

Board of Trustees



Handout Book

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Investment Committee

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Overview

- City of London manages approximately \$409.0 M of LASERS assets or approximately 3.6% of LASERS entire portfolio as of 3/31/2019.
- City of London has managed assets for LASERS since September 2009 in the Emerging (BMI) Markets Country Fund
- Benchmark – MSCI Emerging Markets Index

Team

- Mark Dwyer – EM CEF CIO
- Todd Fawaz - Head of US Marketing

Investment Process

City of London uses a 3-stage investment process that utilizes top-down macroeconomic research along with bottom-up stock (fund) analysis. During stages, 1 and 2, 25 emerging markets are analyzed from a macroeconomic perspective and ranked based on 13 criteria. The bottom-up analysis is incorporated into stage 3, where the following four valuation components are the key drivers in the stock selection process: historical, net performance on the closed-end fund versus its benchmark, discounts to NAV, liquidation dates, and corporate activity.

The Emerging Market Closed-End Fund strategy seeks to provide long-term capital growth via stock selection and active country allocation. City of London believes that closed-end funds offer an efficient way to invest in emerging markets. The "alpha" is generated by capitalizing on discount changes and pricing anomalies that arise in closed-end funds. The resulting portfolio is comprised of 50 - 70 closed-end, emerging market equity mutual funds.

Investment Returns (as of 3/31/19):

	1 Mo	3 Mos.	YTD	FYTD	1 Year	3 Years	5 Years
Manager	1.3%	10.5%	10.5%	2.9%	-4.6%	11.5%	6.0%
Index	0.9%	10.0%	10.0%	0.9%	-7.1%	11.1%	4.1%

Overview

- Westwood Global Investments manages approximately \$282.3M of LASERS assets or approximately 2.5% of LASERS entire portfolio as of 3/31/2019.
- Westwood has managed assets for LASERS since October 2009 in the Westwood Global Emerging Markets equity fund.
- Benchmark – MSCI Emerging Markets Index

Team

- Bryan Ward – Principal/Portfolio Manager
- Meg Reynolds – Principal/Portfolio Manager
- Chris Pickul – Relationship Manager

Investment Process

WGI's investment process is purely bottom up. Central to this process is the research team's travel to meet with companies. Following meetings, portfolio managers and analysts engage in ongoing dialogue to review feedback. This iterative process coincides with the production of internally generated research whereby long-term earnings, cash flows and balance sheets are modeled as well as the primary drivers to revenues and costs. The investment team spends considerable time determining the appropriate valuation levels at which to buy and sell individual stocks, which are based on sector specific valuation metrics.

The investment universe for the WGI Emerging Markets Strategy begins with approximately 900 companies in developing world markets with average daily volumes traded of at least \$10 million USD. From the fundamental research process described above, a "watch list" of those companies in the universe which meet WGI's investment criteria is constructed. Companies on the "watch list" are monitored with a focus on consistency of execution and valuation levels. The last stage of the process involves selecting those 25-31 companies from the "watch list" that, in WGI's view, offer the best combination of fundamental characteristics and upside potential over a three-to-five-year time horizon.

Investment Returns (as of 3/31/19):

	1 Mo	3 Mos.	YTD	Fiscal YTD	1 Year	3 Years	5 Years
Manager	-2.9%	2.1%	2.1%	-3.0%	-12.9%	10.2%	3.9%
Index	0.9%	10.0%	10.0%	0.9%	-7.1%	11.1%	4.1%

Performance Update

March 25, 2019

March Performance Summary

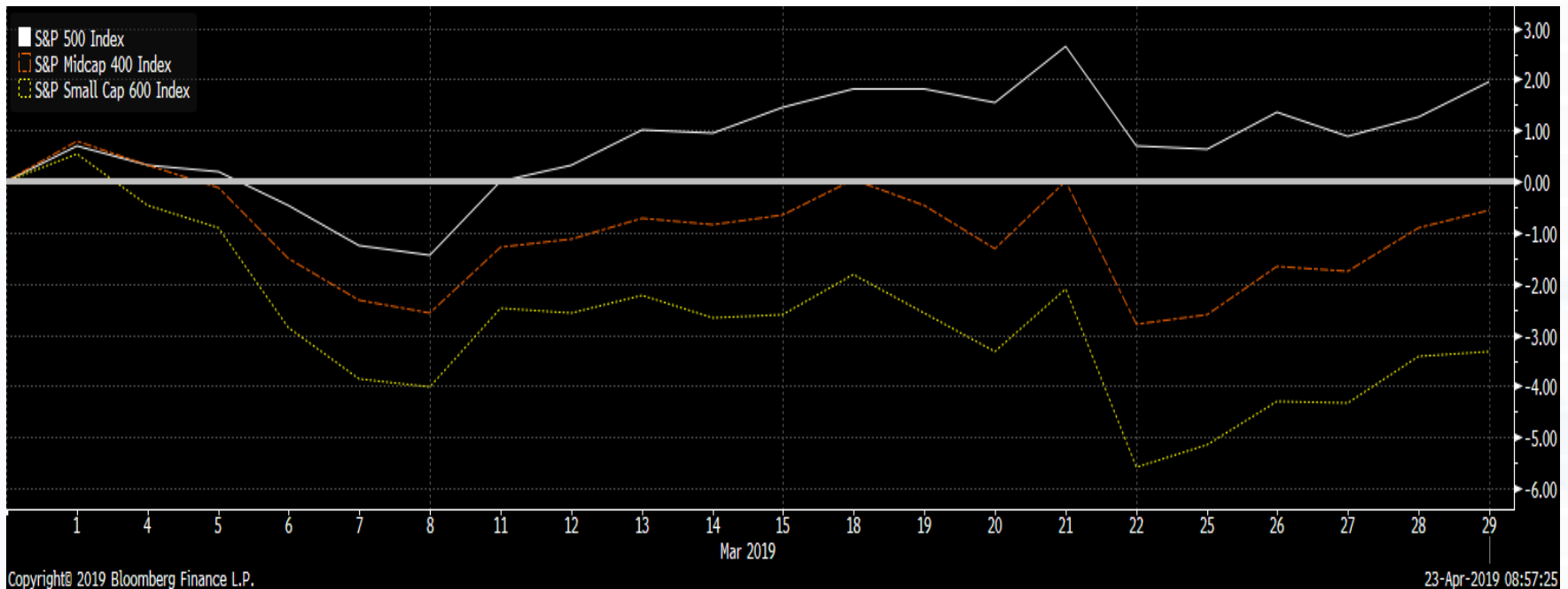
	March	FYTD
U.S. Equity	-0.2	0.0
<i>S&P 500 Index</i>	<i>1.9</i>	<i>5.9</i>
Int'l Developed	0.5	-2.9
<i>MSCI World Ex-USA Index</i>	<i>0.6</i>	<i>-2.1</i>
Int'l Emerging	-0.5	2.1
<i>MSCI Emerging Markets Index</i>	<i>0.9</i>	<i>0.9</i>
U.S. Investment Grade	1.7	4.5
<i>Barclay's Aggregate</i>	<i>1.9</i>	<i>4.6</i>
U.S. High Yield	0.7	3.6
<i>Credit Suisse High Yield Index</i>	<i>1.0</i>	<i>4.5</i>
EMD	-0.6	1.6
<i>JPM GBI-EM Global Diversified Index</i>	<i>-1.3</i>	<i>3.2</i>
GMS	1.2	3.8
<i>50/50 BC Agg/CS HY Index</i>	<i>1.1</i>	<i>3.5</i>
Alternatives	1.1	3.8
TOTAL PLAN	0.4%	1.2%



