



NEW YORK STATE TEACHERS' RETIREMENT SYSTEM REAL ESTATE INVESTMENT PORTFOLIO

January 24-25, 2018 Investment Committee and Board Meetings
Public Information

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NYSTRS' Real Estate Investment Portfolio

Quarter Ended September 30, 2017

Market Value Summary

(in millions)

Equity Real Estate Investments

Direct Equity	
Office	\$1,367
Retail	\$2,373
Industrial	\$330
Multi-family	\$858
Timber	\$308

Total Direct Equity \$5,236

Commingled Funds	
Core	\$1,604
Value-Added	\$878
Opportunistic	\$1,496
Public Real Estate Securities	\$1,992

Total Current Equity Real Estate Holdings \$11,206

Outstanding Commitments	
Direct Equity	\$945
Core Funds	\$58
Value-Added Funds	\$524
Opportunistic Funds	\$1,340

Total Equity Real Estate Portfolio \$14,073

Real Estate Debt Investments

Direct Mortgage Portfolio	\$3,280
Debt Funds/Separate Accounts	\$785
CMBS	\$1,079

Total Current Real Estate Debt Holdings \$5,144

Outstanding Commitments	
Direct Mortgage	\$0
Debt Funds/Separate Accounts	\$1,253
CMBS	\$0

Total Real Estate Debt Portfolio \$6,397

Total Real Estate Investment Portfolio \$20,477

Real Estate Asset Allocation

	<u>Target</u>	<u>Range</u>	<u>Actual</u>
Equity Portfolio	11%	6% - 16%	9.7%
Debt Portfolio	7%	3% - 11%	4.4%

Equity Portfolio Performance

	<u>NYSTRS</u>	<u>Blended NCREIF/ Wilshire Index</u>
Current Quarter	1.8%	1.4%
1 Year	6.8%	5.7%
3 Year	10.9%	9.7%
5 Year	12.0%	10.3%
10 Year	5.8%	4.4%
Inception	8.5%	6.6%

Debt Portfolio Performance

	<u>NYSTRS</u>	<u>Blended GLCMPI/ Barclays Index</u>
Current Quarter	1.3%	0.9%
1 Year	3.3%	2.6%
3 Year	4.5%	3.8%
5 Year	4.8%	4.1%
10 Year	5.0%	5.4%
Inception	8.5%	8.7%



NYSTRS' Real Estate Investment Portfolio

Performance by Strategy

Quarter Ended September 30, 2017

NYSTRS' Real Estate Equity Portfolio Performance							
Strategy (Inception Date)	Net Asset Value	Current Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception*
Direct Properties (2/90)	\$4,928	2.3%	8.7%	12.8%	14.2%	7.7%	10.0%
Core Funds (7/85)	\$1,604	1.0%	2.9%	7.3%	9.5%	5.1%	7.2%
Value-Add Funds (12/89)	\$878	3.1%	13.4%	17.9%	17.1%	4.2%	11.2%
Opportunistic Funds (3/99)	\$1,496	1.8%	9.9%	9.8%	11.5%	2.6%	11.4%
U.S. Real Estate Securities (7/95)	\$1,576	1.1%	2.2%	9.8%	9.7%	6.5%	12.3%
Ex-U.S. Real Estate Securities (12/06)	\$1	3.1%	4.5%	3.9%	5.4%	-0.2%	0.7%
Global Real Estate Securities (09/17)	\$415	-	-	-	-	-	-
Timber (12/98)	\$308	-0.3%	-3.0%	4.4%	6.1%	5.1%	4.1%
Total Equity Real Estate Portfolio (7/85)	\$11,206	1.8%	6.8%	10.9%	12.0%	5.8%	8.5%
Blended NCREIF/Wilshire Benchmark	-	1.4%	5.7%	9.7%	10.3%	4.4%	6.6%

