

INVESTMENT REVIEW

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Public Pension Oversight Board

October 21st, 2025

INVESTMENT REVIEW

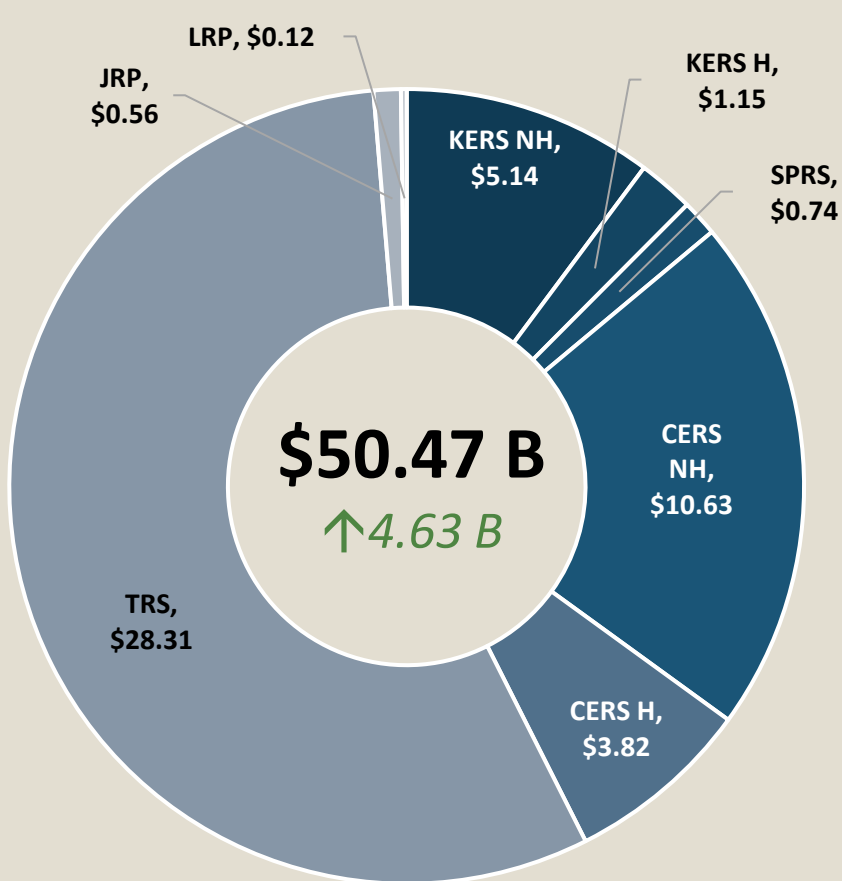
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- Review of Total Assets
- Performance Review and Peer Comparisons
- Allocation Review and Peer Comparisons
- Investment Fees and Expenses
- Net Cash Flow Update
- Special Topics
- Other Required Review Topics (benchmarks, policies, etc.)

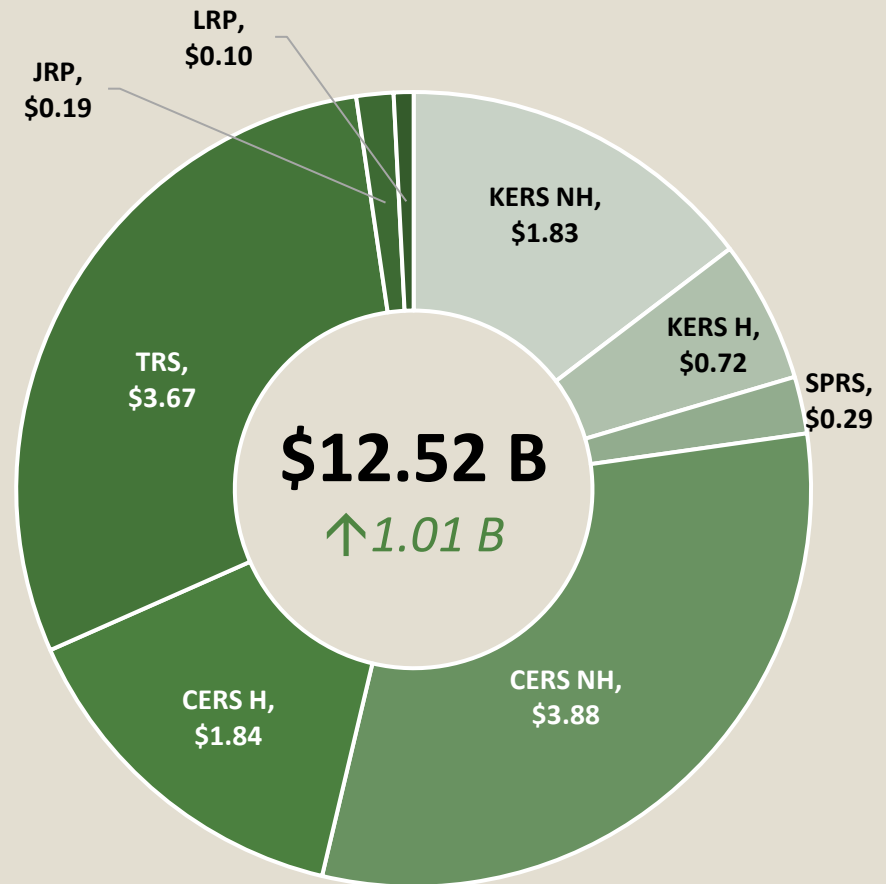
NET PLAN ASSETS → *FY 25 Ended*

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Pension Fund Assets By System/Plan
(6/30/2025)



