LASERS

Louisiana State Employees' Retirement System

Board of Trustees

Handout Book

October 2019

Table of Contents

Investment Committee

LASERS

Louisiana State Employees' Retirement System

Performance Update

October 24, 2019

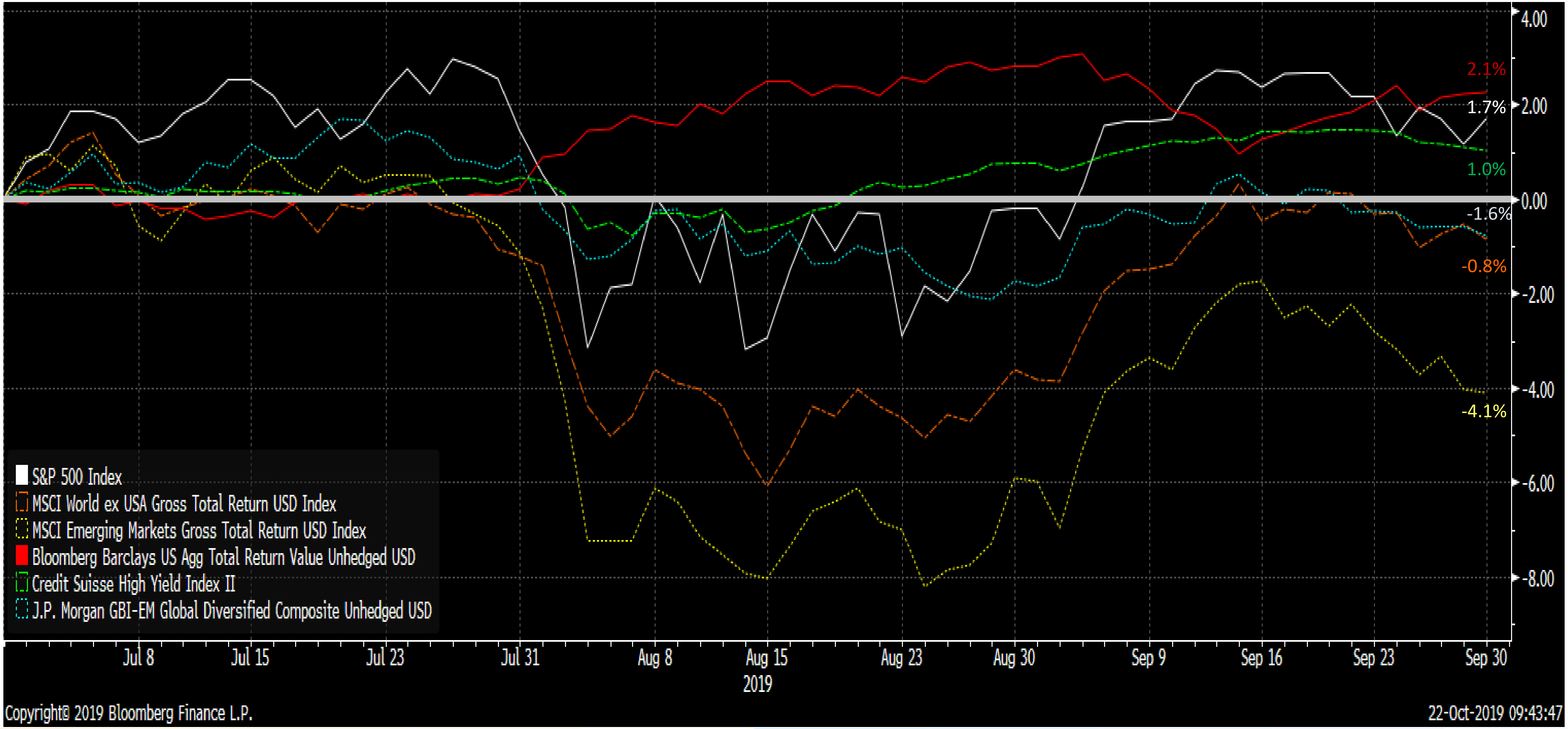
Total Plan Performance Summary

Monthly During 3Q 2019

	1 month	FYTD	1 year	3 years	5 years	7 years	10 years
JULY – Total Plan	0.2	0.2	2.8	8.7	5.9	8.2	9.2
AUGUST – Total Plan	-2.0	-1.8	0.5	7.8	5.1	7.7	8.7
SEPTEMBER – Total Plan	1.7	-0.1	1.9	8.1	6.0	7.6	8.5

Major Indices

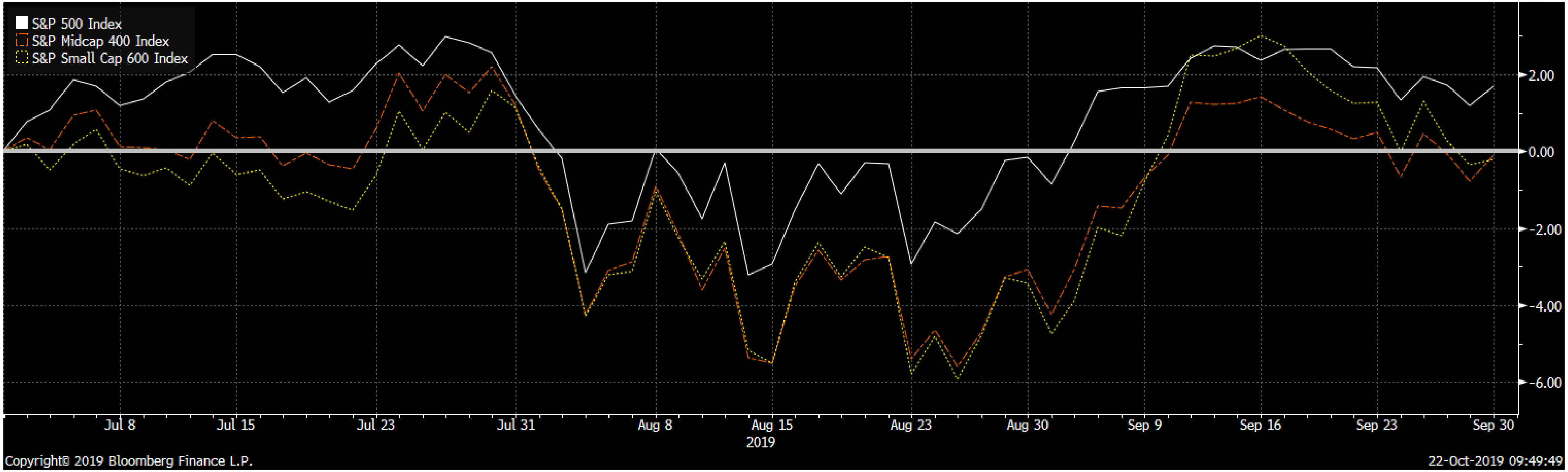
3Q 2019 / FYTD



U.S. Equity Performance

	3Q/ FYTD	1 year	3 years	5 years
Large Cap	1.7	3.3	12.9	10.2
S&P 500 Index	*1.7*	*4.3*	*13.4*	*10.8*
S&P 400 Index	*-0.1*	*-2.5*	*9.4*	*8.9*
Small Cap	-1.0	-10.9	6.7	7.4
S&P 600 Index	*-0.2*	*-9.3*	*9.3*	*9.9*
Total U.S. Equity	**0.6**	**-1.7**	**10.6**	**9.3**

