



2017 REAL ESTATE PORTFOLIO REVIEW

Employees' Retirement System of Rhode Island
(ERSRI)

PCA

PENSION
CONSULTING
ALLIANCE

October 2017

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Section 1 Portfolio Overview

ERSRI Real Estate Portfolio: Performance

Real Estate Portfolio Performance Detail – Net of Fees

Partnership	Current Value (\$M)	2Q-17 Total (%)	1-Year (%)	3-Year (%)	5-Year (%)	Since Inception (%)
ERSRI Core Portfolio	421.2	1.5	7.3	10.5	11.2	5.6
AEW Core Property Trust	102.0	1.6	7.2	10.2	10.4	12.5
Heitman America Real Estate Trust	77.7	1.2	6.9	n/a	n/a	10.1
JP Morgan Strategic Property Fund	105.1	1.4	6.9	9.7	11.0	6.2
Morgan Stanley Prime Property Fund	61.7	2.2	9.1	12.1	12.9	7.7
Prudential PRISA	74.7	1.4	6.8	10.6	10.9	5.8
ERSRI Non-Core Portfolio	171.9	4.1	14.8	14.3	14.4	1.7
Crow Holdings Retail Fund	21.8	5.0	13.4	n/a	n/a	22.2
Exeter Industrial Value Fund III	33.7	5.3	18.5	n/a	n/a	15.7
GEM Realty Fund V	42.3	2.6	15.6	17.4	n/a	9.0
IC Berkeley Partners III	13.0	5.6	11.2	n/a	n/a	15.7
IC Berkeley Partners IV ⁽¹⁾	5.4	-4.2	-10.2	n/a	n/a	-10.2
JP Morgan Alternative Property Fund	0.2	1.2	6.4	6.1	5.8	-0.2
Lone Star Real Estate Fund IV	17.4	7.2	27.3	n/a	n/a	15.1
Magna Hotel Fund III	1.1	11.3	0.0	-3.1	8.7	11.2
TriCon Capital Fund VII	1.1	2.2	0.4	-1.2	-5.8	-15.7
Waterton Fund XII	35.9	2.4	12.9	n/a	n/a	20.0
ERSRI Total Real Estate Portfolio	593.1	2.2	9.2	11.4	11.6	4.8
Net NFI-ODCE		1.5	6.9	10.3	10.8	6.3
Performance Under / Over Benchmark		0.7	2.3	1.1	0.8	-1.5

⁽¹⁾ The current quarter, 1-year, and since inception returns are negative due to the majority of the activity being initial fund expenses and management fees. The current quarter, 1-year, and since inception returns on a gross basis are 1.5%, 1.0%, and 1.0%, respectively.

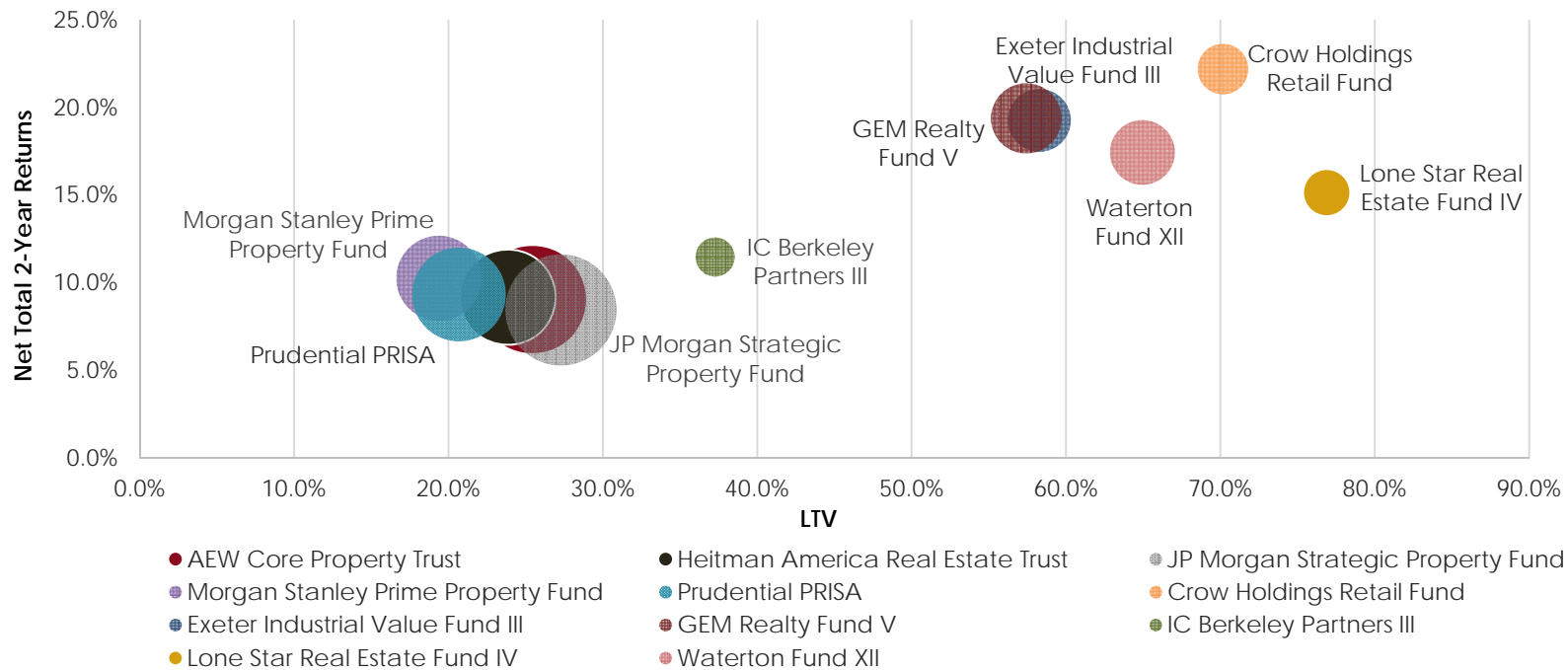
As of June 30, 2017.

- ERSRI net total returns exceeded the benchmark for the current quarter, 1-, 3-, and 5-year time periods.
- The Core portfolio net total return was in-line with the benchmark for the current quarter and exceeded the benchmark for the 1-, 3-, and 5-year time periods.
- The Non-Core portfolio net total return exceeded the benchmark for the current quarter, 1-, 3-, and 5-year time periods.
- ERSRI net total returns, as well as net total returns for the Core and Non-Core portfolios have underperformed the benchmark since inception.

ERSRI Real Estate Portfolio: Performance

- The Portfolio had a total Loan-to-Value (LTV) ratio at quarter end of 38.7%.
- As expected, the Non-Core investments with higher leverage and therefore higher risk, outperformed the Core investments.

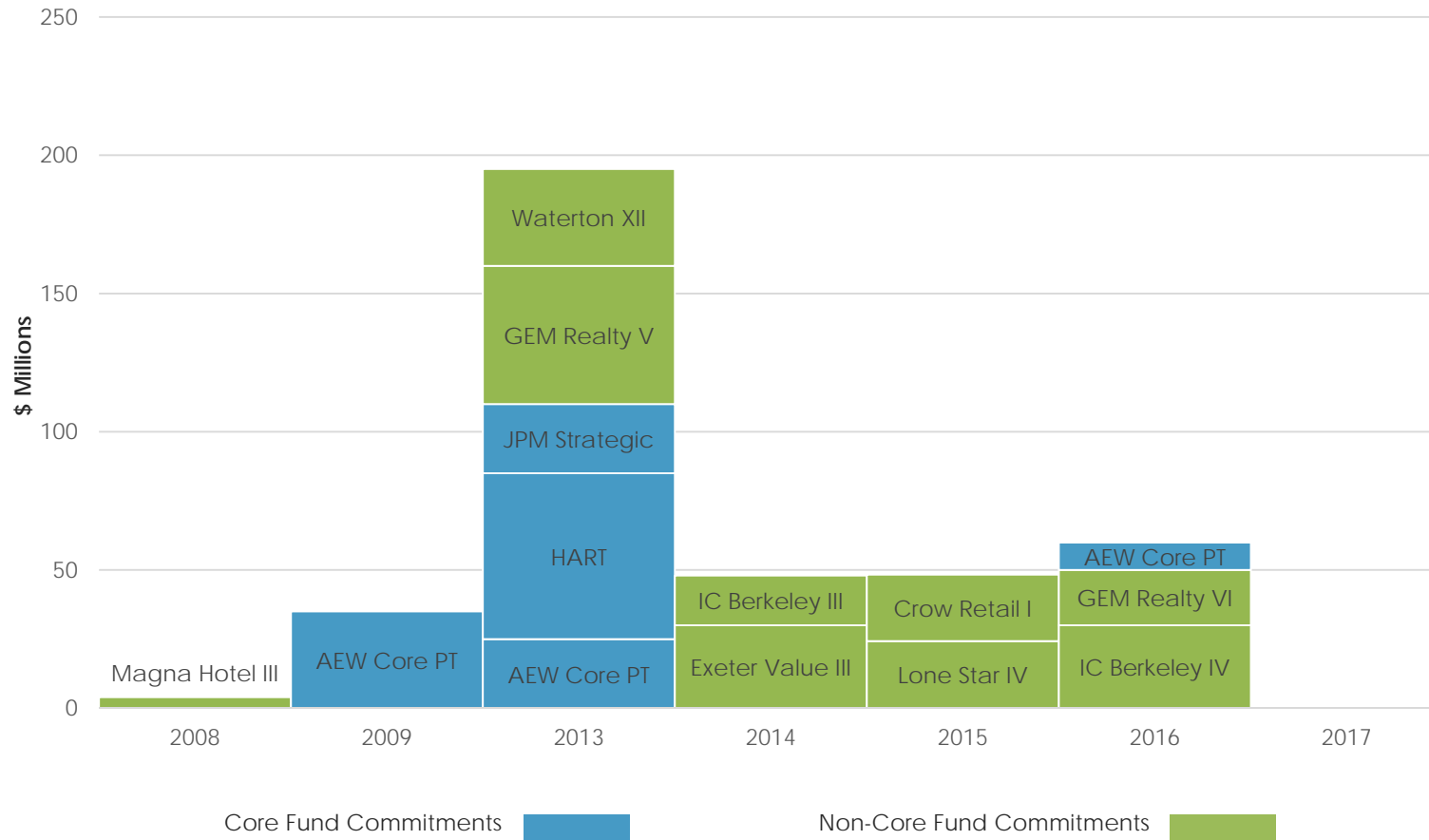
Real Estate Portfolio 2-Year Net Performance^{(1), (2), (3)}