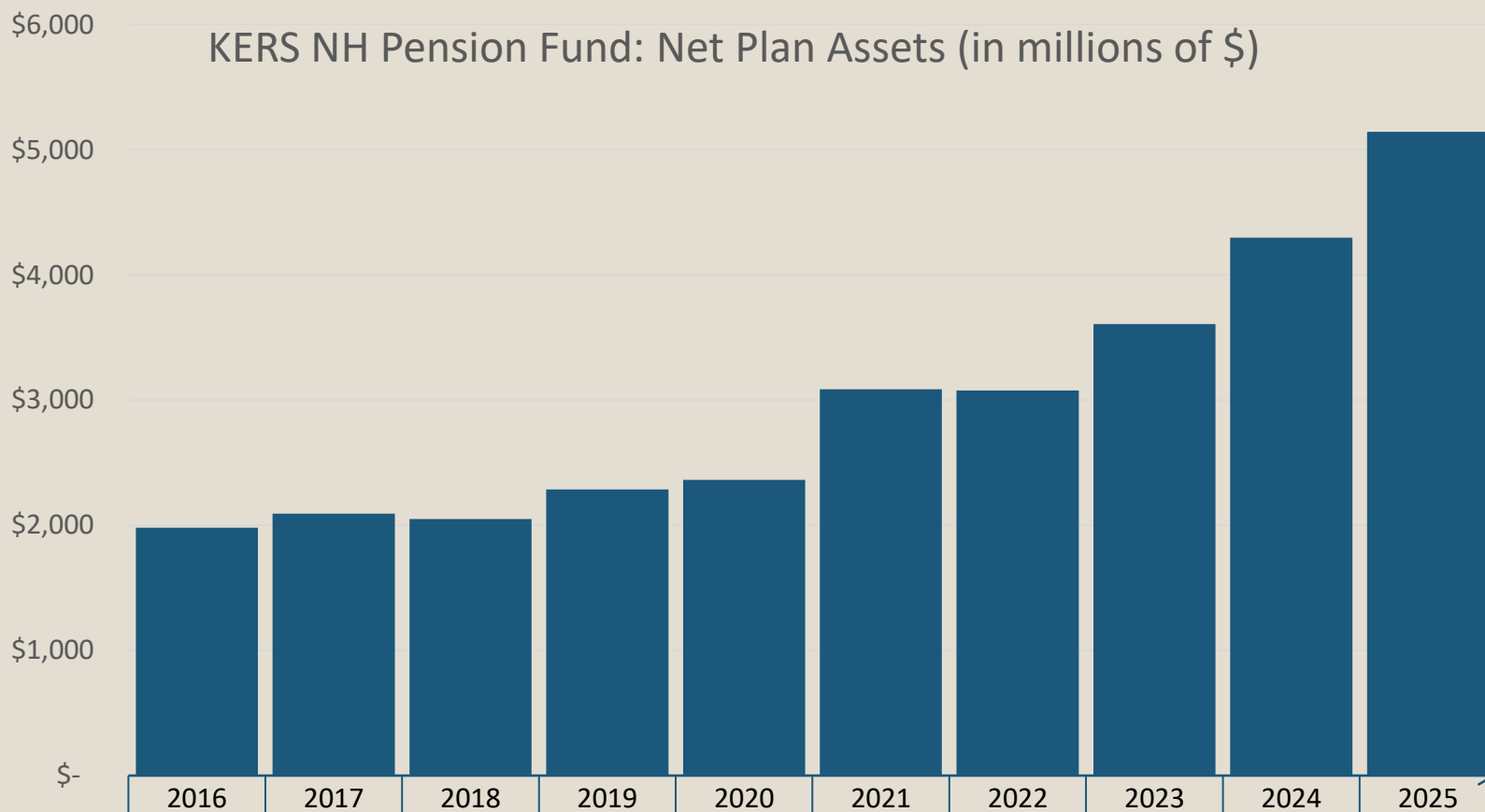
R. Health Fund Assets By System/Plan
(6/30/2025)



NET PLAN ASSETS → *FY 25 Ended (KERS NH)*

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KERS NH Pension Fund: Net Plan Assets (in millions of \$)



Supplemental App.

■ Net Plan Assets

		\$58	\$68	\$16	\$60			\$240	\$240	\$300
	\$1,980	\$2,093	\$2,049	\$2,287	\$2,362	\$3,085	\$3,077	\$3,607	\$4,298	\$5,143

Does not include budgeted FY 26 supplemental appropriation of \$300 M.