U.S. Equity – 3Q 2019

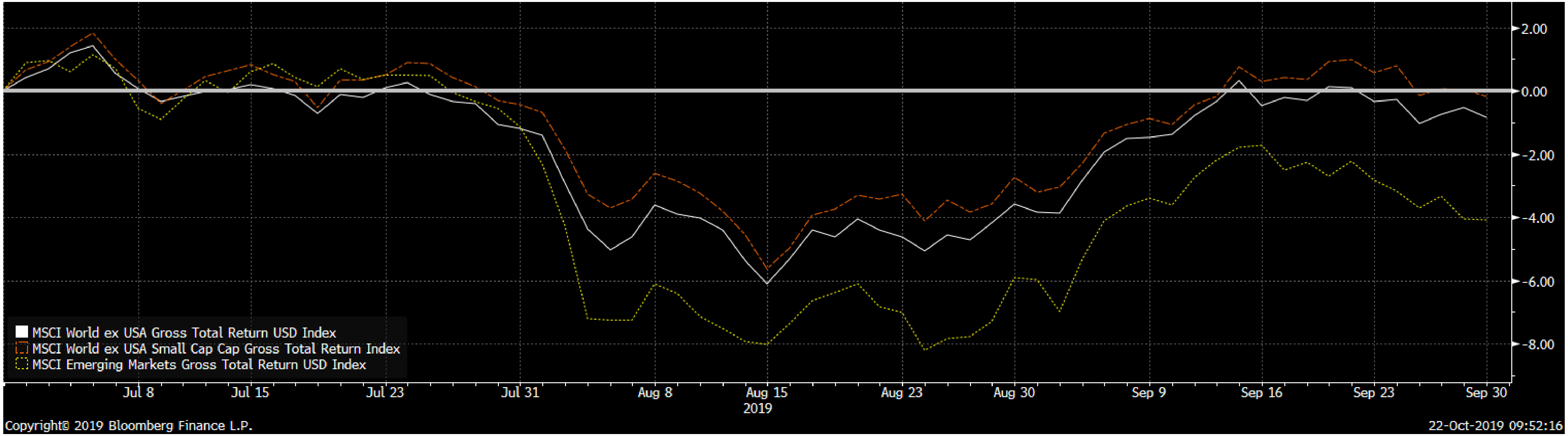


3Q 2019	LASERS	Index
Large Cap	1.7%	1.7%
Mid Cap	-0.1%	-0.1%
Small Cap	-1.0%	-0.2%

Non-U.S. Equity Performance

	3Q/ FYTD	1 year	3 years	5 Years
Int'l Large Cap	-0.9	-0.3	6.6	3.4
MSCI World Ex-USA	*-0.8*	*-0.4*	*7.0*	*3.6*
Int'l Small Cap	-0.9	-5.3	6.6	6.5
MSCI World Ex-USA Sm	*-0.2*	*-5.2*	*6.0*	*5.5*
Emerging Markets	-4.1	-1.8	6.1	2.5
MSCI Emerging Markets	*-4.1*	*-1.6*	*6.4*	*2.7*
Total Non-U.S. Equity	**-2.1**	**-1.6**	**6.5**	**3.3**

Non-U.S. Equity – 3Q 2019

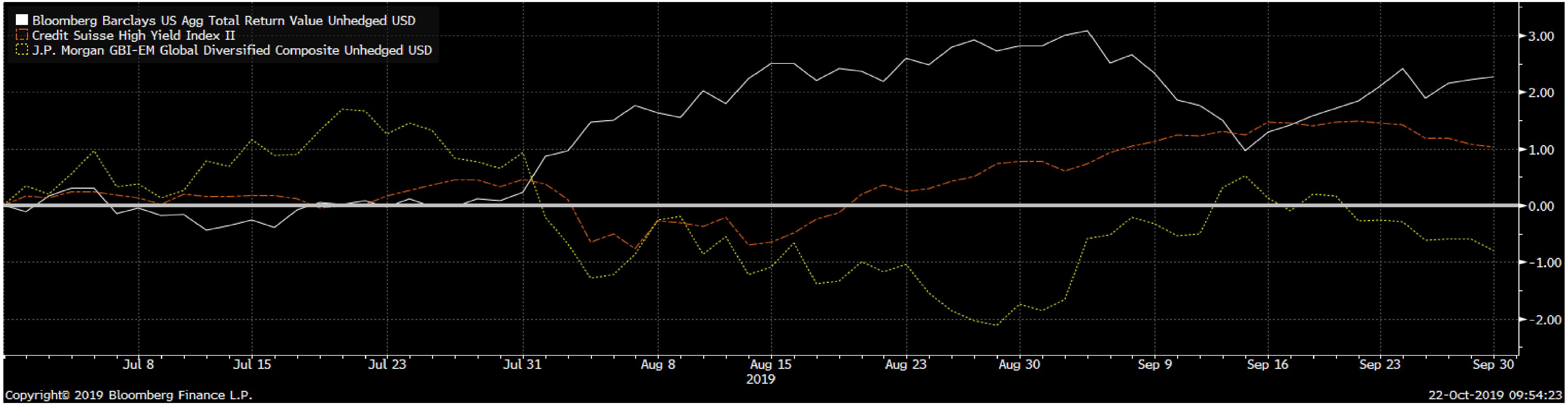


3Q 2019	LASERS	Index
Large Cap	-0.9%	-0.8%
Small Cap	-0.9%	-0.2%
Emerging Markets	-4.1%	-4.1%

Fixed Income Performance

	3Q/ FYTD	1 year	3 years	5 years
U.S. Investment Grade	2.1	9.5	3.7	3.6
BB BC US Aggregate	*2.3*	*10.3*	*2.9*	*3.4*
U.S. High Yield	1.1	4.4	6.1	5.5
Credit Suisse HY	*1.0*	*5.8*	*6.0*	*5.1*
Emerging Market Debt	-1.6	8.5	1.9	-0.5
JPM GBI-EM Global	*-0.8*	*10.1*	*3.1*	*0.6*
Global Multi-Sector	1.1	6.0	7.0	n/a
50/50 Barclays Agg/CS HY Index	*0.9*	*6.8*	*3.8*	*n/a*
Total Fixed Income	**0.8**	**6.7**	**5.1**	**4.2**

Fixed Income – 3Q 2019



3Q 2019	LASERS	Index
Investment Grade	2.1%	2.3%
High Yield	1.1%	1.0%
Emerging Market Debt	-1.6%	-0.8%
Global Multi-Sector	1.1%	0.9%

Alternatives Performance

	3Q/ FYTD	1 year	3 years	5 years
Private Markets	1.0	10.9	15.3	11.8
Absolute Return Strategies	-0.2	-1.1	2.8	1.4
HFRI FoF Composite	*-0.7*	*2.1*	*4.0*	*2.4*
Risk Parity	1.9	8.7	5.4	4.1
Total Alternatives	**1.0**	**7.5**	**9.4**	**6.7**

September Performance

Domestic Equity

Equities saw a nice turn-around from August, with Small Cap Value posting the highest return

- S&P 500 Index returned 1.9%
- S&P 400 Index returned 3.1%
- S&P 600 Index returned 3.3%

International Equity

Here too, the turn-around from August was welcome, with Developed markets out-performing Emerging

