



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

October 1, 2019 | Actuarial Valuation Report

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At the request of the plan sponsor, this report summarizes the City of Miami Fire Fighters' and Police Officers' Retirement Trust as of October 1, 2019. The purpose of this report is to communicate the following results of the valuation:

- Determine Funded Status; and
- Determine Recommended Contribution for the fiscal year October 1, 2020 through September 30, 2021.

This report has been prepared in accordance with the applicable Federal and State laws. 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. A summary of the data used in the valuation is included in this report.

The actuarial assumptions and methods were chosen by the Board. In our opinion, all 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);
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.

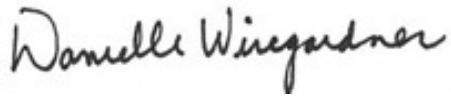
This actuarial valuation and/or cost determination was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of Part VII, Chapter 112, Florida Statutes. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation.

With respect to reporting standards for defined benefit retirement plans or systems contained in Section 112.664(1), F.S., the actuarial disclosures required under this section were prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, meet the requirements of Section 112.664 (1), Florida Statutes, and Rule 60T-1.0035, Florida Administrative Code.

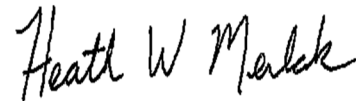
Neither Nyhart nor any of its employees have any relationship with the plan or its sponsor which could impair or appear to impair the objectivity of this report. To the extent that this report or any attachment concerns tax matters, it is not intended to be used and cannot be used by a taxpayer for the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

Nyhart



Danielle Winegardner, FSA, EA, MAAA
Enrolled Actuary No. 20-08260



Heath W. Merlak, FSA, EA, MAAA
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April 8, 2020

Date

Copies of this Report are to be furnished to the Division of Retirement within 60 days of receipt from the actuary at the following addresses:

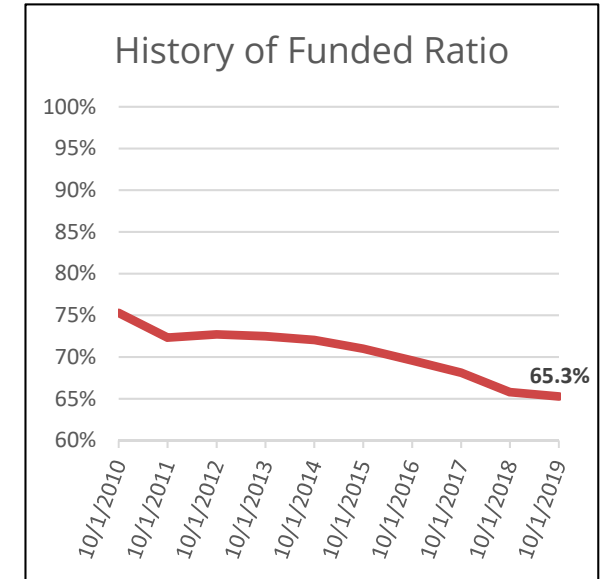
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Summary Results

The actuarial valuation's primary purpose is to produce a scorecard measure displaying the funding progress of the plan toward the ultimate goal of paying benefits at retirement. The accrued liability is based on an entry age level percentage of pay.

	October 1, 2018	October 1, 2019
Funded Status Measures		
Accrued Liability	\$1,796,349,619	\$1,822,559,347
Actuarial Value of Assets	1,172,416,575	1,189,509,806
Unfunded Accrued Liability	\$623,933,044	\$633,049,541
Funded Percentage (AVA)	65.3%	65.3%
Funded percentage (MVA)	63.5%	63.0%
Cost Measures		
Recommended Contribution For Next Fiscal Year	\$60,633,239 ⁽¹⁾	\$62,773,727
Recommended Contribution (as a percentage of payroll)	36.4%	37.4%
Asset Performance		
Market Value of Assets (MVA)	\$1,140,506,121	\$1,149,117,960
Actuarial Value of Assets (AVA)	\$1,172,416,575	\$1,189,509,806
Actuarial Value/Market Value	102.8%	103.5%
Participant Information		
Active Participants	1,998	2,003
Terminated Vested Participants	15	22
Terminated, Due Refund	111	106
Retirees, Beneficiaries, and Disabled	2,120	2,072
DROP Participants	83	122
Total Participants	4,327	4,325
Valuation Payroll	\$166,670,939	\$168,059,448
Total Payroll	\$176,975,203	\$179,393,179



¹Does not include any contribution to the Stabilization Trust. Please see page 46 for more information.

Changes Since Prior Valuation and Key Notes

There have been no changes to the plan provisions since the last valuation.

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 Plan accrued liability and the normal cost.

The administrative expense has decreased to \$2,181,634 from the prior year.