Historical Returns thru March

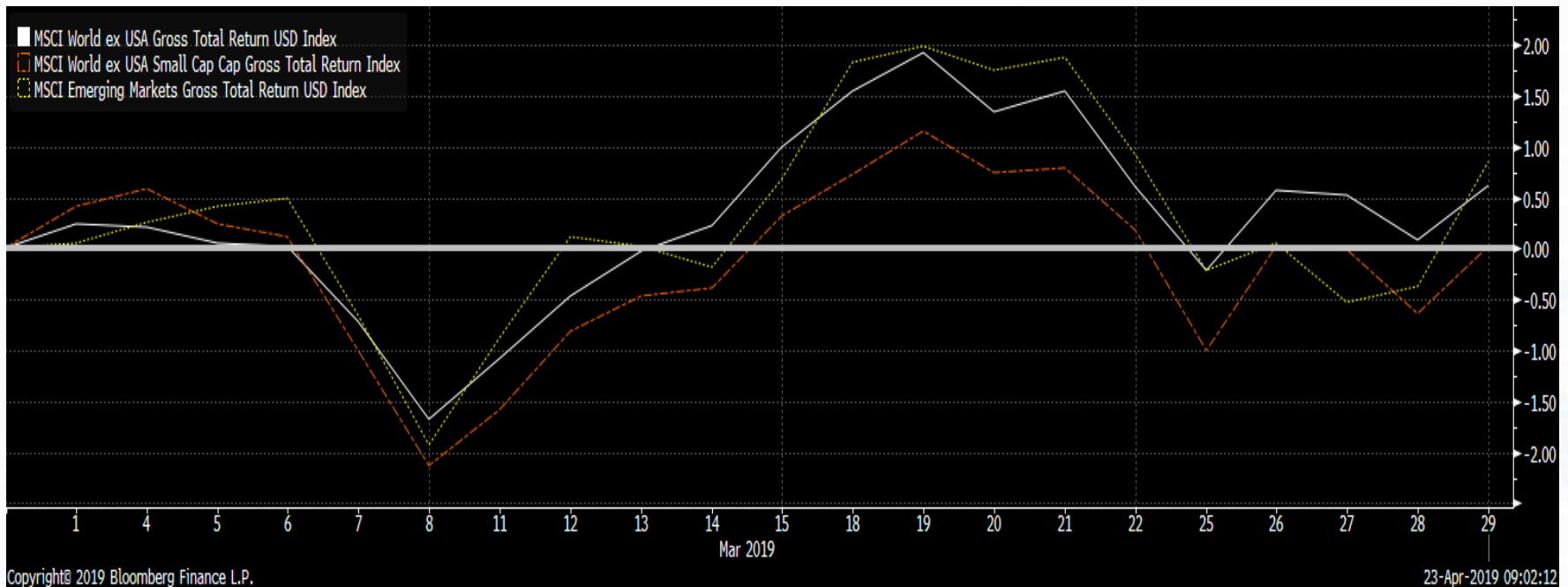
	Mar	Qtr	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years
U.S. Equity	-0.2	13.2	0.0	4.5	11.7	8.9	11.8	15.9
Int'l Developed	0.5	10.5	-2.9	-3.6	7.8	3.0	6.1	9.6
Int'l Emerging	-0.5	7.5	2.1	-7.3	10.7	4.3	3.8	10.8
U.S. Fixed Income	1.2	5.3	4.2	4.8	6.2	4.3	6.0	9.7
EMD	-0.6	3.6	1.6	-10.5	2.6	-1.5	<i>n/a</i>	<i>n/a</i>
GMS	1.2	4.4	3.8	4.8	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
Alternatives	1.1	2.5	3.8	7.6	9.3	6.6	7.3	8.1
Total Plan	0.4	7.4	1.2	1.7	9.3	5.9	7.6	10.8

Domestic Equity - March



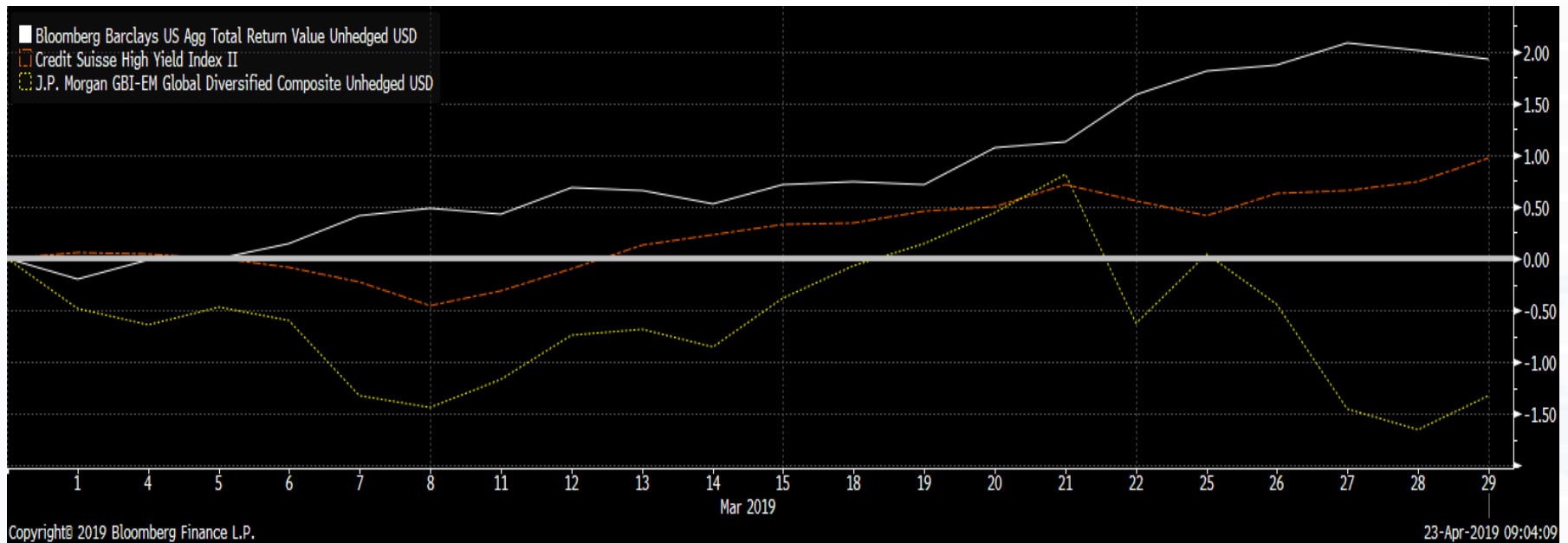
March 2019	LASERS	Index
Large Cap	1.7%	1.9
Mid Cap	-0.6%	-0.6%
Small Cap	-3.8%	-3.3%

International Equity - March



March 2019	LASERS	Index
Large Cap	0.7%	0.6%
Small Cap	0.0%	0.0%
Emerging Markets	-0.5%	0.9%

Fixed Income- March



March 2019	LASERS	Index
Investment Grade	1.7%	1.9%
High Yield	0.7%	1.0%
Emerging Market Debt	-0.6%	-1.3%
Global Multi-Sector	1.2%	1.1%



March Performance

Asset Classes struggled through March and ended the month with lackluster results:

Domestic Equity

- S&P 500 Index returned 1.9%
- S&P 400 Index returned -0.6%
- S&P 600 Index returned -3.3%

International Equity

- MSCI World Ex-USA Index returned 0.6%
- MSCI World Ex-USA Small Cap Index returned 0.0%
- MSCI Emerging Markets Index returned 0.9%

Fixed Income

- Barclay's Aggregate Bond Index returned 1.9%
- Credit Suisse High Yield Index returned 1.0%
- J.P. Morgan GBI-EM Global Diversified Index returned -1.3%

Total Plan Returns

As of March 31

	LASERS Total Plan	S&P 500 Index
FYTD	1.2%	5.9%
1 year	1.7%	9.5%
3 years*	9.3%	13.5%
5 years*	5.9%	10.9%
7 years*	7.6%	12.8%
10 years*	10.8%	15.9%