NYSTRS' Real Estate Debt Portfolio Performance							
Strategy (Inception Date)	Net Asset Value	Current Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception*
Direct Mortgages (7/85)	\$3,280	1.1%	2.5%	4.1%	4.6%	5.6%	8.6%
Commercial Mortgage Backed Securities (4/01)	\$1,079	1.2%	1.8%	3.8%	3.6%	4.8%	5.3%
Bridge Mortgage/Mezzanine Funds (9/01)	\$785	2.9%	10.1%	9.1%	10.4%	-4.3%	0.7%
Total Real Estate Debt Investments (7/85)	\$5,144	1.3%	3.3%	4.5%	4.8%	5.0%	8.5%
Blended GLCMPI/Barclays Benchmark	-	0.9%	2.6%	3.8%	4.1%	5.4%	8.7%

* Due to the nature of the cash flows, since inception returns for development and closed-end commingled fund investments are reported on a dollar-weighted (IRR) basis. All other strategies and timeframes are reported on a time-weighted basis.

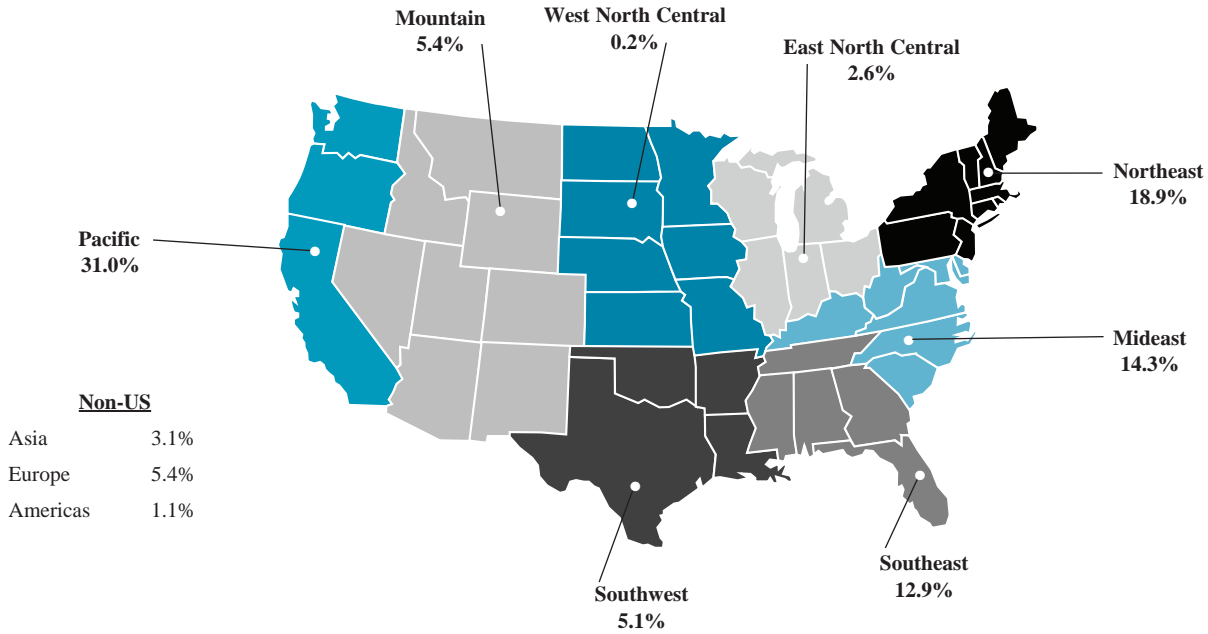


NYSTRS' Real Estate Investment Portfolio

Quarter Ended September 30, 2017

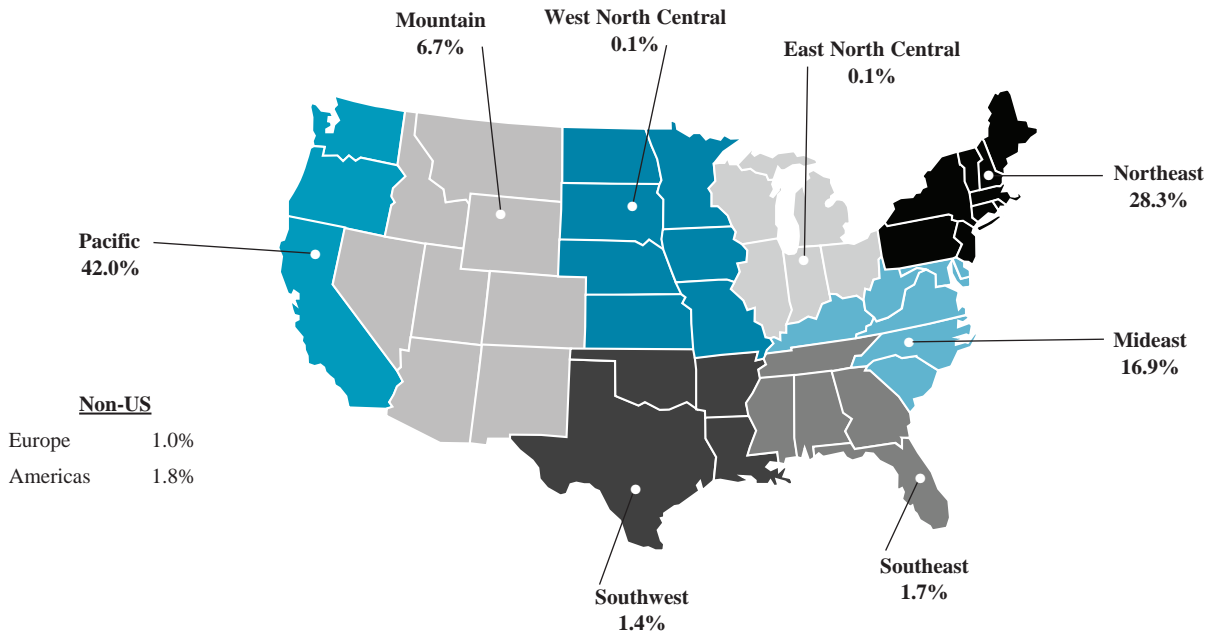
Geographic Distribution of the Equity Real Estate Portfolio

(Excluding Public Real Estate Securities)



Geographic Distribution of the Debt Real Estate Portfolio

(Excluding CMBS)





NYSTRS' Real Estate Investment Portfolio

Quarter Ended September 30, 2017

Equity Portfolio Summary

(in millions)

Equity Real Estate Investments

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Equity Portfolio Performance

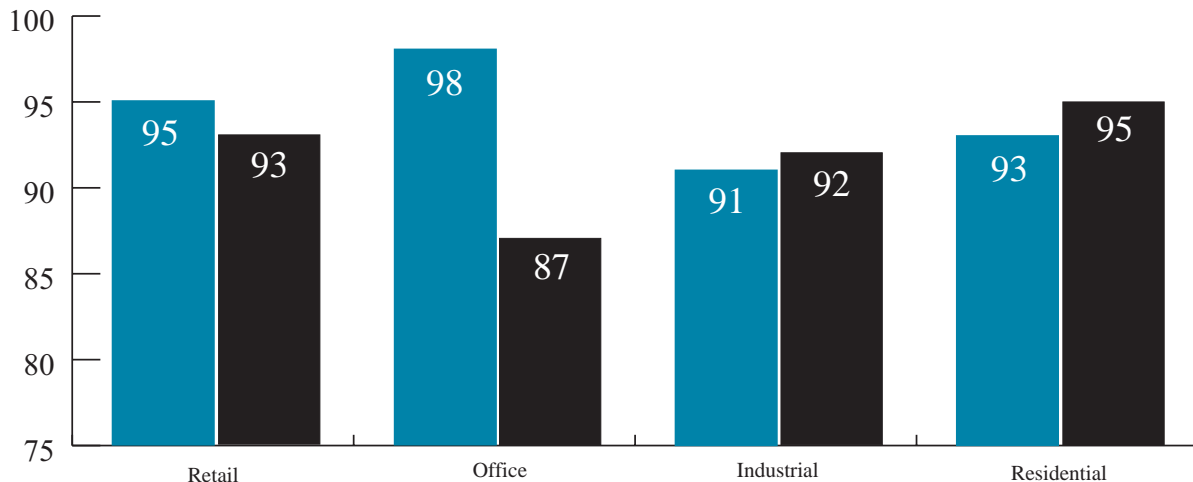
	<u>NYSTRS</u>	<u>Blended NCREIF/ Wilshire Index</u>
Current Quarter	1.8%	1.4%
1 Year	6.8%	5.7%
3 Year	10.9%	9.7%
5 Year	12.0%	10.3%
10 Year	5.8%	4.4%
Inception	8.5%	6.6%

