



New York City Police Pension Fund, Subchapter Two Performance Overview as of March 31, 2017

# **Total Fund Overview**



# **New York City Police Pension Fund, Subchapter Two**

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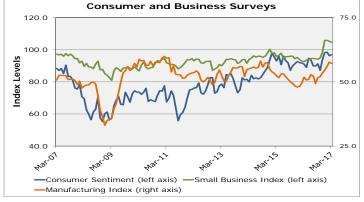
Through March 31, 2017





# 1Q17 Capital Markets Commentary

- **US Equity** Market trends shifted slightly during the first quarter of 2017 as the pro-cyclical reflation trade that had accelerated in November following the US presidential election, gave way to a more cautious tone. Where the fourth quarter was defined by the outperformance of value, small-caps, cyclicals and stocks with domestic sales concentration; the first quarter was led by growth, large-caps, defensives and stocks with greater exposure to international sales. The broad US market index, Russell 3000, solidly advanced by 5.7% for the quarter. Consumer and small business sentiment, seen in the chart below, remains strong and has picked up since the November election. Manufacturing activity also increased and expectations are for further expansion.
- International Equity Equity markets outside of the US produced very strong returns during the first quarter of 2017 in both developed and emerging markets. Market returns were helped by a weaker dollar and positive economic data out of Europe. Emerging market equities had their best quarter since early 2012 as India, South Korea, and China led the emerging market rally with improving economic conditions.



 During its April meeting the European Central Bank left its interest rate and policy guidance unchanged as it balances a more-robust economy against inflationary pressures that still remain subdued. The Bank of Japan pushed back against speculation about an early interest rate increase by mixing an upbeat assessment of the economy with a further lowering of its inflation forecast.

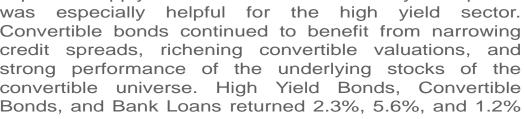
Through March 31, 2017

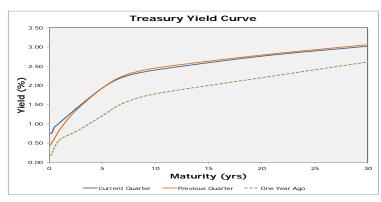


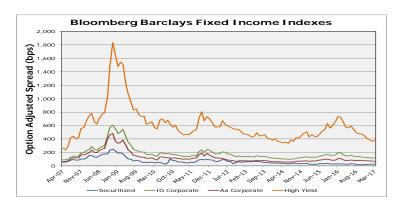


# 1Q17 Capital Markets Commentary

- Fixed Income The US investment-grade fixed income market advanced during the quarter as represented by the Bloomberg Barclays US Aggregate Bond Index return of 0.8%. The US Treasury yield curve did not shift much when compared to last quarter. It flattened as the sixmonth yield increased 29 basis points on the Fed increase, and the ten-year yield fell 5 basis points. The Fed is following its schedule for normalization and investors are looking to June for the next increase in policy rates. Investment grade corporate bonds posted some of the strongest performance among all sectors in the index. Their underlying fundamentals have improved as recent earnings releases were better than expected.
- Opportunistic Fixed Income Spread sectors and high yield corporates posted solid returns on the continuing strong global demand for them despite a larger than expected supply issuance. Increased stability in oil prices was especially helpful for the high yield sector. Convertible bonds continued to benefit from narrowing credit spreads, richening convertible valuations, and strong performance of the underlying stocks of the convertible universe. High Yield Bonds, Convertible Bonds, and Bank Loans returned 2.3%, 5.6%, and 1.2% for the quarter, respectively. ©2017 Wilshire Associates.







#### **Consultant's Commentary**

Through March 31, 2017





# 1Q17 Capital Markets Commentary

- Real Estate At the end of the quarter the NCREIF Open End Diversified Core Equity Fund Index has seven full years of positive appreciation which is one of the longest real estate market expansions in history. Recent returns have moderated as vacancy rates nationally slightly increased in apartments, industrial and office during the quarter, while retail was flat.
- Infrastructure After a disappointing finish for 2016, listed infrastructure stocks rebounded strongly during the quarter. Infrastructure stock performance was positive in every region, with Emerging Markets and Continental Europe leading the way with double digit returns. The strong performance of the listed infrastructure market was supported by a positive economic backdrop and earnings that broadly met expectations.
- Private Equity Private equity returns remained strong. Exit activity was robust, but down from
  recent record highs, as the boom-year investments may have finally been realized. There is still
  significant interest among investors in private equity and venture capital to cash out of their
  holdings, some of which the funds have owned for more than the typical 10 years. Fund raising
  continues at historically high levels, driven both by investor inflows as well as by rising valuations.
  Funds are finding it tougher to find and close good deals at current prices that will generate
  investor's expected returns.
- Hedge Funds Hedge funds produced gains in all three months, adding to a period of extended positive performance that has seen industry returns climb for five consecutive months and 12 of the last 13 months. The HFRI Fund Weighted Composite Index (FWC) increased by 2.3% for the quarter led by equity hedge strategies. The HFRI Equity Hedge (Total) Index advanced 3.6% for the quarter led by technology, fundamental growth, and healthcare. Total hedge fund industry capital increased in the quarter, as investors increased allocations to event driven and trendfollowing macro strategies.

Through March 31, 2017





# 1Q17 Performance Commentary

- Total Plan Over the first quarter of 2017 (1Q17), the Total Fund returned 4.7% outperforming the policy benchmark return of 4.4% on a net-of-fees basis. In the trailing 12 months, Total Fund returned 12.1% also outperforming the policy benchmark return of 11.5%. According to the Wilshire TUCS Universe of public plans over \$5 billion, the median return over the same period was 11.7%, placing the Total Fund in the first percentile.
  - Over the trailing three-, five- and ten-year periods, the Total Fund returned 6.6%, 8.6%, and 5.9%, respectively, closely matching the policy benchmark returns of 6.5%, 8.6%, and 6.0%, respectively.
- Total Domestic Equity Composite The Total Fund has \$13.5 billion, or 36.4% invested in domestic equity. The composite remains predominately passively invested with approximately 80% of the composite invested passively across market cap segments. Currently, active management is utilized in small-cap and mid-cap stocks, with only 1.6% invested in Emerging Managers Fund of Fund mandates.
  - For 1Q17, the Domestic Equity Composite returned 5.4% versus the Russell 3000 return of 5.7%. The Small-Cap Active and Large-Cap Active components underperformed the Russell 2000 and Russell 1000 indexes, respectively, while the Mid-Cap Active outperformed the Russell Midcap Index.
  - While most active managers outperformed their benchmarks during this quarter, Iridian Asset Management had particularly strong performance. Iridian underperformed in 2016 but delivered 543 basis points above its benchmark of the Russell Midcap Value Index this quarter. The strategy employs a bottom-up fundamental analysis and valuation of companies with greater emphasis placed on stock selection than the macroeconomic and regulatory environments.

#### **Consultant's Commentary**

Through March 31, 2017





# 1Q17 Performance Commentary

- Total International Equity Composite The Total Fund has \$6.0 billion, or 16.3% invested in international equities. The composite allocation is 27.7% in passive versus 72.3% active. When broken down by strategy, the allocations are: 47.9% to Developed Large-Cap, 10.5% to Developed Small-Cap, 39.2% to Emerging Markets, and 2.5% to Active Environmental.
  - For 1Q17, the Total International Equity Composite outperformed the MSCI ACWI Ex-US (Net) Index because the Total International Equity Composite emerging markets allocation was overweight versus the benchmark. The Total International Equity Composite returned 10.3% versus the index return of 7.9%. The active Emerging Markets, Developed Growth, and Developed Value segments outperformed their indexes.
- Total Fixed Income Composite The Total Fund has \$11.3 billion, or 30.6% invested in fixed income securities. The structure of the composite is: 47.4% in Structured Fixed Income (the allocation of the Structured Fixed Income is: 32.3% in Investment Grade Credit, 22.7% in Mortgages, 41.7% in Government Bonds, and 3.3% in Long Duration Treasuries), 9.1% in Opportunistic Fixed Income (OFI), 13.3% in TIPS, 15.5% in Enhanced Yield, 5.4% in Bank Loans, 2.1% in Convertible Bonds, 0.7% in Fund of Funds, 0.6% in Core Plus Fixed Income, 3.2% in Targeted Investments, and 2.7% in Short-Term Cash.
  - For 1Q17, the Total Fixed Income Composite returned 1.6%. While the Federal Reserve increased the Fed rate by 25 basis points, longer term rates went down and the curve flattened. The Enhanced Yield, Bank Loans, Convertible Bonds, and OFI segments were able to produce absolute positive returns. Relative to their respective benchmarks, OFI outperformed while Bank Loans and Convertible Bonds underperformed.

#### **Consultant's Commentary**

Through March 31, 2017



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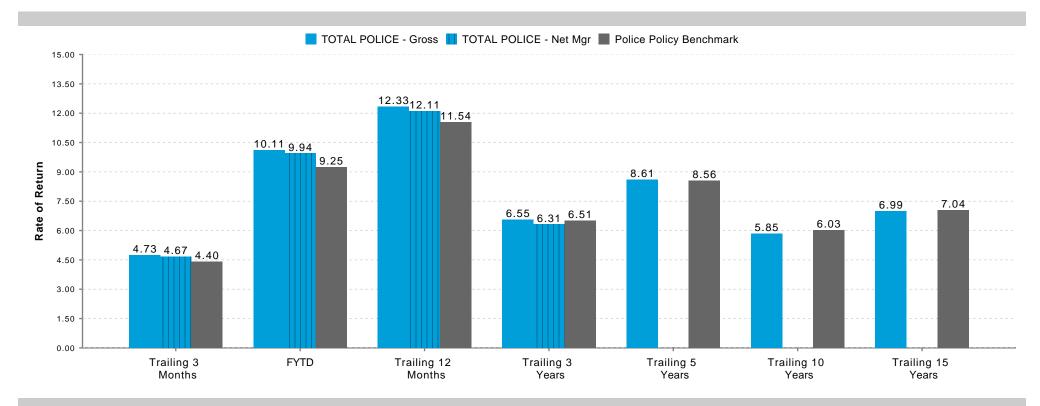
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#### Market Value (Billions)

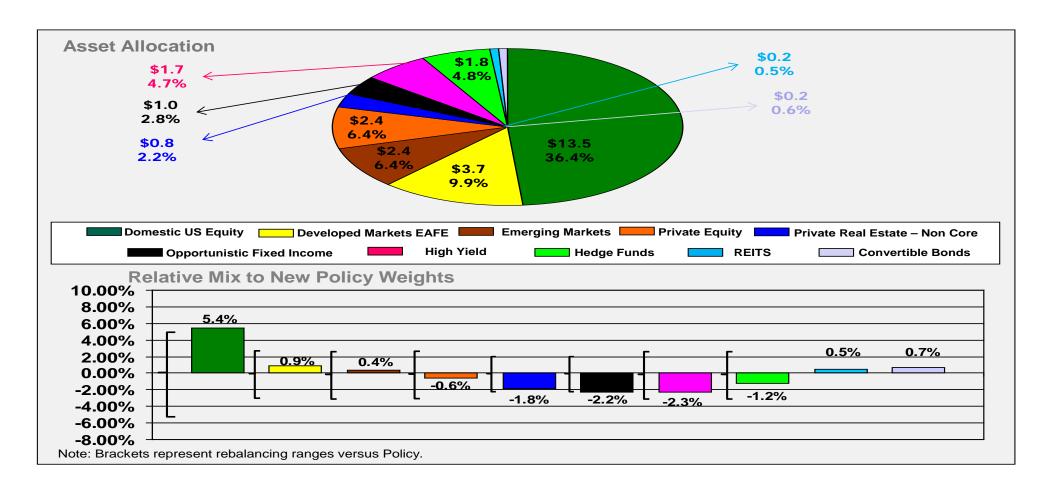
TOTAL POLICE \$37.0



	Plan 3 Years	Benchmark 3 Years	Plan 5 Years	Benchmark 5 Years	Plan 10 Years	Benchmark 10 Years
<b>Standard Deviation</b>						
TOTAL POLICE	6.1	5.9	8.6	6.0	10.2	11.1

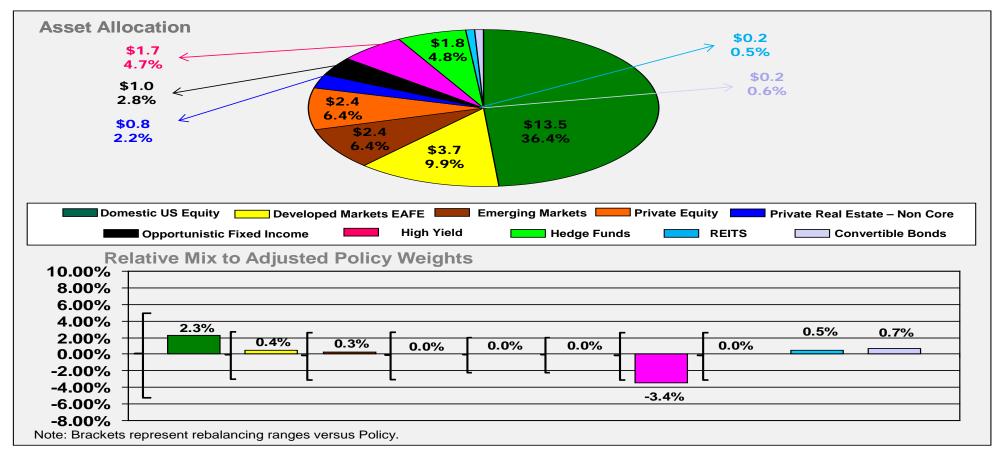


#### **Portfolio Asset Allocation – Growth**





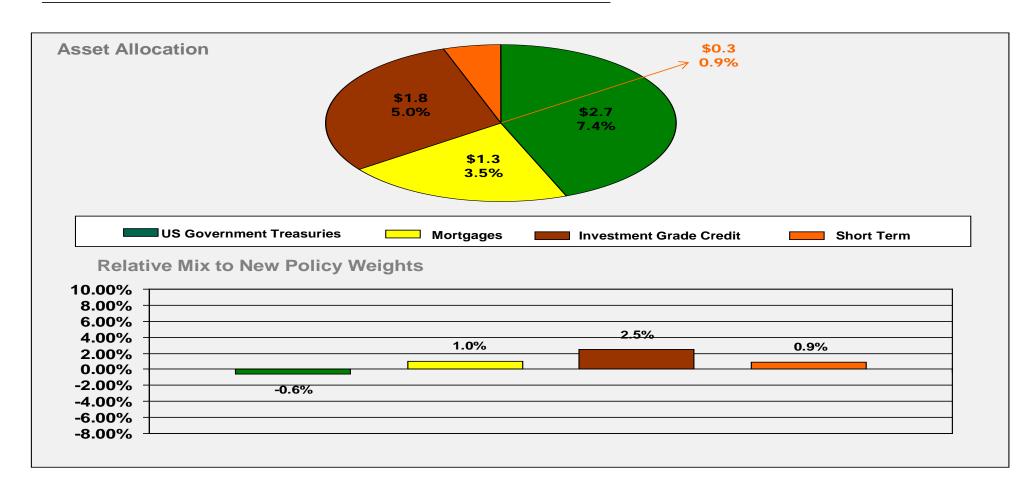
#### **Portfolio Asset Allocation – Growth**



Note: On March 31, 2017 Police's combined Fixed Income and Cash portfolios have a duration of 6.1 years. The duration of the Barclays US Aggregate Index was 6 years on that date.

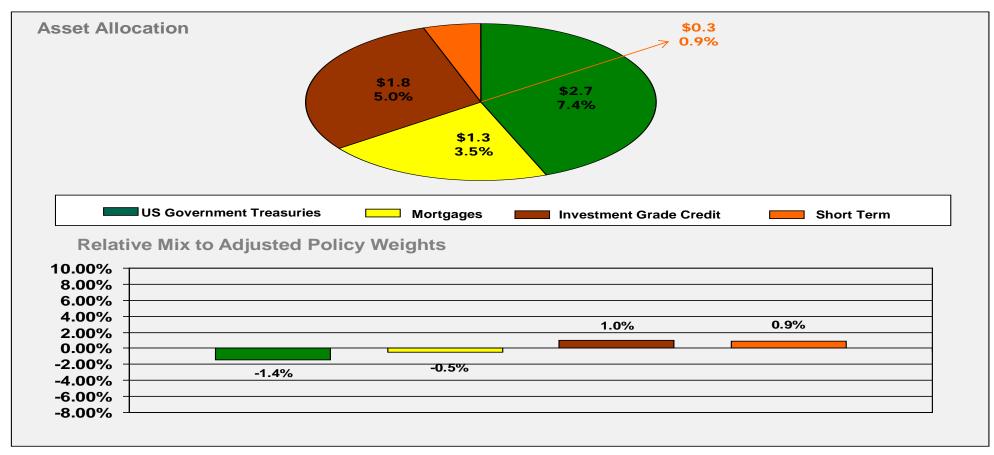


#### Portfolio Asset Allocation - Deflation Protection





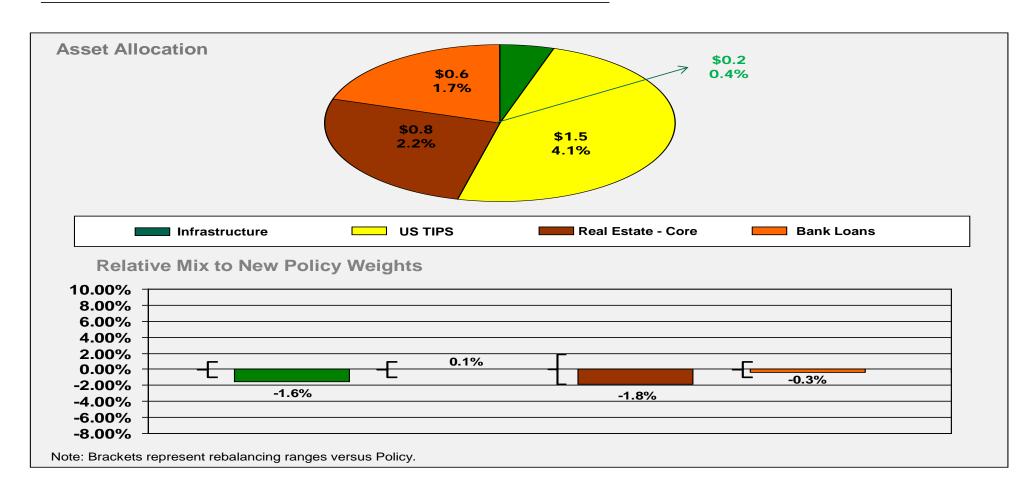
#### **Portfolio Asset Allocation – Deflation Protection**



Note: On March 31, 2017 Police's combined Fixed Income and Cash portfolios have a duration of 6.1 years. The duration of the Barclays US Aggregate Index was 6 years on that date.

