



Kentucky Retirement Systems

PPOB

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Cash Flow Trends

Pension Fund Cash Flows:

- All plans except for KERS Non-Hazardous experienced a decline in Net Position. The decline for KERS Haz and SPRS are directly related to unrealized losses due to the declining markets experienced during the last quarter of 2018. CERS had a negative cash flow as benefit payments exceed contributions and investment income.
- Member contributions are down slightly due to lower payroll and a drop in service purchases from the prior year.
- Net Investment Income increased for all systems except KERS Non-Hazardous. KERS, KERS Haz and SPRS had positive cash flows before investment activity as a result of increased employer contributions.
- Benefit payments (outflows) increased slightly across all plans as retirements continue.

Insurance Fund Cash Flows:

- All systems had declining end of period net position due to unrealized losses during the last quarter of 2018.
- Inflows increased due to an increase in both Employer Contributions and Net Investment Income.
- Outflows increased slightly due to additional retirements; therefore, increasing Health Insurance Premiums.





CASH FLOW – Pension Fund
(KERS Non-Haz, KERS Haz & SPRS)
December 31, 2018 (compared to December 31, 2017)
 (\$ in millions)

Contributions	KERS NON-HAZARDOUS		KERS HAZARDOUS		SPRS	
	FY18	FY19	FY18	FY19	FY18	FY19
<i>Member Contributions</i>	\$56.7	\$50.2	\$9.4	\$9.3	\$3.0	\$2.6
<i>Employer Contributions/Appropriations</i>	361.6	512.7	23.9	30.4	25.3	32.9
<i>Northern Trust Settlement</i>	0.6	-	0.1	-	-	-
<i>Investment Income (Net of Expenses)</i>	16.6	14.3	4.8	5.5	2.1	2.3
Total Cash Inflows	435.5	577.2	38.2	45.2	30.4	37.8
<i>Benefit Payments/Refunds</i>	487.3	497.8	33.6	35.8	29.2	30.4
<i>Administrative Expenses</i>	4.8	5.4	0.4	0.5	0.1	0.1
Total Cash Outflows	492.1	503.2	34.0	36.3	29.3	30.5
NET Cash Flow Before Gains/(Losses)	(56.6)	74.0	4.2	8.9	1.1	7.3
<i>Realized Gain/Loss</i>	56.3	17.8	16.8	7.0	6.2	2.2
NET Cash Flow w/ Realized Gains(Losses)	(0.3)	91.8	21.0	15.9	7.3	9.5
<i>Unrealized Gain/(Loss)</i>	55.0	(71.1)	22.7	(33.0)	8.0	(11.2)
Change in Net Position	54.7	20.7	43.7	(17.1)	15.3	(1.7)
<i>Beginning of Period</i>	2,092.8	2,048.9	605.9	651.2	256.4	268.4
<i>End of Period</i>	\$2,147.5	\$2,069.6	\$649.6	\$634.1	\$271.7	\$266.7

Note: Member contributions include the Health Insurance Contribution (1%) as required by HB1.






**CASH FLOW – Pension Fund
(CERS-Haz and CERS-Haz)
December 31, 2018 (compared to December 31, 2017)
(\$ in millions)**

				
	FY18	FY19	FY18	FY19
Contributions				
<i>Member Contributions</i>	\$81.1	\$80.3	\$33.3	\$31.1
<i>Employer Contributions</i>	171.6	187.4	66.6	70.5
<i>Northern Trust Settlement</i>	0.7	-	0.2	-
<i>Investment Income (Net of Expenses)</i>	54.7	58.8	17.9	19.9
Contribution Inflow	308.1	326.5	118.0	121.5
<i>Benefit Payments/Refunds</i>	365.7	385.3	122.3	129.5
<i>Administrative Expenses</i>	8.9	10.2	0.6	0.7
Contribution Outflow	374.6	395.5	122.9	130.2
NET Cash Flow Before Gains/(Losses)	(66.5)	(69.0)	(4.9)	(8.7)
<i>Realized Gain/Loss</i>	185.1	80.1	61.9	26.6
NET Cash Flow w/ Realized Gains/(Losses)	118.6	11.1	57.0	17.9
<i>Unrealized Gain/(Loss)</i>	253.8	(364.2)	83.5	(121.6)
Change in Net Position	372.4	(353.1)	140.5	(103.7)
<i>Beginning of Period</i>	6,739.1	7,086.3	2,227.7	2,361.0
<i>End of Period</i>	\$7,111.5	\$6,733.2	\$2,368.2	\$2,257.3

Note: Member contributions include the Health Insurance Contribution (1%) as required by HB1.