PERFORMANCE → FY 25 Ended

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Asset Class Performance FY 25

Fiscal Year 2025 Returns		
Return	Class	Type
22.5%	Non-US Small Cap	Equity
17.7%	Non-US Developed	Equity
15.3%	Non-US Emerging Market	Equity
15.2%	US Large Cap	Equity
11.0%	Non-US	Fixed Income
10.3%	US High Yield	Fixed Income
7.7%	US Small Cap	Equity
7.3%	Hedge Funds	Alternative
6.0%	Private Equity	Alternative
5.8%	Commodities	Alternative
4.7%	Cash: T-Bill	Cash
3.5%	Real Estate	Alternative
3.3%	US Gov/Credit	Fixed Income

Commentary FY 25

- General FY Comments
 - Significant market volatility
 - Equities strong finish final quarter
 - Positive returns across all common asset classes
- Median public fund returns:
 - FY 25: 10.4% (LRC Peer)
 - Ky. Funds exceeded peer median
- Returns driven by equities
 - 15%+ returns

PERFORMANCE → Pension FY 25 Ended

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As of June 30, 2025	1 –Year	3-Year	5-Year	10-Year	20-Year	30-Year	AROR
KERS-Nonhaz Pension (N)	11.2%	9.2%	8.6%	7.0%	6.5%	7.6%	5.25%
Policy Benchmark	9.6%	8.9%	8.2%	6.7%	6.5%	7.5%	
KERS-Haz Pension (N)	11.9%	10.8%	9.9%	7.7%	6.9%	7.8%	6.25%
Policy Benchmark	10.8%	10.6%	10.0%	7.7%	6.9%	7.8%	
SPRS Pension (N)	11.0%	9.4%	8.7%	7.0%	6.5%	7.5%	5.25%
Policy Benchmark	9.6%	8.9%	8.2%	6.7%	6.5%	7.5%	
CERS-Nonhaz Pension (N)	11.6%	11.2%	10.2%	7.9%	7.0%	7.9%	6.50%
Policy Benchmark	11.3%	11.6%	10.3%	7.7%	7.0%	7.9%	
CERS-Haz Pension (N)	11.7%	11.3%	10.2%	7.9%	7.0%	7.8%	6.50%
Policy Benchmark	11.3%	11.6%	10.3%	7.7%	7.0%	7.9%	
TRS Pension (N)¹	12.0%	11.4%	9.8%	8.4%	7.7%	8.0%	7.10%
Policy Benchmark ¹	11.6%	11.3%	9.7%	8.3%	See Note	See Note	
LRP Pension (N*)	20.9%	18.6%	15.6%	12.1%	10.1%	9.6%	6.50%
Policy Benchmark	12.7%	14.9%	11.9%	10.3%	8.6%	8.8%	
JRP Pension (N*)	20.9%	18.6%	15.6%	12.1%	10.1%	9.6%	6.50%
Policy Benchmark	12.7%	14.9%	11.9%	10.3%	8.6%	8.8%	
Peer Groups Median Returns							
LRC Peer Group	10.4%	9.2%	9.6%	7.9%			
Investment Metrics>\$1 B Median	10.2%	9.1%	8.9%	7.2%			
Callan PF V. Large>\$10 B Median	10.9%	9.5%	10.0%	8.0%			

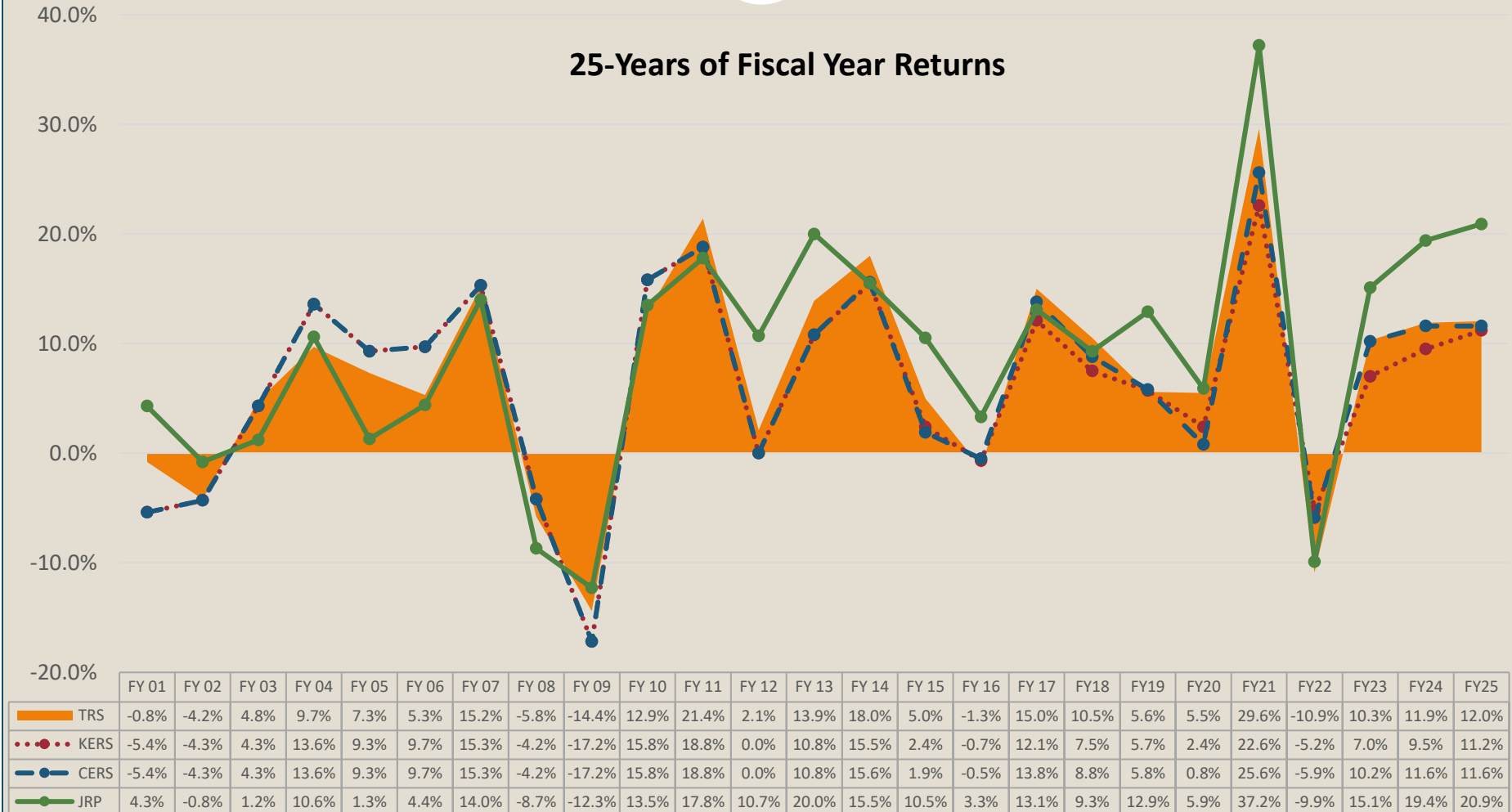
(N) Net of Fee Return * JFRS 1-, 3-, 5-, and 10- year returns are net of fee, longer term are gross