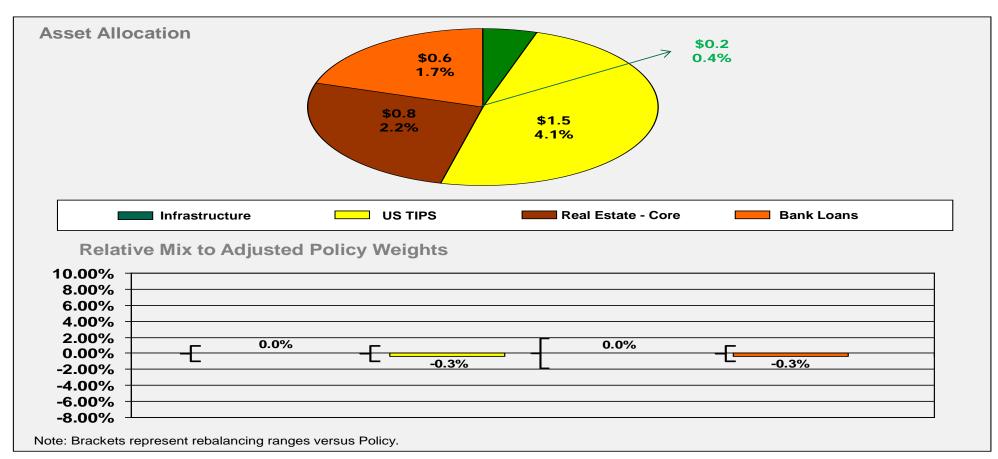


### Portfolio Asset Allocation – Inflation Protection



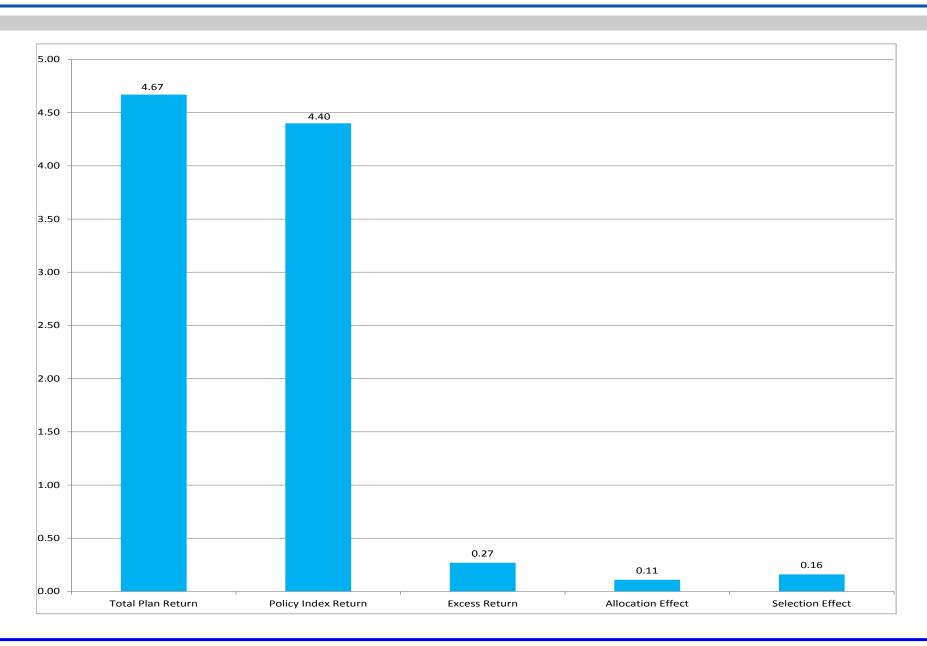


#### **Portfolio Asset Allocation – Inflation Protection**

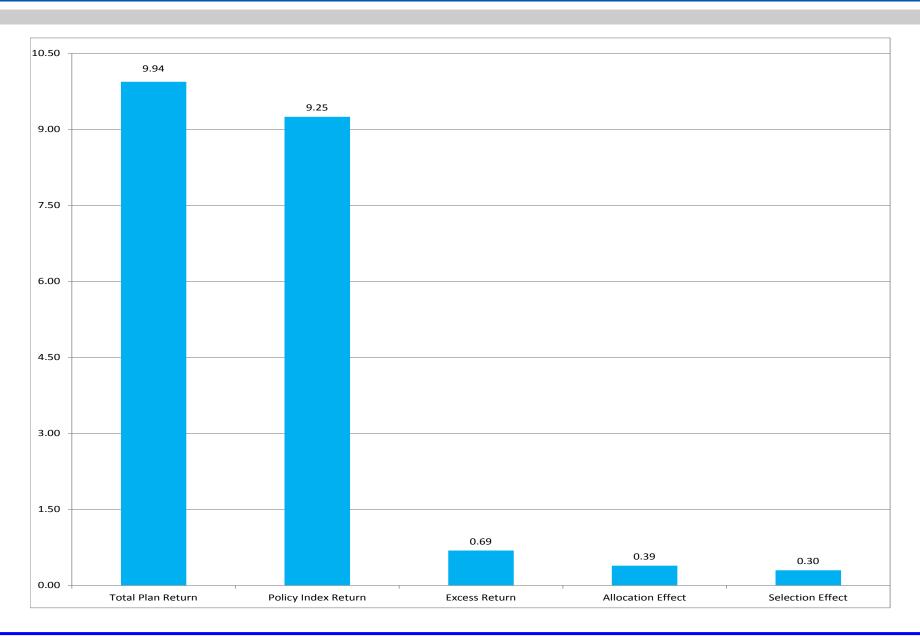


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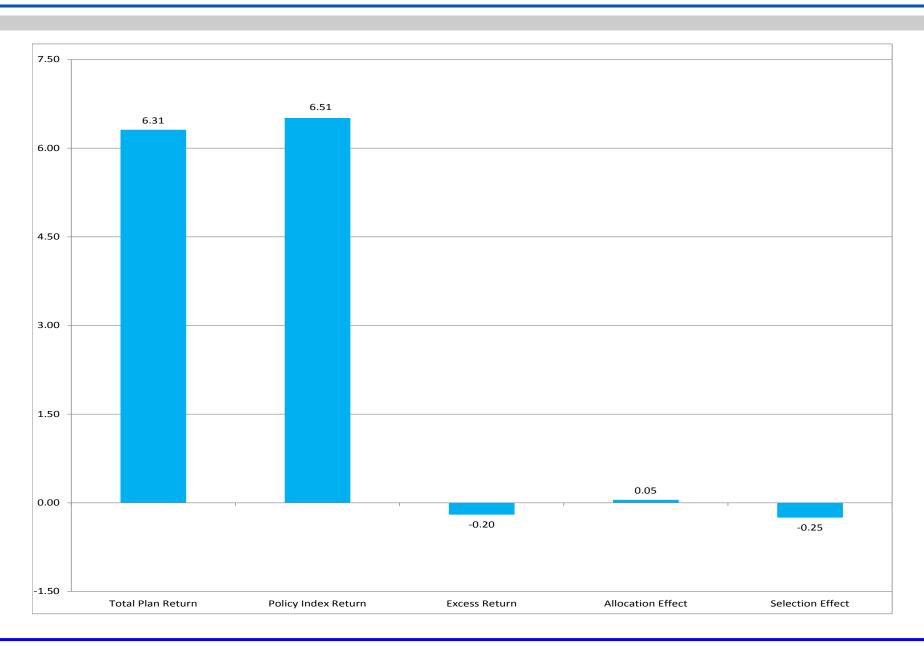












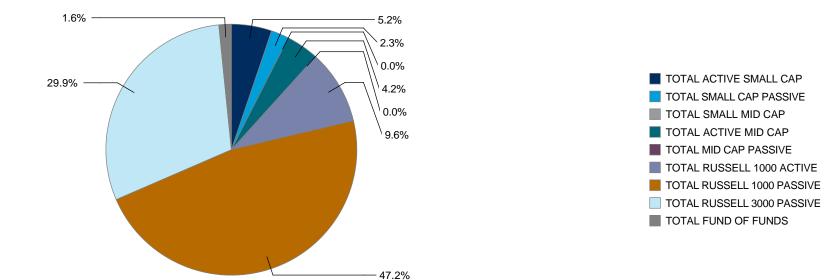


Allocation Effect - Asset Class Breakdown										
	Quarter	FYTD	3 Years	<u>Benchmark</u>						
TOTAL POLICE	0.11	0.39	0.05	Police Policy Benchmark						
TOTAL DOMESTIC EQUITY	0.05	0.12	0.05	RUSSELL 3000						
TOTAL DEVELOPED EQUITY	0.00	-0.01	-0.01	MSCI EAFE IMI Net						
TOTAL EMERGING MARKETS	-0.01	-0.02	0.00	MSCI Emerging Markets						
TOTAL HEDGE FUNDS	0.00	0.00	0.00	HFRI Fund of Funds Composite Index plus 1%						
TOTAL REAL ESTATE SECURITIES	-0.02	-0.01	0.00	Dow Jones US Select Securities Index						
TOTAL PRIVATE EQUITY	0.00	0.00	0.00	Russell 3K + 300bps						
TOTAL PRIVATE REAL ESTATE - CORE	0.00	-0.01	0.00	NCREIF ODCE net						
TOTAL PRIVATE REAL ESTATE - NON CORE	0.00	0.02	0.01	NCREIF ODCE net + 200bps						
TOTAL INFRASTRUCTURE	0.00	0.00	0.00	CPI + 4%						
TOTAL US TREASURY SHORT TERM	-0.11	-0.12	-0.04	Citigroup USBIG Treasury 1-3 Y Index						
TOTAL US TREASURY INTERMEDIATE	0.00	0.00	0.00	Citigroup USBIG Treasury/Agency 1-10 y						
TOTAL US TREASURY INTERMEDIATE LONG	-0.09	-0.14	-0.05	NYC - Treasury Agency Plus Five						
TOTAL US TREASURY LONG DURATION	0.26	0.44	0.14	Citigroup Treasury 10+						
TOTAL INVESTMENT GRADE CREDIT	-0.06	-0.09	-0.03	NYC - Investment Grade Credit						
TOTAL MORTGAGES	0.03	0.03	0.01	CITIGROUP MORTGAGE INDEX						
TOTAL ETI	0.00	0.00	0.00	ETI Custom Benchmark						
TOTAL CORE FIXED INCOME	-0.01	-0.01	0.00	BBG BARC Agg						
TOTAL PROGRESS FIXED	-0.01	-0.01	0.00	BBG BARC Agg						
TOTAL HIGH YIELD	0.08	0.08	0.02	CITIGROUP BB&B						
TOTAL BANK LOANS	0.01	0.01	0.00	Credit Suisse Lev Loan Index						
TOTAL TIPS MANAGERS	0.01	0.01	0.02	Lehman U.S. TIPS						
TOTAL CONVERTIBLE BONDS	0.01	-0.01	0.00	Merrill All US Converts						
TOTAL OPPORTUNISTIC FIXED	0.00	0.00	0.00	OFI - JPMGHY / CSFB 50/50 Blend Plus 300						
TOTAL CASH	-0.03	-0.08	-0.08							

Selection Effect - Asset Class Breakdown										
	Quarter	<u>FYTD</u>	3 Years	Benchmark						
TOTAL POLICE	0.16	0.30	-0.25	Police Policy Benchmark						
TOTAL DOMESTIC EQUITY	-0.14	-0.01	-0.24	RUSSELL 3000						
TOTAL DEVELOPED EQUITY	0.13	0.16	0.17	MSCI EAFE IMI Net						
TOTAL EMERGING MARKETS	0.08	0.15	0.04	MSCI Emerging Markets						
TOTAL HEDGE FUNDS	0.04	0.08	-0.07	HFRI Fund of Funds Composite Index plus 1%						
TOTAL REAL ESTATE SECURITIES	0.01	0.01	-0.02	Dow Jones US Select Securities Index						
TOTAL PRIVATE EQUITY	-0.05	-0.23	-0.06	Russell 3K + 300bps						
TOTAL PRIVATE REAL ESTATE - CORE	0.03	0.00	0.00	NCREIF ODCE net						
TOTAL PRIVATE REAL ESTATE - NON CORE	0.00	-0.04	-0.01	NCREIF ODCE net + 200bps						
TOTAL INFRASTRUCTURE	0.00	0.01	0.01	CPI + 4%						
TOTAL US TREASURY SHORT TERM	0.00	0.00	0.00	Citigroup USBIG Treasury 1-3 Y Index						
TOTAL US TREASURY INTERMEDIATE	0.00	0.00	0.00	Citigroup USBIG Treasury/Agency 1-10 y						
TOTAL US TREASURY INTERMEDIATE LONG	0.00	0.00	0.00	NYC - Treasury Agency Plus Five						
TOTAL US TREASURY LONG DURATION	0.00	0.00	0.00	Citigroup Treasury 10+						
TOTAL INVESTMENT GRADE CREDIT	0.01	0.01	0.00	NYC - Investment Grade Credit						
TOTAL MORTGAGES	0.00	-0.01	0.00	CITIGROUP MORTGAGE INDEX						
TOTAL ETI	0.00	-0.01	0.00	ETI Custom Benchmark						
TOTAL CORE FIXED INCOME	0.00	0.00	0.00	BBG BARC Agg						
TOTAL PROGRESS FIXED	0.00	0.00	0.00	BBG BARC Agg						
TOTAL HIGH YIELD	0.00	0.00	-0.02	CITIGROUP BB&B						
TOTAL BANK LOANS	0.00	-0.02	0.01	Credit Suisse Lev Loan Index						
TOTAL TIPS MANAGERS	0.00	0.00	0.00	Lehman U.S. TIPS						
TOTAL CONVERTIBLE BONDS	-0.01	-0.05	-0.01	Merrill All US Converts						
TOTAL OPPORTUNISTIC FIXED	0.05	0.08	-0.13	OFI - JPMGHY / CSFB 50/50 Blend Plus 300						
TOTAL CASH	0.00	0.00	0.01							



TOTAL DOMESTIC EQUITY \$13.5 \$36.4

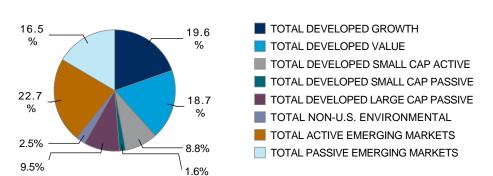


Sub Sector	Policy Weight	Actual Weight	Under/Over Weight	Index Return	Actual Return	Difference
TOTAL SMALL CAP ACTIVE	5.16	5.21	0.05	2.47	2.21	-0.25
TOTAL SMALL CAP PASSIVE	3.29	2.26	-1.03	2.47	3.23	0.77
TOTAL SMALL/MID CAP ACTIVE	1.60	0.00	-1.60	3.76		-3.76
TOTAL MID CAP ACTIVE	6.58	4.18	-2.40	5.15	7.91	2.76
TOTAL MID CAP PASSIVE	8.60	0.00	-8.60	3.94		-3.94
TOTAL RUSSELL 1000 ACTIVE	8.72	9.64	0.92	6.03	3.74	-2.28
TOTAL RUSSELL 1000 PASSIVE	37.80	47.21	9.41	6.03	5.97	-0.06
TOTAL RUSSELL 3000 PASSIVE	26.25	29.89	3.64	5.74	5.70	-0.05
TOTAL EMERGING MANAGERS	2.00	1.61	-0.39	2.47	2.43	-0.04



	Market Value (Billions)	% of plan
TOTAL INTERNATIONAL EQUITY	\$6.0	16.3

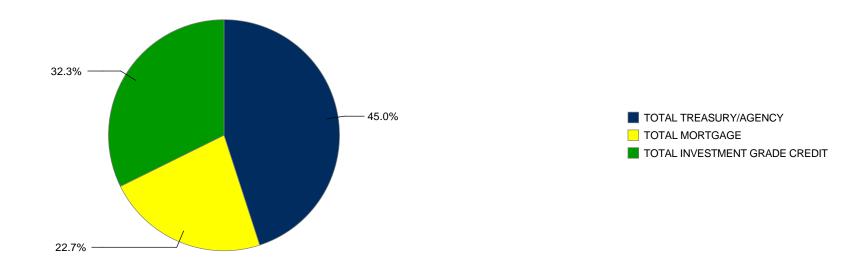




		Quarter	ly Returns - Funds and Ben	chmarks
	Asset Weight	Fund	Benchmark	Excess
TOTAL DEVELOPED GROWTH	19.63	9.88	8.52	1.36
TOTAL DEVELOPED VALUE	18.70	8.14	6.05	2.09
TOTAL DEVELOPED SMALL CAP ACTIVE	8.82	8.96	8.04	0.92
TOTAL DEVELOPED SMALL CAP PASSIVE	1.64	8.00	7.97	0.03
TOTAL DEVELOPED LARGE CAP PASSIVE	9.53	6.85	7.25	(0.40)
TOTAL NON-U.S. ENVIRONMENTAL	2.45	12.38	6.38	6.01
TOTAL ACTIVE EMERGING MARKETS	22.70	13.71	11.44	2.26
TOTAL PASSIVE EMERGING MARKETS	16.50	11.67	11.44	0.23
TOTAL INTERNATIONAL EQUITY	100.00	10.33	7.86	2.47



	Market Value (Billions)	% of plan
TOTAL STRUCTURED + ETI	\$5.7	15.5



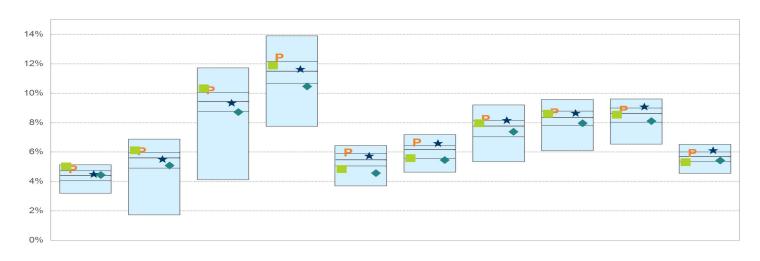
Sub Sector	Policy Weight	Actual Weight	Under/Over Weight	Index Return	Actual Return	Difference
TOTAL TREASURY/AGENCY	21.12	45.01	23.89	1.43	0.82	-0.61
TOTAL MORTGAGE	34.45	22.68	-11.77	0.43	0.44	0.01
TOTAL INV GRADE CREDIT	44.43	32.31	-12.12	1.38	1.51	0.13





