

City of Phoenix Employees' Retirement System

COPERS

Portfolio Report

As Of December 2024

Report created: May 2025

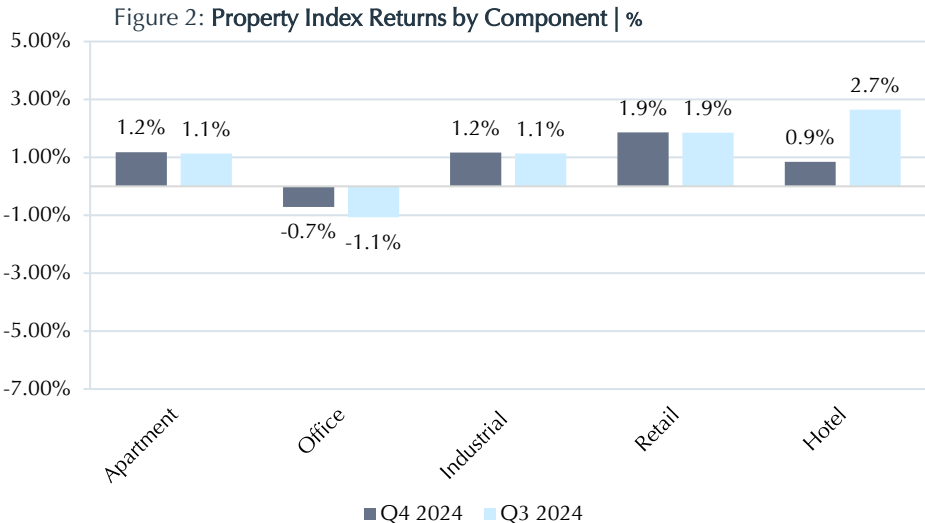
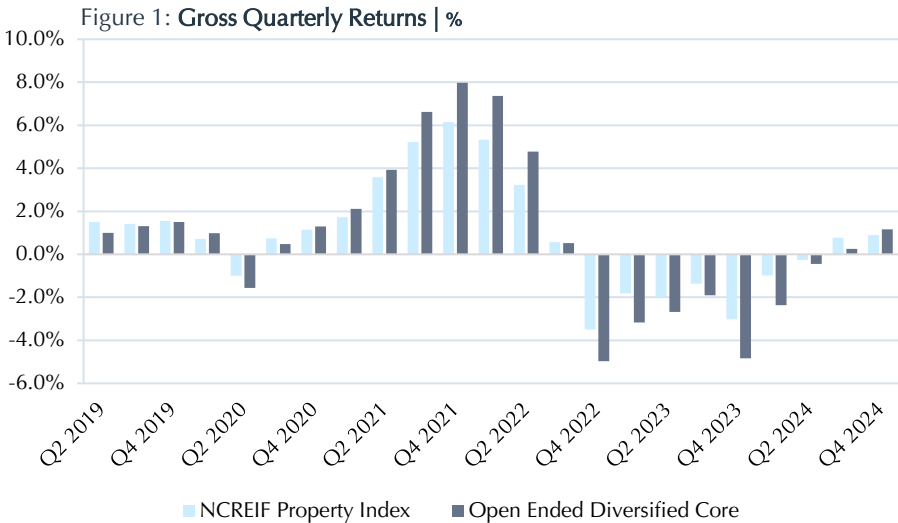
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Real Estate Overview

Tailwinds	Headwinds
<ul style="list-style-type: none">▪ In our view, the industrial sector fundamentals remain strong, stemming from a secular trend towards increasing e-commerce, supply chain reconfiguration and “near-shoring” impacts, though increased new deliveries has resulted in recent upticks in vacancy, particularly for mid-size and big-box distribution warehouses.▪ We observed that overall operational performance of market-rate residential rental assets remains steady in many markets, buoyed by higher mortgage rates. While increased new deliveries in select markets such as Phoenix, Atlanta, and Austin, is putting short-term pressure on rents and concessions, medium-term dynamics should remain healthy as new construction starts have declined meaningfully in recent quarters.▪ Hotel and retail operating fundamentals remain quite healthy, buoyed by resilient consumer spending. Specifically, neighborhood and community centers in regions benefitting from demographic tailwinds, are outperforming.	<ul style="list-style-type: none">▪ The historically-sharp increase in base rates has resulted in steadily declining real estate values since late 2022. At the December 2024 FOMC meeting, the Fed lowered interest rates by 25 bps, resulting in improved sentiment around a potential bottoming in real estate values and capital markets stabilization. From market observations we concluded that:<ul style="list-style-type: none">▪ Higher interest rates have led to increased borrowing costs for real estate owners, resulting in higher yield requirements (cap rates) for investors and non-accretive (negative) leverage at deal origination.▪ Debt availability for new acquisitions was limited as many traditional lenders pulled back due to Debt Service Coverage Ratio (DSCR) and debt yield thresholds. However, traditional lenders became more inclined to lend to high-quality sponsors with proven strategies in fundamentally sound.▪ Potential new government policies on immigration reform and international trade could increase inflationary pressures, impacting consumer spending and market stability.