- (1) The size of the bubble relates to the NAV amount of the investment as of June 30, 2017. Investments in JP Morgan Alternative Property Fund, Magna Hotel Fund III and TriCon Capital Fund VII are excluded due to each NAV being approximately \$ 1 million or less and each respective fund being in the wind-down stage. IC Berkeley Partners IV was also excluded due to it being the first year of the fund.
- (2) Lone Star Real Estate Fund IV and Crow Holdings Retail Fund only have seven quarterly periods being annualized.
- (3) The LTV ratios used in the chart are a weighted average. Crow Holdings Retail Fund and Lone Star Real Estate Fund IV have higher LTV ratios during the trailing 2-year period due to the Fund line of credit being used to make investments in advance of calling capital from investors. As of June 30, 2017.

ERSRI Real Estate Portfolio: Capital Activity

Vintage Year Exposure

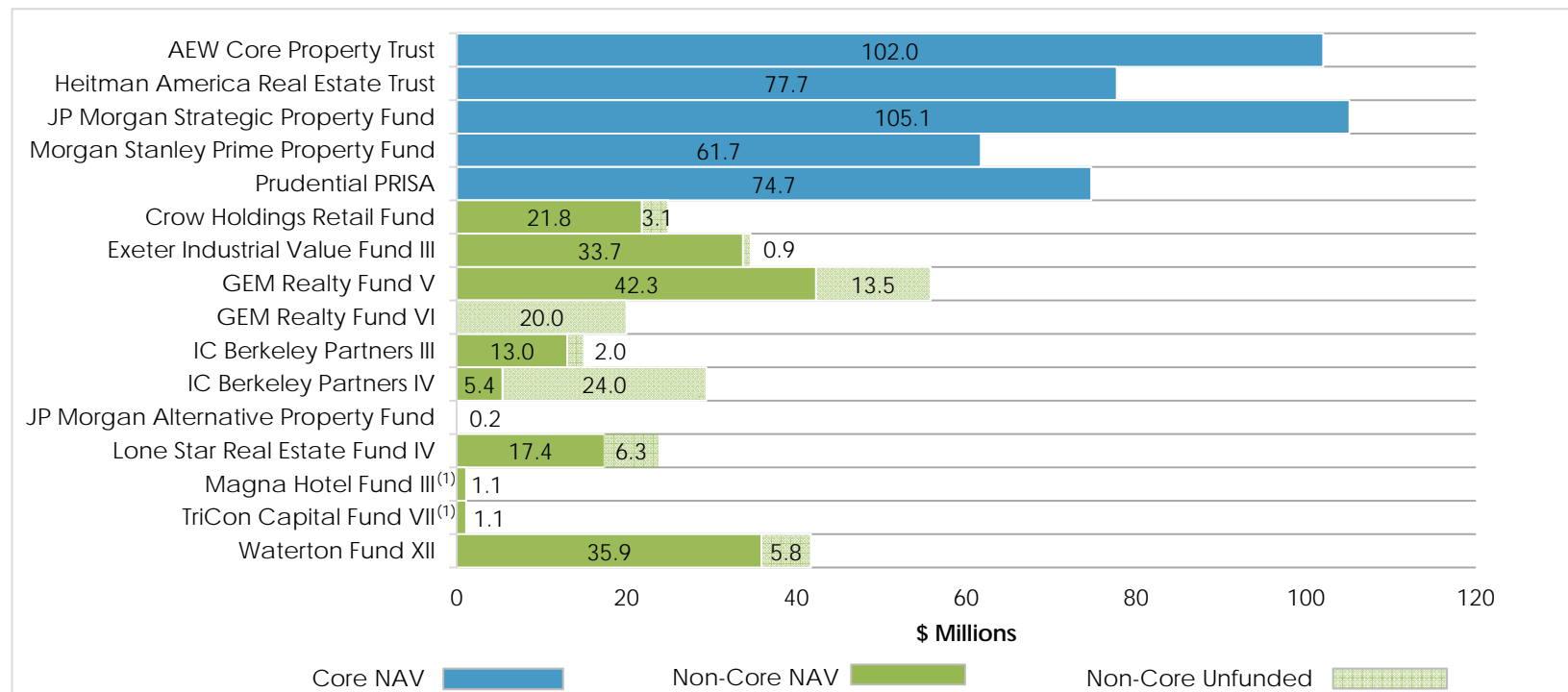


As of June 30, 2017.

ERSRI Real Estate Portfolio: Capital Activity

- Total Q2 Portfolio Value: \$593.1 M
- Current Committed but Unfunded: \$76.6 M
- Total Value and Unfunded: \$669.7 M
- Total Value and Unfunded Commitments as a Percentage of Q2 Total Plan Assets: 8.3%

Current Value with Unfunded Commitments



⁽¹⁾ The unfunded commitments of \$0.6 million (Magna Hotel Fund III) and \$0.4 million (TriCon Capital Fund VII) are not shown.

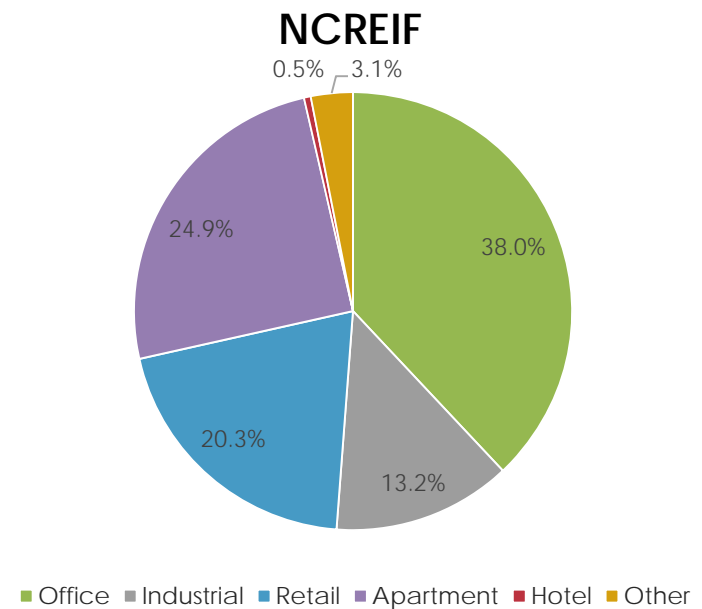
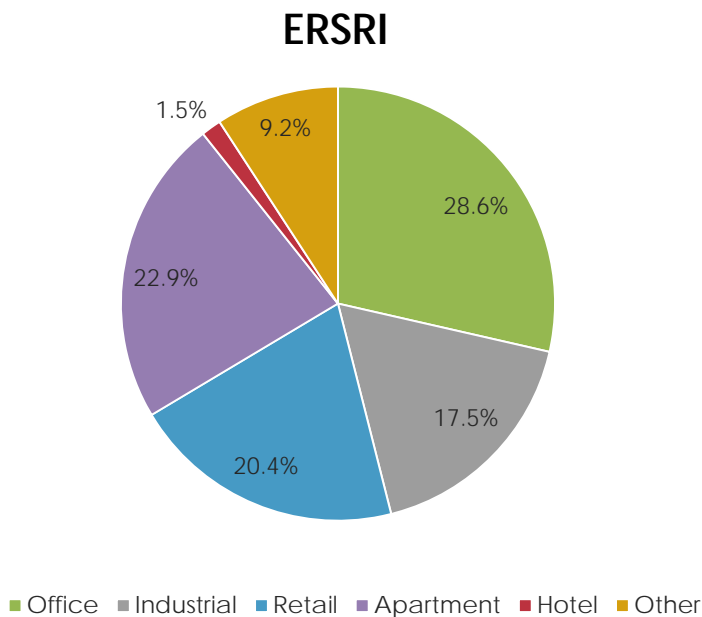
As of June 30, 2017.