#### City of New York Performance Comparison

Total Returns of Master Trusts - Public : Plans > \$10 Billion Cumulative Periods Ending : March 31, 2017



Percentile Rankings	1 Qtr	2 Qtrs	3 Qtrs	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th	5.13	6.88	11.72	13.90	6.44	7.19	9.21	9.57	9.61	6.52
25th	4.73	5.97	10.06	12.16	5.89	6.44	8.15	8.78	8.99	6.00
50th	4.41	5.61	9.44	11.49	5.48	6.16	7.77	8.34	8.63	5.70
75th	4.06	4.91	8.76	10.68	5.05	5.57	7.04	7.80	8.02	5.35
95th	3.19	1.72	4.12	7.75	3.69	4.64	5.35	6.08	6.54	4.56
No. Of Obs	48	48	48	48	47	47	47	47	44	43
Total System - Police	4.73 (25)	5.95 (31)	10.11 (23)	12.33 (17)	5.87 (29)	6.55 (21)	8.15 (25)	8.61 (35)	8.78 (36)	5.85 (34)
Police Policy Benchmar	4.40 (50)	5.43 (64)	9.25 (56)	11.54 (45)	5.65 (33)	6.51 (21)	8.08 (31)	8.56 (37)	9.00 (22)	6.03 (20)
Public Mkt Equiv 25	4.92 (13)	6.03 (21)	10.24 (17)	11.78 (37)	4.75 (81)	5.49 (77)	7.87 (41)	8.51 (41)	8.44 (59)	5.22 (79)
Public Mkt Equiv 35	4.34 (52)	4.99 (72)	8.62 (75)	10.36 (77)	4.48 (85)	5.36 (79)	7.29 (68)	7.87 (70)	8.01 (75)	5.33 (77)

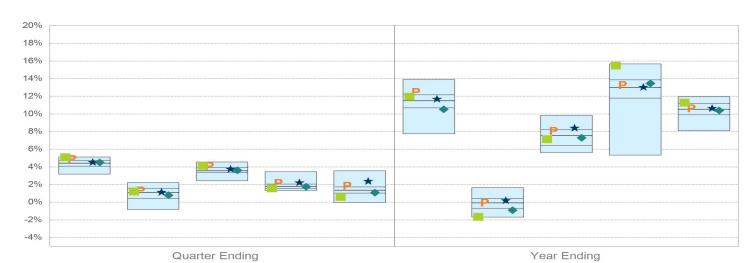
Wilshire Trust Universe Comparison Service® (TUCS®)





#### City of New York Performance Comparison

Total Returns of Master Trusts - Public : Plans > \$10 Billion Consecutive Time Periods: March 31, 2017



Percentile Rankings	Mar 17	Dec 16	Sep 16	Jun 16	Mar 16	Mar 17	Mar 16	Mar 15	Mar 14	Mar 13
5th	5.13	2.20	4.54	3.44	3.56	13.90	1.65	9.84	15.68	11.96
25th	4.73	1.56	3.93	2.04	1.72	12.16	0.42	8.22	13.87	11.16
50th	4.41	1.08	3.55	1.79	1.35	11.49	-0.08	7.53	12.99	10.54
75th	4.06	0.43	3.34	1.54	1.03	10.68	-0.69	6.42	11.79	9.90
95th	3.19	-0.82	2.44	1.31	-0.04	7.75	-1.68	5.59	5.33	8.10
No. Of Obs	48	48	48	48	47	48	47	47	47	47
Total System - Police	4.73 (25)	1.17 (41)	3.93 (27)	2.02 (31)	1.71 (27)	12.33 (17)	-0.22 (59)	7.91 (37)	13.10 (41)	10.47 (56)
Police Policy Benchmar	4.40 (50)	0.99 (54)	3.62 (45)	2.09 (21)	2.24 (5)	11.54 (45)	0.07 (43)	8.26 (23)	12.90 (54)	10.51 (50)
Public Mkt Equiv 25	4.92 (13)	1.05 (52)	3.98 (21)	1.40 (94)	0.44 (94)	11.78 (37)	-1.83 (99)	6.98 (65)	15.32 (11)	11.11 (29)
Public Mkt Equiv 35	4.34 (52)	0.62 (68)	3.46 (64)	1.60 (72)	0.91 (83)	10.36 (77)	-1.08 (79)	7.14 (63)	13.29 (35)	10.23 (63)

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#### POLICE RETIREMENT SYSTEM ACTUAL FEES FOR FISCAL YEAR ENDED JUNE 30, 2016 AND ESTIMATED FEES FOR FY 2017 UPDATED THROUGH NOVEMBER 2016

	Act 20		Estimates 2017		
INVESTMENT STYLE (EQUITIES)	Avg MV 16 (\$MM)	Mgmt Fees BPS	MV 11-30-16 (\$MM)	Mgmt Fees BPS	
US Equities	11,550	9.26	12,846	7.39	
Small Cap Active	565	49.10	673	53.14	
Small Cap Growth	118	83.46	137	100.00	
Small Cap Value	223	52.05	266	54.95	
Small Cap core	114	36.74	136	35.00	
Small Cap Fundamental Index	110	18.96	134	19.84	
Small/Mid Cap Active	131	80.64	-	-	
Small/Mid Cap Growth	131	80.64	-	-	
Mid Cap Active	1,121	40.30	519	44.01	
Mid Cap Growth	448	39.37	-	-	
Mid Cap Value	460	38.67	283	55.67	
Mid Cap core	213	45.78	236	30.00	
Russell 1000 Active	387	12.23	1,230	12.14	
Russell 1000 Fundamental Index	387	12.23	1,230	12.14	
Active Emerging Managers (U.S. Equities)	220	63.31	214	75.00	
Total US Active Equities	2,424	42.14	2,636	33.98	
Total US Passive Equities	9,126	0.52	10,210	0.53	
Environmental US E. Strategies	-	-	-	-	
International Equities	5,061	27.96	5,394	28.44	
Active EAFE Equities	2.484	31.75	2.558	32.55	
Growth	1.035	27.97	1.064	29.44	
Value	981	26.75	1,016	27.85	
Small Cap	468	50.58	478	49.47	
Non-US Environmental Strategies	119	55.73	131	54.83	
Active Emerging Markets	1,089	46.20	1,203	47.37	
Total Int'l Active Equities	3,693	36.79	3,893	37.89	
Total Int'l Passive Equities	1,368	4.13	1,502	3.96	
Total Passive Developed Markets	589	2.32	610	1.68	
Total Passive Emerging Markets	779	5.50	892	5.53	
REITS Passive Index	176	9.96	176	10.79	

Information provided by the New York City Comptroller



# POLICE RETIREMENT SYSTEM ACTUAL FEES FOR RISCAL YEAR ENDED JUNE 30, 2016 AND ESTIMATED FEES FOR FY 2017 UPDATED THROUGH NOVEMBER 2016

		Act 20		Estim 201	
INVESTMENT STYLE (FIXED INCO	ME)	Avg MV 16 (\$MM)	Mgmt Fees BPS	MV 11-30-16 (\$MM)	Mgmt Fees BPS
Fixed Income		10,076	12.55	9,808	13.43
Structured Program	_	5,719	7.62	5,151	8.13
	overnment Sector Duration Treasury	864	6.33	885 176	6.07 1.00
33GA LONG L	Mortgage Sector	2,149	6.11	1,463	6.88
Investment Gra	ade Credit Sector	2,706	9.24	2,627	10.00
Global Fixed Income		70	22.64	71	20.14
Progress Fixed Emerging Managers		82	33.02	76	37.50
TIPS		1,085	1.82	1,482	1.82
	Active TIPS	271	5.79	371	5.76
	Passive TIPS	813	0.50	1,112	0.51
Enhanced Yield		1,288	33.29	1,437	33.25
Bank Loans		566	30.85	600	30.59
Convertible Bonds		215	40.56	227	39.65
ETI - Access - RBC		60	23.91	92	17.78
ETI - AFL-CIO HIT		146	42.49	154	39.53
Total Public Markets (Externally ma	naged)	26,016	14.48	27,707	13.79
Other ETI Programs		151	-	152	-
In-House Short Term		696	0.00	365	0.00
Total Public Markets		26,864	14.02	28,224	13.53
INVESTMENT STYLE (PRIVATE)					
Hedge Funds		1,194	128.34	1,707	125.44
Private Equities		2,311	164.12	2,317	190.30 <sub>1</sub>
Private Real Estate		1,463	120.00	1,493	107.32
Infrastructure		105	60.69	149	104.55 2
Opportunistic Fixed Income		888	90.45	979	89.58
Total Private Markets		5,960	<b>135.24</b> <sub>3</sub>	6,644	140.49
Total Overall		32,824	36.03	34,868	37.73

Information provided by the New York City Comptroller

Footnotes

1 - Private Equity estimates for FY 2017 are based on partnership terms. For funds in the investment period, management fees are based on the committed capital. For funds in the post-investment period, management fees are based on the Market Value as of 6/30/2016.

2 - Infrastructure Fees are based on committed amounts for each investment which are higher than the market values.

3 - Private Markets Investments exclude GP CARRY & Incentive Fees.

4 - The Incentive Fees paid for the Police Fund in 2016 are 11.88 BPS.



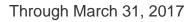
#### NYC POLICE DEPARTMENT PENSION FUND SECURITIES LENDING INCOME March 31, 2017

	U. S. FIXED INCOME	U. S. EQUITY	INTERNATIONAL EQUITY	TOTAL
1989	254,000	-	-	254,000
1990	288,000	-	-	288,000
1991	464,000	-	-	464,000
1992	996,000	138,000	126,000	1,260,000
1993	1,852,000	434,000	203,000	2,489,000
1994	1,846,000	815,000	317,000	2,978,000
1995	1,465,000	888,000	224,000	2,577,000
1996	1,465,000	1,051,000	379,000	2,895,000
1997	1,632,000	1,793,000	599,000	4,024,000
1998	2,770,000	2,517,000	1,006,000	6,293,000
1999	2,681,000	2,713,000	1,184,000	6,578,000
2000	2,697,000	2,899,000	1,520,000	7,116,000
2001	3,947,000	3,595,000	1,980,000	9,522,000
2002	2,646,000	3,401,000	1,725,000	7,772,000
2003	1,238,000	2,257,000	1,859,000	5,354,000
2004	1,515,000	2,306,000	2,097,000	5,918,000
2005	2,333,000	3,172,000	2,503,000	8,008,000
2006	2,104,000	5,043,000	2,243,000	9,390,000
2007	4,582,000	8,425,000	2,727,000	15,734,000
2008	13,856,000	16,383,000	3,872,000	34,111,000
2009	5,163,000	9,110,000	2,695,000	16,968,000
2010	2,405,000	5,813,000	1,979,000	10,197,000
2011	3,060,000	8,287,000	3,253,000	14,600,000
2012	4,213,000	10,047,000	2,545,000	16,805,000
2013	2,980,000	11,363,000	2,255,000	16,598,000
2014	3,478,000	6,803,000	5,786,000	16,067,000
2015	3,692,000	7,281,000	7,489,000	18,462,000
2016	4,070,000	11,406,000	6,506,000	21,982,000
2017 (3 months)	1,390,000	2,393,000	1,022,000	4,805,000
Since Inception	81,082,000	130,333,000	58,094,000	269,509,000



**New York City Police Pension Fund, Subchapter Two** 

# **Appendix A**





		Market Value														
		(\$MM)	% of Total	3 Month	FYTD	CYTD	2016	2015	2014	2013	2012	3 Year	5 Year	10 Year	ITD	Inception Date
	SYSTEM RETURN SUMMARY															
5	POLICE-TOTAL PORTFOLIO - GROSS	36,963	100.00	4.73	10.11	4.73	9.09	0.47	7.60	16.66	13.01	6.55	8.61	5.85	8.60	07/01/1987
	POLICE - ESTIMATED INVESTMENT FEES			(0.05)	(0.17)	(0.05)	(0.23)	(0.23)	(0.26)			(0.23)				
	EST MANAGEMENT FEES - PUBLIC MARKET (ACCRUA	L)		(0.02)	(0.08)	(0.02)	(0.11)	(0.13)	(0.14)							
	EST MANAGEMENT FEES - ALTERNATIVE MARKETS (C	CASH)		(0.03)	(0.09)	(0.03)	(0.12)	(0.10)	(0.12)							
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	POLICE-TOTAL PORTFOLIO - NET MGR			4.67	9.94	4.67	8.86	0.23	7.34			6.31				
	POLICE POLICY BENCHMARK			4.40	9.25	4.40	9.23	0.41	8.16	16.04	13.64	6.51	8.56	6.03		
	EXCESS RETURN			0.28	0.69	0.28	(0.37)	(0.18)	(0.81)	0.62	(0.63)	(0.20)	0.05	(0.18)		
	EQUITY RETURN DETAIL															
18	POLICE-TOTAL EQUITY (INCLUDES PE & RA) - GROSS	25,649	69.39	6.04	13.97	6.04	10.57	0.67	8.27	24.57	15.84	7.82 (0.29)	10.72	5.85	7.72	04/01/2004
	ESTIMATED INVESTMENT FEES  EST MANAGEMENT FEES			(0.06)	(0.21)	(0.06)	(0.27)	(0.29)	(0.30)			(0.29)				
	EST INCENTIVE FEES			(0.06)	(0.21)	(0.06)	(0.27)	(0.29)	(0.30)							
	EST OTHER FEES															
	EST FEE OFFSETS															
	POLICE-TOTAL EQUITY (INCL PE & RA) - NET MGR			5.98	13.77	5.98	10.30	0.38	7.96			7.54				
26	POLICE-TOTAL DOMESTIC EQUITY - GROSS	13,463	36.42	5.39	15.09	5.39	13.13	0.03	11.42	34.93	16.78	9.22	13.10	7.54	44.00	12/01/1984
26	ESTIMATED INVESTMENT FEES	13,463	30.42	(0.02)	(0.06)	(0.02)	(0.10)	(0.12)	(0.13)	34.93	10.76	(0.12)	13.10	7.54	11.00	12/01/1904
	POLICE-TOTAL DOMESTIC EQUITY - NET MGR			5.37	15.03	5.37	13.03	(0.12)	11.29			9.10				
	RUSSELL 3000 (DAILY)			5.74	15.04	5.74	12.74	0.48	12.56	33.55	16.42	9.76	13.18	7.54	11.15	
	EXCESS RETURN			(0.38)	(0.01)	(0.38)	0.29	(0.57)	(1.26)	1.38	0.37	(0.66)	(80.0)	0.00	(0.07)	
				• •	` '	` '		( , ,	( )			• •	` ,		( /	
36	POLICE-TOTAL SMALL CAP ACTIVE - GROSS	702	1.90	2.21	19.52	2.21	23.82	(2.65)	3.34	43.40	16.99	8.12	13.61	8.70	8.87	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.14)	(0.47)	(0.14)	(0.70)	(0.60)	(0.63)			(0.64)				
	POLICE-TOTAL SMALL CAP ACTIVE - NET MGR			2.08	19.05	2.08	23.12	(3.25)	2.71			7.48				
	RUSSELL 2000 (DAILY)			2.47	21.60	2.47	21.31	(4.41)	4.89	38.82	16.35	7.22	12.35	7.12	8.23	
	EXCESS RETURN			(0.39)	(2.56)	(0.39)	1.81	1.17	(2.18)	4.58	0.64	0.27	1.26	1.58	0.65	
46	POLICE-TOTAL SMALL CAP PASSIVE - GROSS	305	0.82	3.23	20.99	3.23	18.57	(3.56)	5.01			7.03			8.99	10/01/2013
	ESTIMATED INVESTMENT FEES			(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)			(0.00)				
	POLICE-TOTAL SMALL CAP PASSIVE - NET MGR			3.23	20.99	3.23	18.57	(3.57)	5.01			7.02		·		<u></u>
	RUSSELL 2000 (DAILY)			2.47	21.60	2.47	21.31	(4.41)	4.89			7.22			9.07	
	EXCESS RETURN			0.77	(0.62)	0.77	(2.74)	0.85	0.11			(0.19)			(80.0)	



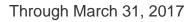


		Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2016	2015	2014	2013	2012	3 Year	5 Year	10 Year	ITD	Inception Date
	EQUITY RETURN DETAIL															
58	POLICE-TOTAL MID CAP ACTIVE - GROSS ESTIMATED INVESTMENT FEES	562	1.52	7.91 (0.08)	16.83 (0.42)	7.91 (0.08)	10.82 (0.57)	(0.20) (0.50)	10.58 (0.55)	38.07	20.86	8.36 (0.53)	13.75	7.45	8.66	04/01/2004
	POLICE-TOTAL MID CAP ACTIVE - NET MGR RUSSELL MIDCAP (DAILY) EXCESS RETURN			7.83 5.15 <b>2.68</b>	16.41 13.42 2.99	7.83 5.15 <b>2.68</b>	10.25 13.80 (3.55)	(0.70) (2.44) 1.74	10.03 13.22 (3.19)	34.76 <b>3.31</b>	17.28 <b>3.58</b>	7.83 8.48 (0.65)	13.09 <b>0.66</b>	7.94 ( <b>0.49</b> )	9.69	
78		1,298	3.51	3.74 (0.07)	12.93 (0.10)	3.74 (0.07)	14.77 (0.10)	(1.87) (0.15)	10.98 (0.25)	41.42	15.50	8.64 (0.17)	13.30	7.87	8.39	04/01/2004
	POLICE-TOTAL RUSSELL 1000 ACTIVE - NET MGR RUSSELL 1000 (DAILY) EXCESS RETURN			3.68 6.03 (2.35)	12.83 14.52 (1.69)	3.68 6.03 (2.35)	14.66 12.05 <b>2.61</b>	(2.01) 0.92 (2.93)	10.73 13.24 (2.51)	33.11 <b>8.31</b>	16.42 <b>(0.93)</b>	8.47 9.99 <b>(1.52)</b>	13.26 <b>0.04</b>	7.58 <b>0.29</b>	8.30 <b>0.09</b>	
88	POLICE-TOTAL RUSSELL 1000 PASSIVE - GROSS ESTIMATED INVESTMENT FEES POLICE-TOTAL RUSSELL 1000 PASSIVE - NET MGR RUSSELL 1000 (DAILY)	6,356	17.20	5.97 (0.00) 5.97 6.03	14.50 (0.00) 14.50 14.52	5.97 (0.00) 5.97 6.03	12.26 (0.00) 12.26 12.05	0.73 (0.00) 0.73 0.92	13.13 (0.00) 13.13 13.24			9.93 (0.00) 9.93 9.99			12.15	10/01/2013
	EXCESS RETURN			(0.06)	(0.02)	(0.06)	0.20	(0.19)	(0.11)			(0.06)			(0.07)	
98	POLICE-TOTAL RUSSELL 3000 - GROSS ESTIMATED INVESTMENT FEES	4,023	10.89	5.70 (0.00)	15.02 (0.01)	5.70 (0.00)	12.77 (0.01)	0.51 (0.01)	12.61 (0.01)	33.67	16.35	9.78 (0.01)	13.21	7.61	11.27	12/01/1984
	POLICE-TOTAL RUSSELL 3000 - NET MGR RUSSELL 3000 (DAILY) EXCESS RETURN			5.70 5.74 (0.05)	15.02 15.04 (0.02)	5.70 5.74 (0.05)	12.76 12.74 <b>0.02</b>	0.50 0.48 <b>0.02</b>	12.60 12.56 <b>0.04</b>	33.55 <b>0.12</b>	16.42	9.77 9.76 <b>0.01</b>	13.18 <b>0.03</b>	7.54 <b>0.07</b>	11.15 <b>0.12</b>	
108	POLICE-TOTAL FUND OF FUNDS - GROSS ESTIMATED INVESTMENT FEES	217	0.59	2.43 (0.19)	19.57 (0.64)	2.43 (0.19)	17.03 (0.85)	(5.52) (0.72)	2.39 (0.78)	40.31		4.88 (0.79)			13.53	06/01/2012
	POLICE-TOTAL FUND OF FUNDS - NET MGR RUSSELL 2000 (DAILY) EXCESS RETURN			2.23 2.47 (0.23)	18.93 21.60 (2.68)	2.23 2.47 (0.23)	16.18 21.31 <b>(5.13)</b>	(6.24) (4.41) (1.83)	1.62 4.89 (3.28)	38.82 <b>1.49</b>		4.09 7.22 (3.12)			14.79 <b>(1.26)</b>	

