878,773
8. Market value – beginning of current year [(1)+(3i)-(4g)+(6)]	\$1,149,117,960	\$412,090,602
9. Current year allocation to COLA II (discounted)	\$0	N/A
10. Net market value – beginning of current year	\$1,149,117,960	\$412,090,602

Membership and Benefits Cost-Of-Living Adjustment Account Summary

		September 30, 2019	
		Market	Book
1.	Investments		
	(a) Bill, bonds, notes	\$394,043,877	\$364,007,233
	(b) Domestic stocks	494,970,660	406,393,257
	(c) International stocks	249,461,359	209,504,493
	(d) Private equity	174,027,722	155,468,811
	(e) Money market fund and time deposit	12,256,675	11,300,087
	(f) Mutual fund	189,748,114	118,252,264
	(g) Real estate	2,095,512	2,095,512
	(h) Securities lending adjustment	0	0
	(i) Total investment	<u>\$1,516,603,919</u>	<u>\$1,267,021,657</u>
2.	Cash	\$43,220,820	\$43,220,820
3.	Receivables		
	(a) City contributions	\$0	\$0
	(b) Member contributions	0	0
	(c) Accounts receivable	6,732	6,732
	(d) Accrued interest and dividend	3,505,062	3,505,062
	(e) Securities sold	11,277,977	11,277,977
	(f) Total receivables	<u>\$14,789,771</u>	<u>\$14,789,771</u>
4.	Payables:		
	(a) Budget advance	\$0	\$0
	(b) Accrual expense	483,754	483,754
	(c) Transfer	0	0
	(d) Tax withheld	5,687	5,687
	(e) Accounts payable	3,325,334	3,325,334
	(f) Securities purchased	9,591,173	9,591,173
	(g) Total payables	<u>\$13,405,948</u>	<u>\$13,405,948</u>
5.	Total [(1i)+(2)+(3f)-(4g)]	\$1,561,208,562	\$1,311,626,300
6.	COLA account	\$412,090,602	\$346,211,829
7.	Current year COLA transfer	\$0	\$0
8.	Membership & benefits account [(5)-(6)-(7)]	\$1,149,117,960	\$965,414,471

Investment Results - Membership and Benefits Accounts

September 30, 2019

	<u>Dollar Return</u>	<u>Market Return</u>	<u>Book Return</u>
<u>Membership and Benefits Accounts</u>			
Interest	\$12,915,881	1.1%	1.4%
Dividends	7,772,794	0.7%	0.8%
Rental and Other Income, less Depreciation	432,090	0.0%	0.0%
Realized Gains	24,265,659	2.1%	2.5%
Securities Lending (Net)	281,027	0.0%	0.0%
Increase in Unrealized Gains	28,057,109	2.5%	2.9%
Custodial and Investment Expenses	(4,148,392)	(0.3%)	(0.3%)
	<u>\$69,576,168</u>	<u>6.1%</u>	<u>7.3%</u>

Investment Results - COLA I and II Accounts

September 30, 2019

COLA Accounts

	<u>Dollar Return</u>	<u>Market Return</u>	<u>Book Return</u>
Interest	\$4,519,749	1.1%	1.3%
Dividends	2,722,067	0.7%	0.8%
Rental and Other Income, less Depreciation	153,034	0.0%	0.0%
Realized Gains	8,564,862	2.1%	2.5%
Securities Lending (Net)	98,193	0.0%	0.0%
Increase in Unrealized Gains	(9,737,313)	(2.3%)	(2.9%)
Custodial and Investment Expenses	(1,448,312)	(0.4%)	(0.3%)
	<u>\$4,872,280</u>	<u>1.2%</u>	<u>1.4%</u>

**Actuarial Value of Assets**

**September 30, 2019**

1.	Expected actuarial value of assets	
	(a) Actuarial value of assets – beginning of prior year	\$1,172,416,575
	(b) City Contributions	56,030,260
	(c) Member Contributions	16,309,563
	(d) Benefits payments and refunds	131,175,683
	(e) Expected return	86,027,052
	(f) Expected actuarial value of assets – beginning of current year	\$1,199,607,767
2.	Market value of assets – beginning of current year	\$1,149,117,960
3.	Present value of COLA transfers	
	(a) Current year	\$0
	(b) Next year	0
	(c) Total	\$0
4.	Market value net COLA transfer [(2)-(3)]	\$1,149,117,960
5.	Amount subject to phase in [(4)-(1f)]	(\$50,489,807)
6.	Phase in of asset gain loss [(5)x20%]	(\$10,097,961)
7.	Preliminary actuarial value of assets – beginning of current year [(1f)+(6)]	\$1,189,509,806
8.	80% of Market value of assets	\$919,294,368
9.	120% of Market value of assets	\$1,378,941,552
10.	Adjusted actuarial value of assets	\$1,189,509,806
11.	Contribution surplus account balance	\$0
12.	Final actuarial value of assets – beginning of current year [(10)-(11)]	\$1,189,509,806
13.	Return on actuarial value of assets	6.48%