**annualized*



Total Plan Performance Summary Monthly During 1Q19

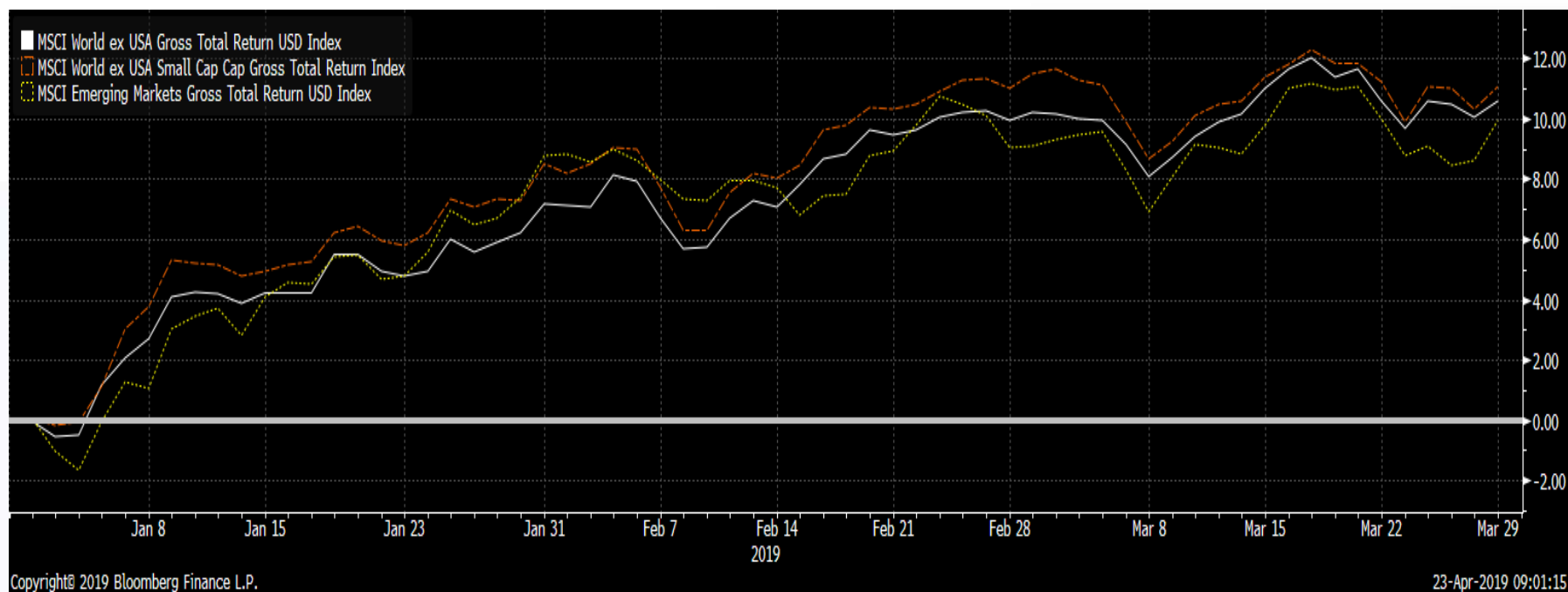
	1 month	FYTD	1 year	3 years	5 years	7 years	10 years
JANUARY – Total Plan	5.3	-0.8	-3.3	10.4	6.4	7.9	10.3
FEBRUARY – Total Plan	1.6	0.7	0.9	11.0	6.1	7.7	11.1
MARCH – Total Plan	0.4	1.2	1.7	9.3	5.9	7.6	10.8

Domestic Equity – 1Q19



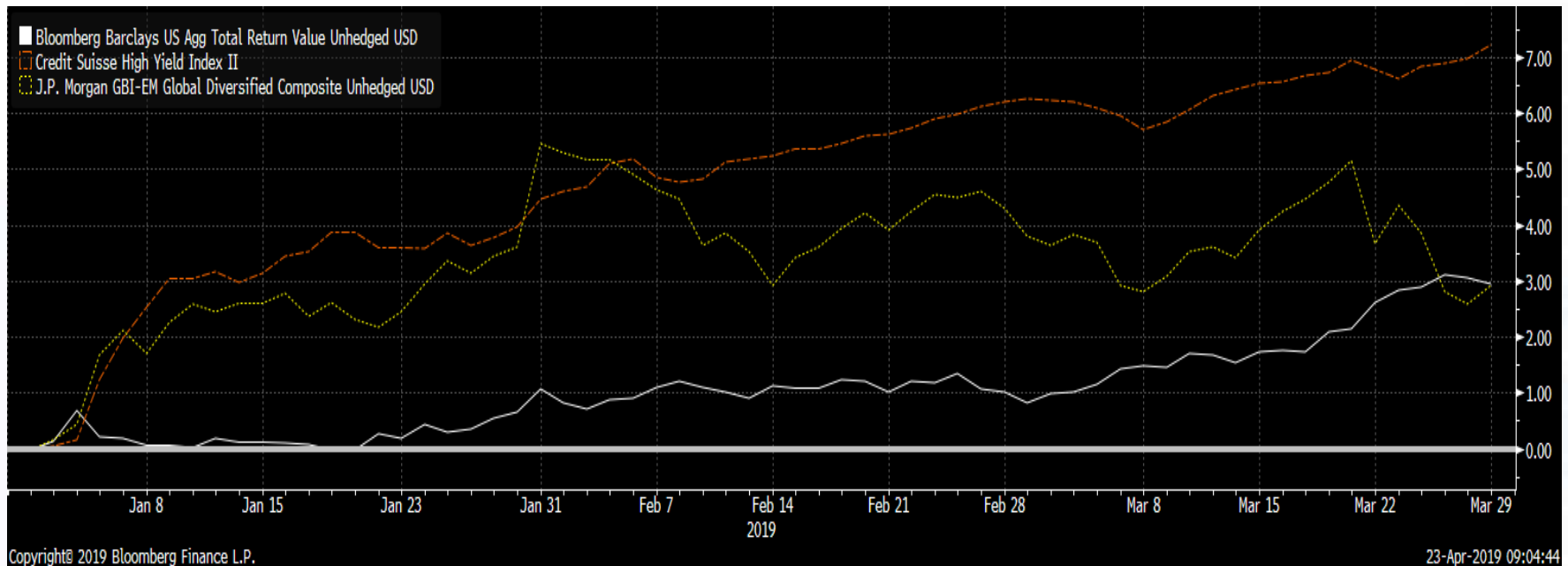
1 st Quarter 2019	LASERS	Index
Large Cap	13.4%	13.6%
Mid Cap	14.5%	14.5%
Small Cap	11.8%	11.6%

International Equity – 1Q19



1 st Quarter 2019	LASERS	Index
Large Cap	10.3%	10.6%
Small Cap	10.8%	11.0%
Emerging Markets	7.5%	10.0%

Fixed Income – 1Q19



1 st Quarter 2019	LASERS	Index
Investment Grade	3.6%	2.9%
High Yield	7.2%	7.2%
Emerging Market Debt	3.6%	2.9%
Global Multi-Sector	4.4%	4.7%



April MTD

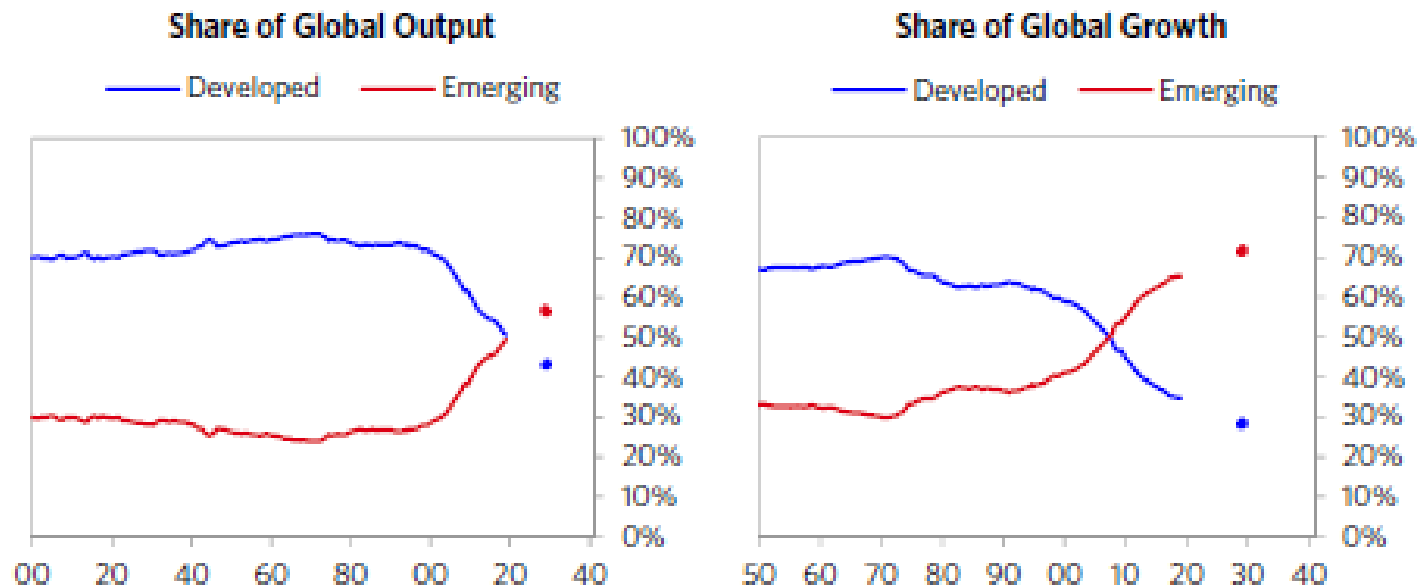
April MTD Performance as of April 22nd was approximately 1.8%