ERSRI Real Estate Portfolio: Diversification

As compared to the NFI-ODCE:

- Underweight to office by 940 basis points and apartment by 200 basis points;
- Overweight to industrial by 430 basis points, hotel by 100 basis points, and retail by 10 basis points; and
- Overweight to "other" property types by 600 basis points, primarily through the core investments in the AEW Core Property Fund, Heitman America Real Estate Trust, Morgan Stanley Prime Property Fund and the Prudential PRISA Fund.

Property Type Diversification



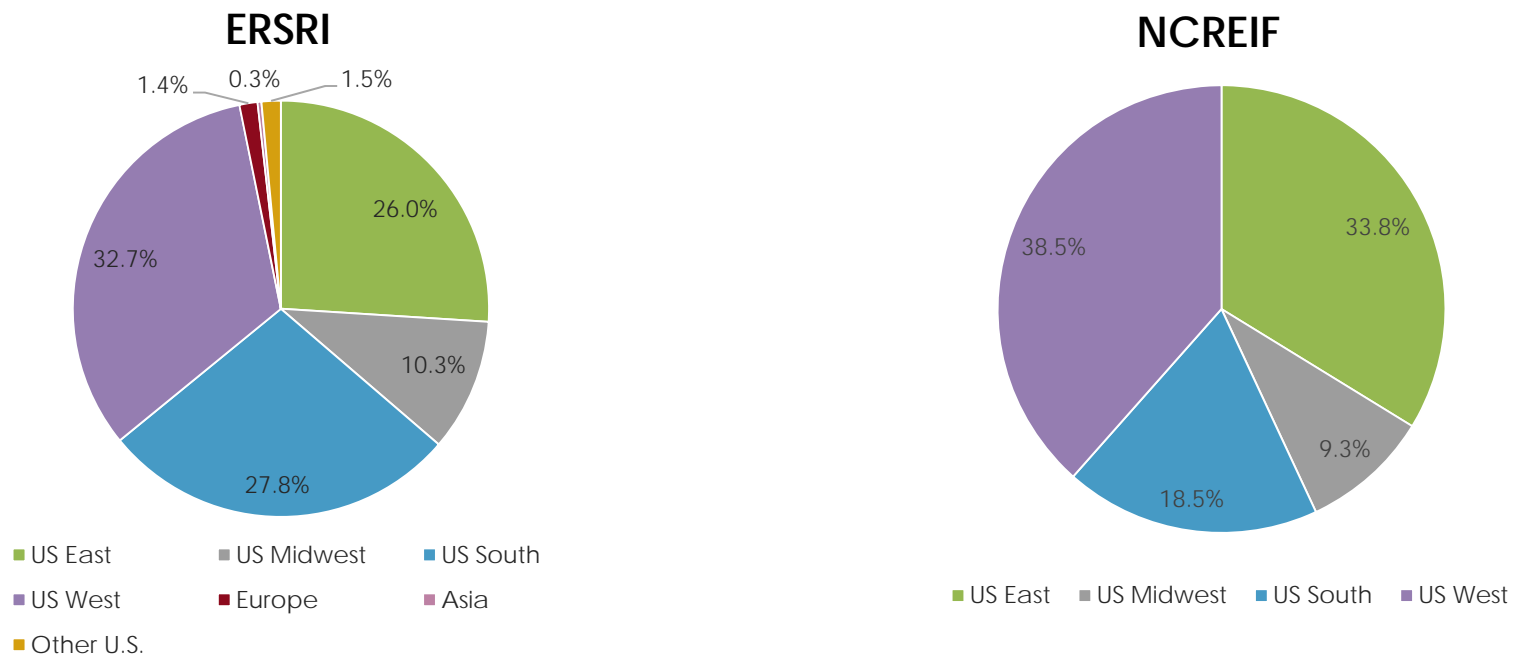
As of June 30, 2017.

ERSRI Real Estate Portfolio: Diversification

As compared to the NFI-ODCE:

- Underweight to the East by 770 basis points and the West by 580 basis points; and
- Overweight to the South by 930 basis points and the Midwest by 100 basis points.
- The “other” category is comprised of the Portfolio’s international allocation from Lone Star RE IV of 1.4% to Europe, 0.3% to Asia and 1.5% to “other U.S.” regions from Lone Star RE IV and Waterton XII.

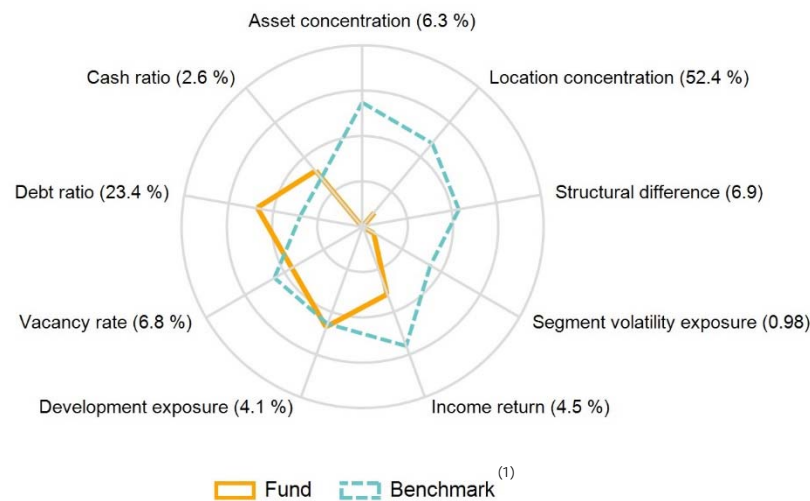
Geographic Diversification



As of June 30, 2017.

Pacing Plan: Core Fund Analysis

Consolidated Core Portfolio RiskWeb



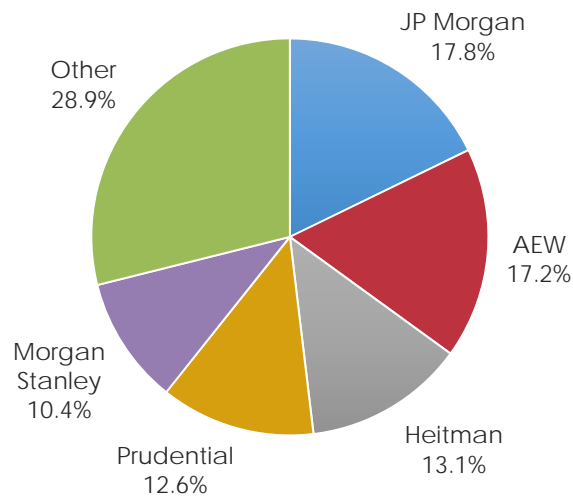
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- The RiskWeb is based on values and percentile ranks. The closer to the outside of the web, the greater the risk.
- Asset Concentration based on the capital value in the top five assets is lower and more favorable than the benchmark's 25.5% value.
- Location Concentration based on the capital value in the top five regions is lower and more favorable than the benchmark's 62.9% value. Top regions include:
 - New York-Northern New Jersey-Long Island, NY-NJ-PA (13.2%)
 - Los Angeles-Long Beach-Santa Ana, CA/Riverside-San Bernardino-Ontario, CA (11.2%)
 - San Francisco-Oakland-Fremont, CA/San Jose-Sunnyvale-Santa Clara, CA (8.5%)
- The Core portfolio in comparison to the benchmark is overweight super-regional malls, power centers and self-storage assets. The Core portfolio is underweight in community/neighborhood centers, other retail and CBD Office.
- The Core portfolio has a slightly higher debt ratio (LTV) of 23.4% in comparison to the benchmark's ratio of 21.5%.