¹ 30 year returns are gross. TRS did not benchmark overall performance prior to July 1, 2008.

PERFORMANCE → *FY 25 Returns By System*

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25-Years of Fiscal Year Returns



NOTE: Returns beginning in FY2015 are Net of Fee, while returns prior are Gross of Fee.

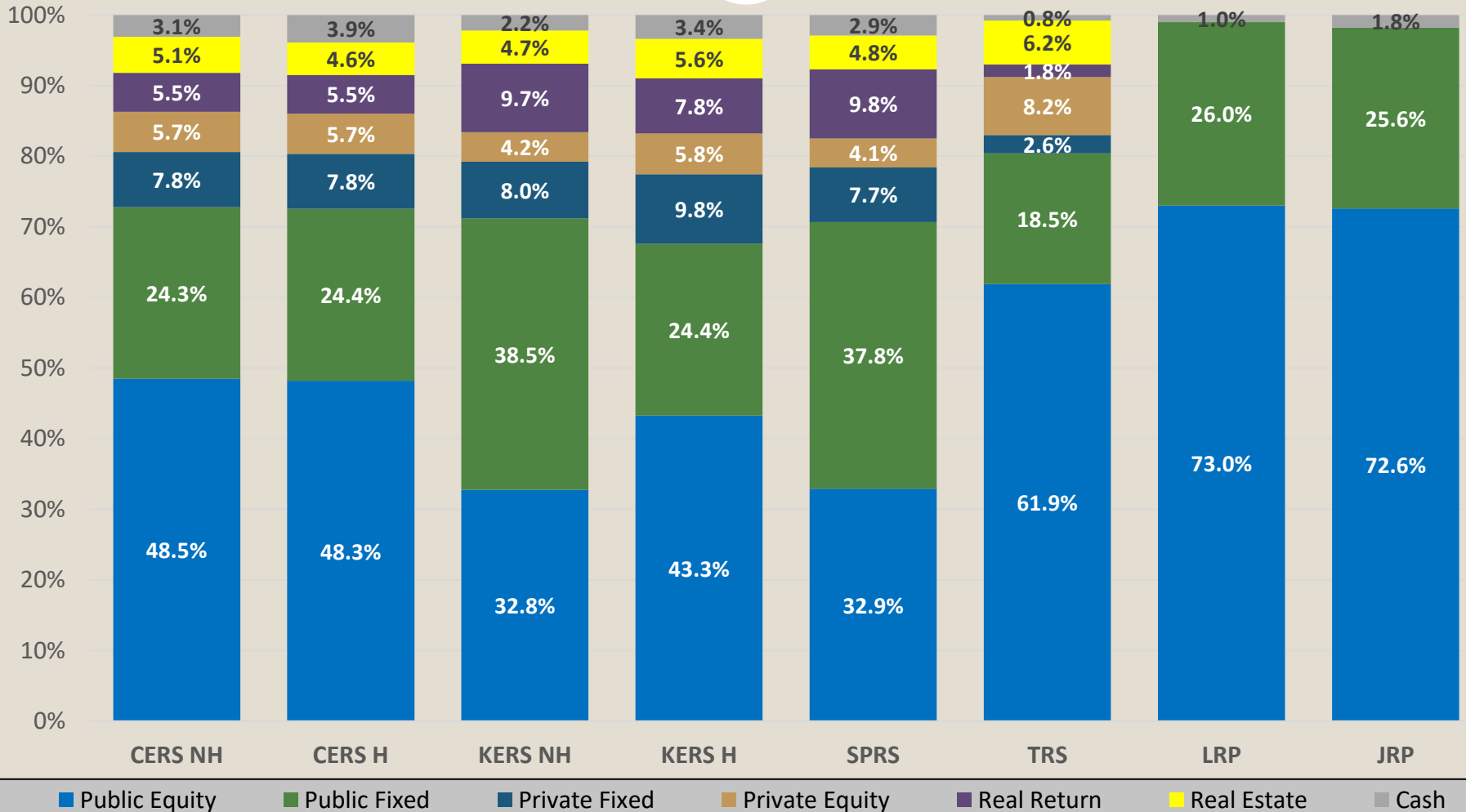
ASSET ALLOCATION → *Drives 90% of Returns*

