



New York City
Fire Officers' Variable Supplements Fund
Performance Overview as of March 31, 2020

Total Fund Overview

**New York City
Fire Officers' Variable Supplements Fund**

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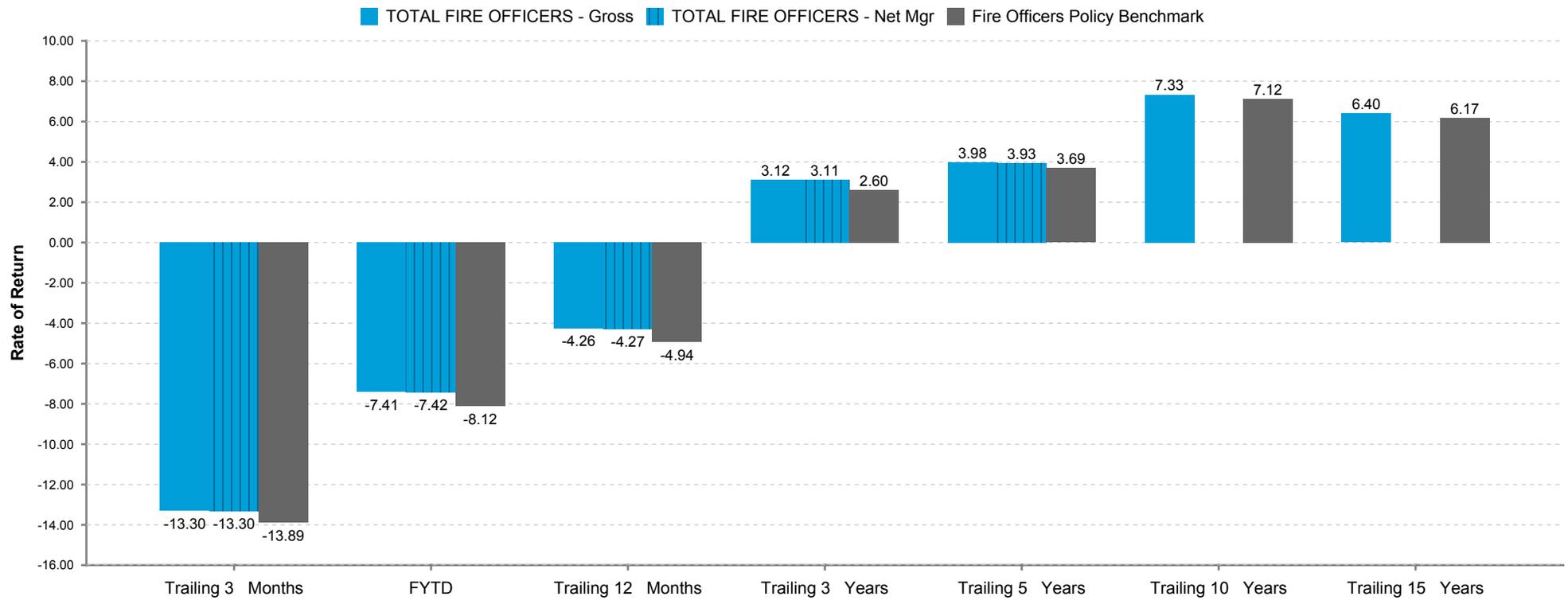
Total Portfolio Returns: March 31, 2020



Market Value (Millions)

TOTAL FIRE OFFICERS

\$308.5



| | Plan 3 Years | Benchmark 3 Years | Plan 5 Years | Benchmark 5 Years | Plan 7 Years | Benchmark 7 Years | Plan 10 Years | Benchmark 10 Years |
|---------------------|--------------|-------------------|--------------|-------------------|--------------|-------------------|---------------|--------------------|
| Standard Deviation | | | | | | | | |
| TOTAL FIRE OFFICERS | 9.7 | 9.8 | 4.0 | 9.3 | 8.8 | 8.6 | 9.7 | 9.5 |

