

LASERS

LOUISIANA STATE EMPLOYEES'
RETIREMENT SYSTEM

Response to
Senate Resolution No.175
(2005 Regular Session)

For the Period July 1 to September 30, 2018

Pursuant to SR 175 of the 2005 Regular Louisiana Legislative Session, each retirement system is to provide a quarterly report of their investments commencing with the quarter beginning July 1, 2005. The following is the quarterly report for LASERS portfolio for the period April 1 to June 30, 2018. The report provides a listing of LASERS investments by asset class, amount of funds invested and with whom, annual returns on the investments and the management fees.

While market returns provide a snapshot view of investment performance, readers should keep in mind that actuarial returns, which are smoothed over five years to offset market volatility, are a better indicator of the system's ability to consistently achieve the assumed annual actuarial return of 7.65%. The Board adopted a plan to reduce the discount rate to 7.5% in 0.05% increments beginning July 1, 2017.

Therefore, in addition to the data presented in the quarterly SR 175 - Senate Resolution No. 175 Report, the following information is given to further illustrate the System's status.

As of June 30, 2018, LASERS 30-year actuarial return was 7.95%.

3rd Quarter 2018

Manager	Net Asset Value \$ (Millions)	Annual Return	Management Fees	
			Annual Basis Points	Quarterly Dollar Amount
U.S. EQUITY				
LARGE CAP VALUE				
Aronson Johnson & Ortiz ¹	252.8	12.5	0.0	-
SMALL CAP GROWTH				
Rice Hall James ¹	275.3	22.2	0.0	-
SMALL CAP VALUE				
LSV Asset Management	242.7	8.2	56.1	344,565
INDEX FUNDS				
LASERS S&P 400 Index Fund	511.8	14.3	n/a	-
LASERS S&P 500 Index Fund	1452.1	17.9	n/a	-
LASERS S&P 600 Index Fund	377.9	19.2	n/a	-
NON-U.S. EQUITY				
LARGE CAP VALUE				
Mondrian Investment Partners	242.0	1.7	28.1	170,776
LARGE CAP CORE				
LASERS MSCI World Ex-USA Index Fund	1509.8	2.9	n/a	-
LASERS Terror-Free International Fund	28.8	2.5	n/a	-
INT'L SMALL CAP				
Mondrian Investment Partners	243.3	7.4	70.1	422,826
Goldman Sachs	415.1	4.4	50.4	524,909
EMERGING MARKETS				
City of London Investment Management	411.8	-2.9	93.0	922,862
LSV Emerging Markets	421.2	-1.8	85.0	899,471
Westwood Global Emerging Markets	301.1	4.8	90.0	679,734
LSV Custom Emerging Markets	346.6	-1.7	50.0	436,733
TOTAL EQUITY	\$7,032.1			4,401,876
US FIXED INCOME				
INVESTMENT GRADE				
Loomis Sayles & Co.	236.9	0.5	17.1	101,322
Orleans Capital Mgt	173.9	-1.0	11.0	48,281
HIGH YIELD				
JP Morgan	202.6	3.3	27.0	141,746
Nomura	202.4	5.1	45.0	246,199
EMERGING MARKET DEBT				
Stone Harbor	186.0	-10.3	52.5	302,974
Global Multi-Sector				
Doubleline	235.3	4.0	60.0	351,067
Goldentree	239.6	7.2	75.0	442,197
TOTAL FIXED INCOME	\$1,476.8			1,633,786

