#### \*\* REVISED \*\*

## AGENDA REGULAR BOARD MEETING CITY OF DELRAY BEACH POLICE OFFICERS' RETIREMENT SYSTEM WEDNESDAY, MAY 12, 2021 at 11:00 AM

Dial-in Number: (352) 448-9762 / Conference ID: 169 443 708#

Pursuant to the Home Rule powers of the City (s. 2(b), Art. VIII of the Florida Constitution and Chapter 166, Florida Statutes), Chapter 252, Florida Statutes (Emergency Management), any and all other applicable statutes, the City Charter and Chapter 95 of the City's Code of Ordinances, the City Commission of the City of Delray Beach shall conduct business at and through virtual meetings utilizing Communications Media Technology (CMT) in accordance with the rules of procedures promulgated by the City, during the COVID-19 public health emergency declared pursuant to Resolution 70-20, as extended. Participants, including the public, may join the meeting by telephone using the above Dial-in Number and Conference ID. You may submit a public comment via email (include your name, address, and comment) to the Pension Administrator at <a href="mailto:castronovol@mydelraybeach.com">castronovol@mydelraybeach.com</a> by no later than 5:00 p.m. Tuesday, May 11, 2021. NOTE: your full email will be reviewable by the Board of Trustees and will be made part of the record. For additional information or if you have difficulty accessing the virtual meeting, please send an email to the Pension Administrator. Backup material for Agenda items is available from the Pension Administrator via email if requested by no later than 5:00 p.m. Tuesday, May 11, 2021.

### 1. Call to Order, Roll Call

### 2. Agenda Adoption

May 12, 2021

#### 3. Comments

- a. Public Comments
- b. Board of Trustees of Police Officers' Retirement System
- c. Active and Retired Members of the System

### 4. Consent Agenda

- a. February 17, 2021 Regular Meeting Minutes
- b. Warrant Ratification (#247)
- c. Warrant Approval (#248)
- d. Ratify/Approve Refunds/Benefit Enhancements/New Retirement/DROP/Vested/Death Annuities

### 5. Reports

- a. AndCo Consulting, Investment Consultant Brendon Vavrica
  - i. Portfolio Performance Review Quarter End March 31, 2021
  - ii. Flash Report April 2021
  - iii. Value Equity Managers Review & Discussion
  - iv. Emerging Markets Equity Review & Discussion
  - v. Real Estate Diversification Review & Discussion
  - vi. Investment Policy Update
- b. Gabriel, Roeder, Smith & Company, Actuary Jeffrey Amrose
  - i. October 1, 2020 Actuarial Valuation
- c. Caler, Donten, Levine, Cohen, Porter & Veil, Auditor Scott Porter
  - i. September 30, 2020 Audit Report
- d. 2020 Annual State Report Lisa Castronovo
- e. Lewis, Longman & Walker, Legal Counsel Janice Rustin
- f. Pension Administrator's Report Lisa Castronovo

### Adjournment

IN ACCORDANCE WITH THE AMERICAN WITH DISABILITIES ACT OF 1990, PERSONS NEEDING A SPECIAL ACCOMMODATION TO PARTICIPATE IN THIS PROCEEDING SHOULD CONTACT THE PLAN ADMINISTRATOR NO LATER THAN TWO (2) DAYS PRIOR TO THE PROCEEDING, TELEPHONE (561) 243-4707 FOR ASSIS TANCE; IF HEARING IMPAIRED, TELEPHONE THE FLORIDA RELAY SERV IC E NUMBERS (800) 955-8771 (TDD) OR (800) 955-8770 (VOICE) FOR ASSISTANCE. NOTICE IS GIVEN TO ALL INTERESTED PARTIES THAT IF ANY PERSON DECIDES TO APPEAL ANY DECISION MADE AT THE FORTHCOMING MEETING OF THE CITY OF DELRAY BEACH POLICE OFFICERS' RETIREMENT SYSTEM, SUCH PERSON WILL NEED A RECORD OF THE PROCEEDINGS CONDUCTED AT SUCH MEETING AND FOR SUCH PURPOSE, HEOR SHE MAY NEED TO ENSURE THAT A VERBATIM RECORD OF THE PROCEEDING IS MADE, WHICH RECORDS INCLUDE THE TESTIMONY AND EVIDENCE UPON WHICH ANY APPEAL MAY BE BASED. FLORIDA STATUTE, SECTION 286.0105.

# Item 1 Call to Order, Roll Call, Pledge of Allegiance

(No backup for this Item)

## Item 2 Agenda Adoption

#### \*\* REVISED \*\*

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## Item 3 Comments

(No backup for this Item)

## Item 4 Consent Agenda

### Item 4.a.

### February 17, 2021 Regular Meeting Minutes

## MINUTES REGULAR PENSION BOARD MEETING CITY OF DELRAY BEACH POLICE OFFICERS' RETIREMENT FUND FEBRUARY 17, 2021

Chair Weber read a prepared script. Script made part of these Minutes.

### 1. CALL TO ORDER, ROLL CALL

Chair Weber called the meeting to order at 9:03 a.m.

Board Members present via communication media technology: Chair Paul Weber, Vice-Chair Jim Hoesley (departed at 10:24 a.m.), Secretary Jeffrey Rasor, Scott Privitera (joined at 9:08 a.m.), and Meer Deen.

Also present via communication media technology: Board Attorney Janice Rustin (Lewis, Longman & Walker as designated by City Attorney), Investment Consultant Brendon Vavrica (AndCo Consulting), Pension Administrator Lisa Castronovo, and Pension Specialist Elizabeth Brown.

Guests present via communication media technology: Vinnie Grey, John Mainville, Laura Thezine

### 2. AGENDA ADOPTION

**MOTION** made by Mr. Rasor, seconded by Mr. Deen, to adopt the February 17, 2021 Agenda. In a voice vote by the members, **Motion** passed 4-0.

### 3. COMMENTS

- a. Public
  - None
- b. Board of Trustees of Police Officers' Retirement System None
- c. Active and Retired Members of the Plan
  - Lt. Vinnie Grey

### 4. CONSENT AGENDA

- a. November 18, 2020 Regular Meeting Minutes
- b. Warrant Ratification (#245)
- c. Warrant Approval (#246)
- d. Ratify/Approve Refunds/Benefit Enhancements/New Retirement/DROP/Vested/Death Annuities
- e. Virtual/Electronic Attendance Policy

**MOTION** made by Mr. Hoesley, seconded by Mr. Deen, to approve Consent Agenda Items 4.a.-e. In a roll call vote of the members, **Motion** passed 5-0.

#### 5. REPORTS

- a. AndCo Consulting Brendon Vavrica
  - i. Portfolio Performance Review Quarter End December 31, 2020 Report made part of these Minutes.

Mr. Vavrica provided an update on AndCo noting the company had made significant investments in itself in 2020 by adding two new employees to its research team, advancing two employees to partners, and enhancing its company-wide technology.

Turning to investment performance, Mr. Vavrica stated that the quarter ended December 31, 2020 was very strong with small cap domestic equity stock leading the way with return rates over 31%. For all asset classes, the investment performance in calendar year 2020 was remarkable considering how poorly the year started. Of particular note was fixed income's strong 2020 calendar year performance which was atypical considering equity returns were equally as strong in the same timeframe. Actions taken by the federal government in early 2020 and the rollout of vaccines in late 2020 helped the market rebound from the negative returns it experienced at the beginning of the year. Mr. Vavrica noted that in the final quarter of 2020 and for the first time in many quarters, domestic value stocks outperformed domestic growth stocks.

The Police Officers' Retirement System ("System") assets increased from \$106M on September 30, 2020 to \$126M on December 31, 2020. \$9M of the \$20M increase came from the City and State's annual contribution and the other \$11M came from investment returns. This dollar increase translated into an 11.4% total net fund increase. Due to excellent returns experienced by growth equity investments, the System became overweight in equities.

While reviewing the individual asset classes, Mr. Hoesley asked Mr. Vavrica if the System should liquidate RhumbLine's value equity index fund and instead invest in an actively managed value fund. Mr. Vavrica stated the Board decided to invest in an index value fund to hedge the returns of BNY Mellon's actively managed value fund. Mr. Hoesley requested Mr. Vavrica to provide alternative value managers to BNY Mellon since their performance was underperforming other active value managers.

Mr. Vavrica stated that international manager Harding Loevner had also done very well in calendar year 2020 with a 20.4% return compared to its benchmark of 10.7% and that smid-cap active manager Clarkston Partners had done exceptionally well since inception with a 10.6% return compared to its benchmark of 4.3%. Mr. Hoesley and Chair Weber stated they would like information on adding emerging markets to the System's international investment exposure.

- ii. Flash Report January 2021 no report available
- iii. High Yield Fixed Income Analysis Report made part of these Minutes.

Mr. Vavrica presented information regarding high yield fixed income investments and four managers for Board consideration: Loomis Sayles & Company, Lord Abbett & Company, New York Life Investment Management, and PGIM funds (as managed by

Regular Pension Board Meeting February 17, 2021 Page 3 of 6

Prudential). Mr. Vavrica stated that while all four managers had recently underperformed compared to their benchmark, the expectation was that they would experience better returns as the markets start experiencing increased interest rates.

iv. Real Estate Diversification Discussion Report made part of these Minutes.

Core real estate manager American Realty provided information showing they were overweight in industrial and office space, underweight in residential, and slightly overweight in the retail space.

Mr. Vavrica presented an overview of four open-end real estate funds (Brookfield Premier Real Estate Partners, Carlyle Property Investors, Harrison Street Core Property Fund, and Stockbridge Smart Markets Fund), on real estate investment trusts (REITs), and on closed-end funds. REITs are more of a roller coaster fund due to their volatility, but they typically end up at the same place as open-end funds at quarter's end.

Mr. Vavrica said he was working on updating the investment policy and that he thought due to recent performance, the Board should increase the target allocation for equities and decrease the target allocation for fixed income. He stated the high yield fixed income strategy would be included in the non-core section of fixed income.

Mr. Hoesley said he would only want to invest about \$3M in high yield fixed income and that he would like to invest with a real estate manager who had no investments in office space. Mr. Vavrica said he would bring to the next quarterly meeting more information regarding REITS and the four open-end real estate funds.

Given the Board's desire to move some assets out of American Realty, Mr. Vavrica said the Board should send a partial liquidation request to American Realty now since it can take nine or more months to exit real estate investments. The Board decided to direct American Realty to redeem \$2.35M with such redeemed money to be invested in a REIT or another open-end real estate fund.

**MOTION** made by Mr. Hoesley, seconded by Mr. Privitera, to allocate \$4M to the MainStay MacKay High Yield Corporate Bond R6 as managed by New York Life Investment Management with \$2M transferred from Garcia Hamilton and \$2M transferred from Fidelity Total Market Index Fund. In a roll call vote of the members, **Motion** passed 5-0.

Mr. Vavrica reiterated that the existing investment policy only allowed a 70% maximum target allocation in domestic equity, but the System was above that percent. Mr. Vavrica stated the Board could do one of three things: rebalance the assets, change the investment policy, or rebalance the assets and update the investment policy at the next quarterly Board meeting. The Trustees directed Mr. Vavrica to present at the next quarterly meeting suggested asset class changes. All asset class changes made at the next Board meeting would be reflected in an updated investment policy.

A break was taken from 10:36 a.m. to 10:44 a.m.

Regular Pension Board Meeting February 17, 2021 Page 4 of 6

- b. Lewis, Longman & Walker Janice Rustin
  - i. Appoint Medical Committee for Disability Claims

**MOTION** made by Chair Weber, seconded by Mr. Rasor, to appoint Ms. Rustin, Mr. Rasor, and Ms. Castronovo as the medical committee for the disability applications for Michael Barbire, Marques Brown, and Christine Suarez. In a roll call vote of the members, **Motion** passed 4-0.

**MOTION** made by Mr. Rasor, seconded by Mr. Deen, to select Dr. Marc Ettensohn as the independent psychiatrist to evaluate Christine Suarez. In a roll call vote of the members, **Motion** passed 4-0.

**MOTION** made by Chair Weber, seconded by Mr. Rasor, to select Dr. Paul Bryan as the independent psychologist to perform the personality assessment inventory and medical symptoms validity tests on Christine Suarez. In a roll call vote of the members, **Motion** passed 4-0.

**MOTION** made by Chair Weber, seconded by Mr. Privitera, to select Dr. Brad Chayet as the independent orthopaedic physician to evaluate Marques Brown. In a roll call vote of the members, **Motion** passed 4-0.

**MOTION** made by Chair Weber, seconded by Mr. Deen, to select Dr. Robert Brodner as the independent neurosurgeon to evaluate Michael Barbire. In a roll call vote of the members, **Motion** passed 4-0.

Ms. Rustin asked the trustees if they were comfortable conducting the initial disability hearings virtually. Chair Weber stated he was comfortable with virtual meetings so long as all records could be presented virtually. Ms. Rustin responded there would be no presentations at the initial hearings. The trustees agreed to hold the initial disability hearings virtually.

Ms. Rustin reminded the trustees they could deny the disability application at the initial hearing. Ms. Rustin added that because the City allowed disability applicants to work light-duty with accommodations she could request each physician to provide their opinion as to whether or not each respective disability applicant could continue working for the City with accommodations. Mr. Rasor said getting such opinion was not a good idea since the police department did not want to keep an officer employed if that officer could not carry a gun.

Mr. Rasor stated he was concerned that disability retirees think they will receive their disability benefit for their entire life. The Board then discussed adopting a policy and/or procedures on how and when to follow-up with disability retirees regarding continued disability. Ms. Rustin said the City Ordinance states that anyone receiving a disability benefit must submit a medical report stating they continue to be totally and permanently disabled. Mr. Rasor said he would like each disability retiree to annually appear before the Board to make their case for their continued disability.

Regular Pension Board Meeting February 17, 2021 Page 5 of 6

Chair Weber stated that as plan fiduciaries the Board had a duty to protect the System. The trustees agreed that the disability application process should be carefully laid out and followed to ensure that both the disability applicant and the System were protected. Ms. Rustin said the Board could use the initial hearing as a way to determine if the disability application had merit and then proceed to a full hearing at which the disability applicant would have the burden of proof to make their case. Ms. Rustin said she would work on drafting a new disability policy to present at the Board's summer quarterly meeting.

### ii. Travel Policy

**MOTION** made by Mr. Rasor, seconded by Mr. Privitera, to adopt the travel policy recently drafted for and adopted by the General Employees' Retirement Plan's Retirement Committee, with modifications to reflect specifics related to the Police Officers' Retirement System. In a roll call vote of the members, **Motion** passed 4-0.

Ms. Rustin reminded the Board they had no authority to address any benefit change requests mentioned in public comments since all benefit changes are dictated by the City in the City Ordinance. When asked if the Board could request an actuarial study for a benefit change (i.e. annual cost-of-living increase), Ms. Rustin responded that the only the City or PBA could request it, not the Board.

**MOTION** made by Mr. Rasor, seconded by Chair Weber, for standing approval that any time the City or PBA asks for census/financial data, such information can be released without Board objection upon the Chair authorizing such release. If there is any cost associated with the release of the data (i.e. actuarial studies), the requesting party will pay such cost. In a roll call vote of the members, **Motion** passed 4-0.

**MOTION** made by Chair Weber, seconded by Mr. Privitera, that if any funds from American Realty are received before a successive real estate fund is established, such funds will be invested in Fidelity Real Estate Index fund (FSRNX). In a roll call vote of the members, **Motion** passed 4-0.

- c. Pension Administrator's Report Lisa Castronovo
  - Ms. Castronovo provided two financial items: 1) financial statement of the Retirement System as of September 30, 2020 and the 2020-21 administrative expense budget versus actual expenses through February 10, 2021.
  - Ms. Castronovo provided updated standing Salem Trust Signature Authorizations for the trustees to sign.
  - Ms. Castronovo stated that per the Board's request, she instructed Matt Dickey and Jamie Hayes from NFP to not make a quarterly presentation but to instead provide an "executive summary" which she included in the meeting's backup materials.
  - Ms. Castronovo reported that the Pension office mailed 139 benefit verification letters of which 100 had been returned.

#### **ADJOURNMENT**

**MOTION** made by Mr. Privitera, seconded by Mr. Deen, to adjourn the meeting. Meeting adjourned at 12:17 p.m.

Regular Pension Board Meeting February 17, 2021 Page 6 of 6

I, Paul Weber	_, the undersigned, am the $\_$	<u>Chair</u>
of the Board of Trustees of the City of	Delray Beach Police Office	ers' Retirement System
("Board"). The information provided here	ein is the Minutes of the Fel	oruary 17, 2021 regular
meeting of said body. These Minutes v	vere formally approved and	I adopted by the Board
on <u>May 12, 2021</u> .		
Doord of Trustage City of Dalray Doorh		
Board of Trustees, City of Delray Beach		
Police Officers' Retirement System		

NOTE TO THE READER: If the Minutes you have received are not complete as indicated above, this means these are not the official minutes of the Board of Trustees of the City of Delray Beach Police Officers' Retirement System. Minutes will become official only after they have been reviewed and approved, which may involve some amendments, additions or deletions to the Minutes as set forth above.

NOTE: upon official approval by the Board of Trustees, the Minutes will be posted on the City of Delray Beach website at: www.delraybeachfl.gov.

## POLICE OFFICERS' RETIREMENT SYSTEM Summary of Warrants May 12, 2021 Regular Board Meeting

Warrant #	<u>April 2021</u>	<b>Amount</b>	<u>Description</u>
247	AndCo Consulting	\$ 9,244.21	Consulting Fee - qtr end 3/31/2021
247	BNYMellon	15,299.21	Investment Fee - qtr end 3/31/2021
247	City of Delray Beach	1,830.14	Pension Office Staff - Oct 2020
247	City of Delray Beach	22,312.40	Pension Office Staff - Nov 2020 - March 2021
247	Gabriel, Roeder, Smith & Company	2,010.00	Actuarial Services - Feb 2021
247	Gabriel, Roeder, Smith & Company	4,432.00	Actuarial Services - March 2021
247	Garcia, Hamilton & Associates	8,354.23	Investment Fee - qtr end 3/31/2021
247	Lewis, Longman & Walker	5,079.50	Legal Services - Feb 2021
247	Lewis, Longman & Walker	989.00	Legal Services - Mar 2021
247	Polen Capital	29,115.73	Investment Fee - qtr end 3/31/2021
247	Rhumbline	1,036.00	Investment Fee - qtr end 3/31/2021
		\$ 99,702.42	
	May 2021		
248	City of Delray Beach	\$ 8,294.96	Pension Office Staff - April, May 2021
248	AndCo Consulting	9,120.00	Consulting Fee - qtr end 9/30/2020
248	Dr. Norman Gotlieb	1,800.00	IME & Report - Barbire
		\$ 19,214.96	

\$ <u>118,917.38</u> <u>TOTAL</u>

## Item 4.b. Warrant Ratification: #247

### WARRANT: 247

Administration:

Lisa Castronovo

MEETING/APPROVAL DATE: April 21, 2021 (no meeting)

To: Salem Trust Company

1715 N. Westshore Blvd, Suite 750

Tampa, FL 33607

You are hereby authorized by the Board of Trustees of the **City of Delray Beach Police Officers' Retirement System** to pay the amounts listed below for services rendered to said Board of Trustees and to pay the person/company named below hereby certified by the Board of Trustees.

PAYMENT FROM STC ACCOUNT: 0740001193 PAYABLE TO: **AMOUNT** AndCo \$ 9,244.21 Invoice #38063 **BNYMellon** \$15,299.21 Invoice 141193 City of Delray Beach \$ 1,830.14 Pension Admin Services - October 2020 City of Delray Beach \$22,312.40 Pension Admin Services - November 2020 - March 2021 Gabriel, Roeder, Smith & Co. \$ 2,010.00 Invoice #460580 Gabriel, Roeder, Smith & Co. \$ 4,432.00 Invoice #461508 **Garcia Hamilton & Associates** \$ 8,354.23 Invoice #33820 Lewis, Longman & Walker \$ 5,079.50 Invoice JWL-139883 Lewis, Longman & Walker 989.00 Invoice JWL-140417 **Polen Capital** \$29,115.73 Acct 740002167; Acct no: DELR0007 RhumbLine \$ 1,036.00 Invoice #g10mdbpor2021Q1 AUTHORIZED BY: Chairman: Trustee: James Hoesley Secretary: Trustee: Jeffrey Rasor Meer Deen Trustee: Scott Privitera



## AndCo PLEASE NOTE OUR PERMANENT ADDRESS:

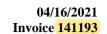
Date Invoice # 3/26/2021 38063

531 W. Morse Blvd Suite 200 Winter Park, FL 32789

### Bill To:

Delray Beach Polices'
Retirement System, City of
Lisa Castronovo CEBS, CPPT
Pension Administrator
City of Delray Beach

Description	Amount
Consulting Services and Performance Evaluation, Billed Quarterly (January, 202	1) 3,081.40
Consulting Services and Performance Evaluation, Billed Quarterly (February, 202	
Consulting Services and Performance Evaluation, Billed Quarterly (March, 2021)	
Thank you for the opportunity to serve you!  Balance Due	\$9,244.21





Lisa Castronovo Pension Administrator City of Delray Beach 100 NW 1st Avenue Delray Beach, FL 33444

### CITY OF DELRAY RETIREMENT SYSTEM

This fee is calculated in accordance with terms set forth in the agreement between the Manager and Client.

Billing Period	01/01/2021 - 03/31/2021
Account Name	Amount due
CITY OF DELRAY BEACH POLICE OFFICERS' RETIREMENT SYSTEM	\$ 15,299.21
Total:	\$ 15,299.21
Total Due for Current Period:	<b>\$ 15,299.21</b>

The following is a statement of transactions pertaining to your account(s).

For any questions pertaining to this bill, please contact the Billing Department at (617) 382-8210 or email us at Billing@bnymellon.com. Thank you.

Remittance Slip

Mellon Investments Corporation

A/C #: 000010-4388

**Invoice Number:** 141193 **Billing Period:** 01/01/2021 - 03/31/2021 **Invoice Date:** 04/16/2021 Account Number: BOS1639

**Amount Due:** \$15,299.21

Please Wire Transfer To: Make Check Payable To:

BNY Mellon, N.A. Mellon Investments Corporation ABA # 011-00-1234 Box 81249 SWIFT IRVTUS3N Woburn, MA 01813-1249 Further Credit to:

Please reference invoice number in wire transmission

01/01/2021 - 03/31/2021					Invoice date <b>04/16/202</b>
Management fee					
CITY OF DELRAY BEACH POL	ICE OFFICEI	RS' RETIREMENT SYSTEM - B	OS1639: Equity Incor	ne Management SM	ſ
<b>Activity</b> Date					Basis in USD
Market value 03/31/202	1				16,586,401.88
Partial Basis: (22.88% of total)					\$ 16,586,401.88
Aggregation participants not billed	l on this Invoic	ce			
					Basis in USD
Bases that are not billed on this Invoi	ice				55,921,741.90
Total:					\$ 55,921,741.90
Total Assets/Basis in USD - used fo	or fee calculatio	ons			\$ 72,508,143.78
Annual Fee Calculation in USD - F	rom: 01/01/20	21 To: 03/31/2021		(adj	usted by: 90 / 360
Fee Schedule Tiers		Annual (%)	Applied Assets	Annual Fee	Periodic Fee
	00,000.00	0.400000	50,000,000.00	200,000.00	50,000.00
50,000,000.00 and above		0.300000	22,508,143.78	67,524.43	16,881.11
			\$ 72,508,143.78	\$ 267,524.43	\$ 66,881.11
Totals:			ψ 12,500,145.10	, , , , , , ,	•
	From: 01/01/20	21 To: 03/31/2021	ψ 12,500,143.70	•	usted by: 90 / 360
	From: 01/01/20	21 To: 03/31/2021 Annual (%)	Applied Assets	•	usted by: 90 / 360 Periodic Fee
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Annual Fee Calculation in USD - F Fee Schedule Tiers 0.00 and above	rom: 01/01/20	Annual (%)	Applied Assets	(adj Annual Fee	Periodic Fee
Annual Fee Calculation in USD - F Fee Schedule Tiers 0.00 and above  Totals:		Annual (%)	Applied Assets 72,508,143.78	(adj Annual Fee	Periodic Fee
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Annual Fee Calculation in USD - F  Fee Schedule Tiers  0.00 and above  Totals:  Qua	arterly Net Fe TY OF DELRA TIREMENT SY	Annual (%) 0.000000  e Calculation in USD  Y BEACH POLICE OFFICERS' YSTEM - BOS1639: Equity	Applied Assets 72,508,143.78	(adj Annual Fee	Periodic Fee 0.00
O.00 and above  Cotals:  Qua  CIT  RE' Inco	arterly Net Fe TY OF DELRA TIREMENT SY ome Manageme	Annual (%) 0.000000  e Calculation in USD  Y BEACH POLICE OFFICERS'	Applied Assets 72,508,143.78	(adj Annual Fee	Periodic Fee
Fee Schedule Tiers  0.00 and above  Fotals:  Qua  CIT  REF  Inco  0.00	arterly Net Fe TY OF DELRA TIREMENT SY	Annual (%) 0.000000  e Calculation in USD  Y BEACH POLICE OFFICERS' YSTEM - BOS1639: Equity	Applied Assets 72,508,143.78	(adj Annual Fee	Periodic Fee 0.00 Quarterly Net Fee 15,299.21
Fee Schedule Tiers  0.00 and above  Fotals:  Qua  CIT  REF  Inco  0.05  Net	arterly Net Fed TY OF DELRA TIREMENT SY ome Manageme 92239%) t Fee:	Annual (%) 0.000000  E Calculation in USD  Y BEACH POLICE OFFICERS' YSTEM - BOS1639: Equity ent SM (\$16,586,401.88 *	Applied Assets 72,508,143.78	(adj Annual Fee	Periodic Fee 0.00 Quarterly Net Fee 15,299.21
Fee Schedule Tiers  0.00 and above  Fotals:  Qua  CIT  REF  Inco  0.05  Net	arterly Net Fer TY OF DELRA TIREMENT SY ome Manageme 92239%) t Fee: gregated Partic	Annual (%) 0.000000  Example Calculation in USD  Y BEACH POLICE OFFICERS' YSTEM - BOS 1639: Equity ent SM (\$16,586,401.88 *	Applied Assets 72,508,143.78	(adj Annual Fee	Periodic Fee 0.00 Quarterly Net Fee 15,299.21
Fee Schedule Tiers  0.00 and above  Fotals:  Qua  CIT  REF  Incc  0.09  Net	arterly Net Fed TY OF DELRA TIREMENT SY ome Manageme 92239%) t Fee:	Annual (%) 0.000000  E Calculation in USD  Y BEACH POLICE OFFICERS' YSTEM - BOS1639: Equity ent SM (\$16,586,401.88 *	Applied Assets 72,508,143.78 \$ 72,508,143.78	(adj Annual Fee 0.00	Periodic Fee 0.00

### CITY OF DELRAY RETIREMENT SYSTEM

Billing Detail Billing period: 01/01/2021 - 03/31/2021				Invoice date <b>04/16/202</b>
	Aggregated Fee A	allocation in USD		
	Account Number	Account - Product	Allocation	Allocated fee
	BOS1639	CITY OF DELRAY BEACH POLICE OFFICERS' RETIREMENT SYSTEM - Equity Income Management SM	39.27%	15,299.21
		Fees that are not billed on this Invoice	60.73%	23,657.87
				\$ 38,957.08
	Billing Summary			
	Management fee			\$ 15,299.21
	Total Current Ch	arges:		\$ 15,299.21

### MONIES OWED BY PENSION FUNDS TO CITY FOR PENSION STAFF

	FY 2021		FY 2021		FY 2021	
	PENSION ADMINISTRATOR		PENSION SPECIALIST		TOTAL	
	ADMINIOTRATOR		OI EGIALIOI		TOTAL	
Position Budget:						
Salary	87,980.00		40,000.00		127,980.00	
FICA	5,454.76	;	2,480.00		7,934.76	
Medicare	1,275.71		580.00		1,855.71	
Pension	9,197.00		4,182.00		13,379.00	
Medical Ins	8,600.00		0.00		8,600.00	
Life Ins	198.00		198.00		396.00	
LTD	188.42		188.42		376.84	
Unemployment	35.04		35.04		70.08	
EAP	29.16	}	29.16		58.32	
TOTAL	\$ 112,958.09		\$ 47,692.62		\$160,650.71	
	\$ 9,413.17	MONTHLY	\$ 3,974.39	MONTHLY	\$ 13,387.56	MONTHLY
	ANNUAL	MONTHLY	ANNUAL	MONTHLY	ANNUAL	MONTHLY
	,	Beg. 10/1/20	7.11.107.1 <u>2</u>	Beg. 10/1/20	/	Beg. 10/1/20
FIRE	\$37,652.32	•	\$15,897.38	•	\$53,549.70	
POLICE	\$37,652.32	•	\$15,897.38		\$53,549.70	
GENERAL	\$37,652.32	•	\$15,897.38	• •	\$53,549.70	
TOTAL	\$112,958.09	\$9,413.17	\$47,692.62	\$3,974.39	\$160,650.71	\$13,387.56

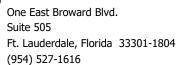
### MONIES OWED BY PENSION FUNDS TO CITY FOR PENSION STAFF

		FY 2020						
		PENSION						
		ADMINISTRATOR		Amount owed by Funds for	Lisa for 10	<u> 0/1/2019 - 9/30/2020</u>		
						Am't Pd by paycheck	Retro Pay for	
Position Budget:				Actual Earnings & Benefits		10/1/19 - 9/30/20	5/29/20-9/30/20	
	Salary	83,137.0	0	Salary	84,320.96	83,137.60	1,183.36	
	FICA	5,154.4	9	FICA	5,227.90	5,154.53	73.37	
	Medicare	1,205.4	9	Medicare	1,222.65	1,205.50	17.16	
	Pension	7,005.1	2	Pension	7,104.89	7,005.18	99.71	99.71=1183.36 x 8.426% (8.426% is City's contribution rate)
	Medical Ins	9,253.1	4	Medical Ins	0.00	0.00	0.00	
	Life Ins	214.5	0	Life Ins	198.00	198.00	0.00	
	LTD	171.6	8	LTD	174.13	171.60	2.53	2.53=1183.36 x .00214% (.00214% is City's contribution rate)
	Unemployment	35.6	2	Unemployment	32.88	32.88	0.00	
	EAP	31.7	2	EAP	29.28	29.28	0.00	
ANNUAL	TOTAL	\$ 106,208.76	6	TOTAL	98,310.69			
MONTHLY		\$ 8,850.73	3		8,192.56			
		ANNUAL	MONTHLY					
			Beg. 10/1/19					
	FIRE	\$35,402.5	7 \$2,950.21					
	POLICE	\$35,402.5	7 \$2,950.21					
	GENERAL	\$35,402.5						
		, ,	. ,					
	TOTAL	\$106,208.7	6 \$8,850.73					
	!	,	. ,	1				

### Each Pension Fund owes 1/3 of total expense

Amount owed by:	OWED Actually Paid Amt Overpaid by Funds
General	\$32,770.23 \$35,402.57 <b>\$2,632.34</b> Deduct from Oct 2020 invoice
Police	\$32,770.23 \$35,402.57 <b>\$2,632.34</b> Deduct from Oct 2020 invoice
Fire	\$32,770.23 \$35,402.57 <b>\$2,632.34</b> Deduct from Oct 2020 invoice

### **Gabriel, Roeder, Smith & Company**



### **Invoice**

Date 3/9/2021

**Invoice** 460580

**Bill To:** 

Attention: Ms. Lisa Castronovo Pension Administrator City of Delray Beach Police Officers' Retirement System 100 NW 1st Avenue Delray Beach, Florida 33444

**Please Remit To:** 

Dept. # 78009 Gabriel, Roeder, Smith & Company

PO Box 78000

Detroit, Michigan 48278-0009

Federal Tax ID

38-1691268

**Client 3526** 

**Amount** 

For services rendered through 2/28/2021

1. Charges since 12/31/2020 for preparation of 10/1/2020 Actuarial Valuation Report; total charges to date equal \$3,165

1,410.00

2. Retirement beenfit calculations for: Guerriero, Umbriac

600.00

**Amount Due** \$2,010

### Gabriel, Roeder, Smith & Company

One East Broward Blvd. Suite 505 Ft. Lauderdale, Florida 33301-1804 (954) 527-1616

### **Invoice**

 Date
 Invoice

 4/6/2021
 461508

**Bill To:** 

Attention: Ms. Lisa Castronovo Pension Administrator City of Delray Beach Police Officers' Retirement System 100 NW 1st Avenue Delray Beach, Florida 33444 **Please Remit To:** 

Dept. # 78009 Gabriel, Roeder, Smith & Company

PO Box 78000

Detroit, Michigan 48278-0009

Federal Tax ID

38-1691268

Client 3526

For services rendered through 4/3/2021

1. Charges since 2/28/2021 for preparation of 10/1/2020 Actuarial Valuation Report; 2,714.00 total charges to date equal \$5,879

2. Preparation of Actuarial Use of State Moneys Form for inclusion in Annual State Report

3. 3/18/2021 email estimating the Required City Contribution for FYE 2022

4. Retirement Benefit Calculations for: Parzyck

300.00

Amount Due



INVOICE # 33820

5 HOUSTON CENTER 1401 McKinney, Suite 1600 HOUSTON, TX 77010

TEL: (713) 853-2322 FAX: (713) 853-2308

WWW.GARCIAHAMILTONASSOCIATES.COM

8,354.23

April 9, 2021

### DELRAY BEACH POLICE OFFICERS' RETIREMENT SYSTEM (0740001698) drbp

Via Email: Salemops@salemtrust.com Lisa Castronovo: CastronovoL@mydelraybeach.com

\*, \* \*

### GARCIA HAMILTON & ASSOCIATES SUMMARY OF MANAGEMENT FEES

For The Period January 1, 2021 the Portfolio Value with Accrued Inter Portfolio Value with Accrued Inter Portfolio Value with Accrued Inter Average of 3 Months	rest as of 01-31-21 rest as of 02-28-21		18,679,399.85 16,429,749.61 16,238,774.35
Average of 3 Months		\$	17,115,974.60
Percent of Total			26.08
$\frac{\text{Brackets}(000'\text{s})}{0} = \frac{\text{Rates}(\%)}{0.2000}$			
0 - 50,000 0.2000 50,000 -1,000,000 0.1800	50,000,000 pro-rated @	0.052 % per annum	6,520.39
Quarterly Management Fee	15,624,812 pro-rated @	0.047 % per annum	1,833.84
Quarterly Management Fee		\$	8,354.23
TOTAL DUE AND PAYABLE		•	9.254.33





515 North Flagler Drive, Suite 1500 West Palm Beach, FL 33401 Tel 561-640-0820 Fax 561-640-8202 Tax ID No. 65-0500793

City of Delray Beach Attn: Lisa Castronovo, Pension Dept. 100 NW 1st Avenue Delray Beach, FL 33444

March 9, 2021 Invoice No. JWL-139883

CLIENT: 1187 - City of Delray Beach Re: 013 Police Pension Board Matters

<b>Date</b> 02/01/21	JDR	Services Review proposed agenda item for February meeting; telephone conference with plan administrator regarding same.	<b>Hours</b> 0.50	<b>Amount</b> 115.00
02/09/21	JDR	Telephone conference with plan administrator regarding February board meeting agenda.	0.50	115.00
02/10/21	JDR	Prepare IME doctor materials for Board meeting agenda.	0.80	184.00
02/16/21	JDR	Review agenda and backup materials for February board meeting; prepare for meeting.	2.00	460.00
02/16/21	JWL	Attention to disability matters; evaluate policy for Board disability determinations.	0.50	157.50
02/17/21	JDR	Prepare for and attend quarterly Board meeting; research and respond to questions asked at meeting regarding disability retirement benefits; contact and obtain engagement letters for Independent Medical Examinations.	6.50	1,495.00
02/22/21	JDR	Review and analyze medical records for Barbire; review and analyze medical records for Brown; prepare letter for doctor for Brown Independent Medical Examination.	6.00	1,380.00

Client Ref Invoice N	March 9, 2021 <b>Page 2</b>					
<b>Date</b> 02/24/21	JDR	regarding dis with City risk regarding Ba telephone co corresponde	conference with med sability claims; telepl manager and insur- arbire workers componference with Barbi ence with cardiologis Medical Examination			
02/25/21	JDR		onference with City's committee regarding			230.00
02/26/21	JDR	Telephone conference with medical committee and City risk department regarding Barbire records.				138.00
			Summary of Se	ervices		
				Rate	Hours	Amount
JWL	Linn, Ja			315.00	0.50	
JDR	Rustin, .	Janice D.		230.00	21.40	4,922.00
Total for S	Services				21.90	\$5,079.50
		7	Total for Services a	nd Expenses		\$5,079.50
			Pre	vious Balance		1,814.00
			Payments Sinc	e Last Invoice		-0.00
				Amount Due		\$6,893.50
Open Invo	oices for t	his Matter				
Date 02/08/21 Outstandir		nvoice No. 139359 nt Due:	Amount Billed 1,814.00	Amount Paid 0.00 _	Amount Due 1,814.00 <b>1,814.00</b>	

\$6,893.50

**Current and Outstanding Amount Due:** 



515 North Flagler Drive, Suite 1500 West Palm Beach, FL 33401 Tel 561-640-0820 Fax 561-640-8202 Tax ID No. 65-0500793

City of Delray Beach Attn: Lisa Castronovo, Pension Dept. 100 NW 1st Avenue Delray Beach, FL 33444 April 8, 2021 Invoice No. JWL-140417

CLIENT: 1187 - City of Delray Beach

Re: 013 Police Pension Board Matters

<b>Date</b> 03/01/21	JDR	Services Telephone conference with J. Rasor regarding workers compensation claim documents (Barbire).	<b>Hours</b> 0.60	<b>Amount</b> 138.00
03/16/21	JDR	Prepare IME package for Dr. Collins (Suarez); prepare Independent Medical Exam package for Dr. Gotlieb (Barbire); email correspondence with Suarez attorney and city insurer regarding additional medical records.	2.50	575.00
03/17/21	JDR	Finalize Independent Medical Examination package for Dr. Collins (Suarez).	0.80	184.00
03/18/21	JDR	Review and analyze correspondence from Mellon investment advisors; e-mail correspondence regarding same.	0.40	92.00
		Summary of Sarvines		

### **Summary of Services**

		Rate	Hours	<b>Amount</b>
JDR	Rustin, Janice D.	230.00	4.30	989.00
Total for Services			4.30	\$989.00

Client Ref: 1187 - 013 April 8, 2021 Invoice No. JWL-140417 Page 2

Total for Services and Expenses \$989.00

Previous Balance 6,893.50

Payments Since Last Invoice -1,814.00

Amount Due \$6,068.50

Open Invoices for this Matter

 Date
 Invoice No.
 Amount Billed
 Amount Paid
 Amount Due

 03/09/21
 139883
 5,079.50
 0.00
 5,079.50

 Outstanding Amount Due:
 5,079.50

Current and Outstanding Amount Due: \$6,068.50



1825 NW Corporate Blvd., Suite 300 · Boca Raton, FL 33431 · Tel: 561-241-2425 · www.polencapital.com

REMITTANCE COPY

Lisa Castronovo City of Delray Beach, Finance Department 100 NW 1st Ave Delray Beach, FL 33444

April 13, 2021

### STATEMENT OF MANAGEMENT FEES

Quarterly Fee calculated for assets under management as of March 31, 2021 For the billing period from January 1, 2021 to March 31, 2021

Custodian Account no: 0740002167 Account no: DELR0007

Account name: DELRAY BEACH POLICE OFFICERS RETIREMENT SYSTEM

### Management Fee Calculation Detail

	Breakpoints	Annual Rate	Account Assets	Fee
Total Portfolio:	D.I.	0.6000/	¢10.600.070	¢20.115.72
	Balance	0.600%	\$19,680,078	\$29,115.73
Total			\$19,680,078	\$29,115.73

Please remit the total fee amount to Polen Capital at the address indicated below.

Payment for this invoice can be sent via mail or wire:

By Mail: Overnight Address: By Wire:

Check payable to: EIS Lockbox/Cust Svc SunTrust Bank
Polen Capital Management LLC SunTrust Bank
Attn: Polen Capital Management LLC 1000 Peachtree St., N.E., Atlanta, GA

Polen Capital Management Attn: Polen Capital Management LLC 1000 Peachtree St., N.E., Atlanta, GA P.O. Box 919766 #919766 ABA: 061 000 104

Orlando, FL 32891-9766 2290 Premier Row Account Name: Polen Capital

Orlando, FL 32809 Management LLC Account #: 1000214295577

Please contact us if your financial situation or investment objectives have changed.



### **Investment Position Detail**

DELRAY BEACH POLICE OFFICERS RETIREMENT SYSTEM 3/31/2021

Security	Qty	Original Cost	Price	Total Value	% Total	Current Yield
EQUITY INVESTMENT						
ABBOTT LABS	8,820	719,163	119.84	1,056,989	5.37%	1.50%
ACCENTURE PLC IRELAND SHS CLASS A	3,350	539,276	276.25	925,438	4.70%	1.27%
ADOBE SYS INC	2,686	668,865	475.37	1,276,844	6.49%	
ALIGN TECHNOLOGY INC	665	148,914	541.53	360,117	1.83%	
ALPHABET INC CAP STK CL A	234	238,882	2,062.52	482,630	2.45%	
ALPHABET INC CAP STK CL C	669	712,544	2,068.63	1,383,913	7.03%	
AMAZON COM INC	297	993,598	3,094.08	918,942	4.67%	
AUTODESK INC	2,432	416,207	277.15	674,029	3.43%	
FACEBOOK INC	5,717	831,221	294.53	1,683,828	8.56%	
GARTNER INC	2,924	428,440	182.55	533,776	2.71%	
ILLUMINA INC	1,122	350,162	384.06	430,915	2.19%	
INTUITIVE SURGICAL INC	495	343,637	738.94	365,775	1.86%	
MASTERCARD INCORPORATED CL A	2,593	555,325	356.05	923,238	4.69%	0.49%
MICROSOFT CORP	6,838	739,480	235.77	1,612,195	8.19%	0.95%
MSCI INC	610	139,693	419.28	255,761	1.30%	0.74%
NETFLIX COM INC	1,111	609,203	521.66	579,564	2.95%	
NIKE INC	3,151	193,323	132.89	418,736	2.13%	0.83%
PAYPAL HLDGS INC	2,830	260,674	242.84	687,237	3.49%	
SALESFORCE COM INC	4,372	796,987	211.87	926,296	4.71%	
SERVICENOW INC	1,559	419,640	500.11	779,671	3.96%	
STARBUCKS CORP	6,099	430,450	109.27	666,438	3.39%	1.65%
UNITEDHEALTH GROUP INC	1,657	499,076	372.07	616,520	3.13%	1.34%
VISA INC	4,321	615,160	211.73	914,885	4.65%	0.60%
ZOETIS INC	5,267	488,752	157.48	829,447	4.21%	0.64%
TOTAL EQUITY INVESTMENT		12,138,670		19,303,185	98.09%	0.43%
CASH AND CASH EQUIVALENTS						
US DOLLARS	376,026	376,026	1.00	376,026	1.91%	
TOTAL CASH AND CASH EQUIVALENTS		376,026		376,026	1.91%	0.00%



### **Investment Position Detail**

### DELRAY BEACH POLICE OFFICERS RETIREMENT SYSTEM 3/31/2021

Security	Qty	Original Cost	Price	Total Value	% Total	Current Yield
TOTAL MARKET VALUE	1	2,514,697		19,679,211	100.00%	0.42%
ACCRUED INCOME				867		
TOTAL PORTFOLIO				19,680,078		



### Performance History

### Gross of Fees

### DELRAY BEACH POLICE OFFICERS RETIREMENT SYSTEM

As of: 3/31/2021

Returns for the period: 1/1/2021 to 3/31/2021

RETURN TYPE:	Quarter 1	Quarter 2	Quarter 3	Quarter 4	YTD
GROSS	1.75%				1.75%
Russell 1000 Growth	0.95%				0.95%
S&P 500	6.18%				6.18%



Investment Advisory Fees for 1st Quarter 2021
Client: Delray Beach Police Officers Retirement System

Billable Assets:	10mdbpor	6mdbpor	
Period Ending:	(RU1000GP)	(RU1000VP)	
01-31-2021	\$6,128,289	\$3,950,593	
02-28-2021	6,126,958	4,188,699	
03-31-2021	6,232,148	4,434,787	
Average Assets:	\$6,162,465	\$4,191,360	
Billable Assets:	\$10,353,825		
Fee Calculation:	Asset Tier	Rate (BPs)	Fee
	\$10,353,825	0.00040000	\$4,142
Total:	\$10,353,825		\$4,142
Annual Fee:			\$4,142
Quarterly Calculated Fee:			\$1,036
Total Quarterly Fee Due:			\$1,036

April 9, 2021

Invoice #: g10mdbpor2021Q1

	10mdbpor	6mdbpor
Fee Allocation:	(RU1000GP)	(RU1000VP)
Fee:	\$617	\$419

### Item 4.c. Warrant Approval: #248

### **WARRANT: 248**

MEET	ING/APPROVAL DATE: May 12, 2	2021			
To:	Salem Trust Company 1715 N. Westshore Blvd. Suite 750 Tampa, FL 33607				
<b>Police</b> rende	ere hereby authorized by the Bo e Officers' Retirement System ered to said Board of Trustees a y certified by the Board of Truste	<b>n</b> to pay the ar and to pay the	nounts listed be	low	for services
PAYMI	ENT FROM STC ACCOUNT: 07	40001193			
PAYAE	BLE TO:			<u>A</u> 1	MOUNT:
Attn:	of <b>Delray Beach</b> Lisa Castronovo/Finance – Pension May 2021	on		\$	8,924.96
<b>AndC</b> Invoic	ce #36095			\$	9,120.00
<b>Dr. Norman Gotlieb</b> Re: Michael Barbire					1,800.00
AUTHO	RIZED BY:				
Chairm	nan:Paul Weber	Trustee:	James Hoesley		
Secreta	ury: Jeffrey Rasor	Trustee:	Scott Privitera		
Trustee	e: Meer Deen	_			

Lisa Castronovo

Administration: \_\_\_

#### MONIES OWED BY PENSION FUNDS TO CITY FOR PENSION STAFF

	FY 2021		FY 2021		FY 2021	
	PENSION ADMINISTRATOR		PENSION SPECIALIST		TOTAL	
	ADMINIOTRATOR		OI EGIALIOI		TOTAL	
Position Budget:						
Salary	87,980.00		40,000.00		127,980.00	
FICA	5,454.76	;	2,480.00		7,934.76	
Medicare	1,275.71		580.00		1,855.71	
Pension	9,197.00		4,182.00		13,379.00	
Medical Ins	8,600.00		0.00		8,600.00	
Life Ins	198.00		198.00		396.00	
LTD	188.42		188.42		376.84	
Unemployment	35.04		35.04		70.08	
EAP	29.16	}	29.16		58.32	
TOTAL	\$ 112,958.09		\$ 47,692.62		\$160,650.71	
	\$ 9,413.17	MONTHLY	\$ 3,974.39	MONTHLY	\$ 13,387.56	MONTHLY
	ANNUAL	MONTHLY	ANNUAL	MONTHLY	ANNUAL	MONTHLY
	,	Beg. 10/1/20	7.11.107.1 <u>2</u>	Beg. 10/1/20	/	Beg. 10/1/20
FIRE	\$37,652.32	•	\$15,897.38	•	\$53,549.70	
POLICE	\$37,652.32	•	\$15,897.38		\$53,549.70	
GENERAL	\$37,652.32	•	\$15,897.38	• •	\$53,549.70	
TOTAL	\$112,958.09	\$9,413.17	\$47,692.62	\$3,974.39	\$160,650.71	\$13,387.56



#### AndCo 531 W. Morse Blvd Suite 200 Winter Park, FL 32789

Date	Invoice #
9/25/2020	36095

#### Bill To:

Delray Beach Polices'
Retirement System, City of
Lisa Castronovo CEBS, CPPT
Pension Administrator
City of Delray Beach

Description	Amount
Consulting Services and Performance Evaluation, Billed Quarterly (July, 2020)	3,040.00
Consulting Services and Performance Evaluation, Billed Quarterly (August, 2020)	3,040.00
Consulting Services and Performance Evaluation, Billed Quarterly (September, 2020)	3,040.00
It is our pleasure to provide 100% independent investment consulting ALWAYS putting clients first!  Balance Due	\$9,120.00

## NORMAN E. GOTLIEB, M.D., P.A. CARDIOLOGY

Fellow, American College of Cardiology Fellow, American College of Chest Physicians Diplomate American Board of Internal Medicine Diplomate American Board of Cardiovascular Disease

April 27th, 2021

Lewis Longman Walker Law 515 North Flagler Drive, Suite 1500 West Palm Beack, Florida 33401

Hi Janice,

As requested, here is an itemized invoice from Dr Gotlieb.

Medical Record Review: 1 Hour \$700 Independent Medical Exam: \$1100

Total \$1800

Please remit payment to:

Dr Norman Gotlieb 2255 Date Palm Road Boca Raton, Florida 33432

#### Item 4.d.

## Ratify/Approve: Refunds/Benefit Enhancements/ New Retirements/DROPs/ Deferred Vested/Death Annuities

# DROPs/New Retirements

## CITY OF DELRAY BEACH POLICE OFFICERS' RETIREMENT SYSTEM Refunds/New Benefits/Deaths May 12, 2021 Regular Board Meeting

Name	Refund	Monthly Benefit
PARZYCK, Stanley DROP 3/1/2021	N/A	\$ 5,399.27
UMBRIAC, Frank DROP 1/1/2021	N/A	\$ 5,664.87

#### CITY OF DELRAY BEACH POLICE OFFICERS' RETIREMENT SYSTEM

Notification of Benefits Payable as a Result of Participation in the Deferred Retirement Option Plan (DROP)

Participant's	Name: STANLEY PARZYCK
the beginnin choose, but	u are eligible for a Normal Retirement Benefit from the Plan. Your benefit is payable at of each month commencing on March 1, 2021. DROP payments will end on the date you ot later than February 1, 2026. The amount of your monthly benefit depends on the optional ty which you choose. Please initial the one optional annuity form listed below that you elect
a C	ODIFIED CASH REFUND ANNUITY: This option provides payments of\$5,576.61_ to you long as you live. If you should die before you have received an amount equal to your own ntributions to the Plan, payments will continue to your beneficiary until your own accumulated ntributions have been used up.
p	N YEAR CERTAIN AND LIFE THEREAFTER ANNUITY: This option provides monthly syments of \$5,542.04 to you as long as you live. If you should die before 120 monthly syments have been made, the same amount* will continue to be paid to your beneficiary until a tal of 120 monthly payments have been made in all.
t s a t	PAY CONTINGENT ANNUITY: This option provides monthly payments of \$5,365.22  you as long as you live. After your death, monthly payments to your suriving ouse until death or remarriage will be \$5,365.22 for the 12 months following your death id then \$3,219.00 thereafter. If you should die before you have received an amount equal your own contributions to the Plan, payments will continue to your beneficiary until your own cumulated contributions have been used up.
	30% JOINT AND SURVIVOR ANNUITY: This option provides monthly payments of \$5,232.53 to you as long as you live. Your designated beneficiary, if living at the time of your eath, will then receive monthly payments of \$5,232.53 * as long as he/she lives.
	5% JOINT AND SURVIVOR ANNUITY: This option provides monthly payments of \$5,314.51 to you as long as you live. Your designated beneficiary, if living at the time of your eath, will then receive monthly payments of \$3,985.88 * as long as he/she lives.
the state of	5 2/3% JOINT AND SURVIVOR ANNUITY: This option provides monthly payments of \$5,342.39 to you as long as you live. Your designated beneficiary, if living at the time of your eath, will then receive monthly payments of \$3,561.59 * as long as he/she lives.
	% JOINT AND SURVIVOR ANNUITY: This option provides monthly payments of \$5,399.27 to you as long as you live. Your designated beneficiary, if living at the time of your eath, will then receive monthly payments of \$2,699.64 * as long as he/she lives.
t	10% JOINT AND SURVIVOR ANNUITY WITH POP-UP: This option provides monthly payments of \$5,193.50 to you as long as you and your beneficiary live. Your designated beneficiary, if living at the time of your death, will then receive monthly payments of \$5,193.50 * as long as he/she lives. you are living at the time of your beneficiary's death, you will then receive monthly payments of \$5,576.61 * as long as you live.
	3% JOINT AND SURVIVOR ANNUITY WITH POP-UP: This option provides monthly payments of \$55,284.40 to you as long as you and your beneficiary live. Your designated beneficiary, if living at e time of your death, will then receive monthly payments of \$3,963.30 * as long as he/she lives. you are living at the time of your beneficiary's death, you will then receive monthly payments of \$5,576.61 * as long as you live.
ī	\$2/3% JOINT AND SURVIVOR ANNUITY WITH POP-UP: This option provides monthly payments of \$5,315.07 to you as long as you and your beneficiary live. Your designated beneficiary, if living at e time of your death, will then receive monthly payments of \$3,543.38 * as long as he/she lives. you are living at the time of your beneficiary's death, you will then receive monthly payments of \$5,576.61 * as long as you live.
ti	% JOINT AND SURVIVOR ANNUITY WITH POP-UP: This option provides monthly payments of \$5,378.08 to you as long as you and your beneficiary live. Your designated beneficiary, if living at e time of your death, will then receive monthly payments of \$2,689.04 as long as he/she lives. You are living at the time of your beneficiary's death, you will then receive monthly payments of \$5,576.61 as long as you live.

Section 415 of the Internal Revenue Code establishes a maximum limit on the amount of the benefit that can be paid from this plan. The benefit amount shown does not reflect the Section 415 limitation. The Section 415 limitation will be applied at the time retirement benefits are paid to you. Benefits that exceed the Section 415 limitation will not be paid from this plan.

<sup>\*</sup> This amount will be adjusted to reflect any cost of living increases the member had received prior to death.

The amounts above are based on the following information:

Your Date of Birth:	November 26, 1976	Credited Service Date:	February 12, 2001
Date of Termination:	February 28, 2021	Years of Credited Service:	20.0000
Average Monthly Earnings:	\$7,984.22		
Beneficiary Name:	Sophia Parzyck	Beneficiary Date of Birth:	January 15, 1973

After-Tax Contributions:	\$0.00		
Pre-Tax Contributions:	N/A		
Interest on Contributions:	N/A		
Accumulated Employee			
Contributions:	N/A		
Nontaxable Portion of			407
Monthly Benefit for Options		Number of Months Nontaxable	
1 or 2:		Portion Continues:	-
Nontaxable Portion of			
Monthly Benefit for Options	7	Number of Months Nontaxable	
3, 4, 5, 6, 7, 8, 9, 10 or 11:	_	Portion Continues:	-

The Survivor Annuity benefit amounts shown above are based on the beneficiary named above and are payable only to this beneficiary. Should you wish to change your beneficiary before your payments begin, new amounts will have to be calculated.

This calculation is subject to correction. If you are or become aware of errors in the data that was used, the calculations that were made, or the plan provisions that were applied, it is your responsibility to contact the plan administrator. The plan has the right to recover from you amounts that were paid to you in error.

BOARD OF TRUSTEES: By	Pal NA	DATE:_	4/16/2	.021_
I accept the terms above,	, including my choice of annuity form, and co	onfirm the in	nformation	
shown above to be correct.	A. 19/2/		1_	/
PARTICIPANT'S SIGNATURE:	They have	DATE:_	4/5/	21_
1 -	Calculation Date: March 31, 2	021		
State of Flore IPA				
State of FAM B	EACH			
The foregoing instrument was ackno	wledged before me by means of () physic	cal presence	e or () online	
notarization this day of	PRIL 2021 by STAN	1/94	PARZ	Yes
who is personally known to me or wi	ho has produced the following identification			_
Karafant Oc	(Notary Signature)	Seal:		
	Toyant Name of Notary)			
77	/		OTNRY PUBL	VATUI CEN A OTTIN

Commission # GG 200886 Expires June 4, 2022

## CITY OF DELRAY BEACH POLICE OFFICERS' RETIREMENT SYSTEM Notification of Benefits Payable as a Result of Participation in the Deferred Retirement Option Plan (DROP)

Participant	's Name: FRANK UMBRIAC
the beginni	You are eligible for a Normal Retirement Benefit from the Plan. Your benefit is payable at ng of each month commencing on January 1, 2021. DROP payments will end on the date you not later than December 1, 2025. The amount of your monthly benefit depends on the optional nuity which you choose. Please initial the one optional annuity form listed below that you elect
F5U1.	MODIFIED CASH REFUND ANNUITY: This option provides payments of \$5,664.87 to you as long as you live. If you should die before you have received an amount equal to your own contributions to the Plan, payments will continue to your beneficiary until your own accumulated contributions have been used up.
2.	TEN YEAR CERTAIN AND LIFE THEREAFTER ANNUITY: This option provides monthly payments of
3.	60% CONTINGENT ANNUITY: This option provides monthly payments of N/A to you as long as you live. After your death, monthly payments to your suriving spouse until death or remarriage will be N/A for the 12 months following your death and then N/A thereafter. If you should die before you have received an amount equal to your own contributions to the Plan, payments will continue to your beneficiary until your own accumulated contributions have been used up.
4.	100% JOINT AND SURVIVOR ANNUITY: This option provides monthly payments of  N/A to you as long as you live. Your designated beneficiary, if living at the time of your death, will then receive monthly payments of N/A * as long as he/she lives.
5.	75% JOINT AND SURVIVOR ANNUITY: This option provides monthly payments of \$4,545.49 to you as long as you live. Your designated beneficiary, if living at the time of your death, will then receive monthly payments of \$3,409.12 * as long as he/she lives.
6	66 2/3% JOINT AND SURVIVOR ANNUITY: This option provides monthly payments of \$4,647.46 to you as long as you live. Your designated beneficiary, if living at the time of your death, will then receive monthly payments of \$3,098.31 * as long as he/she lives.
7	50% JOINT AND SURVIVOR ANNUITY: This option provides monthly payments of \$4,866.12 to you as long as you live. Your designated beneficiary, if living at the time of your death, will then receive monthly payments of \$2,433.06 * as long as he/she lives.
8	. 100% JOINT AND SURVIVOR ANNUITY WITH POP-UP: This option provides monthly payments of  N/A  to you as long as you and your beneficiary live. Your designated beneficiary, if living at the time of your death, will then receive monthly payments of  N/A  * as long as he/she lives.  N/A  * as long as you live.
9	\$4,539.83 to you as long as you and your beneficiary live. Your designated beneficiary, if living at the time of your death, will then receive monthly payments of \$3,404.87 * as long as he/she lives. If you are living at the time of your beneficiary's death, you will then receive monthly payments of \$5,664.87 * as long as you live.
10	5. 66 2/3% JOINT AND SURVIVOR ANNUITY WITH POP-UP: This option provides monthly payments of \$4,641.79 to you as long as you and your beneficiary live. Your designated beneficiary, if living at the time of your death, will then receive monthly payments of \$3,094.53 * as long as he/she lives. If you are living at the time of your beneficiary's death, you will then receive monthly payments of \$5,664.87 * as long as you live.
1	1. 50% JOINT AND SURVIVOR ANNUITY WITH POP-UP: This option provides monthly payments of \$4,861.59 to you as long as you and your beneficiary live. Your designated beneficiary, if living at the time of your death, will then receive monthly payments of \$2,430.80 * as long as he/she lives. If you are living at the time of your beneficiary's death, you will then receive monthly payments of \$5,664.87 * as long as you live.
	nount will be adjusted to reflect any cost of living increases the member had received prior to death.
Section 4	15 of the Internal Revenue Code establishes a maximum limit on the amount of the benefit that can be paid

from this plan. The benefit amount shown does not reflect the Section 415 limitation. The Section 415 limitation will

Participant's Name:	FRANK UMBRIAC
. at merbanic a stanner	THE UTIL CHILDREN

The amounts above are based on the following information:

Your Date of Birth:	April 19, 1966	Credited Service Date:	December 18, 2000
Date of Termination:	December 31, 2020	Years of Credited Service:	20.0000
Average Monthly Earnings:	\$8,252.19		
Beneficiary Name:	Angelina Umbriac	Beneficiary Date of Birth:	November 11, 2000

After-Tax Contributions:	\$0.00	
Pre-Tax Contributions:	N/A	
Interest on Contributions:	N/A	
Accumulated Employee		
Contributions:	N/A	
Nontaxable Portion of		
Monthly Benefit for Options		Number of Months Nontaxable
1 or 2:		Portion Continues:
Nontaxable Portion of		
Monthly Benefit for Options		Number of Months Nontaxable
3, 4, 5, 6, 7, 8, 9, 10 or 11:		Portion Continues:

The Survivor Annuity benefit amounts shown above are based on the beneficiary named above and are payable only to this beneficiary. Should you wish to change your beneficiary before your payments begin, new amounts will have to be calculated.

This calculation is subject to correction. If you are or become aware of errors in the data that was used, the calculations that were made, or the plan provisions that were applied, it is your responsibility to contact the plan administrator. The plan has the right to recover from you amounts that were paid to you in error.

BOARD OF TRUSTEES: By	Talle	DATE:_	2/21/2
	e, including my choice of annuity form, and c	onfirm the in	nformation
shown above to be correct.	70110		2.15.21
PARTICIPANT'S SIGNATURE:	The	DATE:	2.12.01

	Calculation Date:	January 20, 2021	
State of			
County of			
The foregoing instrument was ac	knowledged before me by mean	ns of () physical presence or () on	line
notarization this day of _	, 20 by		· · · · · ·
who is personally known to me o	who has produced the followi	ng identification:	
	(Notary Signature)	Seal:	
	(Print Name of Notary)		

## Item 5 Reports

## Item 5.a. Caler, Donten, Levine, Cohen, Porter & Veil, P.A.

September 30, 2020 Audit Report



#### Communication with Those Charged with Governance

To the Board of Trustees Delray Beach Police Officers' Retirement System Delray Beach, Florida

We have audited the financial statements of the Delray Beach Police Officers' Retirement System (the "Plan") for the year ended September 30, 2020. Professional standards require that we provide you with information about our responsibilities under U.S. generally accepted auditing standards and *Government Auditing Standards*, as well as certain information related to the planned scope and timing of our audit. We have communicated such information to you in our engagement letter dated January 18, 2021. Professional standards also require that we communicate to you the following information related to our audit.

#### **Significant Audit Findings**

Qualitative Aspects of Accounting Practices

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by the Plan are described in Note 1 to the financial statements. No new accounting policies were adopted and the application of existing policies was not changed during the year ended September 30, 2020. We noted no transactions entered into by the Plan during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimates affecting the financial statements were:

- Management's estimate of the fair value of investments at September 30, 2020 and the related investment earnings based on reliance on outside experts. We evaluated the key factors and assumptions used to estimate the fair value of investments in determining that the amounts are reasonable in relation to the financial statements as a whole.
- Management's estimate of the Plan's net pension liability at September 30, 2020 based on reliance on outside experts. We evaluated the key factors and assumptions used to estimate the amount of the Plan's net pension liability. We read and compared these estimates to the actuarial reports by the Plan's actuary in determining that the amounts are reasonable in relation to the financial statements as whole.



The disclosures in the financial statements are neutral, consistent, and clear. Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. The most sensitive disclosures affecting the financial statements were:

- The disclosures related to investments in Note 3 to the financial statements.
- The disclosures related to the Plan's net pension liability in Note 4 to the financial statements.

Difficulties Encountered in Performing the Audit

We encountered no difficulties in performing and completing the audit.

#### Corrected and Uncorrected Misstatements

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are trivial, and communicate them to the appropriate level of management. Audit adjustments were made to receivables and fund equity. There were no unadjusted audit differences for the year ended September 30, 2020.

#### Disagreements with Management

For purposes of this letter, professional standards define a disagreement with management as a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

#### Management Representations

We requested certain representations from management that are included in the management representation letter dated April 26, 2021.

#### Management Consultations with other Independent Accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the Plan's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

#### Internal Control Related Matters

In planning and performing our audit, we considered the internal control over financial reporting (internal control) of the Plan as a basis for designing our auditing procedures for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the internal control of the Plan. Accordingly, we did not express an opinion on the effectiveness of the internal control of the Plan.

Our consideration of internal control over financial reporting was for the limited purpose described in the preceding paragraph and would not necessarily identify all deficiencies in internal control over financial



reporting that might be significant deficiencies or material weaknesses. We did not identify any deficiencies in internal control that we consider to be material weaknesses.

#### Compliance Related Matters

As part of obtaining reasonable assurance about whether the financial statements of the Plan are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we did not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

#### Other Audit Findings or Issues

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the Plan's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

#### Other Matters

#### Other Information in the Audited Financial Statements

We applied certain limited procedures to management's discussion and analysis and pension information, which are required supplementary information (RSI) that supplements the basic financial statements. Our procedures consisted of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We did not audit the RSI and do not express an opinion or provide any assurance on the RSI.

We were engaged to report on the Schedule of Investment and Administrative Expenses, which accompanies the financial statements but is not RSI. With respect to this supplementary information, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with U.S. generally accepted accounting principles, the method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves.

#### **Restriction on Use**

This information is intended solely for the information and use of the Plan's Board of Trustees, the City Commission, management and others within the City of Delray Beach, Florida, and is not intended to be, and should not be, used by anyone other than these specified parties.

West Palm Beach, Florida April 26, 2021



Audited Financial Statements and Supplementary Information

## Delray Beach Police Officers' Retirement System

A Pension Trust Fund of the City of Delray Beach, Florida

**September 30, 2020** 



#### DELRAY BEACH POLICE OFFICERS' RETIREMENT SYSTEM

### AUDITED FINANCIAL STATEMENTS AND SUPPLEMENTARY INFORMATION

#### **SEPTEMBER 30, 2020**

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#### Independent Auditor's Report

To the Board of Trustees Delray Beach Police Officers' Retirement System Delray Beach, Florida

#### **Report on the Financial Statements**

We have audited the accompanying financial statements of the Delray Beach Police Officers' Retirement System (the "Plan"), a pension trust fund of the City of Delray Beach, Florida, which comprise the statement of fiduciary net position as of September 30, 2020 and the related statement of changes in fiduciary net position for the year then ended, and the related notes to the financial statements, which collectively comprise the Plan's basic financial statements as listed in the table of contents.

#### Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

#### **Auditor's Responsibility**

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with U.S. generally accepted auditing standards and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.



#### **Opinion**

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Delray Beach Police Officers' Retirement System, a pension trust fund of the City of Delray Beach, Florida, as of September 30, 2020, and the change in fiduciary net position for the year then ended in accordance with U.S. generally accepted accounting principles.

#### **Other Matters**

#### Required Supplementary Information

U.S. generally accepted accounting principles require that the management's discussion and analysis on pages 3 to 7 and the pension information on pages 23 to 29 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with U.S. generally accepted auditing standards, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

#### Other Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the basic financial statements as a whole. The Schedule of Investment and Administrative Expenses is presented for purposes of additional analysis and is not a required part of the basic financial statements.

The Schedule of Investment and Administrative Expenses is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with U.S. generally accepted auditing standards. In our opinion, the Schedule of Investment and Administrative Expenses is fairly stated in all material respects in relation to the basic financial statements as a whole.

#### Other Reporting Required by Government Auditing Standards

In accordance with Government Auditing Standards, we have also issued our report dated April 26, 2021 on our consideration of the Plan's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Plan's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the Plan's internal control over financial reporting and compliance.

West Palm Beach, Florida April 26, 2021



#### Management's Discussion and Analysis

As management of the Delray Beach Police Officers' Retirement System (the "Plan"), we offer readers of the Plan's financial statements this narrative overview of the financial activities of the Plan for the year ended September 30, 2020. This narrative is intended to supplement the Plan's financial statements, and we encourage readers to consider the information presented here in conjunction with these statements, which begin on page 8.

#### **Overview of the Financial Statements**

The following discussion and analysis is intended to serve as an introduction to the Plan's financial statements. The financial statements include:

- Statement of Fiduciary Net Position
- Statement of Changes in Fiduciary Net Position
- Notes to the Financial Statements

This report also contains the following Required Supplementary Information to the financial statements:

- Schedule of Changes in the Net Pension Liability and Related Ratios
- Schedule of City Contributions
- Schedule of Investment Returns
- Notes to Required Supplementary Information

The financial statements contained in the report are described below:

- The Statement of Fiduciary Net Position is a point-in-time snapshot of account balances at fiscal year-end. It reports the assets available for future payments to retirees and any current liabilities that are owed as of the statement date. The resulting Net Position (Assets Liabilities = Net Position) represents the value of assets held in trust for pension benefits.
- The Statement of Changes in Fiduciary Net Position displays the effect of pension fund transactions that occurred during the fiscal year, where Additions Deductions = Net Increase (Decrease) in Net Position. This Net Increase (Decrease) in Net Position reflects the change in the net asset value of the Statement of Fiduciary Net Position from the prior year to the current year. Both statements are in compliance with Governmental Accounting Standards Board (GASB) Pronouncements.
- The Notes to the Financial Statements are an integral part of the financial statements and provide additional information that is essential to the comprehensive understanding of the data provided in the financial statements. These notes describe the accounting and administrative policies under which the Plan operates and provide additional levels of detail for select financial statement items (See Notes to Financial Statements on pages 10 to 22 of this report).

Because of the long-term nature of a defined benefit pension plan, financial statements alone cannot provide sufficient information to properly reflect the ongoing plan perspective. Therefore, in addition to the financial statements explained above, this financial report includes three additional *Required Supplementary Information* schedules with historical trend information.



- The Schedule of Changes in the Net Pension Liability and Related Ratios (pages 23 to 24) includes information about the sources of changes to the net pension liability and to the changes in Plan fiduciary net position. It also provides information regarding the fiduciary net position as a percentage of the total pension liability and the net pension liability as a percentage of covered payroll.
- The Schedule of City Contributions (page 25) presents information regarding the value of total annual contributions required to be paid by the City and the actual performance of the City in meeting this requirement.
- The Schedule of Investment Returns (page 26) provides information regarding the Plan rate of return.
- The Notes to Required Supplementary Information (pages 27 to 29) provide background information and explanatory detail to aid in understanding the required supplementary schedules.

#### **Financial Highlights**

For fiscal years ended September 30, 2016 and prior, police officers participated in the City of Delray Beach Police and Firefighters Retirement System (the "Legacy Plan") that provided pension benefits to both City police officers and firefighters. Effective October 1, 2016, the City Commission adopted City Ordinance No. 17-16, which provided for the establishment of separate retirement systems for the City's police officers and firefighters, a new board of trustees for each system, changes in the allocation and use of Chapter 175 and 185 premium tax revenues, and changes to the retirement benefits of firefighters and police officers. Ordinance No. 17-16 specified that the determination of the assets and liabilities of the Legacy Plan allocable to the Plan should be made by the Plan's actuary. The actuarial allocation was based on the census data, plan provisions, assumptions and methods used for the October 1, 2015 actuarial valuation of the Legacy Plan. The allocation method resulted in an allocation of 47.431% of the Legacy Plan assets to the new Delray Beach Police Officers' Retirement System. The financial position and operating results of the Plan as of and for the years ended September 30, 2020 and 2019 present only the stand-alone, segregated Plan, although an investment in a real estate fund held by the Legacy Plan and the related income are allocated to the Delray Beach Police Officers' Retirement System based on the actuarial percentage.

- The net position of the Plan restricted for pension benefits at the close of the fiscal years ended September 30, 2020 and 2019 was \$116,987,996 and \$106,861,770, respectively.
- Net position increased by \$10,126,226 or 9.5% during 2020, primarily due to the current year's contributions and investment income.
- For the year ended September 30, 2020 Plan net position was 66.5% of the total pension liability of \$175,952,523. The net pension liability was \$58,964,527 at September 30, 2020, which was 487.9% of covered payroll.
- Additions to fiduciary net position for the year ended September 30, 2020 were \$19,838,837 which includes City, Police Officer and State contributions totaling \$10,461,679 and net income from investment activities totaling \$9,377,158.
- Deductions from fiduciary net position decreased \$73,240 to \$9,712,611 in 2020. The decrease relates to lower DROP benefit payments made in 2020.



#### **Analysis of Financial Activities**

The Plan's funding objective is to meet long-term benefit obligations through investment income and contributions. Accordingly, the collection of employer, state and member contributions, and the income from investments provide the reserves needed to finance future retirement benefits.

Contributions from the City of Delray Beach are made at levels determined by the Plan's actuary. Because expected investment returns and expected payroll growth has remained stable compared to previous years, the City's contribution requirement has increased slightly. Net position restricted for pension benefits increased by \$10,126,226 in 2020.

#### Fiduciary Net Position Table 1

	2020	Increase 2020 - 2019	
Assets Current and other assets Investments	\$ 1,523,799 115,940,973	\$ 540,513 106,632,825	\$ 983,286 9,308,148
Total Assets	117,464,772	107,173,338	10,291,434
Liabilities	476,776	311,568	165,208
Fiduciary Net Position	<u>\$ 116,987,996</u>	<u>\$ 106,861,770</u>	\$ 10,126,226

As the years roll forward and total assets and liabilities grow, investment income will continue to play an important role in funding future retirement benefits. Therefore, investment return over the long term is critical to the funding status of the retirement Plan.

During 2020, the Plan's investment portfolio returned income of 8.34% as compared to 4.43% for the prior year. It is important to remember that a retirement Plan's funding is based on a long time horizon, where temporary ups and downs in the market are expected. The more critical factor is that the Plan be able to meet an expected annual earnings yield of 6.75% on investments (lowered from 7.0% in the prior year).

Based on the latest actuarial analysis for the year ended September 30, 2020, the Plan's total pension liability exceeds its Plan net position by \$59.0 million (an increase of \$1.2 million from 2019), producing a plan net position as a percent of total pension liability of 66.5% (an increase from 64.9% for 2019).

#### **Financial Analysis Summary**

As previously noted, net position viewed over time may serve as a useful indication of the Plan's financial position (see Table 1 above). At the close of fiscal year 2020, the assets of the Plan exceeded its current liabilities by \$116,987,996, shown as net position restricted for pension benefits. The net position is available to meet the Plan's ongoing obligation to Plan members and their beneficiaries.

#### **Fiduciary Net Position**

The Plan's fiduciary net position is established from employer, state and member contributions, and the accumulation of investment income, net of investment and administrative expenses and benefit payments.

#### **Additions to Fiduciary Net Position**

As noted above, fiduciary net position needed to finance retirement benefits are accumulated through collecting employer, state and member contributions and through investment earnings (net of investment expenses.) The additions totaled \$19,838,837 for the year ended September 30, 2020. This was \$5,754,268 more than the prior year, primarily due to increased investment returns.



						Increase
		2020		2019	20	020 - 2019
Contributions						
City	\$	8,396,789	\$	7,552,358	\$	844,431
Police officers		1,196,828		1,160,807		36,021
State of Florida		868,062		835,929		32,133
Total Contributions		10,461,679	_	9,549,094		912,585
Net Investment Earnings		9,377,158	_	4,535,475		4,841,683
T.4.1 A 1122	Φ	10.020.027	ф	14.004.560	d.	5 754 260
Total Additions	5	19,838,837	3	<u>14,084,569</u>	\$	5,754,268

#### **Deductions from Fiduciary Net Position**

The Plan was created to provide retirement, survivor and disability benefits to qualified members and their beneficiaries. The cost of such programs includes recurring benefit payments, refunds of contributions to employees who terminate employment, and the cost of administering the Plan.

#### Deductions from Fiduciary Net Position Table 3

	2020			2010	Increase (Decrease)		
		2020		2019	20	20 - 2019	
Benefit Payments							
Retirement and disability payments	\$	7,112,482	\$	6,494,802	\$	617,680	
DROP withdrawals		2,423,076		3,006,201		(583,125)	
Refunds of participant contributions	_	33,258	_	103,178		(69,920)	
Total Benefit Payments		9,568,816		9,604,181		(35,365)	
<b>Administrative Expenses</b>		143,795		181,670		(37,875)	
<b>Total Deductions</b>	\$	9,712,611	\$	9,785,851	\$	(73,240)	

Total deductions for the year ended September 30, 2020 totaled \$9,712,611 a decrease of .8% from 2019. The decrease was primarily due to decreased DROP payments in 2020. Deductions for the year ended September 30, 2019 totaled \$9,785,851.

The additions to plan net position of \$19,838,837 and deductions from Plan fiduciary net position of \$9,712,611 resulted in an overall increase of \$10,126,226 attributable to operations for the year ended September 30, 2020. The additions to plan net position of \$14,084,569 and deductions from Plan fiduciary net position of \$9,785,851 resulted in an overall increase of \$4,298,718 in net position restricted for pension benefits for the year ended September 30, 2019.

#### **Fiduciary Responsibilities**

The Board of Trustees is the fiduciary of the pension trust fund. Fiduciaries are charged with the responsibility of assuring that the assets of the Plan are used exclusively for the benefit of Plan members and their beneficiaries and defraying reasonable expenses of administering the Plan.



#### **Requests for Information**

This financial report is designed to provide the Board of Trustees, Plan members, taxpayers and investment managers with an overview of the Plan's finances and accountability for the money received. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to:

Pension Administrator
Delray Beach Police Officers' Retirement System
City of Delray Beach Finance - Pension Office
100 NW 1<sup>st</sup> Avenue
Delray Beach, FL 33444



#### DELRAY BEACH POLICE OFFICERS' RETIREMENT SYSTEM

#### STATEMENT OF FIDUCIARY NET POSITION

September 30, 2020

	Defined Benefit Pension Plan	Deferred Retirement Option (DROP) Pension Plan	Total Pension Trust Funds
ASSETS Cash	\$ 11,747	\$ -	\$ 11,747
Receivables:	11,, 1,	•	¥ 11,7.17
	42.006		42.006
Police officers' contributions	42,096	-	42,096
State of Florida contribution	868,062	-	868,062
Interest and dividends	98,805	-	98,805
Pending trades receivable	496,094	-	496,094
Miscellaneous	6,995	-	6,995
Total Receivables	1,512,052	-	1,512,052
Investments:			
Money market mutual funds	1,494,122	-	1,494,122
U.S. Government securities	1,973,841	-	1,973,841
U.S. Government Agency securities	5,998,300	-	5,998,300
Domestic corporate bonds	10,531,627	-	10,531,627
Global asset allocation investment fund	3,364,353	-	3,364,353
Global fixed income investment fund	2,492,882	-	2,492,882
Domestic equity securities	26,645,675	-	26,645,675
Domestic equity mutual funds	10,610,759	-	10,610,759
Domestic equity index funds	3,842,057	-	3,842,057
Pooled domestic equity index funds	8,974,369	-	8,974,369
International equity mutual funds	16,943,127	-	16,943,127
Foreign stocks	2,259,864	-	2,259,864
Timber investment funds	1,088,035	-	1,088,035
Real estate investment funds	7,760,749	-	7,760,749
Fixed income alternative investment fund	2,460,641	-	2,460,641
Participant directed pooled investment funds	-	9,500,572	9,500,572
Total Investments	106,440,401	9,500,572	115,940,973
Total Assets	107,964,200	9,500,572	117,464,772
LIABILITIES			
Accounts payable	83,042	-	83,042
Pending trades payable	393,734	-	393,734
Total Liabilities	476,776	-	476,776
NET POSITION			
Restricted for pension benefits	\$ 107,487,424	\$ 9,500,572	\$ 116,987,996



#### DELRAY BEACH POLICE OFFICERS' RETIREMENT SYSTEM

#### STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

Year Ended September 30, 2020

		Defined Benefit Pension Plan	R	Deferred Setirement Option (DROP) ension Plan		Total Pension Trust Funds
ADDITIONS						
Contributions:						
City of Delray Beach	\$	6,917,364	\$	1,479,425	\$	8,396,789
Police officers		1,196,828		_		1,196,828
State of Florida		868,062		-		868,062
Total Contributions		8,982,254		1,479,425		10,461,679
Investment earnings:						
Net appreciation in fair value of investments		6,287,172		478,414		6,765,586
Interest, dividends and investment fund income		2,938,685		173,218		3,111,903
Other investment income		811		20,977		21,788
		9,226,668		672,609		9,899,277
Less investment expenses		(519,088)		(3,031)		(522,119)
Net Investment Earnings		8,707,580		669,578		9,377,158
Total Additions		17,689,834		2,149,003		19,838,837
DEDUCTIONS						
Police officers benefits		7,112,482		_		7,112,482
Deferred retirement option (DROP) benefits		1,479,425		943,651		2,423,076
Refunds of participant contributions		33,258		-		33,258
Administrative expenses		143,795		_		143,795
Total Deductions	_	8,768,960		943,651		9,712,611
Increase in Plan Net Position		8,920,874		1,205,352		10,126,226
NET POSITION RESTRICTED FOR PENSION BENEFITS						
Beginning of year	_	98,566,550		8,295,220	_	106,861,770
End of year	\$ 1	107,487,424	\$	9,500,572	\$	116,987,996

September 30, 2020

#### 1. Summary of Significant Accounting Policies

Reporting Entity: The Delray Beach Police Officers' Retirement System (the "Plan") was established by the City of Delray Beach, Florida, to account for the financial activity of the defined benefit pension plan and deferred retirement option plan (DROP) that accumulate funds for the retirement pensions of City police officers. The Plan uses separate fiduciary funds to report resources that are held in trust for the members and beneficiaries of the defined benefit pension plan and DROP plan (a defined contribution plan). The Plan is reported as a fiduciary fund (pension trust) in the City's basic financial statements.

Measurement Focus and Basis of Accounting: The Plan's financial statements are prepared in accordance with U.S. generally accepted accounting principles (GAAP) as prescribed by the Governmental Accounting Standards Board (GASB). The financial statements are reported using the economic resources measurement focus and the accrual basis of accounting. Under this method, revenues are recorded when earned and expenses are recorded when the liabilities are incurred. Contributions from the Plan's members are recognized as revenue in the period in which the contributions are due. Contributions from the City, as calculated by the Plan's actuary, are recognized as revenue when due and when the City is legally required to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan.

<u>Cash</u>: Cash includes temporary cash balances held by the Plan's investment managers and are uninsured and uncollateralized.

<u>Investments</u>: The Plan's investment functions for the defined benefit plan are performed by independent investment managers under the direction of the Board of Trustees. The defined benefit plan investments are held in safekeeping by a custodian independent of the investment managers. The DROP investments are self-directed participant accounts investing in pooled investments in mutual funds available through an affiliate of ICMA. Investments are reported at fair value or net asset value, except for money market mutual funds that are reported at amortized cost, which approximates fair value. Securities traded on national or international exchanges are valued at the last reported sales price. Net asset values of the timber and real estate funds are determined by the fund managers using fair market values of the underlying investments of the fund. Net appreciation (depreciation) in fair value of investments includes the difference between cost and fair value of investments held as well as the net realized gains and losses for securities which are sold. Interest and dividend income are recognized on the accrual basis when earned. Purchases and sales of investments are recorded on a trade date basis.

<u>Net Position</u>: The net position of the Plan is restricted for pension benefits pursuant to legal restrictions of the enabling City ordinance that requires all Plan assets be utilized for pension benefits.

<u>Investment and Administrative Expenses</u>: Investment management fees are typically paid based on individually negotiated investment management agreements. The investment management fees are usually paid quarterly based on the investment portfolio's net asset value at the end of the quarter or may be performance related based on exceeding a market benchmark. Fees are paid from the appropriate investment manager's portfolio and are recognized as investment expenses in the Statement of Changes in Fiduciary Net Position over the time period to which the fees apply. Investment expenses also include custody fees paid to the Plan's investment custodian and performance monitoring fees paid to outside investment consultants engaged by the Plan.

September 30, 2020

#### 1. Summary of Significant Accounting Policies (Continued)

Administrative expenses include the various costs of administering the operations of the Plan, including fees for actuarial, audit, insurance and legal services, allocable costs for services provided by the City and office related expenses for supplies, postage and telephone.

<u>Risk Management</u>: The Plan is exposed to various risks of loss related to torts; theft of assets; fiduciary duty; and, errors and omissions. The Plan is also subject to risk of loss arising in the ordinary course of business, including, but not limited to, claims for damages for personal injuries and breach of contract. The Plan purchases commercial insurance for these risks. There were no significant reductions in insurance coverage from the prior year and no settlements in excess of coverage for the prior three years.

As a political subdivision of the State of Florida, the Plan has sovereign immunity under the Florida Constitution for tort actions. Therefore, in accordance with Chapter 768.28 Laws of Florida, the Plan is not liable to pay a claim or judgment, or any portions thereof, which when totaled with all other claims or judgments paid by the State or its agencies or subdivisions arising out of the same incident or occurrence, exceeds the aggregate sum of \$300,000. Chapter 768.28 also provides that judgments may be claimed or rendered in excess of these limits; however, these amounts must be reported to and approved by the Florida Legislature.

<u>New Accounting Pronouncements</u>: GASB Statement No. 84, *Fiduciary Activities*, establishes guidance regarding what constitutes fiduciary activities for accounting and financial reporting purposes, the recognition of liabilities to beneficiaries, and how fiduciary activities should be reported. GASB Statement No. 84 will be effective for the Plan's fiscal year ending September 30, 2021. The Plan has not determined the effect, if any, of the new GASB Statement on the Plan's financial statements.

<u>Use of Estimates</u>: Management uses estimates and assumptions in preparing financial statements in accordance with GAAP. Those estimates and assumptions affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities, and the reported amounts of revenues and expenses. Actual results could vary from the estimates that were used.

#### 2. Plan Description

The following brief description of the Plan is provided for general information purposes only. Members should refer to the enabling City ordinance for more complete information.

The Plan was originally established in 1974 by the City of Delray Beach as the City of Delray Beach Police and Firefighters Retirement System (the "Legacy Plan") to provide pension benefits to all full-time City police officers and firefighters. Effective October 1, 2016, the City Commission adopted City Ordinance No. 17-16, which provided for the establishment of separate retirement systems for the City's police officers and firefighters, a new board of trustees for each system, changes in the allocation and use of Chapter 175 and 185 premium tax revenues, and changes to the retirement benefits of police officers and firefighters. The changes in Ordinance No. 17-16 were ratified by the City's collective bargaining agreements with the Palm Beach County Police Benevolent Association



September 30, 2020

#### 2. Plan Description (Continued)

and the Professional Fire Fighters/Paramedics of Palm Beach County, Local 2928, IAFF. Unless otherwise noted, these financial statements present only the financial activity of the Delray Beach Police Officers' Retirement System established on October 1, 2016 pursuant to Ordinance No. 17-16.