Five Year Valuation Summary

	10/1/2015	10/1/2016	10/1/2017	10/1/2018	10/1/2019
Funding					
Accrued Liability	\$1,616,131,503	\$1,654,140,143	\$1,705,061,093	\$1,796,349,619	\$1,822,559,347
Actuarial Value of Assets	\$1,147,334,950	\$1,150,653,520	\$1,161,585,161	\$1,172,416,575	\$1,189,509,806
Unfunded Actuarial Accrued Liability	\$468,796,553	\$503,486,623	\$543,475,932	\$623,933,044	\$633,049,541
Funded Percentage	71.0%	69.6%	68.1%	65.3%	65.3%
Actual Employer Contribution ¹	\$47,102,220	\$50,591,604	\$56,030,260	TBD	TBD
Recommended Contribution	\$47,102,220	\$50,591,604	\$56,030,260	\$60,633,239	\$62,773,727
Recommended Contribution (% of Pay)	44.3%	38.0%	39.6%	36.4%	37.4%
Interest Rate	7.42%	7.42%	7.42%	7.34%	7.34%
Expense Load Assumption	\$2,058,798	\$2,086,709	\$2,128,469	\$2,210,096	\$2,181,634
Rate of Return					
Actuarial Value of Assets	6.18%	6.51%	6.76%	6.66%	6.48%
Market Value of Assets	2.80%	8.42%	8.24%	6.90%	6.11%
Demographic Information					
Active Participants	1,650	1,869	1,943	1,998	2,003
Terminated Vested Participants	15	15	16	15	22
Terminated, Due Refund	N/A	N/A	97	111	106
Retirees, Beneficiaries, and Disabled	1,952	2,014	2,059	2,120	2,072
DROP Participants	278	191	129	83	122
Total Participants	3,895	4,089	4,244	4,327	4,325
Covered Payroll	\$106,278,378	\$133,083,231	\$141,497,840	\$166,670,939	\$168,059,448
Average Covered Pay	\$64,411	\$71,206	\$72,824	\$83,419	\$83,904

¹ Recommended contribution is for the following fiscal year (e.g., the October 1, 2019 recommended contribution will be made in the fiscal year beginning October 1, 2020 and will be documented in the October 1, 2021 valuation report).

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 City of Miami Fire Fighters' and Police Officers' Retirement Trust falls in its life-cycle.

Duration of Liabilities: 9.3

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: 14.6%

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: 11.40%

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

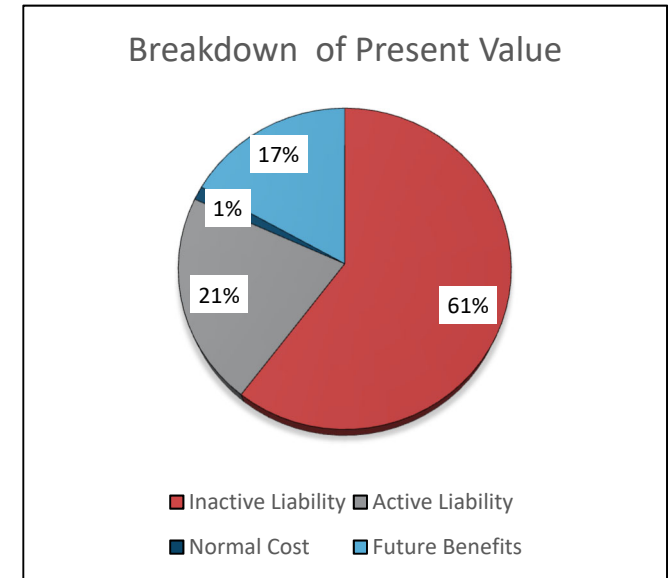
The results presented in this report are shown as single point values. However, these values are derived using assumptions about future markets and demographic behavior. If actual experience deviates from our assumptions, the actual results for the plan will consequently deviate from those presented 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 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
Demographic	Scenario Testing
Participant Longevity	Stress Testing; Scenario Testing
Early Retirement	Stress Testing; Scenario Testing

Present Value of Future Benefits

The Present Value of Future Benefits represents the current future benefits payable to the participant.

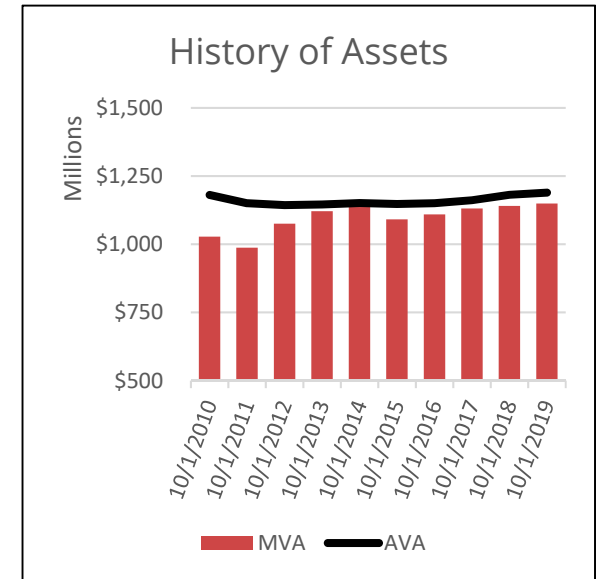
	October 1, 2019
Present Value of Future Benefits	
Active members	
Retirement	\$790,121,210
Disability	41,777,104
Death	11,657,697
Termination	36,699,188
Refund of contributions	4,016,711
Total active	\$884,271,910
Inactive members	
Retired members	\$1,158,241,909
DROP members	127,102,477
Beneficiaries	31,534,623
Disabled members	25,172,741
Terminated vested members	5,249,040
Total inactive	\$1,347,300,790
Total	\$2,231,572,700
 Present value of future payrolls	 \$2,478,236,384



Asset Information

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.