Performance at a Glance

- The NCREIF Open End Diversified Core (“ODCE”) and NCREIF Property Index (“NPI”) reported Q4 2024 gross returns of 1.2% and 0.9%, respectively.^{1,2}
- Transaction volumes during Q4 2024 were up quarter-over-quarter. The NPI reported 248 property transactions during the quarter, a 42% increase from Q3 2024 (175). 4Q 2024 transaction volume was the highest quarterly figure since Q4 2021. Industrial was again the most active sector with a total of 113 transactions, which representing 46% of Q4 deal volume. Apartment properties followed with a total of 68 transactions during the quarter, followed by office (43) and retail (24).²
- Apartment, hotel, retail and industrial properties produced positive returns during the quarter according to NPI, with Office as the only negative sector. Office continued to be the lowest performance property sector, the result of continued headwinds in both operating fundamentals and capital markets.²
- The ODCE index reported positive appreciation during Q4 2024 (0.9%), with a consistently-positive income return of 1.2%. The overall appreciation return for the trailing 1-year is -5.4%.¹



Source: NCREIF, as of December 31, 2024. Past performance is not indicative of future results. The above represents Aksia’s market observations. Observations are subject to change. All references to Aksia herein refer to Aksia LLC, together with its wholly owned subsidiaries (collectively, “Aksia”).

Summary

Category	Sub-category	Amount (M)
Total Commitment	Contributions	~760
	Unfunded	~120
Total Value	Distributions	~557
	Net Asset Value	~489

Portfolio Summary

Active GP Relationships	12
Active Holdings	24
# of Underlying Active Investments	1242
% of Public Companies	0.1%
Total Commitment Amount	\$759.9 mm
Contributions	\$762.0 mm
Distributions	\$556.9 mm
Net Asset Value	\$489.3 mm
Unfunded Commitment	\$117.8 mm
Minimum Annual Pacing	
Maximum Annual Pacing	
Minimum Target Allocation	7.0%
Maximum Target Allocation	17.0%

1Y IRR	-2.0%	2Y IRR	-5.3%	3Y IRR	-1.5%
5Y IRR	2.9%	7Y IRR	4.4%	10Y IRR	5.9%
ITD IRR *	5.5%	ITD TVPI *	1.4x		

Total Exposure by Sector

Sector	Percentage
RE Non-Core	69.3%
RE Core	30.7%

Total Exposure by Region

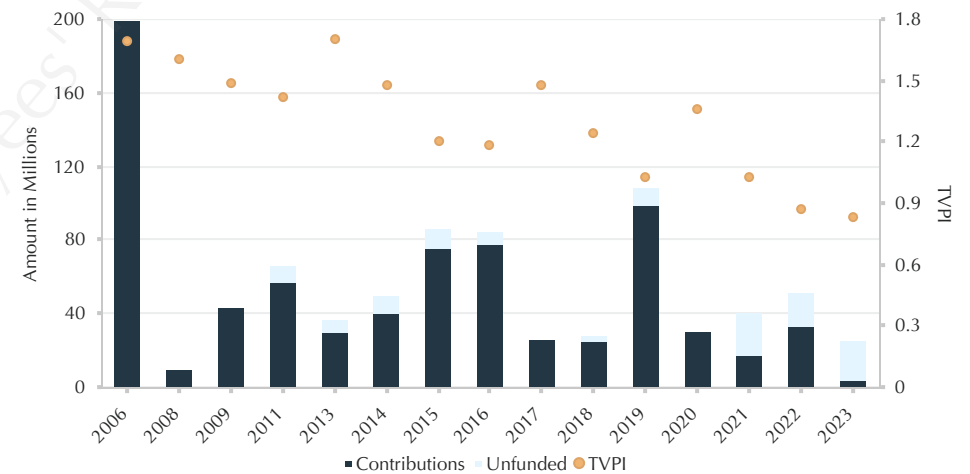
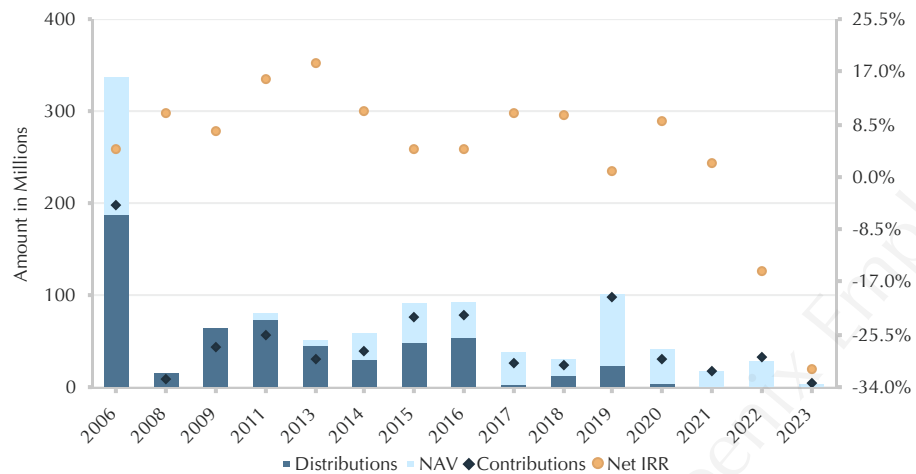
Region	Percentage
Developed Markets	75.1%
Diversified	24.9%

Position Analytics data based on GP provided information as of Dec-2024. Investments made in other currencies are converted to the portfolio's currency using the FX rate at the date of each investment.
IRR not meaningful for investments held less than 12 months
Total Exposure = Unfunded + NAV
Public companies are identified at the time of investment and reviewed at least annually.