#### Through March 31, 2017



		Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2016	2015	2014	2013	2012	3 Year	5 Year	10 Year	ITD	Inception Date
	EQUITY RETURN DETAIL															
120	POLICE-TOTAL INTERNATIONAL - GROSS ESTIMATED INVESTMENT FEES EST MANAGEMENT FEES EST INCENTIVE FEES	6,038	16.33	(0.07) (0.07)	16.87 (0.24) (0.24)	10.33 (0.07) (0.07)	6.92 (0.30) (0.30)	(5.91) (0.28) (0.28)	(3.05) (0.31) (0.31)	14.06	16.48	2.39 (0.30)	5.02	1.70	6.42	11/01/1990
	EST OTHER FEES EST FEE OFFSETS															
	POLICE-TOTAL INTERNATIONAL - NET MGR MSCI AC WORLD EX US (NET)			10.26 7.86	16.63 13.87	10.26 7.86	6.62 4.50	(6.19) (5.66)	(3.36) (3.87)	15.29	16.83	2.09 0.56	4.36	1.35		
	EXCESS RETURN			2.40	2.76	2.40	2.13	(0.53)	0.51	(1.23)	(0.35)	1.53	0.66	0.34		
130	POLICE-TOTAL DEVELOPED GROWTH ACTIVE - GROSS ESTIMATED INVESTMENT FEES	1,185	3.21	9.88 (0.07)	13.47 (0.23)	9.88 (0.07)	3.35 (0.29)	(1.35) (0.28)	(5.21) (0.27)	25.26	19.52	2.58 (0.29)	7.13	3.47	7.43	04/01/2004
	POLICE-TOTAL DEVELOPED GROWTH ACTIVE - NET MGR MSCI EAFE GROWTH			9.81 8.52	13.23 7.60	9.81 8.52	3.05 (3.04)	(1.63) 4.09	(5.48) (4.43)	22.55	16.86	2.29 1.50	6.00	1.98	5.38	
	EXCESS RETURN			1.29	5.63	1.29	6.10	(5.72)	(1.05)	2.71	2.66	0.79	1.12	1.50	2.06	
140	POLICE-TOTAL DEVELOPED VALUE ACTIVE - GROSS ESTIMATED INVESTMENT FEES	1,129	3.05	8.14 (0.07)	18.58 (0.24)	8.14 (0.07)	6.42 (0.30)	(6.01) (0.26)	(3.82) (0.26)	28.90	9.46	0.82 (0.28)	6.62	0.64	5.42	04/01/2004
	POLICE-TOTAL DEVELOPED VALUE ACTIVE - NET MGR			8.07	18.34	8.07	6.12	(6.28)	(4.08)			0.54				
	MSCI EAFE VALUE NET (DAILY) EXCESS RETURN			6.05 2.02	19.31 (0.96)	6.05 2.02	5.02 1.10	(5.68) (0.59)	(5.39) 1.31	22.95 <b>5.95</b>	17.69 (8.23)	(0.61) 1.15	5.56 <b>1.06</b>	0.05 <b>0.59</b>	4.74 <b>0.67</b>	
150	POLICE-TOTAL DEVELOPED SMALL CAP ACTIVE - GROSS ESTIMATED INVESTMENT FEES	533	1.44	8.96 (0.12)	14.41 (0.41)	8.96 (0.12)	3.16 (0.51)	10.89 (0.55)	(4.79) (0.48)			4.71 (0.52)			8.45	05/01/2013
	POLICE-TOTAL DEVELOPED SMALL CAP ACTIVE - NET MGR			8.84	13.99	8.84	2.65	10.34	(5.26)			4.20			= 0.4	
	S&P EPAC SMALL CAP USD NET EXCESS RETURN			8.04 0.80	13.18 0.81	8.04 <b>0.80</b>	1.34 1.32	8.58 1.76	(3.43) (1.83)			3.44 0.76			7.31 <b>1.14</b>	
160	POLICE-TOTAL DEVELOPED SMALL CAP PASSIVE - GROSS ESTIMATED INVESTMENT FEES	99	0.27	8.00 (0.01)	14.10 (0.02)	8.00 (0.01)	2.79 (0.02)	9.88 (0.02)				4.04 (0.02)			5.46 (0.02)	02/01/2014
	POLICE-TOTAL DEVELOPED SMALL CAP PASSIVE - NET MGR	!		7.99	14.08	7.99	2.77	9.86				4.02			5.44	
	MSCI EAFE SMALL CAP NET (DAILY)			7.97	13.95	7.97	2.18	9.59				3.60			5.01	
	EXCESS RETURN			0.02	0.13	0.02	0.59	0.27				0.42			0.43	
170	POLICE-TOTAL DEVELOPED LARGE CAP PASSIVE - GROSS ESTIMATED INVESTMENT FEES POLICE-TOTAL DEVELOPED LARGE CAP PASSIVE - NET MGF	576	1.56	6.85 (0.00) 6.84	12.88 (0.01) 12.87	6.85 (0.00) 6.84	1.31 (0.02) 1.30	(0.53) (0.02) (0.54)	(4.73) (0.02) (4.75)	23.10	17.54	0.58 (0.02) 0.56	6.00		4.09	02/01/2011
	MSCI EAFE	`		7.25	13.33	7.25	1.00	(0.81)	(4.73)	22.78	17.32	0.50	5.83		3.86	
	EXCESS RETURN			(0.40)	(0.46)	(0.40)	0.30	0.27	0.15	0.32	0.22	0.07	0.17		0.22	





		Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2016	2015	2014	2013	2012	3 Year	5 Year	10 Year	ITD	Inception Date
	EQUITY RETURN DETAIL															
182	POLICE-TOTAL NON-U.S. ENVIRONMENTAL - GROSS ESTIMATED INVESTMENT FEES	148	0.40	12.38 (0.15)	19.10 (0.49)	12.38 (0.15)	10.39 (0.60)	7.63 (0.58)	11.99 (0.61)	28.87	19.40	12.60 (0.61)	15.58		8.15	09/01/2008
	POLICE-TOTAL NON-U.S. ENVIRONMENTAL - NET MGR MSCI WORLD INDEX			12.23 6.38	18.62 13.62	12.23 6.38	9.79 7.51	7.04 (0.87)	11.39 4.94	26.68	15.83	12.00 5.52	9.37		6.02	
	EXCESS RETURN			5.86	5.00	5.86	2.28	7.91	6.45	2.19	3.58	6.48	6.22		2.14	
192	POLICE-EMERGING MARKETS ACTIVE - GROSS ESTIMATED INVESTMENT FEES	1,371	3.71	13.71 (0.12)	21.67 (0.41)	13.71 (0.12)	12.03 (0.52)	(14.20) (0.42)	(0.62) (0.49)	1.04	15.90	2.78 (0.49)	2.17	3.06	8.84	04/01/2004
	POLICE-EMERGING MARKETS ACTIVE - NET MGR MSCI EMERGING MARKETS			13.59 11.44	21.25 16.44	13.59 11.44	11.51 11.19	(14.62) (14.92)	(1.11)	(2.60)	18.22	2.29	0.81	2.72	7.98	
	EXCESS RETURN			2.14	4.81	2.14	0.32	0.30	1.08	3.64	(2.32)	1.11	1.36	0.34	0.86	
202	POLICE-EMERGING MARKETS PASSIVE - GROSS	996	2.70	11.67	16.48	11.67	11.23	(14.86)	(2.23)	(1.97)	18.27	1.32	1.00		(0.80)	04/01/2011
	ESTIMATED INVESTMENT FEES POLICE-EMERGING MARKETS PASSIVE - NET MGR			(0.01)	(0.05) 16.43	(0.01)	(0.06)	(0.05)	(0.06)			(0.06)				
	MSCI EMERGING MARKETS			11.44	16.44	11.44	11.19	(14.92)	(2.19)	(2.60)	18.22	1.18	0.81		(0.86)	
	EXCESS RETURN			0.21	(0.01)	0.21	(0.02)	0.00	(0.10)	0.63	0.04	0.09	0.19		0.06	



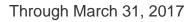


		Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2016	2015	2014	2013	2012	3 Year	5 Year	10 Year	ITD	Inception Date
	EQUITY RETURN DETAIL															
220	POLICE-TOTAL HEDGE FUNDS - NET MGR HFRI FUND OF FUNDS COMPOSITE INDEX + 1%	1,777	4.81	3.45 2.65	7.08 6.44	3.45 2.65	3.08 1.52	(1.54) 0.73	5.21 4.40			3.05 2.82				07/01/2011
	EXCESS RETURN			0.80	0.64	0.80	1.56	(2.27)	0.81			0.23				
230	POLICE-TOTAL DIRECT HEDGE FUNDS - NET MGR HFRI FUND OF FUNDS COMPOSITE INDEX + 1%	1,622	4.39	3.61 2.65	6.88 6.44	3.61 2.65	3.36 1.52	(1.41) 0.73	5.66 4.40			3.41 2.82				01/01/2012
	EXCESS RETURN			0.95	0.44	0.95	1.84	(2.14)	1.26			0.59				
240	POLICE-TOTAL PERMAL HEDGE FUNDS - NET MGR	155	0.42	1.83	8.38	1.83	1.86	(2.14)	2.75			1.01				07/01/2011
	HFRI FUND OF FUNDS COMPOSITE INDEX + 1% EXCESS RETURN			(0.83)	6.44 1.94	2.65 (0.83)	1.52 0.34	0.73	4.40 (1.65)			2.82				



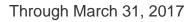


		Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2016	2015	2014	2013	2012	3 Year	5 Year	10 Year	ITD	Inception Date
	EQUITY RETURN DETAIL															
246	POLICE-TOTAL REAL ESTATE SECURITIES - GROSS ESTIMATED INVESTMENT FEES	185	0.50	2.13 (0.02)	(2.89) (0.07)	2.13 (0.02)	3.15 (0.10)	0.28 (0.10)	15.89 (0.11)	3.29		5.60 (0.10)			8.44	06/01/2012
	POLICE-TOTAL REAL ESTATE SECURITIES - NET MGR FTSE EPRA/NAREIT DEVEL. LIQUID			2.10 1.92	(2.97)	2.10 1.92	3.05 2.37	0.18 (0.51)	15.77 14.98	2.53		5.49 4.79			7.97	
	EXCESS RETURN			0.18	0.44	0.18	0.68	0.68	0.79	0.75		0.70			0.48	
256	POLICE-TOTAL PRIVATE EQUITY (TIME WEIGHTED) NYC R3000 +3% LAGGED	2,369	6.41	4.46 4.97	11.79 14.13	4.46 4.97	10.07 18.37	11.70 2.49	14.94 21.24	9.65 24.53	11.60 35.20	12.16 11.67	12.13 18.07	9.74 11.42	12.85 12.51	04/01/2004
	EXCESS RETURN			(0.52)	(2.34)	(0.52)	(8.30)	9.21	(6.31)	(14.88)	(23.61)	0.50	(5.94)	(1.68)	0.34	
266	POLICE-TOTAL PRIVATE REAL ESTATE (TIME WEIGHTED)	1,663	4.50	2.66	8.10	2.66	11.80	16.65	18.00	14.02	14.67	14.48	14.96	4.90	8.13	04/01/2004
	NCREIF NFI-ODCE NET + 100 BP EXCESS RETURN			1.80 0.86	6.13 1.97	1.80 0.86	8.86 2.94	15.08 1.57	12.56 5.44	(0.01)	10.88 3.78	11.87 2.62	12.04 2.92			
276		156	0.42	2.35	8.07	2.35	10.51	15.14	20.26			20.21			14.42	12/01/2013
	CPI + 4% EXCESS RETURN			1.37 0.98	4.66 3.41	1.37 0.98	6.18 4.34	4.68 10.46	4.69 15.56			5.13 15.08			5.27 9.15	





		Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2016	2015	2014	2013	2012	3 Year	5 Year	10 Year	ITD	Inception Date
	FIXED INCOME RETURN DETAIL															
288	POLICE-TOTAL FIXED INCOME - GROSS ESTIMATED INVESTMENT FEES	11,292	30.55	1.63 (0.03)	1.80 (0.10)	1.63 (0.03)	5.66 (0.14)	(0.17) (0.12)	6.20 (0.14)	0.85	7.97	3.55 (0.13)	4.01	5.53	8.29	02/01/1980
	EST MANAGEMENT FEES EST INCENTIVE FEES EST OTHER FEES EST FEE OFFSETS			(0.03)	(0.10)	(0.03)	(0.14)	(0.12)	(0.14)			(0.13)				
	POLICE-TOTAL FIXED INCOME - NET MGR			1.60	1.70	1.60	5.52	(0.29)	6.06			3.42				
296	ESTIMATED INVESTMENT FEES	5,356	14.49	1.04 (0.01)	(1.56) (0.05)	1.04 (0.01)	3.50 (0.07)	0.56 (0.07)	7.69 (0.09)	(1.99)	6.57	3.36 (0.08)	3.21	5.21	7.70	01/01/1985
	POLICE-TOTAL STRUCTURED FIXED INCOME - NET MGR NYC - CORE PLUS FIVE			1.03 0.99	(1.61) (1.99)	1.03 0.99	3.42 3.20	0.48 0.41	7.60 7.66	(2.79)	5.41	3.28 3.23	2.84	4.92		
	EXCESS RETURN			0.04	0.37	0.04	0.23	0.07	(0.06)	0.80	1.16	0.05	0.37	0.29		
306	POLICE-TOTAL CORE FIXED INCOME - GROSS ESTIMATED INVESTMENT FEES	72	0.20	1.21 (0.05)	(0.25) (0.15)	1.21 (0.05)	3.88 (0.22)	1.28 (0.20)	5.74 (0.17)	(1.20)	6.22	3.41 (0.20)	3.15		5.19	05/01/2009
	POLICE-TOTAL CORE FIXED INCOME - NET MGR			1.17	(0.40)	1.17	3.66	1.08	5.57			3.21				
	BBG BARC AGG (DLY)			0.82	(1.73)	0.82	2.65	0.55	5.97	(2.02)	4.21	2.68	2.34		3.98	
	EXCESS RETURN			0.35	1.33	0.35	1.02	0.53	(0.39)	0.82	2.01	0.53	0.81		1.21	
316		77	0.21	0.97	(0.96)	0.97	3.19	1.00	6.21	(1.58)		2.99			2.49	06/01/2012
	ESTIMATED INVESTMENT FEES POLICE-TOTAL FIXED INCOME FUND OF FUND - NET MGR			0.00	(0.05)	0.00	(0.22) 2.97	(0.35) 0.65	(0.36) 5.85			(0.28)				
	BBG BARC AGG (DLY)			0.82	(1.73)	0.82	2.65	0.55	5.97	(2.02)		2.68			2.00	
	EXCESS RETURN			0.16	0.73	0.16	0.32	0.10	(0.12)	0.45		0.02			0.50	
326		1,499	4.06	1.27	(0.25)	1.27	4.70	(1.29)	3.52	(8.47)	7.17	2.02	1.07	4.35	4.01	06/01/2005
	ESTIMATED INVESTMENT FEES POLICE-TOTAL TIPS - NET MGR			(0.00) 1.27	(0.01)	(0.00) 1.27	(0.02) 4.68	(0.03)	(0.07)			(0.03)				
	BBG BARC GBL INF-LK: US TIPS (DLY)			1.26	(0.22)	1.26	4.68	(1.44)	3.64	(8.61)	6.98	2.03	0.97	4.24	3.87	
	EXCESS RETURN			0.00	(0.04)	0.00	(0.01)	0.12	(0.19)	0.14	0.19	(0.05)	0.09	0.11	0.14	
336	POLICE-TOTAL HIGH YIELD - GROSS	1,746	4.72	2.35	9.40	2.35	15.25	(3.94)	2.80	8.14	14.53	4.12	6.64	7.30	7.93	10/01/1994
	ESTIMATED INVESTMENT FEES POLICE-TOTAL HIGH YIELD - NET MGR			(0.08)	(0.27) 9.12	(0.08)	(0.39) 14.86	(0.33)	(0.35) 2.45			(0.35)				<del></del>
	CITIGROUP BB & B			2.27	9.12	2.28	15.48	(4.20)	2.45	6.17	14.45	4.14	6.21	6.02	7.07	
	EXCESS RETURN			(0.01)	(0.08)	(0.01)	(0.61)	(0.05)	(0.34)	1.97	0.07	(0.37)	0.43	1.27	0.86	