	October 1, 2019
Market Value Reconciliation	
Market value of assets, beginning of prior year	\$1,140,506,121
Employer contributions (incl. discounted accrued items)	56,030,260
Member contributions	16,309,563
Investment income, net expenses	69,684,122
Benefit payments and refunds	(131,175,683)
Administrative expenses	(2,128,469)
Other expenses	(107,954)
Market value of asset, beginning of current year	\$1,149,117,960
Return on Market Value	6.11%
Actuarial value of assets	
Value at beginning of current year	\$1,189,509,806



Asset Information (continued)

Plan Assets are used to develop funded percentages and contribution requirements

October 1, 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%

Reconciliation of Gain/Loss

October 1, 2019

Liability (gain)/loss

Present value of future benefits	\$2,203,102,647
Present value of employee contributions	(213,739,716)
Expected employee contribution	14,082,422
Benefit payments	(131,175,683)
Interest	142,323,980
Expected liability	\$2,014,593,650
Assumption change	(54,448,035)
Expected after changes	\$1,960,145,615
Actual liability	\$2,019,713,930
Liability (gain)/loss	\$59,568,315

Asset (gain)/loss

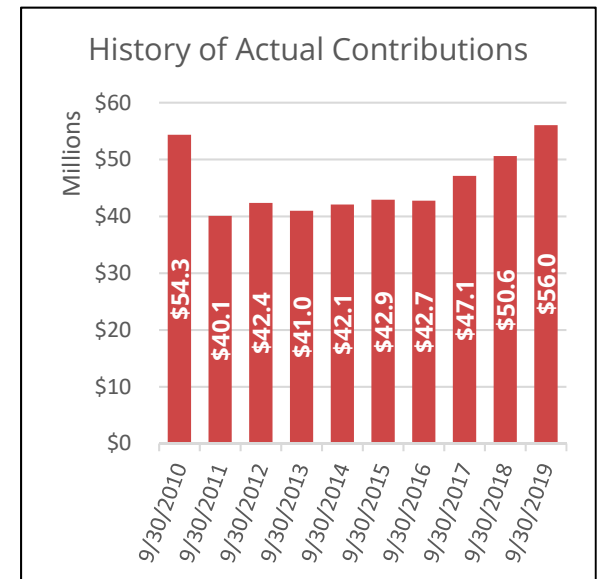
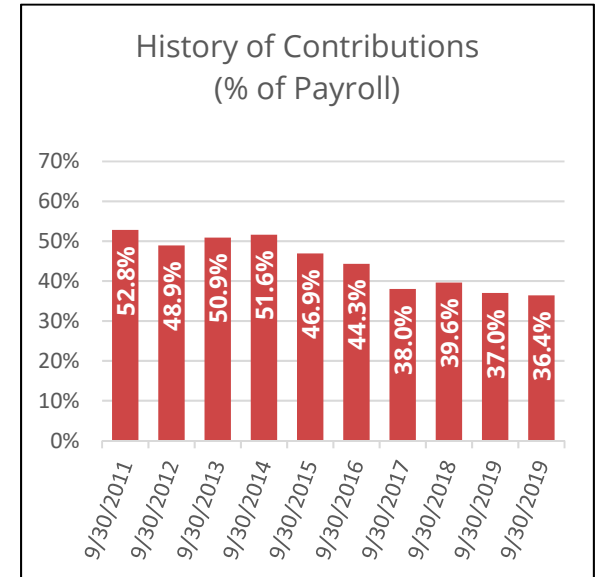
Actuarial value of assets, beginning of prior year	\$1,172,416,575
Contributions	72,339,823
Benefit payments and expenses	(131,175,683)
Expected Investment return	86,027,052
Expected actuarial value of assets, beginning of current year	\$1,199,607,767
Actual actuarial value of assets, beginning of current year	\$1,189,509,806
Asset (gain)/loss	\$10,097,961
Total (gain)/loss	\$69,666,276

Development of Recommended Contribution

The actuarial determined contribution is the annual amount necessary to fund the plan according to funding policies and/or applicable laws.

October 1, 2019

1. Present value of future benefits		\$2,231,572,700
2. Actuarial value of assets		1,189,509,806
3. Present value of future member contributions		211,858,770
4. Present value of future normal Cost [(1)-(2)-(3)]		\$830,204,124
5. Present value of future payroll		\$2,478,236,384
6. Normal cost accrual rate [(4)/(5)]		33.50%
7. Administrative expenses		\$2,181,634
8. Valuation payroll		\$168,059,448
9. Applicable interest		7.34%
10. Normal cost		\$58,481,206
11. Interest to estimated payment date		\$4,292,521
12. Total recommended contribution as of end of year [(10)+(11)] ⁽¹⁾		\$62,773,727
13. As a percentage of valuation payroll		37.35%
14. As a percentage of total payroll		34.99%

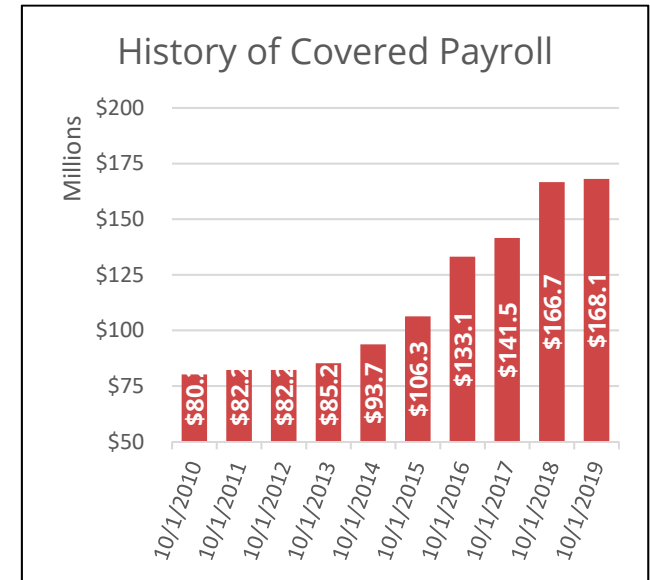


¹Does not include any contribution to the Stabilization Trust. Please see page 46 for more information.

