






Common Investment Meeting (NYCERS)

Schedule	Wednesday, June 19, 2019 9:00 AM — 3:00 PM EDT
Venue	Office of the New York City Comptroller, 1 Centre Street, 10th Floor (Room 1005) - Northside, New York, NY 10007
Organizer	Kim Boston

Agenda

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PUBLIC SESSION

Welcome and Opening

Quarterly Fund Performance Overview:

SUPPLEMENTAL MATERIAL - PERFORMANCE REPORTING (Public):

Total Fund Overview (Public):



New York City
Employees' Retirement System
Performance Overview as of March 31, 2019

Total Fund Overview

New York City Employees' Retirement System

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Through March 31, 2019

City of New York Employees' Retirement System First Quarter 2019 Summary

General Economic and Market Conditions: Investor confidence has shifted wildly over the past six months. Anxiety, panic, and gloom pushed equity markets down around the globe through the last three months of 2018, culminating in one of the worst Decembers in decades. The pessimism derailed global interest rate policy. The central banks in the euro zone had yet to join the U.S. in reversing years of monetary easing, and they may now skip this cycle of tightening altogether. The Fed pressed “pause” on its own tightening plan in January after nine rate hikes. The equity markets then surged during the first quarter of 2019, moving back toward the all-time high set last October, and volatility evaporated.

What changed in the fall of 2018 and then in the first quarter of 2019 to cause this whipsaw of sentiment? U.S. GDP growth softened in the fourth quarter to a still healthy 2.2%, but then notched a surprisingly strong 3.2% increase in the first quarter. This robust gain is a sign of resilience in the face of the fourth quarter market swoon and the uncertainty generated by the government shutdown in January of this year. The increase also reversed a pattern in recent years of inexplicably slower growth in first quarter GDP. The solid GDP report was accompanied by a surge in durable goods orders reported in March, strong exports, sustained job growth, and of course the reversal of the fourth quarter stock market slump.

All of the sudden, everything is fine again. Or is it? Underneath the good news are signs that we may be at the peak of the current economic cycle. More than half of the robust first quarter GDP gain came from net exports and inventory accumulation. Greater investment in inventories now, which adds to GDP, means less investment in the future. Exports rose and imports slumped; both are positive contributions to GDP but neither may be sustainable. Final sales to domestic purchasers, which excludes both trade and inventory building, rose at a more modest 1.4% rate, down from a 2.1% gain in the fourth quarter. Personal consumption inched up 1.2%, less than half the growth rate enjoyed over the year in 2018. To be fair, the weakness in these quarterly data appears to have been concentrated at the start of the year, and the reports for many indicators showed a big bounce in March.

On the positive side of the ledger, the government shutdown in January had a temporary effect, shifting the timing of activity and employment, but the net impact should be minimal. The job market saw a sharp drop in February, to just 33,000 new jobs, only to see a snap back to 196,000 in March. The average gain for the first three months was 180,000, lower than the average for last year but substantially above the bellwether mark of 100,000 per month required to keep the economy growing. Manufacturing employment in the U.S. declined in the first quarter, despite the residual strength in capital goods orders. While both the Markit manufacturing and services PMIs slipped in the first quarter, they remain above readings of 50, the dividing line between expansion and contraction. Of

Through March 31, 2019

particular interest is the eye-catching rebound in China's manufacturing PMI, which jumped from a borderline reading of 50 to 58 in March.

The narrative has changed sharply since the nadir of December 2018. The stock market slump reversed, credit spreads have narrowed, and the potential for the yield curve to steepen has returned. The rebound in GDP and durable goods orders in March, the resilience of the job market, and the gain in net exports reinforce the perception that we are poised to see economic growth reaccelerate in the second quarter. Not all the indicators suggest good news, however. Oil prices have rebounded, driving up gasoline prices and crimping household disposable income. Home price gains, which have an attendant wealth effect typically more widespread and powerful than the wealth effect from the equity market, are slowing. Finally, the continuing strength of the dollar adds to the headwinds facing manufacturing.

Trade and trade policy dominates headlines, but it is worth noting that the impact of trade in the U.S. is far lower than in most of our trading partners, both developed and emerging. One measure is the trade-to-GDP ratio, the sum of exports and imports as a percentage of GDP. (Note that exports add to GDP while imports subtract from GDP, but the sum of their share of GDP is a reasonable measure of the impact of total trade activity on an economy.) Exports and imports include both goods and services. Trade has certainly become a larger component of U.S. GDP over time, with exports rising from 7% in 1985 to 12.3% in 2018 while imports rose from 9% to 15.5%. Trade activity now involves 27.8% of U.S. GDP. By comparison, the World Bank calculates that trade accounts for 37.8% of China GDP, 62.5% for the U.K., 77.6% for Mexico, and 87% for Germany.

Please note that all return figures mentioned below are gross of fee.

Total Fund Performance: For the quarter ended March 31, 2019, the Fund returned +7.17%, forty six basis points above the Policy Target return of +6.71%. Over the trailing year, NYCERS has earned a return of +4.51% versus the Policy Target return of +3.97%. Over three years, the total Fund has returned +9.28% annualized. Over the trailing five years, the Fund has gained 6.93% annualized. The trailing 10-year return is +10.83% annualized.

Total Fund Assets: The Fund's assets totaled \$66.0 billion as of the end of the first quarter of 2019.

U.S. Equity: The total domestic equity portion of the NYCERS Fund returned +13.66% for the quarter, below the +14.04% return of the Russell 3000 Index. For the trailing year, NYCERS underperformed the index, returning +8.66% versus +8.77% for the index. The Fund is below the benchmark over the trailing three, five and ten year periods.

Through March 31, 2019

In Large Cap, the Fund underperformed the Russell 1000 Index, returning +13.66% versus the Russell 1000's return of +14.00% during the first quarter. The Fund's one year return of +9.22% underperformed the +9.30% return of the Index.

In Small Cap, the Fund returned +13.57%, below the Russell 2000 return of +14.58% for the quarter. The Fund's one year return of +2.84% outperformed the +2.05% return of the Index.

Developed International: For the quarter, the Fund's Non-U.S. Developed Equity composite returned +11.85% (excluding NYCERS' non-U.S. Environmental manager), outperforming the Custom MSCI World ex-US Benchmark by 133 basis points. The Fund returned -3.24% for the trailing one year period, above the return of the benchmark (-3.97%). The Fund is above the benchmark over the trailing three, five, and ten year periods.

Emerging Markets Equity: The Fund's active emerging markets equity composite returned +7.49% in the quarter, outperforming the +6.12% return of the FTSE NYCERS custom benchmark. The passive portfolio underperformed the active one for the quarter. The one year return for the active emerging markets composite is -8.44%, outperforming the -8.64% return for the benchmark. The active emerging markets equity composite is above the benchmark over the trailing three, five and ten year periods.

Core Fixed Income: The composite of the Fund's core program returned +3.05% during the quarter, while the NYCERS Core Plus Five Index returned +3.39%. For the past year, the core composite has returned +4.67%, while the benchmark's return is +5.28%.

TIPS: The Fund's TIPS composite delivered a +3.24% return in the quarter, above the +3.19% return for the Bloomberg Barclays Capital US TIPS Index. Over the past year, the Fund's TIPS managers have returned +2.72%, ahead of the benchmark's return of +2.70%. The Fund is ahead of the benchmark over the trailing three, five and ten year periods.

High Yield: In high yield, the Fund's managers returned +7.10% for the quarter, while NYCERS High Yield Custom Benchmark posted a higher return of +7.26%. The Fund underperformed the custom benchmark over the past year, returning +5.72% as compared to the benchmark's return of +5.82%. The Fund is behind the custom benchmark over the trailing three and five year periods, but ahead of the benchmark over the trailing ten year period.

Bank Loans: The NYCERS bank loan composite returned +3.74% in the first quarter, below the Credit Suisse Leveraged Loan Index's return of +3.78%. The Fund underperformed the benchmark for the year returning +3.30% versus +3.33% for the benchmark. The Fund has underperformed the benchmark over the trailing three year period, but outperformed over the trailing five year period.

Through March 31, 2019

Convertibles: The convertible portfolio returned +6.90% in the quarter, above the +6.51% return of the NYCERS Custom Convertible Bond Index. Over the past year, the convertibles portfolio has returned +5.20%, slightly underperforming the +5.21% return for the benchmark. The Fund underperformed the custom benchmark over the trailing three year period, but outperformed over the trailing five year period.

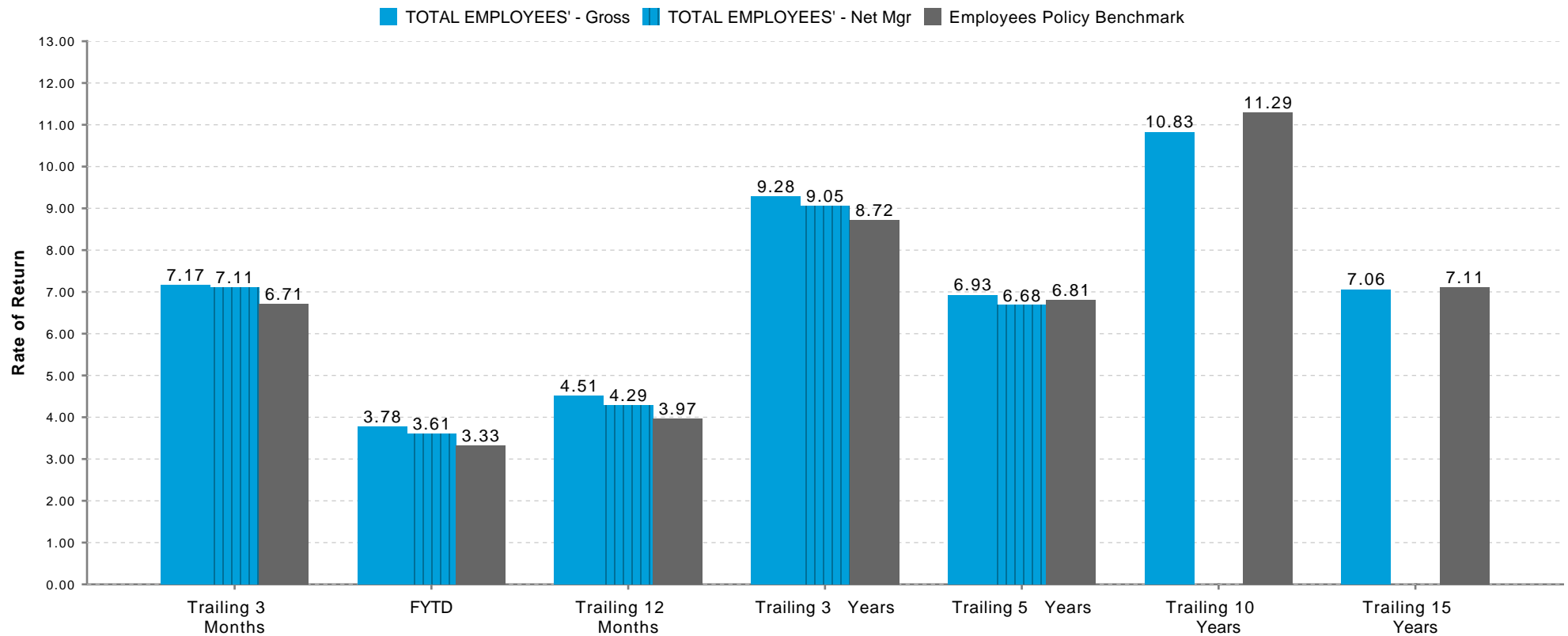
Opportunistic Fixed Income: The opportunistic fixed income composite returned +1.05% over the first quarter, underperforming the blended benchmark of 50% JP Morgan Global High Yield / 50% Credit Suisse Leveraged Loan Index - Plus 300 bps (+6.19%). The Fund returned +5.22% for the trailing one year period, below the return of the blended benchmark (+7.43%). The Fund is below the blended benchmark over the trailing three, five, and ten year periods.

Alternatives: For the quarter, the Private Equity portfolio had approximately \$4.6 billion in invested capital, representing roughly 6.9% of the Total Fund. The Private Real Estate portfolio had approximately \$3.5 billion invested, accounting for roughly 5.3% of the Total Fund. The Infrastructure portfolio had approximately \$617 million invested, or 0.9%. Performance is reported separately by NYCERS' Private Equity and Real Estate consultants.

Market Value (Billions)

TOTAL EMPLOYEES'

\$66.0

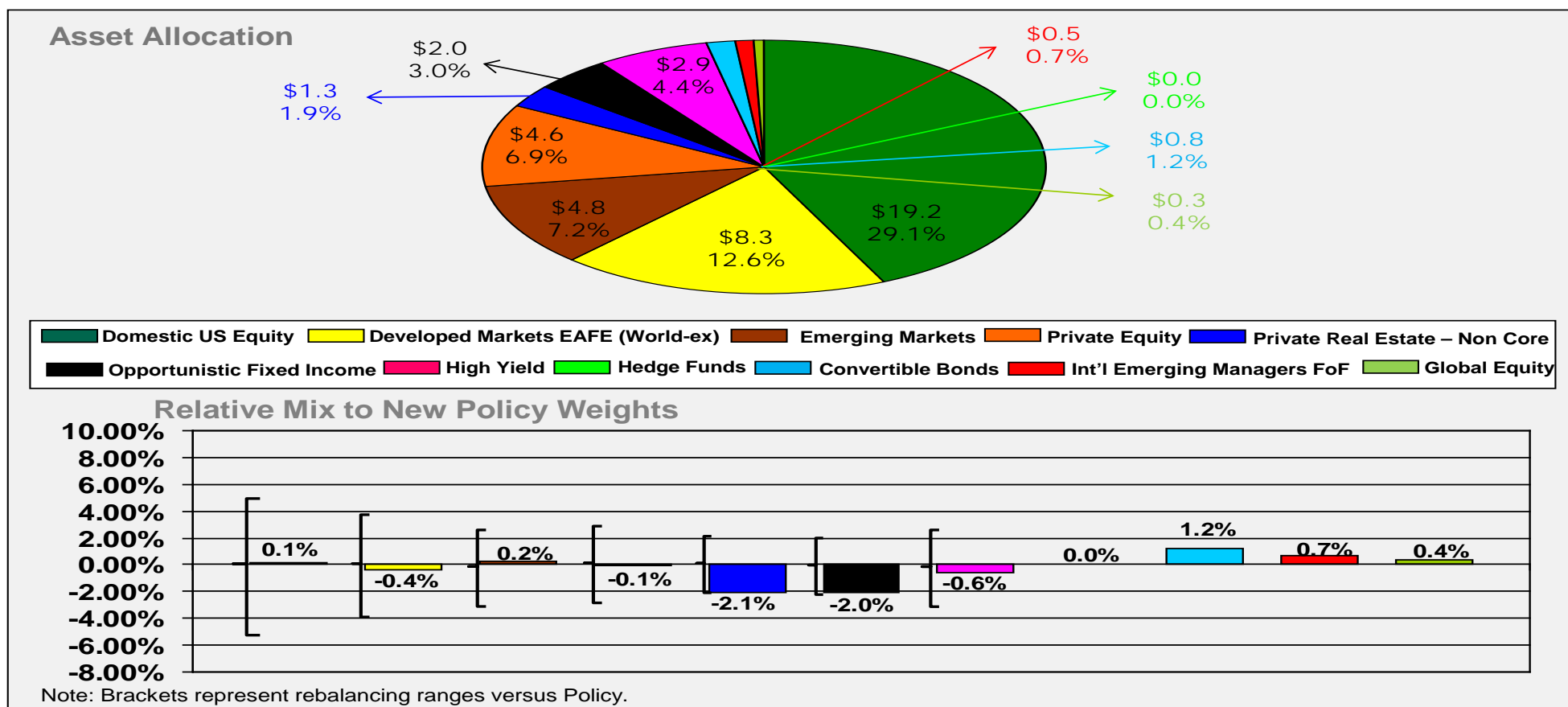


	Plan 3 Years	Benchmark 3 Years	Plan 5 Years	Benchmark 5 Years	Plan 10 Years	Benchmark 10 Years
Standard Deviation						
TOTAL EMPLOYEES'	5.3	5.3	6.9	5.9	7.8	8.2



Portfolio Asset Allocation: March 31, 2019

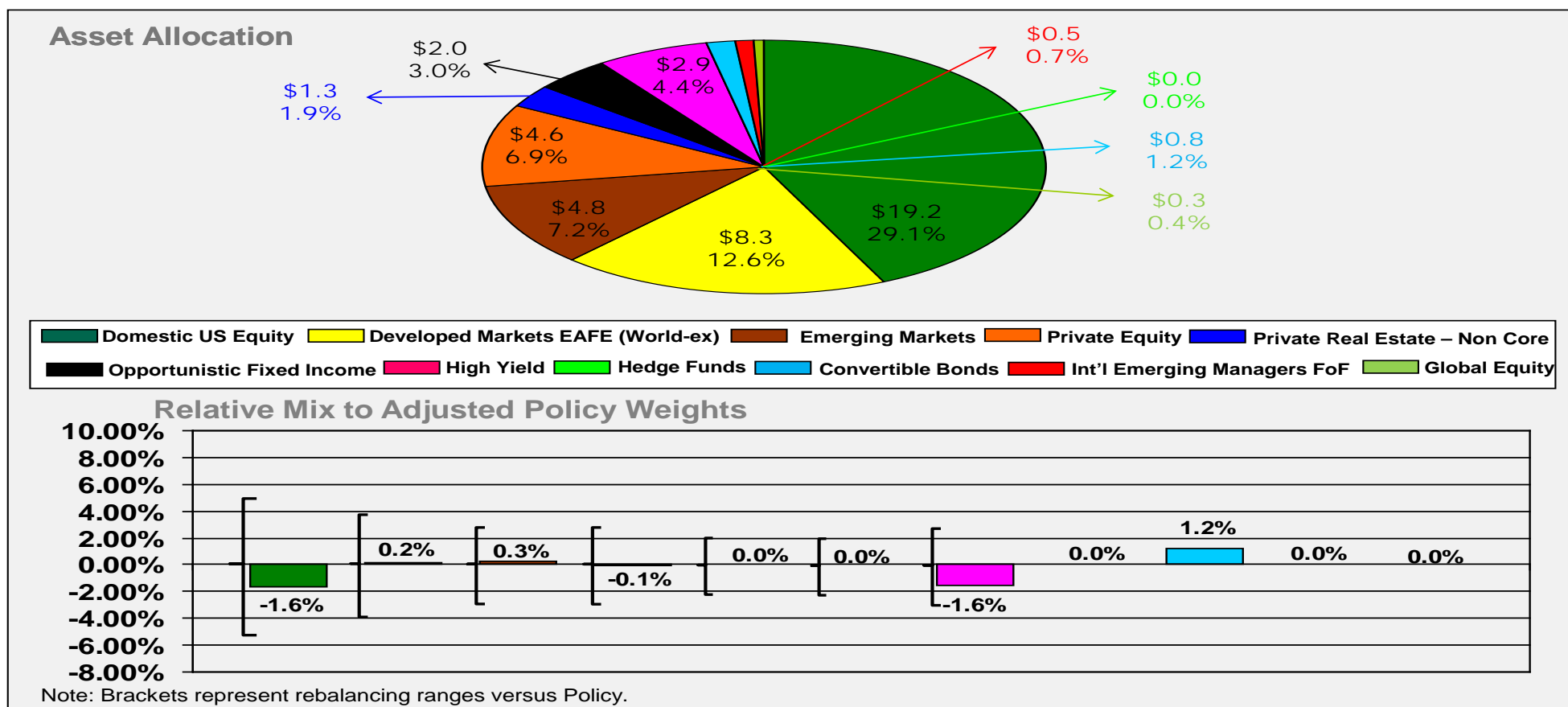
Portfolio Asset Allocation – Growth





Portfolio Asset Allocation: March 31, 2019

Portfolio Asset Allocation – Growth

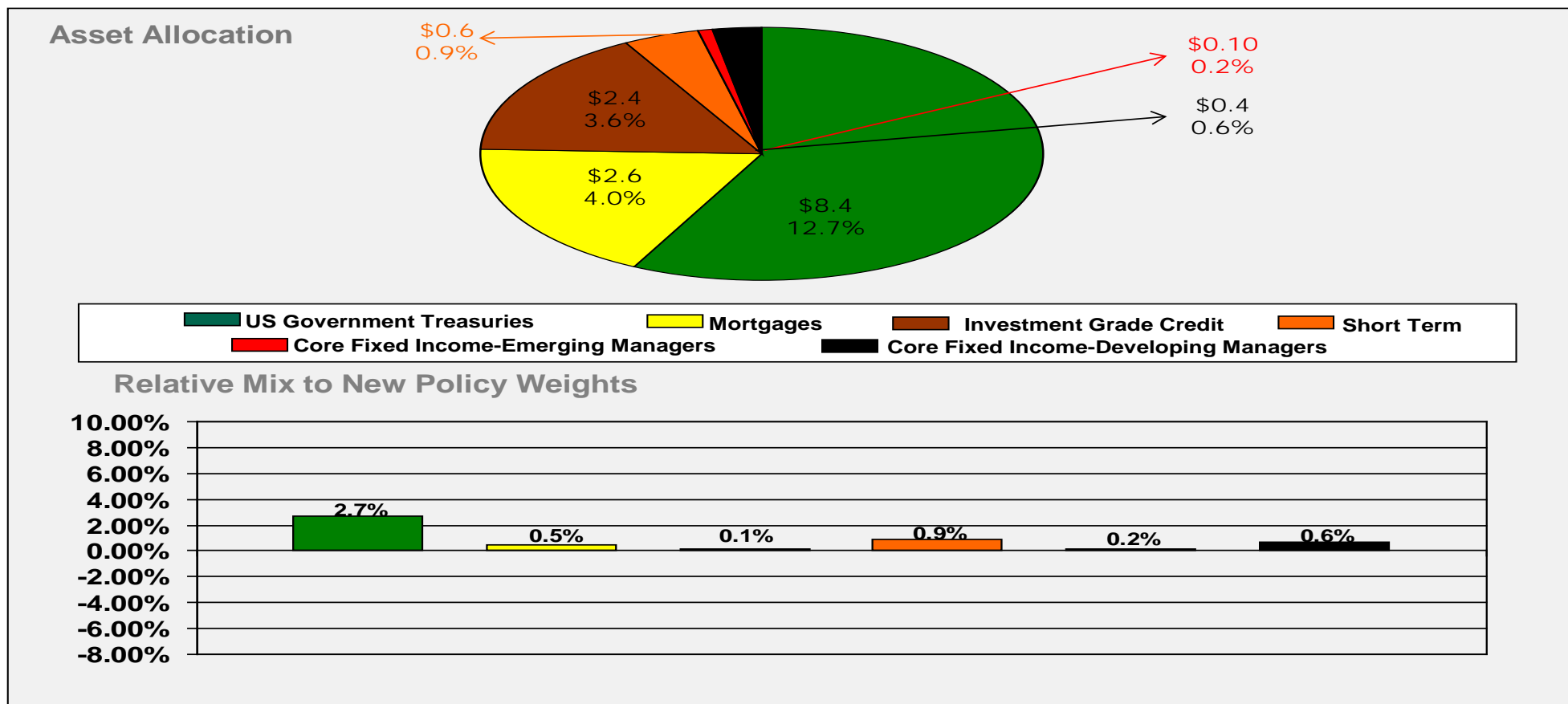


Note: On March 29, 2019 NYCERS' combined Fixed Income and Cash portfolios have a duration of 6.2 years. The duration of the Barclays US Aggregate Index was 5.8 years on that date.



Portfolio Asset Allocation: March 31, 2019

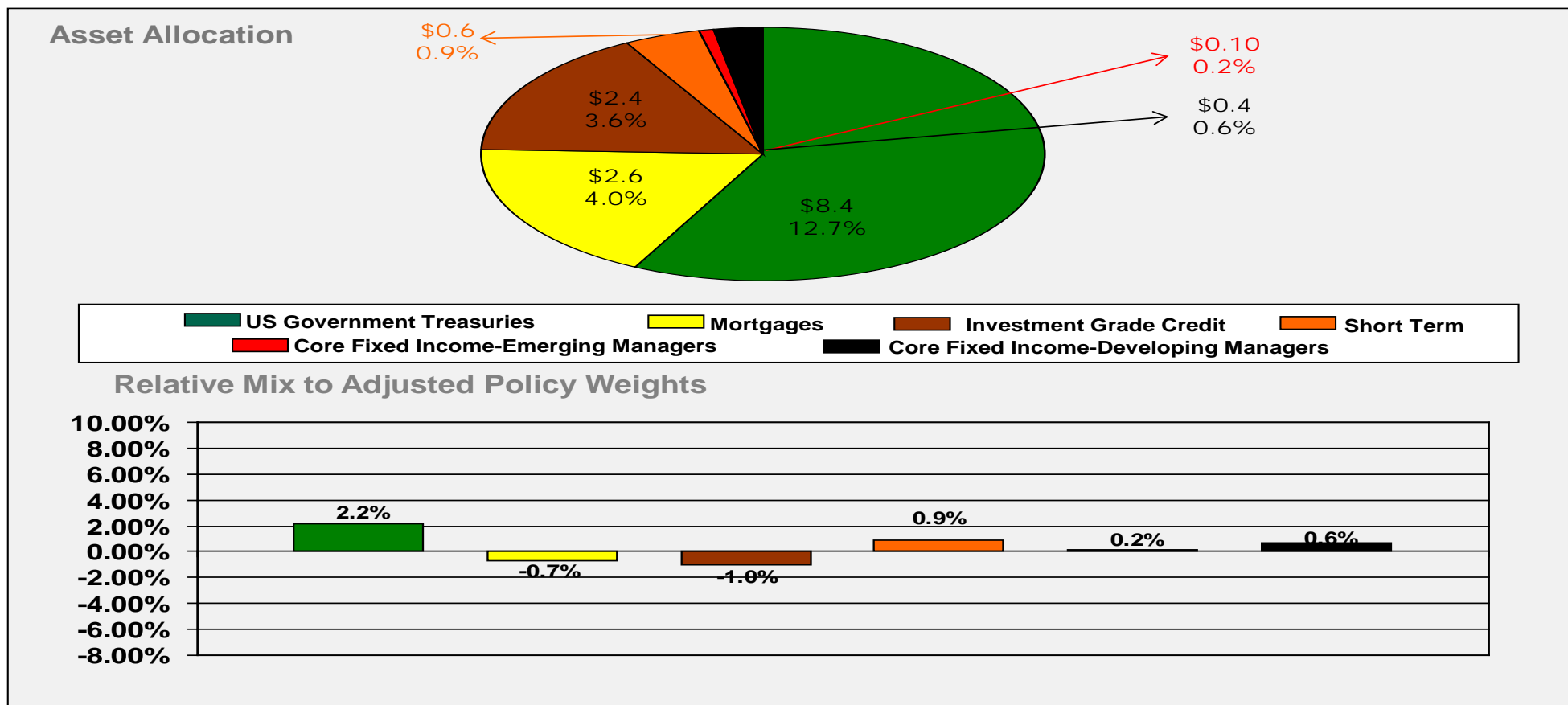
Portfolio Asset Allocation – Deflation Protection





Portfolio Asset Allocation: March 31, 2019

Portfolio Asset Allocation – Deflation Protection



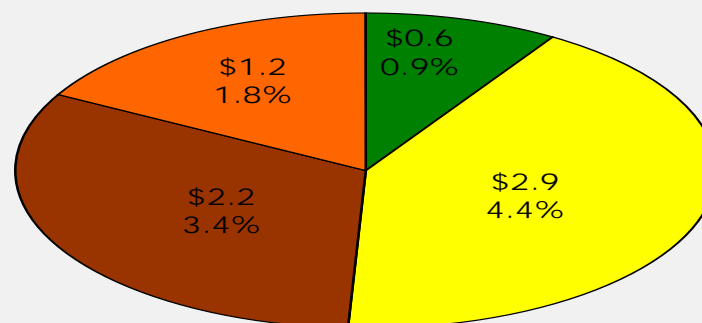
Note: On March 29, 2019 NYCERS' combined Fixed Income and Cash portfolios have a duration of 6.2 years. The duration of the Barclays US Aggregate Index was 5.8 years on that date.



Portfolio Asset Allocation: March 31, 2019

Portfolio Asset Allocation – Inflation Protection

Asset Allocation



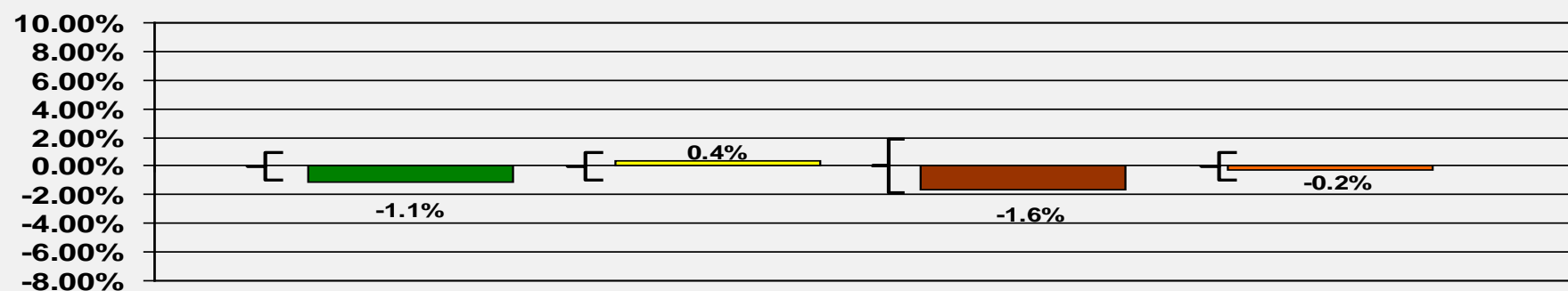
Infrastructure

US TIPS

Real Estate - Core

Bank Loans

Relative Mix to New Policy Weights



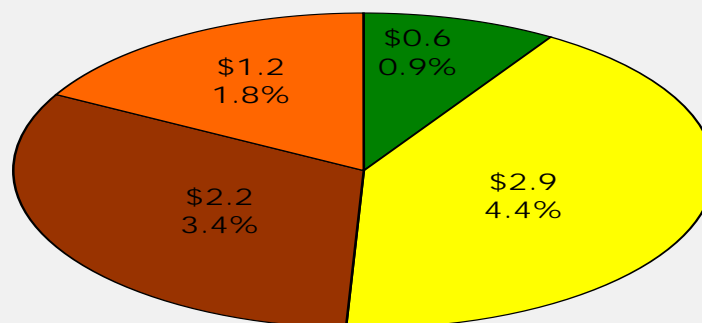
Note: Brackets represent rebalancing ranges versus Policy.



Portfolio Asset Allocation: March 31, 2019

Portfolio Asset Allocation – Inflation Protection

Asset Allocation



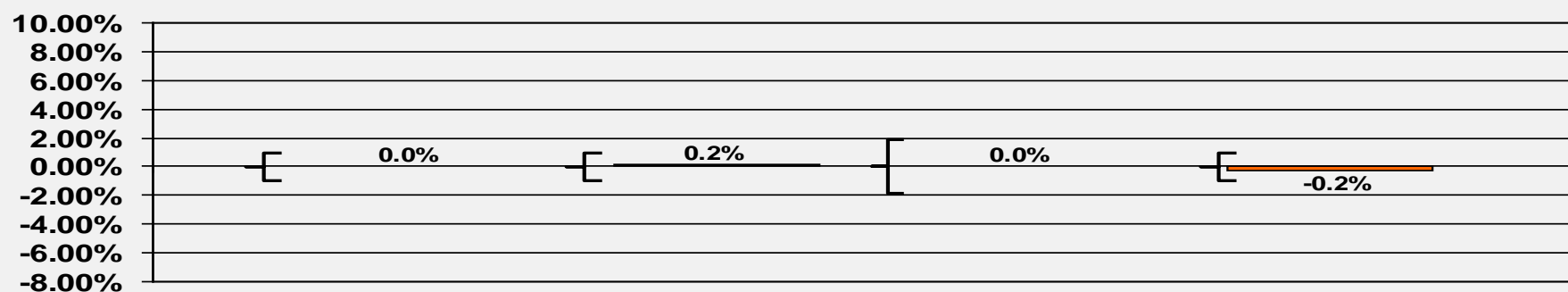
Infrastructure

US TIPS

Real Estate - Core

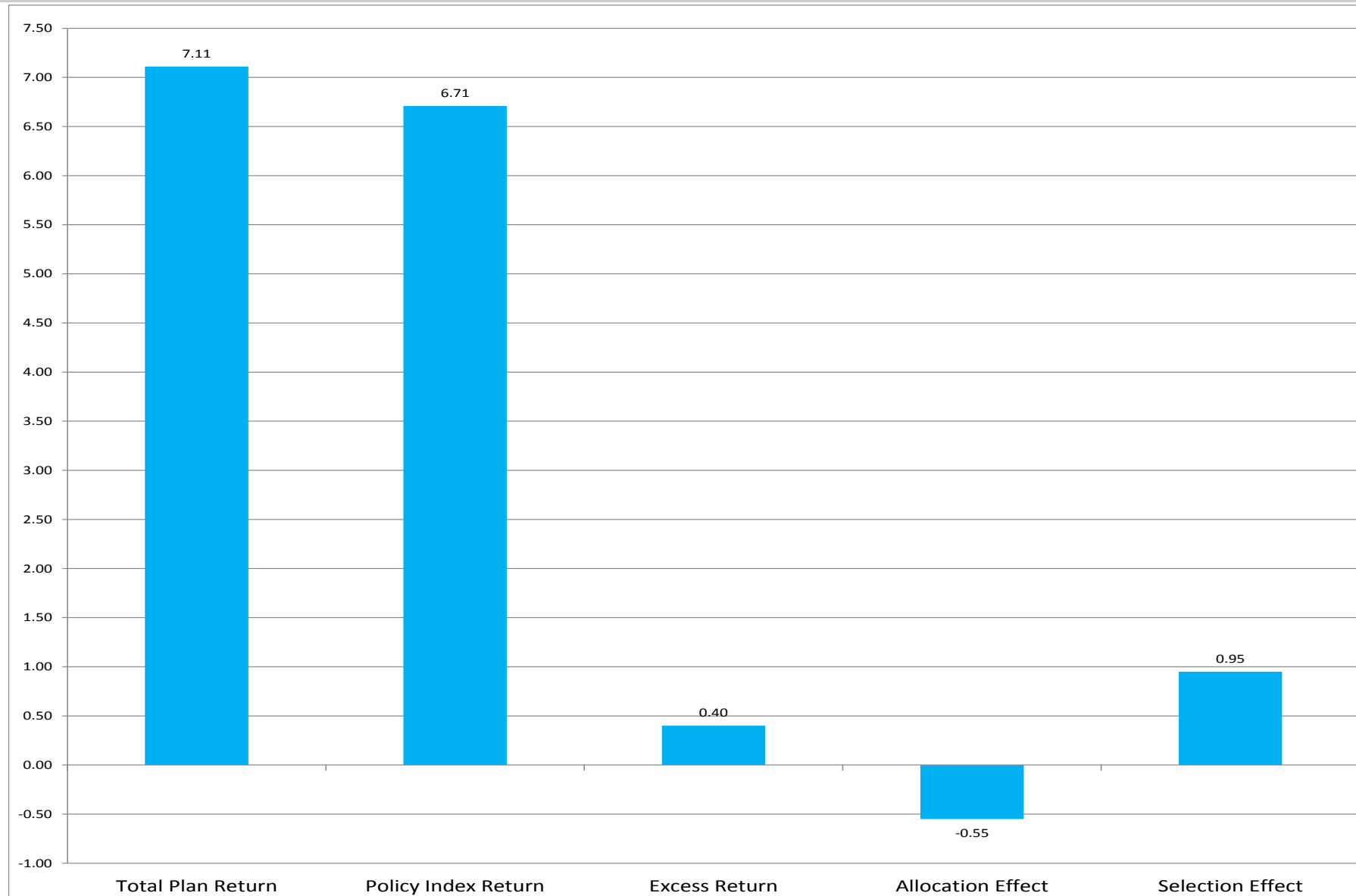
Bank Loans

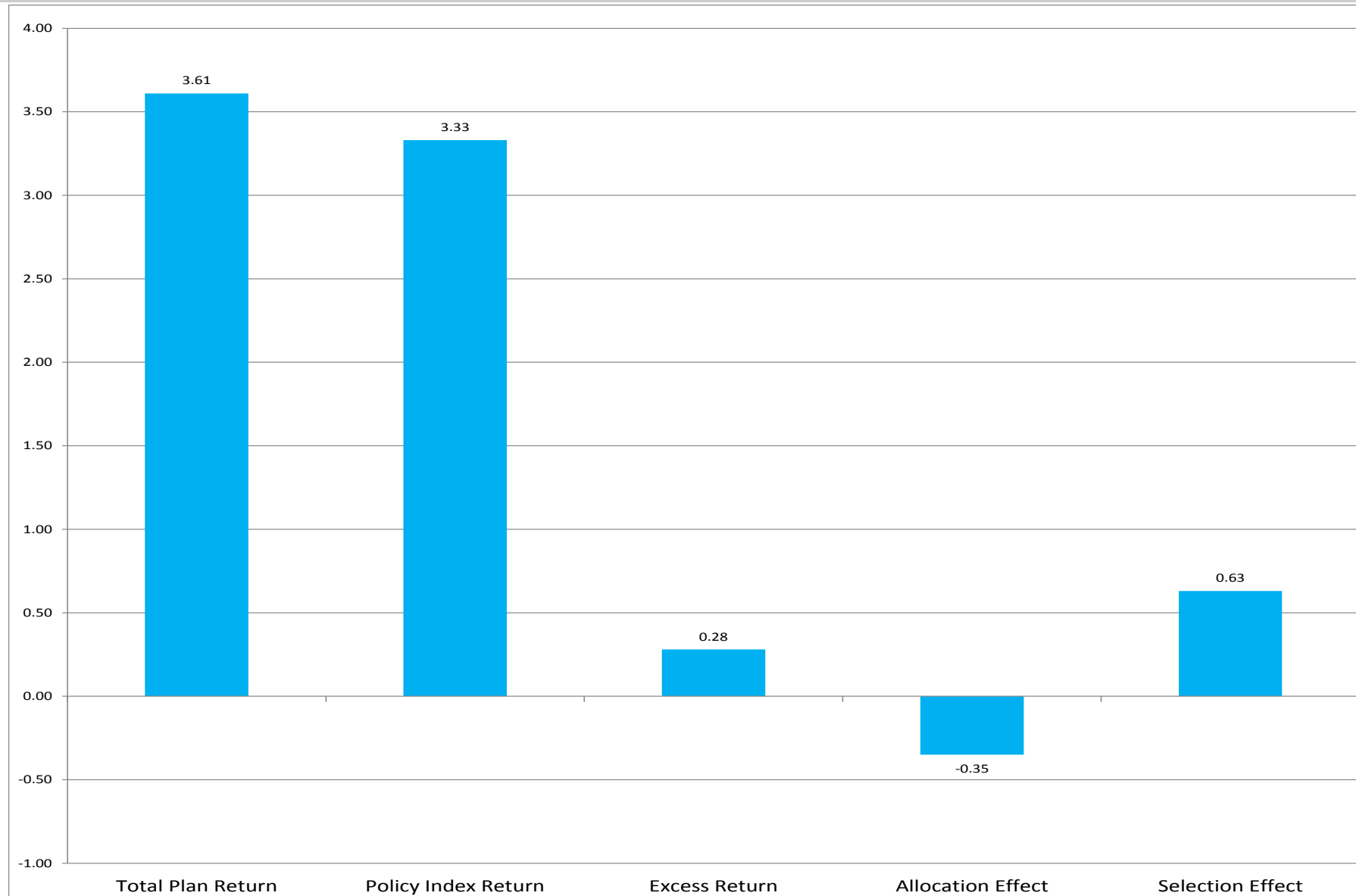
Relative Mix to Adjusted Policy Weights

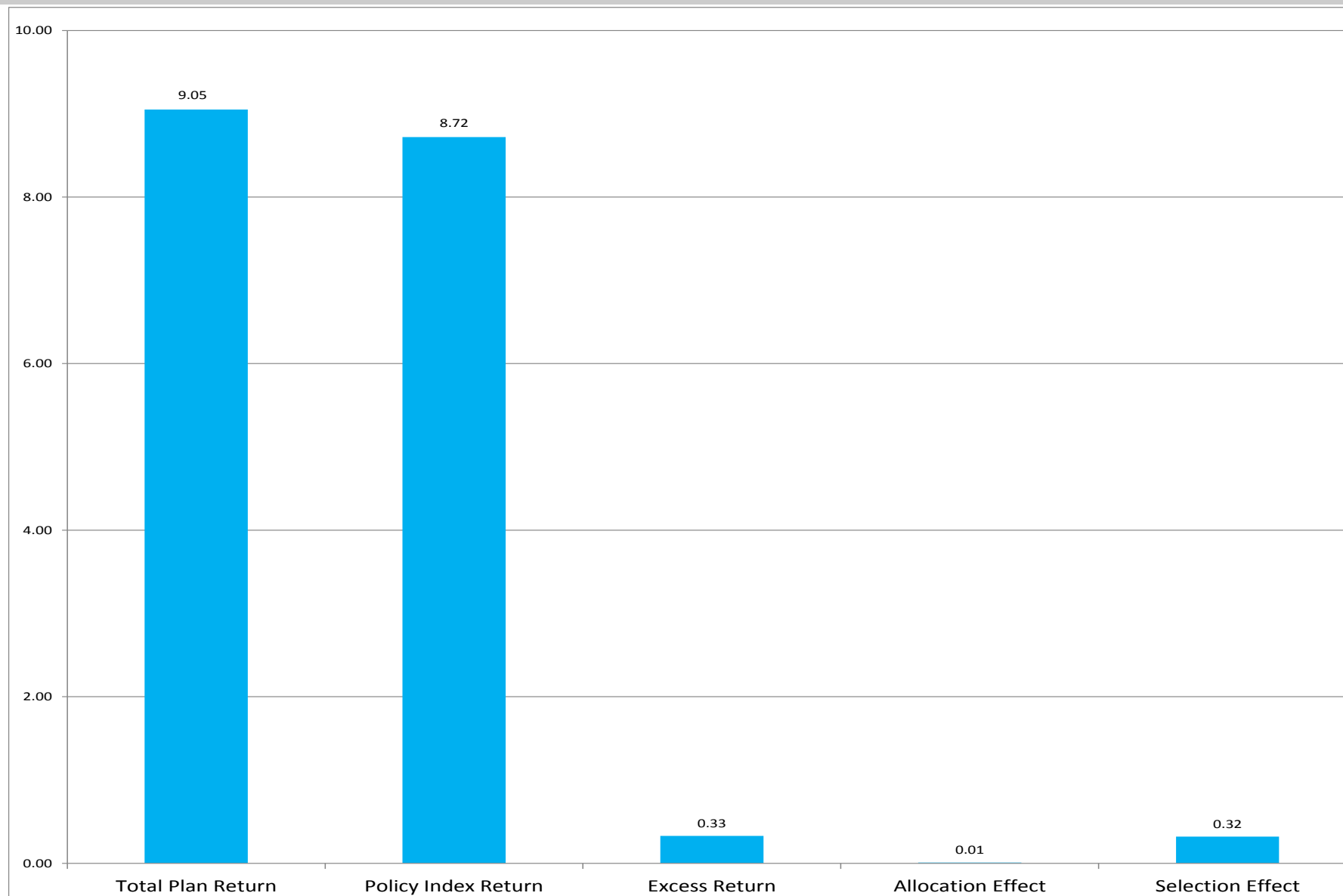


Note: Brackets represent rebalancing ranges versus Policy.

Note: On March 29, 2019 NYCERS' combined Fixed Income and Cash portfolios have a duration of 6.2 years. The duration of the Barclays US Aggregate Index was 5.8 years on that date.





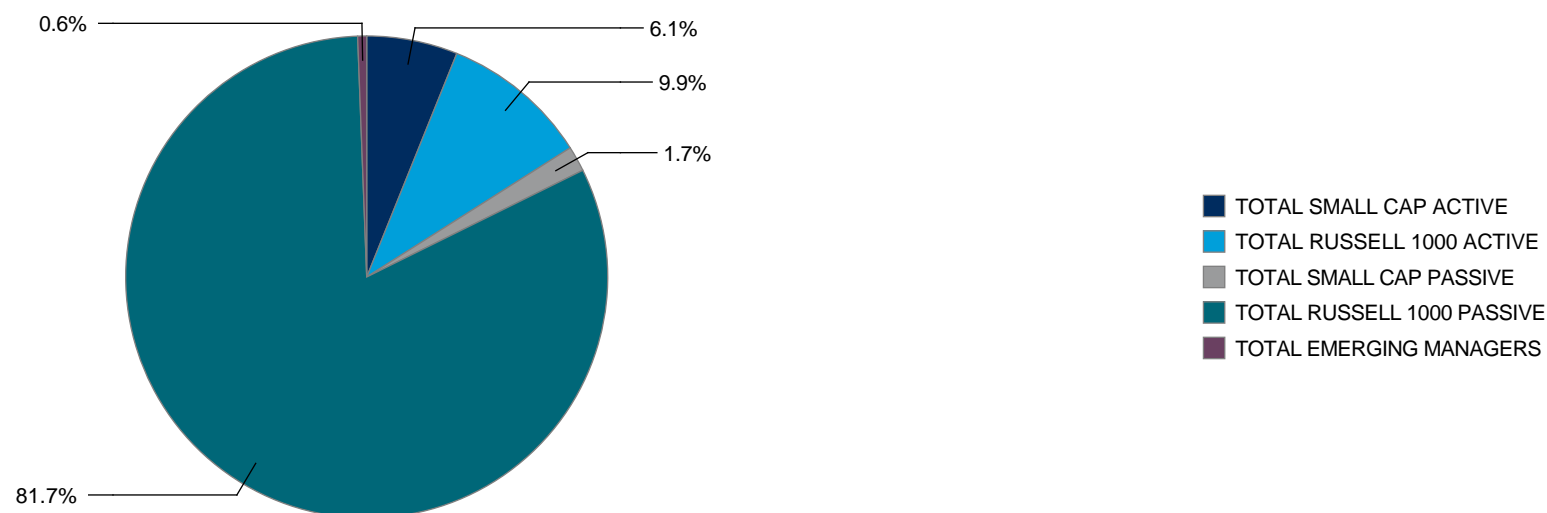


Allocation Effect - Asset Class Breakdown				
	Quarter	FYTD	3 Years	Benchmark
TOTAL EMPLOYEES'	-0.55	-0.35	0.01	Employees Policy Benchmark
TOTAL DOMESTIC EQUITY	-0.20	-0.10	-0.04	RUSSELL 3000
TOTAL DEVELOPED EQUITY	-0.04	-0.01	-0.03	MSCI World ex USA IMI Net
TOTAL GLOBAL EQUITY	0.00	-0.01	0.00	MSCI World Index
TOTAL EMERGING MARKETS	-0.01	-0.03	-0.04	Employees Custom EM Index
TOTAL INTERNATIONAL FOF	0.00	0.00	0.00	NYC Blended Custom Benchmark for FoF
TOTAL HEDGE FUNDS	0.00	0.00	-0.01	HFRI Fund of Funds Composite Index plus 1%
TOTAL PRIVATE EQUITY	-0.08	-0.06	-0.02	Russell 3K + 300bps
TOTAL PRIVATE REAL ESTATE - CORE	0.01	0.00	-0.01	NCREIF ODCE net
TOTAL PRIVATE REAL ESTATE - NON CORE	0.01	0.00	0.00	NCREIF ODCE net + 200bps
TOTAL INFRASTRUCTURE	0.00	0.00	0.00	CPI + 4%
TOTAL US TREASURY SHORT TERM	-0.37	0.03	-0.09	FTSE USBIG Treasury 1-3 Y Index
TOTAL US TREASURY INTERMEDIATE	0.00	0.00	-0.02	FTSE USBIG Treasury/Agency 1-10 y
TOTAL ACTIVE GOVERNMENT	0.13	-0.09	0.25	NYC - Treasury Agency Plus Five
TOTAL INVESTMENT GRADE CREDIT	0.01	-0.03	-0.05	NYC - Investment Grade Credit
TOTAL MORTGAGES	0.02	-0.02	0.03	FTSE MORTGAGE INDEX
TOTAL ETI	0.00	0.00	0.00	ETI Custom Benchmark
TOTAL CORE FI- DEVELOPING MGRS	-0.02	0.01	-0.03	BBG BARC Agg
TOTAL CORE FI- EMERGING MGRS	-0.01	0.00	-0.01	BBG BARC Agg
TOTAL HIGH YIELD	-0.01	-0.03	0.06	High Yield Custom Benchmark
TOTAL BANK LOANS	0.01	0.00	0.01	Credit Suisse Lev Loan Index
TOTAL TIPS MANAGERS	-0.01	-0.01	0.00	BBG BARC Gbl Inf-Lk: US TIPS (Dly)
TOTAL CONVERTIBLE BONDS	0.04	0.01	0.03	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	-0.02	-0.10	

Selection Effect - Asset Class Breakdown				
	Quarter	FYTD	3 Years	Benchmark
TOTAL EMPLOYEES'	0.95	0.63	0.32	Employees Policy Benchmark
TOTAL DOMESTIC EQUITY	-0.11	-0.10	-0.09	RUSSELL 3000
TOTAL DEVELOPED EQUITY	0.15	0.04	0.25	MSCI World ex USA IMI Net
TOTAL GLOBAL EQUITY	0.01	0.02	0.01	MSCI World Index
TOTAL EMERGING MARKETS	0.06	0.00	-0.02	Employees Custom EM Index
TOTAL INTERNATIONAL FOF	0.00	-0.02	-0.01	NYC Blended Custom Benchmark for FoF
TOTAL HEDGE FUNDS	0.00	0.00	-0.03	HFRI Fund of Funds Composite Index plus 1%
TOTAL PRIVATE EQUITY	1.01	0.71	0.07	Russell 3K + 300bps
TOTAL PRIVATE REAL ESTATE - CORE	0.00	0.04	0.02	NCREIF ODCE net
TOTAL PRIVATE REAL ESTATE - NON CORE	-0.01	-0.01	0.04	NCREIF ODCE net + 200bps
TOTAL INFRASTRUCTURE	0.00	0.03	0.03	CPI + 4%
TOTAL US TREASURY SHORT TERM	0.00	0.00	0.00	FTSE USBIG Treasury 1-3 Y Index
TOTAL US TREASURY INTERMEDIATE	0.00	0.00	0.01	FTSE USBIG Treasury/Agency 1-10 y
TOTAL ACTIVE GOVERNMENT	0.00	-0.01	0.00	NYC - Treasury Agency Plus Five
TOTAL INVESTMENT GRADE CREDIT	0.01	0.00	0.01	NYC - Investment Grade Credit
TOTAL MORTGAGES	0.00	0.00	0.00	FTSE MORTGAGE INDEX
TOTAL ETI	0.00	0.01	0.00	ETI Custom Benchmark
TOTAL CORE FI- DEVELOPING MGRS	0.00	0.00	0.00	BBG BARC Agg
TOTAL CORE FI- EMERGING MGRS	0.00	0.00	0.00	BBG BARC Agg
TOTAL HIGH YIELD	-0.01	-0.01	-0.02	High Yield Custom Benchmark
TOTAL BANK LOANS	0.00	0.00	-0.01	Credit Suisse Lev Loan Index
TOTAL TIPS MANAGERS	0.00	0.00	0.00	BBG BARC Gbl Inf-Lk: US TIPS (Dly)
TOTAL CONVERTIBLE BONDS	-0.04	0.00	-0.05	Merrill All US Converts
TOTAL OPPORTUNISTIC FIXED	-0.16	-0.08	0.00	OFI - JPMGHY / CSFB 50/50 Blend Plus 300
TOTAL CASH	0.00	0.00	0.00	

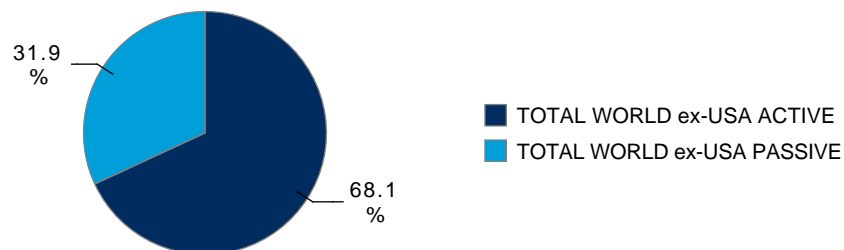
Total Domestic Equity Asset Allocations: Quarter Ending March 31, 2019

	<u>Market Value (Billions)</u>	<u>% of Plan</u>
TOTAL DOMESTIC EQUITY	\$19.2	29.1



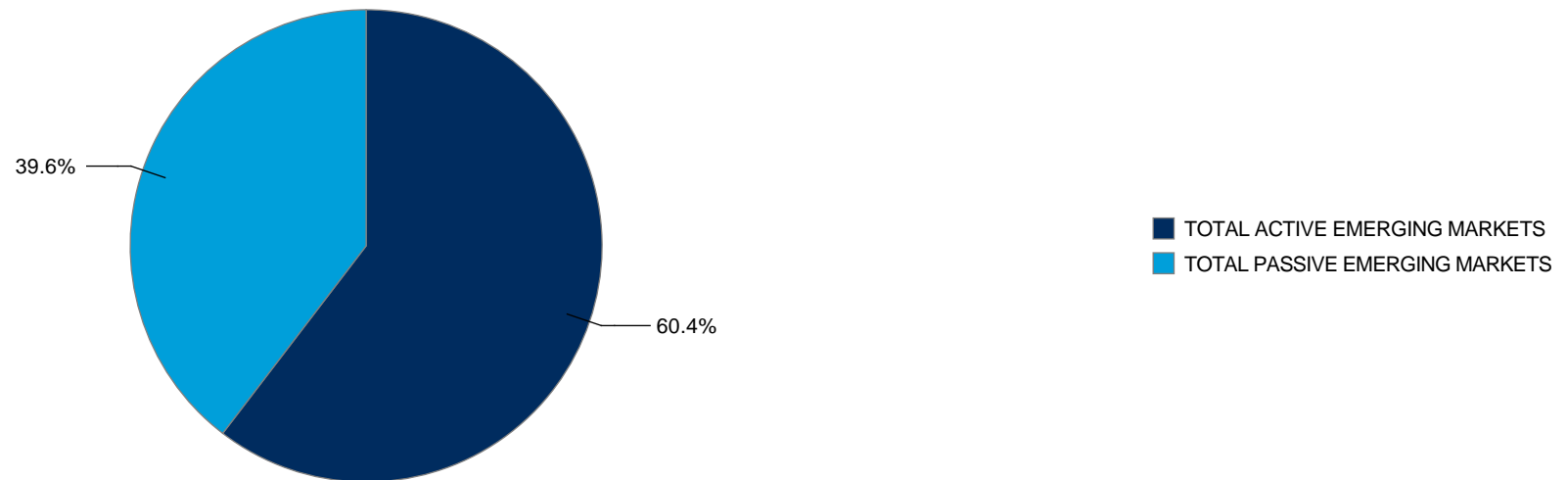
	<u>ALLOCATION</u>			<u>PERFORMANCE</u>		
	<u>Policy Weight</u>	<u>Actual Weight</u>	<u>Under/Over Weight</u>	<u>Quarterly Returns</u>		
				<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL SMALL CAP ACTIVE	4.9	6.1	1.2	12.7	14.6	(1.9)
TOTAL RUSSELL 1000 ACTIVE	18.0	9.9	(8.1)	11.6	14.0	(2.4)
TOTAL SMALL CAP PASSIVE	2.2	1.7	(0.5)	16.4	14.6	1.9
TOTAL RUSSELL 1000 PASSIVE	74.3	81.7	7.4	13.9	14.0	(0.1)
TOTAL EMERGING MANAGERS	0.6	0.6	0.0	14.3	14.6	(0.3)