LASERS

Emerging Market Dynamics

Global Output and Growth Continue to Shift

Emerging Markets overtaking Developed Markets in Global GDP and Growth



Global Growth Stronger in Emerging Markets

Broad based strength in Emerging Markets relative to Developed World



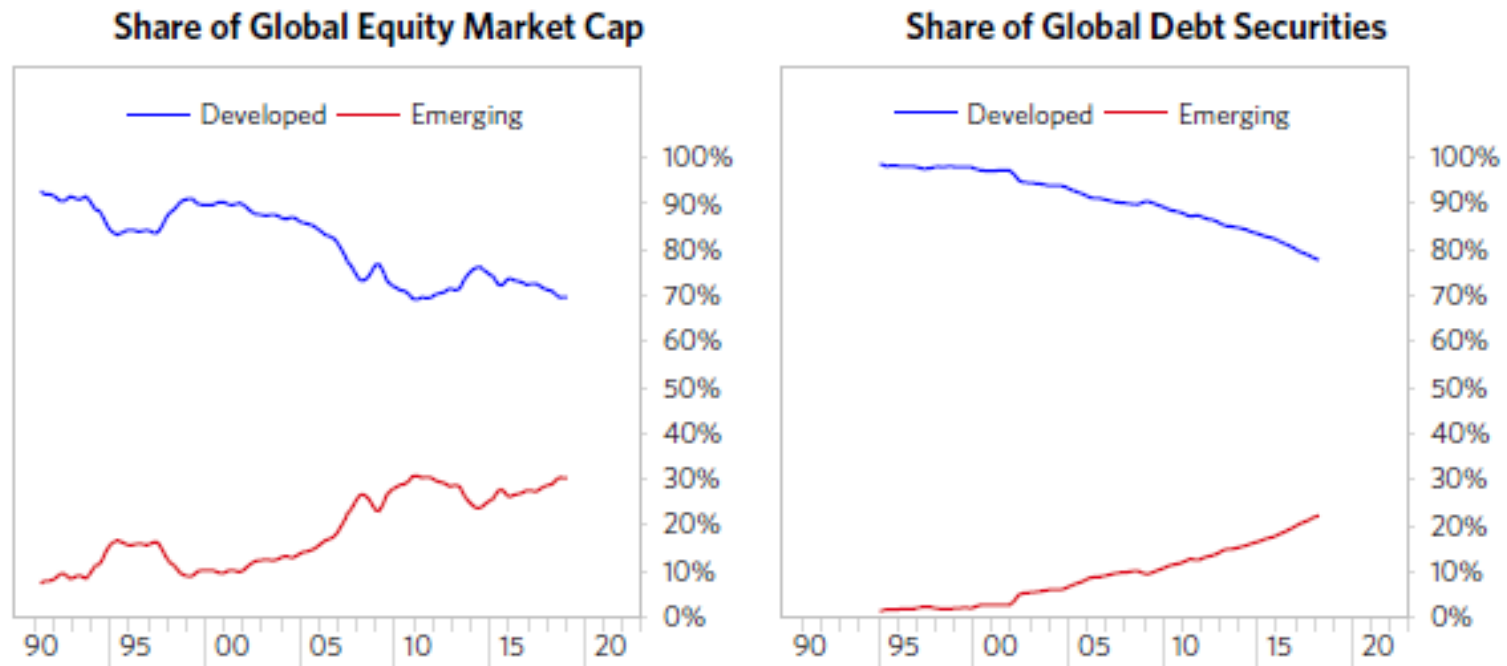
Global Economy Migrating Towards EM

By 2030, nearly two-thirds of Global Economic Activity will come from EM

Impact on Global Economy							
	1970	1980	1990	2000	2010	Today	In 10 Years
Dev World	72%	69%	67%	65%	50%	44%	37%
Emerging World	28%	31%	33%	35%	50%	56%	63%
China	4%	5%	7%	11%	21%	27%	29%
United States	32%	25%	25%	24%	22%	18%	15%
India	3%	3%	4%	5%	7%	8%	13%
Euroland	23%	24%	18%	18%	15%	12%	9%
Brazil	2%	4%	3%	3%	3%	4%	6%
Russia	5%	5%	5%	1%	4%	4%	4%
Japan	9%	11%	12%	10%	5%	5%	4%
Mexico	2%	3%	2%	2%	2%	2%	3%
South Korea	0%	1%	2%	3%	3%	3%	2%
United Kingdom	4%	4%	3%	4%	3%	3%	2%
Argentina	1%	1%	1%	1%	1%	1%	2%
Thailand	0%	1%	1%	1%	1%	1%	2%

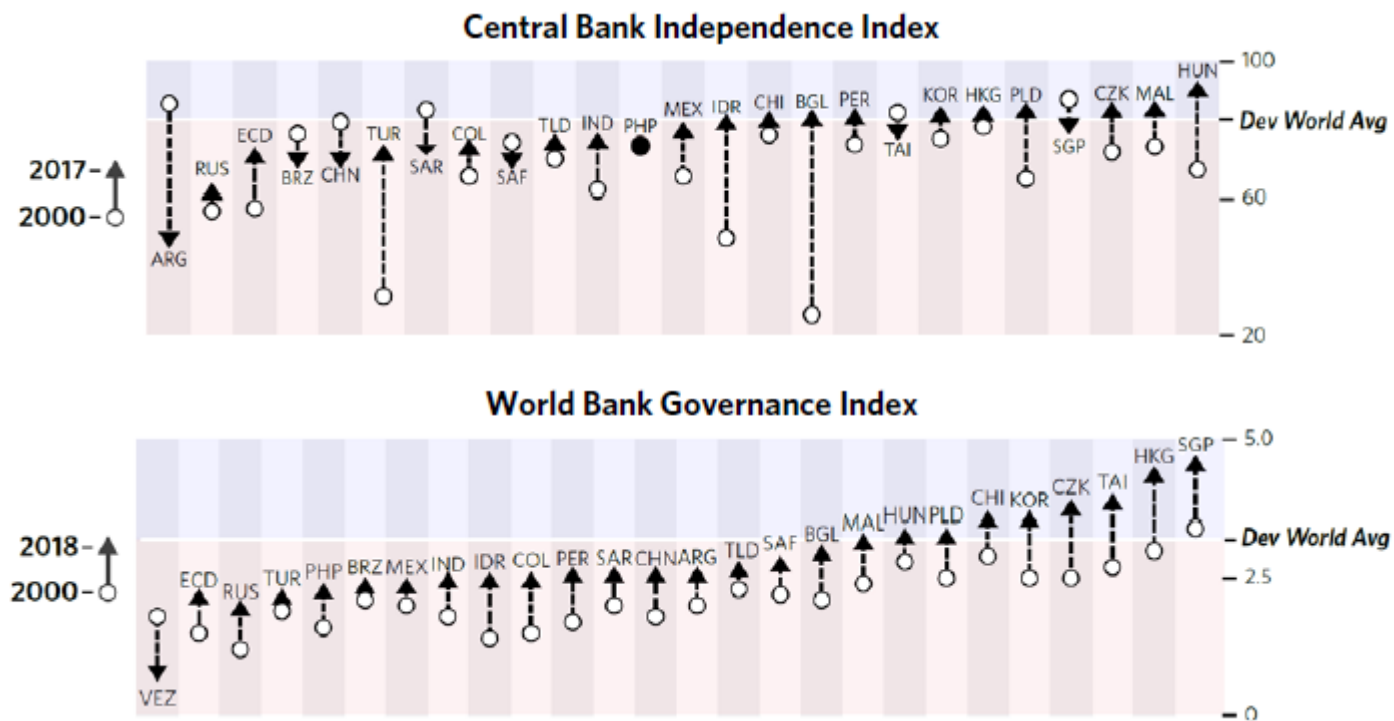
Considerable Financial Asset Gap Remains