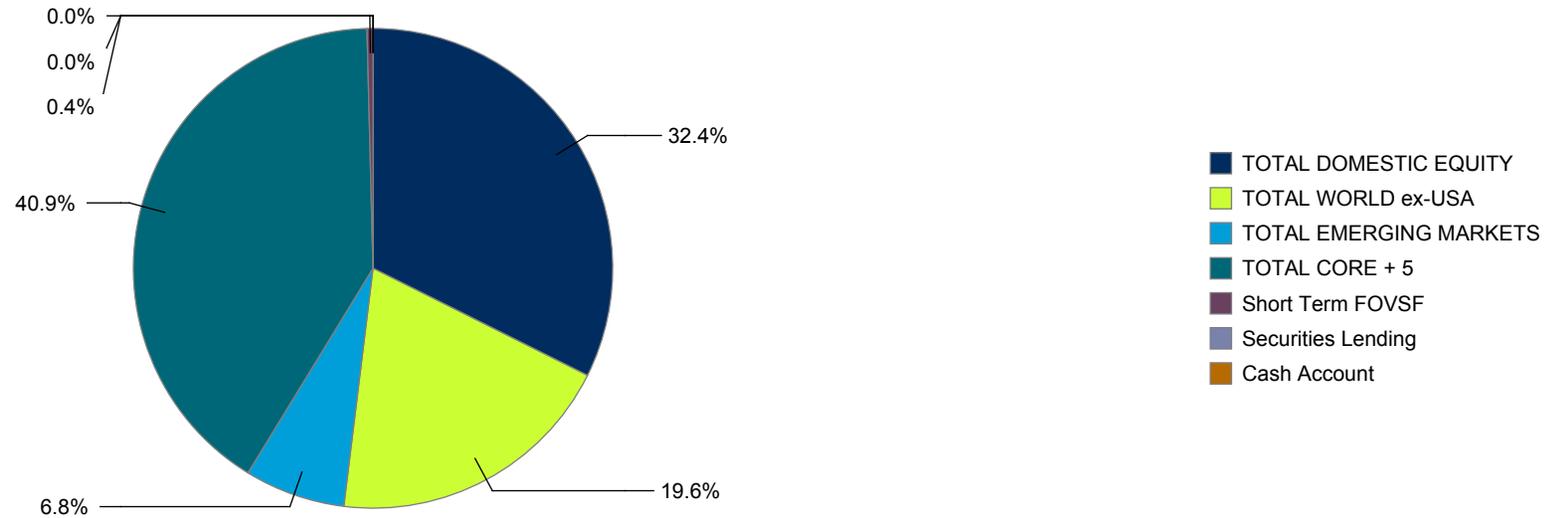


Market Value (Millions)