	<u>Market Value (Billions)</u>	<u>% of Plan</u>
TOTAL WORLD ex-USA	\$8.3	12.6



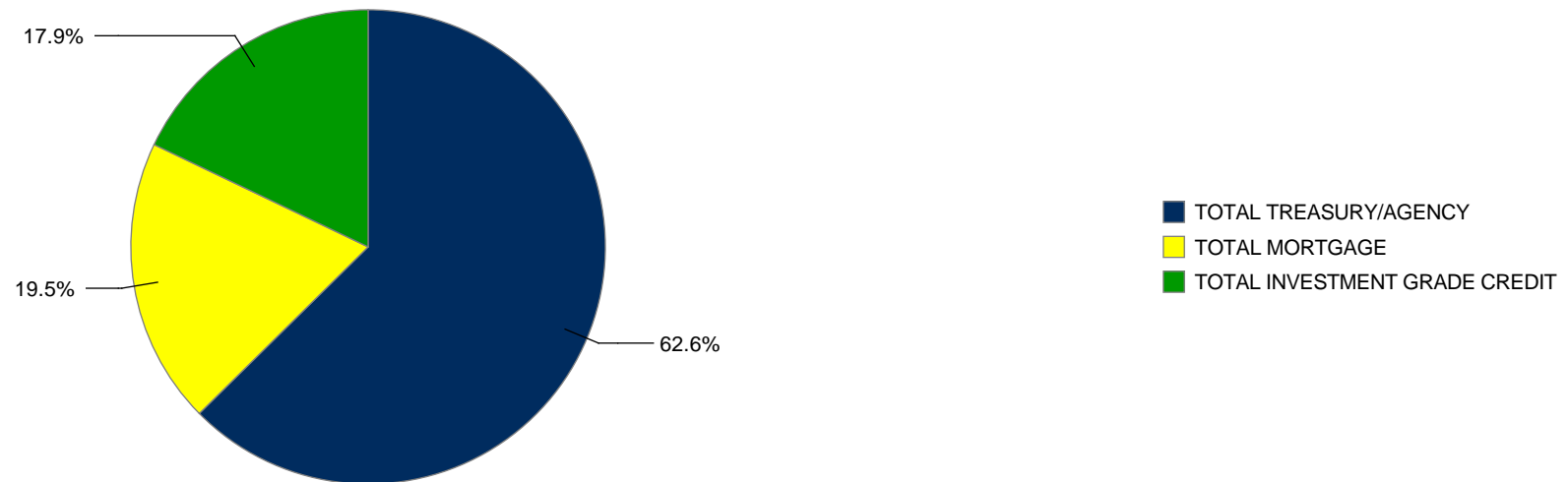
	<u>ALLOCATION</u>	<u>PERFORMANCE</u>		
	<u>Asset Class Weight</u>	<u>Quarterly Returns</u>		
		<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL WORLD ex-USA LARGE & MID ACTIVE	60.51	12.50	10.45	2.05
TOTAL WORLD ex-USA SMALL CAP ACTIVE	7.62	9.76	9.92	(0.17)
TOTAL WORLD ex-USA LARGE & MID CAP PASSIVE	25.49	10.31	10.45	(0.14)
TOTAL WORLD ex-USA SMALL CAP PASSIVE	6.37	10.71	10.93	(0.22)
TOTAL WORLD ex-USA	100.00	11.63	10.52	1.12

	<u>Market Value (Billions)</u>	<u>% of Plan</u>
TOTAL EMERGING MARKETS	\$4.8	7.2



	<u>ALLOCATION</u>	<u>PERFORMANCE</u>		
	<u>Asset Class Weight</u>	<u>Quarterly Returns</u>		
		<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL ACTIVE EMERGING MARKETS	60.37	7.39	6.12	1.26
TOTAL PASSIVE EMERGING MARKETS	39.63	6.28	6.12	0.16
TOTAL EMERGING MARKETS	100.00	6.95	6.12	0.82

	<u>Market Value (Billions)</u>	<u>% of Plan</u>
TOTAL STRUCTURED + ETI	\$13.4	20.3



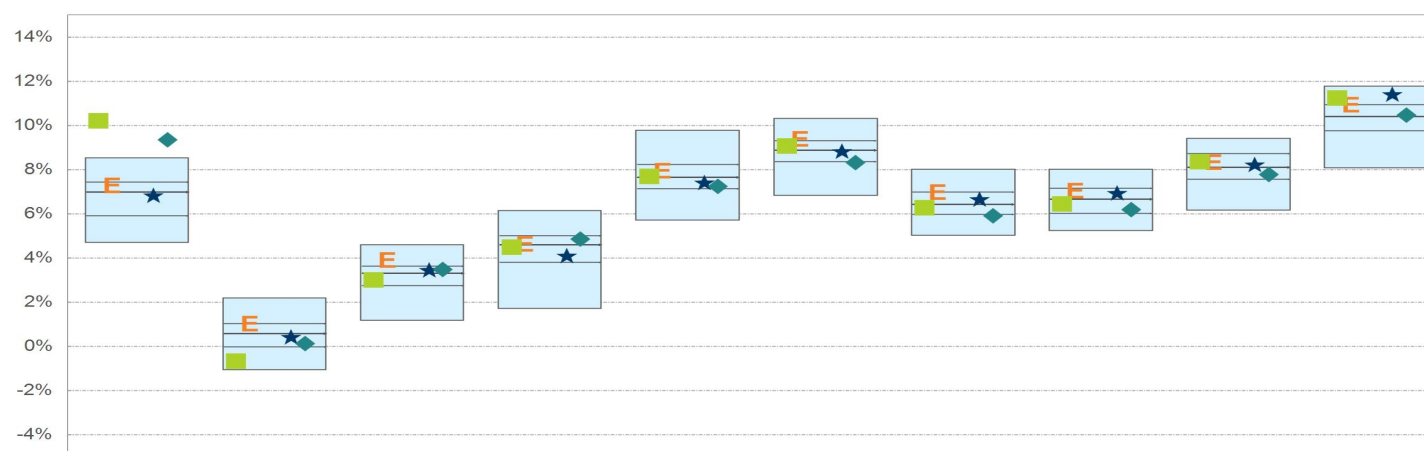
	<u>Policy Weight</u>	<u>Actual Weight</u>	<u>Under/Over Weight</u>	<u>Quarterly Returns</u>		
				<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL TREASURY/AGENCY	58.82	62.58	3.76	2.65	3.37	(0.72)
TOTAL MORTGAGE	20.59	19.53	(1.06)	2.49	2.16	0.33
TOTAL INVESTMENT GRADE CREDIT	20.59	17.89	(2.70)	4.97	4.72	0.24

Through March 31, 2019



City of New York Performance Comparison

Total Returns of Master Trusts - Public : Plans > \$10 Billion
Cumulative Periods Ending : March 31, 2019



Percentile Rankings	1 Qtr	2 Qtrs	3 Qtrs	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th	8.55	2.20	4.60	6.16	9.78	10.33	8.02	8.02	9.42	11.79
25th	7.44	1.02	3.64	5.00	8.24	9.32	7.00	7.16	8.74	10.96
50th	7.00	0.58	3.31	4.60	7.66	8.89	6.43	6.66	8.11	10.41
75th	5.91	-0.03	2.75	3.81	7.14	8.37	5.97	6.03	7.57	9.77
95th	4.70	-1.06	1.18	1.71	5.72	6.85	5.04	5.25	6.17	8.09
No. Of Obs	45	45	45	45	45	45	45	45	45	41
E Total System - Employee	7.17 (38)	0.89 (29)	3.78 (19)	4.51 (50)	7.84 (38)	9.28 (31)	6.87 (31)	6.93 (43)	8.21 (43)	10.83 (32)
★ Employees Policy Bench	6.71 (54)	0.29 (56)	3.33 (45)	3.97 (65)	7.29 (65)	8.72 (63)	6.53 (43)	6.81 (43)	8.11 (50)	11.29 (14)
■ Public Mkt Equiv 25	10.10 (1)	-0.81 (94)	2.87 (68)	4.36 (54)	7.58 (50)	8.96 (45)	6.16 (70)	6.32 (70)	8.24 (43)	11.13 (14)
◆ Public Mkt Equiv 35	9.22 (1)	0.00 (70)	3.35 (43)	4.74 (40)	7.12 (77)	8.19 (82)	5.79 (82)	6.06 (72)	7.66 (68)	10.34 (52)

Wilshire Trust Universe Comparison Service® (TUCS®)

Through March 31, 2019



City of New York Performance Comparison

Total Returns of Master Trusts - Public : Plans > \$10 Billion
Consecutive Time Periods: March 31, 2019



Percentile Rankings	Mar 19	Dec 18	Sep 18	Jun 18	Mar 18	Mar 19	Mar 18	Mar 17	Mar 16	Mar 15
5th	8.55	-2.37	3.81	2.18	1.90	6.16	13.77	13.90	1.65	9.84
25th	7.44	-4.52	2.93	1.60	0.58	5.00	12.58	12.21	0.41	8.22
50th	7.00	-5.89	2.57	1.07	0.17	4.60	10.97	11.48	-0.18	7.69
75th	5.91	-6.71	2.20	0.56	-0.07	3.81	9.89	10.68	-1.26	6.09
95th	4.70	-8.63	1.20	0.20	-1.33	1.71	8.03	7.75	-1.83	5.33
No. Of Obs	45	45	45	45	45	45	45	45	45	45
E Total System - Employee	7.17 (38)	-5.87 (47)	2.87 (29)	0.70 (70)	-0.03 (68)	4.51 (50)	11.29 (43)	12.22 (23)	-0.06 (45)	7.16 (59)
★ Employees Policy Bench	6.71 (54)	-6.02 (52)	3.03 (23)	0.62 (72)	-0.19 (82)	3.97 (65)	10.72 (52)	11.62 (45)	0.23 (34)	7.93 (38)
■ Public Mkt Equiv 25	10.10 (1)	-9.91 (100)	3.72 (5)	1.45 (34)	-1.05 (94)	4.36 (54)	10.89 (52)	11.78 (40)	-1.83 (96)	6.98 (61)
◆ Public Mkt Equiv 35	9.22 (1)	-8.45 (94)	3.35 (17)	1.35 (36)	-1.06 (94)	4.74 (40)	9.55 (82)	10.36 (77)	-1.08 (72)	7.14 (61)

Wilshire Trust Universe Comparison Service® (TUCS®)

**NEW YORK CITY EMPLOYEE RETIREMENT SYSTEM
ACTUAL FEES FOR FISCAL YEAR ENDED JUNE 30, 2018 AND ESTIMATED FEES FOR FY 2019 UPDATED THROUGH SEPTEMBER 2018**

**Actual
2018**

**Estimates
2019**

INVESTMENT STYLE (EQUITIES)	Avg. MV FY 2018 (\$MM)	Mgmt. Fees (\$M)	Partnership Expenses (\$M)	Mgmt. Fees / Partnership Expenses in BPS	Incentive Fees in (\$M)	Incentive Fees in BPS	Total Fees & Expenses in (\$M)	Total Fees & Expenses in BPS	Avg. MV FYTD 09- 30-18 (\$MM)	Mgmt. Fees (\$M)	Mgmt. Fees in BPS
Total US Equities	30,033.47	8,309.25	-	2.77	-	-	8,309.25	2.77	18,795.31	7,900.17	4.20
Small Cap Active	1,273.56	4,687.14	-	36.80	-	-	4,687.14	36.80	1,288.14	4,708.39	36.55
Small Cap Growth	-	-	-	-	-	-	-	-	-	-	-
Small Cap Value	280.85	1,459.33	-	51.96	-	-	1,459.33	51.96	243.05	1,265.24	52.06
Small Cap Core	216.00	1,555.04	-	71.99	-	-	1,555.04	71.99	237.70	1,727.38	72.67
Small Cap Fundamental Index	776.70	1,672.77	-	21.54	-	-	1,672.77	21.54	807.39	1,715.77	21.25
							-				
Russell 1000 Fundamental	2,123.94	2,506.74	-	11.80	-	-	2,506.74	11.80	1,963.48	2,259.10	11.51
Active Emerging Managers (U.S. Equities)	117.16	545.79	-	46.59	-	-	545.79	46.59	123.79	617.75	49.90
							-				
Total US Active Equities	3,514.65	7,739.67	-	22.02	-	-	7,739.67	22.02	3,375.41	7,585.24	22.47
Small Cap Passive							-				
Small Cap Passive	352.91	15.04	-	0.43	-	-	15.04	0.43	350.57	14.81	0.42
							-				
Mid Cap Passive							-				
Mid Cap Passive	644.90	40.01	-	0.62	-	-	40.01	0.62	-	-	-
							-				
Russell / S&P Passive							-				
Russell 1000 Growth Passive	2,499.23	112.60	-	0.45	-	-	112.60	0.45	3.73	-	-
Russell 1000 Value Passive	2,378.71	106.86	-	0.45	-	-	106.86	0.45	3.88	-	-
Russell 1000 Core Passive	14,827.59	72.62	-	0.05	-	-	72.62	0.05	15,061.72	300.12	0.20
Passive Russell 3000	1,485.03	97.57	-	0.66	-	-	97.57	0.66	-	-	-
Passive S&P 500	4,330.43	124.88	-	0.29	-	-	124.88	0.29	-	-	-
Passive Russell Top 200	-	-	-	-	-	-	-	-	-	-	-
							-				
Total US Passive Equities	26,518.81	569.57	-	0.21	-	-	569.57	0.21	15,419.90	314.93	0.20

NEW YORK CITY EMPLOYEE RETIREMENT SYSTEM
ACTUAL FEES FOR FISCAL YEAR ENDED JUNE 30, 2018 AND ESTIMATED FEES FOR FY 2019 UPDATED THROUGH SEPTEMBER 2018

	Actual 2018							Estimates 2019			
	Avg. MV FY 2018 (\$MM)	Mgmt. Fees (\$M)	Partnership Expenses (\$M)	Mgmt. Fees / Partnership Expenses in BPS	Incentive Fees in (\$M)	Incentive Fees in BPS	Total Fees & Expenses in (\$M)	Total Fees & Expenses in BPS	Avg. MV FYTD 09- 30-18 (\$MM)	Mgmt. Fees (\$M)	Mgmt. Fees in BPS
Total International Equities	14,046.83	35,549.61	-	25.31	5,341.81	3.80	40,891.42	29.11	13,456.49	32,646.22	24.26
Global Equity	-	-	-	-	-	-	-	-	253.56	915.53	36.11
Total Global Equities	-	-	-	-	-	-	-	-	253.56	915.53	36.11
Active Total World Ex Usa	5,966.90	18,186.74	-	30.48	-	-	18,186.74	30.48	5,950.71	17,857.13	30.01
World Ex-USA Large & Mid Active	5,139.41	14,319.43	-	27.86	-	-	14,319.43	27.86	5,240.18	14,610.34	27.88
World Ex-USA Small Cap Active	826.95	3,867.31	-	46.77	-	-	3,867.31	46.77	710.11	3,246.79	45.72
Total World Ex USA	0.47	-	-	-	-	-	-	-	0.42	-	-
Total Progress Intl.	0.07	-	-	-	-	-	-	-	0.00	-	-
NON-U.S. Environmental Managers	110.13	1,418.00	-	128.75	5,341.81	485.04	6,759.81	613.79	2.74	-	-
Active Emerging Markets	3,067.42	12,872.07	-	41.96	-	-	12,872.07	41.96	2,902.02	11,625.28	40.06
Total Active Int'l Fund of Funds	377.58	1,799.24	-	47.65	-	-	1,799.24	47.65	424.37	2,188.15	51.56
Total Active International Equities	9,522.04	34,276.05	-	36.00	5,341.81	485.04	39,617.86	41.61	9,279.84	31,670.57	34.13
Int'l Passive Equities											
World Ex-USA Small Cap Passive	487.75	242.39	-	4.97	-	-	242.39	4.97	491.73	246.22	5.01
World Ex-USA Large & Mid Cap Passive	2,009.07	233.79	-	1.16	-	-	233.79	1.16	1,777.63	208.10	1.17
Passive Global	0.01	-	-	-	-	-	-	-	-	-	-
Passive Emerging Markets	2,027.97	797.37	-	3.93	-	-	797.37	3.93	1,907.29	521.34	2.73
Total Int'l Passive Equities	4,524.79	1,273.56	-	2.81	-	-	1,273.56	2.81	4,176.65	975.65	2.34
REITS Active Equities	-	-	-	-	-	-	-	-	-	-	-

NEW YORK CITY EMPLOYEE RETIREMENT SYSTEM
ACTUAL FEES FOR FISCAL YEAR ENDED JUNE 30, 2018 AND ESTIMATED FEES FOR FY 2019 UPDATED THROUGH SEPTEMBER 2018

	Actual 2018							Estimates 2019			
	Avg. MV FY 2018 (\$MM)	Mgmt. Fees (\$M)	Partnership Expenses (\$M)	Mgmt. Fees / Partnership Expenses in BPS	Incentive Fees in (\$M)	Incentive Fees in BPS	Total Fees & Expenses in (\$M)	Total Fees & Expenses in BPS	Avg. MV FYTD 09- 30-18 (\$MM)	Mgmt. Fees (\$M)	Mgmt. Fees in BPS
INVESTMENT STYLE (FIXED INCOME)											
Total Fixed Income	20,412.26	24,253.41	-	11.88	126.76	0.06	24,380.17	11.94	23,122.35	23,559.00	10.19
Structured Program	11,622.74	6,125.43	-	5.27	126.76	0.11	6,252.19	5.38	14,061.62	5,926.76	4.21
Government Treas/Agency Sector	6,715.74	2,058.27	-	3.06	-	-	2,058.27	3.06	9,888.22	2,463.83	2.49
Long Duration Treasury	-	-	-	-	-	-	-	-	-	-	-
Mortgage Sector	1,711.97	1,022.75	-	5.97	126.76	0.74	1,149.51	6.71	1,709.07	1,005.48	5.88
Investment Grade Credit Sector	3,195.02	3,044.42	-	9.53	-	-	3,044.42	9.53	2,464.34	2,457.45	9.97
Developing Managers	402.45	713.19	-	17.72	-	-	713.19	17.72	400.79	716.69	17.88
Emerging Managers	118.55	406.02	-	34.25	-	-	406.02	34.25	118.29	409.06	34.58
TIPS	2,586.90	447.01	-	1.73	-	-	447.01	1.73	2,848.06	499.71	1.75
Active TIPS Managers	634.96	350.42	-	5.52	-	-	350.42	5.52	700.35	391.27	5.59
Passive TIPS Managers	1,951.94	96.60	-	0.49	-	-	96.60	0.49	2,147.71	108.43	0.50
High Yield	2,599.59	8,580.36	-	33.01	-	-	8,580.36	33.01	2,641.92	7,734.46	29.28
Bank Loans	1,120.32	3,619.93	-	32.31	-	-	3,619.93	32.31	1,154.29	3,720.37	32.23
Convertible Bonds	718.82	2,849.12	-	39.64	-	-	2,849.12	39.64	757.61	3,024.85	39.93
ETI - Access - RBC	149.14	276.85	-	18.56	-	-	276.85	18.56	158.12	291.61	18.44
ETI - AFL-CIO HIT	305.91	1,235.49	-	40.39	-	-	1,235.49	40.39	303.59	1,235.49	40.70
Total Public Markets (Externally managed)	63,704.69	68,112.27	-	10.69	5,468.57	0.86	73,580.83	11.55	54,949.65	65,020.91	11.83
Other ETI Programs	360.42	-	-	-	-	-	-	-	352.52	-	-
In-House Short Term	427.45	-	-	-	-	-	-	-	325.53	-	-
Total Public Markets	64,492.56	68,112.27	-	10.56	5,468.57	0.85	73,580.83	11.41	55,627.70	65,020.91	11.69

NEW YORK CITY EMPLOYEE RETIREMENT SYSTEM
ACTUAL FEES FOR FISCAL YEAR ENDED JUNE 30, 2018 AND ESTIMATED FEES FOR FY 2019 UPDATED THROUGH SEPTEMBER 2018

	Actual 2018								Estimates 2019		
	Avg. MV FY 2018 (\$MM)	Mgmt. Fees (\$M)	Partnership Expenses (\$M)	Mgmt. Fees / Partnership Expenses in BPS	Incentive Fees in (\$M)	Incentive Fees in BPS	Total Fees & Expenses in (\$M)	Total Fees & Expenses in BPS	Avg. MV FYTD 09- 30-18 (\$MM)	Mgmt. Fees (\$M)	Mgmt. Fees in BPS
INVESTMENT STYLE (PRIVATE MARKETS)											
Hedge Funds	75.56	550.03	-	72.80	-	-	550.03	72.80	-	-	-
Private Equity	4,432.07	51,023.76	17,512.47	154.64	88,032.63	198.63	156,568.87	353.26	4,566.97	89,210.17	195.34
Private Real Estate	3,349.27	33,103.03	8,497.60	124.21	31,661.63	94.53	73,262.26	218.74	3,439.18	39,177.48	113.92
Infrastructure	328.07	8,432.70	3,097.96	128.69	863.09	26.31	12,393.75	138.32	450.97	11,514.04	116.59
Opportunistic Fixed Income	1,762.93	15,577.66	10,614.53	148.57	3,481.59	19.75	29,673.78	168.32	1,852.23	15,722.56	84.88
Total Private Markets	9,947.90	108,687.18	39,722.55	149.19	124,038.95	124.69	272,448.69	273.88	10,309.34	155,624.26	150.95
Total Overall	62,699.73	176,799.45	39,722.55	34.53	129,507.52	20.66	346,029.52	55.19	65,937.03	220,645.17	33.46

The overall carried interest and incentive fees paid by NYCERS in Fiscal Year 2018: 20.66 BPS

General Footnotes:

1) Private Markets data reflect: carried interest realized and/or Incentive fees as stated by its corresponding partnership. Management fees reported are inclusive of partnership expenses associated with the partnership for the stated fiscal year.

2) Infrastructure's expense data is based off the total committed amounts rather than current market value due to its early fund life juncture.

3) Estimated Fees for the Public Markets data does not take into account major rebalancing shifts and is calculated at a fixed NAV. Estimates fees for the Private Markets data is based solely off gross management fee data and is not inclusive of any offsets. Both estimates are considered to be equitably conservative and should be construed as such. Estimates for FY 2018 for Private Equity is provided by the Consultant.

Through March 31, 2019

**NYC EMPLOYEES' RETIREMENT SYSTEM
SECURITIES LENDING INCOME
March 31, 2019**

	U. S. FIXED INCOME	U. S. EQUITY	INTERNATIONAL EQUITY	TOTAL
1989	-	-	-	-
1990	256,000	-	-	256,000
1991	754,000	48,000	-	802,000
1992	1,467,000	654,000	367,000	2,488,000
1993	3,445,000	1,308,000	732,000	5,485,000
1994	4,261,000	2,744,000	1,082,000	8,087,000
1995	3,727,000	3,191,000	745,000	7,663,000
1996	3,608,000	3,592,000	1,258,000	8,458,000
1997	3,924,000	5,921,000	1,533,000	11,378,000
1998	6,374,000	7,337,000	1,952,000	15,663,000
1999	6,643,000	6,718,000	2,175,000	15,536,000
2000	6,552,000	7,669,000	3,049,000	17,270,000
2001	10,335,000	10,394,000	4,435,000	25,164,000
2002	5,906,000	7,780,000	3,510,000	17,196,000
2003	2,442,000	4,766,000	3,603,000	10,811,000
2004	3,502,000	5,844,000	3,825,000	13,171,000
2005	5,229,000	8,264,000	4,471,000	17,964,000
2006	4,626,000	10,012,000	4,163,000	18,801,000
2007	9,445,000	15,100,000	4,510,000	29,055,000
2008	25,936,000	26,696,000	6,878,000	59,510,000
2009	8,149,000	16,388,000	4,305,000	28,842,000
2010	3,714,000	10,256,000	3,125,000	17,095,000
2011	4,834,000	12,861,000	5,163,000	22,858,000
2012	6,691,000	16,287,000	4,116,000	27,094,000
2013	5,051,000	17,973,000	3,014,000	26,038,000
2014	5,194,000	14,847,000	5,272,000	25,313,000
2015	5,010,000	16,300,000	6,124,000	27,434,000
2016	6,545,000	19,856,000	5,097,000	31,498,000
2017	9,452,000	16,246,000	4,295,000	29,993,000
2018	14,213,961	13,284,175	6,691,938	34,190,073
2019 (3 months)	2,282,651	4,232,631	1,214,105	7,729,387
Since Inception	179,568,611	286,568,806	96,705,043	562,842,460

**New York City
Employees' Retirement System**

Appendix A

Consolidated Performance Report

Consolidated Performance Report

Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014	3 Year	5 Year	10 Year	ITD	Inception Date
SYSTEM RETURN SUMMARY															
5	NYCERS-TOTAL PORTFOLIO - GROSS	66,007	100.00	7.17	3.78	7.17	(2.51)	16.51	9.57	(0.17)	7.34	9.28	10.83	8.67	07/01/1987
	ESTIMATED INVESTMENT FEES			(0.07)	(0.17)	(0.07)	(0.19)	(0.26)	(0.24)	(0.27)	(0.27)	(0.23)	(0.25)		
	EST MANAGEMENT FEES - PUBLIC MARKET (ACCRUAL)			(0.03)	(0.07)	(0.03)	(0.10)	(0.11)	(0.12)	(0.12)	(0.13)	(0.11)	(0.11)		
	EST MANAGEMENT FEES - ALTERNATIVE MARKETS (CASH)			(0.04)	(0.10)	(0.04)	(0.09)	(0.15)	(0.12)	(0.15)	(0.14)	(0.12)	(0.14)		
	EST INCENTIVE FEES														
	EST OTHER FEES														
	EST FEE OFFSETS														
	NYCERS-TOTAL PORTFOLIO - NET MGR			7.11	3.61	7.11	(2.70)	16.25	9.33	(0.44)	7.07	9.05	6.68		
	NYCERS POLICY BENCHMARK			6.71	3.33	6.71	(2.75)	15.98	9.43	0.17	8.15	8.72	6.81	11.29	
	EXCESS RETURN			0.39	0.28	0.39	0.04	0.27	(0.09)	(0.62)	(1.09)	0.33	(0.13)	(0.46)	
EQUITY RETURN DETAIL															
18	NYCERS-TOTAL EQUITY (INCL PE & RA) - GROSS	41,746	63.24	9.52	3.39	9.52	(4.50)	22.77	11.39	(0.17)	7.85	11.94	8.56	13.25	7.80 04/01/2004
	ESTIMATED INVESTMENT FEES			(0.09)	(0.23)	(0.09)	(0.23)	(0.34)	(0.29)	(0.35)	(0.33)	(0.30)	(0.31)		
	EST MANAGEMENT FEES			(0.09)	(0.23)	(0.09)	(0.23)	(0.34)	(0.29)	(0.35)	(0.33)	(0.30)	(0.31)		
	EST INCENTIVE FEES														
	EST OTHER FEES														
	EST FEE OFFSETS														
	NYCERS-TOTAL EQUITY (INCL PE & RA) - NET MGR			9.43	3.16	9.43	(4.74)	22.43	11.10	(0.52)	7.52	11.64	8.25		
26	NYCERS-TOTAL DOMESTIC EQUITY - GROSS	19,225	29.13	13.66	4.36	13.66	(5.37)	20.07	14.34	(0.67)	11.35	13.25	9.89	15.80	11.24 08/01/1979
	ESTIMATED INVESTMENT FEES			(0.01)	(0.03)	(0.01)	(0.04)	(0.06)	(0.10)	(0.09)	(0.11)	(0.06)	(0.08)		
	NYCERS-TOTAL DOMESTIC EQUITY - NET MGR			13.65	4.33	13.65	(5.41)	20.01	14.24	(0.76)	11.24	13.18	9.81		
	RUSSELL 3000 (DAILY)			14.04	4.70	14.04	(5.24)	21.13	12.74	0.48	12.56	13.48	10.36	16.00	11.58
	EXCESS RETURN			(0.40)	(0.36)	(0.40)	(0.17)	(1.12)	1.51	(1.24)	(1.31)	(0.30)	(0.54)	(0.20)	(0.34)
36	NYCERS-TOTAL SMALL CAP - GROSS	1,500	2.27	13.57	(4.87)	13.57	(10.67)	12.91	25.30	(5.96)	4.40	12.06	6.91	16.54	8.35 04/01/2004
	ESTIMATED INVESTMENT FEES			(0.08)	(0.21)	(0.08)	(0.26)	(0.33)	(0.32)	(0.27)	(0.31)	(0.31)	(0.31)		
	NYCERS-TOTAL SMALL CAP - NET MGR			13.48	(5.07)	13.48	(10.93)	12.58	24.97	(6.24)	4.09	11.74	6.60		
	RUSSELL 2000 (DAILY)			14.58	(5.29)	14.58	(11.01)	14.65	21.31	(4.41)	4.89	12.92	7.05	15.36	8.04
	EXCESS RETURN			(1.10)	0.22	(1.10)	0.09	(2.07)	3.67	(1.82)	(0.80)	(1.18)	(0.45)	1.18	0.31
46	NYCERS-TOTAL RUSSELL 1000 - GROSS	17,610	26.68	13.66	5.31	13.66								9.22	04/01/2018
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)								(0.02)	
	NYCERS-TOTAL RUSSELL 1000 - NET MGR			13.66	5.30	13.66								9.21	
	RUSSELL 1000 (DAILY)			14.00	5.54	14.00								9.30	
	EXCESS RETURN			(0.34)	(0.24)	(0.34)								(0.10)	
56	NYCERS-TOTAL FUND OF FUNDS - GROSS	116	0.18	14.46	(1.64)	14.46	(7.77)							7.13	05/01/2017
	ESTIMATED INVESTMENT FEES			(0.14)	(0.37)	(0.14)	(0.46)							(0.50)	
	NYCERS-TOTAL FUND OF FUNDS - NET MGR			14.32	(2.00)	14.32	(8.23)							6.63	
	RUSSELL 2000 (DAILY)			14.58	(5.29)	14.58	(11.01)							6.51	
	EXCESS RETURN			(0.26)	3.29	(0.26)	2.78							0.12	

Consolidated Performance Report

Through March 31, 2019

		Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014	3 Year	5 Year	10 Year	ITD	Inception Date
EQUITY RETURN DETAIL																
68	NYCERS-TOTAL WORLD ex-USA - GROSS	8,349	12.65	11.69	(2.96)	11.69	(13.92)	29.77	4.50	(0.82)	(4.09)	9.71	4.24	10.24	5.97	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.06)	(0.16)	(0.06)	(0.19)	(0.32)	(0.28)	(0.28)	(0.27)	(0.26)	(0.27)			
	NYCERS-TOTAL WORLD ex-USA - NET MGR			11.63	(3.12)	11.63	(14.11)	29.45	4.22	(1.09)	(4.36)	9.45	3.98			
	WORLD EX USA CUSTOM BM			10.52	(3.22)	10.52	(14.68)	26.40	1.15	0.49	(4.90)	7.40	2.67	9.44	5.41	
	EXCESS RETURN			1.12	0.10	1.12	0.57	3.05	3.06	(1.59)	0.54	2.05	1.31	0.81	0.55	
78	NYCERS-TOTAL WORLD ex-USA LARGE & MID ACTIVE - GROSS	5,052	7.65	12.57	(1.80)	12.57	(12.94)	31.04	5.17	(3.97)	(4.44)	11.13	4.32		4.49	11/01/2013
	ESTIMATED INVESTMENT FEES			(0.08)	(0.20)	(0.08)	(0.24)	(0.36)	(0.30)	(0.27)	(0.27)	(0.31)	(0.29)		(0.29)	
	NYCERS-TOTAL WORLD ex-USA LARGE & MID ACTIVE - NET MGR			12.50	(2.00)	12.50	(13.18)	30.68	4.88	(4.24)	(4.71)	10.82	4.03		4.20	
	NYC CUSTOM WORLD EX-USA LG & MID ACT INDEX			10.45	(2.41)	10.45	(14.09)	25.18	1.00	(0.81)	(4.90)	7.34	2.37		2.74	
	EXCESS RETURN			2.05	0.41	2.05	0.91	5.49	3.88	(3.43)	0.20	3.47	1.66		1.47	
88	NYCERS-TOTAL WORLD ex-USA SMALL CAP ACTIVE- GROSS	636	0.96	9.87	(8.96)	9.87	(18.45)	34.86	2.67	10.72	(3.78)	7.36	5.01		7.45	05/01/2013
	ESTIMATED INVESTMENT FEES			(0.11)	(0.30)	(0.11)	(0.37)	(0.62)	(0.50)	(0.55)	(0.48)	(0.49)	(0.50)			
	NYCERS-TOTAL WORLD ex-USA SMALL CAP ACTIVE - NET MGR			9.76	(9.26)	9.76	(18.82)	34.24	2.17	10.18	(4.26)	6.87	4.51			
	S&P EPAC SMALL CAP USD NET			9.92	(8.54)	9.92	(18.58)	33.47	1.34	8.58	(3.43)	6.75	4.12		6.58	
	EXCESS RETURN			(0.17)	(0.71)	(0.17)	(0.24)	0.78	0.83	1.59	(0.83)	0.12	0.40		0.87	
98	NYCERS-TOTAL WORLD ex-USA LARGE CAP PASSIVE - GROSS	2,128	3.22	10.31	(2.37)	10.31	(13.64)	24.54	1.30	(0.41)	(4.98)	7.38	2.45		4.38	02/01/2011
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)	(0.01)	(0.02)			
	NYCERS-TOTAL WORLD ex-USA LARGE CAP PASSIVE - NET MGR			10.31	(2.38)	10.31	(13.65)	24.53	1.28	(0.42)	(5.00)	7.36	2.44			
	NYC CUSTOM WORLD EX US INDEX			10.45	(2.41)	10.45	(14.09)	24.12	1.00	(0.81)	(4.90)	7.04	2.19		4.09	
	EXCESS RETURN			(0.14)	0.03	(0.14)	0.44	0.41	0.28	0.39	(0.10)	0.33	0.25		0.29	
108	NYCERS-TOTAL WORLD ex-USA SMALL CAP PASSIVE - GROSS	532	0.81	10.72	(7.75)	10.72	(17.68)	33.74	2.53	9.99		7.88	4.92		5.76	02/01/2014
	ESTIMATED INVESTMENT FEES			(0.01)	(0.03)	(0.01)	(0.04)	(0.08)	(0.02)	(0.02)		(0.05)	(0.04)		(0.04)	
	NYCERS-TOTAL WORLD ex-USA SMALL CAP PASSIVE - NET MGR			10.71	(7.79)	10.71	(17.72)	33.66	2.52	9.97		7.83	4.89		5.73	
	WORLD EX USA SC PASSIVE CUSTOM BM			10.93	(7.80)	10.93	(18.07)	33.31	2.18	9.59		7.59	4.53		5.37	
	EXCESS RETURN			(0.22)	0.01	(0.22)	0.35	0.35	0.33	0.39		0.24	0.36		0.36	

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		Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014	3 Year	5 Year	10 Year	ITD	Inception Date
EQUITY RETURN DETAIL																
120	NYCERS-TOTAL ACTIVE EMERGING MARKETS - GROSS	2,873	4.35	7.49	2.04	7.49	(14.78)	36.08	12.59	(17.85)	1.02	9.31	2.79	10.62	7.40	11/01/2005
	ESTIMATED INVESTMENT FEES			(0.11)	(0.31)	(0.11)	(0.34)	(0.60)	(0.52)	(0.41)	(0.50)	(0.47)	(0.47)			
	NYCERS-TOTAL ACTIVE EMERGING MARKETS - NET MGR			7.39	1.73	7.39	(15.12)	35.48	12.07	(18.25)	0.52	8.84	2.33			
	NYCERS CUSTOM EM INDEX			6.12	1.82	6.12	(13.38)	34.18	13.66	(16.80)	(0.07)	8.81	2.74	9.35	6.76	
	EXCESS RETURN			1.26	(0.08)	1.26	(1.74)	1.30	(1.59)	(1.45)	0.60	0.03	(0.41)	1.27	0.64	
130	NYCERS-TOTAL PASSIVE EMERGING MARKETS - GROSS	1,887	2.86	6.29	1.86	6.29	(12.83)	32.97	12.55	(17.87)	(1.29)	8.33	1.86		0.13	04/01/2011
	ESTIMATED INVESTMENT FEES			(0.01)	(0.02)	(0.01)	(0.03)	(0.07)	(0.06)	(0.05)	(0.06)	(0.05)	(0.05)			
	NYCERS-TOTAL PASSIVE EMERGING MARKETS - NET MGR			6.28	1.84	6.28	(12.86)	32.90	12.49	(17.92)	(1.35)	8.28	1.81			
	MSCI CUSTOM NYCERS EMERGING MARKETS (NET)			6.12	1.82	6.12	(12.97)	33.03	12.68	(17.71)		8.34				
	EXCESS RETURN			0.16	0.02	0.16	0.11	(0.13)	(0.19)	(0.21)		(0.07)				
140	NYCERS-TOTAL INTERNATIONAL FUND OF FUNDS - GROSS	451	0.68	10.65	(4.72)	10.65	(15.83)								3.51	05/01/2017
	ESTIMATED INVESTMENT FEES			(0.14)	(0.36)	(0.14)	(0.44)								(0.53)	
	NYCERS-TOTAL INTERNATIONAL FUND OF FUNDS - NET MGR			10.51	(5.08)	10.51	(16.27)								2.98	
	NYC BLENDED CUSTOM BENCHMARK FOR FOF (ERS)			9.86	(2.45)	9.86	(14.39)								4.05	
	EXCESS RETURN			0.66	(2.63)	0.66	(1.88)								(1.07)	
150	NYCERS-TOTAL GLOBAL EQUITY - GROSS	265	0.40	15.78		15.78									7.02	08/01/2018
	ESTIMATED INVESTMENT FEES			(0.23)		(0.23)									(0.42)	
	NYCERS-TOTAL GLOBAL EQUITY - NET MGR			15.55		15.55									6.60	
	MSCI WORLD INDEX			12.48		12.48									(0.86)	
	EXCESS RETURN			3.07		3.07									7.45	

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		Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014	3 Year	5 Year	10 Year	ITD	Inception Date
EQUITY RETURN DETAIL																
168	NYCERS-TOTAL HEDGE FUND* - NET MGR	8	0.01	11.79	12.03	11.79	4.80	3.97	2.24	(1.88)	5.56	8.07	5.01		4.58	07/01/2011
	HFRI FUND OF FUNDS COMPOSITE INDEX + 1%			4.89	0.45	4.89	(3.06)	8.84	1.52	0.73	4.40	4.98	3.23		3.52	
	EXCESS RETURN			6.90	11.58	6.90	7.85	(4.87)	0.72	(2.61)	1.16	3.10	1.78		1.06	
178	NYCERS-TOTAL DIRECT HEDGE FUNDS* - NET MGR	8	0.01	11.79	12.03	11.79	4.80	4.30	2.79	(1.56)	6.02	8.39	5.36		5.71	01/01/2012
	HFRI FUND OF FUNDS COMPOSITE INDEX + 1%			4.89	0.45	4.89	(3.06)	8.84	1.52	0.73	4.40	4.98	3.23		4.50	
	EXCESS RETURN			6.90	11.58	6.90	7.85	(4.54)	1.27	(2.29)	1.62	3.41	2.14		1.21	

* INFORMATION PROVIDED BY ALPHA FRONTIER

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	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014	3 Year	5 Year	10 Year	ITD	Inception Date
EQUITY RETURN DETAIL															
187 NYCERS-TOTAL PRIVATE EQUITY (TIME WEIGHTED)	4,587	6.95	(0.18)	9.31	(0.18)	16.96	19.65	10.84	10.61	13.99	14.81	13.30	12.49	12.39	04/01/2004
NYC R3000 +3% LAGGED			(13.63)	(2.48)	(13.63)	21.06	22.22	18.37	2.49	21.24	12.22	11.13	17.02	12.22	
EXCESS RETURN			13.45	11.79	13.45	(4.10)	(2.57)	(7.53)	8.11	(7.26)	2.59	2.17	(4.54)	0.17	
197 NYCERS-TOTAL PRIVATE REAL ESTATE (TIME WEIGHTED)	3,484	5.28	1.39	6.26	1.39	10.84	11.58	10.84	16.06	15.44	10.54	12.30	7.72	9.44	04/01/2004
NCREIF NFI-ODCE NET + 100 BP			1.45	5.43	1.45	8.43	7.72	8.86	15.08	12.56	8.07	10.26			
EXCESS RETURN			(0.06)	0.83	(0.06)	2.41	3.85	1.98	0.98	2.88	2.48	2.04			
207 NYCERS-TOTAL INFRASTRUCTURE (TIME WEIGHTED)	617	0.93	1.86	9.35	1.86	15.81	19.07	9.87	15.14	20.16	14.84	18.81		15.29	12/01/2013
CPI + 4%			1.55	4.35	1.55	6.03	6.20	6.17	4.69	4.69	6.30	5.56		5.62	
EXCESS RETURN			0.31	5.00	0.31	9.78	12.88	3.70	10.45	15.47	8.54	13.25		9.67	

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		Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014	3 Year	5 Year	10 Year	ITD	Inception Date
FIXED INCOME RETURN DETAIL																
219	NYCERS-TOTAL FIXED INCOME (DOM & GLOBAL) - GROSS	24,261	36.75	3.45	4.18	3.45	0.09	4.93	6.00	(0.37)	6.18	3.93	3.50	5.94	8.15	02/01/1980
	ESTIMATED INVESTMENT FEES			(0.03)	(0.09)	(0.03)	(0.11)	(0.13)	(0.14)	(0.13)	(0.15)	(0.13)	(0.13)			
	EST MANAGEMENT FEES			(0.03)	(0.09)	(0.03)	(0.11)	(0.13)	(0.14)	(0.13)	(0.15)	(0.13)	(0.13)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	NYCERS-TOTAL FIXED INCOME (DOM & GLOBAL) - NET MGR			3.42	4.10	3.42	(0.02)	4.80	5.86	(0.50)	6.03	3.81	3.37			
227	NYCERS-TOTAL STRUCTURED FIXED INCOME - GROSS	12,573	19.05	3.05	4.75	3.05	(0.33)	4.39	3.87	0.28	7.69	2.54	3.23	5.13	7.57	01/01/1985
	ESTIMATED INVESTMENT FEES			(0.01)	(0.03)	(0.01)	(0.05)	(0.06)	(0.07)	(0.07)	(0.09)	(0.06)	(0.07)			
	NYCERS-TOTAL STRUCTURED FIXED INCOME - NET MGR			3.04	4.72	3.04	(0.37)	4.33	3.79	0.21	7.60	2.48	3.16			
	NYC CUSTOM STRUCTURED INDEX-ERS			3.39	5.35	3.39	(0.19)	4.47								
	EXCESS RETURN			(0.35)	(0.63)	(0.35)	(0.19)	(0.14)								
237	NYCERS-TOTAL CORE FI- DEVELOPING MGRS - GROSS	417	0.63	3.72	4.76	3.72	(0.87)	4.16	3.80	1.04	5.84	2.54	3.15		4.64	05/01/2009
	ESTIMATED INVESTMENT FEES			(0.05)	(0.14)	(0.05)	(0.18)	(0.18)	(0.19)	(0.18)	(0.17)	(0.18)	(0.18)			
	NYCERS-TOTAL CORE FI- DEVELOPING MGRS - NET MGR			3.68	4.62	3.68	(1.05)	3.98	3.61	0.86	5.67	2.35	2.97			
	BBG BARC AGG (DLY)			2.94	4.65	2.94	0.01	3.54	2.65	0.55	5.97	2.03	2.74		3.75	
	EXCESS RETURN			0.73	(0.03)	0.73	(1.06)	0.44	0.96	0.31	(0.30)	0.33	0.23		0.90	
247	NYCERS-TOTAL CORE FI- EMERGING MGRS - GROSS	123	0.19	3.17	4.85	3.17	0.32	4.66	2.87	0.90	6.18	2.78	3.15	4.48	5.74	01/01/1992
	ESTIMATED INVESTMENT FEES			(0.09)	(0.27)	(0.09)	(0.34)	(0.41)	(0.30)	(0.35)	(0.36)	(0.35)	(0.35)			
	NYCERS-TOTAL CORE FI- EMERGING MGRS - NET MGR			3.09	4.58	3.09	(0.03)	4.25	2.58	0.56	5.82	2.44	2.80			
	BBG BARC AGG (DLY)			2.94	4.65	2.94	0.01	3.54	2.65	0.55	5.97	2.03	2.74	3.77	5.40	
	EXCESS RETURN			0.14	(0.06)	0.14	(0.04)	0.71	(0.07)	0.01	(0.15)	0.41	0.05	0.72	0.34	
257	NYCERS-TOTAL TIPS - GROSS	2,913	4.41	3.24	1.93	3.24	(1.26)	3.06	4.74	(1.18)	3.50	1.75	1.98	3.50	3.71	06/01/2005
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)	(0.02)	(0.02)	(0.02)	(0.03)	(0.07)	(0.02)	(0.03)			
	NYCERS-TOTAL TIPS - NET MGR			3.24	1.92	3.24	(1.27)	3.04	4.72	(1.21)	3.42	1.73	1.95			
	BBG BARC GBL INF-LK: US TIPS (DLY)			3.19	1.92	3.19	(1.26)	3.01	4.68	(1.44)	3.64	1.70	1.94	3.41	3.57	
	EXCESS RETURN			0.04	(0.00)	0.04	(0.01)	0.03	0.04	0.23	(0.21)	0.03	0.01	0.08	0.14	
267	NYCERS-TOTAL HIGH YIELD - GROSS	2,876	4.36	7.10	4.79	7.10	(2.38)	7.00	15.32	(3.82)	2.94	7.81	4.33	9.67	7.66	10/01/1994
	ESTIMATED INVESTMENT FEES			(0.08)	(0.24)	(0.08)	(0.31)	(0.35)	(0.39)	(0.33)	(0.36)	(0.35)	(0.35)			
	NYCERS-TOTAL HIGH YIELD - NET MGR			7.01	4.55	7.01	(2.69)	6.65	14.93	(4.15)	2.58	7.46	3.98			
	HIGH YIELD CUSTOM BENCHMARK			7.26	4.85	7.26	(2.34)	7.03	15.48	(4.21)	2.78	7.91	4.36	9.53	6.87	
	EXCESS RETURN			(0.24)	(0.30)	(0.24)	(0.35)	(0.38)	(0.55)	0.06	(0.20)	(0.45)	(0.38)	0.14	0.79	
277	NYCERS- TOTAL BANK LOANS - GROSS	1,165	1.77	3.74	2.52	3.74	0.99	4.52	9.17	1.18	2.58	5.65	4.15		4.55	12/01/2012
	ESTIMATED INVESTMENT FEES			(0.08)	(0.25)	(0.08)	(0.33)	(0.34)	(0.36)	(0.33)	(0.34)	(0.34)	(0.34)			
	NYCERS-TOTAL BANK LOANS - NET MGR			3.66	2.27	3.66	0.66	4.18	8.81	0.85	2.24	5.30	3.81			
	CSFB LEVERAGED LOAN INDEX			3.78	2.53	3.78	1.14	4.25	9.88	(0.38)	2.06	5.87	3.83		4.32	
	EXCESS RETURN			(0.12)	(0.26)	(0.12)	(0.48)	(0.07)	(1.06)	1.23	0.18	(0.56)	(0.02)		0.23	

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	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014	3 Year	5 Year	10 Year	ITD	Inception Date
FIXED INCOME RETURN DETAIL															
289 NYCERS- TOTAL CONVERTIBLE BONDS - GROSS	771	1.17	6.90	4.55	6.90	(0.29)	13.11	7.47	(0.85)	8.42	9.01	6.05	10.12	6.54	06/01/2008
ESTIMATED INVESTMENT FEES			(0.10)	(0.31)	(0.10)	(0.40)	(0.46)	(0.46)	(0.43)	(0.47)	(0.44)	(0.44)			
NYCERS-TOTAL CONVERTIBLE BONDS - NET MGR			6.80	4.24	6.80	(0.69)	12.65	7.01	(1.28)	7.95	8.57	5.61			
BOFAML ALL CONVERTIBLE EX M AI (DAILY)			10.08	3.93	10.08	0.65	15.70	11.71	(2.75)	9.33	13.69	7.84	13.40	8.39	
EXCESS RETURN			(3.28)	0.31	(3.28)	(1.34)	(3.05)	(4.70)	1.47	(1.38)	(5.13)	(2.23)	(3.27)	(1.84)	
299 NYCERS-TOTAL OPPORTUNISTIC FIXED INCOME	1,966	2.98	1.05	3.44	1.05	6.46	7.69	8.75	(2.18)	8.15	9.11	5.14	11.47	7.57	10/01/2007
OPPORTUNISTIC FIXED INCOME JPMGHY / CSFB 50/50 BLEND PLUS 300			6.18	6.12	6.18	2.36	9.42	17.40	0.63	4.93	10.65	7.46	12.99	9.10	
EXCESS RETURN			(5.13)	(2.68)	(5.13)	4.10	(1.73)	(8.66)	(2.81)	3.22	(1.54)	(2.32)	(1.52)	(1.53)	
309 NYCERS-TOTAL TARGETED INVESTMENTS (NO CASH) - GROSS	843	1.28	2.91	5.92	2.91	1.17	4.08	2.97	4.33	8.26	2.38	4.13	5.07	7.83	12/01/1984
ESTIMATED INVESTMENT FEES			(0.05)	(0.15)	(0.05)	(0.20)	(0.20)	(0.21)	(0.21)	(0.22)	(0.20)	(0.20)	(0.22)	(0.10)	
NYCERS-TOTAL TARGETED INVESTMENTS (NO CASH) - NET MGR			2.86	5.76	2.86	0.98	3.88	2.76	4.12	8.03	2.18	3.93	4.85	7.73	
EMPLOYEES CUSTOM BENCHMARK (NO CASH)			2.49	4.56	2.49	1.01	3.10	2.38	1.42	6.03	2.17	2.93	3.60		
EXCESS RETURN			0.38	1.21	0.38	(0.03)	0.78	0.38	2.70	2.00	0.01	0.99	1.25		
CASH SUMMARY															
321 Short Term NYCERS - GROSS	614	0.93	0.63	1.72	0.63	1.95	1.09	0.76	0.31	0.36	1.37	1.00	0.80		04/01/1982
ESTIMATED INVESTMENT FEES			0.00	0.00	0.00	0.00	0.00	0.00	(0.00)	0.00	0.00	0.00	0.00		
Short Term NYCERS - NET MGR			0.63	1.72	0.63	1.95	1.09	0.76	0.31	0.36	1.37	1.00	0.80		
325 KKR Cash Account	0.00	0.00													
327 Cash Account	0.00	0.00													
329 Securities Lending	0.00	0.00													

New York City
Employees' Retirement System

Appendix B

Public Markets Manager Performance Detail

Public Markets Manager Performance Detail

Net Returns Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
EQUITY SUMMARY										
US EQUITY										
BlackRock US SCG R2000	280	0.42	17.14	(3.05)	17.14	(9.18)	22.32	11.29	(1.54)	5.70
RUSSELL 2000 GROWTH DAILY			17.14	(3.15)	17.14	(9.31)	22.17	11.32	(1.38)	5.60
Excess			(0.00)	0.10	(0.00)	0.12	0.15	(0.03)	(0.16)	0.10
BlackRock US SCV R2000	42	0.06	12.03	(7.29)	12.03	(12.77)	7.95	31.61	(7.49)	4.90
RUSSELL 2000 VALUE DAILY			11.93	(7.51)	11.93	(12.86)	7.84	31.74	(7.47)	4.22
Excess			0.11	0.22	0.11	0.09	0.11	(0.13)	(0.02)	0.68
RAFI US SCE	697	1.06	11.78	(6.87)	11.78	(11.31)	9.63	27.57	(7.09)	4.56
RUSSELL 2000 (DAILY)			14.58	(5.29)	14.58	(11.01)	14.65	21.31	(4.41)	4.89
Excess			(2.80)	(1.58)	(2.80)	(0.29)	(5.01)	6.26	(2.68)	(0.34)
Ceredex US SCV	221	0.33	11.31	(5.93)	11.31	(11.97)	10.59	29.34	(4.74)	2.58
RUSSELL 2000 VALUE DAILY			11.93	(7.51)	11.93	(12.86)	7.84	31.74	(7.47)	4.22
Excess			(0.62)	1.57	(0.62)	0.89	2.75	(2.40)	2.73	(1.64)
Wellington US SCC	260	0.39	17.14	(0.18)	17.14	(10.09)	19.90	19.25	(2.79)	9.89
RUSSELL 2000 (DAILY)			14.58	(5.29)	14.58	(11.01)	14.65	21.31	(4.41)	4.89
Excess			2.55	5.11	2.55	0.93	5.25	(2.05)	1.63	4.99
BlackRock US LC R1000 Growth	0	0.00					30.22	7.04	5.58	12.90
RUSSELL 1000 GROWTH - DAILY							30.21	7.08	5.67	13.05
Excess							0.00	(0.04)	(0.09)	(0.15)
BlackRock US LC R1000 Value	0	0.00					13.53	17.36	(3.94)	13.51
RUSSELL 1000 VALUE (DAILY)							13.66	17.34	(3.83)	13.45
Excess							(0.13)	0.02	(0.11)	0.06

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	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
BlackRock US LMC R1000 Core	15,704	23.79	13.91	5.63	13.91					
RUSSELL 1000 (DAILY)			14.00	5.54	14.00					
Excess			(0.09)	0.09	(0.09)					
VTL US LCE	0	0.00					20.19	12.68	(1.25)	13.81
S&P 500 INDEX (DAILY)							21.83	11.96	1.38	13.69
Excess							(1.64)	0.72	(2.63)	0.12
RAFI US LMCE	1,906	2.89	11.63	2.75	11.63	(6.90)	16.94	15.71	(3.17)	12.15
RUSSELL 1000 (DAILY)			14.00	5.54	14.00	(4.78)	21.69	12.05	0.92	13.24
Excess			(2.37)	(2.79)	(2.37)	(2.11)	(4.74)	3.66	(4.09)	(1.09)
FUND OF FUNDS										
NYCERS-TOTAL FUND OF FUNDS	116	0.18	14.32	(2.00)	14.32	(8.23)				
RUSSELL 2000 (DAILY)			14.58	(5.29)	14.58	(11.01)				
Excess			(0.26)	3.29	(0.26)	2.78				
NYCERS-TOTAL LEGATO	116	0.18	14.32	(2.00)	14.32	(8.17)				
RUSSELL 2000 (DAILY)			14.58	(5.29)	14.58	(11.01)				
Excess			(0.26)	3.29	(0.26)	2.84				
NON - US EQUITY										
Causeway WorldxUS LMCC	1,199	1.82	10.81	(4.23)	10.81	(18.52)	27.94	0.69	(2.41)	(4.94)
NYC Developed Value Benchmark			10.45	(2.41)	10.45	(14.09)	22.77	5.02	(5.68)	(5.39)
Excess			0.36	(1.82)	0.36	(4.43)	5.18	(4.33)	3.28	0.45
Sprucegrove WorldxUS LMCC	1,248	1.89	9.47	(2.07)	9.47	(13.93)	27.61	11.10	(9.77)	(3.69)
NYC Developed Value Benchmark			10.45	(2.41)	10.45	(14.09)	22.77	5.02	(5.68)	(5.39)
Excess			(0.98)	0.34	(0.98)	0.16	4.85	6.08	(4.08)	1.70
Baillie Gifford WorldxUS LMCC	1,298	1.97	18.22	(5.24)	18.22	(12.79)	39.40	2.12	(4.67)	(6.81)
NYC Developed Growth Benchmark			10.45	(2.41)	10.45	(14.09)	27.77	(3.04)	4.09	(4.43)
Excess			7.78	(2.83)	7.78	1.30	11.63	5.16	(8.76)	(2.38)

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	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
Walter Scott WorldxUS LMCC	1,307	1.98	11.63	3.80	11.63	(7.16)	27.94	5.26	0.04	(3.43)
NYC Developed Growth Benchmark			10.45	(2.41)	10.45	(14.09)	27.77	(3.04)	4.09	(4.43)
Excess			1.18	6.21	1.18	6.93	0.17	8.31	(4.05)	1.00
Acadian WorldxUS SCC	410	0.62	10.32	(8.43)	10.32	(19.03)	37.50	5.15	8.71	(3.02)
S&P EPAC Small Cap USD NET			9.92	(8.54)	9.92	(18.58)	33.47	1.34	8.58	(3.43)
Excess			0.40	0.11	0.40	(0.45)	4.03	3.82	0.13	0.41
Fidelity WorldxUS SCC	113	0.17	9.21	(10.23)	9.21	(18.48)	31.22	(0.81)	11.68	(5.51)
S&P EPAC Small Cap USD NET			9.92	(8.54)	9.92	(18.58)	33.47	1.34	8.58	(3.43)
Excess			(0.71)	(1.69)	(0.71)	0.10	(2.25)	(2.15)	3.09	(2.08)
Alger EAFE SCC	114	0.17								
MSCI EAFE SMALL CAP NET (DAILY)										
Excess										
SSGA WorldxUS LMC NYC Custom IDX	2,128	3.22	10.31	(2.38)	10.31	(13.65)	24.53	1.28	(0.42)	(5.00)
NYC Custom World ex US Index			10.45	(2.41)	10.45	(14.09)	24.12	1.00	(0.81)	(4.90)
Excess			(0.14)	0.03	(0.14)	0.44	0.41	0.28	0.39	(0.10)
SSGA WorldxUS SC Custom IDX ¹	532	0.81	10.71	(7.79)	10.71	(17.72)	33.66	2.52	9.97	
World ex USA SC PASSIVE CUSTOM BM			10.93	(7.80)	10.93	(18.07)	33.31	2.18	9.59	
Excess			(0.22)	0.01	(0.22)	0.35	0.35	0.33	0.39	
Generation WorldxUS	0	0.00						9.93	7.04	11.39
MSCI World Index								7.51	(0.87)	4.94
Excess								2.42	7.91	6.45
EMERGING MARKETS										
Baillie Gifford EM	801	1.21	11.28	5.65	11.28	(14.40)	41.25	4.20	(13.67)	4.53
NYCERS Custom EM Index			6.12	1.82	6.12	(13.38)	34.18	13.66	(16.80)	(0.07)
Excess			5.15	3.83	5.15	(1.02)	7.07	(9.46)	3.14	4.60