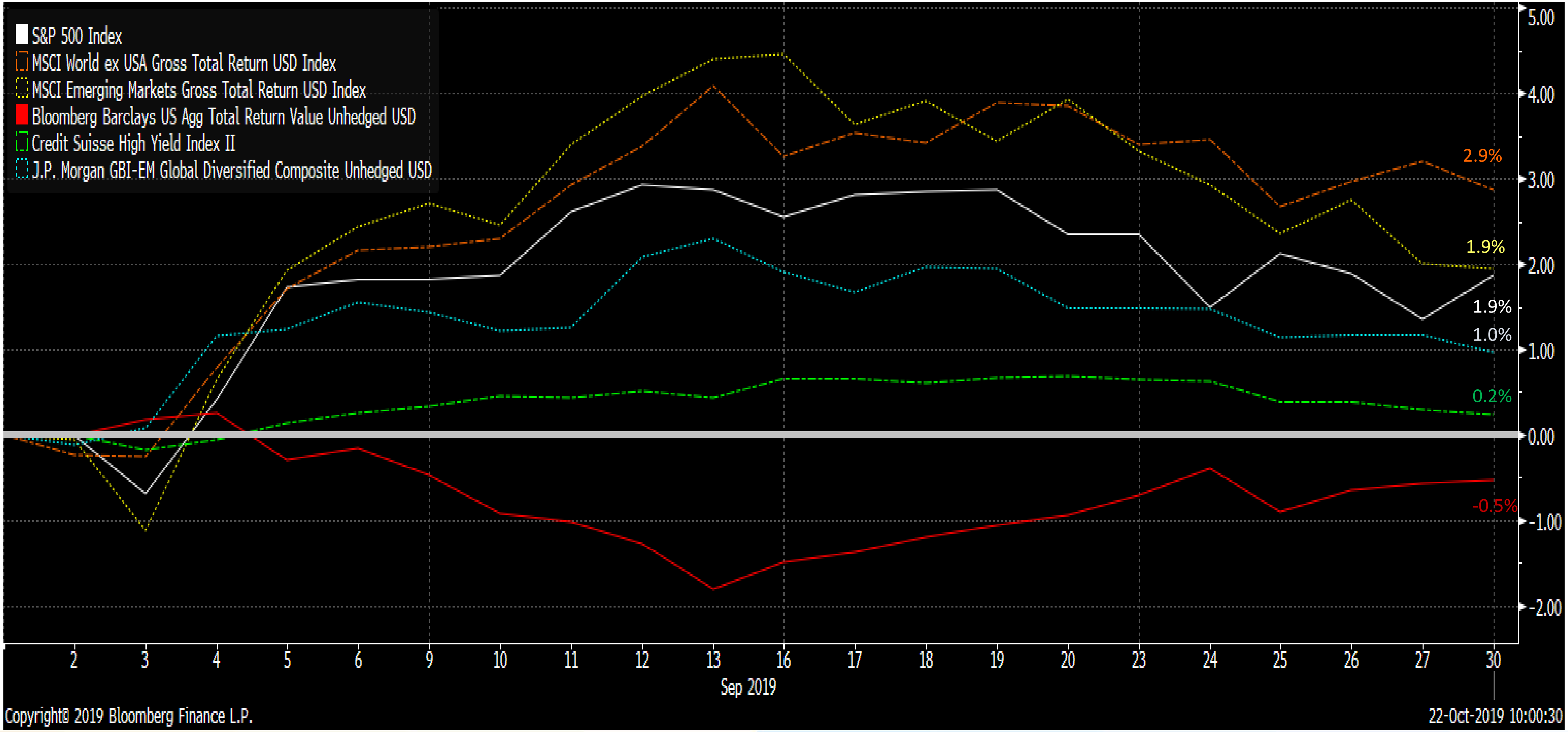
- MSCI World Ex-USA Index returned 2.9%
- MSCI World Ex-USA Small Cap Index returned 2.6%
- MSCI Emerging Markets Index returned 1.9%

Fixed Income

With the exception of Investment Grade, Fixed Income posted modestly positive returns

- Bloomberg Barclay's Aggregate Bond Index returned -0.5%
- Credit Suisse High Yield Index returned 0.2%
- J.P. Morgan GBI-EM Global Diversified Index returned 1.0%

Major Indices - September

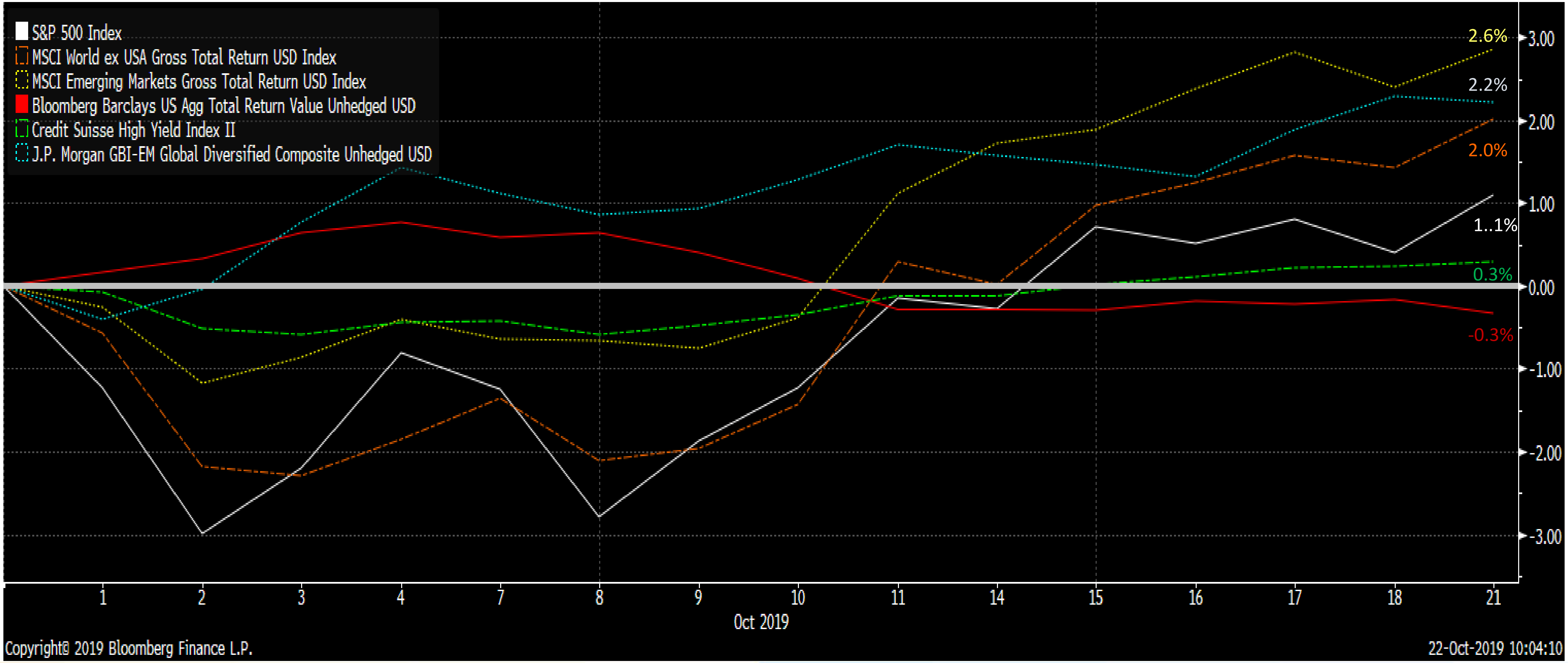


September Performance Summary

	Sept	3Q/ FYTD	1 year	3 years	5 years
U.S. Equity	2.7	0.6	-1.7	10.6	9.3
Non-U.S. Equity	2.8	-2.1	-1.6	6.5	3.3
Total Fixed Income	0.3	0.8	6.7	5.1	4.2
Alternatives	0.7	1.0	7.5	9.4	6.7
S&P 500 Index	1.9	*1.7*	*4.3*	*13.4*	*10.8*
BB BC US Aggregate	-0.5	*2.3*	*10.3*	*2.9*	*3.4*
Total Plan	1.7	-0.1	1.9	8.1	6.0

October MTD

October MTD Performance as of October 21st was approximately 1.3%.