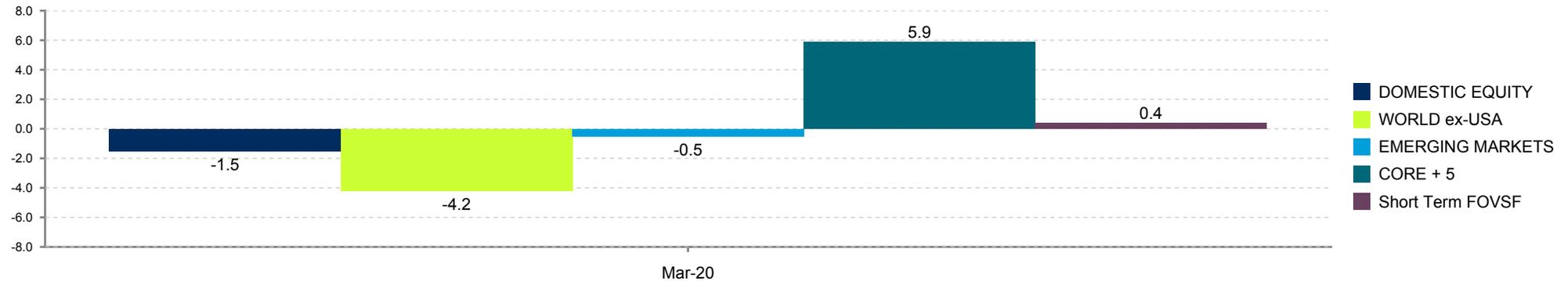
TOTAL FIRE OFFICERS

\$308.5

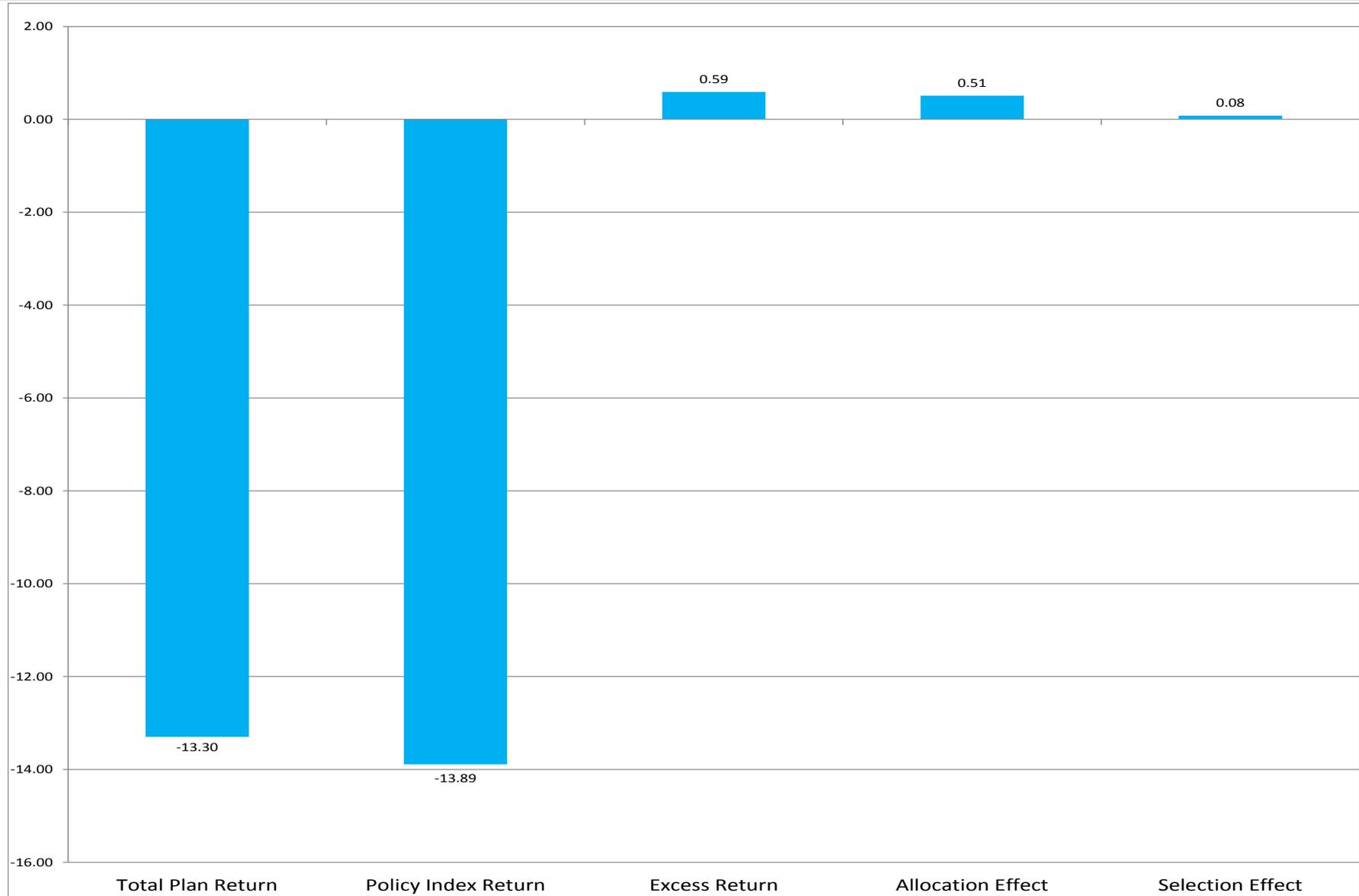
Asset Allocation



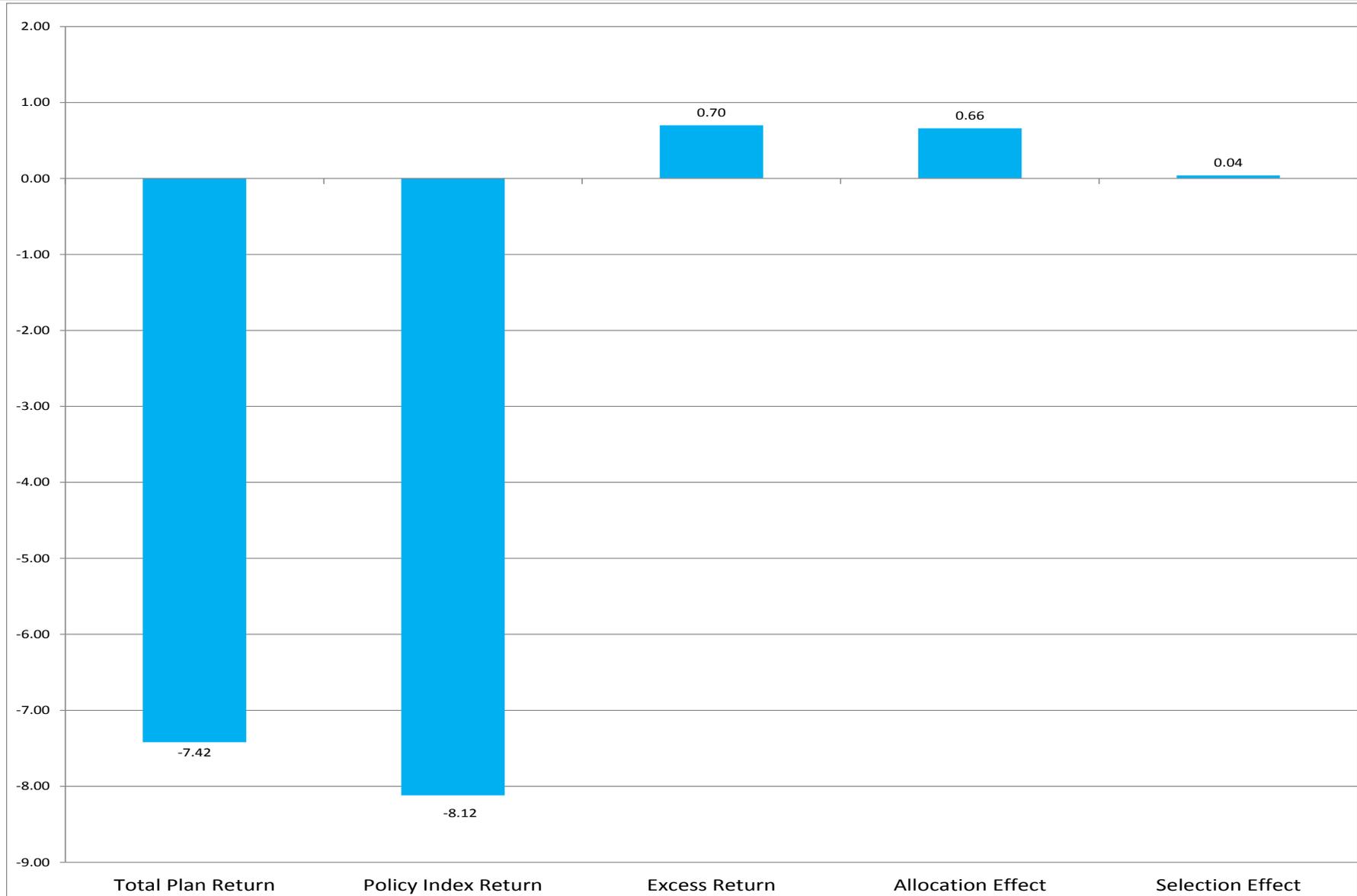
Relative Mix to Asset Weights



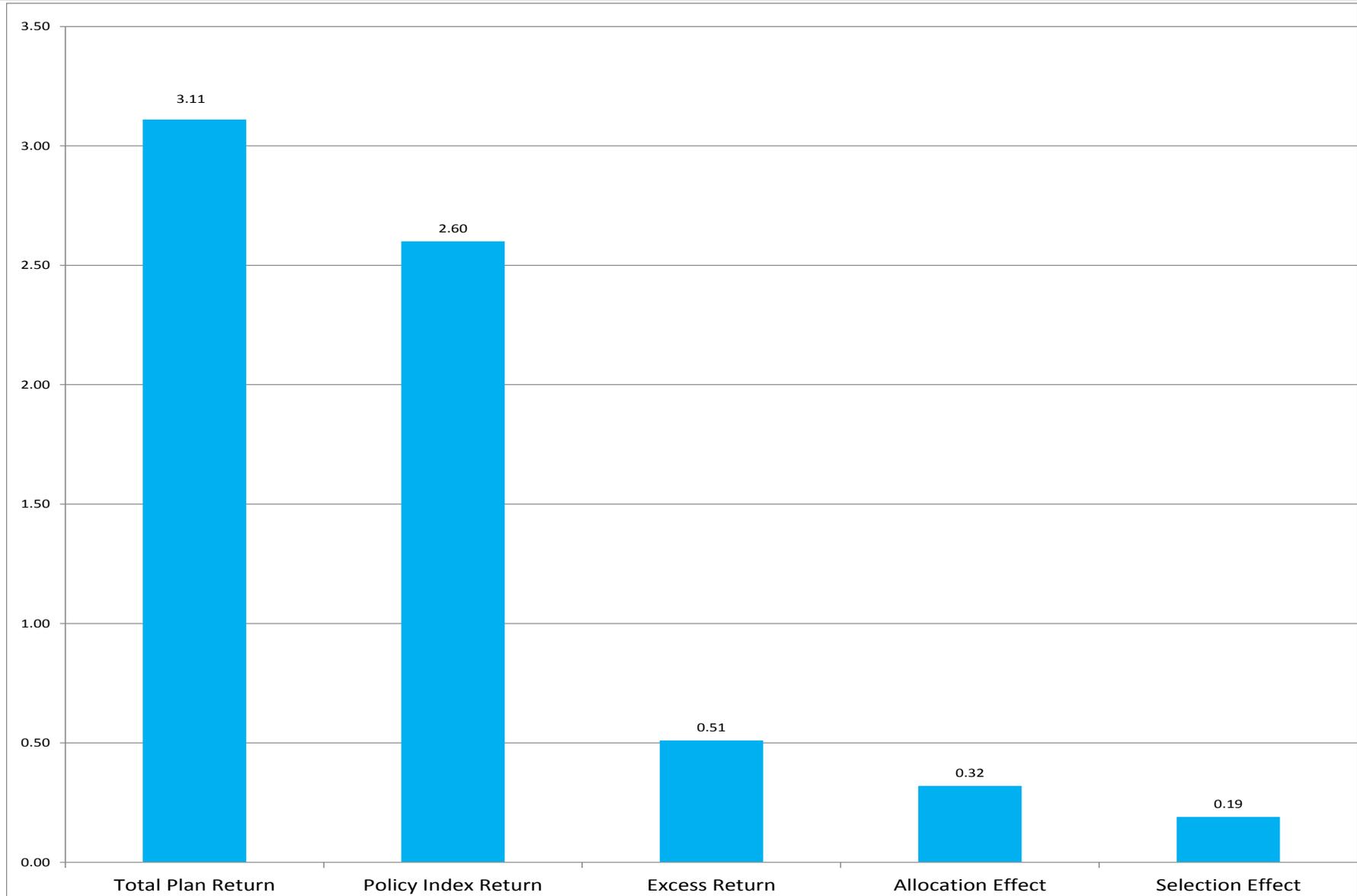
Performance Attribution: Total Plan - Quarter Ending: March 31, 2020



Performance Attribution: Total Plan - Fiscal Year to Date: March 31, 2020



Performance Attribution: Total Plan - 3 Years Ending: March 31, 2020



| Allocation Effect - Asset Class Breakdown | | | | |
|---|----------------|-------------|----------------|--------------------------------|
| | <u>Quarter</u> | <u>FYTD</u> | <u>3 Years</u> | <u>Benchmark</u> |
| TOTAL FIRE OFFICERS | 0.51 | 0.66 | 0.32 | Fire Officers Policy Benchmark |
| TOTAL DOMESTIC EQUITY | -0.04 | 0.07 | 0.05 | RUSSELL 3000 |