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	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
Acadian EM	709	1.07	5.91	(1.12)	5.91	(17.60)	36.05	12.66	(18.25)	3.09
NYCERS Custom EM Index			6.12	1.82	6.12	(13.38)	34.18	13.66	(16.80)	(0.07)
Excess			(0.21)	(2.94)	(0.21)	(4.22)	1.86	(1.00)	(1.45)	3.16
Eaton Vance EM	604	0.91	5.76	0.09	5.76	(14.77)	30.24	11.58	(19.39)	(1.55)
NYCERS Custom EM Index			6.12	1.82	6.12	(13.38)	34.18	13.66	(16.80)	(0.07)
Excess			(0.36)	(1.73)	(0.36)	(1.38)	(3.95)	(2.09)	(2.59)	(1.48)
DFA EM	759	1.15	6.14	1.83	6.14	(13.70)	34.27	20.31	(22.06)	(4.16)
NYCERS Custom EM Index			6.12	1.82	6.12	(13.38)	34.18	13.66	(16.80)	(0.07)
Excess			0.02	0.01	0.02	(0.31)	0.09	6.65	(5.26)	(4.09)
BlackRock MSCI EM Core	1,887	2.86	6.28	1.84	6.28	(12.86)	32.90	12.49	(17.92)	(1.52)
MSCI CUSTOM NYCERS EMERGING MARKETS (NET)			6.12	1.82	6.12	(12.97)	33.03	12.68	(17.71)	
Excess			0.16	0.02	0.16	0.11	(0.13)	(0.19)	(0.21)	
INTERNATIONAL FOF										
NYCERS-TOTAL INTERNATIONAL FOF	451	0.68	10.51	(5.08)	10.51	(16.27)				
NYC Blended Custom Benchmark for FoF (ERS)			9.86	(2.45)	9.86	(14.39)				
Excess			0.66	(2.63)	0.66	(1.88)				
NYCERS-TOTAL INTERNATIONAL BIVIU	148	0.22	10.74	(6.02)	10.74	(18.08)				
NYC Blended Custom Benchmark for FoF (ERS)			9.86	(2.45)	9.86	(14.39)				
Excess			0.88	(3.56)	0.88	(3.69)				
NYCERS-TOTAL INTERNATIONAL FIS	150	0.23	9.47	(4.15)	9.47	(14.84)				
NYC Blended Custom Benchmark for FoF (ERS)			9.86	(2.45)	9.86	(14.39)				
Excess			(0.39)	(1.70)	(0.39)	(0.45)				
NYCERS-TOTAL INTERNATIONAL LEADING EDGE	153	0.23	11.34	(5.04)	11.34	(15.78)				
NYC Blended Custom Benchmark for FoF (ERS)			9.86	(2.45)	9.86	(14.39)				
Excess			1.49	(2.59)	1.49	(1.39)				

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	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
GLOBAL EQUITY										
Fiera WorldxUS	265	0.40	15.55		15.55					
MSCI World Index			12.48		12.48					
Excess			3.07		3.07					
FIXED INCOME SUMMARY										
STRUCTURED FIXED INCOME										
Neuberger Berman Mortgages	533	0.81	2.15	4.08	2.15	0.82	2.43	1.50	1.42	6.99
FTSE MORTGAGE INDEX			2.16	4.21	2.16	1.01	2.47	1.59	1.56	6.12
Excess			(0.01)	(0.13)	(0.01)	(0.19)	(0.04)	(0.09)	(0.14)	0.86
BlackRock Mortgages	1,245	1.89	2.40	4.35	2.40	0.96	2.69	2.17	1.67	6.75
FTSE MORTGAGE INDEX			2.16	4.21	2.16	1.01	2.47	1.59	1.56	6.12
Excess			0.24	0.14	0.24	(0.05)	0.22	0.58	0.11	0.62
Amundi Smith Breeden Mortgages	0	0.00					2.24	2.06	1.73	6.36
FTSE MORTGAGE INDEX							2.47	1.59	1.56	6.12
Excess							(0.23)	0.47	0.16	0.23
Prudential Credit	752	1.14	4.71	5.70	4.71	(1.91)	6.17	5.89	(0.32)	7.54
NYC - Investment Grade Credit			4.72	5.82	4.72	(1.90)	6.04	5.56	(0.65)	7.04
Excess			(0.02)	(0.12)	(0.02)	(0.01)	0.13	0.33	0.33	0.50
T Rowe Price Credit	747	1.13	4.91	5.87	4.91	(2.41)	6.85	6.00	0.13	7.91
NYC - Investment Grade Credit			4.72	5.82	4.72	(1.90)	6.04	5.56	(0.65)	7.04
Excess			0.19	0.05	0.19	(0.51)	0.81	0.44	0.78	0.87
BlackRock Credit	324	0.49	5.02	5.79	5.02	(2.00)	6.38	5.50	(0.83)	7.48
NYC - Investment Grade Credit			4.72	5.82	4.72	(1.90)	6.04	5.56	(0.65)	7.04
Excess			0.30	(0.02)	0.30	(0.10)	0.35	(0.06)	(0.18)	0.44

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Net Returns Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
Taplin Credit	200	0.30	5.77	5.21	5.77	(3.47)	6.91	9.51	(4.37)	7.83
NYC - Investment Grade Credit			4.72	5.82	4.72	(1.90)	6.04	5.56	(0.65)	7.04
Excess			1.05	(0.60)	1.05	(1.56)	0.87	3.95	(3.73)	0.79
Barrow Hanley Credit	376	0.57	5.12	6.03	5.12	(2.37)	6.06	5.88	(0.09)	7.47
NYC - Investment Grade Credit			4.72	5.82	4.72	(1.90)	6.04	5.56	(0.65)	7.04
Excess			0.40	0.21	0.40	(0.46)	0.02	0.32	0.56	0.42
BlackRock LI Treasury	2,910	4.41	3.39	5.47	3.39	(0.19)	4.76	1.24	0.69	11.98
NYC - Treasury Agency Plus Five			3.37	5.57	3.37	(0.05)	4.66	1.21	0.72	12.38
Excess			0.02	(0.10)	0.02	(0.14)	0.10	0.02	(0.03)	(0.40)
SSGA LI Treasury	3,031	4.59	3.38	5.45	3.38	(0.18)	4.93	1.57	0.46	12.10
NYC - Treasury Agency Plus Five			3.37	5.57	3.37	(0.05)	4.66	1.21	0.72	12.38
Excess			0.00	(0.12)	0.00	(0.13)	0.28	0.36	(0.26)	(0.28)
SSGA ST Treasury 1-3Y	2,448	3.71	0.97	2.46	0.97	1.52	0.40			
FTSE USBIG Treasury 1-3 Y Index			0.99	2.48	0.99	1.56	0.42			
Excess			(0.02)	(0.01)	(0.02)	(0.04)	(0.02)			
SSGA IT Treasury 1-10Y ²	6	0.01	1.48	2.63	1.48	2.05				
FTSE USBIG Treasury/Agency 1-10 y			1.58	3.69	1.58	1.42				
Excess			(0.10)	(1.06)	(0.10)	0.63				
91 DAY TREASURY BILL (DAILY)			0.60	1.66	0.60	1.87				
Excess			0.88	0.97	0.88	0.17				
HIGH YIELD										
Loomis Sayles High Yield	0	0.00					7.57	21.61	(7.67)	4.89
NYC-Loomis (BoA MLMSTII 7-03/BB&B PRIOR)							7.48	17.49	(4.64)	2.50
Excess							0.09	4.13	(3.02)	2.38

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	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
Oaktree High Yield	395	0.60	7.08	4.23	7.08	(3.46)	5.78	14.91	(4.77)	1.52
BBG BARC US HY - 2% Issr Cap			7.26	4.85	7.26	(2.08)	7.50	17.13	(4.43)	2.46
Excess			(0.18)	(0.62)	(0.18)	(1.38)	(1.72)	(2.22)	(0.33)	(0.93)
Neuberger Berman High Yield	426	0.65	6.91	4.84	6.91	(2.00)	5.78	14.70	(4.00)	2.14
BBG BARC US HY - 2% Issr Cap			7.26	4.85	7.26	(2.08)	7.50	17.13	(4.43)	2.46
Excess			(0.34)	(0.01)	(0.34)	0.08	(1.73)	(2.43)	0.43	(0.32)
Stone Harbor High Yield	246	0.37	7.62	5.25	7.62	(2.62)	5.85	12.98	(4.54)	0.97
BBG BARC US HY - 2% Issr Cap			7.26	4.85	7.26	(2.08)	7.50	17.13	(4.43)	2.46
Excess			0.36	0.40	0.36	(0.53)	(1.65)	(4.15)	(0.10)	(1.49)
T Rowe Price High Yield	633	0.96	7.09	5.50	7.09	(2.36)	7.03	12.32	(1.28)	2.96
BBG BARC US HY - 2% Issr Cap			7.26	4.85	7.26	(2.08)	7.50	17.13	(4.43)	2.46
Excess			(0.17)	0.65	(0.17)	(0.28)	(0.47)	(4.81)	3.16	0.50
Shenkman High Yield	365	0.55	6.84	3.53	6.84	(3.21)	6.79	11.86	(2.24)	2.93
BBG BARC US HY - 2% Issr Cap			7.26	4.85	7.26	(2.08)	7.50	17.13	(4.43)	2.46
Excess			(0.42)	(1.32)	(0.42)	(1.12)	(0.71)	(5.27)	2.20	0.47
Penn High Yield	-0	-0.00					6.61	11.97	(1.26)	0.84
FTSE BB & B							7.03	15.48	(4.21)	2.78
Excess							(0.42)	(3.51)	2.95	(1.95)
Eaton Vance High Yield	290	0.44	7.01		7.01					
BBG BARC US HY - 2% Issr Cap			7.26		7.26					
Excess			(0.25)		(0.25)					
Mackay Shields High Yield	213	0.32	6.87		6.87					
BBG BARC US HY - 2% Issr Cap			7.26		7.26					
Excess			(0.38)		(0.38)					

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	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
Nomura High Yield	301	0.46	7.17		7.17					
BBG BARC US HY - 2% Issr Cap			7.26		7.26					
Excess			(0.09)		(0.09)					
Transition High Yield	7	0.01								
BANK LOANS										
Barings Bank Loans	317	0.48	3.77	2.01	3.77	0.38	4.47	8.46	0.12	1.99
CSFB LEVERAGED LOAN INDEX			3.78	2.53	3.78	1.14	4.25	9.88	(0.38)	2.06
Excess			(0.01)	(0.52)	(0.01)	(0.76)	0.22	(1.42)	0.50	(0.07)
Credit Suisse Bank Loans	328	0.50	3.65	2.62	3.65	1.04	4.66	8.95	2.57	2.67
CSFB LEVERAGED LOAN INDEX			3.78	2.53	3.78	1.14	4.25	9.88	(0.38)	2.06
Excess			(0.12)	0.09	(0.12)	(0.10)	0.41	(0.92)	2.96	0.61
Guggenheim Bank Loans	205	0.31	2.85	2.09	2.85	1.24	3.82	7.84	2.07	2.88
CSFB LEVERAGED LOAN INDEX			3.78	2.53	3.78	1.14	4.25	9.88	(0.38)	2.06
Excess			(0.93)	(0.43)	(0.93)	0.10	(0.43)	(2.03)	2.45	0.83
Invesco Bank Loans	314	0.48	4.10	2.29	4.10	0.17	3.64	9.68	(0.91)	1.65
CSFB LEVERAGED LOAN INDEX			3.78	2.53	3.78	1.14	4.25	9.88	(0.38)	2.06
Excess			0.32	(0.24)	0.32	(0.97)	(0.61)	(0.20)	(0.53)	(0.41)
TIPS										
SSGA TIPS	2,197	3.33	3.24	1.92	3.24	(1.30)	3.06	4.73	(1.35)	3.57
BBG BARC Gbl Inf-Lk: US TIPS (Dly)			3.19	1.92	3.19	(1.26)	3.01	4.68	(1.44)	3.64
Excess			0.04	(0.00)	0.04	(0.04)	0.05	0.04	0.09	(0.07)
BlackRock TIPS	716	1.09	3.24	1.92	3.24	(1.18)	2.98	4.71	(1.24)	3.74
BBG BARC Gbl Inf-Lk: US TIPS (Dly)			3.19	1.92	3.19	(1.26)	3.01	4.68	(1.44)	3.64
Excess			0.05	0.00	0.05	0.08	(0.02)	0.02	0.20	0.10

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	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
CONVERTIBLE BONDS										
Advent Convertible Bonds	447	0.68	6.18	3.30	6.18	(1.64)	7.75	7.35	(1.92)	4.68
BofA ML U.S. Convertible Yield Alternative			6.29	2.27	6.29	(0.42)	9.45	9.96	(8.77)	2.75
Excess			(0.12)	1.03	(0.12)	(1.22)	(1.69)	(2.61)	6.85	1.93
Victory Convertible Bonds	324	0.49	7.67	5.57	7.67	0.66	20.54	6.47	(0.24)	13.76
BofA Merrill Lynch US Investment Grade Convertible Bond Index			6.91	6.06	6.91	3.35	20.99	14.23	1.68	15.69
Excess			0.76	(0.49)	0.76	(2.69)	(0.45)	(7.77)	(1.92)	(1.93)
CORE FI - EMERGING MANAGERS										
New Century Core-Core Plus	28	0.04	2.96	4.51	2.96	0.17	4.24	1.98	(0.04)	6.09
BBG BARC Agg (Dly)			2.94	4.65	2.94	0.01	3.54	2.65	0.55	5.97
Excess			0.02	(0.14)	0.02	0.16	0.70	(0.67)	(0.59)	0.12
Hillswick Core-Core Plus	10	0.02	2.65	4.73	2.65	0.22	2.56			
BBG BARC Agg (Dly)			2.94	4.65	2.94	0.01	3.54			
Excess			(0.30)	0.08	(0.30)	0.21	(0.98)			
Integrity Core-Core Plus	13	0.02	2.78	4.37	2.78	0.01	3.92			
BBG BARC Agg (Dly)			2.94	4.65	2.94	0.01	3.54			
Excess			(0.16)	(0.28)	(0.16)	(0.00)	0.38			
Pugh Core-Core Plus	32	0.05	2.99	4.42	2.99	(0.39)	4.25	3.13	0.69	6.05
BBG BARC Agg (Dly)			2.94	4.65	2.94	0.01	3.54	2.65	0.55	5.97
Excess			0.05	(0.22)	0.05	(0.40)	0.71	0.49	0.14	0.08
Ramirez Core-Core Plus	41	0.06	3.46	4.79	3.46	0.04	4.80	3.47	0.94	
BBG BARC Agg (Dly)			2.94	4.65	2.94	0.01	3.54	2.65	0.55	
Excess			0.51	0.14	0.51	0.03	1.25	0.82	0.39	

Public Markets Manager Performance Detail

Net Returns Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
CORE FI - DEVELOPING MANAGERS										
LM Capital Core-Core Plus	306	0.46	3.70	4.69	3.70	(1.14)	3.85	3.47	0.83	5.67
BBG BARC Agg (Dly)			2.94	4.65	2.94	0.01	3.54	2.65	0.55	5.97
Excess			0.76	0.05	0.76	(1.15)	0.31	0.82	0.28	(0.30)
GIA Core-Core Plus	111	0.17	3.61	4.41	3.61	(0.81)	4.35	4.00		
BBG BARC Agg (Dly)			2.94	4.65	2.94	0.01	3.54	2.65		
Excess			0.67	(0.23)	0.67	(0.82)	0.80	1.35		
ECONOMICALLY TARGETED INVESTMENTS										
AFL-CIO Housing Investment Trust	317	0.48	2.65	4.47	2.65	0.16	3.17	1.94	1.13	6.10
BBG BARC Agg (Dly)			2.94	4.65	2.94	0.01	3.54	2.65	0.55	5.97
Excess			(0.29)	(0.18)	(0.29)	0.15	(0.38)	(0.71)	0.58	0.14
RBC Access MBS	156	0.24	2.50	4.43	2.50	0.49	2.64	1.61	1.83	6.66
Access RBC Benchmark			2.01	4.03	2.01	1.17	1.96	1.52	1.40	5.08
Excess			0.49	0.40	0.49	(0.69)	0.69	0.09	0.43	1.58
CPC Construction Facility	8	0.01	1.31	3.39	1.31	4.14	6.07	(3.95)	12.90	
CPC CONST BENCHMARK			1.06	3.14	1.06	3.99	3.34	3.03	2.90	
Excess			0.25	0.26	0.25	0.15	2.73	(6.99)	10.00	
BOA PPAR FNMA	23	0.03	3.40	7.43	3.40	2.33	5.21	4.07	42.03	13.31
FNMA Plus 85bps			2.33	4.80	2.33	1.86	3.61	2.38	2.50	7.13
Excess			1.07	2.63	1.07	0.47	1.60	1.69	39.53	6.19
BOA PPAR GNMA	15	0.02	2.77	6.69	2.77	2.42	4.08	3.13	8.04	15.61
GNMA Plus 65bps			2.32	4.68	2.32	1.63	2.53	2.28	2.02	6.65
Excess			0.44	2.01	0.44	0.79	1.56	0.85	6.03	8.96

Public Markets Manager Performance Detail

Net Returns Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
Citibank PPAR FNMA	15	0.02	3.24	8.33	3.24	2.63	5.26	3.71	6.69	25.71
FNMA Plus 85bps			2.33	4.80	2.33	1.86	3.61	2.38	2.50	7.13
Excess			0.91	3.53	0.91	0.77	1.65	1.33	4.20	18.58
Citibank PPAR GNMA	6	0.01	2.73	7.40	2.73	1.90	3.10	2.78	5.08	15.37
GNMA Plus 65bps			2.32	4.68	2.32	1.63	2.53	2.28	2.02	6.65
Excess			0.40	2.73	0.40	0.27	0.57	0.50	3.06	8.72
CFSB PPAR GNMA	3	0.00	2.64	6.73	2.64	0.99	3.83	3.21	5.90	15.34
GNMA Plus 65bps			2.32	4.68	2.32	1.63	2.53	2.28	2.02	6.65
Excess			0.32	2.05	0.32	(0.65)	1.30	0.93	3.88	8.69
CPC PPAR FNMA	93	0.14	3.78	8.40	3.78	2.31	5.06	6.15	8.96	13.91
FNMA Plus 85bps			2.33	4.80	2.33	1.86	3.61	2.38	2.50	7.13
Excess			1.46	3.61	1.46	0.45	1.45	3.77	6.46	6.78
CPC PPAR GNMA	79	0.12	2.54	6.58	2.54	0.86	2.58	2.86	5.08	8.41
GNMA Plus 65bps			2.32	4.68	2.32	1.63	2.53	2.28	2.02	6.65
Excess			0.22	1.90	0.22	(0.77)	0.05	0.58	3.07	1.76
JPMC PPAR FNMA	69	0.11	3.24	7.45	3.24	1.68	9.96	7.94	6.18	12.06
FNMA Plus 85bps			2.33	4.80	2.33	1.86	3.61	2.38	2.50	7.13
Excess			0.91	2.66	0.91	(0.18)	6.35	5.56	3.68	4.93
JPMC PPAR GNMA	32	0.05	2.41	6.71	2.41	1.99	2.63	2.99	6.04	13.75
GNMA Plus 65bps			2.32	4.68	2.32	1.63	2.53	2.28	2.02	6.65
Excess			0.09	2.03	0.09	0.36	0.11	0.72	4.03	7.10
LIIF PPAR FNMA	10	0.02	3.35	8.21	3.35	2.27	9.55	5.03	6.29	38.12
FNMA Plus 85bps			2.33	4.80	2.33	1.86	3.61	2.38	2.50	7.13
Excess			1.02	3.41	1.02	0.41	5.94	2.65	3.79	30.99

Public Markets Manager Performance Detail

Net Returns Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
LIIF PPAR GNMA	3	0.00	1.92	5.48	1.92	2.53	2.52	3.88	3.92	9.74
GNMA Plus 65bps			2.32	4.68	2.32	1.63	2.53	2.28	2.02	6.65
Excess			(0.40)	0.81	(0.40)	0.89	(0.01)	1.61	1.91	3.09
LISC PPAR FNMA	1	0.00	3.72		3.72					
FNMA Plus 85bps			2.33		2.33					
Excess			1.39		1.39					
NCBCI PPAR FNMA	0	0.00	2.52	7.66	2.52	2.00	1.75	3.46	4.97	14.93
FNMA Plus 85bps			2.33	4.80	2.33	1.86	3.61	2.38	2.50	7.13
Excess			0.19	2.87	0.19	0.15	(1.86)	1.07	2.47	7.81
NCBCI PPAR GNMA	2	0.00	2.47	6.60	2.47	1.23	3.01	3.51	5.53	16.66
GNMA Plus 65bps			2.32	4.68	2.32	1.63	2.53	2.28	2.02	6.65
Excess			0.15	1.92	0.15	(0.41)	0.48	1.23	3.52	10.01
NHS PPAR GNMA	1	0.00	2.48	5.99	2.48	0.54	(2.93)	3.58	4.90	13.73
GNMA Plus 65bps			2.32	4.68	2.32	1.63	2.53	2.28	2.02	6.65
Excess			0.16	1.32	0.16	(1.09)	(5.46)	1.30	2.89	7.08
Wells Fargo PPAR FNMA	9	0.01	9.99	16.43	9.99					
FNMA Plus 85bps			2.33	4.80	2.33					
Excess			7.67	11.64	7.67					
CASH										
Short Term NYCERS	614	0.93	0.63	1.72	0.63	1.95	1.09	0.76	0.31	0.36
91 DAY TREASURY BILL (DAILY)			0.60	1.66	0.60	1.87	0.86	0.33	0.05	0.03
Excess			0.03	0.05	0.03	0.07	0.23	0.44	0.26	0.33
KKR SP CASH ACCOUNT	0	0.00								
Cash Account	0	0.00								
Securities Lending	0	0.00								

New York City
Employees' Retirement System

Appendix C

Alternative Assets Manager Performance Detail

Alternative Assets Manager Performance Detail

Through December 31, 2018

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
TOTAL PRIVATE EQUITY		10,932,556,982	9,136,138,984	8,497,666,775	4,588,004,563	1.43	9.7%
TOTAL LIQUIDATED		827,867,726	946,246,003	1,182,721,348	-	1.25	6.3%
TOTAL ACTIVE		10,104,689,257	8,189,892,981	7,314,945,428	4,588,004,563	1.45	10.2%
TOTAL ACTIVE							
Cypress Merchant Banking Partners II, L.P.	1999	45,172,972	53,944,269	50,584,154	26,160	0.94	-1.2%
Lincolnshire Equity Fund II, L.P.	1999	18,397,347	19,261,466	37,375,300	747,159	1.98	24.6%
Solera Partners, L.P.	2000	19,999,779	26,592,283	41,635,156	309,080	1.58	7.5%
SCP Private Equity Partners II, L.P.	2000	27,442,463	30,827,225	10,819,873	1,679,008	0.41	-11.7%
Apollo Investment Fund V, L.P.	2001	40,000,000	62,528,643	123,295,865	398,271	1.98	38.6%
RRE Ventures III, L.P.	2001	19,999,999	26,323,260	34,078,940	1,255,773	1.34	5.5%
Thomas, McNerney & Partners, L.P.	2002	20,000,000	20,000,000	10,058,105	2,287,471	0.62	-7.7%
Landmark Equity Partners XI, L.P.	2002	55,000,000	52,284,778	80,358,502	134,818	1.54	23.3%
FS Equity Partners V, L.P.	2003	25,000,000	21,419,958	41,861,469	2,175,316	2.06	15.5%
Blackstone Capital Partners IV, L.P.	2003	34,418,762	38,818,072	98,629,819	1,487,941	2.58	39.7%
Ares Corporate Opportunities Fund, L.P.	2003	45,000,000	53,984,770	80,476,920	2,705,795	1.54	13.4%
Markstone Capital Partners, LP	2004	40,000,000	46,899,103	19,822,611	272,215	0.43	-45.0%
FdG Capital Partners II LP	2004	35,000,000	37,714,408	43,600,092	2,318,139	1.22	3.8%
Paladin Homeland Security Fund (NY City), L.P.	2004	15,000,000	16,513,285	6,286,009	22,200	0.38	-14.2%
Lincolnshire Equity Fund III, L.P.	2004	55,000,000	54,939,503	77,732,618	21,312,374	1.80	28.6%
Yucaipa American Alliance Fund I, LP	2004	90,000,000	114,094,892	109,686,461	34,175,568	1.26	4.7%
New York/Fairview Emerging Managers Fund, L.P.-Tranche 1	2004	32,000,000	32,862,069	30,406,595	6,987,684	1.14	2.2%
Aurora Equity Partners III L.P.	2004	50,000,000	54,126,788	87,435,881	375,525	1.62	13.5%
Palladium Equity Partners III, L.P.	2005	35,000,000	36,441,392	68,123,287	3,651,458	1.97	16.4%
New Mountain Partners II, L.P.	2005	46,451,615	42,071,397	81,045,604	729,212	1.94	13.6%
Prism Venture Partners V-A, L.P.	2005	30,000,000	30,762,722	19,062,102	502,585	0.64	-8.7%
NB New York City Growth Fund	2005	34,819,694	34,819,694	36,646,515	6,814,632	1.25	3.6%
Snow Phipps Group, L.P.	2005	20,000,000	23,827,483	20,914,615	10,214,881	1.31	6.0%
Blackstone Mezzanine Partners II, L.P.	2005	21,346,698	23,488,553	31,752,958	282,079	1.36	8.0%
Psilos Group Partners III, L.P.	2005	35,000,000	37,205,819	17,948,760	24,602,881	1.14	2.1%
USPF II Institutional Fund, L.P.	2005	65,000,000	85,734,194	85,904,589	26,122,504	1.31	4.5%

Information provided by the New York City Employees' Retirement System Consultants

Alternative Assets Manager Performance Detail

Through December 31, 2018

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
JP Morgan Fleming (Tranche A)	2005	43,000,000	42,685,057	40,077,483	16,541,903	1.33	5.3%
Aisling Capital II, LP	2006	6,680,102	7,854,064	7,775,060	323,494	1.03	0.6%
InterMedia Partners VII, L.P.	2006	25,000,000	29,198,197	29,591,747	249,211	1.02	0.3%
Terra Firma Capital Partners III, L.P.	2006	52,774,580	53,467,890	15,185,274	8,868,491	0.45	-9.8%
BDCM Opportunity Fund II, L.P.	2006	25,000,000	37,160,726	61,921,197	29,999,417	2.47	18.0%
Blackstone Capital Partners V, L.P.	2006	121,624,827	129,358,998	200,630,094	9,862,487	1.63	8.0%
Avista Capital Partners, L.P.	2006	45,000,000	59,165,902	72,036,625	1,281,514	1.24	4.5%
GSC Recovery III, L.P.	2006	25,000,000	28,228,414	33,208,011	248,689	1.19	4.2%
Apollo Investment Fund VI, L.P.	2006	90,000,000	115,838,240	163,387,090	10,599,024	1.50	8.6%
Landmark Equity Partners XIII, L.P.	2006	50,000,000	47,997,218	51,094,749	11,439,515	1.30	5.3%
Ares Corporate Opportunities Fund II, L.P.	2006	50,000,000	54,760,870	88,352,171	3,469,578	1.68	13.1%
Fairview Ventures Fund III, L.P.	2006	25,000,000	26,534,335	31,956,724	22,316,027	2.05	14.0%
Ampersand 2006	2006	25,000,000	25,000,000	41,455,039	29,023,361	2.82	16.7%
CCMP Capital Investors II, L.P.	2006	30,000,000	32,921,953	56,637,777	26,578	1.72	13.5%
CLP 2014 (fka Perseus Partners VII)	2006	30,000,000	35,099,499	13,800,530	(33,330)	0.39	-20.8%
Thomas, McNerney & Partners II, L.P.	2006	25,000,000	25,349,167	51,010,685	4,424,554	2.19	16.4%
Catterton Partners VI, L.P.	2006	45,000,000	51,243,868	74,926,969	21,054,786	1.87	11.8%
First Reserve Fund XI, L.P.	2006	45,000,000	47,820,682	29,053,614	2,492,247	0.66	-9.3%
Arsenal Capital Partners II, LP	2006	22,500,000	27,416,444	43,593,587	6,978,037	1.84	11.6%
RRE Ventures IV, L.P.	2006	35,000,000	44,276,091	24,558,167	39,019,610	1.44	5.5%
MidOcean Partners III, L.P.	2006	58,234,777	69,389,384	121,028,871	20,527,916	2.04	12.9%
GF Capital Private Equity Fund, L.P.	2006	20,000,000	20,716,299	26,087,171	10,619,509	1.77	12.6%
The Fourth Cinven Fund	2006	69,320,388	72,910,838	105,267,237	53,027	1.44	7.4%
Pegasus Partners IV, L.P.	2007	30,000,000	36,262,533	23,854,519	9,726,070	0.93	-1.5%
FTVentures III, LP	2007	24,201,990	26,802,873	46,944,173	10,077,055	2.13	15.8%
Co-Investment Partners Europe, L.P.	2007	39,904,672	42,537,908	51,210,881	2,874,444	1.27	4.7%
Montreux Equity Partners IV, L.P.	2007	20,000,000	20,000,000	11,044,696	16,212,462	1.36	4.9%
Quaker BioVentures II, L.P.	2007	20,000,000	19,058,740	16,436,907	3,737,621	1.06	1.3%
SCP Vitalife Partners II Fund	2007	20,000,000	20,099,698	1,579	9,226,212	0.46	-9.7%
Craton Equity Investors I, L.P.	2007	20,000,000	20,089,805	2,153,907	60,714	0.11	-32.8%
Nautic Partners VI, L.P.	2007	30,000,000	33,794,398	72,914,122	6,513,877	2.35	18.9%

Information provided by the New York City Employees' Retirement System Consultants

Alternative Assets Manager Performance Detail

Through December 31, 2018

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Constellation Venture Capital III, L.P.	2007	25,000,000	28,575,035	13,995,719	7,420,272	0.75	-4.8%
United States Power Fund III, L.P.	2007	65,000,000	76,903,642	77,361,055	19,251,719	1.26	4.2%
Halyard Capital Fund II, L.P.	2007	25,000,000	21,563,143	26,187,697	4,777,760	1.44	6.6%
Carlyle Partners V, L.P.	2007	70,000,000	72,144,879	116,231,821	11,747,995	1.77	13.7%
PCG Clean Energy & Technology Fund (East), LLC	2007	90,000,000	81,429,594	16,191,797	23,726,255	0.49	-9.9%
GSO Capital Opportunities Fund LP	2007	45,000,000	67,377,298	95,627,284	734,445	1.43	17.4%
StarVest Partners II, L.P.	2007	25,000,000	25,159,680	5,254,221	15,741,251	0.83	-2.8%
New Mountain Partners III, L.P.	2007	100,000,000	101,866,058	135,606,735	65,930,753	1.98	13.3%
Vista Equity Partners Fund III, L.P.	2007	30,000,000	32,148,312	73,923,519	7,476,378	2.53	27.2%
Trilantic Capital Partners IV L.P.	2007	69,028,637	72,038,053	106,260,854	8,565,423	1.59	13.9%
RLJ Equity Partners Fund I, L.P.	2007	20,000,000	21,952,327	22,531,306	10,698,679	1.51	9.4%
Pine Brook Capital Partners, L.P.	2007	30,000,000	34,045,068	38,882,924	5,473,548	1.30	7.3%
Paladin III (NY City), L.P.	2008	30,000,000	40,209,181	28,310,127	33,682,345	1.54	9.1%
Relativity Fund, L.P.	2008	10,877,829	10,773,614	5,272,425	251	0.49	-11.2%
Apollo Investment Fund VII, L.P.	2008	100,000,000	121,201,006	190,036,127	17,832,027	1.72	22.9%
NGN BioMed Opportunity II, L.P.	2008	20,000,000	19,151,821	13,346,209	10,503,161	1.25	3.4%
Riverstone/Carlyle Global Energy & Power Fund IV, L.P.	2008	45,000,000	52,385,374	42,200,947	17,903,802	1.15	3.8%
Yucaipa American Alliance Fund II, LP	2008	120,000,000	163,744,290	127,209,094	139,219,221	1.63	9.4%
Levine Leichtman Capital Partners IV, L.P.	2008	35,000,000	37,477,097	59,216,356	4,271,786	1.69	18.5%
New York/Fairview Emerging Managers Fund, L.P.-Tranche 2	2008	45,000,000	44,659,324	45,168,182	33,875,023	1.77	13.9%
Yucaipa Corporate Initiatives Fund II, LP	2008	42,092,788	41,298,333	14,986,804	23,759,920	0.94	-1.0%
Leeds Equity Partners V, L.P.	2008	60,000,000	57,812,601	70,077,924	58,163,650	2.22	18.9%
GI Partners Fund III L.P.	2008	45,000,000	48,618,007	75,587,958	767,714	1.57	13.0%
Ares Corporate Opportunities Fund III, L.P.	2008	75,000,000	90,475,323	132,270,631	53,881,134	2.06	20.4%
GCM Grosvenor NYCERS Emerging Manager Fund, L.P.	2008	116,737,374	141,352,700	122,120,383	78,899,886	1.42	10.6%
First Reserve Fund XII, L.P.	2008	45,000,000	49,986,866	24,517,527	9,437,989	0.68	-8.9%
Landmark Equity Partners XIV, L.P.	2008	109,120,000	106,061,756	116,596,760	22,610,144	1.31	9.8%
Crestview Partners II, L.P.	2008	50,000,000	57,957,601	74,238,021	18,754,968	1.60	12.5%
Avista Capital Partners II, L.P.	2008	75,000,000	97,206,003	150,159,298	13,874,126	1.69	15.1%
Blue Wolf Capital Fund II, L.P.	2008	25,000,000	27,167,904	31,424,990	6,287,845	1.39	7.8%
Bridgepoint Europe IV	2008	26,657,389	26,986,187	28,558,918	10,626,977	1.45	9.3%

Information provided by the New York City Employees' Retirement System Consultants

Alternative Assets Manager Performance Detail

Through December 31, 2018

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Aisling Capital III, LP	2008	14,000,000	15,799,465	26,564,929	7,270,307	2.14	24.5%
Onex Partners III LP	2008	75,000,000	81,909,329	102,987,897	32,635,391	1.66	12.6%
Welsh, Carson, Anderson & Stowe XI, L.P.	2009	40,000,000	40,000,000	51,763,285	14,705,252	1.66	12.8%
FS Equity Partners VI, L.P.	2009	32,500,000	32,591,447	67,284,905	22,585,860	2.76	23.2%
Lincolnshire Equity Fund IV, L.P.	2009	27,500,000	29,281,720	33,330,527	12,173,881	1.55	11.0%
Lexington Capital Partners VII, L.P.	2009	50,000,000	44,200,303	54,152,921	15,332,161	1.57	14.3%
Snow Phipps II, L.P.	2010	30,000,000	33,615,280	25,315,478	19,296,428	1.33	9.0%
JP Morgan Fleming (Tranche B)	2010	35,000,000	35,632,039	24,766,455	26,603,107	1.44	8.8%
Trident V, L.P.	2010	110,000,000	123,749,328	119,597,237	78,780,495	1.60	11.2%
Blackstone Capital Partners VI, L.P.	2011	120,000,000	123,182,670	84,331,549	109,202,553	1.57	13.3%
Ampersand 2011	2011	25,000,000	25,000,000	29,457,057	40,409,799	2.79	22.0%
BDCM Opportunity Fund III, L.P.	2011	45,000,000	64,508,843	29,258,559	56,305,845	1.33	8.3%
AXA Secondary Fund V B L.P.	2011	120,000,000	98,871,804	136,167,348	22,504,757	1.60	15.8%
Wellspring Capital Partners V, L.P.	2011	40,000,000	40,305,719	44,647,130	18,114,587	1.56	15.9%
EQT VI, L.P.	2011	106,251,554	110,120,265	114,754,502	70,707,827	1.68	14.2%
Pegasus Partners V, L.P.	2011	20,789,916	24,860,600	15,051,753	27,851,311	1.73	14.8%
BC European Capital IX	2011	131,683,803	142,220,148	94,145,124	102,099,323	1.38	10.1%
American Securities Partners VI, L.P.	2011	80,000,000	85,921,998	128,938,416	35,450,758	1.91	21.9%
Vista Equity Partners Fund IV, L.P.	2011	100,000,000	103,797,474	117,335,988	85,218,706	1.95	18.4%
Warburg Pincus Private Equity XI, L.P.	2012	110,000,000	117,033,488	76,821,004	104,764,338	1.55	14.0%
Trilantic Capital Partners V L.P.	2012	70,000,000	73,479,754	62,150,455	47,144,732	1.49	18.3%
Palladium Equity Partners IV, L.P.	2012	55,000,000	45,016,347	25,299,135	41,709,245	1.49	14.1%
Ares Corporate Opportunities Fund IV, L.P.	2012	125,000,000	127,798,742	66,640,947	113,378,614	1.41	12.0%
Green Equity Investors VI, L.P.	2012	120,000,000	128,707,341	76,897,154	129,564,214	1.60	16.0%
Platinum Equity Capital Partners III, L.P.	2012	100,000,000	81,908,272	115,783,299	36,612,831	1.86	36.9%
<u>NYCERS - 2012 Emerging Manager Program</u>	2012	<u>139,600,000</u>	<u>132,048,792</u>	<u>46,757,840</u>	<u>143,626,164</u>	<u>1.44</u>	<u>14.5%</u>
Carlyle Partners VI, L.P.	2013	75,000,000	77,459,561	30,606,907	68,730,027	1.28	11.3%
Carlyle Partners VI, L.P. (Side Car)	2014	8,250,000	5,875,624	341,796	5,672,392	1.02	0.8%
Landmark Equity Partners XV, L.P.	2013	75,000,000	51,079,540	35,120,780	31,394,504	1.30	14.4%
Apollo Investment Fund VIII, L.P.	2013	140,000,000	125,921,816	36,674,980	118,983,160	1.24	10.2%
Landmark - NYC Fund I, L.P.	2013	25,000,000	20,321,162	12,494,466	17,281,487	1.47	18.0%

Information provided by the New York City Employees' Retirement System Consultants

Alternative Assets Manager Performance Detail

Through December 31, 2018

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
CVC Capital Partners VI, L.P.	2014	123,469,249	120,360,141	31,966,787	124,662,446	1.30	14.3%
Crestview Partners III, L.P.	2013	66,000,000	39,733,151	7,166,524	43,705,708	1.28	14.0%
Crestview Partners III (Co-Investment B), L.P.	2013	22,000,000	20,146,182	1,085,940	21,638,679	1.13	6.8%
Olympus Growth Fund VI, L.P.	2014	75,000,000	61,208,377	25,426,675	55,546,262	1.32	15.3%
ASF VI B L.P.	2014	83,000,000	58,411,689	29,095,600	52,626,612	1.40	13.3%
ASF VI B NYC Co-Invest L.P.	2014	27,000,000	20,697,356	15,819,861	12,685,057	1.38	12.8%
Vista Equity Partners Fund V, L.P.	2014	125,000,000	143,525,706	112,370,924	137,505,060	1.74	22.7%
Lexington Capital Partners VIII, L.P.	2014	110,000,000	75,798,527	28,736,810	74,935,015	1.37	24.0%
Siris Partners III, L.P.	2015	31,000,000	26,031,066	14,162,811	16,112,619	1.16	9.6%
Centerbridge Capital Partners III, L.P.	2015	23,700,000	13,255,419	4,359,744	12,021,022	1.24	11.0%
Welsh, Carson, Anderson & Stowe XII, L.P.	2015	78,500,000	53,563,129	10,929,590	71,561,597	1.54	26.8%
Warburg Pincus Private Equity XII, L.P.	2015	205,500,000	144,654,547	6,868,427	162,246,902	1.17	12.0%
ASF VII B L.P.	2015	94,500,000	30,824,481	2,157,765	37,303,031	1.28	18.6%
ASF VII B NYC Co-Invest L.P.	2015	46,000,000	22,308,913	1,838,774	33,725,727	1.59	51.2%
EQT VII, L.P.	2015	162,987,448	138,231,505	18,086,777	157,417,553	1.27	17.3%
American Securities Partners VII, L.P.	2015	80,000,000	50,984,429	9,406,486	34,984,871	0.87	-9.4%
Bridgepoint Europe V L.P.	2015	62,090,514	56,670,066	8,076,223	60,600,350	1.21	14.8%
Bridgepoint Europe V Co-Invest	2015	18,352,272	17,018,173	1,702,176	25,404,424	1.59	39.8%
<u>NYCERS - 2015 Emerging Manager Program</u>	2015	<u>190,400,000</u>	<u>52,035,672</u>	<u>2,145,350</u>	<u>59,234,300</u>	<u>1.18</u>	<u>21.0%</u>
Vista Equity Partners Fund VI, L.P.	2016	158,000,000	145,781,665	39,016,048	145,832,017	1.27	16.8%
Platinum Equity Capital Partners IV, L.P.	2016	111,000,000	70,042,467	17,431,507	74,670,136	1.31	NM
Platinum Equity Capital Partners IV Co-Investment, L.P.	2018	16,000,000	11,200,000	-	6,576,384	0.59	NM
Apax IX USD, L.P.	2016	127,000,000	56,233,233	1,204,490	66,321,928	1.20	NM
Green Equity Investors VII, L.P.	2017	95,000,000	43,669,218	376,189	46,886,733	1.08	NM
Ares Corporate Opportunities Fund V, L.P.	2017	95,000,000	40,164,175	1,635,473	37,838,342	0.98	NM
KKR Americas Fund XII, L.P.	2017	158,000,000	54,411,941	1,041,587	52,270,306	0.98	NM
BC European Capital X	2017	89,700,933	44,279,911	-	41,709,122	0.94	NM
BCEC X Co-Investment	2017	36,146,653	21,173,810	-	20,673,760	0.98	NM
Warburg Pincus Financial Sector, L.P.	2017	104,000,000	27,243,156	5,304,000	18,547,347	0.88	NM
Platinum Equity Small Cap Fund, L.P.	2018	41,000,000	1,999,744	-	1,435,957	0.72	NM
EQT VIII, L.P.	2018	111,472,588	979,900	-	(384,147)	(0.39)	NM

Information provided by the New York City Employees' Retirement System Consultants

Alternative Assets Manager Performance Detail

Through December 31, 2018

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
EQT VIII Co-Investment	2018	40,491,249	6,040,864	-	6,070,527	1.00	NM
CVC Capital Partners VII, L.P.	2018	156,518,649	24,563,857	-	26,316,987	1.07	NM
Grain Communications Opportunity Fund II, L.P.	2018	21,000,000	4,177,446	-	3,611,305	0.86	NM
Palladium Equity Partners V, L.P.	2017	33,333,333	-	-	(1,233,471)	-	N/A
Vista Equity Partners Fund VII, L.P.	2018	177,500,000	-	-	(147,370)	-	N/A
Welsh, Carson, Anderson & Stowe XIII, L.P.	2019	89,000,000	-	-	-	-	N/A
Siris Partners IV, L.P.	2018	89,000,000	-	-	(565,112)	-	N/A
Bridgepoint Europe VI	2018	121,745,453	-	-	(1,060,950)	-	N/A
Bridgepoint Europe VI Co-Invest	2018	30,484,294	-	-	-	-	N/A
Apollo Investment Fund IX, L.P.	2018	256,000,000	-	-	(2,693,802)	-	N/A
Crestview Partners IV, L.P.	2018	71,000,000	-	-	-	-	N/A
Crestview Partners IV (Co-Investment), L.P.	2018	23,666,667	-	-	-	-	N/A
KKR European Fund V (USD)	2019	83,250,000	-	-	-	-	N/A
Lexington Capital Partners IX	2019	106,500,000	-	-	-	-	N/A

Information provided by the New York City Employees' Retirement System Consultants

Alternative Assets Manager Performance Detail

Through December 31, 2018

	Vintage Year	Style Sector	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
TOTAL PRIVATE REAL ESTATE			5,278,374,395	4,528,285,696	3,115,264,153	3,449,697,039	1.44	8.0%
TOTAL PRIVATE REAL ESTATE								
Colony Realty Partners II	2006	Core Portfolio	20,000,000	24,666,122	8,957,737	-	0.36	-13.3%
JP Morgan Strategic Property Fund	2006	Core Portfolio	136,000,000	166,198,811	15,444,317	305,605,596	1.93	7.1%
Prologis Targeted US Logistics Fund	2006	Core Portfolio	25,000,000	34,245,023	10,764,828	45,740,031	1.65	5.4%
Prudential PRISA	2006	Core Portfolio	86,000,000	92,673,389	33,988,446	121,473,088	1.68	4.8%
RREEF America REIT II	2006	Core Portfolio	86,000,000	113,537,802	57,638,716	123,876,116	1.60	5.2%
Heitman America Real Estate Trust, L.P.	2007	Core Portfolio	115,000,000	182,571,281	67,571,281	253,316,329	1.76	8.0%
JP Morgan Special Situation Property Fund	2007	Core Portfolio	90,000,000	108,523,776	40,521,007	129,947,399	1.57	4.8%
Prudential PRISA II	2007	Core Portfolio	141,518,761	150,922,667	45,936,739	212,472,432	1.71	5.8%
RREEF America REIT III	2007	Core Portfolio	90,000,000	90,000,000	51,156,568	-	0.57	-7.5%
LaSalle Property Fund	2010	Core Portfolio	132,000,000	49,798,310	18,047,281	72,088,090	1.81	10.7%
UBS Trumbull Property Fund	2011	Core Portfolio	156,000,000	246,495,655	165,704,487	221,730,971	1.57	6.4%
NYC Asset Investor #2	2013	Core Portfolio	75,000,000	72,934,484	20,391,453	97,925,329	1.62	14.9%
MetLife Core Property Fund	2014	Core Portfolio	50,000,000	50,000,000	8,944,213	62,176,665	1.42	9.7%
Almanac Realty Securities VII	2015	Core Portfolio	65,000,000	46,264,149	11,850,062	46,557,835	1.26	14.1%
Almanac Realty Securities VII (Sidecar IV)	2015	Core Portfolio	20,000,000	10,684,035	1,214,221	12,897,998	1.32	17.8%
USAA Eagle Real Estate Fund	2015	Core Portfolio	90,000,000	74,998,937	5,178,682	83,797,888	1.19	8.8%
Artemis Co-Investment	2016	Core Portfolio	53,000,000	51,691,503	18,992,266	43,226,386	1.20	21.9%
Brookfield Premier Real Estate Partners	2016	Core Portfolio	91,000,000	97,214,325	6,214,325	112,957,290	1.23	12.0%
Exeter Core Industrial Club Fund II	2016	Core Portfolio	28,000,000	16,506,000	2,049,930	18,243,299	1.23	14.3%
Jamestown Premier Property Fund	2016	Core Portfolio	48,721,196	45,853,909	19,732,932	35,502,077	1.20	9.8%
Carlyle Property Investors	2017	Core Portfolio	91,000,000	95,038,335	4,038,335	98,623,877	1.08	6.8%
Lion Industrial Trust	2017	Core Portfolio	90,000,000	72,406,774	4,906,774	86,424,673	1.26	15.1%
Almanac Realty Securities VIII	2018	Core Portfolio	51,000,000	128,301	-	(89,749)	N/A	N/A
Almanac Realty Securities VIII (Sidecar II)	2018	Core Portfolio	34,000,000	99,491	-	95,198	N/A	N/A
Artemis Income and Growth Fund	2018	Core Portfolio	61,000,000	-	-	-	N/A	N/A
Heitman Core Real Estate Debt Income Trust	2018	Core Portfolio	45,000,000	16,221,300	-	16,384,592	N/A	N/A
Canyon-Johnson Urban	2002	Non-Core Portfolio	15,000,000	13,742,215	16,418,450	-	1.19	11.1%
Blackstone Real Estate Partners IV L.P.	2004	Non-Core Portfolio	30,000,000	38,393,533	50,030,468	3,415,176	1.39	10.0%
The City Investment Fund I	2004	Non-Core Portfolio	225,000,000	221,883,300	224,384,800	395,663	1.01	0.3%
Tishman Speyer Citigroup Alt Inv V&VI NYC	2004	Non-Core Portfolio	100,000,000	71,066,452	261,908,690	-	3.69	63.2%
Canyon-Johnson Urban II	2005	Non-Core Portfolio	40,000,000	35,954,815	15,898,610	136,437	0.45	-10.5%
Apollo Real Estate Investment Fund V	2006	Non-Core Portfolio	25,000,000	25,000,000	18,953,167	8,123,565	1.08	1.0%
American Value Partners Fund I	2007	Non-Core Portfolio	55,000,000	39,320,163	41,373,738	4,406,016	1.16	3.2%
Blackstone Real Estate Partners VI L.P.	2007	Non-Core Portfolio	110,000,000	123,465,884	234,685,554	10,731,225	1.99	13.3%
Carlyle Realty Partners V, L.P.	2007	Non-Core Portfolio	20,000,000	25,757,491	30,485,065	5,387,036	1.39	8.2%
Metropolitan Workforce Housing Fund	2007	Non-Core Portfolio	14,000,000	14,013,027	16,469,642	529,866	1.21	3.9%
Thor Urban Property Fund II	2007	Non-Core Portfolio	40,000,000	54,796,108	54,781,253	16,972,581	1.31	7.9%

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Alternative Assets Manager Performance Detail

Through December 31, 2018

	Vintage Year	Style Sector	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
UrbanAmerica II	2007	Non-Core Portfolio	25,000,000	23,222,798	2,626,813	-	0.11	-25.0%
Westbrook Real Estate Fund VII, L.P.	2007	Non-Core Portfolio	40,000,000	43,825,653	40,298,184	12,503,556	1.20	3.2%
Ares European Real Estate Fund III	2008	Non-Core Portfolio	30,000,000	30,487,501	33,137,500	610,443	1.11	2.6%
Blackstone Real Estate Partners Europe III - USD	2008	Non-Core Portfolio	50,000,000	51,957,993	68,174,885	9,407,014	1.49	11.2%
Capri Urban Investors	2008	Non-Core Portfolio	60,000,000	60,000,000	27,538,270	16,959,288	0.74	-4.2%
JPM Urban REN PTY FD	2008	Non-Core Portfolio	16,360,625	4,206,523	4,206,523	-	1.00	0.0%
Prudential PRISA III	2008	Non-Core Portfolio	50,000,000	76,938,349	16,539,851	157,983,520	2.27	12.0%
Silverpeak Legacy Partners III	2008	Non-Core Portfolio	50,000,000	23,490,515	4,048,619	4,264,270	0.35	-11.8%
Stockbridge Real Estate III	2008	Non-Core Portfolio	27,000,000	26,998,145	16,829,753	14,679,695	1.17	2.3%
BlackRock Carbon Capital III Co-Investments	2009	Non-Core Portfolio	40,000,000	43,757,162	53,189,633	-	1.22	8.9%
Walton Street Real Estate Fund VI	2009	Non-Core Portfolio	50,000,000	44,323,933	47,860,268	20,253,393	1.54	8.9%
Westbrook Real Estate Fund VIII, L.P.	2009	Non-Core Portfolio	50,000,000	59,574,065	68,952,803	9,919,540	1.32	11.6%
Canyon Johnson Urban Fund III	2010	Non-Core Portfolio	30,000,000	29,971,216	40,371,580	35,337	1.35	11.9%
Carlyle Realty Partners VI, L.P.	2011	Non-Core Portfolio	70,000,000	75,378,878	105,802,596	9,663,756	1.53	21.3%
H/2 Special Opportunities Fund II	2011	Non-Core Portfolio	40,000,000	40,045,335	57,031,777	4,392,531	1.53	14.5%
Blackstone Real Estate Partners VII L.P.	2012	Non-Core Portfolio	170,000,000	209,387,846	222,807,107	117,424,323	1.62	17.3%
Brookfield Strategic Real Estate Partners	2012	Non-Core Portfolio	100,000,000	118,731,844	149,920,590	81,194,643	1.95	21.9%
Taconic New York City Investment Fund	2012	Non-Core Portfolio	70,000,000	29,272,728	46,945,824	4,664,523	1.76	16.0%
Blackstone Real Estate Partners Europe IV L.P. - USD	2013	Non-Core Portfolio	169,000,000	166,712,404	156,116,784	93,509,413	1.50	16.0%
KTR Industrial Fund III	2013	Non-Core Portfolio	40,000,000	18,186,884	28,372,400	-	1.56	40.5%
Lone Star Real Estate Fund III	2013	Non-Core Portfolio	100,000,000	95,639,471	115,529,066	13,046,524	1.34	15.0%
NYC Asset Investor #1	2013	Non-Core Portfolio	50,000,000	55,920,763	22,930,566	47,197,043	1.25	6.8%
NYC Asset Investor #3	2013	Non-Core Portfolio	50,000,000	31,457,833	5,512,467	34,278,927	1.26	9.2%
Carlyle Realty Partners VII, L.P.	2014	Non-Core Portfolio	80,000,000	66,898,984	41,120,521	49,371,681	1.35	15.2%
DivcoWest Fund IV	2014	Non-Core Portfolio	23,000,000	22,770,380	33,029,490	4,618,826	1.65	26.3%
H/2 Special Opportunities Fund III	2014	Non-Core Portfolio	65,000,000	65,000,000	40,143,455	42,318,347	1.27	11.4%
Avanath Affordable Housing Fund II	2015	Non-Core Portfolio	8,000,000	8,086,752	698,328	11,390,310	1.41	11.1%
Blackstone Real Estate Partners VIII L.P.	2015	Non-Core Portfolio	151,000,000	125,922,196	41,906,269	118,606,204	1.27	16.7%
Tristan European Property Investors Special Opp IV	2015	Non-Core Portfolio	49,987,909	34,883,232	2,163,571	37,499,653	1.11	10.6%
DivcoWest Fund V	2016	Non-Core Portfolio	60,000,000	29,020,769	43,068	30,252,783	1.04	4.1%
Exeter Industrial Value Fund IV, L.P.	2016	Non-Core Portfolio	30,000,000	16,500,000	-	17,801,571	1.08	12.3%
H/2 Special Opportunities Fund IV	2016	Non-Core Portfolio	91,000,000	13,469,805	740,287	12,102,516	0.95	-3.3%
Pramerica Real Estate Capital VI	2016	Non-Core Portfolio	60,247,001	30,069,651	13,392,985	21,101,709	1.17	16.8%
PW Real Estate Fund III	2016	Non-Core Portfolio	50,272,204	28,823,471	3,696,925	35,500,586	1.07	27.5%
Westbrook Real Estate Fund X Co-Investment	2016	Non-Core Portfolio	36,000,000	18,323,618	4,119,230	16,449,659	1.12	11.6%
Basis Investment Group Real Estate Fund I	2017	Non-Core Portfolio	17,000,000	6,329,692	1,914,875	5,030,615	1.10	14.5%
DRA Growth and Income Fund IX	2017	Non-Core Portfolio	49,000,000	26,783,338	7,221,894	24,516,686	1.19	20.8%
NYCRS-KKR CMBS Retention Partners	2017	Non-Core Portfolio	122,000,000	72,748,469	4,188,548	89,808,618	1.06	6.0%
Aermont Capital Real Estate Fund IV	2018	Non-Core Portfolio	75,566,700	-	-	-	N/A	N/A
Brookfield Strategic Real Estate Partners III, L.P.	2018	Non-Core Portfolio	170,000,000	-	-	-	N/A	N/A
KKR Real Estate Partners Americas II	2018	Non-Core Portfolio	118,700,000	30,100,134	1,506,811	30,268,561	N/A	N/A

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Alternative Assets Manager Performance Detail

Through December 31, 2018

	Vintage Year	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
TOTAL INFRASTRUCTURE		1,091,538,255	528,031,799	96,492,746	543,715,351	1.21	12.4%
TOTAL INFRASTRUCTURE INVESTMENTS							
Brookfield Infrastructure Fund II, L.P.	2013	75,000,000	61,259,649	15,521,320	73,604,779	1.45	12.5%
IFM Global Infrastructure Fund	2014	75,000,000	100,136,579	36,639,560	102,643,572	1.39	12.3%
Global Energy & Power Infrastructure Fund II	2014	45,000,000	38,036,298	21,723,019	31,245,656	1.39	37.3%
KKR Global Infrastructure Investors II L.P.	2014	77,000,000	74,763,219	8,183,114	79,354,205	1.17	10.4%
Global Infrastructure Partners III-A/B, L.P.	2016	106,000,000	75,270,631	1,682,537	74,339,758	1.01	0.9%
Brookfield Infrastructure Fund III, L.P.	2016	91,000,000	38,124,158	2,664,204	39,211,874	1.10	8.4%
Actis Energy 4	2016	64,300,000	33,577,419	4,952,281	33,562,000	1.15	18.6%
EQT Infrastructure III (No.2) SCSp	2017	56,374,865	35,094,366	2,337,792	39,589,580	NM	NM
ASF VII Infrastructure L.P.	2017	66,000,000	7,296,414	2,273,032	6,534,657	NM	NM
Axiom Infrastructure North America	2017	66,513,390	40,879,214	300,293	40,872,741	NM	NM
NYCRS EIG Energy Partners, L.P.	2017	65,880,000	7,031,123	215,593	7,113,033	NM	NM
NYCRS EIG Energy Partners Co-Investment, L.P.	2018	16,470,000	-	-	-	NM	NM
KKR Global Infrastructure Investors III L.P.	2018	87,500,000	6,062,730	-	5,371,824	NM	NM
Global Energy & Power Infrastructure Fund III, L.P.	2018	87,500,000	-	-	-	NM	NM
Cardinal NR Sidecar Holdings L.P.	2018	10,500,000	10,500,000	-	10,271,671	NM	NM
EQT Infrastructure IV (No.2) USD SCSp	2019	101,500,000	-	-	-	NM	NM

Information provided by the New York City Employees' Retirement System Consultants

Alternative Assets Manager Performance Detail

Through March 31, 2019

	Vintage Year	Commitment - Closing (Base)	Contributions Cumulative (Local)	Distributions Cumulative	Final Market Value	3 Month Base%	Inception IRR%
TOTAL OPPORTUNISTIC FIXED INCOME		2,632,357,955	2,639,083,093	1,349,784,352.41	1,983,350,458	3.27%	7.47%
Avenue Special Situations Fund V, L.P.	2007	75,784,973	76,951,175	100,600,875.00	-		NM
Avenue Europe Special Sit. Fund, L.P.	2008	30,875,489	27,839,090	53,703,162.08	-		NM
PIMCO DiSCO Fund, L.P.	2008	150,000,000	150,427,750	204,457,598.81	-		11.23%
Alliance Bernstein PPIP Fund, L.P.	2009	41,697,493	41,697,493	57,295,571.07	-		15.51%
AG GECC PPIP Fund, L.P.	2010	27,000,000	27,052,129	41,724,862.00	-		20.19%
Avenue Special Situations Fund VI (A), L.P.	2011	70,000,000	71,766,544	71,272,284.00	4,899,123.00	-1.39%	1.39%
GoldenTree Managed Account	2011	140,000,000	131,253,192	-	205,361,718.63	5.26%	6.96%
Marathon Centre Street Partnership, L.P. - Asset Class	2011	218,750,000	287,000,000	110,250,000.00	285,789,684.34	4.51%	7.19%
AG Centre Street Partnership, L.P. - CC Asset Class	2012	180,000,000	163,800,000	47,626,130.00	159,854,040.00	0.06%	5.22%
Apollo Centre Street Partnership, L.P.	2012	268,750,000	378,412,071	194,679,878.00	235,166,025.13	2.78%	4.63%
FCO MA Centre Street L.P.	2012	140,000,000	264,262,524	155,042,754.04	167,520,157.00	1.82%	8.90%
OHA Centre Street Partnership, L.P.	2012	175,000,000	244,955,346	69,955,346.41	252,896,733.72	4.03%	7.92%
Contrarian Centre Street Partnership, L.P. - Asset Class	2013	90,000,000	90,000,000	-	94,829,966.89	2.69%	1.30%
Lone Star Fund VIII (U.S.), L.P.	2013	100,000,000	98,438,980	92,624,618.07	29,942,387.94	-0.16%	13.08%
Oaktree Opportunities Fund IX, L.P.	2013	100,000,000	100,000,000	42,895,430.47	73,450,776.00	5.97%	3.50%
Ares Centre Street Partnership, L.P.	2014	140,000,000	128,117,072	-	180,416,691.94	2.77%	10.04%
Brightwood Capital Fund III, L.P.	2015	35,000,000	28,403,806	10,443,228.60	24,144,128.00	2.12%	6.44%
Torchlight Debt Opportunity Fund V, LP	2015	67,000,000	46,900,000	6,909,717.00	52,160,488.00	1.17%	12.83%
Brightwood Capital Fund IV, LP	2016	87,500,000	43,750,000	3,648,982.00	45,533,674.00	2.99%	12.81%
ICG Centre Street Partnership, L.P.	2017	120,000,000	102,959,917	62,228,178.86	48,157,041.93	2.98%	9.12%
KKR OFI SMA	2017	272,000,000	94,465,736	24,425,736.00	81,489,528.63	6.33%	16.32%
Maranon Centre Street Partnership, L.P.	2018	103,000,000	40,630,268	-	41,738,293.10	1.70%	6.31%

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

Alternative Assets Manager Performance Detail

Through March 31, 2019

	Market Value	MTD Return%	3 Month Return%	FYTD Return%	YTD Return%	1 Year Return%	3 Year Return%	ITD Return%	ITD Cumulative Return%
TOTAL HEDGE FUNDS	7,870,190	11.97%	11.79%	12.03%	11.79%	19.23%	8.07%	4.58%	41.47%
TOTAL DIRECT HEDGE FUNDS	7,870,190	11.97%	11.79%	12.03%	11.79%	19.23%	8.39%	5.71%	49.55%
FUND OF FUNDS HEDGE FUNDS	-	0.00%		0.00%	0.00%		1.41%	1.83%	12.03%
TOTAL DIRECT HEDGE FUNDS									
Luxor Capital Partners Liquidating SPV, LLC.	2,201,913	3.38%	2.83%	4.86%	2.83%	9.14%		11.81%	35.95%
Perry Partners L.P.	5,668,277	15.70%	15.70%	-0.31%	15.70%	-0.32%	0.13%	-2.45%	-13.48%
Event Driven	7,870,190	11.97%	11.79%	0.97%	11.79%	2.00%	5.21%	0.62%	3.87%
FUND OF FUNDS HEDGE FUNDS									
Fund of Funds Hedge Funds	-	0.00%		0.00%	0.00%		1.41%	1.83%	12.03%

Information provided by Alpha Frontier

New York City
Employees' Retirement System

Appendix D

Footnotes

Through March 31, 2019

- 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.
 - The total Core+5 results and benchmark returns combine the three sectors. Historical total Core+5 returns continue to include the old Corporate and Yankee sector returns.
- Effective 11/1/10 The NCREIF NPI policy index was replaced with the NCREIF NFI ODEC net Index retroactively.
- Effective 6/1/11 The Opportunistic Fixed NYC-CORE PLUS 5 + 200BPS policy index was replaced with the NYC-10% ANNUAL RETURN primary and JP MORGAN GLOBAL HIGH YIELD PLUS 3% secondary indices retroactively.
- Effective 8/1/11 The Hedge Funds Primary benchmark is the 1 YEAR TREASURY BILL YIELD + 4% and the secondary benchmark is the HFRI FUND OF FUNDS COMPOSITE INDEX + 1%.