EM assets should continue to grow as a part of markets and portfolios



Emerging Market Central Banks Improving

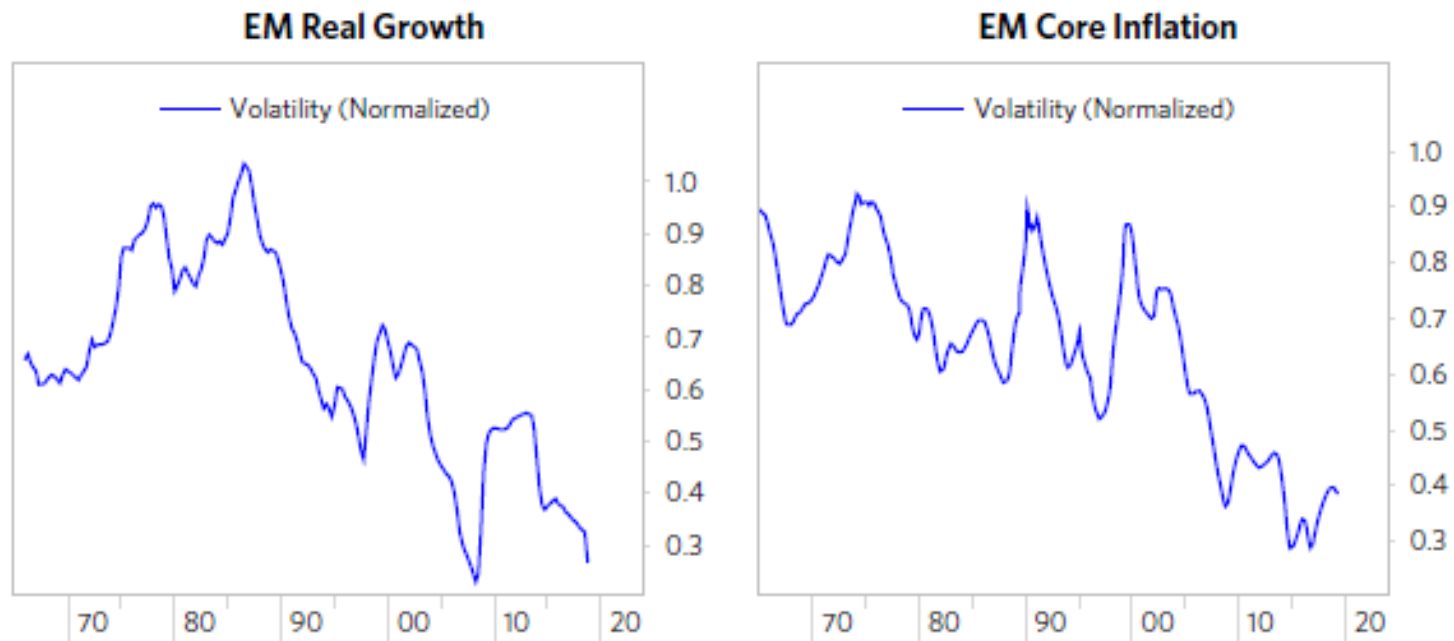
Continued growth in independence and governance



Emerging Market Economic Conditions becoming more Stable

Volatility of Real Growth and Inflation have secularly declined

Volatility of EM Economic Conditions Has Declined Secularly



Emerging Market Assets offer strong Diversification Benefits

Correlations to the US are considerably lower for EM relative to those of the Developed World

Correlations to US Assets and Conditions

Asset Correlations	Euroland	Japan	UK	South Africa	Brazil	Turkey	India
Equities	0.5	0.7	0.6	0.4	0.6	0.3	0.4
Bonds	0.7	0.5	0.6	0.3	0.1	0.3	0.3
Correlation of Economic Conditions							
Growth	0.4	0.4	0.4	0.2	0.1	0.2	0.2
Inflation	0.8	0.6	0.8	0.5	0.1	0.3	0.3
Short-Term Debt Cycle	0.4	0.3	0.6	0.1	-0.3	0.5	0.2
Monetary Policy	0.9	0.4	0.9	0.4	0.5	0.4	0.5

LASERS
SUMMARY OF MANAGER PERFORMANCE
RATES OF RETURN
TOTAL GROSS OF FEES
(For Period Ending March 31, 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	3.0 bps	\$ 230.1	0.3	12.2	12.2	0.0	1.9	7.3	10.8	6.4	7.8	10.4
S&P 500 VALUE INDEX				1.1	12.2	12.2	4.5	5.9	6.8	10.6	7.8	8.0	10.0
S&P 500 INDEX				1.9	13.6	13.6	5.9	9.5	11.7	13.5	10.5	10.9	12.7
TOTAL LARGE VALUE		3.0 bps	\$ 230.1	0.3	12.2	12.2	0.0	1.9	7.3	10.8	6.4	7.8	10.4
LARGE CAP INDEX FUNDS													
LASERS S&P 500 INDEX FUND		1.3 bps	\$ 1,269.8	1.9	13.6	13.6	5.9	9.5	11.7	13.5	10.4	10.9	12.6
S&P 500 INDEX				1.9	13.6	13.6	5.9	9.5	11.7	13.5	10.5	10.9	12.7
TOTAL DOMESTIC LARGE CAP		1.6 bps	\$ 1,499.9	1.7	13.4	13.4	4.6	8.0	10.9	13.0	9.7	10.3	12.2
MID CAP INDEX FUNDS													
LASERS S&P 400 INDEX FUND		1.3 bps	\$ 464.2	-0.6	14.5	14.5	-1.7	2.6	6.7	11.3	7.4	8.3	10.4
S&P MIDCAP 400 INDEX				-0.6	14.5	14.5	-1.6	2.6	6.7	11.2	7.3	8.3	10.3
TOTAL DOMESTIC MID CAP INDEX		1.3 bps	\$ 464.2	-0.6	14.5	14.5	-1.7	2.6	6.7	11.3	7.4	8.3	10.4
SMALL CAP GROWTH													
RICE HALL JAMES	07/31/20	0.0bps	\$ 206.2	-2.9	12.8	12.8	-6.7	-0.7	5.2	7.5	3.6	5.1	8.1
S&P 600 GROWTH INDEX				-2.8	10.8	10.8	-4.7	3.8	9.2	14.1	9.5	9.7	12.5
S&P SMALLCAP 600 INDEX				-3.3	11.6	11.6	-6.6	1.6	7.0	12.6	8.4	8.5	11.5
TOTAL SMALL GROWTH		0.0bps	\$ 206.2	-2.9	12.8	12.8	-6.7	-0.7	5.2	7.5	3.6	5.1	8.1
SMALL CAP VALUE													
LSV	05/31/21	55.8 bps	\$ 201.1	-5.2	10.9	10.9	-9.9	-5.1	0.5	7.7	4.7	7.0	10.9
S&P 600 VALUE INDEX				-3.9	12.5	12.5	-8.3	-0.4	4.9	11.0	7.3	7.2	10.4
S&P SMALLCAP 600 INDEX				-3.3	11.6	11.6	-6.6	1.6	7.0	12.6	8.4	8.5	11.5
TOTAL SMALL VALUE		55.8 bps	\$ 201.1	-5.2	10.9	10.9	-9.9	-5.1	0.5	7.7	4.6	5.8	9.1
SMALL CAP INDEX FUNDS													
LASERS S&P 600 INDEX FUND		1.3 bps	\$ 280.3	-3.3	11.5	11.5	-6.7	1.6	7.0	12.5	8.4	8.5	11.5
S&P SMALLCAP 600 INDEX				-3.3	11.6	11.6	-6.6	1.6	7.0	12.6	8.4	8.5	11.5
TOTAL DOMESTIC SMALL CAP		16.9 bps	\$ 687.6	-3.8	11.8	11.8	-7.6	-1.0	4.5	9.4	5.5	6.3	9.5
TOTAL U.S. EQUITY		5.5 bps	\$ 2,651.7	-0.2	13.2	13.2	0.0	4.5	8.4	11.7	8.1	8.9	11.2