<u>Plan Administration</u>: The Plan is governed by Florida Statutes Chapter 185, as modified by ordinances adopted by the City Commission of the City of Delray Beach. Additionally, the Fund is governed by Chapter 112, Part VII, of the Florida Statutes. All full time police officers of the City are required to participate in the Plan as a condition of employment. Civilian members of the City Police Department and the Police Chief, upon the Police Chief's written election not to participate, are excluded from the Plan.

The Plan is managed by a five member Board of Trustees consisting of the following members: two legal residents of the City who are appointed by the City Commission; two full-time City police officers elected by the active members of the Plan; and, a fifth member chosen by a majority of the other four members. Each trustee serves for a term of four years, except for the fifth member, who serves for a four year term. Each trustee may serve successive terms.

<u>Plan Membership</u>: The Plan membership as of October 1, 2019, the date of the most recent actuarial valuation, is summarized as follows:

Retirees and Beneficiaries		
Retirees and beneficiaries receiving	benefits	131
DROP retirees		15
Terminated employees entitled to be	enefits but not	
receiving them		7
	Total Retirees and Beneficiaries	153
<b>Active Members</b>		
Vested		66
Nonvested		83
	Total Active Members	149

<u>Pension Benefits</u>: The Plan provides retirement, death and disability benefits for police officers. Benefit provisions are established and may be amended by City Ordinance.

Eligibility for Normal Retirement - For police officers hired on or before July 7, 2015, eligibility for normal retirement is the earlier of age 55 and 10 years of service or 20 years of service regardless of age. For police officers hired after July 7, 2015, eligibility for normal retirement is the earlier of age 55 and 10 years of service or 25 years of service regardless of age.

Annual Retirement Benefit - The annual retirement benefit for police officers is based on the date of hire as follows:

A) Police officers hired on or before July 7, 2015, with 20 or more years of service at that date, receive 3.5% (if the enhanced multiplier is elected or 3.0% if it is not elected) times the police officer's average final compensation for all credited service.

September 30, 2020

#### 2. Plan Description (Continued)

- B) Police officers hired on or before July 7, 2015, and retiring with:
  - 1) less than 20 years of service receive 2.5% times the police officer's average final compensation times all years of credited service prior to July 7, 2015 <u>plus</u> 3.0% times the police officer's average final compensation times all years of credited service after July 7, 2015 (subject to a maximum annual benefit of \$108,000, but in no event less than 2.0% times average final compensation for each year of service).
  - 2) more than 20 years of service receive 3.5% (if the enhanced multiplier is elected or 3.0% if it is not elected) times the police officer's average final compensation for all credited service prior to July 7, 2015 <u>plus</u> 3.0% times the police officer's average final compensation times all credited service after July 7, 2015 (subject to a maximum annual benefit of 87.5% of average final compensation). Police Officers hired after April 9, 2013 may not elect the enhanced multiplier.
- C) Police officers hired after July 7, 2015 receive 2.75% times the police officer's average final compensation times all years of credited service (subject to a maximum annual benefit of \$108,000 and further subject to a maximum of 68.75% of their average final compensation, but in no event less than 2% times average final compensation for each year of service).

Early Retirement - A participant age 50 with 10 or more years of credited service is eligible for early retirement. Early retirement benefits are computed in the same manner as normal retirement, based upon the participant's final average salary and credited service at the date of termination, reduced by 3.0% for each year prior to the normal retirement date. Police officers hired after July 7, 2015 are not eligible for early retirement benefits.

Disability Benefits - Disability benefits for service related disabilities are based on a determination of total and permanent disability by the Board of Trustees. Ten years of service are required for non-service related disability benefits. The disability benefit is the participant's accrued pension benefit, but not less than 60% of the participant's average final compensation for service related disabilities. For non-service related disabilities, the benefit is 2.0% of average final compensation times the years of credited service with a minimum of 25% of the participant's average final compensation.

Death Benefits - For any police officer who dies in the line of duty, the surviving spouse shall receive until death or remarriage, 50% of the police officer's final average compensation. Each surviving child under age 18 shall receive 5% of the police officer's final average compensation until age 18 (or 22 if a full-time student). The maximum service-incurred survivor benefit is 60% of the police officer's final average compensation. For any police officer with more than five years of service whose death is not in the line of duty, the surviving spouse shall receive until death or remarriage, 65% of the police officer's accrued benefit at the time of death, subject to a minimum benefit of 20% of the police officer's final average earnings. Each surviving child under age 18 shall receive 5% of the police officer's final average earnings until age 18 (or 22 if a full-time student) with the total death benefit limited to 50% of the police officer's final average compensation.

September 30, 2020

#### 2. Plan Description (Continued)

Cost of Living Adjustments - Post retirement cost of living adjustments are provided for pension recipients. An annual increase equal to a 1% base benefit plus what can be funded from State revenues applies for those who retired after October 1, 1993, commencing on the1st anniversary of the retiree's first benefit payment following their 25<sup>th</sup> hire date anniversary.

Deferred Retirement Option Plan (DROP) - Police officers are eligible to enter the Deferred Retirement Option Plan (DROP) at the normal retirement date, while continuing active employment as a police officer. Upon entering into the DROP, the participant becomes a retiree for all Plan purposes and the accrued benefit is frozen. The maximum duration of DROP participation is 5 years. Normal retirement payments that would have been payable to the participant as a result of retirement are paid to and invested in the DROP to be distributed to the participant upon his or her request or as required by law.

The Board of Trustees contracts with the International City Management Association Retirement Corporation (ICMA-RC) to administer the DROP through a separate 401(a) plan. Police officers who elect to participate in DROP are required to use a self-directed investment program through the ICMA 401(a) plan. The DROP participants self-direct their account in investment options offered by ICMA and approved by the Plan's Board of Trustees. The assets of the DROP cannot be legally accessed by the Plan to pay retirement benefits to other Plan participants because the DROP assets are held in the participants' name in a separate trust under the 401(a) plan. Accordingly, the DROP plan has been reported as a separate defined contribution plan in the accompanying financial statements.

Contributions: Contribution requirements are established and may be amended by City Ordinance. Contribution requirements are based on the benefit structure established by the City. Members are required to contribute 9.0% of salary. Pursuant to Chapter 185, Florida Statutes, a premium tax on certain casualty insurance contracts written on properties within the corporate boundaries of the City is collected by the State and remitted to the Plan for the State's annual contribution amount. The City is required to contribute the remaining amounts necessary to finance the Plan's benefits through periodic contributions at actuarially determined rates sufficient to pay the normal cost plus an amount sufficient to amortize the unfunded accrued past service liability over a period not greater than 30 years. By mutual agreement of the City and the police officers' union, all annual premium tax moneys received pursuant to Chapter 185, up to \$606,595, the amount received during the 2013 calendar year, shall be used to offset the cost of current benefits by reducing the City's annual required contribution to the Plan.

A rehired member may buy back one or more years of continuous past service by paying into the Plan the amount of contributions the employee would otherwise have paid for such service, plus the investment earnings that would have been earned had such funds been invested by the Plan during that time. The buy back of past service must be paid to the Plan within 90 days of being rehired by the City.

<u>Vesting and Refunds of Member Contributions</u>: Police officers who terminate employment with less than 10 years of continuous service, upon the election to receive a refund of member contributions, receive a noncompounded, simple interest rate of three percent per year applied to the principal balance of the participant's contributions as accrued on December 31<sup>st</sup> of each year. Employees who terminate employment with 10 years or more of continuous service, upon the election to receive a refund of

September 30, 2020

#### 2. Plan Description (Continued)

member contributions, receive a noncompounded, simple interest rate of five percent per year applied to the principal balance of the participant's contribution as accrued on December 31<sup>st</sup> of each year. Each member is guaranteed the payment of benefits at least equal in total to his accumulated contributions plus interest as provided herein. Any forfeitures that may arise upon the termination of a member's employment are used to offset the City's contribution.

#### 3. Investments

Authorized Investments - Florida Statutes and the Plan's investment policy authorize the Plan to invest in Florida Prime (a State administered investment pool); negotiable direct obligations of or obligations unconditionally guaranteed by the U.S. Government; interest-bearing time deposits or savings accounts in financial institutions located in Florida and organized under Federal or Florida laws; money market mutual funds limited to U.S. Government securities; obligations of the Federal Farm Credit Banks, Fannie Mae, Freddie Mac, the Federal Home Loan Bank or its district banks; obligations guaranteed by the Government National Mortgage Association; and any additional investments authorized by the Plan's investment policy.

The Plan's investment policy further authorizes the Plan to invest, with certain limitations, in tax sale certificates of the State of Florida or any of its political subdivisions, preferred and common stocks of certain domestic and international corporations, debt securities of certain domestic and international corporations, mutual funds (including exchange traded funds), and alternative investments, including private investment funds consisting of equity and fixed income investments, timber, real estate, and similar investments that are not publicly traded.

Investment Allocation - The policy in regard to the allocation of invested assets is established and may be amended by a majority vote of the Board of Trustees. It is the Board of Trustees' policy to pursue an investment strategy that reduces risk through the prudent diversification of the investment portfolio across a broad selection of distinct asset classes. The investment policy of the Plan discourages the use of cash equivalents, except for liquidity purposes, and aims to refrain from dramatically shifting asset class allocations over short time spans. The investment strategy and allocations are reviewed quarterly with the assistance of the Plan's investment consultant and are rebalanced to the target asset allocations based on market conditions.

The long-term expected net rate of return on investments was determined using a building-block method. Best-estimate ranges of expected future rates of return (expected returns net of investment expense and inflation) are developed for each major asset class. The long-term expected net rate of return on investments is the best-estimate ranges weighted by asset allocation plus expected inflation. Best estimates of arithmetic real rates of return for each major asset class as provided by the investment managers, together with the Board of Trustees' adopted asset allocation policy as of September 30, 2020, are as follows:

September 30, 2020

#### 3. Investments (Continued)

		Long-Term Expected
	Target Allocation	Real Rate Of Return
Asset Class		
Domestic equity	42.5%	7.5%
International equity	15.0	8.5
Fixed income	27.5	2.5
Real estate	10.0	4.5
Alternatives	5.0	6.2
Total	100.0%	_

Rate of Return: The annual money-weighted rate of return on Plan investments, net of pension investment expense, was 8.34% for the year ended September 30, 2020. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts invested.

<u>Fair Value of Investments</u>: The Plan follows the provisions of GASB Statement No. 72, *Fair Value Measurement and Application*, which establishes a framework for measuring the fair value of investments in a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives highest priority to unadjusted quoted prices in active markets for identical assets (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy under GASB Statement No. 72 are described below:

<u>Level 1</u>: Inputs to the valuation methodology are unadjusted quoted prices for identical assets in active markets that the Plan has the ability to access at the measurement date.

Level 2: Inputs to the valuation methodology include the following:

- Quoted prices for similar assets in active markets.
- Quoted prices for identical or similar assets in inactive markets.
- Inputs other than quoted prices that are observable for the assets.
- Inputs that are derived principally from or corroborated by observable market data by correlation or other means.

<u>Level 3</u>: Inputs to the valuation methodology are unobservable and significant to the fair value measurement. These unobservable inputs reflect the entity's own estimates for assumptions that market participants would use in pricing the asset or liability. Valuation techniques would typically include discounted cash flow models and similar techniques, but may also include the use of market prices of assets that are not directly comparable to the subject asset.

The fair value measurement of an asset within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs. The categorization of an investment within the fair value hierarchy is based upon the pricing transparency of the investment and does not necessarily correspond to the Plan's perceived risk of that investment.

September 30, 2020

#### 3. Investments (Continued)

Valuation Methodologies: The following valuation methods and assumptions were used by the Plan to estimate the fair value of financial instruments measured at fair value on a recurring basis under GASB Statement No. 72:

U.S. Government and Agency securities, domestic corporate bonds, global asset allocation investment fund and global fixed income investment fund: Valued at the closing price reported on the active exchange on which the individual securities are actively traded. Securities that are not actively traded are valued using a matrix pricing technique based on the securities' relationship to quoted benchmark prices.

Domestic equity securities and foreign stocks: Valued at the closing price reported on the active exchange on which the individual securities are actively traded.

Domestic and international equity mutual funds and domestic equity index funds: Valued at the closing net asset value reported on the active exchange on which the individual investment funds are actively traded.

Investments measured at net asset value (NAV): Pooled domestic equity index funds, timber and real estate investment funds and the fixed income alternative investment fund, are valued at the unadjusted NAV per share at September 30, 2020, calculated in a manner consistent with the Financial Accounting Standards Board's measurement principles for investment companies based on the fair value of the underlying fund investments, as determined by the fund manager or by valuations of a fund's underlying assets as provided by the general partner or investment manager, since the assets are not publicly traded. Timber and real estate values are based upon periodic independent appraisals performed for assets held by the funds. The fair value of timber and real estate is the price that would be received if the asset was sold to a market participant assuming the highest and best use of each asset at the measurement date. The pooled domestic equity index fund and fixed income alternative investment fund are not publicly traded and invest in various types of equity and fixed income securities.

DROP participant pooled investment funds: Price/unit values for DROP investment options are calculated daily by the DROP provider based on the quoted price on a national exchange for the underlying mutual funds held in comingled pooled investment accounts through a group trust, adjusted for certain expense factors disclosed in the DROP provider contract.

The methods and assumptions described above may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. While the Plan believes its valuation methodologies are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date. There were no changes in the methods and assumptions used for the year ended September 30, 2020.

Fair Value of Investments: The financial assets measured at fair value on a recurring basis include the Plan's investments. There were no liabilities measured at fair value on a recurring basis at September 30, 2020.



September 30, 2020

#### 3. Investments (Continued)

The fair value of the Plan's investments at September 30, 2020 is summarized as follows:

		Fai	ir Values at Se	pteml	ber 30, 2020	
	Level 1		Level 2		Level 3	Total
Fixed income investments	 				_	 
U.S. Government	\$ -	\$	1,973,841	\$	-	\$ 1,973,841
U.S. Government Agency	-		5,998,300		-	5,998,300
Domestic corporate bonds	-		10,531,627		_	10,531,627
Global asset allocation						
investment fund	3,364,353		-		-	3,364,353
Global fixed income						
investment fund	2,492,882		-		-	2,492,882
Total fixed income investments	 5,857,235		18,503,768		_	24,361,003
<b>Equity investments</b>	- , ,		-, ,			, ,
Domestic equity securities	26,645,675		-		_	26,645,675
Domestic equity mutual funds	10,610,759		-		_	10,610,759
Domestic equity index funds	3,842,057		_		_	3,842,057
International equity mutual funds	16,943,127		-		_	16,943,127
Foreign stocks	2,259,864		_		_	2,259,864
Total equity investments	 60,301,482		_			 60,301,482
1 7	 					
Total investments at fair value	\$ 66,158,717	\$	18,503,768	\$		84,662,485
Investments measured at NAV						
Alternative investment funds						
Pooled domestic equity						
index funds						8,974,369
Timber investment fund						1,088,035
Real estate investment funds						7,760,749
Fixed income alternative						
investment fund						 2,460,641
Total investments at NAV						 20,283,794
Investments at amortized cost						
Money market mutual funds						 1,494,122
Total Investments						\$ 106,440,401

The ICMA 401(a) DROP plan investments consist of participant directed investments in comingled pooled investment accounts that invest in various mutual fund products through a group trust sponsored by Vantage Trust Company, an affiliate of ICMA.

September 30, 2020

#### 3. Investments (Continued)

The fair value of the DROP investments at September 30, 2020 is summarized as follows:

#### **DROP** investments

Domestic fixed income funds	\$ 588,803
Asset allocation funds	2,648,350
Domestic equity funds	1,782,179
International equity funds	612,007
Specialty sector funds	230,517
Stable value fund	 3,638,716

Total DROP Investments \$ 9,500,572

All DROP investments are considered to be Level 2 fair value investments.

Alternative Investment Funds: The alternative investment funds may hold certain investments which may be valued by a single market maker. While the fund managers use their best judgment in estimating the fair values of underlying funds, there are inherent limitations in any estimation technique. Accordingly, the fair values of alternative investment funds have been estimated by the management of the pension funds and their investment advisors in the absence of readily ascertainable market values.

The reported fair values for the alternative investment funds may differ significantly from the values that would have been used had a ready market for the underlying funds existed and the differences could be material. Future confirming events will affect the estimates of fair value, and the effect of such events on the estimates of fair value could be material. The alternative investment funds also expose the Plan to additional investment risks, including liquidity risks; counterparty and custody risks; foreign political, economic and governmental risks; and, market risk. At September 30, 2020, the Plan's alternative investments had future funding commitments of approximately \$470,000, no lock-up periods and were generally redeemable monthly, quarterly or annually with 5 to 90 days' notice, subject to the approval of the investment manager.

<u>Custodial Credit Risk</u>: Custodial credit risk is defined as the risk that the Plan may not recover cash and investments held by another party in the event of financial failure. The Plan's investment policy requires investments to be fully insured or collateralized, or held in independent custodial safekeeping accounts in the name of the Plan. At September 30, 2020 all direct investments in securities were held in an independent custodial safekeeping account. Money market mutual funds, mutual funds, index funds and alternative investments, were considered *unclassified* investments pursuant to GASB Standards.

Concentration of Credit Risk: Concentration of credit risk is defined as the risk of loss attributed to the magnitude of an investment in a single issuer. The Plan's investment policy requires diversification of investments to minimize potential losses on individual securities. Securities of a single issuer are limited to no more than 5% of the Plan's net position invested in common stocks and debt securities. Investments in mutual funds, index funds and alternative investments are excluded from the concentration of credit risk disclosure requirement.

#### Notes to Financial Statements

September 30, 2020

#### 3. Investments (Continued)

<u>Credit Risk</u>: Credit risk is the risk that a debt issuer will not fulfill its obligations. The Plan's investment policy addresses credit risk by limiting investments to the safest types of securities, which are generally those with investment grade credit ratings (BBB or better) from a Nationally Recognized Statistical Rating Organization (NRSRO) at the date of purchase. The Plan utilizes ratings from Standard & Poor's and Moody's Investor Services for its investments.

<u>Interest Rate Risk</u>: Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment in debt securities. Generally, the longer the time to maturity, the greater the exposure to interest rate risk. The Plan's investment policy has no specific limits on investment maturities.

The table below summarizes the NRSRO ratings and the average effective duration in years for the fixed income investments of the Plan at September 30, 2020.

		Average	
	NRSRO	Effective	
	Rating	Duration	Fair Value
Money market mutual funds	AAAm	Under 90 days	\$ 1,494,122
U.S. Government securities	AAA	8.3 years	1,973,841
U.S. Government Agency securities	Unrated	.2 years	5,998,300
Domestic corporate bonds	A	6.3 years	10,531,627
Global asset allocation investment fund	Unrated	2.5 years	3,364,353
Global fixed income investment fund	Unrated	2.1 years	2,492,882
Fixed income alternative investment fund	Unrated	Not available	2,460,641
Participant directed pooled investment funds (DROP)			
Domestic fixed income and stable value funds	Unrated	Not available	4,227,519

<u>Foreign Currency Risk</u>: Foreign currency risk includes the risk of revaluation of currencies, high rates of inflation, repatriation restrictions on income and capital, and future adverse political, social, and economic developments. Moreover, securities of foreign governments may be less liquid, subject to delayed settlements and taxation on realized and unrealized gains, and their price may be more volatile than those of comparable securities in U.S. companies.

Risks and Uncertainties: Due to the various risks associated with certain investments, it is at least reasonably possible that changes in the values of investments will occur in the near term and that such changes could materially affect the amounts reported in the accompanying financial statements. The value, liquidity, and related income of certain securities with contractual cash flows, such as asset backed securities, collateralized mortgage obligations, commercial mortgage backed securities and real estate funds or pooled funds investing in these securities or entities, are particularly sensitive to changes in economic conditions, including real estate value, delinquencies or defaults, or both, and may be adversely affected by shifts in the market's perception of the issuers and changes in interest rates.



#### Notes to Financial Statements

September 30, 2020

#### 4. Net Pension Liability

Investment rate of return

The components of the net pension liability of the Plan at September 30, 2020, the measurement date for the Plan, were as follows:

Total pension liability Plan fiduciary net position	\$ 175,952,523 116,987,996
Net pension liability	\$ 58,964,527
Plan fiduciary net position as a percentage of the total pension liability	66.5%

<u>Actuarial Assumptions</u>: The total pension liability was determined by an actuarial valuation as of October 1, 2019, based on the following actuarial assumptions:

Actuarial cost method	Entry Age Normal
Amortization method	Level Dollar, Closed
Remaining amortization period	20 years
Asset valuation method	4 year smoothed
Cost of living adjustments	1.0% per year
Inflation	2.5%
Salary increases	5.25% - 6.75% including inflation

including inflation

Mortality PUB-2010 Headcount Weighted Safety Below Median Male

Table and PUB-2010 Headcount Weighted Safety Employee Female Table. The tables use ages set forward one year and mortality improvements to all future years after 2010 using scale MP-2018. These are the same mortality rates used for Special Risk Class members in the July 1, 2019 actuarial

6.75% net of investment expense,

valuation of the Florida Retirement System.

The actuarial assumptions used in the October 1, 2019 valuation were based on an experience study for the seven years ended September 30, 2019.

The following actuarial assumptions were updated effective October 1, 2019:

- The discount rate was lowered from 7.0% to 6.75%.
- The rate of salary increase was increased from 5.0% 6.25% to 5.25% 6.75%.
- The mortality assumption for active members prior to retirement was revised in accordance with a revision to the active member pre-retirement mortality assumption used by the Florida Retirement System in their July 1, 2019 actuarial valuation.

#### Notes to Financial Statements

September 30, 2020

#### 4. Net Pension Liability (Continued)

- Rates of retirement for employees hired after July 7, 2015 were added.
- Rates of termination were updated to be based on years of service.

<u>Discount Rate</u>: The discount rate used to measure the total pension liability was 6.75%. This is the single rate that reflects the long-term expected rate of return on pension plan investments expected to be used to finance the payment of benefits. The projection of cash flows used to determine the discount rate assumed that plan member contributions are made at the current contribution rate and that City contributions will be made for the actuarially determined contribution. Based on those assumptions, the pension plan's fiduciary net position is projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments is applied to all periods of projected benefit payments to determine the total pension liability. For purposes of this determination it is understood that pension plan assets are expected to be invested using a strategy to achieve the net discount rate.

Sensitivity of the Net Pension Liability to Changes in the Discount Rate: The following table presents the net pension liability calculated using the current discount rate of 6.75%, as well as what the net pension liability would be if it were calculated using a discount rate that is one percentage point lower (5.75%) or one percentage point higher (7.75%) than the current rate:

	De	1% crease .75%)	Current Discount Rate (6.75%)	1% Increase (7.75%)	
Net pension liability	\$ 80	,609,058	\$ 58,964,527	\$ 41,221,081	



REQUIRED SUPPLEMENTARY INFORMATION



#### DELRAY BEACH POLICE OFFICERS' RETIREMENT SYSTEM

Required Supplementary Information - Schedule of Changes in the Net Pension Liability and Related Ratios

Last Seven Fiscal Years

	Fiscal Year	
	2020	2019
<b>Total Pension Liability</b>		
Service cost	\$ 3,026,742	\$ 2,660,367
Interest	11,453,773	10,940,196
Changes in excess State contributions	-	-
Changes of benefit terms	-	-
Differences between expected and actual experience	4,122,894	2,398,201
Contributions - buyback	-	-
Changes of assumptions	795,219	4,555,304
Benefit payments, including refunds	(8,089,391)	(8,299,339)
Net change in total pension liability	11,309,237	12,254,729
Total pension liability, beginning of fiscal year	164,643,286	152,388,557
Total pension liability, end of fiscal year (a)	\$ 175,952,523	\$ 164,643,286
Plan Fiduciary Net Position		
Contributions	A 6017.061	
Employer	\$ 6,917,364	\$ 6,247,516
Plan members	1,196,828	1,160,807
State	868,062	835,929
Net investment income (loss)	9,377,158	4,535,475
Other income	-	-
Equity allocation from Legacy Pension Fund	-	-
Benefit payments, including refunds	(8,089,391)	(8,299,339)
Administrative expense	(143,795)	(181,670)
Net change in plan fiduciary net position	10,126,226	4,298,718
Plan fiduciary net position, beginning of fiscal year	106,861,770	102,563,052
Plan fiduciary net position, end of fiscal year (b)	\$ 116,987,996	\$ 106,861,770
Net Pension Liability, end of fiscal year [(a)-(b)]	\$ 58,964,527	\$ 57,781,516
Plan Fiduciary Net Position as a Percentage	66.501	64.007
of Total Pension Liability	66.5%	64.9%
Covered Payroll	\$ 12,084,406	\$ 12,078,834
Net Pension Liability as a Percentage		
of Covered Payroll	487.9%	478.4%
or constant after	107.770	170.470

#### **Notes to Schedule:**

Information prior to fiscal year 2014 is not available.

Prior to 2017 the Police Officers' and Firefighters' Retirement Systems were operated as a single plan covering both employee groups. The City adopted Ordinance No. 17-16 effective October 1, 2016, that established a separate pension plan for police officers and a separate pension plan for firefighters. Information for 2016 and prior years is for the combined pension plan.

# Draft

		Fiscal Year		
2018	2017	2016	2015	2014
\$ 2,250,201	\$ 2,257,858	\$ 4,161,533	\$ 4,116,670	\$ 4,215,639
10,828,233	10,166,078	16,394,667	19,332,804	16,854,289
-	-	(1,741,230)	659,168	1,406,983
-	_	(1,121,765)	(347,798)	
(1,601,389)	3,864,146	1,568,118	(2,020,566)	
-	· -	32,218	34,696	128,140
12,048,119	-	7,407,717	· -	
(8,478,635)	(7,528,330)	(13,532,591)	(13,282,705)	(12,180,870
15,046,529	8,759,752	13,168,667	8,492,269	10,424,181
137,342,028	128,582,276	238,707,736	230,215,467	219,791,286
\$ 152,388,557	\$ 137,342,028	\$ 251,876,403	\$ 238,707,736	\$ 230,215,467
5,113,912	\$ 5,162,290	\$ 10,789,457	\$ 10,837,369	\$ 9,057,07
1,126,780	1,058,195	1,806,021	1,634,828	1,594,71
786,320	742,419	1,909,358	1,896,237	1,951,08
7,424,945	9,498,373	13,455,717	(1,922,565)	14,082,41
-	-	150,647	22,903	- 1,00=,1-
_	79,052,787	<del>-</del>	-	
(8,478,635)	(7,528,330)	(13,532,591)	(13,282,705)	(12,180,87
(108,929)	(156,400)	(245,221)	(231,434)	(232,36
5,864,393	87,829,334	14,333,388	(1,045,367)	14,272,05
96,698,659	8,869,325	153,260,618	154,305,985	140,033,93
3 102,563,052	\$ 96,698,659	\$ 167,594,006	\$ 153,260,618	\$ 154,305,98
49,825,505	\$ 40,643,369	\$ 84,282,397	\$ 85,447,118	\$ 75,909,48
67.3%	70.4%	66.5%	64.2%	67.0
37.270	, 5.170	55.576	3276	07.0
11,125,424	\$ 10,738,126	\$ 19,643,308	\$ 18,107,436	\$ 16,474,65



# Required Supplementary Information - Schedule of City Contributions Last Seven Fiscal Years

Fiscal Year Ended September 30,	Ι	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contribution as a Percentage of Covered Payroll
2020	\$	7,523,959	\$ 7,523,959	\$ _	\$ 12,084,406	62.3%
2019		6,854,111	6,854,111	-	12,078,834	56.7%
2018		5,985,879	5,720,507	265,372	11,125,424	51.4%
2017		5,503,513	5,904,709	(401,196)	10,738,126	55.0%
2016		11,294,379	11,294,379	-	19,643,308	57.5%
2015		11,293,235	11,342,291	(49,056)	18,107,436	62.6%
2014		9,209,334	9,561,997	(352,663)	16,474,658	58.0%

#### **Notes to Schedule:**

Information prior to fiscal year 2014 is not available.

Prior to 2017 the Police Officers' and Firefighters' Retirement Systems were operated as a single plan covering both employee groups. The City adopted Ordinance No. 17-16 effective October 1, 2016, that established a separate pension plan for police officers and a separate pension plan for firefighters. Information for 2016 and prior years is for the combined pension plan.

Actual contribution for 2017 and later years is based on the City contribution plus \$606,595 of the State contribution per the City's pension ordinance.

Required Supplementary Information - Schedule of Investment Returns

Last Seven Fiscal Years

Fiscal Year Ended September 30,	Annual money- weighted rate of return, net of investment expenses
2020	8.34 %
2019	4.43 %
2018	7.81 %
2017	10.74 %
2016	8.86 %
2015	(1.23)%
2014	9.32 %

#### **Notes to Schedule:**

Information prior to fiscal year 2014 is not available.

Prior to 2017 the Police Officers' and Firefighters' Retirement Systems were operated as a single plan covering both employee groups. The City adopted Ordinance No. 17-16 effective October 1, 2016, that established a separate pension plan for police officers and a separate pension plan for firefighters. Information for 2016 and prior years is for the combined pension plan.



#### DELRAY BEACH POLICE OFFICERS' RETIREMENT SYSTEM

#### Notes to Required Supplementary Information

September 30, 2020

Actuarial valuation date October 1, 2019

Measurement date September 30, 2020

Note: Actuarially determined contribution rates are calculated at October 1, one year prior to the end of

the fiscal year in which the contributions are reported.

#### Actuarial methods and assumptions used to determine contribution rates:

Actuarial cost method Entry Age Normal
Amortization method Level Dollar, Closed

Remaining amortization period 20 years

Asset valuation method 4 year smoothed Inflation 2.5% per year

Salary increases (with inflation) 5.25% to 6.75% depending on service

Investment rate of return 6.75% per year compounded annually, net of expenses, with inflation

Cost of living adjustments 1.0% per year for those that retire after 10/1/1993

Retirement age For members hired before July 7, 2015:

35% retire on normal retirement date; 10% retire each of the next two years; 25% retire in the third year; 25% retire in the fourth year; and 100% retire in the fifth year following normal retirement date. This assumption is based on the results of an experience study for the seven years ended September 30, 2019. No early retirement is assumed.

For members hired after July 7, 2015:

25% of those members age 55+ with 10-24 years of service and 100% of members with

25+ years of service.

Mortality *Healthy Lives:* 

PUB-2010 Headcount Weighted Safety Below Median Male Table and PUB-2010 Headcount Weighted Safety Employee Female Table. The tables use ages set forward one year and mortality improvements to all future years after 2010 using scale MP-2018.

Disabled Lives:

80% of the PUB-2010 Headcount Weighted General Disabled Retiree Male Table and Female Table and 20% of the PUB-2010 Headcount Weighted Safety Disabled Retiree Male Table and Female Table, both with no provision being made for future mortality

improvements.

The assumed rates of mortality were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumption used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those used for Special Risk Class members in the July 1, 2019 FRS actuarial valuation report. 85% of active deaths are assumed to happen in the

line of duty.

85% are assumed married with the husband 3 years older than the wife, for purposes of death-in-

service benefits.

Rates of Separation from Active Membership

Married

		Percentage of Active Members
Years of Service	Sample Ages	Separating Within Next Year
0 - 1	All Ages	9.0%
2 - 3	All Ages	8.5%
4 - 5	All Ages	8.0%
6 - 7	All Ages	6.0%
8 - 9	All Ages	3.0%
10+	0 - 34	3.0%
10+	35 - 39	2.5%
10+	40 - 44	2.0%
10+	45+	1.0%



Notes to Required Supplementary Information (Continued)

September 30, 2020

#### Actuarial methods and assumptions used to determine contribution rates (Continued):

Disability Rate	Percentage Disabled			
	Age	During the Year		
	20	0.07%		
	30	0.09%		
	40	0.15%		
	50	0.50%		

Payroll Growth

1.17% (limited in compliance with Part VII of Chapter 112, Florida Statutes, to the actual ten-year payroll growth average as determined in 2014 and maintained for future valuations).

#### Changes of benefit terms:

- 1. For the 2015 fiscal year, amounts reported as changes of benefit terms resulted from adoption of Ordinance 10-15 with an effective date of July 7, 2015, which provided that:
  - A. Member contributions will be 9.0% of earnings until the member has earned the maximum normal retirement benefit payable under the system.
  - B. For police officers who are employed on the effective date and have less than 20 years of continuous service as of that date, the following shall apply:
    - 1. For service earned on and after the effective date, the benefit multiplier shall be 3.0% per year of continuous service.
    - 2. The benefit accrued prior to the effective date shall be based on whether or not the member elected the enhanced multiplier and the number of years of continuous service at retirement.
      - a. For those electing the enhanced multiplier and retiring with 20 or more years of continuous service, the benefit multiplier for service accrued prior to the effective date will be 3.5%.
      - b. For those electing the enhanced multiplier and retiring with less than 20 years of continuous service, the benefit multiplier for service accrued prior to the effective date will be 2.5%.
      - c. For those not electing the enhanced multiplier (or hired on or after April 9, 2013) and retiring with 20 years or more of continuous service, the benefit multiplier shall be 3.0% for service prior to the effective date.
      - d. For those not electing the enhanced multiplier (or hired on or after April 9, 2013) and retiring with less than 20 years of continuous service, the benefit multiplier shall be 2.5% for service prior to the effective date.
    - 3. The maximum annual starting benefit shall be \$108,000.
  - C. For police officers who are employed on the effective date and have less than 10 years of service as of the effective date, earnings shall mean base wages paid to the member including state education compensation, police basic education, police career education compensation and up to 25 hours of overtime per fiscal year earned through the effective date, but excluding overtime earned after the effective date, bonuses and other payments.
  - D. For police officers hired on and after the effective date:
    - 1. Average monthly earnings shall mean one sixtieth of the arithmetical average for the highest 5 years of the last 10 years preceding the actual retirement or termination date.
    - 2. Earnings shall mean basic wages paid to the member including state education compensation, police basic education, police career education compensation, but excluding overtime compensation, bonuses and other payments.
    - 3. The normal retirement date shall be the earlier of:
      - a. 25 years of continuous service regardless of age.
      - b. Age 55 and the completion of 10 years of continuous service.
    - 4. The normal retirement benefit shall be 2.75% of average monthly earnings for each year of continuous service, subject to a maximum annual starting benefit of \$108,000 and further subject to a maximum benefit of 68.75% of average earnings.
    - 5. No early retirement eligibility.
  - E. As of the effective date, no further benefit enhancement or benefit adjustment shall be paid to police officers, other than the 2.0% per year benefit increase.
- 2. Upon adoption of Ordinance No. 17-16, effective for the September 30, 2016 measurement date, the following changes were effective for the Police Officers' Pension Plan:
  - A. All Chapter 185 tax monies up to \$606,595 will be used to offset the City's pension contribution for Police Officers.
  - B. Accumulated excess 185 monies totaling approximately \$2.4 million were used to pay down the unfunded actuarial accrued liability for Police officers.



Notes to Required Supplementary Information (Continued)

September 30, 2020

#### Actuarial methods and assumptions used to determine contribution rates (Continued)

#### Changes of assumptions:

- 1. Effective October 1, 2017, the discount rate was lowered from 8.0% to 7.25%. The mortality assumption for active members prior to retirement was revised in accordance with a revision to the active member pre-retirement mortality assumption used by the Florida Retirement System (FRS) in their July 1, 2016 actuarial valuation.
- 2. Effective October 1, 2018, the discount rate was lowered from 7.25% to 7.0%.
- 3. Effective October 1, 2019, the discount rate was lowered from 7.0% to 6.75%. The rate of salary increase was increased from 5.0% 6.25% to 5.25% 6.75%. The mortality assumption was revised in accordance with the assumption used by FRS. Rates of retirement for employees hired after October 4, 2016 were added to be 20% of those members age 55+ with 10 24 years of service and 100% of members with 25+ years of service. Rates of termination were changed from 0% 12% based on age to 1.0% 6.5% based on years of service and/or age.



OTHER SUPPLEMENTARY INFORMATION



# DELRAY BEACH POLICE OFFICERS' RETIREMENT SYSTEM

#### SCHEDULE OF INVESTMENT AND ADMINISTRATIVE EXPENSES

Year Ended September 30, 2020

Investment Expenses	
Custody fees	\$ 39,727
Investment manager fees	432,973
Performance monitor fees	 46,388
Total investment expenses	\$ 519,088
Administrative Expenses	
Actuarial fees	\$ 42,990
Audit fees	20,200
City administration	35,403
Fiduciary liability insurance	14,707
Legal fees	27,790
Training and education	1,822
Travel	 883
Total administrative expenses	\$ 143,795



COMPLIANCE REPORT



Independent Auditor's Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance With Government Auditing Standards

To the Board of Trustees Delray Beach Police Officers' Retirement System Delray Beach, Florida

We have audited, in accordance with U.S. generally accepted auditing standards and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Delray Beach Police Officers' Retirement System (the "Plan"), as of and for the year ended September 30, 2020, and the related notes to the financial statements, which collectively comprise the basic financial statements of the Plan, and have issued our report thereon dated April 26, 2021.

#### **Internal Control Over Financial Reporting**

In planning and performing our audit of the financial statements, we considered the Plan's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control. Accordingly, we do not express an opinion on the effectiveness of the Plan's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

#### **Compliance and Other Matters**

As part of obtaining reasonable assurance about whether the financial statements of the Plan are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.



#### **Purpose of this Report**

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

West Palm Beach, Florida April 26, 2021

# Item 5.b. 2020 Annual State Report

2020 Annual Report

Plan Name: City of Delray Beach Police Officers' Retirement System

# City of Delray Beach Police Officers' Retirement System Police and Fire Annual Report

# **Plan And Contacts**

#### **Plan**

Name of Fund City of Delray Beach Police Officers' Retirement System

City Delray Beach

For Plan Year Ending 9/30/2020

#### **Plan Contacts**

#### Chairman

Name Paul Weber

Address Line 1 300 W. Atlantic Avenue

Address Line 2

City Delray Beach

Zip 33444

Telephone 561-243-7888

Email weber@mydelraybeach.com

#### **Secretary**

Name Jeffrey Rasor

Address Line 1 300 W. Atlantic Avenue

Address Line 2

City Delray Beach

Zip 33444

Telephone 561-243-7802

Email rasorj@mydelraybeach.com

Report Status: in progress
2020 Annual Report

Plan Name: City of Delray Beach Police Officers' Retirement System

#### **Plan Contact Person**

Name Lisa Castronovo

Address Line 1 100 NW 1st Avenue

Address Line 2 Finance-Pension

City Delray Beach

Zip 33444

Telephone 561-243-7289

Email castronovol@mydelraybeach.com

2020 Annual Report

Plan Name: City of Delray Beach Police Officers' Retirement System

# **Board, Ordinances, and Details**

#### **Board of Trustees**

Makeup of board specified in:

Ordinance Number 17-16

Section 33.65

Dated 10/4/2016

#### **Board Members**

Name of Trustee	Elected/Appointed By
Scott Privitera	City/District Appointee
Howard Dickson	City/District Appointee
Paul Weber	Police Officer
Jeff Rasor	Police Officer
James Hoesley	Elected Fifth Member

#### **Quarterly Meetings**

Quarter 1 Meeting Date 11/20/2019

Quarter 2 Meeting Date 2/25/2020

Quarter 3 Meeting Date 5/20/2020

Quarter 4 Meeting Date 9/16/2020

#### **Additional Meetings**

Additional Meeting Date
8/24/2020 12:00:00 AM
8/7/2020 12:00:00 AM

Report Status: in progress

2020 Annual Report

Plan Name: City of Delray Beach Police Officers' Retirement System

#### **Ordinances**

Ordinance Number Date Passed
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#### Miscellaneous Plan Details

#### **Chapter Minimum Benefits**

Eligibility for distribution of premium taxes requires that plans meet chapter minimum benefits and standards, with certain very limited exceptions.

Does the plan meet all the chapter minimum benefits and standards as of July 1, 2015? Y

#### **Collective Bargaining Agreement**

Is service in the plan subject to a collective bargaining agreement? Y

Effective Date 10/1/2018

Period Covered Begin Date 10/1/2018

Period Covered End Date 9/30/2021

Next Scheduled Date 10/1/2021

#### **Mutual Consent**

If the plan sponsor and members have not mutually consented to an alternate use of premium taxes, the parameters for premium tax use are defined in sections 175.351 and 185.35, Florida Statutes.

Υ

#### **Defined Contribution Plan**

Sections 175.351(6) and 185.35(6), Florida Statutes, require that local law plans have a defined contribution plan established by 10/1/2015, or the date of the first collective bargaining agreement entered into after 7/1/2015.

Does the plan have a defined contribution plan? Y

Date Established 9/6/2018

Explain

#### **Detailed Accounting Report**

Sections 175.061(8)(a)(1) and 185.05(8)(a)(1), Florida Statutes, require that each plan's board of trustees must prepare a detailed accounting report of expenses for submission to the plan sponsor and the Department of Management Services.

Report Status: in progress

2020 Annual Report

Plan Name: City of Delray Beach Police Officers' Retirement System

Has the plan submitted a detailed accounting report for this filing? Y

Date Provided to Plan Sponsor 3/31/2021

Explain

#### **Administrative Expense Budget**

Sections 175.061(8)(a)(2) and 185.05(8)(a)(2), Florida Statutes, require that each plan's board of trustees operate under an administrative expense budget, which has been provided to the plan sponsor and members.

Did the plan operate under an administrative expense budget? Y

Date Provided to Plan Sponsor 9/20/2019

Explain

#### **Notes**

Report Status: in progress
2020 Annual Report

Plan Name: City of Delray Beach Police Officers' Retirement System

# **Third Party Contacts**

#### **Third Party Contacts**

#### **Actuarial Valuation**

Firm Name Gabriel, Roeder, Smith & Company

Contact Person Jeffrey Amrose

Address Line 1 One East Broward Blvd.

Address Line 2 Suite 505

City Fort Lauderdale

Zip 33301

Telephone 954-527-1616

Email jeffrey.amrose@grsconsulting.com

Date Of Valuation 10/1/2019

Period Covered Begin Date 10/1/2020

Period Covered End Date 9/30/2021

#### **Certified Public Accountant**

Firm Name Caler, Donten, Levine, Cohen, Porter & Veil,

P.A.

Contact Person Scott Porter, CPA

Address Line 1 505 S. Flagler Drive

Address Line 2 Ste 900

City West Palm Beach

Zip 33401

Telephone 561-832-9292

Email sporter@cdlcpa.com

2020 Annual Report

Plan Name: City of Delray Beach Police Officers' Retirement System

# **Money Manager**

Firm Name	Contact Name	Address Line 1	Address Line 2	City	Zip	Phone	Email
Molpus Woodland s Timber	David Scott	119 S. President Street		Jackson	39201	601-949- 3144	dscott@mol pus.com
Garcia Hamilton Associate s	Janna Hamilton	1401 McKinney	Suite 1600	Houston	77010	713-853- 2324	janna.hamilt on@garciah amiltonasso ciates.com
Franklin Templeto n Institution al	Frank Walburn	PO Box 10463		Birmingham	35202	205-264- 4748	frank.walbur n@regions. com
Crescent Direct Lending	Kim Bartholom ew	11100 Santa Monica Blvd	Suite 200	Los Angeles	90025	310-235- 5913	kimberly.bar tholomew@ crescentcap .com
Harding Loevner	John Parsons	400 Crossing Blvd	4th Floor	Bridgewater	08807	908-947- 0117	jparsons@h lmnet.com
Vanguard	Michael Dominick	PO Box 1110		Valley Forge	19482	610-503- 5480	michael_do minick@van guard.com
Angelo Gordon	Noreen Feldman	25 Park Avenue		New York	10022	212-692- 0259	nfeldman@ angelogord on.com
American Core Realty	Richelle Hayes	801 N. Brand Blvd	Suite 800	Glendale	91203	818-545- 1152	rhayes@am ericanreal.c om
Dune Real Estate	Cara Petrucelli	623 5th Avenue	26 Floor	New York	10022	212-301- 8341	cara@drep. com
RhumbLin e Advisers	Julie Carman Lind	265 Franklin Street	21st Floor	Boston	02110	617-345- 0434	jcl@indexm ngr.com
The Boston Company	Meghan Timbas	One Boston Place	Suite 024- 0146	Boston	02108	617-722- 3819	timbas.m@t bcam.com
Clarkston Capital	Kurt Terrien	91 W. Long Lake Road		Bloomfield Hills	48304	248-723- 8000	kpt@clarkst oncapital.co m
Polen Capital	Anthony Xuereb	1825 Corporate Blvd NW	Suite 300	Boca Raton	33431	561-995- 4507	axuereb@p olencapital. com

Report Status: in progress

2020 Annual Report

Plan Name: City of Delray Beach Police Officers' Retirement System

BlackRoc	PO Box	Providence	02940	800-441-	
k	9819			7762	

#### **Performance Evaluation**

Sections 175.071(6)(a) and 185.06(5)(a), Florida Statutes, require that each plan with a professional money manager must retain a professionally qualified independent consultant to evaluate the money manager's performance at least once every three years. This consultant must work on a flat-fee basis and must not be associated with the money manager in any manner.

Firm Name AndCo Consulting

Contact Person Brendon Vavrica

Address Line 1 4901 Vineland Road

Address Line 2 Ste 600

City Orlando

Zip 32811

Telephone 904-386-3013

Email brendonv@andcoconsulting.com

Date Of Evaluation 9/30/2020

#### **Legal Advisor**

Firm Name Lewis, Longman & Walker

Contact Person Janice Rustin

Address Line 1 515 N. Flagler Drive

Address Line 2 Suite 1500

City West Palm Beach

Zip 33401

Telephone 561-640-0820

Email jrustin@llw-law.com

#### **Plan Administrator**

Report Status: in progress
2020 Annual Report

Plan Name: City of Delray Beach Police Officers' Retirement System

Firm Name City of Delray Beach

Contact Person Lisa Castronovo

Address Line 1 100 NW 1st Avenue

Address Line 2 Finance-Pension

City Delray Beach

Zip 33444

Telephone 561-243-7289

Email castronovol@mydelraybeach.com

**Notes** 

2020 Annual Report

Plan Name: City of Delray Beach Police Officers' Retirement System

#### **Assets**

#### Assets - Market Value

#### Cash, Checking and Savings

Institution Holding Deposit	Amount	Interest Rate
	\$11,747.00	

Total Cash, Check and Savings \$11,747.00

#### **Certificates of Deposit**

Institution Holding Deposit	Amount	Interest Rate
-----------------------------	--------	---------------

Total Certificates of Deposit \$0.00

#### **Short Term Investments**

Institution Holding Deposit	Amount	Interest Rate
	\$1,494,122.00	

Total Short Term Investments \$1,494,122.00

#### Other Cash and Equivalents

Institution Holding Deposit	Amount	Interest Rate
-----------------------------	--------	---------------

Total Other Cash and Equivalents \$0.00

#### U.S. Bonds and Bills

Institution Holding Deposit	Amount	Interest Rate
	\$7,972,141.00	

Total U.S. Bonds and Bills \$7,972,141.00

#### **Federal Agency Guaranteed Securities**

Institution Holding Deposit	Amount	Interest Rate
-----------------------------	--------	---------------

Total Federal Agency Guaranteed Securities \$0.00

2020 Annual Report

Plan Name: City of Delray Beach Police Officers' Retirement System

#### **Corporate Bonds**

Institution Holding Deposit	Amount	Interest Rate
	\$13,024,509.00	

Total Corporate Bonds \$13,024,509.00

#### **Stocks**

Institution Holding Deposit	Amount	Interest Rate
	\$72,640,204.00	

Total Stocks \$72,640,204.00

#### **Other Securities**

Institution Holding Deposit	Amount	Interest Rate
	\$3,548,676.00	

Total Other Securities \$3,548,676.00

#### **Real Estate**

Institution Holding Deposit	Amount	Interest Rate
	\$7,760,749.00	

Total Real Estate \$7,760,749.00

#### **Investments Held By Insurance Company**

nstitution Holding Deposit	Amount	Interest Rate
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Total Investments Held By Insurance Company \$0.00

#### **Other Investments**

-			
	Institution Holding Deposit	Amount	Interest Rate

Total Other Investments \$0.00

2020 Annual Report

Plan Name: City of Delray Beach Police Officers' Retirement System

#### **Account Receivable**

Due From	Date of Payment	Amount
ICMA-RC	5/7/2021	\$6,995.00
Brokers-Dealers	10/1/2020	\$496,094.00
Participants	10/2/2020	\$42,096.00
State of Florida	10/14/2020	\$868,062.00

Total Accounts Receivable \$1,413,247.00

#### **Other Assets**

Asset Name	Asset Amount
DROP Self-directed	\$9,500,572.00

Total Other Assets \$9,500,572.00

Accrued Interest \$98,805.00

Total Assets for the year 9/30/2020 \$117,464,772.00

#### **Notes**

2020 Annual Report

Plan Name: City of Delray Beach Police Officers' Retirement System

# Liabilities

# Liabilities

Refunds Payable	\$0.00
Pensions Payable	\$0.00
Unpaid Expenses	\$83,042.00
DROP Plan Payable	\$0.00
Prepaid Contributions	\$0.00

#### **Other Liabilities**

Liability Name	Liability Amount
Broker-Dealer	\$393,734.00

Total Other Liabilities \$393,734.00

Total Liabilities for the year ended 9/30/2020 \$476,776.00

#### **Notes**

Use the following text box to add any notes about the above.

2020 Annual Report

Plan Name: City of Delray Beach Police Officers' Retirement System

#### Revenues

#### Revenues

Contributions From Active Members \$1,196,828.00

#### **State of Florida Premium Tax Monies**

Sections 175.131 and 185.11, Florida Statutes, require that all state funds be deposited into the pension fund immediately and in no circumstances more than 5 days after receipt.

Date of Deposit	Amount	Notes
10/14/2020	\$868,062.00	

Total State of Florida Premium Tax Monies \$868,062.00

#### **City Contributions**

Date of Deposit	Amount	Notes
10/1/2019	\$6,917,364.00	

Total City Contributions \$6,917,364.00

Contributions From City on Behalf of Active \$0.00

Members

Buybacks/Repayment of Contributions \$0.00

Unrealized Gains/Losses \$6,956,750.00

Interests and Dividends \$2,938,685.00

Gains From Sale of Investments \$0.00

#### **Other Revenues**

Name	Amount
Other Income	\$811.00

Total Other Revenues: \$811.00

Report Status: in progress

2020 Annual Report

Plan Name: City of Delray Beach Police Officers' Retirement System

Total Revenues for the year ended 9/30/2020 \$18,878,500.00

Total 2020 Calendar Year Payroll (Police) \$0.00

Total 2020 Calendar Year Payroll (Fire) \$0.00

If lower than last year, or significantly higher, please explain. 30267133 calendar payroll for Police

#### **Notes**

Use the following text box to add any notes about the above.

2020 Annual Report

Plan Name: City of Delray Beach Police Officers' Retirement System

# **Expenditures**

# **Expenditures**

Retirement Pension Payments	\$6,384,676.00
Disability Pension Payments	\$518,470.00
Terminated Vested Pension Payments	\$0.00
Beneficiary Pension Payments	\$209,336.00
Total Pension Payments	\$7,112,482.00
Termination Payments	\$33,258.01
DROP Plan Payments	\$943,651.00
Insurance Premium Payments	\$0.00

# Detail of Expenses - Must include expenses required in section 185.05(8)(a)1. and 175.061(8)(a)1. at a minimum.

Name	Amount
Legal Fees	\$27,790.00
Fiduciary Liability Ins	\$14,707.00
Audit Fees	\$20,200.00
Actuarial Fees	\$42,990.00
Training & Education	\$2,704.99
City Administration	\$35,403.00

Total Detail of Expenses \$143,794.99

#### **Investment Expenses**

Name	Amount
Performance monitor fees	\$46,388.00
Custody Fees	\$39,727.00
Investment manager fees	\$432,973.00

Total Investment Expenses \$519,088.00

Report Status: in progress

2020 Annual Report

Plan Name: City of Delray Beach Police Officers' Retirement System

Loss From Sale of Investments \$0.00

#### **Other Expenditures**

Name Amount

Total for Other Expenditures: \$0.00

Total Expenditures for 9/30/2020 \$8,752,274.00

### Notes

2020 Annual Report

Plan Name: City of Delray Beach Police Officers' Retirement System

# **Fund Totals**

# **Verify Totals**

Total Assets	\$117,464,772.00
Less: Total Liabilities	\$476,776.00
Fund Balance *	\$116,987,996.00
Fund Balance Beginning of Year	\$106,861,770.00
Turid Dalarice Degiriring of Tear	\$100,801,770.00
Add: Total Revenues	\$18,878,500.00
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Add: Total Revenues	\$18,878,500.00

# \*Fund Balances must agree

# **Notes**

Report Status: in progress
2020 Annual Report

Plan Name: City of Delray Beach Police Officers' Retirement System

#### **Investments**

### **Investment Compliance**

#### **Investment Provisions**

Ordinance Number 17-16

Section 33.65

Date 10/4/2016

#### Written Investment Policy

Has the board adopted a written investment policy in accordance with the requirements of section 112.661, F.S., and submitted a copy of this policy to the Bureau of Local Retirement Systems?Y

Date Established 12/18/2018

#### **Expected Annual Rate of Return**

Has the board determined the total expected annual rate of return for the current year, for each of the next several years, and for the long term hereafter pursuant to s. 112.661(9), Florida Statues, and submitted to the Bureau of Local Retirement Systems?Y

Date Established 5/20/2020

#### **Summary Plan Description**

Has the board prepared a summary plan description (SPD) in accordance with the requirements of the section 112.66 Florida Statues? The SPD shall be furnished to a member upon employment and thereafter with each new biennial publication. Y

Date Established 8/1/2013

#### **Divestiture Provisions**

Has the board complied with the divestiture provisions found in S. 175.071(8) and 185.06(7) Florida Statutes?Y

LR002 5/3/2021 4:39:14 PM

Report Status: in progress

2020 Annual Report

Plan Name: City of Delray Beach Police Officers' Retirement System

#### Date Established

For valuations dated on or after 1/1/16 all plans must use the mortality tables used in either of the two most recently published actuarial valuation reports of the Florida Retirement System.

Note: State premium tax moneys may not be released until the plan has complied with the statutory provisions.

#### Notes

LR002 5/3/2021 4:39:14 PM

Report Status: in progress

2020 Annual Report

Plan Name: City of Delray Beach Police Officers' Retirement System

## **Insured Plans**

Insured plans must have the following document forwarded to the insurance company for completion and returned to the municipality as soon as possible, but prior to filling date of the report.

#### Notes

Plan Name: City of Delray Beach Police Officers' Retirement System

2020 Annual Report

#### Annuitants

#### **Data Summary**

Social Security Number	Name	Date of Birth	Retire or Disability	Benefit Type	Date of Retirement or Disability	Monthly Pension Amount	Name of Beneficiary	Pension Option Elected **	Total Distributions This Period	Note	Member Type
4738	RUSSELL ANZALONE	1/1/1959	Retirement		6/1/2006	\$5,394.00	JENNIFER	1	\$64,728.00		police
4092	SALVATORE ARENA	7/1/1962	Retirement		2/1/2011	\$6,549.00	MARCIA	1	\$78,323.00		police
4318	ERIC S ARONOWITZ	3/1/1967	Retirement		12/1/2012	\$5,871.00	AMY	3A	\$70,334.00		police
1351	BENJAMIN BALDWIN	1/1/1939	Retirement		3/1/1990	\$1,556.00	FANNIE	4	\$18,670.00	60%JS	police
7072	ALEXANDER M BATISTA	7/1/1965	Retirement		8/1/2010	\$1,067.00	ELIZABETH	3C	\$12,694.00		police
7435	JOHN BATTILORO	9/1/1967	Retirement		3/1/2014	\$9,310.00		2	\$111,265.00		police
2806	ALLEN BERGLIN	7/1/1944	Disability	LOD	10/18/1983	\$845.00	CELIA	4	\$10,142.00	60%JS	police
0508	WILLIAM BERRY	2/1/1951	Retirement		12/1/2000	\$3,249.00		2	\$38,924.00		police
5326	BRIAN E BOLLAN	1/1/1954	Retirement		4/1/2007	\$5,681.00	MARIA	4	\$67,831.00	60%JS	police
6105	WILLIAM J BOMBACIE JR	6/1/1956	Disability	LOD	11/1/1996	\$3,604.00		2	\$43,210.00		police
4196	ROBERT BRADLEY	8/1/1952	Retirement		5/1/2004	\$5,548.00	KATHY	1	\$66,196.00		police
6701	CLIFFORD BRAILFORD	10/1/1927	Beneficiary		2/13/1981	\$1,181.00	ATHALONE	2	\$14,178.00	-	police

LR003

Plan Name: City of Delray Beach Police Officers' Retirement System

Social Security Number	Name	Date of Birth	Retire or Disability	Benefit Type	Date of Retirement or Disability	Monthly Pension Amount	Name of Beneficiary	Pension Option Elected **	Total Distributions This Period	Note	Member Type
9147	ROBERT BRAND	2/1/1949	Retirement		9/1/2002	\$5,263.00	KATHLEEN	4	\$62,583.00	60%JS	police
4464	CHRISTINE BRASWELL	9/1/1976	Beneficiary		5/1/2017	\$557.00	REYKA AUTUMN	2	\$6,680.00		police
4226	LORENZO BROOKS	9/1/1942	Retirement		1/1/1991	\$1,587.00	JUNE	3C	\$19,048.00		police
5259	LOUIS BROWN	12/1/1949	Retirement		7/1/2005	\$4,009.00	CHERYL	1	\$47,749.00		police
3219	REDICK BROWN	2/1/1947	Disability	LOD	3/1/1976	\$881.00	DAVID	4	\$10,569.00	60%JS	police
6037	JEFFREY CALDWELL	1/1/1964	Retirement		3/1/2017	\$6,518.00		2	\$6,518.00		police
7440	FRANCISCO CASAREZ	8/1/1969	Retirement		3/1/2015	\$5,350.00		1	\$37,448.00		police
8200	STEVEN M CHINQUE	5/1/1975	Disability	LOD	5/27/2016	\$3,622.00	SOPHIA	3D	\$43,460.00		police
8864	WILLIAM H COCHRANE	10/1/1940	Retirement		6/1/1993	\$3,684.00	LINDA	3C	\$44,207.00		police
4531	MICHAEL A COLEMAN	7/1/1968	Retirement		7/1/2019	\$8,115.00	BERNADETTE	3D	\$97,044.00		police
8539	VERONICA COVINGTON	3/1/1954	Retirement		1/1/2000	\$4,608.00		2	\$55,159.00		police
8959	DAVID CUMMINGS	5/1/1955	Beneficiary		10/1/1998	\$1,955.00	SUSAN	2	\$23,078.00		police
4258	EDWARD DEPTEL	3/1/1964	Retirement		6/1/2011	\$4,525.00	VICTORIA	1	\$53,897.00		police
0536	GREGORY T DI LORETO	9/1/1949	Disability	LOD	5/1/2004	\$3,349.00	ELAINE	1	\$40,193.00		police
3519	WAYNE DINAN	5/1/1967	Retirement		6/1/2017	\$0.00	DEFERRED VESTED		\$0.00		police

LR003

Plan Name: City of Delray Beach Police Officers' Retirement System

Social Security Number	Name	Date of Birth	Retire or Disability	Benefit Type	Date of Retirement or Disability	Monthly Pension Amount	Name of Beneficiary	Pension Option Elected **	Total Distributions This Period	Note	Member Type
1431	JOHN DONOVAN	8/1/1960	Retirement		11/1/2002	\$4,032.00	SANDRA	1	\$48,349.00		police
3736	PHILIP DORFMAN	5/1/1964	Retirement		5/1/2014	\$6,962.00	ANDREA	3A	\$83,067.00		police
4740	CHARLES DRUMMOND	5/1/1955	Retirement		2/1/2009	\$4,184.00	NAOMI	3A	\$50,045.00		police
0398	KENNETH DUARTE	10/1/1963	Retirement		11/1/2017	\$5,271.00	DINA	1	\$63,194.00		police
4267	DAVID M EBERHART	1/1/1962	Retirement		10/1/2009	\$6,790.00	KELLY	3B	\$81,475.00		police
1303	KURT EBERLY	9/1/1958	Retirement		11/1/2003	\$3,605.00	JANICE	1	\$43,220.00		police
1570	JOHN C EVANS	7/1/1964	Retirement		2/1/2008	\$6,599.00		2	\$78,923.00		police
1887	ROBERT W. EVANS	3/1/1936	Beneficiary		7/1/1993	\$1,328.00	MILDRED	2	\$15,938.00		police
1463	GLENN M FAHEY	7/1/1954	Disability	LOD	2/1/1997	\$1,514.00	ANDREA	3C	\$18,111.00		police
4143	DWAYNE FERNANDES	2/1/1969	Retirement		5/1/2009	\$4,453.00	ELIZABETH	3D	\$53,122.00		police
5769	JAMES K FINLEY	8/1/1964	Retirement		2/1/2008	\$4,589.00	CYNTHIA	3B	\$54,885.00		police
1474	EDWARD J FLYNN	2/1/1955	Retirement		10/1/2008	\$6,357.00	SUSAN	4	\$76,280.00	60%JS	police
9011	JEFFREY GAYLON	10/1/1961	Beneficiary		1/1/1997	\$2,704.00	GLORIA	2	\$30,134.00		police
9790	LENNIS GILLARD	11/1/1951	Retirement		7/1/2000	\$5,695.00		2	\$67,832.00		police
2861	JEFFREY GOLDMAN	11/1/1968	Retirement		6/1/2014	\$9,913.00	CINDY	1	\$118,074.00	-	police

Plan Name: City of Delray Beach Police Officers' Retirement System

Social Security Number	Name	Date of Birth	Retire or Disability	Benefit Type	Date of Retirement or Disability	Monthly Pension Amount	Name of Beneficiary	Pension Option Elected **	Total Distributions This Period	Note	Member Type
2915	GLENN GOSS	1/1/1963	Retirement		3/1/2005	\$6,072.00	LESLIE	1	\$72,560.00		police
7708	SCOTT GREGORY	8/1/1972	Retirement		3/1/2019	\$4,749.00	NICOLE	3A	\$56,993.00		police
6372	TIMOTHY HALL	10/1/1954	Retirement		7/1/2005	\$2,085.00	LINDA	3D	\$37,225.00	Retiree died	police
2385	ROBERT L HARRIS	7/1/1959	Retirement		8/1/2014	\$1,076.00	KATHERINE	3D	\$12,914.00		police
1629	JOSEPH HART	10/1/1968	Retirement		1/1/2015	\$6,448.00	REGINA	3D	\$58,033.00		police
7424	CRAIG HARTMANN	4/1/1961	Retirement		11/1/2007	\$9,237.00	BRENDA	3A	\$110,747.00		police
6012	FRANK HENRIQUES	10/1/1944	Beneficiary		5/28/1993	\$2,499.00	CAROLYN	2	\$29,988.00		police
6638	KENNETH F HERNDON	2/1/1944	Retirement		8/1/1994	\$2,980.00	JOAN	3A	\$35,469.00		police
7708	TINA HEYSLER	5/1/1957	Retirement		6/1/2009	\$8,501.00		2	\$101,252.00		police
0063	JIMMY E HORRELL	5/1/1962	Retirement		11/1/2007	\$4,414.00	DONNA	4	\$52,923.00	60%JS	police
8348	STEVEN HYNES	5/1/1971	Retirement		2/1/2020	\$8,084.00		2	\$64,670.00		police
7630	CHARLES JEROLOMAN	2/1/1957	Retirement		10/1/2005	\$4,782.00		2	\$57,382.00		police
6594	TERRY JONES	5/1/1962	Disability	LOD	7/17/2018	\$3,566.00	STACY	4	\$42,797.00	60%JS	police
9605	THOMAS JUDGE	11/1/1960	Retirement		8/1/2000	\$3,406.00	ROBIN	3D	\$40,538.00		police
1572	TAMIJO KAYWORTH	5/1/1959	Retirement		11/1/2003	\$1,400.00	ROBERT	3A	\$16,791.00		police

LR003

Plan Name: City of Delray Beach Police Officers' Retirement System

Social Security Number	Name	Date of Birth	Retire or Disability	Benefit Type	Date of Retirement or Disability	Monthly Pension Amount	Name of Beneficiary	Pension Option Elected **	Total Distributions This Period	Note	Member Type
0078	ROBERT KEATING	9/1/1970	Retirement		11/1/2014	\$4,815.00	MELISSA	3C	\$57,736.00		police
6936	JOHN D. KENNEDY	10/1/1941	Beneficiary		8/16/1974	\$627.00	LINDA	2	\$7,519.00		police
2139	MICHAEL KOSICK	12/1/1948	Retirement		2/1/2007	\$6,151.00		2	\$73,568.00		police
9683	JEAN- CLAUDE LAURENT	3/1/1955	Retirement		12/1/2014	\$2,582.00	NANIDE	3C	\$30,979.00		police
1624	ALLAN E LEWIS	6/1/1954	Disability	LOD	12/1/1994	\$5,047.00		2	\$60,463.00		police
5009	ROSS LICATA	10/1/1957	Retirement		5/1/2002	\$6,686.00	PEGGY	1	\$79,763.00		police
8431	RICHARD M LINCOLN	4/1/1951	Retirement		12/1/1996	\$4,710.00	LYNDA	3A	\$56,424.00		police
5381	KYLE LUNDGREN	5/1/1983	Retirement		8/21/2020	\$0.00	DEFERRED VESTED		\$0.00		police
4898	HOWARD LUNSFORD	6/1/1957	Retirement		3/1/2005	\$8,327.00	DARCIE	1	\$99,509.00		police
4623	GLASCO MARTIN JR	4/1/1943	Retirement		6/1/1998	\$3,761.00	GLORIA	3C	\$44,799.00		police
5728	THOMAS P MATAVA	8/1/1950	Retirement		1/1/2010	\$5,461.00		2	\$65,368.00		police
3052	PATRICK MCCOLLOM	9/1/1964	Retirement		10/1/2008	\$856.00	JENNIFER	3C	\$10,274.00		police
3101	WILLIAM MCCOLLOM	1/1/1957	Retirement		4/1/2006	\$8,078.00	SUZANNE	3A	\$96,460.00		police
5450	ALBERTO MELIS	3/1/1949	Retirement		2/1/1997	\$4,626.00	CAROLYN	3A	\$55,333.00		police
0719	JEFFREY T MESSER	7/1/1965	Retirement		8/1/2010	\$5,619.00	DIANNE	3B	\$66,877.00		police

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Plan Name: City of Delray Beach Police Officers' Retirement System

Social Security Number	Name	Date of Birth	Retire or Disability	Benefit Type	Date of Retirement or Disability	Monthly Pension Amount	Name of Beneficiary	Pension Option Elected **	Total Distributions This Period	Note	Member Type
3282	HAROLD MICHAEL	1/1/1932	Disability	LOD	4/17/1984	\$2,075.00	ANITA	4	\$24,901.00	60%JS	police
4627	JOSEPH MILENKOVIC	7/1/1965	Retirement		11/1/2010	\$7,245.00	NEREIDA	3C	\$86,865.00		police
6357	JEFFREY MILLER	5/1/1957	Retirement		6/1/2009	\$4,508.00		3A	\$53,694.00		police
8061	MICHAEL A MILLER	8/1/1958	Retirement		8/1/2008	\$4,434.00		2	\$52,772.00		police
0229	VINCENT MINTUS	4/1/1951	Retirement		8/1/2000	\$3,681.00		2	\$43,808.00		police
5649	JULIUS MITCHELL	7/1/1960	Retirement		12/1/2003	\$3,534.00	PEARL	3C	\$42,341.00		police
6496	THOMAS J MITCHELL	1/1/1964	Retirement		4/1/2012	\$9,368.00	BRIAN	1	\$111,858.00		police
1483	MATTHEW MITCHELL JR	3/1/1937	Retirement		1/1/2000	\$2,678.00	MARTHA	3D	\$32,052.00		police
3202	EDWARD M MORLEY	10/1/1950	Retirement		3/1/1999	\$4,316.00	DEBORAH	3A	\$51,579.00		police
1171	FRANCIS MOSCHETTE	9/1/1967	Retirement		12/1/2014	\$6,783.00	JENNIFER	3A	\$74,546.00		police
3724	MICHAEL MULLER	5/1/1984	Retirement		1/19/2020	\$0.00	DEFERRED VESTED		\$0.00		police
5385	ROBERT MUSCO	3/1/1958	Retirement		4/1/2005	\$8,706.00	CAROL	1	\$103,958.00		police
7287	THOMAS B MYERS	2/1/1962	Retirement		3/1/2007	\$6,256.00	SANDRA	1	\$74,768.00		police
7557	TIMOTHY McINERNEY	1/1/1977	Retirement		8/16/2019	\$0.00	DEFERRED VESTED		\$0.00		police
4342	THERON NUBIN	5/1/1935	Beneficiary		5/1/1982	\$568.00	RUTH	2	\$6,821.00		police

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Plan Name: City of Delray Beach Police Officers' Retirement System

Social Security Number	Name	Date of Birth	Retire or Disability	Benefit Type	Date of Retirement or Disability	Monthly Pension Amount	Name of Beneficiary	Pension Option Elected **	Total Distributions This Period	Note	Member Type
6496	JOHN PALERMO	6/1/1961	Retirement		4/1/2012	\$7,087.00	BRIAN	1	\$84,277.00		police
2628	SHIRLEY PALMER	6/1/1952	Retirement		6/1/2005	\$1,711.00	ETHEL	1	\$20,383.00		police
1544	FREDERICK PARKER	4/1/1961	Retirement		11/1/2006	\$4,626.00	LYNN	3B	\$55,465.00		police
8675	RODERICK PAYNE	1/1/1958	Retirement		5/1/2005	\$4,689.00	ALTA	1	\$55,938.00		police
7590	RALPH PHILLIPS	5/1/1958	Retirement		4/1/2007	\$9,644.00	ELLEN	1	\$115,155.00		police
8432	GERALD F PITOCCHELL I	8/1/1957	Retirement		7/1/2006	\$5,628.00	KRISTINE	3B	\$67,030.00		police
8535	JEAN ALBERT PUN	11/1/1967	Beneficiary		9/2/2005	\$1,162.00	MARIE	2	\$13,941.00		police
7821	THOMAS QUINLAN	10/1/1958	Retirement		2/1/2006	\$5,795.00		2	\$69,308.00		police
4447	JEFFREY RANCOUR	6/1/1959	Retirement		8/1/2000	\$3,860.00		2	\$45,939.00		police
7656	GLEN RASHKIND	2/1/1957	Retirement		3/1/2009	\$4,692.00		2	\$56,077.00		police
1778	DAVID RINGERSON	6/1/1959	Retirement		8/1/2002	\$3,822.00	LAUREN	1	\$45,480.00		police
2701	EDWARD ROBINSON	8/1/1961	Retirement		7/1/2005	\$4,264.00	KECIA	3D	\$50,790.00		police
9247	ADAM ROSENTHAL	10/1/1971	Beneficiary		3/1/2011	\$191.00	JACOB	2	\$2,294.00		police
9247	ADAM ROSENTHAL	10/1/1971	Beneficiary		3/1/2011	\$3,824.00	JOANNE	2	\$45,883.00		police
9247	ADAM ROSENTHAL	10/1/1971	Beneficiary		3/1/2011	\$191.00	ALEXIS	2	\$2,294.00		police

Plan Name: City of Delray Beach Police Officers' Retirement System

Social Security Number	Name	Date of Birth	Retire or Disability	Benefit Type	Date of Retirement or Disability	Monthly Pension Amount	Name of Beneficiary	Pension Option Elected **	Total Distributions This Period	Note	Member Type
9247	ADAM ROSENTHAL	10/1/1971	Beneficiary		3/1/2011	\$191.00	HAILEY	2	\$2,294.00		police
9247	ADAM ROSENTHAL	10/1/1971	Beneficiary		3/1/2011	\$191.00	ZACHARY	2	\$2,294.00		police
2881	TOBY RUBIN	11/1/1960	Retirement		2/1/2016	\$7,329.00	LORRAINE	3A	\$87,656.00		police
2138	ROBERT RUFFING	5/1/1940	Disability	LOD	1/9/1987	\$2,083.00	LINDA	3B	\$24,994.00		police
8817	MATTHEW SAPYTA	7/1/1984	Retirement		5/1/2017	\$0.00	DEFERRED VESTED		\$0.00		police
1876	JOSEPH SCHROEDER	12/1/1956	Retirement		3/1/2005	\$10,136.00	THERESA	ЗА	\$121,126.00		police
5817	RICHARD SENFF	10/1/1954	Retirement		8/1/1994	\$3,315.00		2	\$39,455.00		police
0693	SHERRY L SETTELEN	9/1/1957	Retirement		11/1/2000	\$3,169.00	RUSSELL	3A	\$38,003.00		police
4592	JAMES P SHEA	8/1/1940	Retirement		1/1/1990	\$2,079.00		2	\$24,951.00		police
5070	PAUL SHERSTY	2/1/1962	Retirement		5/1/2011	\$5,060.00	DEBORAH	1	\$60,375.00		police
2699	RICHARD G SHINHOLT	2/1/1957	Disability	LOD	4/15/1992	\$2,425.00	JAMES	1	\$29,097.00		police
2444	JAMIE M SILVERMAN	7/1/1971	Retirement		7/1/2010	\$0.00	DEFERRED VESTED		\$0.00		police
5276	EILEEN C SKIBA	6/1/1970	Disability	LOD	7/1/1999	\$2,014.00	KAREN	1	\$24,163.00		police
3919	DENNIS SMITH	5/1/1939	Disability	LOD	5/15/1984	\$2,918.00	GAIL	3C	\$35,012.00		police
0274	ROBIN SMITH	7/1/1961	Retirement		12/1/2011	\$4,739.00		2	\$56,780.00		police

Plan Name: City of Delray Beach Police Officers' Retirement System

Social Security Number	Name	Date of Birth	Retire or Disability	Benefit Type	Date of Retirement or Disability	Monthly Pension Amount	Name of Beneficiary	Pension Option Elected **	Total Distributions This Period	Note	Member Type
5101	WILLIAM SMITH	12/1/1954	Retirement		5/1/2010	\$7,296.00		2	\$87,044.00		police
6261	SHANNON SNIFFEN	4/1/1975	Disability	LOD	12/1/2019	\$5,145.00		2	\$51,452.00		police
7179	ROBERT STEVENS	2/1/1956	Retirement		10/1/2002	\$4,351.00	TAMIJO	3A	\$52,217.00		police
6811	ANTHONY STRIANESE	2/1/1960	Retirement		9/1/2009	\$8,997.00		2	\$106,981.00		police
9232	MICHAEL E SWIGERT	4/1/1957	Retirement		4/1/2005	\$7,296.00	KARLA	1	\$87,122.00		police
3109	ROBERT SYLVESTER	11/1/1946	Retirement		4/1/1996	\$2,515.00	BESSIE	3A	\$30,026.00		police
9637	ALLAN THOMPSON	8/1/1960	Disability	LOD	2/21/2001	\$2,831.00	STEPHANIE	4	\$33,977.00	60%JS	police
8332	STEPHANIE THOMPSON	12/1/1969	Retirement		4/1/2007	\$0.00	DEFERRED VESTED		\$0.00		police
8408	CASEY THUME	3/1/1971	Retirement		3/1/2014	\$4,998.00	PATRICK	1	\$59,734.00		police
8367	THOMAS TOLBERT	11/1/1975	Retirement		3/1/2019	\$5,156.00	JENNIFER	1	\$61,874.00		police
1460	TAMMY TURBERVILL E	2/1/1970	Retirement		11/1/2012	\$0.00	DEFERRED VESTED		\$0.00		police
4908	THOMAS TUSTIN	10/1/1960	Retirement		10/1/2005	\$7,021.00		2	\$84,253.00		police
6329	JAMES TWITTY	10/1/1943	Retirement		8/1/1992	\$2,533.00		3D	\$30,396.00		police
6852	RICHARD VURCHIO	3/1/1967	Retirement		2/1/2010	\$2,048.00	PATTI	1	\$24,491.00		police
7477	BILLY WARD	10/1/1933	Beneficiary		4/30/1981	\$500.00	BILLY Jr.	2	\$6,000.00		police

Plan Name: City of Delray Beach Police Officers' Retirement System

#### 2020 Annual Report

Social Security Number	Name	Date of Birth	Retire or Disability	Benefit Type	Date of Retirement or Disability	Monthly Pension Amount	Name of Beneficiary	Pension Option Elected **	Total Distributions This Period	Note	Member Type
3769	BRUCE WARZOHA	10/1/1983	Retirement		5/1/2017	\$0.00	DEFERRED VESTED		\$0.00		police
4595	BOBBY S WELLS	7/1/1955	Retirement		4/1/2005	\$3,568.00	DONNA	3D	\$42,822.00		police
9556	RICHARD D WENTZ	3/1/1961	Retirement		12/1/2009	\$5,436.00	DARLENE	1	\$65,123.00		police
3968	GREGORY WESNER	8/1/1962	Retirement		9/1/2014	\$5,604.00	JACQUELINE	1	\$66,862.00		police
7762	DONALD WEST	2/1/1959	Retirement		6/1/2005	\$5,635.00	AMANDA	1	\$67,122.00		police
7954	THOMAS WHATLEY	7/1/1960	Retirement		10/1/2007	\$4,177.00	NINA	4	\$50,125.00	60%JS	police
7565	GEOFFREY WILLIAMS	1/1/1959	Retirement		5/1/2000	\$4,305.00	DEBORAH	3A	\$51,357.00		police
5253	IVERY WILLIAMS	3/1/1955	Retirement		2/1/2004	\$3,430.00	MARY	1	\$41,018.00		police
6937	JAMES WILSON	3/1/1947	Retirement		2/1/2002	\$4,865.00	MARY	3C	\$58,187.00		police
8717	RANDALL WILSON	12/1/1961	Retirement		7/1/2010	\$5,638.00		2	\$67,149.00		police
6676	JAMES WINTEMUTE	7/1/1959	Retirement		2/1/2006	\$4,281.00		2	\$51,207.00		police
1778	MARC WOODS	5/1/1954	Retirement		1/1/2005	\$8,037.00	ANNE	3A	\$96,209.00		police
8134	JOHN E YOUNG	4/1/1967	Retirement		10/1/2010	\$4,605.00	JEANNETTE	3A	\$55,257.00		police
1846	FREDERICK ZIEGLAR	1/1/1955	Disability	LOD	8/1/1990	\$2,161.00	KATHLEEN	3A	\$25,929.00		police

Total Number of rows: 146

Plan Name: City of Delray Beach Police Officers' Retirement System

#### 2020 Annual Report

Member Type	Number of rows
police	146

#### **Disability Categories**

For members listed as disabled please enter the counts below of members with the given disability type.