⁽¹⁾ The benchmark is the PREA/IPD U.S. Property Fund Index Core Diversified Open End Funds As of June 30, 2017.

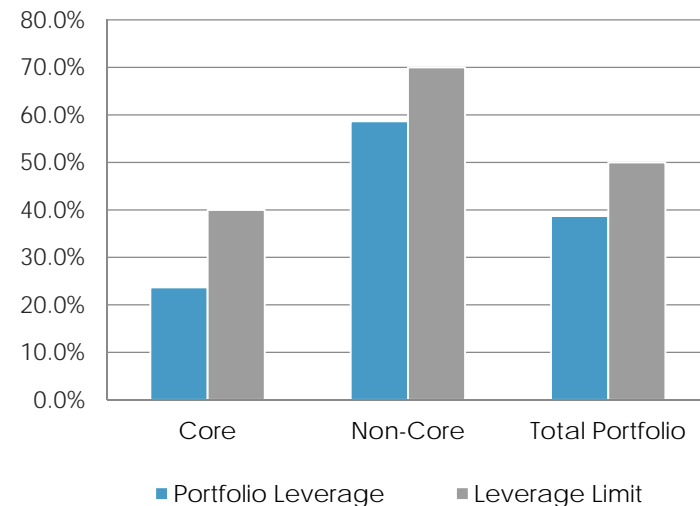
ERSRI Real Estate Portfolio: Other Characteristics

Manager Diversification



- The Portfolio has 13 managers.
- The five largest managers manage 71.1% of the portfolio's net assets.

Loan-to-Value (LTV)



- The Portfolio had an average overall LTV ratio of 38.7%.
- The Core Portfolio had an LTV of 23.7%.
- The Non-Core Portfolio had an LTV of 58.6%.

As of June 30, 2017.

Section 2 Real Estate Pacing Plan

Pacing Plan: Introduction

- PCA has updated the following charts to assist the Employees' Retirement System of Rhode Island (ERSRI or the System) with developing an investment pacing plan for its real estate program.
- PCA used growth and return assumptions provided by the System's existing real estate managers, assumptions from the System for growth of the fund, as well as PCA's own growth and return assumptions in development of this pacing plan.
- Actual market conditions and returns may vary. Key assumptions are included on the following pages.

Pacing Plan: Assumptions

Total Plan Assumptions	
Total Plan Growth Rate	3.0%
Target Real Estate Allocation ⁽¹⁾	5.9%
Real Estate Plan Assumptions	
Core Target Allocation ⁽¹⁾	61.5%
Non-Core Target Allocation ⁽¹⁾	37.5%
Publicly Traded Target Allocation ⁽²⁾	1.0%
Real Estate Growth Assumptions	
Core Net Income	4.5%
Core Net Appreciation	1.0%
Total Net Core Return	5.5%
Core Cash Distributions	3.5%
Non-Core Net Income	2.5%
Non-Core Appreciation	7.6%
Total Net Non-Core Return	10.1%
Publicly Traded Net Appreciation	5.0%
Publicly Traded Dividend	2.5%
Publicly Traded Net Return	7.5%

(1) Proposed allocation percentages

(2) For modeling purposes, the 1% target allocation for Publicly Traded/REIT securities is included in the Non-Core target allocation.

- PCA believes it is appropriate to create ranges for each of the sub asset classes.
- However, for modeling purposes, PCA used static targets for each sub-asset class.

Pacing Plan: Key Inputs

Core

The model assumes that no new Core commitments will need to be made.

Rather, in order to meet the proposed new target allocations, amounts will need to be withdrawn from the Core funds.

- The model assumes a \$74 million withdrawal from the PRISA fund in December of 2017, bringing the fund balance to zero.
- Based on the current estimated growth rate of 3%, it is projected that by 2021 the Core Portfolio will be approximately \$50 million above the targeted NAV.
- The actual growth rate of total plan assets along with the resulting targeted NAV and actual NAV of the Core portfolio, within the Inflation Protection Class, should be monitored in order to ascertain if further withdrawals will be needed.

Non-Core

The model includes the following commitments to the Non-Core portfolio, all of which are contributed over three year periods, earn distributions beginning in the third year, and have been adjusted downward by a 20% over-commitment factor:

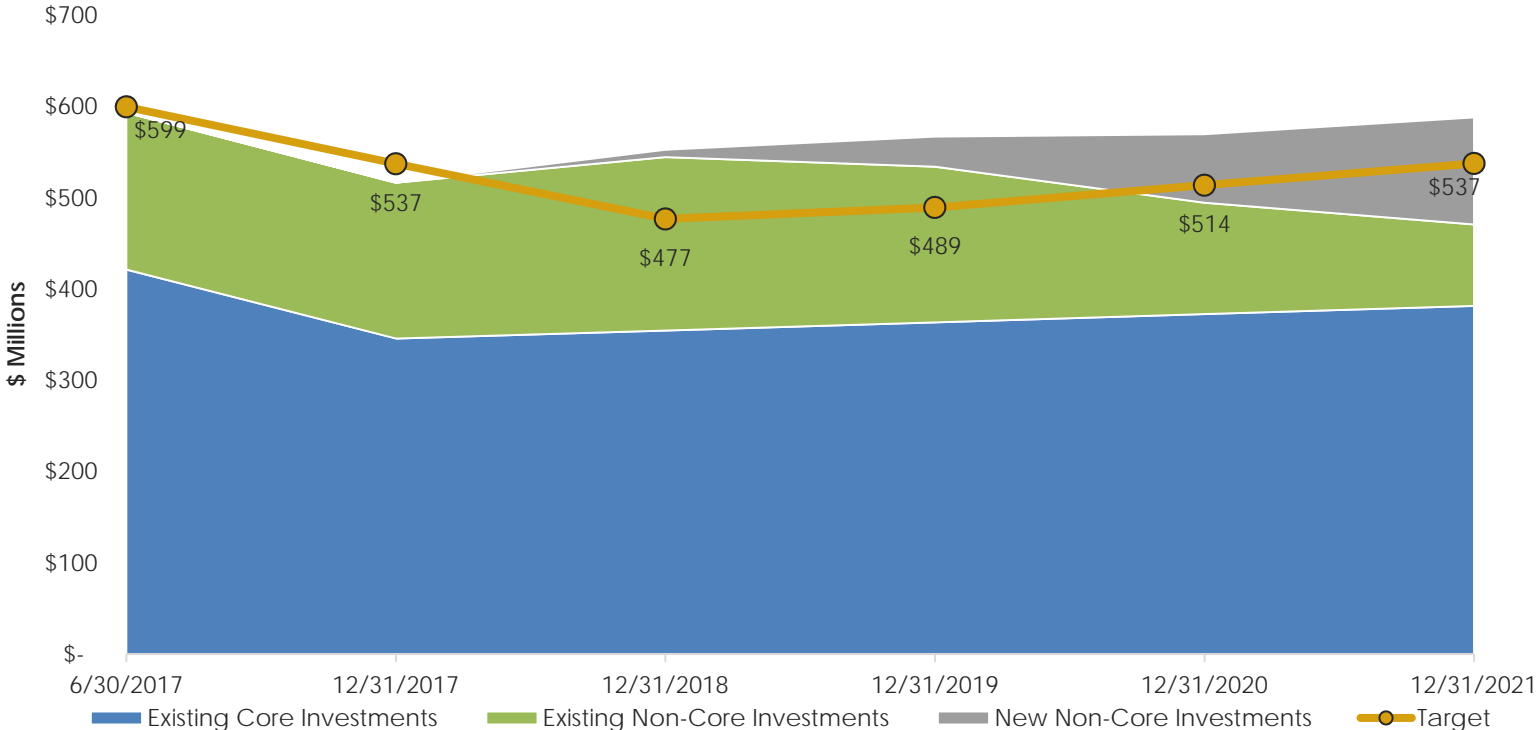
- \$40 million per year between 2018 and 2021.

Publicly-Traded

The model does not include a commitment to publicly-traded securities.

