



STATE RETIREMENT AGENCY  
120 East Baltimore Street  
Baltimore, MD 21202-6700

MARYLAND  
STATE RETIREMENT  
and PENSION SYSTEM

410-625-5555 • 1-800-492-5909  
TTY Users: call via Maryland Relay  
sra.maryland.gov

August 14, 2020

The Honorable Guy J. Guzzone  
Chair, Budget & Taxation Committee  
Miller Senate Office Building, 3 West  
11 Bladen Street  
Annapolis, MD 21401

The Honorable Maggie McIntosh  
Chair, Appropriations Committee  
House Office Building, Room 121  
6 Bladen Street  
Annapolis, MD 21401

The Honorable Sarah K. Elfreth  
Senate Chair, Joint Committee on Pensions  
103 James Senate Office Building  
11 Bladen Street  
Annapolis, MD 21401

The Honorable Michael A. Jackson  
House Chair, Joint Committee on Pensions  
House Office Building, Room 207  
6 Bladen Street  
Annapolis, MD 21401

Re: Report required by State Personnel and Pensions Article § 21-122(f)(4) (MSAR #11742)

Dear Chairmen Guzzone, McIntosh, Elfreth, and Jackson:

On behalf of the Board of Trustees for the State Retirement and Pension System, I am submitting the investment returns for the State Retirement and Pension System for the quarter ending March 31, 2020. The returns are reported as follows:

1. investment performance by asset class, including performance relative to asset class benchmarks; and
2. investment performance of assets under the direction of each Investment Division employee.

The attached exhibits include:

- Exhibit A – Summary of Plan Performance by Asset Class
- Exhibit B – Expanded Performance Report by Manager and Asset Class
- Exhibit C – Investment Division Organizational Chart by Asset Class

Should you require additional information, please call me at (410) 625-5600.

Sincerely,

R. Dean Kenderdine  
Secretary to the Board of Trustees

cc: The Honorable William C. Ferguson  
The Honorable Adrienne A. Jones  
Victoria L. Gruber  
Sarah Albert  
Board of Trustees



**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
<b>TOTAL PLAN</b>	<b>51,138,787,452</b>	<b>100.0</b>	<b>-6.41</b>	<b>-8.29</b>	<b>-8.29</b>	<b>-3.55</b>	<b>-0.69</b>	<b>4.65</b>	<b>4.39</b>	<b>6.22</b>	<b>7.72</b>	<b>07/01/86</b>
TOTAL PLAN POLICY INDEX <sup>(1)</sup>			-6.43	-8.47	-8.47	-3.73	-0.56	4.52	4.45	5.79		07/01/86
Excess			0.02	0.17	0.17	0.18	-0.13	0.12	-0.06	0.43		
<b>TOTAL GROWTH EQUITY</b>	<b>24,088,111,847</b>	<b>47.1</b>	<b>-9.79</b>	<b>-15.39</b>	<b>-15.39</b>	<b>-8.83</b>	<b>-5.98</b>	<b>4.74</b>	<b>5.18</b>	<b>7.73</b>	<b>5.44</b>	<b>01/01/98</b>
GROWTH EQUITY CUSTOM BENCHMARK <sup>(2)</sup>			-9.34	-15.32	-15.32	-9.14	-5.97	4.23				01/01/98
Excess			-0.45	-0.07	-0.07	0.31	-0.01	0.51				
<b>TOTAL RATE SENSITIVE</b>	<b>10,341,914,355</b>	<b>20.2</b>	<b>0.98</b>	<b>9.98</b>	<b>9.98</b>	<b>13.47</b>	<b>18.54</b>	<b>8.48</b>	<b>5.78</b>	<b>5.39</b>	<b>7.23</b>	<b>07/01/86</b>
CUSTOM RATE SENSITIVE BENCHMARK <sup>(3)</sup>			1.94	10.93	10.93	14.49	19.83	8.87	6.06	4.98		07/01/86
Excess			-0.96	-0.95	-0.95	-1.02	-1.30	-0.38	-0.28	0.41		
<b>TOTAL CREDIT/DEBT STRATEGIES</b>	<b>4,595,577,327</b>	<b>9.0</b>	<b>-8.14</b>	<b>-8.90</b>	<b>-8.90</b>	<b>-5.70</b>	<b>-3.41</b>	<b>1.81</b>	<b>3.01</b>	<b>5.54</b>	<b>7.77</b>	<b>03/01/09</b>
MSRA CUSTOM CREDIT BENCHMARK <sup>(4)</sup>			-10.95	-11.90	-11.90	-8.73	-6.34	0.81	2.36	4.36	6.46	03/01/09
Excess			2.81	3.00	3.00	3.03	2.92	1.00	0.64	1.18	1.31	
<b>TOTAL REAL ASSETS</b>	<b>6,526,631,275</b>	<b>12.8</b>	<b>-3.94</b>	<b>-5.84</b>	<b>-5.84</b>	<b>-4.49</b>	<b>-3.03</b>	<b>3.28</b>	<b>2.20</b>	<b>2.99</b>	<b>3.72</b>	<b>02/01/06</b>
CUSTOM REAL ASSETS BENCHMARK <sup>(5)</sup>			-4.97	-8.97	-8.97	-6.36	-4.88	3.02	2.95	2.40	2.92	02/01/06
Excess			1.03	3.14	3.14	1.87	1.85	0.26	-0.76	0.59	0.79	
<b>TOTAL ABSOLUTE RETURN</b>	<b>4,183,393,972</b>	<b>8.2</b>	<b>-5.03</b>	<b>-6.77</b>	<b>-6.77</b>	<b>-5.36</b>	<b>-3.84</b>	<b>-0.13</b>	<b>-0.15</b>	<b>2.42</b>	<b>2.53</b>	<b>04/01/08</b>
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>(6)</sup>			-6.86	-7.23	-7.23	-5.30	-3.67	1.10	1.26	2.25	1.22	04/01/08
Excess			1.83	0.46	0.46	-0.06	-0.16	-1.23	-1.41	0.17	1.31	
<b>TOTAL MULTI ASSET</b>	<b>1,127,106,275</b>	<b>2.2</b>	<b>-10.89</b>	<b>-12.89</b>	<b>-12.89</b>	<b>-8.79</b>	<b>-5.79</b>				<b>-2.76</b>	<b>07/01/18</b>
TOTAL PLAN POLICY INDEX <sup>(1)</sup>			-6.43	-8.47	-8.47	-3.73	-0.56				1.76	07/01/18
Excess			-4.46	-4.42	-4.42	-5.05	-5.23				-4.52	



**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
<b>TOTAL CASH</b>	<b>276,052,400</b>	<b>0.5</b>	<b>-0.57</b>	<b>-1.34</b>	<b>-1.34</b>	<b>0.47</b>	<b>4.17</b>	<b>6.75</b>	<b>5.55</b>	<b>4.07</b>	<b>3.87</b>	<b>07/01/08</b>
FTSE 3 MONTH T-BILL			0.13	0.39	0.39	1.42	2.04	1.74	1.12	0.60	0.58	07/01/08
<i>Excess</i>			-0.69	-1.73	-1.73	-0.95	2.13	5.01	4.42	3.48	3.29	