Sector Portfolio Summary

	# Of Active Funds	NAV (\$mm)	Total Commitment (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Net IRR	TVPI
RE Core	3	186.5	207.9	-	186.5	228.7	190.6	4.6%	1.6x
RE Non-Core	21	302.8	552.0	117.8	420.6	533.3	366.3	7.6%	1.3x
COPERS	24	489.3	759.9	117.8	607.1	762.0	556.9	5.5%	1.4x

Performance Review by Vintage Year



Total Exposure = Unfunded + NAV

Reporting Period: As Of Dec-2024

[View this portfolio online](#)

	Client Commitment Date	Structure	Vintage	Status	Total Commitment (mm)	Unfunded Commitment (mm)	% Funded	NAV (mm)
RE Core								
JPMorgan Strategic Property Fund	10/31/2006	Commingled Fund	2006	Stabilized	87.4	-	100.0%	66.7
Morgan Stanley Prime Property Fund	10/31/2006	Commingled Fund	2006	Stabilized	90.5	-	100.0%	82.6
Realterm Logistics Income Fund	09/30/2020	Commingled Fund	2020	Stabilized	30.0	-	100.0%	37.3
					207.9	-	100.0%	186.5

	Client Commitment Date	Structure	Vintage	Status	Total Commitment (mm)	Unfunded Commitment (mm)	% Funded	NAV (mm)
RE Non-Core								
Adler Real Estate Partners Fund V	07/11/2022	Commingled Fund	2021	Investment	20.0	10.2	49.0%	9.9
American Landmark Fund III	07/13/2021	Commingled Fund	2019	Harvest	30.0	-	100.0%	33.3
American Landmark Fund IV, LP	11/01/2023	Commingled Fund	2022	Investment	20.0	1.0	95.0%	15.3
Ascentris Value Add Fund III	07/31/2019	Commingled Fund	2019	Investment	25.0	1.7	93.2%	9.3
Ascentris Value Add Fund III-B	12/31/2021	Commingled Fund	2022	Investment	5.0	1.7	66.1%	3.2
Focus Senior Housing Fund I	03/31/2017	Commingled Fund	2017	Harvest	25.0	-	100.0%	35.6
Focus Senior Housing Fund II	03/31/2022	Commingled Fund	2022	Investment	25.0	15.6	37.8%	9.5
Hammes Partners III	04/30/2017	Commingled Fund	2018	Harvest	25.0	3.1	87.7%	17.7
Hammes Partners IV	02/01/2022	Commingled Fund	2023	Investment	25.0	21.4	14.6%	2.7
HSI Real Estate Fund V	12/10/2015	Commingled Fund	2016	Harvest	25.0	1.3	94.6%	0.1
JDM Partners Opportunity Fund I	01/29/2010	Commingled Fund	2009	Liquidated	20.0	-	100.0%	-
Northwood Real Estate Partners Series IV	12/31/2013	Commingled Fund	2014	Harvest	20.0	9.8	51.2%	29.3
Northwood Real Estate Partners Series V	12/31/2014	Commingled Fund	2015	Harvest	30.0	9.1	69.8%	35.8
Real Estate Capital Asia Partners II	09/08/2009	Commingled Fund	2009	Liquidated	9.0	-	100.0%	-
Real Estate Capital Asia Partners III	02/14/2012	Commingled Fund	2011	Harvest	30.0	5.9	80.2%	4.4
Real Estate Capital Asia Partners IV	12/31/2014	Commingled Fund	2015	Harvest	30.0	1.6	94.6%	7.6
Real Estate Capital Asia Partners V	01/01/2019	Commingled Fund	2019	Harvest	25.0	2.9	88.6%	15.9
SC Core Fund	08/15/2016	Commingled Fund	2016	Harvest	30.0	0.0	99.8%	27.5
TA Realty Fund IX	04/27/2010	Commingled Fund	2008	Liquidated	9.0	-	100.0%	-
Wheelock Street Real Estate Fund I	05/24/2012	Commingled Fund	2011	Harvest	20.0	3.2	84.1%	2.9
Wheelock Street Real Estate Fund II	11/21/2013	Commingled Fund	2013	Harvest	30.0	6.6	78.1%	5.4
Wheelock Street Real Estate Fund V	08/09/2016	Commingled Fund	2016	Harvest	25.0	5.2	79.3%	10.9

	Client Commitment Date	Structure	Vintage	Status	Total Commitment (mm)	Unfunded Commitment (mm)	% Funded	NAV (mm)
Wheelock Street Real Estate Fund VI	05/15/2019	Commingled Fund	2019	Harvest	20.0	4.9	75.5%	19.4
Wheelock Street Real Estate Fund VII	02/28/2023	Commingled Fund	2021	Investment	20.0	12.8	36.1%	7.1
Wrightwood High-Yield Partners II	01/01/2009	Commingled Fund	2009	<i>Liquidated</i>	9.0	-	100.0%	-
					552.0	117.8	78.7%	302.8
COPERS					759.9	117.8	84.5%	489.3

* Total figures take into account all current and closed portfolio positions as at Dec-2024

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
RE Core											
JPMorgan Strategic Property Fund	USD	13.6%	87.4	99.9	84.2	-	66.7	51.0	66.7	3.6%	1.5x
Morgan Stanley Prime Property Fund	USD	16.9%	90.5	98.8	102.8	-	82.6	86.6	82.6	5.2%	1.9x
Realterm Logistics Income Fund	USD	7.6%	30.0	30.0	3.7	-	37.3	10.9	37.3	9.1%	1.4x
Total RE Core	USD	38.1%	207.9	228.7	190.6	-	186.5	148.4	186.5	4.6%	1.6x