Pacing Plan: Projected Valuations

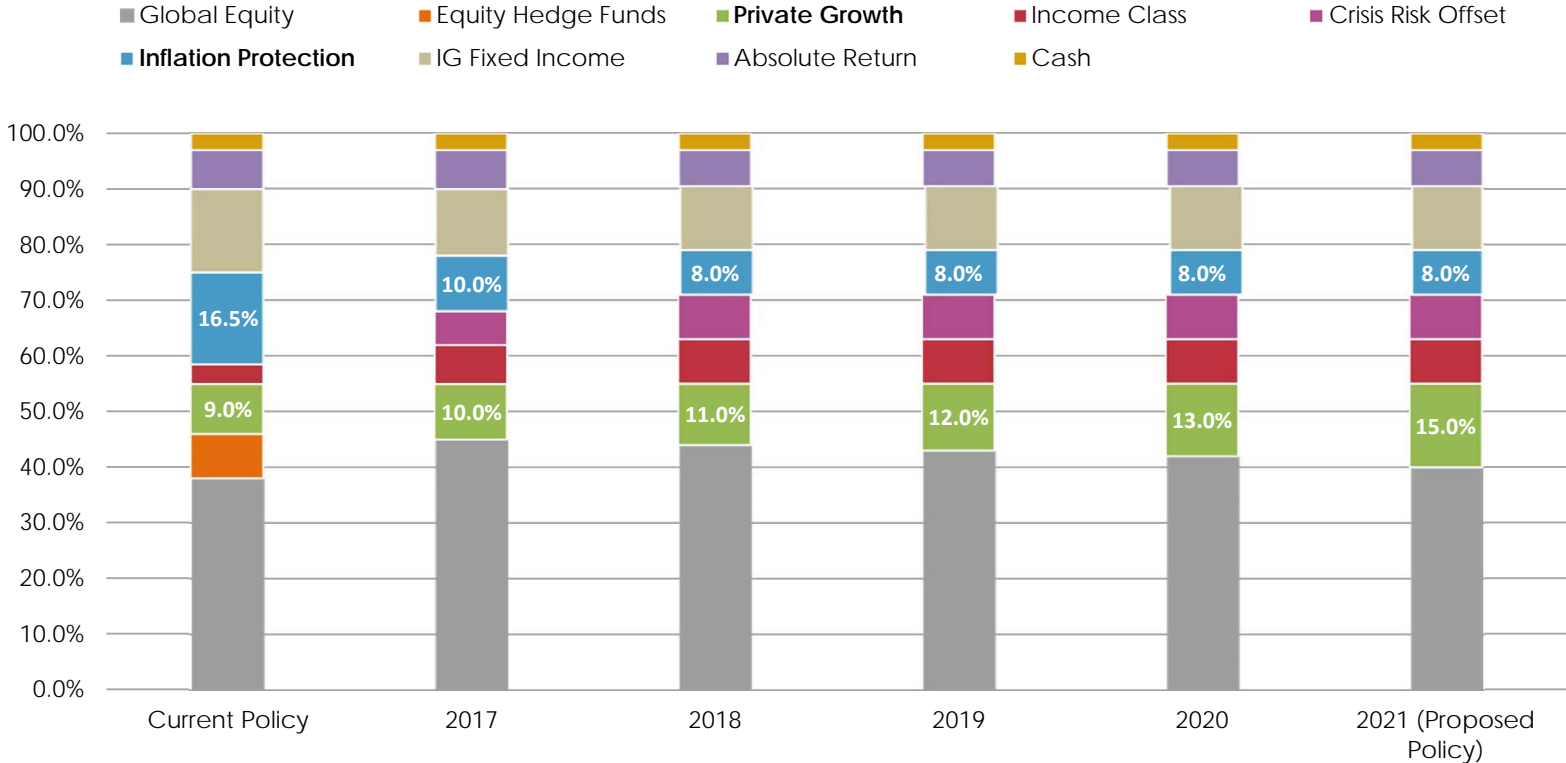
Projected Valuations



- As of June 30, 2017, the System had 7.4% of its assets invested in real estate. The line in the chart illustrates the targeted real estate allocation (i.e., appx. 5.9% of total assets (proposed policy)).
- Assumes total plan assets grow at an annual rate of 3.0%.
- Projected funding over the next four years includes new commitments to the Non-Core sub asset class and a withdrawal from the Core sub asset class.