LASERS

SUMMARY OF MANAGER PERFORMANCE
RATES OF RETURN
TOTAL GROSS OF FEES
(For Period Ending September 30, 2019)

	Contract Exp. Date	Approx. Mgt. Fees	Curr. Mkt. Value ($M)	Month	3 mos	YTD	Fiscal YTD	1 Year	2 Years	3 Years	4 Years	5 Years	6 Years
U.S. EQUITY													
LARGE CAP VALUE													
AJO, LP	03/31/22	3.4 bps	$ 226.8	3.7	1.1	18.1	1.1	0.0	6.1	10.8	10.3	7.5	9.5
S&P 500 VALUE INDEX				**3.7**	**2.8**	**20.0**	**2.8**	**5.6**	**7.8**	**10.6**	**11.9**	**8.5**	**10.0**
S&P 500 INDEX				**1.9**	**1.7**	**20.6**	**1.7**	**4.3**	**10.9**	**13.4**	**13.9**	**10.8**	**12.3**
TOTAL LARGE VALUE		3.4 bps	$ 226.8	**3.7**	**1.1**	**18.1**	**1.1**	**0.0**	**6.1**	10.8	**10.3**	**7.5**	**9.5**
LARGE CAP INDEX FUNDS													
LASERS S&P 500 INDEX FUND		1.3 bps	$ 1,201.6	1.9	1.7	20.5	1.7	4.3	10.8	13.4	13.9	10.8	12.3
S&P 500 INDEX				**1.9**	**1.7**	**20.6**	**1.7**	**4.3**	**10.9**	**13.4**	**13.9**	**10.8**	**12.3**
TOTAL DOMESTIC LARGE CAP		1.6 bps	$ 1,428.4	2.2	**1.7**	**20.2**	**1.7**	**3.3**	**10.0**	**12.9**	**13.2**	**10.2**	**11.8**
MID CAP INDEX FUNDS													
LASERS S&P 400 INDEX FUND		1.3 bps	$ 432.5	3.1	-0.1	17.9	-0.1	-2.5	5.6	9.4	10.9	8.9	9.4
S&P MIDCAP 400 INDEX				**3.1**	**-0.1**	**17.9**	**-0.1**	**-2.5**	**5.5**	**9.4**	**10.8**	**8.9**	**9.4**
TOTAL DOMESTIC MID CAP INDEX		1.3 bps	$ 432.5	3.1	-0.1	17.9	-0.1	**-2.5**	5.6	9.4	10.9	8.9	9.4
SMALL CAP GROWTH													
RICE HALL JAMES	07/31/20	0.0bps	$ 197.5	0.4	-2.6	13.6	-2.6	-12.3	3.5	5.8	5.8	6.1	5.9
S&P 600 GROWTH INDEX				**1.0**	**-1.9**	**11.5**	**-1.9**	**-10.4**	**5.4**	**10.4**	**11.7**	**11.0**	**9.9**
S&P SMALLCAP 600 INDEX				**3.3**	**-0.2**	**13.5**	**-0.2**	**-9.3**	**3.9**	**9.3**	**11.5**	**9.9**	**9.2**
TOTAL SMALL GROWTH		0.0bps	$ 197.5	**0.4**	**-2.6**	13.6	**-2.6**	**-12.3**	**3.5**	**5.8**	**5.8**	**6.1**	**5.9**
SMALL CAP VALUE													
LSV	05/31/21	55.9 bps	$ 200.4	7.6	-0.6	10.5	-0.6	-11.7	-2.2	4.4	7.7	7.2	8.3
S&P 600 VALUE INDEX				**5.7**	**1.5**	**15.5**	**1.5**	**-8.2**	**2.5**	**8.2**	**11.3**	**8.8**	**8.4**
S&P SMALLCAP 600 INDEX				**3.3**	**-0.2**	**13.5**	**-0.2**	**-9.3**	**3.9**	**9.3**	**11.5**	**9.9**	**9.2**
TOTAL SMALL VALUE		55.9 bps	$ 200.4	7.6	**-0.6**	**10.5**	**-0.6**	**-11.7**	**-2.2**	**4.4**	**7.4**	**6.2**	**6.8**
SMALL CAP INDEX FUNDS													
LASERS S&P 600 INDEX FUND		1.3 bps	$ 279.2	3.3	-0.2	13.6	-0.2	-9.3	4.0	9.3	11.5	9.9	9.2
S&P SMALLCAP 600 INDEX				**3.3**	**-0.2**	**13.5**	**-0.2**	**-9.3**	**3.9**	**9.3**	**11.5**	**9.9**	**9.2**
TOTAL DOMESTIC SMALL CAP		17.1 bps	$ 677.1	3.7	**-1.0**	**12.7**	**-1.0**	**-10.9**	**2.1**	**6.7**	**8.3**	**7.4**	**7.2**
TOTAL U.S. EQUITY		**5.7 bps**	$ 2,537.9	2.7	0.6	17.8	0.6	-1.7	7.0	10.6	11.5	9.3	10.1

LASERS

SUMMARY OF MANAGER PERFORMANCE
RATES OF RETURN
TOTAL GROSS OF FEES
(For Period Ending September 30, 2019)

	Contract Exp. Date	Approx. Mgt. Fees	Curr. Mkt. Value ($M)	Month	3 mos	YTD	Fiscal YTD	1 Year	2 Years	3 Years	4 Years	5 Years	6 Years
NON-U.S. EQUITY													
LARGE CAP VALUE													
MONDRIAN INVESTMENT PARTNERS	12/31/20	28.3 bps	$ 225.2	5.1	-0.8	11.3	-0.8	1.3	1.5	6.3	7.1	4.0	5.0
MSCI WORLD EX-USA VALUE INDEX				**4.9**	**-1.3**	**9.5**	**-1.3**	**-3.7**	**-1.6**	**6.0**	**5.9**	**1.6**	**2.4**
MSCI WORLD EX-USA INDEX				**2.9**	**-0.8**	**14.1**	**-0.8**	**-0.4**	**1.4**	**7.0**	**7.2**	**3.6**	**3.9**
TOTAL INT'L LARGE VALUE		28.3 bps	$ 225.2	5.1	-0.8	11.3	-0.8	1.3	1.5	6.3	7.1	4.1	5.0
LARGE CAP CORE													
LASERS MSCI WORLD EX-USA INDEX FUND		1.3 bps	$ 1,423.8	2.8	-1.0	13.4	-1.0	-0.6	1.1	6.7	6.9	3.3	3.6
MSCI WORLD EX-USA INDEX				**2.9**	**-0.8**	**14.1**	**-0.8**	**-0.4**	**1.4**	**7.0**	**7.2**	**3.6**	**3.9**
TOTAL INT'L LARGE CORE		1.3 bps	$ 1,423.8	2.8	-1.0	13.4	-1.0	-0.7	1.1	6.6	6.8	3.3	3.6
LASERS TERROR-FREE INT'L FUND		1.3 bps	$ 29.1	3.0	-0.1	14.9	-0.1	1.0	1.8	7.8	7.6	4.0	4.2
MSCI WORLD EX-USA INDEX				**2.9**	**-0.8**	**14.1**	**-0.8**	**-0.4**	**1.4**	**7.0**	**7.2**	**3.6**	**3.9**
TOTAL INT'L LARGE CAP		4.9 bps	$ 1,678.1	3.2	-0.9	13.2	-0.9	-0.3	1.2	6.6	6.9	3.4	3.8
INT'L SMALL CAP													
MONDRIAN INVESTMENT PARTNERS	02/14/21	70.3 bps	$ 234.1	1.9	-1.8	12.9	-1.8	-3.8	1.7	6.7	8.9	6.3	5.4
GOLDMAN SACHS	02/17/21	51.1 bps	$ 343.6	1.4	-0.3	13.1	-0.3	-6.1	-1.0	6.6			
MSCI WORLD EX-USA SMALL CAP INDEX				**2.6**	**-0.2**	**13.0**	**-0.2**	**-5.2**	**-0.8**	**6.0**	**7.9**	**5.5**	**5.2**
TOTAL INT'L SMALL CAP		58.9 bps	$ 577.7	1.6	-0.9	13.0	-0.9	-5.3	0.0	6.6	9.3	6.5	5.6
EMERGING MARKETS													
CITY OF LONDON	08/31/24	93.0 bps	$ 402.4	2.8	-3.6	9.2	-3.6	3.5	0.2	7.2	9.8	4.2	5.2
WESTWOOD GLOBAL EMERGING MKTS	OPEN	88.9 bps	$ 279.8	3.7	-1.4	1.6	-1.4	-6.3	-0.9	6.7	9.0	3.1	3.8
LSV CUSTOM EMERGING MARKETS	08/22/23	50.0 bps	$ 639.8	2.5	-5.4	2.7	-5.4	-3.1	-2.4	5.3	7.7	1.4	2.5
MSCI EMERGING MARKETS INDEX				**1.9**	**-4.1**	**6.2**	**-4.1**	**-1.6**	**-1.0**	**6.4**	**9.0**	**2.7**	**3.0**
TOTAL EMERGING MARKETS		71.3 bps	$ 1,322.0	2.9	-4.1	4.4	-4.1	-1.8	-1.3	6.1	8.6	2.5	3.5
TOTAL NON-U.S. EQUITY		**38.2 bps**	$ 3,577.8	2.8	-2.1	9.8	-2.1	-1.6	0.1	6.5	7.8	3.3	3.9
TOTAL EQUITY		**24.7 bps**	$ 6,115.7	2.8	-1.0	13.0	-1.0	-1.7	3.0	8.3	9.4	6.1	6.8