## Asset Information

## Development of Actuarial Asset Value for COLA Transfer

	<b>September 30, 2019</b>		
	<u>9/30/2017</u>	<u>9/30/2018</u>	<u>9/30/2019</u>
1. Book Value	\$993,901,213	\$984,859,741	\$965,414,471
2. Market Value	\$1,131,066,046	\$1,140,506,121	\$1,149,117,960
3. [(1)/(2)]	1.1380065	1.1580391	1.1902846
4. 3 year average of book to market value			1.1621101
5. Adjusted market value [(1)x(4)]			\$1,121,917,907
6. Contribution surplus			\$0
7. 80% of Adjusted market value, net of contribution surplus			\$919,294,368
8. 120% of Adjusted market value, net of contribution surplus			\$1,378,941,552
9. Adjusted actuarial value of assets			\$1,121,917,907
10. Present value of next year COLA transfer			\$0
11. Final actuarial asset value [(9)+(10)]			\$1,121,917,907



Rate of return on COLA Transfer Actuarial Asset Value

	September 30, 2019
1. Actuarial asset value – beginning of prior year	\$1,127,674,351
2. Contributions	
(a) City contributions	\$56,030,260
(b) Member contributions	16,309,563
(c) Total	<u>\$72,339,823</u>
3. Benefits and refunds	\$131,175,683
4. Present value of COLA transfer	\$0
5. Contribution surplus	\$0
6. Actuarial asset value – beginning of current year	\$1,121,917,907
7. Net return on investment [(6)+(5)-(4)+(3)-(2)-(1)]	\$53,079,416
8. Rate of return	4.71%

Excess Investment Return

September 30, 2019

1. Expected return on actuarial asset value	
(a) Actuarial asset value as of beginning of prior year	\$1,127,674,351
(b) City Contributions	\$56,030,260
(c) Member Contributions	\$16,309,563
(d) Benefits paid and refunds	\$131,175,683
(e) Expected return at 7.34% <sup>1</sup>	\$82,742,973
(f) Base amount for expected return [(e)/7.34%]	\$1,127,288,460
2. Actual return on actuarial asset value	\$53,079,416
3. Excess return on assets [(2)-(1e)]	(\$29,663,557)
4. Amount to be transferred to COLA fund (limited to cumulative experience position)	
(a) Excess return	
(i) First 2.5%	\$0
(ii) Next 2.5%	0
(iii) Next 2.5%	0
(iv) Total	<u>\$0</u>
(b) COLA Transfer	
(i) 75% of (4a)(i)	\$0
(ii) 50% of (4a)(ii)	0
(iii) 25% of (4a)(iii)	0
(iv) Total	<u>\$0</u>

<sup>1</sup>Assumes mid-year member contributions and benefits and beginning of year City contributions

Summary of Assets Available for Benefits

October 1, 2019

1.	COLA Accounts	\$412,090,602
2.	Transfers of Excess Investment Income	
	(a) Current year	\$0
	(b) Next year	0
	(c) Total	\$0
3.	Minimum City Contributions	
	(a) Expected contributions	\$7,496,759
	(b) Permanent, discounted annuity [1/1.0734 <sup>2.25</sup> ∞]	11.6169029
	(c) Expected future contributions [(a)x(b)]	\$87,089,122
4.	Discounted City Contribution	
	(a) \$6,931,175 due on January 1, 2020	\$6,809,519
	(b) \$7,208,422 due on January 1, 2021	6,597,634
	(c) Total	<u>\$13,407,153</u>
5.	Assets available [(1)+(2)+(3)+(4)]	\$512,586,877

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**Summary of Liabilities**

**October 1, 2019**

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1.	Present value of existing COLA benefits	
	(a) COLA for inactives	366,157,833
	(b) Reserve for current actives	70,514,030
	(c) Reserve for future actives [(15% of (b))]	10,577,105
	(d) Total	<u>\$447,248,968</u>
2.	Contingency reserve [20% of assets available]	\$102,517,375
3.	Unallocated reserve	(\$37,179,466)
4.	Total Liability [(1d)+(2)+(3)]	\$512,586,877