Total Exposure = Unfunded + NAV

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
RE Non-Core											
Adler Real Estate Partners Fund V	USD	2.0%	20.0	9.8	0.7	10.2	20.1	0.9	9.9	6.2%	1.1x
American Landmark Fund III	USD	6.8%	30.0	30.1	8.2	-	33.3	11.4	33.3	11.7%	1.4x
American Landmark Fund IV, LP	USD	3.1%	20.0	20.0	0.5	1.0	16.3	-4.2	15.3	-24.1%	0.8x
Ascentris Value Add Fund III	USD	1.9%	25.0	24.2	2.5	1.7	11.0	-12.4	9.3	-24.6%	0.5x
Ascentris Value Add Fund III-B	USD	0.7%	5.0	3.3	0.0	1.7	4.9	0.0	3.2	-1.4%	1.0x
Focus Senior Housing Fund I	USD	7.3%	25.0	25.5	2.1	-	35.6	12.2	35.6	10.4%	1.5x
Focus Senior Housing Fund II	USD	1.9%	25.0	9.4	0.1	15.6	25.1	0.2	9.5	2.4%	1.0x
Hammes Partners III	USD	3.6%	25.0	24.7	12.9	3.1	20.8	6.0	17.7	10.0%	1.2x
Hammes Partners IV	USD	0.6%	25.0	3.6	0.3	21.4	24.1	-0.6	2.7	-31.2%	0.8x
HSI Real Estate Fund V	USD	0.0%	25.0	21.5	25.9	1.3	1.4	4.4	0.1	9.0%	1.2x
Northwood Real Estate Partners Series IV	USD	6.0%	20.0	39.9	29.7	9.8	39.0	19.0	29.3	10.5%	1.5x
Northwood Real Estate Partners Series V	USD	7.3%	30.0	46.6	25.6	9.1	44.9	14.9	35.8	6.4%	1.3x
Real Estate Capital Asia Partners III	USD	0.9%	30.0	32.7	33.8	5.9	10.3	5.5	4.4	6.8%	1.2x
Real Estate Capital Asia Partners IV	USD	1.5%	30.0	28.8	21.8	1.6	9.2	0.6	7.6	0.5%	1.0x
Real Estate Capital Asia Partners V	USD	3.2%	25.0	27.3	10.3	2.9	18.7	-1.1	15.9	-1.6%	1.0x
SC Core Fund	USD	5.6%	30.0	31.3	6.3	0.0	27.5	2.5	27.5	1.4%	1.1x
Wheelock Street Real Estate Fund I	USD	0.6%	20.0	24.1	39.4	3.2	6.1	18.2	2.9	24.6%	1.8x
Wheelock Street Real Estate Fund II	USD	1.1%	30.0	29.5	44.8	6.6	12.0	20.7	5.4	18.4%	1.7x
Wheelock Street Real Estate Fund V	USD	2.2%	25.0	24.9	21.1	5.2	16.1	7.1	10.9	8.3%	1.3x
Wheelock Street Real Estate Fund VI	USD	4.0%	20.0	16.6	2.1	4.9	24.3	4.9	19.4	11.0%	1.3x
Wheelock Street Real Estate Fund VII	USD	1.4%	20.0	7.4	0.0	12.8	19.8	-0.3	7.1	-3.5%	1.0x

Total Exposure = Unfunded + NAV

Reporting Period: As Of Dec-2024

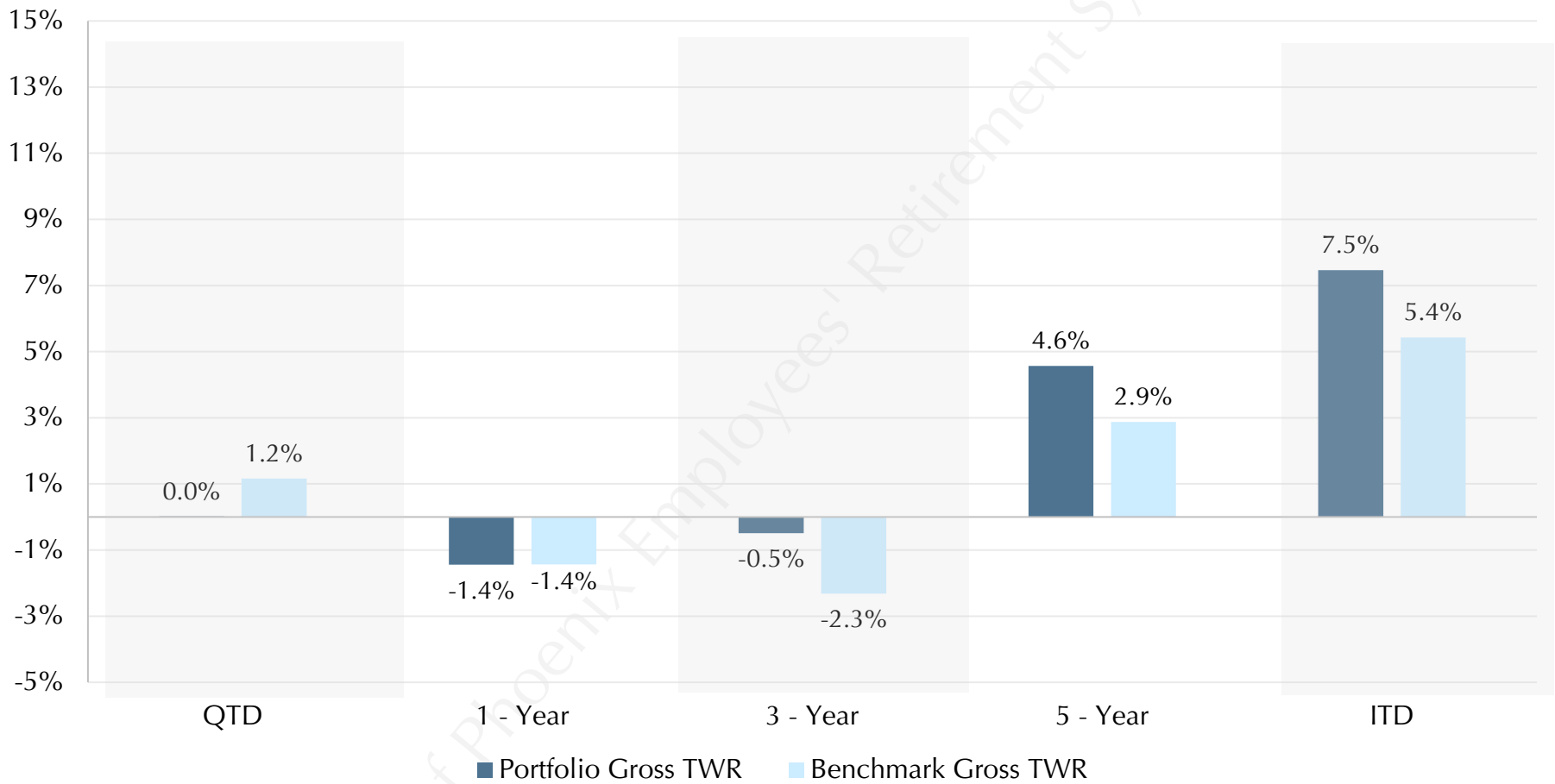
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	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
Liquidated Holdings (4)	USD	-	47.0	51.9	78.1	-	-	26.3	-	8.0%	1.5x
Total RE Non-Core	USD	61.9%	552.0	533.3	366.3	117.8	420.6	135.8	302.8	7.6%	1.3x
COPERS	USD	100.0%	759.9	762.0	556.9	117.8	607.1	284.2	489.3	5.5%	1.4x