| TOTAL WORLD ex-USA EQUITY | 0.27 | 0.27 | 0.12 | MSCI World ex USA IMI Net |
| TOTAL EMERGING MARKETS | 0.01 | -0.01 | 0.01 | MSCI EMERGING MARKETS |
| TOTAL STRUCTURED | 0.16 | 0.22 | 0.18 | Barclays Aggregate |
| TOTAL CASH | 0.11 | 0.11 | -0.06 | |

| Selection Effect - Asset Class Breakdown | | | | |
|--|----------------|-------------|----------------|--------------------------------|
| | <u>Quarter</u> | <u>FYTD</u> | <u>3 Years</u> | <u>Benchmark</u> |
| TOTAL FIRE OFFICERS | 0.08 | 0.04 | 0.19 | Fire Officers Policy Benchmark |
| TOTAL DOMESTIC EQUITY | -0.03 | -0.04 | 0.00 | RUSSELL 3000 |
| TOTAL WORLD ex-USA EQUITY | 0.03 | 0.02 | 0.23 | MSCI World ex USA IMI Net |
| TOTAL EMERGING MARKETS | 0.00 | 0.00 | 0.00 | MSCI EMERGING MARKETS |
| TOTAL STRUCTURED | 0.09 | 0.07 | -0.05 | Barclays Aggregate |
| TOTAL CASH | 0.00 | 0.00 | 0.00 | |