Fire Police Ge	eneral
Heart Disease 0	
Hypertension 0	
Emphysema 0	
Injury 16	
Cancer 0	
Other 0	
Total 16	
Subtotals Fire Police Ge	eneral
Retirement \$0.00 \$6,384,676.00 \$0	0.00
Disability \$0.00 \$518,470.00 \$0	0.00
Beneficiary \$0.00 \$209,336.00 \$0	0.00
Grand Total \$0.00 \$7,112,482.00 \$0	0.00

Plan Name: City of Delray Beach Police Officers' Retirement System

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#### Notes

Plan Name: City of Delray Beach Police Officers' Retirement System

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## Terminations

Social Security Number	Name	Date of Birth	Date of Employment	Date of Termination	Amount Refunded At Termination	Note	Member Type
0136	RENATO DICARLANTONIO	4/1/1987	6/7/2010	12/9/2013	\$18,738.89		police
9268	JAIRO MORENO	6/1/1976	8/4/2014	2/13/2015	\$0.00	UNCLAIMED REFUND	police
1303	BENDJY PHILIPPE	9/1/1990	4/3/2017	10/25/2019	\$14,519.12		police
5154	JOHN PULEO	1/1/1995	1/27/2020	9/22/2020	\$0.00	UNCLAIMED REFUND	police
5005	SCOTT D PURDY	3/1/1976	1/18/2006	10/2/2009	\$0.00	UNCLAIMED REFUND	police
8248	ROBERT D VESPI	8/1/1970	2/2/2015	1/25/2016	\$0.00	UNCLAIMED REFUND	police

Total Number of rows: 6

Member Type	Number of rows	
police	6	

**Subtotals** \$33,258.01

Member Type	Subtotal
police	\$33,258.01

#### Notes

Plan Name: City of Delray Beach Police Officers' Retirement System

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## Statistical Exhibit

Social Securit y Number	Name	Date of Birth	Sex	Age	Date of Employment	Years of Credited Service In Plan	Date of Entry Into Plan	Monthly Salary Used to Compute Pension	Total Cash Compensatio n In Period	Amount Contributed To Fund By Member	Notes	Member Type
0932	DAISY ADDEA	5/1/1981	F	39	9/29/2005	15	9/29/2005	\$0.00	\$87,008.00	\$7,830.70		police
4862	ROBERT ADDEA	3/1/1978	М	42	12/16/2003	17	12/16/2003	\$0.00	\$91,224.00	\$8,210.12		police
8387	KHALED ALAMI	1/1/1987	М	33	2/11/2019	1	2/11/2019	\$0.00	\$57,812.00	\$5,203.04		police
7734	CHAD ALPERT	10/1/1986	М	34	1/23/2012	8	1/23/2012	\$0.00	\$78,175.00	\$7,035.72		police
8706	MARCO ARROYO	9/1/1993	М	27	10/30/2017	2	10/30/2017	\$0.00	\$61,216.00	\$5,509.47		police
0884	TROY BAER	1/1/1977	М	43	4/2/2001	19	4/2/2001	\$0.00	\$116,595.00	\$10,493.58		police
8339	STEPHANIE BAKER	11/1/1979	F	41	10/11/2005	15	10/11/2005	\$0.00	\$92,055.00	\$8,284.91		police
4416	MICHAEL BARBIRE	6/1/1969	М	51	8/7/2006	14	8/7/2006	\$0.00	\$34,532.00	\$3,107.89		police
7344	TREMAYNE BARNES	4/1/1989	М	31	1/2/2018	2	1/2/2018	\$0.00	\$59,071.00	\$5,316.42		police
2106	DANNY BATISTA	5/1/1979	М	41	10/3/2005	15	10/3/2005	\$0.00	\$97,704.00	\$8,793.35		police
0444	ROBIN BOLANOS	6/1/1991	F	29	4/11/2014	6	4/11/2014	\$0.00	\$71,537.00	\$6,438.30		police
3104	LUIS BONET	4/1/1998	М	32	4/30/2018	2	4/30/2018	\$0.00	\$62,486.00	\$5,623.77		police
5759	KENNETH BROTZ	2/1/1970	М	50	3/29/2004	16	3/29/2004	\$0.00	\$93,912.00	\$8,452.11		police
6280	BRITTANY BROWN	3/1/1985	F	35	4/12/2010	10	4/12/2010	\$0.00	\$89,293.00	\$8,036.36		police

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Plan Name: City of Delray Beach Police Officers' Retirement System

Social Securit y Number	Name	Date of Birth	Sex	Age	Date of Employment	Years of Credited Service In Plan	Date of Entry Into Plan	Monthly Salary Used to Compute Pension	Total Cash Compensatio n In Period	Amount Contributed To Fund By Member	Notes	Member Type
4231	MARQUES BROWN	10/1/1977	М	43	10/20/2008	15	10/20/2008	\$0.00	\$81,379.00	\$7,324.13		police
0791	RONALD BROWN	5/1/1973	М	47	6/8/2003	17	6/8/2003	\$0.00	\$94,040.00	\$8,463.59		police
3675	SNYDER BRUNO	7/1/1993	М	27	12/16/2019	0	12/16/2019	\$0.00	\$44,030.00	\$3,962.70	New hire	police
8189	JAMES BUTNER	4/1/1991	М	29	8/6/2018	2	8/6/2018	\$0.00	\$58,241.00	\$5,241.73		police
6023	JOHN CACERES DUQUE	6/1/1991	M	29	6/14/2014	6	6/14/2014	\$0.00	\$78,110.00	\$7,029.91		police
6657	BRIAN CAMBELL	6/1/1970	М	50	10/14/2002	20	10/14/2002	\$0.00	\$113,616.00	\$10,225.45		police
7897	GEORGE CASTRO JR	3/1/1986	М	34	6/19/2017	3	6/19/2017	\$0.00	\$61,069.00	\$5,496.25		police
5192	MICHAEL CIANCIARUL I	12/1/1977	М	43	5/17/2010	10	5/17/2010	\$0.00	\$82,898.00	\$7,460.81		police
8822	TODD CLANCY	5/1/1977	М	43	10/7/2002	18	10/7/2002	\$0.00	\$100,957.00	\$9,086.09		police
9551	ANDREW COLLARETT I	12/1/1985	М	35	1/16/2007	13	1/16/2007	\$0.00	\$88,609.00	\$7,974.81		police
5078	DANIEL CRAMER	12/1/1967	М	53	11/7/1994	26	11/7/1994	\$0.00	\$10,947.00	\$985.26	DROP	police
2205	JOHN CRANE- BAKER	7/1/1970	M	50	9/2/1997	23	9/2/1997	\$0.00	\$81,960.00	\$7,376.37	DROP	police
3674	ANDERW CULBERSO N III	12/1/1989	M	31	3/20/2017	3	3/20/2017	\$0.00	\$62,966.00	\$5,666.93		police

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Plan Name: City of Delray Beach Police Officers' Retirement System

Social Securit y	Name	Date of Birth	Sex	Age	Date of Employment	Years of Credited Service In	Date of Entry Into Plan	Monthly Salary Used to Compute	Total Cash Compensatio n In Period	Amount Contributed To Fund By	Notes	Member Type
Number						Plan		Pension		Member		
0561	MATTHEW CUSSON	5/1/1979	M	41	2/18/2020	0	2/18/2020	\$0.00	\$32,703.00	\$2,943.24	New hire	police
5116	MICHAEL DEBREE	12/1/1977	М	43	2/12/2001	19	2/12/2001	\$0.00	\$121,018.00	\$10,891.61		police
0846	MEER DEEN	11/1/1977	М	43	1/18/2006	14	1/18/2006	\$0.00	\$92,434.00	\$8,319.08		police
1500	JERRY DEFRANCO	12/1/1987	M	33	10/19/2015	5	10/19/2015	\$0.00	\$70,011.00	\$6,300.99		police
5294	OLLINSON DELICE	11/1/1992	М	27	2/4/2019	1	2/4/2019	\$0.00	\$59,280.00	\$5,335.24		police
7839	BRUCE DINAN	2/1/1966	М	54	3/15/2002	18	3/15/2002	\$0.00	\$104,919.00	\$9,442.71		police
9547	JAMES FERNANDE Z	1/1/1979	M	41	8/7/2006	14	8/7/2006	\$0.00	\$91,538.00	\$8,238.40		police
7755	DAMIEN FERRAIOLO	1/1/1979	М	41	10/5/2009	11	10/5/2009	\$0.00	\$82,363.00	\$7,412.63		police
0750	DANIEL FERREIRO	3/1/1991	М	29	9/21/2015	5	9/21/2015	\$0.00	\$70,471.00	\$6,342.42		police
3756	GARY FERRERI	4/1/1982	М	38	10/15/2007	13	10/15/2007	\$0.00	\$110,358.00	\$9,932.24		police
4746	ROUMY FLORVIL	4/1/1976	М	44	1/19/2010	10	1/19/2010	\$0.00	\$75,338.00	\$6,780.46		police
0402	RYAN FRAZIER	12/1/1985	М	35	6/7/2010	10	6/7/2010	\$0.00	\$77,807.00	\$7,002.65		police
3111	GINA GALLINA	6/1/1979	F	41	12/24/2004	16	12/24/2004	\$0.00	\$114,059.00	\$10,265.28		police
7862	MICHELLE GEIGER	12/1/1981	F	39	3/5/2018	2	3/5/2018	\$0.00	\$65,678.00	\$5,911.01		police
2929	MICHAEL GERACI	8/1/1982	М	38	6/7/2010	10	6/7/2010	\$0.00	\$80,781.00	\$7,270.32		police

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Social Securit y Number	Name	Date of Birth	Sex	Age	Date of Employment	Years of Credited Service In Plan	Date of Entry Into Plan	Monthly Salary Used to Compute Pension	Total Cash Compensatio n In Period	Amount Contributed To Fund By Member	Notes	Member Type
9081	BRETT GORDON	8/1/1991	М	29	1/5/2015	5	1/5/2015	\$0.00	\$73,951.00	\$6,655.62		police
2845	JOSEPH GRAMMATI CO	5/1/1985	М	35	8/6/2007	13	8/6/2007	\$0.00	\$105,143.00	\$9,462.87		police
1849	TRAVIS GREEN	8/1/1993	М	27	10/30/2017	2	10/30/2017	\$0.00	\$61,134.00	\$5,502.05		police
1336	BRIAN GRIFFITH	7/1/1968	М	52	7/11/2000	20	7/11/2000	\$0.00	\$95,120.00	\$8,560.81	DROP	police
0689	KEVIN GRUBB	1/1/1988	М	32	6/16/2012	8	6/16/2012	\$0.00	\$78,716.00	\$7,084.40		police
9048	NICOLE GUERRIERO	12/1/1973	F	47	9/28/1999	21	9/28/1999	\$0.00	\$127,931.00	\$11,513.83		police
2393	RODNER GUILLAUME	6/1/1979	М	41	10/29/2013	7	10/29/2013	\$0.00	\$71,622.00	\$6,445.97		police
7568	NICOLAS HERNANDE Z	6/1/1986	М	34	10/17/2016	4	10/17/2016	\$0.00	\$57,583.00	\$55,999.58	54698 for prior svc	police
8358	EDWIN HERNANDE Z Jr	4/1/1985	М	35	12/2/2019	0	12/2/2019	\$0.00	\$44,325.00	\$3,989.26	New hire	police
5785	DARRELL HUNTER	3/1/1971	М	49	1/22/2007	13	1/22/2007	\$0.00	\$118,582.00	\$10,672.36		police
3509	ROBERT HUTCHENS	9/1/1986	М	34	11/7/2016	4	11/7/2016	\$0.00	\$65,430.00	\$5,888.66		police
5599	MARK HUYETT	10/1/1985	М	35	3/9/2013	7	3/9/2013	\$0.00	\$74,182.00	\$6,676.40		police
8348	STEVEN HYNES	5/1/1971	М	49	1/18/2000	23	1/18/2000	\$0.00	\$42,209.00	\$3,798.85	Retired	police

Plan Name: City of Delray Beach Police Officers' Retirement System

Social Securit y Number	Name	Date of Birth	Sex	Age	Date of Employment	Years of Credited Service In Plan	Date of Entry Into Plan	Monthly Salary Used to Compute Pension	Total Cash Compensatio n In Period	Amount Contributed To Fund By Member	Notes	Member Type
0196	JASON JABCUGA	2/1/1971	М	49	10/29/2001	20	10/29/2001	\$0.00	\$58,129.00	\$5,231.60	DROP	police
7448	JOSEPH JAWORSKI	5/1/1982	М	38	3/2/2015	5	3/2/2015	\$0.00	\$71,360.00	\$35,563.34	29141 for prior svc	police
9151	HOWARD JENKINS	9/1/1987	М	33	12/4/2017	2	12/4/2017	\$0.00	\$66,961.00	\$6,026.49		police
7377	TANISHA JOHNSON	12/1/1992	F	27	1/7/2019	1	1/7/2019	\$0.00	\$49,729.00	\$4,475.60		police
6012	CASEY KELLY	12/1/1987	М	33	8/20/2013	7	8/20/2013	\$0.00	\$70,818.00	\$6,373.65		police
8880	KYLE KINNEY	5/1/1994	М	26	7/10/2017	3	7/10/2017	\$0.00	\$65,116.00	\$5,860.42		police
2922	MATTHEW KITZEROW	7/1/1987	М	33	4/6/2015	5	4/6/2015	\$0.00	\$73,088.00	\$6,577.94		police
0993	ARIELLE KOPPLIN	3/1/1990	F	30	12/15/2014	6	12/15/2014	\$0.00	\$71,443.00	\$6,429.91		police
7289	BARRY KOPPLIN	7/1/1988	М	32	2/23/2013	7	2/23/2013	\$0.00	\$71,978.00	\$6,478.03		police
6099	JOSEPH KRATZ	9/1/1991	М	29	8/4/2014	6	8/4/2014	\$0.00	\$69,221.00	\$6,229.92		police
0596	TEO KYOTIKKI	8/1/1993	М	27	5/4/2015	5	5/4/2015	\$0.00	\$71,866.00	\$6,467.91		police
0601	CHASON LANG	9/1/1995	М	25	9/8/2020	0	9/8/2020	\$0.00	\$2,305.00	\$207.45	New hire	police
5520	OSCAR LEON	8/1/1984	М	36	9/8/2009	11	9/8/2009	\$0.00	\$87,319.00	\$7,858.70		police
7739	MICHAEL LIBERTA	10/1/1975	М	45	10/18/2013	7	10/18/2013	\$0.00	\$72,203.00	\$6,498.28		police
2149	RYAN LOWRY	10/1/1981	М	39	6/4/2007	13	6/4/2007	\$0.00	\$88,949.00	\$8,005.45		police

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Plan Name: City of Delray Beach Police Officers' Retirement System

Social Securit y Number	Name	Date of Birth	Sex	Age	Date of Employment	Years of Credited Service In Plan	Date of Entry Into Plan	Monthly Salary Used to Compute Pension	Total Cash Compensatio n In Period	Amount Contributed To Fund By Member	Notes	Member Type
9819	MARK LUCAS	8/1/1971	М	49	9/25/1995	25	9/25/1995	\$0.00	\$102,460.00	\$9,221.44		police
6922	NICOLE LUCAS	11/1/1980	F	40	3/27/2006	14	3/27/2006	\$0.00	\$92,196.00	\$8,297.65		police
2125	HENRY LUGO FERNANDE Z	6/1/1983	M	37	6/11/2007	13	6/11/2007	\$0.00	\$92,178.00	\$8,296.06		police
5381	KYLE LUNDGREN	5/1/1983	М	37	1/4/2010	10	1/4/2010	\$0.00	\$76,040.00	\$6,843.60	Deferred Vested	police
8451	HOWARD LUNSFORD	4/1/1987	М	33	6/14/2014	6	6/14/2014	\$0.00	\$74,213.00	\$6,679.15		police
3311	RUSS MAGER	12/1/1965	М	55	7/11/1996	24	7/11/1996	\$0.00	\$32,597.00	\$2,933.70	DROP	police
7303	BERNENDA MARC	6/1/1991	F	29	5/16/2016	4	5/16/2016	\$0.00	\$65,760.00	\$3,566.65		police
1471	ADAM MARGOLIS	9/1/1977	М	43	6/1/2001	19	6/1/2001	\$0.00	\$110,547.00	\$9,949.24		police
7968	ANGELO MARSEILLE	7/1/1987	М	33	1/17/2017	3	1/17/2017	\$0.00	\$64,470.00	\$5,802.31		police
8252	ANTHONY MARTINEZ	9/1/1970	М	50	3/29/2004	16	3/29/2004	\$0.00	\$118,741.00	\$10,686.70		police
4288	ANTHONY MASI	1/1/1993	М	27	3/20/2017	3	3/20/2017	\$0.00	\$67,705.00	\$6,093.41		police
0815	EDWARD MCCABE	4/1/1980	М	40	2/6/2002	18	2/6/2002	\$0.00	\$123,246.00	\$11,092.12		police
2601	LEO MCCABE JR	9/1/1978	М	42	3/1/2010	10	3/1/2007	\$0.00	\$102,691.00	\$9,242.15		police
2365	KIMBERLY MEAD	12/1/1986	F	34	6/7/2010	10	6/7/2010	\$0.00	\$84,036.00	\$7,563.26		police

Plan Name: City of Delray Beach Police Officers' Retirement System

Social Securit y Number	Name	Date of Birth	Sex	Age	Date of Employment	Years of Credited Service In Plan	Date of Entry Into Plan	Monthly Salary Used to Compute Pension	Total Cash Compensatio n In Period	Amount Contributed To Fund By Member	Notes	Member Type
9571	JORDAN MEREDITH	10/1/1994	М	26	11/6/2017	2	11/6/2017	\$0.00	\$63,014.00	\$5,671.26		police
3079	GIOVANNI MILICCHIO	12/1/1980	М	40	1/14/2008	12	1/14/2008	\$0.00	\$93,012.00	\$8,371.12		police
9754	BRIAN MILLER	12/1/1978	М	42	4/17/2002	18	4/17/2002	\$0.00	\$97,787.00	\$8,800.86		police
7470	ANDREW MINTUS	3/1/1987	М	33	3/19/2007	13	3/19/2007	\$0.00	\$85,209.00	\$7,668.81		police
6985	RICKEY MITCHELL	3/1/1977	М	43	3/6/2006	14	3/6/2006	\$0.00	\$91,062.00	\$8,195.61		police
4587	JOSHUA MOHAMMED	10/1/1994	М	26	4/3/2017	3	4/3/2017	\$0.00	\$61,125.00	\$5,501.29		police
1567	WILLIAM MORALES	8/1/1991	М	29	6/19/2017	3	6/19/2017	\$0.00	\$65,681.00	\$5,911.32		police
1059	MICHAEL MOSCHETT E	10/1/1968	М	52	2/23/1995	25	2/23/1995	\$0.00	\$60,985.00	\$5,488.69	DROP	police
8992	ROBIN MOSCHETT E	8/1/1975	F	45	3/18/2002	18	3/18/2002	\$0.00	\$93,900.00	\$8,450.99		police
3724	MICHAEL MULLER	5/1/1984	М	36	1/19/2010	10	1/19/2010	\$0.00	\$25,986.00	\$2,338.71	Deferred Vested	police
5456	ELJESA MUSLIU	7/1/1996	F	24	3/23/2020	0	3/23/2020	\$0.00	\$25,518.00	\$2,296.62	New hire	police
2219	MATTHEW NAPARSET EK	3/1/1982	M	38	1/24/2011	9	1/24/2011	\$0.00	\$110,519.00	\$20,736.67	10790 for prior svc	police
1282	ADAN PACHECO	1/1/1973	М	47	8/22/2002	18	12/14/2002	\$0.00	\$110,421.00	\$17,237.16	7299 for prior svc	police

Plan Name: City of Delray Beach Police Officers' Retirement System

Social Securit y Number	Name	Date of Birth	Sex	Age	Date of Employment	Years of Credited Service In Plan	Date of Entry Into Plan	Monthly Salary Used to Compute Pension	Total Cash Compensatio n In Period	Amount Contributed To Fund By Member	Notes	Member Type
0055	KAYLEE PAGE	2/1/1989	F	31	2/26/2016	4	2/26/2016	\$0.00	\$69,946.00	\$6,295.14		police
1626	STANLEY PARZYCK	11/1/1976	М	44	2/12/2001	19	2/12/2001	\$0.00	\$99,763.00	\$8,978.66		police
4487	JESAL PATEL	2/1/1991	М	29	7/18/2016	4	7/18/2016	\$0.00	\$68,308.00	\$6,147.72		police
9385	RODNEY PATRICK JR.	6/1/1990	М	30	7/22/2019	1	7/22/2019	\$0.00	\$59,650.00	\$5,368.50		police
2381	CARLOS PENAGOS	4/1/1988	М	32	8/5/2019	1	8/5/2019	\$0.00	\$59,469.00	\$5,352.19		police
7952	ANTHONY PEREZ	5/1/1989	М	31	6/20/2016	4	6/20/2016	\$0.00	\$66,905.00	\$6,021.42		police
1303	BENDJY PHILIPE	9/1/1990	М	30	4/3/2017	3	4/3/2017	\$0.00	\$6,009.00	\$540.82	Terminated	police
0227	LOISE PIMENTEL	2/1/1992	F	28	5/4/2015	5	5/4/2015	\$0.00	\$71,382.00	\$6,424.34		police
4604	NICHOLAS PRIVITERA	10/1/1994	М	25	8/3/2019	1	8/3/2019	\$0.00	\$59,596.00	\$5,363.60		police
5154	JOHN PULEO	1/1/1995	М	25	1/27/2020	0	1/27/2020	\$0.00	\$29,391.00	\$2,645.18	New hire; terminated 9/22/20	police
6553	DANIELA QUINN	8/1/1982	F	38	10/3/2005	15	10/3/2005	\$0.00	\$121,208.00	\$10,908.76		police
5729	ADRIAN RACKAUSK AS	9/1/1969	М	51	1/24/2011	9	1/24/2011	\$0.00	\$76,226.00	\$6,860.30		police
9691	JEFFREY RASOR	2/1/1969	М	51	5/30/2002	21	5/30/2002	\$0.00	\$127,165.00	\$11,444.84		police

Plan Name: City of Delray Beach Police Officers' Retirement System

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Social Securit y Number	Name	Date of Birth	Sex	Age	Date of Employment	Years of Credited Service In Plan	Date of Entry Into Plan	Monthly Salary Used to Compute Pension	Total Cash Compensatio n In Period	Amount Contributed To Fund By Member	Notes	Member Type
1879	CHARLES REED	4/1/1991	М	29	9/19/2016	4	9/19/2016	\$0.00	\$59,773.00	\$5,379.53		police
6064	JUSTIN REED	7/1/1981	М	39	7/6/2005	15	7/6/2005	\$0.00	\$111,902.00	\$10,071.15		police
2707	DAVION REID	8/1/1995	М	25	4/30/2018	2	4/30/2018	\$0.00	\$54,827.00	\$4,934.44		police
9518	ANNA REINHART	6/1/1996	F	24	10/30/2017	2	10/30/2017	\$0.00	\$64,344.00	\$5,790.98		police
5756	DALLAS RICHARDSO N	10/1/1991	М	28	3/4/2019	1	3/4/2019	\$0.00	\$60,337.00	\$5,430.30		police
0968	ROGER ROBERTS	1/1/1989	М	31	1/5/2015	5	1/5/2015	\$0.00	\$74,632.00	\$6,716.84		police
0875	ROXANNE ROBERTSO N	8/1/1972	F	48	6/4/2007	13	6/4/2007	\$0.00	\$87,967.00	\$7,917.04		police
8879	JONATHAN RUSCZYK	5/1/1975	М	45	1/16/2007	16	1/16/2007	\$0.00	\$94,848.00	\$8,536.30		police
0704	NORMI SAINT MARTIN	4/1/1984	М	36	10/19/2015	5	10/19/2015	\$0.00	\$69,799.00	\$6,281.91		police
0693	ANTHONY SALA	12/1/1985	М	35	12/28/2010	10	12/28/2010	\$0.00	\$82,348.00	\$7,411.33		police
3168	GENE SAPINO	11/1/1970	М	50	4/28/1997	23	4/28/1997	\$0.00	\$154,879.00	\$13,939.08		police
3064	MATTHEW SARACENI	4/1/1977	М	43	9/27/2004	16	9/27/2004	\$0.00	\$100,320.00	\$9,028.84		police
2384	TYSEN SARGENT	6/1/1993	М	27	4/3/2017	3	4/3/2017	\$0.00	\$66,606.00	\$5,994.51		police

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Plan Name: City of Delray Beach Police Officers' Retirement System

Social Securit y	Name	Date of Birth	Sex	Age	Date of Employment	Years of Credited Service In	Date of Entry Into Plan	Monthly Salary Used to Compute	Total Cash Compensatio n In Period	Amount Contributed To Fund By	Notes	Member Type
Number						Plan		Pension		Member		
0675	JAMES SCHMIDT	10/1/1972	М	48	7/22/1999	21	7/22/1999	\$0.00	\$112,595.00	\$10,133.55		police
8474	HANNES SCHOEFER LE	7/1/1981	М	39	2/23/2013	7	2/23/2013	\$0.00	\$101,654.00	\$9,148.89		police
0716	JARED SCHUMER	5/1/1989	М	31	2/23/2013	7	2/23/2013	\$0.00	\$70,768.00	\$6,369.09		police
8101	MICHAEL SCHWARTZ	3/1/1989	М	31	2/23/2013	7	2/23/2013	\$0.00	\$68,056.00	\$6,125.00		police
6193	TERANCE SCOTT	3/1/1971	М	49	7/29/1996	24	7/29/1996	\$0.00	\$61,240.00	\$5,511.58	DROP	police
7183	MICHAEL SHINER	6/1/1981	М	39	2/23/2013	7	2/23/2013	\$0.00	\$78,060.00	\$7,025.44		police
8588	AARON SIEGEL	11/1/1987	М	33	6/7/2010	10	6/7/2010	\$0.00	\$85,840.00	\$7,725.57		police
0554	IAN SITZ	9/1/1989	М	31	2/16/2016	4	2/16/2016	\$0.00	\$65,274.00	\$5,874.63		police
4512	LUIS SKEBERIS	12/1/1985	М	35	10/29/2007	13	10/29/2007	\$0.00	\$103,914.00	\$1,319.63		police
8047	SHAWN SKINNER II	5/1/1992	М	28	10/19/2015	5	10/19/2015	\$0.00	\$69,282.00	\$6,235.41		police
6294	MILTON SMITH	5/1/1989	М	31	5/31/2014	6	5/31/2014	\$0.00	\$73,271.00	\$6,594.35		police
6261	SHANNON SNIFFEN	4/1/1975	F	45	6/23/1999	21	6/23/1999	\$0.00	\$15,391.00	\$1,385.23	Duty Disbility	police
9558	PETER SOSA	6/1/1980	М	40	3/14/2005	18	3/14/2005	\$0.00	\$98,016.00	\$8,821.46		police
4465	JASMINE SPOONER	5/1/1991	F	29	8/4/2014	6	8/4/2014	\$0.00	\$69,980.00	\$6,298.17		police
2968	DAVID STEED	11/1/1958	М	62	1/18/2006	14	9/29/2006	\$0.00	\$83,674.00	\$7,530.63		police

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Social Securit y Number	Name	Date of Birth	Sex	Age	Date of Employment	Years of Credited Service In Plan	Date of Entry Into Plan	Monthly Salary Used to Compute Pension	Total Cash Compensatio n In Period	Amount Contributed To Fund By Member	Notes	Member Type
0695	RODNEY STEVENSO N	3/1/1974	М	46	1/24/2002	18	1/24/2002	\$0.00	\$126,396.00	\$7,583.75		police
2003	JACARIA STRINGER	10/1/1996	F	24	2/3/2020	0	2/3/2020	\$0.00	\$34,244.00	\$3,081.97	New hire	police
8425	CHRISTINE SUAREZ	3/1/1980	F	40	1/7/2004	16	1/7/2004	\$0.00	\$72,465.00	\$6,521.89		police
8980	STEVEN SWANSON	4/1/1970	М	50	11/8/2000	20	11/8/2000	\$0.00	\$93,364.00	\$8,402.72		police
9782	JOHN SWILLEY	8/1/1991	М	29	7/16/2018	2	7/16/2018	\$0.00	\$60,828.00	\$5,474.48		police
3907	JESUS TABARES MEDEROS	1/1/1994	М	27	3/26/2017	4	3/26/2017	\$0.00	\$67,449.00	\$6,070.40		police
9140	CHRISTOPH ER TRAPASSO	5/1/1983	М	37	3/17/2008	12	3/17/2008	\$0.00	\$99,691.00	\$8,972.23		police
1330	KILEY TURNER	11/1/1986	F	34	9/27/2010	10	9/27/2010	\$0.00	\$81,576.00	\$7,341.88		police
1697	FRANK UMBRIAC	4/1/1966	М	54	12/18/2000	20	12/18/2000	\$0.00	\$102,214.00	\$9,199.26		police
3800	RACHEL VAN NESS	8/1/1979	F	41	8/30/2002	18	8/30/2002	\$0.00	\$116,566.00	\$10,490.94		police
6282	MEGAN VICKERY	6/1/1992	F	28	5/16/2016	4	5/16/2016	\$0.00	\$68,029.00	\$6,122.59		police
6197	MATTHEW WARNE	3/1/1987	М	33	2/14/2009	11	2/14/2009	\$0.00	\$82,452.00	\$7,420.70		police
1214	ADAM WHITING	12/1/1977	М	43	2/6/2002	18	2/6/2002	\$0.00	\$100,931.00	\$9,083.76		police

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Social Securit y Number	Name	Date of Birth	Sex	Age	Date of Employment	Years of Credited Service In Plan	Date of Entry Into Plan	Monthly Salary Used to Compute Pension	Total Cash Compensatio n In Period	Amount Contributed To Fund By Member	Notes	Member Type
2393	VINCENT WILDER	3/1/1989	М	31	10/1/2018	2	10/1/2018	\$0.00	\$58,028.00	\$5,222.56		police
9101	THEODORE WILLIAMS	2/1/1986	М	34	5/20/2019	1	5/20/2019	\$0.00	\$58,985.00	\$5,308.62		police
3101	NICHOLAS WINDSOR	11/1/1983	М	37	8/15/2013	7	8/15/2013	\$0.00	\$67,923.00	\$9,875.98	3763 for prior svc	police
3490	JOHN WOODS	10/1/1989	М	31	5/31/2014	6	5/31/2014	\$0.00	\$73,463.00	\$6,611.64		police
5387	JENNIFER WORRELL	3/1/1986	F	34	10/8/2018	1	10/8/2018	\$0.00	\$67,474.00	\$27,669.63	21597 for prior svc	police

Total Number of rows: 156

Member Type	Number of rows	
police	156	

#### Subtotals

Member Type	Subtotal
police	\$1,196,827.30

**Total** \$1,196,827.30

#### **Employee Contribution Percentage**

#### Notes

Plan Name: City of Delray Beach Police Officers' Retirement System

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## DROP Plan Participant Roll Forward

Social Security Number	Name	Date of Birth	Date of Employment	DROP Entry Date	Beginning Balance	Additions - Monthly	Additions - Fiscal Year	Additions - Interest Earned	Distributions	Flex Col 1	Flex Col 2	Ending Balance	Note	Member Type
0000	ADMINISTR ATIVE ACCOUNT	1/1/0001	1/1/0001		\$15,549.17		\$0.00	\$1,878.86			\$16,456.17	\$33,884.20		police
4738	RUSSELL ANZALONE	1/1/1959	12/14/1981	10/1/2006	\$48,131.49		\$0.00	\$919.87	\$7,500.00		\$24.50	\$41,575.86		police
1500	ANDREW ARENA	7/1/1965	1/27/1998	10/1/2018	\$78,404.21		\$68,803.56	\$8,167.44			\$50.67	\$155,425.88		police
4092	SALVATOR E ARENA	7/1/1962	12/18/1987	2/1/2011	\$315,165.29		\$0.00	\$14,589.03			\$169.84	\$329,924.16		police
6037	JEFFREY CALDWELL	1/1/1964	4/25/1994	3/1/2017	\$226,451.81		\$64,923.94	\$16,854.49			\$129.51	\$308,359.75		police
7440	FRANCISCO CASAREZ	8/1/1969	2/27/1995	3/1/2015	\$356,872.34		\$21,187.00	(\$22,106.4 4)	\$356,150.95		\$198.05			police
5078	DANIEL CRAMER	12/1/1967	11/7/1994	12/1/2019	\$0.00		\$77,074.47	\$3,409.42				\$80,483.89		police
2205	JOHN CRANE- BAKER	7/1/1970	9/2/1997	5/1/2020	\$0.00		\$52,200.72	\$1,445.28				\$53,646.00		police
3304	MARK DAVIS - TRUST	11/1/1953	11/28/1977	11/1/2002	\$39,545.89		\$0.00	\$482.61	\$40,000.00		\$15.07	\$43.57		police
3736	PHILIP M DORFMAN	5/1/1964	4/17/1989	5/1/2014	\$440,747.09		\$0.00	\$93,191.91	\$39,000.00		\$238.64	\$495,177.64		police
4143	DWAYNE FERNANDE S	2/1/1969	4/16/1989	5/1/2009	\$40,150.82		\$0.00	\$825.13			\$20.44	\$40,996.39		police
3217	VINCENT GRAY	9/1/1963	2/14/1994	3/1/2019	\$76,647.85		\$113,181.6 0	\$14,028.86		(\$389.77)	\$55.86	\$203,524.40		police
1336	BRIAN GRIFFITH	7/1/1968	7/11/2000	8/1/2020	\$0.00		\$18,382.44	\$263.16				\$18,645.60		police
1629	JOSEPH J HART	10/1/1968	1/5/1990	11/1/2014	\$446,940.85		\$12,768.64	\$95,552.54	\$450,000.00		\$256.34	\$105,518.37		police
7424	CRAIG HARTMANN	4/1/1961	3/28/1982	2/1/2008	\$108,895.87		\$0.00	\$2,237.87			\$55.44	\$111,189.18		police

Plan Name: City of Delray Beach Police Officers' Retirement System

Social Security Number	Name	Date of Birth	Date of Employment	DROP Entry Date	Beginning Balance	Additions - Monthly	Additions - Fiscal Year	Additions - Interest Earned	Distributions	Flex Col 1	Flex Col 2	Ending Balance	Note	Member Type
0196	JASON JABCUGA	2/1/1971	10/29/2001	4/1/2020	\$0.00		\$43,825.53	\$3,124.96		(\$31.28)		\$46,919.21		police
7739	RICHARD L JACOBSON	5/1/1963	10/31/1990	11/1/2016	\$392,980.75		\$89,347.08	\$23,585.03			\$217.56	\$506,130.42		police
0078	ROBERT W KEATING	9/1/1970	6/15/1994	11/1/2014	\$270,128.04		\$0.00	\$12,493.16			\$142.72	\$282,763.92		police
5009	ROSS LICATA	10/1/1957	4/30/1977	10/1/2005	\$211,325.69		\$0.00	\$38,380.40			\$114.33	\$249,820.42		police
4898	HOWARD LUNSFORD	6/1/1957	3/15/1980	2/1/2007	\$549,163.02		\$0.00	\$11,285.63			\$279.60	\$560,728.25		police
3311	RUSS MAGER	12/1/1965	7/11/1996	1/1/2020	\$0.00		\$85,151.80	(\$1,302.74)		(\$37.76)		\$83,811.30		police
1205	SCOTT MCGUIRE	4/1/1971	10/24/1996	7/1/2017	\$184,206.54		\$73,686.24	\$13,209.05			\$108.42	\$271,210.25		police
0719	JEFFREY T MESSER	7/1/1965	1/31/1986	8/1/2010	\$354,477.21		\$0.00	\$7,284.73			\$180.47	\$361,942.41		police
4627	JOSEPH MILENKOVI C	7/1/1965	7/5/1990	11/1/2010	\$243,111.90		\$0.00	\$7,346.06			\$125.17	\$250,583.13		police
6357	JEFFREY MILLER	5/1/1957	3/4/1989	5/1/2002	\$200,543.54		\$0.00	\$5,383.50	\$30,000.00		\$102.55	\$176,029.59		police
1171	FRANCIS MOSCHETT E	9/1/1967	2/23/1995	12/1/2014	\$465,250.11		\$0.00	\$24,998.96			\$246.07	\$490,495.14		police
1059	MICHAEL MOSCHETT E	10/1/1968	2/23/1995	3/1/2020	\$0.00		\$78,902.32	\$5,273.48		(\$49.58)		\$84,126.22		police
1544	FREDERICK N PARKER	4/1/1961	10/6/1986	11/1/2006	\$117,889.66		\$0.00	\$2,326.47	\$13,000.00		\$60.02	\$107,276.15		police
7590	RALPH J PHILLIPS	5/1/1958	3/22/1982	4/1/2007	\$634,179.64		\$0.00	\$22,460.35			\$326.40	\$656,966.39		police
5444	PAUL PITTI	3/1/1972	11/25/1997	12/1/2017	\$110,466.67		\$55,155.36	\$15,973.41			\$66.51	\$181,661.95		police
5773	SCOTT PRIVITERA	8/1/1965	11/7/1994	12/1/2017	\$191,145.02		\$96,767.77	\$19,257.22		(\$552.04)	\$114.47	\$306,732.44		police
7656	GLEN RASHKIND	2/1/1957	8/29/1988	3/1/2009	\$162,486.35		\$0.00	\$7,463.42			\$84.27	\$170,034.04		police

Plan Name: City of Delray Beach Police Officers' Retirement System

#### 2020 Annual Report

Social Security Number	Name	Date of Birth	Date of Employment	DROP Entry Date	Beginning Balance	Additions - Monthly	Additions - Fiscal Year	Additions - Interest Earned	Distributions	Flex Col 1	Flex Col 2	Ending Balance	Note	Member Type
1193	GERARDO RICCIO	10/1/1971	6/23/1999	10/1/2019	\$0.00		\$74,523.02	\$5,281.87			\$12.02	\$79,816.91		police
2881	TONY RUBIN	11/1/1960	1/13/1986	2/1/2011	\$9,239.37		\$0.00	\$438.06			\$4.83	\$9,682.26		police
1192	RACHEL SAUNDERS	7/1/1970	6/12/1995	12/1/2017	\$215,475.82		\$105,615.1 2	\$25,651.46		(\$711.42)	\$129.94	\$346,160.92		police
1876	JOSEPH SCHROEDE R	12/1/1956	10/2/1978	3/1/2005	\$435,292.65		\$0.00	\$8,945.53			\$221.62	\$444,459.80		police
6193	TERANCE SCOTT	3/1/1971	7/29/1996	4/1/2020	\$0.00		\$54,585.02	\$3,186.18		(\$32.64)		\$57,738.56		police
5070	PAUL SHERSTY	2/1/1962	4/25/1991	5/1/2011	\$59,973.90		\$0.00	\$3,356.37			\$31.59	\$63,361.86		police
5734	JAVARO SIMS	6/1/1960	9/28/1992	10/1/2017	\$272,729.44		\$125,882.4 5	\$22,329.73		(\$876.79)	\$163.22	\$420,228.05		police
9070	DAVID WEATHERS POON	5/1/1969	3/7/1993	4/1/2016	\$380,584.53		\$97,674.40	\$35,542.14			\$216.71	\$514,017.78		police
8730	PAUL WEBER	1/1/1966	1/20/1998	9/1/2018	\$85,470.33		\$69,786.72	\$10,359.97		(\$349.79)	\$55.10	\$165,322.33		police
8717	RANDALL W WILSON	12/1/1961	11/20/1989	7/1/2010	\$295,445.67		\$0.00	\$17,215.91			\$155.98	\$312,817.56		police
6676	JAMES W. WINTEMUT E	7/1/1959	1/25/1988	2/1/2006	\$260,151.14		\$0.00	\$69,041.48	\$8,000.00		\$146.85	\$321,339.47		police

Total Number of rows: 43

Member Type	Number of rows	
police		43

Subtotals	Fire	Police	General
Total Beginning Balance	\$0.00	\$8,295,219.67	\$0.00
Total Fiscal Year Additions	\$0.00	\$1,479,425.20	\$0.00

LR003			4/19	9/2021 12:49:10 PM
Plan Name: City of Delray Beach Police O	fficers' Retirement System			
2020 Annual Report				
Total Interest Earned	\$0.00	\$651,631.82	\$0.00	
Total Distributions	\$0.00	\$943,650.95	\$0.00	
Flex Column 1	\$0.00	(\$3,031.07)	\$0.00	
Flex Column 2	\$0.00	\$20,976.95	\$0.00	
Total Ending Balance	\$0.00	\$9,500,571.62	\$0.00	

Notes

Plan Name: City of Delray Beach Police Officers' Retirement System

2020 Annual Report

# Share Plan Participant Roll Forward

Social Security Number	Share Plan Entry Date	Beginning Balance	Premium Tax Shares Allocated In Period	Administrative Fees	Reduction	1	Ending Balance	Note	Member Type

Total Number of rows: 0

Subtotals	Fire	Police	General
Expected Total Beginning Balance	\$0.00	\$0.00	\$0.00
Expected Premium Tax Share Allocated In Period	\$0.00	\$0.00	\$0.00
Expected Total Interest Income	\$0.00	\$0.00	\$0.00
Expected Total Administrative Fees	\$0.00	\$0.00	\$0.00
Expected Total Forfeiture Reduction	\$0.00	\$0.00	\$0.00
Expected Total Forfeiture Re-allocation	\$0.00	\$0.00	\$0.00
Flex Column 1	\$0.00	\$0.00	\$0.00
Flex Column 2	\$0.00	\$0.00	\$0.00
Expected Total Distributions	\$0.00	\$0.00	\$0.00
Expected Total Ending Balance	\$0.00	\$0.00	\$0.00
Notes			

#### Notes

Plan Name: City of Delray Beach Police Officers' Retirement System

# Item 5.c. Gabriel, Roeder, Smith & Company

# Item 5.c.i. October 1, 2020 Actuarial Valuation Report

(Will be provided via email when received)

# City of Delray Beach Police Officers' Retirement System

ACTUARIAL VALUATION REPORT AS OF OCTOBER 1, 2020

ANNUAL EMPLOYER CONTRIBUTION FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 2022







May 6, 2021

Board of Trustees City of Delray Beach Police Officers' Retirement System Delray Beach, Florida

Re: City of Delray Beach Police Officers' Retirement System Actuarial Valuation as of October 1, 2020

**Dear Board Members:** 

The results of the October 1, 2020 Annual Actuarial Valuation of the City of Delray Beach Police Officers' Retirement System are presented in this report.

This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The purposes of the valuation are to measure the System's funding progress, to determine the employer contribution rate for the fiscal year ending September 30, 2022, and to determine the actuarial information for Governmental Accounting Standards Board (GASB) Statement No. 67 for the fiscal year ending September 30, 2020. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

The contribution rate in this report is determined using the actuarial assumptions and methods disclosed in Section B of this report. This report includes risk metrics on page 4 but does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

The findings in this report are based on data and other information through September 30, 2020. The valuation was based upon information furnished by the Plan Administrator concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal reasonability and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the Plan Administrator.

Board of Trustees May 6, 2021 Page ii

This report was prepared using certain assumptions approved by the Board as authorized under Florida Statutes and prescribed by the Florida Statutes as described in the section of this report entitled Actuarial Assumptions and Cost Method. The assumed mortality rates detailed in the Actuarial Assumptions and Cost Method section were prescribed by Chapter 112.63, Florida Statutes. All actuarial assumptions used in this report are reasonable for purposes of this valuation.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the City of Delray Beach Police Officers' Retirement System as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board, and with applicable statutes.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

Jeffrey Amrose and Trisha Amrose are members of the American Academy of Actuaries. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein.

The signing actuaries are independent of the plan sponsor.

This actuarial valuation and/or cost determination was prepared and completed by us or under our direct supervision, and we acknowledge responsibility for the results. To the best of our knowledge, the results are complete and accurate. In our opinion, the techniques and assumptions used are reasonable, meet the requirements and intent of Part VII, Chapter 112, Florida Statutes, and are based on generally accepted actuarial principles and practices. 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.

Gabriel, Roeder, Smith & Company will be pleased to review this valuation and Report with the Board of Trustees and to answer any questions pertaining to the valuation.

Respectfully submitted,

GABRIEL, ROEDER, SMITH & COMPANY

Jeffrey/Amrose, MAAA

Enrolled Actuary No. 20-6599

Senior Consultant and Actuary

Trisha Amrose, MAAA

Enrolled Actuary No. 20-8010

Consultant and Actuary



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# **SECTION A**

**DISCUSSION OF VALUATION RESULTS** 

#### **DISCUSSION OF VALUATION RESULTS**

# **Comparison of Required Employer Contributions**

The required employer contribution this year compared with the preceding year is as follows:

	For FYE 9/30/2022 Based on 10/1/2020 Valuation		For FYE 9/30/2021 Based on 10/1/2019 Valuation		Increase (Decrease)	
Required Contribution As % of Contr. Year Payroll	\$	9,022,808 69.56 %	\$	8,932,248 65.93 %	\$	90,560 3.63 %
Estimated State Contribution		606,595		606,595		0
As % of Contr. Year Payroll		4.68 %		4.48 %		0.20 %
Net Employer Contribution		8,416,213		8,325,653		90,560
As % of Contr. Year Payroll		64.88 %		61.45 %		3.43 %

## **Payment of Required Contribution**

The contribution developed in this valuation has been calculated as though payments are made at the end of each biweekly pay period. If the full contribution for the fiscal year ending September 30, 2022 is paid on October 1, 2021, the net required employer contribution is \$8,119,171 or 62.59% of covered payroll.

Further, the required Employer contribution has been computed with the assumption that the amount to be received from the State in FYE 2021 and 2022 will be at least equal to the base amount of \$606,595. If the actual payment from the State falls below this amount, then the Employer must increase its contribution by the difference.

Actual contributions for the fiscal year ending September 30, 2020 were \$6,917,364 from the City plus \$606,595 of Chapter 185 money, for a total of \$7,523,959. The total annual required contribution was \$7,523,959 based on the payment schedule. The excess Chapter 185 revenue of \$261,467 was applied to the Unfunded Actuarial Accrued Liability.

#### **Revisions in Benefits**

There were no revisions in benefits since the prior valuation.

## **Revisions in Actuarial Assumptions and Methods**

There were no changes in assumptions or methods since the prior valuation.

Please note that this valuation reflects the benefit provision which limits the annual benefit to \$108,000 without any assumption for future increases to this amount. We recommend that consideration be given to assuming future increases in this benefit limit when determining the liabilities of the Retirement System.



#### **Actuarial Experience**

There was a net actuarial loss of \$1,955,811 since the last valuation which means that actual experience was less favorable than expected. The loss was primarily due to more retirements than expected and fewer withdrawals than expected. There were 10 new retirees this year (including 1 disability retiree) compared to 6 expected, and there were only 3 members who terminated before retirement eligibility compared to 7 expected. Slightly offsetting these losses was a small investment gain. The investment rate of return was 8.8% based on the market value of assets and 6.8% based on the actuarial value of assets. The net loss caused the required employer contribution to increase by 1.31% of covered payroll.

#### **Funded Ratio**

This year's funded ratio is 63.6%, compared to 62.2% last year. The funded ratio is equal to the actuarial value of assets divided by the actuarial accrued (past service) liability.

## **Analysis of Change in Employer Contribution**

The components of change in the required Employer contribution are as follows:

Contribution Rate Last Year	61.45 %
Experience (Gains) or Losses	1.31
Amortization Payment on UAAL	2.98
Normal Cost Rate	(0.41)
Administrative Expense	(0.25)
Change in State Contribution Rate	(0.20)
Contribution Rate This Year	64.88 %

## **Variability of Future Contribution Rates**

The Actuarial Cost Method used to determine the required contribution is intended to produce contribution rates which are generally level as a percent of payroll. Even so, when experience differs from the assumptions, as it often does, the employer's contribution rate can vary significantly from year-to-year. Over time, if the year-to-year gains and losses offset each other, the contribution rate would be expected to return to the current level, but this does not always happen.

The Market Value of Assets exceeds the Actuarial Value of Assets by \$412,187 as of the valuation date (see Section C). This difference will be gradually recognized over the next several years. In turn, the computed employer contribution rate will decrease by approximately 0.28% of covered payroll over the same period in the absence of offsetting gains and losses.



## **Estimated Required City Contribution for FYE 2023**

The estimated required employer contribution for FYE 2023 compared to the required employer contribution for FYE 2022 is as follows:

	Estimated Required Employer Contribution for FYE 9/30/2023		For FYE 9/30/2022 Based on 10/1/2020 Valuation		Increase (Decrease)	
Required Employer Contribution						
Date of Payment		Biweekly		Biweekly		
Dollar Amount	\$	8,650,000 <sup>1</sup>	\$	8,416,213	\$	233,787
As % of Covered Payroll		63.10 % <sup>1</sup>		64.88 %		(1.78) %

<sup>&</sup>lt;sup>1</sup> Estimated Required Employer Contribution for FYE 2023 assuming no gains, losses, or assumption changes and a 5.67% increase in total covered payroll.

#### **Relationship to Market Value**

If Market Value had been the basis for the valuation, the Employer contribution rate would have been 64.60% and the funded ratio would have been 63.8%. In the absence of other gains and losses, the employer contribution rate should increase to that level over the next several years.

#### **Conclusion**

It is important to note that system assets are insufficient to cover the liabilities for current retirees. As of October 1, 2020, the assets are \$107.5 million and the liability for current retirees is \$115.9 million. Some steps have been taken to address these issues, such as shortening the amortization period and lowering the investment return assumption. Given the low funded ratio, it is advisable to consider further steps, such as making contributions in excess of the minimum required amount. For each additional \$5 million contributed, the funded ratio will increase by 3.0%.

The remainder of this Report includes detailed actuarial valuation results, information relating to the pension fund, financial accounting information, miscellaneous employee data and a summary of plan provisions.



# RISKS ASSOCIATED WITH MEASURING THE ACCRUED LIABILITY AND ACTUARIALLY DETERMINED CONTRIBUTION

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

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 due to changing conditions; 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. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

- 1. Investment risk actual investment returns may differ from the expected returns;
- Contribution risk actual contributions may differ from expected future contributions. For
  example, actual contributions may not be made in accordance with the plan's funding policy or
  material changes may occur in the anticipated number of covered employees, covered payroll,
  or other relevant contribution base;
- 3. Salary and Payroll risk actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
- 4. Longevity risk members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
- 5. Other demographic risks members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The computed contribution rate shown on page 1 may be considered as a minimum contribution rate that complies with the Board's funding policy. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.



#### **PLAN MATURITY MEASURES**

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

	<u>2020</u>	<u> 2019</u>
Ratio of the market value of assets to total payroll	8.8	7.7
Ratio of actuarial accrued liability to payroll	13.7	12.5
Ratio of actives to retirees and beneficiaries	0.9	1.0
Ratio of net cash flow to market value of assets	0.2%	0.2%

#### RATIO OF MARKET VALUE OF ASSETS TO PAYROLL

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

#### RATIO OF ACTUARIAL ACCRUED LIABILITY TO PAYROLL

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 2.5 times the payroll, a change in liability 2% other than assumed would equal 5% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

#### RATIO OF ACTIVES TO RETIREES AND BENEFICIARIES

A young plan with many active members and few retirees will have a high ratio of active to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

#### RATIO OF NET CASH FLOW TO MARKET VALUE OF ASSETS

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions



#### **ADDITIONAL RISK ASSESSMENT**

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.



#### **CHAPTER REVENUE**

Actuarial Confirmation of the Use of State Chapter Money					
Base Amount Previous Plan Year	\$	606,595			
2. Amount Received for Previous Plan Year		868,062			
3. Benefit Improvements		0			
4. Excess Funds for Previous Plan Year		261,467			
5. Accumulated Excess at Beginning of Previous Year		0			
6. Prior Excess Used in Previous Plan Year		261,467			
7. Accumulated Excess as of Valuation Date (Available for Benefit Improvements): (4) + (5) - (6)		0			
8. Base Amount This Plan Year	\$	606,595			

The Accumulated Excess shown in line 7 is being held in reserve and is subtracted from Plan assets. The Base Amount in line 8 is the amount the employer may take as a credit against its required contribution; however, in no event may the employer take credit for more than the actual amount of Chapter revenue received.

Under the mutual agreement between the City and the Union, \$606,595 of annual Chapter 185 revenue will be used as a credit toward the required contribution. Any excess Chapter 185 revenue above this amount will be applied toward the Unfunded Actuarial Accrued Liability.



# **SECTION B**

**VALUATION RESULTS** 

PARTICIPANT DATA				
	October 1, 2020 October 1, 2019			
ACTIVE MEMBERS				
Number		142		149
Covered Annual Payroll	\$	12,275,252	\$	12,821,121
Average Annual Payroll	\$	86,445	\$	86,048
Average Age		36.5		36.7
Average Past Service		9.5		9.7
Average Age at Hire		27.0		27.0
RETIREES, BENEFICIARIES & DROP				
Number		142		133
Annual Benefits	\$	8,508,938	\$	7,621,640
Average Annual Benefit	\$	59,922	\$	57,306
Average Age		60.1	Ť	59.7
DISABILITY RETIREES				
Number		14		13
Annual Benefits	\$	500,643	\$	437,873
Average Annual Benefit	\$	35,760	\$	33,683
Average Age		65.3	·	65.9
TERMINATED VESTED MEMBERS (EXCLU	JDING N	NON-VESTED REI	UNDS	PAYABLE)
Number		9		7
Annual Benefits	\$	200,316	\$	160,656
Average Annual Benefit	\$	22,257	\$	22,951
Average Age		43.9		44.8



ACTUARIALLY DETERMINED CONTRIBUTION (ADC)						
A. Valuation Date	October 1, 2020	October 1, 2019				
B. ADC to Be Paid During Fiscal Year Ending	9/30/2022	9/30/2021				
C. Assumed Dates of Employer Contributions	Biweekly	Biweekly				
D. Annual Payment to Amortize Unfunded Actuarial Liability	\$ 5,915,852	\$ 5,647,913				
E. Employer Normal Cost	2,341,999	2,528,022				
F. ADC if Paid on the Valuation Date: D+E	8,257,851	8,175,935				
G. ADC Adjusted for Frequency of Payments	8,538,205	8,453,508				
H. ADC as % of Covered Payroll	69.56 %	65.93 %				
Assumed Rate of Increase in Covered     Payroll to Contribution Year	5.67 %	5.67 %				
J. Covered Payroll for Contribution Year	12,971,259	13,548,079				
K. ADC for Contribution Year: H x J	9,022,808	8,932,248				
L. Estimated Credit for State Revenue in Contribution Year	606,595	606,595				
M. Required Employer Contribution (REC) in Contribution Year	8,416,213	8,325,653				
N. REC as % of Covered Payroll in Contribution Year: M/J	64.88 %	61.45 %				



	ACTUARIAL VALUE OF BENEFITS AND ASSETS						
	Valuation Date Actuarial Present Value of All Projected Benefits for	October 1, 2020	October 1, 2019				
	<ol> <li>Active Members         <ul> <li>a. Service Retirement Benefits</li> <li>b. Vesting Benefits</li> <li>c. Disability Benefits</li> <li>d. Preretirement Death Benefits</li> <li>e. Return of Member Contributions</li> <li>f. Total</li> </ul> </li> </ol>	\$ 72,586,962 4,663,783 1,775,201 633,034 570,823 80,229,803	\$ 78,171,186 4,570,382 1,781,711 634,446 575,084 85,732,809				
	<ol> <li>Inactive Members         <ul> <li>a. Service Retirees &amp; Beneficiaries</li> <li>b. Disability Retirees</li> <li>c. Terminated Vested Members*</li> <li>d. Total</li> </ul> </li> </ol>	110,717,266 5,210,806 1,488,323 117,416,395	98,993,291 4,528,270 1,255,776 104,777,337				
C.	3. Total for All Members  Actuarial Accrued (Past Service)	197,646,198	190,510,146				
Liability under Entry Age Normal  D. Actuarial Value of Accumulated Plan Benefits per FASB No. 35		168,389,329 154,742,510	160,864,884 146,745,543				
E. Plan Assets 1. Market Value 2. Actuarial Value		107,487,424 107,075,237	98,566,550 100,057,422				
F.	Unfunded Actuarial Accrued Liability	61,314,092	60,807,462				
G. Actuarial Present Value of Projected Covered Payroll 113,614,833 114			114,220,792				
H. Actuarial Present Value of Projected  Member Contributions 10,102,375 10,146,9							
l. 	Accumulated Contributions of Active Members	7,559,575	7,721,779				

<sup>\*</sup> Terminated Vested liability includes refunds payable for terminated non-vested members.



CALCULATION OF EMPLOYER NORMAL COST					
A. Valuation Date	October 1, 2020	October 1, 2019			
B. Normal Cost for					
<ol> <li>Service Retirement Benefits</li> <li>Vesting Benefits</li> <li>Disability Benefits</li> <li>Preretirement Death Benefits</li> <li>Return of Member Contributions</li> <li>Total for Future Benefits</li> <li>Assumed Amount for Administrative Expenses</li> <li>Total Normal Cost</li> </ol>	\$ 2,710,416 294,717 125,808 51,623 120,413 3,302,977 143,795 3,446,772	\$ 2,884,184 304,041 131,431 54,753 125,844 3,500,253 181,670 3,681,923			
C. Expected Member Contribution	1,104,773	1,153,901			
D. Employer Normal Cost: B8-C	2,341,999	2,528,022			
E. Employer Normal Cost as a % of Covered Payroll	19.08%	19.72%			



	A. UAAL AMORTIZATION PERIOD AND PAYMENTS						
	Original UAAL			Current UAA	<b>NL</b>		
Date Established	Base Established	Amortization Period (Years)	Years Remaining	Amount	Payment		
10/1/2015	Initial Unfunded Liability	18	13	\$ 37,574,216	\$ 3,909,457		
10/1/2015	Police Reserve	20	15	(2,205,830)	(208,484)		
10/1/2016	Excess State Revenue	20	16	(386,959)	(35,091)		
10/1/2016	Assumption Change	20	16	3,590,454	325,598		
10/1/2016	Actuarial Loss	20	16	416,969	37,813		
10/1/2017	Actuarial Gain	20	17	(600,629)	(52,453)		
10/1/2017	Assumption Change	20	17	11,354,086	991,549		
10/1/2017	Method Change	20	17	(1,959,133)	(171,091)		
10/1/2018	Actuarial Loss	20	18	2,134,934	180,128		
10/1/2018	Assumption Change	20	18	4,348,033	366,851		
10/1/2019	Actuarial Loss	20	19	4,435,517	362,593		
10/1/2019	Assumption Change	20	19	656,623	53,677		
10/1/2020	Actuarial Loss	20	20	1,955,811	155,305		
				\$ 61,314,092	\$ 5,915,852		

# B. Amortization Schedule

The UAAL is being amortized as a level percentage of covered annual payroll over the number of years remaining in the amortization period. The following schedule illustrates the expected amortization of the UAAL:

Amortization Schedule					
Year	Expected UAAL				
2020 2021 2022 2023 2024	\$ 61,314,092 59,137,607 56,740,336 54,106,497 51,219,248				
2025 2030 2035 2040	48,060,597 27,476,159 6,690,541				



# **ACTUARIAL GAINS AND LOSSES**

The assumptions used to anticipate mortality, employment turnover, investment income, expenses, salary increases, and other factors have been based on long range trends and expectations. Actual experience can vary from these expectations. The variance is measured by the gain and loss for the period involved. If significant long-term experience reveals consistent deviation from what has been expected and that deviation is expected to continue, the assumptions should be modified. The net actuarial gain (loss) for the past year is computed as follows:

1. Last Year's UAAL	60,807,462
2. Last Year's Employer Normal Cost	2,528,022
<ul> <li>3. Last Year's Contributions</li> <li>a. Employer Contribution</li> <li>b. State Contribution Used to Offset Required Contribution</li> <li>c. State Contribution Above \$606,595 Base Amount Used Toward UAAL</li> <li>d. Total Contributions</li> </ul>	6,917,364 606,595 261,467 7,785,426
<ul> <li>4. Interest at the Assumed Rate on:</li> <li>a. 1 and 2 for one year</li> <li>b. 3 from dates paid</li> <li>c. a - b</li> </ul>	4,275,145 466,922 3,808,223
5. This Year's Expected UAAL: 1 + 2 - 3d + 4c	59,358,281
6. This Year's Actual UAAL	61,314,092
7. Net Actuarial Gain/(Loss): 5 - 6	(1,955,811)
8. Gain/(Loss) Due to Investments	43,446
9. Gain/(Loss) Due to Other Sources	(1,999,257)



Net actuarial gains/(losses) since October 1, 2016 have been as follows:

Year Ending	Actuarial Gain / (Loss)
9/16	\$ (441,033)
9/17	622,411
9/18	(2,188,278)
9/19	(4,482,956)
9/20	(1,955,811)



The fund earnings and salary increase assumptions have considerable impact on the cost of the plan so it is important that they are in line with the actual experience. The following table shows the actual fund earnings and salary increase rates compared to the assumed rates for the last few years:

	Investment	Return	Salary Increases		
Year Ending	Actual*	Assumed	Actual**	Assumed	
9/30/2014	9.4 %	8.0 %	0.8 %	5.7 %	
9/30/2015	8.8	8.0	9.8	5.6	
9/30/2016	7.1	8.0	3.2	5.7	
9/30/2017	7.1 ***	8.0	4.7	5.5	
9/30/2018	7.4	7.25	6.1	5.5	
9/30/2019	6.6	7.00	13.4	5.5	
9/30/2020	6.8	6.75	5.2	6.0	
Average	7.6 %		6.1 %		

<sup>\*</sup> Prior to 9/30/2017, the investment return was based on the combined Police and Firefighter Retirement System.

The actual investment return rates shown above are based on the actuarial value of assets. The actual salary increase rates shown above are the increases received by those active members who were included in the actuarial valuations both at the beginning and end of each period.



<sup>\*\*</sup> Prior to 9/30/2016, the salary increase was based on the combined Police and Firefighter Retirement System.

<sup>\*\*\*</sup> Before reflecting fresh start of assets as of 10/1/2017.

# **Number Added To and Removed from Active Participation**

# Actual (A) Versus Expected (E) Decrements

Year Ended	Num Add Dur Ye	led ing	& D	vice ROP ement	Disab Retire	-		d In vice E	Vested	erminat Other	ions Tota	als E	Active Members End of Year
9/30/2017	14	9	3	2	0	0	1	0	2	3	5	8	147
9/30/2018	13	14	5	3	1	0	0	0	0	8	8	8	146
9/30/2019	10	7	4	3	0	0	0	0	1	2	3	8	149
9/30/2020	6	13	9	6	1	0	0	0	2	1	3	7	142
9/30/2021				3		0		0				7	



RECENT HISTORY OF VALUATION RESULTS									
	Numl	ber of		Actuarial		Unfunded		Employer N	lormal Cost
Valuation	Active	Inactive	Covered	Value of	Accrued	Accrued	Funded		
Date	Members	Members	Annual Payroll	Assets	Liability	Liability	Ratio	Amount	% of Payroll
10/1/2015	138	133	\$10,388,706	\$74,821,265	\$114,949,865	\$40,128,600	65.1 %	\$1,333,846	12.84 %
10/1/2016	142	136	10,744,421	80,505,959	123,290,864	42,784,905	65.3	1,432,624	13.33
10/1/2017	147	142	11,191,340	87,750,269	138,781,762	51,031,493	63.2	1,803,364	16.11
10/1/2018	146	148	11,449,174	93,680,304	150,628,377	56,948,073	62.2	1,897,283	16.57
10/1/2019	149	153	12,821,121	100,057,422	160,864,884	60,807,462	62.2	2,528,022	19.72
10/1/2020	142	165	12,275,252	107,075,237	168,389,329	61,314,092	63.6	2,341,999	19.08

Results before October 1, 2017 were determined by the Retirement System's prior actuary, Foster & Foster.



RECENT HISTORY OF REQUIRED AND ACTUAL CONTRIBUTIONS										
	End of Required Contributions									
	Year To Which	Employer	Employer & State		d State	Net Emp	loyer	Actu	al Contributi	ions
Valuation Date	Valuation	Amount	% of Payroll	Amount	% of Payroll	Amount	% of Payroll	Employer	State	Total
10/1/2015	9/30/2017	\$5,503,513	50.13 %	\$606,595	5.52 %	\$4,896,918	44.61 %	\$4,896,918	\$742,419	\$5,639,337
10/1/2016	9/30/2018	5,985,879	52.72	606,595	5.34	5,379,284	47.38	5,379,284	786,320	6,165,604
10/1/2017	9/30/2019	6,854,111	57.96	606,595	5.13	6,247,516	52.83	6,247,516	835,929	7,083,445
10/1/2018	9/30/2020	7,523,959	62.19	606,595	5.01	6,917,364	57.18	6,917,364	868,062	7,785,426
10/1/2019	9/30/2021	8,932,248	65.93	606,595	4.48	8,325,653	61.45			
10/1/2020	9/30/2022	9,022,808	69.56	606,595	4.68	8,416,213	64.88			

Results before October 1, 2017 were determined by the Retirement System's prior actuary, Foster & Foster.



#### ACTUARIAL ASSUMPTIONS AND COST METHOD

#### **Valuation Methods**

**Actuarial Cost Method** - Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an **Individual Entry-Age Actuarial Cost Method** having the following characteristics:

- the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement;
- (ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gains/(losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

**Financing of Unfunded Actuarial Accrued Liabilities -** Unfunded Actuarial Accrued Liabilities (full funding credit if assets exceed liabilities) were amortized by level (principal & interest combined) percent-of-payroll contributions over a reasonable period of future years.

Actuarial Value of Assets – The Actuarial Value of Assets phase in the difference between the expected return on actuarial value and actual return on market value of assets at the rate of 20% per year. The Actuarial Value of Assets will be further adjusted to the extent necessary to fall within the corridor whose lower limit is 80% of the Market Value of plan assets and whose upper limit is 120% of the Market Value of plan assets. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than Market Value. During periods when investment performance is less than assumed rate, Actuarial Value of Assets will tend to be greater than Market Value.

#### **Valuation Assumptions**

**The actuarial assumptions used** in the valuation are shown in this Section. Both the economic and decrement assumptions were established following an Experience Investigation for the seven years ended September 30, 2019. For detailed information, refer to the Experience Investigation for the 7 Years Ended September 30, 2019, dated May 19, 2020. The covered group is too small to provide statistically significant experience on which to base the mortality assumption. Mortality is based on a commonly used mortality table and projection scale.

#### **Economic Assumptions**

**The investment return rate** assumed in the valuation is 6.75% per year, compounded annually (net after investment expenses).

The **Inflation Rate** assumed in this valuation is 2.5% per year. The Inflation Rate is defined to be the expected long-term rate of increases in the prices of goods and services.

The assumed **real rate of return** over inflation is defined to be the portion of total investment return that is more than the assumed inflation rate. Considering other economic assumptions, the 6.75% investment return rate translates to an assumed real rate of return over inflation of 4.25%.



The active member population is assumed to remain constant. For purposes of financing the unfunded liabilities, total payroll is assumed to grow at 1.17% per year (the average growth over the last ten years as determined in 2014).

**The rates of salary increase** used are based on the member's service and are shown in the table below. This assumption is used to project a member's current salary to the salaries upon which benefits will be based. Part of the assumption for each age is for merit and/or seniority increase, and the other 2.5% recognizes wage inflation, including price inflation, productivity increases, and other macroeconomic forces.

	% Increase in Salary					
Years of	Merit and	Base	Total			
Service	Seniority	(Economic)	Increase			
0 - 4	4.25%	2.5%	6.75%			
5 - 9	4.00%	2.5%	6.50%			
10 - 14	3.25%	2.5%	5.75%			
15 - 19	3.00%	2.5%	5.50%			
20+	2.75%	2.5%	5.25%			

#### **Demographic Assumptions**

The mortality table is the PUB-2010 Headcount Weighted Safety Below Median Employee Male Table (pre-retirement), the PUB-2010 Headcount Weighted Safety Employee Female Table (pre-retirement), the PUB-2010 Headcount Weighted Safety Below Median Healthy Retiree Male Table (post-retirement) and the PUB-2010 Safety Healthy Retiree Female Table (post-retirement). These tables use ages set forward one year and mortality improvements to all future years after 2010 using scale MP-2018. These are the same rates used for the Special Risk Class members in the July 1, 2020 Actuarial Valuation of the Florida Retirement System (FRS).

FRS Healthy Post-Retirement Mortality for Special Risk Class Members

Sample	Probabili	ty of	Future	e Life
Attained	Dying Nex	t Year	Expectan	cy (years)
Ages (in 2020)	Men	Women	Men	Women
50	0.42 %	0.20 %	32.40	36.24
55	0.56	0.36	27.63	31.21
60	0.93	0.61	23.05	26.43
65	1.32	0.92	18.80	21.93
70	2.09	1.45	14.80	17.68
75	3.56	2.44	11.21	13.75
80	6.35	4.19	8.14	10.30

This assumption is used to measure the probabilities of each benefit payment being made after retirement.



#### FRS Healthy Pre-Retirement Mortality for Special Risk Class Members

Sample	Probabil	ity of	Future	e Life
Attained	Dying Nex	kt Year	Expectan	cy (years)
Ages (in 2020)	Men	Women	Men	Women
50	0.17 %	0.11 %	35.58	39.50
55	0.26	0.16	30.50	34.36
60	0.43	0.22	25.55	29.30
65	0.69	0.30	20.80	24.29
70	1.18	0.55	16.28	19.39
75	2.09	1.08	12.05	14.69
80	6.35	4.19	8.14	10.30

This assumption is used to measure the probabilities of active members dying prior to retirement (75% of pre-retirement deaths are assumed to be service-connected).

For disabled retirees, the male mortality tables are 80% of the PUB-2010 Headcount Weighted General Disabled Retiree Male Table and 20% of the Headcount Weighted Safety Disabled Retiree Male Table, and the female mortality tables are 80% of the PUB-2010 Headcount Weighted General Disabled Retiree Female Table and 20% Headcount Weighted Safety Disabled Retiree Female Table, both with no provision being made for future mortality improvements. These are the same rates used for the Special Risk Class members in the July 1, 2020 Actuarial Valuation of the Florida Retirement System (FRS).

#### **FRS Disabled Mortality for Special Risk Class Members**

Sample	Probabil	ity of	Future	e Life
Attained	Dying Nex	xt Year	Expectan	cy (years)
Ages (in 2020)	Men	Women	Men	Women
50	1.45 %	1.25 %	24.04	26.84
55	1.91	1.50	20.88	23.54
60	2.37	1.81	17.92	20.32
65	3.00	2.22	15.07	17.17
70	3.91	2.90	12.39	14.10
75	5.30	4.13	9.87	11.22
80	7.66	6.21	7.60	8.67



**The rates of retirement** used to measure the probability of eligible members retiring during the next year are as follows:

Normal Retirement for Memi	bers Hired
Before July 7, 2015	

Before July 7, 2015						
Sample	Years of	Probability of				
Ages	Service	<b>Normal Retirement</b>				
55+	10 - 19	25%				
All	20	35%				
	21	10%				
	22	10%				
	23	25%				
	24	25%				
	25	100%				

# Normal Retirement for Members Hired

After July 7, 2015				
Sample	Years of	Probability of		
Ages	Service	<b>Normal Retirement</b>		
55+	10 - 24	25%		
All	25	100%		

No early retirement rates were assumed.

**Rates of separation from active membership** were as shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

Years of	Sample	% of Active Members	
Service	Ages	Separating Within Next Year	
0 - 1	All Ages	9.0 %	
2 - 3		8.5	
4 - 5		8.0	
6 - 7		6.0	
8 - 9		3.0	
10+	0 - 34	3.0	
	35 - 39	2.5	
	40 - 44	2.0	
	45+	1.0	

Rates of disability among active members (75% of disabilities are assumed to be service-connected).

Sample	% Becoming Disabled
Ages	Within Next Year
20	0.07 %
25	0.08
30	0.09
35	0.12
40	0.15
45	0.26
50	0.50
55	0.78



#### **Miscellaneous and Technical Assumptions**

Administrative & Investment

**Expenses** 

The investment return assumption is intended to be the return net of investment expenses. Annual administrative expenses are assumed to be equal to the prior year's expenses. Assumed administrative expenses are added to the Normal Cost.

**Benefit Service** 

Service calculated based on completed months is used to determine the amount of benefit payable.

**Cost of Living Adjustment** 

The cost of living adjustment for members who receive future normal retirement benefits is 1.0% starting on the 25<sup>th</sup> anniversary of the retirees' hire date.

**Decrement Operation** 

Disability and mortality decrements operate during retirement eligibility.

**Decrement Timing** 

Decrements of all types are assumed to occur at the beginning of the year.

**Eligibility Testing** 

Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

**Forfeitures** 

For vested separations from service, it is assumed that 0% of members separating will withdraw their contributions and forfeit an employer financed benefit. It was further assumed that the liability at termination is the greater of the vested deferred benefit (if any) or the member's accumulated contributions.

**Incidence of Contributions** 

Employer contributions are assumed to be made at the end of each biweekly pay period. Member contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.

**Marriage Assumption** 

85% of males and 85% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.

Normal Form of Benefit

10-year certain and life annuity for unmarried participants. For married participants, a monthly income payable for life of the member; upon death of member, 100% of member's benefit payable to spouse for one year and 60% thereafter until death or remarriage of spouse.



Pay Increase Timing Beginning of fiscal year. This is equivalent to assuming that reported

pays represent amounts paid to members during the year ended on

the valuation date.

Service Credit Accruals It is assumed that members accrue one year of service credit per

year.



#### **GLOSSARY**

Actuarial Accrued Liability (AAL)

The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.

**Actuarial Assumptions** 

Assumptions about future plan experience that affect costs or liabilities, such as: mortality, withdrawal, disablement, and retirement; future increases in salary; future rates of investment earnings; future investment and administrative expenses; characteristics of members not specified in the data, such as marital status; characteristics of future members; future elections made by members; and other items.

**Actuarial Cost Method** 

A procedure for allocating the Actuarial Present Value of Future Benefits between the Actuarial Present Value of Future Normal Costs and the Actuarial Accrued Liability.

Actuarial Equivalent

Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.

Actuarial Present Value (APV)

The amount of funds required to provide a payment or series of payments in the future. It is determined by discounting the future payments with an assumed interest rate and with the assumed probability each payment will be made.

Actuarial Present Value of Future Benefits (APVFB)

The Actuarial Present Value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.

**Actuarial Valuation** 

The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB No. 67, such as the Funded Ratio and the Actuarially Determined Contribution (ADC).

**Actuarial Value of Assets** 

The value of the assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the Actuarially Determined Contribution (ADC).



**Amortization Method** A method for determining the Amortization Payment. The most common

methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the rate at which total covered payroll

of all active members is assumed to increase.

Amortization Payment That portion of the plan contribution or ADC which is designed to pay

interest on and to amortize the Unfunded Actuarial Accrued Liability.

**Amortization Period** The period used in calculating the Amortization Payment.

Actuarially Determined The employer's Contribution (ADC) amount or a per

The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under GASB No. 67. The ADC consists of the Employer Normal Cost and

Amortization Payment.

**Closed Amortization Period** A specific number of years that is reduced by one each year, and declines

to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at

the end of two years, etc.

**Employer Normal Cost** The portion of the Normal Cost to be paid by the employer. This is

equal to the Normal Cost less expected member contributions.

**Equivalent Single** For plans that do not establish separate amortization bases (separate Amortization Period components of the UAAL), this is the same as the Amortization Period.

components of the UAAL), this is the same as the Amortization Period. For plans that do establish separate amortization bases, this is the period over which the UAAL would be amortized if all amortization bases were

combined upon the current UAAL payment.

**Experience Gain/Loss** A measure of the difference between the normal cost rate from last year

and the normal cost rate from this year.

**Funded Ratio** The ratio of the Actuarial Value of Assets to the Actuarial Accrued

Liability.

**GASB** Governmental Accounting Standards Board.



GASB No. 67 and GASB No. 68

These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 67 sets the rules for the systems themselves.

**Normal Cost** 

The annual cost assigned, under the Actuarial Cost Method, to the current plan year.

**Open Amortization Period** 

An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.

Unfunded Actuarial Accrued Liability

The difference between the Actuarial Accrued Liability and Actuarial Value of Assets.

Valuation Date

The date as of which the Actuarial Present Value of Future Benefits are determined. The benefits expected to be paid in the future are discounted to this date.





**PENSION FUND INFORMATION** 

# Statement of Plan Assets at Market Value (Net of DROP Balances)

# September 30

Item	2020	2019
A. Cash and Cash Equivalents (Operating Cash)	\$ 11,747	\$ 125,695
B. Receivables		
1. Member Contributions	\$ 42,096	\$ 43,704
2. Interest and Dividends	98,805	137,877
3. Due from Broker	496,094	226,241
4. State Contribution	868,062	-
5. Employer Contribution	-	_
6. Prepaid Expenses and Other	6,995	6,996
7. Total Receivables	\$ 1,512,052	\$ 414,818
C. Investments		
1. Short Term Investments	\$ 1,494,122	\$ 1,577,559
2. Domestic Equities	50,072,860	43,008,490
3. International Equities	22,567,344	17,970,213
4. Domestic Fixed Income	18,503,768	20,369,217
5. International Fixed Income	2,492,882	3,565,215
6. Real Estate	7,760,749	8,108,384
7. Other	3,548,676_	3,738,527
8. Total Investments	\$ 106,440,401	\$ 98,337,605
D. Liabilities		
1. Prepaid City Contribution	\$ -	\$ -
2. Accounts Payable	(83,042)	(75,432)
3. Due to Broker	(393,734)	(236,136)
4. Total Liabilities	\$ (476,776)	\$ (311,568)
E. Market Value of Assets at End of Year	\$ 107,487,424	\$ 98,566,550
F. Allocation of Investments		
<ol> <li>Short Term Investments</li> </ol>	1.4%	1.6%
2. Domestic Equities	47.1%	43.8%
3. International Equities	21.2%	18.3%
4. Domestic Fixed Income	17.4%	20.7%
5. International Fixed Income	2.3%	3.6%
6. Real Estate	7.3%	8.2%
7. Other	3.3%	3.8%
8. Total Investments	100.0%	100.0%



#### **Reconciliation of Plan Assets (Net of DROP Balances)**

September 30

	Item	2020 2019				
Α.	Market Value of Assets at Beginning of Year	\$	98,566,550	\$	94,110,114	
В.	Revenues and Expenditures					
	1. Contributions					
	a. Member Contributions	\$	1,196,828	\$	1,160,807	
	b. Employer Contributions		6,917,364		6,247,516	
	c. State Contributions		868,062		835,929	
	d. Total	\$	8,982,254	\$	8,244,252	
	2. Investment Income					
	a. Interest, Dividends, and Other Income	\$	2,939,496	\$	2,899,990	
	<ul><li>b. Net Realized/Unrealized Gains/(Losses)*</li></ul>		6,287,172		2,005,993	
	c. Investment Expenses		(519,088)		(609,307)	
	d. Net Investment Income	\$	8,707,580	\$	4,296,676	
	3. Benefits and Refunds					
	a. Regular Monthly Benefits	\$	(8,591,907)	\$	(7,799,644)	
	b. Refunds		(33,258)		(103,178)	
	c. Lump Sum Benefits Paid		_			
	d. Total	\$	(8,625,165)	\$	(7,902,822)	
	4. Administrative and Miscellaneous Expenses	\$	(143,795)	\$	(181,670)	
C.	Market Value of Assets at End of Year	\$	107,487,424	\$	98,566,550	

<sup>\*</sup> The breakdown between realized and unrealized gain/losses was not provided.



#### **Reconciliation of DROP Accounts**

Year Balance at Ended Beginning 9/30 of Year		Credits	Interest	Distributions	Balance at End of Year
2017	\$8,869,325	\$968,127	\$594,985	(\$1,589,091)	\$8,843,346
2018	\$8,843,346	\$1,276,707	\$544,655	(\$2,211,770)	\$8,452,938
2019	\$8,452,938	\$1,304,842	\$238,799	(\$1,701,359)	\$8,295,220
2020	\$8,295,220	\$1,479,425	\$669,578	(\$943,651)	\$9,500,572



#### **Actuarial Value of Assets (Net of DROP Balances)**

	Valuation Date – September 30	2019	2020	2021	2022	2023	2024
Α.	Actuarial Value of Assets Beginning of Year	\$ 93,680,304	\$ 100,057,422				
В.	Market Value End of Year	98,566,550	107,487,424				
C.	Market Value Beginning of Year	94,110,114	98,566,550				
D.	Non-Investment/Administrative Net Cash Flow	159,760	213,294				
E.	Investment Income						
	E1. Actual Market Total: B-C-D	4,296,676	8,707,580				
	E2. Assumed Rate of Return	7.00%	6.75%	6.75%	6.75%	6.75%	6.75%
	E3. Assumed Amount of Return	6,563,213	6,761,075				
	E4. Amount Subject to Phase-In: E1–E3	(2,266,537)	1,946,505				
F.	Phased-In Recognition of Investment Income						
	F1. Current Year: 0.2 x E4	(453,307)	389,301				
	F2. First Prior Year	107,452	(453,307)	389,301			
	F3. Second Prior Year	-	107,452	(453,307)	389,301		
	F4. Third Prior Year	-	-	107,452	(453,307)	389,301	
	F5. Fourth Prior Year	-	-	-	107,452	(453,307)	389,301
	F6. Total Phase-Ins	 (345,855)	43,446	43,446	43,446	(64,006)	389,301
G.	Actuarial Value of Assets End of Year						
	G1. Preliminary Actuarial Value of Assets End of Year:						
	A+D+E3+F6	100,057,422	107,075,237				
	G2. Upper Corridor Limit: 120%*B	118,279,860	128,984,909				
	G3. Lower Corridor Limit: 80%*B	78,853,240	85,989,939				
	G4. Final Actuarial Value of Assets End of Year	100,057,422	107,075,237				
Н.	Difference between Market & Actuarial Value of Assets	(1,490,872)	412,187				
I.	Actuarial Rate of Return	6.6%	6.8%				
J.	Market Value Rate of Return	4.6%	8.8%				
K.	Ratio of Actuarial Value of Assets to Market Value	101.5%	99.6%				



Year Ending	Investment Rate of Return*						
September 30th	Market Value	Actuarial Value					
2014	10.0 %	9.4 %					
2015	(1.2)	8.8					
2016	8.9	7.1					
2017	11.3	7.1 **					
2018	7.9	7.4					
2019	4.6	6.6					
2020	8.8	6.8					
Average Returns:							
Last 5 Years	8.3 %	7.0 %					
All Years	7.1 %	7.6 %					

<sup>\*</sup> Prior to 9/30/2017, the investment return was based on the combined Police and Firefighter Retirement System.

The above rates are based on the retirement system's financial information reported to the actuary. They may differ from figures that the investment consultant reports, in part because of differences in the handling of administrative and investment expenses, and in part because of differences in the handling of cash flows.



<sup>\*\*</sup> Before reflecting fresh start of assets as of 10/1/2017.



FINANCIAL ACCOUNTING INFORMATION

	FASB NO. 35 INFORM	MATION	
Α.	Valuation Date	October 1, 2020	October 1, 2019
В.	Actuarial Present Value of Accumulated Plan Benefits		
	1. Vested Benefits		
	<ul><li>a. Members Currently Receiving Payments</li><li>b. Terminated Vested Members</li><li>c. Other Members</li><li>d. Total</li></ul>	\$ 115,928,072 1,488,323 35,452,803 152,869,198	\$ 103,521,561 1,255,776 39,672,346 144,449,683
	2. Non-Vested Benefits	1,873,312	2,295,860
	3. Total Actuarial Present Value of Accumulated Plan Benefits: 1d + 2	154,742,510	146,745,543
	4. Accumulated Contributions of Active Members	7,559,575	7,721,779
C.	Changes in the Actuarial Present Value of Accumulated Plan Benefits		
	1. Total Value at Beginning of Year	146,745,543	137,292,898
	2. Increase (Decrease) During the Period Attributable to:		
	a. Plan Amendment	0	0
	b. Change in Actuarial Assumptions	0	1,325,559
	c. Latest Member Data, Benefits Accumulated	16 622 122	16 020 009
	and Decrease in the Discount Period d. Benefits Paid	16,622,132 (8,625,165)	16,029,908 (7,902,822)
	e. Net Increase	7,996,967	9,452,645
	3. Total Value at End of Period	154,742,510	146,745,543
D.	Market Value of Assets	107,487,424	98,566,550
E.	Actuarial Assumptions - See page entitled Actuarial Assumptions and Methods		



# SCHEDULE OF CHANGES IN THE EMPLOYER'S NET PENSION LIABILITY AND RELATED RATIOS GASB Statement No. 67

Fiscal year ending September 30,	 2020	2019	2018	2017
Total Pension Liability				
Service Cost	\$ 3,026,742	\$ 2,660,367	\$ 2,250,201	\$ 2,257,858
Interest	11,453,773	10,940,196	10,828,233	10,166,078
Benefit Changes	-	-	-	-
Difference between actual & expected experience	4,122,894	2,398,201	(1,601,389)	3,864,146
Assumption Changes	795,219	4,555,304	12,048,119	-
Benefit Payments	(8,056,133)	(8,196,161)	(8,361,173)	(7,528,330)
Refunds	(33,258)	(103,178)	(117,462)	-
Other	-	-	-	-
Net Change in Total Pension Liability	11,309,237	12,254,729	15,046,529	8,759,752
Total Pension Liability - Beginning	164,643,286	152,388,557	137,342,028	128,582,276
Total Pension Liability - Ending (a)	\$ 175,952,523	\$ 164,643,286	\$ 152,388,557	\$ 137,342,028
Plan Fiduciary Net Position				
Contributions - Employer	6,917,364	6,247,516	5,113,912	5,162,290
Contributions - Employer (from State)	\$ 868,062	\$ 835,929	\$ 786,320	\$ 742,419
Contributions - Non-Employer Contributing Entity	-	-	-	-
Contributions - Member	1,196,828	1,160,807	1,126,780	924,337
Net Investment Income	9,377,158	4,535,475	7,424,945	9,538,904
Benefit Payments	(8,056,133)	(8,196,161)	(8,361,173)	(7,528,330)
Refunds	(33,258)	(103,178)	(117,462)	-
Administrative Expense	(143,795)	(181,670)	(108,929)	(156,400)
Other	 -	-	(160,328) *	-
Net Change in Plan Fiduciary Net Position	10,126,226	4,298,718	5,704,065	8,683,220
Plan Fiduciary Net Position - Beginning	 106,861,770	102,563,052	96,858,987	88,175,767
Plan Fiduciary Net Position - Ending (b)	\$ 116,987,996	\$ 106,861,770	\$ 102,563,052	\$ 96,858,987
Net Pension Liability - Ending (a) - (b)	58,964,527	57,781,516	49,825,505	40,483,041
Plan Fiduciary Net Position as a Percentage				
of Total Pension Liability	66.49 %	64.91 %	67.30 %	70.52 %
Covered Payroll	\$ 12,084,406	\$ 12,078,834	\$ 11,125,424	\$ 10,738,126
Net Pension Liability as a Percentage of Covered Payroll	487.94 %	478.37 %	447.85 %	377.00 %

<sup>\*</sup> Due to Fire Pension fund for final settlement of the Legacy Fund split.



## SCHEDULE OF THE EMPLOYER'S NET PENSION LIABILITY GASB Statement No. 67

FY Ending September 30,	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered Payroll	Net Pension Liability as a % of Covered Payroll	
2017	\$137,342,028	\$ 96,858,987	\$ 40,483,041	70.52%	\$ 10,738,126	377.00%	
2018	152,388,557	102,563,052	49,825,505	67.30%	11,125,424	447.85%	
2019	164,643,286	106,861,770	57,781,516	64.91%	12,078,834	478.37%	
2020	175,952,523	116,987,996	58,964,527	66.49%	12,084,406	487.94%	



## NOTES TO SCHEDULE OF THE EMPLOYER'S NET PENSION LIABILITY GASB Statement No. 67

Valuation Date: October 1, 2019
Measurement Date: September 30, 2020

Roll Forward Procedures: The Total Pension Liability was developed by using standard actuarial

techniques to roll forward amounts from the October 1, 2019 actuarial

valuation one year to the measurement date.

#### Methods and Assumptions Used to Determine Net Pension Liability:

Actuarial Cost Method Entry Age Normal

Roll Forward Procedures The Total Pension Liability was developed by using standard actuarial

techniques to roll forward amounts from the October 1, 2019 actuarial

valuation one year to the measurement date.

Inflation 2.5%

Salary Increases 5.25% to 6.75% depending on service

Investment Rate of Return 6.75%

Retirement Age Experience-based table of rates that are specific to the type of

eligibility condition.

Mortality PUB-2010 Headcount Weighted Safety Below Median Employee Male

Table (pre-retirement), the PUB-2010 Headcount Weighted Safety Employee Female Table (pre-retirement), the PUB-2010 Headcount Weighted Safety Below Median Healthy Retiree Male Table (post-retirement) and the PUB-2010 Safety Healthy Retiree Female Table (post-retirement). These tables use ages set forward one year and mortality improvements to all future years after 2010 using scale MP-2018. These are the same rates used for Special Risk Class members in the July 1, 2019 Actuarial Valuation of the Florida Retirement System

(FRS).

Other Information:

Notes See Section A in the October 1, 2019 Actuarial Valuation Report.

Effective as of October 1, 2019, rates of retirement, withdrawal, salary increases, and mortality were changed. In addition, the investment

return assumption was lowered from 7.00% to 6.75%.



## SCHEDULE OF CONTRIBUTIONS GASB Statement No. 67

	Actuarially		Contribution	Actual Contribution		
FY Ending	Determined	Actual	Deficiency	Covered	as a % of	
September 30, Contribution		Contribution	(Excess)	Payroll	Covered Payroll	
2017	\$ 5,503,513	\$ 5,904,709	\$ (401,196)	\$ 10,738,126	54.99%	
2018	5,985,879	5,720,507	265,372	11,125,424	51.42%	
2019	6,854,111	6,854,111	-	12,078,834	56.74%	
2020	7,523,959	7,523,959	-	12,084,406	62.26%	



## NOTES TO SCHEDULE OF CONTRIBUTIONS GASB Statement No. 67

Valuation Date: October 1, 2018

Notes Actuarially determined contributions are calculated as of October 1,

which is two years prior to the end of the fiscal year in which

contributions are reported.

#### Methods and Assumptions Used to Determine Contribution Rates:

Actuarial Cost Method Entry Age Normal

Amortization Method Level Percentage of Pay, Closed

Remaining Amortization Period 20 years

Asset Valuation Method 5-year smoothed market

Inflation 2.5%

Salary Increases 5.0% to 6.25% based on service

Investment Rate of Return 7.00%

Retirement Age Experience-based table of rates that are specific to the type of

eligibility condition.

Mortality RP-2000 Combined Healthy Participant Mortality Table (for pre-

retirement mortality) and the RP-2000 Mortality Table for Annuitants

(for post-retirement mortality), with mortality improvements

projected to all future years after 2000 using Scale BB. For males, the base mortality rates include a 90% blue collar adjustment and a 10% white collar adjustment. For females, the base mortality rates include a 100% white collar adjustment. These are the same rates used for Special Risk Class members of the Florida Retirement System (FRS) in the July 1, 2018 FRS Valuation, as mandated by Chapter 112.63, Florida

Statutes.

Other Information:

Notes See Section A in the October 1, 2018 Actuarial Valuation Report.

Effective as of October 1, 2018, the investment return assumption was

lowered from 7.25% to 7.00%.



## SINGLE DISCOUNT RATE GASB Statement No. 67

A single discount rate of 6.75% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments of 6.75%. The projection of cash flows used to determine this single discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between the total actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments (6.75%) was applied to all periods of projected benefit payments to determine the total pension liability.

Regarding the sensitivity of the net pension liability to changes in the single discount rate, the following presents the plan's net pension liability, calculated using a single discount rate of 6.75%, as well as what the plan's net pension liability would be if it were calculated using a single discount rate that is 1-percentage-point lower or 1-percentage-point higher.