Demographic Information

The foundation of a reliable actuarial report is the member information provided by the plan sponsor. Monitoring trends in demographic information is crucial for long-term pension planning.

	October 1, 2018	October 1, 2019
Member Counts		
Active Members	1,998	2,003
Retired Members	1,711	1,684
Beneficiaries	279	267
Disabled Members	130	121
Terminated Vested Members, due a Monthly Benefit	15	22
Terminated Members, Due a Refund of Employee Contributions	111	106
DROP Members	83	122
Total	4,327	4,325
Active Participant Demographics		
Average Age	36.4	36.8
Average Service	9.4	9.8
Average Compensation	\$83,419	\$83,904
Valuation Payroll	\$166,670,939	\$168,059,448
Total Payroll	\$176,975,203	\$179,393,179



Demographic Information (continued)

	October 1, 2018	October 1, 2019
Retired Member Statistics		
Average Age	65.3	66.0
Average Monthly Benefit	\$5,576	\$5,624
Beneficiary Statistics		
Average Age	77.7	77.4
Average Monthly Benefit	\$1,149	\$1,208
Disabled Member Statistics		
Average Age	71.9	72.3
Average Monthly Benefit	\$1,975	\$2,020
Terminated Member Statistics		
Average Age	38.1	38.7
Average Monthly Benefit for Participants due Monthly Benefit	\$2,566	\$1,911
Average Remaining Contributions for Participants Due a Refund	\$9,926	\$8,426
DROP Member Statistics		
Average Age	50.7	51.4
Average Monthly Benefit	\$6,383	\$7,137
Payroll	\$10,304,264	\$11,333,731

Participant Reconciliation

	Active	Terminated Vested	Disabled	Retired	Beneficiaries	Totals
Prior Year	1,998	126	130	1,794	279	4,327
Active						
To Terminated Vested	(8)	8				
To Retired	(45)			45		
To Disabled	(1)		1			
To Refund	(16)					(16)
To Due Refund	(6)	6				
To Death	(1)					(1)
Terminated Vested						
To Retired						
To Refund		(9)				(9)
To Active	3	(3)				
Disabled						
To Death			(10)			(10)
Retired						
To Death				(33)		(33)
Survivor						
To Death					(33)	(33)
Additions	79				22	101
Removed					(1)	(1)
Current Year	2,003	128	121	1,806	267	4,325

Active Participant Schedule

Active participant information grouped based on age and service.

Age Group	Years of Service										Total	Average Pay
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & Up		
Under 25	22	82	1								105	\$50,763
25 to 29	22	244	97	4							367	65,345
30 to 34	17	176	191	78	3						465	75,216
35 to 39	2	81	89	175	52						399	87,300
40 to 44	3	20	26	85	86	57					277	99,530
45 to 49		10	10	49	47	90	22				228	105,197
50 to 54		1	6	30	25	38	24	3			127	106,990
55 to 59		1	1	6	5	4	10	3			30	108,262
60 to 64		1		1	1		1				4	112,255
65 to 69							1				1	100,502
70 & up											0	0
Total	66	616	421	428	219	189	58	6	0	0	2003	83,904

Plan Status

January 1, 1994 amended January 1, 1995

Eligibility for Participation

Police officers and fire fighters.

Accrual of Benefits

The accrued benefit is determined as follows:

For Police Officers who were vested as of 9/27/2010:

3% of Average Final Compensation for the first 15 years of Creditable Service plus 3.5% of Average Final Compensation after 15 years. Maximum of 100% of Average Final Compensation.

For all other Police Officers:

3% of Average Final Compensation for the first 15 years of Creditable Service plus 3.5% of Average Final Compensation after 15 years. Maximum of 100% of Average Final Compensation and the final benefit may not exceed the larger of the 9/30/2010 accrued benefit and \$100,000.

For Firefighters who were vested as of 9/27/2010:

3% of Average Final Compensation for the first 15 years of Creditable Service plus 3.5% of Average Final Compensation after 15 years. Maximum of 100% of Average Final Compensation.

For all other Fire Fighters:

3% of Average Final Compensation for the first 15 years of Creditable Service plus 3.5% of Average Final Compensation after 15 years. Maximum of 100% of Average Final Compensation and the final benefit may not exceed the larger of the 9/30/2010 accrued benefit and \$100,000.

Benefits

Normal Retirement

Eligibility	Age plus Creditable Service equal to 64 (Rule of 64) for firefighters active 9/30/2009 who are eligible for Rule of 64 at 9/30/2009 and police officers who are vested at 9/27/2010. Age plus Creditable Service equal to 68 (Rule of 68) on 9/30/2010 for fire fighters vested at 9/27/2010 and not eligible for Rule of 64 at 9/30/2009. Age plus Creditable Service equal to 70 (Rule of 70) with attainment of age 50 for Firefighters and age 49 for Police Officers and 10 years of Creditable Service for all members hired on or after 10/1/2010 and police officers and fire fighters who were not eligible for the Rule of 64 or the Rule of 68 on the specified dates above.
Benefit	Unreduced Accrued Benefit payable immediately.