**NYC FIRE OFFICERS' VARIABLE SUPPLEMENTS FUND
SECURITIES LENDING INCOME
March 31, 2020**

| | <u>U. S. FIXED INCOME</u> | <u>U. S. EQUITY</u> | <u>INTERNATIONAL EQUITY</u> | <u>TOTAL</u> |
|-----------------|-------------------------------|-------------------------|---------------------------------|------------------|
| 2001 | 32,000 | 6,000 | - | 38,000 |
| 2002 | 20,000 | 6,200 | - | 26,200 |
| 2003 | 14,000 | 11,000 | 31,000 | 56,000 |
| 2004 | 24,000 | 24,000 | 24,000 | 72,000 |
| 2005 | 42,000 | 42,000 | 32,000 | 116,000 |
| 2006 | 44,000 | 98,000 | 32,000 | 174,000 |
| 2007 | 91,000 | 137,000 | 28,000 | 256,000 |
| 2008 | 240,000 | 195,000 | 37,000 | 472,000 |
| 2009 | 67,000 | 101,000 | 25,000 | 193,000 |
| 2010 | 32,000 | 101,000 | 20,000 | 153,000 |
| 2011 | 48,000 | 116,000 | 34,000 | 198,000 |
| 2012 | 37,000 | 129,000 | 25,000 | 191,000 |
| 2013 | 17,000 | 113,000 | 25,000 | 155,000 |
| 2014 | 7,900 | 11,000 | 131,000 | 149,900 |
| 2015 | 2,000 | 8,400 | 209,000 | 219,400 |
| 2016 | 7,000 | 131,000 | 170,000 | 308,000 |
| 2017 | 15,000 | 60,000 | 99,000 | 174,000 |
| 2018 | 6,012 | 33,752 | 110,683 | 150,447 |
| 2019 | 8,191 | 18,555 | 67,043 | 93,789 |
| 2020 (3 months) | 3,119 | 4,219 | 15,490 | 22,828 |
| Since Inception | <u>757,222</u> | <u>1,346,126</u> | <u>1,115,217</u> | <u>3,218,564</u> |

**New York City
Fire Officers' Variable Supplements Fund**

Appendix A

Consolidated Performance Report

Consolidated Performance Report

Through March 31, 2020



| | Market Value (\$MM) | % of Total | 3 Month | FYTD | CYTD | FYE 2019 | 2019 | 2018 | 2017 | 1 Year | 3 Year | 5 Year | 10 Year | ITD | Inception Date | |
|------------------------------|--|------------|---------|---------|---------|----------|--------|--------|--------|--------|---------|--------|---------|-------|----------------|------------|
| SYSTEM RETURN SUMMARY | | | | | | | | | | | | | | | | |
| 5 | FIRE OFFICERS-TOTAL PORTFOLIO - GROSS | 309 | 100.00 | (13.30) | (7.41) | (13.30) | 6.17 | 20.17 | (5.83) | 17.71 | (4.26) | 3.12 | 3.98 | 7.33 | 7.94 | 01/01/1988 |
| | FIRE OFFICERS- ESTIMATED INVESTMENT FEES | | | (0.00) | (0.01) | (0.00) | (0.01) | (0.01) | (0.00) | (0.06) | (0.01) | (0.02) | (0.04) | | | |
| | EST MANAGEMENT FEES | | | (0.00) | (0.01) | (0.00) | (0.01) | (0.01) | (0.00) | (0.06) | (0.01) | (0.02) | (0.04) | | | |
| | EST INCENTIVE FEES | | | | | | | | | | | | | | | |
| | EST OTHER FEES | | | | | | | | | | | | | | | |
| | EST FEE OFFSETS | | | | | | | | | | | | | | | |
| | FIRE OFFICERS-TOTAL PORTFOLIO - NET MGR | | | (13.30) | (7.42) | (13.30) | 6.16 | 20.15 | (5.83) | 17.64 | (4.27) | 3.11 | 3.93 | | | |
| | FIRE OFFICERS POLICY BENCHMARK | | | (13.89) | (8.12) | (13.89) | 6.29 | 20.32 | (6.22) | 16.32 | (4.94) | 2.60 | 3.69 | 7.12 | | |
| | EXCESS RETURN | | | 0.59 | 0.70 | 0.59 | (0.13) | (0.17) | 0.39 | 1.32 | 0.66 | 0.50 | 0.24 | 0.20 | | |
| EQUITY RETURN DETAIL | | | | | | | | | | | | | | | | |
| 17 | FOVSF-TOTAL EQUITY - GROSS | 181 | 58.71 | (22.24) | (15.25) | (22.24) | 5.05 | 26.86 | (9.53) | 24.78 | (12.23) | 1.35 | 3.44 | 7.89 | 5.38 | 08/01/2001 |
| | ESTIMATED INVESTMENT FEES | | | (0.00) | (0.01) | (0.00) | (0.01) | (0.01) | (0.01) | (0.06) | (0.01) | (0.02) | (0.04) | | | |
| | EST MANAGEMENT FEES | | | (0.00) | (0.01) | (0.00) | (0.01) | (0.01) | (0.01) | (0.06) | (0.01) | (0.02) | (0.04) | | | |
| | EST INCENTIVE FEES | | | | | | | | | | | | | | | |
| | EST OTHER FEES | | | | | | | | | | | | | | | |
| | EST FEE OFFSETS | | | | | | | | | | | | | | | |
| | FOVSF-TOTAL EQUITY - NET MGR | | | (22.25) | (15.25) | (22.25) | 5.04 | 26.85 | (9.53) | 24.72 | (12.24) | 1.33 | 3.40 | | | |
| 25 | FOVSF-TOTAL DOMESTIC EQUITY - GROSS | 100 | 32.36 | (21.02) | (12.86) | (21.02) | 8.97 | 30.94 | (5.09) | 21.15 | (9.31) | 3.99 | 5.83 | 10.20 | 9.49 | 01/01/1991 |
| | ESTIMATED INVESTMENT FEES | | | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | | |
| | FOVSF-TOTAL DOMESTIC EQUITY - NET MGR | | | (21.02) | (12.86) | (21.02) | 8.96 | 30.94 | (5.09) | 21.14 | (9.31) | 3.99 | 5.83 | | | |
| | RUSSELL 3000/S&P500 04/30/09 | | | (20.90) | (12.70) | (20.90) | 8.98 | 31.02 | (5.24) | 21.13 | (9.13) | 4.00 | 5.77 | 10.15 | 9.44 | |
| | EXCESS RETURN | | | (0.12) | (0.16) | (0.12) | (0.02) | (0.08) | 0.15 | 0.01 | (0.18) | (0.01) | 0.06 | 0.05 | 0.05 | |