* Total figures take into account all current and closed portfolio positions as at Dec-2024

Total Exposure = Unfunded + NAV

Portfolio Gross TWR vs ODCE Gross TWR



Top Contributors

	Vintage	% Funded Commitment	Total Commitment Amount (\$mm)	Gain (\$mm)	NAV (\$mm)	QTD IRR *	ITD IRR *
Focus Senior Housing Fund I	2017	100.0%	25.0	1.2	35.6	3.4%	10.4%
JPMorgan Strategic Property Fund	2006	100.0%	87.4	1.0	66.7	1.5%	3.6%
Ascentris Value Add Fund III	2019	93.2%	25.0	0.7	9.3	8.0%	-24.6%
Adler Real Estate Partners Fund V	2021	49.0%	20.0	0.5	9.9	5.7%	6.2%
Realterm Logistics Income Fund	2020	100.0%	30.0	0.5	37.3	1.4%	9.1%
Gain	-	-	187.4	3.9	158.7	2.5%	3.6%
Gain (Remaining)	-	-	357.5	2.9	208.8	1.4%	6.3%
Total Gain	-	-	544.9	6.8	367.5	1.9%	5.2%

* IRR calculated at portfolio currency. IRR not meaningful for investments held less than 12 months

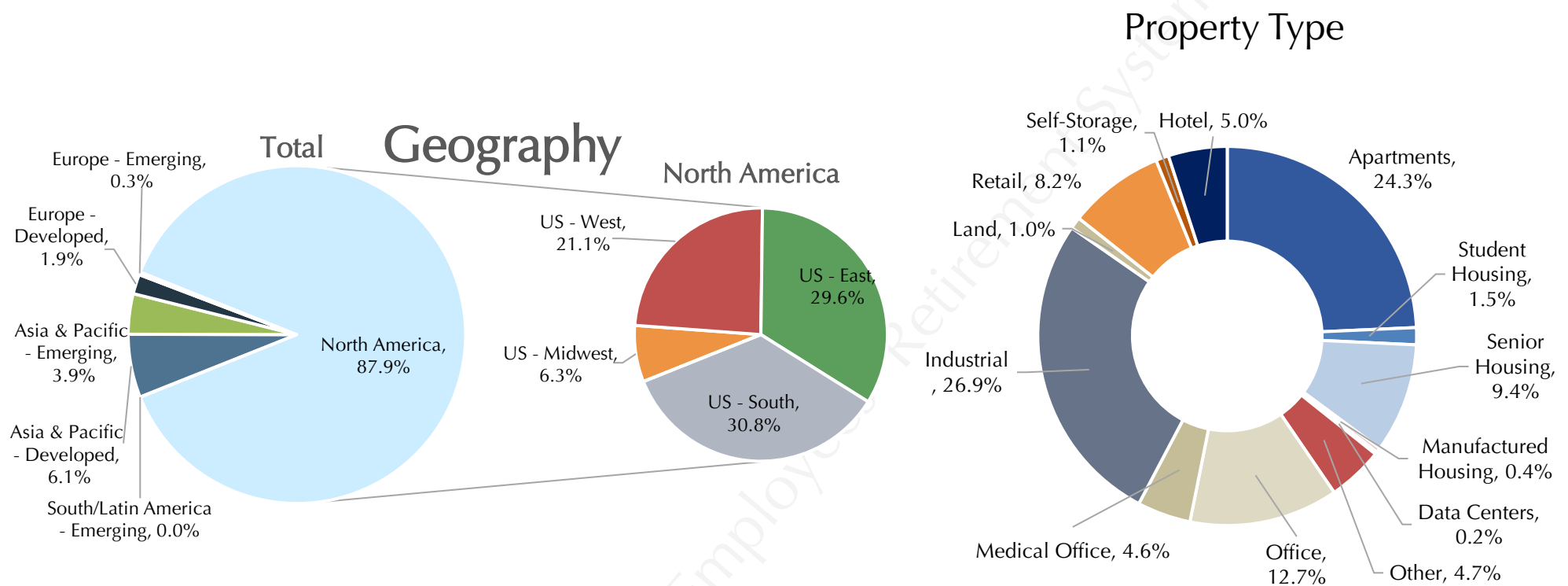
Top Detractors

	Vintage	% Funded Commitment	Total Commitment Amount (\$mm)	Loss (\$mm)	NAV (\$mm)	QTD IRR *	ITD IRR *
SC Core Fund	2016	99.8%	30.0	-2.6	27.5	-8.6%	1.4%
Real Estate Capital Asia Partners V	2019	88.6%	25.0	-1.8	15.9	-10.4%	-1.6%