Early Retirement

Eligibility	Completion of 20 years of Creditable Service.
Benefit	Accrued Benefit adjusted with actuarial equivalence for early commencement.

Late Retirement

Eligibility	Participation continues after normal retirement date.
Benefit	Accrued Benefit

Ordinary Death before Retirement

Eligibility	Participant with 3 years of Creditable Service who dies off duty.
Benefit	Between 3 and 10 years of Creditable Service: Lump sum benefit equal to 50% of Compensation received in year preceding death. After 10 years of Creditable Service and before eligibility for Early Service or Rule of 64 Retirement: Accrued benefit, deferred to earlier of police officer member's 49th and firefighter member's 50th birthday or Rule of 64 eligibility, payable for 10 years.

Beneficiary does not have to survive deferred period or 10 years' certain period.

If eligible for Service, Early Service, or Rule of 64 retirement, considered to have retired on the date of death. Surviving spouse would receive 40% of the member's monthly retirement allowance.

Accidental Death before Retirement

Eligibility	Member who dies during performance of duties.
Benefit	Pension of 50% of Average Final Compensation to spouse until death or remarriage. If there is no spouse, or if spouse dies or remarries before youngest child is 18, payable to child until attainment of age 18. If no spouse or no children under 18, benefit is payable to dependent parents.
	After 10 years of Creditable Service - Beneficiary receives benefit otherwise payable to member at early or normal retirement for a period of 10 years.

Termination Benefit

Eligibility	Fully vested after completion of 10 years of Creditable Service.
Benefit	Accrued Benefit payable at the member's Early or Normal Retirement Date. If the member terminates prior to 10 years of Creditable Service a refund of accumulated contributions with interest will be issued.

Ordinary Disability Benefit

Eligibility	Completion of 10 years of Creditable Service.
Benefit	90% of benefit rate times Average Final Compensation times Creditable Service, with a minimum benefit of 30% of Average Final Compensation. The normal form is a 10 year certain and life normal form.

Accidental Disability Benefit

Eligibility	Immediately upon permanent disability
Benefit	66 2/3% of Average Final Compensation, or 66 2/3% of Final Compensation, whichever is greater. The normal form is a 40% joint & survivor annuity, with a minimum of 10 years' certain and life.

Compensation

Earnable Compensation

An employee's base salary, including pick-up contributions, for all straight time hours worked, plus assignment pay and payments received for vacation and sick leave taken, jury duty, and death-in-family leave taken. Earnable compensation shall not include overtime pay; payments for accrued sick leave, accrued vacation leave, or accrued compensatory leave; holiday pay; premium pay for holidays worked; the value of any employment benefits or non-monetary entitlements; or any other form of remuneration.

Average Final Compensation

For members who retire or terminate employment with ten or more years of creditable service prior to 10/1/2010 or who were vested as of 9/27/2010: the annual earnable compensation of a member during either the last one year or the highest year of membership service, whichever is greater. For members not vested as of 9/27/2010, the following applies:

For members who retire on or after 10/1/2010: the Average Final Compensation shall mean the average of the highest 5 years of service, to be phased in effective 9/30/2010 over the next 4 years as follows:

For members who retire between 10/1/2010 and 9/30/2011: the average of the highest 2 years of membership service

For members who retire between 10/1/2011 and 9/30/2012: the average of the highest 3 years of membership service

For members who retire between 10/1/2012 and 9/30/2013: the average of the highest 4 years of membership service

For members who retire on or after 10/1/2013: the average of the highest 5 years of membership service.

Provided, in no event shall the Average Final Compensation of any member who was employed as a police officer or fire fighter on 9/30/2010 and retires on or after 10/1/2010, be less than the highest year of membership service prior to 9/30/2010.

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.

Member Contributions

Police Officers:	7% (10% if hired on or after 10/1/2012)
Fire Fighters:	10%

DROP

Eligibility	Election must be made within 10 years after eligibility for normal retirement. Members eligible for forward DROP as of 1/1/2013 or vested as of 1/1/2010 remain eligible for forward DROP.
Benefit	Effective 1/1/2013 members may elect the BackDROP option (maximum of 7 years). Members receive a monthly benefit based on an earlier retirement date and a lump sum of past payments compounded at 3%/year.

COLA

Eligibility	Participant or Beneficiary
Benefit	Amount varies annually with the adjustment on January 1

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 or members who were vested at 9/27/2010: 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

Plan Provision Not Included

The COLA benefits and liabilities are not included in this report; these benefits are reported in a separate COLA report dated December 5, 2018. We are not aware of any other provisions not included in this report.

Adjustments Made for Subsequent Events

We are not aware of any event following the measurement date and prior to the date of this report that would materially impact the results.

Changes Since Prior Report

There have been no changes to plan provisions since the last valuation.

Cost Method (CO)

Aggregate Cost Method.

Asset Valuation Method (CO)

20% Write-Up Method: Expected actuarial value of assets, adjusted by 20% of the difference between expected actuarial value and actual market value (net of pending transfers to the COLA Fund).

The result cannot be greater than 120% of market value or less than 80% of market value (net of pending COLA transfers).

Interest Rates (CO)

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 (FE)

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%

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 and/or Contingency Loading (FE)

\$2,181,634.