Through March 31, 2019

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 8 - 13 - Portfolio Asset Allocation

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

Pages 14 -16 - 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.

Through March 31, 2019

The indexes and most recent policy weights are as follows:

*U.S. Equity: Russell 3000 * 30.75%*

International Developed (EAFE) Markets: MSCI World ex USA IMI 12.45%*

Int'l Active- Global: MSCI World Net Dividends Index 0.39%*

Emerging Markets: MSCI Custom ERS Emerging Markets (Net) 6.95%*

International Emerging Managers FOF: NYC Blended Custom Benchmark for FoF 0.69%*

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

*Private Equity: Russell 3000 + 300 b.p. per annum * 7.00%*

*Private Real Estate – Core: NFI - ODCE Net * 3.63%*

*Private Real Estate – Non Core: NFI - ODCE Net + 200bps * 2.06%*

*Infrastructure: CPI + 4% * 0.99%*

*Hedge Funds: HFRI Fund of Funds Composite Index plus 1% * 0.00%*

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

*US Treasury Intermediate: FTSE USBIG Treasury/Agency 1-10Y * 0.00%*

*Active Government: NYC Treasury Agency + 5 * 10.55%*

*Core FI-Developing Managers: BBG Barc Agg * 0.00%*

*Core FI-Emerging Managers: BBG Barc Agg * 0.00%*

*Mortgage: FTSE Mortgage Index * 3.34%*

*ETI: ETI Custom Benchmark * 1.27%*

*Investment Grade Credit: NYC – Investment Grade Credit * 4.61%*

Through March 31, 2019

*High Yield: Bloomberg Barclays US High Yield 2% Issuer Capped * 5.92%*

*Bank Loans: Credit Suisse Leveraged Loan * 2.00%*

*TIPS: BBG BARC Gbl Inf-Lk: US TIPS * 4.25%*

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

*Opportunistic Fixed: OFI - JPMGHY / CSFB 50/50 Blend Plus 300 b.p. per annum * 3.16%*

Page 17 – 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.

ETI Quarterly Report (Public):

Public/Private Apartment Rehabilitation Program (PPAR)

Lenders*	BOA		CCD		CFSB		CPC		JPM		LIIF		NCBCI		NHS		WF		LISC		BE		HDC	
Contractual Commitment ¹	\$80.00		\$40.00		\$10.00		\$290.00		\$145.00		\$25.00		\$17.00		\$3.00		\$70.00		\$12.00		\$12.00		\$20.00	
Current Market Value ¹	\$37.84		\$20.78		\$2.52		\$172.47		\$101.44		\$13.24		\$1.96		\$0.65		\$9.11		\$1.38		\$0.00		\$0.00	
	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units
Commitments Q1																								
(included in total)																								
Bronx	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0
Brooklyn	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Manhattan	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Queens	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Staten Island	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Outside of NYC	0.00	0	0.00	0	0.00	0	2.17	114	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total	\$0.00	0	\$0.00	0	\$0.00	0	\$2.17	114	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0
Delivered Q1																								
(included in total)																								
Bronx	\$0.00	0	\$0.00	0	\$0.00	0	\$4.66	136	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$3.94	90	\$0.00	0	\$0.00	0	\$0.00	0
Brooklyn	0.00	0	0.00	0	0.00	0	0.34	7	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Manhattan	0.00	0	0.00	0	0.00	0	0.98	67	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Queens	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Staten Island	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Outside of NYC	0.00	0	0.00	0	0.00	0	0.39	12	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total	\$0.00	0	\$0.00	0	\$0.00	0	\$6.38	222	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$3.94	90	\$0.00	0	\$0.00	0	\$0.00	0
Total Commitments																								
Bronx	\$0.00	0	\$3.25	157	\$0.00	0	\$49.75	1,689	\$24.33	459	\$1.55	61	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$1.28	101	\$0.00	0
Brooklyn	4.61	212	6.02	179	0.00	0	16.43	819	4.14	156	1.09	95	0.00	0	0.00	0	8.70	130	2.80	156	2.48	359	0.00	0
Manhattan	0.00	0	0.00	0	0.51	39	16.27	435	1.19	54	2.72	174	0.00	0	0.00	0	13.58	103	5.06	155	2.39	83	0.00	0
Queens	0.00	0	0.00	0	0.00	0	7.77	389	5.26	68	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Staten Island	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Outside of NYC	0.00	0	2.11	41	0.00	0	5.38	254	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total	\$4.61	212	\$11.38	377	\$0.51	39	\$95.60	3,586	\$34.92	737	\$5.36	330	\$0.00	0	\$0.00	0	\$22.28	233	\$7.86	311	\$6.15	543	\$0.00	0
Historical Investments																								
Bronx	\$18.31	1,276	\$11.01	645	\$0.00	0	\$123.83	7,667	\$78.02	2,586	\$1.51	117	\$0.00	0	\$0.00	0	\$3.94	90	\$1.27	48	\$0.00	0	\$0.00	0
Brooklyn	6.92	142	4.83	302	0.00	0	128.15	5,072	26.07	747	5.78	401	0.00	0	0.66	7	0.00	0	0.00	0	0.00	0	0.00	0
Manhattan	7.24	148	3.70	283	3.22	197	95.79	5,047	52.12	1,641	7.11	407	1.98	123	0.50	15	3.31	100	0.00	0	0.00	0	0.00	0
Queens	15.17	293	0.80	54	0.00	0	21.10	815	16.09	687	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Staten Island	0.00	0	0.00	0	0.00	0	0.26	8	1.28	35	0.00	0	0.00	0	0.00	0	1.26	67	0.00	0	0.00	0	0.00	0
Outside of NYC	1.61	39	0.00	0	0.00	0	16.50	461	5.55	123	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total	\$49.25	1,898	\$20.34	1,284	\$3.22	197	\$385.64	19,070	\$179.13	5,819	\$14.40	925	\$1.98	123	\$1.17	22	\$8.51	257	\$1.27	48	\$0.00	0	\$0.00	0

*Lenders : Bank of America Citi Community Development Carver Federal Savings Bank The Community Preservation Corp JP Morgan Chase Low Income Investment Fund NCB Capital Impact Neighborhood Housing Service Wells Fargo Local Initiatives Support Corp Bellwether Enterprise NYC HDC

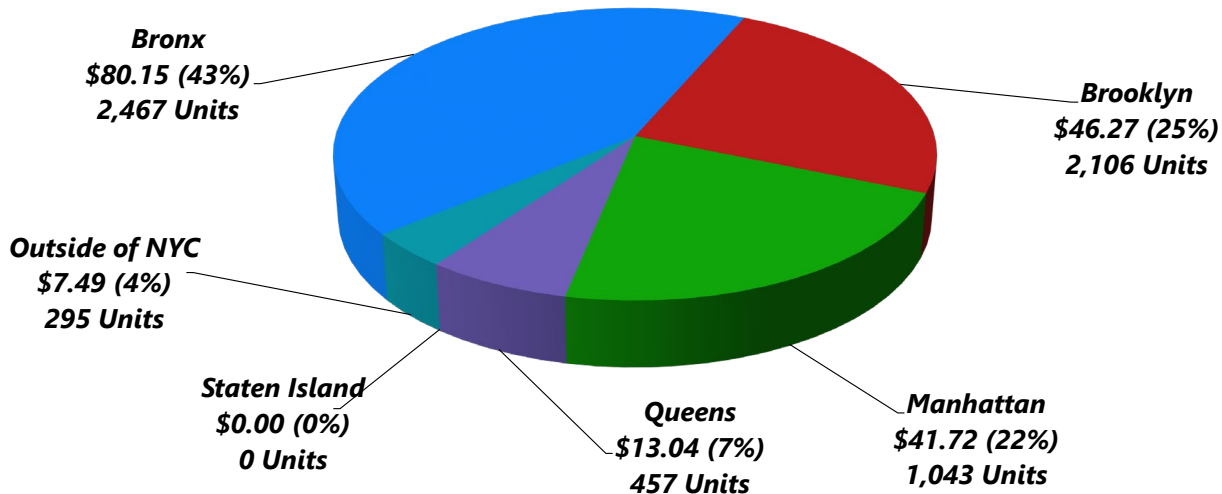
¹ Dollar amount listed in millions

Public/Private Apartment Rehabilitation Program (PPAR)

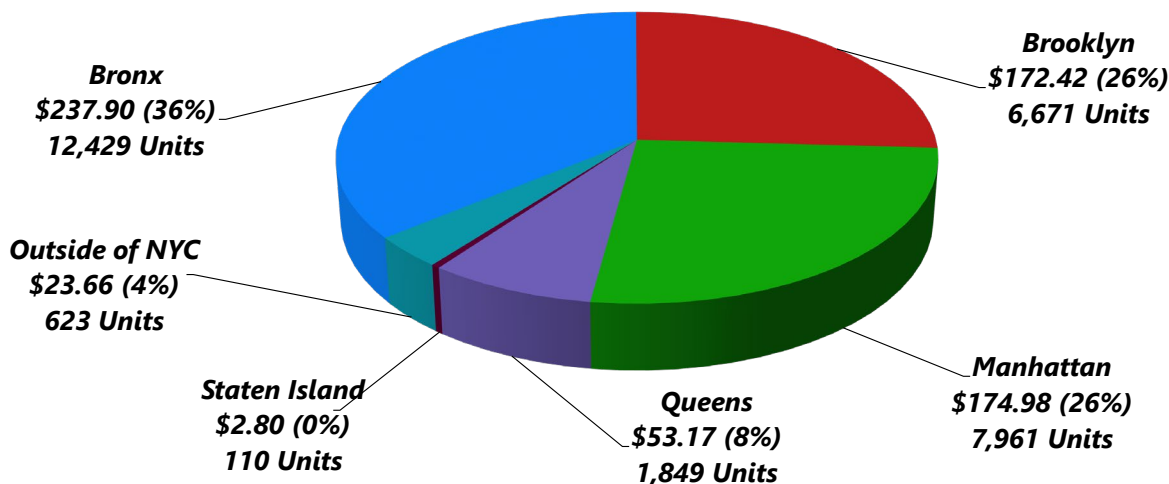
Lenders*	All Lender Totals	
Contractual Commitment ¹	\$724.00	
Current Market Value ¹	\$361.38	
	Dollars	Units
Commitments Q1 (included in total)		
Bronx	\$0.00	0
Brooklyn	0.00	0
Manhattan	0.00	0
Queens	0.00	0
Staten Island	0.00	0
Outside of NYC	2.17	114
Total	\$2.17	114
Delivered Q1 (included in total)		
Bronx	\$8.60	226
Brooklyn	0.34	7
Manhattan	0.98	67
Queens	0.00	0
Staten Island	0.00	0
Outside of NYC	0.39	12
Total	\$10.32	312
Total Commitments		
Bronx	\$80.15	2,467
Brooklyn	46.27	2,106
Manhattan	41.72	1,043
Queens	13.04	457
Staten Island	0.00	0
Outside of NYC	7.49	295
Total	\$188.67	6,368
Historical Investments		
Bronx	\$237.90	12,429
Brooklyn	172.42	6,671
Manhattan	174.98	7,961
Queens	53.17	1,849
Staten Island	2.80	110
Outside of NYC	23.66	623
Total	\$664.93	29,643

¹ Dollar amount listed in millions

Current Commitments All PPAR Lenders



Historical Investments Since Inception All PPAR Lenders



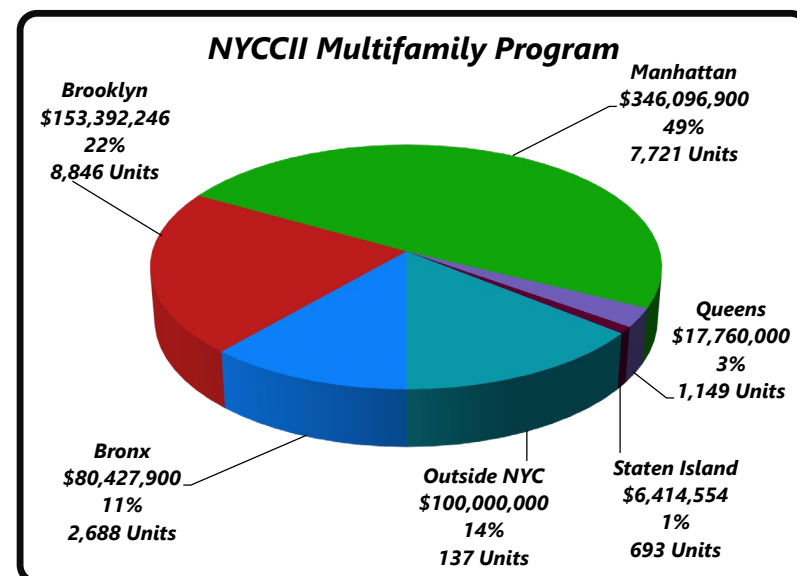
NYCERS Pension Fund - Economically Targeted Investments Quarterly Report

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AFL-CIO Housing Investment Trust (HIT)
Market Value \$317.27 million¹

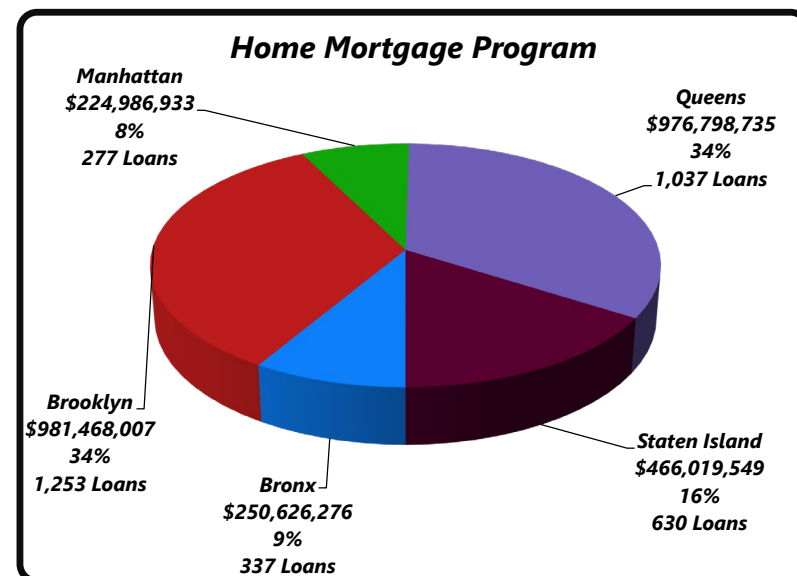
NYC Community Investment Initiative (NYCCII)

Borough	NYCCII Phase I: 2002 - 2005		NYCCII Phase II: 2006 - 2013		Grand Total	
	Investments	Units ²	Investments	Units ²	Investments	Units ²
Bronx	\$27,600,000	1,886	\$52,827,900	802	\$80,427,900	2,688
Brooklyn	49,501,800	3,230	103,890,446	5,616	153,392,246	8,846
Manhattan	172,021,700	6,908	174,075,200	813	346,096,900	7,721
Queens	0	0	17,760,000	1,149	17,760,000	1,149
Staten Island	0	0	6,414,554	693	6,414,554	693
Outside NYC	0	0	100,000,000	137	100,000,000	137
Total	\$249,123,500	12,024	\$454,968,100	9,210	\$704,091,600	21,234



HIT Home Mortgage Program

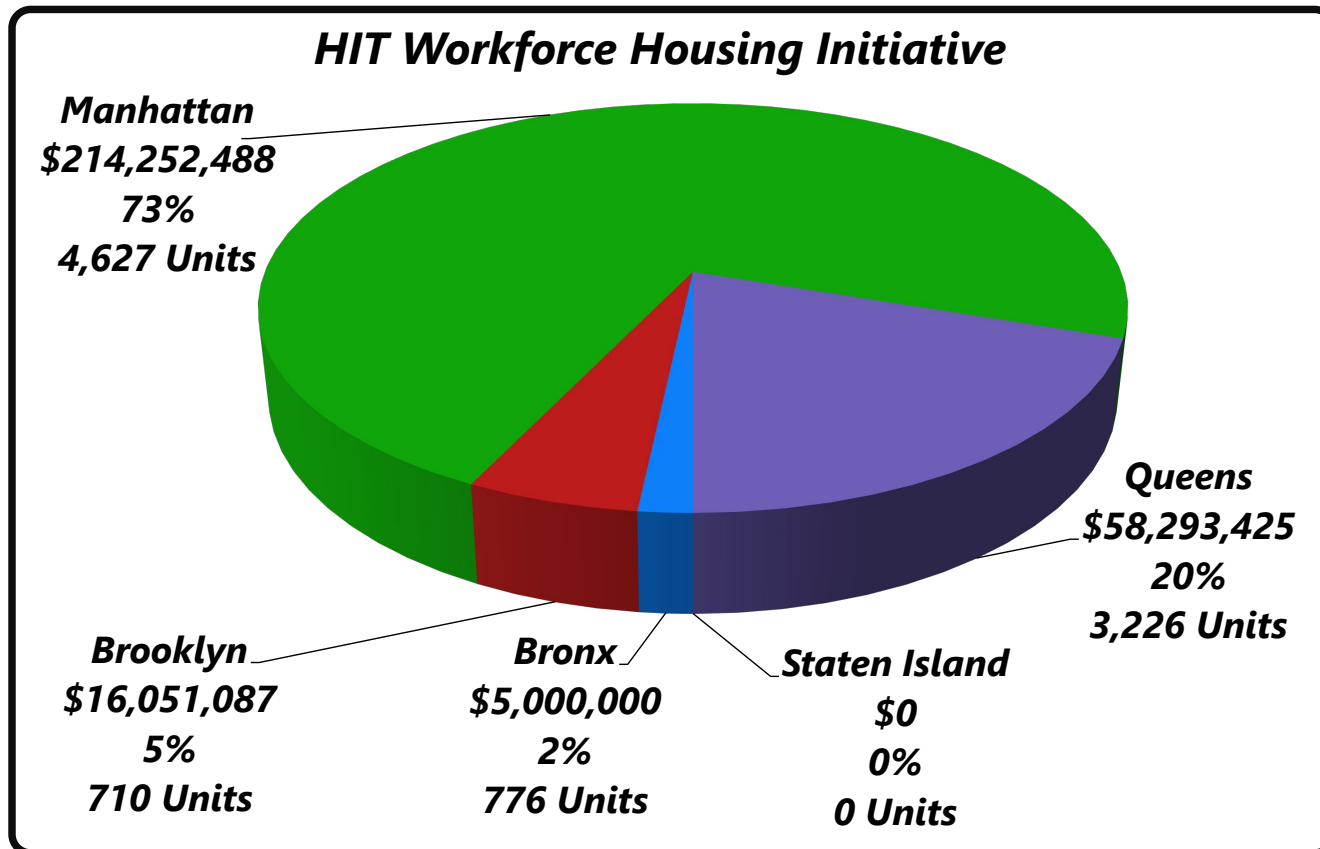
Borough	NYCCII Phase I: 2002 - 2005		NYCCII Phase II: 2006 - 2013		Grand Total	
	\$ Amount	Loans	\$ Amount	Loans	\$ Amount	Loans
Bronx	\$32,544,168	41	\$218,082,108	296	\$250,626,276	337
Brooklyn	116,575,736	138	864,892,271	1,115	981,468,007	1,253
Manhattan	10,742,253	12	214,244,680	265	224,986,933	277
Queens	82,399,317	64	894,399,418	973	976,798,735	1,037
Staten Island	106,039,089	191	359,980,460	439	466,019,549	630
Total	\$348,300,563	446	\$2,551,598,937	3,088	\$2,899,899,500	3,534



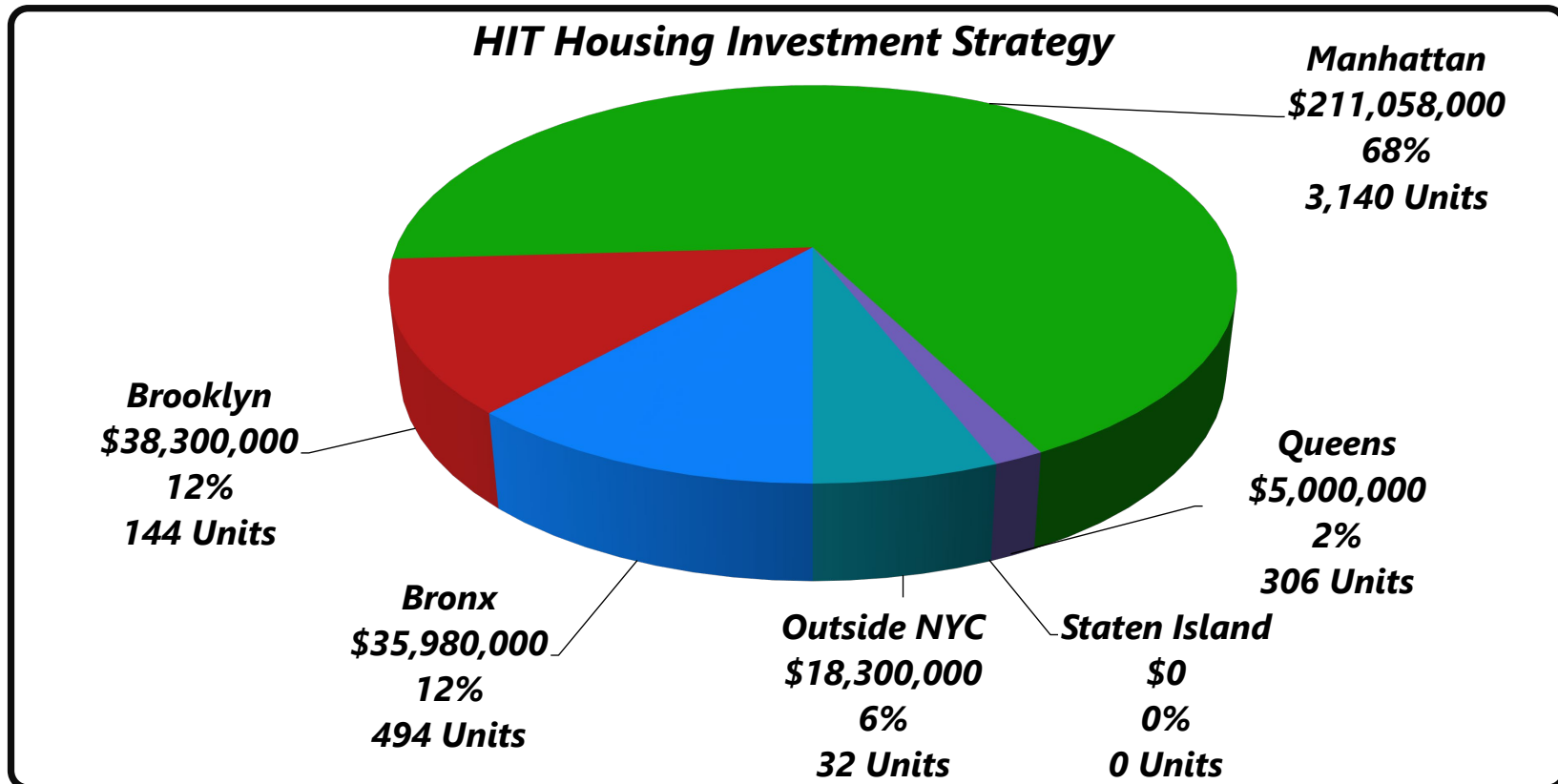
¹Interest is reinvested

²Low/Moderate Income Units

AFL-CIO Housing Investment Trust (HIT)		
NYC Workforce Housing Initiative: 2009 - 2015		
	<u>Investments</u>	<u>LMI Units</u>
<u>Borough</u>	<u>Since Inception</u>	<u>Since Inception</u>
Bronx	\$5,000,000	776
Brooklyn	16,051,087	710
Manhattan	214,252,488	4,627
Queens	58,293,425	3,226
Staten Island	0	0
Total	\$293,597,000	9,339



AFL-CIO Housing Investment Trust (HIT)				
HIT Housing Investment Strategy: 2015 - Q1 2019				
<u>Borough</u>	<u>Q1 Investments</u>	<u>Investments Since Inception</u>	<u>Q1 LMI Units</u>	<u>LMI Units Since Inception</u>
Bronx	\$0	\$35,980,000	0	494
Brooklyn	0	38,300,000	0	144
Manhattan	0	211,058,000	0	3,140
Queens	0	5,000,000	0	306
Staten Island	0	0	0	0
Outside NYC	0	18,300,000	0	32
Total	\$0	\$308,638,000	0	4,116



NYCERS Pension Fund - Economically Targeted Investments Quarterly Report

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RBC ACCESS CAPITAL STRATEGIES (Since Inception 2/1/07)

\$162 million Allocated (36% of total account)

Market Value \$155.84 million

Multifamily Investments Detail	\$ Invested ¹		Units ²	
	Q1	Total	Q1	Total
Bronx	\$0	\$23,334,799	0	18,982
Brooklyn	0	10,442,241	0	8,959
Manhattan	0	27,098,071	0	6,357
Queens	0	6,800,400	0	902
Staten Island	0	2,005,981	0	75
Total NYCERS Multifamily Investments	\$0	\$69,681,493	0	35,275
Multifamily Total All Systems	\$0	\$193,559,702	0	35,275

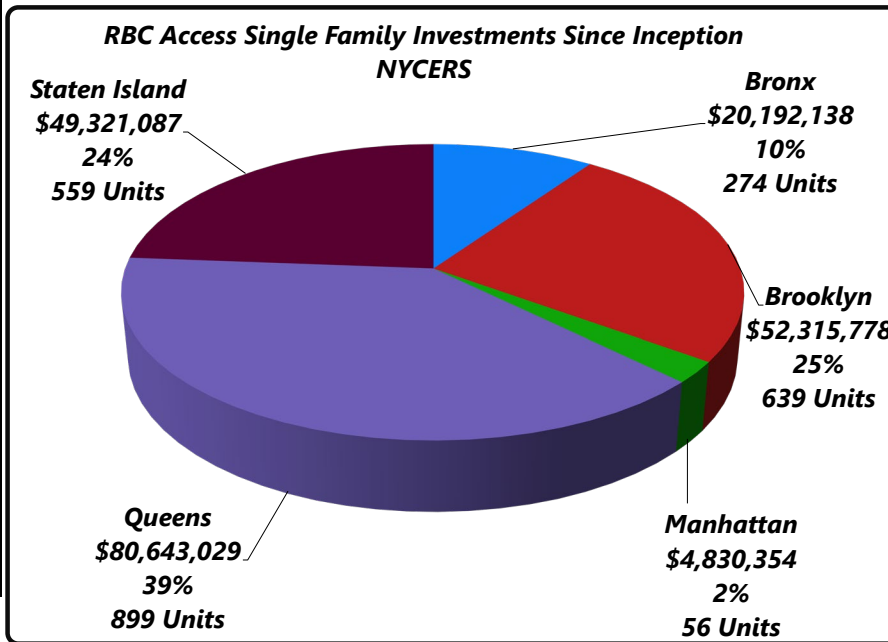
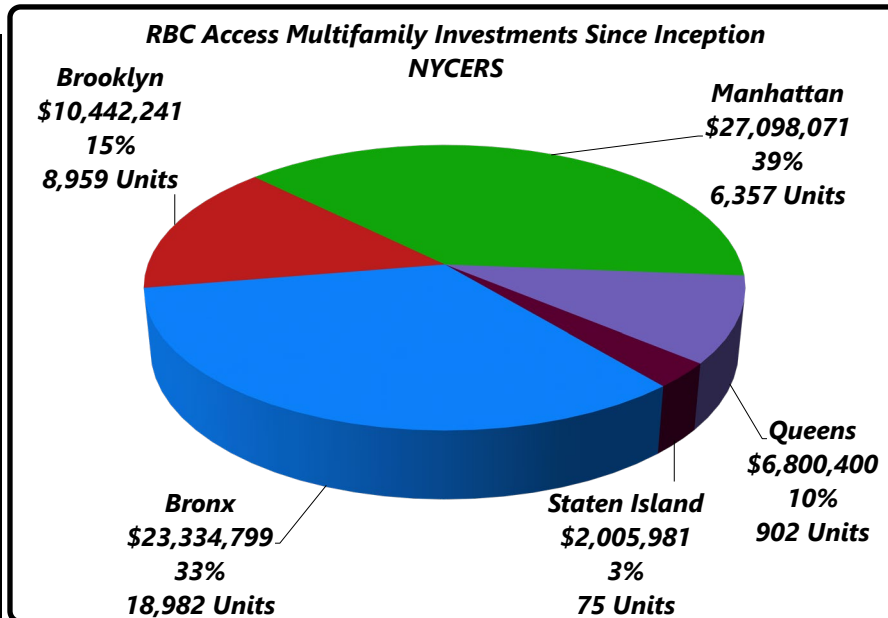
Single Family Investments Detail	\$ Invested		Units	
	Q1	Total	Q1	Total
Bronx	\$0	\$20,192,138	0	274
Brooklyn	0	52,315,778	0	639
Manhattan	0	4,830,354	0	56
Queens	0	80,643,029	0	899
Staten Island	0	49,321,087	0	559
Total NYCERS Single Family Investments	\$0	\$207,302,386	0	2,427
Single Family Total All Systems	\$0	\$575,839,960	0	2,427

Other Investments Detail	\$ Invested		Loans	
	Q1	Total	Q1	Total
Bronx	\$0	\$243,000	0	1
Brooklyn	0	1,940,545	0	8
Manhattan	0	875,846	0	5
Queens	0	195,636	0	3
Staten Island	0	0	0	0
Total NYCERS Other Investments	\$0	\$3,255,026	0	17
Other Investments Total All Systems	\$0	\$9,041,740	0	17

Grand Total NYCERS	\$0	\$280,238,905		
Grand Total All Systems	\$0	\$778,441,402		

¹ Certain bond investment amounts are allocated pro rata across boroughs based upon unit count.

² If not indicated otherwise, superintendent units are allocated based on building size.



Private Equity Quarterly Report (Public):



Private Equity Monitoring Report

For the period ended December 31, 2018

Report Prepared For:

New York City Employees' Retirement System



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All data is as of December 31, 2018 unless otherwise noted.

PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS. ACTUAL PERFORMANCE MAY VARY.

I. Executive Summary

The New York City Employees' Retirement System ("NYCERS") established the Alternative Investment Program (the "Program") on January 1, 1997 on behalf of its beneficiaries to participate in attractive long-term investment opportunities and to provide diversification to its overall pension investment portfolio.

StepStone Group LP ("StepStone") was engaged by NYCERS on September 1, 2011 to provide private equity advisory services for prospective investment opportunities and monitoring and reporting services for existing and new investments.

Since inception through December 31, 2018, the Program has committed US\$10.9 billion to 207 partnership investments (the "Portfolio"). This quarterly monitoring report covers the performance of the Portfolio as of December 31, 2018 as well as significant activity that occurred during the fourth quarter of 2018.

Performance Summary

US\$ in millions	December 31, 2018	September 30, 2018	December 31, 2017	Quarterly Change	Yearly Change
Number of Managers	112	111	111	1	1
Number of Investments	211	207	195	4	16
Committed Capital ¹	\$10,900.9	\$10,665.9	\$9,834.0	\$235.0	\$1,066.9
Contributed Capital	\$9,136.1	\$8,905.4	\$8,456.2	\$230.7	\$679.9
Distributed Capital	\$8,497.7	\$8,174.3	\$7,506.9	\$323.3	\$990.8
Market Value	\$4,588.0	\$4,734.2	\$4,521.8	(\$146.2)	\$66.2
Total Value	\$13,085.7	\$12,908.5	\$12,028.7	\$177.2	\$1,057.0
Total Gain/(Loss)	\$3,949.5	\$4,003.1	\$3,572.5	(\$53.6)	\$377.0
Unfunded Commitment ²	\$3,006.5	\$2,959.8	\$2,503.1	\$46.7	\$503.4
Total Exposure ³	\$7,594.5	\$7,694.0	\$7,024.9	(\$99.5)	\$569.6
DPI ⁴	0.93x	0.92x	0.89x	0.01x	0.04x
TVM ⁵	1.43x	1.45x	1.42x	-0.02x	0.01x
IRR ⁶	9.7%	9.9%	9.8%	-24 bps	-8 bps
TVM Net of StepStone Fees ⁷	1.43x	1.45x	1.42x	-0.02x	0.01x
IRR Net of StepStone Fees ⁷	9.7%	9.9%	9.8%	-26 bps	-9 bps

¹ Committed Capital is presented net of any commitment releases or expirations and reflects foreign currency exchange rate fluctuations.

² Unfunded Commitment represents the aggregate remaining commitments to partnership investments.

³ Total Exposure represents the sum of Market Value and Unfunded Commitment.

⁴ DPI, or Distributed to Paid-In Multiple, is a performance metric that measures distributions received relative to capital invested. DPI is calculated as Distributed Capital divided by Contributed Capital.

⁵ TVM, or Total Value Multiple, is a performance metric that measures total value created by the Portfolio relative to capital invested, without consideration for time. TVM is calculated as Total Value, which is comprised of Market Value plus Distributed Capital, divided by Contributed Capital.

⁶ IRR, or Internal Rate of Return, is a performance metric that is calculated based on the Portfolio's daily cash flows and market value as of quarter-end. IRR is net of fund manager's fees, expenses and carried interest.

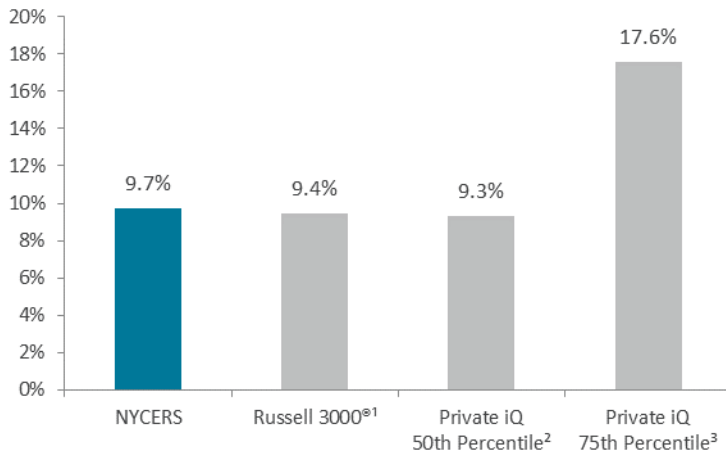
⁷ TVM and IRR Net of StepStone fees represent TVM and IRR net of fees paid by NYCERS to StepStone.

Past performance is not necessarily indicative of future results and there can be no assurance that the fund will achieve comparable results or avoid substantial losses.

Portfolio Performance vs. Benchmarks

The Portfolio's performance is measured against a dollar-weighted public benchmark, which produced the return that would have been earned if NYCERS's private equity cash flows were invested in the Russell 3000® Index¹.

The following graph illustrates Portfolio IRR performance versus benchmarks as of December 31, 2018.



¹Return is a dollar-weighted PME+ calculation of daily changes in the Russell 3000® Index. Russell Investment Group is the source and owner of the trademark, service marks and copyrights related to the Russell Indexes. Russell® is a trademark of Russell Investment Group.

²Private iQ benchmark reflects Equity (all sub-sectors), Mezzanine, Distressed, Oil & Gas Assets asset classes, 50th percentile, or median, IRR at December 31, 2018 for funds with vintage years from 1998 through 2018. Note: Data may be subject to change.

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The referenced indices are shown for general market comparisons and are not meant to represent any particular fund. An investor cannot directly invest in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented.

Portfolio Diversification

By Strategy

As of December 31, 2018 (US\$ in millions)	Market Value		Unfunded Commitment		Total Exposure	
	\$	% of Total	\$	% of Total	\$	% of Total
Buyout	\$2,845.5	62.0%	\$2,090.2	69.5%	\$4,935.6	65.0%
Growth Equity	462.6	10.1%	203.7	6.8%	666.3	8.8%
Special Situations	439.1	9.6%	234.8	7.8%	673.8	8.9%
Energy	98.9	2.2%	10.7	0.4%	109.6	1.4%
Secondaries	268.3	5.8%	300.3	10.0%	568.6	7.5%
Co-Investment	159.4	3.5%	151.2	5.0%	310.7	4.1%
Other	314.3	6.8%	15.4	0.5%	329.6	4.3%
Total	\$4,588.0	100.0%	\$3,006.3	100.0%	\$7,594.3	100.0%

By Fund Geographic Focus

As of December 31, 2018 (US\$ in millions)	Market Value		Unfunded Commitment		Total Exposure	
	\$	% of Total	\$	% of Total	\$	% of Total
North America	\$3,150.6	68.7%	\$1,819.1	60.5%	\$4,969.7	65.4%
Global	771.2	16.8%	552.6	18.4%	1,323.8	17.4%
Western Europe	656.6	14.3%	634.6	21.1%	1,291.3	17.0%
Rest of World	9.5	0.2%	0.0	0.0%	9.5	0.1%
Total	\$4,588.0	100.0%	\$3,006.3	100.0%	\$7,594.3	100.0%

Fund Geographic Focus is based on a number of factors, including the GP-stated geographic focus, the number of investments within each region, invested capital by region, the location of the firm's offices and investment professionals, and the underlying fund currency.

II. Market Overview

Executive Summary

Concerns over global trade, moderated economic data, and tightening central banks shocked equity markets in the fourth quarter of 2018. The MSCI Emerging Markets index outperformed developed markets, declining 7.8%, reversing the trend from earlier in the year. The MSCI Europe index fell 13.0%, as Prime Minister Theresa May postponed the vote on the controversial Withdrawal Agreement and uncertainty of a successful United Kingdom exit from the European Union came to the fore. The European Central Bank ended its stimulus program and downgraded economic forecasts, leading to speculation that interest rates would not be raised until later in 2019. The S&P 500 Total Return index was an underperformer, decreasing 13.5% for the quarter, with Energy decreasing 24.9% following lower demand from China and a potential oversupply. The US Federal Reserve raised interest rates in December, for a total of four increases in 2018, and signaled for only two interest rate increases in 2019 down from three previously.

In private markets, US leveraged buyout (“LBO”) debt volume decreased by 42.8% quarter-over-quarter, from US\$46.5 billion to US\$26.6 billion, more than twice the fourth quarter of 2017 and 50.2% higher than the 10-year quarterly average of US\$17.7 billion. According to data from S&P, purchase price multiples for US LBOs decreased to 10.3x EBITDA in the fourth quarter, down 7.0% from 11.0x EBITDA in the prior quarter, and above the 10-year average of 9.2x EBITDA. Average debt multiples of large corporate US LBO loans remained at 5.9x for the quarter, above the 10-year average of 5.2x. Equity contributions for US LBOs decreased to 42.9%, a 1.3% decrease quarter-over-quarter and slightly above the 10-year average of 42.3%.¹

Fundraising for global private equity totaled US\$130.3 billion in the fourth quarter of 2018, a 1.6% decrease compared to the prior quarter and a 50.2% increase from the fourth quarter of 2017. Geographically, the US represented 67.4% of total funds raised in the quarter, higher than the 10-year average of 59.5%. Funds raised in Europe, Asia, and the Rest of World made up 14.6%, 9.8% and 8.1%, respectively, of global fundraising for the quarter. Invested capital for private equity funds increased 33.0% quarter-over-quarter and increased 92.8% year-over-year, with US\$111.1 billion invested in 3,571 deals. A significant portion of the capital deployed was in the Industrials sector, accounting for 26.4% compared to the 10-year average of 11.8%.²

Private equity-backed IPO transaction volume decreased in the fourth quarter with US\$5.1 billion raised in 24 IPOs. The amount raised through IPOs decreased 38.2% compared to the prior quarter and 19.1% compared to the fourth quarter of 2017. The largest IPOs of the quarter were completed by Tencent Music Entertainment Shenzhen Co Ltd (NYSE: TME), a provider of online music and music-centric social entertainment services in China, which raised US\$1.1 billion, and Moderna, Inc. (NASDAQ: MRNA), a developer of medicines based on messenger RNA (mRNA), which raised US\$604.4 million, together representing 33.0% of the total value for all IPOs in the quarter. M&A activity increased in the fourth quarter with a total value of US\$250.0 billion, a 66.7% increase compared to the prior quarter and a 19.3% increase compared to the fourth quarter of 2017. The largest M&A deals of the quarter were the US\$69.5 billion purchase of Aetna Inc. by CVS Health Corporation (NYSE:CVS) and the US\$53.4 billion purchase of Linde Aktiengesellschaft (DB:LNA) by Linde plc (XTRA:LIN). Together these deals represent 49.2% of the total value for all deals in the quarter.³

¹ S&P US LBO Review, Q4 2018

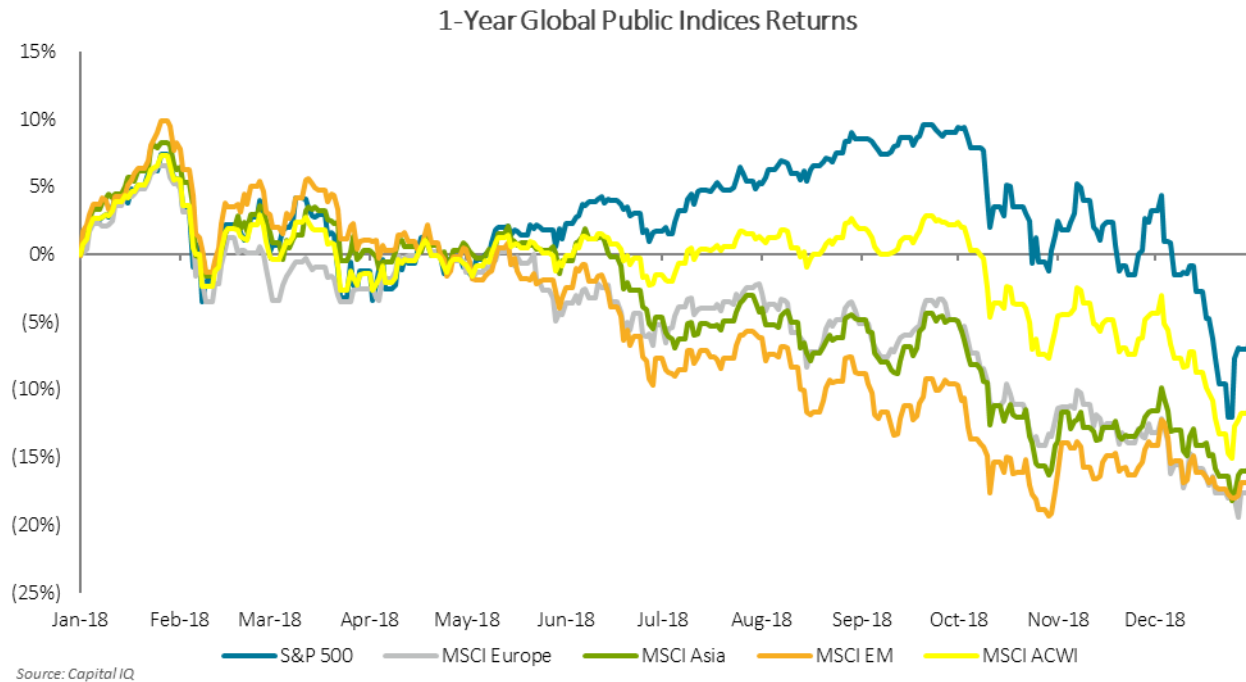
² Thomson ONE data as of March 12, 2019. Please note, all data in this report from Thomson ONE is subject to revision as further data is made available.

³ Capital IQ Transaction Screening Report as of March 12, 2019

Capital Markets Overview

Public Equity Markets

Volatility in global public markets was sparked by moderated economic data, as US markets posted their first annual loss in nine years following lowered guidance from high profile information technology companies. Energy, Industrials, and Information Technology sectors for US equities declined 24.9%, 18.0%, and 17.7% for the quarter, respectively. Although volatility has returned, earnings growth for the S&P 500 was near 26.0% for the quarter, signaling strong corporate data.



The following table shows the returns of four major MSCI indices, as well as the S&P 500 and the S&P 500 Total Return Index, over various time horizons through December 31, 2018. Returns for time periods greater than one year are annualized. During the quarter, US markets decreased 13.5% followed by MSCI Europe down 13.0%. MSCI Asia and MSCI Emerging Markets decreased 11.3% and 7.8%, respectively.

Regional Indices

	3 Mo	1 Yr	3 Yr	5 Yr	10 Yr
MSCI Asia	(11.3%)	(15.6%)	3.9%	1.5%	5.1%
MSCI Europe	(13.0%)	(17.3%)	(0.8%)	(3.3%)	3.1%
MSCI EM	(7.8%)	(16.6%)	6.7%	(0.7%)	5.5%
MSCI ACWI	(13.1%)	(11.2%)	4.5%	2.2%	7.2%
S&P 500	(14.0%)	(6.2%)	7.0%	6.3%	10.7%
S&P 500 Total Return*	(13.5%)	(4.4%)	9.3%	8.5%	13.1%

For the period ended December 31, 2018

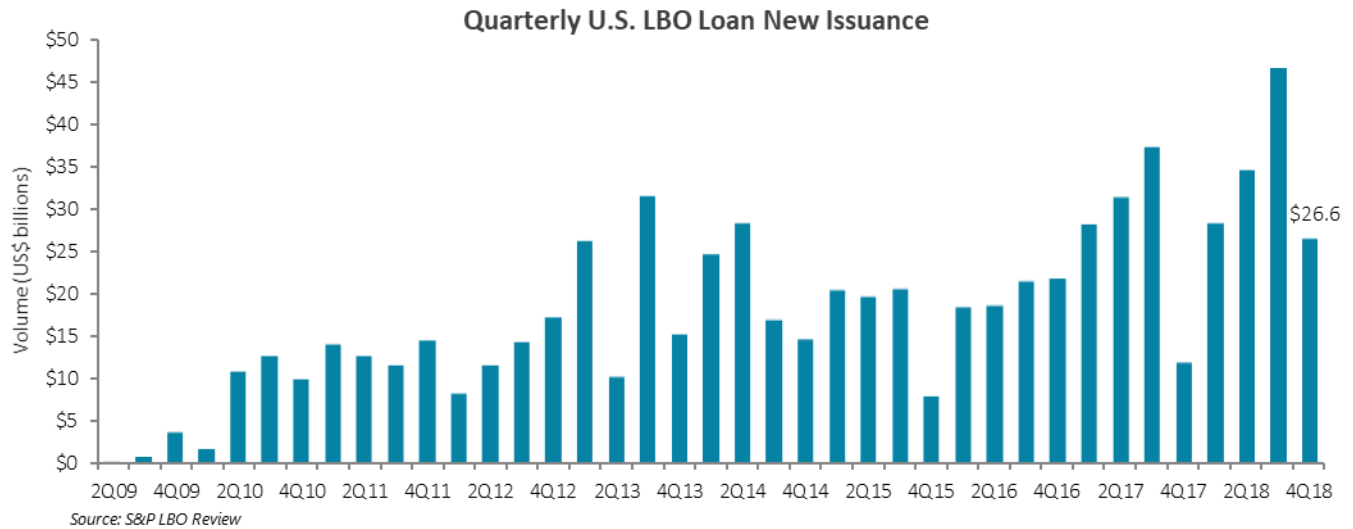
*Includes reinvestment of dividends.

Source: Capital IQ

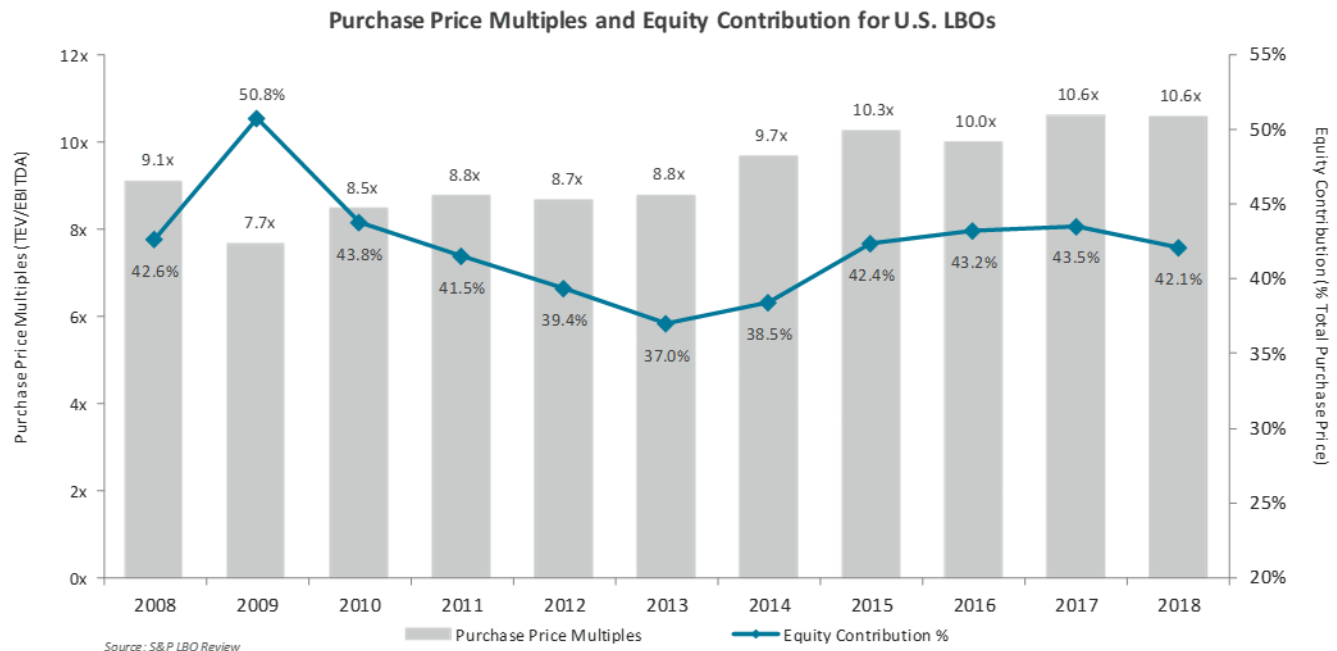
The referenced indices are shown for general market comparisons and are not meant to represent any particular fund. An investor cannot directly invest in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented.