# State Retirement Agency of Maryland

Rates of Return -  
Periods Ending March 31, 2020



## ENDNOTES

- [1] Since 07/01/2008: Calculated monthly using transitional weights and asset class benchmarks. Prior to 07/01/2008: MSRA TOTAL PLAN STATIC POLICY.
- [2] Benchmark is a dynamic blend of the Public Equity Benchmark and the State Street Private Equity Index based off of sub-asset class weights used in the policy benchmark.
- [3] Since 10/01/2017: 53% Barclays Long-Term Government, 13% Barclays Securitized, 13% Barclays Corporate, 21% Barclays U.S. TIPS  
From 07/01/2016 to 09/30/2017: 48% Barclays Long-Term Government, 14% Barclays Securitized, 14% Barclays Corporate, 24% Barclays U.S. TIPS  
From 11/01/2015 to 06/30/2016: 50% Barclays Long-Term Government, 15% Barclays Securitized, 15% Barclays Corporate, 20% Barclays U.S. TIPS  
From 07/01/2013 to 10/31/2015: 80% BC Aggregate Intermediate, 20% BC Global Aggregate 1-10 Year Hedged  
From 07/01/2010 to 06/30/2013: 80% BC Aggregate, 20% BC Global Bond Aggregate Hedged  
From 01/01/2010 to 06/30/2010: 80% BC Aggregate, 20% BC Global Bond Aggregate Unhedged  
From 07/01/2009 to 12/31/2009: Benchmark is dynamically calculated using Beginning Market Value weights of the underlying portfolios and their benchmarks  
Prior to 07/01/2009: Benchmark is BC US Universal.  
Formerly named "Custom Fixed Income Benchmark" prior to 11/01/2015.
- [4] Since 10/01/2017: 78% US Credit Benchmark, 22% non-U.S Credit Benchmark.  
From 01/01/2016 to 09/30/2017: 67% US Credit Benchmark, 33% non-U.S Credit Benchmark.  
From 11/01/2015 to 12/31/2015: 75% US Credit Benchmark, 25% non-U.S Credit Benchmark.  
From 07/01/2013 to 10/31/2015: 50% BC High Yield / 20% BC Credit / 20% JP Morgan GBI EM Global Diversified/ 10% S&P/LSTA Leveraged Loan Index  
From 01/01/2010 to 06/30/2013: 50% BC Credit / 50% BC High Yield  
Prior to 01/01/2010: 75% BC Credit / 25% BC High Yield
- [5] Since 10/01/2017: Benchmark is dynamically calculated using the beginning market values of the Real Estate and Natural Resource/Infrastructure sub-asset classes and their corresponding benchmarks.  
From 11/01/2015 to 09/30/2017: Benchmark is dynamically calculated using the beginning market values of the Real Estate, Commodities and Natural Resource/Infrastructure sub-asset classes and their corresponding benchmarks.  
From 12/01/2012 to 10/31/2015: 30% - DJ UBS Commodities Index (Total Return), 10% - CPI + 5%; 8% Max , 60% - 50% BC US TIPS Index/50% BC World Inflat-Linked Bond Index  
From 07/01/2011 to 11/30/2012: 30% - DJ UBS Commodities Index (Total Return), 10% - CPI + 5%; 8% Max , 60% - 65% BC US TIPS Index/35% BC Global Inflation Linked (USD Hedged) Index  
From 07/01/2009 to 06/30/2011: 20% - DJ UBS Commodities Index (Total Return), 20% - CPI + 5%; 8% Max , 60% - 65% BC US TIPS Index/35% BC Global Inflation Linked (USD Hedged) Index  
07/01/2008 to 06/30/2009: Benchmark is dynamically calculated using Beginning Market Value weights of the underlying portfolios and their benchmarks Prior to 07/01/2008: 100% Barclays US TIPS Index  
Prior to 07/01/2008: 100% Barclays US TIPS Index  
Formerly named "Custom Real Return Benchmark" prior to 11/01/2015.
- [6] Since 11/01/2015: HFRI Fund of Funds Conservative + 100 bps.  
From 07/01/2014 to 10/31/2015: HFRI FOF: Conservative Index.  
From 07/01/2008 to 06/30/2014 benchmark was HFRI Fund of Funds index.  
Prior to 07/01/2008 benchmark was the Citigroup 3-Month T-bill + 500 bps.

This report was prepared for you by State Street Bank and Trust Company (or its affiliates, "State Street") utilizing scenarios, assumptions and reporting formats as mutually agreed between you and State Street. While reasonable efforts have been made to ensure the accuracy of the information contained in this report, there is no guarantee, representation or warranty, express or implied, as to its accuracy or completeness. This information is provided "as-is" and State Street disclaims any and all liability and makes no guarantee, representation, or warranty with respect to your use of or reliance upon this information in making any decisions or taking (or not taking) any actions. State Street does not verify the accuracy or completeness of any data, including data provided by State Street for other purposes, or data provided by you or third parties. You should independently review the report (including, without limitation, the assumptions, market data, securities prices, securities valuations, tests and calculations used in the report), and determine that the report is suitable for your purposes.

State Street provides products and services to professional and institutional clients, which are not directed at retail clients. This report is for informational purposes only and it does not constitute investment research or investment, legal or tax advice, and it is not an offer or solicitation to buy or sell any product, service, or securities or any financial instrument, and it does not transfer rights of any kind (except the limited use and redistribution rights described below) or constitute any binding contractual arrangement or commitment of any kind. You may use this report for your internal business purposes and, if such report contains any data provided by third party data sources, including, but not limited to, market or index data, you may not redistribute this report, or an excerpted portion thereof, to any third party, including, without limitation, your investment managers, investment advisers, agents, clients, investors or participants, whether or not they have a relationship with you or have a reasonable interest in the report, without the prior written consent of each such third party data source. You are solely responsible and liable for any and all use of this report.



**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
<b>GROWTH EQUITY</b>												
<i>U.S. EQUITY</i>												
RHUMBLINE RUSSELL 1000	2,033,872,537	4.0	-13.16	-20.16	-20.16	-11.82	-8.09	4.63	6.21		10.57	11/01/12
Russell 1000			-13.21	-20.22	-20.22	-11.77	-8.03	4.64	6.22		10.59	11/01/12
Excess			0.06	0.06	0.06	-0.04	-0.06	-0.01	-0.01		-0.02	
RHUMBLINE S&P 600 INDEX	340,069,835	0.7	-22.36	-32.58	-32.58	-27.22	-25.85	-5.32			-5.21	03/01/17
S&P SMALLCAP 600			-22.40	-32.64	-32.64	-27.25	-25.89	-5.34			-5.24	03/01/17
Excess			0.04	0.05	0.05	0.03	0.04	0.02			0.03	
<b>TOTAL US EQUITY PASSIVE</b>	<b>2,373,963,035</b>	<b>4.6</b>	<b>-14.61</b>	<b>-22.21</b>	<b>-22.21</b>	<b>-14.35</b>	<b>-11.01</b>	<b>3.11</b>			<b>5.85</b>	<b>11/01/15</b>
D.E. SHAW ALL CAP CORE ENHANCED	869,447,204	1.7	-13.45	-20.58	-20.58	-11.91	-8.17	4.68	6.44		9.54	04/01/13
D.E. Shaw All Cap Custom Benchmark <sup>[1]</sup>			-13.21	-20.22	-20.22	-11.77	-8.03	4.64	6.20		9.28	04/01/13
Excess			-0.24	-0.36	-0.36	-0.14	-0.15	0.04	0.24		0.27	
T. ROWE PRICE ENHANCED	825,678,476	1.6	-13.85	-20.18	-20.18	-11.29	-7.17	5.79	7.32	10.73	7.81	05/01/06
S&P 500			-12.35	-19.60	-19.60	-10.82	-6.98	5.10	6.73	10.53	7.23	05/01/06
Excess			-1.50	-0.58	-0.58	-0.48	-0.19	0.69	0.60	0.20	0.58	
RHUMBLINE US SCIENTIFIC BETA	507,760,739	1.0	-16.90	-24.41	-24.41	-18.12	-14.54	0.89			2.46	01/01/17
SciBeta USA Multi-Beta MStrat 4F-EW TR			-16.37	-23.98	-23.98	-17.59	-13.95	1.20			2.77	01/01/17
Excess			-0.53	-0.43	-0.43	-0.54	-0.60	-0.31			-0.31	
DURABLE CAPITAL PARTNERS	261,782,295	0.5	-19.30	-17.20	-17.20						-17.20	01/01/20
Russell 2000 Growth			-19.10	-25.76	-25.76						-25.76	01/01/20
Excess			-0.20	8.57	8.57						8.57	