3rd Quarter 2018

Manager	Net Asset Value		Management Fees	
	\$ (Millions)	Annual Return	Annual Basis Points	Quarterly Dollar Amount
ALTERNATIVE ASSETS				
PRIVATE MARKETS				
Adams Street 2005 Non-US	4.1	13.3	37.3	10,477
Adams Street Partnership 2002 US ²	1.9	15.9	10.0	-
Adams Street Partnership 2005 US	9.2	12.9	37.3	24,444
Adams Street 2007 US Fund	15.0	18.5	55.0	28,646
Adams Street 2007 Non-US	9.7	17.3	55.0	18,229
Adams Street 2007 Direct	3.0	37.2	100.0	12,500
Adams Street 2009 US Fund	20.8	18.9	67.0	36,458
Adams Street 2009 Non-US Developed	10.7	22.7	67.0	21,875
Adams Street 2009 Non-US Emerging	5.6	15.6	67.0	7,292
Adams Street 2009 Direct	3.5	29.6	140.0	15,000
AEA Investors Fund VI	33.7	8.4	175.0	75,434
BCP Energy Services Fund A	49.5	42.2	200.0	179,874
Brinson ^{2,3}	5.2	10.5	0.0	-
Brookfield Capital IV	47.4	179.3	175.0	218,750
Adams Street V ²	4.1	8.0	0.0	-
Apollo Inv Fund VII	14.0	8.1	0.0	18,243
Apollo Inv Fund VIII	60.8	18.3	150.0	134,631
Apollo European Fund II	39.3	10.9	175.0	122,783
ArcLight Energy Ptr Fund VI	61.3	21.3	150.0	275,633
CCMP Capital III	56.7	8.7	150.0	223,038
Cerberus VI	78.4	-13.3	150.0	468,750
Coller International Partners VI	34.3	21.3	125.0	226,230
Coller International Partners VII	45.0	27.4	150.0	282,791
Drug Royalty Fund III ⁴	11.7	n/a	150.0	129,651
EIG Energy Fund XIV ⁵	7.1	18.5	125.0	47,990
EIG Energy Fund XV ⁵	21.2	-0.3	125.0	74,649
EIG Energy Fund XVI ⁵	52.3	14.9	125.0	157,978
Energy Spectrum Fund V ⁵	0.5	-25.9	175.0	49,227
Energy Spectrum Fund VI ⁵	16.8	24.8	175.0	69,893
GTCR Fund XI	40.9	33.6	150.0	226,208
GTCR Fund XII ⁶	1.0	n/a	150.0	118,827
Louisiana Growth Fund	1.3	34.2	50.0	53,968
Louisiana Growth Fund II	10.6	91.7	50.0	76,742
Gamut Fund I	11.9	-1.0	200.0	204,710
Goldman Sachs PEP IX	28.5	24.4	25.3	35,496
John Hancock ²	0.2	-36.9	0.0	-
HIPEP Partnership III ²	0.1	-6.2	0.0	-
Harbourvest VI - Buyout ²	0.2	-13.4	0.0	-
Harbourvest VI - Direct ²	1.4	-18.6	0.0	-
Harbourvest VI - Partnership ²	1.8	-0.4	0.0	-
HIPEP Direct IV ²	0.4	28.3	0.0	-
Huff Alternative Fund ²	10.5	-0.6	0.0	-
Insight Venture Partner ⁷	10.0	n/a	175.0	218,750
KKR Asian Fund III ⁸	6.0	n/a	125.0	156,250
Marathon European Credit Opp Fund ⁵	8.5	25.2	125.0	-
Mesirow III	5.7	10.5	49.4	23,023
Mesirow IV	33.2	12.3	45.9	62,010
Mesirow V	51.5	19.0	56.7	76,545
Newstone Mezzanine II	8.9	16.5	150.0	24,608
OHA Strategic Credit Fund II ⁹	3.3	n/a	175.0	27,472
Oaktree European Fund III	31.1	7.3	175.0	218,750
Pantheon Europe VI	20.7	17.9	75.0	69,111
Pantheon VI	12.5	10.7	52.7	53,312
Pantheon VII	25.7	15.6	67.5	68,350
Stepstone Fund II	35.5	33.5	37.5	33,095
Stepstone Europe Fund II	19.4	4.1	50.0	22,207
Private Advisors IV	20.8	28.3	75.0	59,063
Private Advisors V	36.5	20.1	90.0	81,000
Private Advisors VI	23.4	12.4	90.0	90,000
Q-BLK II	16.3	8.4	45.9	52,093
Q-BLK III	28.5	11.4	59.7	73,867
Siguler Guff DOF III	35.3	13.9	24.0	97,485
Siguler Guff Fund IV	18.0	8.7	71.0	45,440
Siguler Guff Pelican Gem	37.4	14.9	75.0	187,787
Sterling Partners	22.9	3.7	200.0	100,531
Vista Equity Partners IV	28.7	8.5	150.0	64,160
Vista Equity Partners V	88.8	54.0	150.0	281,250
Vista Equity Partners VI	96.2	15.2	150.0	354,346
Williams Capital ²	0.5	23.3	0.0	-

3rd Quarter 2018

Manager	Net Asset Value \$ (Millions)	Annual Return	Annual Basis Points	Management Fees Quarterly Dollar Amount
ABSOLUTE RETURN STRATEGIES				
Bridgewater Pure Alpha	221.2	4.5	183.9	1,020,091
Prisma Capital Partners	257.2	5.6	65.0	415,834
Entrust Capital Partners	300.6	2.7	112.2	883,356
RISK PARITY				
Bridgewater Custom ¹⁰	407.0	n/a	63.8	649,990
AQR Capital Management ¹¹	375.5	n/a	110.0	1,073,479
TOTAL ALTERNATIVE ASSETS ¹²				
	\$3,131.0			10,229,669
TOTAL PLAN ¹³				
	\$11,716.7			16,265,331

¹ The fund's fee structure is performance based.