COLA Fund Table Amount

	October 1, 2019
1. Assets available for COLA benefits	\$512,586,877
2. Liability based on current table	
(a) COLA II for inactives	\$365,664,886
(b) Reserve for current actives	70,514,030
(c) Reserve for future actives	10,577,105
(d) Sub-Total	\$446,756,021
(e) COLA I for inactives	\$492,947
(f) Total	\$447,248,968
3. 20% Contingency reserve	\$102,517,375
4. Unallocated reserve (not greater than \$0)	(\$37,179,466)
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 [(7)x(8)]	\$0
11. Potential new table amount [(8)+(9)]	\$1,670

**Determination of Net Cumulative Experience Position (Preliminary)**

**October 1, 2019**

1. Expected unfunded actuarial liability	
(a) Expected unfunded actuarial liability – beginning of prior year	\$294,113,025
(b) Entry age normal cost – payable by employer	14,546,175
(c) Assumption changes	(5,803,864)
(d) Plan Provisions	51,527,751
(e) Contributions	(56,030,260)
(f) Interest on prior year unfunded actuarial liability	42,975,670
(g) Expected unfunded actuarial liability – beginning of current year	\$341,328,497
2. Entry age reserve <sup>1</sup>	
(a) Active	\$448,399,304
(b) Inactive	1,392,278,009
(c) Total	\$1,840,677,313
3. Actuarial asset value	\$1,189,509,806
4. Actual unfunded actuarial liability [(2)-(3)]	\$651,167,507
5. Cumulative experience gain (loss) [(1f)-(4)]	(\$309,839,010)
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	\$0

<sup>1</sup>The assumptions and plan provisions used can be found in the October 1, 2018 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, 2019, 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.

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## 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

This report reflects the settlement agreements that were approved by the city commission in October 2018. Plan provisions have been partially restored to the provisions that existed prior to 10/1/2010 as follows:

- Retroactively restore and uncap the FIPO pension plan benefits that were in effect prior to September 27, 2010, for all bargaining unit members who were vested in that plan before September 27, 2010; and
- Retroactively grandfather the select group of retirees that the FIPO Trust began payment to in January 2018, and assume the ongoing obligations for payment to those retirees based on their pension plan benefits to those that were in effect prior to September 27, 2010.

Specifically, the following provisions were restored:

- Benefit accrual multiplier of 3.5% instead of 3.0% for Credited Service after 15 years (Note that the 3.5% multiplier was bargained back for membership in the years subsequent to the City's benefit cuts under financial urgency; however, this change impacts those who left the system during the interim period)
- Final Average Compensation based on one year instead of five years
- Normal form of benefit is Joint & 40% Contingent (married) and 105% Single Life Annuity (single) instead of Ten-Year Certain and Life
- Elimination of \$100,000 annual cap on benefits
- Retirement eligibility Rule of 68 (Fire) instead of Rule of 70. Age 50 with 10 years of service also defines eligibility for retirement
- Retirement eligibility Rule of 64 (Police) instead of Rule of 70. Age 50 with 10 years of service also defines eligibility for retirement

<b>Cost Method</b>	Accrued Benefit Cost Method, based on benefits granted to date																								
<b>Asset Valuation Method</b>	Market Value, plus present value of future minimum City contributions																								
<b>Interest Rates</b>	7.34% net of investment expenses  Support for the discount rate assumption has been provided in the experience study report dated December 2017.																								
<b>Annual Pay Increases</b>	3.25% inflation and 1.5% for promotions and other increases plus salary merit scale below  <table border="0" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;"><u>Service</u></th> <th style="text-align: center;"><u>Police</u></th> <th style="text-align: center;"><u>Fire</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">0-6</td> <td style="text-align: center;">5.0%</td> <td style="text-align: center;">5.0%</td> </tr> <tr> <td style="text-align: center;">7</td> <td style="text-align: center;">2.5%</td> <td style="text-align: center;">5.0%</td> </tr> <tr> <td style="text-align: center;">8-9</td> <td style="text-align: center;">5.0%</td> <td style="text-align: center;">5.0%</td> </tr> <tr> <td style="text-align: center;">10-14</td> <td style="text-align: center;">1.0%</td> <td style="text-align: center;">0.0%</td> </tr> <tr> <td style="text-align: center;">15-16</td> <td style="text-align: center;">1.25%</td> <td style="text-align: center;">2.5%</td> </tr> <tr> <td style="text-align: center;">17-21</td> <td style="text-align: center;">1.0%</td> <td style="text-align: center;">1.0%</td> </tr> <tr> <td style="text-align: center;">22+</td> <td style="text-align: center;">0.0%</td> <td style="text-align: center;">0.0%</td> </tr> </tbody> </table> <p style="margin-left: 40px;">There is no additional increase at retirement.</p> <p style="margin-left: 40px;">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.</p>	<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%
<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%																							
<b>Expense</b>	None assumed																								
<b>Compensated Absence Balance Transfers</b>	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.																								
<b>Marital Status and Ages</b>	100% of Members are assumed to be married. Female spouses assumed to be 3 years younger than male spouses.																								