LASERS

SUMMARY OF MANAGER PERFORMANCE
RATES OF RETURN
TOTAL GROSS OF FEES
(For Period Ending September 30, 2019)

	Contract Exp. Date	Approx. Mgt. Fees		Curr. Mkt. Value ($M)	Month	3 mos	YTD	Fiscal YTD	1 Year	2 Years	3 Years	4 Years	5 Years	6 Years
US FIXED INCOME														
INVESTMENT GRADE														
LOOMIS SAYLES & CO	12/31/24	17.4 bps	$	204.6	-0.6	2.1	9.3	2.1	9.4	4.9	4.1	5.3	3.9	4.6
ORLEANS CAPITAL MGT	12/31/24	12.0 bps	$	148.0	-0.3	2.0	9.0	2.0	9.8	4.2	3.1	4.0	3.3	3.5
BB BC US AGGREGATE BOND INDEX					**-0.5**	**2.3**	**8.5**	**2.3**	**10.3**	**4.4**	**2.9**	**3.5**	**3.4**	**3.5**
TOTAL INVESTMENT GRADE		15.2 bps	$	352.6	-0.4	**2.1**	9.1	**2.1**	**9.5**	4.5	3.7	4.7	3.6	4.1
HIGH YIELD														
JPMORGAN	06/30/22	27.0 bps	$	171.3	0.4	1.1	11.1	1.1	5.5	4.4	5.9	7.1	5.2	5.5
NOMURA	06/30/22	45.0 bps	$	167.2	0.4	1.1	10.1	1.1	3.2	4.1	6.3	8.4	5.7	6.4
CREDIT SUISSE HY INDEX					**0.2**	**1.0**	**11.1**	**1.0**	**5.8**	**4.4**	**6.0**	**7.5**	**5.1**	**5.5**
TOTAL HIGH YIELD		35.9 bps	$	338.5	0.4	1.1	**10.7**	1.1	**4.4**	**4.3**	6.1	7.7	5.5	6.0
TOTAL U.S. FIXED INCOME		**25.3 bps**	$	691.1	0.0	1.6	9.8	1.6	7.1	4.6	5.0	6.1	4.7	5.3
EMERGING MARKET DEBT (+)														
STONE HARBOR	10/02/22	52.5 bps	$	204.5	0.8	-1.3	8.1	-1.3	9.9	-0.7	2.3	6.1	-0.3	-0.6
GRAMERCY*	OPEN	85.0 bps	$	129.2	1.7	-2.1	3.9	-2.1						
J.P. MORGAN GBI-EM GLOBAL DIVERSIFIED INDEX					**1.0**	**-0.8**	**7.9**	**-0.8**	**10.1**	**1.0**	**3.1**	**6.4**	**0.6**	**0.2**
TOTAL EMERGING MARKET DEBT (+)		65.1 bps	$	333.7	1.2	**-1.6**	**6.6**	**-1.6**	**8.5**	**-1.4**	**1.9**	**5.7**	**-0.5**	**-0.9**
GLOBAL MULTI-SECTOR (+)														
DOUBLELINE	05/05/21	60.0 bps	$	250.3	0.2	0.9	7.4	0.9	6.3	5.2	6.1			
GOLDENTREE	05/01/21	75.0 bps	$	251.1	0.0	0.3	8.9	0.3	4.7	5.9	7.5			
PIMCO*	OPEN	95.0 bps	$	187.8	0.3	2.3	9.7	2.3						
BLACKSTONE*	OPEN	78.1 bps	$	122.8	0.4	1.8	3.4	1.8						
ZAIS GROUP*	OPEN	62.5 bps	$	68.3	0.4	0.7	n/a	0.7						
50/50 BB BARCLAYS GLOBAL AGG/CS HY INDEX					**-0.4**	**0.9**	**8.7**	**0.9**	**6.8**	**3.8**	**3.8**			
TOTAL GLOBAL MULTI-SECTOR (+)		63.6 bps	$	880.3	0.2	1.1	**8.5**	1.1	**6.0**	5.8	7.0			
TOTAL FIXED INCOME (+)		**50.0 bps**	$	1,905.1	0.3	0.8	8.7	0.8	6.7	4.0	5.1	6.2	4.2	4.6

LASERS

SUMMARY OF MANAGER PERFORMANCE
RATES OF RETURN
TOTAL GROSS OF FEES
(For Period Ending September 30, 2019)

	Contract Exp. Date	Approx. Mgt. Fees	Curr. Mkt. Value ($M)	Month	3 mos	YTD	Fiscal YTD	1 Year	2 Years	3 Years	4 Years	5 Years	6 Years
ALTERNATIVE ASSETS*													
PRIVATE MARKETS* (for breakout see pages 5-6)													
TOTAL PRIVATE MARKETS*		89.3 bps	$ 1,808.9	0.6	1.0	6.3	1.0	10.9	15.3	15.3	12.2	11.8	12.8
ABSOLUTE RETURN STRATEGIES*													
BRIDGEWATER PURE ALPHA		200.0 bps	$ 142.8	3.8	0.7	-2.2	0.7	5.6	5.0	6.1	3.0	3.1	3.0
PRISMA CAPITAL PARTNERS		65.0 bps	$ 270.4	1.0	2.1	7.9	2.1	1.4	3.5	4.1	3.0	2.0	2.9
ENTRUST CAPITAL PARTNERS		108.1 bps	$ 269.9	0.9	-2.7	-0.9	-2.7	-7.8	-2.7	-0.8	2.1	0.5	3.8
HFRI FUND OF FUNDS COMPOSITE INDEX				-0.4	-0.7	6.0	-0.7	2.1	3.1	4.0	3.1	2.4	2.9
ABSOLUTE RETURN STRATEGIES*~		109.5 bps	$ 687.6	1.6	-0.2	1.1	-0.2	-1.1	1.7	2.8	2.1	1.4	2.4
~includes assets being liquidated: PAAMCO $2.3m; Stark $2.3m													
RISK PARITY*													
BRIDGEWATER CUSTOM		63.1 bps	$ 438.3	0.7	1.8	10.9	1.8	7.7					
AQR CAPITAL MANAGEMENT		110.0 bps	$ 412.4	0.0	2.0	20.1	2.0	9.8	4.8				
LASERS 8% NOMINAL BENCHMARK				0.6	1.9	5.9	1.9	8.0	8.0	8.0	8.0	8.0	8.0
TOTAL RISK PARITY*		85.8 bps	$ 850.7	0.3	1.9	15.2	1.9	8.7	5.3	5.4	6.8	4.1	4.9
TOTAL ALTERNATIVE ASSETS*		**92.6 bps**	$ 3,347.3	0.7	1.0	7.2	1.0	7.5	9.2	9.4	8.0	6.7	7.4
CASH EQUIVALENTS													
HOLDING ACCOUNT			$ 65.6										
EB TEMPORARY INVESTMENT FUND		9.0 bps		0.18	0.59	1.90	0.59	2.53	2.18	1.79	1.46	1.21	1.04
90 DAY T-BILL INDEX				0.17	0.56	1.78	0.56	2.36	1.97	1.52	1.19	0.96	0.80
TOTAL PLAN													
FINANCIAL COMPOSITE		**30.5 bps**	$ 8,086.4	2.2	-0.5	12.1	-0.5	-0.1	3.3	7.7	8.9	5.8	6.4
FINANCIAL ALLOCATION INDEX				1.9	-0.4	12.9	-0.4	0.4	3.6	8.0	9.3	6.1	6.5
FINANCIAL POLICY INDEX				2.0	-0.4	13.1	-0.4	0.8	3.8	8.1	9.4	6.2	6.6
TOTAL PLAN		**48.7 bps**	$ 11,433.7	1.7	-0.1	10.6	-0.1	1.9	4.8	8.1	8.5	6.0	6.7
TOTAL PLAN ALLOCATION INDEX				1.4	0.0	10.9	0.0	2.5	5.4	8.6	8.9	6.5	6.9
TOTAL PLAN POLICY INDEX				1.5	0.0	11.1	0.0	3.0	5.7	8.9	9.2	6.6	7.0