Strategic Plan Targets

	<u>Range</u>	<u>Actual</u>
Core Private	40% - 70%	57.2%
Public Real Estate Securities	5% - 25%	17.8%
Total Core		75.0%
Non-Core	20% - 40%	25.0%

Direct Equity Portfolio

Occupancy By Property Type - September 30, 2017



■ NYSTRS' Direct Portfolio
■ CBRE Econometric Advisors National Average



NYSTRS' Real Estate Investment Portfolio

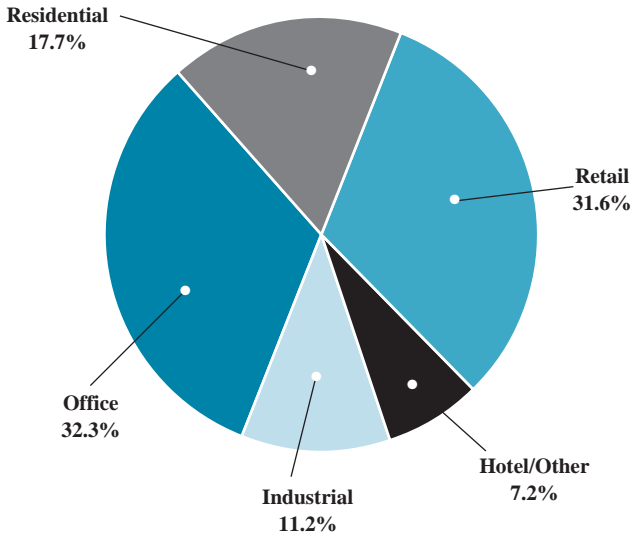
Equity Portfolio Composition

(Excluding Timber and Public Real Estate Securities)