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		Asset Class	Description	NASRA Peer
Traditional Assets		Public Equity	U.S. Equity: Publicly traded stocks listed on U.S. exchange. Includes Large, Middle, and Small Capitalization companies. Very liquid, but tend to have higher volatility. Non-U.S. Equity: Public stocks listed outside U.S. in local currency. Includes developed and emerging countries. Liquid, have higher return & risk expectation than U.S.	43.6%
		Fixed Income	Bonds and other assets with yield component. Includes investment grade (high quality), sovereign debt (global), and high yield (riskier) assets. Have lower expected return than equity, but less volatility given income component.	20.8%
		Cash	Cash Investments.	2.2%
Alternative Assets		Real Estate	Includes both private and public real estate investment trusts (REITs). Larger plans tend to invest in more private real estate, which consists of both core & non-core holdings. Illiquid in nature, but has provided stable returns over time.	33.5%
		Private Equity/Credit	Includes private equity, venture capital, distressed or other private debt strategies. Generally in form of limited partnership agreements. Illiquid in nature and have long investment horizon (7-12 years). Have higher expected return, but also can exhibit higher levels of risk.	
		Real Return	Includes real assets, such as commodities or timber, as well as inflation-linked securities, such as Treasury Inflation Protected Securities (TIPS). Tend to have low correlation to stocks and bonds. Can be less liquid than traditional assets.	
		Absolute Return	Funds that seek positive return regardless of market condition. Can include equity, fixed income, real estate, commodities, or other assets. Can include buying or “shorting” underlying securities. Expected to provide less volatile stream of positive returns over long term.	

ASSET ALLOCATION → *FY 25 By Asset Class*

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NOTE: KPPA Specialty Credit & TRS Additional Categories includes both Public/Private Fixed Income and were adjusted for parity between Public Fixed and Private Fixed.

ASSET ALLOCATION → *Allocation Vs. Peers*

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KERS NH

- Below avg. allocation to equities and alternatives
- Above avg. allocation to fixed income

CERS NH

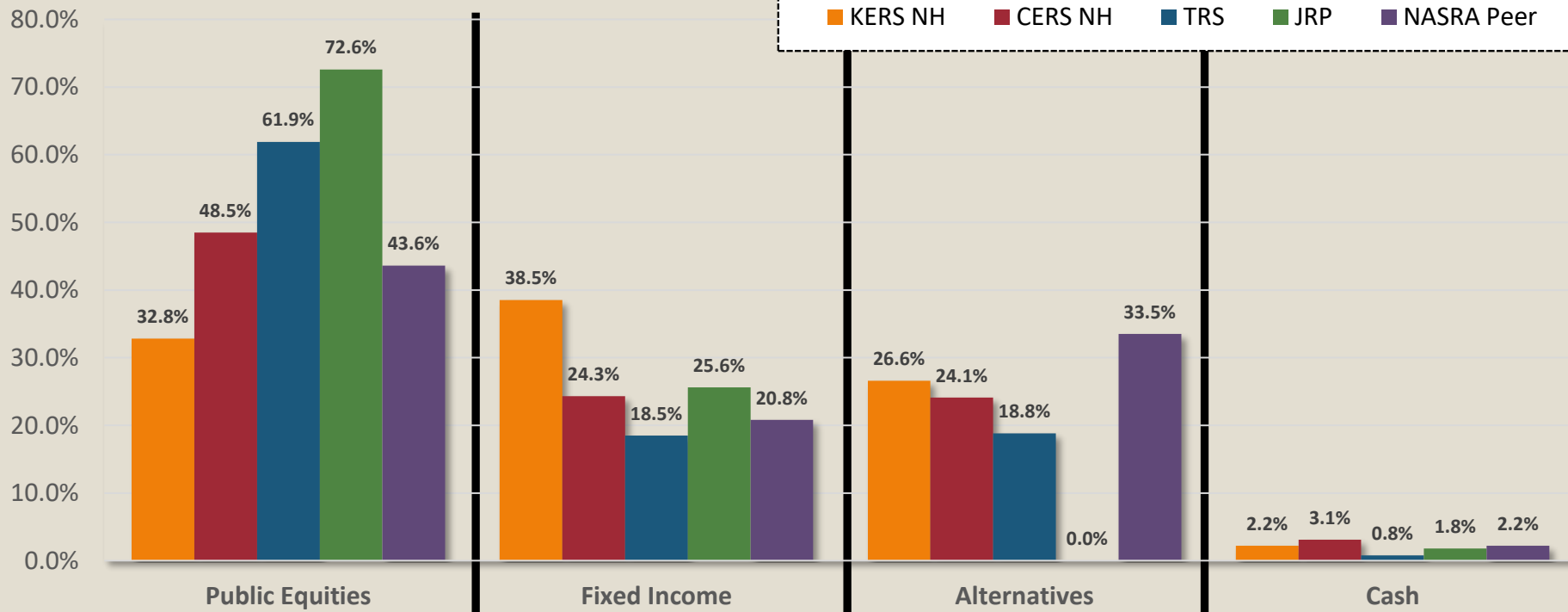
- Above avg. allocation to equities/fixed income
- Below avg. allocation to alternatives

TRS

- Above average allocation to equities
- Below avg. allocation to alternatives

JRP

- Above avg. allocation to equities/fixed income, no alternatives.