Debt Markets

During the fourth quarter of 2018, US LBO new loan issuance totaled US\$26.6 billion, representing an decrease of 42.8% from the prior quarter and an increase from US\$11.9 billion from the fourth quarter of 2017. The following chart shows the quarterly volume of US LBO new loan issuance for the past ten years.



The weighted average purchase price multiple for US LBO deals was 10.3x total enterprise value (“TEV”) to EBITDA in the fourth quarter, a decrease from 11.0x in the prior quarter and above the 10-year average of 9.2x. Average debt multiples of large corporate US LBO loans increased year-over-year from 5.8x EBITDA to 5.9x EBITDA, as equity contributions for US LBOs decreased from 43.5% to 42.1%. The following chart compares purchase price multiples and equity contribution percentages for US LBO deals.



Private Equity Market Overview

All Private Equity

The table below shows the pooled Internal Rate of Return (“IRR”) performance of global private equity investments by sector over various investment horizons through December 31, 2018. The All Private Equity benchmark had an IRR of (0.8%) for the quarter. Two out of five sectors were positive for the quarter, led by Venture Capital with 1.4%, followed by Small/Middle Buyouts with 0.7%, Mezzanine with 0.0%, Large Buyouts with (2.3%), and Energy with (11.1%)

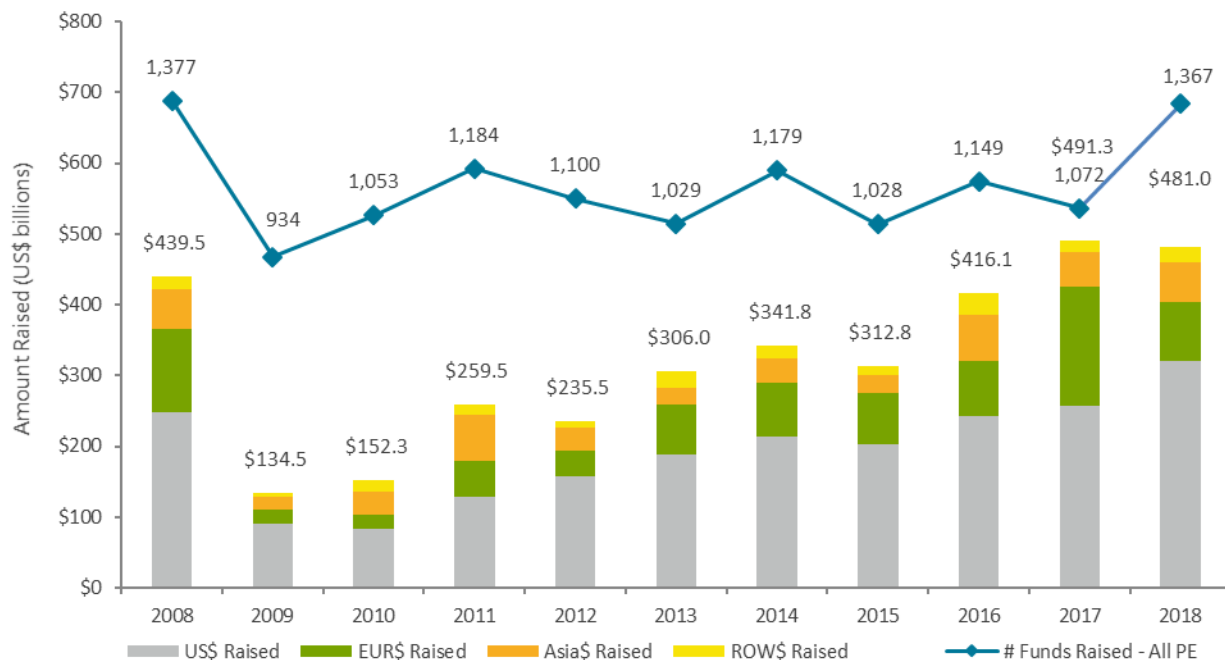
Sector	3 Mo	1 Yr	3 Yr	5 Yr	10 Yr
Small/Middle Buyouts (<\$3bn)	0.7%	9.7%	14.7%	11.8%	13.0%
Large Buyouts (>\$3bn)	(2.3%)	8.9%	14.6%	12.4%	14.6%
Mezzanine	0.0%	6.9%	8.9%	8.6%	9.2%
Energy	(11.1%)	(5.6%)	7.3%	(0.3%)	5.5%
Venture Capital	1.4%	21.1%	11.9%	15.3%	14.0%
All Private Equity	(0.8%)	10.9%	13.0%	11.7%	13.4%

Source: Burgiss PrivateIQ

Fundraising

Global private equity fundraising totaled US\$481.0 billion in 2018, representing a decrease of 2.1% year-over-year. Buyout fundraising totaled US\$326.1 billion in 2018, decreasing 10.4% compared to US\$364.1 billion in 2017. Venture Capital raised US\$78.3 billion in 2018, an increase of 18.6% compared to US\$66.0 billion in 2017. Geographically, the US represented 66.5% of total funds raised in the year, higher than the 10-year average of 59.6%. Funds raised in Europe, Asia, and the Rest of World made up 17.3%, 11.6% and 4.6%, respectively, of global fundraising for the year. The chart below shows annual private equity fundraising activity across all sectors.

Regional Fundraising by Year – All Private Equity

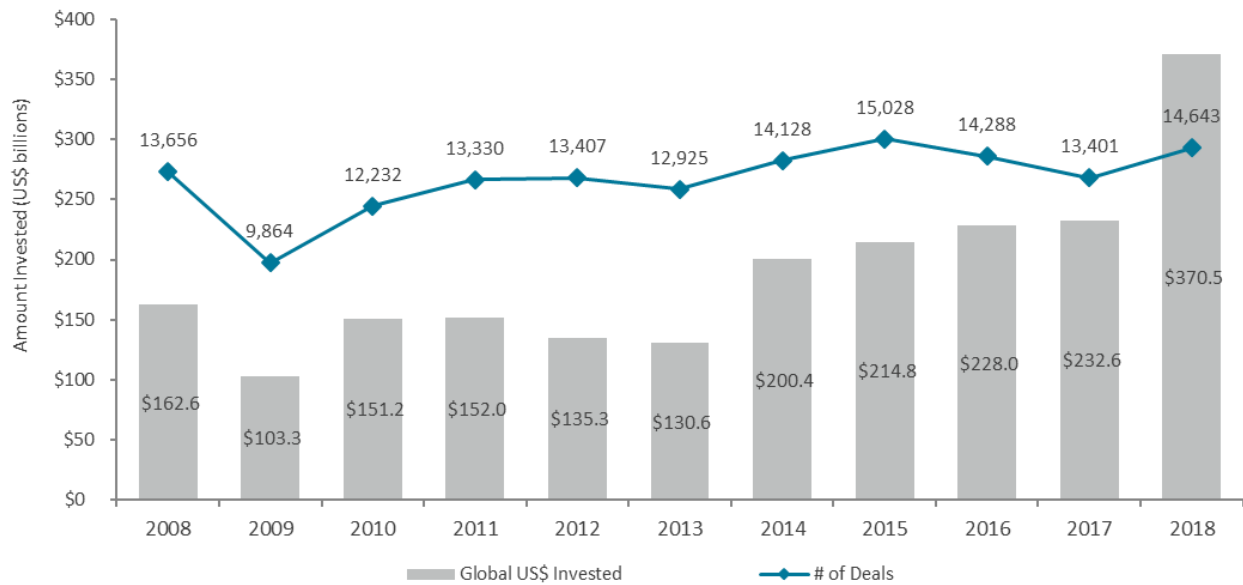


Source: Thomson ONE

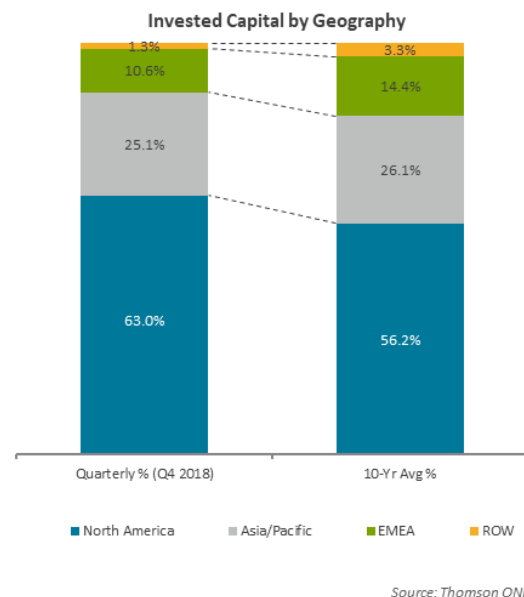
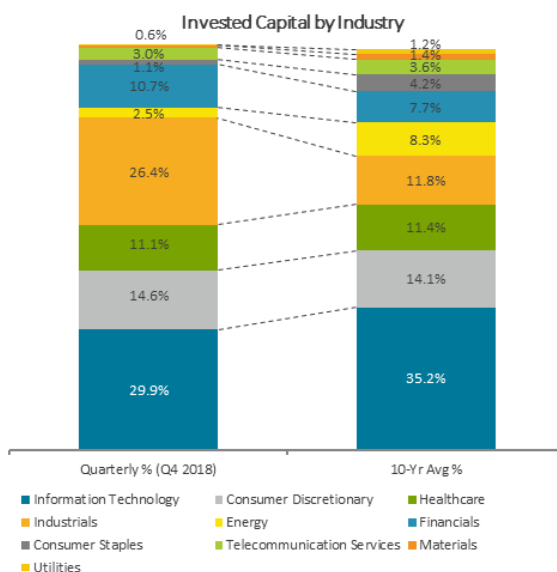
Investment Activity

Private equity funds invested US\$370.5 billion globally during 2018, representing an increase of 59.3% from US\$232.6 billion in 2017. The average investment size during the year was US\$25.3 million, an increase of 45.8% compared to the average investment size of US\$17.4 million in 2017.

Investment Activity - All Private Equity

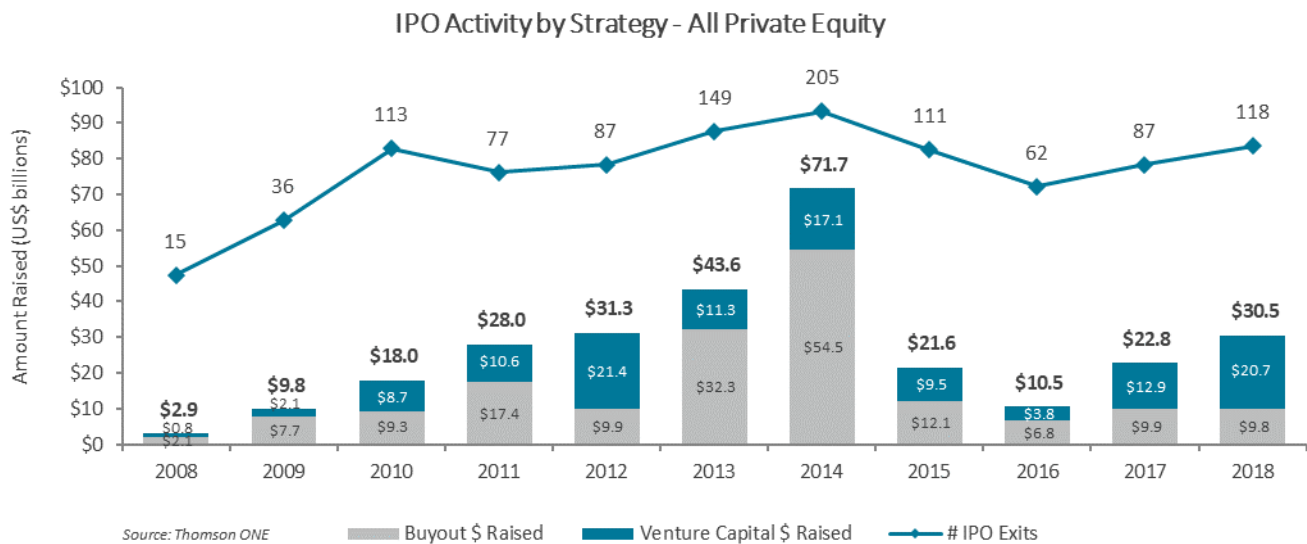


The graphs below depict the percentage of invested capital by industry and geography for the third quarter of 2018 and over the last ten years. The Financials sector had the largest departure from its 10-year average, accounting for US\$14.8 billion of transactions, or 15.8% of total capital invested by private equity firms, compared to its 10-year average of 8.1%. Considering geography, investment activity was above average in North America, comprising 57.1% of total capital invested compared to its 10-year historical average of 55.0%.

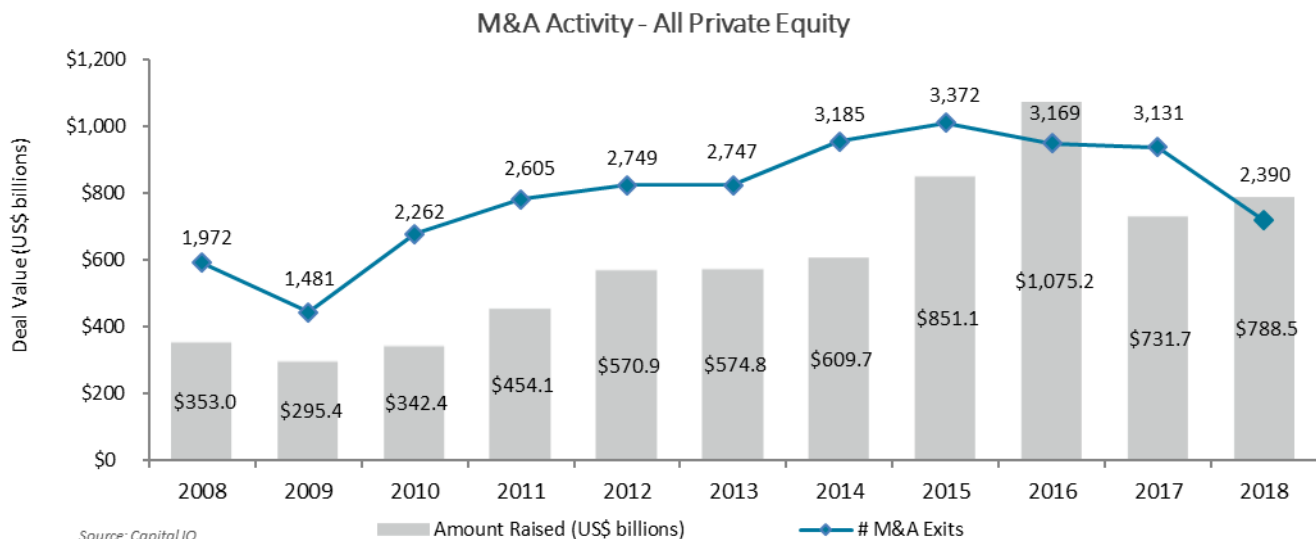


Deal Environment

In 2018, the number of private equity-backed IPOs increased 35.6%, from 87 to 118, and the amount raised increased 33.9%, from US\$22.8 billion to US\$30.5 billion, compared to the prior year. The IPOs were comprised of 94 venture capital-backed IPOs that raised a total of US\$20.7 billion and 24 IPOs from buyouts that raised US\$9.8 billion. The largest IPOs of the quarter were completed by Tencent Music Entertainment Shenzhen Co Ltd (NYSE: TME), a provider of online music and music-centric social entertainment services in China, which raised US\$1.1 billion, and Moderna, Inc. (NASDAQ: MRNA), a developer of medicines based on messenger RNA (mRNA), which raised US\$604.4 million, together representing 33.0% of the total value for all IPOs in the quarter. The graph below shows the amount raised and the number of IPOs on the NYSE and NASDAQ.



The number of private equity-backed Mergers and Acquisitions (“M&A”) declined 23.7%, and the total value of M&A deals increased 7.8% compared to the prior year. In the fourth quarter, there were 536 private-equity backed M&A deals totaling US\$250.0 billion. The largest M&A deals of the quarter were the US\$69.5 billion purchase of Aetna Inc. by CVS Health Corporation (NYSE:CVS) and the US\$53.4 billion purchase of Linde Aktiengesellschaft (DB:LNA) by Linde plc (XTRA:LIN). Together these deals represent 49.2% of the total value for all deals in the quarter. The graph below shows the deal value and the number of M&A deals.



III. Portfolio Review

Quarterly Highlights

- Cash Flow Activity** – During the fourth quarter of 2018, the Portfolio made US\$230.7 million of contributions and received US\$323.3 million of distributions, for a net cash inflow of US\$9.6 million, compared to a net cash inflow of US\$75.8 million during the prior quarter and a net cash inflow of US\$116.4 million during the fourth quarter of 2017. Contributions increased 23.6% from the prior quarter and decreased 21.2% from the fourth quarter of 2017. The most recent four quarter average of the Program's contributions is US\$170.0 million. Distributions increased 23.6% from the prior quarter and decreased 21.0% from the fourth quarter of 2017. The most recent four quarter average of the Program's distributions is US\$247.7 million.
- Recent Portfolio Activity** – During the fourth quarter of 2018, net of cash flow activity, the valuation of the Portfolio decreased by US\$53.6 million, or 0.1%, from the prior quarter. The decrease in Portfolio value is primarily attributable to the poor performance of Buyout funds during the quarter, which generated a US\$49.2 million decrease in valuation from the prior quarter-end. During the last twelve months, net of cash flow activity, the valuation of the Portfolio increased by US\$377.1 million, or 4.3%, from the quarter ended December 31, 2017.
- New Investment Commitments** – The Program closed on four new investment commitments during the fourth quarter of 2018, totaling US\$244.1 million.

<i>As of December 31, 2018 (US\$ in millions)</i>	Month Closed	Sub-Strategy	Geographic Focus	Committed Capital
KKR European Fund V (USD) SCSP	November 2018	Buyout	Europe	\$ 83.3
Grain Communications Opportunity Fund II, L.P.	December 2018	Buyout	North America	21.0
Palladium Equity Partners V, L.P.	December 2018	Buyout	North America	33.3
Lexington Capital Partners IX, L.P.	December 2018	Secondaries	Global	106.5
Total				\$ 244.1

- Subsequent Investment Commitments** – Subsequent to quarter-end through May 24, 2019, the Program has closed on five new investment commitments, totaling US\$509.0 million.

<i>As of June 3, 2019 (US\$ in millions)</i>	Month Closed	Sub-Strategy	Geographic Focus	Committed Capital
Warburg Pincus Global Growth, L.P.	January 2019	Buyout	Global	\$ 125.5
ASF VIII L.P.	March 2019	Secondaries	Europe	174.0
ASF VIII B NYC Co-Invest L.P.	March 2019	Secondaries	Europe	87.0
Lindsay Goldberg V, L.P.	April 2019	Buyout	North America	87.0
Lexington Co-Invest Partners B, L.P.	May 2019	Secondaries	Global	35.5
Total				\$ 509.0

Investment Performance

Since Inception Performance

US\$ in millions	December 31, 2018	September 30, 2018	December 31, 2017	Quarterly Change	Yearly Change
Active Investments					
Number of Managers	94	95	96	(1)	(2)
Number of Investments	183	183	173	-	10
Committed Capital ¹	\$10,073.0	\$9,979.6	\$9,192.7	\$93.4	\$880.3
Contributed Capital	\$8,189.9	\$8,113.5	\$7,712.7	\$76.4	\$477.2
Distributed Capital	\$7,314.9	\$7,191.4	\$6,608.9	\$123.5	\$706.0
Market Value	\$4,588.0	\$4,734.2	\$4,521.8	(\$146.2)	\$66.2
Total Value	\$11,902.9	\$11,925.6	\$11,130.7	(\$22.7)	\$772.2
Total Gain/(Loss)	\$3,713.1	\$3,812.1	\$3,418.0	(\$99.1)	\$295.0
Unfunded Commitment ²	\$3,006.5	\$2,959.8	\$2,503.1	\$46.7	\$503.4
Total Exposure ³	\$7,594.5	\$7,694.0	\$7,024.9	(\$99.5)	\$569.6
DPI ⁴	0.89x	0.89x	0.86x	0.01x	0.04x
TVM ⁵	1.45x	1.47x	1.44x	-0.02x	0.01x
IRR ⁶	10.2%	10.4%	10.3%	-18 bps	-5 bps
Exited Investments					
Number of Managers	24	21	19	3	5
Number of Investments	28	24	22	4	6
Committed Capital ¹	\$827.9	\$686.3	\$641.3	\$141.6	\$186.6
Contributed Capital	\$946.2	\$791.9	\$743.5	\$154.3	\$202.7
Distributed Capital	\$1,182.7	\$982.9	\$898.0	\$199.8	\$284.8
Total Value	\$1,182.7	\$982.9	\$898.0	\$199.8	\$284.8
Total Gain/(Loss)	\$236.5	\$191.0	\$154.4	\$45.5	\$82.0
Unfunded Commitment ²	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
DPI ⁴	1.25x	1.24x	1.21x	0.01x	0.04x
TVM ⁵	1.25x	1.24x	1.21x	0.01x	0.04x
IRR ⁶	6.3%	6.4%	5.7%	- 5 bps	+ 60 bps
Total Portfolio					
Number of Managers	112	111	111	1	1
Number of Investments	211	207	195	4	16
Committed Capital ¹	\$10,900.9	\$10,665.9	\$9,834.0	\$235.0	\$1,066.9
Contributed Capital	\$9,136.1	\$8,905.4	\$8,456.2	\$230.7	\$679.9
Distributed Capital	\$8,497.7	\$8,174.3	\$7,506.9	\$323.3	\$990.8
Market Value	\$4,588.0	\$4,734.2	\$4,521.8	(\$146.2)	\$66.2
Total Value	\$13,085.7	\$12,908.5	\$12,028.7	\$177.2	\$1,057.0
Total Gain/(Loss)	\$3,949.5	\$4,003.1	\$3,572.5	(\$53.6)	\$377.0
Unfunded Commitment ²	\$3,006.5	\$2,959.8	\$2,503.1	\$46.7	\$503.4
Total Exposure ³	\$7,594.5	\$7,694.0	\$7,024.9	(\$99.5)	\$569.6
DPI ⁴	0.93x	0.92x	0.89x	0.01x	0.04x
TVM ⁵	1.43x	1.45x	1.42x	-0.02x	0.01x
IRR ⁶	9.7%	9.9%	9.8%	-24 bps	-8 bps
TVM Net of StepStone Fees ⁷	1.43x	1.45x	1.42x	-0.02x	0.01x
IRR Net of StepStone Fees ⁷	9.7%	9.9%	9.8%	-26 bps	-9 bps

¹ Committed Capital is presented net of any commitment releases or expirations and reflects foreign currency exchange rate fluctuations. Total committed includes underlying fund commitments to the EM 2012 and 2015 Programs.

² Unfunded Commitment represents the aggregate remaining commitments to partnership investments.

³ Total Exposure represents the sum of Market Value and Unfunded Commitment.

⁴ DPI, or Distributed to Paid-In Multiple, is a performance metric that measures distributions received relative to capital invested. DPI is calculated as Distributed Capital divided by Contributed Capital.

⁵ TVM, or Total Value Multiple, is a performance metric that measures total value created by the Portfolio relative to capital invested, without consideration for time. TVM is calculated as Total Value, which is comprised of Market Value plus Distributed Capital, divided by Contributed Capital.

⁶ IRR, or Internal Rate of Return, is a performance metric that is calculated based on the Portfolio's daily cash flows and market value as of quarter-end. IRR is net of fund manager's fees, expenses and carried interest.

Past performance is not necessarily indicative of future results and there can be no assurance that the fund will achieve comparable results or avoid substantial losses.

Performance by Vintage Year

The following table and chart illustrate the Portfolio's since inception investment performance by vintage year as of December 31, 2018 relative to the median quartile U.S. All Private Equity TVM and IRR benchmarks as provided by Burgiss Private iQ. Performance of funds that are less than two years old are not meaningful. Note that Burgiss Private iQ data is continuously updated and is therefore subject to change.

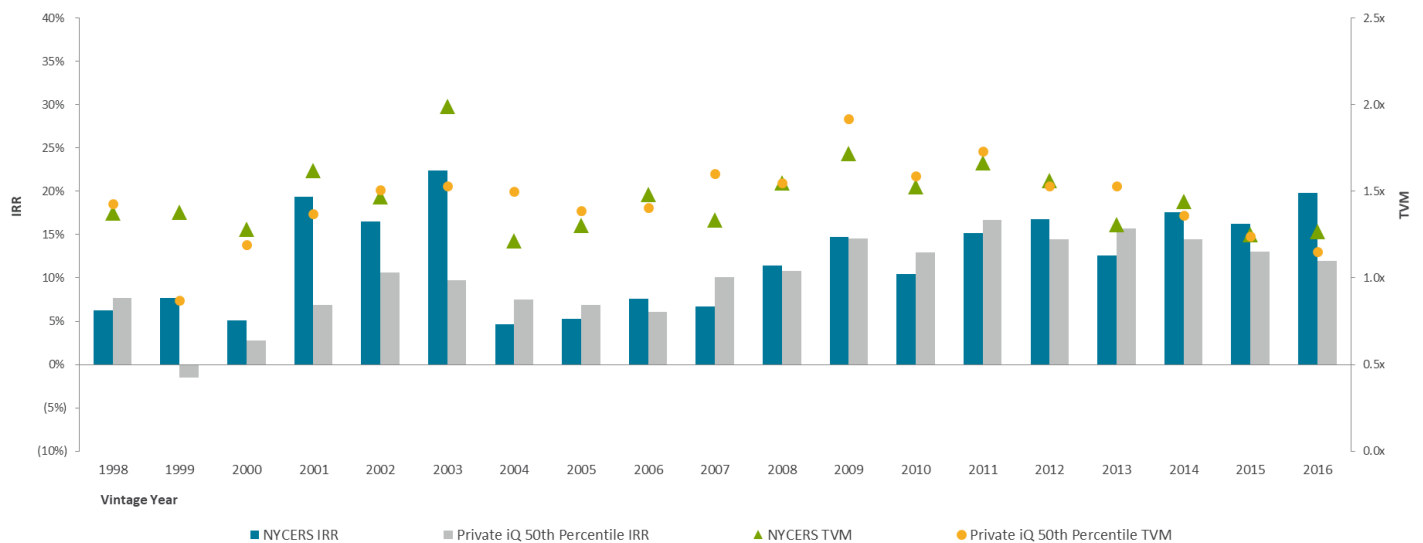
As of December 31, 2018 (US\$ in millions)

Vintage Year	Committed Capital	Contributed Capital	Distributed Capital	Market Value	Unfunded Commitment	Total Exposure	TVM	IRR	PME Return ¹	PME Spread ²	Private iQ U.S. All PE 50th Percentile TVM	Private iQ U.S. All PE 50th Percentile IRR
1998	\$50.0	\$50.2	\$69.1	\$0.0	\$0.0	\$0.0	1.37x	6.3%	3.4%	2.9%	1.43x	7.7%
1999	88.6	102.1	139.9	0.8	0.0	0.8	1.38x	7.6%	6.2%	1.4%	0.87x	(1.5%)
2000	116.9	137.1	173.9	2.0	7.5	9.4	1.28x	5.1%	5.3%	-0.2%	1.19x	2.8%
2001	98.1	128.5	206.6	1.7	2.8	4.4	1.62x	19.4%	7.7%	11.7%	1.37x	6.9%
2002	100.0	124.8	180.6	2.4	2.8	5.2	1.47x	16.5%	7.1%	9.4%	1.51x	10.7%
2003	104.4	114.2	221.0	6.4	11.9	18.3	1.99x	22.4%	6.9%	15.5%	1.53x	9.7%
2004	433.6	475.6	511.2	65.5	9.5	75.0	1.21x	4.6%	7.7%	-3.1%	1.50x	7.5%
2005	520.7	576.3	660.3	89.5	16.6	106.1	1.30x	5.2%	6.8%	-1.6%	1.39x	6.9%
2006	992.8	1,121.4	1,430.7	232.8	28.7	261.5	1.48x	7.6%	8.4%	-0.9%	1.41x	6.1%
2007	940.2	1,010.8	1,108.9	240.0	63.1	303.1	1.33x	6.7%	11.3%	-4.5%	1.60x	10.1%
2008	1,235.1	1,418.0	1,601.8	594.3	88.0	682.3	1.55x	11.4%	13.0%	-1.6%	1.55x	10.8%
2009	179.2	181.3	246.8	64.8	10.8	75.6	1.72x	14.7%	14.1%	0.7%	1.92x	14.6%
2010	175.0	193.0	169.7	124.7	9.8	134.5	1.53x	10.4%	11.8%	-1.4%	1.59x	13.0%
2011	788.7	818.8	794.1	567.9	96.0	663.8	1.66x	15.2%	11.7%	3.5%	1.73x	16.7%
2012	610.5	603.5	442.3	500.0	82.4	582.4	1.56x	16.8%	9.7%	7.1%	1.53x	14.5%
2013	463.1	392.1	142.5	370.3	110.0	480.4	1.31x	12.6%	7.5%	5.1%	1.53x	15.7%
2014	600.7	531.0	252.4	511.8	144.8	656.7	1.44x	17.6%	7.3%	10.3%	1.36x	14.4%
2015	828.1	566.1	79.6	627.9	285.2	913.1	1.25x	16.3%	4.0%	12.3%	1.24x	13.0%
2016	396.0	272.1	57.7	286.8	169.8	456.7	1.27x	19.8%	2.3%	17.5%	1.15x	12.0%
2017	684.2	265.0	8.4	254.4	426.5	680.8	NM	NM	NM	NM	NM	NM
2018	1,216.1	54.3	0.1	44.2	1,161.6	1,205.8	NM	NM	NM	NM	NM	NM
2019	278.8	-	-	-	278.8	278.8	NM	NM	NM	NM	NM	NM
Total	\$10,900.9	\$9,136.1	\$8,497.7	\$4,588.0	\$3,006.5	\$7,594.5	1.43x	9.7%	9.4%	0.3%	1.34x	9.3%

¹ Russell 3000 PME+

² PME Spread is calculated as IRR minus PME Return.

As of December 31, 2018



Portfolio Periodic Returns vs. Russell 3000® Index

As of December 31, 2018	3 Month	1 Year	3 Year	5 Year	10 Year	Since Inception
NYCERS IRR	-1.0%	8.7%	12.2%	10.3%	11.2%	9.7%
Russell 3000® ¹	-14.2%	-5.5%	9.4%	8.2%	14.0%	9.4%
Russell 3000® + 300 bps ²	-11.2%	-2.5%	12.4%	11.2%	17.0%	12.4%
NYCERS Outperformance/(Underperformance)						
vs. Russell 3000® + 300 bps ²	10.2%	11.3%	(0.2%)	(0.9%)	(5.8%)	(2.7%)

¹Return is a dollar-weighted PME+ calculation of daily changes in the Russell 3000® Index. Russell Investment Group is the source and owner of the trademark, service marks and copyrights related to the Russell Indexes. Russell® is a trademark of Russell Investment Group.

²Return is a dollar-weighted PME+ calculation of daily changes in the Russell 3000® Index plus a 300 basis point illiquidity premium (the Opportunity Cost Benchmark).

Note: The referenced indices are shown for general market comparisons and are not meant to represent any particular fund. An investor cannot directly invest in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented.

Performance by Strategy / Sub-Strategy

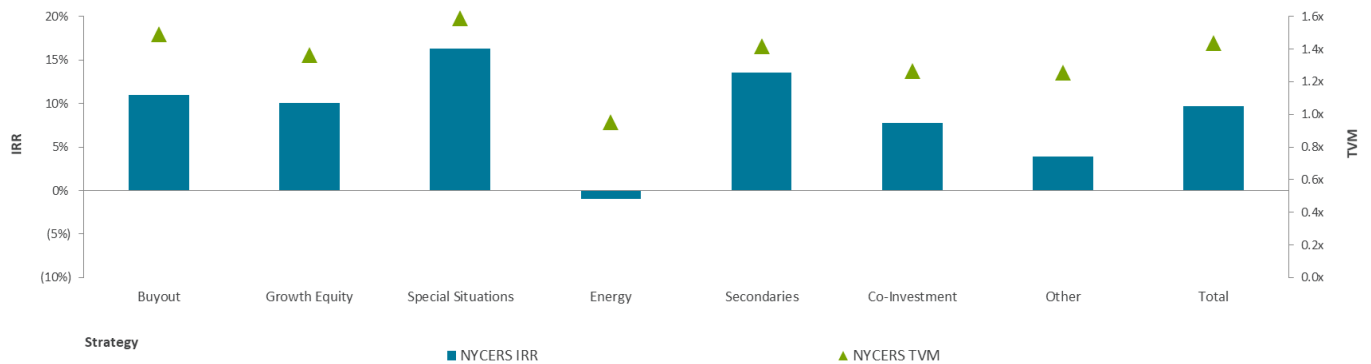
The following table and charts illustrate the Portfolio's since inception investment performance by strategy and sub-strategy as of December 31, 2018.

As of December 31, 2018 (US\$ in millions)

Strategy / Sub-Strategy	Committed Capital	Contributed Capital	Distributed Capital	Market Value	Unfunded Commitment	Total Exposure	TVM	IRR
Buyout	\$7,089.7	\$5,896.8	\$5,895.9	\$2,845.5	\$2,090.2	\$4,935.6	1.48x	10.9%
Mega Buyout	2,241.5	1,340.2	994.7	847.7	1,088.1	1,935.9	1.37x	11.0%
Large Buyout	1,991.9	1,839.5	1,805.8	1,097.6	426.4	1,524.0	1.58x	14.8%
Middle-Market Buyout	1,656.7	1,462.8	1,733.7	459.3	433.6	892.9	1.50x	9.5%
Small Buyout	1,199.6	1,254.3	1,361.7	440.9	142.0	582.9	1.44x	8.9%
Growth Equity	687.0	523.0	249.8	462.6	203.7	666.3	1.36x	10.1%
Special Situations	812.2	730.4	723.5	439.1	234.8	673.8	1.59x	16.3%
Energy	355.0	394.3	275.2	98.9	10.7	109.6	0.95x	-1.0%
Secondaries	853.1	565.5	533.5	268.3	300.3	568.6	1.42x	13.5%
Co-Investment	381.0	236.8	147.5	159.4	151.2	310.7	1.30x	7.8%
Other	722.9	789.4	672.3	314.3	15.5	329.8	1.25x	3.9%
Venture Capital	656.5	698.5	544.9	313.3	11.6	324.8	1.23x	3.3%
Mezzanine	66.3	90.9	127.4	1.0	3.9	5.0	1.41x	13.3%
Total	\$10,900.9	\$9,136.1	\$8,497.7	\$4,588.0	\$3,006.5	\$7,594.5	1.43x	9.7%

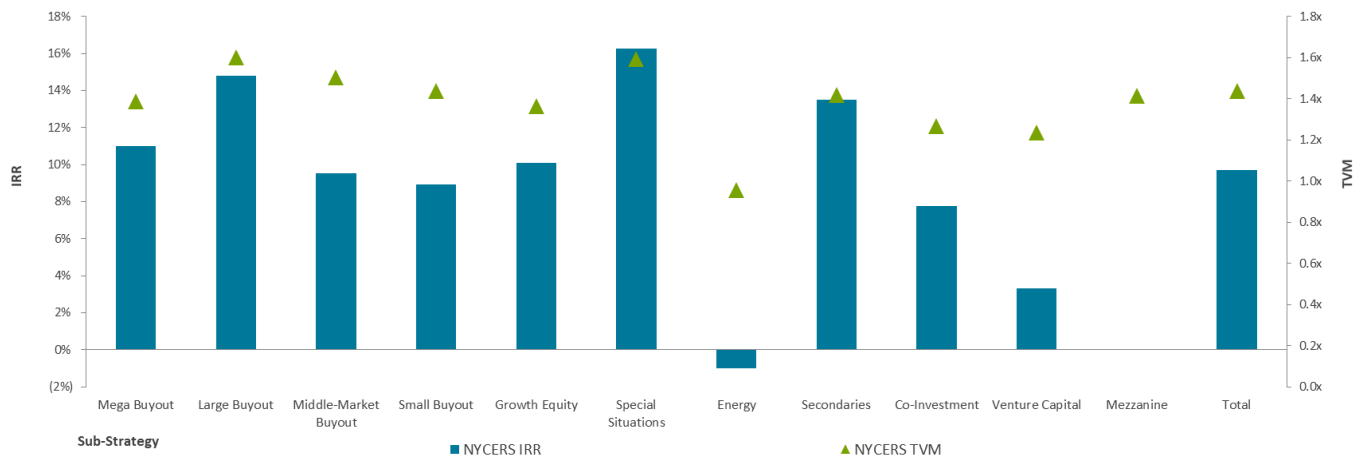
Performance by Strategy

As of December 31, 2018



Performance by Sub-Strategy

As of December 31, 2018



Portfolio Diversification

The following tables illustrate the Portfolio's diversification by strategy and fund geographic focus as of December 31, 2018.

By Strategy/Sub-Strategy

As of December 31, 2018 (US\$ in millions)	Market Value		Unfunded Commitment		Total Exposure	
	\$	% of Total	\$	% of Total	\$	% of Total
Buyout	\$2,845.5	62.0%	\$2,090.2	69.5%	\$4,935.6	65.0%
Mega Buyout	847.7	18.5%	1,088.1	36.2%	1,935.9	25.5%
Large Buyout	1,097.6	23.9%	426.4	14.2%	1,524.0	20.1%
Middle-Market Buyout	459.3	10.0%	433.6	14.4%	892.9	11.8%
Small Buyout	440.9	9.6%	142.0	4.7%	582.9	7.7%
Growth Equity	462.6	10.1%	203.7	6.8%	666.3	8.8%
Special Situations	439.1	9.6%	234.8	7.8%	673.8	8.9%
Energy	98.9	2.2%	10.7	0.4%	109.6	1.4%
Secondaries	268.3	5.8%	300.3	10.0%	568.6	7.5%
Co-Investment	159.4	3.5%	151.2	5.0%	310.7	4.1%
Other	314.3	6.8%	15.4	0.5%	329.6	4.3%
Venture Capital	313.3	6.8%	11.4	0.4%	324.7	4.3%
Mezzanine	1.0	0.0%	3.9	0.1%	5.0	0.1%
Total	\$4,588.0	100.0%	\$3,006.3	100.0%	\$7,594.3	100.0%

By Fund Geographic Focus

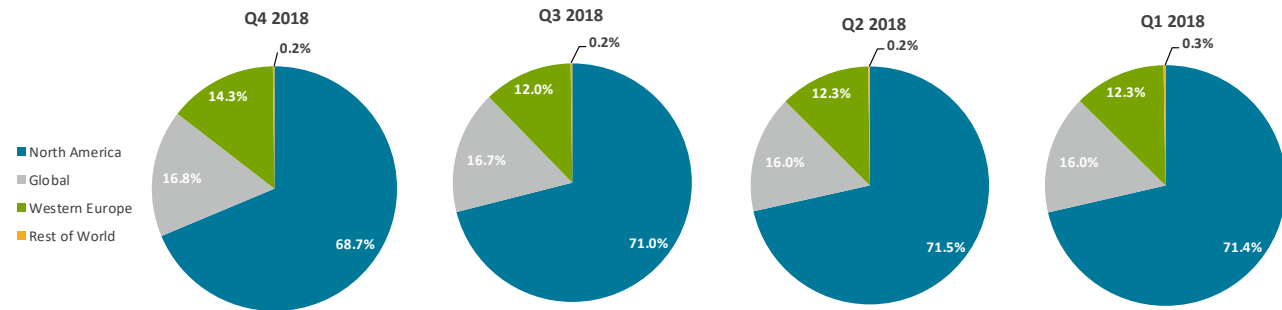
As of December 31, 2018 (US\$ in millions)	Market Value		Unfunded Commitment		Total Exposure	
	\$	% of Total	\$	% of Total	\$	% of Total
North America	\$3,150.6	68.7%	\$1,819.1	60.5%	\$4,969.7	65.4%
Global	771.2	16.8%	552.6	18.4%	1,323.8	17.4%
Western Europe	656.6	14.3%	634.6	21.1%	1,291.3	17.0%
Rest of World	9.5	0.2%	0.0	0.0%	9.5	0.1%
Total	\$4,588.0	100.0%	\$3,006.3	100.0%	\$7,594.3	100.0%

Fund Geographic Focus is based on a number of factors, including the GP-stated geographic focus, the number of investments within each region, invested capital by region, the location of the firm's offices and investment professionals, and the underlying fund currency.

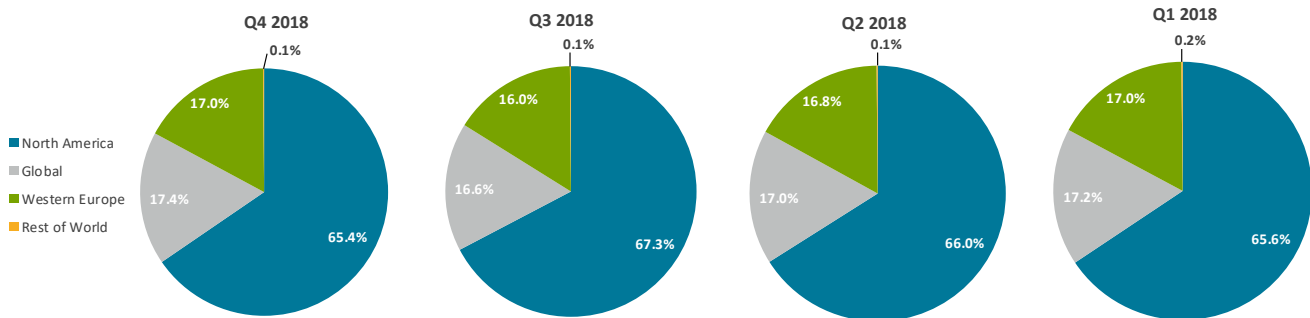
By Fund Geographic Focus

The following charts illustrate the Portfolio's diversification by fund geographic focus for the most recent four quarters as of December 31, 2018.

Geographic Exposure by Market Value



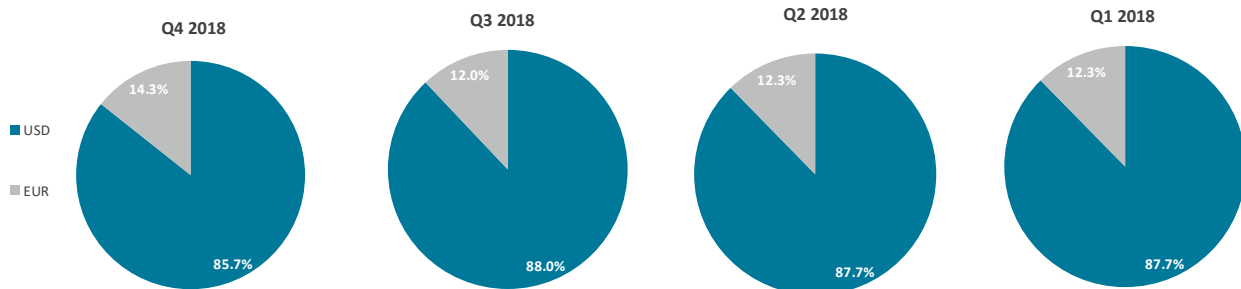
Geographic Exposure by Market Value + Unfunded



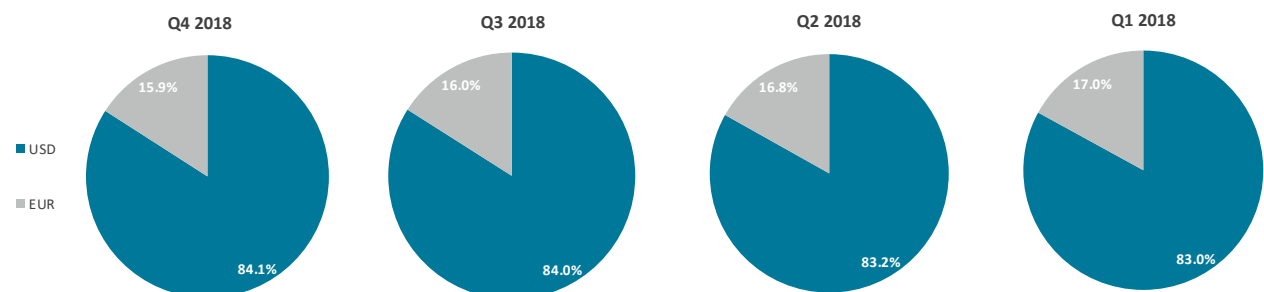
By Fund Currency

The following charts illustrate the Portfolio's diversification by fund currency for the most recent four quarters as of December 31, 2018.

Fund Currency Exposure by Market Value



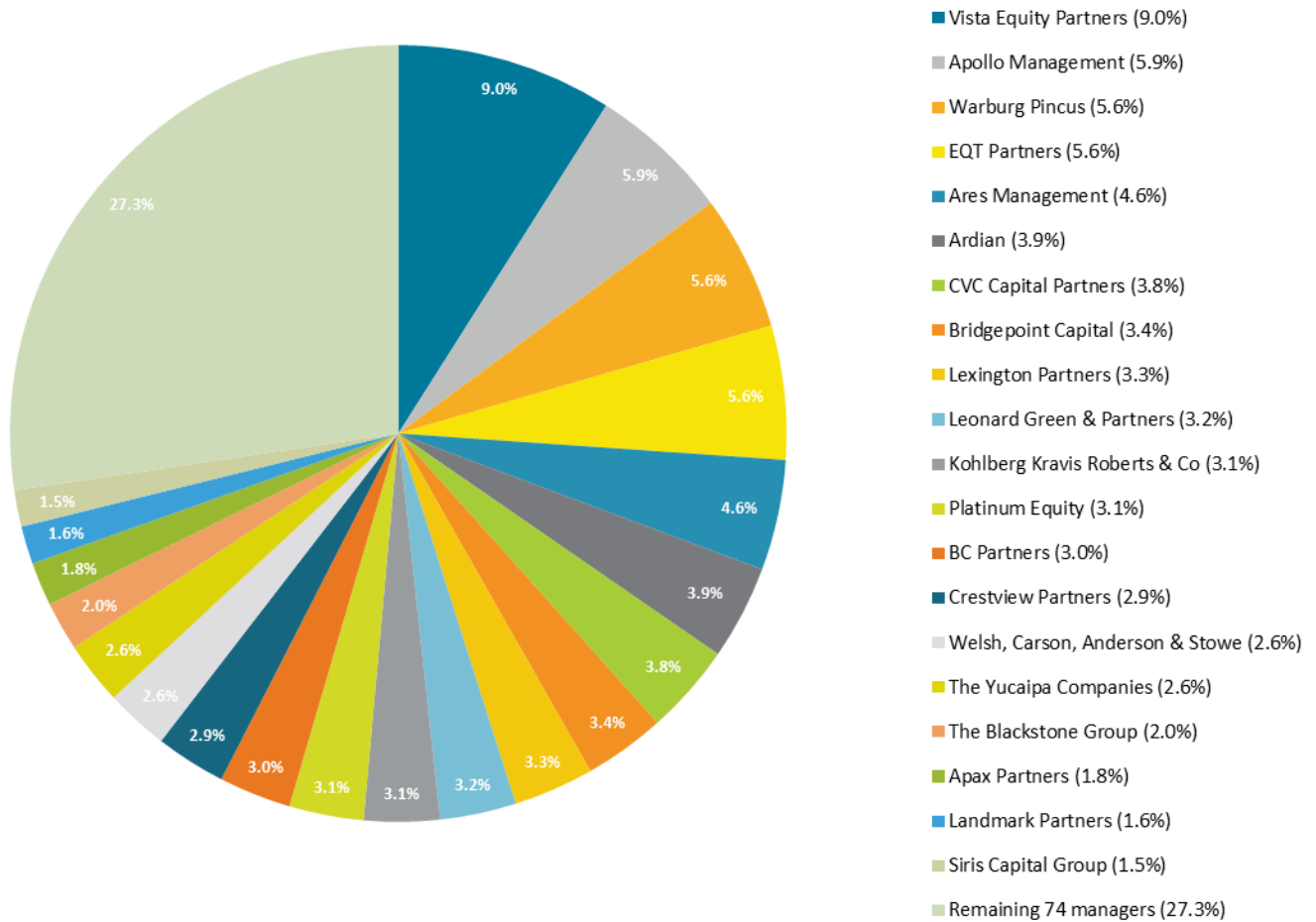
Fund Currency Exposure by Market Value + Unfunded



By Investment Manager

As of December 31, 2018, the Portfolio was highly diversified by investment manager, with 20 managers comprising US\$5.5 billion, or 72.7% of total exposure. The remaining 74 managers comprised 27.3% of total exposure as of quarter-end.

Portfolio Total Exposure by Investment Manager
As of December 31, 2018

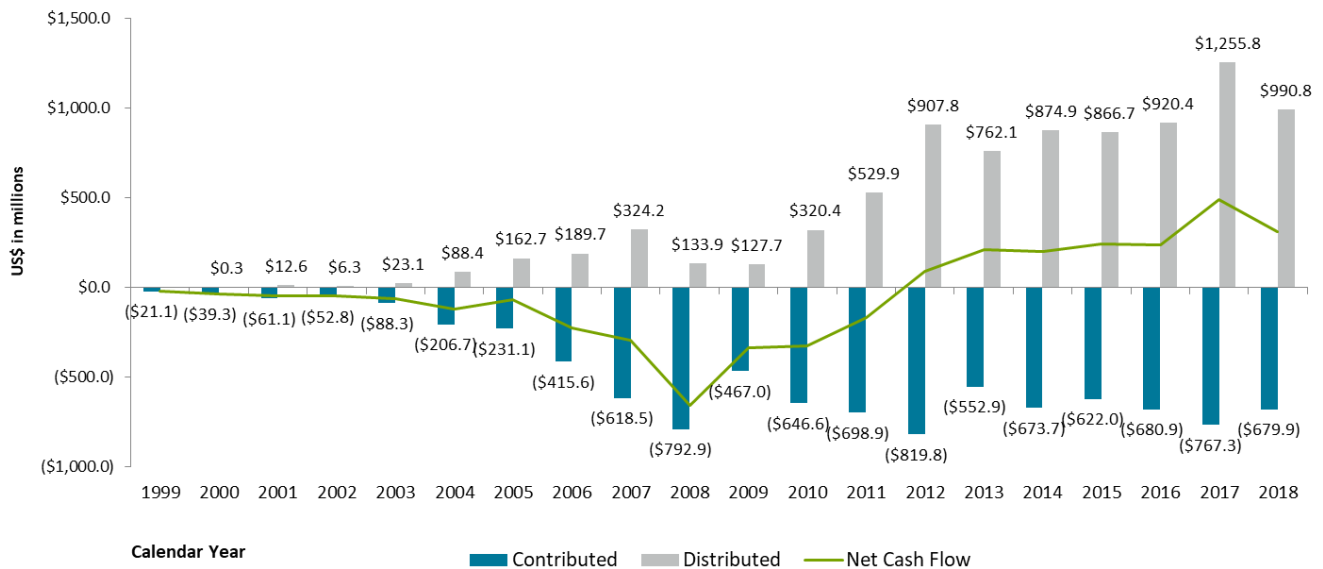


Portfolio Cash Flow Analysis

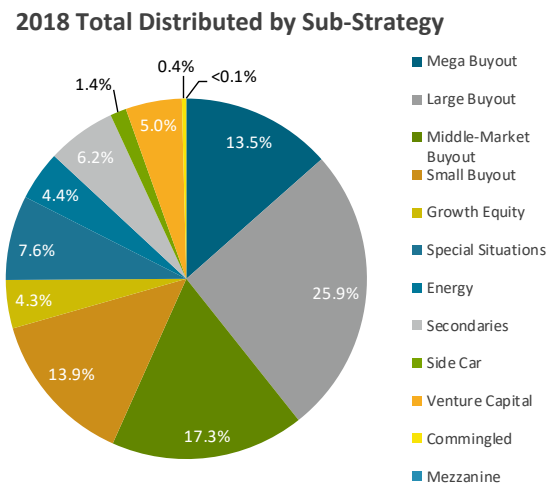
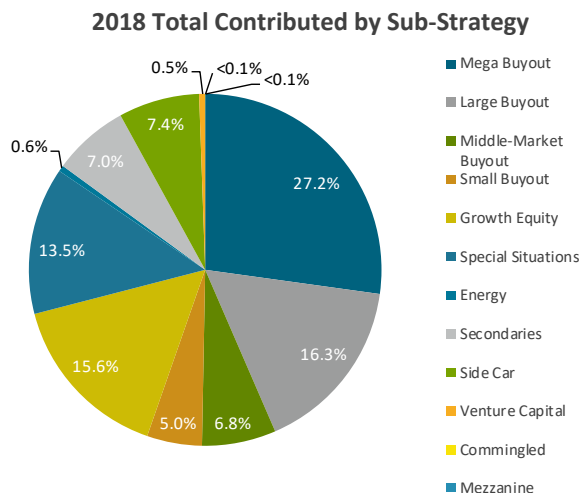
The following yearly and quarterly cash flow analysis is based on actual Portfolio cash flows during those time periods.

Year to Date Cash Flow Activity

During the twelve months ended December 31, 2018, the Portfolio made US\$990.8 million of contributions and received US\$679.9 million of distributions, for a net cash inflow of US\$310.9 million, compared to a net cash inflow of US\$488.6 million during the same period in the prior year. The graph below illustrates cash flow activity since inception by calendar year.

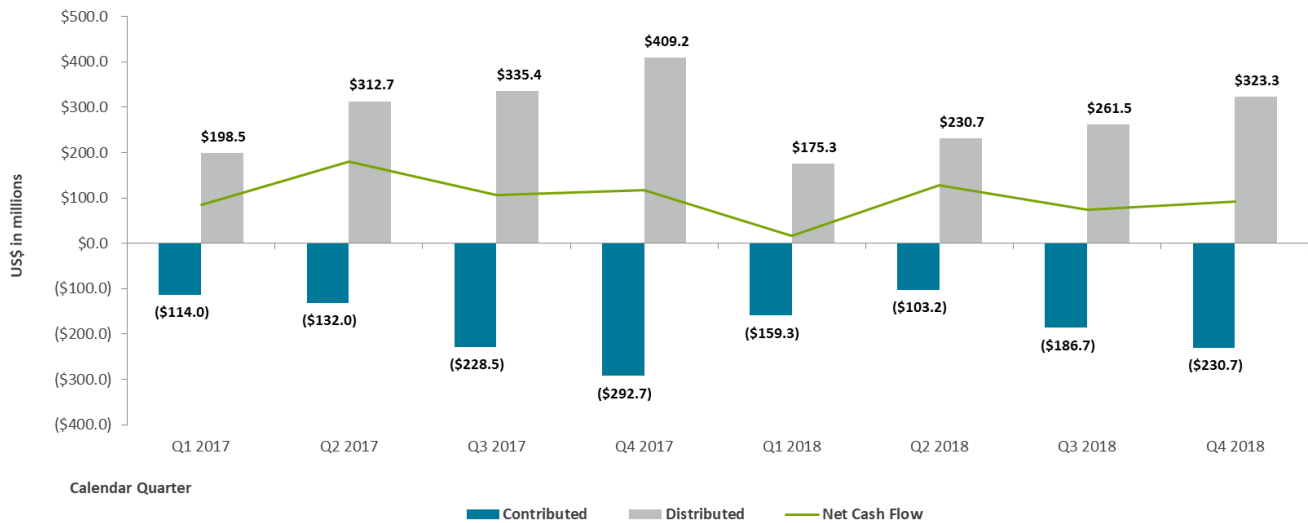


Buyout funds were the most active in terms of cash flow activity during 2018. Buyout funds drew down US\$346.2 million, or 55.3% of total contributions during 2018, and distributed US\$699.1 million, or 70.6% of total distributions during 2018.