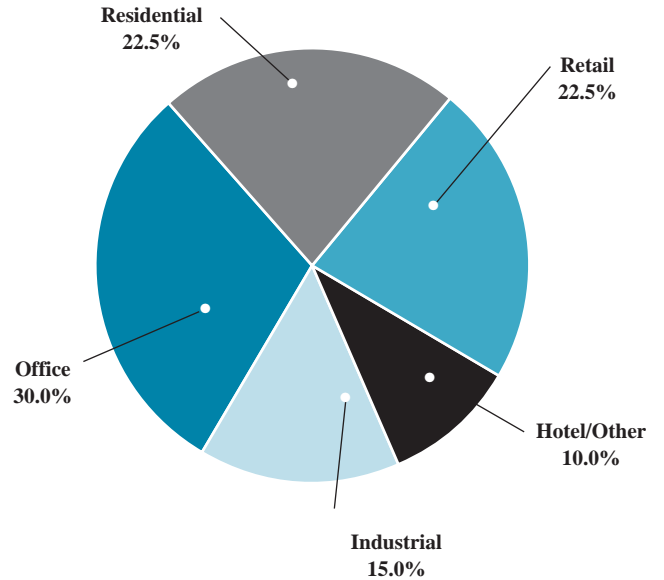
Quarter Ended September 30, 2017

Diversification By Property Type

NYSTRS' Current Portfolio

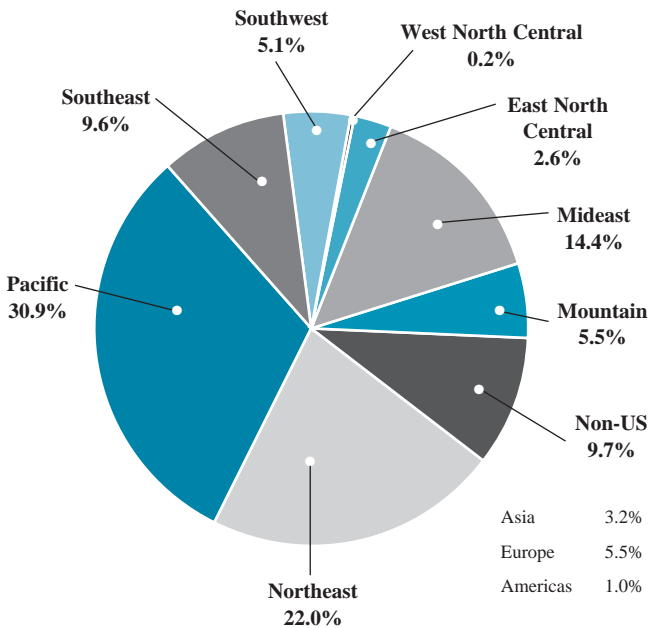


NYSTRS' Strategic Plan

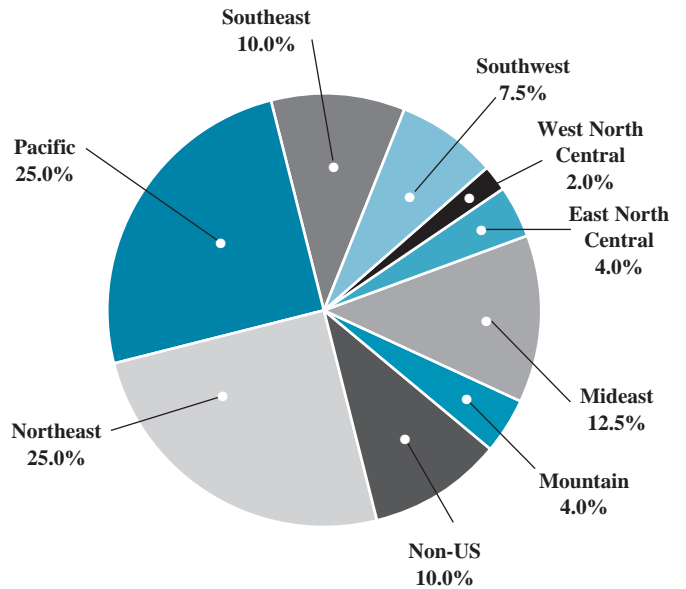


Diversification By Geographic Region

NYSTRS' Current Portfolio



NYSTRS' Strategic Plan





NYSTRS' Real Estate Investment Portfolio

Real Estate Market Overview

Quarter Ended September 30, 2017

Equity Real Estate Leverage Summary

Direct Equity Portfolio:

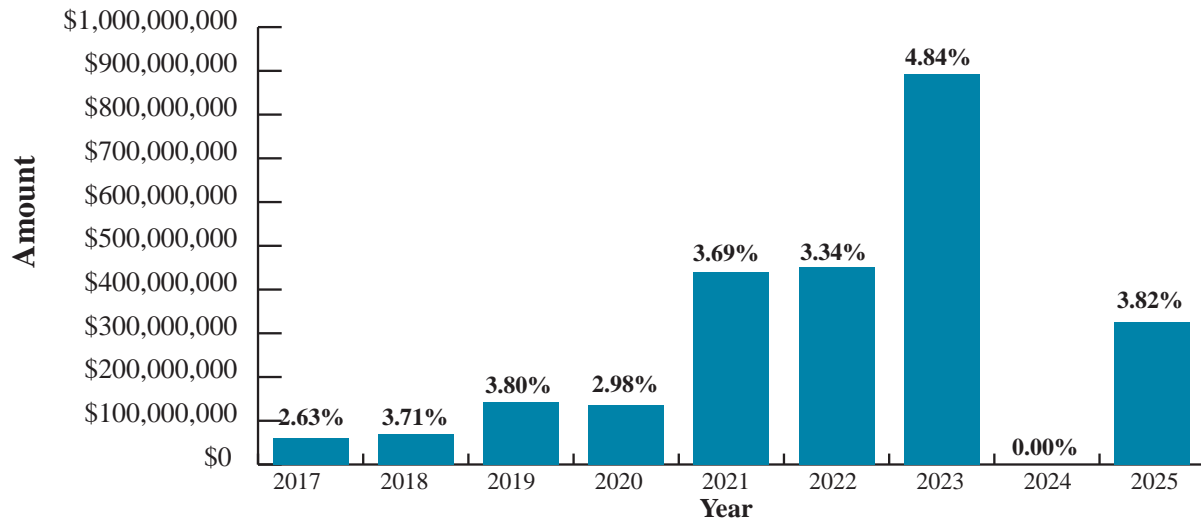
GAV (100%)	\$16.4 B
Debt (100%)	\$ 6.2 B
GAV (NYSTRS %)	\$ 8.0 B