Mortality Rates (CO)

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 (FE)

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.

Disability Rates (FE)

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	0.195%
45	0.400%
50	0.605%

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 (FE)

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.

Marital Status and Ages

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

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.

Withdrawal of Employee Contributions

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

COLA

COLA benefits are assumed to increase as indicated in the COLA table; these are documented in a separate COLA report. No increase to the table is assumed to occur.

Changes Since Prior Report

The administrative expenses decreased to \$2,181,634.

The mortality rate assumptions were changed in accordance with the Florida Retirement System Valuation report dated December 2019.

FE indicates an assumption representing an estimate of future experience.

MO indicates an assumption representing an observation of estimates inherit to market data.

CO indicates an assumption representing a combination of an estimate of future experience and observations of market data.

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

- ✓ Market Value Reconciliation
- ✓ Membership and Benefits Cost-Of-Living Adjustment Account Summary
- ✓ Investment Results
- ✓ 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

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.

	October 1, 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)	N/A	\$0
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	\$1,516,603,919	\$1,267,021,657
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	\$14,789,771	\$14,789,771
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	\$13,405,948	\$13,405,948
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	\$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%)
	\$69,576,168	6.1%	7.3%

Investment Results - COLA Account

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%)
	\$4,872,280	1.2%	1.4%

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

Comparative Summary of Principal Valuation Results

	10/1/2019 7.34% (assumption & plan changes)	10/1/2019 7.34% (prior methods & assumptions)	10/1/2018 7.34%
Participant Data			
Active members	2,003	2,003	1,998
Total annual payroll	\$168,059,448	\$168,059,448	\$166,670,939
Members in DROP	122	122	83
DROP Payroll	\$11,333,731	\$11,333,731	\$10,304,264
Projected Total Payroll	\$179,393,179	\$179,393,179	\$176,975,203
Retired members and beneficiaries	1,951	1,951	1,990
Total annualized benefit	\$117,511,844	\$56,686,122	\$118,333,631
Disabled members receiving benefits	121	121	130
Total annualized benefit	\$2,932,916	\$2,932,916	\$3,081,300
Terminated vested members	128	128	126
Total annualized benefit	\$504,464	\$504,464	\$461,951
Assets			
Actuarial value of assets	\$1,189,509,806	\$1,189,509,806	\$1,172,416,575
Market value of assets	\$1,149,117,960	\$1,149,117,960	\$1,140,506,121

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

Comparative Summary of Principal Valuation Results (continued)

	10/1/2019 7.34% (assumption & plan changes)	10/1/2019 7.34% (prior methods & assumptions)	10/1/2018 7.34%
Liabilities, present value of all future expected benefit payments			
Active members			
Retirement benefits	\$790,121,210	\$794,202,589	\$740,558,652
Vesting benefits	36,699,188	36,703,150	35,887,030
Disability benefits	41,777,104	41,297,686	41,148,692
Death benefits	11,657,697	16,789,831	16,314,460
Return of contribution	4,016,711	4,017,943	4,170,824
Total	<u>\$884,271,910</u>	<u>\$893,011,199</u>	<u>\$838,079,658</u>
Terminated vested members	5,249,040	5,319,816	4,999,749
Retired members and beneficiaries	1,316,879,009	1,361,530,469	1,333,106,550
Disabled members	<u>25,172,741</u>	<u>25,448,833</u>	<u>26,916,690</u>
Total	\$2,231,572,700	\$2,285,310,317	\$2,203,102,647
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)

	10/1/2019 7.34% (assumption & plan changes)	10/1/2019 7.34% (prior methods & assumptions)	10/1/2018 7.34%
Actuarial present value of accrued benefits			
Statement of actuarial present value of all accrued benefits			
Vested accrued benefits			
Inactive members and beneficiaries	\$1,347,300,790	\$1,392,299,118	\$1,365,022,989
Active members	341,343,811	346,273,484	303,678,632
Total value of all vested accrued benefits	\$1,688,644,601	\$1,738,572,602	\$1,668,701,621
Non-vested accrued benefits	46,228,070	45,721,644	33,054,644
Total actuarial present value of all accrued benefits	\$1,734,872,671	\$1,784,294,246	\$1,701,756,265
Statement of changes in total actuarial present value of all accrued benefits (ASC 960)			
Actuarial present value of accrued benefits, beginning of year	\$1,701,756,265	\$1,701,756,265	\$1,649,365,304
Increase (decrease) during year			
Benefits accumulated	\$93,533,663	\$93,533,663	\$65,369,477
Plan amendment	0	0	18,552,047
Changes in actuarial assumptions	(49,421,575)	0	(17,064,831)
Interest	120,180,001	120,180,001	116,347,569
Benefits paid	(131,175,683)	(131,175,683)	(130,813,301)
Other changes	0	0	0
Net increase (decrease)	\$33,116,406	\$82,537,981	\$52,390,961
Actuarial present value of accrued benefits, end of year	\$1,734,872,671	\$1,784,294,246	\$1,701,756,265

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

Comparative Summary of Principal Valuation Results (continued)