CASH FLOW – Insurance Fund
(KERS Non-Haz, KERS Haz & SPRS)
December 31, 2018 (compared to December 31, 2017)
 (\$ in millions)

						
Contributions	FY18	FY19	FY18	FY19	FY18	FY19
<i>Employer Contributions</i>	\$66.7	\$87.8	\$2.0	\$1.7	4.8	\$6.8
<i>Insurance Premiums</i>	0.1	3.2	-	0.2	-	0.1
<i>Retired Reemployed Healthcare</i>	2.1	1.9	0.5	0.6	-	-
<i>Northern Trust Settlement</i>	-	-	-	-	-	-
<i>Investment Income (Net of Expenses)</i>	5.9	7.8	3.3	4.3	1.2	1.6
Contribution Inflow	74.8	100.7	5.8	6.8	6.0	8.5
<i>Healthcare Premiums</i>	65.6	67.2	9.3	9.7	7.0	7.2
<i>Administrative Expenses</i>	0.4	0.5	-	-	-	-
Contribution Outflow	66.0	67.7	9.3	9.7	7.0	7.2
NET Cash Flow Before Gains/(Losses)	8.8	33.0	(3.5)	(2.9)	(1.0)	1.3
<i>Realized Gain/Loss</i>	15.7	6.4	11.1	5.5	4.2	2.3
NET Cash Flow w/ Realized Gains/(Losses)	24.5	39.4	7.6	2.5	3.2	3.6
<i>Unrealized Gain/(Loss)</i>	33.5	(49.1)	21.4	(26.4)	8.0	(9.7)
Change in Net Position	58.0	(9.7)	29.0	(23.8)	11.2	(6.1)
<i>Beginning of Period</i>	781.4	846.8	484.4	513.4	178.2	190.0
<i>Ending of Period</i>	\$839.4	\$837.1	\$513.4	489.6	\$189.4	183.9



**CASH FLOW – Insurance Fund
(CERS Non-Haz and CERS-Haz)
December 31, 2018 (compared to December 31, 2017)
(in \$millions)**

				
	FY18	FY19	FY18	FY19
Contributions				
<i>Employer Contributions</i>	\$57.5	\$64.3	\$28.2	\$31.1
<i>Insurance Premiums</i>	0.3	3.9	-	0.5
<i>Retired Reemployed Healthcare</i>	2.2	2.3	0.4	0.6
<i>Northern Trust Settlement</i>	0.2	-	0.1	-
<i>Investment Income (Net of Expenses)</i>	14.4	20.6	7.8	10.9
Contribution Inflow	74.6	91.1	36.5	43.1
<i>Healthcare Premiums</i>	67.4	71.2	37.0	39.2
<i>Administrative Expenses</i>	0.4	0.4	0.2	0.2
Contribution Outflow	67.8	71.6	37.2	39.4
NET Cash Flow Before Gains/(Losses)	6.8	19.5	(0.7)	3.7
<i>Realized Gain/Loss</i>	51.5	28.1	28.5	15.5
NET Cash Flow Before w/ Realized Gains/(Losses)	58.3	47.6	27.8	19.2
<i>Unrealized Gain/(Loss)</i>	96.2	(121.2)	52.6	(65.0)
Change in Net Position	154.5	(73.6)	80.4	(45.8)
<i>Beginning of Period</i>	2,160.6	2,346.8	1,179.3	1,268.3
<i>End of Period</i>	\$2,315.1	\$2,273.2	\$1,259.7	\$1,222.5

Optimizing our Portfolio

▶ Growth Investments - 62.5%

- ▶ US Equity (7 Mandates) - 18.75%
 - ▶ Indexed - 13.75%
 - ▶ Active Aggressive Sm. Cap / Other - 5%
- ▶ International Equity (6 Mandates) - 18.75%
 - ▶ Indexed - 8.75%
 - ▶ Active Alpha Seeking - 5%
 - ▶ Active Aggressive Emerging Markets - 5%
- ▶ Private Equity (69 Partnerships) - 10%
- ▶ Specialty Finance / High Yield (11 Mandates) - 15%

Staff is focused on the 50% of the portfolio that provides alpha

New mandates focused on adding alpha in small cap and emerging markets. Remainder of the equity portfolio to be simplified and indexed.

Staff is limited in this area by recent transparency legislation and by the high fee nature of the space.

Continued optimization of this area, targeting strategies that return L+600bps (~8.5% currently) while maintaining a position senior to equity.

▶ Liquidity Investments - 14.5%

- ▶ Core Fixed income (4 mandates) - 13.5%
- ▶ Cash - 1%

▶ Diversifying Strategies - 23%

- Real Estate (14 Mandates) - 5%
- Real Return (9 Mandates) - 8%
- *Opportunistic (19 Mandates**)- 10%

Looking for strategies that provide returns that are less correlated to traditional stocks and bonds, and / or provide excess returns by their illiquid nature.