**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
<b>TOTAL U.S. EQUITY ACTIVE</b>	<b>2,464,668,808</b>	<b>4.8</b>	<b>-14.49</b>	<b>-21.01</b>	<b>-21.01</b>	<b>-13.03</b>	<b>-9.18</b>	<b>4.08</b>	<b>5.97</b>	<b>9.44</b>		<b>06/01/94</b>
ACTIVE US EQ BM <sup>[2]</sup>			-13.98	-21.22	-21.22	-13.32	-9.58	3.68	5.68	10.05		06/01/94
Excess			-0.51	0.20	0.20	0.30	0.40	0.40	0.28	-0.61		
<b>CAPITAL PROSPECTS US SMALL CAP (TM)</b>	<b>274,183,088</b>	<b>0.5</b>	<b>-24.27</b>	<b>-33.53</b>	<b>-33.53</b>	<b>-29.26</b>	<b>-27.22</b>	<b>-5.63</b>			<b>-5.63</b>	<b>04/01/17</b>
S&P 600 Small Cap USD NET			-22.46	-32.73	-32.73	-27.52	-26.25	-5.76			-5.76	04/01/17
Excess			-1.81	-0.81	-0.81	-1.74	-0.97	0.14			0.14	
<b>US EQUITY TERRA MARIA</b>	<b>274,287,078</b>	<b>0.5</b>	<b>-24.28</b>	<b>-34.39</b>	<b>-34.39</b>	<b>-30.30</b>	<b>-29.15</b>	<b>-7.44</b>	<b>-2.95</b>	<b>5.32</b>	<b>4.22</b>	<b>04/01/07</b>
TERRA MARIA US EQUITY BENCHMARK <sup>[3]</sup>			-21.83	-31.26	-31.26	-26.17	-24.77	-4.93	-0.02	7.28	4.89	04/01/07
Excess			-2.45	-3.12	-3.12	-4.12	-4.38	-2.52	-2.93	-1.96	-0.67	
<b>TOTAL US EQUITY TM + U.S. EQUITY ACTIVE</b>	<b>2,738,955,885</b>	<b>5.4</b>	<b>-15.64</b>	<b>-22.71</b>	<b>-22.71</b>	<b>-15.33</b>	<b>-11.94</b>	<b>2.43</b>	<b>4.26</b>	<b>8.84</b>	<b>7.32</b>	<b>07/01/08</b>
TM US EQ + ACTIVE US EQ BM <sup>[2]</sup>			-14.89	-22.45	-22.45	-14.98	-11.62	2.47	4.84	9.73	7.98	07/01/08
Excess			-0.76	-0.25	-0.25	-0.35	-0.32	-0.05	-0.58	-0.90	-0.66	
<b>U.S. EQUITY EX OVERLAY</b>	<b>5,112,918,920</b>	<b>10.0</b>	<b>-15.20</b>	<b>-22.53</b>	<b>-22.53</b>	<b>-14.90</b>	<b>-11.54</b>	<b>2.75</b>	<b>4.72</b>	<b>9.28</b>	<b>8.02</b>	<b>04/01/94</b>
MSRA CUSTOM US EQUITY INDEX <sup>[4]</sup>			-13.75	-20.90	-20.90	-12.70	-9.13	4.00	5.77	10.15		04/01/94
Excess			-1.45	-1.63	-1.63	-2.20	-2.42	-1.25	-1.05	-0.87		
US Equity Tactical	46,082,946	0.1										10/01/18
US Equity Structural	22,469,549	0.0										02/01/17
<b>U.S. EQUITY OVERLAY</b>	<b>68,552,494</b>	<b>0.1</b>										<b>02/01/17</b>



**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
<b>U.S. EQUITY</b>	<b>5,181,471,415</b>	<b>10.1</b>	<b>-15.07</b>	<b>-21.99</b>	<b>-21.99</b>	<b>-14.82</b>	<b>-11.33</b>	<b>3.00</b>	<b>4.88</b>	<b>9.37</b>	<b>8.05</b>	<b>04/01/94</b>
MSRA CUSTOM US EQUITY INDEX <sup>[4]</sup>			-13.75	-20.90	-20.90	-12.70	-9.13	4.00	5.77	10.15		04/01/94
<i>Excess</i>			-1.31	-1.09	-1.09	-2.12	-2.21	-1.00	-0.89	-0.78		
<b>INTERNATIONAL DEVELOPED MARKETS</b>												
SSGA INTERNATIONAL FUND	1,283,777	0.0										05/01/03
<b>INTERNATIONAL DEVELOPED EQUITY PASSIVE</b>	<b>1,283,777</b>	<b>0.0</b>										<b>11/01/15</b>
ARTISAN PARTNERS, L.P.	521,608,018	1.0	-12.80	-20.71	-20.71	-14.69	-6.58	3.95	0.85	5.74	7.25	11/01/03
ARTISAN CUSTOM BENCHMARK <sup>[5]</sup>			-14.12	-23.26	-23.26	-18.00	-14.89	-2.07	-0.76	2.65	5.29	11/01/03
<i>Excess</i>			1.33	2.55	2.55	3.32	8.32	6.03	1.62	3.09	1.96	
AQR ENHANCED ACWI EX-US	257,266,273	0.5	-16.10	-24.98	-24.98	-20.90	-19.09	-4.98	-2.44		-1.60	12/01/13
AQR Enhanced Custom Benchmark <sup>[6]</sup>			-14.12	-23.26	-23.26	-18.00	-14.89	-2.07	-0.93		-0.67	12/01/13
<i>Excess</i>			-1.97	-1.72	-1.72	-2.89	-4.20	-2.91	-1.51		-0.92	
BROWN CAPITAL MANAGEMENT INT'L	515,113,956	1.0	-6.16	-14.21	-14.21	-9.35	-5.01	2.75	2.19	5.44	9.80	12/01/08
Brown Capital Management International Custom Benchmark <sup>[7]</sup>			-14.71	-24.00	-24.00	-18.34	-15.48	-2.29	-1.05	1.94	5.73	12/01/08
<i>Excess</i>			8.56	9.79	9.79	8.99	10.47	5.03	3.24	3.50	4.08	
DFA INTERNATIONAL CORE EQUITY	321,225,643	0.6	-16.89	-27.05	-27.05	-21.05	-18.97	-4.08	-0.80		1.08	05/01/13
MSCI WORLD EX US (NET)			-14.12	-23.26	-23.26	-18.00	-14.89	-2.07	-0.76		0.81	05/01/13
<i>Excess</i>			-2.77	-3.79	-3.79	-3.05	-4.07	-2.00	-0.03		0.27	