Wheelock Street Real Estate Fund II	2013	78.1%	30.0	-1.3	5.4	-19.2%	18.4%
Real Estate Capital Asia Partners IV	2015	94.6%	30.0	-1.0	7.6	-11.6%	0.5%
American Landmark Fund III	2019	100.0%	30.0	-0.4	33.3	-1.1%	11.7%
Loss	-	-	145.0	-7.0	89.7	-7.3%	6.1%
Loss (Remaining)	-	-	70.0	-0.4	32.1	-1.3%	9.9%
Total Loss	-	-	215.0	-7.5	121.8	-5.8%	7.3%
Total Portfolio	-	84.5%	759.9	-0.7	489.3	-0.1%	5.5%

* IRR calculated at portfolio currency. IRR not meaningful for investments held less than 12 months

Reporting Period: As Of Dec-2024

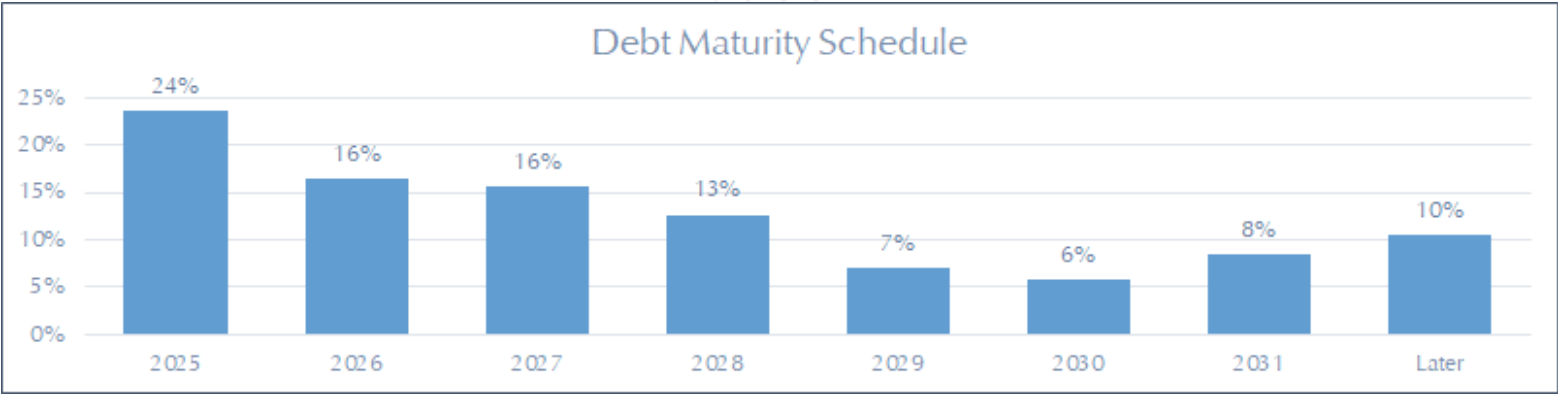
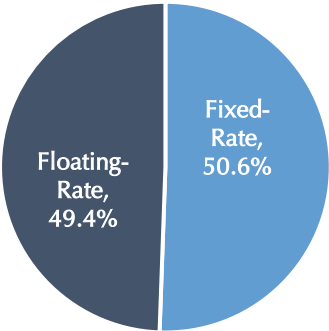
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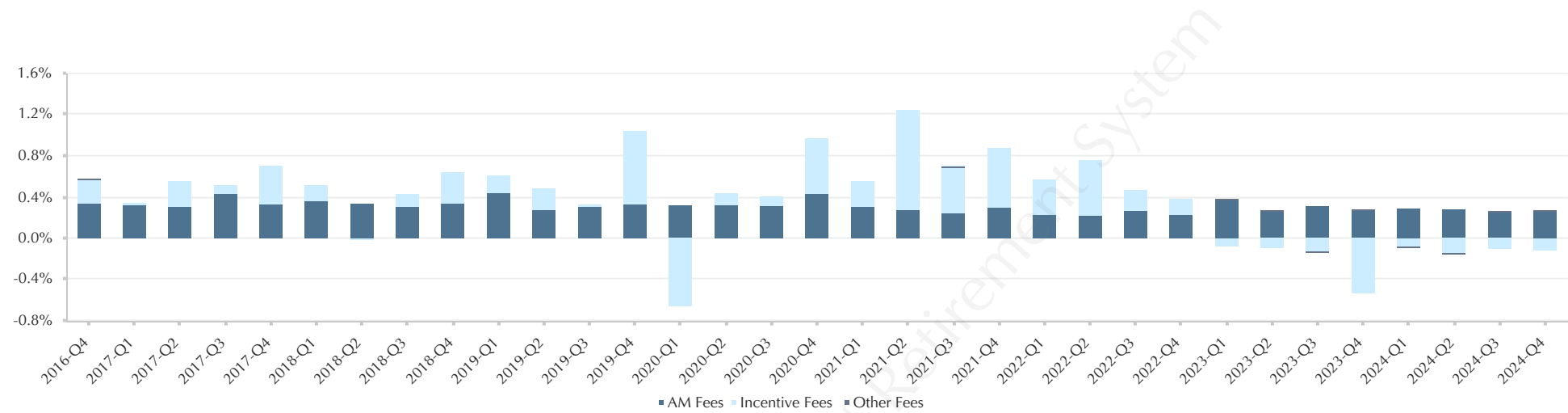
Portfolio Is Well-Diversified by Geography and Property Type

- Unfunded commitments to funds with a U.S. focus (Hammes IV, Focus SH II, Wheelock VII, Adler V and Carlyle Property Investors) will maintain the portfolio's domestic concentration.
- The portfolio remains well diversified by property sector, with increasing concentration in demographically-driven sectors such as seniors housing (Focus), medical office (Hammes), infill industrial (Adler) and single-family rentals (Carlyle).