LONG TERM RETURNS FOR TOTAL PLAN

7 Years	8 Years	9 Years	10 Years
7.6	8.6	8.0	8.5

Cells highlighted in green represent performance above the benchmark.
Cells highlighted in yellow represent manager performance below the benchmark.
Cells highlighted in red represent asset class performance below the benchmark.
Royal blue lines represent specific benchmarks.
Light blue lines represent broad benchmarks.
*Net of fee information is reported.
(+) Composite is mixed, containing both gross-of-fee and net-of-fee portfolios.

LASERS

SUMMARY OF MANAGER PERFORMANCE
RATES OF RETURN
TOTAL NET OF FEES
(For Period Ending September 30, 2019)

	Vintage Year	Contract Exp. Date	Commit. Amount	Approx. Mgt. Fees	Curr. Mkt. Value ($M)	Month	3 mos	YTD	Fiscal YTD	1 Year	2 Years	3 Years	4 Years	5 Years	6 Years
PRIVATE MARKETS BREAKOUT															
ADAMS STREET 2005 NON-US	2005	12/31/20	$ 15.0	18.6 bps	$ 2.9	-2.2	-2.2	-3.1	-2.2	-4.5	4.0	7.0	3.9	3.0	5.3
ADAMS STREET PARTNERSHIP 2002 US	2002	12/31/19	$ 15.0	0.0 bps	$ 1.4	-3.9	-3.9	-6.5	-3.9	-6.7	4.0	7.9	5.2	5.7	8.0
ADAMS STREET PARTNERSHIP 2005 US	2005	12/31/20	$ 35.0	18.6 bps	$ 7.1	7.0	7.0	8.9	7.0	14.1	13.5	13.5	9.1	9.9	11.9
ADAMS STREET 2007 US FUND	2007	12/31/19	$ 27.5	30.0 bps	$ 13.3	6.8	6.8	20.3	6.8	22.0	20.2	19.4	14.6	16.0	17.5
ADAMS STREET 2007 NON-US	2007	12/31/19	$ 17.5	30.0 bps	$ 8.1	-0.5	-0.5	1.1	-0.5	7.6	12.3	13.0	10.3	10.1	12.5
ADAMS STREET 2007 DIRECT	2007	12/31/19	$ 5.0	60.0 bps	$ 3.3	2.2	2.2	8.2	2.2	26.0	31.5	22.4	17.2	25.1	28.5
ADAMS STREET 2009 US FUND	2009	12/31/20	$ 25.0	50.0 bps	$ 21.3	3.3	3.3	14.4	3.3	18.1	18.5	15.6	13.2	14.5	15.5
ADAMS STREET 2009 NON-US DEV	2009	12/31/20	$ 15.0	50.0 bps	$ 9.6	4.3	4.3	13.2	4.3	17.6	20.1	20.5	17.3	14.5	15.4
ADAMS STREET 2009 NON-US EMG	2009	12/31/20	$ 5.0	50.0 bps	$ 5.6	-1.2	-1.2	5.9	-1.2	4.8	10.1	10.8	8.8	12.1	12.3
ADAMS STREET 2009 DIRECT	2009	12/31/20	$ 5.0	100.0 bps	$ 3.0	-1.3	-1.3	-9.3	-1.3	0.2	13.9	11.0	8.8	9.8	13.8
AEA INVESTORS FUND VI	2015	05/31/25	$ 50.0	175.0 bps	$ 51.1	-0.2	-0.2	11.8	-0.2	11.4	9.9	5.7			
ALTAS PARTNERS HOLDING II	2019	06/30/29	$ 100.0	100.0 bps	$ 23.8	0.0									
BARING PE ASIA FUND VII	2018	08/08/28	$ 100.0	175.0 bps	$ 23.1	0.0	0.0	n/a	0.0						
BCP ENERGY SERVICES FUND A	2015	09/23/25	$ 50.0	200.0 bps	$ 46.6	0.0	7.4	8.0	7.4	5.9	22.7	22.9			
BCP FUND II A	2017	12/31/27	$ 75.0	200.0 bps	$ 3.4	0.0	-2.4	n/a	-2.4						
BRINSON (ϕ)	'97-'03	termed out	$ 202.8	0.0 bps	$ 3.3	0.0	-3.1	-5.9	-3.1	-1.2	4.5	4.1	2.5	0.9	2.5
BROOKFIELD CAPITAL IV	2015	05/31/25	$ 50.0	175.0 bps	$ 44.2	0.0	0.0	29.8	0.0	32.4	92.3	64.9			
BROOKFIELD CAPITAL V	2019	10/24/29	$ 100.0	150.0 bps	$ 10.0	-14.7									
ADAMS STREET V	2003	08/08/19	$ 15.0	0.0 bps	$ 4.6	0.0	6.6	12.3	6.6	11.6	9.8	2.5	2.1	3.2	9.4
APOLLO INV FUND VII	2008	12/17/19	$ 60.0	0.0 bps	$ 9.4	0.0	0.0	-17.7	0.0	-20.9	-7.6	-4.2	-5.8	-3.8	4.2
APOLLO INV FUND VIII	2013	06/30/23	$ 70.0	150.0 bps	$ 60.8	0.0	0.0	-2.3	0.0	0.1	8.8	11.8	13.0	13.6	
APOLLO EUROPEAN FUND II	2011	12/31/19	$ 100.0	175.0 bps	$ 26.1	0.0	-0.1	-2.9	-0.1	-7.8	1.1	5.2	7.9	8.0	9.7
APOLLO INV FUND IX	2017	06/01/27	$ 85.0	130.0 bps	$ 6.5	0.0	0.0	n/a	0.0						
ARCLIGHT ENERGY FUND VI	2015	07/28/25	$ 75.0	150.0 bps	$ 70.6	0.0	-1.5	-0.2	-1.5	10.2	15.6	13.9	11.7		
CCMP CAPITAL III	2013	12/31/23	$ 60.0	150.0 bps	$ 51.7	0.0	2.4	-1.2	2.4	3.2	5.9	8.3	11.4	11.5	16.9
CERBERUS VI	2016	08/31/26	$ 125.0	150.0 bps	$ 104.8	0.0	0.0	3.4	0.0	6.7	-3.8	9.0			
COLLER INTERNATIONAL PTNRS VI	2012	06/15/22	$ 100.0	81.0 bps	$ 31.3	0.0	0.1	8.7	0.1	19.0	20.1	20.2	16.2	15.5	17.5
COLLER INTERNATIONAL PTNRS VII	2015	12/31/25	$ 75.0	150.0 bps	$ 59.5	0.0	-1.2	3.6	-1.2	10.0	18.4	43.9			
DOUBLELINE MORTGAGE OPP FUND	2018	10/31/20	$ 125.0	100.0 bps	$ 113.5	0.0	0.0	10.6	0.0	5.8					
DRUG ROYALTY FUND III	2013	06/30/23	$ 50.0	150.0 bps	$ 5.7	0.0	-0.5	22.7	-0.5	27.2	44.6	32.5	27.5	23.6	
EIG ENERGY FUND XIV	2007	11/07/19	$ 50.0	0.0 bps	$ 5.0	0.0	-0.3	-24.5	-0.3	-23.6	-4.9	1.6	-22.9	-22.9	-19.6
EIG ENERGY FUND XV	2010	06/06/20	$ 40.0	125.0 bps	$ 15.9	0.7	1.6	-3.8	1.6	-0.8	-0.6	4.8	1.0	-0.3	0.6
EIG ENERGY FUND XVI	2013	05/13/23	$ 70.0	125.0 bps	$ 47.6	-2.6	-1.9	-1.9	-1.9	-0.7	6.8	17.5	13.7	-3.9	-6.7
ENERGY SPECTRUM FUND V	2007	04/01/20	$ 30.0	0.0 bps	$ 0.0	0.0	-0.3	-69.6	-0.3	-74.8	-56.8	-37.2	-42.8	-43.7	30.8
ENERGY SPECTRUM FUND VI	2010	12/31/20	$ 40.0	175.0 bps	$ 10.3	0.0	6.0	10.4	6.0	85.0	52.0	52.3	33.9	28.7	25.7
GTCR FUND XI	2014	05/21/23	$ 50.0	135.0 bps	$ 43.8	0.0	0.9	29.1	0.9	40.3	36.9	34.7	27.0	25.7	
GTCR FUND XII	2017	09/14/27	$ 60.0	150.0 bps	$ 11.6	0.0	-0.5	5.8	-0.5	-14.7					
LOUISIANA GROWTH FUND	2004	11/13/19	$ 50.0	50.0 bps	$ 0.1	0.0	0.0	20.6	0.0	15.3	24.4	-4.5	-6.5	-2.4	-0.4
LOUISIANA GROWTH FUND II	2007	06/26/20	$ 73.5	12.5 bps	$ 3.1	0.0	0.0	-0.3	0.0	3.8	41.1	38.4	27.4	21.0	19.2
GAMUT FUND I	2016	07/28/26	$ 50.0	200.0 bps	$ 19.4	0.0	12.1	23.4	12.1	26.5	11.9				
GOLDMAN SACHS PEP IX	2007	12/31/19	$ 100.0	10.7 bps	$ 23.2	3.6	3.6	2.2	3.6	5.4	14.5	15.3	12.8	12.6	14.8
GOLDENTREE DISTRESSED FUND III	2018	01/31/23	$ 75.0	125.0 bps	$ 10.7	0.0	0.0	5.1	0.0						