² The fund no longer charges fees.

³ This is a composite of six limited partnerships.

⁴ LASERS is awaiting final escrow distribution from this fund, so one year return is not listed.

⁵ Annual Basis Points are based on historical cost or net asset value.

⁶ The portfolio was funded 05/2018.

⁷ The portfolio was funded 04/2018.

⁸ The portfolio was funded 02/2018.

⁹ The portfolio was funded 11/2017.

¹⁰ Bridgewater Major Market and Bridgewater All Weather were merged to form this new fund 01/2018.

¹¹ The portfolio was funded 10/2017.

¹² The net asset values and returns are reflected net of fees for all Alternatives, and includes \$10.2 million for Paamco and \$2.5 million for Stark, which are being liquidated.

¹³ The Total Plan Market Value includes \$76.6 million in cash/cash equivalents and \$0.2 million in the Harbor Police transition account.

The Total Quarterly Dollar Amount does not include \$303,597 for Self-Directed Plan and Optional Retirement Plan.

The Total Quarterly Dollar Amount does not include \$27,401 in fee for liquidating funds.

The Total Quarterly Dollar Amount does not include \$375,000 in fee accruals for new funds.

The Total Quarterly Dollar Amount includes fee adjustments from prior periods.

Comments

For the majority of LASERS investment managers, management fees are paid quarterly in arrears, based upon the market value of assets under its management, excluding any cash balance, as reported by LASERS custodian bank, and are calculated as follows:

The fee is calculated at the end of each calendar quarter as follows: (Average of market value of assets under management on last business day of each of the four preceding calendar months, which shall not include funds that are managed by LASERS custodian bank) times the annual percentage fee schedule (basis points) divided by four. Fees on invested contributions and withdrawals during each calendar quarter will be computed separately on a pro-rata basis. It is not necessary to pro-rate contributions and withdrawals for Month 1 of the calculation period. Contributions and withdrawals are to be calculated as such:

Contributions: (month end market value for the month in which the contribution was made less any cash balance) minus the amount of the contribution, and then multiplied by the number of days the funds were not in the account, divided by the total number of days for the month.

Withdrawals: (month end market value for the month in which the withdrawal was made less any cash balance) plus the amount of the withdrawal, and then multiplied by the number of days the funds were in the account, divided by the total number of days for the month.

The managers shall provide a monthly reconciliation of their records to LASERS custodian bank. Should the manager fail to reconcile LASERS portfolio on a timely basis, LASERS maintains the right to withhold payment of the management fee until the portfolio has been reconciled to LASERS satisfaction.

Private Equity earns fees as a percentage of LASERS capital commitment to each fund. The fees are deducted from the portfolios on a quarterly basis and verified with the receipt of each manager's annual audited financials. The one exception is for Adams Street Secondary 1998 Fund and Adams Street Primary 1997 and 1999 Funds, for which billing is handled by UBS Global Asset Management. For these funds an invoice is received, verified, and paid on a quarterly basis.

Investment Terminology

Annual Return	Annualized returns express the rate of return over a given time period on an annual basis, or as a return per year. An annualized return can be calculated over any period one year or longer and is useful for comparing two or more portfolios over similar time periods.
Basis Point	One gradation on a 100-point scale which is used in expressing variations on the yield of bonds. A basis point is equal to one-hundredth of a percentage point.
Concentrated Portfolio	A portfolio that generally has fewer securities than traditional portfolios.
Index Fund	A fund (or account) comprised of securities, the characteristics of which will produce a return which will replicate (or substantially replicate) a designated securities index.
Management Fee	The fee charged by the investment manager for supervision of an investment. Generally quoted in terms of a percent of assets.
Market Value	The current or prevailing price of a security or commodity as indicated by current market quotations, and therefore the price at which additional amounts can presumably be purchased or sold.
Universe	The list of all assets eligible for inclusion in a portfolio.

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