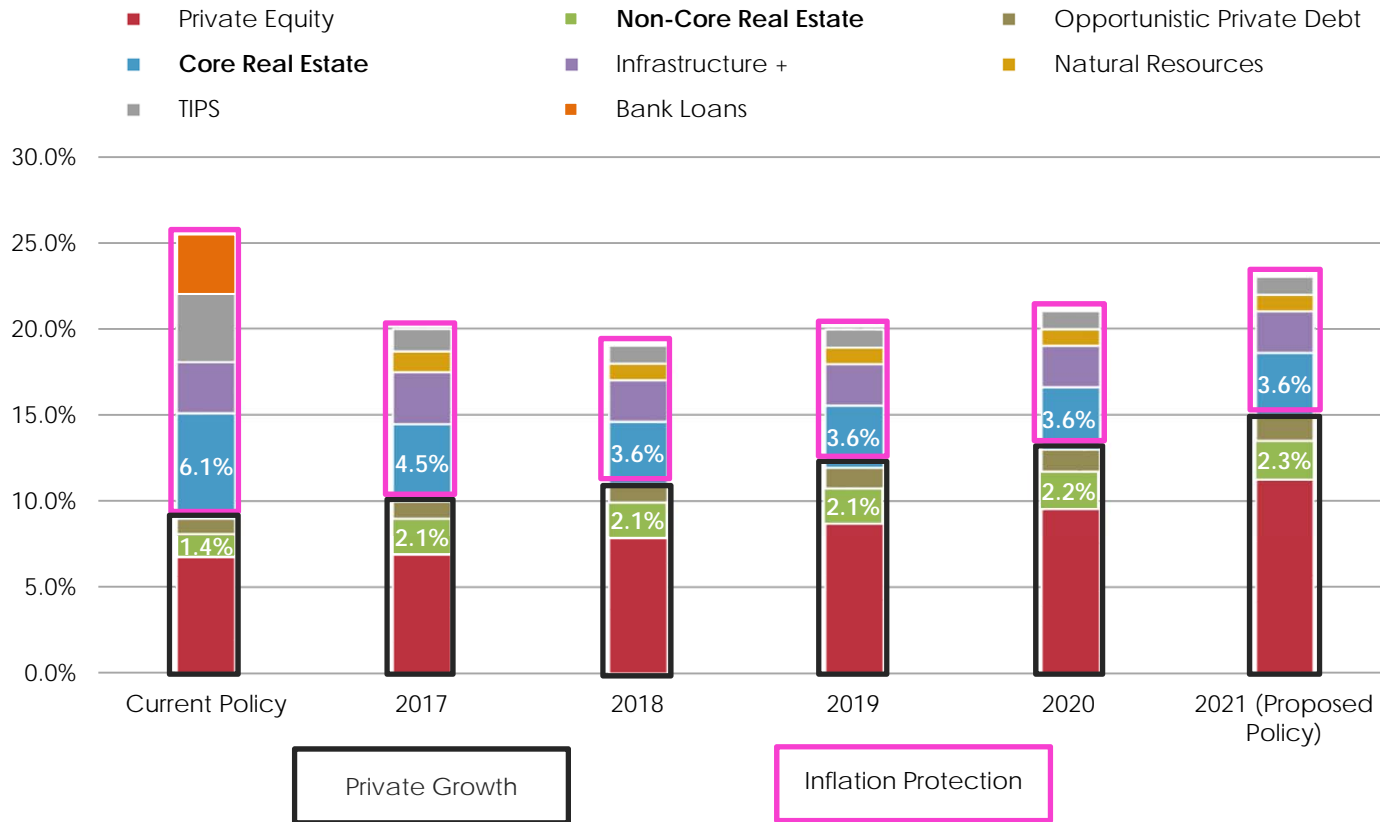
Pacing Plan: Strategic Allocations

Proposed Target Allocations



Pacing Plan: Strategic Allocations

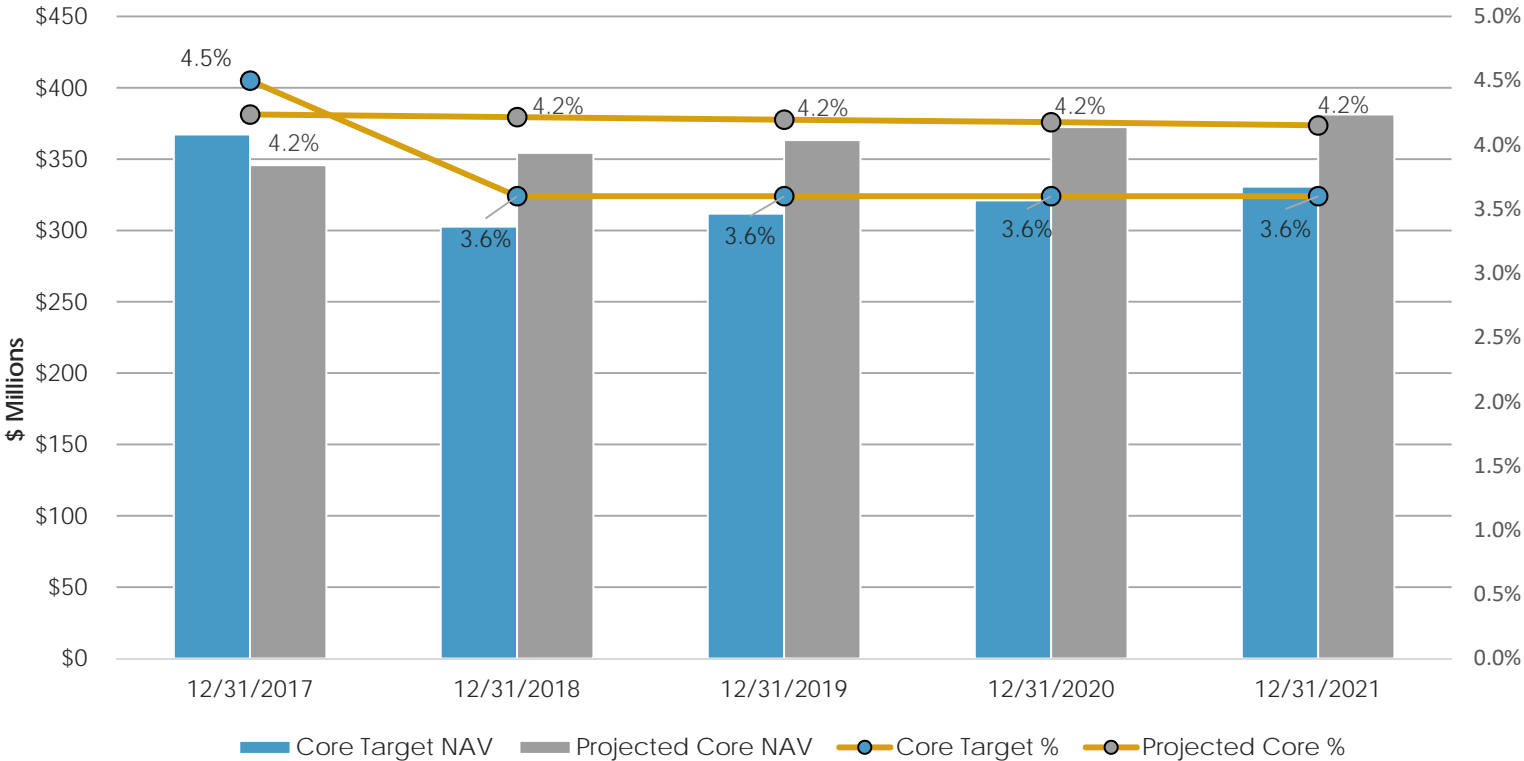
Proposed Target Allocations



- Within the Inflation Protection Class, the long-term target for Core real estate is 45%.
- Within the Private Growth Class, the long-term target for Non-Core real estate will be 15%.

Pacing Plan: Strategic Allocations

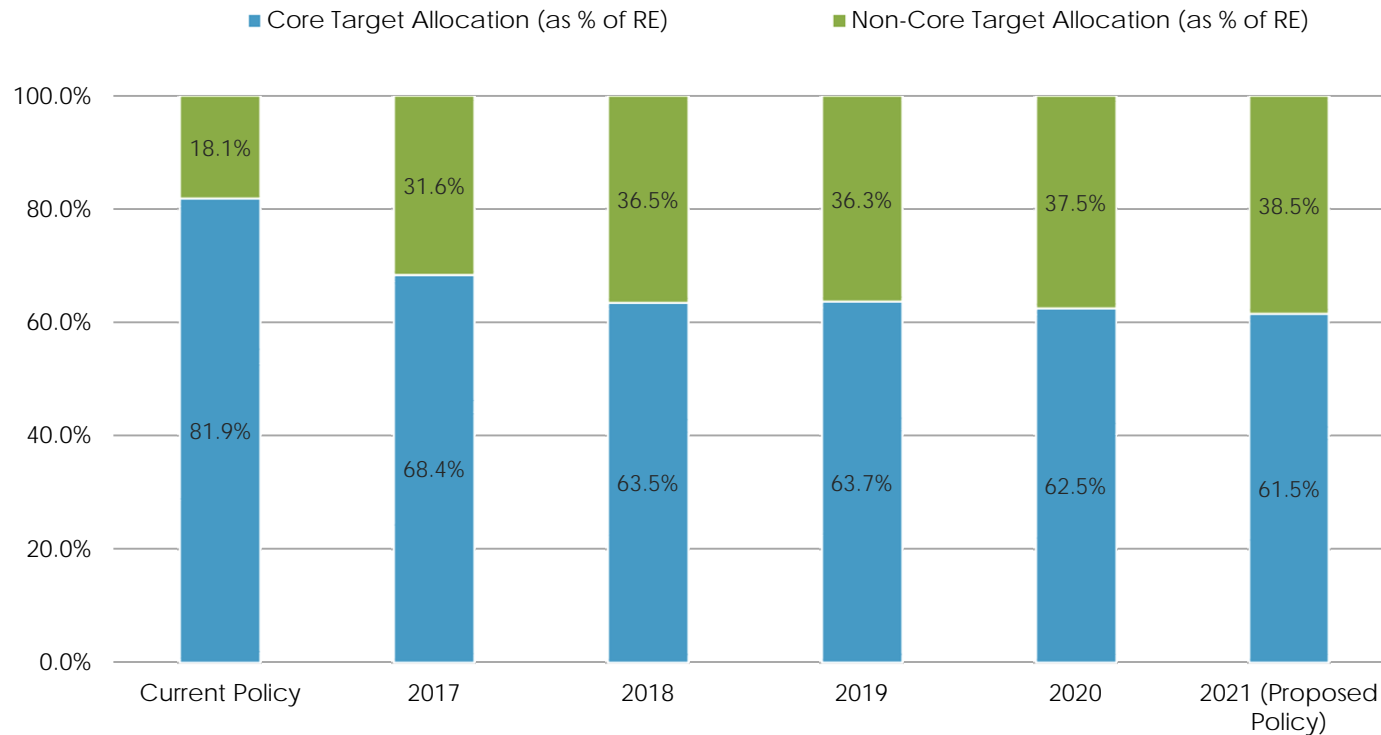
Proposed Core Real Estate Allocations



- Within the Inflation Protection Class, the long-term target for Core real estate is 3.6% of Total Plan assets.

Pacing Plan: Strategic Allocations

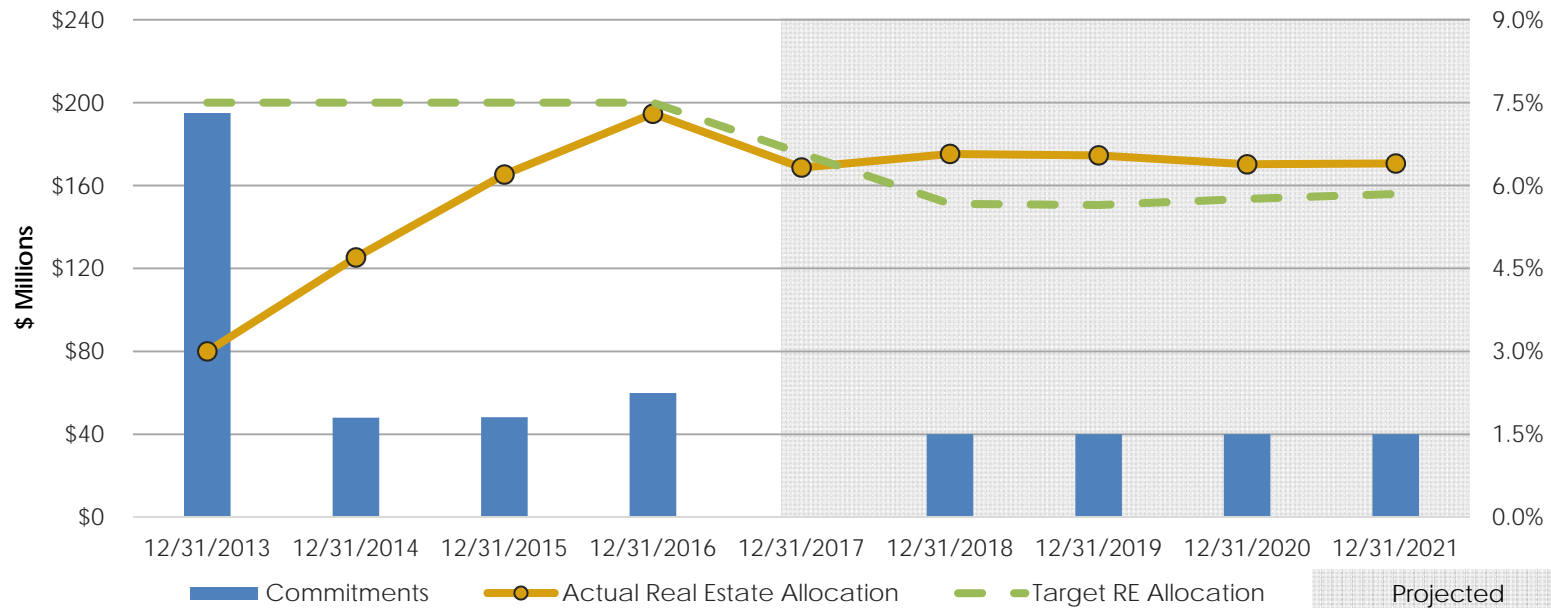
Proposed Target Allocations



- Over the next four years, the pacing plan will shift the portfolio towards a long-term target of approximately 61.5% core and 38.5% non-core real estate.
- This translates to Core real estate having a target of 3.6% of total plan assets and Non-Core real estate having a target of 2.3% of total plan assets.