#### Sensitivity of the Net Pension Liability to the Single Discount Rate Assumption

Current Single Discount									
1% Decrease	1% Increase								
5.75%	6.75%	7.75%							
\$80,609,058	\$58,964,527	\$41,221,081							



### **S**ECTION **E**

**M**ISCELLANEOUS INFORMATION

	RECONCILIATION OF MEMBERSHIP DATA										
		From 10/1/19 To 10/1/20	From 10/1/18 To 10/1/19								
A.	Active Members										
	Number Included in Last Valuation New Members Included in Current Valuation Non-Vested Employment Terminations Vested Employment Terminations DROP Retirement Service Retirements Disability Retirements Deaths Other - Transfer/Rehire	149 6 (1) (2) (8) (1) (1) 0	146 10 (2) (1) (2) (2) 0 0								
	Number Included in This Valuation	142	149								
В.	Terminated Vested Members	<u> </u>									
1. 2. 3. 4. 5. 6. 7.	Number Included in Last Valuation Additions from Active Members Lump Sum Payments/Refund of Contributions Payments Commenced Deaths Other Number Included in This Valuation	7 2 0 0 0 0 0	7 1 0 (1) 0 0 7								
C.	DROP Plan Members										
1. 2. 3. 4. 5.	Number Included in Last Valuation Addition from Active Members Retirements Deaths Resulting in No Further Payments Other Number Included in This Valuation	15 8 (4) 0 0 19	16 2 (3) 0 0 15								
D.	Service Retirees, Disability Retirees and Beneficiaries										
1. 2. 3. 4. 5. 6. 7. 8.	Number Included in Last Valuation Additions from Active Members Additions from DROP Additions from Terminated Vested Members Deaths Resulting in No Further Payments Deaths Resulting in New Survivor Benefits End of Certain Period - No Further Payments Other Number Included in This Valuation	131 2 4 0 (1) 1 0 0	125 2 3 1 (2) 2 0 0								



#### **ACTIVE MEMBERS AS OF OCTOBER 1, 2020**

AVG PAY 5	0-1 2 07,702 53,851 2 97,697 48,849	1-2 - - - 4 228,942 57,236	2-3 2 126,830 63,415 6 359,260 59,877	3-4 - - - 6 393,682	4-5 - - -	5-9 - - -	10-14 - -	15-19 - - -	20-24 - -	25 & Up - -	Totals 4 234,532
TOT PAY 10 STATE OF THE PAY AVG PAY 25-29 NO TOT PAY AVG PAY 20 STATE OF TOT PAY TOT PAY	.07,702 53,851 2 97,697	4 228,942 57,236	126,830 63,415 6 359,260	393,682		- - -	- - -	- - -	- -	-	234,532
TOT PAY AVG PAY 25-29 NO TOT PAY AVG PAY 25-34 NO TOT PAY	.07,702 53,851 2 97,697	4 228,942 57,236	126,830 63,415 6 359,260	393,682		- - -	- - -	- -	-	-	234,532
AVG PAY  25-29 NO TOT PAY AVG PAY  30-34 NO TOT PAY	53,851 2 97,697	4 228,942 57,236	63,415 6 359,260	393,682		-	-	- -	-	-	
25-29 NO TOT PAY AVG PAY  30-34 NO TOT PAY	2 97,697	4 228,942 57,236	6 359,260	393,682		-	-	-	_		
TOT PAY AVG PAY  30-34 NO TOT PAY	97,697	228,942 57,236	359,260	393,682					-	-	58,633
AVG PAY  30-34 NO TOT PAY		57,236				7	-	-	-	-	29
30-34 NO TOT PAY	48,849 - -		59,877	CF C4 *	262,844	506,047	-	-	-	-	1,848,472
TOT PAY	-	4		65,614	65,711	72,292	-	-	-	-	63,740
	-		2	3	5	14	5	-	-	-	33
AVG PAY		234,959	126,032	192,866	340,444	1,006,675	419,113	-	-	-	2,320,089
	-	58,740	63,016	64,289	68,089	71,905	83,823	-	-	-	70,306
35-39 NO	1	1	1	1	2	7	12	2	-	-	27
TOT PAY	55,453	58,985	65,678	61,069	137,273	586,046	1,145,250	198,910	-	-	2,308,664
AVG PAY	55,453	58,985	65,678	61,069	68,637	83,721	95,438	99,455	-	-	85,506
40-44 NO	1	-	-	_	-	1	12	12	2	-	28
	52,811	-	-	-	_	71,622	1,074,670	1,263,953	217,552	-	2,680,608
	52,811	-	-	-	-	71,622	89,556	105,329	108,776	-	95,736
45-49 NO	-	_	-	_	_	1	1	4	3	-	9
TOT PAY	-	-	-	-	-	72,203	87,967	409,184	350,947	_	920,301
AVG PAY	-	-	-	-	-	72,203	87,967	102,296	116,982	-	102,256
50-54 NO	_	_	_	_	_	1	2	5	2	_	10
TOT PAY	_	_	_	_	_	76,226	203,874	521,847	282,044	_	1,083,991
AVG PAY	-	-	-	-	-	76,226	101,937	104,369	141,022	-	108,399
55-59 NO	_	_	_	_	_	_	_	1	_	_	1
TOT PAY	_	_	_	_	_	_	_	104,919	_	_	104,919
AVG PAY	-	-	-	-	-	-	-	104,919	-	-	104,919
60-64 NO	_	_	_	_	_	_	1	_	_	_	1
TOT PAY	_	_	_	_	_	_	83,674	_	_	_	83,674
AVG PAY	-	-	-	-	-	-	83,674	-	-	-	83,674
65 & Up NO	_	_	_	_	_	_	_	_	_	_	_
TOT PAY	_	_	_	_	_	_	_	_	_	_	_
AVG PAY	-	-	-	-	-	-	-	-	-	-	-
TOT NO	6	9	11	10	11	31	33	24	7	_	142
	13,663	522,886	677,800	647,617	740,561	2,318,819	3,014,548	2,498,813	850,543	_	11,585,250
	52,277	58,098	61,618	64,762	67,324	74,801	91,350	104,117	121,506	_	81,586



#### **INACTIVE MEMBERS AS OF OCTOBER 1, 2020**

	Terminated Vested		Dis	abled	Retired		Beneficiaries		<b>Grand Total</b>	
		Total		Total		Total		Total		Total
Age	Number	Benefits	Number	Benefits	Number	Benefits	Number	Benefits	Number	Benefits
Under 20	0	-	0	-	0	-	3	6,882	3	6,882
20 - 24	0	-	0	-	0	-	1	2,294	1	2,294
25 - 29	0	-	0	-	0	-	1	6,680	1	6,680
30 - 34	0	-	0	-	0	-	0	-	0	-
35 - 39	4	71,436	0	-	0	-	0	-	4	71,436
40 - 44	1	42,480	0	-	1	61,874	1	45,883	3	150,237
45 - 49	1	27,828	2	105,202	9	670,716	0	-	12	803,746
50 - 54	3	58,572	1	24,163	18	1,544,542	0	-	22	1,627,277
55 - 59	0	-	1	42,797	32	2,268,078	3	47,869	36	2,358,744
60 - 64	0	-	3	106,320	32	2,116,337	2	46,391	37	2,269,048
65 - 69	0	-	2	86,492	17	936,806	1	25,023	20	1,048,321
70 - 74	0	-	2	50,762	7	394,676	1	29,988	10	475,426
75 - 79	0	-	0	-	4	138,785	3	53,425	7	192,210
80 - 84	0	-	2	60,006	2	43,621	2	48,069	6	151,696
85 - 89	0	-	1	24,901	0	-	1	6,821	2	31,722
90 - 94	0	-	0	-	0	-	1	14,178	1	14,178
95 - 99	0	-	0	-	0	-	0	-	0	-
100 & Ove	r 0	-	0	-	0	-	0	-	0	-
Total	9	200,316	14	500,643	122	8,175,435	20	333,503	165	9,209,897
Average Ag	ge	44		65		61		60		60



## **SECTION F**

**SUMMARY OF PLAN PROVISIONS** 

#### **SUMMARY OF PLAN PROVISIONS**

#### A. Ordinances

The Plan was established under the Code of Ordinances for the City of Delray Beach, Florida, Chapter 33, and was most recently amended under Ordinance No. 17-16 passed and adopted on its second reading on October 4, 2016. The Plan is also governed by certain provisions of Chapter 185, Florida Statutes, Part VII, Chapter 112, Florida Statutes and the Internal Revenue Code.

#### B. Effective Date

April 22, 1974

#### C. Plan Year

October 1 through September 30

#### D. Type of Plan

Qualified, governmental defined benefit retirement plan; for GASB purposes it is a single employer plan.

#### E. Eligibility Requirements

All full-time police officers participate as a condition of employment. The police chief may elect not to participate.

#### F. Credited Service

Years and completed months of full-time service with the City during which time prescribed employee contributions are made. No service is credited for any periods of employment for which the member received a refund of their contributions.

#### G. Compensation

#### For Members hired prior to July 7, 2015 with 10 or more years of service as of that date:

Compensation is the total actual fixed cash compensation, excluding commissions, overtime and bonuses. Lump sum payment of unused leave is also excluded. Effective October 1, 2006, base earnings include up to 25 hours of overtime per fiscal year.

#### For Members hired prior to July 7, 2015 with less than 10 years of service as of that date:

Compensation is the total actual fixed cash compensation including state education compensation, police basic education, police career education compensation and up to 25 hours of overtime per fiscal year earned through July 7, 2015 but excluding overtime earned after July 7, 2015, bonuses and other payments.



#### For Members hired after July 7, 2015:

Compensation is the total actual fixed cash compensation including state education compensation, police basic education, police career education compensation, but excluding overtime compensation, bonuses and other payments.

#### H. Final Average Compensation (FAC)

#### For Members hired prior to July 7, 2015:

The average of Compensation over the highest 3 years of Credited Service.

#### For Members hired on or after July 7, 2015:

The average of Compensation over the highest 5 years out of the last 10 years of Credited Service.

#### I. Normal Retirement

#### For Members hired prior to July 7, 2015 with 20 or more years of service as of that date:

Eligibility: A member may retire on the first day of the month coincident with or next

following the earlier of:

(1) age 55 and 10 years of Credited Service, or

(2) 20 years of Credited Service regardless of age.

Benefit: 3.00% (or 3.50% of FAC for those electing the enhanced multiplier) for each year of

Credited Service; subject to a maximum benefit equal to 87.50% of FAC.

Normal Form

of Benefit: 10 Years Certain and Life thereafter. For married participants, a monthly income

payable for life of member; upon death of member, 100% of member's benefit payable to spouse for one year and 60% thereafter until death or remarriage of

spouse.

COLA: Cost of living increases of 1.00% apply for those retiring after October 1, 1993,

commencing on the 25<sup>th</sup> anniversary of the retiree's hire date.

#### For Members hired prior to July 7, 2015 with less than 20 years of service as of that date:

Eligibility: A member may retire on the first day of the month coincident with or next

following the earlier of:

(1) age 55 and 10 years of Credited Service, or

(2) 20 years of Credited Service regardless of age.



Benefit:

For those retiring with more than 20 years of service: 3.00% of FAC (or 3.50% of FAC for those electing the enhanced multiplier) for each year of Credited Service prior to July 7, 2015. For Credited Service earned after July 7, 2015, 3.00% of FAC for each year of Credited Service after July 7, 2015. Members hired after April 9, 2013 are not eligible to elect the enhanced multiplier.

**For those retiring with less than 20 years of service:** 2.50% of FAC for each year of Credited Service prior to July 7, 2015. For Credited Service earned after July 7, 2015, 3.00% of FAC for each year of Credited Service after July 7, 2015.

The maximum annual starting benefit is \$108,000, but not less than 2.00% of FAC for each year of continuous service.

**Normal Form** 

of Benefit: 10 Years Certain and Life thereafter. For married participants, a monthly income

payable for life of member; upon death of member, 100% of member's benefit payable to spouse for one year and 60% thereafter until death or remarriage of

spouse.

COLA: Cost of living increases of 1.00% apply for those retiring after October 1, 1993,

commencing on the 25<sup>th</sup> anniversary of the retiree's hire date.

#### For Members hired after July 7, 2015:

Eligibility: A member may retire on the first day of the month coincident with or next

following the earlier of:

(1) age 55 and 10 years of Credited Service, or

(2) 25 years of Credited Service regardless of age.

Benefit: 2.75% of FAC for each year of Credited Service, subject to a maximum annual

starting benefit of \$108,000 (but not less than 2.00% of FAC for each year of

continuous service). The maximum benefit is equal to 68.75% of FAC.

**Normal Form** 

of Benefit: 10 Years Certain and Life thereafter. For married participants, a monthly income

payable for life of member; upon death of member, 100% of member's benefit payable to spouse for one year and 60% thereafter until death or remarriage of

spouse.

COLA: Cost of living increases of 1.00% apply for those retiring after October 1, 1993,

commencing on the 25<sup>th</sup> anniversary of the retiree's hire date.



#### J. Early Retirement

#### For Members hired prior to July 7, 2015:

Eligibility: A member may elect to retire earlier than the Normal Retirement Eligibility upon

attainment of age 50 and 10 years of Credited Service.

Benefit: The Normal Retirement Benefit is reduced by 3.0% for each year by which the

Early Retirement date precedes the Normal Retirement date.

**Normal Form** 

of Benefit: 10 Years Certain and Life thereafter. For married participants, a monthly income

payable for life of member; upon death of member, 100% of member's benefit payable to spouse for one year and 60% thereafter until death or remarriage of

spouse.

COLA: Cost of living increases of 1.00% apply for those retiring after October 1, 1993,

commencing on the 25<sup>th</sup> anniversary of the retiree's hire date.

#### For Members hired on or after July 7, 2015:

Early retirement is not available.

#### K. Delayed Retirement

Same as Normal Retirement taking into account compensation earned and service credited until the date of actual retirement.

#### L. Service Connected Disability

Eligibility: Any member who becomes totally and permanently disabled as a result of an act

occurring in the performance of service for the City is immediately eligible for a

disability benefit.

Benefit: The disability benefit is equal to the accrued benefit, but not less than 60% of FAC.

**Normal Form** 

of Benefit: Payable until death or recovery from disability. 10 Years Certain and Life

thereafter. For married participants, a monthly income payable for life of

member; upon death of member, 100% of member's benefit payable to spouse for

one year and 60% thereafter until death or remarriage of spouse.

COLA: None



#### M. Non-Service Connected Disability

Eligibility: Any member with at least 10 years of Credited Service who becomes totally and

permanently disabled is immediately eligible for a disability benefit.

Benefit: 2.00% of FAC for each year of Credited Service, with a minimum of 25% of FAC.

Normal Form

of Benefit: Payable until death or recovery from disability. 10 Years Certain and Life

thereafter. For married participants, a monthly income payable for life of

member; upon death of member, 100% of member's benefit payable to spouse for

one year and 60% thereafter until death or remarriage of spouse.

COLA: None

#### N. Death in the Line of Duty

Eligibility: Any member whose death is determined to be the result of a service incurred

injury is eligible for survivor benefits regardless of Credited Service.

Benefit: Spouse will receive 50% of FAC, plus 5% to each unmarried child under 18 (age

22 if full-time student), subjected to an overall maximum of 60% of FAC.

**Normal Form** 

of Benefit: Payable for the life of spouse, or until age 18 (age 22 if full-time student) for

children.

COLA: Cost of living increases of 1.00% apply for those retiring after October 1, 1993,

commencing on the 25<sup>th</sup> anniversary of the retiree's hire date.

#### O. Other Pre-Retirement Death

Eligibility: All members are eligible for survivor benefits.

Benefit: \$2,500 lump sum is payable if the member has less than one year of service. A

\$5,000 lump sum is payable if the member has more than one year of service

but less than five.

If the member has five or more years of service, a \$5,000 lump sum is payable, plus a month benefit of 65% of the accrued benefit to the spouse (as of the date of death), subject to a minimum of 20% of AFC. In addition, to eligible children, a monthly benefit is determined in the same manner. The total monthly benefit is subject to a maximum of 50% of AFC and 35% after death or remarriage of

spouse.



Normal Form

of Benefit: Payable for the life of spouse, or until age 18 (age 22 if full-time student) for

children.

COLA: Cost of living increases of 1.00% apply for those retiring after October 1, 1993,

commencing on the 25<sup>th</sup> anniversary of the retiree's hire date.

#### P. Post Retirement Death

Benefit determined by the form of benefit elected upon retirement.

#### Q. Optional Forms

In lieu of electing the Normal Form of benefit, the optional forms of benefits available to all retirees are the life annuity and the 50%, 66 2/3%, 75% and 100% Joint and Survivor options with or without the pop-up feature.

#### R. Vested Termination

Eligibility: A member has earned a non-forfeitable right to Plan benefits after the completion

of 10 years of Credited Service.

Benefit: The benefit is the member's accrued Normal Retirement Benefit. Benefit begins on

the date that would have been the member's Normal Retirement date based on

Credited Service at termination. Members can also elect a reduced Early

Retirement Benefit any time after age 50 (for members hired prior to July 7, 2015).

Normal Form

of Benefit: 10 Years Certain and Life thereafter. For married participants, a monthly income

payable for life of member; upon death of member, 100% of member's benefit payable to spouse for one year and 60% thereafter until death or remarriage of

spouse.

COLA: Cost of living increases of 1.00% apply for those retiring after October 1, 1993,

commencing on the 25<sup>th</sup> anniversary of the retiree's hire date.

S. Refunds

Eligibility: All members terminating employment with less than 10 years of Credited Service

are eligible.

Benefit: Refund of the member's contributions with simple interest of 3%.

#### T. Member Contributions

9.00% of Compensation until the member has earned the maximum normal retirement benefit.



#### **U. State Contributions**

Chapter 185 Premium Tax Refunds.

#### V. Employer Contributions

Any additional amount determined by the actuary needed to fund the plan properly according to State laws.

#### W. Cost of Living Increases

Members who retire after October 1, 1993 receive a 1.00% COLA commencing on the 25<sup>th</sup> anniversary of the retiree's hire date.

#### X. Deferred Retirement Option Plan

Eligibility: Plan members who have met the eligibility requirements for Normal Retirement.

Benefit: The member's Credited Service and FAC are frozen upon entry into the DROP. The

monthly retirement benefit as described under Normal Retirement is calculated

based upon the frozen Credited Service and FAC.

Maximum

DROP Period: 60 months

Interest

Credited: For members who enter the DROP, the member's DROP account is credited at the

net rate of return on retirement fund assets during the period the employee

participates in the DROP.

Normal Form

of Benefit: Lump Sum, Direct Rollover, or Partial Lump Sum with a Direct Rollover of

remaining balance.

#### Y. Other Ancillary Benefits

There are no ancillary retirement type benefits not required by statutes but which might be deemed a City of Delray Beach Police Officers' Retirement System liability if continued beyond the availability of funding by the current funding source.

#### Z. Changes from Previous Valuation

There were no changes from the previous valuation.



# Item 5.d. AndCo Consulting

# Item 5.d.i. Portfolio Performance Review Quarter End March 31, 2021

Investment Performance Review Period Ending March 31, 2021

## **Delray Beach Police Officers' Retirement System**

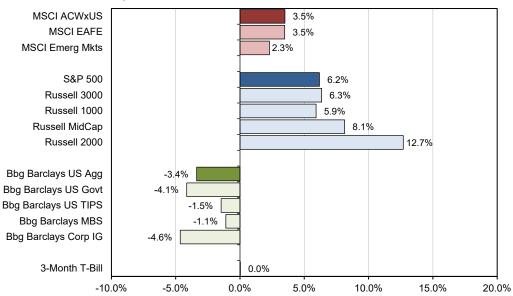


**1st Quarter 2021 Market Environment** 

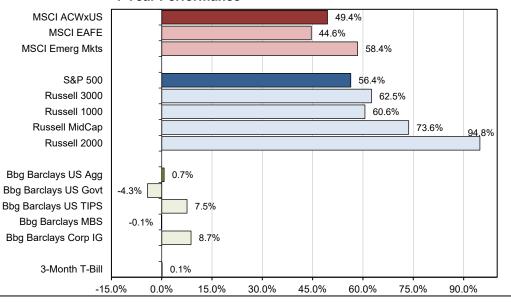


- Broad US equity markets produced positive returns for the 1st quarter of 2021. Performance during the period was largely driven by the effects of the American Rescue Plan (the 3<sup>rd</sup> round of US fiscal stimulus) and the growing deployment of COVID-19 vaccines. In March, President Biden signed the Plan into law providing an additional \$1.9 trillion of economic stimulus to the US which only served to bolster investors' optimism. As a result, for the 1st quarter, higher beta, small company stocks outperformed, returning 12.7% compared to 8.1% for mid-caps and 5.9% for large company stocks. The FDA also approved a third COVID-19 vaccine, a single dose treatment from Johnson & Johnson, for use. This approval created a better alignment of vaccine supply with countywide demand. The equity market has grown immensely over the past year as evidenced by the trailing 1-year chart which details the stellar rebound following a dramatic selloff in the 1st quarter of last year. Despite the sharp downturn at the onset of the pandemic, all broad US equity market indexes have rebounded and are trading at near-record levels. Most notably, domestic small cap stocks have returned 94.9% while US large caps returned 56.4% over the trailing 1-year period.
- Broad international equity markets also posted positive returns for the 1st quarter. Similar to US markets, a theme of optimism surrounding the outlook for global growth and demand drove performance. In the 1st quarter, the MSCI EAFE Index (3.5%) modestly outperformed the MSCI Emerging Markets Index (2.3%) as a strengthening US dollar created headwinds for emerging markets. This trend is reversed over the trailing 1-year period with the MSCI EAFE Index's return of 44.6%, underperforming the MSCI Emerging Markets Index return of 58.4%. While the European Union (EU) passed its largest-ever relief bill at the end of 2020, unlike the relief bills passed in the US, the EU benefits will take months to be dispersed through the economy. This delay most likely played a part in why the MSCI EAFE Index underperformed US markets in the 1st quarter.
- In contrast to equities, fixed income returns were negative during the 1st quarter as long-term interest rates rose and the yield curve noticeably steepened. However, despite this, the Fed reiterated its intent to keep short-term rates low based on the expectation that inflation will not exceed the average 2% target. For the quarter, the Bloomberg Barclays (BB) US Aggregate Index returned -3.4% driven by the underperformance in US Government (-4.1%) and Corporate Investment grade (-4.6%) bonds. For the 1-year period, while not comparable to equity market advances, Corporate Investment Grade credit proved to be an area of strength returning 8.7% and was closely followed by US TIPS returning 7.5%.





#### 1-Year Performance

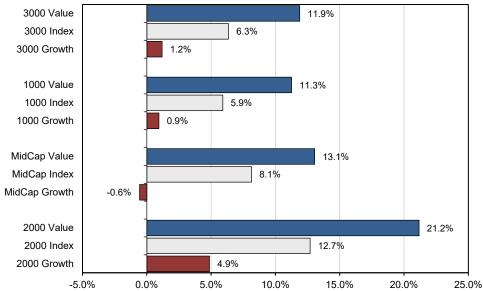


Source: Investment Metrics

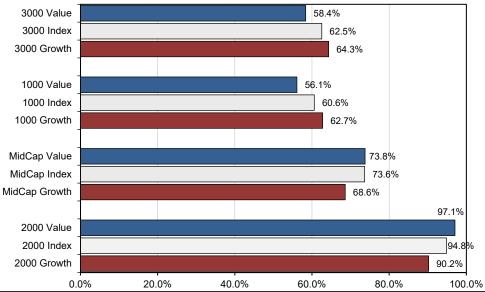


- Continuing their recent trend, the majority of US equities posted their 4<sup>th</sup> straight quarter of positive returns across both the style and market capitalization spectrums, with mid cap growth being the modestly negative outlier. During the quarter, small cap stocks outpaced both mid cap and large cap stocks as momentum related to vaccines and fiscal stimulus drove the market. The Russell 2000 Index returned a strong 12.7% compared to 8.1% for the Russell Mid Cap Index and 5.9% for the Russell 1000 Index.
- Value stocks outpaced growth stocks for the second consecutive quarter. Similar to the 4<sup>th</sup> quarter, the Russell 2000 Value Index was the best performing style index for the quarter with a return of 21.2%. While not as robust as small cap value, both the mid cap (13.1%) and large cap (11.3%) value benchmarks posted double-digit gains. In contrast, growth-oriented companies lagged value-oriented companies at each capitalization level. The widest performance dispersion occurred in small cap with a span of 16.3% separating the growth and value index returns. Beneath the headline index performance, the growth and value differentials are also observable across economic sector returns since the value benchmarks are more heavily weighted to sectors such as energy and financials, which led sector results, while growth indexes are dominated by their weights to technology and healthcare, which lagged.
- Following one of the sharpest drawdowns in history, stock returns were strongly positive over the trailing 1-year period across all styles and market capitalizations. Not surprisingly, higher beta, small cap stocks represented by the Russell 2000 produced an outsized return of 94.8%. While not as strong as small cap, performance in mid cap (73.6%) and large cap (60.6%) benchmarks was also extremely impressive over the trailing year. Despite more than a 30% dispersion between market capitalization performance over the trailing 1-year period, the difference between value and growth index results within each capitalization segment was much narrower. However, these style-based results do show how much value stocks have recovered relative to growth stocks in the recent quarter after lagging significantly following the onset of the pandemic.

#### **Quarter Performance - Russell Style Series**



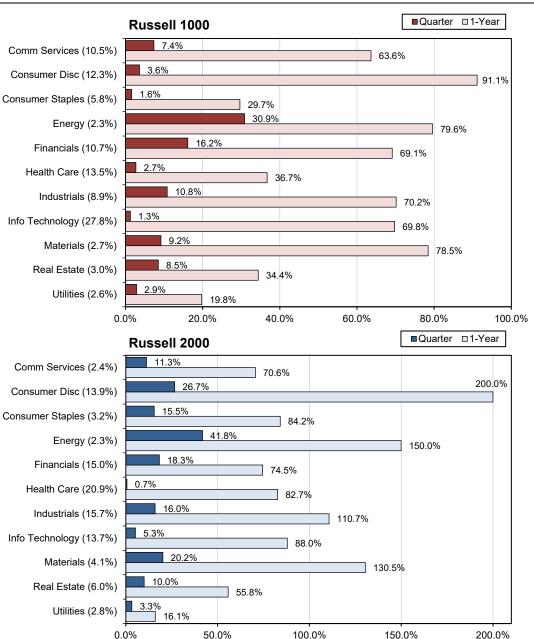
#### 1-Year Performance - Russell Style Series



Source: Investment Metrics



- Sector performance was positive across all eleven large cap economic sectors for the 1st quarter. Six sectors outpaced the return of the broad index during the period. The pro-cyclical rotation that began during the latter part of 2020 continued through the 1st quarter of 2021. Value-oriented sectors like energy and financials were some of the best performers for the quarter returning 30.9% and 16.2%, respectively. The energy sector experienced strong returns primarily due to rising energy prices resulting from increased expectations of economic growth and reduced supply. Financial stocks benefited from rising interest rates which acted as a tailwind to earnings. While all sectors experienced positive returns, consumer staples (1.6%) and information technology (1.3%) were significant laggards relative to their sector peers and the broad index results.
- Over the trailing 1-year period, large cap consumer discretionary (91.1%), energy (79.6%), and materials (78.5%) were the best performing economic sectors. For the full year, seven sectors exceeded the return of the broad benchmark: communication services, consumer discretionary, energy, financials, industrials, information technology, and materials. In contrast, sectors that were less impacted by COVID-19 such as consumer staples and utilities posted solid, but lower, returns for the trailing 1-year period. It is astonishing to observe that the weakest economic sector in the Russell 1000 for the trailing year, utilities, still managed to produce a strong return of 19.8%.
- Similar to large cap stocks, all eleven small cap sectors posted positive performance for the recent quarter and seven of them posted returns greater than the Russell 2000 Index. The index was led higher by strength in the energy sector, which returned 41.8% for the quarter. Consumer discretionary stocks also performed well during the period, returning 26.7%. Some of the Consumer Staples (3.2%) sector's absolute performance for the quarter can be partially attributed to the "Reddit-fueled" individual investor trading frenzy that took place in stocks like GameStop (+907.5%) and AMC Entertainment (+223.1%) which experienced significant positive performance and volatility.
- Small cap stocks significantly outperformed large cap across the majority of economic sectors for the trailing 1-year period. While large cap sector returns were impressive, small cap performance within the consumer discretionary (200.0%) and energy (150.0%) sectors were simply amazing. Consumer discretionary's outsized performance is mainly attributable to the economic recovery seen throughout 2020- multiple stimulus injections into the economy and investor confidence in the progress on vaccines. Like the large cap index, the bottom performing sector in the small cap benchmark was utilities (16.1%). This sector performance produced a staggering dispersion of more than 180% from the best to the worst-performing sector in the Russell 2000.





As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.



Top 10 Weighted Stocks						
Russell 1000	Weight	Weight 1-Qtr 1-Year Return Return		Sector		
Apple Inc	5.15%	-7.8%	93.6%	Information Technology		
Microsoft Corp	4.70%	6.2%	51.0%	Information Technology		
Amazon.com Inc	3.49%	-5.0%	58.7%	Consumer Discretionary		
Facebook Inc A	1.88%	7.8%	76.6%	Communication Services		
Alphabet Inc A	1.65%	17.7%	77.5%	Communication Services		
Alphabet Inc Class C	1.60%	18.1%	77.9%	Communication Services		
Tesla Inc	1.36%	-5.3%	537.3%	Consumer Discretionary		
Berkshire Hathaway Inc Class B	1.28%	10.2%	39.7%	Financials		
JPMorgan Chase & Co	1.23%	20.7%	75.4%	Financials		
Johnson & Johnson	1.15%	5.1%	28.7%	Health Care		

Top 10 Weighted Stocks						
Russell 2000	Weight 1-Qtr 1-Year Return Return		Sector			
Penn National Gaming Inc	0.58%	21.4%	728.8%	Consumer Discretionary		
Caesars Entertainment Inc	0.56%	17.7%	507.3%	Consumer Discretionary		
Plug Power Inc	0.52%	5.7%	912.4%	Industrials		
Darling Ingredients Inc	0.42%	27.6%	283.8%	Consumer Staples		
Novavax Inc	0.39%	62.6%	1235.1%	Health Care		
GameStop Corp Class A	0.38%	907.5%	5323.4%	Consumer Discretionary		
Lithia Motors Inc Class A	0.36%	33.4%	379.8%	Consumer Discretionary		
Sunrun Inc	0.34%	-12.8%	498.8%	Industrials		
Builders FirstSource Inc	0.33%	13.6%	279.1%	Industrials		
RH	0.33%	33.3%	493.8%	Consumer Discretionary		

Top 10 Performing Stocks (by Quarter)						
Russell 1000	Weight	Weight 1-Qtr 1-Year Return Sect		Sector		
Upstart Holdings Inc Ordinary Shares	0.00%	216.2%	N/A	Financials		
TripAdvisor Inc	0.01%	86.9%	209.3%	Communication Services		
Williams-Sonoma Inc	0.04%	76.7%	331.6%	Consumer Discretionary		
Teradata Corp	0.01%	71.5%	88.1%	Information Technology		
Coherent Inc	0.02%	68.6%	137.7%	Information Technology		
Signature Bank	0.03%	67.7%	187.3%	Financials		
L Brands Inc	0.04%	66.3%	435.1%	Consumer Discretionary		
Marathon Oil Corp	0.02%	60.6%	227.4%	Energy		
Cimarex Energy Co	0.02%	59.0%	263.0%	Energy		
Continental Resources Inc	0.01%	58.7%	238.6%	Energy		

Top 10 Performing Stocks (by Quarter)						
Russell 2000	Weight	Weight 1-Qtr 1-Year Return Return		Sector		
GameStop Corp Class A	0.38%	907.5%	5323.4%	Consumer Discretionary		
Cassava Sciences Inc	0.05%	559.1%	993.7%	Health Care		
AMC Entmt Holdings Inc Class A	0.14%	381.6%	223.1%	Communication Services		
Express, Inc.	0.01%	341.8%	169.8%	Consumer Discretionary		
Pandion Therapeutics Inc Ord Shrs	0.03%	304.4%	N/A	Health Care		
Evolus Inc	0.01%	286.6%	213.0%	Health Care		
Immunome Inc Ordinary Shares	0.00%	250.0%	N/A	Health Care		
Rubius Therapeutics Inc	0.03%	249.1%	495.5%	Health Care		
The ExOne Co	0.02%	230.5%	390.8%	Industrials		
Amyris Inc	0.07%	209.3%	646.1%	Materials		

Bottom 10 Performing Stocks (by Quarter)						
Russell 1000	Weight	t 1-Qtr 1-Year Return Return		Sector		
Sarepta Therapeutics Inc	0.01%	-56.3%	-23.8%	Health Care		
C3.ai Inc Ordinary Shares - Class A	0.00%	-52.5%	N/A	Information Technology		
ACADIA Pharmaceuticals Inc	0.01%	-51.7%	-38.9%	Health Care		
Berkeley Lights Inc Ordinary Shares	0.00%	-43.8%	N/A	Health Care		
Unity Software Inc Ordinary Shares	0.01%	-34.6%	N/A	Information Technology		
Adaptive Biotechnologies Corp	0.01%	-31.9%	44.9%	Health Care		
Alteryx Inc Class A	0.01%	-31.9%	-12.8%	Information Technology		
Iovance Biotherapeutics Inc	0.01%	-31.8%	5.8%	Health Care		
American Well Corp Ord Shrs - Class A	0.00%	-31.4%	N/A	Health Care		
Array Technologies Inc Ord Shares	0.01%	-30.9%	N/A	Industrials		

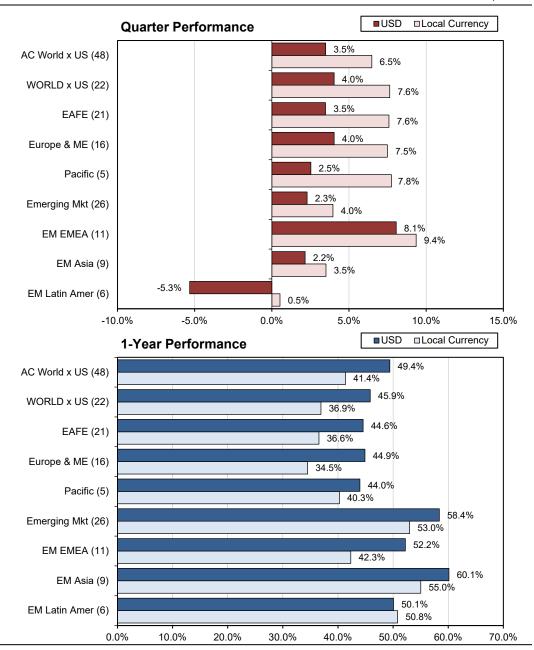
Bottom 10 Performing Stocks (by Quarter)						
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector		
Odonate Therapeutics Inc	0.00%	-82.2%	-87.6%	Health Care		
Graybug Vision Inc Ordinary Shares	0.00%	-80.9%	N/A	Health Care		
Frequency Therapeutics Inc	0.01%	-73.1%	-46.7%	Health Care		
Immunovant Inc	0.02%	-65.3%	3.1%	Health Care		
Imara Inc Ordinary Shares	0.00%	-61.7%	-47.3%	Health Care		
Athenex Inc	0.01%	-61.1%	-44.4%	Health Care		
Concert Pharmaceuticals Inc	0.01%	-60.5%	-43.6%	Health Care		
Amicus Therapeutics Inc	0.09%	-57.2%	6.9%	Health Care		
Oncorus Inc Ordinary Shares	0.00%	-56.9%	N/A	Health Care		
Acutus Medical Inc Ordinary Shares	0.01%	-53.6%	N/A	Health Care		

Source: Morningstar Direct



Nearly all broad international equity indexes the chart tracks posted positive returns in both US dollar (USD) and local currency terms for the 1st quarter. Much like the trend seen in the US equity markets, international benchmarks benefited from the optimism surrounding the continued roll-out of COVID-19 vaccines. Fiscal and monetary stimulus also remained supportive throughout the Eurozone, UK, and Japan in the 1st quarter and benefited from the rebound in demand for global goods. For the period, developed markets outperformed emerging markets in both USD and local currency. The MSCI EAFE Index returned 3.5% in USD and 7.6% in local currency terms for the period while the MSCI Emerging Markets Index returned a lower 2.2% in USD and 3.5% in local currency terms. The performance of both broad international benchmarks faced headwinds from currency conversion as the USD strengthened relative to most major developed currencies and thus led to lower USD results. During the 1st quarter, the only regional index component that had negative performance was EM Latin American. This region's -5.3% return was largely driven by the negative performance of Columbia (-17.2%) and Brazil (-10.0%) during the period.

The trailing 1-year results for international developed and emerging markets were positive across all regions and currencies. The MSCI EAFE Index returned 44.6% in USD and 36.6% in local currency terms, while the MSCI Emerging Markets Index returned 58.4% in USD and 53.0% in local currency terms. Like last quarter, performance within the emerging markets was led by Asian countries with the EM Asia Index region returning 60.1% in USD.



Source: MSCI Global Index Monitor (Returns are Net)



MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.2%	3.9%	42.6%
Consumer Discretionary	12.8%	5.8%	67.3%
Consumer Staples	10.3%	-2.6%	19.0%
Energy	3.3%	10.6%	25.6%
Financials	17.3%	9.7%	54.1%
Health Care	12.0%	-3.9%	17.4%
Industrials	15.5%	5.4%	58.9%
Information Technology	9.0%	2.4%	59.8%
Materials	8.0%	5.2%	73.3%
Real Estate	3.1%	2.5%	31.8%
Utilities	3.7%	-2.6%	28.2%
Total	100.0%	3.5%	44.6%
MSCI - ACWIXUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	7.1%	4.9%	45.2%
Consumer Discretionary	13.7%	2.2%	65.5%
Consumer Staples	8.4%	-2.5%	22.0%
Energy	4.5%	9.6%	36.3%
Financials	18.9%	8.4%	50.0%
Health Care	8.9%	-3.8%	22.2%
Industrials	11.8%	5.2%	57.9%
Information Technology	12.8%	3.5%	82.3%
Materials	8.2%	5.4%	76.2%
Real Estate	2.6%	3.5%	28.9%
Utilities	3.2%	-1.3%	28.4%
Total	100.0%	3.5%	49.4%
MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	11.7%	5.6%	48.9%
Consumer Discretionary	17.7%	-3.1%	61.5%
Consumer Staples	5.6%	-2.8%	34.1%
Energy	4.8%	2.8%	44.6%
Financials	18.2%	3.2%	37.4%
Health Care	4.5%	-4.6%	59.4%
Industrials	4.3%	2.7%	49.9%
Information Technology	20.9%	4.7%	103.9%
Materials	8.1%	9.1%	96.5%
Real Estate	2.2%	5.9%	20.2%
Utilities	2.0%	1.8%	30.4%
Total	100.0%	2.3%	58.4%

	MOOL FAFF	MOOL AOMINIO	O	4 V
Country	MSCI-EAFE	MSCI-ACWIXUS	Quarter Return	1- Year Return
Japan	Weight 24.8%	Weight 15.5%	1.6%	39.7%
United Kingdom	14.3%	8.9%	6.2%	33.5%
Š		7.0%	4.4%	
France	11.1%			50.0%
Germany	9.5%	5.9%	4.2%	59.3%
Switzerland	9.2%	5.7%	-2.0%	23.7%
Australia	7.0%	4.4%	3.4%	68.4%
Netherlands	4.2%	2.6%	11.2%	74.0%
Sweden	3.6%	2.3%	11.3%	75.2%
Hong Kong	3.4%	2.1%	7.3%	37.3%
Italy	2.5%	1.6%	6.3%	53.0%
Spain	2.4%	1.5%	1.0%	36.9%
Denmark	2.4%	1.5%	-3.0%	51.6%
Singapore	1.1%	0.7%	8.9%	40.3%
Finland	1.0%	0.6%	-1.4%	46.8%
Belgium	0.9%	0.6%	-2.6%	32.8%
Ireland	0.7%	0.5%	5.3%	63.1%
Norway	0.6%	0.4%	11.0%	63.5%
Israel	0.6%	0.4%	-0.3%	40.0%
New Zealand	0.3%	0.2%	-10.6%	28.2%
Austria	0.2%	0.1%	9.3%	85.1%
Portugal	0.2%	0.1%	-4.3%	26.1%
Total EAFE Countries	100.0%	62.4%	3.5%	44.6%
Canada		6.7%	9.6%	59.3%
Total Developed Countries		68.8%	15.9%	7.6%
China		11.7%	-0.4%	43.6%
Taiwan		4.3%	10.9%	93.2%
Korea		4.1%	1.6%	89.5%
India		3.0%	5.1%	76.4%
Brazil		1.4%	-10.0%	46.5%
South Africa		1.2%	12.1%	80.5%
Russia		1.0%	4.9%	44.3%
Saudi Arabia		0.9%	16.5%	54.4%
Thailand		0.6%	4.3%	39.1%
Mexico		0.5%	4.2%	58.5%
Malaysia		0.4%	-5.8%	20.8%
Indonesia		0.4%	-7.6%	40.6%
Qatar		0.2%	2.4%	20.8%
Philippines		0.2%	-10.6%	27.2%
Poland		0.2%	-7.5%	29.0%
Chile		0.2%	16.9%	66.2%
United Arab Emirates		0.2%	15.1%	56.5%
Turkey		0.1%	-20.4%	3.8%
Peru		0.1%	-10.6%	32.6%
Hungary		0.1%	0.4%	45.4%
Colombia		0.1%	-17.2%	33.4%
Argentina		0.0%	-6.0%	74.7%
Czech Republic		0.0%	5.5%	64.8%
Greece		0.0%	1.5%	35.3%
Egypt		0.0%	-4.0%	2.1%
Pakistan		0.0%	0.1%	37.8%
Total Emerging Countries		30.7%	2.3%	58.4%
Total ACWIXUS Countries		100.0%	3.5%	49.4%
Total Homixoo oodiitiica		100.070	3.370	73.770

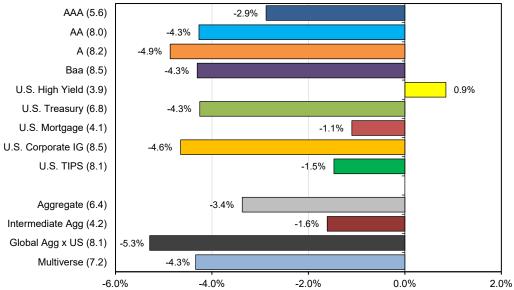
Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)

As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.

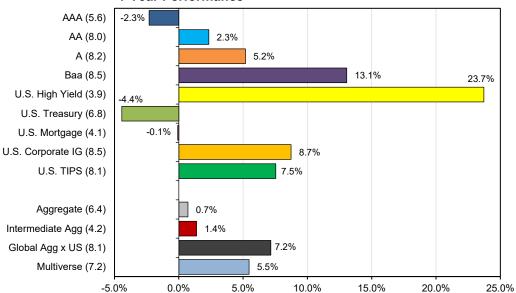


- Fixed income markets declined sharply during the 1st quarter primarily due to rising interest rates which acted as a drag on bond benchmark performance. The Bloomberg Barclays (BB) US Aggregate Bond Index returned -3.4% for the period. Digging deeper into the investment grade index's segments, while each component was negative, the US Treasury (-4.3%) and US Corporate Investment Grade (-4.6%) segments drove the results. Although vields on issues of less than 2-years declined during the guarter, yields on longer-dated issues rose substantially as the term to maturity increased. Notably. US High Yield (non-investment grade) was the only benchmark tracked on the chart to produce a positive result, adding 0.9% for the quarter. High yield bonds generally have a shorter duration compared to either US Treasury or US investment grade corporate bonds, and as such, are less affected by rising interest rates. Importantly, credit spreads also continued to decline during the period which acted as an additional tailwind for high yield issues. Outside of domestic markets, the BB Global Aggregate ex US Index posted a -5.3% return for the guarter. Like international stocks, global bonds were negatively impacted by the strengthening USD. Also notable was the revision in quality's performance in the 1st quarter relative to the previous three quarters. BBB rated credit (-4.3%) underperformed AAA (-2.9%) issues by 1.4%. In contrast, over the trailing 1-year period, BBB issues (13.1%) outpaced AAA issues (-2.3%) by a sizable margin.
- Over the trailing 1-year period, domestic bonds performance was small but positive while global bonds posted solid results. The BB Global Aggregate ex US Index return of 7.2% easily outpaced the domestic BB US Aggregate Index's return of 0.7%. A steepening yield curve, combined with a falling USD, were the primary contributors to the relative outperformance of global bonds. Results for the year were split beneath the headline performance of the BB US Aggregate Index with the US Corporate Investment Grade segment returning 8.7% and the US Treasury segment returning -4.4%. The US High Yield Index's return of 23.7% was a positive outlier in fixed income for the 1-year period. High Yield issues likely benefited both from narrowing of credit spreads as well as capital appreciation following the pandemic's economic shock during the 1st quarter of 2020.





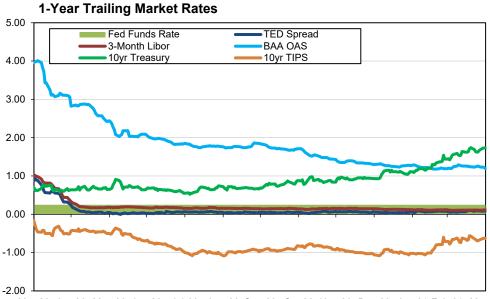
#### 1-Year Performance



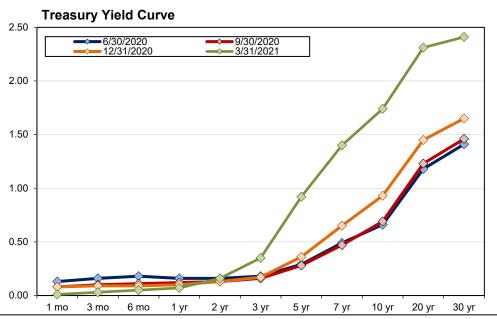
Source: Bloomberg

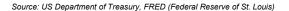


- Much of the index performance detailed in the bar graphs on the previous page is visible on a time series basis in the yield graph to the right. The "1-Year Trailing Market Rates" chart illustrates that throughout 2020 the US 10year Treasury (green line) stayed between 0.5% and 1.0% but began increasing rapidly at the beginning of 2021, reaching a high of 1.74% during the 1st quarter of 2021. At the start of 2020, US interest rates declined significantly following the onset of the pandemic and the response from the US Federal Reserve Bank (Fed) to lower rates back near zero. 2021's acceleration in longer-term rates is due to an increase in investor expectations of stronger economic growth and inflation concerns over the continued issuance of new Treasury bonds by the government to fund stimulus. The blue line illustrates changes in the BAA OAS (Option Adjusted Spread). This measure quantifies the additional yield premium that investors require to purchase and hold non-Treasury investment grade issues. The line illustrates the normalization in credit spreads following the substantial widening at the onset of the pandemic. Credit spreads continued their steady decline through the 1st quarter as concerns over corporate defaults subsided. The green band across the graph illustrates the Fed Funds Rate. Over the past year, the Fed's target rate range has remained unchanged at 0.00% - 0.25%. During its March meeting, the Federal Open Market Committee (FOMC) upgraded its projections for the US economy in 2021 but vowed to keep interest rates near zero while also maintaining its asset purchasing measures aimed at supplying the market with liquidity.
- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four quarters. Beginning in the 4<sup>th</sup> quarter of 2020, longer-term interest rates began to move higher as investors' optimism improved. This trend continued through the 1<sup>st</sup> quarter. Short term interest rates, primarily those under two years, fell modestly while all long-term rates increased. The combination of additional fiscal stimulus, higher expected economic growth, and inflation concerns all contributed to higher long-term rates. The 10-year Treasury ended the quarter at 1.74%, more in line with pre-pandemic levels, compared to 0.52% at its lowest point in 2020 and 0.93% at the beginning of 2021.



Mar-20 Apr-20 May-20 Jun-20 Jul-20 Aug-20 Sep-20 Oct-20 Nov-20 Dec-20 Jan-21 Feb-21 Mar-21







As of March 31, 2021

Total Fund Compliance:	Yes	No	N/A
1. The Total Plan return equaled or exceeded the 7.25% actuarial earnings assumption over the trailing three and five year periods.	•		
2. The Total Plan return equaled or exceeded the total plan benchmark over the trailing three and five year periods.		•	
3. The Total Plan return ranked within the top 40th percentile of its peer group over the trailing three and five year periods.		•	

<sup>\*</sup> Based off net of fees and public plan peer group.

Total Equity Compliance:	Yes	No	N/A
1. Total equity returns meet or exceed the benchmark over the trailing three and five year periods.		•	
2. Total equity returns ranked within the top 40th percentile of its peer group over the trailing three and five year periods.			•
3. The total equity allocation was less than 70% of the total plan assets at market. Actual 70.86		•	
4. Total foreign equity was less than 25% of the total plan assets at market.	•		

Total Fixed Income Compliance:	Yes	No	N/A
1. Total fixed income returns meet or exceed the benchmark over the trailing three and five year periods.		•	
2. Total fixed income returns ranked within the top 40th percentile of its peer group over the trailing three and five year periods.		•	
3. No more than 15% of the fixed income portfolio was rated below BBB/Baa.	•		

	Fic	lelity TM	l lx	Rhum	nbline R	1000V	Во	oston - 3y	r
	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
1. Manager outperformed the index over the trailing three and five year periods.*			•			•	•		
2. Manager ranked within the top 40th percentile over trailing three and five year periods.*			•			•		•	
3. Less than four consecutive quarters of under performance relative to the benchmark.			•			•	•		
4. Three and five-year down-market capture ratio less than the index.*			•			•		•	
5. Manager reports compliance with PFIA.			•			•			•

	Rh	ımbline R	1000G	P	olen LC	G	Fide	lity Mid-C	Сар
	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
1. Manager outperformed the index over the trailing three and five year periods.*			•			•			•
2. Manager ranked within the top 40th percentile over trailing three and five year periods.*			•			•			•
3. Less than four consecutive quarters of under performance relative to the benchmark.			•	•					•
4. Three and five-year down-market capture ratio less than the index.*			•			•			•
5. Manager reports compliance with PFIA.			•			•		·	•



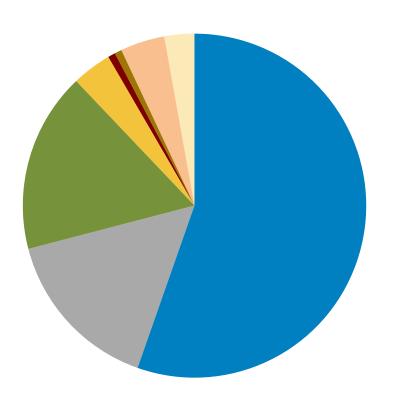
# Delray Beach Police Pension Plan Compliance Checklist As of March 31, 2021

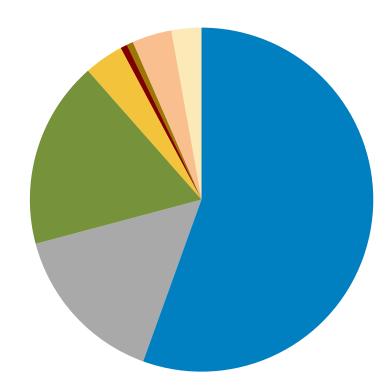
	Cla	rkston- :	3yr	H.L. I	Intl Equ	ity-3yr	(	GHA - 3yr	
	Clarkston- 3yr  Yes No N/			Yes	No	N/A	Yes	No	N/A
1. Manager outperformed the index over the trailing three and five year periods.*	•			•				•	
2. Manager ranked within the top 40th percentile over trailing three and five year periods.*	•			•				•	
3. Less than four consecutive quarters of under performance relative to the benchmark.	•			•			•		
4. Three and five-year down-market capture ratio less than the index.*	•			•			•		
5. Manager reports compliance with PFIA.			•			•	•		

	Loc	omis Bo	nd	Blackro	ock Mul	ti-Asset	Ame	erican Re	alty
	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
1. Manager outperformed the index over the trailing three and five year periods.*			•			•		•	
2. Manager ranked within the top 40th percentile over trailing three and five year periods.*			•			•		•	
3. Less than four consecutive quarters of under performance relative to the benchmark.			•	•			•		
4. Three and five-year down-market capture ratio less than the index.*			•			•			•
5. Manager reports compliance with PFIA.			•			•			•



December 31, 2020 : \$126,422,261 March 31, 2021 : \$129,378,196

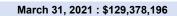


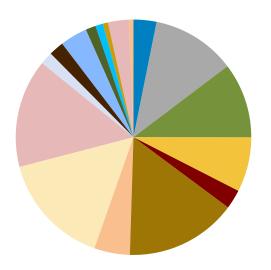


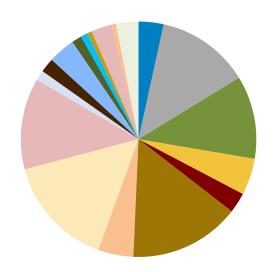
Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
■ US Equity	70,011,807	55.4	■ US Equity	71,830,424	55.5
International Equity	19,675,368	15.6	International Equity	19,848,567	15.3
US Fixed Income	21,426,932	16.9	US Fixed Income	22,804,138	17.6
US Private Real Estate	4,718,081	3.7	US Private Real Estate	4,792,882	3.7
■ US Real Return	880,107	0.7	US Real Return	813,357	0.6
■ Cash	844,550	0.7	■ Cash	793,144	0.6
US Private Equity	5,281,027	4.2	US Private Equity	4,835,253	3.7
US Real Assets	3,584,389	2.8	US Real Assets	3,660,431	2.8



December 31, 2020 : \$126,422,261

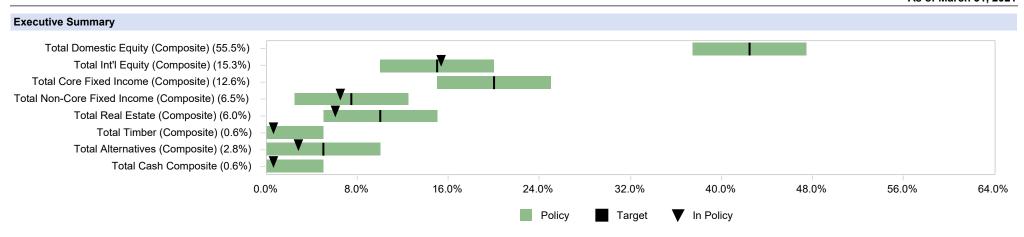


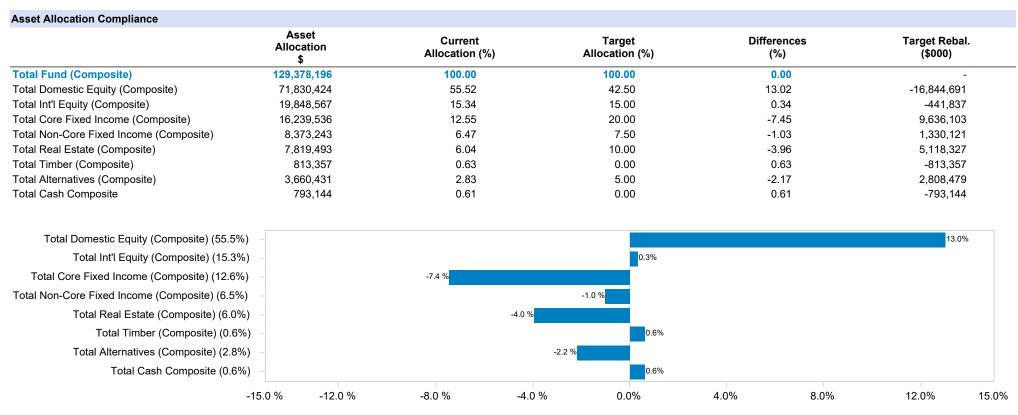




Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
Rhumbline R1000V	3,987,031	3.2	Rhumbline R1000V	4,434,787	3.4
■ Boston LCV	14,582,625	11.5	■ Boston LCV	16,586,270	12.8
■ Clarkston Partners (CISMX)	13,055,626	10.3	Clarkston Partners (CISMX)	14,784,093	11.4
Fidelity Total Market Ix (FSKAX)	9,505,202	7.5	Fidelity Total Market Ix (FSKAX)	6,506,601	5.0
■ Fidelity Mid Cap Index (FSMDX)	3,334,811	2.6	■ Fidelity Mid Cap Index (FSMDX)	3,606,436	2.8
■ Polen Capital LCG	19,372,500	15.3	Polen Capital LCG	19,680,090	15.2
Rhumbline R1000G	6,174,012	4.9	■ Rhumbline R1000G	6,232,148	4.8
Harding Loevner Intl Equity (HLIZX)	19,675,368	15.6	Harding Loevner Intl Equity (HLIZX)	19,848,567	15.3
Garcia Hamilton Fixed Income	18,830,451	14.9	■ Garcia Hamilton Fixed Income	16,239,536	12.6
Crescent Direct Lending Levered Fund	2,203,785	1.7	Crescent Direct Lending Levered Fund	1,808,642	1.4
■ Loomis Sayles Bond Fund (LSBDX)	2,596,482	2.1	■ Loomis Sayles Bond Fund (LSBDX)	2,564,128	2.0
American Core Realty	4,718,081	3.7	American Core Realty	4,792,882	3.7
■ Angelo Gordon Net Lease Realty Fund III, L.P.	1,763,825	1.4	Angelo Gordon Net Lease Realty Fund III, L.P.	1,779,173	1.4
Dune Real Estate Fund III	1,313,417	1.0	Dune Real Estate Fund III	1,247,438	1.0
■ Molpus Woodlands Timber	880,107	0.7	Molpus Woodlands Timber	813,357	0.6
■ Blackrock Multi-Asset Income (BKMIX)	3,584,389	2.8	■ Blackrock Multi-Asset Income (BKMIX)	3,660,431	2.8
■ Mutual Fund Cash	4,374	0.0	■ Mutual Fund Cash	4,377	0.0
■ R&D	840,176	0.7	R&D	788,767	0.6
MainStay High Yield Corp Bond (MHYSX)	-	0.0	MainStay High Yield Corp Bond (MHYSX)	4,000,474	3.1







Allocation Differences



Financial Reconciliation									
	Market Value 01/01/2021	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Market Value 03/31/2021
Total Equity	89,687,175	-3,536,715	-	-	-43,972	-3,813	139,883	5,436,434	91,678,991
Total Domestic Equity	70,011,807	-3,536,715	_	_	-43,972	-3,813	139,883	5,263,235	71,830,424
Boston LCV	14,582,625	-	_	_	-13,800	-1,430	83,059	1,935,815	16,586,270
Rhumbline R1000V	3,987,031	430	_	_	-430	-225	22,657	425,323	4,434,787
Fidelity Total Market Ix (FSKAX)	9,505,202	-3,537,670	_	_	_	-	· -	539,069	6,506,601
Polen Capital LCG	19,372,500	-	_	-	-29,218	-1,899	21,787	316,918	19,680,090
Rhumbline R1000G	6,174,012	525	_	-	-525	-260	12,379	46,017	6,232,148
Fidelity Mid Cap Index (FSMDX)	3,334,811	_	_	-	_	-	-	271,625	3,606,436
Clarkston Partners (CISMX)	13,055,626	-	-	-	-	-	-	1,728,467	14,784,093
Total Int'l Equity	19,675,368	_	_	_	_	_	_	173,199	19,848,567
Harding Loevner Intl Equity (HLIZX)	19,675,368	-	-	-	-	-	-	173,199	19,848,567
Total Fixed Income	23,630,717	1,545,836	-	-	-9,131	-1,837	141,222	-694,028	24,612,780
Total Core Fixed Income	18,830,451	-2,000,000	_	_	-9,131	-1,837	85,959	-665,905	16,239,536
Garcia Hamilton Fixed Income	18,830,451	-2,000,000	_	_	-9,131 -9,131	-1,837	85,959	-665,905	16,239,536
Galdia Hamilton i ixed income	10,030,431	-2,000,000	_	_	-9,101	-1,037	00,909	-005,905	10,239,330
Total Non-Core Fixed Income	4,800,267	3,545,836	-	-	-	-	55,263	-28,122	8,373,243
Crescent Direct Lending Levered Fund	2,203,785	-454,164	-	-	-	-	-	59,021	1,808,642
Loomis Sayles Bond Fund (LSBDX)	2,596,482	-	-	-	-	-	19,359	-51,713	2,564,128
MainStay High Yield Corp Bond (MHYSX)	-	4,000,000	-	-	-	-	35,904	-35,430	4,000,474
Total Real Estate	7,795,323	-77,564	-	-	-13,217	-	47,181	67,769	7,819,493
American Core Realty	4,718,081	-	-	-	-13,217	-	47,181	40,836	4,792,882
Angelo Gordon Net Lease Realty Fund III, L.P.	1,763,825	-30,632	-	-	-	-	-	45,980	1,779,173
Dune Real Estate Fund III	1,313,417	-46,932	-	-	-	-	-	-19,047	1,247,438
Total Timber	880,107	-	-	-	-	-	-	-66,750	813,357
Molpus Woodlands Timber	880,107	-	-	-	-	-	-	-66,750	813,357
Total Alternatives	3,584,389	-	-	-	•	-	37,234	38,809	3,660,431
Blackrock Multi-Asset Income (BKMIX)	3,584,389	-	-	-	-	-	37,234	38,809	3,660,431
Total Cash Accounts	844,550	2,068,443	239,949	-2,324,121	-	-35,694	18	-	793,144
R&D	840,176	2,068,443	239,949	-2,324,121	-	-35,694	15	-	788,767
Mutual Fund Cash	4,374	-	-	-	-	-	3	-	4,377
Total Fund	126,422,261	-	239,949	-2,324,121	-66,320	-41,345	365,538	4,782,234	129,378,196



Financial Reconciliation									
	Market Value 10/01/2020	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Market Value 03/31/2021
Total Equity	70,049,341	3,730,390	-	-	-83,500	-7,543	1,080,103	16,910,200	91,678,991
Total Domestic Equity	53,106,214	3,730,390	_	_	-83,500	-7,543	921,451	14,163,412	71,830,424
Boston LCV	12,068,859	5,750,550		_	-25,868	-2,615	158,652	4,387,242	16,586,270
Rhumbline R1000V	3,431,747	826		_	-826	- <u>2,</u> 013	46,339	957,132	4,434,787
Fidelity Total Market Ix (FSKAX)	-	5,802,363	_	_	-020	-401	117,521	586,717	6,506,601
Polen Capital LCG	17,610,170	3,002,003	_	_	-55,777	-3,626	42,612	2,086,711	19,680,090
Rhumbline R1000G	5,542,622	1,028	_	_	-1,028	-3,0 <u>2</u> 0 -871	26,087	664,310	6,232,148
Fidelity Mid Cap Index (FSMDX)	5,542,022	3,275,970	_	_	-1,020	-071	61,084	269,382	3,606,436
, , ,		3,213,910	-	-		-			
Clarkston Partners (CISMX)	10,610,759	-	-	-	-	-	469,156	3,704,177	14,784,093
Total Int'l Equity	16,943,127	_	-	-	-	-	158,652	2,746,788	19,848,567
Harding Loevner Intl Equity (HLIZX)	16,943,127	-	-	-	-	-	158,652	2,746,788	19,848,567
Total Fixed Income	23,586,656	1,288,980	-	-	-18,724	-3,662	264,736	-505,206	24,612,780
Total Core Fixed Income	18,701,384	-2,000,000	_	_	-18,724	-3,662	168,427	-607,888	16,239,536
Garcia Hamilton Fixed Income	18,701,384	-2,000,000	-	-	-18,724	-3,662	168,427	-607,888	16,239,536
Total Non-Core Fixed Income	4,885,272	3,288,980	-	-	-	-	96,309	102,682	8,373,243
Crescent Direct Lending Levered Fund	2,392,390	-711,020	-	-	-	-	-	127,272	1,808,642
Loomis Sayles Bond Fund (LSBDX)	-	2,485,418	-	-	-	-	60,405	18,304	2,564,128
MainStay High Yield Corp Bond (MHYSX)	-	4,000,000	-	-	-	-	35,904	-35,430	4,000,474
Total Real Estate	7,741,279	-96,163	-	-	-26,227	-	93,830	106,774	7,819,493
American Core Realty	4,664,908	-	-	-	-26,227	-	93,830	60,371	4,792,882
Angelo Gordon Net Lease Realty Fund III, L.P.	1,754,297	-49,231	-	-	-	-	-	74,107	1,779,173
Dune Real Estate Fund III	1,322,073	-46,932	-	-	-	-	-	-27,704	1,247,438
Total Timber	1,088,035	-207,928	-	-	-	-	-	-66,750	813,357
Molpus Woodlands Timber	1,088,035	-207,928	-	-	-	-	-	-66,750	813,357
Total Alternatives	3,364,353	-	-	-	-		75,341	220,737	3,660,431
Blackrock Multi-Asset Income (BKMIX)	3,364,353	-	-	-	-	-	75,341	220,737	3,660,431
Total Cash Accounts	735,923	-4,715,280	9,430,535	-4,602,956	-	-55,124	47	-	793,144
R&D	731,550	-4,715,280 -4,715,280	9,430,535	-4,602,956		-55,124	43	-	788,767
Mutual Fund Cash	4,373	-4,7 13,200	9,430,333	-4,002,930	-	-55, 124	43	-	4,377
			A /AA =A-						
Total Fund	106,565,587	-	9,430,535	-4,602,956	-128,451	-66,330	1,514,056	16,665,754	129,378,196



Comparative Performance																	
	Q	ΓR	ΥT	D.	FY	TD	1 Y	′R	2 `	YR	3 \	/R	5 \	/R	Ince	ption	Inception Date
Total Fund (Net)	4.07	(14)	4.07	(14)	15.91	(17)	38.26	(32)	14.74	(24)	11.45	(25)	10.42	(45)	6.38	(85)	10/01/2005
Total Fund Policy	2.47	(76)	2.47	(76)	12.20	(74)	33.80	(63)	13.72	(44)	11.01	(35)	10.78	(34)	7.17	(42)	
Difference	1.60		1.60		3.71		4.46		1.02		0.44		-0.36		-0.79		
All Public Plans-Total Fund Median	3.13		3.13		13.85		35.80		13.46		10.29		10.25		7.01		
Total Fund (Gross)	4.13	(26)	4.13	(26)	16.03	(23)	38.55	(16)	15.01	(16)	11.74	(13)	10.78	(25)	6.82	(71)	10/01/2005
Total Fund Policy	2.47	(64)	2.47	(64)	12.20	(58)	33.80	(47)	13.72	(27)	11.01	(23)	10.78	(25)	7.17	(56)	
Difference	1.66		1.66		3.83		4.75		1.29		0.73		0.00		-0.35		
IM Mixed-Asset Target Alloc Moderate (MF) Median	2.86		2.86		12.95		33.48		12.36		9.48		9.67		7.30		
Total Equity (Composite)	6.35		6.35		23.30		61.02		20.88		15.37		14.47		8.36		10/01/2005
Total Equity Policy	5.50		5.50		21.80		60.20		19.27		14.52		15.03		7.92		
Difference	0.85		0.85		1.50		0.82		1.61		0.85		-0.56		0.44		
Total Domestic Equity (Composite)	7.92	(41)	7.92	(41)	25.06	(38)	64.17	(43)	22.15	(37)	17.66	(35)	15.60	(52)	9.35	(72)	10/01/2005
Total Domestic Equity Policy	6.17	(55)	6.17	(55)	22.03	(48)	63.86	(43)	21.61	(41)	17.24	(38)	16.76	(39)	10.20	(53)	
Difference	1.75		1.75		3.03		0.31		0.54		0.42		-1.16		-0.85		
IM U.S. All Cap Equity (SA+CF+MF) Median	6.46		6.46		21.50		62.56		20.65		15.63		15.89		10.29		
Total Int'l Equity (Composite)	0.88	(96)	0.88	(96)	17.15	(83)	50.54	(51)	16.66	(25)	8.99	(29)	10.87	(37)	5.53	(13)	05/01/2007
Total Int'l Policy	3.49	(56)	3.49	(56)	21.10	(43)	49.41	(57)	12.31	(61)	6.51	(58)	9.76	(52)	2.55	(97)	
Difference	-2.61		-2.61		-3.95		1.13		4.35		2.48		1.11		2.98		
IM International Large Cap Core Equity (SA+CF) Median	4.01		4.01		20.42		50.64		13.65		7.26		9.81		4.33		
Total Fixed Income (Composite)	-2.29	(40)	-2.29	(40)	-0.99	(57)	3.76	(79)	4.04	(95)	4.21	(94)	3.98	(72)	4.96	(55)	10/01/2005
Total Fixed Policy	-3.38	(83)	-3.38	(83)	-2.73	(95)	0.71	(96)	4.74	(88)	4.65	(89)	3.10	(95)	4.18	(91)	
Difference	1.09		1.09		1.74		3.05		-0.70		-0.44		0.88		0.78		
IM U.S. Broad Market Fixed Income (SA+CF+MF) Median	-2.66		-2.66		-0.67		6.75		6.13		5.70		4.45		5.07		
Total Real Estate (Composite)	1.48	(80)	1.48	(80)	2.60	, ,	-1.37	(92)	1.08	(91)	3.95	(90)	6.01	(74)	4.04	(100)	07/01/2007
NCREIF ODCE	2.25	(33)	2.25	(33)	3.64	(51)	2.91	(57)	4.08	(68)	5.29	(63)	6.52	(56)	5.30	(71)	
Difference	-0.77		-0.77		-1.04		-4.28		-3.00		-1.34		-0.51		-1.26		
IM U.S. Open End Private Real Estate (SA+CF) Median	1.86		1.86		3.67		3.09		4.38		5.70		6.80		5.70		
Total Timber (Composite)	-7.58		-7.58		-7.58		-7.26		-5.17		-2.06		-3.01		1.66		07/01/2007
NCREIF Timberland Index	0.76		0.76		1.34		1.46		1.38		1.71		2.51		4.62		
Difference	-8.34		-8.34		-8.92		<b>-</b> 8.72		-6.55		-3.77		-5.52		-2.96		
Total Alternatives (Composite)	2.12		2.12		8.80		23.22		7.71		6.79		6.77		2.53		08/01/2010
Alternatives Policy	1.35		1.35		7.83		26.07		12.96		11.04		9.83		5.83		
Difference	0.77		0.77		0.97		-2.85		-5.25		-4.25		-3.06		-3.30		



	Q <sup>-</sup>	ΓR	ΥT	D	FY	ΓD	1 Y	′R	2 `	ΥR	3 `	ΥR	5 `	/R	Ince	ption	Inception Date
Total Domestic Equity (Composite)	7.92		7.92		25.06		64.17		22.15		17.66		15.60		9.35		10/01/2005
Fidelity Total Market Ix (FSKAX)	6.44	(50)	6.44	(50)	N/A		N/A		N/A		N/A		N/A		6.44	(50)	01/01/2021
Dow Jones U.S. Total Stock Market Index	6.45	(50)	6.45	(50)	22.16	(20)	62.68	(15)	21.49	(26)	17.05	(25)	16.60	(17)	6.45	(50)	
Difference	-0.01		-0.01		N/A		N/A		N/A		N/A		N/A		-0.01		
IM U.S. Large Cap Core Equity (MF) Median	6.44		6.44		19.21		55.30		19.53		15.28		15.21		6.44		
Rhumbline R1000V	11.24	(56)	11.24	(56)	29.24	(54)	55.90	(66)	13.70	(77)	10.95	(61)	N/A		9.10	(70)	01/01/2018
Russell 1000 Value Index	11.26	(55)	11.26	(55)	29.34	(54)	56.09	(66)	13.71	(77)	10.96	(61)	11.74	(76)	9.11	(69)	
Difference	-0.02		-0.02		-0.10		-0.19		-0.01		-0.01		N/A		-0.01		
IM U.S. Large Cap Value Equity (SA+CF) Median	11.53		11.53		29.80		61.04		15.91		11.87		12.98		10.31		
Boston LCV	13.86	(29)	13.86	(29)	37.71	(18)	71.10	(24)	17.66	(36)	12.68	(43)	N/A		10.86	(42)	01/01/2018
Russell 1000 Value Index	11.26	(55)	11.26	(55)	29.34	(54)	56.09	(66)	13.71	(77)	10.96	(61)	11.74	(76)	9.11	(69)	
Difference	2.60		2.60		8.37		15.01		3.95		1.72		N/A		1.75		
IM U.S. Large Cap Value Equity (SA+CF) Median	11.53		11.53		29.80		61.04		15.91		11.87		12.98		10.31		
Total Growth (Composite)	1.56	(50)	1.56	(50)	12.19	(63)	58.75	(67)	27.78	(42)	25.31	(13)	19.05	(81)	9.20	(99)	07/01/2007
Russell 1000 Growth Index	0.94	(64)	0.94	(64)	12.44	(58)	62.74	(41)	28.15	(36)	22.80	(40)	21.05	(51)	12.47	(49)	
Difference	0.62		0.62		-0.25		-3.99		-0.37		2.51		-2.00		-3.27		
IM U.S. Large Cap Growth Equity (SA+CF+MF) Median	1.55		1.55		12.93		61.01		26.89		22.27		21.06		12.45		
Rhumbline R1000G	0.95	(71)	0.95	(71)	12.46	(65)	62.69	(39)	28.17	(32)	22.80	(36)	N/A		21.40	(45)	01/01/2018
Russell 1000 Growth Index	0.94	(71)	0.94	(71)	12.44	(66)	62.74	(39)	28.15	(32)	22.80	(36)	21.05	(41)	21.40	(45)	
Difference	0.01		0.01		0.02		-0.05		0.02		0.00		N/A		0.00		
IM U.S. Large Cap Growth Equity (SA+CF) Median	2.16		2.16		13.69		60.35		26.27		21.54		20.08		20.51		
Polen Capital LCG	1.75	(58)	1.75	(58)	12.11	(73)	57.55	(65)	27.67	(35)	N/A		N/A		33.34	(33)	01/01/2019
Russell 1000 Growth Index	0.94	(71)	0.94	(71)	12.44	(66)	62.74	(39)	28.15	(32)	22.80	(36)	21.05	(41)	33.22	(34)	
Difference	0.81		0.81		-0.33		-5.19		-0.48		N/A		N/A		0.12		
IM U.S. Large Cap Growth Equity (SA+CF) Median	2.16		2.16		13.69		60.35		26.27		21.54		20.08		31.34		
Fidelity Mid Cap Index (FSMDX)	8.15	(77)	8.15	(77)	N/A		N/A		N/A		N/A		N/A		8.15	(77)	01/01/2021
Russell Midcap Index	8.14	(77)	8.14	(77)	29.67	(67)	73.64	(38)	19.10	(27)	14.73	(15)	14.67	(17)	8.14	(77)	
Difference	0.01	. ,	0.01		N/A		N/A		N/A		N/A		N/A		0.01		
IM U.S. Mid Cap Core Equity (MF) Median	10.41		10.41		32.60		70.62		17.04		11.98		12.24		10.41		
Clarkston Partners (CISMX)	13.24	(70)	13.24	(70)	39.33	(87)	69.93	(72)	22.01	(12)	14.96	(1)	N/A		13.98	(1)	01/01/2018
Russell 2500 Value Index	16.83	(58)	16.83	(58)	50.13	(38)	87.47	(41)	15.69	(43)	10.88	(29)	12.15	(38)	9.09	(30)	
Difference	-3.59	` '	-3.59	` '	-10.80	` '	-17.54	` '	6.32	` '	4.08	` '	N/A	` '	4.89	` '	
IM U.S. SMID Cap Value Equity (MF) Median	17.50		17.50		45.69		82.66		14.52		9.18		10.60		7.74		



	QT	ΓR	ΥT	D	FY	TD	1 Y	′R	2 \	<b>Y</b> R	3 \	/R	5 \	/R	Ince	ption	Inceptio Date
Total Int'l Equity (Composite)	0.88	(96)	0.88	(96)	17.15	(83)	50.54	(51)	16.66	(25)	8.99	(29)	10.87	(37)	5.53	(13)	05/01/2007
Total Int'l Policy	3.49	(56)	3.49	(56)	21.10	(43)	49.41	(57)	12.31	(61)	6.51	(58)	9.76	(52)	2.55	(97)	
Difference	-2.61		-2.61		-3.95		1.13		4.35		2.48		1.11		2.98		
IM International Large Cap Core Equity (SA+CF) Median	4.01		4.01		20.42		50.64		13.65		7.26		9.81		4.33		
Harding Loevner Intl Equity (HLIZX)	0.88	(75)	0.88	(75)	17.15	(72)	50.54	(67)	16.74	(30)	9.05	(27)	N/A		11.24	(32)	09/01/2016
MSCI AC World ex USA (Net)	3.49	(45)	3.49	(45)	21.10	(49)	49.41	(71)	12.31	(63)	6.51	(48)	9.76	(53)	9.54	(53)	
Difference	-2.61		-2.61		-3.95		1.13		4.43		2.54		N/A		1.70		
IM International Equity (MF) Median	3.18		3.18		20.87		55.10		13.94		6.34		9.91		9.65		
Total Core Fixed Income (Composite)	-3.23		-3.23		-2.50		3.17		4.74		4.52		3.29		4.22		10/01/2005
Total Fixed Policy	-3.38		-3.38		-2.73		0.71		4.74		4.65		3.10		4.18		
Difference	0.15		0.15		0.23		2.46		0.00		-0.13		0.19		0.04		
Garcia Hamilton Fixed Income	-3.23	(55)	-3.23	(55)	-2.50	(67)	3.17	(54)	4.74	(90)	4.52	(95)	N/A		3.99	(79)	01/01/2018
Blmbg. Barc. U.S. Aggregate Index	-3.38	(68)	-3.38	(68)	-2.73	(82)	0.71	(92)	4.74	(90)	4.65	(92)	3.10	(93)	3.82	(93)	
Difference	0.15		0.15		0.23		2.46		0.00		-0.13		N/A		0.17		
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-3.21		-3.21		-2.07		3.52		5.55		5.30		3.78		4.45		
Total Non-Core Fixed Income (Composite)	0.53		0.53		4.11		5.16		1.37		2.76		5.10		6.84		07/01/2010
Loomis Sayles Bond Fund (LSBDX)	-1.25	(6)	-1.25	(6)	N/A		N/A		N/A		N/A		N/A		4.61	(2)	11/01/2020
Blmbg. Barc. U.S. Aggregate Index	-3.38	(74)	-3.38	(74)	-2.73	(86)	0.71	(91)	4.74	(69)	4.65	(60)	3.10	(67)	-2.29	(87)	
Difference	2.13	, ,	2.13	, ,	N/A	,	N/A		N/A	,	N/A	,	N/A	, ,	6.90	,	
IM U.S. Broad Market Core Fixed Income (MF) Median	-3.04		-3.04		-1.68		4.37		5.21		4.80		3.40		-1.30		
MainStay High Yield Corp Bond (MHYSX)	N/A		N/A		N/A		0.27	(49)	03/01/2021								
Blmbg. Barc. U.S. Corp High Yield	0.85	(53)	0.85	(53)	7.36	(44)	23.72	(37)	7.30	(21)	6.84	(12)	8.06	(9)	0.15	(67)	
Difference	N/A	,	N/A	,	N/A	•	0.12	,									
IM U.S. High Yield Bonds (MF) Median	0.91		0.91		6.99		22.24		6.25		5.64		6.70		0.27		
Total Real Estate (Composite)	1.48		1.48		2.60		-1.37		1.08		3.95		6.01		4.04		07/01/2007
American Core Realty	1.87	(50)	1.87	(50)	3.31	(56)	1.90	(66)	3.98	(69)	5.37	(63)	6.17	(71)	5.30	(71)	07/01/2007
NCREIF ODCE	2.25	(33)	2.25	(33)	3.64	, ,	2.91	(57)	4.08	(68)	5.29	(63)	6.52	(56)	5.30	٠,	
Difference	-0.38	, ,	-0.38	, ,	-0.33	, ,	-1.01	` '	-0.10	. ,	0.08		-0.35	` '	0.00	` '	
IM U.S. Open End Private Real Estate (SA+CF) Median	1.86		1.86		3.67		3.09		4.38		5.70		6.80		5.70		
Total Timber (Composite)	-7.58		-7.58		-7.58		-7.26		-5.17		-2.06		-3.01		1.66		07/01/2007
Molpus Woodlands Timber	-7.58		-7.58		-7.58		-7.26		-5.17		-1.96		-1.50		1.41		06/01/2008
NCREIF Timberland Index	0.76		0.76		1.34		1.46		1.38		1.71		2.51		3.56		



	QTI	R	YT	D	FYTD	1 Y	'R	2 Y	′R	3 YR	5 YR	Inception	Inception Date
Alternatives													
Blackrock Multi-Asset Income (BKMIX)	2.12	(57)	2.12	(57)	8.80 (73)	23.22	(75)	7.71	(60)	N/A	N/A	7.71 (60)	04/01/2019
50% MSCI World Value/ 50% BBA	3.00	(45)	3.00	(45)	11.43 (59)	22.75	(76)	7.72	(60)	6.20 (57)	N/A	7.72 (60)	
Difference	-0.88		-0.88		-2.63	0.47		-0.01		N/A	N/A	-0.01	
IM Flexible Portfolio (MF) Median	2.58		2.58		12.28	31.16		8.78		6.51	7.18	8.78	

<sup>^</sup> Some products shown on IRR page.