**Mortality Rates**

Pre-Retirement: RP2000 Generational, Females, 100% Combined Healthy White Collar Scale BB, Males, 10% Combined Healthy White Collar / 90% Combined Healthy Blue Collar, Scale BB

Post-Retirement: RP2000 Generational, Females, 100% Annuitant White Collar, Scale BB, Males, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB

Disability: RP2000, Females, 60% Disabled set forward two years, 40% Annuitant White Collar, no projection scale, Males, 60% Disabled setback four years, 40% Annuitant White Collar, no projection scale

**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.

## Actuarial Assumptions

**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>&lt;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 special risk members' pre-retirement mortality. The pre-retirement mortality was changed to apply the Combined Healthy tables rather than the Annuitant tables. The withdrawal and disability assumptions were changed in accordance with the recent experience study dated December 2017.

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

	10/1/2019 7.34% (Plan & Assumption Changes)	10/1/2019 7.34% (Plan Changes)	10/1/2019 7.34% (prior methods & assumptions)	10/1/2018 7.34%
Participant Data				
Active members	2,003	2,003	2,003	1,998
Total annual payroll	\$156,240,315	\$156,240,315	\$156,240,315	\$148,949,683
Members in DROP	122	122	122	83
Total annualized benefit	\$209,457	\$209,457	\$209,457	\$138,376
Retired members and beneficiaries	1,950	2,072	1,950	1,989
Total annualized benefit	\$25,054,084	\$25,054,084	\$25,054,083	\$24,836,519
Disabled members receiving benefits	121	121	121	130
Total annualized benefit	\$2,796,202	2,796,202	\$2,796,202	\$2,984,562
Terminated vested members	13	13	13	14
Total annualized benefit	\$14,649	\$14,649	\$14,649	\$15,965
Assets				
Actuarial value of assets	\$512,586,877	\$512,586,877	\$512,586,877	\$522,807,288
Market value of assets	\$412,090,602	\$412,090,602	\$412,090,602	\$426,176,255

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

Comparative Summary Of Principal Valuation Results  
(continued)

	10/1/2019 7.34% (Plan & Assumption Changes)	10/1/2019 7.34% (Plan Changes)	10/1/2019 7.34% (prior methods & assumptions)	10/1/2018 7.34%
<b>Liabilities, present value of all future expected benefit payments</b>				
Active members				
Retirement benefits	\$64,561,743	\$61,296,671	\$57,623,680	\$55,756,051
Vesting benefits	\$2,969,132	\$2,899,354	\$3,123,047	\$3,079,244
Disability benefits	\$2,525,620	\$4,944,738	\$5,093,769	\$4,975,938
Death benefits	\$457,535	\$815,876	\$852,936	\$833,339
Return of contribution	0	0	0	0
Reserve for future actives	10,577,105	10,493,496	10,004,015	9,696,686
Total	\$81,091,135	\$80,450,135	\$76,697,447	\$74,341,258
Terminated vested members	\$578,580	\$578,580	\$578,580	\$585,520
Retired members and beneficiaries	\$341,139,233	\$341,139,296	\$341,139,296	\$339,399,403
Disabled members	\$24,440,020	\$24,447,557	\$24,447,557	\$25,896,077
Total	\$447,248,968	\$446,615,568	\$442,862,880	\$440,222,258
Liabilities due and unpaid	\$0	\$0	\$0	\$0
Actuarial accrued liability	N/A	N/A	N/A	N/A
Unfunded actuarial accrued liability	N/A	N/A	N/A	N/A

## Other Measurements

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

Comparative Summary Of Principal Valuation Results  
(continued)