Pacing Plan: Commitment Schedule⁽¹⁾

Historical and Projected Commitments and Allocations

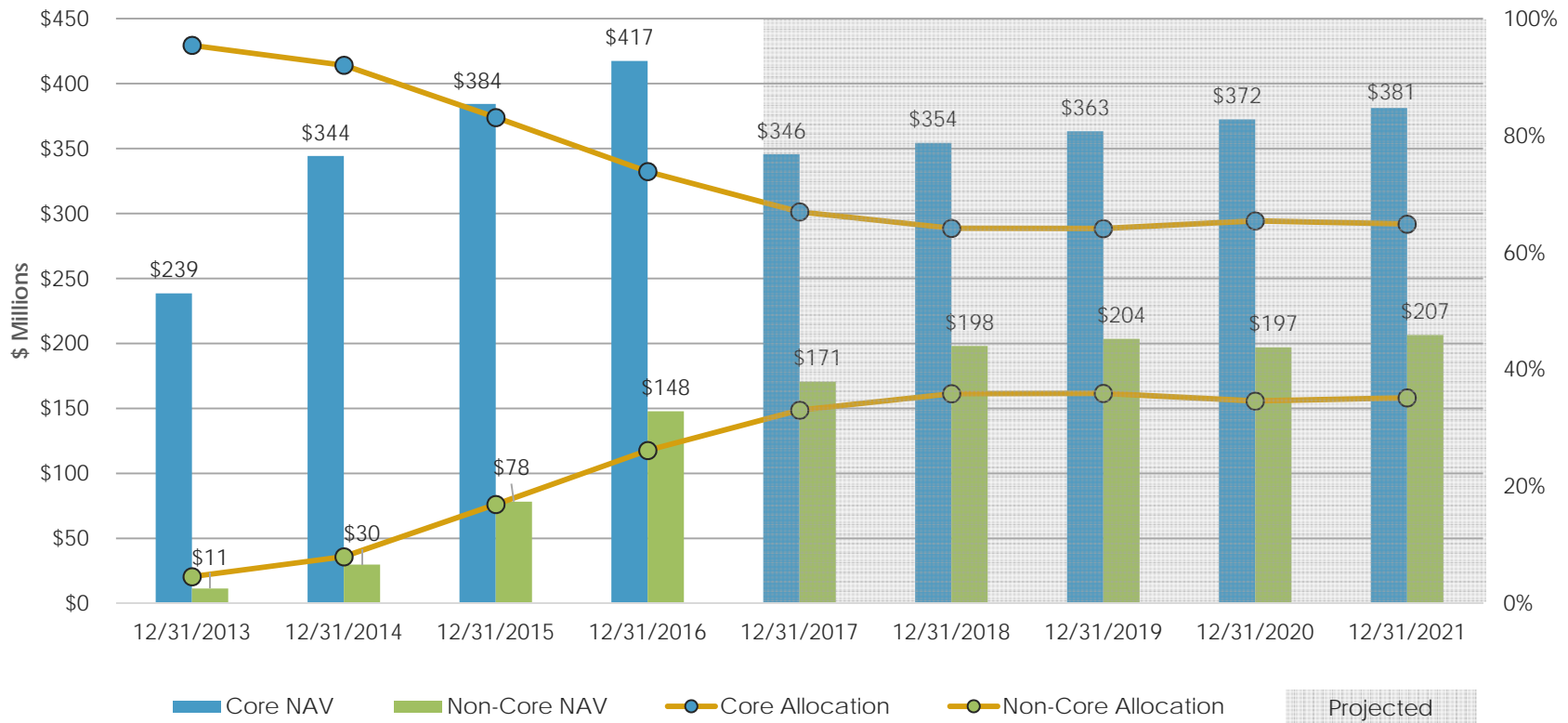


- Post the secondary sale of eight Non-Core investments in 2013, there was a large number of new commitments in 2013.
- Actual commitments between 2013 and 2016 totaled approximately \$120 million Core and \$231million Non-Core.
- Additional Core commitments are not anticipated to be needed at this time.
- Projected Non-Core commitments beginning in 2018 and thereafter will be approximately \$40 million per year.

(1) Includes commitments made but not yet funded based on year commitment was made and funded commitments based on the year of the capital calls

Pacing Plan: Strategic Allocations

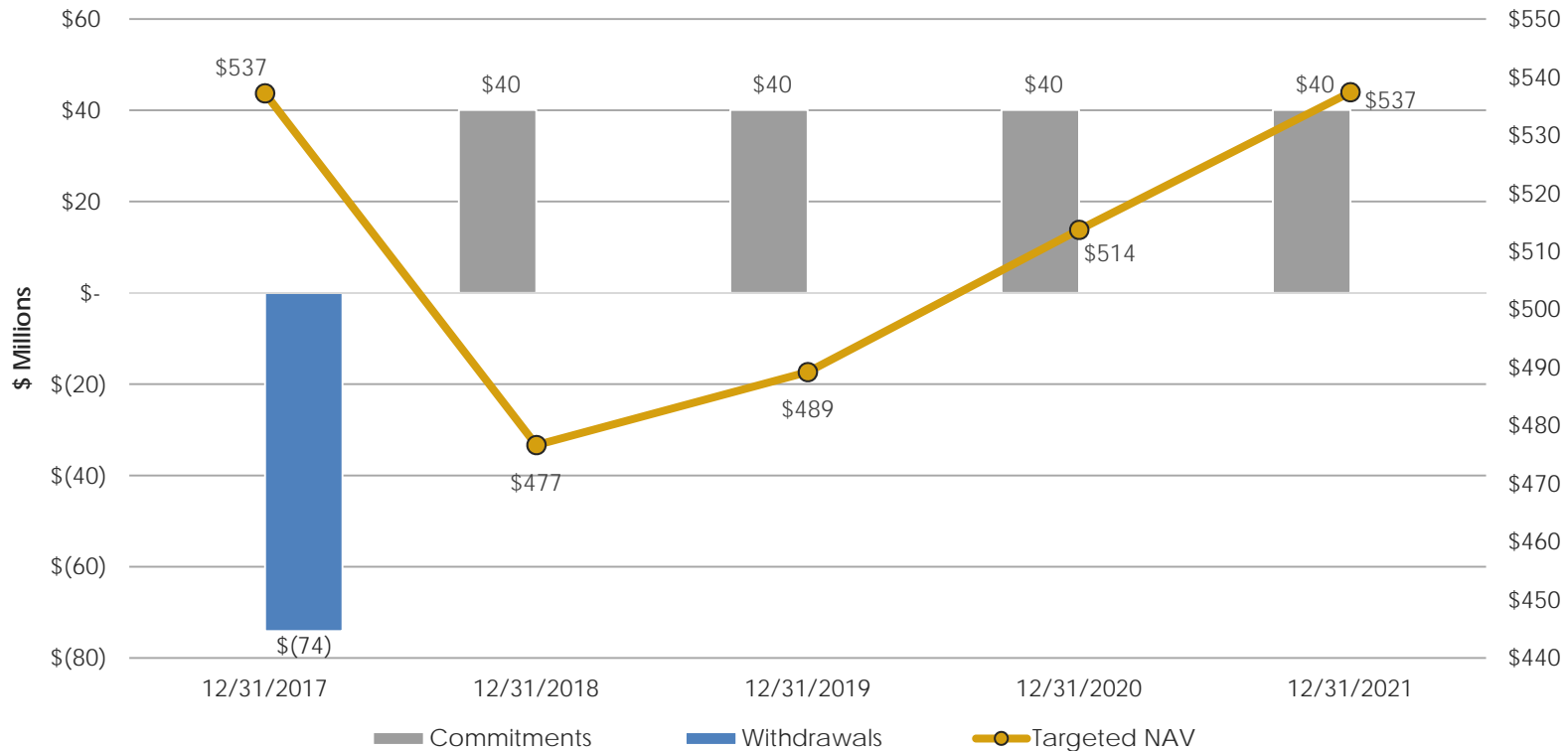
Historical and Projected Core and Non-Core NAVs



- Over the next four years, the pacing plan will continue to shift the portfolio towards a long-term target of 61.5% core and 38.5% non-core real estate.