	10/1/2019 7.34% (assumption & plan changes)	10/1/2019 7.34% (prior methods & assumptions)	10/1/2018 7.34%
Pension cost			
Normal Cost	78,004,958	82,165,764	\$76,703,765
Member contributions	15,231,231	15,231,231	\$15,035,518
Expected plan sponsor contribution	\$62,773,727	\$66,934,533	\$61,668,247
As % of payroll	37.35%	39.83%	37.00%
As % of Total Payroll	34.99%	37.31%	34.85%
Member Contributions as % of payroll	9.06%	9.06%	9.02%
Past contributions			
Required plan sponsor contribution	9/30/2019		9/30/2018
	\$56,030,260		\$50,591,605
Required member contribution	\$16,309,563		\$14,258,763
Actual contributions made by:			
Plan's sponsor	\$56,030,260		\$50,591,605
Members	\$16,309,563		\$14,258,763
Other	\$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 attained age	\$2,478,236,384	\$2,470,661,082	\$2,508,636,036
Future contributions at attained age	\$211,858,770	\$211,148,352	\$213,739,716

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	\$0	\$0	\$0
Liabilities, present value of all future expected benefit payments			
Active members			
Retirement benefits	\$453,495,802	\$336,625,408	\$790,121,210
Vesting benefits	21,748,283	14,950,905	\$36,699,188
Disability benefits	25,723,250	16,053,854	\$41,777,104
Death benefits	5,788,935	5,868,762	\$11,657,697
Return of contribution	2,750,300	1,266,411	4,016,711
Total	\$509,506,570	\$374,765,340	\$884,271,910
Terminated vested members	4,529,164	719,876	5,249,040
Retired members and beneficiaries	747,350,138	569,528,871	1,316,879,009
Disabled members	22,015,159	3,157,582	25,172,741
Total	\$1,283,401,031	\$948,171,669	\$2,231,572,700
Entry age reserve			
Active	\$257,593,528	\$217,665,028	\$475,258,556
Inactive	773,894,460	573,406,331	1,347,300,791
Total	\$1,031,487,988	\$791,071,359	\$1,822,559,347
Actuarial asset value ¹	\$673,209,944	\$516,299,862	\$1,189,509,806

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	\$1,283,401,031	\$948,171,669	\$2,231,572,700
Present value of future member contributions	(113,988,535)	(97,870,235)	(211,858,770)
Actuarial asset value	(673,209,944)	(516,299,862)	(1,189,509,806)
Present value of future normal costs	\$496,202,552	\$334,001,572	\$830,204,124
Present value of future payrolls	\$1,410,721,309	\$1,067,515,075	\$2,478,236,384
Administrative expense ¹	\$1,234,708	\$946,926	\$2,181,634
Current payroll	\$96,521,154	\$71,538,294	\$168,059,448
Interest rate	7.34%	7.34%	7.34%
Normal Cost	\$35,184,747	\$23,329,657	\$58,481,206
Interest to End of Year	\$2,582,560	\$1,712,397	\$4,292,521
Contribution Requirement at end of year	\$37,767,307	\$25,042,054	\$62,773,727
As a percentage of payroll	39.13%	35.01%	37.35%
Hypothetical Total			\$62,809,361

¹Allocated based on Entry Age Reserve

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

Historical Salary Increases and Asset Performance

September 30, 2019

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%) ⁽¹⁾	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%

¹Including impact of change in valuation pay definition

City of Miami Fire Fighters' and Police Officers' Retirement Trust
Actuarial Valuation as of October 1, 2019
Other Measurements

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

October 1, 2019

	GASB 67/68 7.34%	- 200 bp ² 5.34%	Funding Rate ² 7.34%	+ 200 bp ² 9.34%
Total pension liability				
Service Cost	\$28,288,965	\$29,482,856	\$29,482,856	\$29,482,856
Interest	123,773,849	129,287,195	129,287,195	129,287,195
Benefit changes	55,386,337	0	0	0
Difference between expected and actual experience	30,180,272	49,098,997	49,098,997	49,098,997
Changes in assumptions	(5,024,794)	350,093,395	(50,483,637)	(341,072,852)
Benefit payments	(130,536,526)	(130,536,526)	(130,536,526)	(130,536,526)
Contribution refunds	(639,157)	(639,157)	(639,157)	(639,157)
Net change in pension liability	\$101,428,946	\$426,786,760	\$26,209,728	(\$264,379,487)
Total pension liability, beginning of year	\$1,722,429,802	\$1,796,349,619	\$1,796,349,619	\$1,796,349,619
Total pension liability, end of year	1,823,858,748	\$2,223,136,379	\$1,822,559,347	\$1,531,970,132
Plan fiduciary net position				
Contributions - Employer	\$56,030,260	\$56,030,260	\$56,030,260	\$56,030,260
Contributions - State	0	0	0	0
Contributions - Member	16,309,563	16,309,563	16,309,563	16,309,563
Net investment income	69,684,122	69,684,122	69,684,122	69,684,122
Benefit payments	(130,536,526)	(130,536,526)	(130,536,526)	(130,536,526)
Contribution refunds	(639,157)	(639,157)	(639,157)	(639,157)
Administrative expense	(2,128,469)	(2,128,469)	(2,128,469)	(2,128,469)
Other	(107,954)	(107,954)	(107,954)	(107,954)
Net change in plan fiduciary net position	\$8,611,839	\$8,611,839	\$8,611,839	\$8,611,839
Plan fiduciary net position, beginning of year	\$1,140,506,121	\$1,140,506,121	\$1,140,506,121	\$1,140,506,121
Plan fiduciary net position, end of year	\$1,149,117,960	\$1,149,117,960	\$1,149,117,960	\$1,149,117,960
Net pension liability/(asset)	\$674,740,788	\$1,074,018,419	\$673,441,387	\$382,852,172
Funded ratio	63.00%	51.69%	63.05%	75.01%
Years that Assets support expected benefit payments	11	10	11	13
Estimated city contribution				
Annual dollar value	\$63,208,765	\$92,853,891	\$62,773,727	\$37,006,215
Percentage of payroll	37.61%	55.25%	37.35%	22.02%