# **Comparative Performance - IRR**

# As of March 31, 2021

Comparative Performance - IRR			
	QTR	Inception	Inception Date
Molpus Woodlands Timber	-7.58	1.73	06/24/2008
Angelo Gordon Net Lease Realty Fund III, L.P.	2.61	6.65	03/10/2014
Dune Real Estate Fund III	-1.45	6.93	11/06/2014
Crescent Direct Lending Levered Fund	3.08	7.32	10/09/2014



Comparative Performance																		
	Oct-2019 To	Oct-2		Oct-2		Oct-2		Oct-2		Oct-2		Oct-2		Oct-2		Oct-2011 To	Oct-	2010
	Sep-2020	Sep-	-	Sep-2	-	Sep-	-	Sep-2	-	Sep-		Sep-	-	Sep-	-	Sep-2012	Sep-	-
Total Fund (Net)	8.70 (53)	4.49	(34)	8.11		11.07	(68)	8.82	(63)	-1.22		10.01	(44)	10.96	(71)	16.79 (65)		(18)
Total Fund Policy	10.42 (32)	5.02	(22)	8.59		11.90	(46)	10.34	(18)	0.55	(21)	10.23	(39)	10.24	(78)	15.21 (84)	2.15	(7)
Difference	-1.72	-0.53	. ,	-0.48	. ,	-0.83	. ,	-1.52	. ,	-1.77	. ,	-0.22		0.72	. ,	1.58	-0.89	
All Public Plans-Total Fund Median	8.85	4.01		7.98		11.65		9.29		-0.61		9.68		11.75		17.52	-0.35	
Total Fund (Gross)	8.94 (48)	4.79	(72)	8.47	(33)	11.48	(69)	9.41	(84)	-0.72	(64)	10.58	(58)	11.52	(72)	17.35 (87)	1.61	(59)
Total Fund Policy	10.42 (34)	5.02	(69)	8.59	(31)	11.90	(60)	10.34	(71)	0.55	(38)	10.23	(66)	10.24	(86)	15.21 (95)	2.15	(49)
Difference	-1.48	-0.23		-0.12		-0.42		-0.93		-1.27		0.35		1.28		2.14	-0.54	
IM Mixed-Asset Target Alloc Moderate (MF) Median	8.64	6.25		7.46		12.54		11.29		-0.04		10.95		13.18		19.89	2.04	
Total Equity (Composite)	12.31	2.91		12.88		16.39		11.59		-3.61		13.96		21.06		25.94	-0.85	
Total Equity Policy	12.49	1.49		13.60		18.94		13.34		-6.20		11.73		19.62		22.72	-4.71	
Difference	-0.18	1.42		-0.72		-2.55		-1.75		2.59		2.23		1.44		3.22	3.86	
Total Domestic Equity (Composite)	11.79 (50)	5.16	(25)	15.75	(52)	14.97	(86)	12.80	(48)	-1.73	(61)	17.23	(48)	22.56	(64)	27.44 (57)	3.01	(22)
Total Domestic Equity Policy	15.74 (38)	2.36	(46)	17.73	(41)	18.62	(56)	14.77	(27)	-1.18	(56)	17.67	(42)	22.03	(68)	29.64 (39)	0.48	(39)
Difference	-3.95	2.80		-1.98		-3.65		-1.97		-0.55		-0.44		0.53		-2.20	2.53	
IM U.S. All Cap Equity (SA+CF+MF) Median	11.64	1.83		15.95		19.06		12.58		-0.53		17.07		24.66		28.33	-0.56	
Total Int'l Equity (Composite)	13.93 (14)	-3.33	(76)	5.86	(14)	18.68	(67)	7.98	(51)	-8.63	(65)	6.07	(52)	16.67	(89)	21.58 (5)	-10.95	(70)
Total Int'l Policy	3.00 (57)	-1.23	(47)	1.76	(61)	19.61	(58)	9.26	(34)	-12.16	(90)	4.77	(65)	16.48	(89)	14.49 (83)	-10.81	(70)
Difference	10.93	-2.10		4.10		-0.93		-1.28		3.53		1.30		0.19		7.09	-0.14	
IM International Large Cap Core Equity (SA+CF) Median	4.03	-1.56		2.55		20.27		8.00		-7.16		6.12		22.51		17.32	-9.37	
Total Fixed Income (Composite)	5.26 (81)	7.95	(82)	0.97	(20)	3.91	(24)	5.81	(64)	2.09	(62)	6.00	(34)	2.81	(12)	11.79 (18)	3.12	(83)
Total Fixed Policy	6.98 (58)	10.30	(52)	-1.22	(90)	0.07	(93)	5.19	(84)	2.94	(30)	3.96	(86)	-2.35	(97)	5.75 (89)	5.96	(15)
Difference	-1.72	-2.35		2.19		3.84		0.62		-0.85		2.04		5.16		6.04	-2.84	
IM U.S. Broad Market Fixed Income (SA+CF+MF) Median	7.22	10.33		-0.45		1.86		6.27		2.52		5.35		-0.41		8.33	4.99	
Total Real Estate (Composite)	-2.00 (88)	5.87	(74)	10.09	(29)	9.82	(29)	9.06	(94)	14.70	(61)	12.33	(68)	8.10	(100)	13.00 (47)	14.11	(88)
NCREIF ODCE	1.74 (60)	6.17	(72)	8.82	(59)	7.81	(56)	10.62	(68)	14.71	(61)	12.39	(67)	12.47	(69)	11.77 (64)	18.03	
Difference	-3.74	-0.30		1.27		2.01		-1.56		-0.01		-0.06		-4.37		1.23	-3.92	
IM U.S. Open End Private Real Estate (SA+CF) Median	1.90	6.89		9.04		8.05		11.32		15.45		12.78		13.28		12.89	16.62	
Total Timber (Composite)	-4.04	5.58		-9.38		0.28		6.48		6.70		9.49		4.51		-5.86	3.87	
NCREIF Timberland Index	0.19	2.10		4.00		3.28		3.28		9.26		10.38		9.68		2.25	0.26	
Difference	-4.23	3.48		-13.38		-3.00		3.20		-2.56		-0.89		-5.17		-8.11	3.61	
Total Alternatives (Composite)	2.44	5.25		4.93		8.16		9.11		-3.68		6.84		-9.88		-8.55	-0.85	
Alternatives Policy	11.70	7.72		8.07		9.04		10.41		1.09		7.56		-3.91		-2.59	1.58	
Difference	-9.26	-2.47		-3.14		-0.88		-1.30		-4.77		-0.72		<b>-</b> 5.97		-5.96	-2.43	



	Oct-2019	Oct-2018	Oct-2017	Oct-2016	Oct-2015	Oct-2014	Oct-2013	Oct-2012	Oct-2011	Oct-2010
	To	To	To	To	To	To	To	To	To	To
	Sep-2020	Sep-2019	Sep-2018	Sep-2017	Sep-2016	Sep-2015	Sep-2014	Sep-2013	Sep-2012	Sep-2011
Total Domestic Equity (Composite)	11.79	5.16	15.75	14.97	12.80	-1.73	17.23	22.56	27.44	3.01
Rhumbline R1000V Russell 1000 Value Index Difference IM U.S. Large Cap Value Equity (SA+CF) Median	-4.97 (64)	4.00 (39)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	-5.03 (64)	4.00 (39)	9.45 (79)	15.12 (76)	16.19 (27)	-4.42 (65)	18.89 (42)	22.30 (60)	30.92 (26)	-1.89 (62)
	0.06	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	-3.33	2.45	11.83	17.89	13.62	-3.28	18.38	23.67	28.12	-0.98
Boston LCV Russell 1000 Value Index Difference IM U.S. Large Cap Value Equity (SA+CF) Median	-7.29 (78)	3.28 (44)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	-5.03 (64)	4.00 (39)	9.45 (79)	15.12 (76)	16.19 (27)	-4.42 (65)	18.89 (42)	22.30 (60)	30.92 (26)	-1.89 (62)
	-2.26	-0.72	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	-3.33	2.45	11.83	17.89	13.62	-3.28	18.38	23.67	28.12	-0.98
Total Growth (Composite)  Russell 1000 Growth Index  Difference  IM U.S. Large Cap Growth Equity (SA+CF+MF) Median	<b>36.10 (43)</b> 37.53 (36) -1.43 35.35	11.10 (6) 3.71 (49) 7.39 3.60	<b>22.18 (79)</b> 26.30 (45) -4.12 25.71	<b>14.68 (97)</b> 21.94 (40) -7.26 21.29	<b>7.63 (92)</b> 13.76 (25) -6.13 12.10	<b>4.20 (43)</b> 3.17 (59) 1.03 3.87	<b>18.19 (51)</b> 19.15 (38) -0.96 18.22	<b>18.74 (70)</b> 19.27 (64) -0.53 20.68	<b>29.37 (43)</b> 29.19 (44) 0.18 28.45	8.43 (3) 3.78 (27) 4.65 1.70
Vanguard Total Stock Mkt (VTSAX) CRSP U.S. Total Market TR Index Difference IM U.S. Equity (MF) Median	14.99 (33)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	14.99 (33)	2.92 (34)	17.62 (31)	18.64 (40)	14.99 (27)	-0.55 (47)	17.77 (23)	21.59 (55)	29.96 (29)	0.46 (32)
	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4.20	0.12	13.30	17.48	12.13	-0.92	13.74	22.54	27.33	-1.87
Fidelity Total Market Ix (FSKAX)  Dow Jones U.S. Total Stock Market Index  Difference  IM U.S. Large Cap Core Equity (MF) Median	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	14.77 (40)	2.81 (55)	17.58 (32)	18.67 (45)	14.93 (24)	-0.55 (29)	17.69 (47)	21.44 (27)	30.24 (22)	0.67 (30)
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12.90	3.21	16.07	18.38	13.06	-1.60	17.39	19.95	27.93	-1.12
Rhumbline R1000G Russell 1000 Growth Index Difference IM U.S. Large Cap Growth Equity (SA+CF) Median	37.55 (28)	3.70 (52)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	37.53 (28)	3.71 (52)	26.30 (36)	21.94 (38)	13.76 (23)	3.17 (55)	19.15 (40)	19.27 (64)	29.19 (39)	3.78 (30)
	0.02	-0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	33.28	3.82	24.44	20.83	11.72	3.61	18.18	20.30	27.71	1.40
Sawgrass Large Cap Growth Russell 1000 Growth Index Difference IM U.S. Large Cap Growth Equity (SA+CF) Median	N/A	N/A	21.71 (66)	14.68 (92)	7.63 (88)	4.20 (41)	18.19 (50)	18.74 (69)	29.37 (37)	N/A
	37.53 (28)	3.71 (52)	26.30 (36)	21.94 (38)	13.76 (23)	3.17 (55)	19.15 (40)	19.27 (64)	29.19 (39)	3.78 (30)
	N/A	N/A	-4.59	-7.26	-6.13	1.03	-0.96	-0.53	0.18	N/A
	33.28	3.82	24.44	20.83	11.72	3.61	18.18	20.30	27.71	1.40
Polen Capital LCG Russell 1000 Growth Index Difference IM U.S. Large Cap Growth Equity (SA+CF) Median	35.64 (36)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	37.53 (28)	3.71 (52)	26.30 (36)	21.94 (38)	13.76 (23)	3.17 (55)	19.15 (40)	19.27 (64)	29.19 (39)	3.78 (30)
	-1.89	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	33.28	3.82	24.44	20.83	11.72	3.61	18.18	20.30	27.71	1.40



# Comparative Performance Fiscal Year Returns As of March 31, 2021

	Oct-2019 To Sep-2020	Т	2018 o 2019	Oct-2 To Sep-2	0	Oct-2 T Sep-	0	Oct-2 To Sep-2	0	Oct-2014 To Sep-2015	Oct-201 To Sep-201	То	Oct-2011 To Sep-2012	Oct-20 To Sep-20	
Vanguard Mid-Cap Index (VIMAX)	7.08 (14)	3.65	(24)	13.42		15.30	(49)	12.63	(40)	N/A	N/A	N/A	N/A	N/A	
CRSP U.S. Mid Cap TR Index	7.07 (15)	3.70	(22)	13.44	(30)	15.33	(47)	12.68	(39)	1.76 (22)	15.94 (	3) 28.08 (41)	26.23 (50)	-0.18 (	22)
Difference	0.01	-0.05	, ,	-0.02	, ,	-0.03	, ,	-0.05	,	N/A	N/A	N/A	N/A	N/A	
IM U.S. Mid Cap Core Equity (MF) Median	-1.32	1.09		10.84		15.25		11.87		-1.05	12.32	27.52	26.17	-3.68	
Fidelity Mid Cap Index (FSMDX)	N/A	N/A		N/A		N/A		N/A		N/A	N/A	N/A	N/A	N/A	
Russell Midcap Index	4.55 (22)	3.19	(27)	13.98	(25)	15.32	(47)	14.25	(25)	-0.25 (34)	15.83 (	6) 27.91 (44)	28.03 (33)	-0.88 (	27)
Difference	N/A	N/A		N/A		N/A		N/A		N/A	N/A	N/A	N/A	N/A	
IM U.S. Mid Cap Core Equity (MF) Median	-1.32	1.09		10.84		15.25		11.87		-1.05	12.32	27.52	26.17	-3.68	
Clarkston Partners (CISMX)	2.07 (5)	3.45	(4)	N/A		N/A		N/A		N/A	N/A	N/A	N/A	N/A	
Russell 2500 Value Index	-12.62 (37)	-4.35	(60)	10.24	(28)	15.75	(54)	17.68	(9)	-2.44 (40)	9.88 (8	0) 27.58 (60)	32.15 (40)	<b>-</b> 4.70 (	17)
Difference	14.69	7.80		N/A		N/A		N/A		N/A	N/A	N/A	N/A	N/A	
IM U.S. SMID Cap Value Equity (MF) Median	-13.36	-3.35		8.40		16.78		11.65		-3.30	13.26	28.44	31.14	-7.94	
Total Int'l Equity (Composite)	13.93 (14)	-3.33	(76)	5.86	(14)	18.68	(67)	7.98	(51)	-8.63 (65)	6.07 (	2) 16.67 (89)	21.58 (5)	-10.95 (	70)
Total Int'l Policy	3.00 (57)	-1.23	(47)	1.76	(61)	19.61	(58)	9.26	(34)	-12.16 (90)	4.77 (6	5) 16.48 (89)	14.49 (83)	-10.81 (	(70)
Difference	10.93	-2.10		4.10		-0.93		-1.28		3.53	1.30	0.19	7.09	-0.14	
IM International Large Cap Core Equity (SA+CF) Median	4.03	-1.56		2.55		20.27		8.00		-7.16	6.12	22.51	17.32	-9.37	
Harding Loevner Intl Equity (HLIZX)	14.11 (29)	-3.34	(62)	5.85	(10)	18.65	(58)	N/A		N/A	N/A	N/A	N/A	N/A	
MSCI AC World ex USA (Net)	3.00 (63)	-1.23	(44)	1.76	(34)	19.61	(48)	9.26	(51)	-12.16 (64)	4.77 (4	3) 16.48 (56)	14.49 (65)	-10.81 (	(38)
Difference	11.11	-2.11		4.09		-0.96		N/A		N/A	N/A	N/A	N/A	N/A	
IM International Equity (MF) Median	6.64	-1.93		0.08		19.37		9.32		-8.75	4.26	17.81	16.20	-12.08	



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	Oct-2019 To Sep-2020	Oct-2 To Sep-2	)	Oct-2017 To Sep-2018	Т	2016 o 2017	Oct-2 To Sep-2	0	Oct-2 To Sep-2	)	Oct-2 To Sep-2	0	Oct-2012 To Sep-2013	Oct-2011 To Sep-2012	Oct-2010 To Sep-2011
Total Core Fixed Income (Composite)	7.40	8.75		-0.70	0.79		5.78		3.88		4.40		-1.26	7.71	4.42
Total Fixed Policy	6.98	10.30		-1.22	0.07		5.19		2.94		3.96		-2.35	5.75	5.96
Difference	0.42	-1.55		0.52	0.72		0.59		0.94		0.44		1.09	1.96	-1.54
Garcia Hamilton Fixed Income	7.40 (55)	8.75	(96)	N/A	N/A		N/A		N/A		N/A		N/A	N/A	N/A
Blmbg. Barc. U.S. Aggregate Index	6.98 (77)	10.30	(69)	-1.22 (88)	0.07	(84)	5.19	(80)	2.94	(62)	3.96	(81)	-1.68 (78)	5.16 (89)	5.26 (50)
Difference	0.42	-1.55		N/A	N/A		N/A		N/A		N/A		N/A	N/A	N/A
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	7.53	10.43		-0.74	0.63		5.66		3.02		4.49		-1.25	6.61	5.26
Total Non-Core Fixed Income (Composite)	-2.27	5.19		4.99	11.18		6.07		-2.56		9.33		11.74	24.76	-3.22
Bloomberg Barclays Global Aggregate	6.24	7.60		-1.31	-1.26		8.83		-3.26		1.19		-2.64	5.07	4.00
Difference	-8.51	-2.41		6.30	12.44		-2.76		0.70		8.14		14.38	19.69	-7.22
Templeton Global Total Return (FTTRX)	-4.57 (100)	2.49	(99)	-1.90 (66)	13.82	(1)	2.64	(94)	-8.23	(95)	5.71	(22)	5.29 (2)	15.90 (3)	N/A
Blmbg. Barc. Global Multiverse	5.99 (33)	7.54	(51)	-1.32 (51)	-0.56	(77)	9.23	(25)	-3.56	(42)	1.40	(79)	-2.22 (56)	5.57 (81)	3.85 (11)
Difference	-10.56	-5.05		-0.58	14.38		-6.59		-4.67		4.31		7.51	10.33	N/A
IM Global Fixed Income (MF) Median	5.39	7.65		-1.29	1.02		7.42		-3.85		3.37		-1.81	7.17	1.74
Loomis Sayles Bond Fund (LSBDX)	N/A	N/A		N/A	N/A		N/A		N/A		N/A		N/A	N/A	N/A
Blmbg. Barc. U.S. Aggregate Index	6.98 (50)	10.30	(24)	-1.22 (41)	0.07	(64)	5.19	(51)	2.94	(9)	3.96	(59)	-1.68 (53)	5.16 (81)	5.26 (14)
Difference	N/A	N/A		N/A	N/A		N/A		N/A		N/A		N/A	N/A	N/A
IM U.S. Broad Market Core Fixed Income (MF) Median	6.96	9.81		-1.34	0.48		5.21		1.98		4.19		-1.62	6.79	4.31
MainStay High Yield Corp Bond (MHYSX)	N/A	N/A		N/A	N/A		N/A		N/A		N/A		N/A	N/A	N/A
Blmbg. Barc. U.S. Corp High Yield	3.25 (19)	6.36	(27)	3.05 (25)	8.88	(26)	12.73	(3)	-3.43	(55)	7.20	(19)	7.14 (36)	19.37 (21)	1.78 (28)
Difference	N/A	N/A		N/A	N/A		N/A		N/A		N/A		N/A	N/A	N/A
IM U.S. High Yield Bonds (MF) Median	1.89	5.35		2.28	7.81		9.72		-3.18		6.11		6.55	17.96	0.96
Total Real Estate (Composite)	-2.00	5.87		10.09	9.82		9.06		14.70		12.33		8.10	13.00	14.11
American Core Realty	1.62 (65)	6.81	(52)	8.50 (65)	7.53	(62)	9.04	(94)	13.98	(68)	12.49	(64)	12.27 (72)	11.56 (66)	16.11 (63)
NCREIF ODCE	1.74 (60)	6.17	(72)	8.82 (59)	7.81	(56)	10.62	(68)	14.71	(61)	12.39	(67)	12.47 (69)	11.77 (64)	18.03 (43)
Difference	-0.12	0.64		-0.32	-0.28		-1.58		-0.73		0.10		-0.20	-0.21	-1.92
IM U.S. Open End Private Real Estate (SA+CF) Median	1.90	6.89		9.04	8.05		11.32		15.45		12.78		13.28	12.89	16.62
Total Timber (Composite)	-4.04	5.58		-9.38	0.28		6.48		6.70		9.49		4.51	-5.86	3.87
Amsouth Timber Fund	N/A	N/A		-15.26	-0.52		6.12		11.73		7.98		3.85	-1.33	2.00
NCREIF Timberland Index	0.19	2.10		4.00	3.28		3.28		9.26		10.38		9.68	2.25	0.26
Difference	N/A	N/A		-19.26	-3.80		2.84		2.47		-2.40		-5.83	-3.58	1.74
Molpus Woodlands Timber	-4.04	5.91		-2.66	1.18		6.08		1.64		10.96		5.25	-10.32	5.68
NCREIF Timberland Index	0.19	2.10		4.00	3.28		3.28		9.26		10.38		9.68	2.25	0.26
Difference	-4.23	3.81		-6.66	-2.10		2.80		-7.62		0.58		-4.43	-12.57	5.42



# Comparative Performance Fiscal Year Returns As of March 31, 2021

	Oct-2019 To Sep-2020	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013	Oct-2011 To Sep-2012	Oct-2010 To Sep-2011
Alternatives										
Blackrock Multi-Asset Income (BKMIX)	2.44 (50)	N/A								
50% MSCI World Value/ 50% BBA	-0.25 (70)	5.80 (23)	N/A							
Difference	2.69	N/A								
IM Flexible Portfolio (MF) Median	2.43	2.59	3.38	9.02	8.55	-4.22	7.99	8.17	15.66	-0.87
Westwood Income Opportunity Fund (WHGIX)	N/A	N/A	4.93 (36)	8.14 (60)	9.20 (40)	-3.83 (46)	N/A	N/A	N/A	N/A
Alternatives Policy	11.70 (12)	7.72 (15)	8.07 (18)	9.04 (50)	10.41 (24)	1.09 (11)	7.56 (55)	-3.91 (95)	-2.59 (100)	1.58 (24)
Difference	N/A	N/A	-3.14	-0.90	-1.21	-4.92	N/A	N/A	N/A	N/A
IM Flexible Portfolio (MF) Median	2.43	2.59	3.38	9.02	8.55	-4.22	7.99	8.17	15.66	-0.87



#### Peer Group Analysis - All Public Plans-Total Fund 60.00 20.00 17.00 52.00 14.00 44.00 0 0 11.00 0 0 36.00 0 00 8.00 28.00 00 5.00 20.00 2.00 00 0 0 12.00 00 -1.00 4.00 0 -4.00 -4.00 -7.00 -10.00 -12.00 Oct-2019 Oct-2018 Oct-2017 Oct-2016 Oct-2015 Oct-2014 To To To To QTR **FYTD** 1 YR 2 YR 3 YR 4 YR 5 YR Sep-2020 Sep-2019 Sep-2018 Sep-2017 Sep-2016 Sep-2015 Total Fund (Composite) 4.07 (14) 15.91 (17) 38.26 (32) 14.74 (24) 11.45 (25) 10.70 (36) 10.42 (45) Total Fund (Composite) 8.70 (53) 4.49 (35) 8.11 (44) 11.07 (68) 8.82 (64) -1.22 (68) Total Fund Policy 2.47 (76) 12.20 (74) 33.80 (63) 13.72 (44) 11.01 (35) 10.70 (36) Total Fund Policy 10.42 (32) 5.02 (22) 8.59 (34) 11.90 (45) 10.34 (19) 0.55 (21) Median 3.13 13.85 35.80 13.46 10.29 10.22 10.25 Median 8.85 4.03 7.87 11.63 9.29 -0.61 **Comparative Performance** 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr **Ending** Ending Ending Ending Ending Ending Dec-2020 Sep-2020 Jun-2020 Mar-2020 Dec-2019 Sep-2019 **Total Fund (Composite)** 11.38 (21) 5.27 (59) 13.31 (49) -13.92 (59) 5.87 (25) 0.80 (53) 0.94 **Total Fund Policy** 9.49 5.45 (50)13.09 (53)-12.24 (30) 5.50 (47)(39)(68)All Public Plans-Total Fund Median 5.44 -13.43 5.43 0.82 10.14 13.19



Count

0 (0%)

0 (0%)

# 

#### 3 Yr Rolling Percentile Ranking - 5 Years Return Percentile Rank 25.0 50.0 75.0 100.0 12/16 12/17 6/18 6/19 12/19 6/20 3/21 6/16 6/17 12/18 5-25 25-Median Median-75 75-95 **Total Period**

Count

1 (5%)

14 (70%)

Count

6 (30%)

6 (30%)

Count

13 (65%)

0 (0%)

Pee	r Group	Scattergram - 3 Years		
Return (%)	11.78 11.40 - 11.02 - 10.64 - 10.26 -		•	

11.40

Risk (Standard Deviation %)

Earliest Date

11.20

Under Performance

11.00

9.88

10.80

X Latest Date

11.60

11.80

# Peer Group Scattergram - 5 Years

20

20

Total Fund (Composite)

Total Fund Policy



	Return	Standard Deviation
<ul><li>Total Fund (Composite)</li></ul>	11.45	11.75
<ul> <li>Total Fund Policy</li> </ul>	11.01	11.10
Median	10.29	11.79

	Return	Standard Deviation
<ul><li>Total Fund (Composite)</li></ul>	10.42	9.40
<ul> <li>Total Fund Policy</li> </ul>	10.78	8.97
Median	10.26	9.51

<b>Historical Statistics - 3</b>	Years							
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fund (Composite)	1.58	105.81	107.53	-0.07	0.30	0.85	1.05	7.58
Total Fund Policy	0.00	100.00	100.00	0.00	N/A	0.86	1.00	6.99

12.00

<b>Historical Statistics - 5</b>	Years							
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fund (Composite)	1.46	100.09	104.42	-0.66	-0.20	0.97	1.04	6.02
Total Fund Policy	0.00	100.00	100.00	0.00	N/A	1.05	1.00	5.59







# 3 Yr Rolling Under/Over Performance - 5 Years 25.0 Over Performance 15.0 0.0 15.0 10.0 Total Domestic Equity Policy (%)

#### 3 Yr Rolling Percentile Ranking - 5 Years Return Percentile Rank 25.0 50.0 75.0 100.0 6/16 6/19 12/19 6/20 3/21 12/16 6/17 12/17 6/18 12/18

	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count	
<ul> <li>Total Domestic Equity (Composite)</li> </ul>	20	0 (0%)	6 (30%)	11 (55%)	3 (15%)	
<ul> <li>Total Domestic Equity Policy</li> </ul>	20	0 (0%)	20 (100%	0 (0%)	0 (0%)	

# Peer Group Scattergram - 3 Years 18.09 17.42 16.75 16.08 15.41 14.74 18.80 19.00 19.20 19.40 19.60 19.80 20.00 Risk (Standard Deviation %)

Earliest Date

Under Performance

X Latest Date

Pee	Group Sca	ttergram - 5	Years					
-	17.16 16.77			0				
rn (%)	16.38			O				
Retui	15.99 -							
œ	15.60							
	15.21							
	14.96	15.18	15.40	15.62	15.84	16.06	16.28	16.50

	Return	Standard Deviation
Total Domestic Equity (Composite)	17.66	18.96
<ul> <li>Total Domestic Equity Policy</li> </ul>	17.24	19.19
Median	15.63	19.81

	Return	Standard Deviation
<ul> <li>Total Domestic Equity (Composite)</li> </ul>	15.60	15.28
<ul> <li>Total Domestic Equity Policy</li> </ul>	16.76	15.53
Median	15.89	16.23

Risk (Standard Deviation %)

Historical Statistics - 3 Years								
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Domestic Equity (Composite)	1.90	100.28	98.67	0.64	0.18	0.88	0.98	12.51
Total Domestic Equity Policy	0.00	100.00	100.00	0.00	N/A	0.85	1.00	12.43
Historical Statistics - 5 Years								
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Domestic Equity (Composite)	2.07	95.55	97.99	-0.63	-0.51	0.95	0.98	9.91
Total Domestic Equity Policy	0.00	100.00	100.00	0.00	N/A	1.00	1.00	9.86



#### Peer Group Analysis - IM U.S. Large Cap Value Equity (SA+CF) 110.00 32.00 95.00 26.00 80.00 20.00 0 65.00 14.00 00 0 50.00 8.00 Return 00 35.00 2.00 00 20.00 -4.00 0 00 00 0 00 5.00 -10.00 -10.00 -16.00 -25.00 -22.00 Oct-2019 Oct-2018 Oct-2017 Oct-2016 Oct-2015 Oct-2014 To To Τo To To QTR **FYTD** 1 YR 2 YR 3 YR 4 YR 5 YR Sep-2020 Sep-2019 Sep-2018 Sep-2017 Sep-2016 Sep-2015 Rhumbline R1000V 11.24 (56) 29.24 (54) 55.90 (66) 13.70 (77) 10.95 (61) N/A N/A Rhumbline R1000V -4.97 (64) 4.00 (39) Russell 1000 Value Index 11.26 (55) 29.34 (54) 56.09 (66) 13.71 (77) 10.96 (61) 9.95 (76) 11.74 (76) Russell 1000 Value Index -5.03 (64) 4.00 (39) 9.45 (79) 15.12 (76) 16.19 (27) -4.42 (65) Median 11.53 29.80 61.04 15.91 11.87 11.47 12.98 Median -3.33 2.45 11.83 17.89 13.62 -3.28 **Comparative Performance** 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr **Ending Ending Ending** Ending Ending Ending Dec-2020 Sep-2020 Jun-2020 Mar-2020 Dec-2019 Sep-2019 Rhumbline R1000V 16.19 (49) 5.58 (48) 14.25 (80) -26.64 (57) 7.39 (61) 1.36 (60) Russell 1000 Value Index 16.25 (49)5.59 (48)14.29 (80)-26.73 (59)7.41 (61) 1.36 (60)IM U.S. Large Cap Value Equity (SA+CF) Median 5.41 1.71 16.05 16.98 -26.13 7.91



Count

0 (0%)

0 (0%)

#### 3 Yr Rolling Under/Over Performance - 5 Years 12.0 Over Rhumbline R1000V (%) Performance 10.0 8.0 6.0 Under Performance 4.0 6.0 8.0 10.0 12.0 4.0 Russell 1000 Value Index (%)

X Latest Date

#### 3 Yr Rolling Percentile Ranking - 5 Years 0.0 Return Percentile Rank 25.0 50.0 00000000000000 75.0 100.0 3/21 6/16 12/16 6/17 12/17 6/18 12/18 6/19 12/19 6/20 5-25 25-Median Median-75 75-95 **Total Period**

Count

0 (0%)

0 (0%)

2

20

Count

0 (0%)

4 (20%)

Count

2 (100%)

16 (80%)





	Return	Standard Deviation
<ul><li>Rhumbline R1000V</li></ul>	10.95	22.95
<ul><li>Russell 1000 Value Index</li></ul>	10.96	23.02
Median	11.87	23.65

Return	Standard Deviation
N/A	N/A
11.74	18.16
12.98	18.63
	N/A 11.74

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Rhumbline R1000V	0.07	99.72	99.66	0.02	-0.30	0.55	1.00	13.71
Russell 1000 Value Index	0.00	100.00	100.00	0.00	N/A	0.55	1.00	13.77

Rhumbline R1000V

O Russell 1000 Value Index

HISTORICAI STATISTICS - 5 YE	Tracking	Up	Down		Information	Sharpe		Downside
	Error	Market Capture	Market Capture	Alpha	Ratio	Ratio	Beta	Risk
Rhumbline R1000V	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 1000 Value Index	0.00	100.00	100.00	0.00	N/A	0.70	1.00	10.95



#### Peer Group Analysis - IM U.S. Large Cap Value Eqty (SA+CF) 110.00 32.00 95.00 26.00 80.00 20.00 0 0 65.00 14.00 0 0 50.00 8.00 Return 00 35.00 2.00 0 20.00 -4.00 0 0 00 0 5.00 -10.00 -10.00 -16.00 -22.00 -25.00 Oct-2019 Oct-2018 Oct-2017 Oct-2016 Oct-2015 Oct-2014 To To To To To To QTR **FYTD** 1 YR 2 YR 3 YR 4 YR 5 YR Sep-2020 Sep-2019 Sep-2018 Sep-2017 Sep-2016 Sep-2015 Boston LCV 13.86 (29) 37.71 (18) 71.10 (24) 17.66 (36) 12.68 (43) N/A N/A Boston LCV -7.29 (78) 3.28 (44) N/A N/A Russell 1000 Value ldx -5.03 (64) 4.00 (39) 9.45 (79) 15.12 (76) 16.19 (27) -4.42 (65) Russell 1000 Value Idx 11.26 (55) 29.34 (54) 56.09 (66) 13.71 (77) 11.74 (76) 10.96 (61) 9.95 (76) Median 11.53 29.80 61.04 15.91 11.87 11.47 12.98 Median -3.33 2.45 11.83 17.89 13.62 -3.28 **Comparative Performance** 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr **Ending Ending Ending Ending** Ending Ending Dec-2020 Sep-2020 Jun-2020 Mar-2020 Dec-2019 Sep-2019

17.93 (38)

14.29

16.98

(80)

-31.18 (87)

-26.73 (59)

-26.13

8.43

7.41

7.91

(37)

(61)



2.78

1.36

1.71

(21)

(60)

Boston LCV

Russell 1000 Value Index

IM U.S. Large Cap Value Eqty (SA+CF)

20.95

16.25

16.05

(18)

(49)

5.36

5.59

5.41

(51)

(48)

#### 3 Yr Rolling Under/Over Performance - 5 Years 15.0 Over Performance X Boston LCV (%) 12.0 9.0 6.0 Under Performance 3.0 6.0 9.0 12.0 15.0 3.0 Russell 1000 Value Index (%) X Latest Date

#### 3 Yr Rolling Percentile Ranking - 5 Years Return Percentile Rank 25.0 50.0 75.0 100.0 6/16 12/16 6/20 3/21 6/17 12/17 6/18 12/18 6/19 12/19

	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count	
<ul><li>Boston LCV</li></ul>	2	0 (0%)	1 (50%)	1 (50%)	0 (0%)	
<ul><li>Russell 1000 Value Idx</li></ul>	20	0 (0%)	4 (20%)	16 (80%)	0 (0%)	

# Peer Group Scattergram - 3 Years 12.98 12.39 11.80 11.21 10.62 22.08 23.04 24.00 24.96 25.92 26.88 27.84 28.80 Risk (Standard Deviation %)

Peer G	roup S	catter	gram - 8	Years



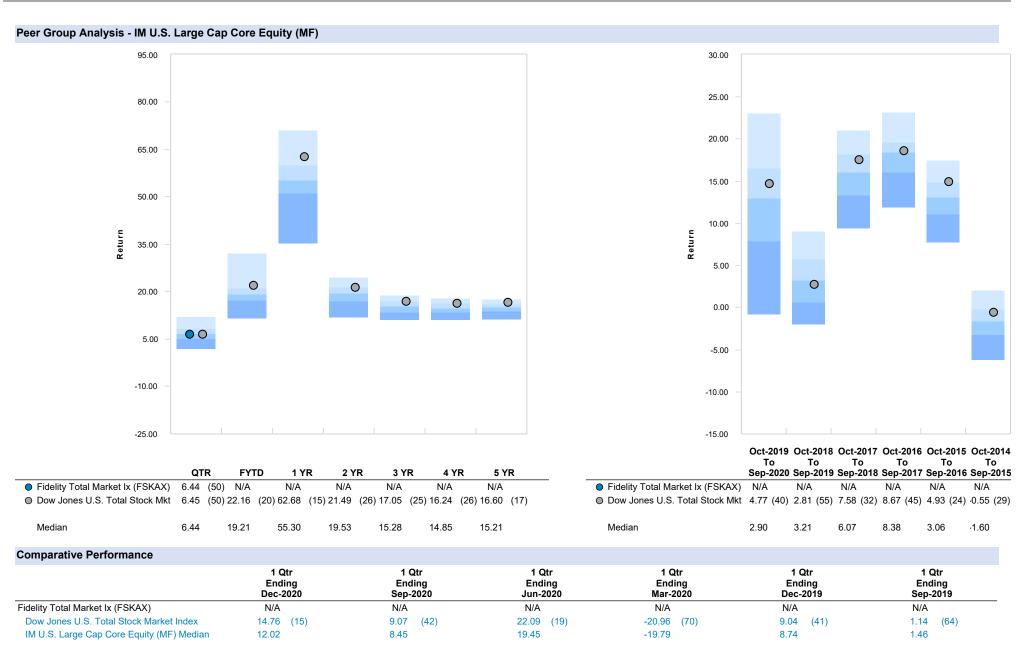
	Return	Standard Deviation
<ul><li>Boston LCV</li></ul>	12.68	27.19
<ul><li>Russell 1000 Value Idx</li></ul>	10.96	23.02
Median	11.87	23.65

	Return	Standard Deviation
<ul><li>Boston LCV</li></ul>	N/A	N/A
<ul> <li>Russell 1000 Value Idx</li> </ul>	11.74	18.16
Median	12.98	18.63

Historical Statistics - 3 Years										
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk		
Boston LCV	3.91	111.06	107.28	0.69	0.54	0.59	1.11	15.85		
Russell 1000 Value Index	0.00	100.00	100.00	0.00	N/A	0.55	1.00	13 77		

Historical Statistics - 5 Years									
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk	
Boston LCV	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Russell 1000 Value Index	0.00	100.00	100.00	0.00	N/A	0.70	1.00	10.95	







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#### Peer Group Analysis - IM U.S. Large Cap Growth Equity (SA+CF) 110.00 70.00 95.00 60.00 80.00 50.00 65.00 40.00 00 00 50.00 30.00 Return 0 0 20.00 35.00 00 0 00 0 0 20.00 10.00 00 00 0 5.00 0.00 00 -10.00 -10.00 -20.00 -25.00 Oct-2019 Oct-2018 Oct-2017 Oct-2016 Oct-2015 Oct-2014 To To To Τo To Τo QTR FYTD 1 YR 2 YR 3 YR 4 YR 5 YR Sep-2020 Sep-2019 Sep-2018 Sep-2017 Sep-2016 Sep-2015 Rhumbline R1000G 0.95 (71) 12.46 (65) 62.69 (39) 28.17 (32) 22.80 (36) N/A N/A Rhumbline R1000G 37.55 (28) 3.70 (52) Russell 1000 Growth I 0.94 (71) 12.44 (66) 62.74 (39) 28.15 (32) 22.80 (36) 22.41 (42) 21.05 (41) Russell 1000 Growth I 37.53 (28) 3.71 (52) 26.30 (36) 21.94 (38) 13.76 (23) 3.17 (55) Median 2.16 13.69 60.35 26.27 21.54 21.45 20.08 Median 33.28 3.82 24.44 20.83 11.72 3.61 **Comparative Performance** 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr Ending Ending **Ending** Ending **Ending Ending** Dec-2020 Sep-2020 Jun-2020 Mar-2020 Dec-2019 Sep-2019 Rhumbline R1000G 11.40 (54) 13.22 (23) 27.78 (38) -14.03 (47) 10.60 (26) 1.49 (29) Russell 1000 Growth Index (54)(23)(38)-14.10 (49) (25)1.49 (29)11.39 13.22 27.84 10.62

26.62

-14.30

11.14

11.64

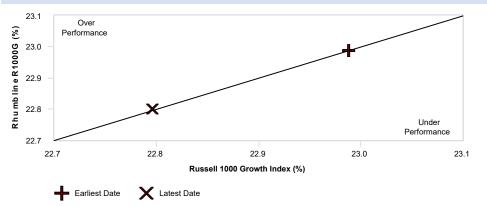


0.61

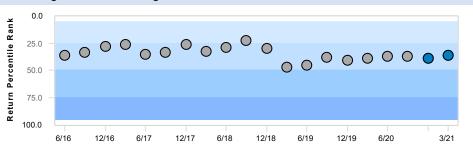
9.58

IM U.S. Large Cap Growth Equity (SA+CF) Median

## 3 Yr Rolling Under/Over Performance - 5 Years

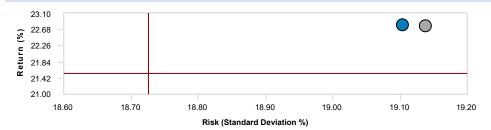


# 3 Yr Rolling Percentile Ranking - 5 Years



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count	
<ul><li>Rhumbline R1000G</li></ul>	2	0 (0%)	2 (100%)	0 (0%)	0 (0%)	Ī
<ul> <li>Russell 1000 Growth I</li> </ul>	20	1 (5%)	19 (95%)	0 (0%)	0 (0%)	

### Peer Group Scattergram - 3 Years



Peer Group Scattergram - 5 Yea	rs
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	Return	Standard Deviation		
<ul><li>Rhumbline R1000G</li></ul>	22.80	19.10		
<ul><li>Russell 1000 Growth I</li></ul>	22.80	19.14		
Median	21.54	18.73		

	Return	Standard Deviation
<ul><li>Rhumbline R1000G</li></ul>	N/A	N/A
<ul><li>Russell 1000 Growth I</li></ul>	21.05	15.71
Median	20.08	15.50

#### **Historical Statistics - 3 Years**

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Rhumbline R1000G	0.04	99.90	99.77	0.04	-0.04	1.10	1.00	11.11
Russell 1000 Growth Index	0.00	100.00	100.00	0.00	N/A	1.09	1.00	11.13

#### **Historical Statistics - 5 Years**

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Rhumbline R1000G	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 1000 Growth Index	0.00	100.00	100.00	0.00	N/A	1.22	1.00	8.87



#### Peer Group Analysis - IM U.S. Large Cap Growth Equity (SA+CF) 110.00 70.00 95.00 60.00 80.00 50.00 65.00 40.00 0 0 50.00 30.00 0 0 35.00 20.00 00 0 0 20.00 10.00 00 0 0 5.00 0.00 00 -10.00 -10.00 -20.00 -25.00 Oct-2019 Oct-2018 Oct-2017 Oct-2016 Oct-2015 Oct-2014 To To To Τo To Τo QTR **FYTD** 1 YR 2 YR 3 YR 4 YR 5 YR Sep-2020 Sep-2019 Sep-2018 Sep-2017 Sep-2016 Sep-2015 Polen Capital LCG 1.75 (58) 12.11 (73) 57.55 (65) 27.67 (35) N/A N/A N/A Polen Capital LCG 35.64 (36) N/A N/A Russell 1000 Growth I 0.94 (71) 12.44 (66) 62.74 (39) 28.15 (32) 22.80 (36) 22.41 (42) 21.05 (41) Russell 1000 Growth I 37.53 (28) 3.71 (52) 26.30 (36) 21.94 (38) 13.76 (23) 3.17 (55) Median 2.16 13.69 60.35 26.27 21.54 21.45 20.08 Median 33.28 3.82 24.44 20.83 11.72 3.61 **Comparative Performance**

1 Qtr

**Ending** 

Jun-2020

(40)

(38)

27.60

27.84

26.62

1 Qtr

Ending

Mar-2020

-14.10 (49)

(32)

-12.96

-14.30

1 Qtr

**Ending** 

Dec-2019

(21)

(25)

10.89

10.62

9.58

1 Qtr

Ending

Dec-2020

10.18 (72)

11.39

11.64

(54)

1 Qtr

Ending

Sep-2020

10.13 (71)

13.22

11.14

(23)



1 Qtr

**Ending** 

Sep-2019

(43)

(29)

0.97

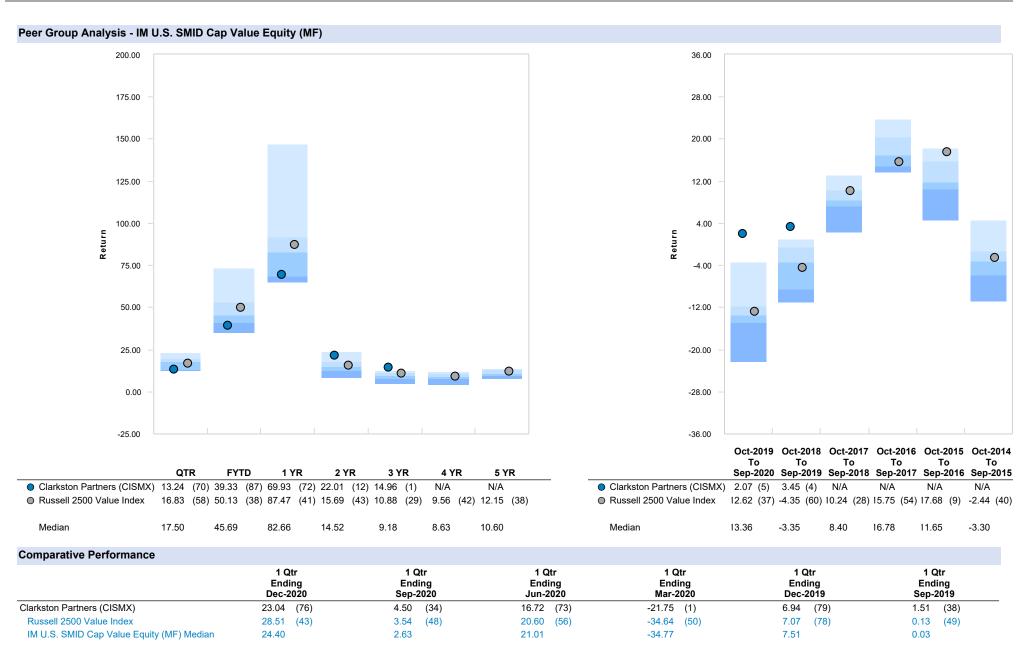
1.49

0.61

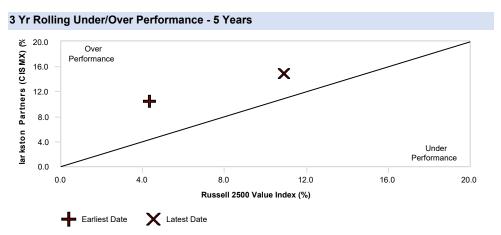
Polen Capital LCG

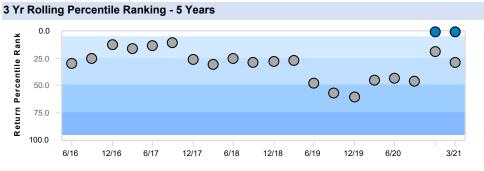
Russell 1000 Growth Index

IM U.S. Large Cap Growth Equity (SA+CF) Median









	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count	
<ul><li>Clarkston Partners (CISMX)</li></ul>	2	2 (100%)	0 (0%)	0 (0%)	0 (0%)	
<ul> <li>Russell 2500 Value Index</li> </ul>	20	7 (35%)	11 (55%)	2 (10%)	0 (0%)	

# Peer Group Scattergram - 3 Years 16.00 14.00 10

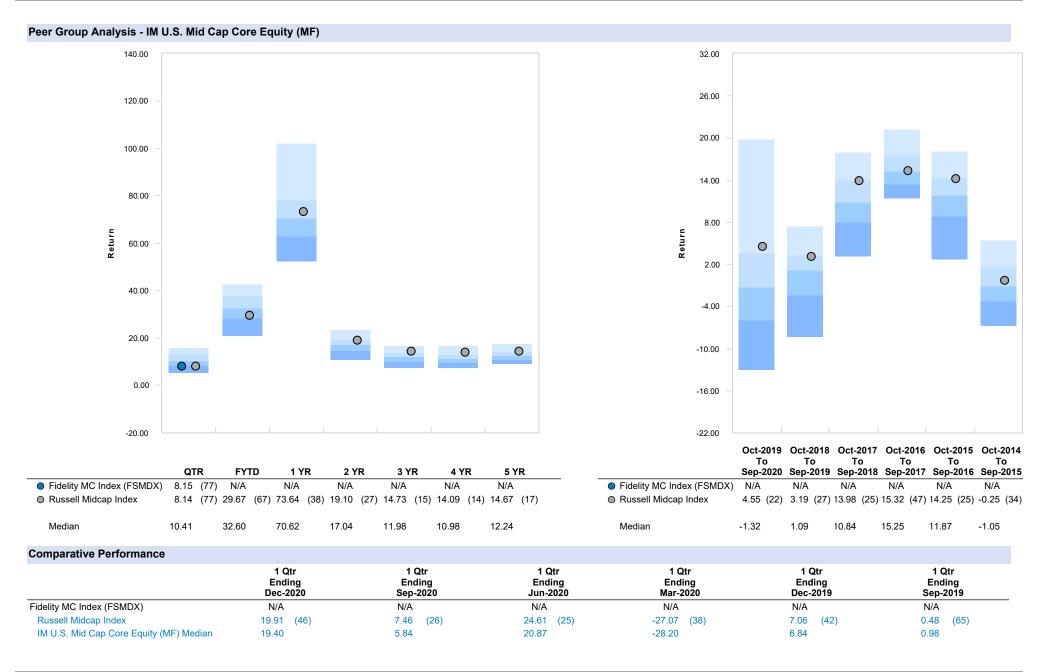
Pee	r Group Scat	tergram - 5 Years				
rn (%)	12.75 12.24 – 11.73 –	0				
Return	10.71	99.99	00.00	24.00	04.00	21.40
	20.40	20.60	20.80	21.00	21.20	21.40
			Risk (Standard I	Deviation %)		

Return	Standard Deviation
14.96	18.70
10.88	25.37
9.18	26.25
	14.96 10.88

	Return	Standard Deviation
<ul><li>Clarkston Partners (CISMX)</li></ul>	N/A	N/A
<ul><li>Russell 2500 Value Index</li></ul>	12.15	20.59
Median	10.60	21.20

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Clarkston Partners (CISMX)	8.77	79.91	61.28	6.15	0.23	0.76	0.71	11.93
Russell 2500 Value Index	0.00	100.00	100.00	0.00	N/A	0.48	1.00	18.46
Historical Statistics - 5 Ye	ars							
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Clarkston Partners (CISMX)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 2500 Value Index	0.00	100.00	100.00	0.00	N/A	0.61	1.00	14.59







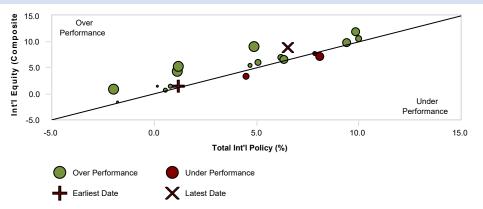
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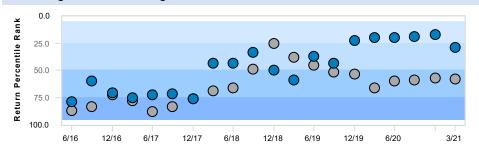




# 3 Yr Rolling Under/Over Performance - 5 Years

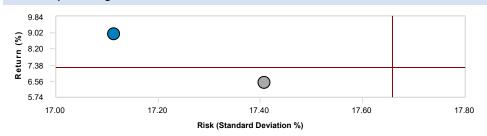


# 3 Yr Rolling Percentile Ranking - 5 Years



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
<ul> <li>Total Int'l Equity (Composite)</li> </ul>	20	5 (25%)	7 (35%)	6 (30%)	2 (10%)
<ul><li>Total Int'l Policy</li></ul>	20	1 (5%)	3 (15%)	10 (50%)	6 (30%)

### Peer Group Scattergram - 3 Years



Peer Grou	p Scatter	gram - 5 \	<b>Years</b>
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	Return	Standard Deviation
<ul> <li>Total Int'l Equity (Composite)</li> </ul>	8.99	17.11
<ul><li>Total Int'l Policy</li></ul>	6.51	17.41
Median	7.26	17.66

	Return	Standard Deviation
<ul><li>Total Int'l Equity (Composite)</li></ul>	10.87	14.50
<ul><li>Total Int'l Policy</li></ul>	9.76	14.50
Median	9.81	14.82

### **Historical Statistics - 3 Years**

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Int'l Equity (Composite)	4.31	102.06	91.26	2.66	0.52	0.50	0.95	11.20
Total Int'l Policy	0.00	100.00	100.00	0.00	N/A	0.36	1.00	11.97

#### **Historical Statistics - 5 Years**

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Int'l Equity (Composite)	4.28	100.75	94.28	1.47	0.23	0.70	0.96	9.34
Total Int'l Policy	0.00	100.00	100.00	0.00	N/A	0.63	1.00	9.67



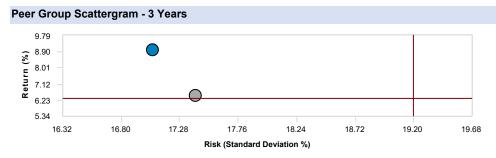
#### Peer Group Analysis - IM International Equity (MF) 110.00 50.00 40.00 95.00 30.00 80.00 20.00 00 65.00 10.00 00 50.00 Return 0 0 0.00 0 35.00 -10.00 0 20.00 0 0 -20.00 00 5.00 -30.00 -10.00 -40.00 -25.00 Oct-2019 Oct-2018 Oct-2017 Oct-2016 Oct-2015 Oct-2014 To To To To To To Sep-Sep-Sep-Sep-Sep-Sep-QTR **FYTD** 1 YR 2 YR 3 YR 4 YR 5 YR 2020 2019 2018 2017 2016 2015 Harding Loevner Intl Eqty (HLIZX) 0.88 (75) 17.15 (72) 50.54 (67) 16.74 (30) 9.05 (27) 11.50 (30) Harding Loevner Intl Eqty (HLIZX) 4.11 (29) 3.34 (62) 5.85 (10) 8.65 (58) N/A N/A MSCI AC World ex USA (Net) 3.49 (45) 21.10 (49) 49.41 (71) 12.31 (63) 6.51 (48) 8.93 (55) 9.76 (53) MSCI AC World ex USA (Net) 3.00 (63) 1.23 (44) 1.76 (34) 9.61 (48) 9.26 (51) 2.16 (64) Median 3.18 20.87 55.10 13.94 6.34 9.22 9.91 Median 6.64 -1.930.08 9.37 9.32 -8.75**Comparative Performance** 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr Ending Ending Ending **Ending** Ending Ending Dec-2020 Sep-2020 Jun-2020 Mar-2020 Dec-2019 Sep-2019 Harding Loevner Intl Eqty (HLIZX) 16.13 (57) 8.68 (43) 18.24 (54) -19.34 (18) 10.09 (42) -2.40 (61) MSCI AC World ex USA (Net) 17.01 (49) 6.25 (65)16.12 (75) -23.36 (47)8.92 (62)-1.80 (47)IM International Equity (MF) Median 18.59 9.59 -1.90 16.90 7.87 -23.70



#### 3 Yr Rolling Under/Over Performance - 5 Years 15.0 10.0 10.0 5.0 0.0 15.0 Over Performance 8 0 Under Performance -5.0 0.0 5.0 10.0 15.0 MSCI AC World ex USA (Net) (%) X Latest Date Over Performance Earliest Date

#### 3 Yr Rolling Percentile Ranking - 5 Years Return Percentile Rank 000000000 25.0 50.0 75.0 100.0 6/19 12/19 6/20 3/21 6/16 12/16 12/17 6/18 12/18 6/17

	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
<ul> <li>Harding Loevner Intl Eqty (HLIZX)</li> </ul>	7	4 (57%)	3 (43%)	0 (0%)	0 (0%)
<ul><li>MSCI AC World ex USA (Net)</li></ul>	20	0 (0%)	10 (50%)	10 (50%)	0 (0%)



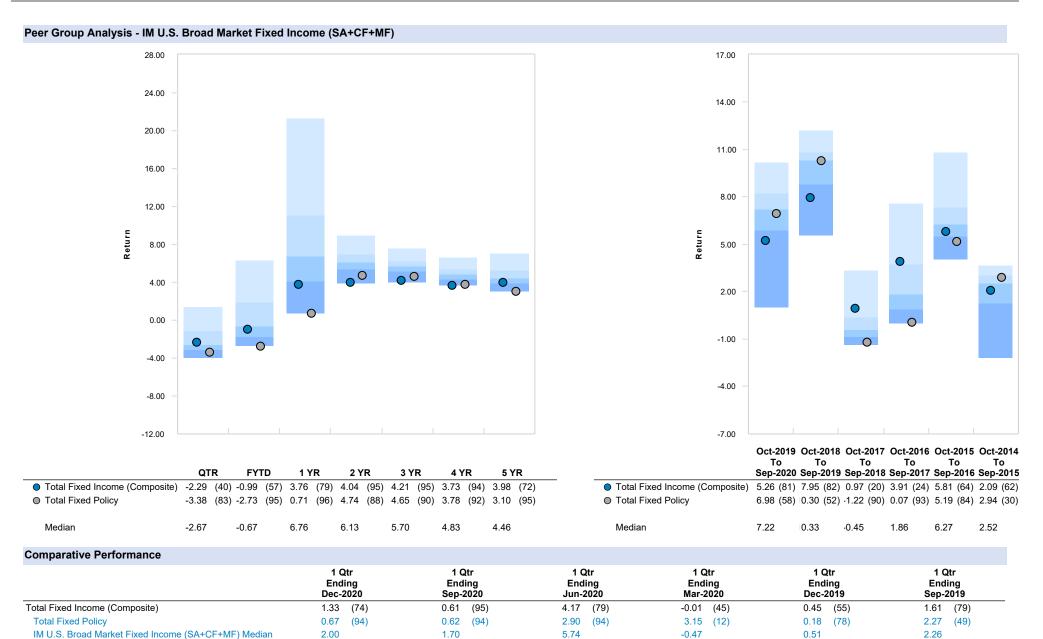
Pee	r Group S	cattergram - 8	5 Years					
(%)	9.96 9.90							
Return (	9.84 -							
ď	9.78	C	)					
	14.00	14.35	14.70	15.05	15.40	15.75	16.10	16.45
			ı	Risk (Standard I	Deviation %)			

	Return	Standard Deviation
<ul> <li>Harding Loevner Intl Eqty (HLIZX)</li> </ul>	9.05	17.06
<ul> <li>MSCI AC World ex USA (Net)</li> </ul>	6.51	17.41
Median	6.34	19.20

	Return	Standard Deviation	
<ul><li>Harding Loevner Intl Eqty (HLIZX)</li></ul>	N/A	N/A	
<ul><li>MSCI AC World ex USA (Net)</li></ul>	9.76	14.50	
Median	9.91	16.06	

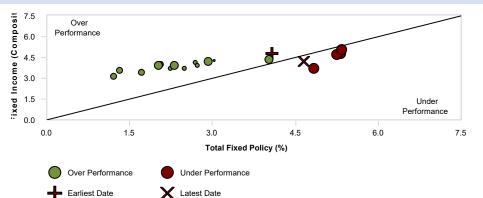
Historical Statistics - 3 Years								
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Harding Loevner Intl Eqty (HLIZX)	4.35	101.96	90.94	2.73	0.53	0.50	0.95	11.13
MSCI AC World ex USA (Net)	0.00	100.00	100.00	0.00	N/A	0.36	1.00	11.97
Historical Statistics - 5 Years								
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Harding Loevner Intl Eqty (HLIZX)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MSCI AC World ex USA (Net)	0.00	100.00	100.00	0.00	N/A	0.63	1.00	9.67



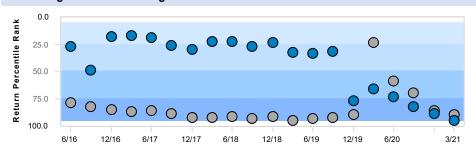




#### 3 Yr Rolling Under/Over Performance - 5 Years

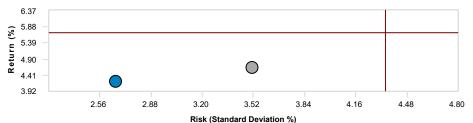


## 3 Yr Rolling Percentile Ranking - 5 Years



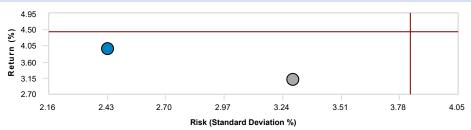
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count	
<ul> <li>Total Fixed Income (Composite)</li> </ul>	20	6 (30%)	8 (40%)	2 (10%)	4 (20%)	
<ul> <li>Total Fixed Policy</li> </ul>	20	1 (5%)	0 (0%)	2 (10%)	17 (85%)	

#### Peer Group Scattergram - 3 Years



	4 OF		

Peer Group Scattergram - 5 Years



Return	Standard Deviation
4.21	2.66
4.65	3.51
5.70	4.35
	4.21 4.65

	Return	Standard Deviation
<ul> <li>Total Fixed Income (Composite)</li> </ul>	3.98	2.43
<ul> <li>Total Fixed Policy</li> </ul>	3.10	3.29
Median	4.46	3.83

#### **Historical Statistics - 3 Years**

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fixed Income (Composite)	2.01	75.93	52.23	1.29	-0.23	1.00	0.62	1.49
Total Fixed Policy	0.00	100.00	100.00	0.00	N/A	0.91	1.00	1.56

#### **Historical Statistics - 5 Years**

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fixed Income (Composite)	1.91	81.51	33.01	2.08	0.44	1.13	0.61	1.34
Total Fixed Policy	0.00	100.00	100.00	0.00	N/A	0.60	1.00	1.79



#### Peer Group Analysis - IM U.S. Broad Market Core Fixed Income (SA+CF) 12.00 17.00 10.00 14.00 8.00 11.00 6.00 4.00 8.00 Return 2.00 0 5.00 0.00 0 2.00 -2.00 00 00 0 -4.00 -1.00 -6.00 -4.00 -8.00 Oct-2019 Oct-2018 Oct-2017 Oct-2016 Oct-2015 Oct-2014 To To To To To To Sep-Sep-Sep-Sep-Sep-Sep-QTR **FYTD** 1 YR 2 YR 3 YR 4 YR 5 YR 2020 2019 2018 2017 2016 2015 Garcia Hamilton Fixed Income -3.23 (55) -2.50 (67) 3.17 (54) 4.74 (90) 4.52 (95) N/A N/A Garcia Hamilton Fixed Income 7.40 (55) 8.75 (96) N/A N/A N/A N/A Blmbg. Barc. U.S. Aggregate Index -3.38 (68) -2.73 (82) 0.71 (92) 4.74 (90) 4.65 (92) 3.78 (94) Blmbg. Barc. U.S. Aggregate Index 6.98 (77) 0.30 (69) 1.22 (88) 0.07 (84) 5.19 (80) 2.94 (62) 3.10 (93) Median -3.21 -2.07 3.52 5.55 5.30 4.42 3.78 Median 7.53 0.43 0.740.63 5.66 3.02 **Comparative Performance** 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr Ending Ending Ending Ending Ending **Ending** Dec-2020 Sep-2020 Jun-2020 Mar-2020 Dec-2019 Sep-2019 Garcia Hamilton Fixed Income 0.75 (73) 0.83 (68) 4.95 (30) 1.51 (60) -0.01 (87) 2.40 (33) Blmbg. Barc. U.S. Aggregate Index (84)(85)2.90 (89)3.15 (24) 0.18 (58) 2.27 (70)0.67 0.62

4.36

1.95



2.32

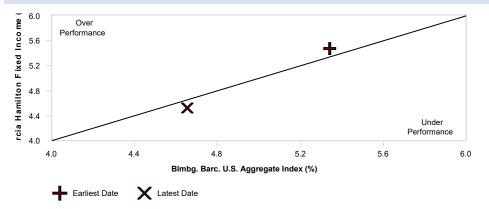
0.22

IM U.S. Broad Market Core Fixed Income (SA+CF) Median

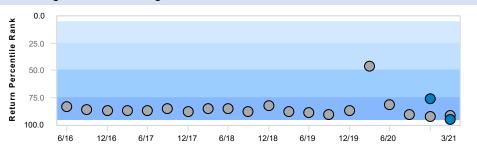
1.12

1.10

#### 3 Yr Rolling Under/Over Performance - 5 Years

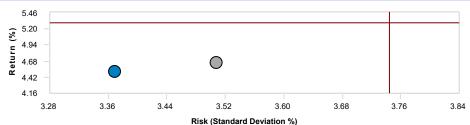


## 3 Yr Rolling Percentile Ranking - 5 Years

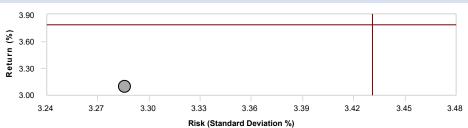


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
<ul> <li>Garcia Hamilton Fixed Income</li> </ul>	2	0 (0%)	0 (0%)	0 (0%)	2 (100%
<ul> <li>Blmbg. Barc. U.S. Aggregate Index</li> </ul>	20	0 (0%)	1 (5%)	0 (0%)	19 (95%)

### Peer Group Scattergram - 3 Years



Peer Group Scattergram - 5 Years



	Return	Standard Deviation
<ul> <li>Garcia Hamilton Fixed Income</li> </ul>	4.52	3.37
<ul> <li>Blmbg. Barc. U.S. Aggregate Index</li> </ul>	4.65	3.51
Median	5.30	3.75

	Return	Standard Deviation
<ul> <li>Garcia Hamilton Fixed Income</li> </ul>	N/A	N/A
<ul> <li>Blmbg. Barc. U.S. Aggregate Index</li> </ul>	3.10	3.29
Median	3.78	3.43

#### **Historical Statistics - 3 Years**

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Garcia Hamilton Fixed Income	1.18	94.21	89.40	0.31	-0.11	0.89	0.90	1.55
Blmbg. Barc. U.S. Aggregate Index	0.00	100.00	100.00	0.00	N/A	0.91	1.00	1.56

#### **Historical Statistics - 5 Years**

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Garcia Hamilton Fixed Income	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Blmbg. Barc. U.S. Aggregate Index	0.00	100.00	100.00	0.00	N/A	0.60	1.00	1.79



#### Peer Group Analysis - IM U.S. Broad Market Core Fixed Income (MF) 14.00 14.00 11.00 11.00 0 8.00 8.00 0 5.00 5.00 Return Return 2.00 2.00 0 0 -1.00 0 -1.00 0 -4.00 0 -4.00 -7.00 Oct-Oct-Oct-Oct-Oct-Oct--7.00 2019 2018 2017 2016 2015 2014 Τo To To То То To Sep-Sep-Sep-Sep-Sep-Sep-QTR **FYTD** 1 YR 2 YR 3 YR 4 YR 5 YR 2020 2019 2018 2017 2016 2015 Loomis Sayles Bond Fund (LSBDX) -1.25 (6) N/A N/A N/A N/A N/A N/A Loomis Sayles Bond Fund (LSBDX) N/A N/A N/A N/A N/A Blmbg. Barc. U.S. Aggregate Index -3.38 (74) -2.73 (86) 0.71 (91) 4.74 (69) 4.65 (60) 3.78 (58) 3.10 (67) Blmbg. Barc. U.S. Aggregate Index 6.98 (50) 0.30 (24) 1.22 (41) 0.07 (64) 5.19 (51) 2.94 (9) Median -3.04 -1.68 4.37 5.21 4.80 3.89 3.40 Median 6.96 9.81 1.34 0.48 5.21 1.98 **Comparative Performance** 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr Ending Ending **Ending** Ending Ending Ending Dec-2020 Sep-2020 Jun-2020 Mar-2020 Dec-2019 Sep-2019

N/A

2.90

4.94

(91)

N/A

0.55

3.15 (16)

N/A

0.18

0.18

(51)



N/A

2.27 (34)

2.16

Loomis Sayles Bond Fund (LSBDX)

Blmbg. Barc. U.S. Aggregate Index

IM U.S. Broad Market Core Fixed Income (MF) Median

N/A

0.67 (88)

1.36

N/A

0.62

1.19

(88)

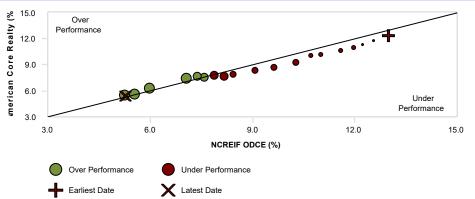
#### Peer Group Analysis - IM U.S. High Yield Bonds (MF) 40.00 20.00 35.00 16.00 30.00 12.00 0 25.00 0 8.00 0 20.00 4.00 0 0 Return 15.00 0.00 10.00 0 0 0 -4.00 5.00 -8.00 0 0.00 -12.00 -5.00 -16.00 -10.00 Oct-2019 Oct-2018 Oct-2017 Oct-2016 Oct-2015 Oct-2014 To To To To Τo To Sep-Sep-Sep-Sep-Sep-Sep-QTR **FYTD** 1 YR 2 YR 3 YR 4 YR 5 YR 2020 2019 2018 2017 2016 2015 MainStay HY Corp Bond (MHYSX) N/A N/A N/A N/A N/A N/A N/A MainStay HY Corp Bond (MHYSX) N/A N/A N/A N/A N/A N/A Blmbg. Barc. U.S. Corp High Yield 0.85 (53) 7.36 (44) 23.72 (37) Blmbg. Barc. U.S. Corp High Yield 3.25 (19) 6.36 (27) 3.05 (25) 8.88 (26) 2.73 (3) 7.30 (21) 6.84 (12) 6.07 (12) 8.06 (9) 3.43 (55) Median 0.91 6.99 22.24 6.25 5.64 5.04 6.70 Median 1.89 5.35 2.28 7.81 9.72 -3.18**Comparative Performance** 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr **Ending Ending** Ending Ending Ending Ending Dec-2020 Sep-2020 Jun-2020 Mar-2020 Dec-2019 Sep-2019 MainStay HY Corp Bond (MHYSX) N/A N/A N/A N/A N/A N/A Blmbg. Barc. U.S. Corp High Yield 6.45 4.60 (45)-12.68 (48)2.61 (41) 1.33 (41) (38)10.18 (29)IM U.S. High Yield Bonds (MF) Median 4.50 -12.78 2.47 1.23 6.02 9.16



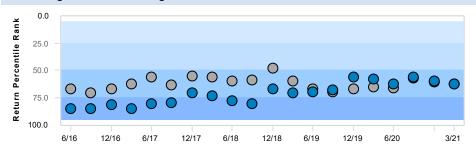
#### Peer Group Analysis - IM U.S. Open End Private Real Estate (SA+CF) 14.00 28.00 24.00 11.00 20.00 8.00 16.00 00 00 5.00 12.00 00 Return 0 0 00 0 00 8.00 0 2.00 00 4.00 -1.00 00 0.00 -4.00 -4.00 -8.00 -7.00 Oct-2019 Oct-2018 Oct-2017 Oct-2016 Oct-2015 Oct-2014 To To Τo To QTR **FYTD** 1 YR 2 YR 3 YR 4 YR 5 YR Sep-2020 Sep-2019 Sep-2018 Sep-2017 Sep-2016 Sep-2015 American Core Realty 1.87 (50) 3.31 (56) 1.90 (66) 3.98 (69) 5.37 (63) 6.03 (62) 6.17 (71) American Core Realty 6.81 (52) 8.50 (65) 7.53 (62) 9.04 (94) 13.98 (68) NCREIF ODCE 2.25 (33) 3.64 (51) 2.91 (57) 4.08 (68) 5.29 (63) 6.00 (62) 6.52 (56) NCREIF ODCE 1.74 (60) 6.17 (72) 8.82 (59) 7.81 (56) 10.62 (68) 14.71 (61) Median 1.86 3.67 3.09 4.38 5.70 6.37 6.80 Median 1.90 6.89 9.04 8.05 11.32 15.45 **Comparative Performance** 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr **Ending** Ending **Ending Ending** Ending Ending Dec-2020 Sep-2020 Jun-2020 Mar-2020 Dec-2019 Sep-2019 American Core Realty 1.42 (59) -0.14 (87) -1.23 (55) 1.54 (31) 1.46 (66) 1.44 (71) NCREIF ODCE 1.36 (60)0.57 (48)-1.27 (59) 0.92 (67)(58)1.39 (75)1.53 IM U.S. Open End Private Real Estate (SA+CF) Median 0.49 1.61 1.75 1.63 -1.22 1.31



# 3 Yr Rolling Under/Over Performance - 5 Years

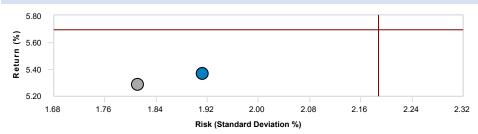


## 3 Yr Rolling Percentile Ranking - 5 Years



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count	
<ul> <li>American Core Realty</li> </ul>	20	0 (0%)	0 (0%)	12 (60%)	8 (40%)	
NCREIF ODCE	20	0 (0%)	1 (5%)	19 (95%)	0 (0%)	

#### Peer Group Scattergram - 3 Years



	Peer	Group	Scat	tergra	m - 5	Years
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	Return	Standard Deviation
<ul><li>American Core Realty</li></ul>	5.37	1.91
<ul><li>NCREIF ODCE</li></ul>	5.29	1.81
Median	5.70	2.19

	Return	Standard Deviation
<ul> <li>American Core Realty</li> </ul>	6.17	1.62
<ul><li>NCREIF ODCE</li></ul>	6.52	1.59
Median	6.80	1.97

#### **Historical Statistics - 3 Years**

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
American Core Realty	0.64	101.12	96.65	0.04	0.12	1.35	1.01	0.72
NCREIF ODCE	0.00	100.00	100.00	0.00	N/A	1.35	1.00	0.74

#### **Historical Statistics - 5 Years**

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
American Core Realty	0.84	94.83	96.65	0.11	-0.40	1.67	0.93	0.55
NCREIF ODCE	0.00	100.00	100.00	0.00	N/A	1.72	1.00	0.57



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#### Peer Group Analysis - IM Flexible Portfolio (MF) 80.00 25.00 20.00 70.00 15.00 60.00 10.00 50.00 0 5.00 40.00 Return Return 0.00 0 30.00 00 -5.00 20.00 -10.00 0 10.00 -15.00 00 0.00 -20.00 -10.00 -25.00 Oct-Oct-Oct-Oct-Oct-Oct--20.00 2019 2018 2017 2016 2015 2014 To To To To To To Sep-Sep-Sep-Sep-Sep-Sep-QTR **FYTD** 1 YR 2 YR 3 YR 4 YR 5 YR 2020 2019 2018 2017 2016 2015 Blackrock Multi-Asset Income (BKMIX) 2.12 (57) 8.80 (73) 23.22 (75) 7.71 (60) N/A N/A N/A Blackrock Multi-Asset Income (BKMIX) 2.44 (50) N/A N/A N/A N/A N/A ■ 50% MSCI World Value/ 50% BBA 3.00 (45) 11.43 (59) 22.75 (76) 7.72 (60) 6.20 (57) N/A N/A 0.25 (70) 5.80 (23) N/A N/A N/A Median 2.58 12.28 31.16 8.78 6.51 6.50 7.18 Median 2.43 2.59 3.38 9.02 8.55 4.22 **Comparative Performance** 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr **Ending** Ending **Ending** Ending **Ending** Ending Dec-2020 Sep-2020 Jun-2020 Mar-2020 Dec-2019 Sep-2019 Blackrock Multi-Asset Income (BKMIX) 6.54 (75) 3.47 (68) 9.45 (69) -11.69 (25) 2.42 (80) 1.28 (34) 50% MSCI World Value/ 50% BBA 8.19 (62)2.28 (88)7.70 (79)-12.68 (31) 3.71 (57)1.45 (31) IM Flexible Portfolio (MF) Median 9.22 4.57 11.21 4.09 0.73 -15.28



		Uncalled Capital				
	Market Value	Commitment	QTD IRR	Inception IRR	Inception Date	Expected Termination
*Angelo Gordon Net Lease Realty Fund III, L.P.	\$1,779,173.00	\$75,889	2.61	6.65	3/10/2014	4/1/2027
*Crescent Direct Lending Levered Fund	\$1,808,642.00	\$390,451	3.08	7.32	10/9/2014	12/1/2022
*Dune Real Estate Fund III	\$1,247,438	\$77,982	-1.45	6.93	11/6/2014	12/1/2024
*Molpus Woodlands Timber	\$813,357.00	\$0	<b>-</b> 7.58	1.73	6/24/2008	5/2018-5/2022

<sup>\*</sup> Market Value as of 12-31-2020

Market Value includes contributions & distributions since end of period.



otal Fund Policy Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)
Jan-1978		Oct-2013	110.9.11 (70)
S&P 500 Index	65.00	Wilshire 5000 Total Market Index (full-cap) Index	35.00
Blmbg. Barc. U.S. Gov't/Credit	30.00	MSCI AC World ex USA (Net)	15.00
FTSE 3 Month T-Bill	5.00	Blmbg. Barc. U.S. Aggregate Index	27.50
1020 Month 1 Bill	0.00	NCREIF ODCE	5.00
Apr-2007		Quadrant Custom Policy	5.00
Blmbg. Barc. U.S. Gov't/Credit	30.00	NCREIF Timberland Index	5.00
Blmbg. Barc. U.S. TIPS 1-10 Year	5.00	CPI+5%	7.50
S&P 500 Index	60.00		
MSCI EAFE (Net) Index	5.00	May-2014	
		Wilshire 5000 Total Market Index (full-cap) Index	35.00
Oct-2007		MSCI AC World ex USA (Net)	15.00
MSCI EAFE (Net) Index	10.00	Blmbg. Barc. U.S. Aggregate Index	27.50
Bloomberg Barclays Intermed Aggregate Index	30.00	NCREIF ODCE	10.00
Blmbg. Barc. U.S. TIPS 1-10 Year	5.00	NCREIF Timberland Index	5.00
Russell 3000 Index	50.00	CPI+5%	7.50
NCREIF Property Index	5.00		
I 0040		Jul-2015	
Jan-2010	45.00	Wilshire 5000 Total Market Index (full-cap) Index	35.00
MSCI AC World ex USA (Net)	15.00	MSCI AC World ex USA (Net)	15.00
Blmbg. Barc. U.S. Aggregate Index	30.00	Blmbg. Barc. U.S. Aggregate Index	27.50
Bloomberg Barclays U.S. TIPS Index	5.00	NCREIF ODCE	10.00
Russell 3000 Index	45.00	NCREIF Timberland Index	5.00
NCREIF Property Index	5.00	Alternatives Policy	7.50
Jul-2010		Nov-2015	
Wilshire 5000 Total Market Index (full-cap) Index	35.00	Wilshire 5000 Total Market Index (full-cap) Index	42.50
MSCI AC World ex USA (Net)	15.00	MSCI AC World ex USA (Net)	15.00
Blmbg. Barc. U.S. Aggregate Index	25.00	Blmbg. Barc. U.S. Aggregate Index	27.50
Bloomberg Barclays U.S. TIPS Index	5.00	NCREIF ODCE	10.00
NCREIF ODCE	5.00	Alternatives Policy	5.00
Barclay BTOP 50	5.00	, atomical voor oney	0.00
Quadrant Custom Policy	5.00		
NCREIF Timberland Index	5.00		



Total Equity Policy	
Allocation Mandate	Weight (%)
Oct-2005	
S&P 500 Index	95.00
FTSE 3 Month T-Bill	5.00
Apr-2007	
FTSE 3 Month T-Bill	5.00
S&P 500 Index	85.00
MSCI EAFE (Net) Index	10.00
Oct-2007	
MSCI EAFE (Net) Index	15.00
Russell 3000 Index	85.00
Jan-2010	
MSCI AC World ex USA (Net)	25.00
Russell 3000 Index	75.00
Jul-2010	
MSCI AC World ex USA (Net)	45.00
Wilshire 5000 Total Market Index (full-cap) Index	55.00
Nov-2015	
MSCI AC World ex USA (Net)	25.00
Wilshire 5000 Total Market Index (full-cap) Index	75.00

Weight (%)
100.00
100.00
100.00

Total Int'l Policy	
Allocation Mandate	Weight (%)
Jan-1970	
MSCI EAFE (Net) Index	100.00
Jan-2010	100.00
MSCI AC World ex USA (Net)	100.00
Alternatives Policy	
Allocation Mandate	Weight (%)
Aug-2010	
Barclay BTOP 50	100.00
Nov. 0040	
Nov-2013	100.00
CPI+5%	100.00
Jul-2015	
S&P 500 Index	50.00
Blmbg. Barc. U.S. Aggregate Index	50.00
Total Fixed Policy	
Allocation Mandate	Weight (%)
Oct-2005	
Blmbg. Barc. U.S. Gov't/Credit	95.00
FTSE 3 Month T-Bill	5.00
Jan-2007	
Blmbg. Barc. U.S. Gov't/Credit	85.00
Blmbg. Barc. U.S. TIPS 1-10 Year	15.00
3	
Oct-2007	
Blmbg. Barc. U.S. TIPS 1-10 Year	15.00
Bloomberg Barclays Intermed Aggregate Index	85.00
Jan-2010	
Bloomberg Barclays U.S. TIPS Index	15.00
Blmbg. Barc. U.S. Aggregate Index	85.00
Oct-2013	400.55
Blmbg. Barc. U.S. Aggregate Index	100.00



	Market Value (\$)	Estimated Annual Fee (\$)	Estimated Annual Fee (%)	Fee Schedule
Fidelity Total Market Ix (FSKAX)	6,506,601	3,253	0.05	0.05 % of Assets
Rhumbline R1000V	4,434,787	1,774	0.04	0.04 % of Assets
Boston LCV	16,586,270	91,224	0.55	0.55 % of First \$25 M 0.45 % of Next \$25 M 0.35 % of Next \$50 M 0.25 % Thereafter
Rhumbline R1000G	6,232,148	2,493	0.04	0.04 % of Assets
Polen Capital LCG	19,680,090	118,081	0.60	0.60 % of Assets
Fidelity Mid Cap Index (FSMDX)	3,606,436	1,082	0.03	0.03 % of Assets
Clarkston Partners (CISMX)	14,784,093	147,841	1.00	1.00 % of Assets
Harding Loevner Intl Equity (HLIZX)	19,848,567	144,895	0.73	0.73 % of Assets
Garcia Hamilton Fixed Income	16,239,536	40,599	0.25	0.25 % of Assets
American Core Realty	4,792,882	52,722	1.10	1.10 % of Assets
Blackrock Multi-Asset Income (BKMIX)	3,660,431	21,597	0.59	0.59 % of Assets
Total Fund (Composite)	129,378,196	665,942	0.51	



**Active Return** 

- Arithmetic difference between the manager's performance and the designated benchmark return over a specified time period.

Alpha

- A measure of the difference between a portfolio's actual performance and its expected return based on its level of risk as determined by beta. It determines the portfolio's non-systemic return, or its historical performance not explained by movements of the market.

Beta

- A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.

Consistency

- The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. Higher consistency indicates the manager has contributed more to the product's performance.

Distributed to Paid In (DPI)

- The ratio of money distributed to Limited Partners by the fund, relative to contributions. It is calculated by dividing cumulative distributions by paid in capital. This multiple shows the investor how much money they got back. It is a good measure for evaluating a fund later in its life because there are more distributions to measure against.

**Down Market Capture** 

- The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance

**Downside Risk** 

- A measure similar to standard deviation that utilizes only the negative movements of the return series. It is calculated by taking the standard deviation of the negative quarterly set of returns. A higher factor is indicative of a riskier product.

**Excess Return** 

- Arithmetic difference between the manager's performance and the risk-free return over a specified time period.

Excess Risk

- A measure of the standard deviation of a portfolio's performance relative to the risk free return.

Information Ratio

- This calculates the value-added contribution of the manager and is derived by dividing the active rate of return of the portfolio by the tracking error. The higher the Information Ratio, the more the manager has added value to the portfolio.

**Public Market Equivalent (PME)** 

- Designs a set of analyses used in the Private Equity Industry to evaluate the performance of a Private Equity Fund against a public benchmark or index.

R-Squared

- The percentage of a portfolio's performance that can be explained by the behavior of the appropriate benchmark. A high R-Squared means the portfolio's performance has historically moved in the same direction as the appropriate benchmark.

Return

- Compounded rate of return for the period.

**Sharpe Ratio** 

- Represents the excess rate of return over the risk free return divided by the standard deviation of the excess return. The result is an absolute rate of return per unit of risk. A higher value demonstrates better historical risk-adjusted performance.

**Standard Deviation** 

- A statistical measure of the range of a portfolio's performance. It represents the variability of returns around the average return over a specified time period.

Total Value to Paid In (TVPI)

- The ratio of the current value of remaining investments within a fund, plus the total value of all distributions to date, relative to the total amount of capital paid into the fund to date. It is a good measure of performance before the end of a fund's life

**Tracking Error** 

- This is a measure of the standard deviation of a portfolio's returns in relation to the performance of its designated market benchmark.

**Treynor Ratio** 

- Similar to Sharpe ratio but utilizes beta rather than excess risk as determined by standard deviation. It is calculated by taking the excess rate of return above the risk free rate divided by beta to derive the absolute rate of return per unit of risk. A higher value indicates a product has achieved better historical risk-adjusted performance.

**Up Market Capture** 

- The ratio of average portfolio performance over the designated benchmark during periods of positive returns. A higher value indicates better product performance.



AndCo compiled this report for the sole use of the client for which it was prepared. AndCo is responsible for evaluating the performance results of the Total Fund along with the investment advisors by comparing their performance with indices and other related peer universe data that is deemed appropriate. AndCo uses the results from this evaluation to make observations and recommendations to the client.

AndCo uses time-weighted calculations which are founded on standards recommended by the CFA Institute. The calculations and values shown are based on information that is received from custodians. AndCo analyzes transactions as indicated on the custodian statements and reviews the custodial market values of the portfolio. As a result, this provides AndCo with a reasonable basis that the investment information presented is free from material misstatement. This methodology of evaluating and measuring performance provides AndCo with a practical foundation for our observations and recommendations. Nothing came to our attention that would cause AndCo to believe that the information presented is significantly misstated.

This performance report is based on data obtained by the client's custodian(s), investment fund administrator, or other sources believed to be reliable. While these sources are believed to be reliable, the data providers are responsible for the accuracy and completeness of their statements. Clients are encouraged to compare the records of their custodian(s) to ensure this report fairly and accurately reflects their various asset positions.

The strategies listed may not be suitable for all investors. We believe the information provided here is reliable, but do not warrant its accuracy or completeness. Past performance is not an indication of future performance. Any information contained in this report is for informational purposes only and should not be construed to be an offer to buy or sell any securities, investment consulting, or investment management services.

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# Item 5.d.ii. Flash Report

# **April 2021**

(Will provide electronically when received)

# Item 5.d.iii. Value Equity Managers Review & Discussion

Large Cap Value Equity Manager Analysis March 31, 2021

# **Delray Beach Police Officers' Retirement System**



## Purpose for this Manager Evaluation Report

The purpose of this search is to evaluate options for the replacement of Mellon US Dynamic Large Cap Value and/or Rhumbline Russell 1000 Value Index.

Investment Options for this Manager Evaluation Report								
Firm Name	Strategy Name	Vehicle	Management Fee	Investment Minimum				
Brandywine Global Investment Management, LLC	Brandywine Dynamic Large Cap Value	SA	0.45% on first \$10M; 0.40% on next \$15M; 0.375% on next \$25M; 0.35% on next \$50M; 0.30% thereafter	\$5,000,000				
Dodge & Cox	Dodge & Cox Stock (DODGX)	MF	0.52%	\$2,500				
MFS Investment Management	MFS Value R6 (MEIKX)	MF	0.47%	None				
Vanguard Group, Inc. Subadvisors: Wellington Management, Vanguard Group	Vanguard Equity Income Admiral (VEIRX)	MF	0.19%	None				
Mellon Investments Corporation	Mellon US Dynamic Large Cap Value	SA	0.55% on first \$25M; 0.45% on next \$25M; 0.35% on next \$50M; 0.25% thereafter	\$4,000,000 (Negotiated)				



#### **Definition and Characteristics**

US Large Cap Value is typically defined as US-based companies with a market capitalization over \$5 billion that have lower price-to-book and price-to-earnings ratios and lower forecasted growth rates. The primary benchmark for strategies in this space is the Russell 1000 Value Index. The index contains those stocks with lower than average price-to-book and price-to-earnings ratios and lower 3-yr forecasted growth rates within the Russell 1000 on Russell's annual reconstitution day, typically calculated at the end of May. The Financials sector dominates the index, accounting for approximately 20% of the weight by market cap. The Healthcare, Industrials, Communication Services and Technology sectors also all have meaningful weights. The index contains over 700 individual names, but the largest companies by market cap dominate the index. The weighted average market cap of the index typically exceeds \$50 billion, while the median market cap is less than \$10 billion.

#### Role within a Portfolio

The primary role of a US Large Cap Value strategy is to provide diversified exposure to the US stock market with a style tilt toward those names with attractive valuations. The value style factor has historically shown to perform well over long periods. Stocks in the value space often demonstrate lower price volatility and higher dividend rates. Active managers in the space typically look for mispricing in a stock's valuation relative to its future business prospects. Within the portfolio, a Large Cap Value strategy is usually paired with a Large Cap Growth strategy to provide additional diversification across different economic environments.

#### **Benchmark and Peer Group**

This US Large Cap Value search report will use the following benchmark and peer group:

Index - Russell 1000 Value: Consists of the stocks in the Russell 1000 Index with lower than average forecasted growth rates and lower price-to-book and price-to-earnings ratios.

Morningstar Category - Large Value: Large Value portfolios invest primarily in big US companies that are less expensive or growing more slowly than other Large Cap stocks. Stocks in the top 70% of the capitalization of the US equity market are defined as Large Cap. Value is defined based on low valuations (low price ratios and high dividend yields) and slow growth (low growth rates for earnings, sales, book value, and cash flow).