% Fixed	83.2%
% Floating	16.8%

	<u>LTV%</u>	<u>Weighted Avg. Rate</u>	<u>Weighted Avg. Maturity</u>
Stabilized	37.9%	4.13%	4.8 years
Development	50.4%	3.36%	1.4 years
Total	38.2%	4.11%	

Direct Equity Portfolio - Debt Maturities by Year

As of 9/30/17 (excludes DSRG and EDENS)

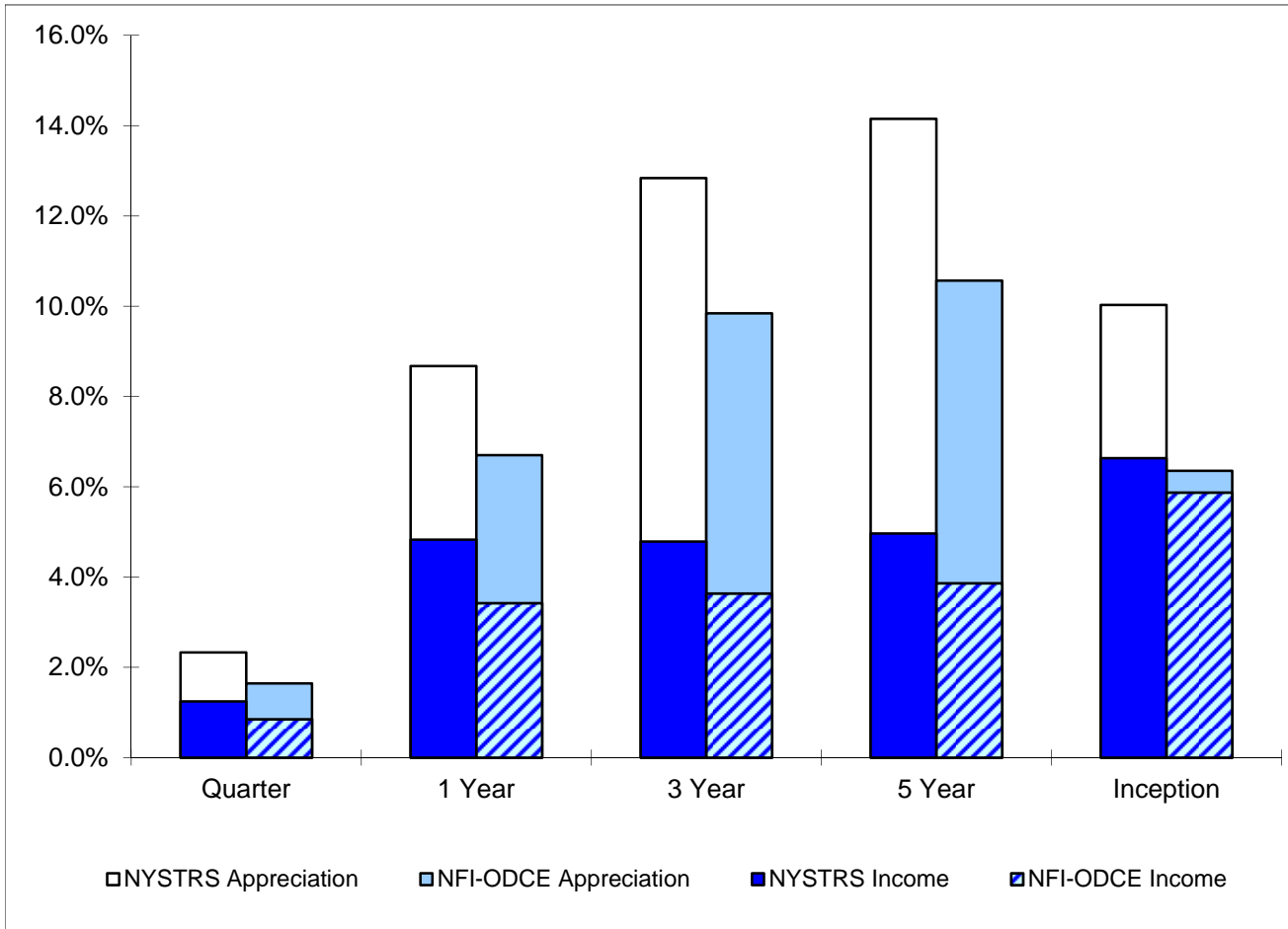


Note: Percentages reflect weighted average interest rate of debt maturing in that year.

Commingled Funds:

	<u>LTV%</u>
Core	39.8%
Value-Add	50.3%
Opportunistic	55.4%

**NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
DIRECT INVESTMENT PERFORMANCE
AS COMPARED TO THE NFI-ODCE
September 30, 2017**



		<u>Current Quarter</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Years</u>	<u>Since Inception*</u>
Income	NYSTRS	1.2%	4.8%	4.8%	5.0%	6.6%