LASERS

SUMMARY OF MANAGER PERFORMANCE
RATES OF RETURN
TOTAL GROSS OF FEES
(For Period Ending March 31, 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	28.2 bps	\$ 233.1	1.1	10.3	10.3	2.5	-0.1	5.9	7.7	4.3	3.8	6.8
MSCI WORLD EX-USA VALUE INDEX				-0.5	8.7	8.7	-3.2	-4.9	3.4	7.8	2.5	1.3	4.1
MSCI WORLD EX-USA INDEX				0.6	10.6	10.6	-2.1	-2.6	5.6	7.8	3.6	2.7	5.0
TOTAL INT'L LARGE VALUE		28.2 bps	\$ 233.1	1.1	10.3	10.3	2.5	-0.1	5.9	7.7	4.3	3.8	6.8
LARGE CAP CORE													
LASERS MSCI WORLD EX-USA INDEX FUND		1.3 bps	\$ 1,459.3	0.6	10.4	10.4	-1.9	-2.8	5.3	7.5	3.4	2.5	4.7
MSCI WORLD EX-USA INDEX				0.6	10.6	10.6	-2.1	-2.6	5.6	7.8	3.6	2.7	5.0
TOTAL INT'L LARGE CORE		1.3 bps	\$ 1,459.3	0.6	10.4	10.4	-1.9	-2.8	5.3	7.5	3.4	2.5	4.7
LARGE CAP TERROR-FREE													
LASERS TERROR-FREE INT'L FUND		1.3 bps	\$ 27.9	0.9	10.4	10.4	-1.2	-2.5	5.0	8.2	3.9	3.0	5.1
MSCI WORLD EX-USA INDEX				0.6	10.6	10.6	-2.1	-2.6	5.6	7.8	3.6	2.7	5.0
TOTAL INT'L LARGE CAP		4.9 bps	\$ 1,720.3	0.7	10.3	10.3	-1.3	-2.4	5.4	7.6	3.6	2.7	5.0
INT'L SMALL CAP													
MONDRIAN INVESTMENT PARTNERS	02/14/21	70.5 bps	\$ 228.1	0.5	10.0	10.0	-5.9	-3.7	7.3	7.6	6.7	4.4	6.3
GOLDMAN SACHS	02/17/21	50.9 bps	\$ 357.9	-0.3	11.3	11.3	-8.0	-8.6	5.7				
MSCI WORLD EX-USA SMALL CAP INDEX				0.0	11.0	11.0	-7.6	-8.3	5.6	7.7	6.3	4.1	6.8
TOTAL INT'L SMALL CAP		58.5 bps	\$ 586.0	0.0	10.8	10.8	-7.3	-6.9	6.3	8.4	7.1	4.8	6.6
EMERGING MARKETS													
CITY OF LONDON	08/31/19	93.0 bps	\$ 409.0	1.3	10.5	10.5	2.9	-4.6	7.7	11.5	5.8	6.0	5.1
WESTWOOD GLOBAL EMERGING MKTS	10/05/19	88.9 bps	\$ 282.3	-2.9	2.1	2.1	-3.0	-12.9	3.7	10.2	5.3	3.9	4.3
LSV CUSTOM EMERGING MARKETS	08/22/23	50.0 bps	\$ 706.5	-0.6	8.0	8.0	4.8	-5.2	5.5	7.9	3.5	2.6	
MSCI EMERGING MARKETS INDEX				0.9	10.0	10.0	0.9	-7.1	7.9	11.1	4.9	4.1	3.2
TOTAL EMERGING MARKETS		70.4 bps	\$ 1,397.9	-0.5	7.5	7.5	2.1	-7.3	5.6	10.7	4.9	4.3	3.7
TOTAL NON-U.S. EQUITY		38.1 bps	\$ 3,704.2	0.1	9.3	9.3	-1.0	-5.1	5.6	8.8	4.4	3.5	4.6
TOTAL EQUITY		24.5 bps	\$ 6,355.9	0.0	10.9	10.9	-0.5	-1.0	6.8	10.1	6.1	6.0	7.8

LASERS

SUMMARY OF MANAGER PERFORMANCE
RATES OF RETURN
TOTAL GROSS OF FEES
(For Period Ending March 31, 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	12/31/19	17.5 bps	\$ 204.0	1.7	3.7	3.7	4.3	4.1	3.5	4.2	3.1	3.4	3.3
ORLEANS CAPITAL MGT	12/31/19	11.5 bps	\$ 160.3	1.8	3.6	3.6	4.8	4.6	3.1	2.5	2.3	2.7	2.4
BB BC US AGGREGATE BOND INDEX				1.9	2.9	2.9	4.6	4.5	2.8	2.0	2.0	2.7	2.3
TOTAL INVESTMENT GRADE		14.9 bps	\$ 364.3	1.7	3.6	3.6	4.5	4.3	3.3	3.4	2.7	3.0	2.9
HIGH YIELD													
JPMORGAN	06/30/22	27.0 bps	\$ 175.7	0.7	7.5	7.5	4.7	5.8	5.0	8.1	5.1	4.8	5.2
NOMURA	06/30/22	45.0 bps	\$ 171.9	0.7	6.7	6.7	2.3	4.1	4.8	9.6	6.2	5.3	6.6
CREDIT SUISSE HY INDEX				1.0	7.2	7.2	4.5	5.6	4.6	8.7	5.3	4.5	5.0
TOTAL HIGH YIELD		35.9 bps	\$ 347.6	0.7	7.2	7.2	3.6	5.0	4.9	8.9	5.6	5.1	5.9
TOTAL U.S. FIXED INCOME													
		25.1 bps	\$ 711.9	1.2	5.3	5.3	4.2	4.8	4.3	6.2	4.3	4.3	4.8
EMERGING MARKET DEBT (+)													
STONE HARBOR	10/02/22	52.5 bps	\$ 195.4	-1.7	3.3	3.3	1.2	-10.8	0.6	2.5	1.4	-1.6	-2.9
GRAMERCY*	OPEN	100.0 bps	\$ 66.6	2.7	4.4	4.4							
J.P. MORGAN GBI-EM GLOBAL DIVERSIFIED INDEX				-1.3	2.9	2.9	3.2	-7.6	2.2	3.3	2.0	-0.8	-1.9
TOTAL EMERGING MARKET DEBT (+)		64.6 bps	\$ 262.0	-0.6	3.6	3.6	1.6	-10.5	0.8	2.6	1.5	-1.5	-2.8
GLOBAL MULTI-SECTOR (+)													
DOUBLELINE	05/05/21	60.0 bps	\$ 241.7	1.0	3.7	3.7	4.1	4.9	5.6				
GOLDENTREE	05/01/21	75.0 bps	\$ 244.3	0.6	6.0	6.0	4.1	5.2	6.8				
PIMCO*	OPEN	95.0 bps	\$ 124.7	3.2	3.2	3.2							
BLACKSTONE*	OPEN	78.1 bps	\$ 17.2	-0.1	-0.3	-0.3							
50/50 BB BARCLAYS GLOBAL AGG/CS HY INDEX				1.1	4.7	4.7	3.5	2.6	4.0				
TOTAL GLOBAL MULTI-SECTOR (+)		71.1 bps	\$ 627.9	1.2	4.4	4.4	3.8	4.8	6.1				
TOTAL FIXED INCOME (+)													
		49.6 bps	\$ 1,601.9	0.9	4.7	4.7	3.7	2.6	4.3	6.1	4.2	3.8	3.9

LASERS

SUMMARY OF MANAGER PERFORMANCE
RATES OF RETURN
TOTAL GROSS OF FEES
(For Period Ending March 31, 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*		87.7 bps	\$ 1,690.5	0.3	-0.1	-0.1	6.0	13.3	16.9	14.0	12.9	12.1	13.0
ABSOLUTE RETURN STRATEGIES*													
BRIDGEWATER PURE ALPHA		182.7 bps	\$ 229.7	-0.5	-3.7	-3.7	1.6	2.5	2.8	4.8	0.9	2.8	3.3
PRISMA CAPITAL PARTNERS		65.0 bps	\$ 264.0	2.2	5.3	5.3	0.6	1.2	3.6	4.1	1.1	2.1	2.8
ENTRUST CAPITAL PARTNERS		113.0 bps	\$ 272.3	2.0	5.3	5.3	-0.5	2.4	0.3	4.5	2.6	3.0	8.0
HFRI FUND OF FUNDS COMPOSITE INDEX				1.3	5.0	5.0	1.8	2.6	4.1	4.5	2.0	2.5	3.2
ABSOLUTE RETURN STRATEGIES*~		115.7 bps	\$ 776.9	1.4	2.4	2.4	0.7	2.1	1.8	4.2	0.8	2.0	3.2
~includes assets being liquidated: PAAMCO \$8.6m; Stark \$2.3m													
RISK PARITY*													
BRIDGEWATER CUSTOM		63.5 bps	\$ 418.2	1.7	5.8	5.8	2.3	4.0					
AQR CAPITAL MANAGEMENT		110.0 bps	\$ 385.8	3.7	12.4	12.4	2.6	0.5					
LASERS 8% NOMINAL BENCHMARK				0.6	1.9	1.9	5.9	8.0	8.0	8.0	8.0	8.0	8.0
TOTAL RISK PARITY*		85.8 bps	\$ 804.0	2.6	8.9	8.9	2.4	2.3	4.5	6.6	2.7	3.7	3.0
TOTAL ALTERNATIVE ASSETS*		93.9 bps	\$ 3,271.4	1.1	2.5	2.5	3.8	7.6	9.5	9.3	6.5	6.6	7.0
CASH EQUIVALENTS													
HOLDING ACCOUNT		\$ 68.7											
EB TEMPORARY INVESTMENT FUND		9.0 bps		0.22	0.65	0.65	1.83	2.35	1.87	1.47	1.18	0.98	0.84
90 DAY T-BILL INDEX				0.21	0.60	0.60	1.67	2.11	1.59	1.17	0.90	0.72	0.61
TOTAL PLAN													
FINANCIAL COMPOSITE		29.4 bps	\$ 8,026.6	0.2	9.5	9.5	0.2	-0.4	6.4	9.3	5.8	5.7	7.1
FINANCIAL ALLOCATION INDEX				0.5	10.1	10.1	0.2	0.0	7.1	9.7	6.1	5.8	7.1
FINANCIAL POLICY INDEX				0.4	10.1	10.1	0.6	0.5	7.2	9.8	6.2	5.9	7.2
TOTAL PLAN		48.1 bps	\$ 11,297.9	0.4	7.4	7.4	1.2	1.7	7.2	9.3	6.0	5.9	7.1
TOTAL PLAN ALLOCATION INDEX				0.5	7.5	7.5	1.5	2.4	8.1	9.7	6.6	6.2	7.3
TOTAL PLAN POLICY INDEX				0.5	7.6	7.6	1.9	3.1	8.5	10.0	6.9	6.4	7.4
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.										LONG TERM RETURNS FOR TOTAL PLAN			
										7 Years	8 Years	9 Years	10 Years
										7.6	7.1	8.1	10.8