**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
RHUMBLINE SCI BETA INTL EX-US	496,977,064	1.0	-18.33	-28.16	-28.16	-22.92	-22.03	-5.14			-4.30	03/01/17
SciBeta Developed ex USA Value Div MS			-18.35	-28.19	-28.19	-22.87	-21.83	-4.73			-3.89	03/01/17
Excess			0.02	0.02	0.02	-0.05	-0.19	-0.41			-0.42	
<b>INTERNATIONAL DEVELOPED EQUITY ACTIVE <sup>[8]</sup></b>	<b>2,112,326,742</b>	<b>4.1</b>	<b>-13.74</b>	<b>-22.73</b>	<b>-22.73</b>	<b>-17.46</b>	<b>-14.07</b>	<b>-1.32</b>	<b>-0.79</b>	<b>2.22</b>		<b>01/01/95</b>
CUSTOM INTL DEV EQ ACTIVE BENCHMARK <sup>[9]</sup>			-15.31	-24.65	-24.65	-19.30	-16.76	-2.76	-1.21	1.80		01/01/95
Excess			1.56	1.92	1.92	1.84	2.69	1.43	0.42	0.42		
<b>ATTUCKS INTL DEVELOPED (TM)</b>	<b>348,644,110</b>	<b>0.7</b>	<b>-15.50</b>	<b>-25.04</b>	<b>-25.04</b>	<b>-18.59</b>	<b>-15.79</b>	<b>-2.56</b>	<b>0.32</b>	<b>5.51</b>	<b>8.66</b>	<b>12/01/08</b>
MSCI WORLD EX US NET (DAILY)			-14.12	-23.26	-23.26	-18.00	-14.89	-2.07	-0.76	2.43	5.39	12/01/08
Excess			-1.38	-1.78	-1.78	-0.59	-0.90	-0.49	1.08	3.08	3.27	
<b>XPONANCE INTL SMALL CAP (TM)</b>	<b>216,885,070</b>	<b>0.4</b>	<b>-18.05</b>	<b>-28.54</b>	<b>-28.54</b>	<b>-21.27</b>	<b>-19.38</b>	<b>-3.89</b>			<b>-3.89</b>	<b>04/01/17</b>
MSCI WORLD EX US SMALL CAP (NET)			-18.28	-28.39	-28.39	-20.44	-19.04	-3.60			-3.60	04/01/17
Excess			0.23	-0.15	-0.15	-0.83	-0.34	-0.30			-0.30	
<b>LEADING EDGE INTL DEVELOPED (TM)</b>	<b>353,627,669</b>	<b>0.7</b>	<b>-14.34</b>	<b>-22.61</b>	<b>-22.61</b>	<b>-16.11</b>	<b>-12.09</b>	<b>-1.43</b>	<b>0.17</b>	<b>4.41</b>	<b>8.08</b>	<b>12/01/08</b>
MSCI WORLD EX US NET (DAILY)			-14.12	-23.26	-23.26	-18.00	-14.89	-2.07	-0.76	2.43	5.39	12/01/08
Excess			-0.22	0.65	0.65	1.89	2.80	0.64	0.93	1.98	2.69	
<b>INTL DEVELOPED EQUITY TERRA MARIA <sup>[8]</sup></b>	<b>919,267,826</b>	<b>1.8</b>	<b>-15.68</b>	<b>-25.02</b>	<b>-25.02</b>	<b>-18.33</b>	<b>-15.34</b>	<b>-2.46</b>	<b>-0.56</b>	<b>2.75</b>	<b>0.94</b>	<b>11/01/07</b>
TERRA MARIA INTL DEVELOPED EQ BM <sup>[10]</sup>			-14.77	-24.35	-24.35	-18.28	-15.68	-2.25	-0.93	2.06	-0.26	11/01/07
Excess			-0.91	-0.67	-0.67	-0.05	0.34	-0.21	0.37	0.70	1.20	
<b>INTL DEVELOPED EQUITY ACTIVE AND TM <sup>[8]</sup></b>	<b>3,031,594,568</b>	<b>5.9</b>	<b>-14.34</b>	<b>-23.43</b>	<b>-23.43</b>	<b>-17.74</b>	<b>-14.46</b>	<b>-1.67</b>	<b>-0.74</b>	<b>2.31</b>	<b>0.90</b>	<b>07/01/08</b>
TM INTL DEV EQ + ACTIVE INTL DEV EQ BM <sup>[9]</sup>			-15.14	-24.56	-24.56	-18.99	-16.43	-2.59	-1.12	1.88	0.52	07/01/08
Excess			0.80	1.13	1.13	1.26	1.97	0.92	0.38	0.44	0.37	

**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
INTL EQUITY TRANSITION ACCOUNT	6,849	0.0										11/01/04
<b>TOTAL INTL DEV EQUITY EX RECORD CURRENCY <sup>[B]</sup></b>	<b>3,032,885,193</b>	<b>5.9</b>	<b>-14.33</b>	<b>-23.42</b>	<b>-23.42</b>	<b>-17.73</b>	<b>-14.45</b>	<b>-1.83</b>	<b>-0.96</b>	<b>2.03</b>		<b>01/01/95</b>
MSRA CUSTOM INTERNATIONAL INDEX <sup>[11]</sup>			-14.12	-23.26	-23.26	-18.00	-14.89	-2.07	-1.13	1.83		01/01/95
Excess			-0.21	-0.16	-0.16	0.27	0.44	0.24	0.17	0.20		
RECORD CURRENCY MANAGEMENT	19,339,205	0.0										05/01/09
<b>TOTAL INTL DEVELOPED EQUITY EX OVERLAY <sup>[B]</sup></b>	<b>3,052,224,399</b>	<b>6.0</b>	<b>-13.78</b>	<b>-22.78</b>	<b>-22.78</b>	<b>-16.96</b>	<b>-13.85</b>	<b>-1.65</b>	<b>-1.17</b>	<b>2.31</b>	<b>5.22</b>	<b>01/01/95</b>
MSRA CUSTOM INTERNATIONAL INDEX <sup>[11]</sup>			-14.12	-23.26	-23.26	-18.00	-14.89	-2.07	-1.13	1.83	4.27	01/01/95
Excess			0.34	0.48	0.48	1.04	1.05	0.42	-0.04	0.48	0.95	
International Equity Tactical	59,256,206	0.1										01/01/17
International Equity Structural	42,371,242	0.1										02/01/17
<b>TOTAL INTL DEVELOPED EQUITY OVERLAY</b>	<b>101,627,447</b>	<b>0.2</b>										<b>12/01/16</b>
<b>TOTAL INTL DEVELOPED EQUITY</b>	<b>3,153,851,846</b>	<b>6.2</b>	<b>-14.93</b>	<b>-24.16</b>	<b>-24.16</b>	<b>-18.10</b>	<b>-14.96</b>	<b>-2.09</b>	<b>-1.43</b>	<b>2.17</b>	<b>5.16</b>	<b>01/01/95</b>
MSRA CUSTOM INTERNATIONAL INDEX <sup>[11]</sup>			-14.12	-23.26	-23.26	-18.00	-14.89	-2.07	-1.13	1.83	4.27	01/01/95
Excess			-0.81	-0.89	-0.89	-0.10	-0.07	-0.02	-0.30	0.34	0.89	
<b>EMERGING MARKETS</b>												
SSGA EMERGING MARKETS INDEX FUND	24,669,180	0.0	-14.54	-22.90	-22.90	-17.51	-17.01	-1.69	-0.60		1.08	06/01/12
MSCI EMERGING MARKETS			-15.40	-23.60	-23.60	-18.18	-17.69	-1.62	-0.37		1.57	06/01/12
Excess			0.86	0.70	0.70	0.67	0.68	-0.07	-0.23		-0.49	

**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
<b>EMERGING MARKETS EQUITY PASSIVE</b>	<b>24,669,180</b>	<b>0.0</b>	<b>-14.54</b>	<b>-22.90</b>	<b>-22.90</b>	<b>-17.51</b>	<b>-16.98</b>	<b>-0.81</b>			<b>2.83</b>	<b>11/01/15</b>
MSCI EMERGING MARKETS			-15.40	-23.60	-23.60	-18.18	-17.69	-1.62			2.36	11/01/15
<i>Excess</i>			0.86	0.70	0.70	0.67	0.71	0.81			0.47	
<b>BAILLIE GIFFORD EMERGING MARKETS</b>	<b>622,444,320</b>	<b>1.2</b>	<b>-19.04</b>	<b>-26.48</b>	<b>-26.48</b>	<b>-19.75</b>	<b>-17.86</b>	<b>1.88</b>			<b>4.88</b>	<b>11/01/15</b>
MSCI EMERGING MARKETS			-15.40	-23.60	-23.60	-18.18	-17.69	-1.62			2.36	11/01/15
<i>Excess</i>			-3.64	-2.88	-2.88	-1.57	-0.17	3.50			2.52	
<b>DFA EMERGING MARKETS</b>	<b>500,018,153</b>	<b>1.0</b>	<b>-19.55</b>	<b>-28.31</b>	<b>-28.31</b>	<b>-24.06</b>	<b>-23.40</b>	<b>-5.39</b>			<b>3.07</b>	<b>02/01/16</b>
MSCI EMERGING MARKETS			-15.40	-23.60	-23.60	-18.18	-17.69	-1.62			5.74	02/01/16
<i>Excess</i>			-4.15	-4.71	-4.71	-5.87	-5.72	-3.77			-2.67	
<b>ACADIAN EMRG MKTS MANAGED VOLATILITY EQ</b>	<b>20,000</b>	<b>0.0</b>										<b>04/01/16</b>
<b>POLUNIN CAPITAL PARTNERS</b>	<b>310,113,857</b>	<b>0.6</b>	<b>-18.23</b>	<b>-29.76</b>	<b>-29.76</b>	<b>-24.81</b>	<b>-23.40</b>	<b>-6.35</b>			<b>1.05</b>	<b>04/01/16</b>
MSCI EMERGING MARKETS			-15.40	-23.60	-23.60	-18.18	-17.69	-1.62			2.78	04/01/16
<i>Excess</i>			-2.82	-6.16	-6.16	-6.63	-5.72	-4.73			-1.73	
<b>AXIOM INTERNATIONAL INVESTORS</b>	<b>694,893,729</b>	<b>1.4</b>	<b>-15.11</b>	<b>-21.51</b>	<b>-21.51</b>	<b>-13.63</b>	<b>-11.36</b>	<b>1.58</b>			<b>5.05</b>	<b>05/01/16</b>
MSCI EMERGING MARKETS			-15.40	-23.60	-23.60	-18.18	-17.69	-1.62			2.70	05/01/16
<i>Excess</i>			0.30	2.09	2.09	4.55	6.33	3.21			2.35	
<b>WESTWOOD GLOBAL INVESTMENTS</b>	<b>522,363,481</b>	<b>1.0</b>	<b>-20.29</b>	<b>-28.84</b>	<b>-28.84</b>	<b>-21.88</b>	<b>-21.63</b>	<b>-6.14</b>	<b>-1.43</b>	<b>1.87</b>	<b>8.31</b>	<b>12/01/08</b>
MSCI EMERGING MARKETS			-15.40	-23.60	-23.60	-18.18	-17.69	-1.62	-0.37	0.68	6.81	12/01/08
<i>Excess</i>			-4.89	-5.24	-5.24	-3.70	-3.95	-4.52	-1.07	1.19	1.50	