	10/1/2019 7.34% (Plan & Assumption Changes)	10/1/2019 7.34% (Plan Changes)	10/1/2019 7.34% (prior methods & assumptions)	10/1/2018 7.34%
<b>Actuarial present value of accrued benefits</b>				
Statement of actuarial present value of all accrued benefits				
Vested accrued benefits				
Inactive members and beneficiaries	\$366,157,833	\$366,165,433	\$366,165,433	\$365,881,000
Active members	36,319,825	37,934,668	34,998,701	33,951,070
Total value of all vested accrued benefits	\$402,477,658	\$404,100,101	\$401,164,134	\$399,832,070
Non-vested accrued benefits	(113,450)	90,867	(1,083,662)	(1,198,653)
Total actuarial present value of all accrued benefits	\$402,364,208	\$404,190,968	\$400,080,472	\$398,633,417
Statement of changes in total actuarial present value of all accrued benefits (ASC 960)				
Actuarial present value of accrued benefits, beginning of year	\$398,633,417	\$398,633,417	\$398,633,417	\$388,470,319
Increase (decrease) during year				
Benefits accumulated	(\$1,266,417)	(\$1,266,417)	(\$1,266,417)	\$3,879,203
Plan amendment	4,110,496	4,110,496	0	0
Changes in actuarial assumptions	(1,826,760)	0	0	3,660,489
Interest	28,335,996	28,335,996	28,335,996	27,903,391
Benefits paid	(25,622,524)	(25,622,524)	(25,622,524)	(25,279,985)
Other changes	0	0	0	0
Net increase (decrease)	\$3,730,791	\$5,557,551	\$1,447,055	\$10,163,098
Actuarial present value of accrued benefits, end of year	\$402,364,208	\$404,190,968	\$400,080,472	\$398,633,417



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

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

	10/1/2019 7.34% (Plan & Assumption Changes)	10/1/2019 7.34% (Plan Changes)	10/1/2019 7.34% (prior methods & assumptions)	10/1/2018 7.34%
<b>Pension cost</b>				
Normal Cost	N/A	N/A	N/A	N/A
Member contributions	\$0	\$0	\$0	\$0
Expected plan sponsor contribution	\$6,931,175	\$6,931,175	\$6,931,175	\$6,664,591
As % of payroll	4.44%	4.44%	4.44%	4.47%
Member Contributions as % of payroll	0.00%	0.00%	0.00%	0.00%
<b>Past contributions</b>	10/1/2019	10/1/2019	10/1/2019	10/1/2018
Required plan sponsor contribution	\$6,664,591	\$6,664,591	\$6,664,591	\$6,408,261
Required member contribution	\$0	\$0	\$0	\$0
Actual contributions made by:				
Plan's sponsor	\$6,664,591	\$6,664,591	\$6,664,591	\$6,408,261
Members	\$0	\$0	\$0	\$0
Other	\$0	\$0	\$0	\$0
<b>Net actuarial gain (loss) (if applicable)</b>	N/A	N/A	N/A	N/A
<b>Other disclosures (where applicable)</b>				
Present value of active member				
Future salaries at entry age	\$1,953,813,872	\$1,895,122,126	\$1,934,698,785	\$1,879,864,655
Future contributions at entry age	\$0	\$0	\$0	\$0

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

**Hypothetical City Contribution Requirement for 2018/2019 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	\$39,095,098	\$25,466,645	\$64,561,743
Vesting benefits	1,788,482	1,180,650	2,969,132
Disability benefits	1,608,953	916,667	2,525,620
Death benefits	203,643	253,892	457,535
Return of contribution	0	0	0
Reserve for future actives	6,404,426	4,172,679	10,577,105
Total	\$49,100,602	\$31,990,533	\$81,091,135
Terminated vested members	\$527,907	\$50,673	\$578,580
Retired members and beneficiaries	\$198,988,412	\$142,150,821	\$341,139,233
Disabled members	\$20,489,397	\$3,950,623	\$24,440,020
Total	\$269,106,318	\$178,142,650	\$447,248,968
Entry age reserve			
Active	\$23,594,644	\$16,363,691	\$39,958,335
Inactive	220,005,716	146,152,116	366,157,832
Total	\$243,600,360	\$162,515,807	\$406,116,167
Actuarial asset value <sup>1</sup>	\$307,464,607	\$205,122,270	\$512,586,877

<sup>1</sup>Allocated based on Entry Age Reserve

## Other Measurements

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

## Hypothetical City Contribution Requirement for 2018/2019 Fiscal Year (continued)

	Police	Fire	Total
Normal cost			
Total present value of future benefits	\$269,106,318	\$178,142,650	\$447,248,968
Present value of future member contributions	\$0	\$0	\$0
Actuarial asset value	(\$307,464,607)	(\$205,122,270)	(\$512,586,877)
Unfunded actuarial accrued liability	\$0	\$0	\$0
Present value of future normal costs	\$0	\$0	\$0
Present value of future payrolls	\$1,130,066,513	\$823,747,359	\$1,953,813,872
Administrative expense <sup>1</sup>	\$0	\$0	\$0
Current payroll	\$89,561,542	\$66,678,773	\$156,240,315
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