Consolidated Performance Report

Through March 31, 2020



| | Market Value (\$MM) | % of Total | 3 Month | FYTD | CYTD | FYE 2019 | 2019 | 2018 | 2017 | 1 Year | 3 Year | 5 Year | 10 Year | ITD | Inception Date | |
|-----------------------------|--|------------|---------|---------------|---------------|---------------|-------------|-------------|-------------|---------------|-------------|-------------|---------------|---------------|----------------|------------|
| EQUITY RETURN DETAIL | | | | | | | | | | | | | | | | |
| 37 | FOVSF-TOTAL WORLD ex-USA - GROSS | 60 | 19.59 | (23.87) | (18.26) | (23.87) | 0.28 | 22.99 | (14.40) | 36.65 | (15.28) | (0.82) | 0.24 | 2.86 | 4.90 | 07/01/1994 |
| | ESTIMATED INVESTMENT FEES | | | (0.00) | (0.01) | (0.00) | (0.01) | (0.01) | (0.02) | (0.17) | (0.01) | (0.03) | (0.12) | | | |
| | FOVSF-TOTAL WORLD ex-USA - NET MGR | | | (23.87) | (18.27) | (23.87) | 0.27 | 22.98 | (14.41) | 36.48 | (15.29) | (0.86) | 0.12 | | | |
| | WORLD EX-USA CUSTOM BM | | | (24.00) | (18.34) | (24.00) | 0.16 | 22.91 | (14.68) | 26.40 | (15.48) | (2.10) | (0.49) | 2.93 | 3.89 | |
| | EXCESS RETURN | | | 0.13 | 0.07 | 0.13 | 0.11 | 0.07 | 0.27 | 10.08 | 0.19 | 1.24 | 0.61 | (0.06) | 1.00 | |
| 47 | FOVSF- TOTAL EMERGING MARKETS - GROSS | 21 | 6.77 | (23.63) | (18.18) | (23.63) | 1.44 | 18.74 | (14.44) | 37.41 | (17.60) | (1.53) | (1.22) | 0.06 | 4.04 | 08/01/2005 |
| | ESTIMATED INVESTMENT FEES | | | (0.00) | (0.01) | (0.00) | (0.02) | (0.03) | 0.01 | (0.15) | (0.02) | (0.04) | (0.05) | | | |
| | FOVSF-TOTAL EMERGING MARKETS - NET MGR | | | (23.64) | (18.19) | (23.64) | 1.42 | 18.72 | (14.44) | 37.27 | (17.62) | (1.57) | (1.27) | | | |
| | MSCI EMERGING MARKETS | | | (23.60) | (18.18) | (23.60) | 1.21 | 18.42 | (14.57) | 37.28 | (17.69) | (1.62) | (0.37) | 0.68 | 4.80 | |
| | EXCESS RETURN | | | (0.04) | (0.01) | (0.04) | 0.21 | 0.29 | 0.13 | (0.02) | 0.07 | 0.05 | (0.90) | (0.63) | (0.76) | |