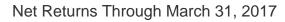
		Market Value (\$MM)	% of Total	3 Month	FYTD	СҮТД	2016	2015	2014	2013	2012	3 Year	5 Year	10 Year	ITD	Inception Date
	FIXED INCOME RETURN DETAIL															
348	POLICE- TOTAL BANK LOANS - GROSS ESTIMATED INVESTMENT FEES	612	1.66	1.14 (0.08)	6.08 (0.24)	1.14 (0.08)	8.86 (0.34)	1.80 (0.32)	2.76 (0.32)	6.54		4.38 (0.32)			4.99	12/01/2012
	POLICE-TOTAL BANK LOANS - NET MGR CSFB LEVERAGED LOAN INDEX			1.07 1.20	5.84 6.69	1.07 1.20	8.52 9.88	1.49 (0.38)	2.44 2.06	6.15		4.06 3.72			4.48	
	EXCESS RETURN			(0.14)	(0.85)	(0.14)	(1.35)	1.87	0.38	0.39		0.34			0.51	
358	POLICE-TOTAL CONVERTIBLE BONDS - GROSS ESTIMATED INVESTMENT FEES	239	0.65	4.50 (0.10)	9.24 (0.32)	4.50 (0.10)	7.23 (0.43)	(0.41) (0.41)	9.44 (0.45)	16.96	11.69	5.55 (0.42)	8.12		6.94	07/01/2008
	POLICE-TOTAL CONVERTIBLE BONDS - NET MGR BOFAML ALL CONVERTIBLE EX M AI (DAILY)			4.40 5.62	8.91 16.40	4.40 5.62	6.80 11.71	(0.81) (2.75)	8.99 9.33	25.00	14.41	5.13 6.32	10.31		8.58	
	EXCESS RETURN			(1.21)	(7.48)	(1.21)	(4.90)	1.94	(0.34)	(8.04)	(2.72)	(1.19)	(2.19)		(1.64)	-
368	POLICE-TOTAL OPPORTUNISTIC FIXED INCOME 10% ANNUAL RETURN	1,025	2.77	4.42 2.41	11.99 7.41	4.42 2.41	8.62 10.00	(1.34)	8.86 10.00	17.15 10.00	22.48 10.00	5.60 10.00	9.91		8.51 10.00	10/01/2007
	EXCESS RETURN			2.01	4.58	2.01	(1.38)	(11.34)	(1.14)	7.15	12.48	(4.40)	(0.09)		(1.49)	
378	POLICE-TOTAL TARGETED INVESTMENTS (NO CASH) POLICE CUSTOM BENCHMARK (NO CASH)	362	0.98	0.38 0.66	(2.98) (1.00)	0.38 0.66	2.73 2.38	4.04 1.40	8.06 6.11	2.22 (1.66)	6.32 3.41	4.06 2.89	4.53 2.35	5.77 4.42	8.22	12/01/1984
	EXCESS RETURN			(0.27)	(1.97)	(0.27)	0.35	2.65	1.95	3.87	2.92	1.17	2.19	1.36		
	CASH SUMMARY															
390	POLICE SHORT TERM - GROSS ESTIMATED INVESTMENT FEES POLICE SHORT TERM - NET MGR	304	0.82	0.20 0.00 0.20	0.45 0.00 0.45	0.20 0.00 0.20	0.89 0.00 0.89	0.47 0.00 0.47	0.23 0.00 0.23	0.21 0.00 0.21	0.40 0.00 0.40	0.58 0.00 0.58	0.46 0.00 0.46	1.27 0.00 1.27		04/01/1982
394	C/D - FAIL FLOAT EARNINGS	1	0.00													
396	SECURITY LENDING	20	0.05													



**New York City Police Pension Fund, Subchapter Two** 

# **Appendix B**

Public Markets Manager Performance Detail





	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2016	2015	2014
	manet i alae (41111)		0					
EQUITY SUMMARY								
US EQUITY								
State Street Global Adv R3000	4,023	10.89	5.70	15.01	5.70	12.75	0.47	12.59
RUSSELL 3000 (DAILY)			5.74	15.04	5.74	12.74	0.48	12.56
Excess			(0.05)	(0.03)	(0.05)	0.02	(0.01)	0.04
NYC POLICE BLACKROCK R2000 GROWTH	188	0.51	5.40	19.18	5.40	11.29	(1.30)	5.50
RUSSELL 2000 GROWTH DAILY			5.35	19.17	5.35	11.32	(1.38)	5.60
Excess			0.05	0.01	0.05	(0.02)	0.08	(0.11
NYC POLICE BLACKROCK R2000 VALUE	117	0.32	(0.06)	24.03	(0.06)	31.71	(7.38)	4.11
RUSSELL 2000 VALUE DAILY			(0.13)	24.03	(0.13)	31.74	(7.47)	4.22
Excess			0.07	0.01	0.07	(0.03)	0.09	(0.11
Brown AM - SCG	147	0.40	8.82	17.61	8.82	10.23	8.62	2.93
RUSSELL 2000 GROWTH DAILY			5.35	19.17	5.35	11.32	(1.38)	5.60
Excess			3.47	(1.56)	3.47	(1.09)	10.00	(2.68
Ceredex SCV	133	0.36	1.42	14.28	1.42	29.38	(4.74)	2.55
RUSSELL 2000 VALUE DAILY			(0.13)	24.03	(0.13)	31.74	(7.47)	4.22
Excess			1.55	(9.75)	1.55	(2.36)	2.73	(1.66
Dalton Greiner (Value) - Small Cap	142	0.38	(0.04)	21.21	(0.04)	25.01	(3.32)	4.47
RUSSELL 2000 VALUE DAILY			(0.13)	24.03	(0.13)	31.74	(7.47)	4.22
Excess			0.09	(2.81)	0.09	(6.73)	4.15	0.25
DFA Small Cap	142	0.38	0.78	21.32	0.78	25.08	(3.86)	4.48
RUSSELL 2000 (DAILY)			2.47	21.60	2.47	21.31	(4.41)	4.89
Excess			(1.69)	(0.28)	(1.69)	3.77	0.56	(0.42



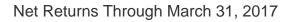
	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2016	2015	2014
RAFI - SC Fundamental	138	0.37	(0.40)	20.92	(0.40)	27.83	(6.65)	4.72
RUSSELL 2000 (DAILY)			2.47	21.60	2.47	21.31	(4.41)	4.89
Excess			(2.86)	(0.69)	(2.86)	6.52	(2.23)	(0.17)
Iridian Asset Mgmt. MCV	310	0.84	9.19	16.70	9.19	4.19	(3.71)	14.04
RUSSELL MIDCAP (DAILY)			5.15	13.42	5.15	13.80	(2.44)	13.22
Excess			4.05	3.28	4.05	(9.60)	(1.27)	0.82
Wellington Mgmt. MCC	252	0.68	6.20	15.96	6.20	12.30	1.76	10.93
S&P 400 MIDCAP INDEX (DAILY)			3.94	16.28	3.94	20.74	(2.18)	9.77
Excess			2.26	(0.31)	2.26	(8.44)	3.93	1.16
NYC POLICE BLACKROCK R1000 GROWTH	3,137	8.49	8.90	15.02	8.90	7.15	5.60	12.91
RUSSELL 1000 GROWTH - DAILY			8.91	15.05	8.91	7.08	5.67	13.05
Excess			(0.01)	(0.03)	(0.01)	0.08	(0.07)	(0.14)
NYC POLICE BLACKROCK R1000 VALUE	3,220	8.71	3.26	13.98	3.26	17.43	(4.02)	13.39
RUSSELL 1000 VALUE (DAILY)			3.27	14.00	3.27	17.34	(3.83)	13.45
Excess			(0.01)	(0.02)	(0.01)	0.09	(0.19)	(0.06)
DASI 10 Sundamental		0.40	0.55	40.07	0.55	45.70	(0.00)	40.04
RAFI - LC Fundamental	1,145	3.10	3.55	12.97	3.55	15.73	(3.09)	12.04
RUSSELL 1000 (DAILY)			6.03	14.52	6.03	12.05	0.92	13.24
Excess			(2.47)	(1.55)	(2.47)	3.68	(4.01)	(1.20)
VTL S&P 500 Fundamental	152	0.41	4.65	13.53	4.65	12.77	(1.26)	13.81
S&P 500 INDEX (DAILY)		-	6.07	14.36	6.07	11.96	1.38	13.69
Excess			(1.42)	(0.83)	(1.42)	0.81	(2.64)	0.12
FUND OF FUNDS								
POLICE-FUND OF FUNDS	217	0.59	2.23	18.93	2.23	16.18	(6.24)	1.62
RUSSELL 2000 (DAILY)			2.47	21.60	2.47	21.31	(4.41)	4.89
Excess			(0.23)	(2.68)	(0.23)	(5.13)	(1.83)	(3.28)
			, ,			. ,		



	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2016	2015	2014
POLICE-TOTAL ATTUCKS	38	0.10	1.61	17.73	1.61	14.63	(6.62)	2.12
RUSSELL 2000 (DAILY)			2.47	21.60	2.47	21.31	(4.41)	4.89
Excess			(0.86)	(3.88)	(0.86)	(6.67)	(2.21)	(2.77)
POLICE-TOTAL CAPITAL PROSPECTS	54	0.15	3.19	18.65	3.19	14.31	(6.51)	1.54
RUSSELL 2000 (DAILY)			2.47	21.60	2.47	21.31	(4.41)	4.89
Excess			0.73	(2.95)	0.73	(6.99)	(2.09)	(3.35)
POLICE-TOTAL PROGRESS EQUITY	66	0.18	1.06	18.49	1.06	18.15	(7.48)	1.43
RUSSELL 2000 (DAILY)			2.47	21.60	2.47	21.31	(4.41)	4.89
Excess			(1.41)	(3.11)	(1.41)	(3.16)	(3.07)	(3.46)
POLICE-TOTAL FIS	60	0.16	3.18	20.83	3.18	17.24	(4.25)	4.40
	60	0.16	2.47	21.60	2.47		(4.25)	1.49
RUSSELL 2000 (DAILY) Excess			0.71	(0.78)	0.71	(4.07)	0.16	(3.40)
NON - US EQUITY								
Baillie Gifford	541	1.46	12.22	18.06	12.22	0.70	(3.81)	(6.77)
MSCI EAFE GROWTH			8.52	7.60	8.52	(3.04)	4.09	(4.43)
Excess			3.70	10.46	3.70	3.74	(7.90)	(2.34)
Walter Scott	644	1.74	7.87	9.47	7.87	5.03	0.28	(3.56)
MSCI EAFE GROWTH			8.52	7.60	8.52	(3.04)	4.09	(4.43)
Excess			(0.66)	1.86	(0.66)	8.07	(3.81)	0.87
Causeway	503	1.36	8.03	16.18	8.03	0.52	(2.39)	(5.18)
MSCI EAFE VALUE NET (DAILY)	303	1.30	6.05	19.31	6.05	5.02	(5.68)	(5.18)
			1.99	(3.13)	1.99		3.29	
Excess			1.88	(3.13)	1.99	(4.51)	3.29	0.21
Sprucegrove	626	1.69	8.09	20.15	8.09	11.10	(9.44)	(3.32)
MSCI EAFE VALUE NET (DAILY)			6.05	19.31	6.05	5.02	(5.68)	(5.39)
Excess			2.05	0.84	2.05	6.08	(3.75)	2.07



	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2016	2015	2014
Acadian	272	0.73	10.03	16.98	10.03	6.41	8.68	(4.92)
S&P EPAC Small Cap USD NET			8.04	13.18	8.04	1.34	8.58	(3.43)
Excess			1.99	3.80	1.99	5.07	0.09	(1.49)
Pyramis	261	0.71	7.63	11.05	7.63	(0.91)	11.97	(5.60)
S&P EPAC Small Cap USD NET			8.04	13.18	8.04	1.34	8.58	(3.43)
Excess			(0.41)	(2.13)	(0.41)	(2.24)	3.38	(2.17)
SSGA	576	1.56	6.84	12.87	6.84	1.30	(0.54)	(4.75)
NYC Custom World ex US Index			6.73	12.79	6.73	1.00	(0.81)	(4.90)
Excess			0.11	0.08	0.11	0.30	0.27	0.15
SSGA MSCI EAFE Small Cap Index	99	0.27	7.99	14.08	7.99	2.77	9.86	
MSCI EAFE SMALL CAP NET (DAILY)			7.97	13.95	7.97	2.18	9.59	
Excess			0.02	0.13	0.02	0.59	0.27	
Generation GE	148	0.40	12.23	18.62	12.23	9.79	7.04	11.39
MSCI World Index			6.38	13.62	6.38	7.51	(0.87)	4.94
Excess			5.86	5.00	5.86	2.28	7.91	6.45
EMERGING MARKETS								
DFA	335	0.91	13.52	22.40	13.52	17.39	(19.39)	(4.50)
MSCI EMERGING MARKETS			11.44	16.44	11.44	11.19	(14.92)	(2.19)
Excess			2.07	5.96	2.07	6.20	(4.48)	(2.31)
Ballie Gifford	333	0.90	15.97	23.97	15.97	2.78	(8.00)	0.10
MSCI EMERGING MARKETS			11.44	16.44	11.44	11.19	(14.92)	(2.19)
Excess			4.53	7.52	4.53	(8.41)	6.92	2.29
PARAMETRIC EM	348	0.94	10.16	15.11	10.16	13.87	(15.72)	(3.92)
MSCI EMERGING MARKETS			11.44	16.44	11.44	11.19	(14.92)	(2.19)
Excess			(1.29)	(1.34)	(1.29)	2.68	(0.80)	(1.73)





		% of						
	Market Value (\$MM)	Total	3 Month	FYTD	CYTD	2016	2015	2014
ACADIAN	355	0.96	14.93	24.09	14.93	12.65	(15.05)	3.79
MSCI EMERGING MARKETS			11.44	16.44	11.44	11.19	(14.92)	(2.19)
Excess			3.49	7.65	3.49	1.46	(0.13)	5.98
Blackrock EM	996	2.70	11.66	16.43	11.66	11.17	(14.91)	(2.29)
MSCI EMERGING MARKETS			11.44	16.44	11.44	11.19	(14.92)	(2.19)
Excess			0.21	(0.01)	0.21	(0.02)	0.01	(0.10)
REAL ESTATE SECURITIES								
CONY GT SSGA REIT	185	0.50	2.10	(2.97)	2.10	3.05	0.18	15.77
FTSE EPRA/NAREIT Devel. Liquid			1.92	(3.40)	1.92	2.37	(0.51)	14.98
Excess			0.18	0.44	0.18	0.68	0.68	0.79
FIXED INCOME SUMMARY								
STRUCTURED FIXED INCOME								
Blackrock - Mortgage	835	2.26	0.46	(0.51)	0.46	2.29	1.81	6.48
CITIGROUP MORTGAGE INDEX			0.43	(1.00)	0.43	1.59	1.56	6.12
Excess			0.03	0.49	0.03	0.71	0.25	0.35
Neuberger Berman - Mortgage	98	0.26	0.45	(1.05)	0.45	1.52	1.42	6.68
CITIGROUP MORTGAGE INDEX			0.43	(1.00)	0.43	1.59	1.56	6.12
Excess			0.02	(0.06)	0.02	(0.07)	(0.15)	0.55
T. Rowe Price - Credit	739	2.00	1.57	0.19	1.57	6.04	0.02	7.91
NYC - Investment Grade Credit			1.38	(0.37)	1.38	5.56	(0.65)	7.04
Excess			0.19	0.56	0.19	0.48	0.67	0.86
Blackrock - Credit	210	0.57	1.44	(0.19)	1.44	5.48	(0.57)	7.55
NYC - Investment Grade Credit			1.38	(0.37)	1.38	5.56	(0.65)	7.04
Excess			0.06	0.18	0.06	(0.07)	0.07	0.51



	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2016	2015	2014
	market value (\$\pi\text{min})	Total	3 Month	1110	OTTE	2010	2013	2014
Prudential - Credit	430	1.16	1.33	(0.10)	1.33	6.05	(0.32)	7.19
NYC - Investment Grade Credit			1.38	(0.37)	1.38	5.56	(0.65)	7.04
Excess			(0.04)	0.27	(0.04)	0.50	0.33	0.14
Taplin Canida Habacht Credit	143	0.39	1.75	2.77	1.75	9.54	(3.98)	7.92
NYC - Investment Grade Credit			1.38	(0.37)	1.38	5.56	(0.65)	7.04
Excess			0.37	3.14	0.37	3.98	(3.34)	0.88
Pyramis - Credit	197	0.53	1.26	0.15	1.26	5.80	(0.09)	7.38
NYC - Investment Grade Credit			1.38	(0.37)	1.38	5.56	(0.65)	7.04
Excess			(0.11)	0.52	(0.11)	0.24	0.56	0.34
Prudential-Privest - Credit	128	0.35	1.68	0.89	1.68	4.24	1.63	7.20
NYC - Investment Grade Credit			1.38	(0.37)	1.38	5.56	(0.65)	7.04
Excess			0.30	1.26	0.30	(1.32)	2.28	0.16
State Street - Gov't	612	1.66	1.24	(6.26)	1.24	1.62	0.49	12.13
NYC - Treasury Agency Plus Five			1.09	(6.75)	1.09	1.21	0.72	12.38
Excess			0.14	0.49	0.14	0.41	(0.24)	(0.25)
Blackrock - Gov't	361	0.98	1.23	(6.50)	1.23	1.21	0.66	11.93
NYC - Treasury Agency Plus Five			1.09	(6.75)	1.09	1.21	0.72	12.38
Excess			0.14	0.24	0.14	(0.00)	(0.06)	(0.44)
Fischer Francis - Govt	240	0.65	1.14	(6.67)	1.14	1.34	0.51	11.36
NYC - Treasury Agency Plus Five			1.09	(6.75)	1.09	1.21	0.72	12.38
Excess			0.05	0.07	0.05	0.12	(0.21)	(1.02)
SSGA 1-3 Treasury Index	864	2.34	0.26		0.26			
Citigroup USBIG Treasury 1-3 Y Index			0.27		0.27			
Excess			(0.01)		(0.01)			



	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2016	2015	2014
SSgA Int Gov Bond Index	319	0.86						
Citigroup USBIG Treasury/Agency 1-10 y								
Excess								
SSGA Long Duration Treasury	178	0.48	1.41		1.41			
Citigroup Treasury 10+			1.42		1.42			
Excess			(0.01)		(0.01)			
FIXED INCOME FUND OF FUNDS								
Hillswick	8	0.02	0.78	(2.01)	0.78	2.61	0.61	7.09
BBG BARC Agg (Dly)			0.82	(1.73)	0.82	2.65	0.55	5.97
Excess			(0.03)	(0.27)	(0.03)	(0.03)	0.06	1.13
Integrity	7	0.02	1.05	(1.18)	1.05			
BBG BARC Agg (Dly)			0.82	(1.73)	0.82			
Excess			0.23	0.55	0.23			
Ramirez Asset	19	0.05	0.87	(0.57)	0.87	3.64	1.12	
BBG BARC Agg (Dly)			0.82	(1.73)	0.82	2.65	0.55	
Excess			0.05	1.17	0.05	0.99	0.57	
NEW CENTURY	20	0.05	1.05	(0.95)	1.05	2.37	(0.30)	6.53
BBG BARC Agg (Dly)			0.82	(1.73)	0.82	2.65	0.55	5.97
Excess			0.24	0.78	0.24	(0.28)	(0.85)	0.56
PUGH CAP	23	0.06	1.02	(1.01)	1.02	3.48	0.79	5.88
BBG BARC Agg (Dly)			0.82	(1.73)	0.82	2.65	0.55	5.97
Excess			0.21	0.72	0.21	0.83	0.24	(0.09)
HIGH YIELD								
Loomis Sayles - High Yield	264	0.72	2.99	13.21	2.99	22.23	(8.58)	4.73
NYC-Loomis (BoA MLMSTII 7-03/BB&B PRIOR)		***=	2.71	10.38	2.71	17.49	(4.64)	2.50
Excess			0.28	2.83	0.28	4.74	(3.94)	2.22