<sup>1</sup>Allocated 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)
9/30/2019	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%
9/30/2010	(34.40%)	(9.33%) <sup>(1)</sup>	7.51%	9.80%	4.48%	7.75%
Averages						
3-year				7.08%	6.63%	
5-year				6.47%	6.52%	
10-year	3.30%			8.24%	6.11%	

<sup>1</sup>Including impact of change in valuation pay definition

Information to Comply with Florida 112.664 and Florida Administrative Code 60T-1.0035<sup>1</sup>

	October 1, 2019			
	Valuation	- 200 bp <sup>1</sup>	Funding Rate <sup>1</sup>	+ 200 bp <sup>1</sup>
	7.34%	5.34%	7.34%	9.34%
Total pension liability				
Service Cost	\$2,658,364	\$2,658,364	\$2,658,364	\$2,658,364
Interest	28,624,812	28,624,812	28,624,812	28,624,812
Benefit changes	3,641,134	3,641,134	3,641,134	3,641,134
Difference between expected and actual experience	(3,799,618)	(3,799,618)	(3,799,618)	(3,799,618)
Changes in assumptions	477,291	115,678,281	477,291	(77,194,987)
Benefit payments	(25,622,524)	(25,622,524)	(25,622,524)	(25,622,524)
Contribution refunds	0	0	0	0
Net change in pension liability	\$5,979,459	\$121,180,450	\$5,979,459	(\$71,692,819)
Total pension liability, beginning of year	\$400,136,709	\$400,136,709	\$400,136,709	\$400,136,709
Total pension liability, end of year	\$406,116,168	\$521,317,159	\$406,116,168	\$328,443,890
Plan fiduciary net position				
Contributions - Employer	\$6,664,591	\$6,664,591	\$6,664,591	\$6,664,591
Contributions - State	0	\$0	\$0	\$0
Contributions - Member	0	\$0	\$0	\$0
Net investment income	4,901,133	4,901,133	4,901,133	4,901,133
Benefit payments	(25,622,524)	(25,622,524)	(25,622,524)	(25,622,524)
Contribution refunds	0	0	0	0
Administrative expense	0	0	0	0
Other	(28,853)	(28,853)	(28,853)	(28,853)
Net change in plan fiduciary net position	(\$14,085,653)	(\$14,085,653)	(\$14,085,653)	(\$14,085,653)
Plan fiduciary net position, beginning of year	\$426,176,255	\$426,176,255	\$426,176,255	\$426,176,255
Plan fiduciary net position, end of year	\$412,090,602	\$412,090,602	\$412,090,602	\$412,090,602
Net pension liability/(asset)	(\$5,974,434)	\$109,226,557	(\$5,974,434)	(\$83,646,712)
Funded ratio	101.47%	79.05%	101.47%	125.47%
Years that Assets support expected benefit payments	35	22	35	100
Estimated city contribution				
Annual dollar value	\$6,931,175	\$6,931,175	\$6,931,175	\$6,931,175
Percentage of payroll	4.22%	4.22%	4.22%	4.22%

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

Information to Comply with Florida 112.664 and Florida Administrative Code 60T-1.0035<sup>1</sup>

October 1, 2019

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	\$412,090,602	\$29,272,901	\$27,033,131	30	\$205,979,193	\$13,774,456	\$37,292,914
2	414,330,372	29,413,415	27,695,672	31	182,460,735	12,043,956	37,410,667
3	416,048,115	29,517,791	28,297,779	32	157,094,024	10,179,526	37,480,381
4	417,268,127	29,589,831	28,783,459	33	129,793,169	8,175,337	37,488,889
5	418,074,499	29,628,722	29,346,472	34	100,479,617	6,025,707	37,433,820
6	418,356,749	29,631,691	29,838,800	35	69,071,504	3,724,956	37,306,103
7	418,149,640	29,598,911	30,326,393	36	35,490,357		37,117,514
8	417,422,158	29,529,239	30,777,859				
9	416,173,538	29,419,902	31,268,518				
10	414,324,922	29,267,767	31,724,717				
11	411,867,972	29,072,377	32,142,194				
12	408,798,155	28,833,307	32,523,466				
13	405,107,996	28,549,260	32,889,330				
14	400,767,926	28,218,199	33,236,070				
15	395,750,055	27,837,510	33,579,406				
16	390,008,159	27,404,799	33,891,644				
17	383,521,314	26,917,506	34,201,161				
18	376,237,659	26,372,907	34,477,961				
19	368,132,605	25,768,219	34,749,159				
20	359,151,665	25,099,528	35,012,425				
21	349,238,768	24,362,412	35,276,183				
22	338,324,997	23,552,209	35,529,506				
23	326,347,700	22,664,428	35,769,375				
24	313,242,753	21,694,197	36,000,406				
25	298,936,544	20,635,401	36,242,289				
26	283,329,656	19,481,096	36,485,262				
27	266,325,490	18,224,192	36,729,323				
28	247,820,359	16,858,359	36,938,924				
29	227,739,794	15,377,273	37,137,874				