Total Portfolio Loan-to-Value (LTV):	47.7%
Core Portfolio LTV:	30.5%
Non-Core Portfolio LTV:	55.3%
Weighted-Average Interest Rate:	5.5%



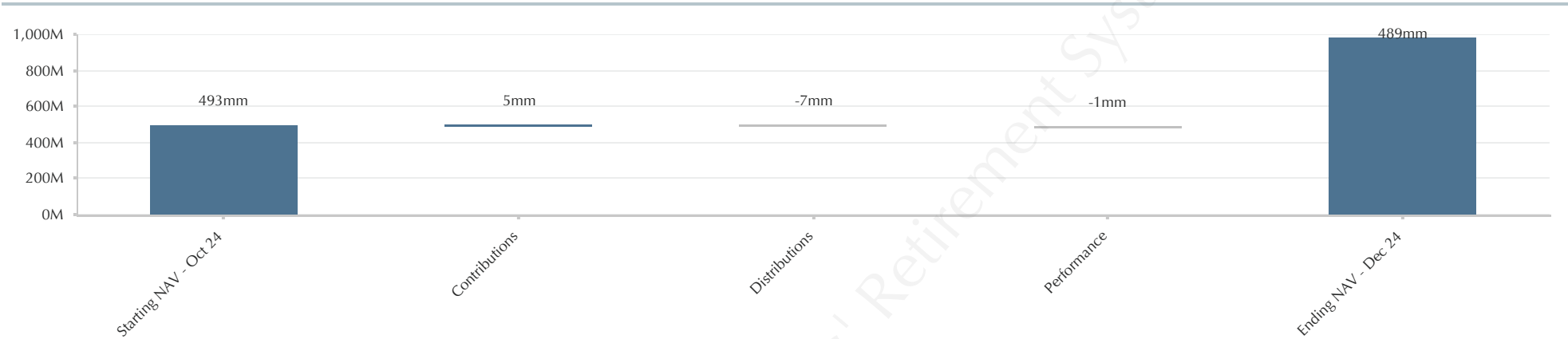
Note: Portfolio leverage data excludes RLIF data due to lack of availability.



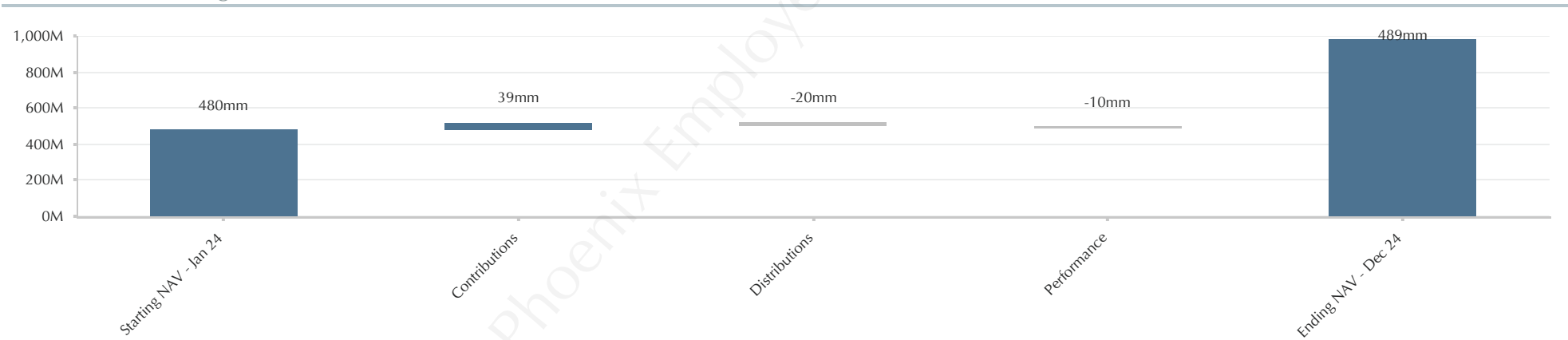
RE Portfolio Fees (% of Market Value)

Type	2024-Q4	Quarterly Avg.
	Oct-2024 - Dec-2024	Oct-2006 - Dec-2024
AM Fees	0.27%	0.25%
Incentive Fees	-0.12%	0.12%
Other Fees	0.00%	0.00%
Total	0.15%	0.37%

Quarterly Valuation Bridge (Oct-2024 to Dec-2024)



YTD Valuation Bridge (Jan-2024 to Dec-2024)



Below are some portfolio updates that occurred subsequent to the end of 4Q2024:

1Q2025 Core Portfolio Flash Returns (gross):

- *NCREIF-ODCE Benchmark*: +1.1%
- JP Morgan SPF: +1.8%
- Morgan Stanley Prime: +1.5%
- Realterm Logistics Income Fund: +0.0%

Focus Senior Housing Fund II

- In February, the fund called \$3.1 million from COPERS to repay the fund's credit line.