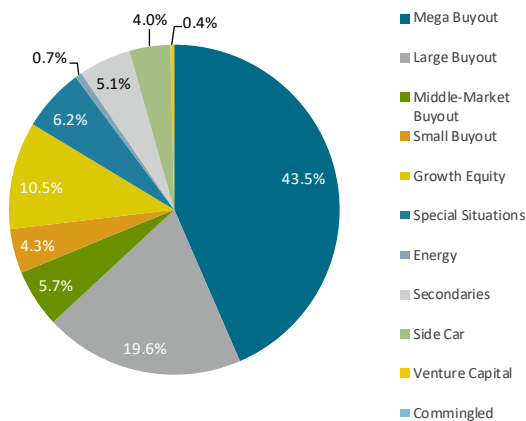
Quarterly Cash Flow Activity

During the fourth quarter of 2018, the Portfolio made US\$230.7 million of contributions and received US\$323.3 million of distributions, for a net cash inflow of US\$92.6 million. The graph below illustrates recent cash flow activity by quarter.

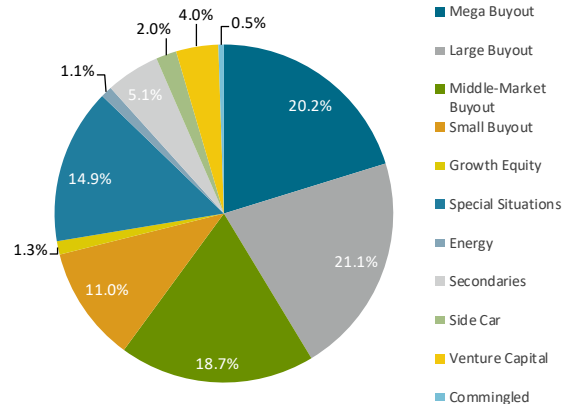


Buyout funds were the most active in terms of cash flow activity during fourth quarter of 2018. Buyout funds drew down US\$168.7 million or 73.1% of total contributions during the quarter, and distributed US\$229.9 million, or 71.1% of total distributions during the quarter.

Q4 2018 Contributed by Sub-Strategy



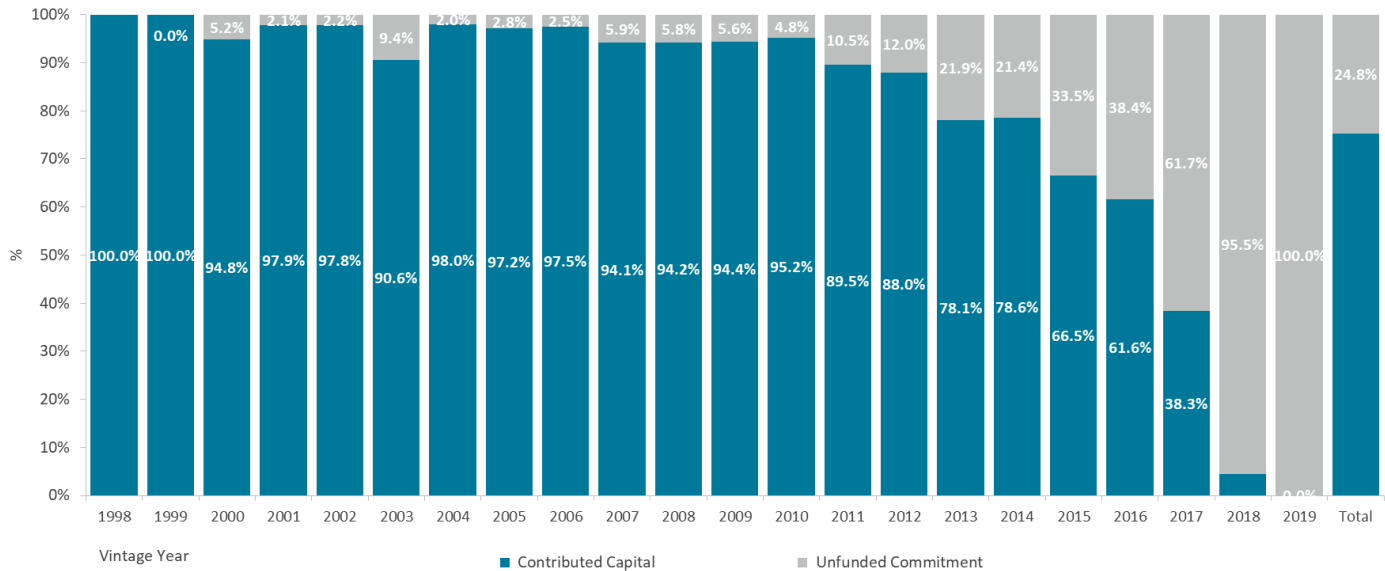
Q4 2018 Distributed by Sub-Strategy



Invested Capital by Vintage Year

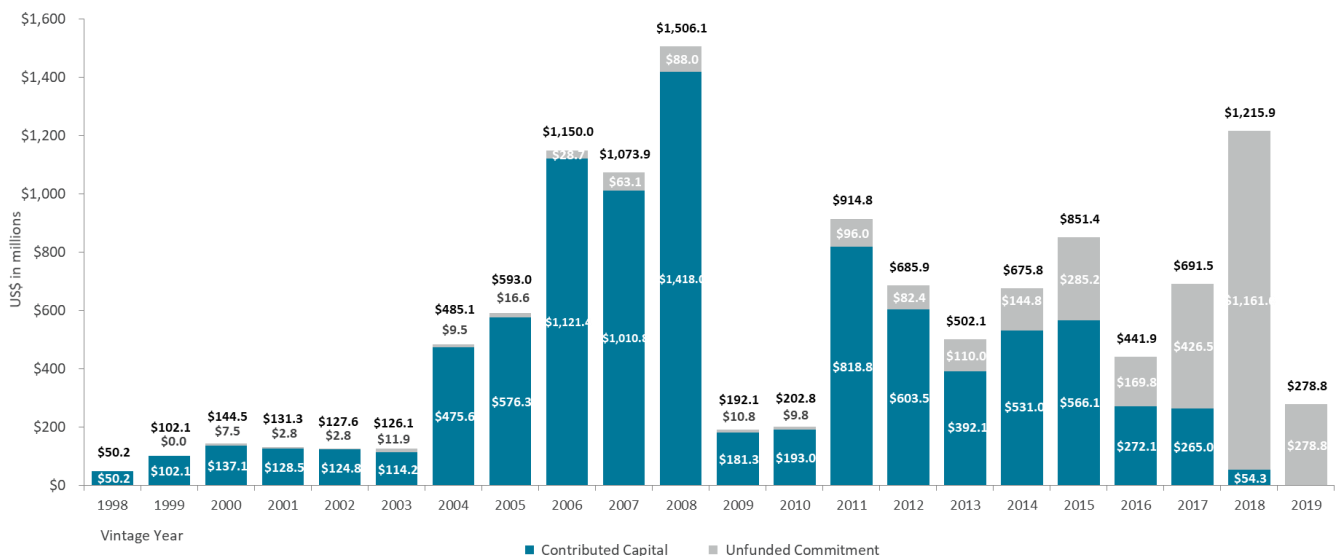
The following chart illustrates cumulative capital contributions as a percentage of total capital commitments, by fund vintage year, as of December 31, 2018.

Capital Contributions to Unfunded by Vintage Year (%)



The following chart illustrates cumulative capital contributions relative to unfunded commitment, by fund vintage year, as of December 31, 2018.

Capital Contributions to Unfunded by Vintage Year (US\$)



Portfolio Company-Level Analysis

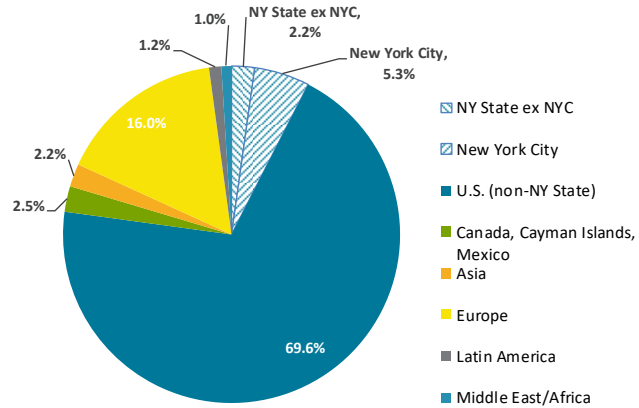
Geographic Exposure

The following charts illustrate the Portfolio's total investment cost and current market value exposure by geography at the portfolio company level as of December 31, 2018. Please note that the geography is based upon the corporate headquarters of each portfolio company.

Geographic Exposure by Total Cost

As of December 31, 2018 (US\$ in millions)

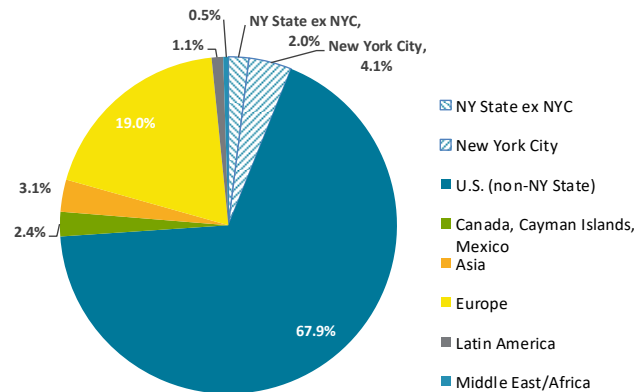
	Sum of Total Cost	% of Total
North America	\$6,413.8	79.6%
New York	606.5	7.5%
NY State ex NYC	177.7	2.2%
New York City	428.7	5.3%
U.S. (non-NY State)	5,609.1	69.6%
Canada, Cayman Islands, Mexico	198.2	2.5%
Asia	177.0	2.2%
Europe	1,291.8	16.0%
Latin America	94.9	1.2%
Middle East/Africa	77.8	1.0%
Total	\$8,055.3	100.0%



Geographic Exposure by Current Market Value

As of September 30, 2018 (US\$ in millions)

	Sum of Current Market Value	% of Total
North America	\$4,200.6	76.3%
New York	334.3	6.1%
NY State ex NYC	107.9	2.0%
New York City	226.4	4.1%
U.S. (non-NY State)	3,736.8	67.9%
Canada, Cayman Islands, Mexico	129.5	2.4%
Asia	169.8	3.1%
Europe	1,048.0	19.0%
Latin America	60.8	1.1%
Middle East/Africa	27.3	0.5%
Total*	\$5,506.4	100.0%

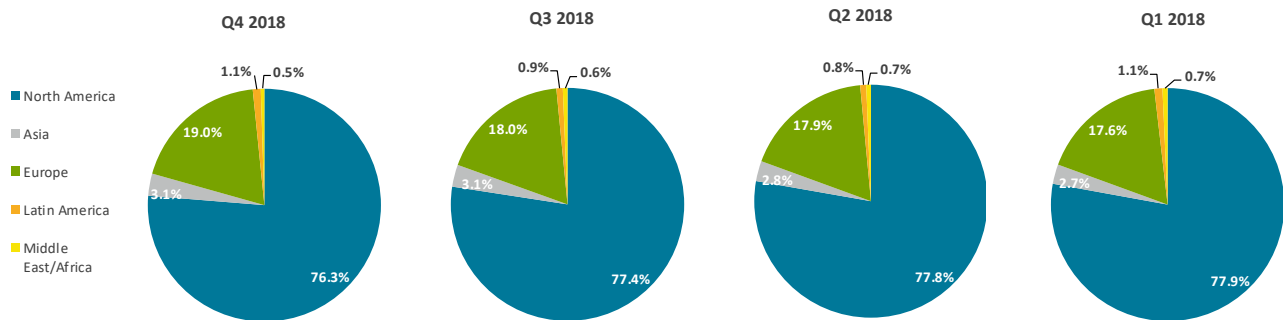


* Total portfolio company market value will not equal the Portfolio's market value due to a fund's cash holding and rounding estimates.

Geographic Exposure

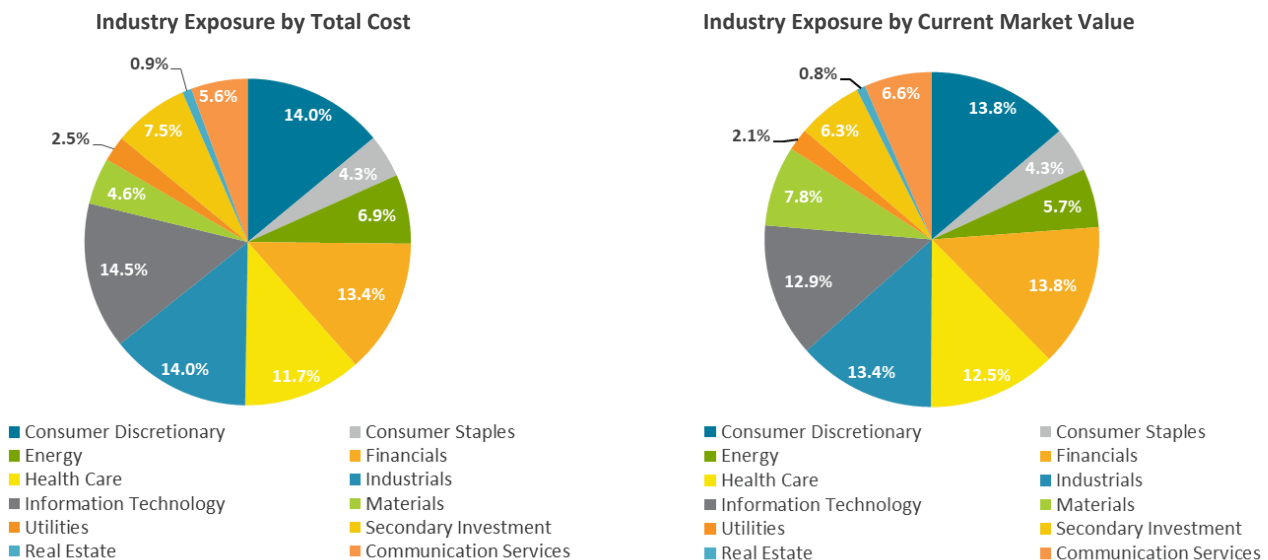
The following charts illustrate the Portfolio's current exposure by geography at the portfolio company level for the most recent four quarters. Please note that the geography is based upon the corporate headquarters of each portfolio company.

Geographic Exposure by Current Market Value



Industry Exposure

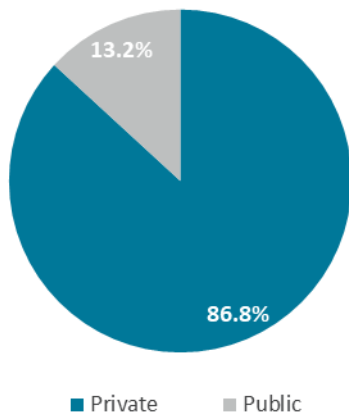
The following charts illustrate the Portfolio's total investment cost and current market value exposure by industry at the portfolio company level as of December 31, 2018. Please note that the Financials category includes investments in various debt securities.



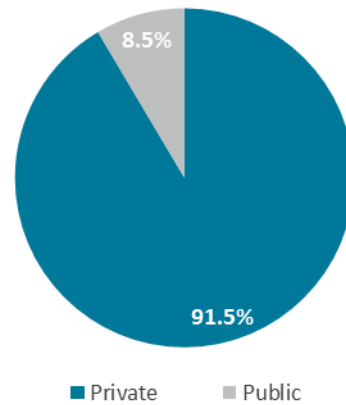
Public Market Exposure

As of quarter-end, publicly traded investments comprised 13.2% of the Portfolio’s total investment cost and 8.5% of the Portfolio’s exposed market value. The following charts illustrate the total investment and current market value exposure at the portfolio company level.

Public Market Exposure by Total Cost



Public Market Exposure Current Market Value



IV. Appendix

**New York City Employees' Retirement System
Private Equity Portfolio
As of December 31, 2018 (in USD)**

Vintage Year	Investment	First Drawdown	Committed Capital	Contributed Capital	Distributed Capital	Market Value	Multiple	IRR ¹	PME Return ²	PME Spread ³
Active Investments										
1999	Cypress Merchant Banking Partners II, L.P.	3/29/1999	\$ 45,172,972	\$ 53,944,269	\$ 50,584,154	\$ 26,160	0.94x	(1.2%)	5.5%	(6.7%)
1999	Lincolnshire Equity Fund II, L.P.	10/20/1999	18,397,347	19,261,466	37,375,300	747,159	1.98x	24.6%	6.9%	17.7%
2000	Solera Partners, L.P.	5/26/2000	19,999,779	26,592,283	41,635,156	309,080	1.58x	7.5%	6.1%	1.4%
2000	SCP Private Equity Partners II, L.P.	6/15/2000	27,442,463	30,827,225	10,819,873	1,679,008	0.41x	(11.7%)	5.2%	(16.9%)
2001	Apollo Investment Fund V, L.P.	4/13/2001	40,000,000	62,528,643	123,295,865	398,271	1.98x	38.6%	8.3%	30.3%
2001	RRE Ventures III, L.P.	7/6/2001	19,999,999	26,323,260	34,078,940	1,255,773	1.34x	5.5%	6.5%	(1.1%)
2002	Thomas, McNerney & Partners, L.P.	10/9/2002	20,000,000	20,000,000	10,058,105	2,287,471	0.62x	(7.7%)	10.2%	(17.9%)
2002	Landmark Equity Partners XI, L.P.	10/23/2002	55,000,000	52,284,778	80,358,502	134,818	1.54x	23.3%	7.5%	15.8%
2003	FS Equity Partners V, L.P.	1/20/2003	25,000,000	21,419,958	41,861,469	2,175,316	2.06x	15.5%	5.0%	10.5%
2003	Blackstone Capital Partners IV, L.P.	2/26/2003	34,418,762	38,818,072	98,629,819	1,487,941	2.58x	39.7%	7.6%	32.2%
2003	Ares Corporate Opportunities Fund, L.P.	4/1/2003	45,000,000	53,984,770	80,476,920	2,705,795	1.43x	13.4%	7.4%	6.0%
2004	Markstone Capital Partners, LP	1/30/2004	40,000,000	46,899,103	19,822,611	272,215	0.43x	(45.0%)	10.3%	(55.3%)
2004	FdG Capital Partners II LP	8/30/2004	35,000,000	37,714,408	43,600,092	2,318,139	1.22x	3.8%	6.7%	(2.9%)
2004	Paladin Homeland Security Fund (NY City), L.P.	9/27/2004	15,000,000	16,513,285	6,286,009	22,200	0.38x	(14.2%)	6.2%	(20.4%)
2004	Lincolnshire Equity Fund III, L.P.	10/1/2004	55,000,000	54,939,503	77,732,618	21,312,374	1.80x	28.6%	10.5%	18.0%
2004	Yucaipa American Alliance Fund I, LP	10/1/2004	90,000,000	114,094,892	109,686,461	34,175,568	1.26x	4.7%	10.0%	(5.3%)
2004	New York/Fairview Emerging Managers Fund, L.P.-Tranche 1	10/21/2004	32,000,000	32,862,069	30,406,595	6,987,684	1.14x	2.2%	8.5%	(6.3%)
2004	Aurora Equity Partners III L.P.	11/16/2004	50,000,000	54,126,788	87,435,881	375,525	1.62x	13.5%	9.9%	3.6%
2005	Palladium Equity Partners III, L.P.	11/12/2004	35,000,000	36,441,392	68,123,287	3,651,458	1.97x	16.4%	11.8%	4.6%
2005	New Mountain Partners II, L.P.	1/12/2005	46,451,615	42,071,397	81,045,604	729,212	1.94x	13.6%	4.4%	9.2%
2005	Prism Venture Partners V-A, L.P.	7/14/2005	30,000,000	30,762,722	19,062,102	502,585	0.64x	(8.7%)	8.3%	(17.0%)
2005	NB New York City Growth Fund	8/16/2005	34,819,694	34,819,694	36,646,515	6,814,632	1.25x	3.6%	4.5%	(0.9%)
2005	Snow Phipps Group, L.P.	9/7/2005	20,000,000	23,827,483	20,914,615	10,214,881	1.31x	6.0%	10.3%	(4.3%)
2005	Blackstone Mezzanine Partners II, L.P.	10/10/2005	21,346,698	23,488,553	31,752,958	282,079	1.36x	8.0%	3.8%	4.2%
2005	Psilos Group Partners III, L.P.	10/24/2005	35,000,000	37,205,819	17,948,760	24,602,881	1.14x	2.1%	6.9%	(4.8%)
2005	USPF II Institutional Fund, L.P.	11/23/2005	65,000,000	85,734,194	85,904,589	26,122,504	1.31x	4.5%	7.4%	(2.9%)
2005	JP Morgan Fleming (Tranche A)	12/21/2005	43,000,000	42,685,057	40,077,483	16,541,903	1.33x	5.3%	10.3%	(5.0%)
2006	Aisling Capital II, LP	1/12/2006	6,680,102	7,854,064	7,775,060	323,494	1.03x	0.6%	7.9%	(7.3%)
2006	InterMedia Partners VII, L.P.	1/20/2006	25,000,000	29,198,197	29,591,747	249,211	1.02x	0.3%	9.7%	(9.4%)
2006	Terra Firma Capital Partners III, L.P.	3/8/2006	52,774,580	53,467,890	15,185,274	8,868,491	0.45x	(9.8%)	9.6%	(19.5%)
2006	BDCM Opportunity Fund II, L.P.	3/29/2006	25,000,000	37,160,726	61,921,197	29,999,417	2.47x	18.0%	10.6%	7.4%
2006	Blackstone Capital Partners V, L.P.	4/13/2006	121,624,827	129,358,998	200,630,094	9,862,487	1.63x	8.0%	8.3%	(0.3%)
2006	Avista Capital Partners, L.P.	4/27/2006	45,000,000	59,165,902	72,036,625	1,281,514	1.24x	4.5%	6.3%	(1.7%)
2006	GSC Recovery III, L.P.	5/4/2006	25,000,000	28,228,414	33,208,011	248,689	1.19x	4.2%	6.8%	(2.5%)
2006	Apollo Investment Fund VI, L.P.	5/10/2006	90,000,000	115,838,240	163,387,090	10,599,024	1.50x	8.6%	7.5%	1.1%
2006	Landmark Equity Partners XIII, L.P.	5/11/2006	50,000,000	47,997,218	51,094,749	11,439,515	1.30x	5.3%	6.3%	(1.0%)
2006	Ares Corporate Opportunities Fund II, L.P.	5/23/2006	50,000,000	54,760,870	88,352,171	3,469,578	1.68x	13.1%	3.9%	9.3%
2006	Fairview Ventures Fund III, L.P.	6/29/2006	25,000,000	26,534,335	31,956,724	22,316,027	2.05x	14.0%	11.6%	2.5%
2006	Amersand 2006	8/14/2006	25,000,000	25,000,000	41,455,039	29,023,361	2.82x	16.7%	8.4%	8.3%
2006	CCMP Capital Investors II, L.P.	8/17/2006	30,000,000	32,921,953	56,637,777	26,578	1.72x	13.5%	10.6%	2.9%
2006	CLP 2014 (fka Perseus Partners VII)	8/31/2006	30,000,000	35,099,499	13,800,530	(33,330)	0.39x	(20.8%)	13.0%	(33.9%)
2006	Thomas, McNerney & Partners II, L.P.	11/30/2006	25,000,000	25,349,167	51,010,685	4,424,554	2.19x	16.4%	11.3%	5.0%
2006	Catterton Partners VI, L.P.	12/14/2006	45,000,000	51,243,868	74,926,969	21,054,786	1.87x	11.8%	8.5%	3.3%
2006	First Reserve Fund XI, L.P.	12/14/2006	45,000,000	47,820,682	29,053,614	2,492,247	0.66x	(9.3%)	6.9%	(16.1%)
2006	Arsenal Capital Partners II, LP	12/19/2006	22,500,000	27,416,444	43,593,587	6,978,037	1.84x	11.6%	11.7%	(0.0%)
2006	RRE Ventures IV, L.P.	12/19/2006	35,000,000	44,276,091	24,558,167	39,019,610	1.44x	5.5%	10.1%	(4.6%)
2006	MidOcean Partners III, L.P.	12/21/2006	58,234,777	69,389,384	121,028,871	20,527,916	2.04x	12.9%	9.5%	3.4%
2006	GF Capital Private Equity Fund, L.P.	12/22/2006	20,000,000	20,716,299	26,087,171	10,619,509	1.77x	12.6%	11.8%	0.7%
2006	The Fourth Civen Fund	1/22/2007	69,320,388	72,910,838	105,267,237	53,027	1.44x	7.4%	7.5%	(0.2%)
2007	Pegasus Partners IV, L.P.	1/29/2007	30,000,000	36,262,533	23,854,519	9,726,070	0.93x	(1.5%)	10.9%	(12.4%)
2007	FTVentures III, LP	3/1/2007	24,201,990	26,802,873	46,944,173	10,077,055	2.13x	15.8%	9.7%	6.1%
2007	Co-Investment Partners Europe, L.P.	3/19/2007	39,904,672	42,537,908	51,210,881	2,874,444	1.27x	4.7%	15.2%	(10.6%)
2007	Montreux Equity Partners IV, L.P.	3/27/2007	20,000,000	20,000,000	11,044,696	16,212,462	1.36x	4.9%	9.6%	(4.7%)
2007	Quaker BioVentures II, L.P.	3/30/2007	20,000,000	19,058,740	16,436,907	3,737,621	1.06x	1.3%	12.4%	(11.0%)
2007	SCP Vitalife Partners II Fund	4/13/2007	20,000,000	20,099,698	1,579	9,226,212	0.46x	(9.7%)	6.8%	(16.6%)
2007	Craton Equity Investors I, L.P.	4/30/2007	20,000,000	20,089,805	2,153,907	60,714	0.11x	(32.8%)	13.8%	(46.6%)
2007	Nautic Partners VI, L.P.	5/14/2007	30,000,000	33,794,398	72,914,122	6,513,877	2.35x	18.9%	11.8%	7.1%
2007	Constellation Venture Capital III, L.P.	5/22/2007	25,000,000	28,575,035	13,995,719	7,420,272	0.75x	(4.8%)	16.2%	(21.0%)
2007	United States Power Fund III, L.P.	6/28/2007	65,000,000	76,903,642	77,361,055	19,251,719	1.26x	4.2%	9.2%	(5.0%)
2007	Halyard Capital Fund II, L.P.	7/2/2007	25,000,000	21,563,143	26,187,697	4,777,760	1.44x	6.6%	9.6%	(3.0%)
2007	Carlyle Partners V, L.P.	7/6/2007	70,000,000	72,144,879	116,231,821	11,747,995	1.77x	13.7%	10.8%	3.0%
2007	PCG Clean Energy & Technology Fund (East), LLC	7/6/2007	90,000,000	81,429,594	16,191,797	23,726,255	0.49x	(9.9%)	12.8%	(22.7%)
2007	GSO Capital Opportunities Fund LP	7/16/2007	45,000,000	67,377,298	95,627,284	734,445	1.43x	17.4%	10.1%	7.3%
2007	StarVest Partners II, L.P.	8/1/2007	25,000,000	25,159,680	5,254,221	15,741,251	0.83x	(2.8%)	13.5%	(16.3%)
2007	New Mountain Partners III, L.P.	8/9/2007	100,000,000	101,866,058	135,606,735	65,930,753	1.98x	13.3%	12.0%	1.3%
2007	Vista Equity Partners Fund III, L.P.	10/3/2007	30,000,000	32,148,312	73,923,519	7,476,378	2.53x	27.2%	9.8%	17.5%
2007	Trilantic Capital Partners IV L.P.	10/22/2007	69,028,637	72,038,053	106,260,854	8,565,423	1.59x	13.9%	10.9%	3.0%

New York City Employees' Retirement System
Private Equity Portfolio
As of December 31, 2018 (in USD)

Vintage Year	Investment	First Drawdown	Committed Capital	Contributed Capital	Distributed Capital	Market Value	Multiple	IRR ¹	PME Return ²	PME Spread ³
2007	RLJ Equity Partners Fund I, L.P.	11/30/2007	20,000,000	21,952,327	22,531,306	10,698,679	1.51x	9.4%	13.2%	(3.8%)
2007	Pine Brook Capital Partners, L.P.	1/11/2008	30,000,000	34,045,068	38,882,924	5,473,548	1.30x	7.3%	11.7%	(4.5%)
2008	Paladin III (NY City), L.P.	1/8/2008	30,000,000	40,209,181	28,310,127	33,682,345	1.54x	9.1%	11.0%	(1.9%)
2008	Relativity Fund, L.P.	1/17/2008	10,877,829	10,773,614	5,272,425	251	0.49x	(11.2%)	11.7%	(22.9%)
2008	Apollo Investment Fund VII, L.P.	1/28/2008	100,000,000	121,201,006	190,036,127	17,832,027	1.72x	22.9%	13.3%	9.5%
2008	NGN BioMed Opportunity II, L.P.	2/11/2008	20,000,000	19,151,821	13,346,209	10,503,161	1.25x	3.4%	14.4%	(11.0%)
2008	Riverstone/Carlyle Global Energy & Power Fund IV, L.P.	3/3/2008	45,000,000	52,385,374	42,200,947	17,903,802	1.15x	3.8%	13.2%	(9.4%)
2008	Yucaipa American Alliance Fund II, LP	3/28/2008	120,000,000	163,744,290	127,209,094	139,219,221	1.63x	9.4%	11.3%	(1.9%)
2008	Levine Leichtman Capital Partners IV, L.P.	4/8/2008	35,000,000	37,477,097	59,216,356	4,271,786	1.69x	18.5%	14.0%	4.5%
2008	New York/Fairview Emerging Managers Fund, L.P.-Tranche 2	5/28/2008	45,000,000	44,659,324	45,168,182	33,875,023	1.77x	13.9%	12.0%	1.9%
2008	Yucaipa Corporate Initiatives Fund II, LP	6/23/2008	42,092,788	41,298,333	14,986,804	23,759,920	0.94x	(1.0%)	11.3%	(12.3%)
2008	Leeds Equity Partners V, L.P.	7/28/2008	60,000,000	57,812,601	70,077,924	58,163,650	2.22x	18.9%	12.1%	6.7%
2008	GI Partners Fund III L.P.	7/29/2008	45,000,000	48,618,007	75,587,958	767,714	1.57x	13.0%	15.3%	(2.3%)
2008	Ares Corporate Opportunities Fund III, L.P.	7/30/2008	75,000,000	90,475,323	132,270,631	53,881,134	2.06x	20.4%	11.4%	9.0%
2008	GCM Grosvenor NYCERS Emerging Manager Fund, L.P.	8/22/2008	116,737,374	141,352,700	122,120,383	78,899,886	1.42x	10.6%	12.2%	(1.6%)
2008	First Reserve Fund XII, L.P.	8/25/2008	45,000,000	49,986,866	24,517,527	9,437,989	0.68x	(8.9%)	16.5%	(25.4%)
2008	Landmark Equity Partners XIV, L.P.	9/19/2008	109,120,000	106,061,756	116,596,760	22,610,144	1.31x	9.8%	13.9%	(4.1%)
2008	Crestview Partners II, L.P.	10/1/2008	50,000,000	57,957,601	74,238,021	18,754,968	1.60x	12.5%	14.2%	(1.7%)
2008	Avista Capital Partners II, L.P.	11/5/2008	75,000,000	97,206,003	150,159,298	13,874,126	1.69x	15.1%	14.5%	0.6%
2008	Blue Wolf Capital Fund II, L.P.	11/14/2008	25,000,000	27,167,904	31,424,990	6,287,845	1.39x	7.8%	15.4%	(7.6%)
2008	Bridgepoint Europe IV	11/14/2008	26,657,389	26,986,187	28,558,918	10,626,977	1.45x	9.3%	14.4%	(5.1%)
2008	Aisling Capital III, LP	11/20/2008	14,000,000	15,799,465	26,564,929	7,270,307	2.14x	24.5%	13.5%	11.0%
2008	Onex Partners III LP	12/10/2008	75,000,000	81,909,329	102,987,897	32,635,391	1.66x	12.6%	14.3%	(1.7%)
2009	Welsh, Carson, Anderson & Stowe XI, L.P.	2/10/2009	40,000,000	40,000,000	51,763,285	14,705,252	1.66x	12.8%	14.1%	(1.4%)
2009	FS Equity Partners VI, L.P.	7/27/2009	32,500,000	32,591,447	67,284,905	22,585,860	2.76x	23.2%	14.1%	9.1%
2009	Lincolnshire Equity Fund IV, L.P.	8/5/2009	27,500,000	29,281,720	33,330,527	12,173,881	1.55x	11.0%	12.8%	(1.7%)
2009	Lexington Capital Partners VII, L.P.	12/3/2009	50,000,000	44,200,303	54,152,921	15,332,141	1.57x	14.3%	13.7%	0.7%
2010	Snow Phipps II, L.P.	1/8/2010	30,000,000	33,615,280	25,315,478	19,296,428	1.33x	9.0%	12.4%	(3.4%)
2010	JP Morgan Fleming (Tranche B)	2/26/2010	35,000,000	35,632,039	24,766,455	26,603,107	1.44x	8.8%	12.2%	(3.4%)
2010	Trident V, L.P.	4/29/2010	110,000,000	123,749,328	119,597,237	78,780,495	1.60x	11.2%	11.6%	(0.4%)
2011	Blackstone Capital Partners VI, L.P.	1/24/2011	120,000,000	123,182,670	84,331,549	109,202,553	1.57x	13.3%	10.6%	2.7%
2011	Ampersand 2011	3/11/2011	25,000,000	25,000,000	29,457,057	40,409,799	2.79x	22.0%	11.2%	10.8%
2011	BDCM Opportunity Fund III, L.P.	4/8/2011	45,000,000	64,508,843	29,258,559	56,305,845	1.33x	8.3%	10.4%	(2.1%)
2011	AXA Secondary Fund V B L.P.	6/16/2011	120,000,000	98,871,804	136,167,348	22,504,757	1.60x	15.8%	14.3%	1.6%
2011	Wellspring Capital Partners V, L.P.	7/1/2011	40,000,000	40,305,719	44,647,130	18,114,587	1.56x	15.9%	11.1%	4.8%
2011	EQT VI, L.P.	8/1/2011	106,251,554	110,120,265	114,754,502	70,707,827	1.68x	14.2%	11.0%	3.2%
2011	Pegasus Partners V, L.P.	8/16/2011	20,789,916	24,860,600	15,051,753	27,851,311	1.73x	14.8%	12.1%	2.7%
2011	BC European Capital IX	9/19/2011	131,683,803	142,220,148	94,145,124	102,099,323	1.38x	10.1%	11.8%	(1.7%)
2011	American Securities Partners VI, L.P.	11/18/2011	80,000,000	85,921,998	128,938,416	35,450,758	1.91x	21.9%	12.2%	9.8%
2011	Vista Equity Partners Fund IV, L.P.	11/30/2011	100,000,000	103,797,474	117,335,988	85,218,706	1.95x	18.4%	12.0%	6.4%
2012	Warburg Pincus Private Equity XI, L.P.	5/24/2012	110,000,000	117,033,488	76,821,004	104,764,338	1.55x	14.0%	10.2%	3.8%
2012	Trilantic Capital Partners V L.P.	9/20/2012	70,000,000	73,479,754	62,150,455	47,144,732	1.49x	18.3%	9.8%	8.5%
2012	Palladium Equity Partners IV, L.P.	10/10/2012	55,000,000	45,016,347	25,299,135	41,709,245	1.49x	14.1%	10.4%	3.7%
2012	Ares Corporate Opportunities Fund IV, L.P.	11/5/2012	125,000,000	127,798,742	66,640,947	113,378,614	1.41x	12.0%	8.5%	3.6%
2012	Green Equity Investors VI, L.P.	11/30/2012	120,000,000	128,707,341	76,897,154	129,564,214	1.60x	16.0%	9.4%	6.5%
2012	Platinum Equity Capital Partners III, L.P.	1/14/2013	100,000,000	81,908,272	115,783,299	36,612,831	1.86x	36.9%	11.6%	25.3%
2012	ACON Equity Partners III, L.P.	6/21/2013	11,000,000	10,018,558	3,830,506	7,797,827	1.16x	4.1%	10.0%	(5.9%)
2012	NYCERS - 2012 Emerging Manager Program ⁴	6/21/2013	139,600,000	132,048,792	46,757,840	143,626,164	1.44x	14.5%	7.5%	7.0%
2013	Carlyle Partners VI, L.P.	7/3/2013	75,000,000	77,459,561	30,606,907	68,730,027	1.28x	11.3%	7.4%	3.8%
2014	Carlyle Partners VI, L.P. (Side Car)	9/23/2014	8,250,000	5,875,624	341,796	5,672,392	5.34x	122.1%	7.5%	114.7%
2013	Landmark Equity Partners XV, L.P.	10/30/2013	75,000,000	51,079,540	35,120,780	31,394,504	1.30x	14.4%	8.5%	6.0%
2013	Apollo Investment Fund VIII, L.P.	12/11/2013	140,000,000	125,921,816	36,674,980	118,983,160	1.24x	10.2%	7.6%	2.7%
2013	Landmark - NYC Fund I, L.P.	12/24/2013	25,000,000	20,321,162	12,494,466	17,281,487	1.47x	18.0%	6.6%	11.3%
2014	CVC Capital Partners VI, L.P.	2/18/2014	123,469,249	120,360,141	31,966,787	124,662,446	1.30x	14.3%	6.2%	8.1%
2013	Crestview Partners III, L.P.	3/3/2015	66,000,000	39,733,151	7,166,524	43,705,708	1.28x	14.0%	4.9%	9.1%
2013	Crestview Partners III (Co-Investment B), L.P.	12/17/2015	22,000,000	20,146,182	1,085,940	21,638,679	1.13x	6.8%	7.3%	(0.6%)
2014	Olympus Growth Fund VI, L.P.	1/21/2014	75,000,000	61,208,377	25,426,675	55,546,262	1.32x	15.3%	8.5%	6.7%
2014	ASF VI B L.P.	5/9/2014	83,000,000	58,411,689	29,095,600	52,626,612	1.40x	13.3%	8.2%	5.1%
2014	ASF VI B NYC Co-Invest L.P.	5/9/2014	27,000,000	20,697,356	15,819,861	12,685,057	1.38x	12.8%	6.8%	6.0%
2014	Vista Equity Partners Fund V, L.P.	9/8/2014	125,000,000	143,525,706	112,370,924	137,505,060	1.74x	22.7%	8.0%	14.7%
2014	Lexington Capital Partners VIII, L.P.	1/8/2015	110,000,000	75,798,527	28,736,810	74,935,015	1.37x	24.0%	5.7%	18.3%
2015	Siris Partners III, L.P.	5/4/2015	31,000,000	26,031,066	14,162,811	16,112,619	1.16x	9.6%	7.3%	2.3%
2015	Centerbridge Capital Partners III, L.P.	5/21/2015	23,700,000	13,255,419	4,359,744	12,021,022	1.24x	11.0%	6.8%	4.2%
2015	Welsh, Carson, Anderson & Stowe XII, L.P.	8/26/2015	78,500,000	53,563,129	10,929,590	71,561,597	1.54x	26.8%	5.3%	21.5%
2015	Warburg Pincus Private Equity XII, L.P.	12/21/2015	205,500,000	144,654,547	6,868,427	162,246,902	1.17x	12.0%	2.7%	9.4%
2015	ASF VII B L.P.	12/29/2015	94,500,000	30,824,481	2,157,765	37,303,031	1.28x	18.6%	2.2%	16.4%

**New York City Employees' Retirement System
Private Equity Portfolio
As of December 31, 2018 (in USD)**

Vintage Year	Investment	First Drawdown	Committed Capital	Contributed Capital	Distributed Capital	Market Value	Multiple	IRR ¹	PME Return ²	PME Spread ³
2015	ASF VII B NYC Co-Invest L.P.	12/29/2015	46,000,000	22,308,913	1,838,774	33,725,727	1.59x	51.2%	(4.9%)	56.1%
2015	EQT VII, L.P.	1/8/2016	162,987,448	138,231,505	18,086,777	157,417,553	1.27x	17.3%	3.8%	13.5%
2015	American Securities Partners VII, L.P.	1/19/2016	80,000,000	50,984,429	9,406,486	34,984,871	0.87x	(9.4%)	6.8%	(16.2%)
2015	Bridgepoint Europe V L.P.	2/8/2016	62,090,514	56,670,066	8,076,223	60,600,350	1.21x	14.8%	4.8%	10.0%
2015	Bridgepoint Europe V Co-Invest	8/16/2016	18,352,272	17,018,173	1,702,176	25,404,424	1.59x	39.8%	2.0%	37.8%
2015	NYCERS - 2015 Emerging Manager Program ⁵	2/22/2016	190,400,000	52,035,672	2,145,350	59,234,300	1.18x	21.0%	(2.6%)	23.6%
2016	Vista Equity Partners Fund VI, L.P.	6/28/2016	158,000,000	145,781,665	39,016,048	145,832,017	1.27x	16.8%	5.1%	11.6%
2016	Platinum Equity Capital Partners IV, L.P.	3/21/2017	111,000,000	70,042,467	17,431,507	74,670,136	1.31x	NM	NM	N/A
2018	Platinum Equity Capital Partners IV Co-Investment, L.P.	9/7/2018	16,000,000	11,200,000	-	6,576,384	0.59x	NM	NM	N/A
2016	Apax IX USD, L.P.	5/12/2017	127,000,000	56,233,233	1,204,490	66,321,928	1.20x	NM	NM	N/A
2017	Green Equity Investors VII, L.P.	5/12/2017	95,000,000	43,669,218	376,189	46,886,733	1.08x	NM	NM	N/A
2017	Ares Corporate Opportunities Fund V, L.P.	6/22/2017	95,000,000	40,164,175	1,635,473	37,838,342	0.98x	NM	NM	N/A
2017	KKR Americas Fund XII, L.P.	10/31/2017	158,000,000	54,411,941	1,041,587	52,270,306	0.98x	NM	NM	N/A
2017	BC European Capital X	12/14/2017	89,700,933	44,279,911	-	41,709,122	0.94x	NM	NM	N/A
2017	BCEC X Co-Investment	3/24/2017	36,146,653	21,173,810	-	20,673,760	0.98x	NM	NM	N/A
2017	Warburg Pincus Financial Sector, L.P.	1/5/2018	104,000,000	27,243,156	5,304,000	18,547,347	0.88x	NM	NM	N/A
2018	Platinum Equity Small Cap Fund, L.P.	6/27/2018	41,000,000	1,999,744	-	1,435,957	0.72x	NM	NM	N/A
2018	EQT VIII, L.P.	8/10/2018	111,472,588	979,900	-	(384,147)	(0.39x)	NM	NM	N/A
2018	EQT VIII Co-Investment	11/2/2018	40,491,249	6,040,864	-	6,070,527	1.00x	NM	N/A	N/A
2018	CVC Capital Partners VII, L.P.	12/4/2018	156,518,649	24,563,857	-	26,316,987	1.07x	NM	NM	N/A
2018	Grain Communications Opportunity Fund II, L.P.	12/26/2018	21,000,000	4,177,446	-	3,611,305	0.86x	NM	NM	N/A
2017	Palladium Equity Partners V, L.P.	2/11/2019	33,333,333	-	-	(1,233,471)	-	N/A	N/A	N/A
2018	Vista Equity Partners Fund VII, L.P.	2/13/2019	177,500,000	-	-	(147,370)	-	N/A	N/A	N/A
2018	Welsh, Carson, Anderson & Stowe XIII, L.P.	3/14/2019	89,000,000	-	-	-	-	N/A	N/A	N/A
2019	Siris Partners IV, L.P.	3/15/2019	89,000,000	-	-	(565,112)	-	N/A	N/A	N/A
2018	Bridgepoint Europe VI	4/1/2019	121,745,453	-	-	(1,060,950)	-	N/A	N/A	N/A
2018	Bridgepoint Europe VI Co-Invest	5/7/2019	30,484,294	-	-	-	-	N/A	N/A	N/A
2018	Apollo Investment Fund IX, L.P.	N/A	256,000,000	-	-	(2,693,802)	-	N/A	N/A	N/A
2018	Crestview Partners IV, L.P.	N/A	71,000,000	-	-	-	-	N/A	N/A	N/A
2018	Crestview Partners IV (Co-Investment), L.P.	N/A	23,666,667	-	-	-	-	N/A	N/A	N/A
2018	KKR European Fund V (USD)	N/A	83,250,000	-	-	-	-	N/A	N/A	N/A
2019	Lexington Capital Partners IX	N/A	106,500,000	-	-	-	-	N/A	N/A	N/A
Total Portfolio⁶			\$ 10,932,556,982	\$ 9,136,138,984	\$ 8,497,666,775	\$ 4,588,004,563	1.43x	9.7%	9.4%	0.3%

¹ Performance for funds with less than eight (8) quarters of activity is not meaningful.

² Russell 3000 PME+ or Long-Nickels PME for investments with no distributed capital as of quarter-end.

³ PME Spread is calculated as IRR minus PME Return.

⁴ NYCERS - 2012 Emerging Manager Program total commitment amount of \$139.6 million has been fully committed as of June 30, 2015.

⁵ NYCERS - 2015 Emerging Manager Program total commitment amount includes the full amount allocated to the Program, of which \$158.8 million has been committed as of June 3, 2019.

⁶ Total Portfolio includes liquidated investments.

Past performance is not necessarily indicative of future results and there can be no assurance that the fund will achieve comparable results or avoid substantial losses.

Note: IRRs presented are interim estimates and may not be indicative of the ultimate performance of fund investments due to a number of factors, such as the lack of industry valuation standards and the differences in the investment pace and strategy of various funds. Until a fund is liquidated, typically over 10 to 12 years, the IRR is only an interim estimated return. The IRR calculated in early years of a fund is not meaningful given the J-curve effect. The actual IRR performance of any fund is not known until all capital contributed and earnings have been distributed to the investor. The IRRs contained in this report are calculated by StepStone Group LP ("StepStone"), a consultant to the New York City Employees' Retirement System, based on information provided by the general partners (e.g. cash flows and valuations). The IRR calculations and other information contained in this report have not been reviewed or confirmed by the general partners. The result of the IRR calculation may differ from that generated by the general partner or other limited partners. Differences in IRR calculations can be affected by cash-flow timing, the accounting treatment of carried interest, fund management fees, advisory fees, organizational fees, other fund expenses, sale of distributed stock, and valuations.

**New York City Employees' Retirement System
Subsequent Commitments
As of December 31, 2018 (in USD)**

Vintage Year	Investment	First Drawdown	Committed Capital	Contributed Capital	Distributed Capital	Market Value	Multiple	IRR ¹	PME Return ²	PME Spread ³
Commitments Closed Subsequent to as of Date										
2018	Warburg Pincus Global Growth, L.P.	3/26/2019	\$ 125,500,000	\$ -	\$ -	\$ -	N/A	N/A	N/A	N/A
2019	ASF VIII B L.P.	3/15/2019	174,000,000	-	-	-	N/A	N/A	N/A	N/A
2019	ASF VIII B NYC Co-Invest L.P.	3/15/2019	87,000,000	-	-	-	N/A	N/A	N/A	N/A
2019	Lindsay Goldberg V, L.P.	N/A	87,000,000	-	-	-	N/A	N/A	N/A	N/A
2019	Lexington Co-Invest Partners B, L.P.	N/A	35,500,000	-	-	-	N/A	N/A	N/A	N/A
Total Commitments Closed Subsequent to as of Date			\$ 509,000,000	\$ -	\$ -	\$ -	N/A	N/A	N/A	N/A

¹ Performance for funds with less than eight (8) quarters of activity is not meaningful.

² Russell 3000 PME+

³ PME Spread is calculated as IRR minus PME Return.

Note: IRRs presented are interim estimates and may not be indicative of the ultimate performance of fund investments due to a number of factors, such as the lack of industry valuation standards and the differences in the investment pace and strategy of various funds. Until a fund is liquidated, typically over 10 to 12 years, the IRR is only an interim estimated return. The IRR calculated in early years of a fund is not meaningful given the J-curve effect. The actual IRR performance of any fund is not known until all capital contributed and earnings have been distributed to the investor. The IRRs contained in this report are calculated by StepStone Group LP ("StepStone"), a consultant to the New York City Employees' Retirement System, based on information provided by the general partners (e.g. cash flows and valuations). The IRR calculations and other information contained in this report have not been reviewed or confirmed by the general partners. The result of the IRR calculation may differ from that generated by the general partner or other limited partners. Differences in IRR calculations can be affected by cash-flow timing, the accounting treatment of carried interest, fund management fees, advisory fees, organizational fees, other fund expenses, sale of distributed stock, and valuations.

Real Estate Quarterly Report (Public):

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM

REAL ESTATE PORTFOLIO

PERFORMANCE MEASUREMENT REPORT

Fourth Quarter 2018



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All valuations are based on current values calculated in accordance with StepStone's Valuation Policies and may include both realized and unrealized investments. Due to the inherent uncertainty of valuation, the stated value may differ significantly from the value that would have been used had a ready market existed for all of the portfolio investments, and the difference could be material. The long-term value of these investments may be lesser or greater than the valuations provided.

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An investment involves a number of risks and there are conflicts of interest.

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All data is as of December 31, 2018, unless otherwise noted.

PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS. ACTUAL PERFORMANCE MAY VARY.

I. EXECUTIVE SUMMARY

PERFORMANCE SUMMARY

StepStone Group LP (“StepStone”) was engaged by NYCERS to provide Real Estate services for prospective investment opportunities, as well as portfolio management on NYCERS’s portfolio (the “Portfolio”). Inception date of the Portfolio was on December 2002.

The following table illustrates the Portfolio's since inception investment performance as of December 31, 2018 as well as the change in performance from the prior quarter-end and the end of the same quarter in the prior year. The Portfolio’s since inception net Internal Rate of Return (“IRR”) now stands at 8.0% at December 31, 2018, which is down 8 basis points quarter-over-quarter.

As of December 31, 2018. In USD millions.

	DECEMBER 31, 2018	SEPTEMBER 30, 2018	DECEMBER 31, 2017	Quarterly Change	Yearly Change
Number of Managers	47	47	47	0	0
Number of Investments	81	79	73	2	8
Number of Active Investments	74	72	67	2	7
Number of Active Managers	43	43	44	0	-1
Committed Capital ¹	\$5,295.3	\$5,185.9	\$4,756.3	\$109.4	\$539.0
Contributions	\$4,528.3	\$4,405.2	\$4,178.7	\$123.1	\$349.5
Distributions	\$3,115.3	\$2,886.6	\$2,619.2	\$228.7	\$496.0
Market Value	\$3,449.1	\$3,498.4	\$3,313.2	-\$49.3	\$135.9
Total Gain/(Loss)	\$2,016.9	\$1,979.8	\$1,753.6	\$37.1	\$263.2
Unfunded Commitment ²	\$1,369.3	\$1,401.9	\$1,107.9	-\$35.0	\$261.4
Total Exposure ³	\$4,818.5	\$4,900.3	\$4,421.1	-\$81.8	\$397.4
Net DPI	0.69x	0.66x	0.63x	0.03x	0.06x
TVM Gross of Fees ^{5,8}	1.55x	1.61x	1.52x	-0.06x	0.03x
IRR Gross of Fees ^{6,8}	10.5%	10.6%	10.5%	-0.1%	0.0%
TVM Net of Fees ^{5,7,8}	1.45x	1.45x	1.42x	0.00x	0.03x
IRR Net of Fees ^{6,7,8}	8.0%	8.1%	8.0%	-0.1%	0.0%

¹Committed Capital represents original commitments to partnership investments.

²Unfunded Commitment represents the aggregate remaining commitments to partnership investments.

³Total Exposure represents the sum of Market Value and Unfunded Commitment.

⁴DPI, or Distributed to Paid-In Multiple, is a performance metric that measures distributions received relative to capital interest. DPI is calculated as Distributions divided by Contributions.

⁵TVM, or Total Value Multiple, is a performance metric that measures total value created by the Portfolio relative to Contributions, without consideration for time. TVM is calculated as Total Value, which is comprised of Market Value plus Distributions, divided by Contributions.

⁶IRR, or Internal Rate of Return, is a performance metric that is calculated based on the Portfolio's daily cash flows and market value as of quarter-end. IRR is net of fund manager's fees, expenses, and carried interest.

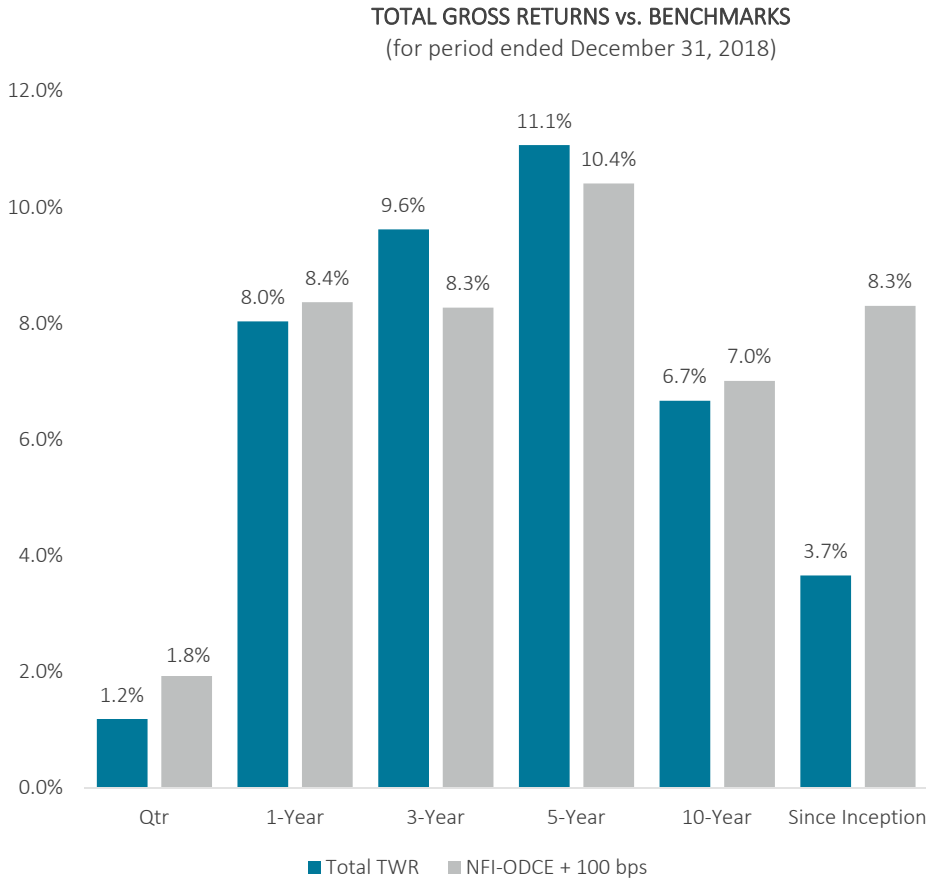
⁷TVM and IRR Net of fees represent TVM and IRR net of fees.

⁸DPI, TVM and IRR are since inceptions values up until the current quarter.

Past performance is not necessarily indicative of future results and there can be no assurance that the fund will achieve comparable results or avoid substantial losses.

Portfolio Performance vs. Benchmarks

The Portfolio's Total Time Weighted Returns ("TWR") are measured against the NFI-ODCE benchmark plus 100 basis points. The following graph illustrates the Portfolio's total TWR versus the benchmark as of December 31, 2018



The NCREIF Fund Index – Open End Diversified Core Equity ("NFI-ODCE") is a capitalization-weighted return index with an inception date of December 31, 1977. The NFI-ODCE contains data from 25 core, open-end funds investing in the United States. For the current quarter, the NFI-ODCE contained performance data from 2,922 investments, totaling over \$252.6 billion of gross real estate assets. The NFI-ODCE differs from the NCREIF Property Index because it includes leverage, reports returns gross and net of fees, and all reporting funds must qualify according the NFI-ODCE diversification and other standards (e.g., fund-level leverage below 40%).

The referenced benchmark is shown for general market comparison and is not meant to represent any particular fund. An investor cannot directly invest in the NFI-ODCE index. Moreover, the benchmark does not reflect commissions or fees that may be charged to an investments product based on the index, which may materially affect the performance data presented.