	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2016	2015	2014
Oaktree - High Yield	204	0.55	1.92	8.57	1.92	14.91	(4.75)	1.41
BofAML HYM CONSTRAINED (DAILY)			2.71	10.38	2.71	17.49	(4.61)	2.51
Excess			(0.79)	(1.81)	(0.79)	(2.58)	(0.14)	(1.10)
Neuberger Berman - High Yield	282	0.76	2.41	8.82	2.41	14.72	(4.00)	2.05
BofAML HIGH YIELD MASTER II (DAILY)			2.71	10.38	2.71	17.49	(4.64)	2.50
Excess			(0.30)	(1.56)	(0.30)	(2.77)	0.65	(0.45)
Stone Harbor - High Yield	184	0.50	2.28	8.63	2.28	13.01	(4.47)	0.31
BofAML HIGH YIELD MASTER II (DAILY)			2.71	10.38	2.71	17.49	(4.64)	2.50
Excess			(0.43)	(1.75)	(0.43)	(4.47)	0.17	(2.19)
T. Rowe Price - High Yield	563	1.52	1.84	7.70	1.84	12.36	(1.13)	2.92
CITIGROUP BB & B			2.28	9.20	2.28	15.48	(4.21)	2.78
Excess			(0.44)	(1.50)	(0.44)	(3.11)	3.08	0.13
Fort Washington - High Yield	140	0.38	2.48	8.08	2.48	12.86	(4.13)	2.41
CITIGROUP BB & B			2.28	9.20	2.28	15.48	(4.21)	2.78
Excess			0.20	(1.12)	0.20	(2.62)	0.08	(0.37)
Shenkman - High Yield	108	0.29	2.14	8.13	2.14	11.72	(2.65)	2.64
CITIGROUP BB & B			2.28	9.20	2.28	15.48	(4.21)	2.78
Excess			(0.13)	(1.07)	(0.13)	(3.75)	1.56	(0.15)
BANK LOANS								
Babson BL	240	0.65	1.06	6.12	1.06	8.44	0.12	1.99
CSFB LEVERAGED LOAN INDEX			1.20	6.69	1.20	9.88	(0.38)	2.06
Excess			(0.14)	(0.57)	(0.14)	(1.43)	0.50	(0.07)
Credit Suisse BL	249	0.67	1.18	5.93	1.18	8.94	2.57	2.67
CSFB LEVERAGED LOAN INDEX			1.20	6.69	1.20	9.88	(0.38)	2.06
Excess			(0.02)	(0.76)	(0.02)	(0.93)	2.96	0.61



		% of						
	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2016	2015	2014
Guggenheim BL	124	0.33	0.84	5.11	0.84	7.84	2.07	2.88
CSFB LEVERAGED LOAN INDEX			1.20	6.69	1.20	9.88	(0.38)	2.06
Excess			(0.36)	(1.57)	(0.36)	(2.03)	2.45	0.83
TIPS								
State Street TIPS Passive	1,124	3.04	1.27	(0.27)	1.27	4.68	(1.35)	3.57
BBG BARC Gbl Inf-Lk: US TIPS (Dly)			1.26	(0.22)	1.26	4.68	(1.44)	3.64
Excess			0.00	(0.05)	0.00	(0.00)	0.09	(0.07)
Blackrock TIPS	375	1.01	1.26	(0.24)	1.26	4.66	(1.24)	3.74
BBG BARC Gbl Inf-Lk: US TIPS (Dly)			1.26	(0.22)	1.26	4.68	(1.44)	3.64
Excess			0.00	(0.02)	0.00	(0.02)	0.20	0.10
CONVERTIBLE BONDS								
Advent Conv Bonds	119	0.32	3.56	7.95	3.56	7.15	(1.38)	4.65
BofA ML U.S. Convertible Yield Alternative			3.73	9.84	3.73	9.96	(8.77)	2.75
Excess			(0.17)	(1.90)	(0.17)	(2.81)	7.40	1.91
Victory Conv Bonds	120	0.33	5.25	9.89	5.25	6.46	(0.24)	13.76
BofA Merrill Lynch US Investment Grade Convertible Bond Index			5.52	15.75	5.52	14.23	1.68	15.69
Excess			(0.26)	(5.86)	(0.26)	(7.77)	(1.92)	(1.94)
CORE FIXED INCOME								
LM Capital	36	0.10	1.02	(0.64)	1.02	3.38	1.02	5.57
BBG BARC Agg (Dly)			0.82	(1.73)	0.82	2.65	0.55	5.97
Excess			0.21	1.10	0.21	0.74	0.47	(0.39)
GIA	37	0.10	1.30	(0.17)	1.30	3.93		
BBG BARC Agg (Dly)			0.82	(1.73)	0.82	2.65		
Excess			0.49	1.57	0.49	1.29		



		% of						
	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2016	2015	2014
ECONOMICALLY TARGETED INVESTMENTS								
AFL-CIO HOUSING INV TRUST	155	0.42	0.81	(1.68)	0.81	1.94	1.13	6.10
BBG BARC Agg (Dly)			0.82	(1.73)	0.82	2.65	0.55	5.97
Excess			(0.01)	0.05	(0.01)	(0.71)	0.58	0.14
ACCESS RBC	56	0.15	0.48	(1.25)	0.48	1.61	1.83	6.66
Access RBC Benchmark			0.46	(1.30)	0.46	1.52	1.40	5.08
Excess			0.02	0.05	0.02	0.09	0.43	1.58
CPC CONST FACILITY	4	0.01	2.04	1.37	2.04	(3.95)	12.90	
CPC CONST BENCHMARK			0.83	2.41	0.83	3.12	2.90	
Excess			1.21	(1.04)	1.21	(7.07)	10.01	
BOA-PPAR (FNMA)	7	0.02	0.24	(6.54)	0.24	4.07	42.03	13.31
FNMA Plus 85bps			0.71	(0.50)	0.71	2.38	2.50	7.13
Excess			(0.47)	(6.04)	(0.47)	1.69	39.53	6.19
BOA-PPAR (GNMA)	6	0.02	0.47	(5.88)	0.47	3.13	8.04	15.61
GNMA Plus 65bps			0.42	(0.30)	0.42	2.28	2.02	6.65
Excess			0.05	(5.58)	0.05	0.85	6.03	8.96
CCD-PPAR (FNMA)	2	0.01	0.35	(5.41)	0.35	3.71	6.69	25.71
FNMA Plus 85bps			0.71	(0.50)	0.71	2.38	2.50	7.13
Excess			(0.36)	(4.91)	(0.36)	1.33	4.20	18.58
CCD-PPAR (GNMA)	3	0.01	0.06	(5.63)	0.06	2.78	5.08	15.37
GNMA Plus 65bps			0.42	(0.30)	0.42	2.28	2.02	6.65
Excess			(0.36)	(5.34)	(0.36)	0.50	3.06	8.72
CFSB-PPAR (GNMA)	1	0.00	0.23	(5.44)	0.23	3.21	5.90	15.34
GNMA Plus 65bps			0.42	(0.30)	0.42	2.28	2.02	6.65
Excess			(0.19)	(5.14)	(0.19)	0.93	3.88	8.69



	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2016	2015	2014
CPC-PPAR (FNMA)	42	0.11	(0.80)	(5.79)	(0.80)	6.15	8.96	13.91
FNMA Plus 85bps			0.71	(0.50)	0.71	2.38	2.50	7.13
Excess			(1.50)	(5.29)	(1.50)	3.77	6.46	6.78
CPC - PPAR (GNMA)	63	0.17	(0.44)	(5.52)	(0.44)	2.21	5.24	9.23
GNMA Plus 65bps			0.42	(0.30)	0.42	2.28	2.02	6.65
Excess			(0.86)	(5.22)	(0.86)	(0.07)	3.23	2.58
JPMC - PPAR (FNMA)	14	0.04	1.24	(1.64)	1.24	7.94	6.18	12.08
FNMA Plus 85bps			0.71	(0.50)	0.71	2.38	2.50	7.13
Excess			0.53	(1.14)	0.53	5.56	3.68	4.96
LIIF-PPAR (FNMA)	4	0.01	0.39	(11.80)	0.39	5.03	6.29	38.12
FNMA Plus 85bps			0.71	(0.50)	0.71	2.38	2.50	7.13
Excess			(0.32)	(11.30)	(0.32)	2.65	3.79	30.99
LIIF-PPAR (GNMA)	2	0.00	0.36	(2.43)	0.36	3.88	3.92	9.74
GNMA Plus 65bps			0.42	(0.30)	0.42	2.28	2.02	6.65
Excess			(0.06)	(2.13)	(0.06)	1.61	1.91	3.09
NCBCI-PPAR (FNMA)	0	0.00	(0.60)	(5.69)	(0.60)	3.46	4.97	14.93
FNMA Plus 85bps			0.71	(0.50)	0.71	2.38	2.50	7.13
Excess			(1.31)	(5.19)	(1.31)	1.07	2.47	7.81
NCBCI-PPAR (GNMA)	1	0.00	(0.04)	(5.36)	(0.04)	3.51	5.53	16.66
GNMA Plus 65bps			0.42	(0.30)	0.42	2.28	2.02	6.65
Excess			(0.46)	(5.07)	(0.46)	1.23	3.52	10.01
NHS-PPAR (GNMA)	0	0.00	(5.50)	(9.57)	(5.50)	3.58	4.90	13.73
GNMA Plus 65bps			0.42	(0.30)	0.42	2.28	2.02	6.65
Excess			(5.93)	(9.28)	(5.93)	1.30	2.89	7.08



		% of Total						
	Market Value (\$MM)	Total	3 Month	FYTD	CYTD	2016	2015	2014
WELLS FARGO-PPAR MTA 2013 (FNMA)	0	0.00	0.23		0.23			
FNMA Plus 85bps			0.71		0.71			
Excess			(0.47)		(0.47)			
CASH								
POLICE SHORT TERM	304	0.82	0.20	0.45	0.20	0.89	0.47	0.23
91 DAY T-BILL			0.10	0.28	0.10	0.33	0.05	0.02
Excess			0.09	0.17	0.09	0.56	0.42	0.21
C/D - Fail Float Earnings	1	0.00						
SECURITY LENDING	20	0.05						



**New York City Police Pension Fund, Subchapter Two** 

# **Appendix C**

Alternative Assets Manager Performance Detail





	Vintage Year					Investment	
	(Cash Flow)	Commitments	Contributions	Distributions	Market Value	Multiple	ITD IRR%
TOTAL PRIVATE EQUITY		5,028,598,874	4,300,395,546	3,609,996,794	2,389,790,634	1.40	10.1%
TOTAL LIQUIDATED		256,182,945	277,103,017	343,214,468	-	1.24	6.7%
TOTAL ACTIVE		4,772,415,929	4,023,292,529	3,266,782,327	2,389,790,634	1.41	10.4%
TOTAL ACTIVE							
Cypress Merchant Banking Partners II, L.P.	1999	45,172,972	53,944,269	50,537,286	84,201	0.94	-1.2%
FdG Capital Partners LLC	1999	50,000,000	57,908,408	97,563,862	1,329,874	1.71	14.7%
Lincolnshire Equity Fund II, L.P.	1999	11,038,409	11,556,880	21,877,852	331,597	1.92	
Solera Partners, L.P.	2000	9,999,888	13,248,487	20,817,577	1,576,822	1.69	
SCP Private Equity Partners II, L.P.	2000	25,000,000	28,057,160	10,857,159	3,766,680	0.52	
Apollo Investment Fund V, L.P.	2001	35,000,000	54,551,027	107,451,726	862,577	1.99	
CVC European Equity Partners III, L.P.	2001	25,000,000	28,947,553	74,439,614	667,208	2.59	41.1%
Coller International Partners IV, L.P.	2002	26,100,000	26,761,761	35,995,127	168,006	1.35	11.5%
Landmark Equity Partners XI, L.P.	2002	30,000,000	28,518,970	42,458,641	1,700,475	1.55	23.4%
FS Equity Partners V, L.P.	2003	15,000,000	12,841,490	25,051,276	1,445,910	2.06	15.7%
Blackstone Capital Partners IV, L.P.	2003	46,253,267	57,128,138	126,615,370	13,063,443	2.45	36.4%
Ares Corporate Opportunities Fund, L.P.	2003	35,000,000	41,988,154	62,544,314	2,552,054	1.55	13.6%
Markstone Capital Partners, LP	2004	10,000,000	11,724,772	4,955,651	488,982	0.46	-31.7%
Euro Choice II (Delaware) L.P.	2004	20,247,528	20,142,503	28,160,988	1,074,928	1.45	7.0%
FdG Capital Partners II LP	2004	25,000,000	26,874,461	30,356,466	1,631,692	1.19	3.5%
Paladin Homeland Security Fund (NY City), L.P.	2004	30,000,000	32,917,117	12,041,510	853,004	0.39	-13.8%
Lincolnshire Equity Fund III, L.P.	2004	15,000,000	14,808,950	18,945,592	7,827,872	1.81	29.7%
Yucaipa American Alliance Fund I, LP	2004	20,000,000	29,967,488	25,901,853	7,121,967	1.10	2.8%
Aurora Equity Partners III L.P.	2004	15,000,000	16,236,943	25,918,608	1,228,844	1.67	14.0%
Trilantic Capital Partners III L.P.	2004	20,000,000	18,079,250	29,208,586	424,713	1.64	14.6%
Medica III Investments (International) L.P.	2004	10,000,000	10,000,000	4,237,089	3,375,000	0.76	-6.3%
Celtic Pharmaceutical Holdings L.P.	2004	10,000,000	10,160,838	160,838	1,590,407	0.17	-17.8%
Palladium Equity Partners III, L.P.	2005	25,000,000	26,809,523	37,439,723	13,043,066	1.88	15.5%
New Mountain Partners II, L.P.	2005	7,741,935	6,963,466	13,477,943	91,143	1.95	13.7%
VSS Communications Partners IV, L.P.	2005	12,345,176	14,219,840	9,575,652	960,118	0.74	-5.2%
Carlyle Partners IV, L.P.	2005	50,000,000	51,531,593	100,780,768	1,806,568	1.99	13.1%
Levine Leichtman Capital Partners Deep Value Fund, L.P.	2005	20,000,000	24,978,381	25,665,635	-	1.03	0.7%
Prism Venture Partners V-A, L.P.	2005	20,000,000	20,508,481	11,142,526	2,390,001	0.66	-8.2%
Arlington Capital Partners II, L.P.	2005	20,000,000	20,224,665	31,178,301	3,348,377	1.71	11.1%
Snow Phipps Group, L.P.	2005	10,000,000	11,823,886	9,035,666	5,497,686	1.23	
GI Partners Fund II L.P.	2005	12,500,000	12,661,967	19,445,714	641,117	1.59	7.5%
Blackstone Mezzanine Partners II, L.P.	2005	14,000,000	13,356,475	17,644,741	266,750	1.34	7.8%
Psilos Group Partners III, L.P.	2005	12,500,000	13,287,792	6,410,270	9,229,659	1.18	3.1%
FirstMark Capital I, L.P. (fka FirstMark IV)	2005	10,000,000	10,927,097	25,631,641	41,281,753	6.12	37.6%

#### Through December 31, 2016



	Vintage Year					Investment	
	(Cash Flow)	Commitments	Contributions	Distributions	Market Value	Multiple	ITD IRR%
USPF II Institutional Fund, L.P.	2005	20,000,000	26,379,750	19,077,730	16,985,550	1.37	5.8%
JP Morgan Fleming (Tranche A)	2005	40,000,000	39,103,763	29,766,232	22,020,236	1.32	5.9%
Aisling Capital II, LP	2006	2,500,000	2,948,127	2,070,599	448,648	0.85	-3.2%
InterMedia Partners VII, L.P.	2006	12,500,000	14,562,257	14,670,985	1,268,482	1.09	1.4%
Falconhead Capital Partners II, L.P.	2006	15,000,000	16,747,713	13,925,346	4,628,708	1.11	2.2%
Terra Firma Capital Partners III, L.P.	2006	15,526,012	15,764,303	1,728,731	5,708,792	0.47	-10.9%
Fenway Partners Capital Fund III, L.P.	2006	15,000,000	17,031,438	13,785,183	5,991,906	1.16	3.0%
Blackstone Capital Partners V, L.P.	2006	42,087,697	44,709,437	62,148,170	10,285,963	1.62	8.1%
Avista Capital Partners, L.P.	2006	20,000,000	26,225,511	24,790,152	8,526,966	1.27	5.2%
GSC Recovery III, L.P.	2006	5,000,000	5,635,384	5,939,453	522,089	1.15	3.6%
Apollo Investment Fund VI, L.P.	2006	45,000,000	57,919,123	72,890,784	13,238,328	1.49	8.8%
Landmark Equity Partners XIII, L.P.	2006	10,000,000	9,599,442	9,208,405	2,996,326	1.27	5.3%
Ares Corporate Opportunities Fund II, L.P.	2006	15,000,000	16,428,261	26,480,331	1,564,577	1.71	13.6%
Atlantic Equity Partners IV, L.P.	2006	25,124,928	21,964,259	-	12,704,994	0.58	-7.6%
CCMP Capital Investors II, L.P.	2006	20,000,000	22,008,129	28,576,394	8,798,584	1.70	13.5%
Capital Partners Private Equity Income Fund, L.P.	2006	15,000,000	14,432,112	27,471,396	4,979,888	2.25	21.3%
CLP 2014 (fka Perseus Partners VII)	2006	15,000,000	17,521,186	6,515,747	164,932	0.38	-22.1%
NB Co-Investment Partners LP	2006	60,000,000	60,465,577	81,988,963	5,862,294	1.45	8.8%
Euro Choice III L.P.	2006	26,719,167	26,875,176	23,376,577	7,042,337	1.13	2.6%
Thomas, McNerney & Partners II, L.P.	2006	10,000,000	9,939,667	19,145,668	3,144,864	2.24	17.1%
Catterton Partners VI, L.P.	2006	20,000,000	22,366,016	27,716,915	13,025,097	1.82	12.3%
First Reserve Fund XI, L.P.	2006	20,000,000	21,253,053	12,396,409	2,239,908	0.69	-8.9%
Permira IV, L.P.	2006	16,187,825	17,323,598	22,587,539	3,665,173	1.52	8.4%
Arsenal Capital Partners II, LP	2006	10,000,000	11,980,340	15,794,212	4,110,910	1.66	10.6%
RRE Ventures IV, L.P.	2006	15,000,000	18,833,841	9,496,306	18,640,940	1.49	7.3%
Coller International Partners V, L.P.	2006	10,000,000	8,677,544	10,244,182	2,107,487	1.42	8.6%
MidOcean Partners III, L.P.	2006	40,000,000	45,739,729	49,837,465	26,759,617	1.67	10.5%
GF Capital Private Equity Fund, L.P.	2006	10,000,000	10,437,343	11,544,232	7,171,292	1.79	13.9%
The Fourth Cinven Fund	2006	13,945,143	14,218,057	18,359,161	1,361,411	1.39	6.8%
Pegasus Partners IV, L.P.	2007	15,000,000	17,839,579	10,692,339	6,420,786	0.96	-0.9%
Olympus Capital Asia III, L.P.	2007	20,000,000	23,404,664	11,861,251	12,223,700	1.03	0.8%
FTVentures III, LP	2007	7,500,000	8,222,068	11,127,943	6,337,590	2.12	16.4%
Highland Consumer Fund I LP	2007	10,000,000	9,716,060	2,943,522	4,230,717	0.74	-4.8%
Montreux Equity Partners IV, L.P.	2007	10,000,000	10,000,000	5,522,350	8,728,893	1.43	6.8%
Gleacher Mezzanine Fund II, L.P.	2007	10,000,000	9,197,768	11,840,269	290,648	1.32	10.4%
Quaker BioVentures II, L.P.	2007	15,000,000	13,544,055	9,388,927	6,076,812	1.14	3.4%
SCP Vitalife Partners II Fund	2007	15,000,000	15,074,774	1,184	8,556,272	0.57	-9.6%
Comvest Investment Partners III, L.P.	2007	15,000,000	19,400,716	13,273,181	10,102,012	1.20	5.0%
Constellation Venture Capital III, L.P.	2007	15,000,000	16,296,009	3,405,627	8,873,639	0.75	-5.2%
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#### Through December 31, 2016