¹ Does not include DROP assets and liabilities

² Based on valuation assumption with the following changes

- interest rate (as noted)
- update to FRS Mortality

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

October 1, 2019

Sustainment of Expected Benefit Payments

Mortality
Interest

Valuation
7.34%

<u>Year</u>	<u>Market Value of Assets</u>	<u>Investment Return</u>	<u>Benefit Payments</u>
1	\$1,149,117,960	\$79,595,225	\$131,761,662
2	1,096,951,523	75,700,625	133,580,887
3	1,039,071,261	71,370,635	135,843,819
4	974,598,077	66,548,881	138,324,295
5	902,822,663	61,107,000	143,138,868
6	820,790,795	54,994,130	145,683,384
7	730,101,541	48,340,213	145,609,207
8	632,832,547	41,213,470	145,254,126
9	528,791,891	33,564,190	145,606,290
10	416,749,791	25,214,149	149,105,601
11	292,858,339	15,887,899	155,558,202
12	153,188,036		162,386,782

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

October 1, 2019

Sustainment of Expected Benefit Payments

Mortality FRS Special Risk Pub-2010 Generational using scale MP-2018
Interest 5.34%

<u>Year</u>	<u>Market Value of Assets</u>	<u>Investment Return</u>	<u>Benefit Payments</u>
1	\$1,149,117,960	\$57,763,761	\$136,575,340
2	1,070,306,381	53,542,467	137,059,388
3	986,789,460	49,044,922	138,491,546
4	897,342,836	44,224,653	140,154,325
5	801,413,164	38,958,089	145,615,589
6	694,755,664	33,196,508	148,122,777
7	579,829,395	27,066,571	147,852,363
8	459,043,603	20,637,945	147,042,766
9	332,638,782	13,896,377	146,722,119
10	199,813,040	6,712,538	150,173,185
11	56,352,393		156,355,718

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

October 1, 2019

Sustainment of Expected Benefit Payments

Mortality FRS Special Risk Pub-2010 Generational using scale MP-2018
 Interest 7.34%

<u>Year</u>	<u>Market Value of Assets</u>	<u>Investment Return</u>	<u>Benefit Payments</u>
1	\$1,149,117,960	\$79,421,691	\$136,575,340
2	1,091,964,311	75,209,163	137,059,388
3	1,030,114,086	70,617,727	138,491,546
4	962,240,267	65,575,845	140,154,325
5	887,661,787	59,904,905	145,615,589
6	801,951,103	53,523,356	148,122,777
7	707,351,682	46,589,507	147,852,363
8	606,088,826	39,186,000	147,042,766
9	498,232,060	31,280,873	146,722,119
10	382,790,814	22,683,074	150,173,185
11	255,300,703	13,102,418	156,355,718
12	112,047,403		163,445,052

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

October 1, 2019

Sustainment of Expected Benefit Payments

Mortality FRS Special Risk Pub-2010 Generational using scale MP-2018
Interest 9.34%

<u>Year</u>	<u>Market Value of Assets</u>	<u>Investment Return</u>	<u>Benefit Payments</u>
1	\$1,149,117,960	\$101,091,903	\$136,575,340
2	1,113,634,523	97,755,650	137,059,388
3	1,074,330,785	94,019,292	138,491,546
4	1,029,858,531	89,789,664	140,154,325
5	979,493,870	84,836,256	145,615,589
6	918,714,537	79,044,994	148,122,777
7	849,636,754	72,605,476	147,852,363
8	774,389,867	65,614,381	147,042,766
9	692,961,482	58,023,610	146,722,119
10	604,262,973	49,581,601	150,173,185
11	503,671,389	39,904,067	156,355,718
12	387,219,738	28,703,800	163,445,052
13	252,478,486	16,014,737	165,727,910
14	102,765,313		168,876,155

Contribution Stabilization Trust

As outlined in City ordinance (Article IV – Division 5), beginning October 1, 2008, any time the city's contributions to normal costs fall below 37%, the difference between the contributions to normal costs and 37% will be deposited into the city firefighters' and police officers' retirement contribution stabilization fund trust (“Stabilization Trust”). The purpose of the trust is to assist in stabilizing the city's annual contributions to the city Firefighters' and Police Officers' Retirement Trust. Whenever the city's annual contributions to the retirement system exceed 37% of valuation payroll, the city may choose to use part of the trust to cover contributions in excess of 37%. The following shows the contributions or use of the funds from the Stabilization Trust.

	October 1, 2019	October 1, 2018
1. City Contribution	\$62,773,727	\$60,633,239
2. Valuation Payroll	\$168,059,448	\$166,670,939
3. City Contribution as a % of Valuation Payroll	37.35%	36.38%
4. Pension Stabilization Contribution, $[(37\% - (1)/(2)) \times (2)]$ (not less than \$0)	\$0	\$1,035,008
5. Amount of City Contribution that may be paid from the Stabilization Trust (if funds available), $[(1)/(2) - 37\%] \times (2)$ (not less than \$0)	\$591,731	\$0