Information to Comply with Florida 112.664 and Florida Administrative Code 60T-1.0035<sup>1</sup>

October 1, 2019

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	\$412,090,602	\$21,293,240	\$27,033,131
2	406,350,711	20,969,270	27,695,672
3	399,624,309	20,594,213	28,297,779
4	391,920,743	20,170,044	28,783,459
5	383,307,328	19,695,251	29,346,472
6	373,656,107	19,166,901	29,838,800
7	362,984,208	18,584,172	30,326,393
8	351,241,987	17,945,240	30,777,859
9	338,409,368	17,247,048	31,268,518
10	324,387,898	16,486,280	31,724,717
11	309,149,461	15,661,546	32,142,194
12	292,668,813	14,771,431	32,523,466
13	274,916,778	13,813,831	32,889,330
14	255,841,279	12,786,062	33,236,070
15	235,391,271	11,684,984	33,579,406
16	213,496,849	10,507,593	33,891,644
17	190,112,798	9,250,728	34,201,161
18	165,162,365	7,911,081	34,477,961
19	138,595,485	6,485,262	34,749,159
20	110,331,588	4,969,033	35,012,425
21	80,288,196	3,357,765	35,276,183
22	48,369,778	1,646,645	35,529,506
23	14,486,917		35,769,375

Information to Comply with Florida 112.664 and Florida Administrative Code 60T-1.0035<sup>1</sup>

October 1, 2019

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	\$412,090,602	\$29,272,901	\$27,033,131	30	\$205,979,193	\$13,774,456	\$37,292,914
2	414,330,372	29,413,415	27,695,672	31	182,460,735	12,043,956	37,410,667
3	416,048,115	29,517,791	28,297,779	32	157,094,024	10,179,526	37,480,381
4	417,268,127	29,589,831	28,783,459	33	129,793,169	8,175,337	37,488,889
5	418,074,499	29,628,722	29,346,472	34	100,479,617	6,025,707	37,433,820
6	418,356,749	29,631,691	29,838,800	35	69,071,504	3,724,956	37,306,103
7	418,149,640	29,598,911	30,326,393	36	35,490,357		37,117,514
8	417,422,158	29,529,239	30,777,859				
9	416,173,538	29,419,902	31,268,518				
10	414,324,922	29,267,767	31,724,717				
11	411,867,972	29,072,377	32,142,194				
12	408,798,155	28,833,307	32,523,466				
13	405,107,996	28,549,260	32,889,330				
14	400,767,926	28,218,199	33,236,070				
15	395,750,055	27,837,510	33,579,406				
16	390,008,159	27,404,799	33,891,644				
17	383,521,314	26,917,506	34,201,161				
18	376,237,659	26,372,907	34,477,961				
19	368,132,605	25,768,219	34,749,159				
20	359,151,665	25,099,528	35,012,425				
21	349,238,768	24,362,412	35,276,183				
22	338,324,997	23,552,209	35,529,506				
23	326,347,700	22,664,428	35,769,375				
24	313,242,753	21,694,197	36,000,406				
25	298,936,544	20,635,401	36,242,289				
26	283,329,656	19,481,096	36,485,262				
27	266,325,490	18,224,192	36,729,323				
28	247,820,359	16,858,359	36,938,924				
29	227,739,794	15,377,273	37,137,874				



Information to Comply with Florida 112.664 and Florida Administrative Code 60T-1.0035<sup>1</sup>