	NFI-ODCE	0.8%	3.4%	3.6%	3.9%	5.9%
Appreciation	NYSTRS	1.1%	3.7%	7.8%	8.9%	3.2%
	NFI-ODCE	0.8%	3.2%	6.0%	6.5%	0.5%
Total Net Returns	NYSTRS	2.3%	8.7%	12.8%	14.2%	10.0%
	NFI-ODCE	1.6%	6.7%	9.8%	10.6%	6.4%

* Inception 2/1/90

Investment Operations Department
January 24, 2018



NYSTRS' Real Estate Investment Portfolio

Quarter Ended September 30, 2017

Debt Portfolio Summary

(in millions)

Real Estate Debt Investments

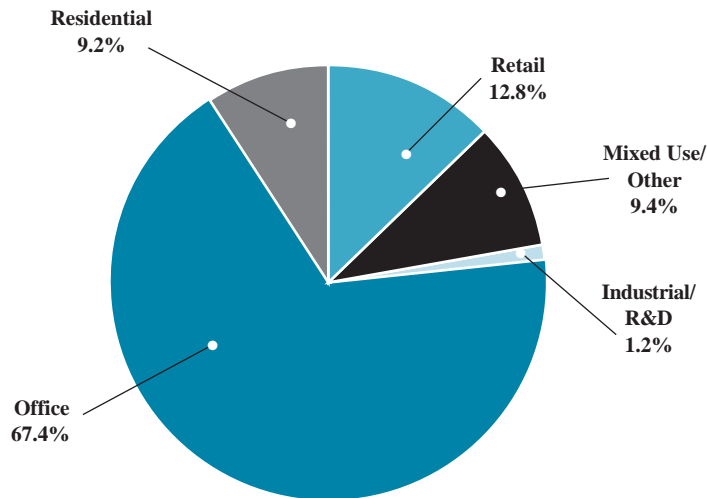
Direct Mortgage Portfolio	\$3,280
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CMBS	<u>\$1,079</u>
Total Current Real Estate Debt Holdings	\$5,144
Outstanding Commitments	
Direct Mortgage	\$0
Debt Funds/Separate Accounts	\$1,253
CMBS	<u>\$0</u>
Total Real Estate Debt Portfolio	\$6,397