Portfolio Diversification

Allocations by Strategy

	Market Value		Unfunded Commitment		Total Exposure	
	\$	% of Total	\$	% of Total	\$	% of Total
USD in millions						
Core	\$2,201.0	64.4%	\$370.4	27.1%	\$2,571.4	51.8%
Non-Core	\$1,248.2	35.6%	\$998.9	72.9%	\$2,247.1	48.2%
Total	\$3,449.1	100.0%	\$1,692.3	100.0%	\$5,122.2	100.0%
Emerging	\$64.6	1.9%	\$115.3	6.8%	\$179.9	3.5%
Debt	\$218.1	6.4%	\$379.2	22.4%	\$597.3	11.7%

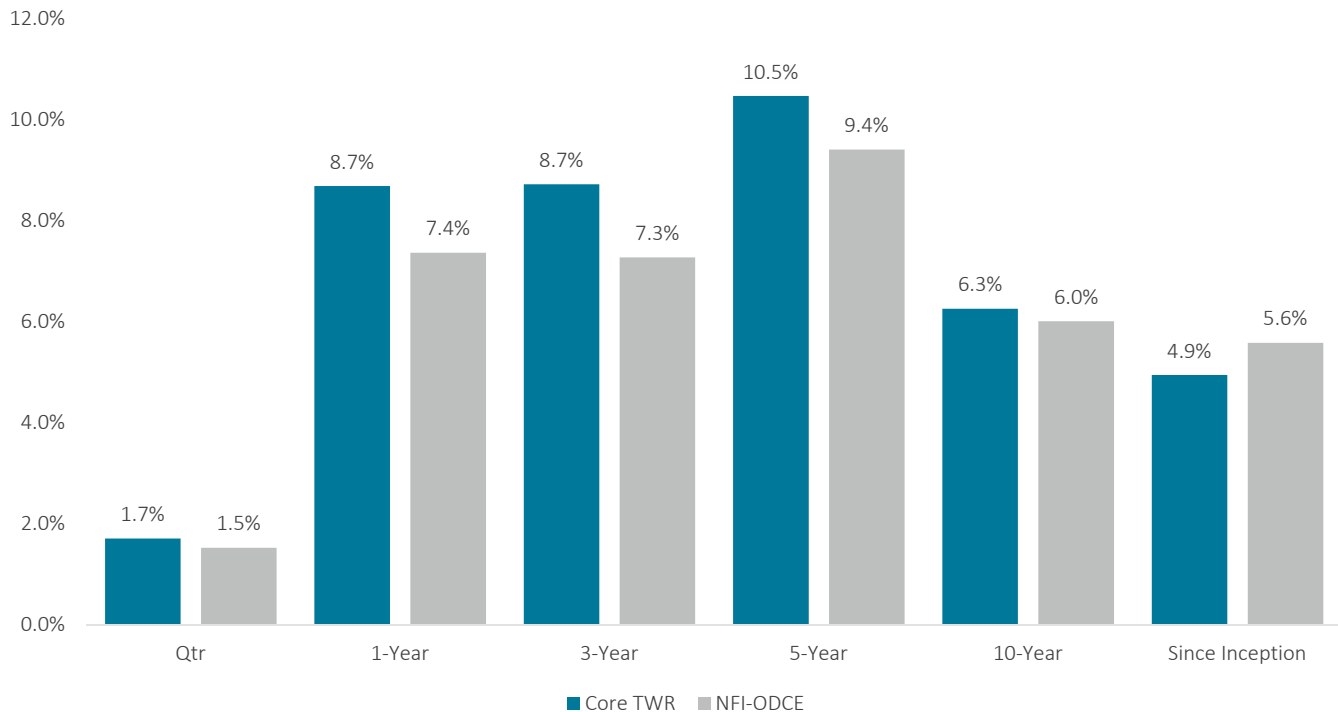
Allocations by Region

	Market Value		Unfunded Commitment		Total Exposure	
	% of Total	\$	\$		\$	
USD in millions						
North America	90.5%	\$3,103.5	\$1,531.3		\$4,634.8	
Europe	7.3%	\$250.8	\$123.7		\$374.5	
Asia	1.5%	\$52.1	\$25.7		\$77.8	
Rest of World	0.7%	\$23.5	\$11.6		\$35.1	
Total	100.0%	\$3,449.1	\$1,692.3		\$5,122.2	

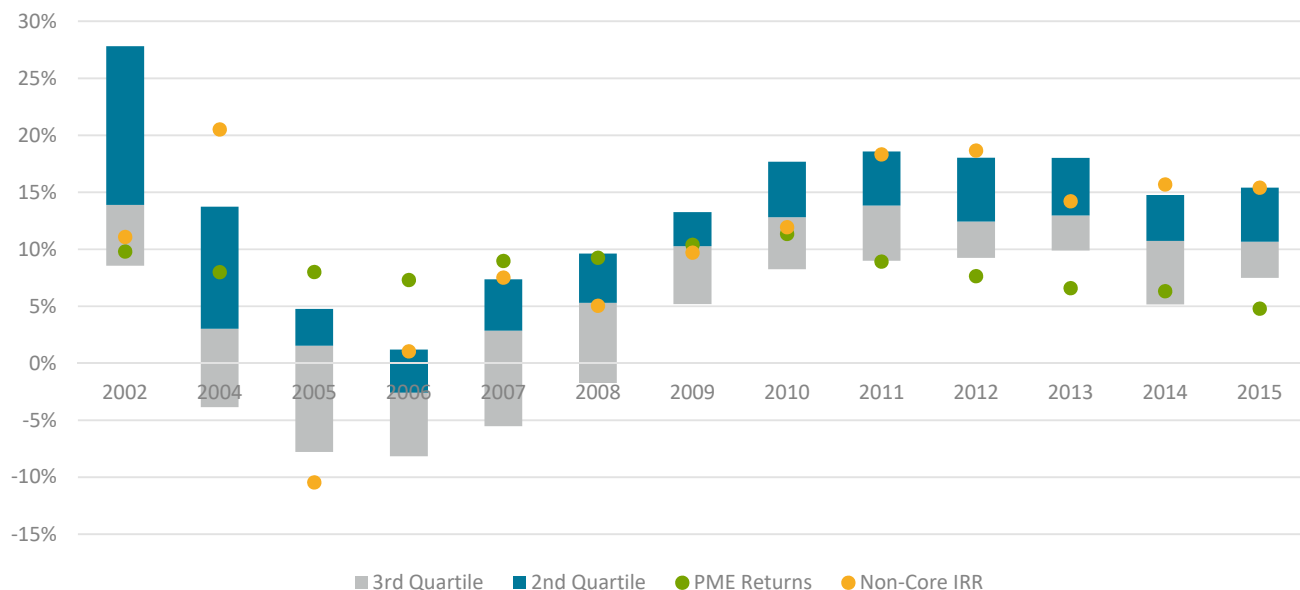
* The allocations are based on net real estate value of each investment reported by the managers.

Core and Non-Core Performance vs. Benchmarks

The following graphs measure the Portfolio's Core and Non-Core performance against chosen benchmarks. The Portfolio's Core Time Weighted Returns are benchmarked against the NFI-ODCE. The Portfolio uses IRR by vintage year as a measurement of its Non-Core performance. A public market equivalent ("PME") of 60% Russell 3000 and 40% Barclays Capital Aggregate Bond Index is used to measure the Portfolio's Non-Core Performance. The PME is calculated using the Portfolio cash flows to produce a return that would have been earned if the Portfolio cash flows were invested in the PME.



Non-Core IRR vs PME Returns



Portfolio Profile

New York City Retirement Systems has allocated 9% of the total plan to Real Estate. The Real Estate Portfolio's objective is to generate a total net return that exceeds the Benchmark NFI-ODCE +100 bps total net return measured over full market cycles.

Portfolio Statistics (for period ended December 31, 2018)	
Total Plan Assets:	\$61,679,000,000
Total Real Estate Allocation (%):	9.0
Total Real Estate Allocation (\$):	\$5,551,110,000
Total Real Estate Market Value:	\$3,449,103,431
Real Estate Unfunded Commitments:	\$1,369,348,745
Total Real Estate Exposure:	\$4,818,479,176
Number of Managers:	47
Number of Investments:	81

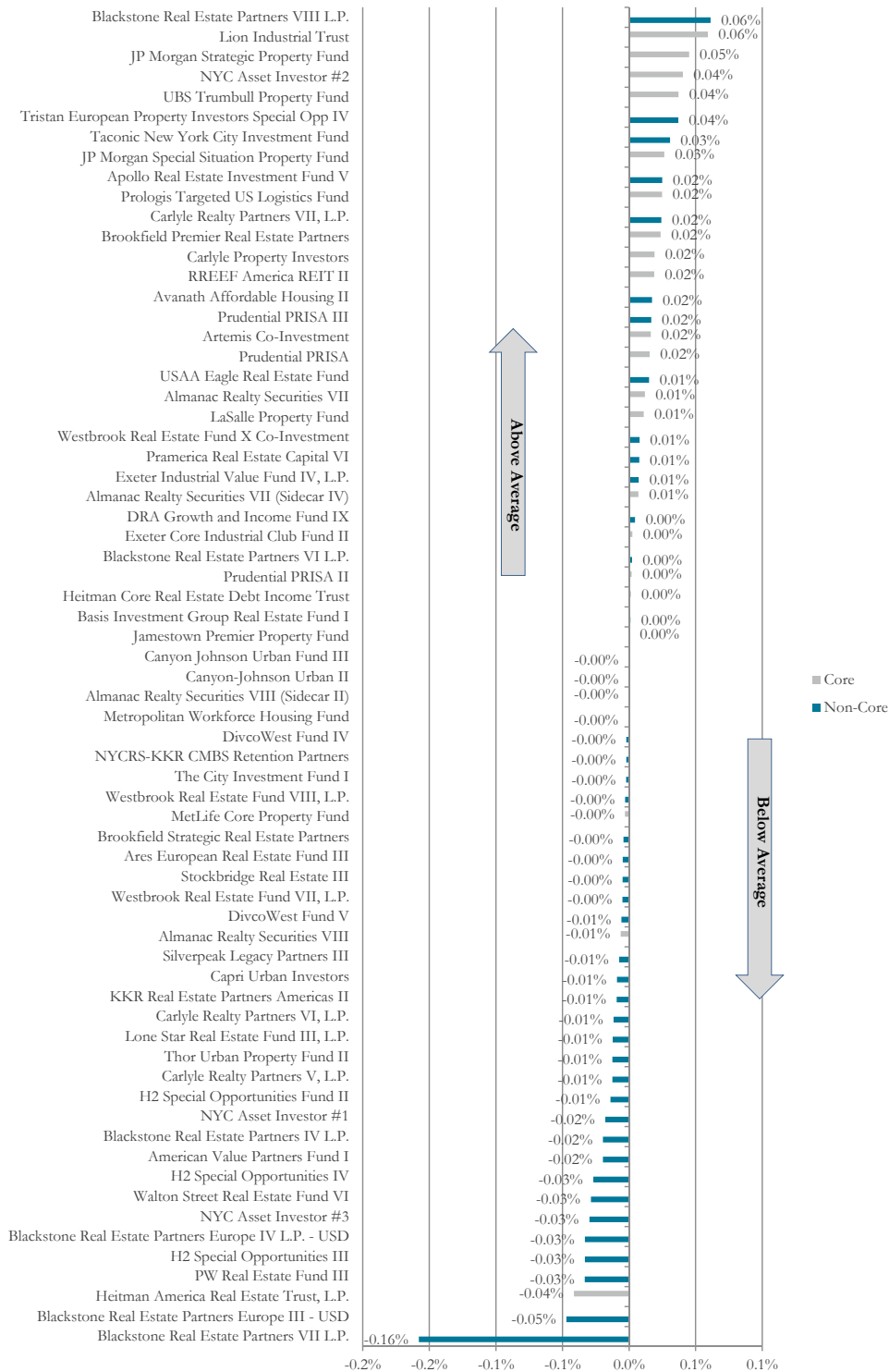
Net Returns (for period ended December 31, 2018)	
Quarter TWR:	1.2%
1-Year TWR:	8.0%
2-Year TWR:	9.8%
3-Year TWR:	9.6%
5-Year TWR:	11.1%
10-Year TWR:	6.7%
15-Year TWR:	9.9%
ITD TWR:	3.7%
ITD Net IRR:	8.0%
Benchmark NFI-ODCE + 100 bps	8.3%
ITD Net Equity Multiple:	1.45

Portfolio Allocation

NYC ERS - Real Estate	
Total Plan Assets (\$):	\$61,679,000,000
Real Estate Allocation (%):	9.0
Real Estate Allocation (\$):	\$5,551,110,000
Real Estate Core Allocation (%):	5.0
Real Estate Core Allocation (\$):	\$3,083,950,000
Real Estate Non-Core Allocation (%):	4.0
Real Estate Non-Core Allocation (\$):	\$2,467,160,000
Style Sector Allocation	
Funded (Market Value) Core/Core Plus Portfolio:	\$2,200,973,411
Funded (Market Value) Non-Core Portfolio:	\$1,248,157,020
Unfunded Core/Core Plus Portfolio:	\$370,429,730
Unfunded Non-Core Portfolio:	\$998,919,014
Funded (Market Value) and Committed Statistics	
Core/Core Plus Portfolio:	\$2,200,973,411
Non-Core Portfolio:	\$1,248,157,020
Total Portfolio:	\$3,449,130,431
Core/Core Plus Committed:	\$1,880,239,957
Non-Core Committed:	\$3,071,773,813
Total \$ Commitment:	\$4,952,013,770
Core/Core Plus Total Exposure:	\$2,571,403,141
Non-Core Total Exposure:	\$2,247,076,034
Total Portfolio Exposure:	\$4,818,479,176
% Total Exposure on Real Estate Allocation:	92.3%
% Total Exposure on Total Plan Assets:	8.3%
Funded (Market Value) Statistics	
% Core/Core Plus Funded (Market Value) of Total Plan Assets:	3.6%
% Non-Core Funded (Market Value) of Total Plan Assets:	2.0%
% Funded (Market Value) of Total Plan Assets:	5.6%
% Funded (Market Value) of Total Real Estate Allocation:	61.8%

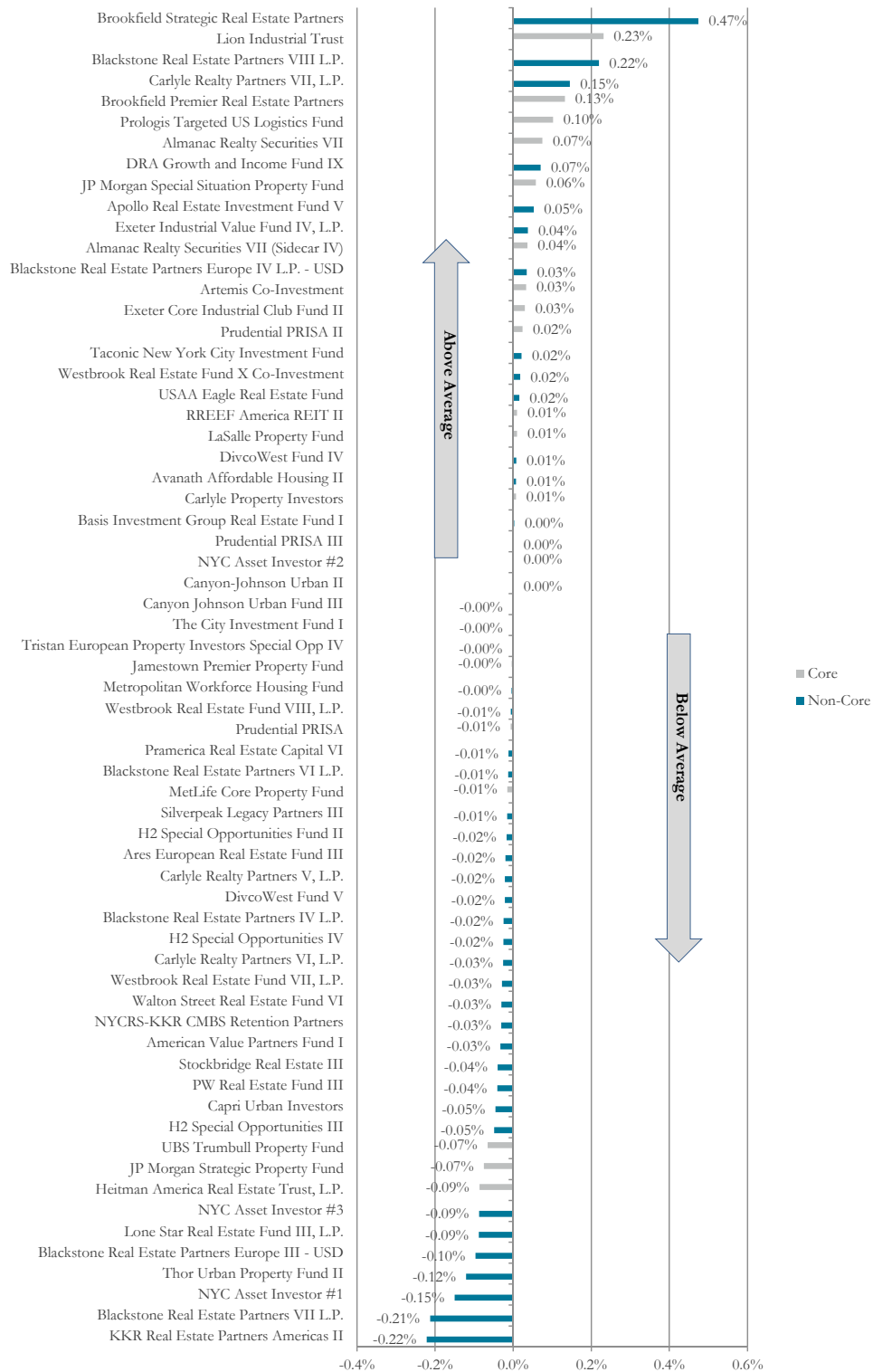
Fund Contribution to Portfolio Return

Percent Contribution to Current-Quarter Return



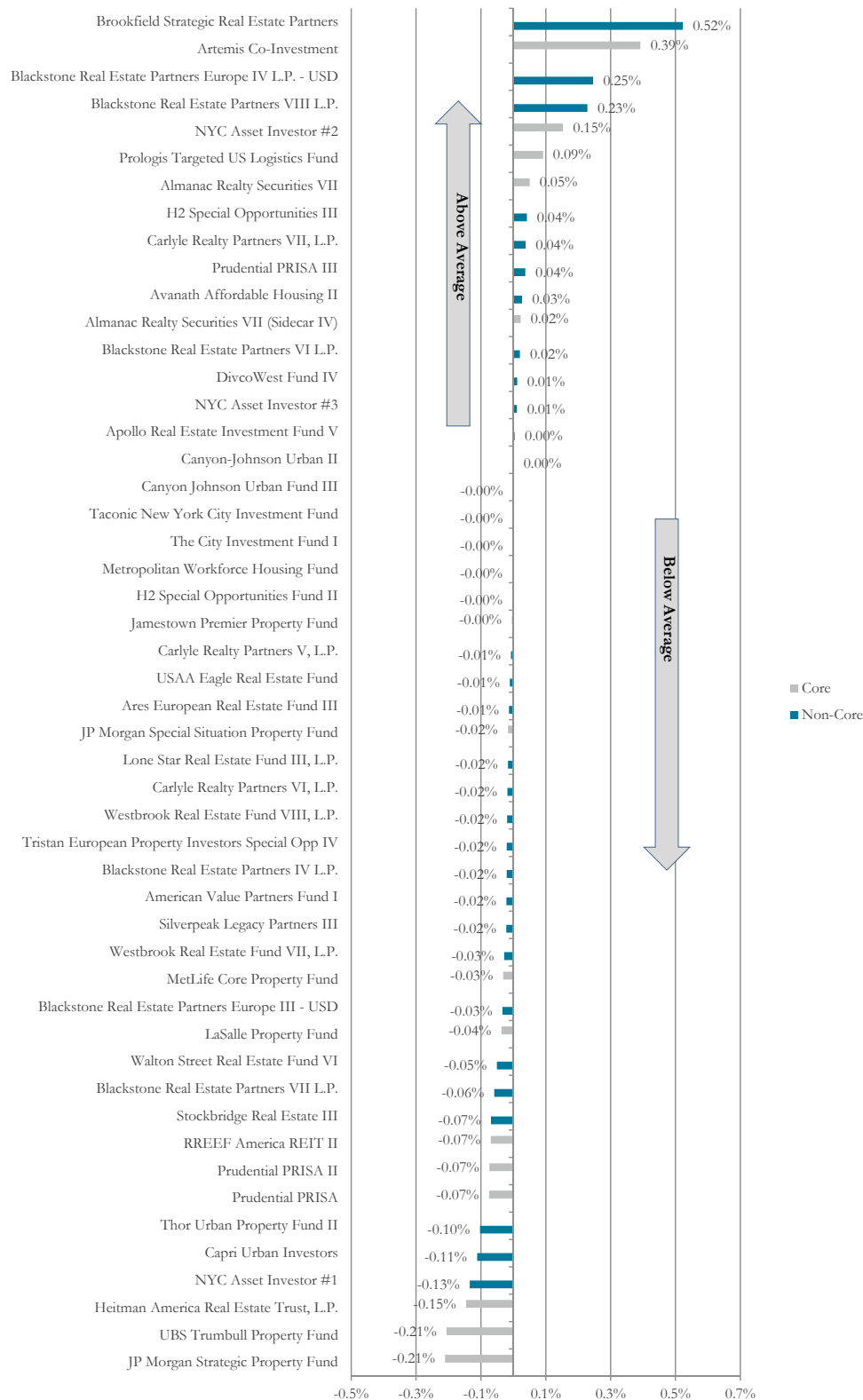
* Excluding liquidated investments

Percent Contribution to 1-Year Return



* Excluding liquidated investments

Percent Contribution to 3-Year Return



* Excluding liquidated investments

Portfolio Compliance Checklist

Category	Requirement	Portfolio Status
Benchmark	Comprised of NFI-ODCE plus 100 basis points	Portfolio returns outperform the benchmark over the three and five-year time periods.
Portfolio Composition	Core/Core Plus (5% of RE Allocation)	The portfolio is funded (market value) and committed at 92.3% of real estate allocation with a portfolio composition of 51.8% core/core plus and 48.2% non-core. Based on market value, the Portfolio is 64.4% core/core plus and 35.6% non-core
	Non-Core (4% of RE Allocation)	
Real Estate Allocation	Target of 9%	Funded (market value) and committed dollars place the portfolio at 8.3% of total plan assets.
	Currently Funded at 5.6%	
Property Type Diversification	Up to 40% Multifamily Up to 35% Industrial Up to 45% Office Up to 35% Retail Up to 25% Hotel Up to 20% Other	All property type allocations are in compliance.
Geographic Diversification	Diversified geographically Max 25% Ex-U.S.	All geographic allocations are in compliance.
LTV	65.0%	The leverage (37.2%) is in compliance.
Manager Exposure	15% of real estate allocation	All manager allocations are in compliance.



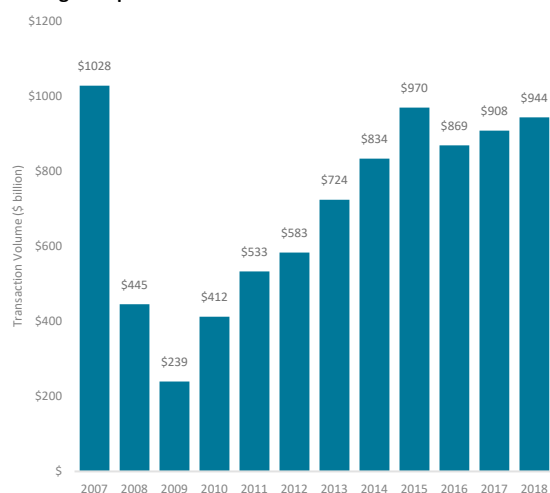
StepStone Real Estate

Market Commentary

Winter 2018

Year-over-year Global real estate transaction volume grew 3.9% in 2018 to \$944 billion, led by a 17.9% increase in North America volume. The Global level is -2.7% below the current cycle peak of \$970 billion in 2015 and -8.2% below the prior cycle high of \$1.0 trillion in 2007.

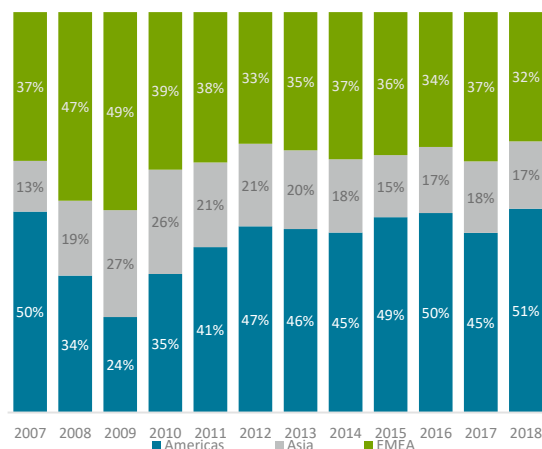
Figure 1| Annual Global Transaction Volume



Source: Real Capital Analytics (12/31/18)

North America posted 51% of Global volume, marking the first time in the current cycle for North America to represent a majority of transaction activity. Ongoing concerns over Brexit contributed to a -10.0% decline in Europe, Middle East and Africa (EMEA) to \$305 billion. US - China Trade War concerns and China's recent implementation of capital controls contributed to Asia's volume decline of -2.3% to \$159 billion.

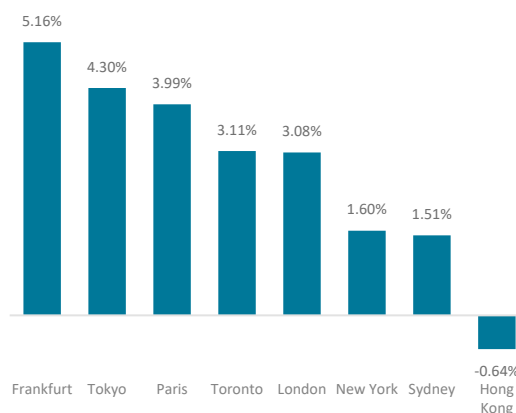
Figure 2| Regional Share of Global Transaction Volume



Source: Real Capital Analytics (12/31/18)

The investor demand demonstrated by the increased transaction volume has led to increased valuations across most developed markets. These increased valuations occurred as many central banks were tightening leading to spread compression globally in the fourth quarter. The cap rate spread in Frankfurt was highest among major global developed markets, ending the year at 5.16%. In contrast, Hong Kong ended the year with the lowest cap rate spread at -0.64%. The cap rate spread for New York Office was 1.60% as of December 31, 2018.

Figure 3| Office Cap Rate Spread to 10 Year Sovereign Debt

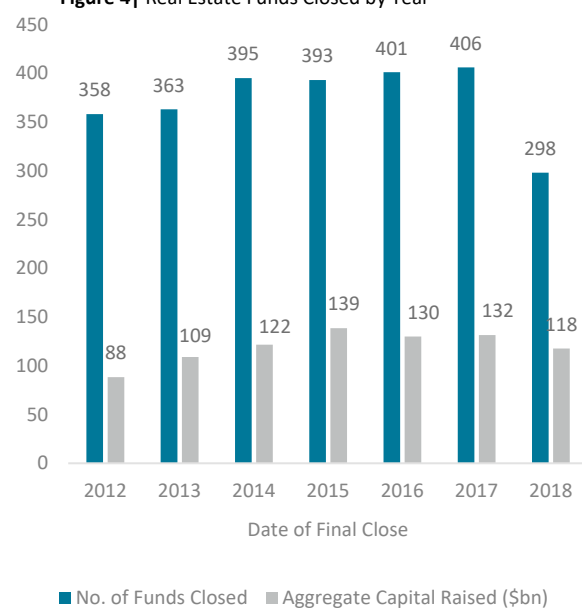


Source: Bloomberg (12/31/18)

Fundraising and Dry Powder

2018 continued the trend of large managers getting larger and limited partners reducing the number of manager relationships. The number of funds closed in 2018 (298) was the lowest level in over five years and down 25% relative to 2017 (406). At \$118 billion, the amount of capital raised in 2018 was the lowest level since 2013.

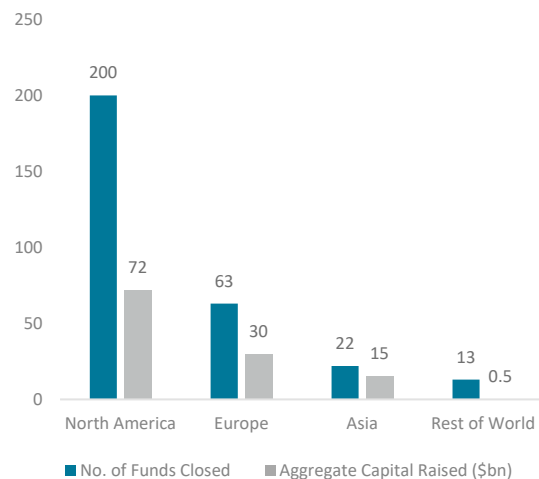
Figure 4 | Real Estate Funds Closed by Year



Source: Preqin (12/31/18).

The two hundred funds targeting North America received \$72 billion, which was 61% of all capital closed in 2018. The sixty-three Europe and twenty-two Asia targeted funds received \$30 billion and \$15 billion, respectively.

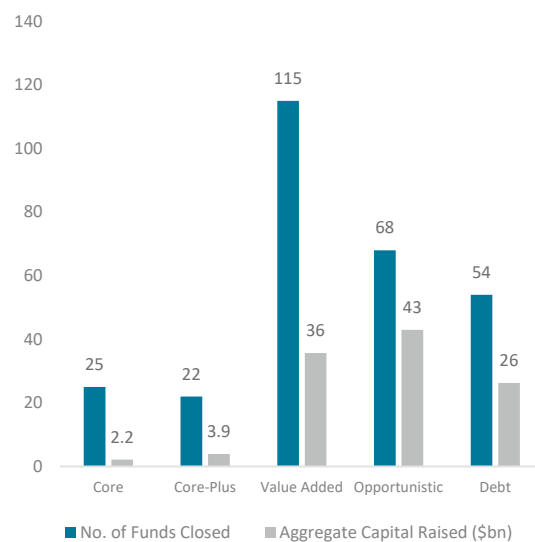
Figure 5 | Real Estate Funds Closed by Region



Source: Preqin (12/31/18).

More Value-Added (115) strategies closed than Opportunistic (68) in 2018. However, the Opportunistic funds closed on more capital than the Value-Added funds, with \$43 billion and \$36 billion, respectively. There was \$26 billion raised by the fifty-four debt funds that closed in 2018.

Figure 6 | Real Estate Funds Closed by Strategy



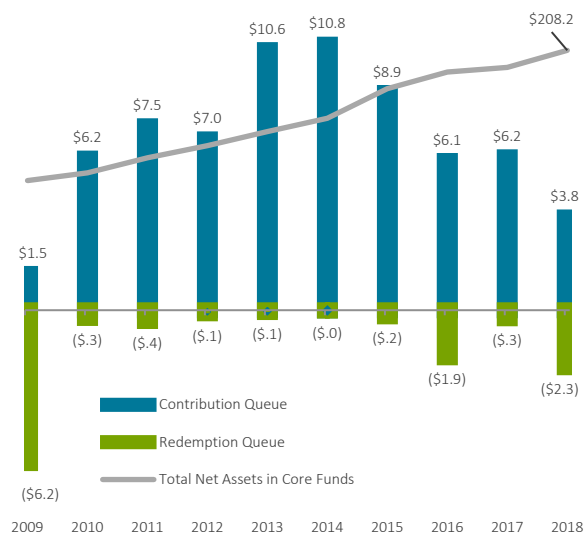
Source: Preqin (12/31/18).

Shift from Core and Gateway Markets

Contributions to US Core Open-Ended funds has decreased over the past few years as investors react to heightened valuations and lower yields. The aggregate contribution queue for the funds in the NCREIF ODCE Index ended 2018 at \$3.8 billion, which is about one-third of the peak levels in 2014 when there were \$10.8 billion of committed capital waiting to be called.

Of the twenty-five ODCE funds, fourteen have contribution queues and seven have redemption queues. One fund in particular makes up \$2.2 billion of the \$2.3 billion redemption queue.

Figure 7 | Core Contribution and Redemption Queues (\$bil.)

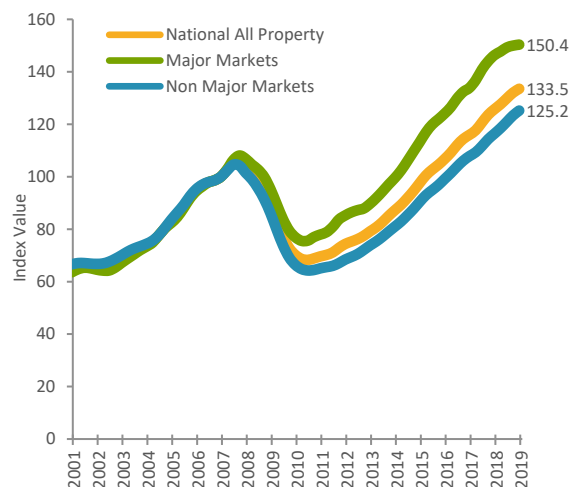


Source: StepStone Real Estate (12/31/18).

As investor demand diminishes a bit in the Core segment, there is a related movement of capital into secondary and tertiary markets. The Major Markets of Boston, New York, Washington DC, Chicago, San Francisco and Los Angeles have

seen values grow slower than the Non-Major Markets for each of the last six quarters.

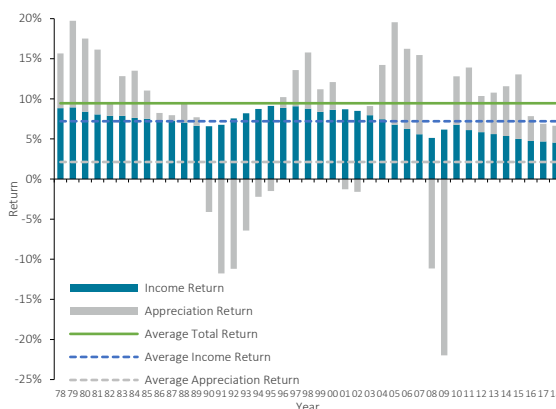
Figure 8 | Major vs Non-Major Market



Source: Moody's Commercial Property Price Index (12/31/18).

With falling yields and slowing appreciation, one-year total returns for NCREIF in 2018 of 6.72% were below the long-term historical income returns of 7.21%.

Figure 8 | Core Contribution and Redemption Queues



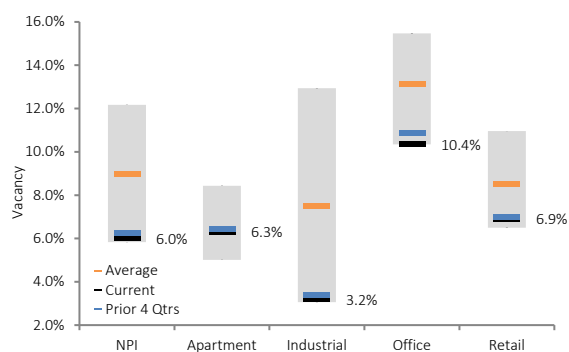
Source: NCREIF (12/31/18).

US Fundamentals Remain Strong

All four of the main NCREIF property types produced positive returns for the four quarters ending in December. Industrials led with 14.3%, followed by Office (6.8%), Apartments, (6.1%) and Retail (2.2%). Concerns over store closings and e-commerce led to year-over-year value declines of -2.4% for the Retail sector. These same factors contributed to a 9.1% appreciation gain for Industrials.

Vacancy has fallen below the year ago levels for all major property types in the NCREIF Property Index ("NPI"). Industrial (3.2%) and Office (10.4%) vacancies are at 10-year lows.

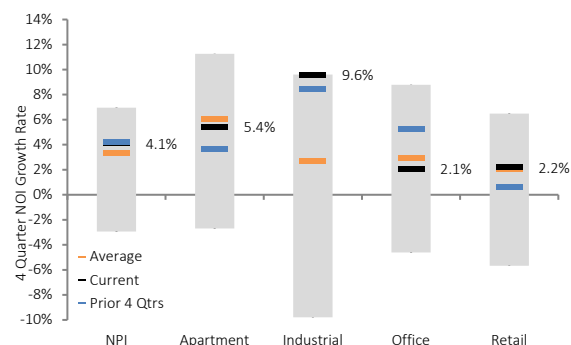
Figure 9 | US Vacancy



Source: NCREIF (12/31/18). Data reflect the prior 40 quarters.

NOI Growth for Industrials (9.6%) is at a 10-year high. Other sectors are at, or below, the long-term average level for NOI Growth.

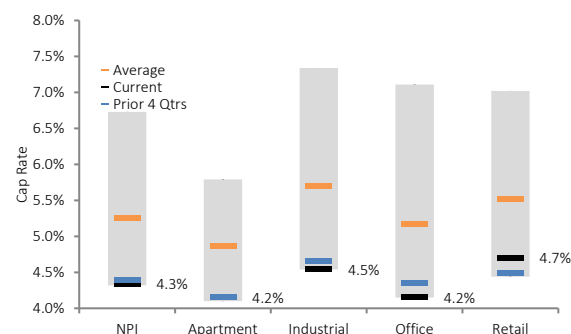
Figure 10 | Four Quarter NOI Growth



Source: NCREIF (12/31/18). Data reflect the prior 40 quarters.

NPI cap rates are near record lows (4.3%) and have compressed below year ago levels for all property types except Retail (4.7%). Industrial (4.5%) and Office (4.2%) cap rates are at 10-year lows.

Figure 11 | Cap Rates



Source: NCREIF (12/31/18). Data reflect the prior 40 quarters.

US Apartment Sector

Apartment supply has exceeded demand for eight straight quarters, which is causing vacancy to rise and rents to fall.

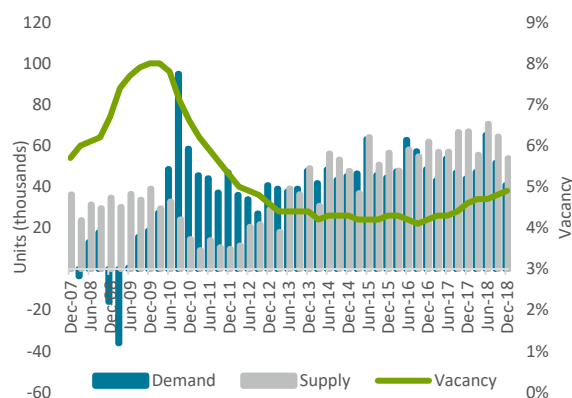
There were a little more than 53,000 new Apartment units completed across the US in the fourth quarter, the lowest quarterly level in over two years. The four quarter total units supplied through 4Q18 was about 244,000, which is 1.2% below the four-quarter level through 4Q17.

Demand in the quarter was around 41,000 units, which is the lowest level in over five years.

Vacancy has risen to 4.9% through December, up 30 basis points from the 4.6% one year prior. Vacancy is much tighter for the BC-Class units (3.6%) compared to A-Class units (6.2%).

Absorption for the quarter was highest in New York (4.5%), Denver (3.7%) and Austin (3.3%).

Figure 12 | Apartment Supply & Demand



Source: REIS (12/31/18).

Rent growth for A-Class units in the quarter was 4.6%, which is inline with the year ago growth levels. Given the tighter vacancy, BC-Class units are seeing accelerating rent growth. Rent growth in the quarter for the non-luxury

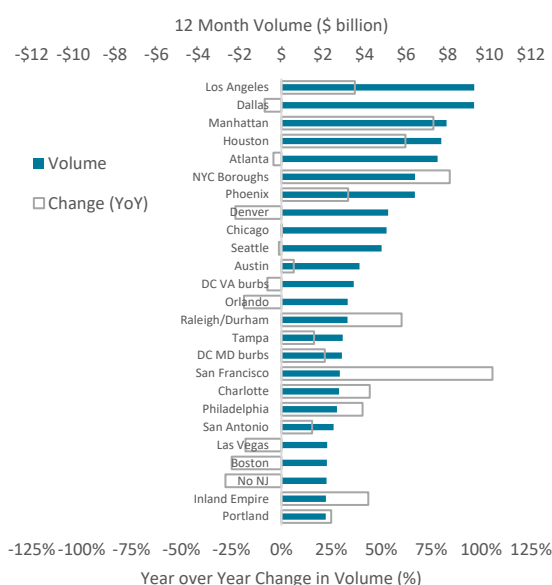
segment was 4.4%, which up 30+% from the year ago period.

Rent growth was highest in Phoenix (8.4%), Atlanta (7.5%) and Denver (7.0%).

With \$51 billion of transaction activity in the quarter, the Apartment segment led all property types and was 31% of activity for the quarter. Volume in the quarter was up 12% compared to the same quarter a year ago.

Los Angeles and Dallas were virtually even for annualized volume through the end of the quarter, though Dallas is coming off even higher levels in late 2017. If combined, Manhattan and the NYC Burroughs would have led the transaction activity for the quarter. San Francisco posted the highest year-over-year growth in transaction volume (105%). Among the ten largest markets by volume, Denver saw the largest year-over-year decline (-23%).

Figure 13 | Apartment Transaction Activity



Source: Real Capital Analytics (12/31/18).

US Industrial Sector

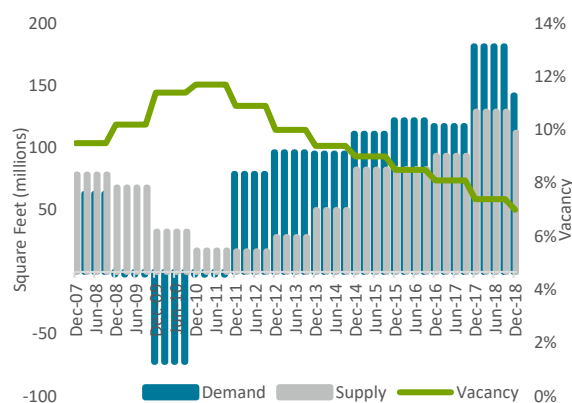
Industrial demand has exceeded supply since 2011, which has resulted in tight vacancy and strong NOI growth.

After growing for five straight years, demand growth is beginning to slow. The 128 million square feet of demand is 13% below the year ago level. That said, supply has not kept up with the demand that has come from online retailers and logistics firms. Reis forecasts that new supply will step down over the next few years.

Vacancy has fallen to 7.0% through December, down 40 basis points from the 7.4% one year prior. Vacancy is tighter for modern logistics facilities and in-fill locations that can serve “last mile” distribution. Vacancy is tightest in the west coast markets of Los Angeles (4.7%), Orange County (6.6%) and Seattle (6.7%).

Absorption for the quarter was highest in Denver (2.9%), Riverside (2.8%) and Indianapolis (2.6%).

Figure 14 | Industrial Supply & Demand



Source: REIS (12/31/18).

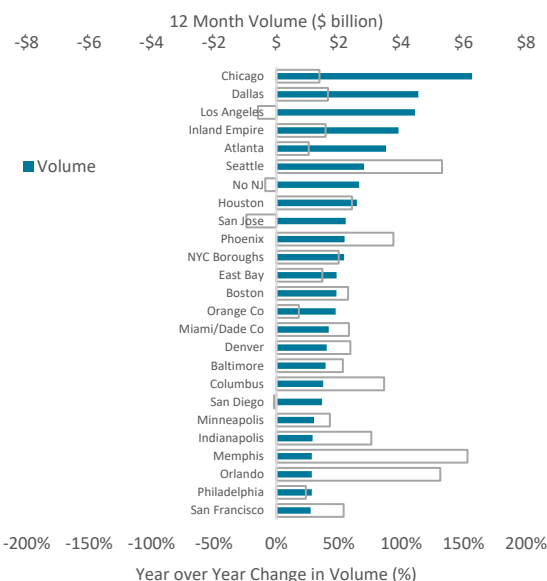
Year-over-year rent growth of 2.8% was slightly ahead of the five-year average of 2.5% from 2012 to 2017. That said, the industrial rent growth was down from the 5.7% level posted for

the year ago period as demand comes off slightly. Rent growth was highest in Fort Worth (4.2%), Riverside (4.1%) and Chicago (4.0%).

With \$27 billion of transaction activity in the quarter, the Industrial segment has overcome the retail sector as the third largest sector behind apartment and office. Volume in the quarter was up 25% compared to the same quarter a year ago.

Chicago had the highest amount of annualized volume through the end of the quarter, followed by Dallas and Los Angeles. Among the ten largest markets by volume, Los Angeles saw the largest year-over-year decline (-15%) and Seattle saw the largest increase (132%). Memphis, the headquarters of logistics leader UPS, saw the highest year-over-year volume growth (153%).

Figure 15 | Industrial Transaction Activity



Source: Real Capital Analytics (12/31/18).

US Office Sector

Despite record employment levels, Office vacancy is rising as supply has exceeded demand for 10 of the past 11 quarters.

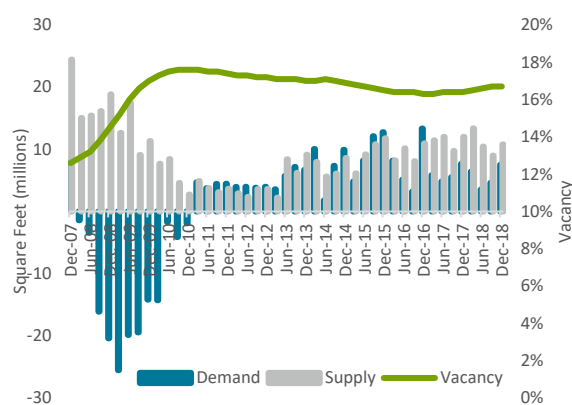
There were 11 msf new Office space completed across the US in the fourth quarter, which is below the 12 msf delivered in the same period a year ago. The one-year total supplied through 4Q18 was about 43 msf, which is slightly below the four-quarter level of 45 msf through 4Q17.

The calendar year demand level in 2018 was the lowest level since 2013.

Vacancy has risen to 16.7% through December, up 30 basis points from the 16.4% one year prior. Vacancy is tighter for the A-Class space (15.3%) compared to B-Class space (18.4%).

Absorption for the quarter was highest in the tech driven markets of San Jose (5.1%), San Francisco (4.6%) and Denver (2.7%).

Figure 16 | Office Supply & Demand



Source: REIS (12/31/18).

Rent growth for A-Class space in the quarter was 2.6%, which is above the year ago growth level of 1.5%. Rental growth in BC-Class space was 2.4%, compared to 1.8% for the year ago.

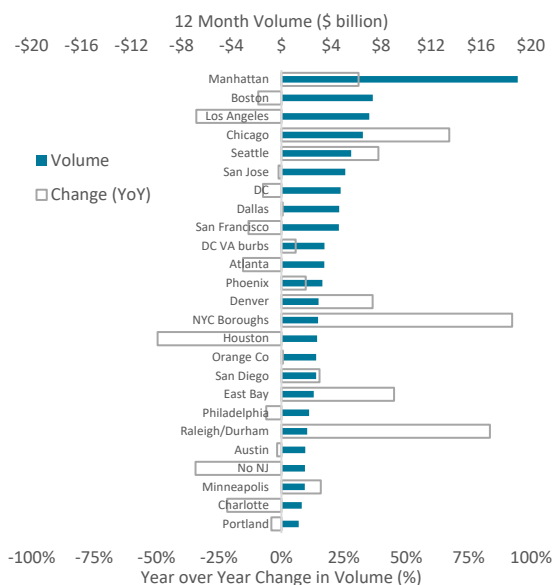
Rent growth was highest in San Jose (5.0%), Orange County (4.0%) and Denver (3.7%).

With \$41 billion of transaction activity in the quarter, the Office segment was behind only Apartments and was 24% of activity for the quarter. Volume in the quarter was nearly flat, growing only 1.2% compared to a year ago.

Large Office markets of Boston and Los Angeles saw significant volume declines of -9% and -34%, respectively. Among the 10 largest Office markets, Chicago saw the largest year-over-year increase in transaction volume (67%).

In advance of the Amazon HQ2 announcement, the NYC Burroughs posted the highest growth in transaction volume (92.4%). Among the ten largest markets by volume, Denver saw the largest year-over-year decline (-23%). The other, and ultimate, winner in the HQ2 process was Washington DC, where CBD volume fell -7% and suburban volume grew 6%.

Figure 17 | Office Transaction Activity



Source: Real Capital Analytics (12/31/18).

US Retail Sector

Though Retail supply remains well below pre-GFC levels, it has exceeded demand for eight straight quarters.

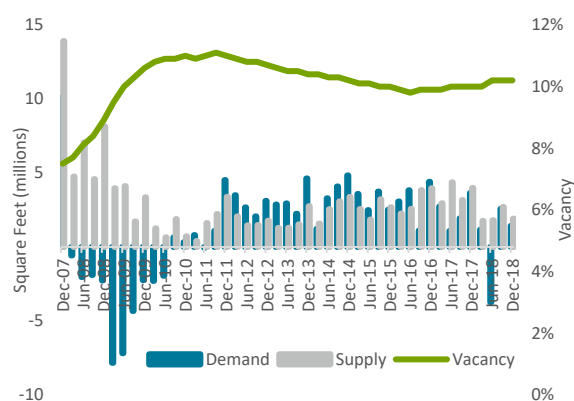
There were a little more than 1.9 million square feet of new Retail space completed across the US in the fourth quarter. The four-quarter total supplied through 4Q18 was about 8 million square feet, which is 40% below the four-quarter level through 4Q17.

Demand in the four quarters ending 4Q18 was about 70% lower than the year ago levels.

Vacancy has risen to 10.2% through December, up 20 basis points from the 10.0% one year prior. With mall closings, vacancy is lower in 2018 than 2011, when vacancies hit 11.1%.

Absorption for the quarter was highest in West and South markets of Sacramento (1.7%) Seattle (1.3%), and Orlando (1.1%).

Figure 18 | Retail Supply & Demand



Source: REIS (12/31/18).

Rent growth for Retail was below inflation at 1.5%, down from 1.9% a year ago.

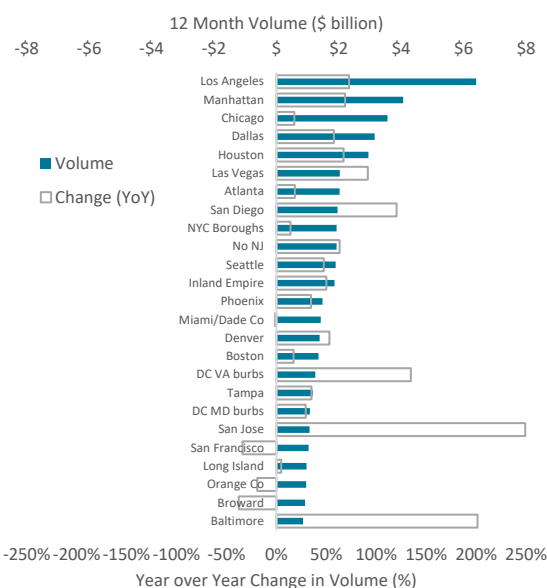
Rent growth was highest in San Jose (4.1%), Orlando (3.0%) and Los Angeles (2.7%).

With \$17 billion of transaction activity in the quarter, the Retail segment was the lowest of the main property types and was 15% of activity for the quarter. Volume in the quarter was up 31% compared to the same quarter a year ago, which was the largest increase among the main property types.

Among the ten largest markets by volume, San Diego saw the largest year-over-year increase (120%). San Jose had the largest volume increase with a gain of almost 250%.

It is worth noting that only three of the Top 25 markets saw a decline in volume, led by the relatively small Broward County with a 37% decline.

Figure 19 | Retail Transaction Activity



Source: Real Capital Analytics (12/31/18).

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III. Portfolio Review

Quarterly Highlights

- **Cash Flow Activity —**

During the fourth quarter of 2018, the Portfolio made \$123.1 million of contributions and received \$228.7 million of distributions, for a net cash inflow of \$105.6 million, compared to a net cash inflow of \$21 million during the third quarter of 2018. Contributions increased 52.7% from the prior quarter and decreased 34.7% from the fourth quarter of 2017. The most recent four quarter average of the Program's contributions is \$87.4 million. Distributions increased 125% from the prior quarter and decreased 10.4% from the fourth quarter of 2017. The most recent four quarter average of the Program's distributions is \$124 million.

- **Recent Portfolio Activity —**

During the fourth quarter of 2018, net of cash flow activity, the Portfolio valuation decreased by \$68.4 million, or 2%, from the prior quarter. During the last twelve months, net of cash flow activity, the Portfolio valuation increased by \$116.7 million, or 3.5%, from the quarter ended December 31, 2017.

- **Subsequent Investment Commitments —**

Subsequent to quarter-end through May 15th, 2019, the Program closed on commitments to Blackstone Real Estate Partners IX, Westbrook Real Estate Fund XI, Harrison Street Core Fund, Harrison Street Core Fund, Co-Investment, and Blackstone Real Estate Partners Europe V. Additionally, the Program committed to a follow-on investment in MetLife Core Property Fund.

Investment Performance

Since Inception Performance

USD in millions

	DECEMBER 31, 2018	SEPTEMBER 30, 2018	DECEMBER 31, 2017	Quarterly Change	Yearly Change
Number of Managers	47	47	47	0	0
Number of Investments	81	79	73	2	8
Committed Capital ¹	\$5,295.3	\$5,185.9	\$4,756.3	\$109.4	\$539.0
Contributions	\$4,528.3	\$4,405.2	\$4,178.7	\$123.1	\$349.5
Distributions	\$3,115.3	\$2,886.6	\$2,619.2	\$228.7	\$496.0
Market Value	\$3,449.1	\$3,498.4	\$3,313.2	-\$49.3	\$135.9
Total Gain (Loss)	\$2,016.9	\$1,979.8	\$1,753.6	\$37.1	\$263.2
Unfunded Commitment ²	\$1,369.3	\$1,401.9	\$1,107.9	-\$35.6	\$261.4
Total Exposure ³	\$4,818.5	\$4,900.3	\$4,421.1	-\$81.8	\$397.4
DPI ^{4,8}	0.69x	0.66x	0.63x	0.03x	0.06x
TVM Gross of Fees ^{5,8}	1.55x	1.61x	1.52x	-0.06x	0.03x
IRR Gross of Fees ^{6,8}	10.5%	10.6%	10.5%	-0.1%	0.0%
TVM Net of Fees ^{5,7,8}	1.45x	1.45x	1.42x	0.00x	0.03x
IRR Net of Fees ^{6,7,8}	8.0%	8.1%	8.0%	-0.1%	0.0%

¹Committed Capital represents original commitments to partnership investments.

²Unfunded Commitment represents the aggregate remaining commitments to partnership investments.

³Total Exposure represents the sum of Market Value and Unfunded Commitment.

⁴DPI, or Distributed to Paid-In Multiple, is a performance metric that measures distributions received relative to capital interest. DPI is calculated as Distributions divided by Contributions.

⁵TVM, or Total Value Multiple, is a performance metric that measures total value created by the Portfolio relative to Contributions, without consideration for time. TVM is calculated as Total Value, which is comprised of Market Value plus Distributions, divided by Contributions.

⁶IRR, or Internal Rate of Return, is a performance metric that is calculated based on the Portfolio's quarterly cash flows and market value as of quarter-end. IRR is net of fund manager's fees, expenses, and carried interest.

⁷TVM and IRR Net of fees represent TVM and IRR net of fees.

⁸DPI, TVM and IRR are since inception values up until the current quarter.

Past performance is not necessarily indicative of future results and there can be no assurance that the fund will achieve comparable results or avoid substantial losses.