**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
MARSHALL WACE TOPS CHINA A	261,479,308	0.5	-7.87	-7.79	-7.79	2.35	0.58				20.89	11/01/18
MSCI China A Share Net			-8.22	-9.72	-9.72	-3.25	-6.69				15.14	11/01/18
Excess			0.35	1.93	1.93	5.60	7.27				5.76	
TT INTERNATIONAL EMERGING MARKETS	313,799,460	0.6	-20.05	-26.98	-26.98						-20.12	08/01/19
MSCI Emerging Markets IMI Index (Net)			-16.19	-24.40	-24.40						-18.23	08/01/19
Excess			-3.86	-2.57	-2.57						-1.89	
RWC PARTNERS EMERGING MARKETS	228,374,400	0.4	-19.16	-28.48	-28.48						-23.88	12/01/19
MSCI EMERGING MARKETS			-15.40	-23.60	-23.60						-17.90	12/01/19
Excess			-3.76	-4.88	-4.88						-5.98	
MARSHALL WACE TOPS EMERGING MARKETS	250,000,000	0.5										03/01/20
TRANSITION ACCOUNT EMERGING MARKETS	0	0.0										05/01/16
<b>TOTAL EMERGING MARKET ACTIVE</b>	<b>3,703,549,106</b>	<b>7.2</b>	<b>-17.79</b>	<b>-25.63</b>	<b>-25.63</b>	<b>-19.66</b>	<b>-18.74</b>	<b>-2.09</b>	<b>0.62</b>		<b>1.19</b>	<b>07/01/10</b>
MSCI EMERGING MARKETS			-15.40	-23.60	-23.60	-18.18	-17.69	-1.62	-0.37		1.61	07/01/10
Excess			-2.39	-2.03	-2.03	-1.48	-1.05	-0.47	0.99		-0.42	
EMERGING MARKETS EQUITY TERRA MARIA	278,596,791	0.5	-19.36	-26.48	-26.48	-23.15	-20.84					11/01/15
MSCI EMERGING MARKETS			-15.40	-23.60	-23.60	-18.18	-17.69					11/01/15
Excess			-3.96	-2.88	-2.88	-4.97	-3.15					
EMERGING MARKETS ACTIVE AND TM	3,982,145,897	7.8	-17.90	-25.68	-25.68	-19.91	-18.88	-2.26			2.50	11/01/15
MSCI EMERGING MARKETS			-15.40	-23.60	-23.60	-18.18	-17.69	-1.62			2.36	11/01/15
Excess			-2.50	-2.08	-2.08	-1.73	-1.19	-0.64			0.14	

**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
<b>TOTAL EMERGING MARKETS EQUITY EX OVERLAY</b>	<b>4,006,815,076</b>	<b>7.8</b>	<b>-17.89</b>	<b>-25.66</b>	<b>-25.66</b>	<b>-19.90</b>	<b>-18.88</b>	<b>-2.19</b>			<b>2.17</b>	<b>11/01/15</b>
MSCI EMERGING MARKETS			-15.40	-23.60	-23.60	-18.18	-17.69	-1.62			2.36	11/01/15
<i>Excess</i>			-2.48	-2.06	-2.06	-1.72	-1.20	-0.57			-0.19	
 Emrg Mkts Structural Overlay	 47,294,521	 0.1										 02/01/17
 Emrg Mkts Tactical Overlay	 62,800,883	 0.1										 10/01/17
 <b>TOTAL EMERGING MARKETS OVERLAY</b>	 <b>110,095,404</b>	 <b>0.2</b>										 <b>02/01/17</b>
 <b>TOTAL EMERGING MARKETS EQUITY</b>	 <b>4,116,910,481</b>	 <b>8.1</b>	 <b>-18.81</b>	 <b>-26.96</b>	 <b>-26.96</b>	 <b>-21.08</b>	 <b>-20.08</b>	 <b>-2.43</b>			 <b>1.98</b>	 <b>11/01/15</b>
MSCI EMERGING MARKETS			-15.40	-23.60	-23.60	-18.18	-17.69	-1.62			2.36	11/01/15
<i>Excess</i>			-3.41	-3.36	-3.36	-2.90	-2.40	-0.81			-0.39	
 <b>GLOBAL EQUITY</b>												
BAILLIE GIFFORD	724,877,472	1.4	-5.51	-2.83	-2.83	9.49	11.64	19.76	15.72	14.42	10.81	02/01/08
MSCI AC WORLD INDEX NET			-13.50	-21.37	-21.37	-14.35	-11.26	1.50	2.85	5.88	3.66	02/01/08
<i>Excess</i>			7.99	18.54	18.54	23.84	22.90	18.26	12.87	8.54	7.15	
 LONGVIEW PRTRNS GLOBAL EQUITY	 574,805,357	 1.1	 <b>-18.04</b>	 <b>-27.19</b>	 <b>-27.19</b>	 <b>-18.46</b>	 <b>-17.09</b>	 <b>0.62</b>	 <b>2.97</b>	 <b>8.86</b>	 <b>9.45</b>	 <b>10/01/09</b>
MSCI AC WORLD INDEX NET			-13.50	-21.37	-21.37	-14.35	-11.26	1.50	2.85	5.88	6.36	10/01/09
<i>Excess</i>			-4.54	-5.83	-5.83	-4.11	-5.83	-0.88	0.12	2.98	3.10	
 AQR CAPITAL - GLOBAL EQUITY	 800,423,291	 1.6	 <b>-14.57</b>	 <b>-23.08</b>	 <b>-23.08</b>	 <b>-16.92</b>	 <b>-15.77</b>	 <b>-1.77</b>	 <b>0.69</b>		 <b>6.35</b>	 <b>08/01/10</b>
MSCI AC WORLD INDEX NET			-13.50	-21.37	-21.37	-14.35	-11.26	1.50	2.85		6.65	08/01/10
<i>Excess</i>			-1.07	-1.71	-1.71	-2.57	-4.51	-3.27	-2.16		-0.30	