Debt Portfolio Performance

	<u>First Mortgages</u>	<u>CMBS</u>	<u>Debt Funds/Separate Accounts</u>	<u>Total</u>	<u>Blended GLC-MPI/Barclays Index</u>
Cur. Quarter	1.1%	1.2%	2.9%	1.3%	0.9%
1 Year	2.5%	1.8%	10.1%	3.3%	2.6%
3 Year	4.1%	3.8%	9.1%	4.5%	3.8%
5 Year	4.6%	3.6%	10.4%	4.8%	4.1%
10 Year	5.6%	4.8%	-4.3%	5.0%	5.4%
Inception	8.6%	5.3%	0.7%	8.5%	8.7%

Debt Portfolio Diversification as of September 30, 2017

Property Type (Excluding CMBS)



Debt Portfolio Metrics

	<u>Duration</u>	<u>Weighted Avg. Cash/Coupon Yield</u>	<u>Weighted Avg. Yield to Maturity</u>
Direct Mortgages	4.6 years	4.2%	3.9%
CMBS Portfolio	5.3 years	5.4%	3.5%

Strategic Plan Targets

	<u>Range</u>	<u>Actual</u>
Core-Mortgages/CMBS	60% - 100%	84.7%
Non-Core	0% - 40%	15.3%



NYSTRS' Real Estate Investment Portfolio

Quarter Ended September 30, 2017

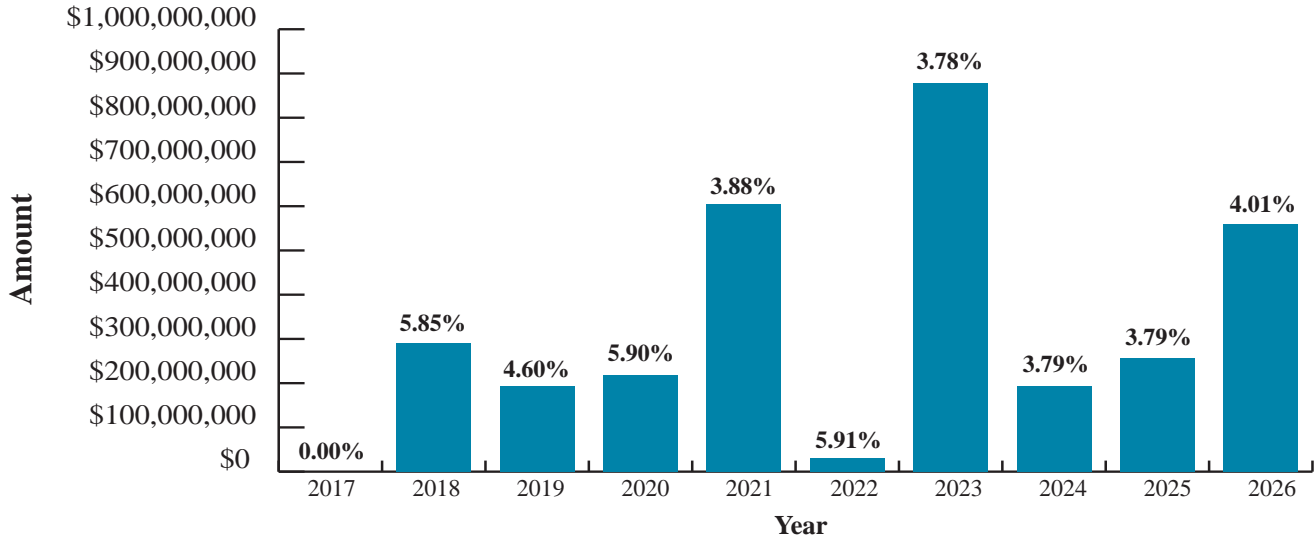
Direct Mortgage Portfolio Summary

Direct Mortgage Performance

	<u>Net Asset Value</u>	<u>Current Quarter</u>	<u>1 Year</u>	<u>3 Years</u>	<u>5 Years</u>	<u>10 Years</u>	<u>Since Inception</u>
Direct Mortgages (7/85)	\$3,280	1.1%	2.5%	4.1%	4.6%	5.6%	8.6%
GL Custom Index		1.1%	2.5%	4.1%	4.6%	5.5%	8.8%

Direct Mortgage Portfolio - Debt Maturities by Year

As of 9/30/17



Note: Percentages reflect weighted average interest rate of debt maturing in that year.