JPMorgan Strategic Property Fund

- In January, the fund made a redemption payment of over \$3.2 million and an income distribution of approximately \$0.7 million.

Carlyle Property Investors

- In May, COPERS closed on a \$50M commitment to Carlyle Property Investors. The fund is expected to begin calling capital from COPERS in 3Q or 4Q 2025.

Appendix

City of Phoenix Employees' Retirement System

Net TWR Analysis

	QTD	Q3 2024	1Y	2Y	3Y	5Y	7Y	10Y	ITD
RE Core	1.1%	0.3%	-0.8%	-5.2%	-1.7%	3.2%	4.1%	5.8%	5.5%
RE Non-Core	-0.9%	0.8%	-2.9%	-5.6%	-1.4%	2.6%	4.7%	5.7%	7.2%
COPERS	-0.1%	0.6%	-2.1%	-5.5%	-1.6%	2.9%	4.3%	5.8%	5.7%

	Strategy	Currency	Vintage	Opening value (mm)	Net Income (mm)	Net Appreciation (mm)	Contributions (mm)	Distributions (mm)	Ending Value (mm)
RE Core									
JPMorgan Strategic Property Fund	Core North America	USD	2006	69.1	0.5	0.5	0.2	3.6	66.7
Morgan Stanley Prime Property Fund	Core North America	USD	2006	82.9	0.6	-0.2	-	0.8	82.6
Realterm Logistics Income Fund	Core+ North America	USD	2020	37.0	0.5	0.0	-	0.2	37.3
				189.0	1.6	0.3	0.2	4.6	186.5
RE Non-Core									
Adler Real Estate Partners Fund V	Value Added North America	USD	2021	9.5	0.1	0.5	-	0.1	9.9
American Landmark Fund III	Value Added North America	USD	2019	34.8	-0.1	-0.3	-	1.0	33.3
American Landmark Fund IV, LP	Value Added North America	USD	2022	14.9	-	0.4	0.0	0.1	15.3
Ascentris Value Add Fund III	Value Added North America	USD	2019	8.6	-0.1	0.8	0.1	-	9.3
Ascentris Value Add Fund III-B	Value Added North America	USD	2022	2.9	0.0	0.3	0.0	-	3.2
Focus Senior Housing Fund I	Value Added North America	USD	2017	34.4	-0.1	1.2	-	-	35.6
Focus Senior Housing Fund II	Value Added North America	USD	2022	7.0	-0.1	0.3	2.2	-	9.5
Hammes Partners III	Value Added North America	USD	2018	17.8	0.1	0.2	-	0.3	17.7
Hammes Partners IV	Value Added North America	USD	2023	2.8	-0.1	0.1	-	0.1	2.7
HSI Real Estate Fund V	Opportunistic Latin America	USD	2016	0.1	0.0	0.0	0.0	0.0	0.1
JDM Partners Opportunity Fund I	Opportunistic North America	USD	2009	-	-	-	-	-	-
Northwood Real Estate Partners Series IV	Value Added Global	USD	2014	29.4	0.0	-0.3	0.3	0.1	29.3

	Strategy	Currency	Vintage	Opening value (mm)	Net Income (mm)	Net Appreciation (mm)	Contributions (mm)	Distributions (mm)	Ending Value (mm)
Northwood Real Estate Partners Series V	Value Added Global	USD	2015	35.6	0.0	0.1	0.4	0.1	35.8
Real Estate Capital Asia Partners II	Opportunistic Asia-Pacific	USD	2009	-	-	-	-	-	-
Real Estate Capital Asia Partners III	Opportunistic Asia-Pacific	USD	2011	4.1	0.0	0.3	-	-	4.4
Real Estate Capital Asia Partners IV	Opportunistic Asia-Pacific	USD	2015	8.6	0.0	-1.0	-	-	7.6
Real Estate Capital Asia Partners V	Opportunistic Asia-Pacific	USD	2019	17.1	0.0	-1.8	0.7	0.1	15.9
SC Core Fund	Core+ Asia Pacific	USD	2016	30.0	-2.4	-0.2	0.0	-	27.5
TA Realty Fund IX	Value Added North America	USD	2008	-	-	-	-	-	-
Wheelock Street Real Estate Fund I	Opportunistic North America	USD	2011	2.5	0.0	0.4	-	-	2.9
Wheelock Street Real Estate Fund II	Opportunistic North America	USD	2013	6.7	0.1	-1.4	0.1	0.1	5.4
Wheelock Street Real Estate Fund V	Opportunistic North America	USD	2016	10.9	0.3	-0.2	-	-	10.9
Wheelock Street Real Estate Fund VI	Opportunistic North America	USD	2019	19.7	0.0	0.2	-	0.5	19.4
Wheelock Street Real Estate Fund VII	Opportunistic North America	USD	2021	6.2	0.1	0.1	0.6	-	7.1
Wrightwood High-Yield Partners II	U.S. CRE Transitional Lending	USD	2009	-	-	-	-	-	-
				303.6	-2.3	-0.3	4.5	2.6	302.8
COPERS		USD		492.6	-0.7	0.0	4.6	7.2	489.3

* Total figures take into account all current and closed portfolio positions as at Dec-2024

SOURCES:

¹ NATIONAL COUNCIL OF REAL ESTATE INVESTMENT FIDUCIARIES (“NCREIF”) OPEN-ENDED DIVERSIFIED CORE EQUITY INDEX (“ODCE”). WWW.NCREIF.ORG

² NATIONAL COUNCIL OF REAL ESTATE INVESTMENT FIDUCIARIES (“NCREIF”) PROPERTY INDEX (“NPI”). WWW.NCREIF.ORG

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