Consolidated Performance Report

Through March 31, 2020



| | Market Value (\$MM) | % of Total | 3 Month | FYTD | CYTD | FYE 2019 | 2019 | 2018 | 2017 | 1 Year | 3 Year | 5 Year | 10 Year | ITD | Inception Date | |
|-----------------------------------|---|------------|---------|-------------|-------------|-------------|-------------|-------------|---------------|-------------|-------------|-------------|-------------|------|----------------|------------|
| FIXED INCOME RETURN DETAIL | | | | | | | | | | | | | | | | |
| 59 | FOVSF-TOTAL FIXED INCOME - GROSS | 127 | 41.29 | 3.37 | 5.82 | 3.37 | 7.74 | 8.51 | (0.18) | 3.68 | 9.04 | 4.64 | 3.75 | 4.97 | 6.01 | 08/01/1993 |
| | ESTIMATED INVESTMENT FEES | | | (0.00) | (0.01) | (0.00) | (0.01) | (0.02) | 0.01 | (0.06) | (0.02) | (0.01) | (0.06) | | | |
| | EST MANAGEMENT FEES | | | (0.00) | (0.01) | (0.00) | (0.01) | (0.02) | 0.01 | (0.06) | (0.02) | (0.01) | (0.06) | | | |
| | EST INCENTIVE FEES | | | | | | | | | | | | | | | |
| | EST OTHER FEES | | | | | | | | | | | | | | | |
| | EST FEE OFFSETS | | | | | | | | | | | | | | | |
| | FOVSF-TOTAL FIXED INCOME - NET MGR | | | 3.36 | 5.81 | 3.36 | 7.72 | 8.49 | (0.17) | 3.62 | 9.02 | 4.63 | 3.69 | | | |
| 67 | FOVSF-TOTAL STRUCTURED - GROSS | 126 | 40.86 | 3.40 | 5.87 | 3.40 | 8.00 | 8.76 | (0.22) | 3.31 | 9.15 | 4.68 | 3.49 | 4.86 | 5.81 | 09/01/2000 |
| | ESTIMATED INVESTMENT FEES | | | (0.00) | (0.01) | (0.00) | (0.01) | (0.02) | 0.01 | (0.05) | (0.02) | (0.01) | (0.04) | | | |
| | FOVSF-TOTAL STRUCTURED - NET MGR | | | 3.39 | 5.86 | 3.39 | 7.99 | 8.75 | (0.21) | 3.26 | 9.14 | 4.67 | 3.45 | | | |
| | BBG BARC AGG (DLY) | | | 3.15 | 5.68 | 3.15 | 7.87 | 8.72 | 0.01 | 3.54 | 8.93 | 4.82 | 3.36 | 3.88 | 4.97 | |
| | EXCESS RETURN | | | 0.24 | 0.18 | 0.24 | 0.12 | 0.03 | (0.22) | (0.28) | 0.20 | (0.15) | 0.09 | 0.97 | 0.84 | |
| CASH SUMMARY | | | | | | | | | | | | | | | | |
| 79 | Short Term FOVSF - GROSS | 1 | 0.42 | 0.26 | 1.14 | 0.26 | 2.27 | 2.09 | 1.62 | | 1.73 | | | | | 01/01/1988 |
| | ESTIMATED INVESTMENT FEES | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | | | |
| | Short Term FOVSF - NET MGR | | | 0.26 | 1.14 | 0.26 | 2.27 | 2.09 | 1.62 | | 1.73 | | | | | |
| 83 | Cash Account | 0 | 0.00 | | | | | | | | | | | | | |
| 85 | Securities Lending | 0 | 0.00 | | | | | | | | | | | | | |

**New York City
Fire Officers' Variable Supplements Fund**

Appendix B

Public Markets Manager Performance Detail

Public Markets Manager Performance Detail



Net Returns Through March 31, 2020

| | Market Value (\$MM) | % of Total | 3 Month | FYTD | CYTD | 2019 | 2018 | 2017 | 2016 | 2015 |
|--|---------------------|------------|---------|---------|---------|--------|---------|--------|--------|--------|
| EQUITY SUMMARY | | | | | | | | | | |
| US EQUITY | | | | | | | | | | |
| BlackRock US SCG R2000 | 4 | 1.32 | (25.76) | (20.79) | (25.76) | 28.39 | (9.14) | 22.26 | 11.29 | (1.30) |
| RUSSELL 2000 GROWTH DAILY | | | (25.76) | (20.76) | (25.76) | 28.48 | (9.31) | 22.17 | 11.32 | (1.38) |
| Excess | | | 0.01 | (0.04) | 0.01 | (0.09) | 0.17 | 0.09 | (0.02) | 0.08 |
| BlackRock US SCV R2000 | 3 | 1.00 | (35.73) | (30.55) | (35.73) | 22.60 | (12.79) | 7.34 | 31.71 | (7.38) |
| RUSSELL 2000 VALUE DAILY | | | (35.66) | (30.60) | (35.66) | 22.39 | (12.86) | 7.84 | 31.74 | (7.47) |
| Excess | | | (0.06) | 0.05 | (0.06) | 0.20 | 0.08 | (0.49) | (0.03) | 0.09 |
| BlackRock US LMC R1000 Core | 93 | 30.04 | (20.22) | (11.79) | (20.22) | 31.37 | | | | |
| RUSSELL 1000 (DAILY) | | | (20.22) | (11.77) | (20.22) | 31.43 | | | | |
| Excess | | | (0.00) | (0.02) | (0.00) | (0.06) | | | | |
| NON - US EQUITY | | | | | | | | | | |
| SSGA WorldxUS LMC NYC Custom IDX | 51 | 16.63 | (23.06) | (17.76) | (23.06) | 22.75 | (13.64) | | | |
| NYC Custom World ex US Index | | | (23.26) | (18.00) | (23.26) | 22.49 | (14.09) | | | |
| Excess | | | 0.20 | 0.24 | 0.20 | 0.26 | 0.45 | | | |
| SSGA WORLD EX USA SMALL CAP ¹ | 9 | 2.96 | (28.14) | (20.04) | (28.14) | 25.67 | (17.97) | | | |
| World ex USA SC PASSIVE CUSTOM BM | | | (28.39) | (20.44) | (28.39) | 25.41 | (18.07) | | | |
| Excess | | | 0.25 | 0.40 | 0.25 | 0.26 | 0.10 | | | |
| EMERGING MARKETS | | | | | | | | | | |
| BlackRock MSCI EM Core | 21 | 6.77 | (23.64) | (18.16) | (23.64) | 18.76 | (14.44) | 37.26 | 11.19 | |
| MSCI EMERGING MARKETS | | | (23.60) | (18.18) | (23.60) | 18.42 | (14.57) | 37.28 | 11.19 | |
| Excess | | | (0.04) | 0.02 | (0.04) | 0.34 | 0.13 | (0.02) | 0.01 | |