**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
D.E. SHAW INV - GLOBAL EQUITY	759,035,174	1.5	-14.21	-22.55	-22.55	-16.05	-13.98	0.78	2.64		7.83	08/01/10
MSCI WORLD INDEX			-13.23	-21.05	-21.05	-13.84	-10.39	1.92	3.25		7.44	08/01/10
<i>Excess</i>			-0.98	-1.50	-1.50	-2.21	-3.59	-1.14	-0.61		0.39	
<b>TOTAL GLOBAL EQUITY ACTIVE</b>	<b>2,859,605,071</b>	<b>5.6</b>	<b>-13.10</b>	<b>-19.60</b>	<b>-19.60</b>	<b>-11.61</b>	<b>-9.95</b>	<b>3.47</b>	<b>4.20</b>	<b>7.52</b>	<b>6.02</b>	<b>10/01/05</b>
MSCI AC WORLD INDEX NET			-13.50	-21.37	-21.37	-14.35	-11.26	1.50	2.85	5.88	4.83	10/01/05
<i>Excess</i>			0.40	1.77	1.77	2.74	1.30	1.97	1.35	1.64	1.18	
MARSHALL WACE EUREKA FUND	567,954,567	1.1	-5.01	-5.85	-5.85	-0.85	2.04	5.76	5.88		9.12	10/01/12
HFRI Equity Hedge (Total) Index			-10.41	-13.98	-13.98	-10.45	-9.07	-0.31	1.06		3.28	10/01/12
<i>Excess</i>			5.41	8.13	8.13	9.60	11.11	6.07	4.82		5.84	
INDUS PACIFIC OPPORTUNITIES FUND	5,914,805	0.0										06/01/13
<b>TOTAL EQUITY HEDGE FUND</b>	<b>573,869,372</b>	<b>1.1</b>	<b>-4.87</b>	<b>-5.71</b>	<b>-5.71</b>	<b>-2.44</b>	<b>-0.89</b>	<b>1.41</b>	<b>0.76</b>		<b>3.48</b>	<b>07/01/12</b>
HFRI Equity Hedge (Total) Index			-10.41	-13.98	-13.98	-10.45	-9.07	-0.31	1.06		3.62	07/01/12
<i>Excess</i>			5.54	8.26	8.26	8.00	8.18	1.73	-0.30		-0.14	
<b>TOTAL GLB EQ TM + GLB EQ ACTIVE + HF</b>	<b>3,433,474,443</b>	<b>6.7</b>	<b>-11.82</b>	<b>-17.57</b>	<b>-17.57</b>	<b>-10.05</b>	<b>-8.42</b>	<b>2.44</b>	<b>3.01</b>	<b>6.54</b>	<b>4.52</b>	<b>07/01/08</b>
TM GLOBAL + ACTIVE GLOBAL BM + EQ HF <sup>[2]</sup>			-12.97	-20.21	-20.21	-13.75	-10.95	0.91	2.31	5.45	3.67	07/01/08
<i>Excess</i>			1.14	2.64	2.64	3.69	2.52	1.52	0.71	1.09	0.85	
GLOBAL EQUITY TRANSITION ACCOUNT	3,987,194	0.0										06/01/11
<b>TOTAL GLOBAL EQUITY EX RECORD CURRENCY</b>	<b>3,437,461,637</b>	<b>6.7</b>	<b>-11.81</b>	<b>-17.56</b>	<b>-17.56</b>	<b>-10.05</b>	<b>-8.42</b>	<b>2.44</b>	<b>3.08</b>	<b>6.64</b>	<b>5.43</b>	<b>10/01/05</b>
MSRA CUSTOM GLOBAL INDEX <sup>[12]</sup>			-13.50	-21.37	-21.37	-14.35	-11.26	1.50	2.85	5.91	4.92	10/01/05
<i>Excess</i>			1.69	3.80	3.80	4.30	2.83	0.94	0.24	0.74	0.51	

**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
RECORD CURRENCY - GLOBAL	6,559,254	0.0										05/01/09
<b>TOTAL GLOBAL EQUITY EX OVERLAY</b>	<b>3,444,020,891</b>	<b>6.7</b>	<b>-11.63</b>	<b>-17.34</b>	<b>-17.34</b>	<b>-9.76</b>	<b>-8.18</b>	<b>2.56</b>	<b>3.02</b>	<b>6.72</b>	<b>5.53</b>	<b>10/01/05</b>
MSRA CUSTOM GLOBAL INDEX <sup>[12]</sup>			-13.50	-21.37	-21.37	-14.35	-11.26	1.50	2.85	5.91	4.92	10/01/05
<i>Excess</i>			1.87	4.02	4.02	4.59	3.07	1.06	0.17	0.81	0.62	
Global Equity Tactical	63,701,276	0.1										01/01/20
<b>TOTAL GLOBAL EQUITY OVERLAY</b>	<b>63,701,276</b>	<b>0.1</b>										<b>01/01/20</b>
<b>TOTAL GLOBAL EQUITY</b>	<b>3,507,722,167</b>	<b>6.9</b>	<b>-11.92</b>	<b>-17.60</b>	<b>-17.60</b>	<b>-10.04</b>	<b>-8.46</b>	<b>2.45</b>	<b>2.96</b>	<b>6.69</b>	<b>5.51</b>	<b>10/01/05</b>
MSRA CUSTOM GLOBAL INDEX <sup>[12]</sup>			-13.50	-21.37	-21.37	-14.35	-11.26	1.50	2.85	5.91	4.92	10/01/05
<i>Excess</i>			1.58	3.77	3.77	4.31	2.79	0.95	0.11	0.78	0.59	
<b>PUBLIC EQUITY</b>												
<b>TOTAL PUBLIC EQUITY EX OVERLAY</b>	<b>15,615,979,286</b>	<b>30.5</b>	<b>-14.89</b>	<b>-22.39</b>	<b>-22.39</b>	<b>-15.59</b>	<b>-13.27</b>	<b>0.42</b>	<b>1.98</b>	<b>5.91</b>		<b>04/01/94</b>
PUBLIC EQ BM 2 <sup>[13]</sup>			-14.34	-22.32	-22.32	-15.73	-13.22	0.68	2.49	5.86		04/01/94
<i>Excess</i>			-0.54	-0.06	-0.06	0.13	-0.05	-0.26	-0.51	0.05		
<b>TOTAL PUBLIC EQUITY OVERLAY</b>	<b>343,976,622</b>	<b>0.7</b>										<b>12/01/16</b>
<b>TOTAL PUBLIC EQUITY</b>	<b>15,959,955,908</b>	<b>31.2</b>	<b>-15.37</b>	<b>-22.88</b>	<b>-22.88</b>	<b>-16.18</b>	<b>-13.82</b>	<b>0.34</b>	<b>1.92</b>	<b>5.88</b>		<b>04/01/94</b>
PUBLIC EQ BM 2 <sup>[13]</sup>			-14.34	-22.32	-22.32	-15.73	-13.22	0.68	2.49	5.86		04/01/94
<i>Excess</i>			-1.02	-0.56	-0.56	-0.45	-0.60	-0.34	-0.56	0.02		

**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
<b>PRIVATE EQUITY</b>												
<b>TOTAL PRIVATE EQUITY</b>	<b>8,128,155,939</b>	<b>15.9</b>	<b>3.61</b>	<b>4.49</b>	<b>4.49</b>	<b>10.22</b>	<b>14.59</b>	<b>16.63</b>	<b>15.18</b>	<b>14.69</b>	<b>8.37</b>	<b>03/01/94</b>
Custom MD/SS PEI Index <sup>[14]</sup>			3.48	4.35	4.35	8.94	13.82	13.31	11.16	11.95		03/01/94
Excess			0.13	0.14	0.14	1.28	0.77	3.32	4.02	2.74		
<b>TOTAL GROWTH EQUITY</b>	<b>24,088,111,847</b>	<b>47.1</b>	<b>-9.79</b>	<b>-15.39</b>	<b>-15.39</b>	<b>-8.83</b>	<b>-5.98</b>	<b>4.74</b>	<b>5.18</b>	<b>7.73</b>	<b>5.44</b>	<b>01/01/98</b>
GROWTH EQUITY CUSTOM BENCHMARK <sup>[15]</sup>			-9.34	-15.32	-15.32	-9.14	-5.97	4.23				01/01/98
Excess			-0.45	-0.07	-0.07	0.31	-0.01	0.51				
<b>RATE SENSITIVE</b>												
<b>NOMINAL FIXED INCOME</b>												
<b>SSGA US GOVT LONG BOND INDEX</b>	<b>121,357,713</b>	<b>0.2</b>	<b>7.20</b>	<b>22.08</b>	<b>22.08</b>	<b>26.32</b>	<b>33.91</b>	<b>13.71</b>			<b>9.74</b>	<b>11/01/16</b>
BBG BARC US Gov Lg Idx			5.93	20.63	20.63	24.79	32.28	13.30			9.43	11/01/16
Excess			1.27	1.45	1.45	1.53	1.63	0.41			0.31	
<b>SSGA US SECURITIZED INDEX</b>	<b>402,339,641</b>	<b>0.8</b>	<b>0.72</b>	<b>2.59</b>	<b>2.59</b>	<b>4.55</b>	<b>6.64</b>	<b>3.78</b>			<b>2.91</b>	<b>11/01/16</b>
BBG BARC Sec Idx			0.70	2.65	2.65	4.75	6.89	4.02			3.15	11/01/16
Excess			0.02	-0.06	-0.06	-0.20	-0.24	-0.24			-0.24	
<b>SSGA US LONG INVEST GRADE CORP INDEX</b>	<b>119,109,308</b>	<b>0.2</b>	<b>-11.53</b>	<b>-6.12</b>	<b>-6.12</b>	<b>0.58</b>	<b>7.84</b>	<b>6.37</b>			<b>4.68</b>	<b>11/01/16</b>
BBG BARC Lg Corp			-9.92	-4.51	-4.51	2.18	9.57	6.66			5.28	11/01/16
Excess			-1.61	-1.60	-1.60	-1.60	-1.73	-0.29			-0.60	
<b>SSGA US INTERM INVEST GRADE INDEX</b>	<b>197,007,891</b>	<b>0.4</b>	<b>-6.70</b>	<b>-4.36</b>	<b>-4.36</b>	<b>-1.56</b>	<b>1.61</b>	<b>2.68</b>			<b>2.22</b>	<b>11/01/16</b>
BBG BARC US Corp Int Inv Grd Idx			-5.48	-3.15	-3.15	-0.38	2.74	3.02			2.52	11/01/16
Excess			-1.22	-1.21	-1.21	-1.17	-1.13	-0.34			-0.30	