Pacing Plan: Commitment & Withdrawal Schedule

Projected Commitments and Withdrawals

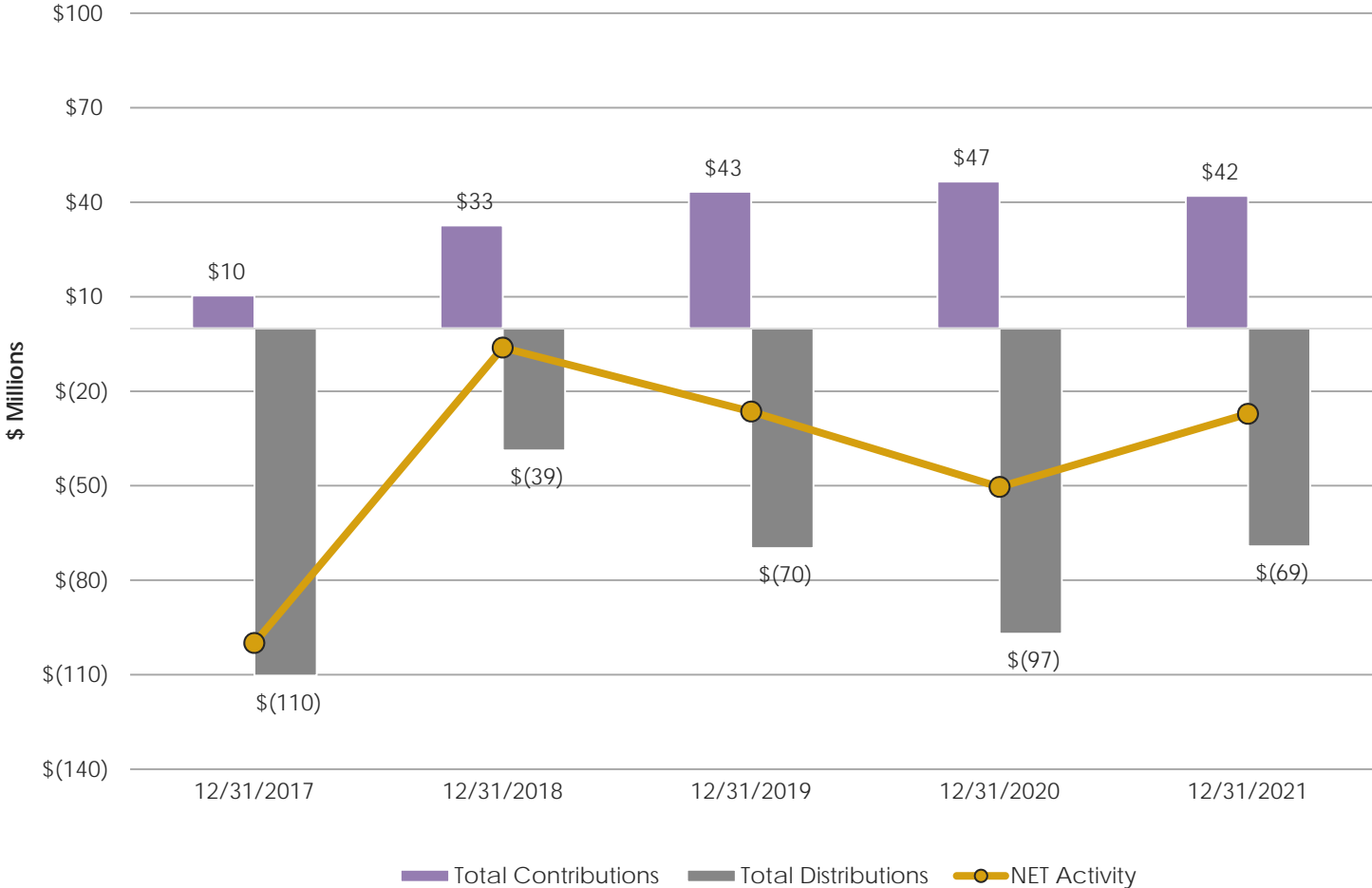


The System would need to make the following commitments and withdrawal beginning in 2017 in order to achieve the targeted 5.9% real estate allocation in four years:

- Core: a withdrawal in December of 2017 for approximately \$74 million.
- Non-Core: approximately \$40 million of new commitments annually in 2018-2021.

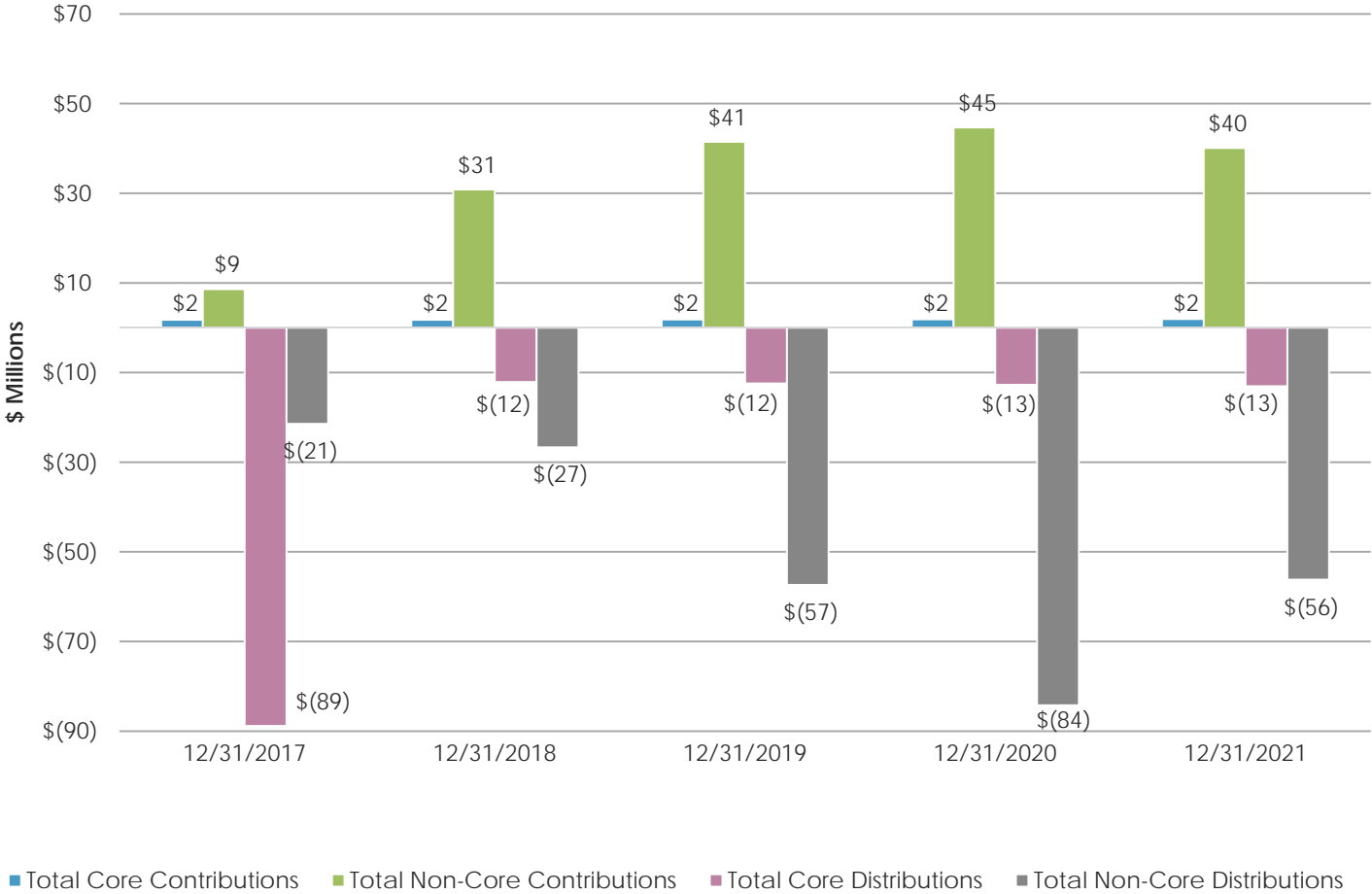
Pacing Plan: Projected Total Cash Flows

Projected Cash Flows



Pacing Plan: Projected Core and Non-Core Cash Flows

Projected Cash Flows



- The total distribution amounts include a withdrawal from the Core funds.

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