LASERS

SUMMARY OF MANAGER PERFORMANCE
RATES OF RETURN
TOTAL NET OF FEES
(For Period Ending September 30, 2019)

	Vintage Year	Contract Exp. Date	Commit. Amount	Approx. Mgt. Fees	Curr. Mkt. Value ($M)	Month	3 mos	YTD	Fiscal YTD	1 Year	2 Years	3 Years	4 Years	5 Years	6 Years
JOHN HANCOCK*	multiple	OPEN	$ 55.5	0.0 bps	$ 0.4	0.0	-0.3	52.5	-0.3	51.9	-2.1	-3.2	0.0	2.3	2.6
HIPEP PARTNERSHIP III	1997	12/31/19	$ 60.0	0.0 bps	$ 0.1	0.0	-1.8	-2.0	-1.8	-6.7	-6.4	-2.3	-2.0	-3.1	1.1
HARBOURVEST VI - DIRECT	1999	termed out	$ 25.0	0.0 bps	$ 1.9	0.0	6.5	30.7	6.5	36.2	5.3	-1.9	-7.8	-3.3	-1.6
HARBOURVEST VI - PTNR	1999	termed out	$ 150.0	0.0 bps	$ 1.0	0.0	0.2	-4.9	0.2	-0.7	-0.6	3.1	2.1	1.5	3.1
HIPEP DIRECT IV	2000	12/31/19	$ 10.0	0.0 bps	$ 0.3	0.0	-19.8	-11.1	-19.8	-26.7	-3.1	14.6	9.6	4.0	12.5
HUFF ALTERNATIVE FUND	2001	10/15/19	$ 32.5	0.0 bps	$ 10.5	0.0	2.6	2.6	2.6	0.1	-0.2	6.1	3.7	4.0	3.5
INSIGHT VENTURE PARTNERS X	2017	07/14/27	$ 50.0	175.0 bps	$ 38.9	0.0	1.9	10.6	1.9	15.5					
KKR ASIAN FUND III	2017	05/31/28	$ 50.0	125.0 bps	$ 28.0	-0.4	-0.4	37.0	-0.4	70.0					
MARATHON EUROPEAN CREDIT OPP	2012	12/31/19	$ 100.0	0.0 bps	$ 7.6	-2.0	0.4	9.9	0.4	16.6	20.8	15.8	13.3	11.6	11.2
MESIROW III	2005	04/06/20	$ 23.0	40.0 bps	$ 4.2	3.7	3.7	0.9	3.7	0.2	5.2	4.0	2.8	4.9	8.8
MESIROW IV	2006	11/21/19	$ 60.0	37.2 bps	$ 27.2	5.0	5.0	10.6	5.0	13.0	12.6	14.1	11.9	12.7	14.8
MESIROW V	2008	11/05/20	$ 60.0	45.9 bps	$ 49.5	6.8	6.8	15.3	6.8	18.6	18.8	20.1	17.4	17.9	18.8
NEWSTONE MEZZANINE II	2010	03/05/20	$ 40.0	100.0 bps	$ 5.5	0.0	-2.1	15.6	-2.1	16.4	16.5	13.2	11.6	15.2	14.0
OHA STRATEGIC CREDIT FUND II	2017	07/14/27	$ 50.0	175.0 bps	$ 13.7	-1.4	-2.2	8.7	-2.2	6.9					
OAKTREE EUROPEAN FUND III	2011	03/31/22	$ 45.1	175.0 bps	$ 29.0	-1.0	-4.3	-5.7	-4.3	1.7	4.5	10.0	9.0	9.4	8.6
PANTHEON EUROPE VI	2008	12/19/20	$ 44.9	60.8 bps	$ 15.5	4.5	1.1	8.5	1.1	12.1	15.0	18.5	15.7	14.4	13.7
PANTHEON VI	2004	07/12/20	$ 50.0	38.4 bps	$ 9.8	3.7	3.7	3.8	3.7	5.0	7.8	8.2	5.3	5.3	7.3
PANTHEON VII	2006	04/28/20	$ 50.0	54.7 bps	$ 18.7	2.6	2.6	1.4	2.6	4.4	9.9	11.9	9.5	10.3	12.7
STEPSTONE FUND II	2006	05/12/20	$ 50.0	37.5 bps	$ 0.9	-5.3	-5.7	-23.9	-5.7	-17.0	5.3	10.2	6.2	10.6	14.4
STEPSTONE EUROPE FUND II	2010	12/15/22	$ 25.9	50.0 bps	$ 16.0	-2.8	-6.2	-2.0	-6.2	-1.3	1.4	7.9	4.3	6.3	5.5
PRIVATE ADVISORS IV	2011	12/15/26	$ 35.0	60.8 bps	$ 19.7	5.3	5.3	8.6	5.3	19.4	23.8	23.7	18.8	17.8	17.4
PRIVATE ADVISORS V	2012	06/30/25	$ 40.0	81.0 bps	$ 36.5	9.2	9.2	18.3	9.2	27.9	24.0	21.5	19.9	17.7	13.5
PRIVATE ADVISORS VI	2014	06/30/26	$ 40.0	90.0 bps	$ 28.2	3.5	3.5	10.8	3.5	15.6	14.0	13.8	8.7	4.9	
Q-BLK II	2005	12/04/19	$ 50.0	45.9 bps	$ 10.8	0.0	0.0	10.0	0.0	11.0	9.7	9.8	6.1	6.5	9.1
Q-BLK III	2007	12/29/19	$ 60.0	0.0 bps	$ 23.1	0.0	-1.0	10.8	-1.0	14.8	13.1	12.0	10.6	10.7	12.5
SIGULER GUFF DOF III	2008	12/31/19	$ 200.0	16.0 bps	$ 30.8	1.0	1.0	0.3	1.0	0.8	7.1	8.7	6.4	6.7	8.2
SIGULER GUFF FUND IV	2011	09/03/23	$ 40.0	45.4 bps	$ 15.5	-0.2	-0.2	2.4	-0.2	2.1	5.3	7.0	7.0	7.6	8.8
SIGULER GUFF PELICAN GEM	2016	10/10/28	$ 100.0	75.0 bps	$ 64.9	0.4	0.4	6.6	0.4	3.1	8.9				
STERLING PARTNERS	2011	09/30/23	$ 35.0	200.0 bps	$ 16.6	0.0	0.0	-15.6	0.0	-24.1	-11.3	-13.2	-7.9	-5.4	-5.1
VISTA EQUITY PARTNERS IV	2011	03/31/22	$ 35.0	150.0 bps	$ 24.8	0.0	0.0	-2.5	0.0	9.5	9.0	10.6	14.9	19.2	18.8
VISTA EQUITY PARTNERS V	2014	10/15/24	$ 75.0	150.0 bps	$ 97.4	0.0	0.0	17.3	0.0	35.4	44.4	34.0	28.5	23.1	
VISTA EQUITY PARTNERS VI	2015	03/11/26	$ 100.0	150.0 bps	$ 119.8	0.0	2.6	13.9	2.6	37.2	25.7	17.3			
VISTA EQUITY PARTNERS VII	2018	02/28/28	$ 125.0	150.0 bps	$ 20.3	0.0	-0.2	n/a	-0.2						
WARBURG PINCUS	2018	02/28/29	$ 100.0	140.0 bps	$ 4.9	0.0	7.3	n/a	7.3						
WILLIAMS CAPITAL	2004	termed out	$ 30.0	0.0 bps	$ 0.8	-33.4	-33.4	-33.5	-33.4	55.3	38.4	2.7	-15.9	-12.3	-8.9
TOTAL PRIVATE MARKETS*			**$ 4,618.2**	**89.3 bps**	**$ 1,808.9**	**0.6**	**1.0**	**6.3**	**1.0**	**10.9**	**15.3**	**15.3**	**12.2**	**11.8**	**12.8**