# **Investment Option Comparison**



	Brandywine Dynamic Large Cap Value	Dodge & Cox Stock	MFS Value R6	Vanguard Equity-Income Adm	Mellon US Dynamic Large Cap Value SA
Firm Information					
Year Founded	1/1/1986	1/1/1930	1/1/1924	1/1/1975	1/1/1933
US Headquarters Location	Philadelphia, PA	San Francisco, CA	Boston, MA	Malvern, PA	Boston, MA
Number of Major Global Offices	6	2	9	12	3
Year Began Managing Ext. Funds	1/1/1986	1/1/1930	1/1/1924	1/1/1975	1/1/1970
Firm AUM (\$ M)	66,300	326,700	608,000	6,742,192	524,648
Ownership Type	Subsidiary	Independent	Subsidiary	Mutual Company	Subsidiary
Largest Owner (Name)	Franklin Templeton	Not Disclosed	SunLife Financial	Not Disclosed	BNY Mellon
Employee Ownership (%)	0	100	6	0	2
Qualify as Emerging Manager?	No	No	No	No	No
Strategy Information					
Inception Date	1/1/2007	1/4/1965	2/1/1989	3/31/1988	1/1/1994
Open/Closed	Open	Open	Open	Open	Open
Primary Benchmark	Russell 1000 Value	Russell 1000 Value	Russell 1000 Value	Russell 1000 Value	Russell 1000 Value
Secondary Benchmark	S&P 500	S&P 500	None	FTSE High Dividend Yield	None
Peer Universe	US Large Cap Value	US Large Cap Value	US Large Cap Value	US Large Cap Value	US Large Cap Value
Outperformance Estimate (%)	2-4	1-3	1-2	1-2	1-3
Tracking Error Estimate (%)	4-6	3-5	2-4	2-4	3-5
Strategy AUM (\$ M)	867	102,100	89,600	40,200	6,323
Strategy AUM as % Firm Assets	1	31	15	1	1
Estimated Capacity (\$ M)	25, 000	120, 000	Limited Capacity	50, 000	20, 000
Investment Approach - Primary	Top-Down	Bottom-up	Bottom-up	Bottom-up	Bottom-up

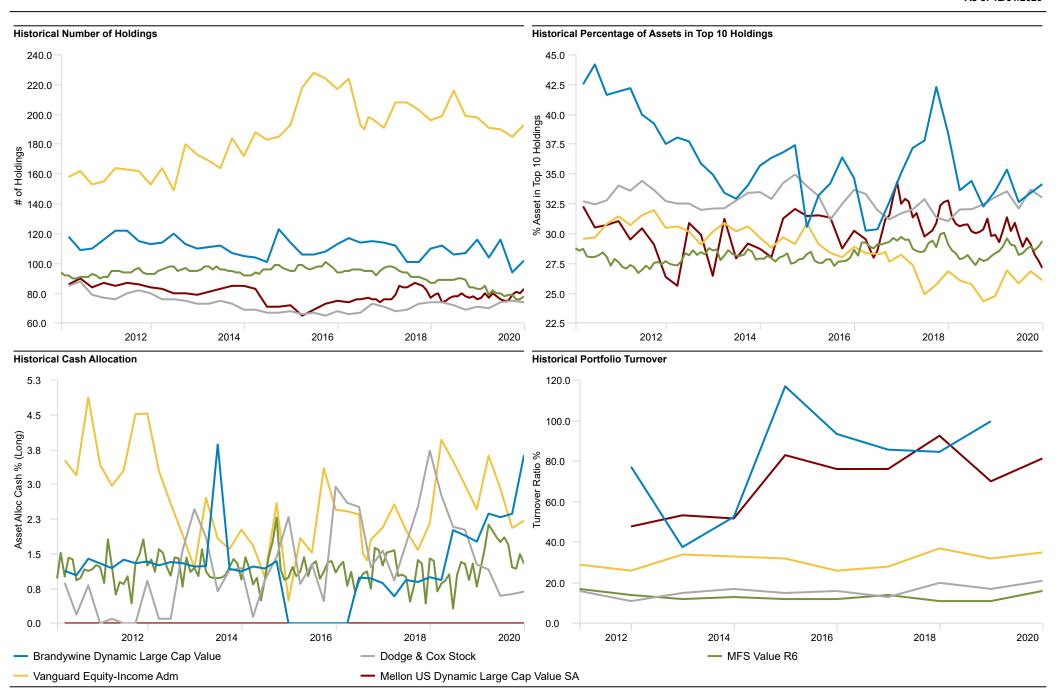


	Brandywine Dynamic Large Cap Value	Dodge & Cox Stock	MFS Value R6	Vanguard Equity-Income Adm	Mellon US Dynamic Large Cap Value SA
Team Information					
Decision Making Structure	PM-Led	Committee	PM-Led	Multi-Manager	PM-Led
Number of Decision Makers	3	9	2	3	1
Names of Decision Makers	M. Fleisher, H. Otto, S. Tonkovich	9 Person Committee Team	N. Chitkara, K. Cannan	M. Reckmeyer, J. Stetler, B. Guo	B. Ferguson
Date Began Managing Strategy	2007, 2007, 2007	1992-2021	2006, 2019	2007, 2003, 2016	2003
Date Began with Firm	1997, 1988, 1989	1983-2009	1997, 2013	1994, 1982, 2007	1997
Number of Products Managed by Team	9	5	3	18	4
Number of Investment Analysts	5	27	64	70	22
Investment Analyst Team Structure	Generalists	Sector/Industry Specialists	Sector/Industry Specialists	Combination	Sector/Industry Specialists
Portfolio Construction Information					
Broad Style Category	Value	Value	Value	Value	Value
Style Bias	Relative Value	Traditional Value	Relative Value	Dividend-Oriented	Relative Value
Sector Constraint Type	Benchmark Relative	None	None	Benchmark Relative	Benchmark Relative
Sector Constraints (%)	+/-15	None	None	+/-10	+/-10
Typical Sector/s Overweight	Consumer Discretionary	Technology	Industrials	Consumer Staples	Financials
Typical Sector/s Underweight	Real Estate, Utilities	Utilities, Real Estate	Energy	Financials	Real Estate
Typical Number of Holdings	75-150	60-90	80-100	160-220	65-100
Average Full Position Size (%)	1-3	1-3	1	2-3	+/- 0.5
Maximum Position Size (%)	5	5	5	5	5
Annual Typical Asset Turnover (%)	80-100	30-45	20-40	20-40	50-100
Annual Typical Name Turnover (%)	80-100	15-20	10-20	20-40	60-80
Maximum Cash Allocation (%)	5	10	2	None	5
Maximum Foreign Exposure (%)	0	20	10	25	0

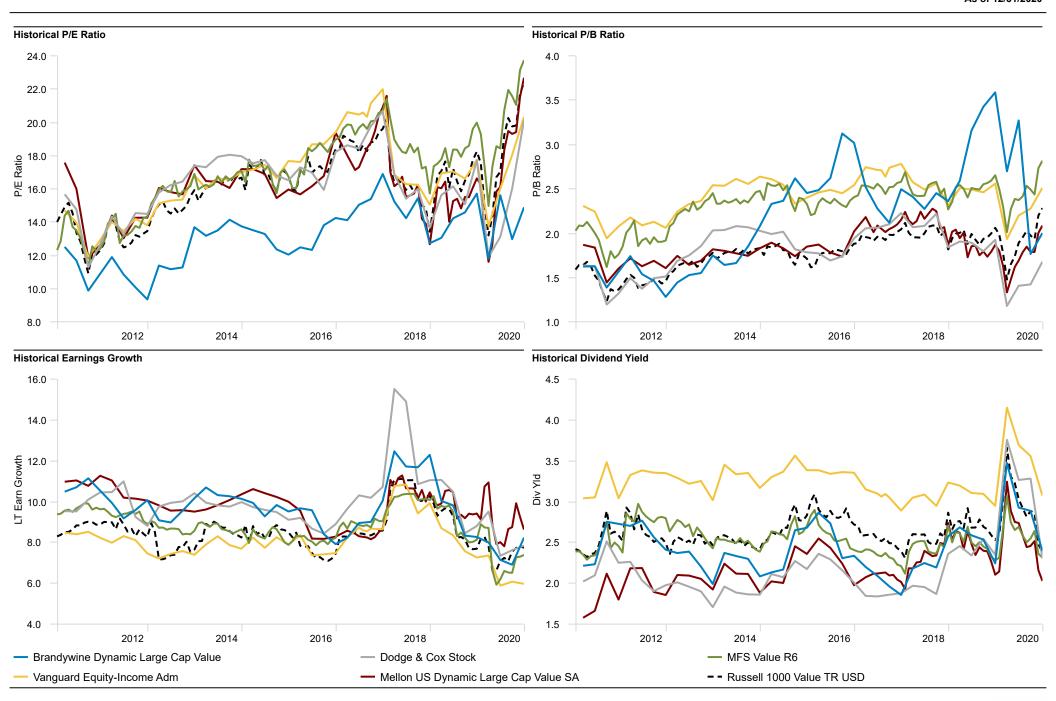


		Drawdania				Mellon	
	Brandywine Dynamic Large Cap Value	Dodge & Cox Stock	MFS Value R6	Vanguard Equity-Income Adm	US Dynamic Large Cap Value SA	Russell 1000 Value TR USD	
COMPOSITION							
# of Holdings	102	74	78	193	83	855	
% Asset in Top 10 Holdings	34.16	33.02	29.38	26.10	27.11	16.55	
Asset Alloc Cash %	3.63	0.69	1.29	2.22	0.00	0.00	
Asset Alloc Equity %	96.37	99.23	98.71	97.78	100.00	100.00	
Asset Alloc Bond %	0.00	0.00	0.00	0.00	0.00	0.00	
Asset Alloc Other %	0.00	0.08	0.00	0.00	0.00	0.00	
CHARACTERISTICS							
Average Market Cap (mil)	42,636.21	70,547.75	93,337.52	94,335.12	48,994.96	63,448.98	
P/E Ratio (TTM)	14.90	20.14	23.74	20.33	22.68	22.40	
P/B Ratio (TTM)	2.00	1.68	2.82	2.51	2.09	2.28	
LT Earn Growth	8.25	7.85	7.40	5.98	8.63	7.75	
Dividend Yield	2.40	2.31	2.32	3.08	2.03	2.38	
ROE % (TTM)	21.57	7.45	20.67	21.66	10.01	13.08	
GICS SECTORS %							
Energy %	1.02	8.14	1.96	4.24	5.41	4.36	
Materials %	7.81	1.45	3.88	3.08	7.47	4.77	
Industrials %	8.07	9.26	17.42	10.45	12.82	13.43	
Consumer Discretionary %	14.00	2.67	1.64	4.20	5.93	7.65	
Consumer Staples %	3.84	1.14	7.13	13.39	4.22	7.64	
Healthcare %	11.69	16.07	19.38	17.91	14.20	13.41	
Financials %	35.23	28.36	25.89	20.07	28.62	19.55	
Information Technology %	8.59	19.14	10.65	10.31	11.80	9.66	
Communication Services %	3.47	12.90	3.81	5.63	2.60	9.64	
Utilities %	2.65	0.00	6.60	7.49	6.37	5.46	
Real Estate %	0.00	0.00	0.35	1.03	0.56	4.42	
MARKET CAPITALIZATION							
Market Cap Giant %	17.88	23.86	30.72	36.77	15.92	27.23	
Market Cap Large %	31.31	47.20	56.53	43.95	47.22	39.29	
Market Cap Mid %	41.03	26.18	11.46	15.48	32.01	28.29	
Market Cap Small %	6.16	1.90	0.00	1.53	4.85	5.17	
Market Cap Micro %	0.00	0.00	0.00	0.05	0.00	0.02	





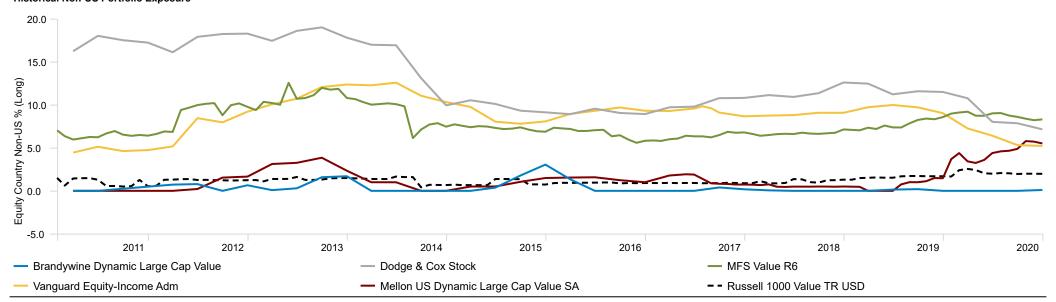






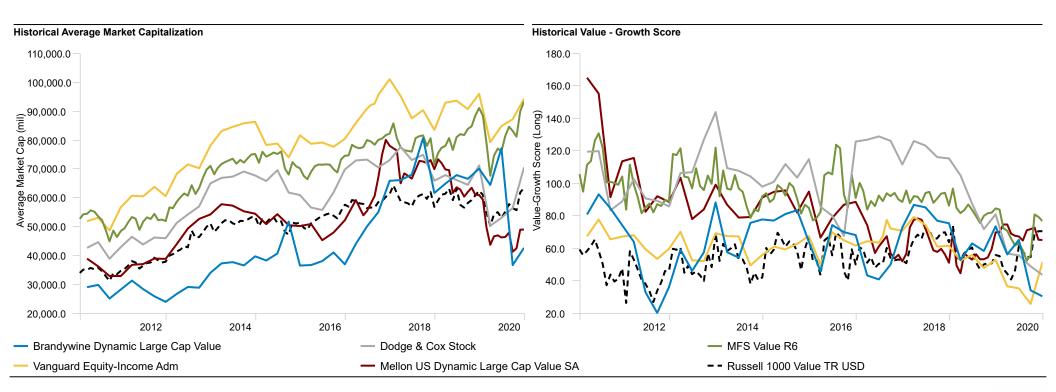
Current Portfolio Region Allocation							
	Brandywine Dynamic Large Cap Value	Dodge & Cox Stock	MFS Value R6	Vanguard Equity-Income Adm	Mellon US Dynamic Large Cap Value SA	Russell 1000 Value TR USD	
Equity Country United States %	99.90	92.79	91.57	94.66	94.48	98.02	
Equity Region North America %	99.90	92.79	92.23	95.23	94.48	98.02	
Equity Region Latin America %	0.10	0.00	0.00	0.00	0.00	0.03	
Equity Region United Kingdom %	0.00	2.45	1.91	1.56	0.74	1.02	
Equity Region Europe dev %	0.00	4.76	4.81	2.95	3.31	0.60	
Equity Region Europe emrg %	0.00	0.00	0.00	0.00	0.00	0.00	
Equity Region Japan %	0.00	0.00	0.00	0.00	0.00	0.00	
Equity Region Australasia %	0.00	0.00	0.00	0.00	0.00	0.00	
Equity Region Asia dev %	0.00	0.00	0.00	0.26	0.00	0.00	
Equity Region Asia emrg %	0.00	0.00	1.05	0.00	1.47	0.34	
Equity Region Africa/Middle East %	0.00	0.00	0.00	0.00	0.00	0.00	
Equity Region Developed %	100.00	100.00	98.95	100.00	98.53	99.66	
Equity Region Emerging %	0.00	0.00	1.05	0.00	1.47	0.34	

## Historical Non-US Portfolio Exposure

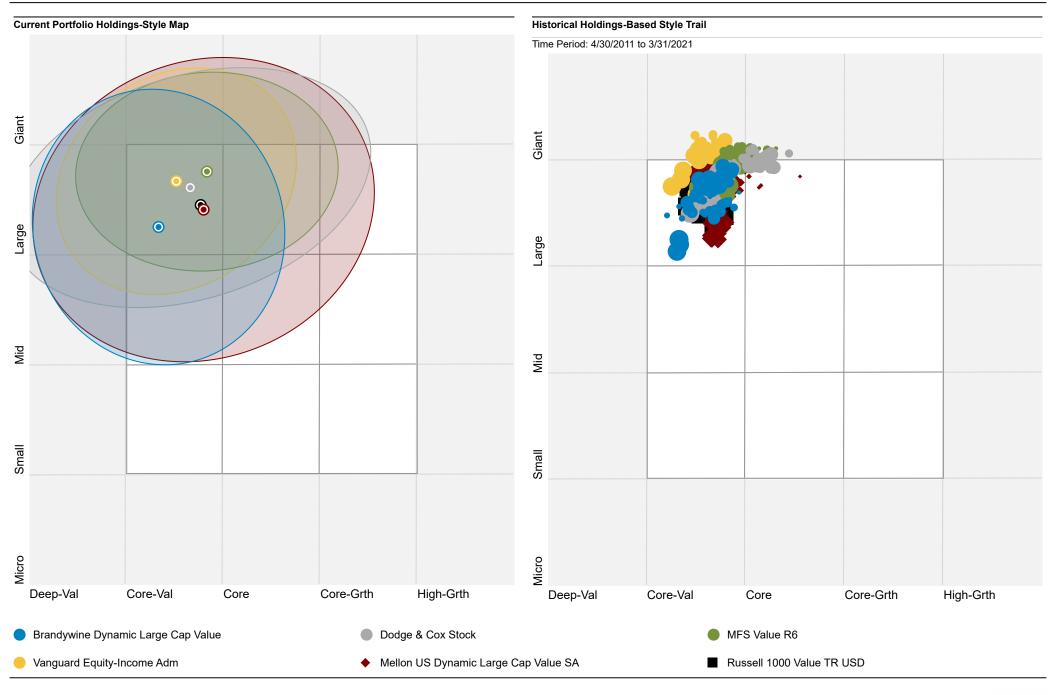




Style Allocation						
	Brandywine Dynamic Large Cap Value	Dodge & Cox Stock	MFS Value R6	Vanguard Equity-Income Adm	Mellon US Dynamic Large Cap Value SA	Russell 1000 Value TR USD
Equity Style Large Value %	33.45	37.92	35.40	41.32	25.57	28.33
Equity Style Large Core %	15.74	23.87	51.29	37.84	32.02	34.79
Equity Style Large Growth %	0.00	9.28	0.56	1.57	5.54	3.29
Equity Style Mid Value %	32.55	17.51	3.22	11.46	19.39	12.74
Equity Style Mid Core %	6.50	7.91	8.25	4.01	11.37	13.62
Equity Style Mid Growth %	1.98	0.76	0.00	0.00	1.24	1.86
Equity Style Small Value %	3.77	1.69	0.00	0.95	1.14	1.97
Equity Style Small Core %	1.19	0.00	0.00	0.33	2.54	2.70
Equity Style Small Growth %	0.81	0.00	0.00	0.15	1.17	0.43



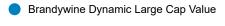






# **Quantitative Review**

Peer Group (5-95%): Separate Accounts - U.S. - Large Value 85.0 80.0 75.0 70.0 65.0 60.0 55.0 50.0 45.0 40.0 35.0 30.0 25.0 20.0 15.0 10.0 5.0 1 Year 2 Years 3 Years 4 Years 5 Years 6 Years 7 Years 8 Years 9 Years 10 Years 1 Year Rank 2 Years Rank 3 Years Rank 4 Years Rank 5 Years Rank 6 Years Rank 7 Years Rank 8 Years Rank 9 Years Rank 10 Years Rank Brandywine Dynamic Large Cap Value 71.17 14 20.34 11 15.29 11 15.59 6 15.05 12 11.54 22 11.77 15 13.95 7 14.67 4 14.43 2 Dodge & Cox Stock 9 5 8 7 5 76.17 19.16 16 14.18 20 13.46 21 16.46 12.81 11.97 13 14.02 14.78 4 13.55 MFS Value R6 48.96 70 14.75 52 11.56 52 11.07 55 12.37 51 10.48 45 10.50 41 12.05 37 12.59 37 12.00 36 Vanguard Equity-Income Adm 47.82 55 10.92 35 10.64 39 11.77 45 12.33 43 12.37 27 73 13.38 68 11.48 53 11.26 52 12.22 Mellon US Dynamic Large Cap Value SA 70.72 15 17.34 28 11.84 47 11.46 49 14.00 26 10.67 40 10.67 38 12.60 25 13.30 17 11.91 38 Russell 1000 Value TR USD 56.09 49 13.71 64 10.96 60 9.95 73 11.74 67 9.41 69 9.40 68 10.85 66 11.70 59 10.99 63



Mellon US Dynamic Large Cap Value SA

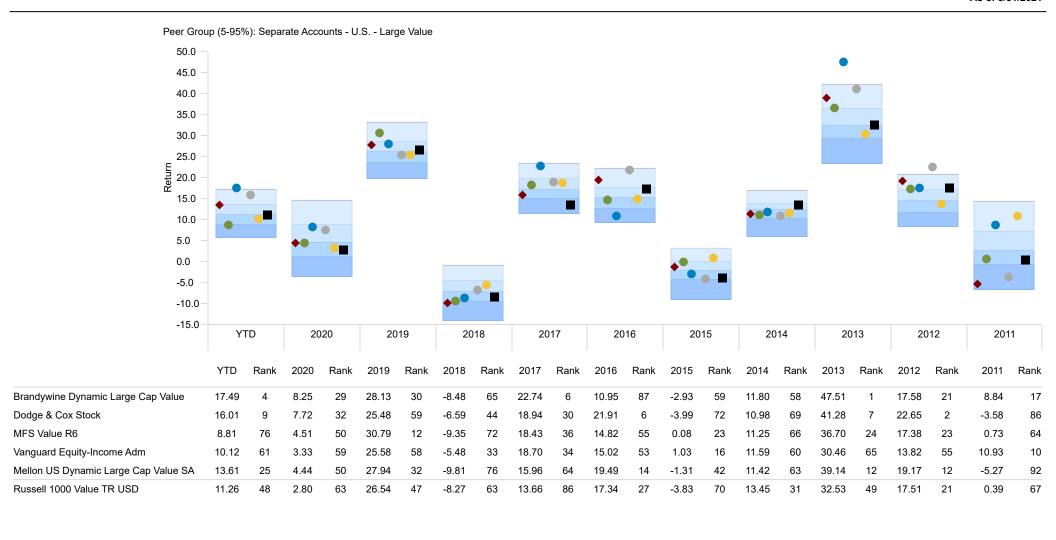
Dodge & Cox Stock

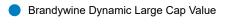
MFS Value R6

Russell 1000 Value TR USD



Vanguard Equity-Income Adm





♦ Mellon US Dynamic Large Cap Value SA

Dodge & Cox Stock

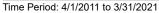
MFS Value R6

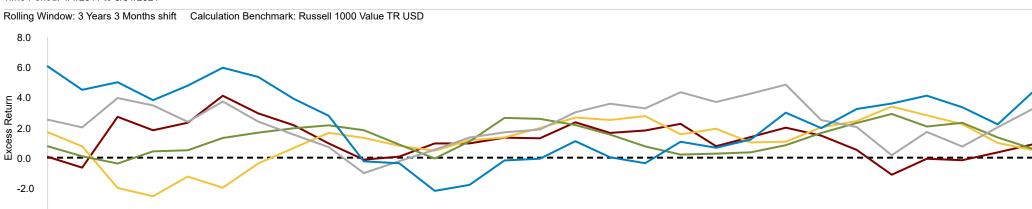
Russell 1000 Value TR USD



Vanguard Equity-Income Adm

# **Rolling Excess Returns**

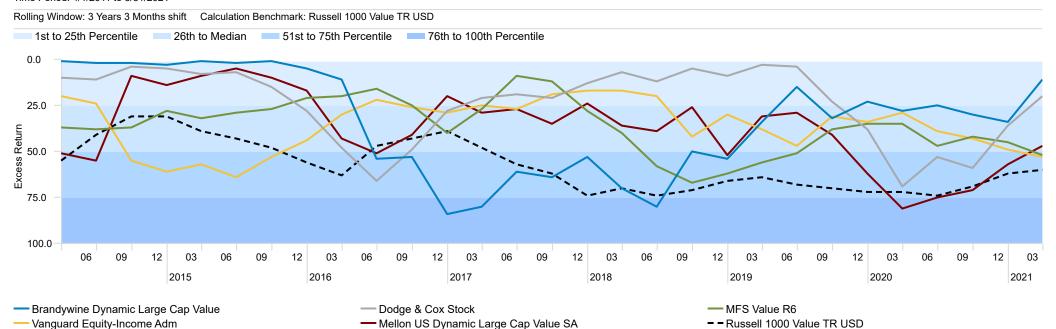




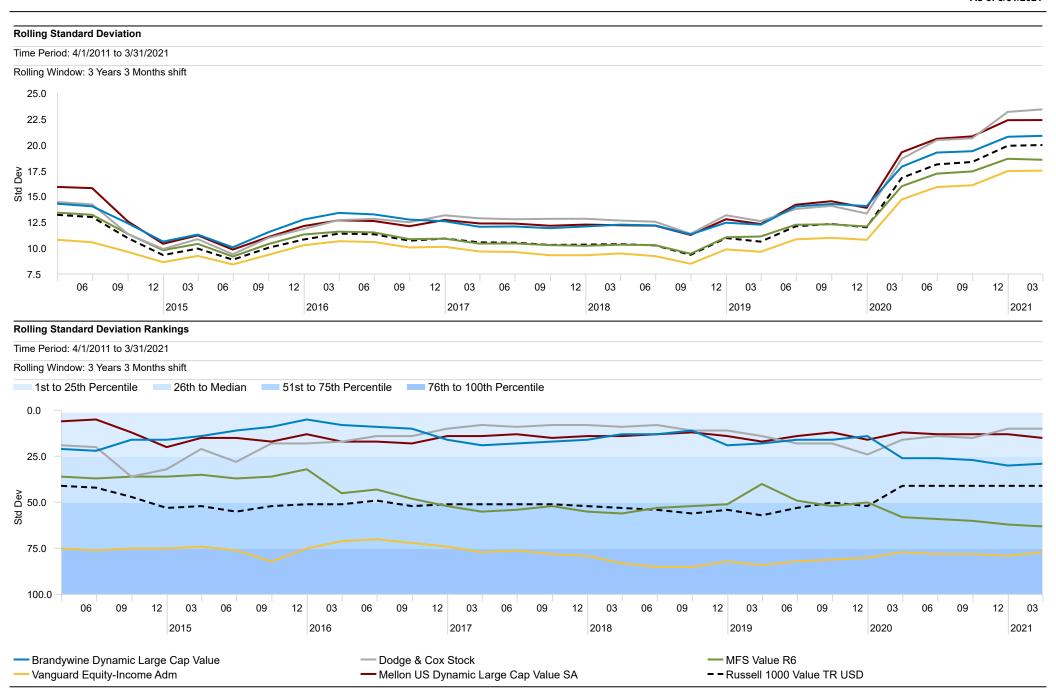
# Rolling Excess Return Rankings

-4.0

Time Period: 4/1/2011 to 3/31/2021





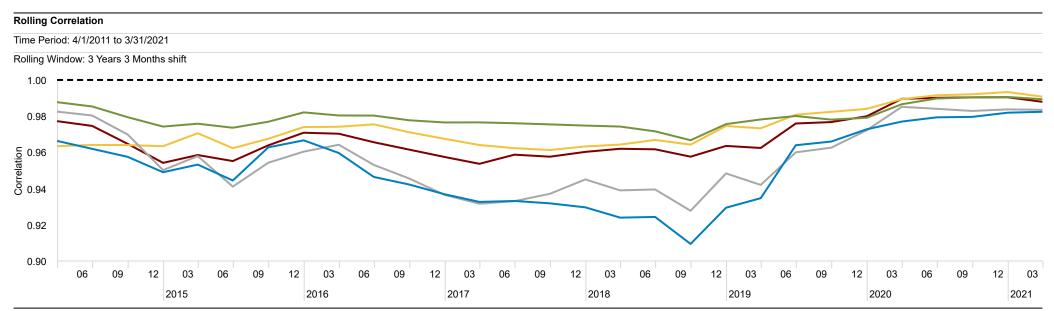




Correlation Matrix						
Time Period: 4/1/2011 to 3/31/2021						
	1	2	3	4	5	6
Brandywine Dynamic Large Cap Value	1.00					
2 Dodge & Cox Stock	0.96	1.00				
3 MFS Value R6	0.96	0.96	1.00			
4 Vanguard Equity-Income Adm	0.95	0.94	0.98	1.00		
5 Mellon US Dynamic Large Cap Value SA	0.96	0.98	0.96	0.94	1.00	
6 Russell 1000 Value TR USD	0.97	0.97	0.98	0.98	0.98	1.00

Correlation Matrix (Excess Returns vs. Ru	ussell 1000 Value TR USD)						
Time Period: 4/1/2011 to 3/31/2021							
Calculation Benchmark: Russell 1000 Value	TR USD						
	1	1	2	3	4	5	6
1 Brandywine Dynamic Large Cap Value	Russell 1000 Value TR USD	1.00					
2 Dodge & Cox Stock	Russell 1000 Value TR USD	0.29	1.00				
B MFS Value R6	Russell 1000 Value TR USD	0.18	-0.15	1.00			
Vanguard Equity-Income Adm	Russell 1000 Value TR USD	-0.08	-0.49	0.43	1.00		
Mellon US Dynamic Large Cap Value SA	Russell 1000 Value TR USD	0.35	0.62	-0.13	-0.64	1.00	
Russell 1000 Value TR USD	Russell 1000 Value TR USD						1.00

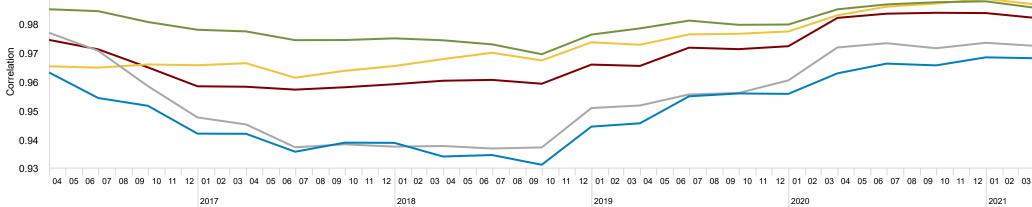


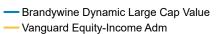




Time Period: 4/1/2011 to 3/31/2021





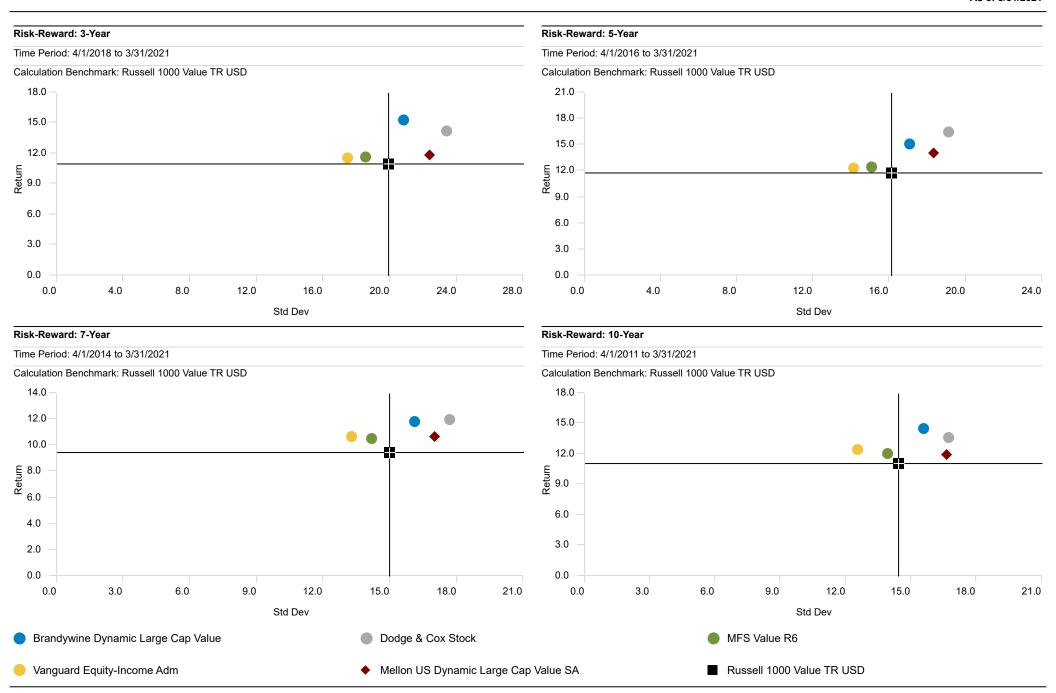




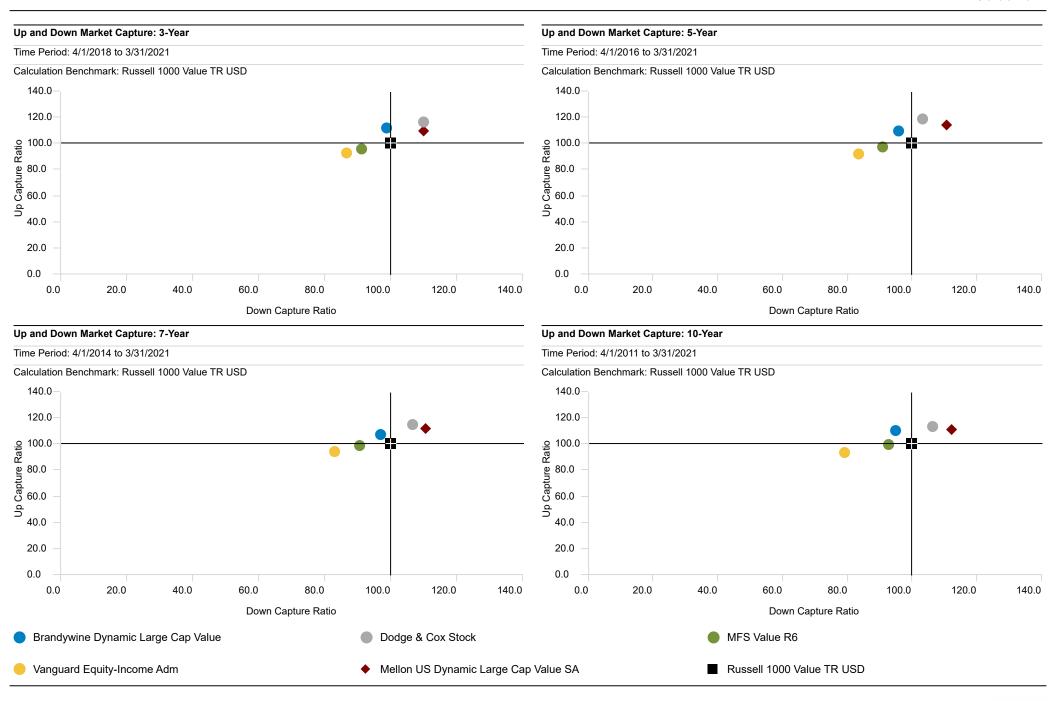
— MFS Value R6

- - Russell 1000 Value TR USD

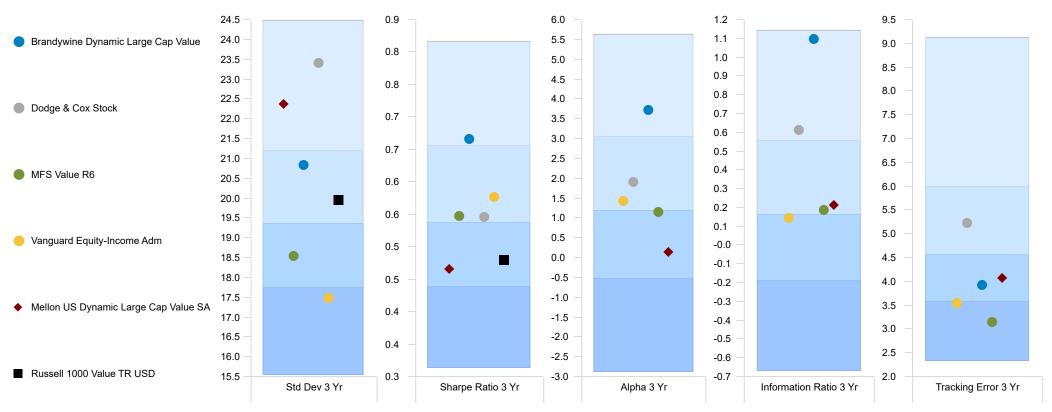








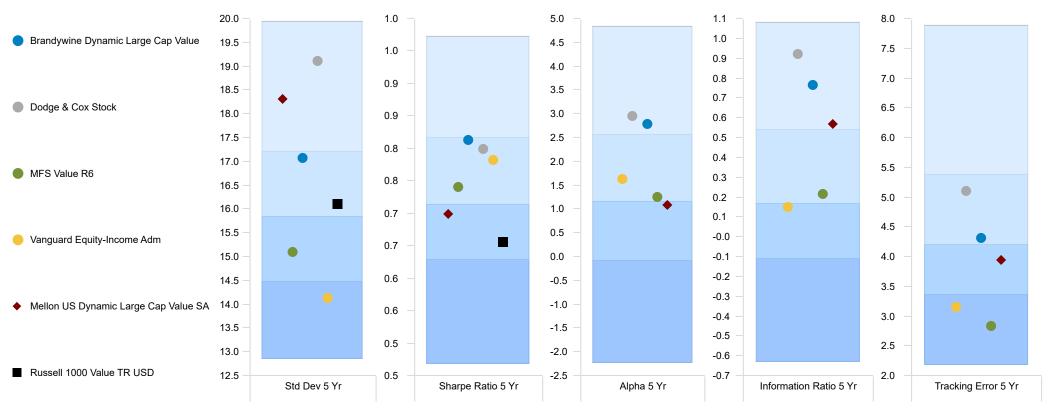




Time Period: 4/	/1/2018 to	3/31/2021
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	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
Brandywine Dynamic Large Cap Value	20.86	29	0.67	23	3.73	18	1.10	7	3.94	67
Dodge & Cox Stock	23.41	10	0.55	48	1.91	38	0.61	22	5.24	36
MFS Value R6	18.54	63	0.55	47	1.16	51	0.19	48	3.16	83
Vanguard Equity-Income Adm	17.50	77	0.58	40	1.44	47	0.14	51	3.55	75
Mellon US Dynamic Large Cap Value SA	22.38	15	0.47	67	0.14	64	0.21	46	4.09	62
Russell 1000 Value TR USD	19.97	41	0.48	63	0.00	66			0.00	100

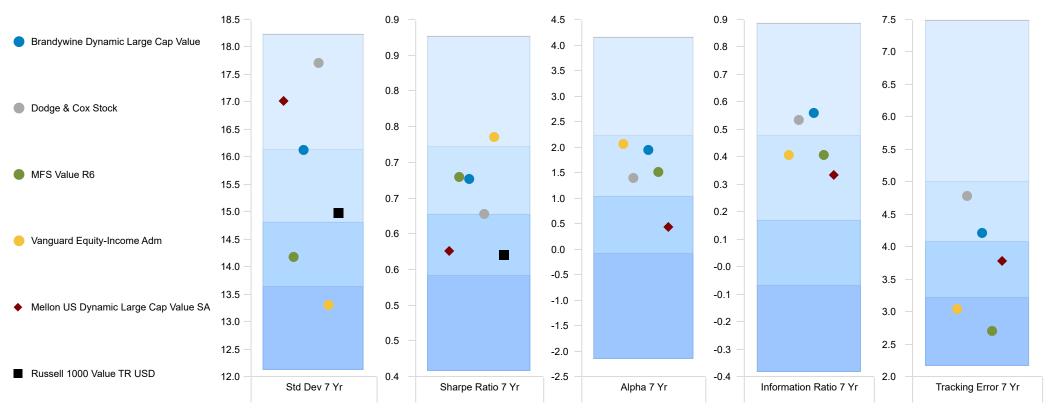




Time Period:	4/1/2016 to	3/31/2021
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	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
Brandywine Dynamic Large Cap Value	17.09	26	0.81	26	2.79	22	0.77	13	4.31	48
Dodge & Cox Stock	19.12	9	0.80	28	2.95	18	0.92	9	5.12	28
MFS Value R6	15.11	63	0.74	43	1.26	47	0.22	45	2.84	85
Vanguard Equity-Income Adm	14.15	79	0.78	33	1.63	40	0.15	52	3.15	78
Mellon US Dynamic Large Cap Value SA	18.33	14	0.70	53	1.09	51	0.57	23	3.95	58
Russell 1000 Value TR USD	16.11	43	0.66	67	0.00	72			0.00	100

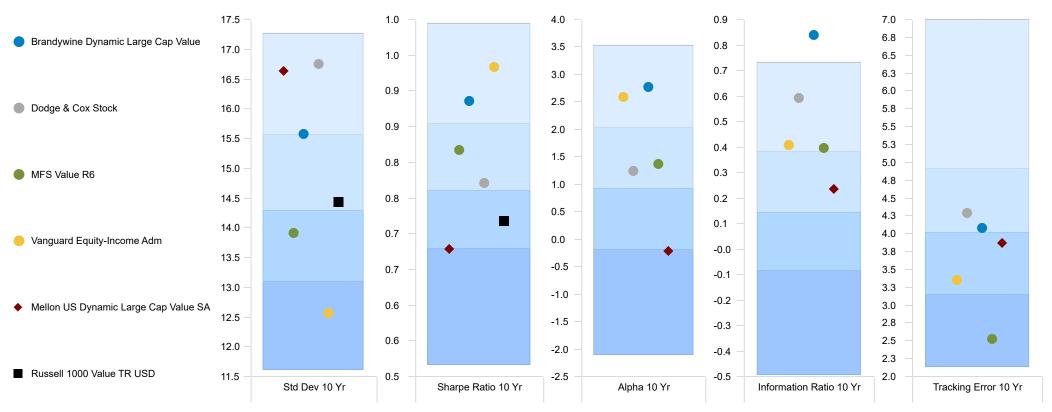




Time Period: 4/1/2014 to 3/31/2021
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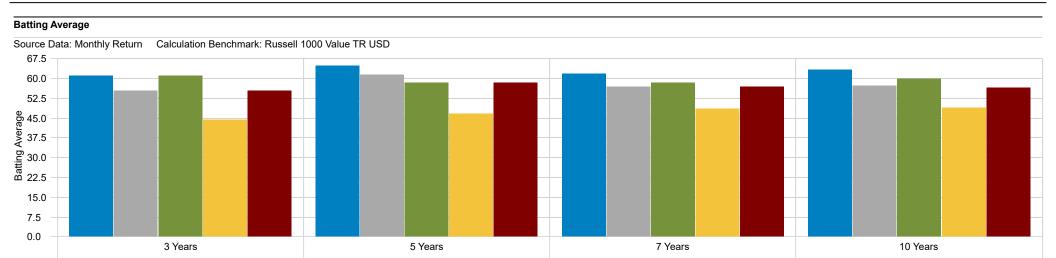
	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
Brandywine Dynamic Large Cap Value	16.14	25	0.68	37	1.96	30	0.56	18	4.22	45
Dodge & Cox Stock	17.72	8	0.63	50	1.41	42	0.54	20	4.79	29
MFS Value R6	14.19	63	0.68	35	1.52	40	0.41	31	2.71	86
Vanguard Equity-Income Adm	13.30	80	0.74	21	2.07	28	0.41	31	3.05	78
Mellon US Dynamic Large Cap Value SA	17.02	16	0.58	64	0.45	64	0.33	36	3.79	58
Russell 1000 Value TR USD	14.99	45	0.57	67	0.00	72			0.00	100





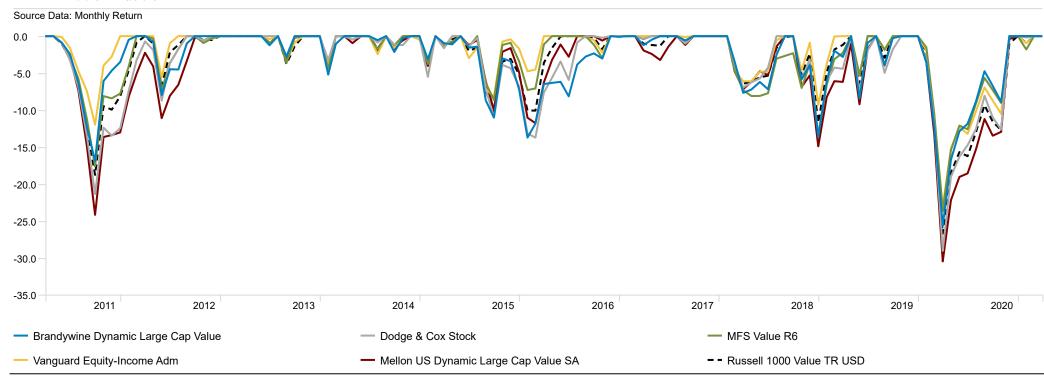
	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
Brandywine Dynamic Large Cap Value	15.58	24	0.89	21	2.78	13	0.84	3	4.08	47
Dodge & Cox Stock	16.76	10	0.77	46	1.25	41	0.60	9	4.30	39
MFS Value R6	13.93	59	0.82	35	1.38	40	0.40	24	2.53	89
Vanguard Equity-Income Adm	12.58	81	0.93	13	2.59	16	0.41	22	3.36	69
Mellon US Dynamic Large Cap Value SA	16.63	12	0.68	75	-0.21	76	0.24	38	3.88	54
Russell 1000 Value TR USD	14.44	47	0.72	66	0.00	72			0.00	100







Time Period: 4/1/2011 to 3/31/2021





MPT Statistics: 3-Year

	Brandywine Dynamic Large Cap Value	Dodge & Cox Stock	MFS Value R6	Vanguard Equity-Income Adm	Mellon US Dynamic Large Cap Value SA	Russell 1000 Value TR USD
Return	15.29	14.18	11.56	11.48	11.84	10.96
Excess Return	4.33	3.22	0.60	0.51	0.88	0.00
Std Dev	20.86	23.41	18.54	17.50	22.38	19.97
Beta	1.03	1.15	0.92	0.87	1.11	1.00
Tracking Error	3.94	5.24	3.16	3.55	4.09	0.00
Sharpe Ratio	0.67	0.55	0.55	0.58	0.47	0.48
Alpha	3.73	1.91	1.16	1.44	0.14	0.00
Information Ratio	1.10	0.61	0.19	0.14	0.21	
Batting Average	61.11	55.56	61.11	44.44	55.56	100.00
Up Capture Ratio	111.71	116.31	95.65	92.27	109.55	100.00
Down Capture Ratio	98.67	109.80	91.19	86.63	109.96	100.00
MPT Statistics: 5-Year						
Time Period: 4/1/2016 to 3/31/2021	Calculation Benchmark: Russell 100	0 Value TR USD				
Return	15.05	16.46	12.37	12.22	14.00	11.74
Excess Return	3.31	4.72	0.62	0.48	2.25	0.00
Std Dev	17.09	19.12	15.11	14.15	18.33	16.11
Beta	1.03	1.15	0.92	0.87	1.12	1.00
Tracking Error	4.31	5.12	2.84	3.15	3.95	0.00
Sharpe Ratio	0.81	0.80	0.74	0.78	0.70	0.66
Alpha	2.79	2.95	1.26	1.63	1.09	0.00
Information Ratio	0.77	0.92	0.22	0.15	0.57	
Batting Average	65.00	61.67	58.33	46.67	58.33	100.00
Up Capture Ratio	109.25	118.40	96.86	92.13	114.16	100.00
Down Capture Ratio	96.01	103.30	90.86	83.61	110.57	100.00



MPT Statistics: 7-Year

	Brandywine Dynamic Large Cap Value	Dodge & Cox Stock	MFS Value R6	Vanguard Equity-Income Adm	Mellon US Dynamic Large Cap Value SA	Russell 1000 Value TR USD
Return	11.77	11.97	10.50	10.64	10.67	9.40
Excess Return	2.37	2.57	1.10	1.25	1.27	0.00
Std Dev	16.14	17.72	14.19	13.30	17.02	14.99
Beta	1.04	1.15	0.93	0.87	1.11	1.00
Tracking Error	4.22	4.79	2.71	3.05	3.79	0.00
Sharpe Ratio	0.68	0.63	0.68	0.74	0.58	0.57
Alpha	1.96	1.41	1.52	2.07	0.45	0.00
Information Ratio	0.56	0.54	0.41	0.41	0.33	
Batting Average	61.90	57.14	58.33	48.81	57.14	100.00
Up Capture Ratio	107.38	114.40	98.36	94.27	111.70	100.00
Down Capture Ratio	96.93	106.70	90.53	83.16	110.47	100.00
MPT Statistics: 10-Year						
Time Period: 4/1/2011 to 3/31/2021	Calculation Benchmark: Russell 100	0 Value TR USD				
Return	14.43	13.55	12.00	12.37	11.91	10.99
Excess Return	3.44	2.56	1.01	1.38	0.92	0.00
Std Dev	15.58	16.76	13.93	12.58	16.63	14.44
Beta	1.04	1.13	0.95	0.85	1.13	1.00
Tracking Error	4.08	4.30	2.53	3.36	3.88	0.00
Sharpe Ratio	0.89	0.77	0.82	0.93	0.68	0.72
Alpha	2.78	1.25	1.38	2.59	-0.21	0.00
Information Ratio	0.84	0.60	0.40	0.41	0.24	
Batting Average	63.33	57.50	60.00	49.17	56.67	100.00
Up Capture Ratio	109.81	113.38	99.50	93.02	110.75	100.00
Down Capture Ratio	94.89	106.44	92.69	79.21	112.34	100.00



# **Investment Option Narratives**



Founded in 1986, Brandywine Global Investment Management (BGIM) is an SEC-registered investment manager headquartered in Philadelphia, PA. Shortly after its founding, BGIM was acquired by Legg Mason, Inc. and became a wholly-owned, but independent subsidiary. Since the acquisition, the firm has maintained complete control over investments, hiring and compensation. Legg Mason was acquired by Franklin Templeton (NYSE: BEN) in July 2020. BGIM remains autonomous as a wholly-owned subsidiary of Franklin Templeton. The majority of the BGIM's assets under management are managed within fixed income and all strategies, whether equity or fixed income, are managed in a value style. The firm also maintains office locations in San Francisco, Singapore and an operating unit in London.

#### Expectations

Brandywine Dynamic Large Cap Value will maintain a quality bias relative to the Russell 1000 Value Index regardless of whether the portfolio is invested in the deep value or broad value model. Notably, we expect it to remain overweight companies with higher returns on equity. In markets where quality lags, such as 2016, performance will typically struggle. From a sector standpoint, Dynamic Large Cap Value does not invest in Real Estate, and has typically underweight Utilities, which contributes to a modest yield underweight. It has also historically maintained an overweight to Consumer Discretionary.

Despite its broad diversification, the portfolio will possess some concentration among its largest positions with 30% or more of the portfolio invested in the top 10 positions. This, in combination with sector weights which may vary meaningfully occasionally, contributes to above average tracking error, which we expect to remain in the 4-6% range. Over a full market cycle, we believe the portfolio has the potential to outperform the benchmark by 2-4% on annualized basis gross of fees.

#### **Team Overview**

Mike Fleisher, Steve Tonkovich and Henry Otto oversee Brandywine Dynamic Large Cap Value. Fleisher, as the lead PM, is responsible for managing and monitoring the portfolios on a day-to-day basis as well as coordinating the activities of other team members. He joined BGIM in 1997 and is the architect of Dynamic Large Cap Value. Otto and Tonkovich joined BGIM in 1988 and 1989, respectively and co-lead the firm's Diversified Value equity strategies in addition to supporting this strategy. The trio is joined by two additional portfolio managers, one associate portfolio manager, and two quantitative equity analysts.

#### Points to Consider

Clients considering Dynamic Large Cap Value should be prepared to be patient during periods of underperformance when multiple factor tilts are out of favor. For example, in 2016, the strategy lagged by 6.4% gross of fees due largely to quality being out of favor, but also the portfolio's avoidance of companies with lower price-to-book ratios, which are emphasized in the strategy's deep value model, but not its broad value model. Prior to this time, the portfolio had never experienced such significant underperformance. Despite the potential for these outlier periods, we remain confident in the strategy, which not only rebounded strongly in 2017, but also possesses one of the higher batting averages in the category.

BGIM believes they have identified enduring anomalies that arise from investor behavioral biases, which lead to pricing opportunities within the market. Their quantitative research confirms the historical long-term viability of these anomalies and helps them understand how each factor will perform over the short term in different environments, and provides information on interaction between factors. The process starts by identifying stocks with low valuations (based on P/E or P/B). The team performs security selection through quantitative multi-factor models that rely on factors from three core areas: Value, Sentiment and Quality.

The strategy implements a quantitative Dynamic Timing tool to evaluate valuation spreads within the U.S. equity market to identify which environment BGIM expects going forward. The Dynamic Timing tool seeks to identify broad, long-term trends in the market and therefore, shifts between the models occur on an infrequent basis, every two-to-seven years on average. BGIM ranks its value universe (constructed from the top 1,000 U.S. companies by market cap) using the environment appropriate multi-factor scoring model. The model portfolios consist of the highest-ranking companies held on a market capitalization-weighted basis and comprise between 75 and 150 stocks. Portfolios will be more diversified in deep value environments when compared to broad value periods. Both sector and industry weights will be maintained at +/- 15% relative to the representative sector/industry weight within the index (at purchase). Individual positions are capped at a maximum of 5%. Portfolio cash is a residual of the investment process, but the goal is to remain fully invested at all times, defined as approximately 1-2% frictional cash. The strategy will equitize cash via ETF investments in order to transition new accounts and reduce the cash impact of large cash flows.

We recommend Brandywine Dynamic Large Cap Value as a core or complementary offering in the large cap value category. Mike Fleisher, chief architect of the strategy, has served as lead PM since its 2007 inception and has been a member of Brandywine's experienced and stable quantitative equity team since 1997. The strategy's dynamic triggering tool, which responds to current market conditions by shifting the portfolio between its deep value and broad value model, is its true differentiator. In the later stages of a bull market, when stocks separate themselves and valuation spreads begin to widen, the portfolio will be invested in its broad value model. During spread narrowing environments, the portfolio's deep value model is utilized. Regardless of the model, the strategy will possess a quality tilt throughout. The portfolio is broadly diversified, yet typically maintains an above average active share. We believe clients willing to tolerate Dynamic Large Cap Value's higher tracking error may benefit from higher excess returns over a full market cycle.



Established in 1930, Dodge & Cox (D&C) is one of the oldest investment management firms in the country. In its early years, the firm managed assets exclusively for individuals and families but began to work with institutional clients in the 1960s.

D&C is an independent investment firm owned entirely by its active employees and operates out of a single investment office in San Francisco. D&C's independence allows it to make business decisions that they believe to be in the long-term best interest of their clients. D&C manages more than \$250 billion in client assets within three primary broad asset classes: US Equity, International Equity and US Fixed Income.

#### **Team Overview**

The nine-member Investment Policy Committee (IPC) makes all decisions on the Dodge & Cox Stock strategy. The IPC is comprised of senior portfolio managers and analysts and is led by Chairman and CIO Charles Pohl. Other members of the IPC include Director of Research Bryan Cameron, Associate CIO David Hoeft, Associate Director of Research Steven Voorhis, as well as Senior Analysts Phillip Barret, Kathleen McCarthy, Karol Marcin, Benjamin Garosi and Karim Fakhry. The average D&C tenure of the IPC members is more than 20 years. The IPC attempts to reach consensus on the merits of a particular recommendation. Each member has the opportunity to provide his or her input equally. The firm's global equity team comprises more than 30 portfolio managers and industry analysts.

## **Strategy Overview**

Dodge & Cox's philosophy is built on traditional valuation investment principles that have been employed since the founding of the firm. The firm believes if the team conducts intense, bottom-up company research and builds a diversified portfolio of stocks trading at a substantial discount to their long-term profit opportunities, investors will gain a solid premium over a three- to five-year period.

The process begins with the industry analysts' idea generation, which can come from a variety of sources including, but not limited to: industry conferences, news, industry publications, valuation screens, annual reports and company management teams. For stocks of interest, research analysts will build cash flow, balance sheet and income statement models forecasted out three-to-five years. To assist with model forecasting, analysts visit each company and meet with the management teams. In addition, he/she talks with competitors, customers and suppliers to develop a 360-degree assessment of the company. The investment process is collegial/collaborative so analysts and portfolio managers are engaged in communication throughout. Prior to presenting a stock to the IPC, analysts vet stock ideas within one of four super sector committees (Technology, Media & Telecom, Health Care/Consumer, Finance/REITs and Industrials/Materials/Energy). The IPC has final decision-making authority on buys and sells and on final portfolio construction. Sales typically occur when stock prices reflect a more optimistic outlook than D&C's expectations or due to deteriorating long-term fundamentals.

The fund typically holds 60-90 stocks, with cash below 5% in most market conditions. Average annual portfolio turnover is low, typically 15-20%. The strategy is broadly diversified relative to the S&P 500 Index sectors, although typically maintains a pro-cyclical tilt and is underweight the yield-oriented sectors (Utilities, REITs).

#### **Expectations**

The strategy has maintained a pro-cyclical bias with a beta of approximately 1.1 over the past decade. As such, the approach tends to underperform during strong market sell-offs, such as 2008, as well as yield-oriented market environments, such as 2011. Conversely, D&C Stock typically outperforms during strong market recoveries such as 2009 or 2012, or when value-oriented stocks are leading the market, such as 2016.

The fund's non U.S. exposure ranges from the mid-single digits to 20%. As such, weak non-U.S. equity markets may provide a headwind to performance. The firm does not have a specific target for tracking error, which has fallen in the 4% range over the past the decade, near the top quartile of the peer group.

#### **Points to Consider**

In 2004, the strategy closed due to heavy inflows, prior to AUM peaking near \$125 billion in 2007. At that time, the firm was finding more opportunities in the mid cap areas of the market and dealing with significant inflows. The strategy has experienced net outflows over the past several years and reopened in 2019 at approximately \$100 billion in AUM. The IPC is finding more opportunities in mega caps and the firm's ability to take advantage of mid cap opportunities may be limited going forward.

The firm developed a reputation for being deeper value in the late 1990s, when the IPC stuck to its valueorientation through the technology bubble. However, the approach is well diversified across value themes. The IPC organizes its portfolio holdings into four main categories: deep value or turnaround, cyclical or asset plays, compounders and above average growers. Depending on allocation to these categories, the strategy may fluctuate between deeper value and core value, however the IPC has remained true to their value orientation such that overall valuation measures are below those of the index.

Chairman and CIO Charles Pohl and Director of Research Bryan Cameron will be stepping away from the organization as of June 30, 2022, and December 31, 2021, respectively. We do not believe there is cause for concern given D&C's committee approach to investment management and gradual transition to experienced successors. In anticipation of their departure from the US Equity committee, Global Industry Analyst Karim Fakhry (43 years old, 15+ years at D&C) was added to the committee in January 2021.

#### **Recommendation Summary**

We believe D&C Stock possesses several key differentiators and recommend the strategy as a core large cap value offering for both participant-directed accounts and plan sponsor-directed accounts. First, management has adhered to same long-term, value oriented process since the fund's inception in 1965. Second, we like the firm's structure and focus. D&C is 100% employee-owned and the firm manages three equity strategies (Stock, International and Global) that follow the same investment philosophy. Third, the IPC's experience and tenure is a testament to the firm's collegial culture. Most of D&C's employees spend their entire careers at the firm and employee turnover is low (sub 5%) relative to peers. While we expect D&C Stock to generate solid excess returns over the long-term, we acknowledge the strategy's higher beta profile and recommend the strategy only for clients that can be patient during periods of risk-aversion, when the approach typically lags.



MFS' investment management history dates back to 1924. MFS began managing tax-exempt capital in 1970. Headquartered in Boston, MFS has been a majority-owned subsidiary of Sun Life of Canada since 1982. The firm maintains considerable autonomy in managing its day-to-day business. Up to 22% of MFS' common stock is available for ownership by senior management, investment professionals and other key employees. MFS has nine offices around the world. Total firm assets under management (AUM) are over \$500 billion across a plethora of equity, fixed income and balanced/blended strategies. The client mix is about 50/50 institutional/retail.

#### **Team Overview**

Nevin Chitkara and Katherine Cannan have managed MFS Value since 2006 and 2019, respectively. They are jointly responsible for portfolio decisions. Chitkara joined MFS as a research analyst in 1997 and previously covered U.S. media, cellular telephone, and paper & packaging industries, as well as Northern European stocks and Pan-European media and utility companies. Cannan possesses over 10 years of research experience and joined MFS in 2013. She has covered multiple industries during her tenure with MFS, including energy, technology and telecommunications.

MFS' global equity research platform consists of more than 60 fundamental equity analysts organized into eight global sector teams and located around the world. The global sector analyst teams support all MFS investment strategies. More than 25 analysts are dedicated to U.S. equity research. Each analyst is a specialist, covering approximately two different industries on average in a particular region. The platform also comprises more than 40 fixed income and quantitative research analysts.

#### **Strategy Overview**

The MFS Value team believes that stock prices often overreact to short-term events, thus providing opportunities for long-term investors. Their ideal holding is a high-quality company with above-average rates of free cash flow growth that is trading below intrinsic value. The portfolio managers employ a bottom-up, fundamental research process that seeks to invest in undervalued companies that possess sustainable, durable franchises, generate significant free cash flow, have strong balance sheets and management teams that are good stewards of capital.

The investment universe for MFS Value comprises those stocks in the Russell 1000 Index in addition to their global multi-national peers. Of that universe, approximately 250-350 companies meet the team's quality metrics, which mostly comprises U.S.-based companies with market capitalizations greater than \$5 billion. The portfolio managers work closely with MFS' global industry analysts throughout the research process, including accompanying them on company visits, working through their financial models and valuation framework. Research analysts generate a large majority of ideas that make their way into the fund. The portfolio managers consider current valuations relative to a company's history, its peers and overall market in constructing a portfolio of 80-100 stocks. A change to relative valuations or a breakdown in a company's quality dimensions are the primary reasons stocks are sold. Annual turnover ranges from 10-30%. Sector allocations are driven by the firm's bottom-up process with a 25% cap at the industry level. The fund has tended to be overweight Consumer Staples and Industrials stocks, and underweight Energy and Utilities, relative to the Russell 1000 Value Index.

#### Expectations

MFS Value's quality bias contributes to its outperformance during periods of risk-aversion, as measured by high yield spreads widening. The strategy performed well through the 2008 downturn, as well as during the market sell-off from the third quarter of 2014 through the first quarter of 2016.

The strategy typically lags during lower quality rallies, led by companies with low profitability or those with highly levered balance sheets, such as the market rebound in 2009, or the second half of 2016. Additionally, MFS Value tends to be underweight mid and small cap stocks relative to the benchmark, which hurt relative performance in 2010.

#### **Points to Consider**

MFS soft-closed this strategy to new separate accounts in the third quarter of 2013, however recently reopened with limited capacity. The MFS Value team managed nearly \$90 billion in large cap value assets at the end of 2020 including the equity sleeve of the firm's Total Return strategy. While this is a year-end peak for the strategy, the increase in AUM has been due entirely to capital appreciation rather than net inflows. Since the soft closure in 2013, the strategy has had net outflows of more than \$10 billion. In addition, MFS has confirmed the portfolio has an improved liquidity profile considering market conditions.

Steve Gorham, who was a PM on MFS Value since 2002, stepped off of the strategy at the end of 2020. Katherine Cannan, previously a research analyst on the strategy, was added as a PM effective December 31, 2019, giving her a full year to get up to speed with Gorham still involved. Chitkara remains on the strategy, and has moved to being completely focused on MFS Value. He transitioned off of two MFS balanced portfolios at the end of 2020. The announcement exemplifies the firm's proactive approach to succession planning and we remain confident in the strategy.

#### **Recommendation Summary**

We recommend MFS Value as a core large cap value option for AndCo clients. The strategy's portfolio managers are supported by robust, integrated global research platform that fosters a culture of collaboration. The 0.47% expense ratio for the R6 share is competitive relative to other institutionally priced large cap value options. The strategy is ideal for clients seeking a high-quality, diversified large cap value strategy with modest tracking error and high performance consistency over rolling three-year periods. Over the long-term, the approach has outperformed the Russell 1000 Value Index while exhibiting below average volatility. Given the strategy will tend to lag during low-quality rallies, clients may benefit pairing the strategy with an approach that exhibits greater cyclicality and up-market capture.



Founded in 1975 and headquartered in Malvern, PA, The Vanguard Group (Vanguard) is structured as a mutual company, owned by the Vanguard funds and its investors. Vanguard's fund family comprises more than 170 member funds with more than \$6 trillion in assets across a broad array of investment categories including passive equities, bond funds, balanced funds, money market and stable value strategies. The firm's Portfolio Review Department (PRD), comprises more than 70 investment professionals who oversee the firm's more than \$500 billion in externally managed funds.

## Expectations

Vanguard Equity Income's emphasis on higher quality companies with above average yields has resulted in a lower volatility portfolio relative the Russell 1000 Value Index. The strategy has generated most of its alpha in risk-off market environments, such as 2008, which favored dividend-paying stocks. The fund's beta has ranged from 0.8-0.9 over the past decade.

The strategy generally lags in strong up-markets, such as 2013 and 2019, given its long term upside/downside capture ratio of approximately 93/80. Additionally, Vanguard Equity Income tends to overweight mega-cap companies, which detracts from relative performance during markets led by smaller-cap stocks.

The fund's tracking error relative to the Russell 1000 Value Index is typically 2-4%. It is generally overweight consumer staples companies and underweight financial services stocks. Wellington may own up to 20% in non U.S. stocks, which has historically resulted in the fund holding 5-10% in foreign equities.

#### **Team Overview**

Vanguard Equity Income follows a multimanager approach with approximately 35% of the fund managed by the firm's Quantitative Equity Group (QEG), and 65% overseen by Wellington Management. Vanguard's QEG comprises more than 20 investment professionals dedicated to modeling, fund management and analysis. QEG oversees more than \$30 billion in active equities. James Stetler and Binbin Guo have advised the fund since 2003 and 2010, respectively. Stetler joined Vanguard in 1982, while Guo joined in 2007. Portfolio decisions are driven by the team's quantitative model.

Wellington Management, headquartered in Boston, oversees more than \$1 trillion in assets. The firm's equity-income team, based in Radnor, PA comprises eight portfolio managers and analysts, who are supported by close to 50 centralized global industry analysts. Mike Reckmeyer joined Wellington in 1994 and has managed this fund since 2007. He is the sole decision maker for Wellington's portion of the portfolio.

#### **Points to Consider**

Long-time back-up portfolio manager Karen Grimes retired from Wellington at the end of 2018. Her back-up PM responsibilities were assumed by Adam Illfelder, a member of team since 2008, who also assumed lead portfolio manager responsibilities from Grimes on Wellington's Value Equity strategy. The team also added research analyst Ravi Gill in early 2019.

James Stetler, Co-PM of the Vanguard QEG sleeve of Equity Income, announced plans to retire in July 2021 after 39 years with Vanguard. Given the Vanguard sleeve of Equity Income is quantitatively managed and remaining PM Binbin Guo has over 10 years of experience at the helm, we have no concerns with the impending PM change on the sleeve. Sharon Hill, Ph.D., Senior PM and head of Income Investment Team for the Quantitative Equity Group, was added to the strategy as a replacement co-PM. Stetler will continue to serve as a co-PM for the funds until his retirement.

Vanguard Equity Income seeks to provide investors over the long term with a source of dividend income and stock market exposure with below average volatility. The philosophy is based on the belief that dividend income is a more stable source of total return than capital appreciation. The fund's multi-manager structure combines Vanguard's quantitative approach with Wellington's fundamental, bottom-up investment process.

Vanguard QEG follows a risk-controlled investment process that emphasizes valuation, quality, growth, sentiment, and management decisions. It is managed on a sector neutral basis relative to the FTSE High Dividend Yield Index with a growth tilt. The Vanguard sleeve typically holds 100-130 stocks with turnover in the 40-50% range.

Wellington follows a bottom-up, contrarian approach that emphasizes high-quality companies in out-of-favor industries. Areas of opportunity include misunderstood negative events, consolidating industry structures, low but improving returns on capital or new management teams. Wellington will typically hold 60-75 stocks, with 20-30% annual turnover and sector weights that remain within 10% of the benchmark. The Wellington portfolio targets a dividend yield that is consistently higher than the S&P 500 Index.

We recommend Vanguard Equity Income as a conservative large cap value option. We like the fund's multi-manager approach, which combines two distinct and complementary investment processes. Wellington's fundamental, high-quality investment approach has provided strong down market protection and pairs nicely with Vanguard's quantitative, lower tracking error approach, which has generated more favorable upside participation. Both strategies have generated strong track records on a stand-alone basis. The fund's expense ratio is among the lowest in its category. The strategy is ideal for clients looking to add a low volatility, income-oriented option to their portfolios. Given the strategy may struggle in rising rate market environments, clients may want to pair Vanguard Equity Income with an approach that exhibits greater cyclicality and up-market capture.



The Mellon U.S. Dynamic Large Cap Value team was previously part of The Boston Company Asset Management (TBC). TBC was founded and registered with the SEC in 1970. The firm, specializing in fundamental equity management, was previously an independently operated subsidiary of The BNY Mellon Corporation (NYSE: BK). On November 13, 2017, BNY Mellon Investment Management announced its intent to combine Mellon Capital Management Corporation (Mellon Capital), Standish Mellon Asset Management Company LLC (Standish) and TBC to form a specialist multi-asset investment manager overseeing more than \$500 billion in assets. The merger became effective February 1, 2018 and the combined company rebranded as Mellon Investments Corporation on January 2, 2019.

#### **Team Overview**

Lead PM Brian Ferguson has served as the key decision-maker for Mellon U.S. Dynamic U.S. Large Cap Value since 2003. John Bailer and David Intoppa serve as co-managers with Bailer being the lead on Mellon's Equity Income and High Dividend strategies. Each PM serves in a dual analyst role with Ferguson overseeing Health Care and Financials, Bailer covering Consumer Discretionary, Consumer Staples, Technology and Telecommunications and Intoppa having oversight on Energy, Industrials Materials and Utilities. A centralized research group, which includes more than 15 U.S-focused research analysts organized by sector, also supports the team.

#### Strategy Overview

The strategy follows a classic, bottom-up, fundamental approach. The Mellon U.S. Dynamic LCV team believes that successful investing is achieved through a three-fold philosophy: a) focus on equity securities with attractive valuations relative to the market, sector and stock history, while avoiding value traps by marrying traditional valuation measures with companies that exhibit business improvement, b) use proprietary, unbiased research resources to identify opportunities that are underappreciated and/or not fully understood, and c) employ risk controls at all levels of the portfolio construction process to minimize unintended exposures and ensure performance is driven by stock selection.

The investment team periodically reviews all potential securities to create a working list of roughly 20 to 30 portfolio addition candidates. They use quantitative screens to source ideas, while also employing qualitative screens to uncover potential opportunities not yet reflected in quantitative data. Once the working list is established, the dedicated team takes responsibility for conducting fundamental research on those names consistent with their sector coverage. Many research inputs are utilized, including Mellon's centralized research team consisting of over 20 investment professionals. The work culminates in a written recommendation to PM Brian Ferguson that includes up and down price targets and the related investment thesis incorporating valuation, fundamental and business improvement ideas. The dedicated analysts ultimately recommend individual stocks with attractive risk/reward characteristics. Ferguson makes the final determination as to whether a security is added to the portfolio in addition to its weighting.

The strategy will typically include 65 to 100 holdings with a maximum single-stock weight of 5%. Sector weights are maintained at a maximum +/- 10% relative to the representative sector weight in the index. The strategy will remain fully invested at all times with cash levels typically no greater than 1%. Portfolio turnover is typically within a range of 50-100%.

#### Expectations

Given the team's focus on stock-selection, the portfolio has been able to perform well in multiple market environments. There are periods, typically short-term in nature, when stock performance does not reward attractive valuations and business improvement. It is during these periods that the strategy may lag. This occurred in 2006 when the team started to reduce its financials weight as the sector continued to outperform. However, this reversed in 2007 and benefitted relative performance.

The strategy's risk-controlled, yet active approach has contributed to tracking error in the 3-5% range that we expect to continue. The portfolio has historically underweighted yield-oriented sectors (Real Estate and Utilities), while maintaining a modest overweight in the financials sector.

Mellon U.S. Dynamic Large Cap Value has historically struggled on a relative basis in periods with short-term bursts of upward or downward momentum-driven price action without fundamental support. In addition, we would expect the strategy to underperform in periods driven by deep value cyclicals and/or high dividend yielders.

#### **Points to Consider**

The emphasis on stock selection and all-weather nature of the portfolio results in an unpredictable return pattern. The strategy boasts a historical beta profile of close to 1, but the path to achieving that figure has been inconsistent. In down markets, the strategy has significantly underperformed (2011) and greatly outperformed (2007). Similarly, the strategy has done very well in strong up markets (2013), but also lagged in 2014, a double-digit return year led by lower volatility stocks. While we expect the strategy to outperform over extended periods of time, clients should be prepared to exercise patience during short-term periods of underperformance.

Mellon announced a realignment of its asset management businesses under three brands in a transition expected to take place in the third quarter of 2021. Equity strategies, including Dynamic LCV, will move under Newton Investment Management. This announcement is not expected to materially impact the strategy or team outside of the strategy being branded with the Newton name.

#### **Recommendation Summary**

We consider the "all weather" nature of Mellon U.S. Dynamic Large Cap Value to be differentiating, as lead PM Brian Ferguson has successfully outperformed the benchmark and peer group median in most years since taking over the strategy in 2003, regardless of whether value, momentum or quality is leading the market. The strategy invests solely in U.S. based companies, is fairly diversified, and possesses solid risk controls. Its active share tends to fall within the 65-75% range and the team sets active positon sizes relative to the Russell 1000 Value Index with every stock either zero weight or overweight relative to the index. The investment team has remained stable over time and has consistently adhered to strategy's "value with a catalyst" approach that combines both quantitative screening and in-depth fundamental research. We consider Mellon U.S. Dynamic Large Cap Value to be appropriate as a core large cap value option for most client types. For clients that do not qualify for the strategy's lower priced separate account or collective investment fund, we support BNY Mellon Dynamic Value, the firm's mutual fund vehicle.



Alpha - A measure of the difference between a portfolio's actual returns and its expected performance, is symmetric with skewness 0. given its level of risk as measured by beta.

Batting Average - A measure of a manager's ability to consistently beat the market. It is calculated by dividing the number of months in which the manager beat or matched an index by the total number of months in the period.

Best Quarter- This is the highest quarterly (3 month) return of the investment since its inception.

Beta - A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.

**Down Period Percent -** Number of months below 0 divided by the total number of months.

Downmarket Capture Ratio - The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance.

Downside Std Dev - This measures only deviations below a specified benchmark.

Excess Return- This is a measure of an investment's return in excess of a benchmark.

Information Ratio - This calculates the value-added contribution of the manager and is derived by dividing the excess rate of return of the portfolio by the tracking error. The higher the Information Ratio, the more the manager has added value to the portfolio.

Longest Down-Streak Return - Return for the longest series of negative monthly returns.

Longest Down-Streak # of Periods - Longest series of negative monthly returns.

Longest Up-Streak Return - Return for the longest series of positive monthly returns.

**Longest Up-Streak** - Longest series of positive monthly returns.

Kurtosis - Kurtosis indicates the peakedness of a distribution. For normal distribution, Kurtosis is 3.

Max Drawdown - The peak to trough decline during a specific record period of an investment or fund. It is usually quoted as the percentage between the peak to the trough.

Max Drawndown # of Periods - This is the number of months that encompasses the max drawdown for an investment.

R-Squared - The percentage of a portfolio's performance that can be explained by the behavior of the appropriate benchmark. A high R-Squared means the portfolio's performance has historically moved in the same direction as the appropriate benchmark.

Return - Compounded rate of return for the period.

Sharpe Ratio - Represents the excess rate of return over the risk free return divided by the standard deviation of the excess return. The result is an absolute rate of return per unit of risk. A higher value demonstrates better historical risk-adjusted performance.

Skewness - Skewness reflects the degree of asymmetry of a distribution. If the distribution has a longer left tail, the function has negative skewness. Otherwise, it has positive skewness. A normal distribution

Sortino Ratio - The Sortino Ratio is similar to Sharpe Ratio except it uses downside risk (Downside Deviation) in the denominator. It was developed in early 1980's by Frank Sortino. Since upside variability is not necessarily a bad thing, Sortino ratio is sometimes more preferable than Sharpe ratio.

Standard Deviation - A statistical measure of the range of a portfolio's performance. It represents the variability of returns around the average return over a specified time period.

Tracking Error - This is a measure of the standard deviation of a portfolio's excess returns versus its designated market benchmark.

Treynor Ratio - Similar to Sharpe Ratio, Treynor Ratio is a measurement of efficiency utilizing the relationship between annualized risk-adjusted return and risk. Unlike Sharpe Ratio, Treynor Ratio utilizes "market" risk (beta) instead of total risk (standard deviation). Good performance efficiency is measured by a high ratio.

**Up period Percent** - Number of months above 0 divided by the total number of months.

Upmarket Capture Ratio - The ratio of average portfolio performance over the designated benchmark during periods of positive returns. A higher value indicates better product performance.

Value-Growth Score - Morningstar assigns an Overall Value score and an Overall Growth score to each stock within a fund. Morningstar then calculates a net value-core-growth score for each stock by subtracting the stock's Overall Value score from its Overall Growth score. Once this is done, these raw scores are rescaled to range between -100 to 400 in order to fit within the Morningstar Style Box. Scores below 67 are classified as value, scores above 233 are classified as growth, and scores between 67 and 233 fit within the core boundaries.

Worst Quarter - This is the lowest quarterly (3 month) return of the investment since its inception.



#### IMPORTANT DISCLOSURE INFORMATION

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Performance data is provided for historical and informational purposes only. Where applicable, results shown represent past performance and do not represent expected future performance or experience. Past performance does not guarantee future results. Returns are typically stated net of fees, which may include: investment advisory fees, taxes and other expenses. There may be instances where certain returns are shown gross of fees (i.e., before the aforementioned fees are deducted) and would be noted as such. Generally, there are two instances where returns may be shown as gross figures. In the case of separate accounts, typically returns are demonstrated as gross of fees due to the fact that the fee structure would generally vary widely depending on the client's size and circumstances. Additionally, there are instances where a strategy vehicle is relatively new and does not have a sufficiently long track record to represent a viable comparison relative to other strategies. Accordingly, the returns for the separate account version of such a strategy could be used as demonstrative of the performance for a similar vehicle; separate account returns are generally shown as gross of fees. It is important to note that any such separate accounts being used as a "proxy" are strictly for illustrative purposes. An investor should not expect the same results from the actual strategy(ies) under consideration. When client-specific performance is shown, AndCo uses time-weighted calculations, which are founded on standards recommended by the CFA Institute. In these cases, the performance-related data shown are based on information that is received from custodians. As a result, this provides AndCo with a reasonable basis that the investment information presented is free from material misstatement.

#### **RISK FACTORS**

#### THE RISK DISCLOSURES HEREIN DO NOT PURPORT TO COVER ALL RISKS. PLEASE REFER TO THE RESPECTIVE PROSPECTUSES FOR COMPLETE INFORMATION.

As presented in this report, although investing in equities can be beneficial, it is also important to consider the associated risks. Investing in such funds may not be suitable for all investors. Equity markets can be volatile and can decline significantly in response to, or investor perceptions of, issuer, market, economic, industry, political, regulatory, geopolitical, and other conditions. These conditions can affect a single issuer or type of security, issuers within a broad market sector, industry or geographic region, or the equity markets in general. The primary risk factors to consider include, but are not limited to: stock market risk, manager risk, investment style risk, sector-focus risk, issuer risk and liquidity risk. The securities markets are volatile and the market prices of the funds' securities may decline generally. Securities fluctuate in price based on changes in a company's financial condition and overall market and economic conditions. If the market prices of the securities owned by the fund fall, the value of your investment in the fund will decline. Depending on the specific strategy, there many additional considerations such as the risks associated with equity investing.

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# Item 5.d.iv. Emerging Markets Equity Review & Discussion

Emerging Markets Equity Manager Analysis Period Ending March 31, 2021

# **Delray Beach Police Officers' Retirement System**



## **Purpose for this Manager Evaluation Report**

The purpose of this search is to evaluate options to further diversify and enhance the return profile of the portfolio.

## **Investment Options for this Manager Evaluation Report**

Firm Name	Strategy Name	Vehicle	Management Fee	Investment Minimum
ABS Investment Management	ABS Emerging Markets Strategic Portofolio*	LP	0.75% Plus underlying managers average 0.68%.	\$250,000
RBC Global Asset Management	RBC Emerging Markets Equity R6 (RREMX)*	MF	0.89%	\$250,000
Wellington Management Company	Wellington Emerging Markets Research Equity CTF-II*	CF	0.75% plus operating expenses. Operating expenses average 10bps and are capped at 20bps.	\$1,000,000
Wells Fargo Asset Management	Wells Fargo Emerging Markets Equity R6 (EMGDX)*	MF CIT	1.12% 0.95%	No Minimum \$5,000,000



<sup>\*</sup>The inception date for the ABS Emerging Markets Strategic Portfolio is 12/1/2017. Performance prior to the inception date represents carve out performance from a separate strategy and does not represent live performance of an investable strategy. The quoted fee does not include management fees paid to underlying managers, which averaged 0.68% as of 03/31/2021.

<sup>\*</sup>RBC Emerging Markets Equity Composite will be used as a proxy for RBC Emerging Markets Equity R6 (RREMX).

<sup>\*</sup>Wellington Emerging Markets Research Equity composite will be used as a proxy for Wellington Emerging Markets Research Equity CTF-II.

<sup>\*</sup>WFAM Berkeley Street Emerg Mkts Eq will be used as a proxy for Wells Fargo Emerging Markets Equity R6 (EMGDX).

<sup>\*</sup>Noted funds being used as proxies are strictly for illustrative purposes. Please see additional important disclosure information at the end of this presentation.

#### **Definition and Characteristics**

The Emerging Markets equity asset class is typically defined as the markets of all developing countries. Generally, developing countries can be defined as those that are experiencing accelerated economic growth with lower per capita income and less mature capital markets and political regimes than developed countries. These countries account for approximately 10% of the global equity exposure by market cap. The category blends both value and growth companies. The most often used benchmark for the category is the MSCI Emerging Markets Index. China is the index's largest country exposure at over 35%. South Korea, Taiwan, India and Brazil also account for meaningful weights. The largest sectors are Financials, Information Technology, and the Consumer sectors.

# Role within a Portfolio

The primary role of an Emerging Markets equity strategy is to provide exposure to the equity securities of companies domiciled in developing markets countries. In general, emerging economies are expected to grow faster in GDP terms and provide greater long-term opportunity for higher return in equity markets relative to those of developed economies. Emerging Markets equities are also expected to have higher risk and volatility. Specific attention should be paid to political and event risk. Companies in developing markets are less likely to be covered by Wall Street research analysts and the large opportunity set gives managers the ability to build portfolios substantially different from the benchmark, so tracking error can also be high.

## **Benchmark and Peer Group**

This Emerging Markets search report will use the following benchmark and peer group:

Index – MSCI Emerging Markets: The MSCI Emerging Markets Index captures large and mid cap representation across 26 Emerging Markets (EM) countries. With 1385 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

Morningstar Category – Diversified Emerging Markets: Diversified emerging markets portfolios tend to divide their assets among 20 or more nations, although they tend to focus on the emerging markets of Asia and Latin America rather than on those of the Middle East, Africa, or Europe. These portfolios invest predominantly in emerging market equities, but some funds also invest in both equities and fixed income investments from emerging markets.



# **Investment Option Comparison**



	ABS EM Strategic Portfolio	RBC Emerging Markets Equity	Wellington Emerging Markets Research Eq	WFAM Berkeley Street Emerg Mkts Eq
Firm Information				
Year Founded	1/1/2002	1/1/1959	1/1/1928	1/1/1971
US Headquarters Location	Greenwich, CT	Minneapolis, MN	Boston, MA	San Francisco, CA
Number of Major Global Offices	4	8	11	6
Year Began Managing Ext. Funds	1/1/2003	1/1/1959	1/1/1928	1/1/1971
Firm AUM (\$ M)	6,500	429,000	1,300,000	476,500
Ownership Type	Other	Subsidiary	Independent	Publicly Traded
Largest Owner (%)	41	100	N/A	100
Largest Owner (Name)	Evercore Partners	Royal Bank of Canada	N/A	Wells Fargo & Co.
Employee Ownership (%)	59	0	100	1
Qualify as Emerging Manager?	No	No	No	No
Strategy Information				
Inception Date	12/1/2017	4/1/2010	3/31/2010	9/30/1997
Open/Closed	Open	Open	Open	Open
Primary Benchmark	MSCI Emerging Markets IMI	MSCI Emerging Markets	MSCI Emerging Markets	MSCI Emerging Markets
Secondary Benchmark	None	None	None	None
Peer Universe	International Emerging	International Emerging	International Emerging	International Emerging
Outperformance Estimate (%)	2-3	2-3	2-3	1-3
Tracking Error Estimate (%)	3-5	4-6	2-4	3-5
Strategy AUM (\$ M)	1,200	15,000	6,500	13,000
Estimated Capacity (\$ M)	4, 000	Limited	Limited	Limited
Strategy AUM as % Firm Assets	18	3	0	2
Investment Approach - Primary	Bottom-up	Bottom-up	Bottom-up	Bottom-up
Investment Approach - Secondary	Fundamental	Fundamental	Fundamental	Fundamental



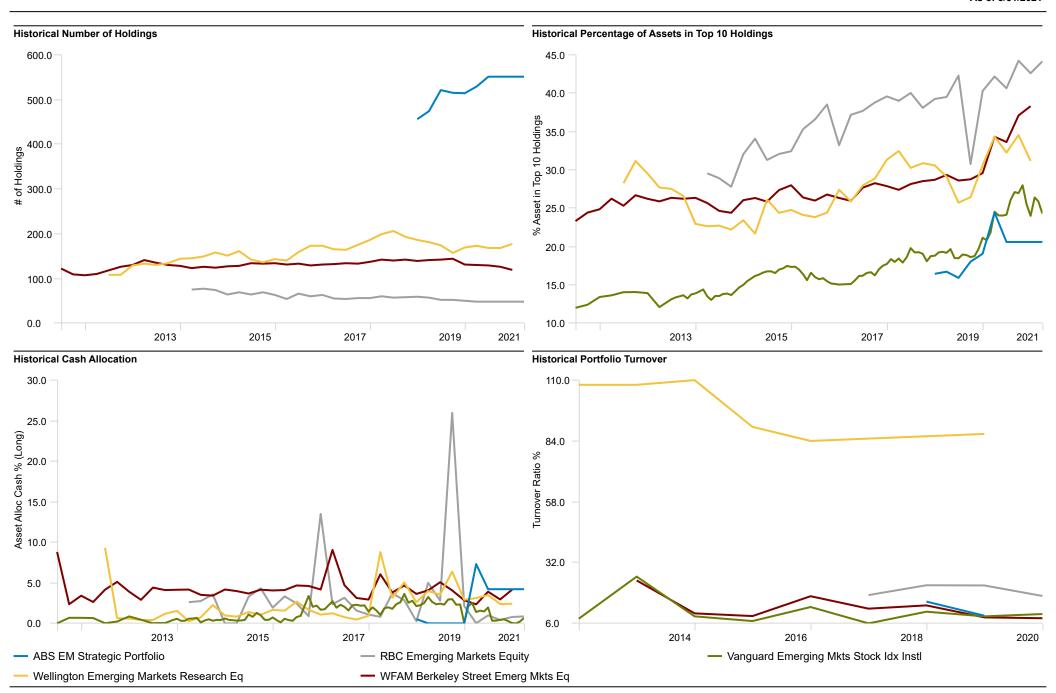
	ABS EM Strategic Portfolio	RBC Emerging Markets Equity	Wellington Emerging Markets Research Eq	WFAM Berkeley Street Emerg Mkts Eq
Team Information				
Decision Making Structure	Team	PM-Led	Sector PM-Led	PM-Led
Number of Decision Makers	5	1	12	3
Names of Decision Makers	5-Person Team	P. Langham	12-Person Team	J. Zhang, D. Irwin, R. Peck
Date Began Managing Strategy	2017	2010	2010-2019	2006, 2011, 2014
Date Began with Firm	2002-2013	2009	1992-2016	2004, 2005, 2010
Number of Products Managed by Team	3	3	12	3
Number of Investment Analysts	4	9	12	6
Investment Analyst Team Structure	Multi-Manager	Combination	Sector/Industry Specialists	Combination
Portfolio Construction Information				
Broad Style Category	Core	Growth	Core	Core
Style Bias	Growth	GARP	Flexible	Flexible
Country/Region Constraint Type	Benchmark Relative	Benchmark Relative	Benchmark Relative	Benchmark Relative
Typical Country Constraints (%)	+/- 15	+/- 15	+/-10	1.5x
Typical Region Constraints (%)	None	None	None	None
Typical Countries/Regions Overweight	None	India, South Africa	None	None
Typical Countries/Regions Underweight	None	China, Russia, S. Korea	S. Korea	S. Korea, Taiwan
Maximum Emerging Market Exposure (%)	100	None	None	N/A
Sector Constraint Type	Benchmark Relative	Benchmark Relative	Benchmark Relative	Benchmark Relative
Sector Constraints (%)	+/- 15	+/- 15	+/- 1%	1.5x
Typical Sector/s Overweight	Consumer Staples	Consumer Staples, Financials	None	Consumer Staples
Typical Sector/s Underweight	Financials	Energy	None	Materials
Typical Number of Holdings	400-600	40-60	150-200	90-150
Average Full Position Size (%)	1-3	1.5-2	0-2	1-2
Maximum Position Size (%)	8	7	5 or +2	5
Annual Typical Asset Turnover (%)	20-80	10-40	70-100	10-20
Annual Typical Name Turnover (%)	10-50	10-40	70-100	10-20
Maximum Cash Allocation (%)	10	15 (Typically <5)	10	10
Currency Hedged?	No	No	No	No

The source of data and figures provided is generally the respective managers. Certain data represents AndCo's view and could differ from the manager's interpretation. The most current AUM of each strategy may therefore differ from what is currently stated.