LASERS
SUMMARY OF MANAGER PERFORMANCE
RATES OF RETURN
TOTAL NET OF FEES

	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	\$ 3.2	-4.2	-4.2	-4.2	-5.2	-4.5	9.0	5.7	5.2	3.8	4.8
ADAMS STREET PARTNERSHIP 2002 US	2002	12/31/19	\$ 15.0		\$ 1.4	-6.9	-6.9	-6.9	-1.1	0.4	6.7	7.1	6.3	7.0	9.3
ADAMS STREET PARTNERSHIP 2005 US	2005	12/31/20	\$ 35.0	18.6 bps	\$ 8.0	-6.2	-6.2	-6.2	0.9	3.7	7.1	7.4	7.2	8.2	10.1
ADAMS STREET 2007 US FUND	2007	12/31/19	\$ 27.5	30.0 bps	\$ 12.9	0.0	0.0	0.0	3.1	8.0	11.5	12.1	11.8	13.4	14.8
ADAMS STREET 2007 NON-US	2007	12/31/19	\$ 17.5	30.0 bps	\$ 7.9	-6.3	-6.3	-6.3	4.1	6.0	13.6	10.3	10.5	10.3	11.2
ADAMS STREET 2007 DIRECT	2007	12/31/19	\$ 5.0	60.0 bps	\$ 2.5	-16.0	-16.0	-16.0	8.9	21.9	25.6	15.1	15.4	26.1	23.2
ADAMS STREET 2009 US FUND	2009	12/31/20	\$ 25.0	50.0 bps	\$ 20.5	2.1	2.1	2.1	7.7	14.7	14.6	13.1	12.0	13.6	14.1
ADAMS STREET 2009 NON-US DEV	2009	12/31/20	\$ 15.0	50.0 bps	\$ 10.1	1.9	1.9	1.9	12.9	15.4	21.9	18.1	16.2	13.7	13.4
ADAMS STREET 2009 NON-US EMG	2009	12/31/20	\$ 5.0	50.0 bps	\$ 5.5	0.1	0.1	0.1	-0.5	3.6	11.5	9.2	10.6	12.2	11.3
ADAMS STREET 2009 DIRECT	2009	12/31/20	\$ 5.0	100.0 bps	\$ 3.0	-11.1	-11.1	-11.1	4.3	10.8	15.2	9.7	10.0	11.7	13.3
AEA INVESTORS FUND VI	2015	05/31/25	\$ 50.0	175.0 bps	\$ 40.6	0.0	9.2	9.2	8.8	18.0	7.7				
BCP ENERGY SERVICES FUND A	2015	09/23/25	\$ 50.0	200.0 bps	\$ 50.0	3.6	3.6	3.6	6.7	9.2	25.0	18.6			
BCP FUND II A	2017	12/31/27	\$ 75.0	200.0 bps	\$ 3.6	75.7									
BRINSON (ϕ)	'97-'03	termed out	\$ 202.8	0.0 bps	\$ 3.3	-6.1	-6.1	-6.1	2.3	4.2	5.1	2.9	2.6	1.0	2.9
BROOKFIELD CAPITAL IV	2015	05/31/25	\$ 50.0	175.0 bps	\$ 46.6	18.7	16.7	16.7	11.3	27.0	83.3	65.6			
ADAMS STREET V	2003	08/08/19	\$ 15.0	0.0 bps	\$ 4.2	3.9	3.9	3.9	5.3	5.9	3.3	-2.9	5.3	5.6	9.3
APOLLO INV FUND VII	2008	12/17/19	\$ 60.0	0.0 bps	\$ 10.3	0.0	-14.8	-14.8	-18.1	-13.9	-6.2	-3.3	-2.6	0.3	8.2
APOLLO INV FUND VIII	2013	06/30/23	\$ 70.0	150.0 bps	\$ 57.7	0.0	-8.7	-8.7	-6.5	-8.9	10.1	14.3	11.9	10.6	
APOLLO EUROPEAN FUND II	2011	12/31/19	\$ 100.0	175.0 bps	\$ 31.6	-0.2	0.7	0.7	-4.5	-0.2	6.7	9.9	10.0	9.9	9.6
APOLLO INV FUND IX	2017	06/01/27	\$ 85.0	130.0 bps	\$ 4.5	-30.8									
ARCLIGHT ENERGY FUND VI	2015	07/28/25	\$ 75.0	150.0 bps	\$ 72.1	-1.8	-1.8	-1.8	8.5	25.6	17.5	16.1			
CCMP CAPITAL III	2013	12/31/23	\$ 60.0	150.0 bps	\$ 55.3	-6.4	-6.4	-6.4	-2.3	7.7	8.1	12.6	12.8	13.2	
CERBERUS VI	2016	08/31/26	\$ 125.0	150.0 bps	\$ 111.0	0.0	-3.7	-3.7	-0.6	-21.6	1.0				
COLLER INTERNATIONAL PTNRS VI	2012	06/15/22	\$ 100.0	81.0 bps	\$ 35.1	-0.5	3.5	3.5	13.8	24.3	24.9	18.2	16.7	16.1	17.1
COLLER INTERNATIONAL PTNRS VII	2015	12/31/25	\$ 75.0	150.0 bps	\$ 52.7	0.0	1.2	1.2	10.2	13.0	51.5	77.7			
DOUBLELINE MORTGAGE OPP FUND	2018	10/31/20	\$ 125.0	100.0 bps	\$ 80.9	6.1	6.1	6.1							
DRUG ROYALTY FUND III	2013	06/30/23	\$ 50.0	150.0 bps	\$ 7.6	12.7	12.5	12.5	16.3	43.6	37.7	33.5	28.3	18.9	
EIG ENERGY FUND XIV	2007	11/07/19	\$ 50.0	125.0 bps	\$ 5.6	-0.1	-15.8	-15.8	-14.8	10.9	9.7	-5.2	-23.5	-20.8	-18.3
EIG ENERGY FUND XV	2010	06/06/20	\$ 40.0	125.0 bps	\$ 19.5	0.5	-3.3	-3.3	2.0	0.5	2.5	7.6	1.2	0.4	2.1
EIG ENERGY FUND XVI	2013	05/13/23	\$ 70.0	125.0 bps	\$ 49.1	-0.9	-2.2	-2.2	-1.6	9.0	12.2	22.0	17.0	-3.6	
ENERGY SPECTRUM FUND V	2007	04/01/19	\$ 30.0	0.0 bps	\$ 0.1	-69.4	-69.4	-69.4	-75.0	-83.3	-62.2	-33.5	-46.5	-43.0	33.5
ENERGY SPECTRUM FUND VI	2010	12/31/20	\$ 40.0	175.0 bps	\$ 9.4	1.0	1.0	1.0	69.2	93.4	52.8	44.6	27.4	27.3	25.3
GTCR FUND XI	2014	05/21/23	\$ 50.0	135.0 bps	\$ 39.4	0.0	4.3	4.3	13.5	36.0	31.3	27.2	24.5		
GTCR Fund XII	2017	09/14/27	\$ 60.0	150.0 bps	\$ 8.1	0.0	-11.8	-11.8							
LOUISIANA GROWTH FUND	2004	11/13/19	\$ 50.0	50.0 bps	\$ 0.1	20.6	20.6	20.6	15.3	34.3	3.4	-9.0	-5.1	-0.4	0.7
LOUISIANA GROWTH FUND II	2007	06/26/19	\$ 73.5	50.0 bps	\$ 11.0	-0.3	-0.3	-0.3	12.8	63.3	61.3	38.5	26.8	24.4	27.9
GAMUT FUND I	2016	07/28/26	\$ 50.0	200.0 bps	\$ 13.2	8.7	8.6	8.6	12.3	10.5	-51.6				
GOLDMAN SACHS PEP IX	2007	12/31/19	\$ 100.0	10.7 bps	\$ 25.5	0.0	0.0	0.0	8.5	14.9	16.8	16.5	15.8	15.0	15.4
GOLDENTREE DISTRESSED FUND III	2018	01/31/23	\$ 75.0	125.0 bps	\$ 8.4	0.0	-2.6	-2.6							
JOHN HANCOCK*	multiple	OPEN	\$ 55.5	0.0 bps	\$ 0.2	0.0	0.0	0.0	-1.2	-36.5	-22.7	-13.1	-7.4	-5.2	-4.1
HIPEP PARTNERSHIP III	1997	12/31/19	\$ 60.0	0.0 bps	\$ 0.1	0.0	0.0	0.0	-7.0	-7.0	-5.2	-1.0	-3.1	-1.7	2.1