(ϕ) Brinson consists of five limited partnerships
Private Markets fees are based on commitment amounts rather than market value.

LASERS FLASH REPORT

The return numbers are expressed as percentages and are listed in columns 5-14

The far left hand column lists the asset class headings, investment managers, benchmarks and composites

The contract expiration date is listed in the second column

The % return for the month

Year to Date (YTD) is the % return since Jan. 1

The 1-6 year columns represent the % return per year for each number of years

	Contract Exp. Date	Mgt. Fees	MKT VAL $ (Million)	Month	3 mos	YTD	Fiscal YTD	1 Year	2 Years
U.S. EQUITY									
LARGE CAP GROWTH									
GOLDMAN SACHS	01/31/08	44.0 bps	$ 130.4	-0.5	6.4	10.7	11.5	10.7	7.7
CHICAGO EQUITY PARTNERS	01/31/08	30.0 bps	$ 136.8	-0.1	5.3	15.0	11.3	15.0	10.4
S&P 500 / CITIGROUP GROWTH				**0.4**	**5.6**	**11.0**	**12.1**	**11.0**	**6.0**
S&P 500				**1.4**	**6.7**	**15.8**	**12.7**	**15.8**	**10.2**
TOTAL LARGE GROWTH		36.8 bps	$ 267.2	-0.2	5.9	12.9	11.5	12.9	9.0

The broader benchmarks are in light blue and style specific ones in royal blue

The management fees charged are listed third (bps stands for basis points)
“36.8 bps” equals .368%

The market value column tells us the size of each account in millions. For example, $267.2 equals $267,200,000

Fiscal YTD is the % return since July 1

Green = manager outperformed style benchmark

Yellow = manager underperformed style benchmark

Red = composite underperformed style benchmark

LASERS FLASH REPORT

WHAT IS IT?

- A snapshot look at the composition and investment returns of LASERS Trust Fund
- Summary of investment manager performance

WHAT INFORMATION DOES IT PROVIDE?

- Asset classes and the investment managers we use to invest the money
- Fees charged by the investment managers who invest our money
- Amount of money we have allocated to each manager
- Investment returns of each investment

HOW CAN I USE THE INFORMATION?

- To evaluate investment manager returns against a set benchmark [(1)] return
- To evaluate the return of each asset or asset class
- Analyze LASERS investments gains/losses over time

HOW DO I READ THE REPORT?

Left Side (Asset Classes)

Broken down by each investment manager
Blue lines are benchmarks used to evaluate asset class

Top (contract data & returns):

Management fees in basis points [(2)]
Market value
Returns -

Month	% return that month
3 months	% return from the past 3 months
YTD	Year to date return (since January 1)
Fiscal YTD	Fiscal year to date return (since July 1)
1 year, 2 years, etc.	% return for the specified time period

Colors
Green – performance of asset was above benchmark (think *money*)
Yellow – manager performed below benchmark
Red – asset class as a whole performed below benchmark

Total Plan (last page of Flash Report)

Financial composite – portfolio excluding alternative investments asset class
Total plan – includes alternative investments
Policy index – return of portfolio based on allocation set forth in investment policy
Allocation index – return of portfolio based the actual allocation LASERS maintained
(Investment policy provides a model for allocation; however, small deviations from this model may occur to take advantage of certain market conditions.)

DEFINITIONS:

1. **Benchmark** – an index whose returns can be used to measure investment performance
2. **Basis Point (bps)** – 0.01%, 100 basis points equals 1%, investment managers charge fees as a percentage of the money invested, fees are usually defined in basis points

LASERS
LOUISIANA STATE EMPLOYEES' RETIREMENT SYSTEM

Investment Division

As of September 30, 2019

ASSET ALLOCATION

Asset Class	Target Weight	Actual Weight	Over/(Under) Weight
U.S. Equity	23%	22.2%	-0.8%
Non-U.S. Equity	32%	31.3%	-0.7%
U.S. Fixed Income	6%	6.0%	0.0%
Emerging Market Debt	3%	2.9%	-0.1%
Global Multi-Sector	7%	7.7%	0.7%
Private Markets	15%	15.8%	0.8%
Absoulte Return	7%	6.0%	-1.0%
Risk Parity	7%	7.4%	0.4%
Cash	0%	0.7%	0.7%

*Target weights listed above were approved March 2018.