	Vintage Year					Investment	
	(Cash Flow)	Commitments	Contributions	Distributions	Market Value	Multiple	ITD IRR%
United States Power Fund III, L.P.	2007	15,000,000	17,746,993	8,853,661	15,621,926	1.38	6.5%
Carlyle Partners V, L.P.	2007	50,000,000	50,889,453	69,382,906	15,491,828	1.67	13.1%
PCG Clean Energy & Technology Fund (East), LLC	2007	40,000,000	35,578,057	4,619,129	16,499,231	0.59	-8.9%
GSO Capital Opportunities Fund LP	2007	17,500,000	26,152,888	36,667,384	987,741	1.44	17.6%
New Mountain Partners III, L.P.	2007	35,000,000	35,437,909	33,035,076	29,465,173	1.76	12.8%
Vista Equity Partners Fund III, L.P.	2007	20,000,000	21,256,899	45,504,483	8,656,741	2.55	27.9%
Trilantic Capital Partners IV L.P.	2007	45,856,523	47,664,602	64,769,064	10,358,289	1.58	14.2%
Pine Brook Capital Partners, L.P.	2007	15,000,000	16,164,532	10,144,334	9,805,832	1.23	6.5%
Paladin III (NY City), L.P.	2008	30,000,000	38,017,779	18,719,678	30,398,514	1.29	7.0%
Relativity Fund, L.P.	2008	8,158,371	8,080,212	1,726,554	2,420,192	0.51	-11.1%
Apollo Investment Fund VII, L.P.	2008	50,000,000	59,464,803	90,226,556	13,795,007	1.75	24.0%
NGN BioMed Opportunity II, L.P.	2008	10,000,000	9,575,911	1,973,105	4,873,659	0.71	-6.9%
Carpenter Community BancFund-A, L.P.	2008	15,000,000	14,639,741	8,743,840	15,394,238	1.65	8.6%
Riverstone/Carlyle Global Energy & Power Fund IV, L.P.	2008	15,000,000	16,529,731	11,320,273	7,978,851	1.17	4.9%
Yucaipa American Alliance Fund II, LP	2008	50,000,000	68,226,790	40,539,046	53,412,096	1.38	8.1%
Milestone Partners III, L.P.	2008	15,000,000	16,153,125	8,662,995	6,956,702	0.97	-0.7%
Levine Leichtman Capital Partners IV, L.P.	2008	10,000,000	10,040,438	14,946,553	2,674,101	1.75	19.9%
Lee Equity Partners Fund, L.P.	2008	17,534,865	23,773,661	28,901,301	52,512	1.22	6.3%
Coral's 2007 Institutional Momentum Fund, L.P.	2008	10,000,000	9,492,863	3,068,142	1,187,786	0.45	-12.7%
Yucaipa Corporate Initiatives Fund II, LP	2008	14,030,930	13,674,863	4,223,223	8,435,626	0.93	-1.6%
CVC European Equity Partners V, L.P.	2008	34,336,335	36,060,104	36,973,820	20,178,098	1.58	13.6%
GI Partners Fund III L.P.	2008	17,500,000	18,810,473	20,204,931	7,741,306	1.49	12.6%
Ares Corporate Opportunities Fund III, L.P.	2008	25,000,000	29,968,177	34,695,512	21,825,002	1.89	21.1%
GCM Grosvenor NYCPPF Emerging Manager Fund, L.P.	2008	59,909,091	67,189,039	49,202,386	43,566,535	1.38	11.6%
First Reserve Fund XII, L.P.	2008	20,000,000	21,744,246	9,625,572	5,977,417	0.72	-8.8%
Landmark Equity Partners XIV, L.P.	2008	27,250,000	25,554,119	22,367,597	10,891,238	1.30	10.8%
Crestview Partners II, L.P.	2008	22,500,000	24,562,425	20,497,395	23,114,540	1.78	16.5%
NB New York City Growth Fund IA	2008	4,835,960	4,835,960	1,670,495	1,549,781	0.67	-6.4%
Euro Choice IV L.P.	2008	19,274,256	17,913,130	6,626,839	15,325,597	1.23	5.7%
Avista Capital Partners II, L.P.	2008	35,000,000	43,122,357	57,337,615	20,850,015	1.81	17.1%
Blue Wolf Capital Fund II, L.P.	2008	15,000,000	16,300,742	9,278,118	12,085,874	1.31	7.8%
Bridgepoint Europe IV	2008	13,322,655	13,383,049	13,047,085	6,213,111	1.44	10.3%
Aisling Capital III, LP	2008	7,000,000	7,685,439	7,893,441	4,681,494	1.64	20.6%
Onex Partners III LP	2008	15,000,000	16,205,396	12,841,683	13,224,474	1.61	13.7%
NorthBound Emerging Manager Custom Fund LP	2009	20,000,000	17,025,308	12,932,090	17,106,237	1.76	16.7%
Welsh, Carson, Anderson & Stowe XI, L.P.	2009	22,500,000	22,076,558	18,743,725	15,713,135	1.56	13.2%
Scale Venture Partners III, LP	2009	10,000,000	9,787,455	11,452,912	9,890,863	2.18	21.3%
FS Equity Partners VI, L.P.	2009	20,000,000	19,294,650	16,715,054	20,162,178	1.91	18.1%
Lincolnshire Equity Fund IV, L.P.	2009	7,500,000	7,775,825	3,017,480	7,589,759	1.36	10.1%

#### Through December 31, 2016



	Vintage Year					Investment	
	(Cash Flow)	Commitments	Contributions	Distributions	Market Value	Multiple	ITD IRR%
Lexington Capital Partners VII, L.P.	2009	20,000,000	17,233,247	16,886,256	8,960,793	1.50	14.9%
Snow Phipps II, L.P.	2010	17,500,000	17,708,181	8,515,790	18,066,682	1.50	15.9%
Trident V, L.P.	2010	40,000,000	43,860,716	17,306,456	43,120,933	1.38	10.1%
Comvest Investment Partners IV, L.P.	2010	45,000,000	44,346,825	56,458,064	20,936,371	1.75	33.4%
Blackstone Capital Partners VI, L.P.	2011	35,000,000	34,242,279	9,390,344	34,367,769	1.28	10.9%
Ampersand 2011	2011	12,500,000	12,062,500	9,518,627	15,431,305	2.07	19.6%
BDCM Opportunity Fund III, L.P.	2011	20,000,000	25,513,911	9,212,561	21,148,151	1.19	7.5%
AXA Secondary Fund V B L.P.	2011	80,000,000	63,888,824	52,170,049	47,379,896	1.56	16.8%
Wellspring Capital Partners V, L.P.	2011	22,500,000	22,535,305	18,370,876	15,315,414	1.49	17.7%
EQT VI, L.P.	2011	48,586,754	47,807,272	6,285,469	53,819,884	1.26	8.4%
Pegasus Partners V, L.P.	2011	14,552,940	13,345,485	2,909,464	19,672,805	1.69	18.1%
BC European Capital IX	2011	65,664,624	62,163,023	25,417,288	55,965,908	1.31	11.1%
American Securities Partners VI, L.P.	2011	50,000,000	53,327,571	18,038,449	66,556,629	1.59	21.3%
Vista Equity Partners Fund IV, L.P.	2011	70,000,000	69,648,155	40,466,604	84,523,389	1.79	20.6%
Warburg Pincus Private Equity XI, L.P.	2012	80,000,000	75,435,264	18,674,320	79,532,683	1.30	12.4%
Summit Partners Growth Equity Fund VIII-A, L.P.	2012	75,000,000	77,977,319	30,480,813	77,676,873	1.39	18.8%
NYCPPF - 2012 Emerging Manager Program	<u>2012</u>	50,000,000	32,901,375	4,971,213	33,958,831	<u>1.18</u>	<u>11.1%</u>
Trilantic Capital Partners V L.P.	2012	50,000,000	34,387,680	2,941,219	36,894,760	1.16	8.7%
Palladium Equity Partners IV, L.P.	2012	35,000,000	22,993,307	2,131,514	23,925,916	1.13	7.0%
Ares Corporate Opportunities Fund IV, L.P.	2012	50,000,000	41,189,572	9,402,805	45,211,354	1.33	14.0%
Green Equity Investors VI, L.P.	2012	55,000,000	54,953,152	10,655,869	58,246,184	1.25	13.0%
Platinum Equity Capital Partners III, L.P.	2012	50,000,000	41,706,892	32,937,458	37,639,255	1.69	49.8%
Neuberger Berman Strategic Co-Investment II LP	2012	60,000,000	55,058,870	20,543,365	60,322,798	1.47	21.2%
Carlyle Partners VI, L.P.	2013	60,000,000	36,276,200	9,509,544	31,542,028	1.13	8.0%
Carlyle Partners VI, L.P. (Side Car)	2014	3,654,000	3,580,525	-	3,302,298	0.92	-5.2%
Landmark Equity Partners XV, L.P.	2013	67,000,000	27,488,046	12,124,779	20,294,417	1.18	11.3%
Landmark - NYC Fund I, L.P.	2013	23,000,000	11,665,733	4,513,323	10,097,872	1.25	14.3%
Apollo Investment Fund VIII, L.P.	2013	100,000,000	59,128,705	4,927,390	62,397,778	1.14	11.9%
CVC Capital Partners VI, L.P.	2013	84,212,872	48,353,459	592,149	50,175,288	1.05	5.1%
Crestview Partners III, L.P.	2013	45,000,000	13,796,516	227,482	13,199,358	0.97	NM
Crestview Partners III (Co-Investment B), L.P.	2013	15,000,000	9,070,351	205,453	10,196,766	1.15	NM
Olympus Growth Fund VI, L.P.	2014	35,000,000	17,892,157	4,854,061	18,564,065	1.31	27.3%
ASF VI B L.P.	2014	60,000,000	33,301,057	3,222,706	38,168,687	1.24	14.5%
ASF VI B NYC Co-Invest L.P.	2014	20,000,000	13,255,736	3,866,065	13,303,067	1.30	16.0%
Vista Equity Partners Fund V, L.P.	2014	85,000,000	82,607,872	15,747,647	78,034,348	1.14	9.8%
Lexington Capital Partners VIII, L.P.	2014	80,000,000	20,539,253	6,526,389	20,333,281	1.31	NM
Siris Partners III, L.P.	2015	15,000,000	6,129,513	98,820	5,999,578	0.99	NM
Centerbridge Capital Partners III, L.P.	2015	11,100,000	3,026,882	133,775	3,386,480	1.16	NM
Welsh, Carson, Anderson & Stowe XII, L.P.	2015	37,000,000	10,417,440	-	11,870,186	1.14	NM





	Vintage Year					Investment			
	(Cash Flow)	Commitments	Contributions	Distributions	Market Value	Multiple	ITD IRR%		
Warburg Pincus Private Equity XII, L.P.	2015	97,000,000	17,306,262	-	15,853,449	0.92	NM		
ASF VII B L.P.	2015	44,500,000	3,814,733	13,727	4,452,489	1.17	NM		
ASF VII B NYC Co-Invest L.P.	2015	22,000,000	2,200	-	2,200	1.00	NM		
EQT VII, L.P.	2015	72,614,149	24,735,288	138,203	22,315,326	0.91	NM		
American Securities Partners VII, L.P.	2015	37,000,000	7,168,756	-	7,306,496	1.02	NM		
Bridgepoint Europe V L.P.	2015	27,878,944	8,153,513	-	9,424,974	1.16	NM		
Bridgepoint Europe V Co-Invest	2015	7,471,078	1,546,441	-	1,520,233	0.98	NM		
NYCPPF - 2015 Emerging Manager Program	<u>2015</u>	60,000,000	1,850,240	29,369	1,917,112	<u>1.05</u>	<u>NM</u>		
Vista Equity Partners Fund VI, L.P.	2016	75,000,000	26,599,609	100,096	26,427,719	1.00	NM		
Apax IX USD, L.P.	2016	60,000,000	-	-	(652,004)	-	N/A		
BC European Capital X	2017	39,058,310	-	-	-	-	N/A		
BCEC X Co-Investment	2017	15,623,324	-	-	-	-	N/A		
Green Equity Investors VII, L.P.	2017	44,000,000	-	-	-	-	N/A		
Ares Corporate Opportunities Fund V, L.P.	2017	44,000,000	_	-	_	-	N/A		

Through December 31, 2016



			Original	Total	Total		Total Value	
	Vintage Year	Style Sector	Commitment	Contributions	Distrubutions	Market Value	Multiple	Net IRR%
TOTAL PRIVATE REAL ESTATE			2,541,703,696	2,001,001,282	1,127,570,148	1,590,558,914	1.40	8.3%
TOTAL PRIVATE REAL ESTATE								
H/2 Special Opportunities Fund IV	2006	Core / Core Plus Portfolio	61,000,000	5,251,830	-	5,310,489	1.01	1.2%
PRISA SA	2006	Core / Core Plus Portfolio	21,000,000	22,590,656	6,214,074	27,742,539	1.50	4.4%
Prologis Targeted U.S. Logistics Fund	2006	Core / Core Plus Portfolio	10,000,000	13,194,914	3,336,250	13,577,547	1.28	3.2%
RREEF America REIT II	2006	Core / Core Plus Portfolio	21,000,000	27,724,347	12,446,259	27,984,013	1.46	5.0%
UBS Trumbull Property Fund	2006	Core / Core Plus Portfolio	61,000,000	84,294,322	18,703,664	104,759,807	1.46	7.1%
Colony Realty Partners II	2007	Core / Core Plus Portfolio	20,000,000	21,420,211	666,108	4,214,200	0.23	-15.6%
Heitman HART	2007	Core / Core Plus Portfolio	28,000,000	40,009,702	12,009,702	54,252,323	1.66	8.3%
JP Morgan Special Situation Property Fund	2007	Core / Core Plus Portfolio	15,000,000	17,296,308	4,747,809	19,214,990	1.39	4.0%
JP Morgan Strategic Property Fund	2007	Core / Core Plus Portfolio	56,000,000	61,473,883	-	111,403,813	1.81	8.5%
PRISA II	2007	Core / Core Plus Portfolio	60,278,867	63,729,327	14,619,308	82,518,444	1.52	5.5%
RREEF America REIT III - 1410	2007	Core / Core Plus Portfolio	15,000,000	15,000,000	8,425,717	108,160	0.57	-7.6%
LaSalle Property Fund	2010	Core / Core Plus Portfolio	50,000,000	50,000,000	11,758,201	69,062,385	1.62	12.0%
Almanac Realty Securities VI	2012	Core / Core Plus Portfolio	50,000,000	33,130,982	24,407,849	20,904,958	1.37	17.2%
Almanac Realty Securities VI (Sidecar II)	2012	Core / Core Plus Portfolio	15,000,000	5,698,048	2,776,669	6,077,518	1.55	29.1%
NYC Asset Investor #2 LLC	2013	Core / Core Plus Portfolio	60,000,000	57,585,676	7,912,602	67,133,689	1.30	16.0%
MetLife Core Property Fund	2014	Core / Core Plus Portfolio	40,000,000	40,000,000	3,738,218	46,704,478	N/A	N/A
Almanac Realty Securities VII	2015	Core / Core Plus Portfolio	50,000,000	16,383,764	509,197	17,658,842	N/A	N/A
Almanac Realty Securities VII (Sidecar II)	2016	Core / Core Plus Portfolio	20,000,000	4,511,830	69,962	5,034,258	N/A	N/A
Exeter Industrial Core Club Fund II	2016	Core / Core Plus Portfolio	19,000,000	4,655,000	99,000	4,791,811	N/A	N/A
Jamestown Premier Property Fund	2016	Core / Core Plus Portfolio	26,000,000	26,713,346	2,367,226	25,203,402	N/A	N/A
NYCRS Artemis Co-Investment	2016	Core / Core Plus Portfolio	35,000,000	10,353,121	-	12,798,947	N/A	N/A
USAA Eagle Real Estate Fund	2016	Core / Core Plus Portfolio	40,000,000	30,940,650	-	34,110,210	N/A	N/A
Brookfield Premier Real Estate Partners	2017	Core / Core Plus Portfolio	61,000,000	28,761,682	-	31,198,336	N/A	N/A
Lion Industrial Trust - 2007	2017	Core / Core Plus Portfolio	40,000,000	-	-	-	N/A	N/A
Canyon Johnson Urban Fund	2003	Non-Core Portfolio	10,000,000	9,060,242	10,582,954	-	1.17	10.2%
OCM Real Estate Opportunities Fund III	2003	Non-Core Portfolio	15,000,000	15,000,000	25,262,239	153,350	1.69	11.3%
Blackstone Fund IV	2004	Non-Core Portfolio	15,000,000	19,220,353	24,376,753	2,548,002	1.40	10.5%
The City Investment Fund I	2004	Non-Core Portfolio	70,000,000	69,030,360	69,717,861	254,233	1.01	0.3%
Canyon Johnson Urban Fund II	2005	Non-Core Portfolio	20,000,000	17,977,405	7,832,638	176,951	0.45	-10.5%
AREA Real Estate Investment Fund V, LP	2006	Non-Core Portfolio	5,000,000	5,000,004	2,796,629	2,072,234	0.97	-0.4%
Blackstone Real Estate Partners VI	2007	Non-Core Portfolio	40,000,000	44,531,260	66,822,087	19,022,718	1.93	13.1%
Carlyle Realty Partners V	2007	Non-Core Portfolio	20,000,000	25,086,865	28,469,696	6,355,485	1.39	8.5%
Colony Investors VIII	2007	Non-Core Portfolio	20,000,000	21,249,679	6,439,168	2,951,075	0.44	-12.3%
Metropolitan Workforce Housing Fund	2007	Non-Core Portfolio	7,000,000	7,006,513	6,082,622	2,502,440	1.23	4.1%
AG Realty Fund VII	2008	Non-Core Portfolio	25,000,000	23,454,500	32,919,951	2,927,909	1.53	13.2%
American Value Partners Fund I	2008	Non-Core Portfolio	15,000,000	11,355,858	8,721,235	3,091,797	1.04	0.8%
ARA Asia Dragon Fund	2008	Non-Core Portfolio	10,000,000	9,284,000	11,886,344	42,369	1.28	7.1%
AREA European Real Estate Fund III, LP	2008	Non-Core Portfolio	30,000,000	30,487,500	31,137,500	4,852,140	1.18	4.2%