*Assumes we take the opportunistic allocation up to its maximum of 10% at the expense of the Real Return Allocation

**Includes 13 hedge funds where KRS has issued full redemption notices but is still waiting for all of the dollars to be returned.

Optimizing our Portfolio: KERS & SPRS

▶ Growth Investments - 53.5%

- ▶ US Equity (7 Mandates) - 15.75%
 - ▶ Indexed - 12.75%
 - ▶ Active Aggressive Sm. Cap / Other - 3%
- ▶ International Equity (6 Mandates) - 15.75%
 - ▶ Indexed - 10.75%
 - ▶ Active Alpha Seeking - 2.5%
 - ▶ Active Aggressive Emerging Markets - 2.5%
- ▶ Private Equity (69 Partnerships) - 10%
- ▶ Specialty Finance / High Yield (11 Mandates) - 15%

Staff is focused on the 33% of the portfolio that provides alpha

New mandates focused on adding alpha in small cap and emerging markets. Remainder of the equity portfolio to be simplified and indexed.

Current PE investments are in run-off mode due to the plans funded status.

Continued optimization of this area, targeting strategies that return L+600bps (~8.5% currently) while maintaining a position senior to equity.

▶ Liquidity Investments - 23.5%

- ▶ Core Fixed income (4 mandates) - 20.5%
- ▶ Cash - 3%

▶ Diversifying Strategies - 23%

- Real Estate (14 Mandates) - 5%
- Real Return (9 Mandates) - 8%
- *Opportunistic (19 Mandates**)- 10%

Looking for strategies that provide returns that are less correlated to traditional stocks and bonds, and / or provide excess returns by their illiquid nature.

*Assumes we take the opportunistic allocation up to its maximum of 10% at the expense of the Real Return Allocation

**Includes 13 hedge funds where KRS has issued full redemption notices but is still waiting for all of the dollars to be returned.

Pension- Investment Update 12/30/2018

Annual Rates of Return (Net of Fees)

	Market Value (\$ in millions)	1 Year	3 Years	5 Years	10 Years	20 Years
KERS Non-Hazardous	\$1,971.0	-1.0%	6.3%	5.1%	8.1%	5.4%
<i>Plan Index*</i>		-2.2%	6.3%	4.9%	8.4%	5.4%
KERS Hazardous	\$627.8	-2.0%	7.1%	5.2%	8.2%	5.4%
<i>Plan Index*</i>		-2.9%	6.8%	5.0%	8.5%	5.4%
CERS Non-Hazardous	\$6,681.1	-2.1%	7.1%	5.2%	8.2%	5.4%
<i>Plan Index*</i>		-2.9%	6.8%	5.0%	8.5%	5.4%
CERS Hazardous	\$2,237.9	-2.0%	7.1%	5.2%	8.2%	5.4%
<i>Plan Index*</i>		-2.9%	6.8%	5.0%	8.5%	5.4%
SPRS	\$257.7	-1.6%	6.4%	4.7%	7.9%	5.3%
<i>Plan Index*</i>		-2.4%	6.5%	4.9%	8.4%	5.4%
Total Pension Fund	\$11,775.5	-1.8%	7.0%	5.2%	8.2%	5.4%
<i>Plan Index**</i>		-2.8%	6.6%	5.2%	8.5%	5.5%

*Plan Index – KRS Blended Index

** Weighted Composite of Individual Plans

Insurance - Investment Update 12/30/2018

Annual Rates of Return (Net of Fees)

	Market Value (\$ in millions)	1 Year	3 Years	5 Years	10 Years	20 Years
KERS Non-Hazardous	\$820.4	-3.3%	6.6%	4.6%	8.2%	4.7%
<i>Plan Index*</i>		-2.7%	7.0%	5.2%	9.1%	5.0%
KERS Hazardous	\$488.9	-2.0%	7.2%	5.1%	8.5%	4.9%
<i>Plan Index*</i>		-2.3%	7.1%	5.3%	9.2%	5.1%
CERS Non-Hazardous	\$2,259.9	-1.6%	7.4%	5.3%	8.6%	4.9%
<i>Plan Index*</i>		-2.7%	7.0%	5.2%	9.2%	5.0%
CERS Hazardous	\$1,216.8	-1.5%	7.4%	5.3%	8.6%	4.9%
<i>Plan Index*</i>		-2.7%	7.0%	5.2%	9.2%	5.0%
SPRS	\$182.6	-1.5%	7.4%	5.3%	8.6%	4.9%
<i>Plan Index*</i>		-2.7%	7.0%	5.3%	9.2%	5.1%
Total Pension Fund	\$4,968.6	-1.8%	7.3%	5.2%	8.5%	4.9%
<i>Plan Index**</i>		-2.7%	6.9%	5.4%	9.2%	5.1%

*Plan Index – KRS Blended Index

** Weighted Composite of Individual Plans