**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
<b>SSGA PASSIVE FIXED INCOME</b>	<b>839,814,553</b>	<b>1.6</b>	<b>-0.84</b>	<b>6.19</b>	<b>6.19</b>	<b>9.71</b>	<b>15.24</b>	<b>7.95</b>	<b>5.23</b>	<b>4.64</b>	<b>4.69</b>	<b>05/01/03</b>
SSgA Aggregate Bond Custom Benchmark <sup>[16]</sup>			2.89	13.31	13.31	17.21	23.20	10.27	6.73	5.37		05/01/03
Excess			-3.73	-7.13	-7.13	-7.51	-7.96	-2.32	-1.50	-0.73		
<b>MD LONG GOVERNMENT BONDS</b>	<b>1,304,593,650</b>	<b>2.6</b>	<b>6.40</b>								<b>6.40</b>	<b>03/01/20</b>
BBG BARC US Gov Lg Idx			5.93								5.93	03/01/20
Excess			0.46								0.46	
<b>US NOMINAL FIXED INCOME PASSIVE</b>	<b>2,144,408,203</b>	<b>4.2</b>	<b>3.72</b>	<b>14.33</b>	<b>14.33</b>	<b>18.12</b>	<b>24.09</b>	<b>10.64</b>			<b>7.70</b>	<b>11/01/15</b>
US NOMINAL FI PASSIVE BENCHMARK <sup>[17]</sup>			2.89	13.31	13.31	17.21	23.20	10.27			7.57	11/01/15
Excess			0.82	1.02	1.02	0.91	0.89	0.38			0.13	
<b>PIMCO</b>	<b>1,426,607,539</b>	<b>2.8</b>	<b>1.68</b>	<b>11.96</b>	<b>11.96</b>	<b>15.53</b>	<b>21.52</b>	<b>10.07</b>	<b>6.68</b>	<b>5.44</b>		<b>06/01/84</b>
PIMCO Custom Blended Index <sup>[18]</sup>			2.89	13.31	13.31	17.21	23.20	10.27	6.73	5.37		06/01/84
Excess			-1.21	-1.35	-1.35	-1.68	-1.68	-0.20	-0.05	0.07		
<b>WESTERN ASSET MANAGEMENT</b>	<b>2,594,458,920</b>	<b>5.1</b>	<b>0.26</b>	<b>10.12</b>	<b>10.12</b>	<b>14.26</b>	<b>20.64</b>	<b>9.75</b>	<b>6.82</b>	<b>6.37</b>	<b>6.60</b>	<b>09/01/03</b>
WESTERN ASSET MANAGEMENT CUSTOM BM <sup>[19]</sup>			2.89	13.31	13.31	17.21	23.20	10.27	6.69	5.35	5.29	09/01/03
Excess			-2.63	-3.20	-3.20	-2.95	-2.56	-0.51	0.13	1.03	1.31	
<b>DOUBLELINE US SECURITIZED</b>	<b>437,866,390</b>	<b>0.9</b>	<b>-1.27</b>	<b>1.06</b>	<b>1.06</b>	<b>2.79</b>	<b>5.23</b>				<b>3.52</b>	<b>10/01/17</b>
BBG BARC Sec Dly			0.70	2.65	2.65	4.75	6.89				4.09	10/01/17
Excess			-1.98	-1.59	-1.59	-1.95	-1.66				-0.57	
<b>GARDA FIRVO</b>	<b>350,700,000</b>	<b>0.7</b>	<b>3.76</b>	<b>6.34</b>	<b>6.34</b>	<b>10.91</b>	<b>13.72</b>	<b>7.54</b>			<b>7.42</b>	<b>04/01/16</b>
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23	-5.30	-3.67	1.10			2.39	04/01/16
Excess			10.62	13.57	13.57	16.21	17.39	6.44			5.03	

**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
DODGE & COX - FI CORE	332,948,786	0.7	-7.55	-4.36	-4.36	0.02	4.70	4.58	4.07	4.53	5.37	03/01/09
CORE BOND CUSTOM BENCHMARK <sup>[21]</sup>			-7.09	-3.63	-3.63	0.48	4.98	4.20	3.24	3.63	4.09	03/01/09
Excess			-0.47	-0.73	-0.73	-0.46	-0.27	0.38	0.83	0.90	1.28	
WESTERN ASSET - ISRAEL BD	23,251,606	0.0	-0.17	0.55	0.55	2.16	3.76	3.10	1.52	1.94	2.68	06/01/05
WESTERN ASSET ISRAEL BOND INDEX			-0.69	1.47	1.47	3.48	6.86	4.34	3.36	3.26	1.57	06/01/05
Excess			0.52	-0.92	-0.92	-1.33	-3.10	-1.24	-1.84	-1.32	1.12	
<b>US NOMINAL FIXED INCOME ACTIVE</b>	<b>5,165,833,241</b>	<b>10.1</b>	<b>0.20</b>	<b>8.60</b>	<b>8.60</b>	<b>12.41</b>	<b>17.94</b>	<b>8.87</b>	<b>6.21</b>	<b>5.54</b>	<b>5.81</b>	<b>07/01/08</b>
CUSTOM NOMINAL FIXED INCOME BENCHMARK <sup>[22]</sup>			2.89	13.31	13.31	17.21	23.20	10.27	6.72	5.31	5.50	07/01/08
Excess			-2.69	-4.71	-4.71	-4.81	-5.26	-1.39	-0.52	0.23	0.31	
<b>US NOMINAL FIXED INCOME TERRA MARIA</b>	<b>596,288,384</b>	<b>1.2</b>	<b>-3.07</b>	<b>-0.04</b>	<b>-0.04</b>	<b>2.20</b>	<b>5.04</b>	<b>3.42</b>	<b>2.68</b>	<b>3.61</b>	<b>5.18</b>	<b>11/01/08</b>
TERRA MARIA FI BENCHMARK <sup>[23]</sup>			-0.50	2.62	2.62	4.89	7.77	4.16	3.03	3.53	6.07	11/01/08
Excess			-2.57	-2.67	-2.67	-2.69	-2.72	-0.75	-0.35	0.08	-0.90	
<b>TOTAL RATE SENSITIVE (CP)</b>	<b>596,288,384</b>	<b>1.2</b>	<b>-3.07</b>	<b>-0.04</b>	<b>-0.04</b>	<b>2.20</b>	<b>5.04</b>	<b>3.41</b>	<b>2.72</b>	<b>3.87</b>	<b>5.05</b>	<b>11/01/08</b>
RATE SENSITIVE (CP) BENCHMARK <sup>[23]</sup>			-0.50	2.62	2.62	4.89	7.77	4.17	3.08	3.64	4.57	11/01/08
Excess			-2.57	-2.67	-2.67	-2.69	-2.72	-0.76	-0.36	0.23	0.47	
<b>TOTAL US NOMINAL FI ACTIVE + TM</b>	<b>5,762,121,625</b>	<b>11.3</b>	<b>-0.15</b>	<b>7.70</b>	<b>7.70</b>	<b>11.33</b>	<b>16.58</b>	<b>8.32</b>	<b>5.85</b>	<b>5.35</b>	<b>5.65</b>	<b>07/01/08</b>
CUSTOM NOMINAL FIXED INCOME BENCHMARK <sup>[22]</sup>			2.89	13.31	13.31	17.21	23.20	10.27	6.72	5.31	5.50	07/01/08
Excess			-3.04	-5.62	-5.62	-5.88	-6.62	-1.95	-0.87	0.04	0.15	
<b>US NOMINAL FIXED INCOME</b>	<b>7,906,529,828</b>	<b>15.5</b>	<b>0.85</b>	<b>9.37</b>	<b>9.37</b>	<b>13.05</b>	<b>18.46</b>	<b>8.90</b>	<b>6.13</b>	<b>5.42</b>	<b>5.86</b>	<b>07/01/08</b>
US NOMINAL FIXED INCOME BENCHMARK <sup>[24]</sup>			2.89	13.31	13.31	17.21	23.20	10.27	6.73	5.37	5.58	07/01/08
Excess			-2.04	-3.94	-3.94	-4.16	-4.74	-1.36	-0.60	0.05	0.28	