LASERS
SUMMARY OF MANAGER PERFORMANCE
RATES OF RETURN
TOTAL NET OF FEES

	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
HARBOURVEST VI - BUYOUT	1999	termed out	\$ 25.0	0.0 bps	\$ 0.0	0.0	-6.1	-6.1	-3.8	-7.4	-4.5	-2.1	-1.1	1.1	3.1
HARBOURVEST VI - DIRECT	1999	termed out	\$ 25.0	0.0 bps	\$ 1.5	0.0	0.0	0.0	4.3	-16.5	-15.4	-11.1	-14.5	-9.0	-2.5
HARBOURVEST VI - PTNR	1999	termed out	\$ 150.0	0.0 bps	\$ 1.5	0.0	0.0	0.0	13.5	16.0	2.0	5.1	3.5	4.2	4.6
HIPEP DIRECT IV	2000	12/31/19	\$ 10.0	0.0 bps	\$ 0.3	0.0	0.0	0.0	-17.6	35.7	45.5	28.8	15.9	13.8	16.5
HUFF ALTERNATIVE FUND	2001	10/15/19	\$ 32.5	0.0 bps	\$ 10.2	0.0	0.0	0.0	-2.4	-3.1	6.3	6.0	3.6	3.5	6.1
INSIGHT VENTURE PARTNERS X	2017	07/14/27	\$ 50.0	175.0 bps	\$ 25.3	0.0	0.9	0.9	5.4	-4.1					
KKR ASIAN FUND III	2017	05/31/28	\$ 50.0	125.0 bps	\$ 13.9	0.0	3.2	3.2	24.9	-7.8					
MARATHON EUROPEAN CREDIT OPP	2012	12/31/19	\$ 100.0		\$ 9.7	0.4	6.8	6.8	14.3	29.2	20.5	16.3	14.3	11.7	11.2
MESIROW III	2005	04/06/19	\$ 23.0	40.0 bps	\$ 4.8	0.0	0.0	0.0	1.4	5.6	3.4	4.3	5.7	7.2	10.0
MESIROW IV	2006	11/21/19	\$ 60.0	37.2 bps	\$ 27.8	0.0	0.0	0.0	7.4	10.6	14.0	12.5	12.8	12.1	14.1
MESIROW V	2008	11/05/20	\$ 60.0	45.9 bps	\$ 47.1	0.0	0.0	0.0	8.8	18.2	20.1	17.5	18.0	16.3	17.1
NEWSTONE MEZZANINE II	2010	03/05/20	\$ 40.0	100.0 bps	\$ 5.8	10.9	10.9	10.9	13.9	19.3	17.0	12.9	15.9	15.1	14.0
OHA STRATEGIC CREDIT FUND II	2017	07/14/27	\$ 50.0	175.0 bps	\$ 8.4	2.1	3.5	3.5	10.1	20.7					
OAKTREE EUROPEAN FUND III	2011	03/31/22	\$ 45.1	175.0 bps	\$ 31.2	-1.4	-3.1	-3.1	3.8	0.6	14.0	9.8	14.5	9.2	11.0
PANTHEON EUROPE VI	2008	12/19/20	\$ 44.9	60.8 bps	\$ 18.0	-0.7	-1.1	-1.1	15.3	14.5	24.9	17.2	19.7	12.3	13.7
PANTHEON VI	2004	07/12/19	\$ 50.0	38.4 bps	\$ 11.3	-2.1	-2.1	-2.1	3.4	6.2	8.3	6.0	4.2	5.5	7.9
PANTHEON VII	2006	04/28/19	\$ 50.0	54.7 bps	\$ 21.3	-4.0	-4.0	-4.0	4.1	10.6	13.2	11.3	9.7	11.8	13.2
STEPSTONE FUND II	2006	05/12/19	\$ 50.0	37.5 bps	\$ 31.3	0.0	0.0	0.0	27.3	36.9	29.7	20.2	20.6	22.8	21.3
STEPSTONE EUROPE FUND II	2010	12/15/22	\$ 25.9	50.0 bps	\$ 16.6	-1.5	-1.9	-1.9	-1.7	-1.6	15.5	5.8	11.7	6.0	8.9
PRIVATE ADVISORS IV	2011	12/15/26	\$ 35.0	60.8 bps	\$ 19.3	0.0	-0.7	-0.7	16.0	33.1	27.5	21.6	18.8	17.0	15.6
PRIVATE ADVISORS V	2012	06/30/25	\$ 40.0	81.0 bps	\$ 34.7	0.0	-0.5	-0.5	14.0	26.5	20.4	17.0	16.6	13.7	10.8
PRIVATE ADVISORS VI	2014	06/30/26	\$ 40.0	90.0 bps	\$ 25.1	0.0	-0.3	-0.3	6.1	15.6	14.3	9.5	5.2		
Q-BLK II	2005	12/04/19	\$ 50.0	45.9 bps	\$ 15.2	0.0	11.2	11.2	12.2	17.7	15.8	10.2	7.7	10.1	11.0
Q-BLK III	2007	12/29/19	\$ 60.0	0.0 bps	\$ 25.9	0.0	10.3	10.3	14.3	24.0	18.0	13.5	12.8	13.6	13.9
SIGULER GUFF DOF III	2008	12/31/19	\$ 200.0	16.0 bps	\$ 33.6	0.0	-0.1	-0.1	3.1	8.9	11.3	9.1	8.0	8.1	8.9
SIGULER GUFF FUND IV	2011	09/03/23	\$ 40.0	45.4 bps	\$ 16.6	0.0	2.4	2.4	3.1	4.6	7.4	7.5	8.7	9.3	10.1
SIGULER GUFF PELICAN GEM	2016	10/10/28	\$ 100.0	75.0 bps	\$ 57.6	0.0	1.3	1.3	4.2	2.1	7.0				
STERLING PARTNERS	2011	09/30/23	\$ 35.0	200.0 bps	\$ 17.9	0.0	-8.7	-8.7	-17.9	-15.6	-12.4	-9.7	-5.3	-2.5	0.0
VISTA EQUITY PARTNERS IV	2011	03/31/22	\$ 35.0	150.0 bps	\$ 26.2	-8.1	-8.2	-8.2	2.5	9.7	11.4	11.1	18.4	19.1	18.1
VISTA EQUITY PARTNERS V	2014	10/15/24	\$ 75.0	150.0 bps	\$ 82.2	-0.9	-0.9	-0.9	14.3	52.3	38.2	26.4	23.9		
VISTA EQUITY PARTNERS VI	2015	03/11/26	\$ 100.0	150.0 bps	\$ 106.0	1.6	1.6	1.6	22.3	31.5	18.9				
VISTA EQUITY PARTNERS VII	2018	02/28/28	\$ 125.0	150.0 bps	\$ 9.5	-0.9									
WARBURG PINCUS	2018	02/28/19	\$ 100.0	140.0 bps	\$ 1.2	0.0									
WILLIAMS CAPITAL	2004	termed out	\$ 30.0	0.0 bps	\$ 1.3	0.0	0.0	0.0	133.6	178.3	107.8	1.1	-6.0	-4.8	-2.5
TOTAL PRIVATE MARKETS*			\$ 4,343.2	87.7 bps	\$ 1,690.5	0.3	-0.1	-0.1	6.0	13.3	16.9	14.0	12.9	12.1	13.0

(*) 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



LOUISIANA STATE EMPLOYEES'
RETIREMENT SYSTEM

Investment Division

As of March 31, 2019

ASSET ALLOCATION

Asset Class	Target Weight	Actual Weight	Over/(Under) Weight
U.S. Equity	23%	23.5%	0.5%
Non-U.S. Equity	32%	32.8%	0.8%
U.S. Fixed Income	6%	6.3%	0.3%
Emerging Market Debt	3%	2.3%	-0.7%
Global Multi-Sector	7%	5.6%	-1.4%
Private Markets	15%	15.0%	0.0%
Absoulte Return	7%	6.9%	-0.1%
Risk Parity	7%	7.1%	0.1%
Cash	0%	0.6%	0.6%

*Target weights listed above were approved March 2018.