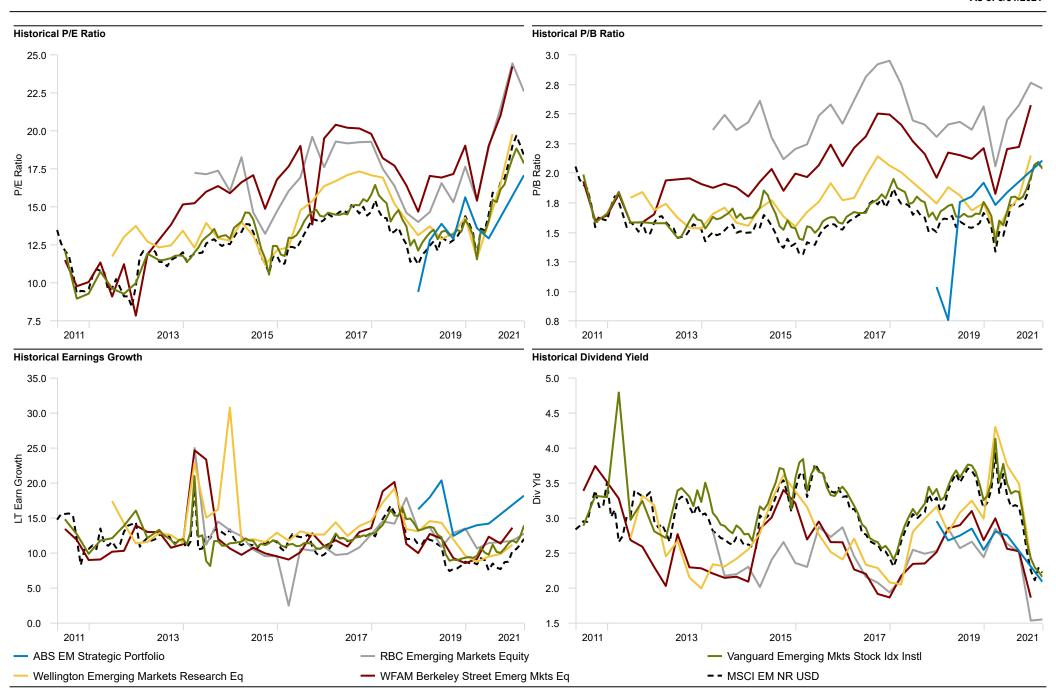


	ABS EM Strategic Portfolio	RBC Emerging Markets Equity	Vanguard Emerging Mkts Stock Idx Instl	Wellington Emerging Markets Research Eq	WFAM Berkeley Street Emerg Mkts Eq	MSCI EM NR USD
COMPOSITION						
# of Holdings	551	48	4,301	177	119	1,392
% Asset in Top 10 Holdings	20.59	44.15	24.29	31.15	38.30	28.26
Asset Alloc Cash %	4.22	0.86	0.65	2.43	4.17	0.00
Asset Alloc Equity %	95.13	99.14	99.24	99.19	95.85	99.95
Asset Alloc Bond %	0.37	0.00	0.00	0.00	0.00	0.00
Asset Alloc Other %	0.29	0.00	0.11	0.00	0.00	0.05
CHARACTERISTICS						
Average Market Cap (mil)	19,385.00	53,025.36	32,232.66	48,063.69	44,548.17	51,842.80
P/E Ratio (TTM)	17.09	22.59	17.86	19.79	24.23	18.38
P/B Ratio (TTM)	2.11	2.71	2.04	2.15	2.57	2.03
LT Earn Growth	18.23	12.82	13.97	11.22	13.65	12.04
Dividend Yield	2.09	1.56	2.16	2.42	1.87	2.22
ROE % (TTM)	13.78	17.25	15.00	14.12	10.45	14.25
GICS SECTORS %						
Energy %	3.73	0.00	5.20	4.83	4.00	4.79
Materials %	8.06	6.04	8.75	5.73	0.79	8.08
Industrials %	6.59	5.58	5.67	2.54	1.93	4.30
Consumer Discretionary %	18.71	18.09	17.48	12.55	23.24	17.66
Consumer Staples %	10.81	9.57	5.78	6.56	14.61	5.63
Healthcare %	4.16	4.04	4.65	1.84	1.71	4.46
Financials %	14.44	25.65	18.82	19.05	12.99	18.25
Information Technology %	20.35	22.67	16.85	27.27	20.18	20.93
Communication Services % Utilities %	8.94	6.54	10.92	13.80	19.17	11.74
Real Estate %	2.31 1.89	0.00 1.83	2.72 3.17	3.33 2.50	0.00 1.36	2.00 2.15
MARKET CAPITALIZATION	1.09	1.03	3.17	2.30	1.50	2.13
Market Cap Giant %	41.31	58.49	47.66	57.94	57.64	56.11
•	28.77	34.75	30.00	25.16	30.21	32.50
Market Cap Large %						
Market Cap Mid %	22.01	6.76	18.26	14.87	10.23	11.24
Market Cap Small %	6.44	0.00	3.71	1.89	1.77	0.15
Market Cap Micro %	1.46	0.00	0.37	0.14	0.15	0.00











71.53

60.00

Current Portfolio Region Allocation						
	ABS EM Strategic Portfolio	RBC Emerging Markets Equity	Vanguard Emerging Mkts Stock Idx Instl	Wellington Emerging Markets Research Eq	WFAM Berkeley Street Emerg Mkts Eq	MSCI EM NR USD
Equity Country United States %	0.28	0.00	0.01	0.00	1.68	0.21
Equity Region North America %	0.64	0.00	0.04	0.26	1.68	0.21
Equity Region Latin America %	9.30	9.13	8.27	13.58	15.41	7.13
Equity Region United Kingdom %	0.85	8.69	0.00	1.57	0.00	0.00
Equity Region Europe dev %	0.58	0.00	0.33	2.20	0.06	0.25
Equity Region Europe emrg %	5.09	1.10	3.66	4.35	2.82	4.18
Equity Region Japan %	0.64	0.00	0.00	1.36	0.00	0.00
Equity Region Australasia %	0.00	0.00	0.01	0.00	0.00	0.00
Equity Region Asia dev %	26.35	31.37	17.98	29.91	26.73	27.47
Equity Region Asia emrg %	50.69	41.89	59.97	43.43	51.78	52.39
Equity Region Africa/Middle East %	5.86	7.82	9.74	3.34	1.52	8.35
Equity Region Developed %	30.06	40.06	20.48	40.01	28.47	29.70

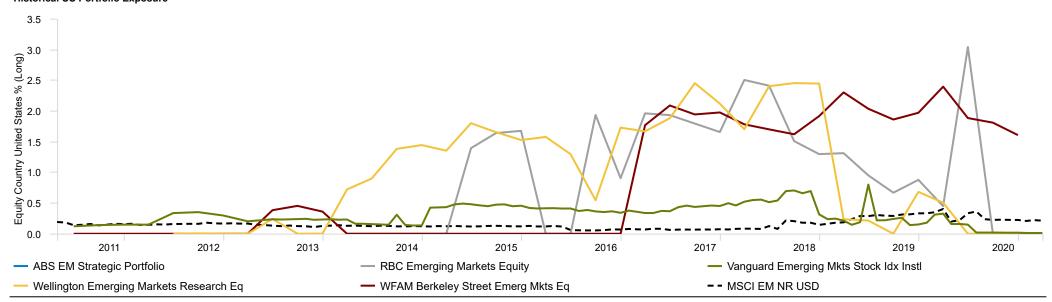
79.52

59.94

# Historical US Portfolio Exposure

69.94

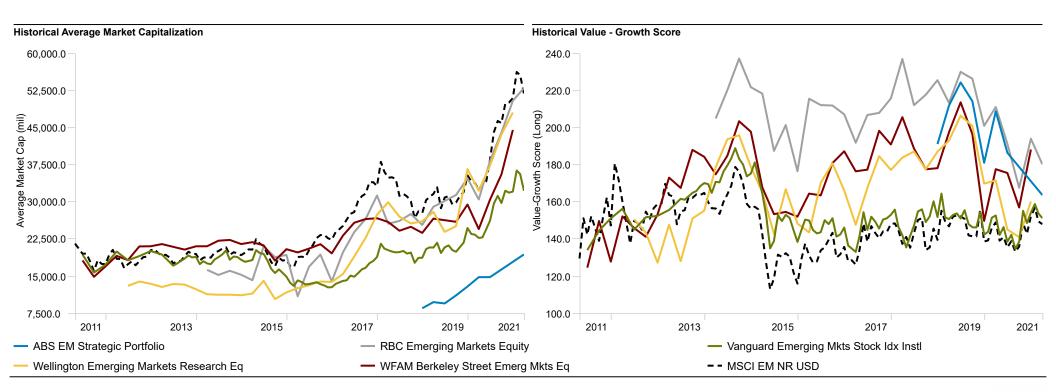
Equity Region Emerging %



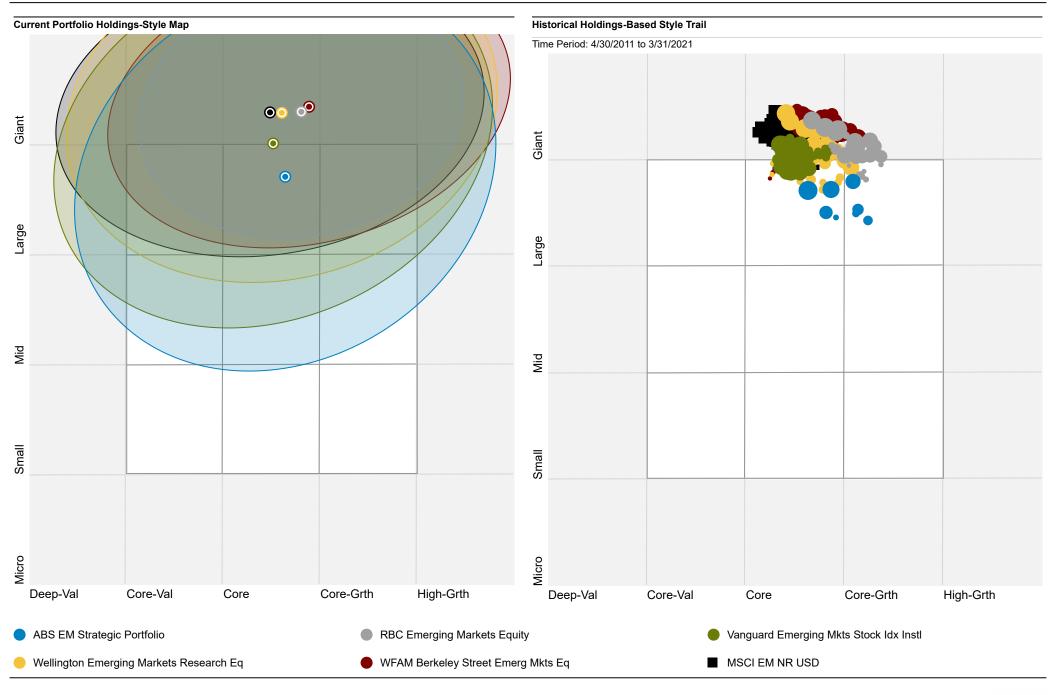


70.30

Style Allocation						
	ABS EM Strategic Portfolio	RBC Emerging Markets Equity	Vanguard Emerging Mkts Stock Idx Instl	Wellington Emerging Markets Research Eq	WFAM Berkeley Street Emerg Mkts Eq	MSCI EM NR USD
Equity Style Large Value %	16.45	17.36	20.07	21.70	17.16	27.19
Equity Style Large Core %	28.62	43.81	34.89	36.07	35.33	36.13
Equity Style Large Growth %	24.40	31.94	22.65	25.08	37.23	25.29
Equity Style Mid Value %	5.68	0.00	6.74	6.05	4.10	4.94
Equity Style Mid Core %	10.63	5.23	7.57	6.07	4.25	4.31
Equity Style Mid Growth %	6.30	1.67	3.95	2.91	1.58	1.98
Equity Style Small Value %	2.91	0.00	1.79	1.09	0.10	0.06
Equity Style Small Core %	4.22	0.00	1.79	0.80	0.25	0.10
Equity Style Small Growth %	0.79	0.00	0.55	0.23	0.00	0.00









# **Quantitative Review**

Peer Group (5-95%): Separate Accounts - U.S. - Diversified Emerging Mkts 90.0 82.5 75.0 67.5 60.0 52.5 45.0 37.5 30.0 22.5 15.0 7.5 0.0 1 Year 2 Years 3 Years 4 Years 5 Years 6 Years 7 Years 8 Years 9 Years 10 Years 1 Year Rank 2 Years Rank 3 Years Rank 4 Years Rank 5 Years Rank 6 Years Rank 7 Years Rank 8 Years Rank 9 Years Rank 10 Years Rank ABS EM Strategic Portfolio 70.41 33 20.25 22 10.63 18 27 15.19 24 11.48 16 10.77 9 9.47 12 13.76 RBC Emerging Markets Equity 56 29 33 56.43 84 14.69 63 9.44 25 12.37 41 12.86 8.99 48 9.19 8.03 8.25 27 6.82 23 Vanguard Emerging Mkts Stock Idx Instl 58.40 78 13.71 71 6.47 60 9.95 71 11.47 72 7.06 80 6.50 73 5.31 79 4.90 86 3.45 87 Wellington Emerging Markets Research Eq 64.83 9.32 6.45 52 15.59 56 7.57 46 13.45 30 15.53 23 11.47 16 10.04 16 13 8.61 21 31 WFAM Berkeley Street Emerg Mkts Eq 64.79 52 20.46 20 11.31 14 14.06 25 15.46 24 11.42 17 9.37 27 8.06 31 7.45 40 6.04 41 MSCI EM NR USD 58.39 78 14.18 67 6.48 59 10.82 60 12.07 63 7.64 71 6.58 71 5.54 75 5.14 80 3.65 82







RBC Emerging Markets Equity

WFAM Berkeley Street Emerg Mkts Eq.

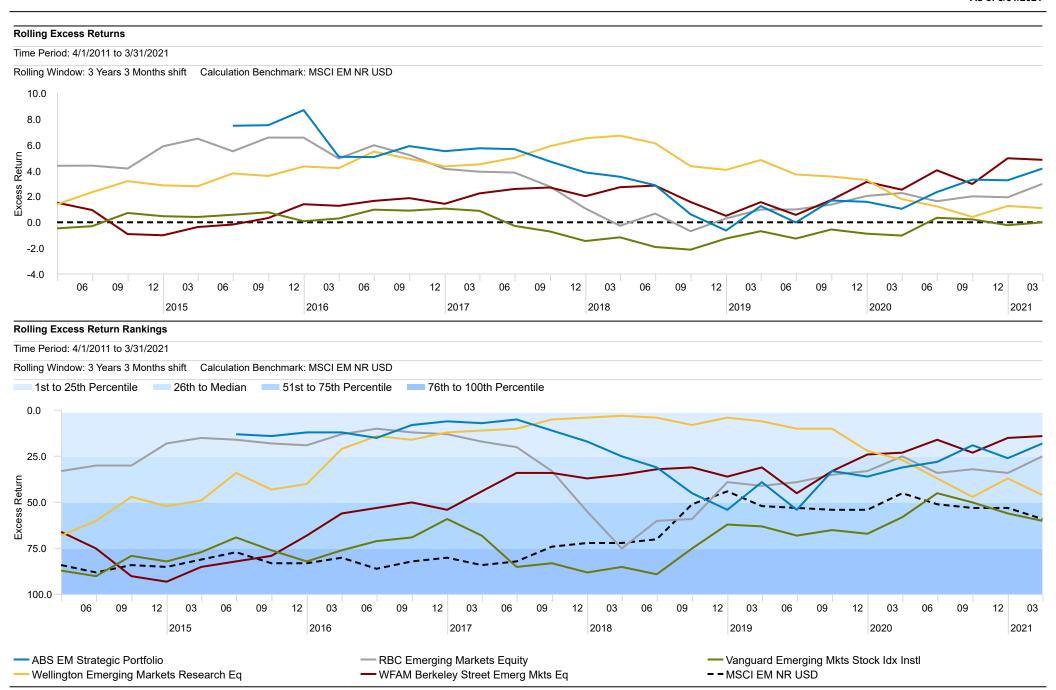


Vanguard Emerging Mkts Stock Idx Instl

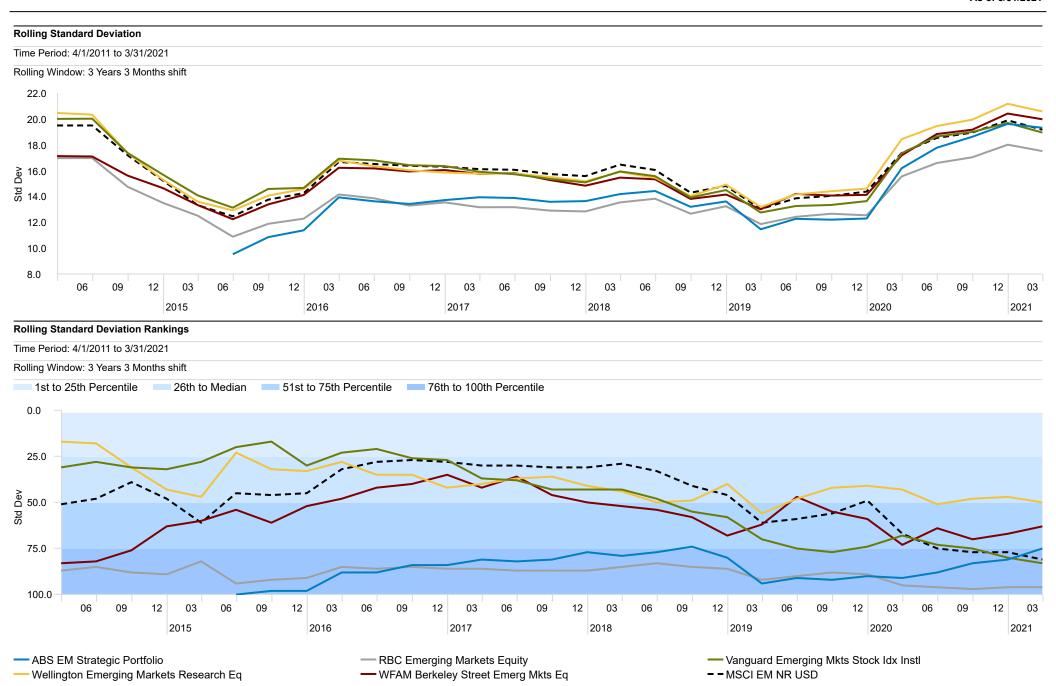
MSCI EM NR USD

ABS EM Strategic Portfolio

Wellington Emerging Markets Research Eq.





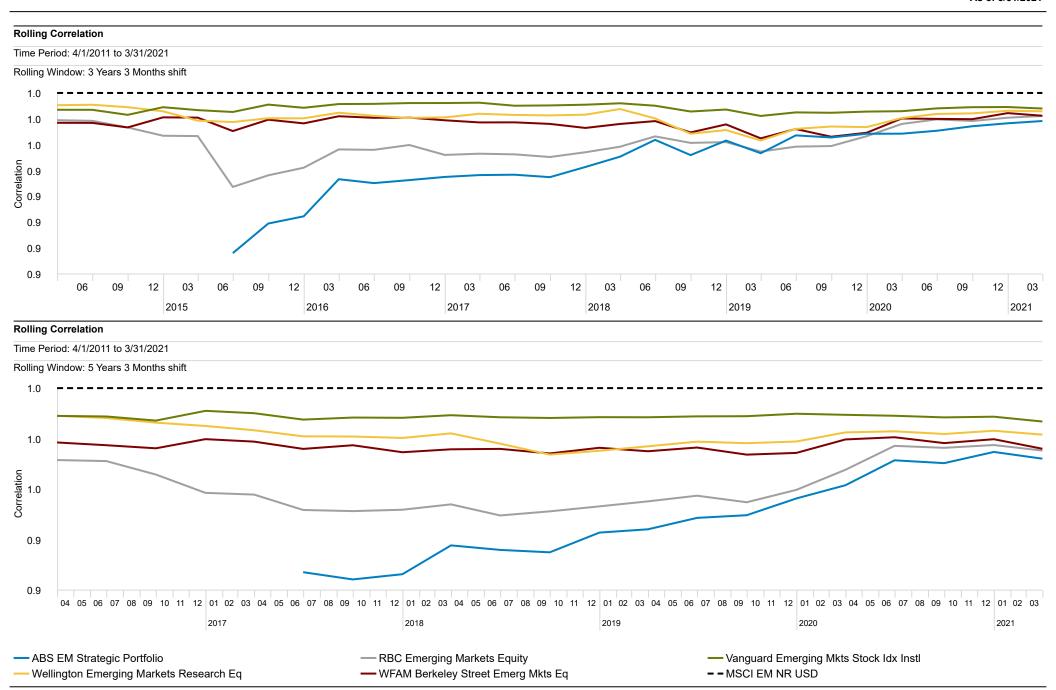




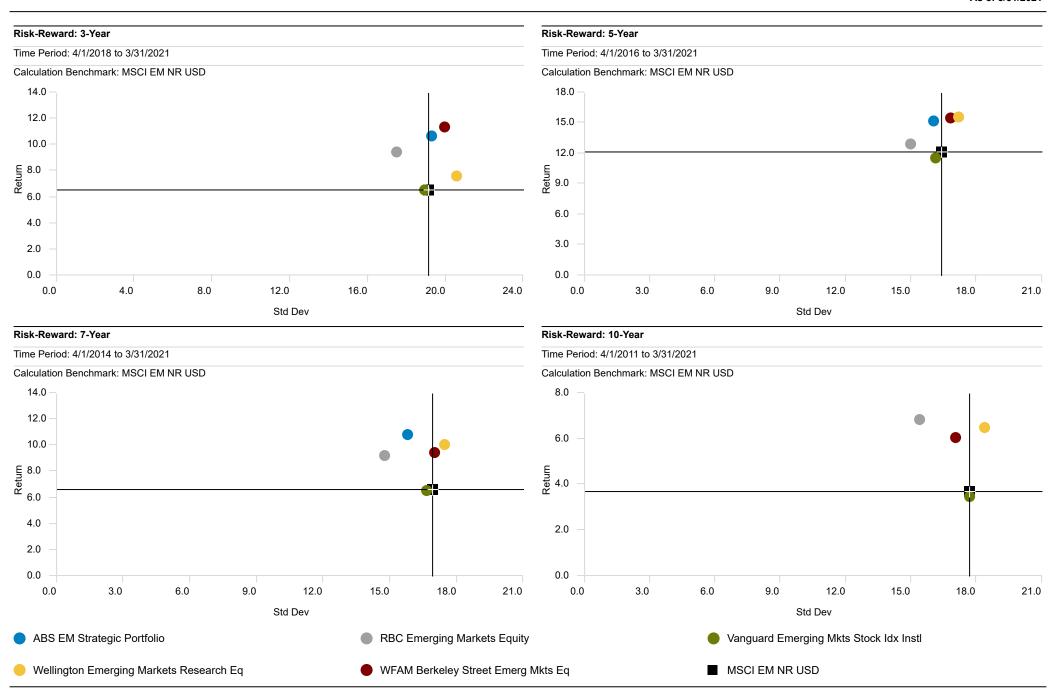
Correlation Matrix								
Time Period: 4/1/2014 to 3/31/2021								
	1	2	3	4	5	6		
1 ABS EM Strategic Portfolio	1.00							
2 RBC Emerging Markets Equity	0.95	1.00						
3 Vanguard Emerging Mkts Stock ldx Instl	0.96	0.96	1.00					
4 Wellington Emerging Markets Research Eq	0.96	0.95	0.98	1.00				
5 WFAM Berkeley Street Emerg Mkts Eq	0.96	0.96	0.97	0.97	1.00			
6 MSCI EM NR USD	0.96	0.97	0.99	0.98	0.98	1.00		

Excess Return Correlation							
Time Period: 4/1/2014 to 3/31/2021							
Calculation Benchmark: MSCI EM NR USD							
		1	2	3	4	5	6
1 ABS EM Strategic Portfolio	MSCI EM NR USD	1.00					
2 RBC Emerging Markets Equity	MSCI EM NR USD	0.42	1.00				
3 Vanguard Emerging Mkts Stock ldx Instl	MSCI EM NR USD	0.30	0.08	1.00			
4 Wellington Emerging Markets Research Eq	MSCI EM NR USD	0.33	-0.12	0.27	1.00		
5 WFAM Berkeley Street Emerg Mkts Eq	MSCI EM NR USD	0.35	0.26	0.19	0.17	1.00	
6 MSCI EM NR USD	MSCI EM NR USD						1.00

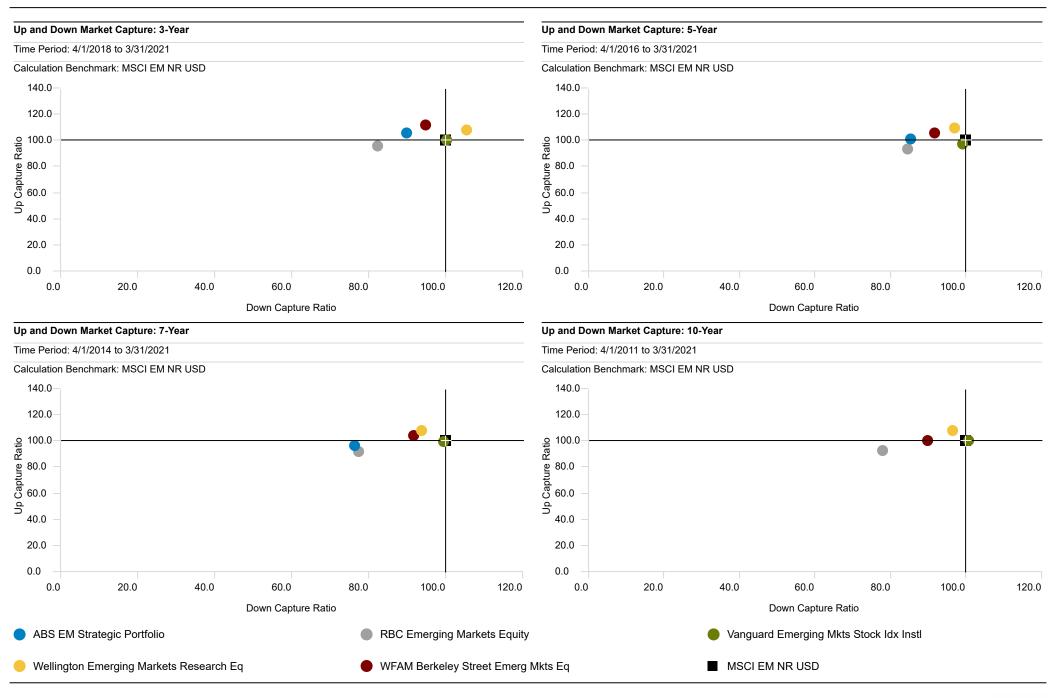




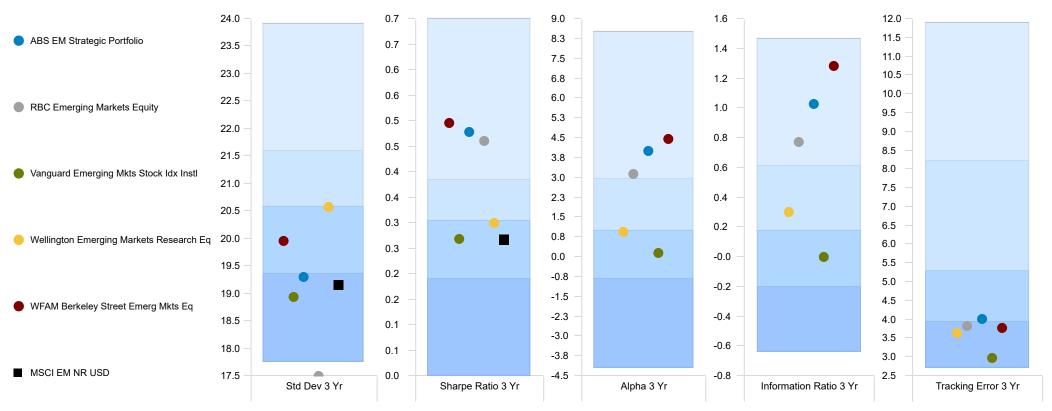






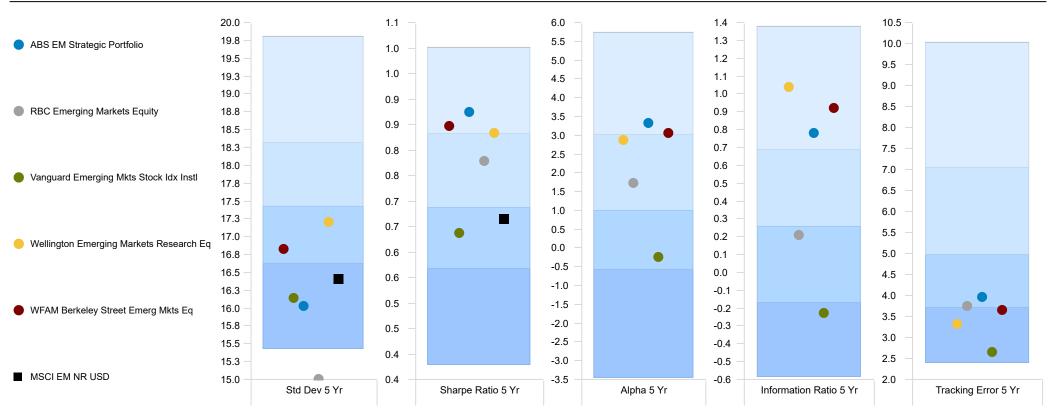






	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
ABS EM Strategic Portfolio	19.31	75	0.48	17	3.99	18	1.03	17	4.03	72
RBC Emerging Markets Equity	17.51	96	0.46	20	3.15	24	0.77	22	3.84	76
Vanguard Emerging Mkts Stock ldx Instl	18.94	83	0.27	57	0.14	59	0.00	59	2.98	89
Wellington Emerging Markets Research Eq	20.57	50	0.30	50	0.93	52	0.30	41	3.64	80
WFAM Berkeley Street Emerg Mkts Eq	19.97	63	0.50	15	4.46	15	1.28	8	3.77	77
MSCI EM NR USD	19.16	81	0.27	58	0.00	62			0.00	100

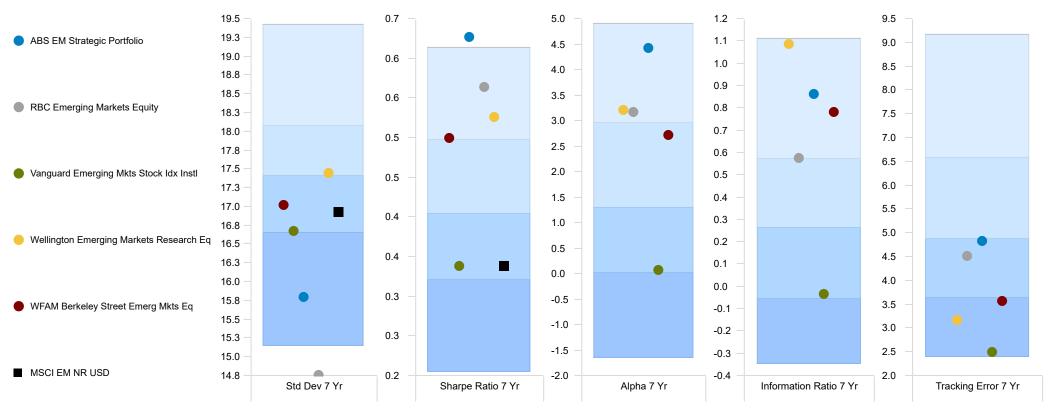




Time Period: 4/1	/2016 to	3/31/202	21
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	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
ABS EM Strategic Portfolio	16.04	88	0.87	17	3.33	23	0.78	20	3.99	68
RBC Emerging Markets Equity	15.01	97	0.78	31	1.75	38	0.21	54	3.77	74
Vanguard Emerging Mkts Stock ldx Instl	16.14	84	0.64	66	-0.23	70	-0.23	78	2.67	92
Wellington Emerging Markets Research Eq	17.21	54	0.84	24	2.88	26	1.04	13	3.33	82
WFAM Berkeley Street Emerg Mkts Eq	16.84	66	0.85	22	3.06	23	0.92	16	3.68	75
MSCI EM NR USD	16.41	79	0.66	60	0.00	66			0.00	100

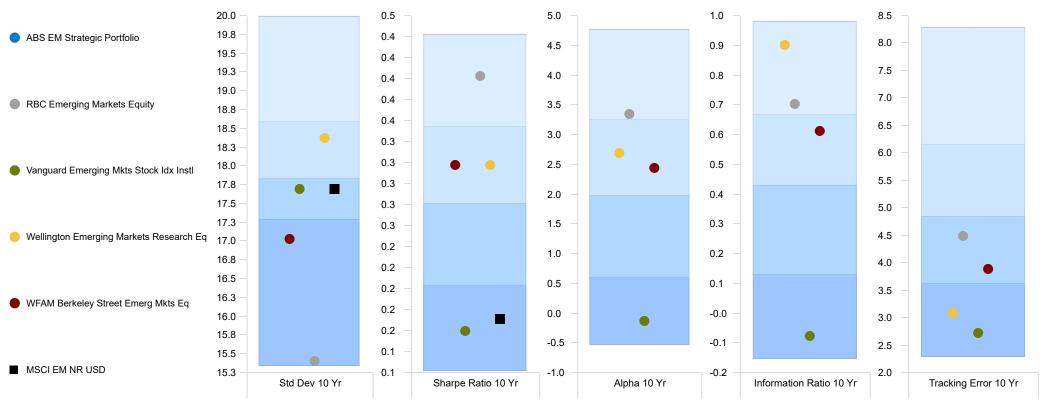




Time Period	4/1/2014 to	3/31/2021
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	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
ABS EM Strategic Portfolio	15.81	91	0.63	5	4.44	8	0.87	15	4.84	51
RBC Emerging Markets Equity	14.77	96	0.56	11	3.18	22	0.58	24	4.52	56
Vanguard Emerging Mkts Stock ldx Instl	16.68	72	0.34	68	0.07	73	-0.03	73	2.51	93
Wellington Emerging Markets Research Eq	17.45	46	0.53	19	3.22	18	1.09	6	3.18	84
WFAM Berkeley Street Emerg Mkts Eq	17.03	60	0.50	24	2.73	28	0.78	16	3.57	77
MSCI EM NR USD	16.94	65	0.34	68	0.00	75			0.00	100



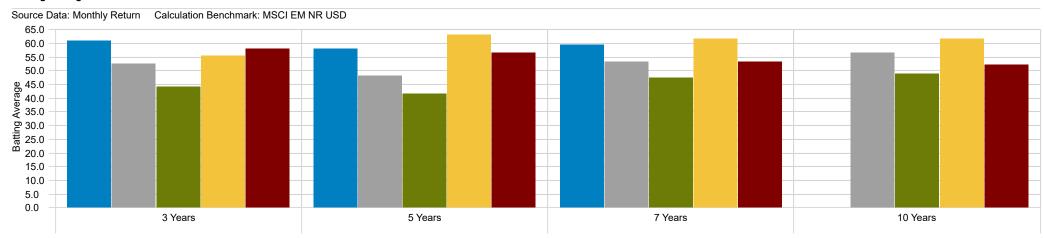


Time	Dariad.	1/1/2011	to 3/31/2021

	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
ABS EM Strategic Portfolio										
RBC Emerging Markets Equity	15.41	94	0.40	13	3.35	23	0.70	21	4.50	55
Vanguard Emerging Mkts Stock ldx Instl	17.70	57	0.16	84	-0.13	88	-0.07	89	2.73	93
Wellington Emerging Markets Research Eq	18.37	30	0.32	35	2.70	34	0.90	8	3.10	86
WFAM Berkeley Street Emerg Mkts Eq	17.04	83	0.32	34	2.44	40	0.61	32	3.89	67
MSCI EM NR USD	17.70	57	0.17	80	0.00	85			0.00	100

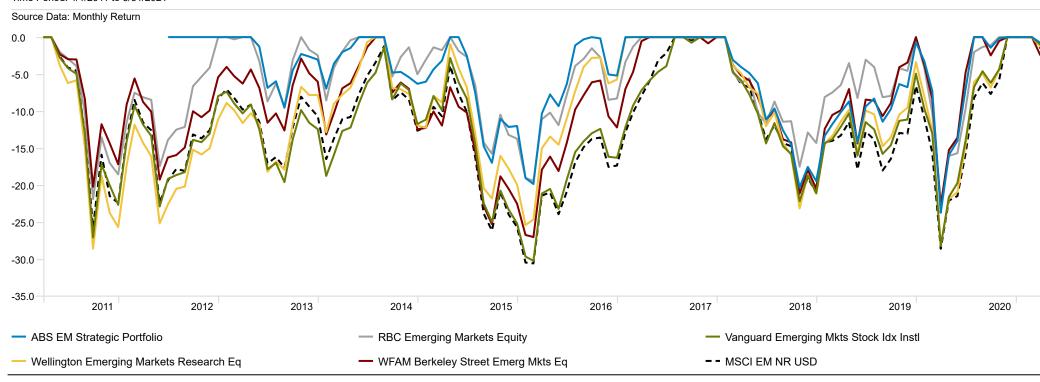






#### Drawdown

Time Period: 4/1/2011 to 3/31/2021





MPT Statistics: 3-Year

Time Period: 4/1/2018 to 3/31/2021 Calculation Benchmark: MSCI EM NR USD

	ABS EM Strategic Portfolio	RBC Emerging Markets Equity	Vanguard Emerging Mkts Stock Idx	Wellington Emerging Markets Research	WFAM Berkeley Street Emerg Mkts	MSCI EM NR USD
	· Graene	_44)	Instl	Eq	Eq	
Return	10.63	9.44	6.47	7.57	11.31	6.48
Excess Return	4.15	2.97	-0.01	1.10	4.83	0.00
Std Dev	19.31	17.51	18.94	20.57	19.97	19.16
Beta	0.99	0.90	0.98	1.06	1.02	1.00
Tracking Error	4.03	3.84	2.98	3.64	3.77	0.00
Sharpe Ratio	0.48	0.46	0.27	0.30	0.50	0.27
Alpha	3.99	3.15	0.14	0.93	4.46	0.00
Information Ratio	1.03	0.77	0.00	0.30	1.28	
Batting Average	61.11	52.78	44.44	55.56	58.33	100.00
Up Capture Ratio	105.25	95.50	100.12	107.98	111.64	100.00
Down Capture Ratio	89.71	82.42	100.17	105.29	94.87	100.00
MPT Statistics: 5-Year						
Time Period: 4/1/2016 to 3/31/2021 Calcula	ation Benchmark: MSCI EM N	IR USD				
Return	15.19	12.86	11.47	15.53	15.46	12.07
Excess Return	3.12	0.80	-0.60	3.46	3.39	0.00
Std Dev	16.04	15.01	16.14	17.21	16.84	16.41
Beta	0.95	0.89	0.97	1.03	1.00	1.00
Tracking Error	3.99	3.77	2.67	3.33	3.68	0.00
Sharpe Ratio	0.87	0.78	0.64	0.84	0.85	0.66
Alpha	3.33	1.75	-0.23	2.88	3.06	0.00
Information Ratio	0.78	0.21	-0.23	1.04	0.92	
Batting Average	58.33	48.33	41.67	63.33	56.67	100.00
Up Capture Ratio	101.10	93.10	97.51	109.30	105.80	100.00
Down Capture Ratio	85.48	84.54	99.15	97.07	91.78	100.00



	<b>-</b>		-
мрт	Statistics:	7-1	(ea

Time Period: 4/1/2014 to 3/31/2021 Calculation Benchmark: MSCI EM NR USD

	ABS EM Strategic Portfolio	RBC Emerging Markets Equity	Vanguard Emerging Mkts Stock Idx Instl	Wellington Emerging Markets Research Eq	WFAM Berkeley Street Emerg Mkts Eq	MSCI EM NR USD
Return	10.77	9.19	6.50	10.04	9.37	6.58
Excess Return	4.19	2.61	-0.08	3.47	2.79	0.00
Std Dev	15.81	14.77	16.68	17.45	17.03	16.94
Beta	0.90	0.85	0.97	1.01	0.98	1.00
Tracking Error	4.84	4.52	2.51	3.18	3.57	0.00
Sharpe Ratio	0.63	0.56	0.34	0.53	0.50	0.34
Alpha	4.44	3.18	0.07	3.22	2.73	0.00
Information Ratio	0.87	0.58	-0.03	1.09	0.78	
Batting Average	59.52	53.57	47.62	61.90	53.57	100.00
Up Capture Ratio	96.65	91.91	99.19	107.60	103.64	100.00
Down Capture Ratio	76.35	77.46	99.34	93.68	91.70	100.00
MPT Statistics: 10-Year						
Time Period: 4/1/2011 to 3/31/2021	Calculation Benchmark: MSCI EM N					
Return		6.82	3.45	6.45	6.04	3.65
Excess Return		3.17	-0.20	2.80	2.39	0.00
Std Dev		15.41	17.70	18.37	17.04	17.70
Beta		0.85	0.99	1.02	0.94	1.00
Tracking Error		4.50	2.73	3.10	3.89	0.00
Sharpe Ratio		0.40	0.16	0.32	0.32	0.17
Alpha		3.35	-0.13	2.70	2.44	0.00
Information Ratio		0.70	-0.07	0.90	0.61	
Batting Average		56.67	49.17	61.67	52.50	100.00
Up Capture Ratio		92.55	99.93	107.64	100.27	100.00
Down Capture Ratio		77.87	100.82	96.46	89.97	100.00



# **Investment Option Narratives**



ABS Investment Management LLC (ABS) is an investment management firm specializing in global equity solutions. The firm focuses on active equity strategies across the globe and has extensive experience in both emerging markets and early stage investing. The firm was founded in 2002 by Alain DeCoster, Laurence Russian and Guilherme Valle, who have managed portfolios as a team for over 20 years. ABS is headquartered in Greenwich, CT, with research offices in Hong Kong, Zurich, and São Paulo. However, most of its team is based in the firm's Greenwich office. The firm staffs over 30 employees. ABS is 59% internally owned by 21 employees and 41% owned by Evercore Partners, a global investment bank (NYSE: EVR). The firm currently manages over \$6 billion across multiple commingled products and customized portfolios.

#### **Team Overview**

ABS employs a team-based approach to portfolio management of its strategies. While Guilherme Valle is the Lead PM for the strategy, investment decisions are made by the Investment Committee (IC). The IC is comprised of the Managing Members (Alain DeCoster, Laurence Russian and Guilherme Valle), Head of Research Michael Halper and Head of Risk Management Sean White. Any new manager being added to the portfolio requires signoff by two of the three managing members (DeCoster, Russian, Valle). The team is supported by 14 investment professionals including qualitative, quantitative, and operational experts. The dedicated EM team comprises Lead PM Valle and four qualitative analysts (Donald Leung, Natascha Willians, Omar Yacoub, and Yousif Al-Shamali). Leung and Yacoub are among the most tenured analysts at the firm with over 13 years of industry experience. While analysts are considered generalists, occasionally analysts may be assigned to specific regions based on localization or manager specialization. Importantly, each member of the IC and the operational due diligence team has veto authority. Frank Docimo is the Head of Operational Due Diligence and is supported by three ODD analysts.

#### **Expectations**

The ABS EM Strategic portfolio is designed to outperform the MSCI EM IMI Index over a full market cycle with a similar level of risk while also tracking the index's broad regional allocations. While there is diversification across sectors and countries, each manager can allocate differently across sectors and market capitalizations. While the portfolio is diversified by the number of stocks, the tracking error relative to the benchmark has been in the 4-5% range. We would expect the strategy to outperform during periods where there is wide stock dispersion with fundamentals driving stock prices. Each sub advisors' ability to seek opportunities in broader and deeper areas in the asset class, including non-benchmark stocks and less researched companies, should allow them to generate alpha over the long term. The portfolio may underperform in periods where large, global-oriented index stocks are the primary drivers of performance.

#### **Points to Consider**

The track record for ABS EM Strategic is limited. Although the team has been investing in emerging markets for over 20 years, it has only managed dedicated EM strategies since 2012, when the firm launched the ABS EM Portfolio, which is a long-biased strategy with shorting capabilities utilizing the same multi-manager approach with the same subadvisors. ABS EM Strategic Portfolio's live track record is less than three years.

Clients that invest in the ABS EM Strategic portfolio pay higher than average fees compared to competitors investing in the same category. Currently, investors pay ABS a management fee of 0.75% to access the EM Strategic portfolio on top of the flat fees paid to the underlying managers (0.68%). Furthermore, ABS applies some incentive fees above a preferred return negotiated with each manager.

#### Strategy Overview

The team's philosophy is grounded in the conviction that managers with local expertise should be capable of identifying long-term opportunities in less efficient markets. The firm takes a differentiated approach to sourcing, where they seek to find the very best local specialists within a country and/or region. The goal of the portfolio is to identify local specialists across all the major emerging market regions where excess returns are generated primarily from stock selection as opposed to country and/or top-down decisions.

The portfolio is all cap in nature, with a limit of 50% to small cap stocks. Country and sector allocations are limited to +/- 15% versus the weights of the MSCI Emerging Markets IMI Index, and exposure to developed and frontier market countries is limited to 15%, as defined by MSCI's classification standards. Over time, we anticipate that the portfolio will have a bias towards local consumption-oriented themes in the mid/small cap segments.

#### Recommendation Summary

We recommend ABS Emerging Markets Strategic Portfolio as a complementary option to a client's existing ACWI ex US or to a core/value-oriented emerging markets equity strategy. The strategy may also be utilized as a standalone core/growth emerging markets equity allocation given its multi-manager approach and broad diversification. The manager of managers approach provides the strategy wide diversification while still allowing for each sub-advisor's best stock ideas to come through in the portfolio. The ABS team is stable, having worked together for over 20 years and benefits from analysts having local expertise. The structure of this portfolio also has the side benefit of reducing key person risk as no single PM or single manager is solely responsible for performance. The strategy is suitable for clients of most sizes as a standalone option, provided clients are comfortable with a modest growth-style tilt approach. The strategy would not be appropriate for most Defined Contribution plans given the vehicle structure.



RBC Global Asset Management (RBC-GAM) was founded in 1959 as the asset management division of Royal Bank of Canada. In addition to its headquarters in Toronto, Canada, RBC has offices in London, Minneapolis, Boston, Chicago, Hong Kong and Vancouver. Total firm assets under management are more than \$300 billion overseen by 21 specialist teams. The firm's strategies are diversified across multiple domestic and non-U.S. equity approaches, as well as fixed income and alternatives offerings.

RBC-GAM is the asset management division of Royal Bank of Canada (RBC), one of the largest banks in the world based on market capitalization. RBC is publicly-owned and traded on the New York Stock Exchange and Toronto Stock Exchange. RBC-GAM comprises multiple affiliates, all of which are wholly-owned subsidiaries of RBC including: RBC-GAM Inc. RBC-GAM U.S., RBC-GAM UK, RBC Investment Management Asia, BlueBay Asset Management LLP and BlueBay Asset Management Inc.

#### **Team Overview**

Phillippe (Phil) Langham serves as lead PM on RBC Emerging Markets Equity (EME) and heads RBC's nineperson EM Equity team, which is based in London. Prior to joining RBC GAM in 2009 to launch RBC EME, Langham was the head of emerging markets equity at Société Générale, as well as head of Asia and EM at Credit Suisse in Zurich. Langham is joined by Deputy Head Laurence Bensafi, who joined the firm in 2013 from Aviva Investors, where she was Head of their EM team. Additional team members include Head of Research Guido Giammattei (joined in 2010), PM Zeena Dahdaleh (2009), PM Richard Farrell (2013), PM Veronique Erb (2015), PM Chris Enemaerke (2013), Associate PM Ashna Yarashi (2017), and Analyst Angel Su (2019). Research is organized by region with analysts also assigned global industry coverage. Final decision-making authority resides with Langham; however, the process is highly collaborative.

#### **Strategy Overview**

RBC Emerging Markets Equity follows a quality "growth-at-a-reasonable price" (GARP) investment approach predicated on the belief that companies with sustainably high cash flow return on investment (CFROI) produce superior returns. The primarily bottom-up process emphasizes companies with strong management teams, sustainable franchises and organizations that benefit all stakeholders, including suppliers, employees, customers, shareholders, the environment and the local community. Top down investable themes such as digitization, deposit franchises and health & wellness guide the idea generation process. However, stock selection is expected to drive 60-80% of expected alpha. A quantitative screen, which emphasizes, Quality (45%), Value (35%) and Momentum (20%), helps narrow the investment universe from approximately 2,500 names to 400 for more rigorous due diligence. In-person meetings are required before purchase, along with a Portfolio Buy Note and a completed 75-question checklist which answers questions surrounding Strength and Sustainability, Management Quality and Corporate Governance. The final portfolio will typically hold 40-60 stocks and the team maintains a long-term perspective, with annual turnover generally in the 10%-40% range.

#### Expectations

RBC EME employs a GARP-oriented investment approach that focuses on companies with strong balance sheets and higher returns on invested capital. As such, we expect the strategy to generally perform well in risk-off market environments. Additionally, EME should generally provide good up-market participation when the structural growth areas of the market are in favor. Conversely, the strategy will likely underperform when lower quality and/or deeper value stocks are in favor, often at the beginning of an economic recovery or momentum-oriented environments. Additionally, the strategy is persistently underweight China due to transparency issues, shorter CFROI track records and high state-owned enterprise representation. Given China represents close to one-third of the benchmark, EME's relative performance will certainly be impacted by its performance.

We believe RBC EME's high conviction approach has the potential to generate 2-3% gross of fee outperformance over a full market cycle. We expect tracking error to fall in the 4-6% range. While the portfolio is concentrated, the strategy is benchmark aware with country and sector weights typically falling within 10% of their representations in the benchmark (with the exception of China).

#### Points to Consider

If Langham would become unable to manage EME, Guido Giammattei and Zeena Dahdaleh would assume the co-lead roles on the strategy, as opposed to Deputy Head Laurence Bensafi, who would head up the team, but remain focused on managing the EM Value strategy. While Langham, who's in his 50s, expects to head the group for the foreseeable future, we take comfort that the team has a succession plan in place for EME involving two long-tenured PMs/Analysts.

The portfolio is typically underweight China. Should China's weight in the index continue to rise over time, the team may continue to underweight the country instead of arbitrarily increasing its China weight by purchasing stocks where the team has less conviction.

#### **Recommendation Summary**

RBC EME Lead PM Phil Langham has built a diverse and collaborative team, whose company and industry research rivals that of larger peers. The strategy's high conviction (40-60 stock), GARP-oriented investment approach, combines top-down thematic analysis and bottom-up research to invest in stocks benefiting from structural long-term growth opportunities. We found the team's 75-question company checklist, loaded with ESG questions, to be thorough and differentiating. Additionally, the team's global industry primers, which inform top-down views, are impressive given the relatively small team size.

We expect RBC EME's focus on quality, as evidenced by companies with high and sustainable Cash Flow Return On Investment (CFROI) and strong balance sheets to continue to aid its ability to provide solid downmarket protection with good up-market participation as well. This, in conjunction with reasonable, 4-6% tracking error, gives us the confidence to support the strategy as a core or complementary option in client portfolios.



Wellington Management Company (WMC) is headquartered in Boston and has been incorporated since 1933. The firm also has offices in Chicago, Radnor, PA, San Francisco, Beijing, Frankfurt, Hong Kong, London, Luxembourg, Singapore, Sydney, Tokyo, and Zurich. WMC manages over \$1 trillion in primarily institutional client assets across equities, fixed income, and alternatives. The firm is 100% employee owned by over 160 active partners.

#### **Team Overview**

The Emerging Markets Research Equity (EMRE) investment team is comprised of 12 industry analysts, each of which has his/her own investment style. The 12 team members average more than 14 years of experience covering stocks in emerging markets. Director of Global Industry Research Mary Pryshlak, along with Research Directors, Ray Joseph and Gardiner Holland (Americas), Jawan Parker (Asia) and Luke Stellini (EMEA) are responsible for team oversight, however analysts have full discretion to buy and sell stocks as they see fit. Jonathan White oversees portfolio implementation and risk management for the research portfolios.

#### **Strategy Overview**

The team believes an industry-focused, bottom-up approach to managing equity portfolios has the potential to produce attractive, risk-adjusted returns over time. They also believe the experience of covering the same companies over a period of many years provides the firm's industry analysts with unusually keen insights, which in turn leads to better and more timely decisions.

The EMRE portfolio consists of multiple subportfolios. Each subportfolio is actively managed by one or more of WMC's global industry analysts. The allocation of assets to each subportfolio corresponds to the relative weight of the analysts' coverage universe within the index. Stock selection and timing of investments for each subportfolio is at the discretion of the analyst, subject only to the constraints that the securities fall within the analyst's area of research expertise and that the subportfolio remains fully invested (except for frictional cash). Purchase and sale decisions are based on the fundamental research conducted by the global industry analysts. The analysts use a variety of valuation and analytical techniques to establish target stock prices and identify securities for inclusion in the portfolio. For example, the consumer products analyst might use an earnings per share growth approach, whereas the bank analyst might use a value/contrarian approach. In general, an analyst will buy/sell a stock when it becomes undervalued or overvalued relative to its underlying fundamentals or peers and/or when it has strong/weak earnings expectations. In addition, if an analyst's subportfolio weight moves outside the ±1% benchmark industry weight, the holdings will be adjusted to revert to an industry neutral position.

The overall portfolio is diversified across more than 100 stocks. It is rebalanced quarterly to maintain industry weighting neutrality versus the index. Total annual portfolio turnover averages between 70% and 100%. Country weights are limited to +/- 10% of the index weights. Individual security weights are limited to 5% or index plus 2%.

#### Expectations

The strategy is designed to perform well in a variety of market environments given the sector and style neutrality. Relative performance will be driven primarily by bottom-up stock selection. Since a vast majority of portfolio decisions are driven by fundamental research, we would expect the strategy to perform well in periods where fundamentals drive stock returns.

Historically, "flight to safety" environments and low beta rallies have been headwinds to relative performance. The only sustained period of underperformance for the strategy was the final three quarters of 2011. During the period, there was a "flight to safety" across global equity markets, in which sectors deemed to be riskier sold off in favor of more defensive sectors.

Historical tracking error for the strategy has ranged from 2% to 4% since its inception of April 2010.

#### **Points to Consider**

WMC has conservatively estimated capacity for the strategy to be approximately \$6 billion. We view the estimate as appropriate given the portfolio's healthy allocation (>25%) to companies with market caps below \$5 billion. As part of capacity management, the strategy remains closed to new separate account relationships and limiting inflows into its commingled funds. The team recently launched a second version of the strategy that focuses mainly on large and mid-cap stocks.

Wellington's global industry analysts are typically "career analysts", but with a 12-person team there will be inevitable turnover due to retirements and promotions. Bradford Stoesser, Global Industry Analyst and Property Sector Team Leader assumed management of the real estate sub-portfolio in EMRE in the first quarter of 2020, replacing Naveen Venkataramani who managed the real estate sub-portfolio since the departure of Mark Syn. In addition, Lihui Chen will co-manage the real estate subportfolio within EMRE alongside Stoesser.

#### **Recommendation Summary**

We recommend WMC's Emerging Markets Research Equity strategy primarily for defined benefit plans in search of a diversified emerging equity option that has a demonstrated ability of adding consistent alpha over time. The strategy could also be used for defined contribution plans in situations where the client has the ability and/or comfort with using collective investment trusts. It would work well as a standalone, core emerging equity investment. The strategy directly leverages 12 of the firm's deep, experienced industry analysts. The sector and style neutral nature of the process combined with the multiple independent sources of alpha has led to very consistent and stable alpha over time. While we would still expect periods of underperformance from time-to-time, the relative performance will ultimately be driven by bottom-up stock selection as opposed to style or factor tilts.



Wells Capital Management (WellsCap) is a wholly owned subsidiary of Wells Fargo Asset Management Holdings, LLC, which in turn is indirectly wholly owned by Wells Fargo & Company. WellsCap legal headquarters is in San Francisco, but the firm maintains satellite offices in Menomonee Falls, WI, Los Angeles, CA Boston, MA, Charlotte, NC and London, UK. The firm was formed in 1996 from existing investment management teams that have been in place since the early 1980s. WellsCap is a multi-boutique asset management firm focused on institutional clients. Its diverse and autonomous teams provide a broad range of investment solutions, including but not limited to: domestic equity, international equity, taxable and municipal fixed income, short duration, and quantitative products.

#### **Team Overview**

Wells' Berkeley Street EM team is led by PM Jerry Zhang, who joined the firm from Evergreen Investments in 2004 and has been managing the strategy since 2006. Co-PMs Derrick Irwin and Richard Peck joined Wells Cap in 2005 and 2010, respectively. A team of six analysts support the three PMs and the entire team is based in Boston

Analyst coverage is split on a regional and sector basis with the materials and energy sectors covered globally and the rest the universe covered regionally. Zhang heads up the research efforts for companies based in Asia, while Irwin focuses on Europe, Middle East and Africa and Peck specializes in Latin America. While the investment approach is collaborative, ultimate portfolio decision responsibility falls to Zhang.

#### **Strategy Overview**

The Berkeley Street Emerging Markets Equity team uses a bottom-up, fundamental research process to find quality companies selling at prices below their intrinsic value. They focus their research on those companies that are able to sustain high profitability over a long period of time which is expected to not only add value over a reasonable time frame, but protect investors from permanent capital loss.

The emerging equity universe is initially screened on quality (companies that generates return on capital greater than its cost of capital), which results in a focus list of approximately 300 stocks. This pool of quality stocks is the source for the team's portfolio construction decisions, where valuation is the trigger for inclusion. In-depth fundamental research carried out by PMs/analysts concentrates on this short list of high quality stocks. The focus of this part of the process is on deepening and confirming the investment thesis through industry research, site visits, examination of competitors and suppliers and exploration of the key macroeconomic headwinds or tailwinds the business model may face. Analysts develop base and stressed case scenarios for each stock to come up with a valuation range.

Portfolio construction is ultimately the responsibility of Zhang, however they consider all team members critical in providing input that leads to portfolio decisions. There is constant dialogue among all team members throughout the process. The final portfolio typically holds 90 to 150 stocks with a maximum position size at time of purchase of 5% (typically less than 3%). Countries and sectors are constrained depending on their weightings in the index. For those with an index weighting of greater than 15%, the portfolio is limited to 50% to 150% of the index weight. For index weightings between 5% and 15%, the portfolio is limited to 0% to 300% of the index weight. Finally, for index weightings below 5%, the portfolio can invest between 0% and 15% of portfolio value. Portfolio turnover averages less than 20% annually.

#### Expectations

We expect the strategy to outperform in down markets as the team's close attention to margin of safety at the individual portfolio holding level tends to provide a solid floor in a decline. In addition, markets where investors are focused on companies with stronger fundamentals, most notably those with higher profitability and strong competitive positions, should benefit relative performance. Conversely, we expect it to underperform in momentum-driven market environments. Additionally, when a particular style (value vs. growth) is the primary driver of overall returns, the strategy may lag the index due to its diversified, core approach.

Over a full market cycle, we believe WellsCap Berkeley St. EME has the potential to outperform the MSCI EM Index by 1%-3% annually gross of fees with modest, 3%-5%, tracking error.

#### **Points to Consider**

On February 23, 2021, GTCR LLC (GTCR) and Reverence Capital Partners, L.P. (Reverence) signed a definitive agreement to acquire Wells Fargo Asset Management (WFAM). The transaction is expected to close in the second half of 2021. While investment teams will remain largely autonomous, there is risk of potential team turnover, team consolidations and other developments associated with an acquisition of this scale.

The team launched an EM Small Cap strategy in 2018 which may present a distraction. While there is some overlap with the broader quality pool utilized for the all cap strategy (~100 of the 300 stocks possess market caps below \$5B), the team will be looking at an expanded pool representing an additional 200 small cap stocks.

#### **Recommendation Summary**

We recommend Wells Capital Management Berkeley Street Emerging Markets Equity for both defined benefit and defined contribution clients looking for a diversified, all cap core emerging equity strategy. The strategy employs bottom-up, fundamental research to find quality companies selling at compelling prices. The team's philosophy is long-term in nature and benchmark aware. PM Jerry Zhang has been the key decision-maker since 2006 and is supported by a long-tenured, capable team of two co-PMs and six analysts. Risk management is a key focus of the team at multiple levels: at the company level by focusing on margin of safety and quality, diversification at the portfolio level (country, sector, stock, and type of company), and finally at the firm level with oversight from the independent Risk Management Oversight team.

In addition to the all cap strategy, Wells Cap offers the Berkeley Street Emerging Markets Large/Mid Cap Equity strategy that excludes the smaller market cap holdings. The overlap in holdings between the two strategies is typically close to 90%.



Alpha - A measure of the difference between a portfolio's actual returns and its expected performance, is symmetric with skewness 0. given its level of risk as measured by beta.

Batting Average - A measure of a manager's ability to consistently beat the market. It is calculated by dividing the number of months in which the manager beat or matched an index by the total number of months in the period.

Best Quarter- This is the highest quarterly (3 month) return of the investment since its inception.

Beta - A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.

**Down Period Percent -** Number of months below 0 divided by the total number of months.

Downmarket Capture Ratio - The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance.

Downside Std Dev - This measures only deviations below a specified benchmark.

Excess Return- This is a measure of an investment's return in excess of a benchmark.

Information Ratio - This calculates the value-added contribution of the manager and is derived by dividing the excess rate of return of the portfolio by the tracking error. The higher the Information Ratio, the more the manager has added value to the portfolio.

Longest Down-Streak Return - Return for the longest series of negative monthly returns.

Longest Down-Streak # of Periods - Longest series of negative monthly returns.

Longest Up-Streak Return - Return for the longest series of positive monthly returns.

**Longest Up-Streak** - Longest series of positive monthly returns.

Kurtosis - Kurtosis indicates the peakedness of a distribution. For normal distribution, Kurtosis is 3.

Max Drawdown - The peak to trough decline during a specific record period of an investment or fund. It is usually quoted as the percentage between the peak to the trough.

Max Drawndown # of Periods - This is the number of months that encompasses the max drawdown for an investment.

R-Squared - The percentage of a portfolio's performance that can be explained by the behavior of the appropriate benchmark. A high R-Squared means the portfolio's performance has historically moved in the same direction as the appropriate benchmark.

Return - Compounded rate of return for the period.

Sharpe Ratio - Represents the excess rate of return over the risk free return divided by the standard deviation of the excess return. The result is an absolute rate of return per unit of risk. A higher value demonstrates better historical risk-adjusted performance.

Skewness - Skewness reflects the degree of asymmetry of a distribution. If the distribution has a longer left tail, the function has negative skewness. Otherwise, it has positive skewness. A normal distribution

Sortino Ratio - The Sortino Ratio is similar to Sharpe Ratio except it uses downside risk (Downside Deviation) in the denominator. It was developed in early 1980's by Frank Sortino. Since upside variability is not necessarily a bad thing, Sortino ratio is sometimes more preferable than Sharpe ratio.

Standard Deviation - A statistical measure of the range of a portfolio's performance. It represents the variability of returns around the average return over a specified time period.

Tracking Error - This is a measure of the standard deviation of a portfolio's excess returns versus its designated market benchmark.

Treynor Ratio - Similar to Sharpe Ratio, Treynor Ratio is a measurement of efficiency utilizing the relationship between annualized risk-adjusted return and risk. Unlike Sharpe Ratio, Treynor Ratio utilizes "market" risk (beta) instead of total risk (standard deviation). Good performance efficiency is measured by a high ratio.

**Up period Percent** - Number of months above 0 divided by the total number of months.

Upmarket Capture Ratio - The ratio of average portfolio performance over the designated benchmark during periods of positive returns. A higher value indicates better product performance.

Value-Growth Score - Morningstar assigns an Overall Value score and an Overall Growth score to each stock within a fund. Morningstar then calculates a net value-core-growth score for each stock by subtracting the stock's Overall Value score from its Overall Growth score. Once this is done, these raw scores are rescaled to range between -100 to 400 in order to fit within the Morningstar Style Box. Scores below 67 are classified as value, scores above 233 are classified as growth, and scores between 67 and 233 fit within the core boundaries.

Worst Quarter - This is the lowest quarterly (3 month) return of the investment since its inception.



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# Item 5.d.v. Real Estate Diversification Review & Discussion

Core Real Estate and REIT Manager Analysis December 31, 2020

# Delray Beach Police Officers' Retirement System





### **Disclosure Information**

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#### **RISK FACTORS**

As presented in this report, although investing in private real estate funds can be beneficial, it is also important to consider the associated risks. Investing in private real estate funds is higher risk, may involve speculation, and is not suitable for all investors. Prospective investors should be aware of the long-term nature of an investment in private real-estate funds. Investments (direct or indirect) in private real estate are typically illiquid. Other general risks and important considerations associated with private real estate funds include, but are not limited to: volatilities in political, market and economic conditions; extensive and frequently changing regulation; downturns in demand; changes to real estate values and property taxes; valuation and appraisal methodologies; interest rates; and environmental issues. The risks outlined herein do not purport to cover all risks or underlying factors associated with investing in private real estate funds. Please refer to the respective offering documents for complete information.





### Introduction

### Purpose for this Manager Analysis Report:

• This search report reviews potential candidates for an allocation to a core real estate strategy. Based on our research and due diligence of core real estate managers and an evaluation of fit with the existing portfolio, we present the following candidates:

Firm	Fund
Carlyle Investment Management	Carlyle Property Investors
Harrison Street Real Estate Capital	Harrison Street Core Property Fund





### **Strategy Overview**

#### Definition and Characteristics:

Core real estate strategies focus on the four primary property types: industrial, multifamily, office, and retail. A typical core investment is a high-quality, "class A" asset located in a primary market that is 75% plus leased. Leverage is typically in the 0% to 35% Loan-to-Value (LTV) range. The long-term target return (gross) is in the 6% to 8% range. The primary component of total return is current income.

#### Role within a Portfolio:

• Real estate provides diversification benefits, typically reduces overall portfolio volatility, generates income and has inflation hedging characteristics. A strategic allocation to a core strategy is typically the primary component of an institutional investor's real estate portfolio.

#### Benchmark and Peer Group:

Performance evaluation is typically done relative to the NCREIF Fund Index – Open End Diversified Core Equity Index (NFI-ODCE). NFI-ODCE is a capitalization-weighted, gross of fee, time-weighted return index with an inception date of December 31, 1977. The index is currently comprised of 26 open-end, core real estate funds.





### **Defining NFI-ODCE**

The NCREIF Fund Index – Open-End Diversified Core Equity (ODCE) is a time-weighted return index with an inception of December 31, 1977. The term Diversified Core Equity typically reflects lower risk investment strategies that utilize low leverage and are generally comprised of equity ownership positions in stable U.S. operating properties that are diversified across regions and property types. The index is currently comprised of 26 funds that meet the criteria for inclusion.

The ODCE Policies and Inclusion Criteria are:

- 95% of fund gross asset value in US markets
- 80% of fund gross assets invested in private equity direct real estate (DRE). To be considered DRE the property must be submitted to NCREIF
- 75% of DRE is invested in the four primary property types (office, industrial, multifamily, and retail). A look through provision is allowed for private debt investments
- 75% of fund gross asset value invested in properties that are 75% or more leased using DRE gross market value
- 35% maximum leverage
- No more than 60% of DRE in one property type, and must be invested in three of the four primary property types with a 5% minimum in any one of the three types







Firm	RE Business Inception	Ownership	Private Real Estate AUM	Headquarters	Real Estate Professionals
Carlyle Investment Management	1997	<ul> <li>Publicly-traded corporation (ticker: CG).</li> <li>Approximately, 40% of common shares are held by co-founders and senior professionals</li> </ul>	\$16.9 billion	Washington D.C.	131
Harrison Street Real Estate Capital	2005	<ul> <li>75% Colliers International Group and 25% employee owned</li> </ul>	\$32.1 billion	Chicago, IL	104





# **Investment Team**

Firm	Investment Team	Supporting Investment Professionals		
Carlyle Investment	<ul> <li>Head of US Real Estate Robert Stuckey and Portfolio Manager Mark</li></ul>	<ul> <li>Approximately, 13 sourcing, 25 transactions,</li></ul>		
Management	Schoenfeld.	and 70 asset management.		
Harrison Street	<ul> <li>Senior Portfolio Manager Joey Lansing, Portfolio Manager Chip</li></ul>	<ul> <li>Approximately, 26 asset managers, 25</li></ul>		
Real Estate Capital	George, Assistant Portfolio Manager Colleen McMillin.	acquisitions, and 11 research & strategy.		





# **Portfolio Summary Statistics**

Fund	Strategy Inception	Fund Size GAV*	Number of Properties	Occupancy Rate	% of Portfolio in Top Ten Properties	Leverage** (Loan-to-Value)
Carlyle Property Investors	2016	\$6.8 billion	113	90.8%	25.6%	<ul><li>Target: 50%</li><li>Current: 51%</li></ul>
Harrison Street Core Property Fund	2011	\$10.1 billion	312	84.9%	17.5%	<ul><li>Target: 22% to 27%</li><li>Current: 24%</li></ul>

<sup>\*</sup>Gross Asset Value



<sup>\*\*</sup>Leverage for the NFI-ODCE Index is currently 23%



# **Key Differentiators**

Firm	Unique Features	Points to Consider
Carlyle	<ul> <li>Portfolio is comprised primarily of specialty/niche property sectors which includes manufactured housing, medical office, single family rentals, 55+ age restricted apartments, student housing, life science lab, self-storage. The common theme of these property types is demand driven by demographic trends and/or social need.</li> <li>Core plus strategy that invests in assets that require light renovations to become core stabilized assets.</li> <li>Target long-term gross return: 10% to 12%.</li> </ul>	<ul> <li>Specialty property sector focus provides diversification benefits for core portfolios comprised of an ODCE fund(s).</li> <li>Higher leverage at 50% LTV relative to a typical low-20s for the ODCE.</li> <li>Generally, will not invest in development projects.</li> </ul>
Harrison Street	<ul> <li>Portfolio is comprised solely of specialty/niche property sectors which includes medical office, senior housing, student housing, self-storage, and life science lab. The common theme of these property types is demand driven by demographic trends and/or social need.</li> <li>Core strategy that invests in stabilized assets.</li> <li>Target long-term gross return: 9% to 10%.</li> </ul>	<ul> <li>Specialty property sector focus provides diversification benefits for core portfolios comprised of an ODCE fund(s).</li> <li>Leverage will tend to be near or slightly above the ODCE.</li> <li>Minimal exposure to value-add and development.</li> </ul>





# **Terms**

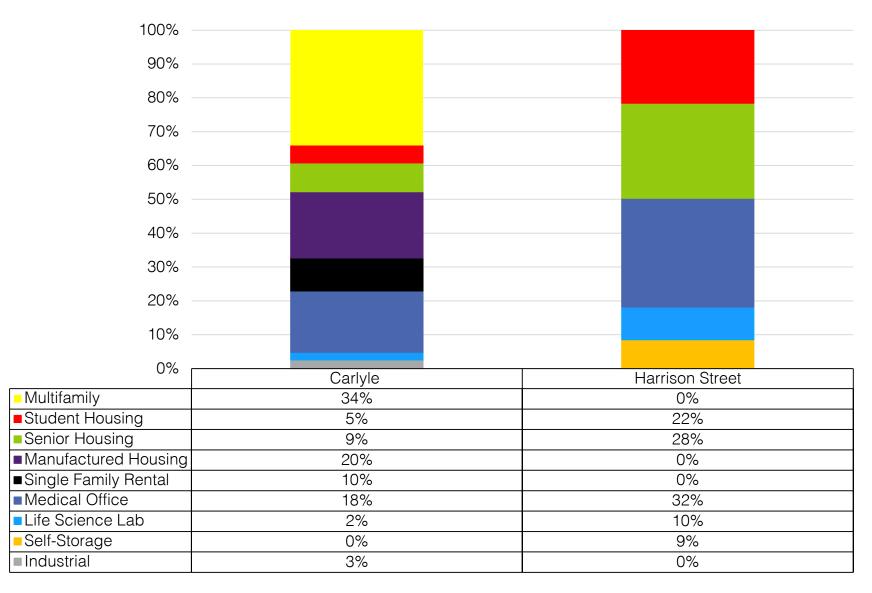
	Stated Minimum	Contribution Queue	Redemption Terms	Management Fee (Based on NAV)	Incentive Fee	ERISA Fiduciary
Carlyle Property Investors	\$5 million (negotiable)	Two to three quarters	Quarterly, 90-day notice after a two- year lock up period	<b>1</b> .00%	<ul> <li>10% after a 7% IRR and 50% Carlyle/50% Investor catch-up</li> <li>Incentive is measured over a three-year period</li> </ul>	No
Harrison Street Core Property Fund	\$10 million (negotiable)	One to two quarters	Quarterly, 45-day notice	<ul> <li>1.15% first \$25M</li> <li>1.05% over \$25M to \$50M</li> <li>0.95% over \$50M to \$75M</li> <li>0.90% over \$75M to \$100M</li> <li>0.85% over \$100M</li> </ul>	None	No







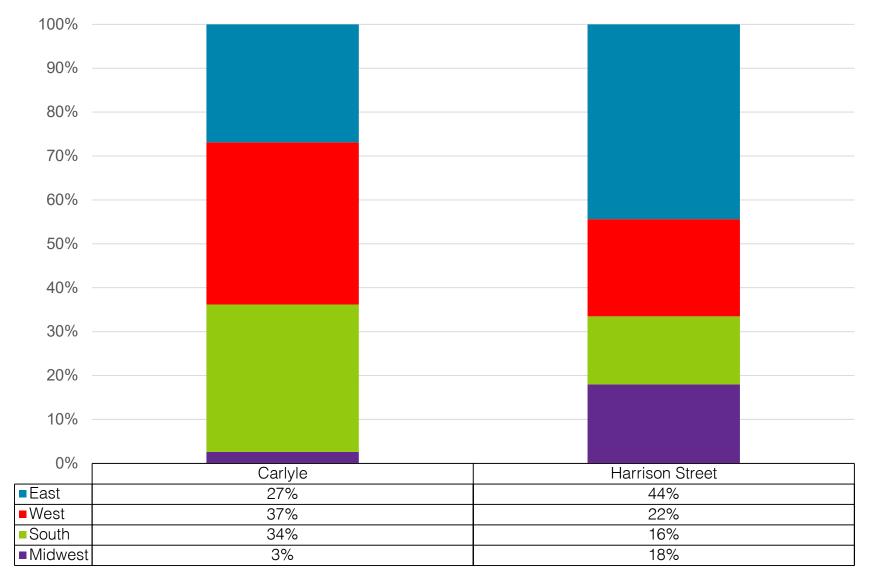
## **Property Type Allocation**







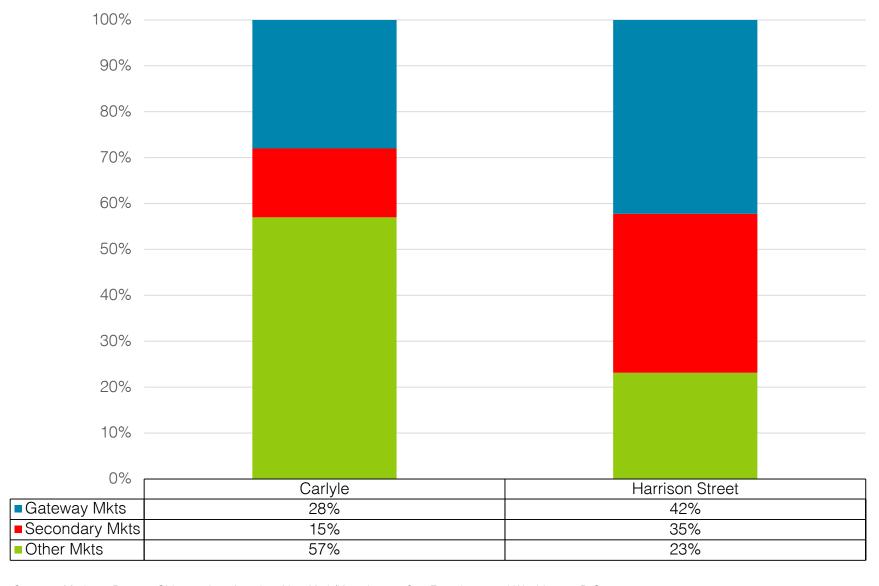
## **Geographic Allocation**







### **Property Location**

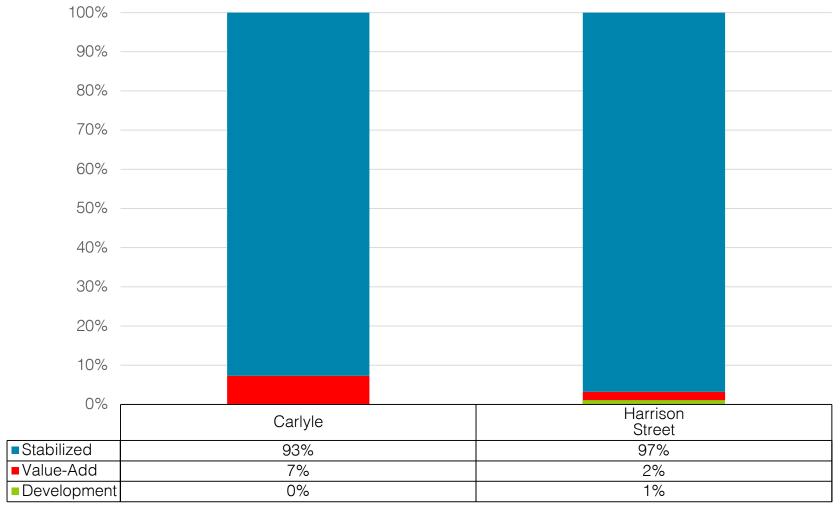


Gateway Markets: Boston, Chicago, Los Angeles, New York/New Jersey, San Francisco, and Washington D.C. Secondary Markets: Atlanta, Austin, Baltimore, Charlotte, Dallas, Denver, Fort Lauderdale, Houston, Miami, Minneapolis, Oakland, Orange County, Philadelphia, Phoenix, Portland, Riverside, San Diego, San Jose, Seattle, and West Palm Beach





## **Property Life Cycle**

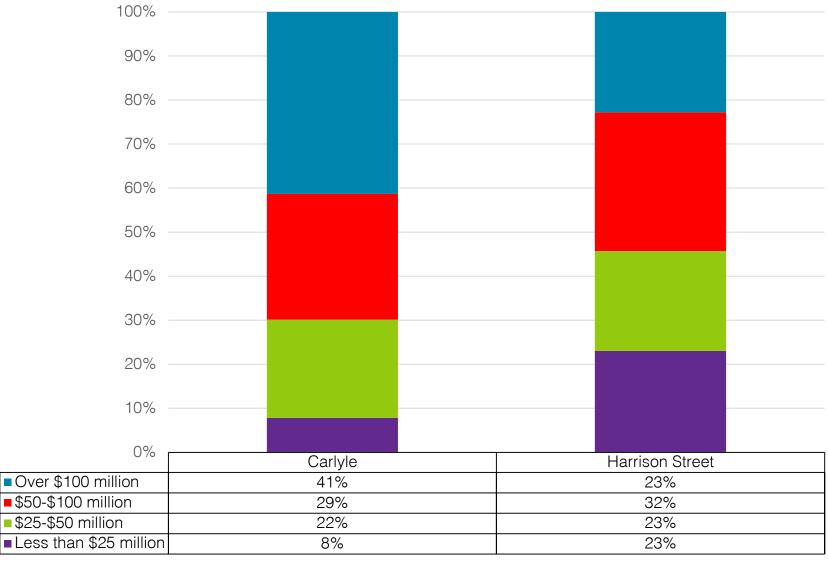


Stabilized: asset that is 75%+ leased Value-add: asset that is <75% leased





### **Investment Size Allocation**

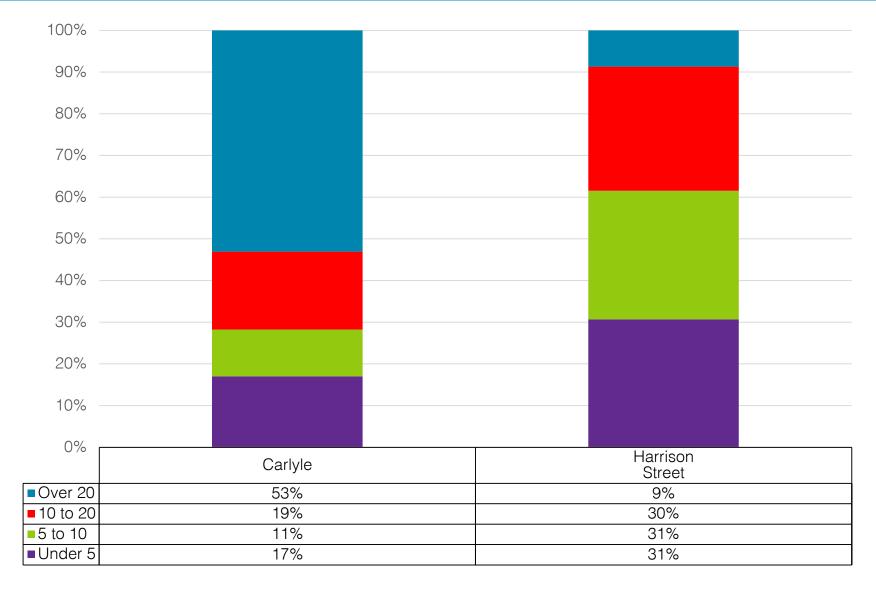


<sup>\*</sup>Investment size is represented by Gross Asset Value





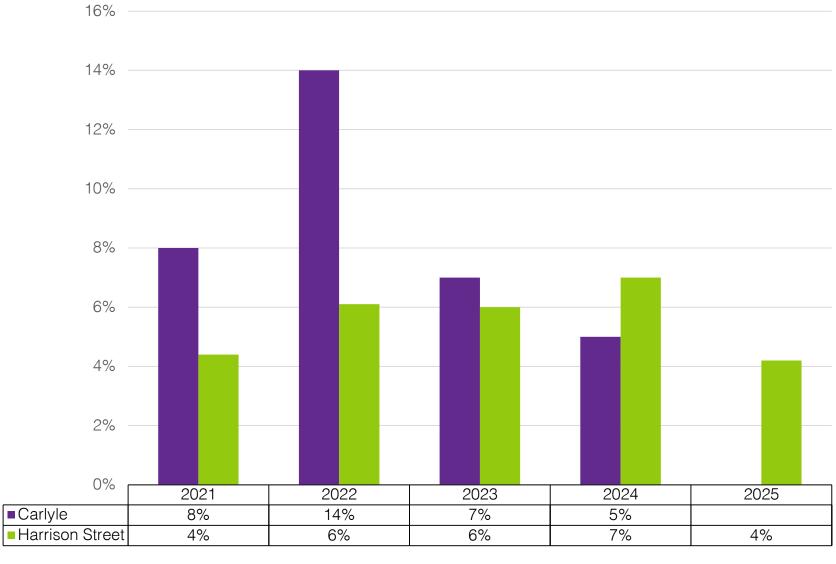
## **Property Age Allocation**







## **Lease Expirations**



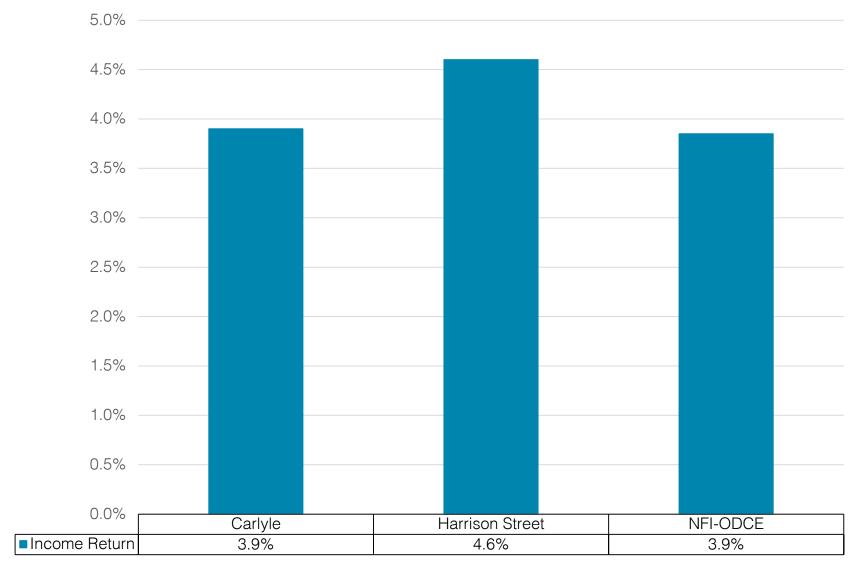
Note: represents lease expirations for life science, medical office, and industrial. Carlyle does not provide a 2025 specific number.







## **Trailing 1-year Income Return**







## **Comparative Performance: Calendar Year**

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Carlyle Property Investors	7.47	8.14	8.35	10.43	n/a	n/a	n/a	n/a	n/a	n/a
Harrison Street Core Property Fund	3.96	6.90	7.22	10.13	9.36	9.61	9.09	9.94	10.17	n/a
NCREIF – ODCE (VW)	0.35	4.40	7.37	6.66	7.79	13.95	11.46	12.90	9.79	14.96

Note: all returns are <u>net</u> of fees. The results shown represent past performance and do not represent expected future performance or experience. Past performance does not guarantee future results.





## **Comparative Performance: Trailing Periods**

	1-yr	3-yr	5-yr	7-yr	10-yr
Carlyle Property Investors	7.47	7.98	n/a	n/a	n/a
Harrison Street Core Property Fund	3.96	6.01	7.49	8.02	n/a
NCREIF – ODCE (VW)	0.35	4.00	5.28	7.35	8.88







### **Carlyle Investment Management – Carlyle Property Investors**

#### Firm Overview

The Carlyle Group was formed in 1987 by co-founding partners, William E. Conway, Jr., Daniel A. D'Aniello, and David M. Rubenstein. Today, the firm has \$200 billion of assets under management across four business lines: corporate private equity, global credit, real assets, and investment solutions. The Carlyle Group is headquartered in Washington D.C. and employs over 1,700 professionals across the globe. The firm originally listed its common units on the NASDAQ Global Select Market in May 2012. In January 2020, it converted from a publicly-traded partnership to a corporation called The Carlyle Group, Inc. As of Q1 2020, the co-founders and senior professionals held 40.9% of the common shares.

#### **Team Overview**

Carlyle's U.S. Real Estate Team includes 13 professionals dedicated to sourcing, 25 transactions, and 70 asset management who are responsible for the investment activities of CPI and the U.S. opportunistic fund series. Head of U.S. Real Estate and Investment Committee Chairman Robert Stuckey oversees all of the firm's real estate investment activities. He has held the role since 1998 and overseen each investment the firm has made across CPI and its U.S. opportunistic fund series. Prior to Carlyle, his experience includes CIO of CarrAmerica Realty Corporation where he led the investment efforts to expand the firm from a local to national company and acquisitions at ProLogis. Portfolio Manager Mark Schoenfeld leads the investment activities of CPI. Schoenfeld was the first real estate professional hired at Carlyle. Prior to Carlyle, he worked in banking with a focus on asset sales and loan workouts. As the IC Chairman, Stuckey has veto power and ultimate responsibility for final investments decisions. The 14 managing directors from the sourcing, transactions, and asset management teams comprise the remainder of the IC. The managing directors average 17 years of tenure at Carlyle.