NOTE: NASRA Peer reported on NASRA website (most recent data)

FEES → *Trend of Kentucky Plans (FY 25 Ended)*

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• KPPA

- Management fees tied to market value, so as fund assets increase = more fee dollars
- Incentive fees tied to return or performance of private assets

KPPA - PENSION						
FY	Total Fees		Management Fees		Incentive Fees/CI	
	Dollars	bps ¹	Dollars	bps ¹	Dollars	bps ¹
2023	\$70.0 M	42	\$53.1 M	32	\$16.9 M	10
2024	\$87.2 M	47	\$54.1 M	29	\$33.1 M	18
2025	\$105.4 M	51	\$61.2 M	30	\$44.2 M	21

• TRS – Management Fees remain low

- Management fees tied to market value, so as fund assets increase = more fee dollars
- TRS had a “clawback” on incentive fees/CI to private assets in FY 23

TRS - PENSION						
FY	Total Fees		Management Fees		Incentive Fees/CI	
	Dollars	bps ¹	Dollars	bps ¹	Dollars	bps ¹
2023	\$64.3 M	27	\$78.9 M	33	-\$14.6 M	-6
2024	\$89.4 M	35	\$81.9 M	32	\$7.5 M	3
2025	\$84.5 M	30	\$81.4 M	29	\$3.1 M	1

• JFRS – Lowest fee structure

JFRS		
FY	Total Fees	
	Dollars	bps ¹
2023	\$536 K	7.4
2024	618 K	7.5
2025	\$714 K	7.5

• Retiree Health Fund Expenses 2025:

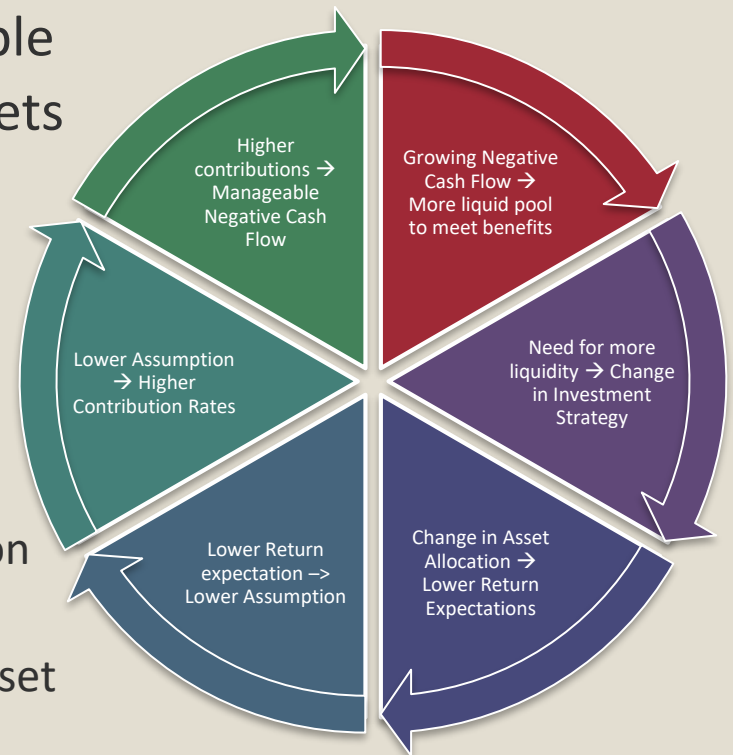
- KPPA: \$46.2 M total fees
- TRS: \$9.5 M total fees
- JFRS: Included in above chart

¹ Calculated using End Year Balance of Fair Market Value of Assets

CASH FLOW → *Summary*

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- Net Cash Flow = **Contributions** – **Benefits** - **Expenses**
- More plans having to manage Negative Net Cash Flow
 - Plans are maturing, retirees and benefit amounts increasing
- Negative CF not necessarily implying trouble
- Measuring negative CF as a percent of assets can serve as warning
 - As funding declines, assets decline
 - Negative CF becomes larger %
- At what level is negative CF okay?
 - No specific standard, depends on plan/actuary
 - Research indicates range of 3-5%, but depends on funding plan, health, and market experience
 - Portfolio income should offset majority, allow asset growth/funding to remain stable



CASH FLOW → *Current by Plan*

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• Mix of positive & negative cash flow

- KERS NH– Continued higher contributions/additional appropriations have led to positive CF in recent years. HB 8 funding created improved CF stability. Had exceeded 3-5% threshold for many years in the past. Positive CF as a % of assets of 8.2% due in large part to add'l. appropriations. W/O add'l. appropriations value is 1.2%. Has dropped some in recent years.
- CERS NH – Negative cash flow has improved in recent years but declined in current year (reduced employer rates).
- SPRS –Positive cash flow % of 2.7% due to add'l appropriation. W/O add'l. appropriations value is -1.1%.
- TRS –Higher ADEC contributions in recent years has helped reduce negative cash flow back within range & provided continued improvement. ADEC contribution requests are projected to increase in future.