Public Markets Manager Performance Detail



Net Returns Through March 31, 2020

| | Market Value (\$MM) | % of Total | 3 Month | FYTD | CYTD | 2019 | 2018 | 2017 | 2016 | 2015 |
|-----------------------------------|------------------------|---------------|---------|--------|--------|--------|--------|------|------|------|
| FIXED INCOME SUMMARY | | | | | | | | | | |
| STRUCTURED FIXED INCOME | | | | | | | | | | |
| SSGA-Core US Agg | 126 | 40.86 | 3.39 | 5.86 | 3.39 | 8.75 | (0.24) | | | |
| BBG BARC Agg (Dly) | | | 3.15 | 5.68 | 3.15 | 8.72 | 0.01 | | | |
| Excess | | | 0.24 | 0.18 | 0.24 | 0.03 | (0.25) | | | |
| CASH | | | | | | | | | | |
| Short Term FOVSF | 1 | 0.42 | 0.26 | 1.14 | 0.26 | 2.09 | 1.62 | | 0.48 | 0.18 |
| ICE BofA US 3-Month Treasury Bill | | | 0.57 | 1.61 | 0.57 | 2.28 | 1.87 | | 0.33 | 0.05 |
| Excess | | | (0.32) | (0.47) | (0.32) | (0.19) | (0.25) | | 0.16 | 0.13 |
| Cash Account | 0 | 0.00 | | | | | | | | |
| Securities Lending | 0 | 0.00 | | | | | | | | |

**New York City
Fire Officers' Variable Supplements Fund**

Appendix C

Footnotes

Through March 31, 2020



- Effective 4/1/03, the name of the Core +5 benchmark index provider was changed from Salomon to Citigroup.

- Effective 5/31/09, the US Passive Equity sector S&P 500 Index was replaced with the Russell 3000 benchmark index.

- Effective 7/1/09, the Core+5 program was restructured.
 - The U.S. Gov't sector benchmark Index was changed from the Citigroup Core+5 Treasury/Gov't Sponsored Index to the Citigroup Core+5 Treasury/Agency Index.
 - The Corporate and Yankee sectors were combined to form the new Investment Grade Credit sector. The benchmark for the new combined sector is the customized Citigroup Credit Index. For historical performance purposes, the old Corporate sector Index is linked to the new Credit sector Index.
 - There were no changes to the Mortgage sector Index.
 - The total Core+5 results and benchmark returns combine the three sectors. Historical total Core+5 returns continue to include the old Corporate and Yankee sector returns.

General Notes

- Returns are Net of Manager Fees for periods after January 2014 and Gross of investment advisory fees for other periods unless otherwise indicated.

Page Specific

Page 4 - Portfolio Asset Allocation

- Rebalancing Ranges: the minimum and maximum weights that actual Asset Allocation may reach before rebalancing between Asset Classes is necessary.

Pages 5 - 7 - Performance Attribution: Total Plan

- Plan Return at Policy Weights: the return of the Total Plan assuming actual Asset Class results were maintained at target (Adjusted Policy) weights. *Figure = (Return of Asset Class 1 * Target Weight) plus (Return Of Asset Class 2 * Target Weight) plus (.....)*
- **Allocation Effect** = Total Plan Return minus Plan Return At Adjusted Policy Weights. Allocation is the Contribution to Performance resulting from an overweight or underweight to an asset class. E.g. an underweight to an Asset Class that under-performs results in a positive Allocation Effect and vice versa.
- **Selection Effect** = Equal to the Custom Benchmark (Adjusted Policy Index) Return minus Plan Return at Adjusted Policy Weights. This illustrates how the Managers have added or removed value based on their Security Selection decisions, e.g., *If the manager's Actual Returns are higher than the Implied Return there will be a positive Selection Effect.*
- **Policy Index = Custom Benchmark**
The "policy index" is a custom benchmark representing the weighted average return of the weighted benchmark indexes for each major investment program. Weights may reflect an adjustment of actual policy for outstanding commitments for new or revised programs, such as for private market programs, which are invested gradually, or for any new or updated program requiring the completion of RFPs and contracts. The policy index/custom benchmark is calculated monthly based on adjusted policy weights at the beginning of each month.

Glossary of Terms

Through March 31, 2020



The indexes and most recent policy weights are as follows:

*U.S. Equity: Russell 3000 * 33.90%*

*International Developed (EAFE) Markets: MSCI World ex USA IMI Net * 23.80%*

*International Emerging Markets: MSCI Emerging Markets * 7.30%*

*REITs: Dow Jones Select Real Estate Securities * 0.00%*

*Domestic Fixed Income: Barclays Aggregate * 35.00%*

TIPS: BBG BARC Gbl Inf-Lk: US TIPS (Dly) 0.00%*

*High Yield: FTSE BB&B * 0.00%*

Page 8 – Allocation and Selection Effects - Asset Class Breakdown

- This chart aims to break down the Allocation and Selection Effects shown on the Performance Attribution pages. The aim of the Page is to show the asset classes where Managers are either out performing or under performing their benchmark and to show the basis point effect that this is having on Plan performance.