#### Strategy Overview

Carlyle Property Investors (CPI) is a diversified core plus strategy that invests in multifamily, manufactured housing, medical office, single family rental, active adult (apartments restricted to individuals 55+ years of age), student housing, life science lab, industrial, and self-storage sectors. CPI targets income-generating assets that require minor repositioning to be considered a stabilized core asset. Examples of minor repositioning strategies the team pursues include light cosmetic updates of apartment interiors, improvements to the clubhouse and landscaping of a manufactured housing) and installing a new and more active property management team for a medical office property. Unlike most core plus funds, CPI generally does not invest in development projects. The investments are made via wholly owned and joint venture structures. The typical transaction size is a \$20 to \$50 million equity investment and an average of \$20 million. At the asset level, the team typically utilizes leverage in the 30% to 55% LTV range. The financing is typically sourced from banks and life insurance companies. For CPI, the target aggregate leverage is 50% LTV with a maximum of 55% LTV.

#### **Expectations**

CPI has a long-term net return target in the 8.0% to 9.0% range. This is a reasonable expectation based on the income return of approximately 4.0% and NOI growth potential for the targeted property types. Additionally, for CPI's targeted property types, we believe there is potential for cap rate compression that would be a tailwind for performance. We anticipate that institutional capital flows into the space will increase because of the different demand drivers and resiliency during market downturns relative to the four primary property types.

#### Points to Consider

- CPI is a core plus strategy. Accordingly, it will utilize higher leverage than the maximum 35% permitted for ODCE funds. It targets a 50% LTV and the fund has a stated 55% maximum LTV.
- Relative to most core plus funds, CPI has minimal focus on development projects. Todate, it has made no investments in development projects nor does the team anticipate making any investments going forward. CPI has a stated 10% maximum allocation to development projects.
- CPI offers quarterly liquidity, However, there is an initial two-year lock-up period before a redemption can take place.
- For new investors, generally, it takes three quarters for the commitment to be fully called. After execution of subscription documents, the first call occurs the following quarter and remainder is called the next quarter.

#### Recommendation Summary

The continuity and track record of the senior investment professionals that comprise Carlyle's U.S. Real Estate Team is notable. The key decision makers have overseen each investment across the CPI core plus portfolio and the U.S. opportunistic series which dates to 1998. The 16 senior professionals across the sourcing, transactions, and asset management teams average 17 years of tenure. Additionally, we value the alignment of interest via employee capital invested in CPI and a broad allocation of CPI's carried interest to nearly half of the 108 investment professionals who comprise the U.S. Real Estate Team.

The CPI portfolio is differentiated from most funds which provides diversification benefits for investors. CPI provides significant exposure to specialty property sectors such as manufactured housing, single family rental, medical office, active adult (apartments restricted to 55+ years of age) and life science labs. Most core and core plus funds provide no or minimal exposure to these sectors. The demand for CPI's targeted sectors is predominately driven by demographics which has historically resulted in greater resiliency through recessions relative to sectors that are more dependent on economic growth such as office, retail, and industrial. Additionally, these sectors have higher operating margins and more fragmented ownership relative to the primary property types which contributes to durable cash flows and opportunity to generate strong NOI growth. Given these characteristics, CPI is an excellent complement to most core or core plus funds that have significant allocations to office, retail, and industrial sectors. It is also a viable stand-alone allocation for clients who are comfortable with a marginally higher risk/return profile relative to the typical core fund.



### Harrison Street Real Estate Capital – Core Property Fund

#### Firm Overview

Harrison Street Real Estate Capital was founded in 2005 by Christopher Merrill, Chris Galvin, and Mike Galvin. The co-founders created the firm with a goal of focusing its investment activities on real estate properties that have demographic and needs-based demand drivers. The firm is headquartered in Chicago and has a London office. It has more than 140 employees and over \$20 billion of assets under management. In July 2018, Harrison Street entered a strategic partnership with Colliers International Group to purchase 75% of the firm. The Galvins sold 100% of their interest. The remaining interest is held by Co-Founder/Chairman & CEO Christopher Merrill and Senior Managing Directors Stephen Gordon, Robert Mathias, Joey Lansing, Mike Gordon, and Geoff Regnery.

#### **Team Overview**

Senior Managing Director/Senior Portfolio Manager Joey Lansing has overseen the investment activities of CPF since inception. With the growth of the fund, HSREC has added Portfolio Manager Chip George and Assistant Portfolio Manager Colleen McMillin to support Lansing. The team dedicated to CPF also includes two portfolio associates, a portfolio analyst, and five individuals responsible for financial reporting. Additionally, there are 51 investment professionals across the firm's transactions and asset management teams who are critical to the execution of the fund's investment activities.

The Investment Committee (IC) has input into investment strategy, review portfolio construction, and approve all acquisitions and dispositions. Additionally, significant capital expenditures, leasing and financing decisions require review by IC member(s). The IC is comprised of Merrill, Egerter, S. Gordon, M. Gordon, Lansing, Mathias, and Regnery.

#### Strategy Overview

CPF is a diversified core strategy that invests exclusively in specialty property types which includes medical office, senior housing, student housing, self-storage, and life science. The common theme across these property types are fragmented ownership and demand driven by demographic trends and/or social need. Accordingly, these property types tend to be less correlated to economic growth relative to traditional commercial real estate investments.

The investments are made via wholly owned or joint venture structures. The typical equity investment ranges from \$2.0 to \$20.0 million per property and the typical transaction size is \$10 to \$75 million. The target leverage is in the 22% to 27% LTV range. With the growth of the size of the fund, the team has more flexibility with its financing strategy and can utilize portfolio-level financing in addition to property-level debt. It will tend to favor portfolio-level financing because of its flexibility.

#### Expectations

For core real estate, we expect a long-term total net return in the 6% to 8% range. Approximately, 80% of the return is expected to be derived from the income component. We expect a slightly higher long-term return for the Core Property Fund. The specialty property types it invests in have an income return advantage relative to traditional property types (office, multifamily, industrial, and retail). As of Q2 2019, the year one cap rate for CPF is 5.3% compared to 4.5% for the ODCE. Additionally, there is potential for greater cap rate compression for these property types as more institutional capital begin to view these property types as "institutional quality", which will lead to greater capital flows into the space. Accordingly, this provides potential for higher appreciation relative to traditional property types.

#### Points to Consider

- CPF will have slightly higher leverage relative to the ODCE. The target leverage in the 22% to 27% range relative to the ODCE which is generally in the low 20s.
- The stated minimum for CPF is \$10 million. Harrison Street is flexible on accepting smaller commitments on a case-by-case basis. However, there will likely be limited availability to attend client meetings.

#### Recommendation Summary

Harrison Street Real Estate Capital (Harrison Street) was one of the first fund sponsors to identify and solely focus on the opportunity in specialty property types. Accordingly, it has developed a depth of knowledge and investment experience within these property types that sets it apart from competitors. As one of the earliest movers in the space, the firm has established itself as a valued partner by health systems, universities, and operating partners, which provides a competitive advantage for information sharing and investment sourcing.

The CPF portfolio is differentiated from the typical core fund that comprises the NFI-Openend Diversified Core Equity (ODCE) peer group. It provides exposure to a different set of property types that most ODCE funds have minimal or no exposure to. Additionally, it has a higher income return and exposure to property types that have less correlation to economic growth.

CPF is an excellent complement to a core fund that invests in the four primary property types. It will enhance the income return and increase property type diversification. We are also comfortable with it utilized as the sole allocation in a core portfolio. While the portfolio is comprised of property types that are different from that of most core funds, the characteristics of the CPF portfolio are consistent with a core strategy's objective of providing a stable income return and diversification.



**Clients first.** 



CHICAGO | CLEVELAND | DALLAS | DETROIT | ORLANDO | PITTSBURGH | RENO

Real Estate Investment Trust Manager Analysis December 31, 2020

## **Delray Beach Police Officers' Retirement System**



#### Purpose for this Manager Evaluation Report

Looking at additional Real Estate options to diversify and reduce risk in the portfolio.

#### Investment Options for this Manager Evaluation Report

Firm Name	Strategy Name	Vehicle	Management Fee	Investment Minimum
DWS Investment Management Americas, Inc. (Subadvisor: RREEF America LLC)	DWS RREEF Real Estate Securities R6 (RRRZX)	MF	0.54%	N/A
Fidelity Management & Research Company LLC (Subadvisor: Geode Capital Management, LLC)	Fidelity® Real Estate Index (FSRNX)	MF	0.07%	N/A



#### **Definition and Characteristics**

The publicly-traded Real Estate Investment Trust (REIT) asset class is comprised of companies that own or finance real estate in a range of property sectors. The largest property sectors are retail, residential, and office. The U.S. accounts for approximately 50% of the global universe of REITs. The most often used benchmarks for the category are the FTSE/EPRA NAREIT Developed Index and the MSCI U.S. REIT Index. The FTSE/EPRA NAREIT Developed Index is typically utilized for global strategies and covers only developed markets in the U.S., Europe, and Asia. The largest exposures are the U.S., Japan, and Hong Kong. The MSCI U.S. REIT Index is typically utilized for U.S. focused strategies. It represents approximately 99% of the U.S. REIT universe that are classified as equity REITs.

#### Role within a Portfolio

REITs provide a portfolio with dedicated exposure to real estate. REITs are required to distribute 90% of taxable income to their shareholders annually. Accordingly, this provides a steady stream of income for a portfolio. Additionally, REITs have historically provided diversification benefits relative to the broad equity market and fixed income.

#### **Benchmark and Peer Group**

This REIT search report will use the following benchmark and the following peer group:

Index - MSCI US REIT Index: The MSCI US REIT Index is a free float-adjusted market capitalization weighted index that is comprised of equity Real Estate Investment Trusts (REITs). The index is based on the MSCI USA Investable Market Index (IMI), its parent index, which captures the large, mid and small cap segments of the US market. With 137 constituents, it represents about 99% of the US REIT universe and securities are classified under the Equity REITs Industry (under the Real Estate Sector) according to the Global Industry Classification Standard (GICS®), have core real estate exposure (i.e., only selected Specialized REITs are eligible) and carry REIT tax status.

**Morningstar Category - Real Estate**: Real estate portfolios invest primarily in real estate investment trusts of various types. REITs are companies that develop and manage real estate properties. There are several different types of REITs, including apartment, factory-outlet, health-care, hotel, industrial, mortgage, office, and shopping center REITs. Some portfolios in this category also invest in real estate operating companies.



# **Investment Option Comparison**



DWS
RREEF
Real
Estate
Securities
R6

	Securities R6
Firm Information	
Year Founded	1/1/1956
US Headquarters Location	New York, NY
Number of Major Global Offices	16
Year Began Managing Ext. Funds	1/1/1990
Firm AUM (\$ M)	840,000
Ownership Type	Subsidiary
Largest Owner (Name)	Deutsche Bank
Employee Ownership (%)	0
Qualify as Emerging Manager?	No

Strategy Information	
Inception Date	3/31/2004
Open/Closed	Open
Primary Benchmark	MSCI US REIT
Secondary Benchmark	None
Peer Universe	US REIT
Outperformance Estimate (%)	2
Tracking Error Estimate (%)	2
Strategy AUM (\$ M)	3,247
Strategy AUM as % Firm Assets	1
Estimated Capacity (\$ M)	19, 000
Investment Approach - Primary	Bottom-up
Investment Approach - Secondary	Fundamental



DWS RREEF Real Estate Securities R6

Team InformationDecision Making StructurePM-LedNumber of Decision Makers2Names of Decision MakersD. Zonavetch, B. ThomasDate Began Managing Strategy2013, 2017Date Began with Firm1998, 2017Number of Products Managed by Team2Number of Investment Analysts5Investment Analyst Team StructureSector/Industry Specialists

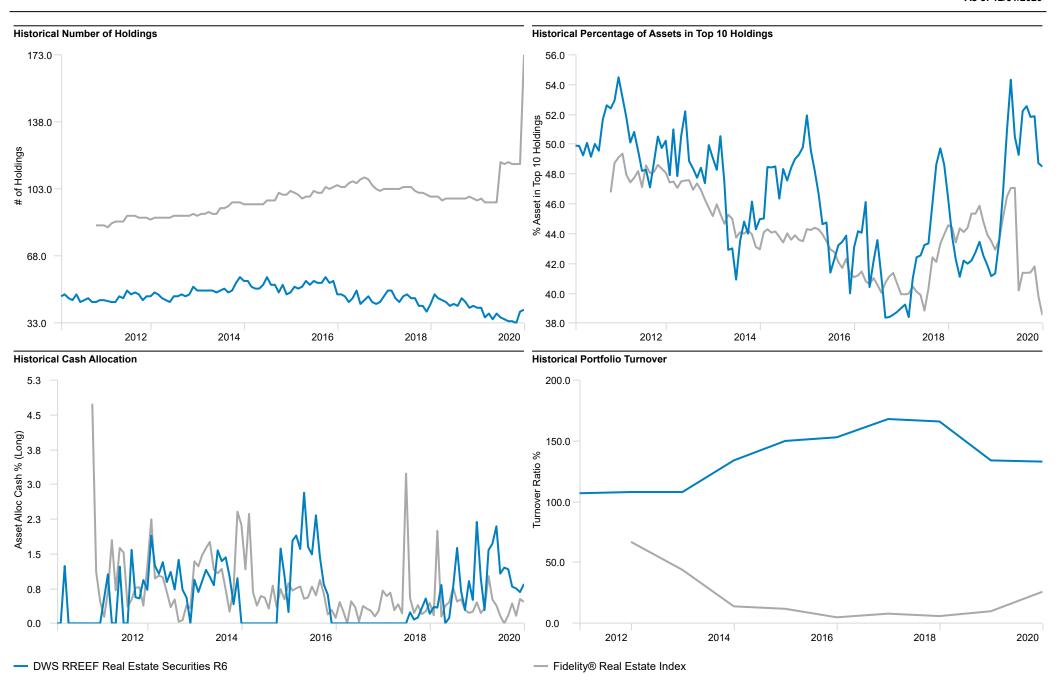
#### Portfolio Construction Information

**Broad Style Category** Value Style Bias Relative Value Sector Constraint Type Benchmark Relative Sector Constraints (%) Typical Sector/s Overweight None Typical Sector/s Underweight None Typical Number of Holdings 30-50 Average Full Position Size (%) 2.25 Maximum Position Size (%) 10 Annual Typical Asset Turnover (%) 130 Annual Typical Name Turnover (%) Not Provided Maximum Cash Allocation (%) Maximum Foreign Exposure (%) 0

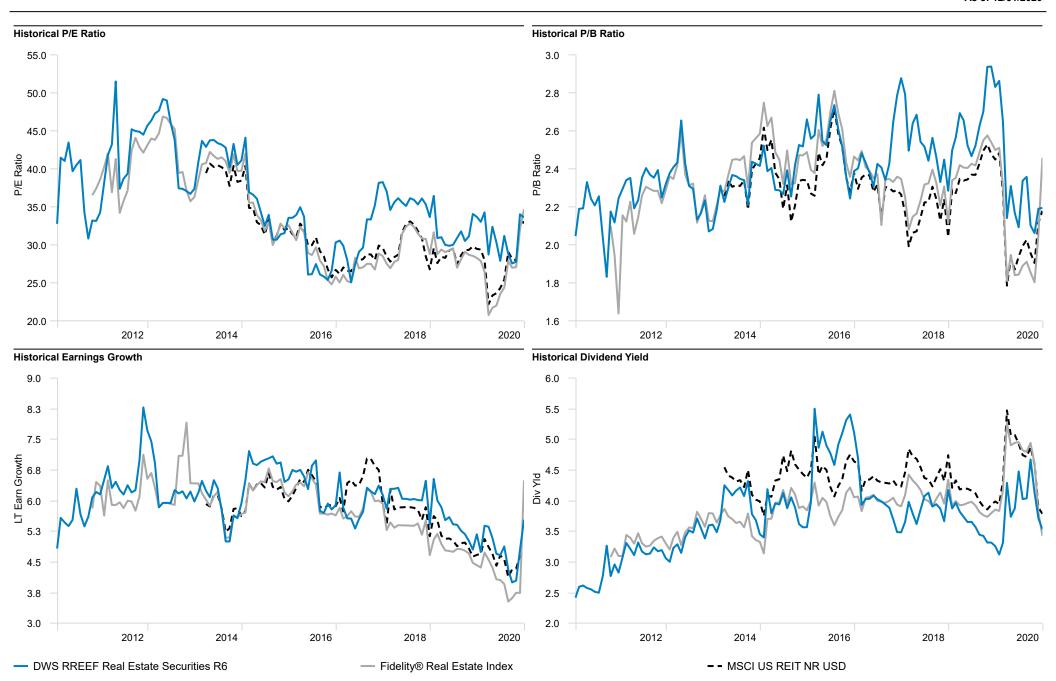


	DWS RREEF Real Estate Securities R6	Fidelity® Real Estate Index	MSCI US REIT NR USD
COMPOSITION			
# of Holdings	40	172	137
% Asset in Top 10 Holdings	46.69	37.30	37.88
Asset Alloc Cash %	0.72	0.24	0.00
Asset Alloc Equity %	99.28	99.76	100.00
Asset Alloc Bond %	0.00	0.00	0.00
Asset Alloc Other %	0.00	0.00	0.00
CHARACTERISTICS			
Average Market Cap (mil)	16,206.25	16,306.65	13,803.10
P/E Ratio (TTM)	33.31	36.56	34.78
P/B Ratio (TTM)	2.43	2.52	2.24
LT Earn Growth	6.49	6.73	5.34
Dividend Yield	3.38	3.21	3.55
ROE % (TTM)	13.11	11.07	8.60
GICS SECTORS %			
Energy %	0.00	0.00	0.00
Materials %	0.00	0.01	0.00
Industrials %	0.00	0.04	0.00
Consumer Discretionary %	0.00	0.03	0.00
Consumer Staples %	0.00	0.01	0.00
Healthcare %	0.00	0.04	0.00
Financials %	0.00	0.02	0.00
Information Technology %	0.00	0.04	0.00
Communication Services %	0.00	0.01	0.00
Utilities %	0.00	0.00	0.00
Real Estate %	100.00	99.80	100.00
MARKET CAPITALIZATION			
Market Cap Giant %	0.00	0.00	0.00
Market Cap Large %	21.90	30.72	25.38
Market Cap Mid %	50.27	46.46	49.81
Market Cap Small %	26.60	17.83	20.42
Market Cap Micro %	0.51	4.74	4.39



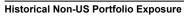


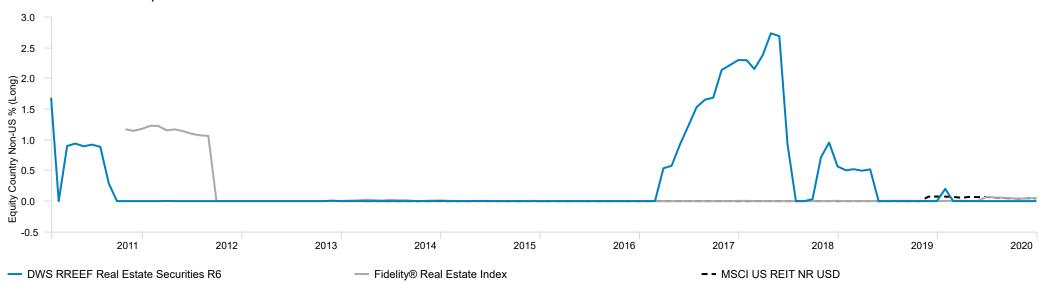






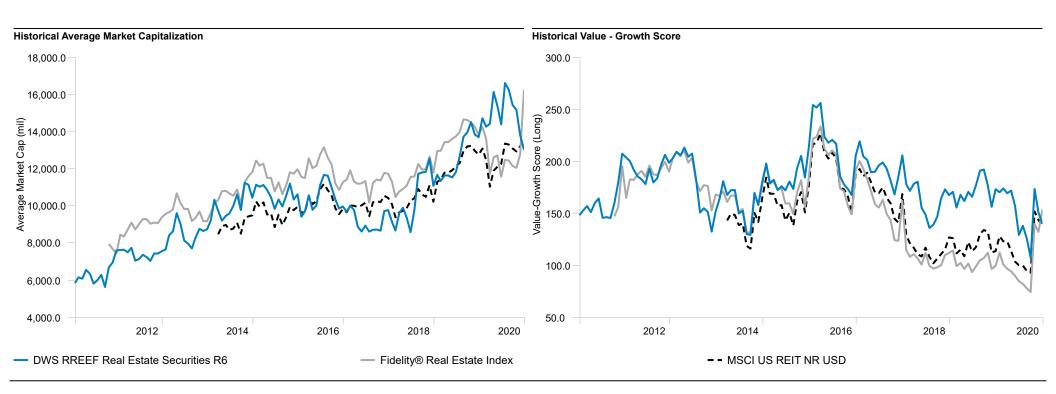
Current Portfolio Region Allocation			
	DWS RREEF Real Estate Securities R6	Fidelity® Real Estate Index	MSCI US REIT NR USD
Equity Country United States %	100.00	99.95	99.95
Equity Region North America %	100.00	100.00	100.00
Equity Region Latin America %	0.00	0.00	0.00
Equity Region United Kingdom %	0.00	0.00	0.00
Equity Region Europe dev %	0.00	0.00	0.00
Equity Region Europe emrg %	0.00	0.00	0.00
Equity Region Japan %	0.00	0.00	0.00
Equity Region Australasia %	0.00	0.00	0.00
Equity Region Asia dev %	0.00	0.00	0.00
Equity Region Asia emrg %	0.00	0.00	0.00
Equity Region Africa/Middle East %	0.00	0.00	0.00
Equity Region Developed %	100.00	100.00	100.00
Equity Region Emerging %	0.00	0.00	0.00



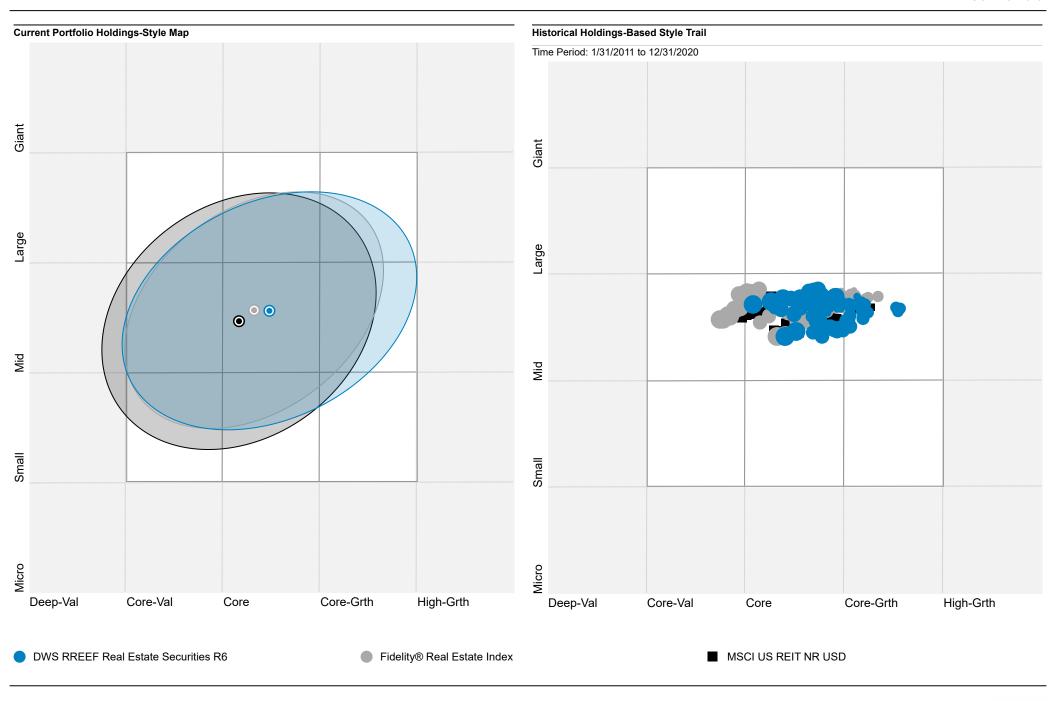




Style Allocation			
	DWS RREEF Real Estate Securities R6	Fidelity® Real Estate Index	MSCI US REIT NR USD
Equity Style Large Value %	0.00	0.00	0.00
Equity Style Large Core %	7.40	25.10	16.18
Equity Style Large Growth %	8.19	4.29	6.94
Equity Style Mid Value %	6.92	6.94	8.30
Equity Style Mid Core %	42.19	34.46	40.17
Equity Style Mid Growth %	2.54	4.52	1.39
Equity Style Small Value %	9.56	6.40	6.07
Equity Style Small Core %	15.72	14.16	16.89
Equity Style Small Growth %	6.63	3.50	3.88



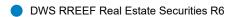






## **Quantitative Review**



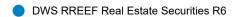


Fidelity® Real Estate Index

MSCI US REIT NR USD



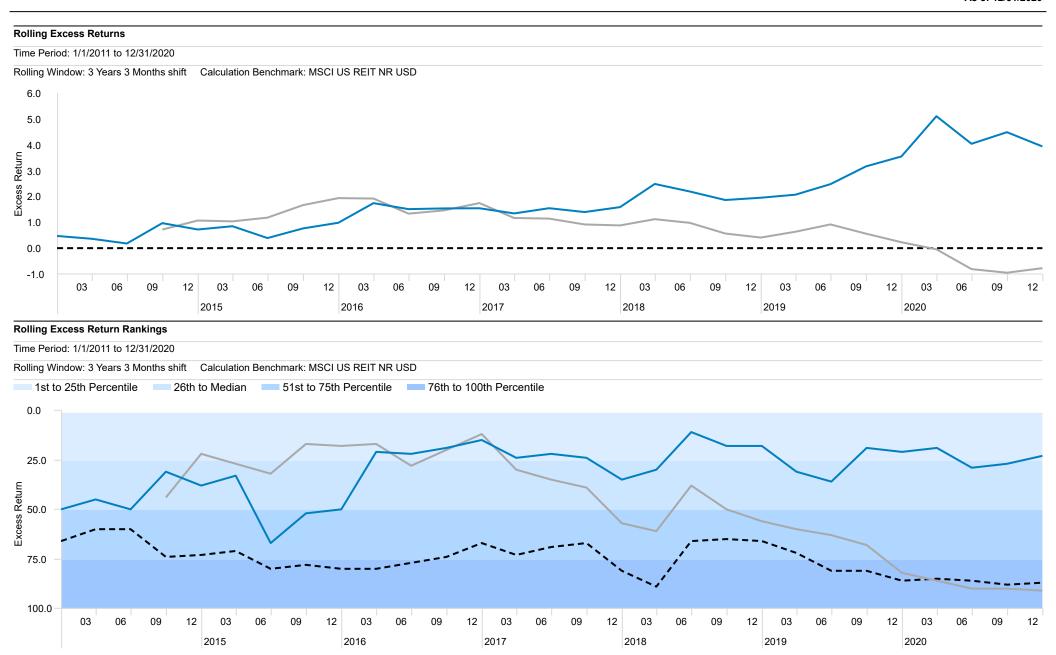




Fidelity® Real Estate Index

MSCI US REIT NR USD



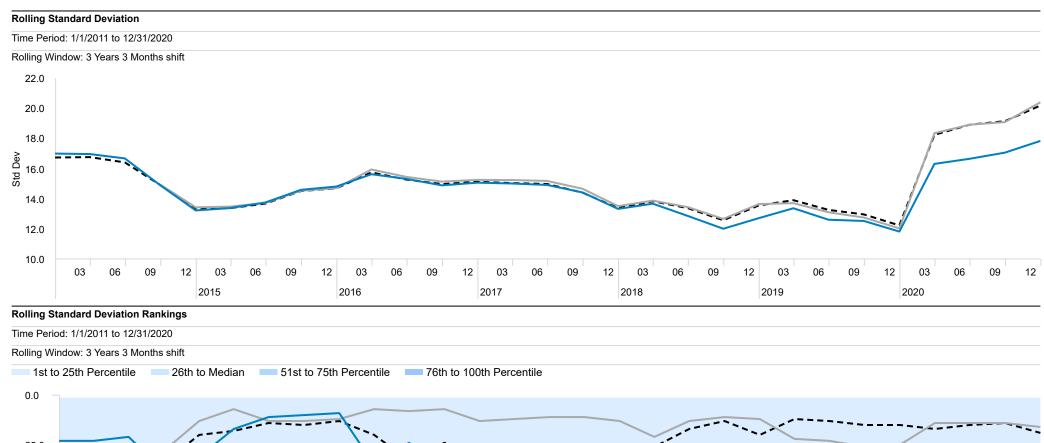


- Fidelity® Real Estate Index



- - MSCI US REIT NR USD

DWS RREEF Real Estate Securities R6



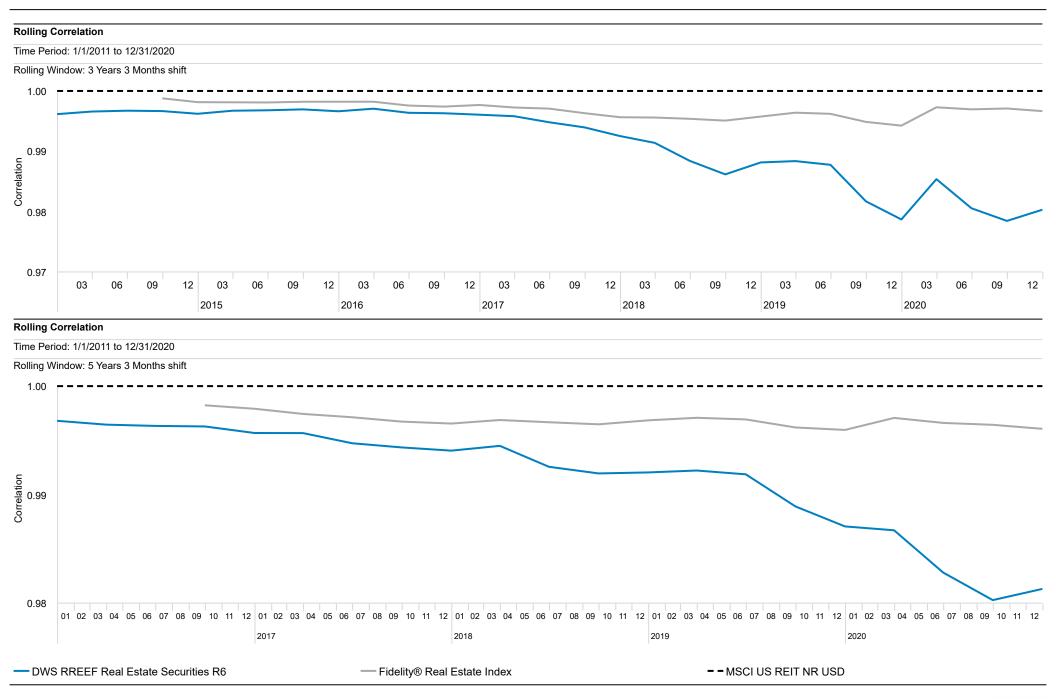




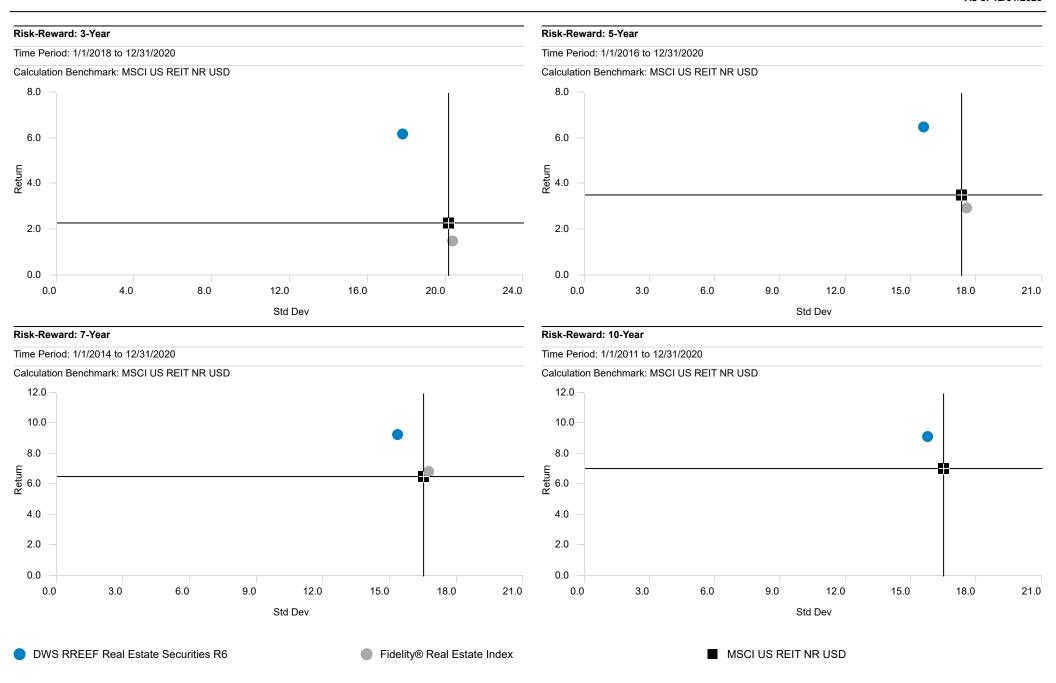
Correlation Matrix				
Time Period: 1/1/2014 to 12/31/2020				
	1	2	I	3
1 DWS RREEF Real Estate Securities R6	1.00			
2 Fidelity® Real Estate Index	0.98	1.00		
3 MSCI US REIT NR USD	0.98	1.00		1.00

Correlation Matrix (Excess Returns vs. MSCI US REIT NR USD)						
Time Period: 1/1/2014 to 12/31/2020						
Calculation Benchmark: MSCI US REIT NR USD						
	1	1	2	3		
1 DWS RREEF Real Estate Securities R6	MSCI US REIT NR USD	1.00				
2 Fidelity® Real Estate Index	MSCI US REIT NR USD	-0.23	1.00			
3 MSCI US REIT NR USD	MSCI US REIT NR USD			1.00		

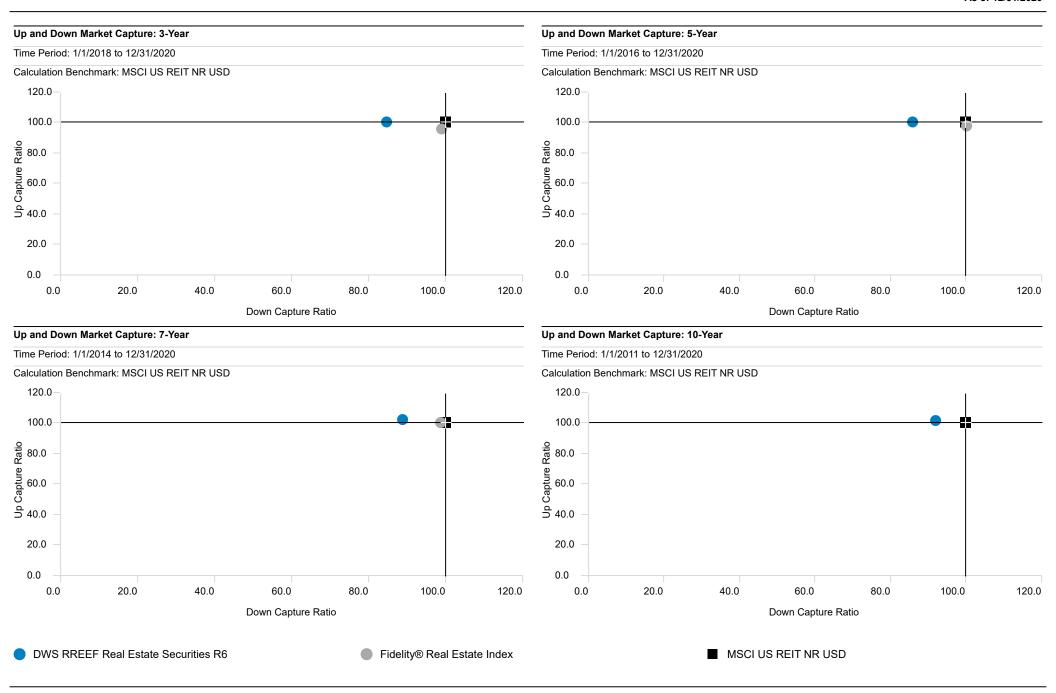




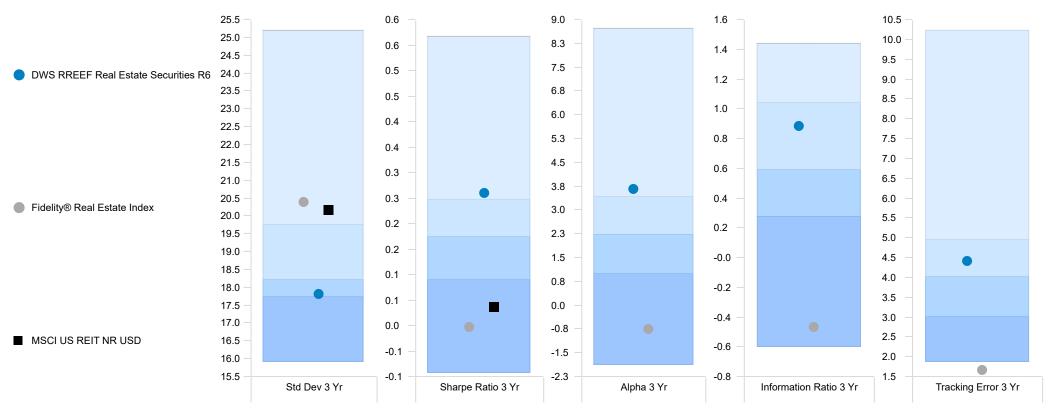








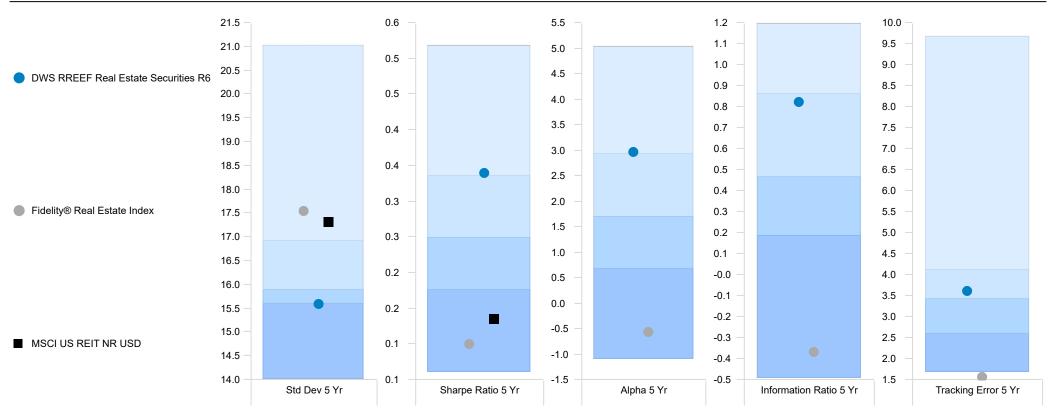




Time	Dariad.	1/1/2018 to	12/31/2020

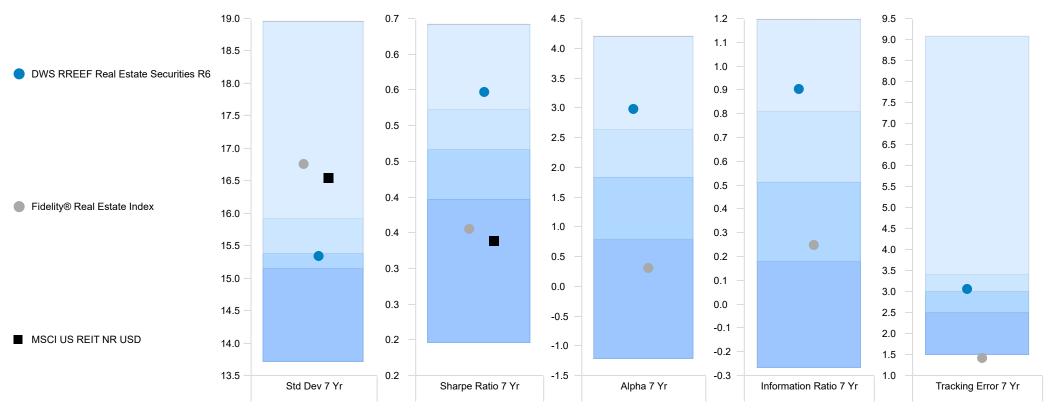
	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
DWS RREEF Real Estate Securities R6	17.83	67	0.26	22	3.66	22	0.89	33	4.43	39
Fidelity® Real Estate Index	20.39	16	0.00	91	-0.73	93	-0.46	93	1.67	98
MSCI US REIT NR USD	20.17	19	0.04	87	0.00	88			0.00	100





	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
DWS RREEF Real Estate Securities R6	15.59	73	0.34	22	2.97	24	0.82	27	3.61	40
Fidelity® Real Estate Index	17.56	14	0.10	91	-0.55	92	-0.37	93	1.56	97
MSCI US REIT NR USD	17.32	16	0.13	85	0.00	86			0.00	100

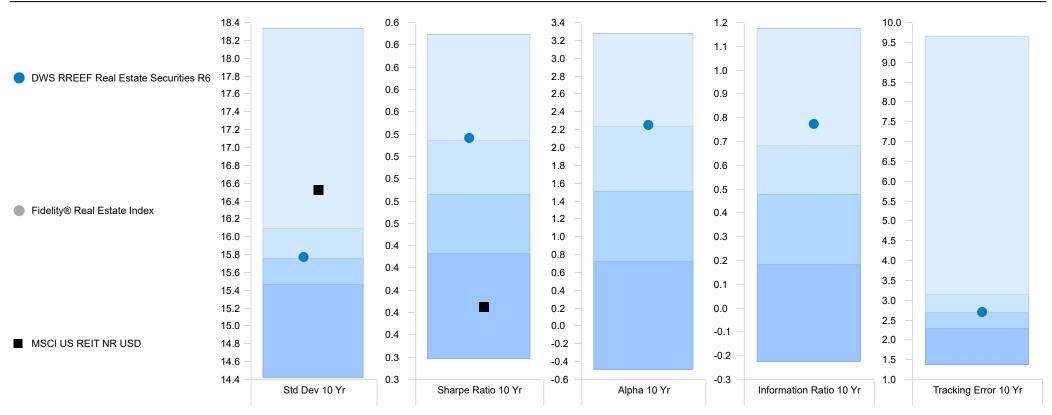




Time Pe	riod: 1/	1/2014 to	o 12/31	/2020
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	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
DWS RREEF Real Estate Securities R6	15.34	55	0.55	18	2.99	18	0.91	21	3.08	44
Fidelity® Real Estate Index	16.76	12	0.36	86	0.31	87	0.25	70	1.43	98
MSCI US REIT NR USD	16.54	15	0.34	88	0.00	89			0.00	100

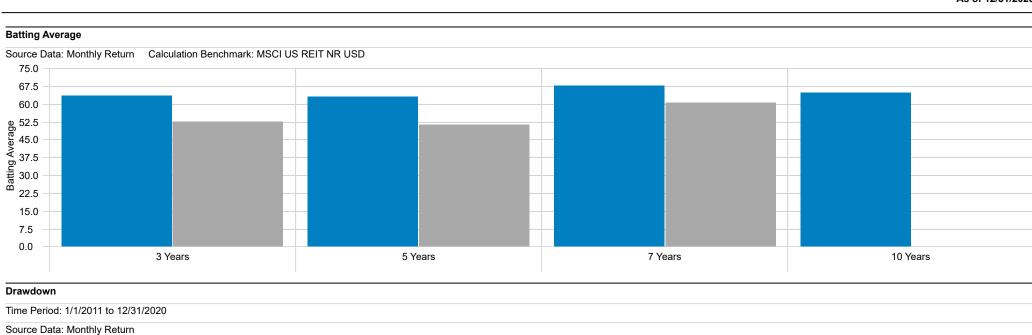


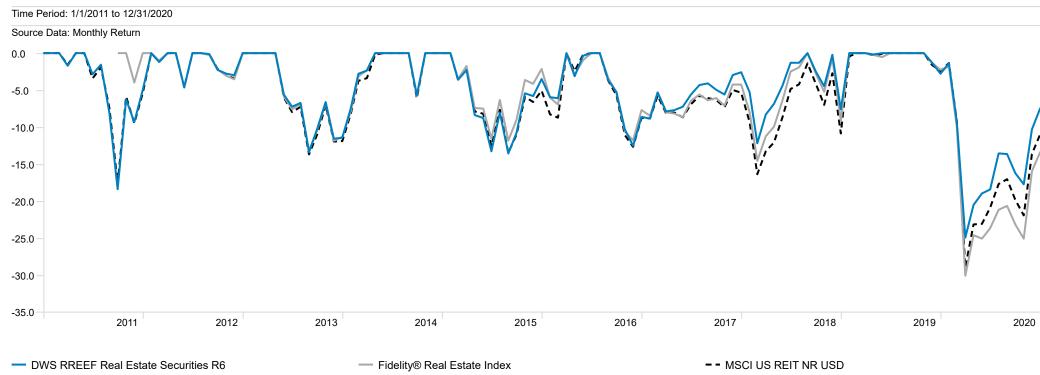


Time Period:	1/1	/2011 to	12/31	/2020
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	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
DWS RREEF Real Estate Securities R6	15.78	45	0.54	24	2.26	25	0.78	19	2.71	49
Fidelity® Real Estate Index										
MSCI US REIT NR USD	16.53	12	0.39	89	0.00	90			0.00	100









MPT	Stat	istics	: 3-\	Year
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Time Period: 1/1/2018 to 12/31/2020 Calculation Benchmark: MSCI US REIT NR USD

	DWS RREEF Real Estate Securities R6	Fidelity® Real Estate Index	MSCI US REIT NR USD
Return	6.18	1.48	2.25
Excess Return	3.93	-0.77	0.00
Std Dev	17.83	20.39	20.17
Beta	0.87	1.01	1.00
Tracking Error	4.43	1.67	0.00
Sharpe Ratio	0.26	0.00	0.04
Alpha	3.66	-0.73	0.00
Information Ratio	0.89	-0.46	
Batting Average	63.89	52.78	100.00
Up Capture Ratio	100.61	95.90	100.00
Down Capture Ratio	84.57	98.92	100.00
MPT Statistics: 5-Year			
Time Period: 1/1/2016 to 12/31/2020 Calculation Benchma	ark: MSCI US REIT NR USD		
Return	6.48	2.94	3.51
Excess Return	2.97	-0.57	0.00
Std Dev	15.59	17.56	17.32
Beta	0.88	1.01	1.00
Tracking Error	3.61	1.56	0.00
Sharpe Ratio	0.34	0.10	0.13
Alpha	2.97	-0.55	0.00
Information Ratio	0.82	-0.37	
Batting Average	63.33	51.67	100.00
Up Capture Ratio	100.60	97.70	100.00
op daptare ratio	100.62	97.70	100.00



MPT Statistics: 7-Year
Time Period: 1/1/2014 to

Period: 1/1/2014 to 12/31/2020 Calculation Benchmark: MSCI US REIT NR USD

	DWS RREEF Real Estate Securities R6	Fidelity® Real Estate Index	MSCI US REIT NR USD
Return	9.26	6.82	6.46
Excess Return	2.80	0.36	0.00
Std Dev	15.34	16.76	16.54
Beta	0.91	1.01	1.00
Tracking Error	3.08	1.43	0.00
Sharpe Ratio	0.55	0.36	0.34
Alpha	2.99	0.31	0.00
Information Ratio	0.91	0.25	
Batting Average	67.86	60.71	100.00
Up Capture Ratio	102.58	100.43	100.00
Down Capture Ratio	88.83	98.67	100.00
MPT Statistics: 10-Year			
Time Period: 1/1/2011 to 12/31/2020 Calculation Bench	hmark: MSCI US REIT NR USD		
Return	9.09		6.99
Excess Return	2.10		0.00
Std Dev	15.78		16.53
Beta	0.94		1.00
Tracking Error	2.71		0.00
Sharpe Ratio	0.54		0.39
Alpha	2.26		0.00
Information Ratio	0.78		
Batting Average	65.00		100.00
Up Capture Ratio	101.96		100.00
Down Capture Ratio	91.95		100.00



# **Investment Option Narratives**



#### Firm Overview

DWS (formerly Deutsche Asset Management) is a publicly traded company that is majority owned by Deutsche Bank A.G. Deutsche Bank A.G. is a publicly traded entity incorporated in Germany. Its shares trade on stock exchanges throughout the world including the New York Stock Exchange (ticker: DB). DWS' real estate business is a part of the Alternatives platform. RREEF America LLC, the legal entity responsible for the strategy is part of the DWS organization. It is one of the largest global real estate advisors and manages a range of strategies within the private and public real estate spaces.

#### Expectations

The strategy favors companies with higher cash flow growth prospects and lower current yields. We expect the strategy to outperform in an environment of solid U.S. economic growth. We expect the strategy to underperform if U.S. economic growth decelerates causing investors favoring more defensive companies with higher current yields.

#### **Team Overview**

Co-Lead Portfolio Managers Bob Thomas and David Zonavetch are responsible for all investment decisions. Zonavetch has been in his role since 2013, while Thomas joined the firm as a co-lead portfolio manager in 2017. Thomas and Zonavetch's goal is to achieve a consensus among the Americas analyst team on all decisions. The analysts, who are property sector specialists, include John Bejjani (joined in 2016), Derek Bower (2015), Christian Schroeder (2009), and Edward Mui (2017).

The Global Property Allocation Committee (GPAC), which includes the CIO, private real estate portfolio management, research, and real estate securities portfolios management, meets monthly to determine sector and sub-sector positioning. The process focuses on the year-over-year change of macroeconomic indicators, real estate fundamentals, as well as current and forecasted credit environments.

#### **Points to Consider**

There are several new members of the team including Thomas who joined in January 2017. Thomas replaced Co-Lead Portfolio Manager Joe Fisher who left to be the CFO of an apartment REIT. Also, three of the five analysts joined within the last three years. However, Zonavetch as co-lead portfolio manager and the other two analysts have been in place since 2013, providing stability. Additionally, CIO and Co-Head of Liquid Real Assets John Vojticek, who provides oversight of the strategy has 13 years of experience with the Fund including five years as Co-Head of Americas Real Estate Securities.

#### **Strategy Overview**

The investment process combines bottom-up, fundamental stock selection with a macro focus on real estate fundamentals and credit markets that drive sector allocations. The core of the process is the analysts underwriting of each company's real estate portfolios using a discounted cash flow analysis to arrive at an intrinsic value and target total return for each security within their assigned property sectors. The three-year cash flow estimations are generated through an evaluation of the geographic and property type exposures of each company. The analysts leverage the firm's dedicated real estate Research and Strategy group for forecasting of sector and market specific growth as well as demand/supply analysis by market. The discount rate is formulated using the firm's Dynamic Asset Pricing model that focuses on the relationship of real estate asset values and credit markets. It considers the level of spread between real estate implied cap rates and investment grade corporate bonds as well as the spread between "A" quality assets and buyers and "B" quality assets and buyers that are more leverage dependent.

After intrinsic values and sector and sub-sector allocations are determined, analysts use the firm's proprietary Equity Value Adjustment (EVA) scoring model to determine the warranted NAV discount/premium a company should trade at based on the following five factors: management, balance sheet, property, themes, and liquidity. Companies are then selected based on forecasted total return.

#### **Recommendation Summary**

Deutsche U.S. Real Estate Securities is recommended as an option for exposure to real estate assets via liquid publicly-traded markets. The strategy provides exposure to a diverse set of property types including the four primary property types as well as specialty property types such as data centers, net lease, and self-storage. Additionally, the expense ratio of the institutional mutual fund and R6 share class is significantly below peers at under 63 bps and 54 bps, respectively. The Morningstar category median is around 90 bps.

The core of the investment process is the analyst's underwriting of the real estate portfolio of each company within their assigned property sectors. The integration into the underwriting process of the firm's real estate Research and Strategy group that generates some of the highest quality research in the space is a differentiator. Additionally, the team has access to over 100 professionals on the private real estate platform for local and submarket level views. These resources provide valuable data for the analysts' discounted cash flow analysis of a company's portfolio of real estate assets



**Alpha** - A measure of the difference between a portfolio's actual returns and its expected performance, given its level of risk as measured by beta.

**Batting Average** – A measure of a manager's ability to consistently beat the market. It is calculated by dividing the number of months in which the manager beat or matched an index by the total number of months in the period.

Best Quarter- This is the highest guarterly (3 month) return of the investment since its inception.

**Beta** - A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.

**Down Period Percent -** Number of months below 0 divided by the total number of months.

**Downmarket Capture Ratio** - The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance.

**Downside Std Dev** - This measures only deviations below a specified benchmark.

Excess Return- This is a measure of an investment's return in excess of a benchmark.

**Information Ratio** - This calculates the value-added contribution of the manager and is derived by dividing the excess rate of return of the portfolio by the tracking error. The higher the Information Ratio, the more the manager has added value to the portfolio.

Longest Down-Streak Return - Return for the longest series of negative monthly returns.

Longest Down-Streak # of Periods - Longest series of negative monthly returns.

Longest Up-Streak Return - Return for the longest series of positive monthly returns.

**Longest Up-Streak** - Longest series of positive monthly returns.

Kurtosis - Kurtosis indicates the peakedness of a distribution. For normal distribution, Kurtosis is 3.

**Max Drawdown** - The peak to trough decline during a specific record period of an investment or fund. It is usually quoted as the percentage between the peak to the trough.

Max Drawndown # of Periods - This is the number of months that encompasses the max drawdown for an investment.

**R-Squared** - The percentage of a portfolio's performance that can be explained by the behavior of the appropriate benchmark. A high R-Squared means the portfolio's performance has historically moved in the same direction as the appropriate benchmark.

Return - Compounded rate of return for the period.

**Sharpe Ratio** - Represents the excess rate of return over the risk free return divided by the standard deviation of the excess return. The result is an absolute rate of return per unit of risk. A higher value demonstrates better historical risk-adjusted performance.

**Skewness** - Skewness reflects the degree of asymmetry of a distribution. If the distribution has a longer left tail, the function has negative skewness. Otherwise, it has positive skewness. A normal distribution

is symmetric with skewness 0.

**Sortino Ratio** - The Sortino Ratio is similar to Sharpe Ratio except it uses downside risk (Downside Deviation) in the denominator. It was developed in early 1980's by Frank Sortino. Since upside variability is not necessarily a bad thing, Sortino ratio is sometimes more preferable than Sharpe ratio.

**Standard Deviation** - A statistical measure of the range of a portfolio's performance. It represents the variability of returns around the average return over a specified time period.

**Tracking Error** - This is a measure of the standard deviation of a portfolio's excess returns versus its designated market benchmark.

**Treynor Ratio** - Similar to Sharpe Ratio, Treynor Ratio is a measurement of efficiency utilizing the relationship between annualized risk-adjusted return and risk. Unlike Sharpe Ratio, Treynor Ratio utilizes "market" risk (beta) instead of total risk (standard deviation). Good performance efficiency is measured by a high ratio.

**Up period Percent -** Number of months above 0 divided by the total number of months.

**Upmarket Capture Ratio** - The ratio of average portfolio performance over the designated benchmark during periods of positive returns. A higher value indicates better product performance.

**Value-Growth Score** - Morningstar assigns an Overall Value score and an Overall Growth score to each stock within a fund. Morningstar then calculates a net value-core-growth score for each stock by subtracting the stock's Overall Value score from its Overall Growth score. Once this is done, these raw scores are rescaled to range between -100 to 400 in order to fit within the Morningstar Style Box. Scores below 67 are classified as value, scores above 233 are classified as growth, and scores between 67 and 233 fit within the core boundaries.

Worst Quarter - This is the lowest quarterly (3 month) return of the investment since its inception.



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#### **RISK FACTORS**

#### THE RISK DISCLOSURES HEREIN DO NOT PURPORT TO COVER ALL RISKS. PLEASE REFER TO THE RESPECTIVE PROSPECTUSES FOR COMPLETE INFORMATION.

As presented in this report, although investing in equities can be beneficial, it is also important to consider the associated risks. Investing in such funds may not be suitable for all investors. Equity markets can be volatile and can decline significantly in response to, or investor perceptions of, issuer, market, economic, industry, political, regulatory, geopolitical, and other conditions. These conditions can affect a single issuer or type of security, issuers within a broad market sector, industry or geographic region, or the equity markets in general. The primary risk factors to consider include, but are not limited to: stock market risk, manager risk, investment style risk, sector-focus risk, issuer risk and liquidity risk. The securities markets are volatile and the market prices of the funds' securities may decline generally. Securities fluctuate in price based on changes in a company's financial condition and overall market and economic conditions. If the market prices of the securities owned by the fund fall, the value of your investment in the fund will decline. Depending on the specific strategy, there many additional considerations such as the risks associated with equity investing.

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# Item 5.d.vi. Investment Policy Update

# CITY OF DELRAY BEACH (PLAN SPONSOR) POLICE OFFICERS' RETIREMENT SYSTEM

### **Investment Policy Statement**

#### I. PURPOSE OF INVESTMENT POLICY STATEMENT

The Pension Board of Trustees (Board) maintains that an important determinant of future investment returns is the expression and periodic review of the City of Delray Beach Police Officers' Retirement System (the Plan) investment objectives. To that end, the Board has adopted this statement of Investment Policy and directs that it apply to all assets under their control.

In fulfilling their fiduciary responsibility, the Board recognizes that the retirement system is an essential vehicle for providing income benefits to retired participants or their beneficiaries. The Board also recognizes that the obligations of the Plan are long-term and that investment policy should be made with a view toward performance and return over a number of years. The general investment objective is to obtain a reasonable total rate of return - defined as interest and dividend income plus realized and unrealized capital gains or losses - commensurate with the Prudent Investor Rule and any other applicable ordinances and statutes.

Reasonable consistency of return and protection of assets against the inroads of inflation are paramount. However, interest rate fluctuations and volatility of securities markets make it necessary to judge results within the context of several years rather than over short periods of five years or less.

The Board will employ investment professionals to oversee and invest the assets of the Plan. Within the parameters allowed in this document and their agreements with the Board, the investment management professionals shall have investment discretion over their mandates, including security selection, sector weightings and investment style.

The Board, in performing their investment duties, shall comply with the fiduciary standards set forth in Employee Retirement Income Security Act of 1974 (ERISA) at 29 U.S.C. s. 1104(a) (1) (A) - (C). In case of conflict with other provisions of law authorizing investments, the investment and fiduciary standards set forth in this section shall prevail.

#### II. TARGET ALLOCATIONS

In order to provide for a diversified portfolio, the Board has engaged investment professional(s) to manage and administer the fund. The investment manager(s) are responsible for the assets and allocation of their mandate only and may be provided an addendum to this policy with their specific performance objectives and investment criteria. The Board has established the following asset allocation targets for the total fund:

Asset Class - NEW	Target	Range	Benchmark Index
Domestic Equity	50.0%	42% - 60%	Dow Jones Wilshire 5000
International Equity	15.0%	10% - 22%	MSCI-ACWI ex. U.S.
Fixed Income (Core)	15.0%	10% - 25%	Barclays Aggregate
Fixed Income (Non Core)	5.0%	0% - 15%	Asset Specific
Real Estate*	10.0%	0% - 15%	NCREIF ODCE
Timber*	0.0%	0% - 5%	NCREIF Timber
Alternatives	5.0%	0% - 10%	Asset Specific

<sup>\*</sup>Benchmark will default to "broad market fixed income" if these portfolios are not funded. Targets and ranges above are based on market value of total Plan assets.

The investment consultant will monitor the aggregate asset allocation of the portfolio, and will rebalance to the target asset allocation based on market conditions. If at the end of any calendar quarter, the allocation of an asset class falls outside of its allowable range, barring extenuating circumstances such as pending cash flows or allocation levels viewed as temporary, the asset allocation will be rebalanced into the allowable range. To the extent possible, contributions and withdrawals from the portfolio will be executed proportionally based on the most current market values available. The Board does not intend to exercise short-term changes to the target allocation.

#### III. INVESTMENT PERFORMANCE OBJECTIVES

The following performance measures will be used as objective criteria for evaluating the effectiveness of the Investment Managers.

#### A. Total Portfolio Performance

- 1. The performance of the total portfolio will be measured for rolling three and five year periods. The performance of the portfolio will be compared to the return of the policy indexes comprised of 5042.5% Wilshire 5000, 15% MSCI ACWI ex. U.S., 2027.5% Barclays Aggregate Bond Index, 10% NCREIF ODCE Index, and 5% alternative specific benchmark.
- 2. On a relative basis, it is expected that the total portfolio performance will rank in the top 40<sup>th</sup> percentile of the appropriate peer universe over three and five-year time periods.
- 3. On an absolute basis, the objective is that the return of the total portfolio will equal or exceed the actuarial earnings assumption (8.0 %%), and provide inflation protection by meeting Consumer Price Index plus 3%.

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#### B. Equity Performance

The combined equity portion of the portfolio, defined as common stocks and convertible bonds, is expected to perform at a rate at least equal to the 75% Wilshire 5000 and 25% MSCI ACWI ex. U.S. Index. Individual components of the equity portfolio will be compared to the specific benchmarks defined in each Investment Manager addendum. All portfolios are expected to rank in the top 40<sup>th</sup> percentile of the appropriate peer universe over three and five-year time periods.

#### C. Fixed Income Performance

The overall objective of the fixed income portion of the portfolio is to add stability and liquidity to the total portfolio. The fixed income portion of the portfolio is expected to perform at a rate at least equal to the Barclays Capital U.S. Aggregate Bond Index. All portfolios are expected to rank in the top 40<sup>th</sup> percentile of the appropriate peer universe over three and five-year time periods.

#### D. Real Estate Performance

The overall objective of the real estate portfolio, if utilized, is to add diversification and another stable income stream to the total fund. The real estate portion of the total fund, defined as core, open ended private real estate, is expected to perform at a rate at least equal to the NCREIF ODCE and rank in the top 40<sup>th</sup> percentile of the appropriate peer universe over three and five-year time periods.

#### E. Alternative and Other Asset Performance

The overall objective of the alternative and/or "other asset" portion of the portfolio, if utilized, is to reduce the overall volatility of the portfolio and enhance returns. This portion of the portfolio will be measured against an appropriate benchmark, which will be identified by the investment consultant and investment manager to the board at the time of investment.

#### IV. INVESTMENT GUIDELINES

#### A. Authorized Investments

Notwithstanding any limitation provided for in Chapters 175 and 185, Florida Statutes, or any limitation or condition contained in Section 215.47, Florida Statutes, the Board of Trustees may invest and reinvest pension fund assets in such securities, investment vehicles and property wherever situated and of whatever kind, as the Board shall approve in the exercise of its fiduciary duty and authority, including but not limited to common or preferred stocks, bonds and other evidences of indebtedness or ownership. In no event, however, shall more than twenty-five (25) percent of the assets of the fund, at market, be invested in foreign securities.

#### 1. Equities:

- a. Must be traded on a national exchange or electronic network; and
- b. Not more than 5% of the Plan's assets, at the time of purchase, shall be invested in the common stock, capital stock or convertible stock of any one issuing company, nor shall the aggregate investment in any one issuing company exceed 5% of the outstanding capital stock of the company; and
- c. Additional criteria may be outlined in the manager's addendum.

#### 2. Fixed Income:

- a. 85% of the fixed income investments (excluding any specific allocation to below investment grade fixed income) shall have a minimum rating of investment grade or higher as reported by a major credit rating service; and
- b. The value of bonds issued by any single corporation shall not exceed 3% of the total fund; and
- c. Additional criteria may be outlined in the manager's addendum.

#### 3. Money Market:

- a. The money market fund or STIF options provided by the Plan's custodian; and
- b. Have a minimum rating of Standard & Poor's A1 or Moody's P1.

#### 4. Pooled Funds:

Investments made by the Board may include pooled funds. For purposes of this policy pooled funds may include, but are not limited to, mutual funds, commingled funds, exchange-traded funds, limited partnerships and private equity. Pooled funds may be governed by separate documents which may include investments not expressly permitted in this Investment Policy Statement. In the event of investment by the Plan into a pooled fund, the Board will adopt the prospectus or governing policy of that fund as the stated addendum to this Investment Policy Statement.

#### B. <u>Trading Parameters</u>

When feasible and appropriate, all securities shall be competitively bid. Commissions paid for purchase of securities must meet the prevailing best-execution rates. The responsibility of monitoring best price and execution of trades placed by each manager on behalf of the Plan will be governed by the Portfolio Management Agreement between the Plan and the Investment Managers.

#### C. <u>Limitations</u>

- 1. Investments in corporate common stock and convertible bonds shall not exceed seventy (870%) of the Plan assets at market.
- 2. Foreign securities shall not exceed twenty-five percent (25%) of Plan's market value.
- 3. All equity and fixed income securities must be readily marketable. Commingled funds must be independently appraised at least annually.

#### D. Absolute Restrictions

No investments shall be permitted in;

- 1. Any investment not specifically allowed as part of this policy.
- 2. Illiquid investments, as described in Chapter 215.47, Florida Statutes.
- 3. Direct investment in 'Scrutinized Companies' identified in the periodic publication by the State Board of Administration ("SBA list", updated on their website <a href="www.sbafla.com/fsb/">www.sbafla.com/fsb/</a>), is prohibited. Any security identified as non-compliant on or before January 1, 2010 must be divested by September 10, 2010. The Board shall be notified each quarter, in writing, of the results of the review. Securities identified after January 1, 2010, are subject to the provisions of section V. (C) below. However, if divestiture of business activities is accomplished and the company is subsequently removed from the SBA list, the manager can continue to hold that security. Indirect investment in 'Scrutinized Companies' (through pooled funds) are governed by the provisions of Section V. (G) below.

#### V. COMMUNICATIONS

- A. On a monthly basis, the custodian shall supply an accounting statement that will include a summary of all receipts and disbursements and the cost and the market value of all assets.
- B. On a quarterly basis, the Investment Managers shall provide a written report affirming compliance with the security restrictions of Section IV (as well as any provisions outlined in the Investment Manager's addendum). In addition, the Investment Managers shall deliver a report each quarter detailing the Plan's performance, forecast of the market and economy, portfolio analysis and current assets of the Plan. Written reports shall be delivered to the Board within 30 days of the end of the quarter. A copy of the written report shall be submitted to the person designated by the City, and shall be available for public inspection. The Investment Managers will provide immediate written and telephone notice to the Board of any significant market related or non-market related event, specifically including, but not limited to, any deviation from the standards set forth in Section IV or their Investment Manager addendum.
- C. If the Fund owns investments, that complied with section IV at the time of purchase, which subsequently exceed the applicable limit or do not satisfy the applicable investment standard, such excess or noncompliant investments may be continued until it is economically feasible to dispose of such investment in accordance with the prudent man standard of care, but no additional investment may be made unless authorized by law or ordinance. An action plan outlining the investment 'hold or sell' strategy shall be provided to the Board immediately.
- D. The Investment Consultant shall evaluate and report on a quarterly basis the rate of return net of investment fees and relative performance of the Plan.
- E. The Board will meet periodically to review the Investment Consultant performance report.

  The Board will meet with the investment manager and appropriate outside consultants to

<u>5/12/2021</u>4 4 17 Page 5

- discuss performance results, economic outlook, investment strategy and tactics and other pertinent matters affecting the Plan on a periodic basis.
- F. At least annually, the Board shall provide the Investment Managers with projected disbursement needs of the Plan so that the investment portfolio can be structured in such a manner as to provide sufficient liquidity to pay obligations as they come due. To this end the Investment Managers should, to the extent possible, attempt to match investment maturities with known cash needs and anticipated cash-flow requirements.
- G. The Investment Consultant, on behalf of the Board, shall send a letter to any pooled fund referring the investment manager to the listing of 'Scrutinized Companies' by the State Board of Administration ('SBA list'), on their website <a href="www.sbafla.com/fsb/">www.sbafla.com/fsb/</a>. This letter shall request that they consider removing such companies from the fund or create a similar actively managed fund having indirect holdings devoid of such companies. If the manager creates a similar fund, the Plan shall replace all applicable investments with investments in the similar fund in an expedited timeframe consistent with prudent investing standards. For the purposes of this section, a private equity fund is deemed to be an actively managed investment fund. However, after sending the required correspondence, the Plan is not required to sell the pooled fund.

#### VI. COMPLIANCE

- A. It is the direction of the Board that the plan assets are held by a third party custodian, and that all securities purchased by, and all collateral obtained by the plan shall be properly designated as Plan assets. No withdrawal of assets, in whole or in part, shall be made from safekeeping except by an authorized member of the Board or their designee. Securities transactions between a broker-dealer and the custodian involving purchase or sale of securities by transfer of money or securities must be made on a "delivery vs. payment" basis to insure that the custodian will have the security or money in hand at conclusion of the transaction.
- B. The investment policy shall require all approved institutions and dealers transacting repurchase agreements to execute and perform as stated in the Master Repurchase Agreement. All repurchase agreement transactions shall adhere to the requirements of the Master Repurchase Agreement.
- C. At the direction of the Board operations of the Plan shall be reviewed by independent certified public accountants as part of any financial audit periodically required. Compliance with the Board's internal controls shall be verified. These controls have been designed to prevent losses of assets that might arise from fraud, error, or misrepresentation by third parties or imprudent actions by the Board or employees of the plan sponsor, to the extent possible.
- D. Each member of the Board of Trustees shall participate in a continuing education program relating to investments and the Trustee's responsibilities to the fund. It is strongly recommended that either the CPPT or CAPPP program be utilized to achieve this recommendation. It is highly suggested that this education process begin during the Trustees' first term.

- E. With each actuarial valuation, the Board shall determine the total expected annual rate of return for the current year, for each of the next several years and for the long term thereafter. This determination shall be filed promptly with the Department of Management Services, the plan's sponsor and the consulting actuary.
- F. The proxy votes must be exercised for the exclusive benefit of the participants of the Plan. Each Investment Manager shall provide the Board with a copy of their proxy voting policy for approval. On a regular basis, at least annually, each manager shall report a record of their proxy vote.

#### VII. CRITERIA FOR INVESTMENT MANAGER REVIEW

The Board wishes to adopt standards by which judgments of the ongoing performance of a portfolio manager may be made. If, at any time, any three of the following is breached, the portfolio manager may be warned of the Board's serious concern for the Plan's continued safety and performance. If any five of these are violated the consultant may recommend a manager search for that mandate.

- Four (4) consecutive quarters of relative under-performance verses the benchmark.
- Three (3) year trailing return below the top 40<sup>th</sup> percentile within the appropriate peer group and under performance verses the benchmark.
- Five (5) year trailing return below the top 40<sup>th</sup> percentile and under performance verses the benchmark.
- Three (3) year downside volatility greater than the index (greater than 100), as measured by down market capture ratio.
- Five (5) year downside volatility greater than the index (greater than 100), as measured by down market capture ratio.
- Style consistency or purity drift from the mandate.
- Management turnover in portfolio team or senior management.
- Investment process change, including varying the index or benchmark.
- Failure to adhere to the IPS or other compliance issues.
- Investigation of the firm by the Securities and Exchange Commission (SEC).
- Significant asset flows into or out of the company.
- Merger or sale of firm.
- Fee increases outside of the competitive range.
- Servicing issues key personnel stop servicing the account without proper notification.
- Failure to attain a 60% vote of confidence by the Board.

Nothing in this section shall limit or diminish the Board's right to terminate the manager at any time for any reason.

#### VIII. APPLICABLE CITY ORDINANCES

If at any time this document is found to be in conflict with the City Ordinances or applicable Florida Statutes, the Ordinances and Statutes shall prevail.

#### IX. REVIEW AND AMENDMENTS

It is the Board's intention to review this document at least annually subsequent to the actuarial report and to amend this statement to reflect any changes in philosophy, objectives, or guidelines. In this regard, the Investment Manager's interest in consistency in these matters is recognized and will be taken into account when changes are being considered. If, at any time, the Investment Manager feels that the specific objectives defined herein cannot be met, or the guidelines constrict performance, the Board should be notified in writing. By initialing and continuing acceptance of this Investment Policy Statement, the Investment Managers concur with the provisions of this document. By signing this document, the Chairman attests that this policy has been recommended by the Investment Consultant, reviewed by the plan's legal counsel for compliance with applicable law, and approved by the Board of Trustees.

#### X. FILING OF THE INVESTMENT POLICY

Upon adoption by the Board, the investment policy shall be promptly filed with the Florida Department of Management Services, the City, and the plan's actuary. The effective date of the Investment Policy shall be the 31 days following the filing date with the City.

Chairman, Board of Trustees	Date

CITY OF DELRAY BEACH POLICE OFFICERS' RETIREMENT SYSTEM

# Item 5.e. Lewis, Longman & Walker

**Legal Items** 

(No backup for this Item)

# Item 5.f. Pension Administrator

## **City of Delray Beach**

Pension Dept.



# MEMORANDUM

TO: Board of Trustees of the City of Delray Beach Police Officers'

Retirement System

FROM: Lisa Castronovo, Pension Administrator

SUBJECT: Pension Administrator Report

DATE: 5/6/2021

1) The Financial Statement of the Retirement System as of December 31, 2020 (latest date for which we have all individual money manager statements) and the approved 2020-21 administrative expense budget versus actual administrative expenses through May 5, 2021 are attached.

- 2) NFP's Executive Summary for the DROP for quarter end March 31, 2021 follows. I provided the full NFP quarterly report as a separate attachment to the email sending the Agenda and backup materials.
- 3) I would like Elizabeth Brown, our Pension Specialist, to obtain a notary certification. Please advise if the Board will split the cost of the certification fee (approx. \$200 total) with the other two pension boards.
- 4) All 139 retirees/beneficiaries returned their benefit verification letter in a timely manner so we did not suspend anyone's monthly benefits.
- 5) The FPPTA 37<sup>th</sup> Annual Conference & Expo will be held at the Omni Orlando Resort at Champions Gate June 27 June 30, 2021. Please let me know if you are interested in attending so that I can register you. Please advise if the Board will split the cost (approx. \$1500 total) for my attendance at this conference with the other two pension boards.

# Item 1

#### CITY OF DELRAY BEACH, FLORIDA

#### STATEMENT OF CHANGES IN PLAN NET POSITION -

# PENSION TRUST FUNDS - POLICE OFFICERS' RETIREMENT SYSTEM Through quarter ended December 31, 2020 - FY 2021.

ADDITIONS           Contributions         \$8,033,015           Employer         \$8,033,015           Plan members         868,062           Total contributions         9,148,481           Investment earnings         11,766,637           Interest and dividends         1,255,982           Other Investment Income         9           13,022,628         13,022,628           Less investment expenses - custodian fees         (64,338)           Net investment earnings         12,958,290           Other income         -           Total additions         22,106,771           DEDUCTIONS         8,934           Administrative expenses         1,058           Total deductions         8,934           Administrative expenses         1,058           Total deductions         2,277,641           Change In Plan Net Position         19,829,131           Net Position Restricted for Pension Benefits - October 01, 2020         107,487,424           Net Position Restricted for Pension Benefits - December 31, 2020         \$127,316,555		Police Officers' Retirement System	
Employer         \$ 8,033,015           Plan members         868,062           Total contributions         9,148,481           Investment earnings         11,766,637           Interest and dividends         1,255,982           Other Investment Income         9           Less investment expenses - custodian fees         (64,338)           Net investment earnings         12,958,290           Other income         -           Total additions         22,106,771           DEDUCTIONS         8,934           Refunds of contributions         8,934           Administrative expenses         1,058           Total deductions         2,277,641           Change In Plan Net Position         19,829,131           Net Position Restricted for Pension Benefits - October 01, 2020         107,487,424	ADDITIONS		
Plan members         868,062           Total contributions         9,148,481           Investment earnings         11,766,637           Interest and dividends         1,255,982           Other Investment Income         9           Less investment expenses - custodian fees         (64,338)           Net investment earnings         12,958,290           Other income         -           Total additions         22,106,771           DEDUCTIONS         8,934           Refunds of contributions         8,934           Administrative expenses         1,058           Total deductions         2,277,641           Change In Plan Net Position         19,829,131           Net Position Restricted for Pension Benefits - October 01, 2020         107,487,424	Contributions		
State       868,062         Total contributions       9,148,481         Investment earnings       11,766,637         Interest and dividends       1,255,982         Other Investment Income       9         Less investment expenses - custodian fees       (64,338)         Net investment earnings       12,958,290         Other income       -         Total additions       22,106,771         DEDUCTIONS       3,934         Refunds of contributions       8,934         Administrative expenses       1,058         Total deductions       2,277,641         Change In Plan Net Position       19,829,131         Net Position Restricted for Pension Benefits - October 01, 2020       107,487,424	Employer	\$ 8,033,015	
Total contributions   9,148,481	Plan members		
Investment earnings   11,766,637     Interest and dividends   1,255,982     Other Investment Income   9	State	868,062	
Net appreciation (depreciation) in fair value of investments       11,766,637         Interest and dividends       1,255,982         Other Investment Income       9         Less investment expenses - custodian fees       (64,338)         Net investment earnings       12,958,290         Other income       -         Total additions       22,106,771         DEDUCTIONS       Senefits         Refunds of contributions       8,934         Administrative expenses       1,058         Total deductions       2,277,641         Change In Plan Net Position       19,829,131         Net Position Restricted for Pension Benefits - October 01, 2020       107,487,424	Total contributions	9,148,481	
Interest and dividends         1,255,982           Other Investment Income         9           13,022,628           Less investment expenses - custodian fees         (64,338)           Net investment earnings         12,958,290           Other income         -           Total additions         22,106,771           DEDUCTIONS         Senefits           Refunds of contributions         8,934           Administrative expenses         1,058           Total deductions         2,277,641           Change In Plan Net Position         19,829,131           Net Position Restricted for Pension Benefits - October 01, 2020         107,487,424	Investment earnings		
Other Investment Income         9           13,022,628           Less investment expenses - custodian fees         (64,338)           Net investment earnings         12,958,290           Other income         -           Total additions         22,106,771           DEDUCTIONS         Senefits           Refunds of contributions         8,934           Administrative expenses         1,058           Total deductions         2,277,641           Change In Plan Net Position         19,829,131           Net Position Restricted for Pension Benefits - October 01, 2020         107,487,424		11,766,637	
Less investment expenses - custodian fees       (64,338)         Net investment earnings       12,958,290         Other income       -         Total additions       22,106,771         DEDUCTIONS Benefits Refunds of contributions Refunds of contributions Administrative expenses Total deductions       8,934 Administrative expenses 1,058 Total deductions         Total adductions       2,277,641         Change In Plan Net Position       19,829,131         Net Position Restricted for Pension Benefits - October 01, 2020       107,487,424	Interest and dividends	1,255,982	
Less investment expenses - custodian fees         (64,338)           Net investment earnings         12,958,290           Other income         -           Total additions         22,106,771           DEDUCTIONS Benefits Refunds of contributions Refunds of contributions Administrative expenses Total deductions         8,934           Administrative expenses Total deductions         1,058           Total deductions         2,277,641           Change In Plan Net Position         19,829,131           Net Position Restricted for Pension Benefits - October 01, 2020         107,487,424	Other Investment Income	9	
Net investment earnings       12,958,290         Other income       -         Total additions       22,106,771         DEDUCTIONS        Senefits         Refunds of contributions       8,934         Administrative expenses       1,058         Total deductions       2,277,641         Change In Plan Net Position       19,829,131         Net Position Restricted for Pension Benefits - October 01, 2020       107,487,424			
Other income         -           Total additions         22,106,771           DEDUCTIONS Benefits           Benefits         2,267,648           Refunds of contributions         8,934           Administrative expenses         1,058           Total deductions         2,277,641           Change In Plan Net Position         19,829,131           Net Position Restricted for Pension Benefits - October 01, 2020         107,487,424	1		
Total additions       22,106,771 <b>DEDUCTIONS</b> 2,267,648         Benefits       2,267,648         Refunds of contributions       8,934         Administrative expenses       1,058         Total deductions       2,277,641         Change In Plan Net Position       19,829,131         Net Position Restricted for Pension Benefits - October 01, 2020       107,487,424	Net investment earnings	12,958,290	
DEDUCTIONS         Benefits       2,267,648         Refunds of contributions       8,934         Administrative expenses       1,058         Total deductions       2,277,641         Change In Plan Net Position       19,829,131         Net Position Restricted for Pension Benefits - October 01, 2020       107,487,424	Other income	<del>-</del>	
Benefits       2,267,648         Refunds of contributions       8,934         Administrative expenses       1,058         Total deductions       2,277,641         Change In Plan Net Position       19,829,131         Net Position Restricted for Pension Benefits - October 01, 2020       107,487,424	Total additions	22,106,771	
Refunds of contributions       8,934         Administrative expenses       1,058         Total deductions       2,277,641         Change In Plan Net Position       19,829,131         Net Position Restricted for Pension Benefits - October 01, 2020       107,487,424	DEDUCTIONS		
Administrative expenses         1,058           Total deductions         2,277,641           Change In Plan Net Position         19,829,131           Net Position Restricted for Pension Benefits - October 01, 2020         107,487,424	Benefits	2,267,648	
Total deductions 2,277,641  Change In Plan Net Position 19,829,131  Net Position Restricted for Pension Benefits - October 01, 2020 107,487,424	Refunds of contributions	8,934	
Change In Plan Net Position 19,829,131  Net Position Restricted for Pension Benefits - October 01, 2020 107,487,424	Administrative expenses	1,058	
Net Position Restricted for Pension Benefits - October 01, 2020 107,487,424	Total deductions	2,277,641	
,	Change In Plan Net Position	19,829,131	
Net Position Restricted for Pension Benefits -December 31, 2020 \$ 127,316,555	Net Position Restricted for Pension Benefits - October 01, 2020	107,487,424	
	Net Position Restricted for Pension Benefits -December 31, 2020	\$ 127,316,555	

# CITY OF DELRAY BEACH POLICE OFFICERS' RETIREMENT SYSTEM 2020-21 ADMINISTRATIVE EXPENSE BUDGET- BUDGETED vs. ACTUAL

TYPE of EXPENDITURE	<u>Budgeted</u>	<u>Actual</u> (thru 5/5/2021)	Remaining
Actuarial Services	\$45,000	\$16,100	\$28,900
Audit Services	\$21,000	\$0	\$21,000
City Administrators' Services	\$75,000	\$36,000	\$39,000
Custodial Services	\$50,000	\$33,350	\$16,650
Dues & Subscriptions	\$3,000	\$0	\$3,000
Fiduciary Liability Insurance	\$20,000	\$14,850	\$5,150
Legal Services	\$35,000	\$17,400	\$17,600
Misc. Expenditures	\$50,000	\$1,850	\$48,150
Performance Monitoring Services	\$45,000	\$27,485	\$17,515
Trustee Training & Education	<u>\$6,000</u>	<u>\$1,350</u>	<u>\$4,650</u>
	\$350,000	\$148,385	\$201,615

# Item 2



Meeting Date: 5/12/2021 City of Delray Beach PD DROP 401(a)

only or boundy bound in building
Administrative Review
Prior Meeting Minutes ⊠:
Service Plan ⊠:
Signed Investment Policy Statement on file with NFP: ⊠ Yes ☐ No.
Market Review
U.S. equity markets rose 6.3% (Russell 3000) in the first quarter on continued improvement in economic and COVID-19 data, as well as a \$1.9 trillion coronavirus relief package from Congress. International equities rose to a lesser extent, posting a 3.5% gain over the quarter (MSCI ACWI ex U.S.). The broad U.S. fixed income market declined 3.4% for the quarter (Bloomberg Barclays Aggregate) as longer-term interest rates moved significantly higher. Interest rates on the 10-year Treasury increased by over 80 basis points in the quarter on heightened inflation concerns. After hitting 14.7% unemployment in 2020, the U.S. labor market continued to improve during the first quarter with March unemployment dropping to 6%. For the second quarter in a row, value stocks outperformed growth stocks with the Russell 1000 Value outperforming the Russell 1000 Growth by over ten percentage points. The Federal Reserve kept rates at nearly zero during the quarter and signaled their expectation of rates remaining low for the next couple years. (All data from MPI)
Methodology
A review of the Scorecard Methodology was discussed. The scoring system includes pass/fail criteria on a scale of 0 to 10 (10 being best). Eighty percent of the fund's score is quantitative, incorporating Modern Portfolio Theory statistics and peer group rankings. The other 20 percent of the score is qualitative. Primary considerations are given to manager tenure, fund expenses and strength of statistics, however, other significant factors may be considered in the qualitative review. Active and asset allocation strategies are evaluated over a five year time period and passive strategies are evaluated over a three year time period. The Scorecard Point System is as follows: Good: 9-10 points   Acceptable: 7-8 points   Watch List: 5-6 points   Poor: 0-4 points. The Scorecard Methodology supports upholding the impartial conduct standards as the scores and analytics do not include any adviser compensation components and are calculated incorporating all investment fees and revenue sharing. In addition, any and all compensation earned by the adviser (if any) is explicitly disclosed and reasonable given services provided. All information material to any investment recommendations has been disclosed and no misleading information has been provided to fiduciaries in their determination of action.
Scorecard as of 3/31/2021
Assets of the Plan as of 3/31/2021 were \$10,543,115.76. Results of the analysis showed many funds received Good and Acceptable scores (7-10). One fund scored a Watch List score (5-6) and the consequences of the score are discussed below. All other funds not specifically listed in this executive summary were reviewed and met qualitative reviews and/or are scoring acceptable to good.
Fund Review
Asset class: Large Cap Growth  The Fidelity Contrafund is currently scoring a 6. The fund fails the Peer Group rankings narrowly outside the top 50 <sup>th</sup> percentile and the Up/Down Capture and Info Ratio. This is the second quarter in which the fund has scored a Watch-list score. The Committee discussed the composition of the fund and both short term and long term performance.
No action – Continue to monitor at this time.
Additional Investment Discussion: The fund changes are in progress at ICMA-RC. NFP to monitor project to conclusion.
Discussion of Fiduciary Topics
Regulatory and Compliance
Plan Design and Education Fiduciary



Additional Comments		
Pending Action Items		
Scheduler	Employee Education	Fund Changes initiated by ☐ NFP Support ☒ NFP Consultant ☒ Recordkeeper

This material contains an assessment of the market and economic environment at a specific point in time and is not intended to be a forecast of future events, or a guarantee of future results. Forward-looking statements are subject to certain risks and uncertainties. Actual results, performance, or achievements may differ materially from those expressed or implied. Information is based on data gathered from what we believe are reliable sources. It is not guaranteed by Kestra IS as to accuracy, does not purport to be complete and is not intended to be used as a primary basis for investment decisions. It should also not be construed as advice meeting the particular investment needs of any investor. The indices mentioned are unmanaged and cannot be directly invested into. Past performance does not guarantee future results.

Securities may be offered through NFP Retirement and its subsidiary FiduciaryFirst, Member FINRA/SIPC. Investment Advisory Services offered through NFP Retirement, Inc.