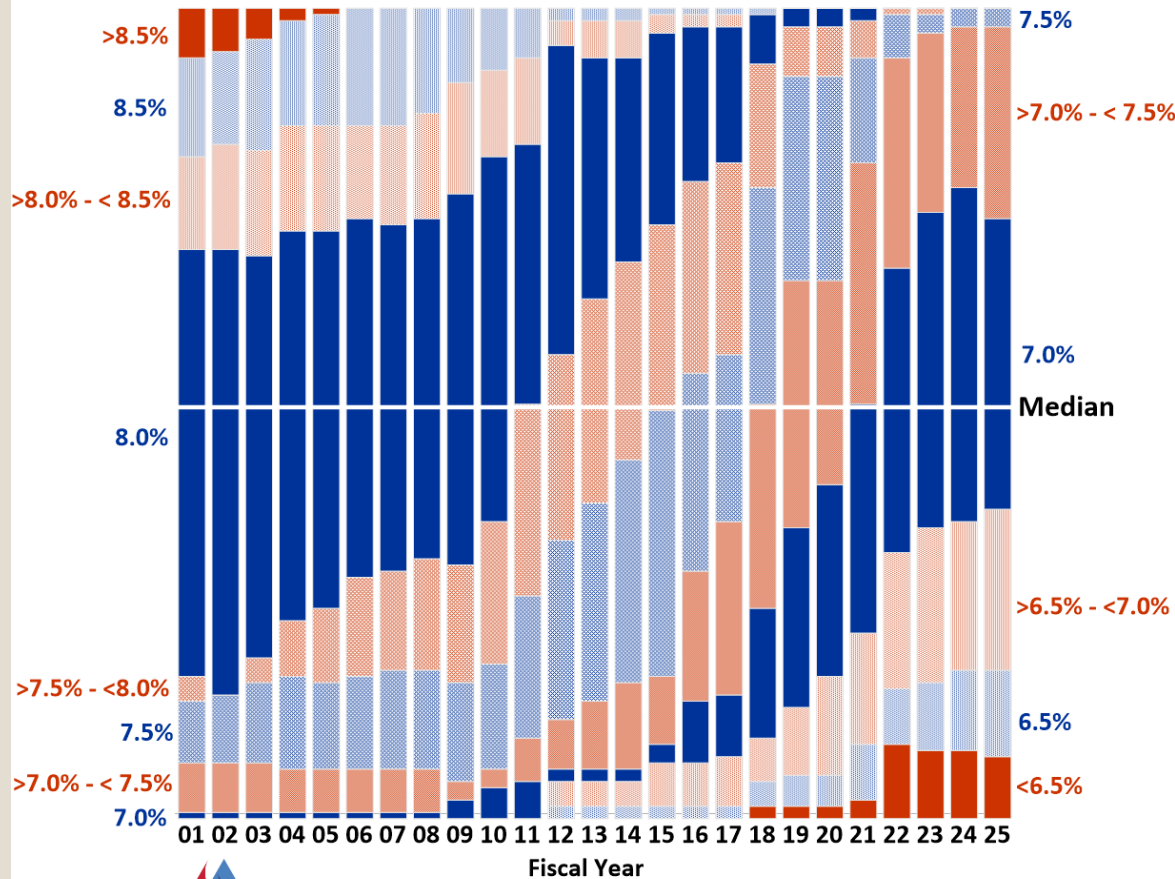
<i>Funding Level 2024 Valuation</i>	24.8%	58.4%	56.7%	59.1%
<i>As of June 30, 2025</i>	KERS NH	CERS NH	SPRS	TRS
Net Plan Assets BOY (M)	\$4,298	\$9,718	\$653	\$26,108
Cash Flow (M)	\$352.4	(\$199.1)	\$17.7	(\$805.7)
CF as % Assets	8.2%	-2.0%	2.7%	-3.1%
Investment Income ¹ (M)	\$129.3	\$234.8	\$20.0	\$383.8
Yield as % of Assets	3.0%	2.4%	3.1%	1.5%
2024 Cash Flow	\$334.4	(\$66.5)	\$3.3	(\$950.1)
CF as % Assets	9.3%	-0.8%	0.6%	-3.9%

¹ Does not include asset gains or losses

SPECIAL TOPIC → *Assumed Rates of Return*

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Distribution of Investment Return Assumptions
FY 01 to present



- The National Association of State Retirement Administrators (NASRA) collects data on public pension plans including the investment return assumption.
- Since 2000, the median assumed rate of return among pension plans has dropped from 8% to now 7%.
- Ky. AROR (pension):
 - KERS NH/SPRS: 5.25%
 - CERS: 6.5%
 - TRS: 7.1%
 - JFRS/LRP: 6.5%