			Original Total Total		Total		Total Value	
	Vintage Year	Style Sector	Commitment	Contributions	Distrubutions	<b>Market Value</b>	Multiple	Net IRR%
Fidelity Real Estate Growth Fund III	2008	Non-Core Portfolio	15,000,000	13,388,046	16,692,593	1,199,576	1.34	7.6%
PRISA III	2008	Non-Core Portfolio	30,000,000	35,405,764	-	78,807,030	2.23	12.9%
Silverpeak Legacy Partners III	2008	Non-Core Portfolio	30,000,000	13,301,089	1,873,126	3,391,789	0.40	-11.8%
Stockbridge Real Estate Fund III	2008	Non-Core Portfolio	27,000,000	26,998,145	16,829,753	14,572,862	1.16	2.6%
Westbrook Real Estate Fund VII	2008	Non-Core Portfolio	10,000,000	11,113,528	9,618,184	3,569,811	1.19	3.2%
Carbon Capital III	2009	Non-Core Portfolio	15,000,000	16,408,936	19,925,471	-	1.21	8.5%
Thor Urban Property Fund II	2009	Non-Core Portfolio	20,000,000	25,878,333	27,390,625	10,806,818	1.48	11.5%
Walton Street Real Estate Fund VI	2009	Non-Core Portfolio	30,000,000	26,594,360	25,469,507	14,017,756	1.48	9.3%
Blackstone Real Estate Partners Europe III (USD Vehicle)	2010	Non-Core Portfolio	35,000,000	35,960,960	27,097,658	21,719,888	1.36	10.1%
Canyon Johnson Urban Fund III	2010	Non-Core Portfolio	15,000,000	14,793,490	19,793,332	180,583	1.35	11.9%
Westbrook Real Estate Fund VIII	2010	Non-Core Portfolio	35,000,000	41,555,430	47,461,062	6,937,400	1.31	12.2%
Carlyle Realty Partners VI	2011	Non-Core Portfolio	40,000,000	37,690,178	44,204,231	19,615,227	1.69	27.5%
H/2 Special Opportunities Fund II	2011	Non-Core Portfolio	25,000,000	25,000,000	20,626,906	15,943,387	1.46	15.4%
Blackstone Real Estate Partners VII	2012	Non-Core Portfolio	100,000,000	117,976,746	87,502,759	90,977,573	1.51	19.6%
Brookfield Strategic Real Estate Partners	2012	Non-Core Portfolio	60,000,000	63,803,543	22,782,857	70,332,858	1.46	17.5%
Divco West Fund III	2012	Non-Core Portfolio	70,000,000	68,667,971	100,853,974	17,028,085	1.72	25.1%
Taconic New York City Investment Fund LP	2012	Non-Core Portfolio	40,000,000	16,545,454	12,636,364	17,084,884	1.80	17.8%
KTR Industrial Fund III	2013	Non-Core Portfolio	30,000,000	13,109,606	20,690,514	55,953	1.58	40.5%
NYC Asset Investor #1 LLC	2013	Non-Core Portfolio	30,000,000	32,238,387	4,185,071	36,338,527	1.26	12.7%
NYC Asset Investor #3 LLC	2013	Non-Core Portfolio	40,000,000	16,676,804	156,538	18,961,821	1.15	9.1%
Blackstone Real Estate Partners Europe IV (USD Vehicle)	2014	Non-Core Portfolio	97,500,000	86,760,457	14,867,181	80,557,472	N/A	N/A
Carlyle Realty Partners VII	2014	Non-Core Portfolio	60,000,000	34,023,946	460,289	38,222,980	N/A	N/A
Divco West Fund IV	2014	Non-Core Portfolio	70,000,000	67,974,450	68,630,203	38,250,087	N/A	N/A
Lone Star Real Estate Fund III	2014	Non-Core Portfolio	75,000,000	70,082,885	35,979,882	55,176,953	N/A	N/A
Avanath Affordable Housing Fund II	2015	Non-Core Portfolio	5,000,000	4,861,193	-	5,782,734	N/A	N/A
Blackstone Real Estate Partners VIII	2015	Non-Core Portfolio	101,000,000	43,659,628	10,946,037	39,887,047	N/A	N/A
H/2 Special Opportunities Fund III	2015	Non-Core Portfolio	40,000,000	34,650,281	2,251,505	38,033,759	N/A	N/A
Divco West Fund V	2016	Non-Core Portfolio	40,000,000	2,089,084	-	1,869,314	N/A	N/A
European Property Investors Special Opportunities IV (EPISO	I 2016	Non-Core Portfolio	32,413,099	5,812,974	789,033	4,803,878	N/A	N/A
PW Real Estate Fund III LP	2016	Non-Core Portfolio	30,811,730	6,733,863	-	5,938,249	N/A	N/A
Westbrook Real Estate Fund X	2016	Non-Core Portfolio	24,000,000	2,781,613	-	2,816,693	N/A	N/A
Lone Star Real Estate Fund V	2017	Non-Core Portfolio	92,700,000	-	-	(1,037,939)	N/A	N/A

Through December 31, 2016



		Original	Total	Total		<b>Total Value</b>	
	Vintage Year	Commitment	Contributions	Distrubutions	Market Value	Multiple	Net IRR%
TOTAL INFRASTRUCTURE		331,600,000	143,545,986	7,956,868	155,179,990	1.14	10.1%
TOTAL INFRASTRUCTURE INVESTMENTS							
Brookfield Infrastructure Fund II	2013	60,000,000	46,083,956	5,151,116	52,404,883	1.25	14.8%
First Reserve Energy Infrastructure Fund II, L.P.	2014	40,000,000	13,463,607	493,207	16,080,722	N/A	N/A
IFM Global Infrastructure Fund	2014	60,000,000	61,903,068	1,903,068	66,232,874	N/A	N/A
Brookfield Infrastructure Fund III, L.P.	2016	61,000,000	9,566,585	169,085	10,241,933	N/A	N/A
Global Infrastructure Partners III-A/B, L.P.	2016	71,000,000	12,528,770	240,392	10,219,579	N/A	N/A
Actis Energy 4	2017	39,600,000	-	-	-	N/A	N/A





		Commitment - Contributions Di		Distributions	Final Market	3 Month	Inception
	Vintage Year	Closing (Base)	<b>Cumulative (Local)</b>	Cumulative	Value	Base%	IRR%
TOTAL OPPORTUNISTIC FIXED INCOME		1,193,405,570	1,164,639,886	430,153,049	1,026,133,946	1.62%	7.78%
Avenue Special Situations Fund V, L.P.	2007	20,209,326	20,520,314	26,593,239	223,852	0.00%	NM
Avenue Europe Special Sit. Fund, L.P.	2008	14,571,244	13,775,563	26,870,440	-	0.74%	NM
Torchlight Debt Oppy Fund III, LLC	2009	35,000,000	37,314,271	49,884,871	4,940,759	0.05%	13.28%
AG GECC PPIP Fund, L.P.	2010	27,000,000	27,052,129	41,724,862	50,500		20.19%
Avenue Special Situations Fund VI L.P.	2011	45,000,000	46,135,636	36,082,805	16,932,618	0.00%	2.26%
Golden Tree	2011	88,000,000	82,502,006	-	119,285,838	1.94%	8.24%
Marathon Centre Street Partnership, L.P.	2011	140,625,000	155,250,000	33,750,000	178,383,449	1.13%	8.90%
AG Centre Street Partnership, L.P.	2012	105,000,000	82,950,000	14,131,909	91,814,437	2.56%	6.76%
Apollo Centre Street Partnership, L.P	2012	162,500,000	162,949,186	46,636,178	127,811,576	1.56%	2.97%
FCO MA Centre Street L.P.	2012	90,000,000	116,429,684	53,368,409	90,699,974	0.00%	8.32%
OHA Centre Street Partnership, L.P.	2012	112,500,000	114,139,015	36,200,453	106,566,421	3.90%	7.55%
Contrarian Partnership, L.P	2013	55,000,000	55,000,000	-	62,458,284	2.98%	6.27%
Lone Star Fund VIII(U.S.), L.P.	2013	70,000,000	68,907,286	56,174,052	31,881,768	0.00%	18.29%
Oaktree Opportunities Fund IX, L.P.	2013	70,000,000	70,000,000	5,577,477	71,751,594	0.00%	0.86%
Ares Centre Street LP	2014	90,000,000	82,360,975	-	95,706,244	1.49%	9.98%
Brightwood Capital Fund III, L.P.	2015	22,000,000	17,853,821	3,158,354	15,148,075	0.00%	0.04%
Torchlight Debt Opportunity Fund V, LP	2015	46,000,000	11,500,000	-	12,478,559	3.58%	11.89%

Information provided by Alpha Frontier Above data is not final and subject to change





		NATE But and	3 Month	24 Month	5V7D D.1	NTD Data and	1 Year	3 Year	ITD	ITD Cumulative
TOTAL HEROE FUNDS	Market Value	MTD Return%	Return%	Return%	FYTD Return%		Return%	Return%	Return%	Return%
TOTAL PUREST LIFTON FUNDS	1,773,775,267	0.27% 0.29%	3.00% 3.27%	0.53% 0.64%	7.53% 7.86%	3.00% 3.27%	7.43%	2.87%	3.25%	20.18%
TOTAL DIRECT HEDGE FUNDS	1,618,878,204						7.50%	3.15%	4.47%	25.78%
TOTAL FUND OF FUNDS HEDGE FUNDS	154,897,063	-0.02%	0.29%	-0.40%	4.48%	0.29%	6.25%	0.98%	2.32%	14.10%
TOTAL DIRECT HEDGE FUNDS										
DE Shaw Composite Fund LLC	215,915,340	1.41%	2.56%	8.37%	5.19%	2.56%	6.27%	11.68%	13.54%	94.75%
Multi-Strategy	215,915,340	1.41%	2.56%	8.41%	5.19%	2.56%	6.27%	9.79%	12.38%	84.53%
Brevan Howard LP - Series L2	65,187,865	-2.25%	-1.64%	-0.69%	2.75%	-1.64%	2.89%	1.70%	0.49%	1.86%
Brevan Howard LP - Series B	59,650,810	-2.91%	-2.39%	-2.22%	1.72%	-2.39%	1.47%	0.22%	0.73%	3.91%
Systematica BlueTrend Fund LP	93,108,626	-1.63%	-1.62%	-9.08%	-9.88%	-1.62%	-17.16%	2.28%	-1.18%	-5.48%
CCP Quantitative Fund Onshore (Euler 20% Class)	61,909,491	-1.62%	1.77%	-11.51%	-5.60%	1.77%	-11.66%	10.78%	-2.23%	-8.96%
Pharo Macro Fund Ltd	158,661,466	0.60%	4.97%	5.53%	11.52%	4.97%	13.55%	6.23%	9.17%	38.96%
Pharo Gaia Fund Ltd	148,352,931	1.89%	8.60%	18.43%	20.58%	8.60%	21.95%	18.43%	18.43%	25.30%
Tactical Trading	586,871,189	-0.36%	2.85%	-1.60%	4.30%	2.85%	1.39%	5.71%	1.90%	10.41%
Caspian Select Credit Fund LP	166,864,447	0.54%	4.21%	0.93%	12.79%	4.21%	16.39%	0.49%	4.29%	22.93%
Fir Tree Value Fund LP	129,233,746	-1.61%	0.35%	-4.70%	6.44%	0.35%	13.52%	-2.93%	1.06%	4.49%
Perry Partners LP	9,994,207	-5.80%	-4.02%	-4.96%	3.78%	-4.02%	6.35%	-5.31%	-2.25%	-8.35%
Luxor Capital Partners LP (excl side pockets)	151,836,130	2.90%	11.15%	-0.23%	31.63%	11.15%	32.16%	-4.13%	-4.13%	-11.27%
JMB Capital Partners LP	6,157,354	-4.95%	-4.95%	-6.79%	-8.20%	-4.95%	-6.79%	-6.79%	-6.79%	-6.79%
Standard General Fund II LP	43,436,607	1.88%	0.78%	0.78%	0.78%	0.78%	0.78%	0.78%	0.78%	0.78%
Event Driven	507,522,491	0.58%	5.06%	-1.66%	13.24%	5.06%	16.62%	-2.37%	2.65%	13.74%
Manager Receivables			0.00%	0.01%	0.00%	0.00%	0.01%	0.01%	0.01%	0.01%
Cash			0.00%	0.01%	0.00%	0.00%	0.01%	0.01%	0.01%	0.01%
SRS Partners US LP	116,636,207	-1.54%	1.66%	8.54%	15.98%	1.66%	17.24%	5.72%	5.72%	13.33%
Gotham Targeted Neutral LP	38,071,726	-0.74%	-0.88%	0.17%	3.56%	-0.88%	2.19%	-1.11%	-1.11%	-2.38%
Turiya Fund LP	111,746,572	3.16%	3.38%	-2.10%	2.58%	3.38%	2.69%	-2.10%	-2.10%	-3.65%
Altimeter Partners Fund LP	42,114,680	-0.79%	3.16%	9.86%	25.45%	3.16%	10.93%	9.86%	9.86%	10.73%
Long/Short Equity	308,569,185	0.32%	2.15%	2.82%	9.69%	2.15%	7.74%	0.07%	0.07%	0.15%
TOTAL FUND OF FUNDS HEDGE FUNDS										
Fund of Funds Hedge Funds	154,897,063	-0.02%	0.29%	-0.40%	4.48%	0.29%	6.25%	0.98%	2.32%	14.10%



**New York City Police Pension Fund, Subchapter Two** 

# **Appendix D**

# **Footnotes**

#### **Footnotes**

#### Through March 31, 2017



- •The Barclays Capital Aggregate (then known as the Lehman Brothers Aggregate) was used prior to 1/1/89. Effective 1/1/89, in the Government Sector, maturities of less than 5 years were dropped from the Salomon and Lehman indices. From that date until 7/1/99 the benchmark was the NYC Core + 5, from Lehman.
- •Effective 7/1/94, the NYC Core + 5 Index includes BBB rated securities.
- •Effective 7/1/99, the basis of the NYC Index was changed from Lehman Brothers to Salomon. Also effective 7/1/99, only Salomon indices have been used to compare all fixed income managers.
- •Effective 4/1/03, the name of the benchmark provider was changed from Salomon to Citigroup.
- •Effective 7/1/03, the "NYC-Loomis" benchmark index for the Loomis Sayles Enhanced Yield portfolio reflects a change from the Citigroup BB&B Index to the more appropriate Merrill Lynch High Yield Master II 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.

#### **Glossary of Terms**

Through March 31, 2017



#### **General Notes**

- Estimated management fees for public market investments are calculated on an accrual basis without adjustment for management fee caps. Alternative investment fees are recorded on a cash basis. Since not all alternative managers currently provide detailed fee disclosure, the alternative investment fees noted here are not comprehensive.
- Public Market returns are Net of Manager Fees for periods after January 2014 and Gross of investment advisory fees for other periods unless otherwise indicated.
- Public market excess returns for periods prior to 2014 are based on Gross performance.

#### **Page Specific**

#### Pages 10 - 15 - Portfolio Asset Allocation

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

#### Pages 16 - 18 - 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, 2017



The indexes and most recent policy weights are as follows:

U.S. Equity: Russell 3000 \* 33.84%

International Developed (EAFE) Markets: MSCI EAFE IMI Net \* 9.50%

Emerging Markets: MSCI Emerging Markets \* 6.14%

REITs: Dow Jones Real Estate Securities \* 0.00%

Private Equity: Russell 3000 + 300 b.p. per annum \* 6.33%

Private Real Estate - Core: NFI - ODCE Net \* 2.12%

Private Real Estate - Non Core: NFI - ODCE Net + 200bps \* 2.31%

Infrastructure: CPI + 4% \* 0.42%

Hedge Funds: HFRI Fund of Funds Composite Index plus 1% \* 4.82%

US Treasury Short Term: Citigroup USBIG Treasury 1-3Y \* 0.00%

US Treasury Intermediate Long: NYC Treasury Agency + 5 \* 0.00%

US Treasury Long Duration: Citigroup Treasury 10+ \* 8.85%

Core Fixed Income: BBG Barc Agg \* 0.00%

Progress Fixed: BBG Barc Agg \* 0.00%

Mortgage: Citigroup Mortgage Index \* 3.21%

ETI: ETI Custom Benchmark \* 0.98%

Investment Grade Credit: NYC - Investment Grade Credit \* 4.19%

High Yield: Citigroup BB&B \* 8.11%

Bank Loans: Credit Suisse Leveraged Loan \* 2.00%

#### **Glossary of Terms**

Through March 31, 2017



TIPS: Lehman U.S. TIPS \* 4.40%

Convertible Bonds: BofAML All Convertibles Ex Mandatory \* 0.00%

Opportunistic Fixed: OFI - JPMGHY / CSFB 50/50 Blend Plus 300 b.p. per annum \* 2.79%

#### Page 19 - 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.