October 1, 2019

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	\$412,090,602	\$37,254,992	\$27,033,131	30	\$1,219,557,530	\$112,203,965	\$37,292,914
2	422,312,463	38,179,464	27,695,672	31	1,294,468,581	119,195,281	37,410,667
3	432,796,255	39,131,159	28,297,779	32	1,376,253,195	126,830,781	37,480,381
4	443,629,635	40,120,822	28,783,459	33	1,465,603,595	135,175,720	37,488,889
5	454,966,998	41,154,026	29,346,472	34	1,563,290,426	144,302,184	37,433,820
6	466,774,552	42,234,373	29,838,800	35	1,670,158,790	154,289,521	37,306,103
7	479,170,125	43,369,857	30,326,393	36	1,787,142,208	165,224,382	37,117,514
8	492,213,589	44,567,503	30,777,859	37	1,915,249,076	177,200,720	36,873,165
9	506,003,233	45,833,054	31,268,518	38	2,055,576,631	190,320,918	36,575,200
10	520,567,769	47,172,552	31,724,717	39	2,209,322,349	204,696,357	36,233,766
11	536,015,604	48,596,319	32,142,194	40	2,377,784,940	220,448,242	35,850,946
12	552,469,729	50,115,726	32,523,466	41	2,562,382,236	237,708,651	35,434,343
13	570,061,989	51,742,139	32,889,330	42	2,764,656,544	256,621,606	34,984,581
14	588,914,798	53,487,160	33,236,070	43	2,986,293,569	277,344,716	34,498,097
15	609,165,888	55,362,936	33,579,406	44	3,229,140,188	300,050,461	33,975,278
16	630,949,418	57,383,262	33,891,644	45	3,495,215,371	324,927,651	33,410,896
17	654,441,036	59,563,247	34,201,161	46	3,786,732,126	352,183,244	32,799,223
18	679,803,122	61,919,428	34,477,961	47	4,106,116,147	382,043,922	32,137,541
19	707,244,589	64,470,078	34,749,159	48	4,456,022,528	414,757,712	31,424,994
20	736,965,508	67,233,992	35,012,425	49	4,839,355,246	450,595,945	30,659,354
21	769,187,075	70,231,444	35,276,183	50	5,259,291,837	489,855,397	29,840,764
22	804,142,336	73,484,699	35,529,506	51	5,719,306,470	532,860,525	28,969,906
23	842,097,529	77,018,762	35,769,375	52	6,223,197,089	579,966,495	28,037,189
24	883,346,916	80,860,907	36,000,406	53	6,775,126,395	631,561,955	27,045,831
25	928,207,417	85,039,834	36,242,289	54	7,379,642,519	688,071,767	25,994,406
26	977,004,962	89,586,431	36,485,262	55	8,041,719,880	749,960,419	24,885,575
27	1,030,106,131	94,534,937	36,729,323	56	8,766,794,724	817,735,527	23,722,180
28	1,087,911,745	99,924,411	36,938,924	57	9,560,808,071	891,951,805	22,508,133
29	1,150,897,232	105,798,172	37,137,874	58	10,430,251,743	973,215,362	21,248,347

**GASB 5 – COLA Fund**

<b>Funding Status and Progress as of September 30, 2019 and 2018</b>	2018	2019
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	365.9	\$366.1
b. Current Employees		
Accumulated employee contributions including interest	0	0
Employer-financed vested	0	0
Employer-financed nonvested	74.3	\$81.1
c. Total pension benefit obligation (a+b+c)	\$440.2	\$447.2
3. Net assets available for benefits	\$426.2	\$412.1
4. Unfunded pension benefit (obligation)/asset [(3)-(2)]	(\$14.0)	(\$35.1)

The pension benefit obligations were determined as part of actuarial valuations at January 1, 2019 and January 1, 2020, based on data and asset information at September 30, 2019 and September 30, 2018. 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, 2020 and January 1, 2019. All plan provisions and other assumptions not listed above can be found in the January 1, 2020 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 <sup>(1)</sup>	(2) Pension Benefit Obligation <sup>(2)</sup>	(3) Percent Funded	(4) Unfunded PBO (2)-(1)	(5) Annual Covered Payroll	(4)/(5)
	(\$)	(\$)	(%)	(\$)	(\$)	(%)
2010	311.8	315.6	99	3.8	80.2	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

<sup>(1)</sup> Excluding future City minimum contributions

<sup>(2)</sup> 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
	(\$)	(\$)	(\$)	(\$)
2010	0	4,682,453	18,493,888	23,176,341
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

Expenses by Type

Fiscal Year	Expenses by Type			Total
	Benefits	Administrative Expenses	Refunds	
	(\$)	(\$)	(\$)	
2010	17,236,918	1,164,379	0	18,401,297
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