STATUTORY REVIEW → *Other Topics*

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- To meet statutory requirements of review:
 - Total Fund Objectives
 - ✦ Desire to meet Actuarial Return target of 5.25% (KERS-NH and SPRS), 6.5% (CERS, KERS-H), 6.5% (LRP/JRP), or 7.1% (TRS)
 - ✦ Desire to exceed Policy Benchmarks over market cycle (5 and 10 year periods)
 - Policies and Oversight
 - ✦ KRS: Policies available online
 - ✦ CERS: Policies available online
 - ✦ TRS – Investment Policy recorded as Administrative Regulation (102 KAR 1:175).
Board Governance manual, which includes several policies, has been available online (being updated)
 - ✦ LRP/JRP - Policy available online
 - Securities Litigation Annual Recoveries (6/30/25)
 - ✦ KPPA – \$586,368 proceeds received; TRS – \$892,891 proceeds received; LRP/JRP – \$0 proceeds received

INVESTMENT REVIEW → *Benchmarks*

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- Asset Class and Total Fund Benchmarks (6/30/25)
 - All plans using recognized and industry known indices
 - Alternative indices limited, most plans using a public index + model

KPPA Asset Class	Benchmark
Public Equity	MSCI ACWI
Private Equity	Russell 3000 + 300 bps (lagged)
High Yield/ Specialty Credit	50% Bloomberg US Corporate HY +50% Morningstar LSTA Leveraged Loan
Core Fixed	Bloomberg Barclays US Aggregate
Cash	3 Month US T-Bill
Real Estate	NCREIF ODCE (lagged)
Real Return	US CPI + 3%

JFRS Asset Class	Benchmark
US Equity	S&P 500
Fixed Income	Barclays US Gov't/ Credit Interm.

TRS Asset Class	Benchmark
US Equity	S&P 1500
Non US Equity	MSCI ACWI Ex US
Fixed Income	Bloomberg Barclays Government/Credit
Real Estate	Inhouse: CPI + 2% Core: NCREIF ODCE Noncore: NCREIF Property
Timberland	NCREIF Timberland
Private Equity	Actual Perf (< 5Yrs) S&P500 + 3% (>5+ Yrs)
Additional Categories	B of A Merrill Lynch US High Yield II
Cash	90 Day T-Bill

REVIEW → Allocation & Targets (FY 25 Ended)

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- Current Asset Allocation, Targets, and Allowable Ranges (6/30/25)
 - All pension fund asset classes within allowable ranges (see selected funds below)

KPPA Nonhazardous Plans (6/30/25)

	KERS NH			CERS NH		
	Actual	Target	Range	Actual	Target	Range
EQUITY						
Public Equity	32.8%	30%	20-40%	48.5%	45%	30-55%
Private Equity	4.2%	6%	3-9%	5.7%	8%	4-12%
FIXED INCOME						
Specialty Credit	20.1%	20%	15-25%	19.6%	20%	16-24%
Core Fixed	26.4%	27%	22-35%	12.5%	13%	10-20%
Cash	2.2%	2%	0-5%	3.1%	2%	0-5%
INFLATION PROTECTED						
Real Estate	4.7%	5%	3-7%	5.1%	5%	3-7%
Real Return	9.7%	10%	7-13%	5.5%	7%	4-10%

TRS (6/30/25)

	Actual	Target	Range
US Equity	40.2%	38%	29-40%
International Equity	21.7%	21%	16-27%
Fixed Income	12.5%	15%	8-22%
Real Estate	6.2%	7%	4-10%
Alternative Investments	8.2%	7%	4-10%
Additional Categories	10.4%	10%	4-15%
Cash	0.8%	2%	1-5%

JFRS Plans (6/30/25)

	JRP		LRP		Range
	Actual	Target	Actual	Target	
US Equity	72.6%	70.0%	73.0%	70.0%	60%-80%
Fixed Income	25.6%	30.0%	26.0%	30.0%	20%-40%
Cash	1.8%	0.0%	1.0%	0.0%	

INVESTMENT REVIEW

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Questions?

APPENDIX A

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Retiree Fund Portfolio Performance

RETIREE HEALTH PERFORMANCE → FY 25

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<i>As of June 30, 2025</i>	1 –Year	3-Year	5-Year	10-Year	AROR
KERS -Nonhaz	11.8%	10.9%	9.9%	7.6%	6.5%
Policy Benchmark	10.8%	10.6%	9.9%	7.6%	
KERS – Haz	11.9%	10.8%	9.9%	7.7%	6.5%
Policy Benchmark	10.8%	10.6%	10.0%	7.7%	
SPRS	11.0%	9.4%	8.7%	7.0%	6.5%
Policy Benchmark	9.6%	8.9%	8.2%	6.7%	
CERS - Nonhaz	11.6%	11.2%	10.2%	7.9%	6.5%
Policy Benchmark	11.3%	11.6%	10.3%	7.7%	
CERS – Haz	11.7%	11.3%	10.2%	7.9%	6.5%
Policy Benchmark	11.3%	11.6%	10.3%	7.7%	
TRS Insurance	12.3%	12.1%	10.8%	8.2%	7.1%
Policy Benchmark	12.2%	12.6%	10.8%	8.5%	