Portfolio Periodic Returns vs. Benchmark

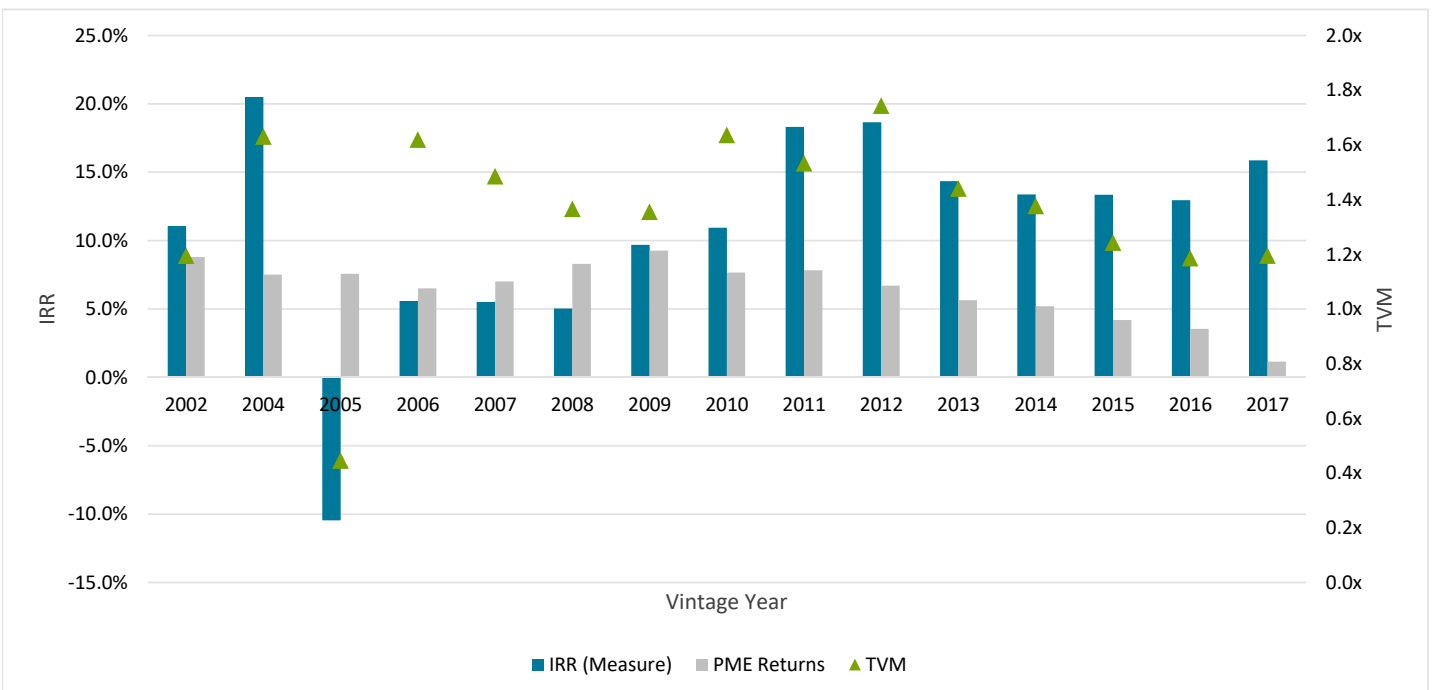
As of December 31, 2018	3-Month	1-Year	3-Year	5-Year	10-Year	Since Inception
NYCRS Net TWR	1.2%	8.0%	9.6%	11.1%	6.7%	3.7%
NYCRS Outperformance (Underperformance)	-1.6%	-1.3%	0.4%	-0.3%	-1.3%	-5.6%
Benchmark: NFI-ODCE + 100 bps	2.8%	9.3%	9.2%	11.4%	8.0%	9.3%

Performance by Vintage Year

The following table and chart illustrate the Portfolio's since inception investment performance by vintage year as of December 31, 2018 relative to a blended PME benchmark comprised of Russell 3000 and Barclays Capital Aggregate Bond Index at a 50/50 ratio. The PME benchmark is used to measure the Portfolio's performance, using the respective vintage year Portfolio cash flows to produce a return that would have been earned if those same vintage year cash flows were invested in the PME.

Vintage Year	Committed Capital	Contributions	Distributions	Market Value	Unfunded Commitment	Total Exposure	TVM	IRR	PME Returns	PME Returns Spread ¹
2002	15.0	13.7	16.4	0.0	0.0	0.0	1.2x	11.1%	8.8%	2.3%
2004	355.0	331.3	536.3	3.8	0.0	3.8	1.6x	20.5%	7.5%	13.0%
2005	40.0	36.0	15.9	0.1	4.0	4.2	0.4x	-10.5%	7.6%	-18.0%
2006	534.0	702.8	311.5	826.5	2.5	829.0	1.6x	5.6%	6.5%	-0.9%
2007	740.5	856.4	625.9	646.3	32.4	678.7	1.5x	5.5%	7.0%	-1.5%
2008	283.4	274.1	170.5	203.9	6.6	210.5	1.4x	5.0%	8.3%	-3.3%
2009	140.0	147.7	170.0	30.2	12.1	42.3	1.4x	9.7%	9.3%	0.4%
2010	162.0	79.8	58.4	72.1	82.4	154.5	1.6x	10.9%	7.7%	3.3%
2011	110.0	115.4	162.8	14.1	46.1	60.1	1.5x	18.3%	7.8%	10.5%
2012	340.0	357.4	419.7	203.3	78.5	281.8	1.7x	18.7%	6.7%	11.9%
2013	484.0	440.9	348.9	286.0	71.0	357.0	1.4x	14.4%	5.6%	8.7%
2014	218.0	204.7	123.2	158.5	45.0	203.4	1.4x	13.4%	5.2%	8.2%
2015	384.0	300.8	63.0	310.7	130.1	440.9	1.2x	13.4%	4.2%	9.2%
2016	548.2	347.5	69.0	343.1	238.8	581.9	1.2x	13.0%	3.5%	9.4%
2017	386.0	273.3	22.3	304.4	127.6	432.0	1.2x	15.9%	1.2%	14.7%
2018	555.3	46.5	1.5	46.7	509.2	555.8	1.0x	10.7%	N/A	N/A
Total	5,295.3	4,528.3	3,115.3	3,449.1	1,369.3	4,818.5	1.4x	8.1%	6.8%	1.3%

¹The PME Returns Spread is calculated as the IRR minus the blended PME. Performance of funds that are less than one year old are not meaningful. Note that Russell 3000 and Barclays Capital Aggregate Bond Index data are continuously updated and are therefore subject to change.



Performance by Strategy

The following table and charts illustrate the Portfolio's since inception investment performance by strategy and sub-strategy as of December 31, 2018.

USD in millions

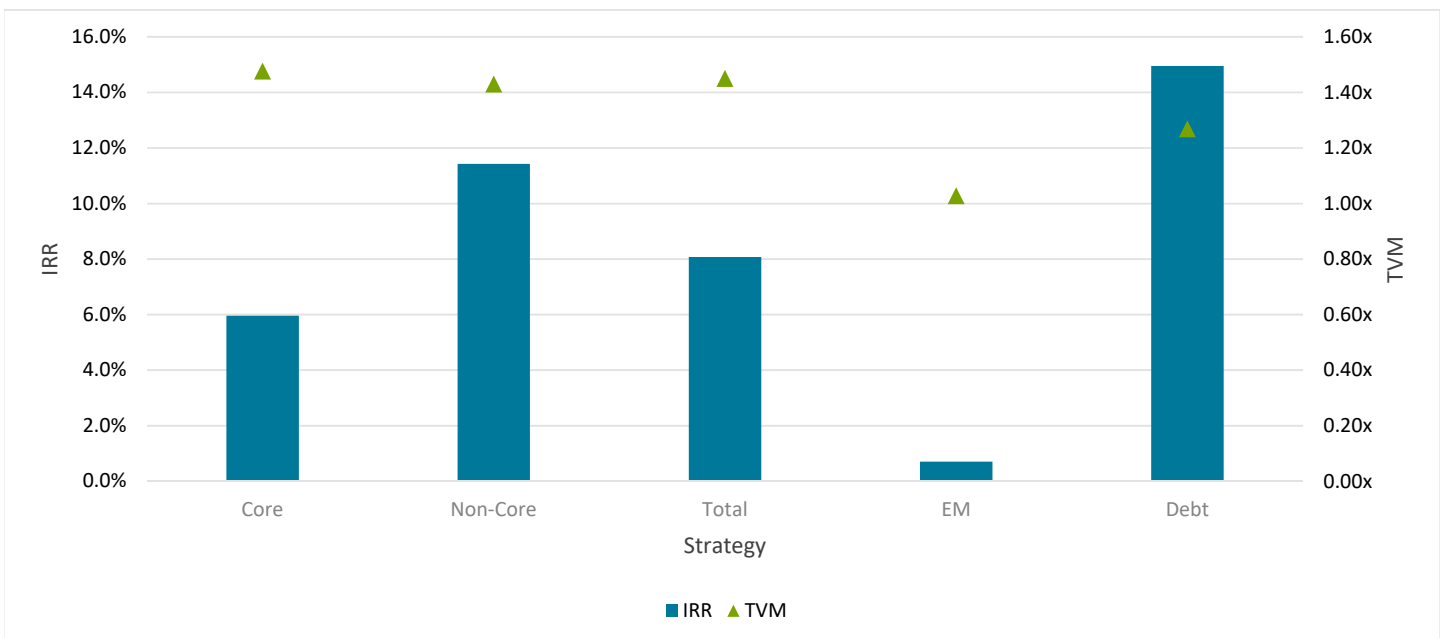
Strategy/Sub-Strategy	Committed Capital	Contributions	Distributions	Market Value	Unfunded Commitment	Total Exposure	TVM	IRR	PME Returns ¹	PME Returns Spread ²
Core	1,880.2	1,909.7	619.2	2,201.0	370.4	2,571.4	1.48x	6.0%	5.9%	0.1%
Non-Core	3,071.7	2,618.6	2,496.0	1,248.2	998.9	2,247.1	1.43x	11.4%	8.3%	3.1%
Total	4,952.0	4,528.3	3,115.3	3,449.1	1,692.3	4,818.5	1.45x	8.1%	6.8%	1.3%
Emerging Manag	247.6	142.7	82.1	64.6	115.3	179.9	1.03x	0.7%	N/A	N/A
Debt	734.5	369.6	234.4	234.5	379.2	613.6	1.27x	15.0%	N/A	N/A

¹ The PME is comprised of Russell 3000 and Barclays Capital Aggregate Bond Index at the ratios of 40/60, 60/40 and 50/50 for Core, Non-Core and Total Portfolio, respectively, except that BofA Merrill Lynch US High Yield Index is the benchmark for NYCERS-KKR CMBS Retention Partners, a non-core investment.

² Spread is calculated as IRR minus the PME for NYCERS.

The following chart illustrates the IRR and TVM of the Portfolio's various strategies and sub-strategies side by side. Both metrics are important to measure investment returns. IRR takes into account the time value of money and is generally favored by investors that are more yield driven over shorter investment horizons. The TVM equity multiple is the ratio of distributions plus current market value over the amount of capital contributed.

As of December 31, 2018.



Portfolio Diversification

The following charts outline the Portfolio's diversification by strategy and geographic regions, the limits of which are governed by the Policy Statement and Annual Plan.

Allocations by Strategy

	Market Value		Unfunded Commitment		Total Exposure	
	\$	% of Total	\$	% of Total	\$	% of Total
<i>USD in millions</i>						
Core	\$2,201.9	64.4%	\$370.4	27.1%	\$2,571.4	51.8%
Non-Core	\$1,248.2	35.6%	\$998.9	72.9%	\$2,247.1	48.2%
Total	\$3,449.1	100.0%	\$1,369.3	100.0%	\$4,818.5	100.0%
Emerging	\$64.6	1.9%	\$115.3	6.8%	\$179.9	3.5%
Debt	\$218.1	6.4%	\$379.2	22.4%	\$597.3	11.7%

Allocations by Region

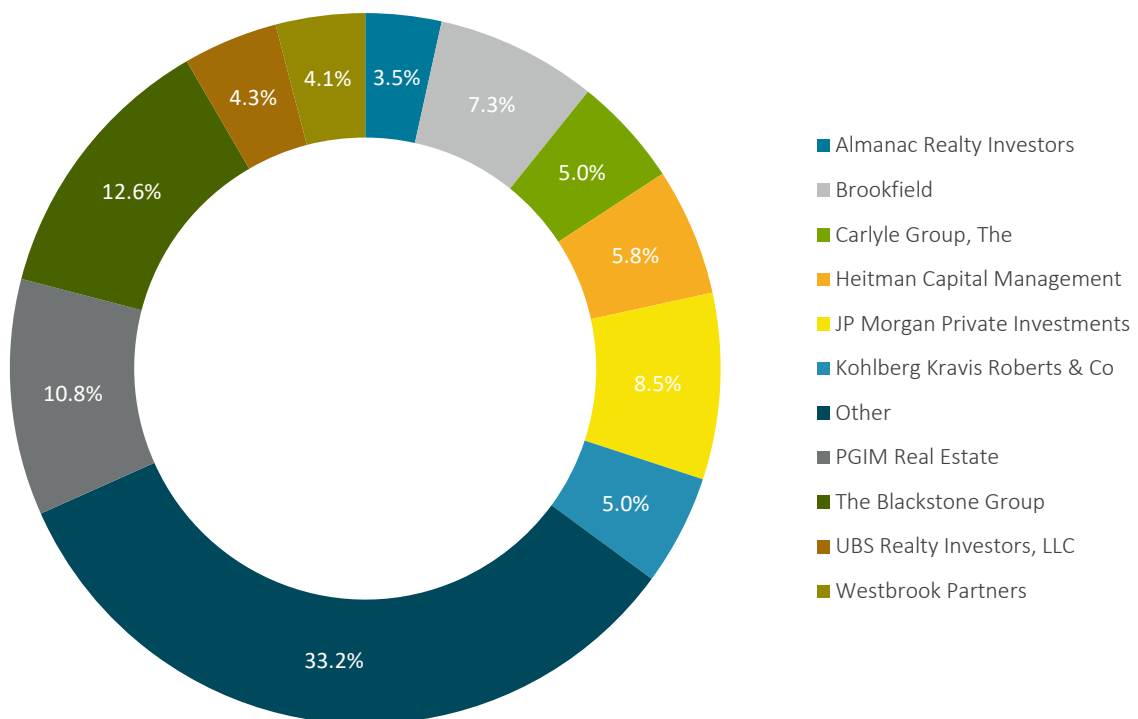
	Market Value		Unfunded Commitment		Total Exposure	
	% of Total	\$	\$		\$	
<i>USD in millions</i>						
North America	90.5%	\$3,103.5	\$1,531.3		\$4,634.8	
Europe	7.3%	\$250.8	\$123.7		\$374.5	
Asia	1.5%	\$52.1	\$25.7		\$77.8	
Rest of World	0.7%	\$23.5	\$11.6		\$35.1	
Total	100.0%	\$3,449.1	\$1,369.3		\$4,818.5	

* The allocations are based on net real estate value of each investment reported by the managers.

By Investment Manager

As of December 31, 2018, the Portfolio was diversified by investment manager, with 43 active managers and \$5.12 billion total exposure.

Portfolio Total Exposure by Investment Manager

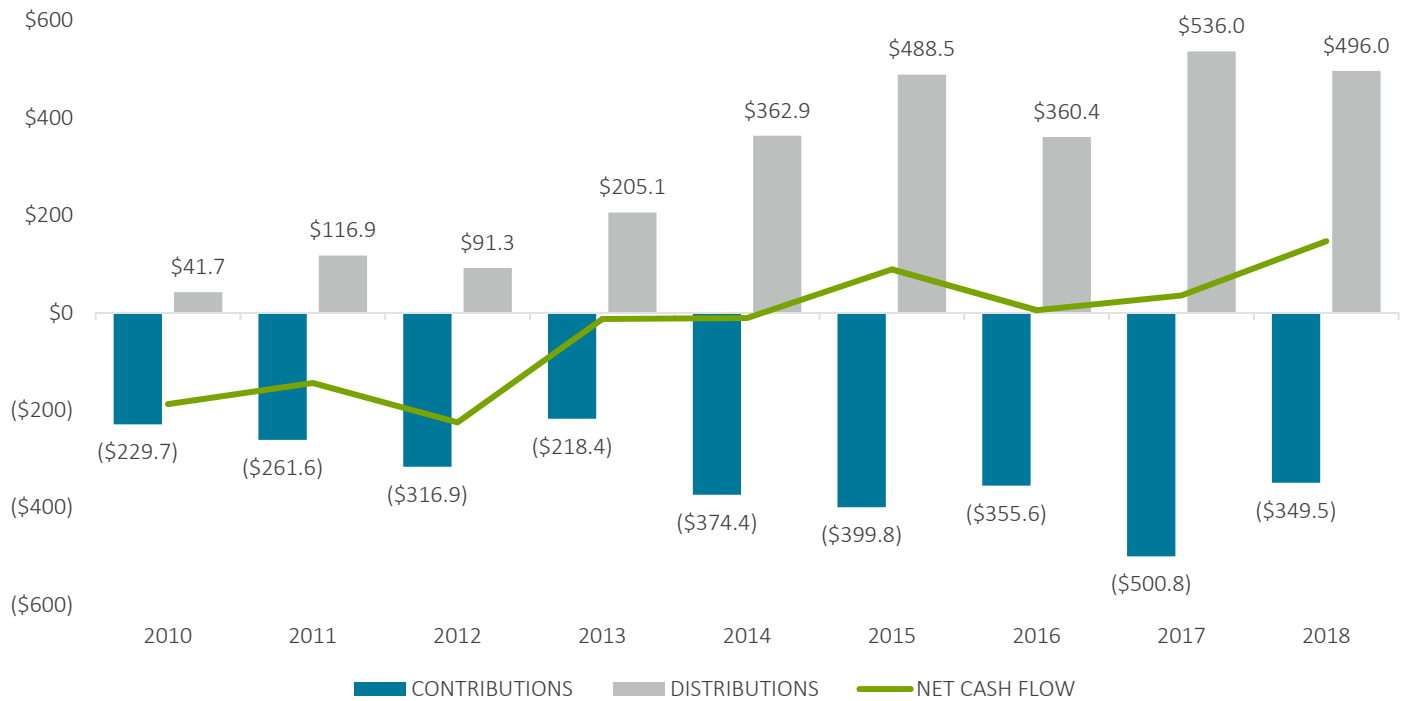


Portfolio Cash Flow Analysis

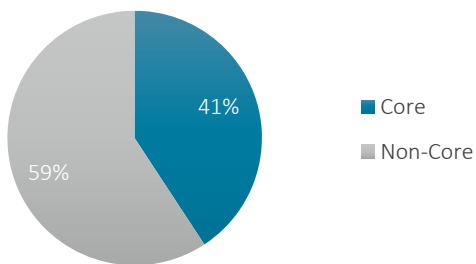
The following yearly and quarterly cash flow analysis is based on actual Portfolio cash flows during those time periods.

Year to Date Cash Flow Activity

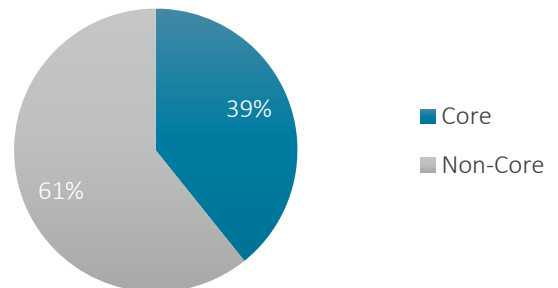
During the year-to-date period ended December 31, 2018, the Portfolio contributed US\$349.5 million and received US\$496.0 million of distributions, for a net cash inflow of US\$146.5 million. The graph below illustrates recent cash flow activity by quarter.



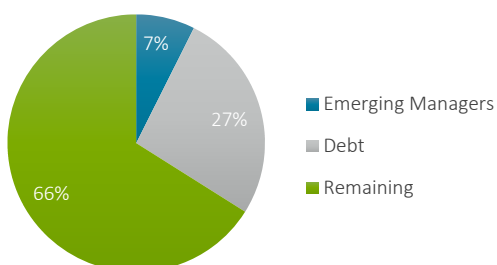
YTD 2018 Total Contributed by Strategy



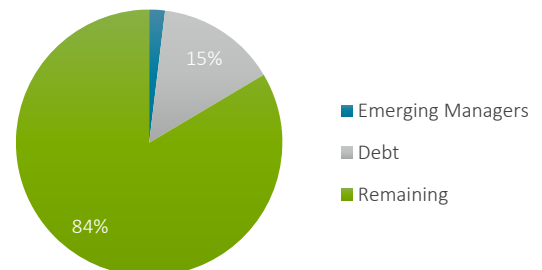
YTD 2018 Total Distributed by Strategy



YTD 2018 Total Contributed by Sub-Strategy

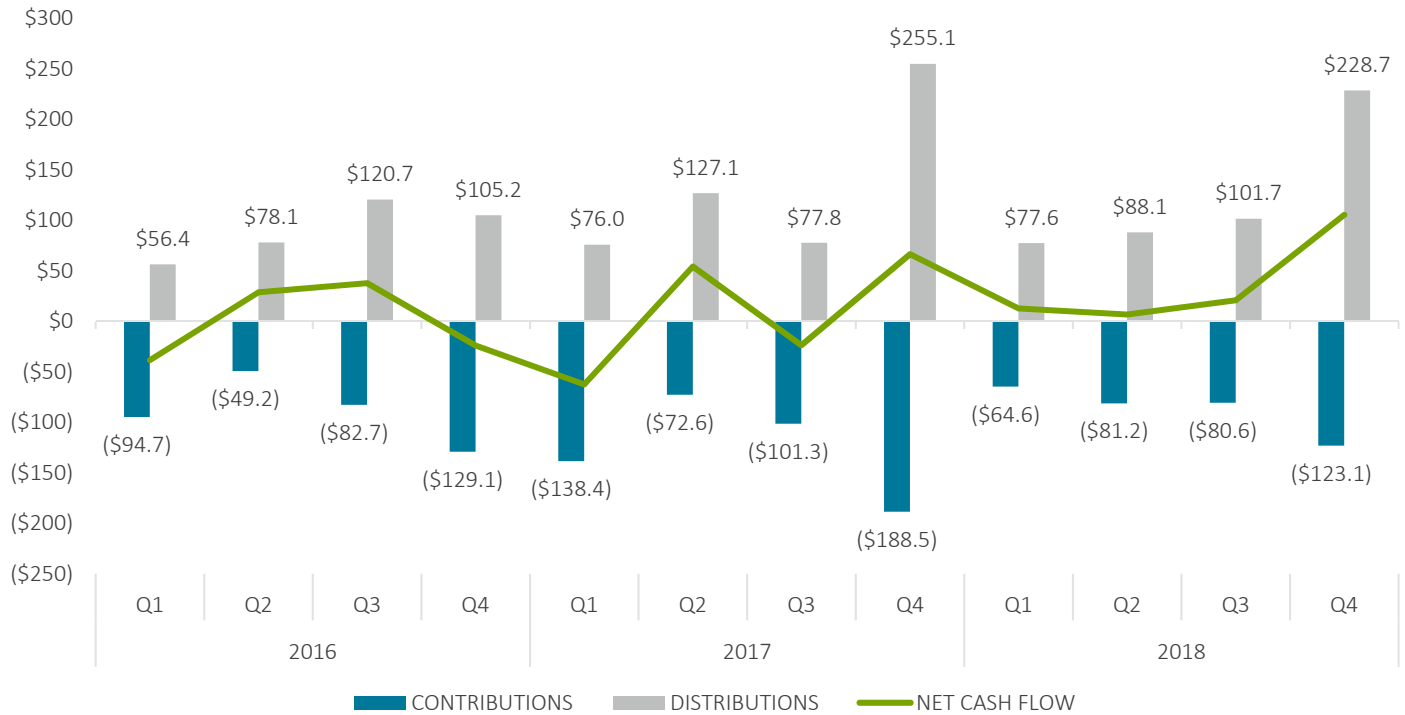


YTD 2018 Total Distributed by Sub-Strategy

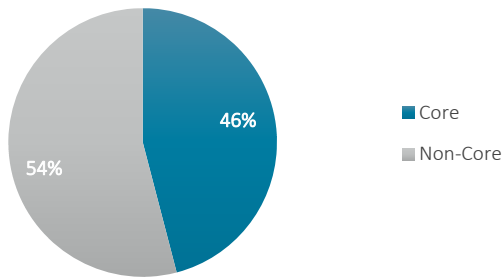


QUARTERLY CASH FLOW ACTIVITY

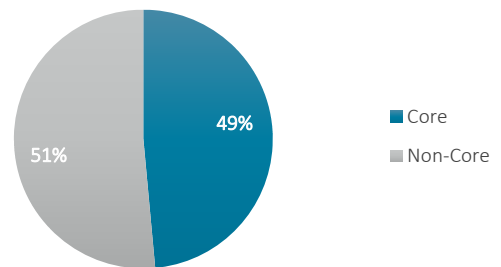
During the fourth quarter of 2018, the Portfolio contributed US\$123.1 million and received US\$228.7 million of distributions, for a net cash inflow of US\$105.6 million. The graph below illustrates recent cash flow activity by quarter.



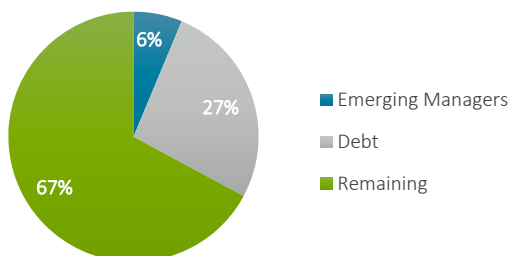
Q4 2018 Contributed by Strategy



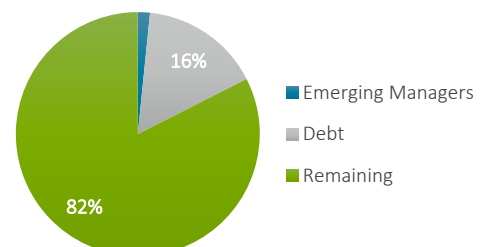
Q4 2018 Distributed by Strategy



Q4 2018 Total Contributed by Strategy

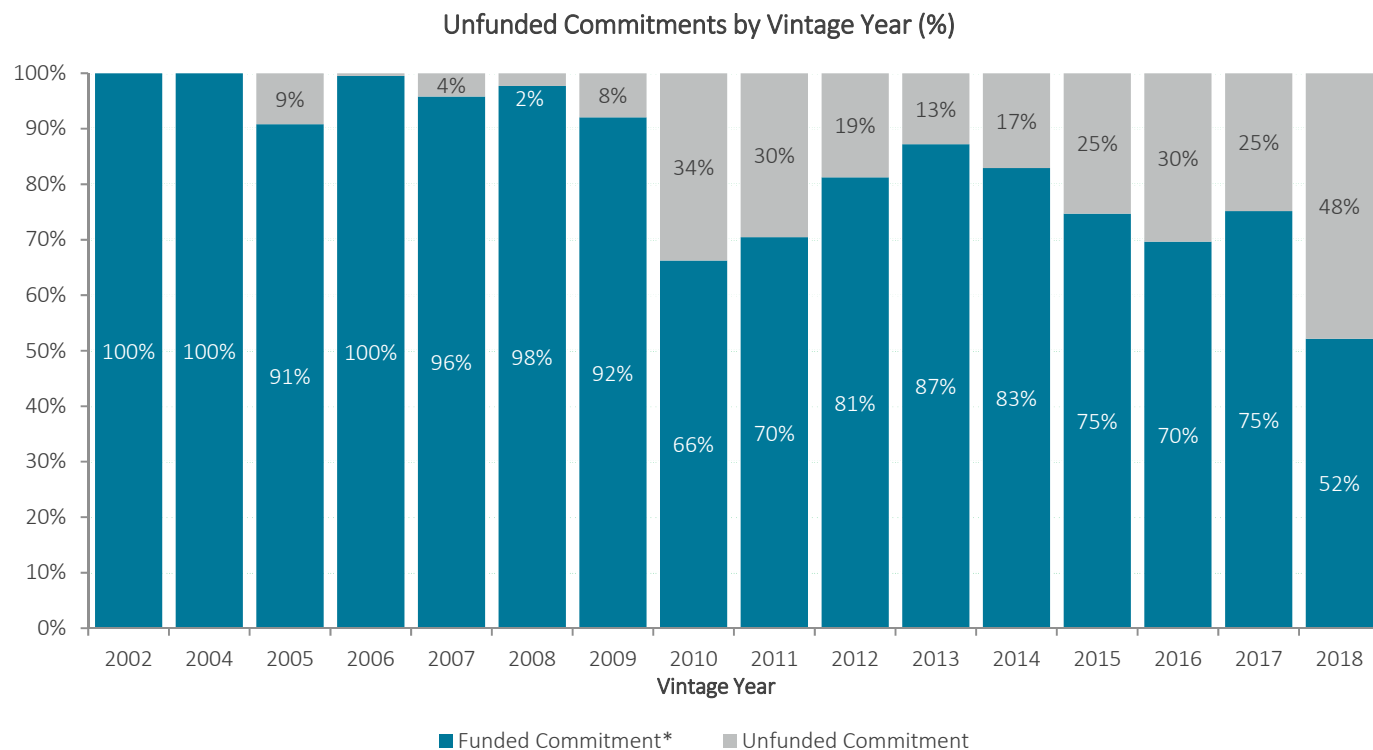


Q4 2018 Total Distributed by Strategy

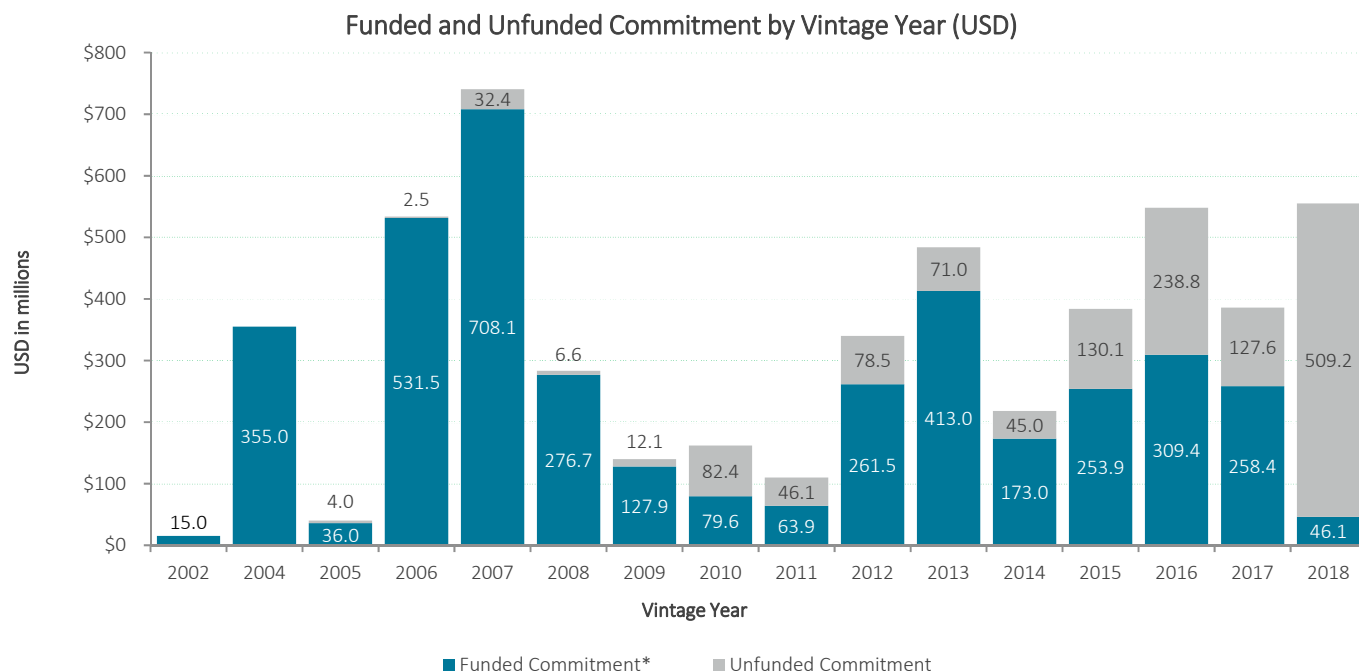


Invested Capital by Vintage Year

The following chart illustrates cumulative capital contributions as a percentage of total capital commitments, by fund vintage year, as of December 31, 2018.



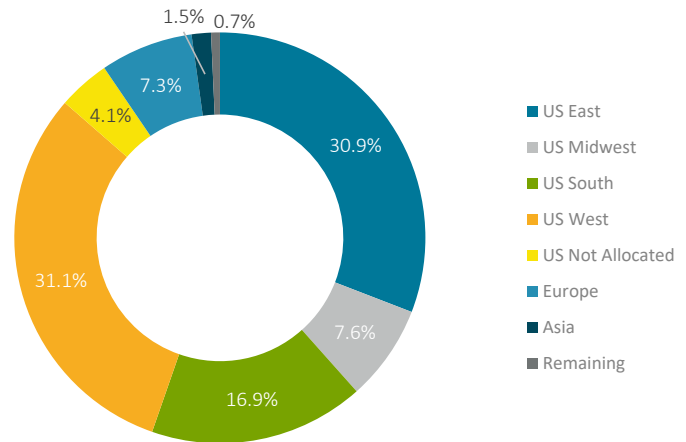
The following chart illustrates cumulative capital contributions relative to unfunded commitment, by fund vintage year, as of December 31, 2018.



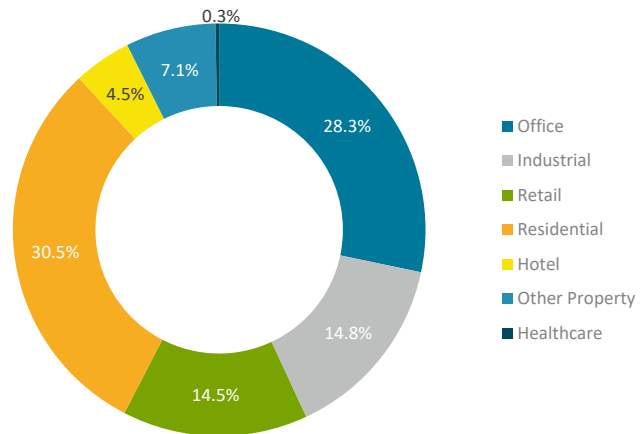
* Funded Commitment includes expired or released commitments and recallable distributions. NYCERS

PORTFOLIO EXPOSURE

Geography	NYC ERS - RE ¹	NFI ODCE ²
New York State	12.0%	9.2%
US East (Non-NY)	18.9%	21.6%
US East	30.9%	30.8%
US Midwest	7.6%	8.9%
US South	16.9%	18.9%
US West	31.1%	41.4%
US Not Allocated	4.1%	0.0%
United States	90.5%	100.0%
Europe	7.3%	0.0%
Asia	1.5%	0.0%
Remaining	0.7%	0.0%
Total	100.0%	100.0%



Property Type	NYC ERS - RE ¹	NFI ODCE ²
Office	28.3%	33.9%
Industrial	14.8%	18.1%
Retail	14.5%	18.6%
Residential	30.5%	25.3%
Hotel	4.5%	0.3%
Healthcare	0.3%	0.0%
Other Property	7.1%	3.8%
Total	100.0%	100.0%



¹ The New York City Employees Retirement System allocations are based on net real estate value of each investment reported by the managers

² The NFI-ODCE Geography and Property Type diversification are for illustrative purposes only. It is not an New York City Employees Retirement System to track the NFI-ODCE allocations.

Portfolio Performance

INVESTMENT	Vintage Year	First Draw-down	Committed Capital	Contributions	Distributions	Market Value	Unfunded Commitment	Total Exposure	TVM	IRR	IRR Quarile-Private iQ ⁴
Almanac Realty Securities VII	2015	04/24/15	\$65,000,000	\$46,264,149	\$11,850,062	\$46,557,835	\$24,000,021	\$70,557,856	1.3x	14.1%	N/A
Almanac Realty Securities VII (Sidecar IV)	2015	12/09/15	\$20,000,000	\$10,684,035	\$1,214,221	\$12,897,998	\$9,357,894	\$22,255,892	1.3x	17.8%	N/A
Almanac Realty Securities VIII	2018	12/21/18	\$51,000,000	\$128,301	\$0	-\$89,749	\$50,871,699	\$50,781,950	N/M	N/M	N/A
Almanac Realty Securities VIII (Sidecar II)	2018	12/21/18	\$34,000,000	\$99,491	\$0	\$95,198	\$33,900,509	\$33,995,707	N/M	N/M	N/A
Artemis Co-Investment	2016	02/24/16	\$53,000,000	\$51,691,503	\$18,992,266	\$43,226,386	\$11,806,704	\$55,033,090	1.2x	21.9%	N/A
Artemis Income and Growth Fund	2018	NA	\$61,000,000	\$0	\$0	\$0	\$61,000,000	\$61,000,000	N/A	N/A	N/A
Brookfield Premier Real Estate Partners	2016	11/22/16	\$91,000,000	\$97,214,325	\$6,214,325	\$112,957,290	\$0	\$112,957,290	1.2x	12.0%	N/A
Carlyle Property Investors	2017	07/03/17	\$91,000,000	\$95,038,335	\$4,038,335	\$98,623,877	\$0	\$98,623,877	1.1x	6.8%	N/A
Colony Realty Partners II	2006	12/20/06	\$20,000,000	\$24,666,122	\$8,957,737	\$0	\$0	\$0	0.4x	-13.3%	N/A
Exeter Core Industrial Club Fund II	2016	05/20/16	\$28,000,000	\$16,506,000	\$2,049,930	\$18,243,299	\$11,494,000	\$29,737,299	1.2x	14.3%	N/A
Heitman America Real Estate Trust, L.P.	2007	03/29/07	\$115,000,000	\$182,571,281	\$67,571,281	\$253,316,329	\$0	\$253,316,329	1.8x	8.0%	N/A
Heitman Core Real Estate Debt Income Trust	2018	11/07/18	\$45,000,000	\$16,221,300	\$0	\$16,384,592	\$28,778,700	\$45,163,292	N/M	N/M	N/A
Jamestown Premier Property Fund	2016	02/04/16	\$48,721,196	\$45,853,909	\$19,732,932	\$35,502,077	\$9,721,196	\$45,223,273	1.2x	9.8%	N/A
JP Morgan Special Situation Property Fund	2007	01/05/07	\$90,000,000	\$108,523,776	\$40,521,007	\$129,947,399	\$0	\$129,947,399	1.6x	4.8%	N/A
JP Morgan Strategic Property Fund	2006	12/05/06	\$136,000,000	\$166,198,811	\$15,444,317	\$305,605,596	\$0	\$305,605,596	1.9x	7.1%	N/A
LaSalle Property Fund	2010	07/01/10	\$132,000,000	\$49,798,310	\$18,047,281	\$72,088,090	\$82,000,000	\$154,088,090	1.8x	10.7%	N/A
Lion Industrial Trust	2017	01/03/17	\$90,000,000	\$72,406,774	\$4,906,774	\$86,424,673	\$22,500,000	\$108,924,673	1.3x	15.1%	N/A
MetLife Core Property Fund	2014	07/01/14	\$50,000,000	\$50,000,000	\$8,944,213	\$62,176,665	\$0	\$62,176,665	1.4x	9.7%	N/A
NYC Asset Investor #2	2013	07/09/13	\$75,000,000	\$72,934,484	\$20,391,453	\$97,925,329	\$4,827,308	\$102,752,637	1.6x	14.9%	N/A
Prologis Targeted US Logistics Fund	2006	10/01/06	\$25,000,000	\$34,245,023	\$10,764,828	\$45,740,031	\$0	\$45,740,031	1.7x	5.4%	N/A
Prudential PRISA	2006	09/29/06	\$86,000,000	\$92,673,389	\$33,988,446	\$121,473,088	\$0	\$121,473,088	1.7x	4.8%	N/A
Prudential PRISA II	2007	06/29/07	\$141,518,761	\$150,922,667	\$45,936,739	\$212,472,432	\$0	\$212,472,432	1.7x	5.8%	N/A
RREEF America REIT II	2006	10/02/06	\$86,000,000	\$113,537,802	\$57,638,716	\$123,876,116	\$0	\$123,876,116	1.6x	5.2%	N/A
UBS Trumbull Property Fund	2006	09/28/06	\$156,000,000	\$246,495,655	\$165,704,487	\$221,730,971	\$0	\$221,730,971	1.6x	6.4%	N/A
USAA Eagle Real Estate Fund	2015	12/01/15	\$90,000,000	\$74,998,937	\$5,178,682	\$83,797,888	\$20,171,700	\$103,969,588	1.2x	8.8%	N/A
Core³			\$1,880,239,957	\$1,909,674,379	\$619,244,600	\$2,200,973,411	\$370,429,730	\$2,571,403,141	1.5x	6.0%	

¹ Emerging managers

⁴ Quartiles based on Private iQ Real Estate Benchmarks - Global All Real Estate for Non-Core funds by region: U.S., Europe and Global are not applicable to Core funds

² Debt investments

³ Total includes liquidated investments

INVESTMENT	Vintage Year	First Draw-down	Committed Capital	Contributions	Distributions	Market Value	Unfunded Commitment	Total Exposure	TVM	IRR	IRR Quarile-Private iQ ⁴
Aermont Capital Real Estate Fund IV	2018	NA	\$75,566,700	\$0	\$0	\$0	\$75,566,700	\$75,566,700	N/M	N/M	N/M
American Value Partners Fund I	2007	10/18/07	\$55,000,000	\$39,320,163	\$41,373,738	\$4,406,016	\$15,679,837	\$20,085,853	1.2x	3.2%	First
Apollo Real Estate Investment Fund V	2006	06/15/06	\$25,000,000	\$25,000,000	\$18,953,167	\$8,123,565	\$2,500,000	\$10,623,565	1.1x	1.0%	First
Ares European Real Estate Fund III	2008	05/20/08	\$30,000,000	\$30,487,501	\$33,137,500	\$610,443	\$0	\$610,443	1.1x	2.6%	First
Avanath Affordable Housing II	2015	07/14/15	\$8,000,000	\$8,086,752	\$698,328	\$11,390,310	\$222,091	\$11,612,401	1.5x	13.4%	First
Basis Investment Group Real Estate Fund I	2017	11/16/17	\$17,000,000	\$6,329,692	\$1,914,875	\$5,030,615	\$12,020,568	\$17,051,183	1.1x	14.5%	First
Blackstone Real Estate Partners Europe III - USD	2008	10/24/08	\$50,000,000	\$51,957,993	\$68,174,885	\$9,407,014	\$6,615,496	\$16,022,510	1.5x	11.2%	First
Blackstone Real Estate Partners Europe IV L.P. - USD	2013	12/23/13	\$169,000,000	\$166,712,404	\$156,116,784	\$93,509,413	\$30,992,381	\$124,501,794	1.5x	16.0%	First
Blackstone Real Estate Partners IV L.P.	2004	05/14/04	\$30,000,000	\$38,393,533	\$50,030,468	\$3,415,176	\$0	\$3,415,176	1.4x	10.0%	First
Blackstone Real Estate Partners VI L.P.	2007	07/28/06	\$110,000,000	\$123,465,884	\$234,685,554	\$10,731,225	\$5,618,578	\$16,349,803	2.0x	13.3%	First
Blackstone Real Estate Partners VII L.P.	2012	04/13/12	\$170,000,000	\$209,387,846	\$222,807,107	\$117,424,323	\$24,963,197	\$142,387,520	1.6x	17.3%	First
Blackstone Real Estate Partners VIII L.P.	2015	08/18/15	\$151,000,000	\$125,922,196	\$41,906,269	\$118,606,204	\$59,082,062	\$177,688,266	1.3x	16.7%	First
Brookfield Strategic Real Estate Partners	2012	09/20/12	\$100,000,000	\$118,731,844	\$149,920,590	\$81,194,643	\$12,798,281	\$93,992,924	1.9x	21.9%	First
Brookfield Strategic Real Estate Partners III, L.P.	2018	NA	\$170,000,000	\$0	\$0	\$0	\$170,000,000	\$170,000,000	N/M	N/M	N/M
Canyon Johnson Urban Fund III	2010	03/29/10	\$30,000,000	\$29,971,216	\$40,371,580	\$35,337	\$413,020	\$448,357	1.3x	11.9%	First
Canyon-Johnson Urban II	2005	05/11/05	\$40,000,000	\$35,954,815	\$15,898,610	\$136,437	\$4,045,186	\$4,181,623	0.4x	-10.5%	Fourth
Capri Urban Investors	2008	06/03/08	\$60,000,000	\$60,000,000	\$27,538,270	\$16,959,288	\$0	\$16,959,288	0.7x	-4.2%	Fourth
Carlyle Realty Partners V, L.P.	2007	08/27/07	\$20,000,000	\$25,757,491	\$30,485,065	\$5,387,036	\$4,420,459	\$9,807,495	1.4x	8.2%	First
Carlyle Realty Partners VI, L.P.	2011	09/28/11	\$70,000,000	\$75,378,878	\$105,802,596	\$9,663,756	\$46,050,411	\$55,714,167	1.5x	21.3%	First
Carlyle Realty Partners VII, L.P.	2014	07/01/14	\$80,000,000	\$66,898,984	\$41,120,521	\$49,371,681	\$42,894,827	\$92,266,508	1.4x	15.2%	First
DivcoWest Fund IV	2014	01/15/14	\$23,000,000	\$22,770,380	\$33,029,490	\$4,618,826	\$2,067,545	\$6,686,371	1.7x	26.3%	First
DivcoWest Fund V	2016	12/21/16	\$60,000,000	\$29,020,769	\$43,068	\$30,252,783	\$30,979,231	\$61,232,014	1.0x	4.1%	First
DRA Growth and Income Fund IX	2017	03/09/17	\$49,000,000	\$26,783,338	\$7,221,894	\$24,516,686	\$26,602,920	\$51,119,606	1.2x	20.8%	First
Exeter Industrial Value Fund IV, L.P.	2016	09/20/17	\$30,000,000	\$16,500,000	\$0	\$17,801,571	\$13,500,000	\$31,301,571	1.1x	12.3%	First
H2 Special Opportunities Fund II	2011	02/14/11	\$40,000,000	\$40,045,335	\$57,031,777	\$4,392,531	\$0	\$4,392,531	1.5x	14.5%	First
H2 Special Opportunities III	2014	12/29/14	\$65,000,000	\$65,000,000	\$40,143,455	\$42,318,347	\$0	\$42,318,347	1.3x	11.4%	First
H2 Special Opportunities IV	2016	11/15/16	\$91,000,000	\$13,469,805	\$740,287	\$12,102,516	\$78,230,062	\$90,332,578	1.0x	-3.3%	Fourth
KKR Real Estate Partners Americas II	2018	02/09/18	\$118,700,000	\$30,100,134	\$1,506,811	\$30,268,561	\$89,055,474	\$119,324,035	N/M	N/M	N/M
Lone Star Real Estate Fund III, L.P.	2013	02/28/14	\$100,000,000	\$95,639,471	\$115,529,066	\$13,046,524	\$6,258,452	\$19,304,976	1.3x	15.0%	First
Metropolitan Workforce Housing Fund	2007	07/12/07	\$14,000,000	\$14,013,027	\$16,469,642	\$529,866	\$0	\$529,866	1.2x	3.9%	First
NYC Asset Investor #1	2013	06/25/13	\$50,000,000	\$55,920,763	\$22,930,566	\$47,197,043	\$10,428,358	\$57,625,401	1.3x	6.8%	First
NYC Asset Investor #3	2013	09/20/13	\$50,000,000	\$31,457,833	\$5,512,467	\$34,278,927	\$18,542,168	\$52,821,095	1.3x	9.2%	First
NYCRS-KKR CMBS Retention Partners	2017	09/27/17	\$122,000,000	\$72,748,469	\$4,188,548	\$89,808,618	\$49,501,770	\$139,310,388	1.3x	30.8%	First
Pramerica Real Estate Capital VI	2016	04/20/17	\$60,247,001	\$30,069,651	\$13,392,985	\$21,101,709	\$39,777,287	\$60,878,996	1.1x	16.8%	First

¹ Emerging managers

⁴ Quartiles based on Private iQ Real Estate Benchmarks - Global All Real Estate for Non-Core funds by region: U.S., Europe and Global

² Debt investments

³ Total includes liquidated investments

INVESTMENT	VINTAGE YEAR	First Draw- down	Committed Capital	Contributions	Distributions	Market Value	Unfunded Commitment	Total Exposure	TVM	IRR	Quarile-Private iQ ⁴
Prudential PRISA III	2008	09/30/08	\$50,000,000	\$76,938,349	\$16,539,851	\$157,983,520	\$0	\$157,983,520	2.3x	12.0%	First
PW Real Estate Fund III	2016	10/07/16	\$50,238,480	\$28,823,471	\$3,696,925	\$35,500,586	\$21,415,009	\$56,915,595	1.4x	26.6%	First
Silverpeak Legacy Partners III	2008	06/04/08	\$50,000,000	\$23,490,515	\$4,048,619	\$4,264,270	\$0	\$4,264,270	0.4x	-11.8%	Fourth
Stockbridge Real Estate III	2008	09/09/08	\$27,000,000	\$26,998,145	\$16,829,753	\$14,679,695	\$1,855	\$14,681,550	1.2x	2.3%	First
Taconic New York City Investment Fund	2012	07/05/12	\$70,000,000	\$29,272,728	\$46,945,824	\$4,664,523	\$40,727,272	\$45,391,795	1.8x	16.0%	First
The City Investment Fund I	2004	03/16/04	\$225,000,000	\$221,883,300	\$224,384,800	\$395,663	\$0	\$395,663	1.0x	0.3%	First
Thor Urban Property Fund II	2007	10/30/08	\$40,000,000	\$54,796,108	\$54,781,253	\$16,972,581	\$2,971,106	\$19,943,687	1.3x	7.8%	First
Tristan European Property Investors Special Opp IV	2015	12/18/15	\$49,987,909	\$34,883,232	\$2,163,571	\$37,499,653	\$17,271,478	\$54,771,131	1.1x	10.6%	First
Walton Street Real Estate Fund VI	2009	04/27/09	\$50,000,000	\$44,323,933	\$47,860,268	\$20,253,393	\$7,770,792	\$28,024,185	1.5x	8.9%	First
Westbrook Real Estate Fund VII, L.P.	2007	12/03/07	\$40,000,000	\$43,825,653	\$40,298,184	\$12,503,556	\$3,756,190	\$16,259,746	1.2x	3.2%	First
Westbrook Real Estate Fund VIII, L.P.	2009	12/28/09	\$50,000,000	\$59,574,065	\$68,952,803	\$9,919,540	\$4,310,561	\$14,230,101	1.3x	11.6%	First
Westbrook Real Estate Fund X Co-Investment	2016	07/18/16	\$36,000,000	\$18,323,618	\$4,119,230	\$16,449,659	\$21,834,668	\$38,284,327	1.1x	11.6%	First
Non-Core³			\$3,631,100,714	\$2,618,611,317	\$2,496,019,553	\$1,248,723,629	\$1,321,885,290	\$2,570,608,919	1.4x	11.4%	
TOTAL³			\$5,601,340,670	\$4,528,285,696	\$3,115,264,153	\$3,449,697,040	\$1,692,315,021	\$5,142,012,061	1.4x	8.1%	

¹ Emerging managers

⁴ Quartiles based on Private iQ Real Estate Benchmarks - Global All Real Estate for Non-Core funds by region: U.S., Europe and Global

² Debt investments

³ Total includes liquidated investments

APPENDICES:

Basket Clause

Basket Limit	25.00%
Basket Consumed	21.11%
Remaining Capacity	3.89%

		Basket-Eligible Assets*			
	Non-Basket Assets	Non-Contributing	Contributing	Basket Assets	Total
FIXED INCOME	33.62%	3.81%	0.01%	5.08%	42.53%
U.S. Fixed	17.05%	3.22%	0.01%	4.89%	25.17%
Cash/Equivalent	9.82%	---	---	0.00%	9.82%
TIPS	4.02%	---	---	----	4.02%
Convertible Bonds	1.04%	0.00%	0.00%	0.02%	1.07%
OFI	0.03%	0.10%	0.01%	2.59%	2.73%
High Yield	0.27%	2.99%	0.00%	0.74%	4.00%
Bank Loans	0.07%	0.05%	0.00%	1.52%	1.64%
ETI Investments	1.14%	---	---	0.01%	1.15%
Core/Core Plus	0.67%	0.07%	---	0.01%	0.75%
U.S. Structured	16.57%	0.60%	---	0.19%	17.36%
Credit	2.70%	0.57%	---	0.06%	3.33%
Mortgages	2.30%	---	---	0.13%	2.43%
ST Treasury	3.39%	---	---	----	3.39%
Treasury/Agency	8.18%	0.03%	---	----	8.21%
MT Treasury	0.01%	---	---	----	0.01%
EQUITY	25.79%	15.66%	9.48%	6.55%	57.47%
Public Equity	25.77%	9.99%	9.48%	0.17%	45.40%
U.S. Equity	25.26%	0.54%	0.51%	0.11%	26.41%
EAFE	0.23%	6.05%	5.74%	0.03%	12.05%
Emerging Markets	0.05%	3.34%	3.16%	0.02%	6.58%
Global	0.23%	0.07%	0.07%	0.00%	0.36%
Alternative Investments	0.02%	5.67%	---	6.38%	12.07%
Hedge Funds	---	---	---	0.01%	0.01%
Infrastructure	0.00%	0.86%	---	----	0.86%
Private RE/Core	0.00%	3.07%	---	----	3.07%
Private RE/Non-Core	0.00%	1.74%	---	----	1.74%
Private Equity	0.02%	---	---	6.37%	6.39%
TOTAL ASSETS	59.42%	19.47%	9.49%	11.63%	100.00%
	Non-Basket:	78.89%	Basket:	21.11%	

This analysis shows basket consumption by investment mandate on a security look-through basis.

* Basket Eligible Assets are subject to the following thresholds - above which investment consumes basket capacity: 10% aggregate portfolio weight for investments in non-U.S. listed equities; 10% aggregate portfolio weight for real assets; and 10% aggregate portfolio weight for investments in high yield bonds and foreign debt issues that are registered with the SEC. To the extent that the value of investments in a particular category exceeds a threshold, the excess consumes basket capacity.

In the above table, the investment of cash held as collateral under the system's securities lending program, is included as a Non-Basket Asset in the Cash/Equivalent line.

Liquidity Analysis

AUM as of March 31, 2019

	Current MV	Liquid Assets		
		Today	1 Year	2 Years
PUBLIC EQUITY	\$33,051	\$33,051	\$33,051	\$33,051
U.S.	19,225	19,225	19,225	19,225
EAFE Equity	8,349	8,349	8,349	8,349
Emerging Markets	5,211	5,211	5,211	5,211
Global Equity	265	265	265	265
PUBLIC FIXED INCOME	\$22,295	\$21,609	\$21,926	\$21,926
Short Term Securities	614	614	614	614
U.S. Government	8,396	8,396	8,396	8,396
Mortgages				
Core Mortgages	1,778	1,778	1,778	1,778
ETI	843	156	473	473
Credit - Investment Grade	3,711	3,711	3,711	3,711
Corporate - High Yield	2,876	2,876	2,876	2,876
Corporate - Bank Loans	1,165	1,165	1,165	1,165
UST - Inflation Protected	2,913	2,913	2,913	2,913
ALTERNATIVE ASSETS	\$10,661	\$1,474	\$1,970	\$1,973
Private Equity	4,587	0	0	0
Private Real Estate	3,484	0	0	0
Infrastructure	617	0	0	0
Opportunistic Fixed Income	1,966	1,474	1,966	1,966
Hedge Funds	7	0	5	7
Total Assets	\$66,007	\$56,134	\$56,947	\$56,950
Total Illiquid \$		\$9,873	\$9,060	\$9,058
Total Illiquid %		15.0%	13.7%	13.7%
Unfunded OFI Commitments	\$202			
Unfunded INF Commitments	\$869			
Unfunded PE Commitments	\$3,200			
Unfunded RE Commitments	\$1,709			
Total commitments \$	\$5,979			
Total commitments %	9.1%			

NYCERS Liquidity Profile - Static Analysis

03/31/19

AUM as of March 31, 2019

Denominator Effect - Decrease AUM by One-Third

Total Illiquid \$	\$9,873	\$9,060	\$9,058
Total Illiquid %	22.4%	20.6%	20.6%

Note: Assumes zero realizations, no new commitments and a five-year investment period; funded out of liquids

	Current MV	Liquid Assets		
		Today	1 Year	2 Years
Total Assets	\$66,007	\$56,134	\$56,947	\$56,950

Private Equity, Real Estate, Infrastructure and Opportunistic Fixed Income Stress Case

Unfunded OFI Commitments	\$40	\$81
Unfunded INF Commitments	\$174	\$347
Unfunded PE Commitments Drawn	\$640	\$1,280
Unfunded RE Commitments Drawn	\$342	\$684
Total commitments \$	\$1,196	\$2,392
Total commitments %	1.8%	3.6%

Total Illiquid \$	\$10,256	\$11,449
Total Illiquid %	15.5%	17.3%

Note: Assumes zero realizations, no new commitments and a five-year investment period; funded out of liquids

See Assumptions Page for Full Details

Denominator Effect - Decrease AUM by One-Third

Total Illiquid \$	\$9,873	\$10,256	\$11,449
Total Illiquid %	22.4%	23.3%	26.0%

Note: Assumes zero realizations, no new commitments and a five-year investment period; funded out of liquids