**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
<b>NOMINAL FIXED INCOME EX OVERLAY</b>	<b>7,906,529,922</b>	<b>15.5</b>	<b>0.85</b>	<b>9.37</b>	<b>9.37</b>	<b>13.05</b>	<b>18.46</b>	<b>8.90</b>	<b>6.06</b>	<b>5.53</b>	<b>7.27</b>	<b>07/01/86</b>
CUSTOM NOMINAL FIXED INCOME BENCHMARK <sup>[22]</sup>			2.89	13.31	13.31	17.21	23.20	10.27	6.72	5.31		07/01/86
Excess			-2.04	-3.94	-3.94	-4.16	-4.74	-1.37	-0.67	0.22		
Nominal FI Tactical	83,705,034	0.2										01/01/17
Nominal FI Structural	19,282	0.0										01/01/17
<b>NOMINAL FIXED INCOME OVERLAY</b>	<b>83,724,316</b>	<b>0.2</b>										<b>01/01/17</b>
<b>NOMINAL FIXED INCOME</b>	<b>7,990,254,238</b>	<b>15.6</b>	<b>1.67</b>	<b>12.18</b>	<b>12.18</b>	<b>16.03</b>	<b>21.76</b>	<b>9.87</b>	<b>6.64</b>	<b>5.82</b>	<b>7.35</b>	<b>07/01/86</b>
CUSTOM NOMINAL FIXED INCOME BENCHMARK <sup>[22]</sup>			2.89	13.31	13.31	17.21	23.20	10.27	6.72	5.31		07/01/86
Excess			-1.22	-1.13	-1.13	-1.18	-1.44	-0.39	-0.09	0.51		
<b>INFLATION SENSITIVE</b>												
SSGA PASSIVE US TIPS	101,867,755	0.2	-1.72	1.99	1.99	4.18	7.26	3.63	2.74		1.19	12/01/12
BBG BARC US TIPS Idx			-1.79	1.93	1.93	4.19	7.27	3.63	2.76		1.23	12/01/12
Excess			0.07	0.06	0.06	-0.01	-0.01	-0.00	-0.02		-0.04	
MD TIPS	2,249,792,364	4.4	-1.68	2.06	2.06	4.31					4.31	07/01/19
BBG Barc US Gov Infl-Lkd All Maturities			-1.79	1.93	1.93	4.19					4.19	07/01/19
Excess			0.10	0.13	0.13	0.11					0.11	
<b>TOTAL U.S. TIPS</b>	<b>2,351,660,118</b>	<b>4.6</b>	<b>-1.68</b>	<b>2.06</b>	<b>2.06</b>	<b>4.30</b>	<b>7.36</b>	<b>3.66</b>	<b>2.76</b>	<b>3.44</b>	<b>4.16</b>	<b>02/01/06</b>
CUSTOM US TIPS MD BM <sup>[25]</sup>			-1.79	1.93	1.93	4.19	7.27	3.63	2.76	3.52	3.96	02/01/06
Excess			0.10	0.13	0.13	0.10	0.09	0.03	0.00	-0.09	0.20	

**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
<b>INFLATION SENSITIVE FI EX OVERLAY</b>	<b>2,351,660,119</b>	<b>4.6</b>	<b>-1.68</b>	<b>2.06</b>	<b>2.06</b>	<b>4.31</b>	<b>7.38</b>	<b>3.66</b>	<b>2.73</b>	<b>3.76</b>	<b>3.91</b>	<b>07/01/08</b>
CUSTOM INFLATION SENSITIVE BENCHMARK <sup>[26]</sup>			-1.79	1.93	1.93	4.19	7.27	3.63	2.76	3.84	3.71	07/01/08
Excess			0.10	0.13	0.13	0.11	0.11	0.03	-0.03	-0.08	0.21	
Inflation Sensitive FI Tactical	-1	0.0										07/01/17
<b>INFLATION SENSITIVE FIXED INCOME OVERLAY</b>	<b>-1</b>	<b>0.0</b>										<b>07/01/17</b>
<b>INFLATION SENSITIVE FIXED INCOME</b>	<b>2,351,660,117</b>	<b>4.6</b>	<b>-1.68</b>	<b>2.09</b>	<b>2.09</b>	<b>4.37</b>	<b>7.44</b>	<b>3.63</b>	<b>2.71</b>	<b>3.75</b>	<b>3.91</b>	<b>07/01/08</b>
CUSTOM INFLATION SENSITIVE BENCHMARK <sup>[26]</sup>			-1.79	1.93	1.93	4.19	7.27	3.63	2.76	3.84	3.71	07/01/08
Excess			0.11	0.16	0.16	0.18	0.17	-0.00	-0.05	-0.09	0.20	
<b>TOTAL RATE SENSITIVE EX OVERLAY</b>	<b>10,258,190,040</b>	<b>20.1</b>	<b>0.34</b>	<b>7.79</b>	<b>7.79</b>	<b>11.14</b>	<b>15.98</b>	<b>7.73</b>	<b>5.33</b>	<b>5.17</b>	<b>7.16</b>	<b>07/01/86</b>
CUSTOM RATE SENSITIVE BENCHMARK <sup>[27]</sup>			1.94	10.93	10.93	14.49	19.83	8.87	6.06	4.98		07/01/86
Excess			-1.60	-3.13	-3.13	-3.35	-3.86	-1.14	-0.73	0.18		
<b>TOTAL RATE SENSITIVE OVERLAY</b>	<b>83,724,315</b>	<b>0.2</b>										<b>01/01/17</b>
<b>TOTAL RATE SENSITIVE</b>	<b>10,341,914,355</b>	<b>20.2</b>	<b>0.98</b>	<b>9.98</b>	<b>9.98</b>	<b>13.47</b>	<b>18.54</b>	<b>8.48</b>	<b>5.78</b>	<b>5.39</b>	<b>7.23</b>	<b>07/01/86</b>
CUSTOM RATE SENSITIVE BENCHMARK <sup>[27]</sup>			1.94	10.93	10.93	14.49	19.83	8.87	6.06	4.98		07/01/86
Excess			-0.96	-0.95	-0.95	-1.02	-1.30	-0.38	-0.28	0.41		
<b>CREDIT/DEBT</b>												
<b>US CREDIT</b>												
PIMCO HIGH QUALITY HY	1,437,300,544	2.8	-8.96	-10.29	-10.29	-6.22	-3.46				1.16	07/01/18
BBG BARC Ba to B US HY Idx			-10.27	-11.39	-11.39	-7.47	-4.80				0.38	07/01/18
Excess			1.31	1.09	1.09	1.25	1.34				0.78	



**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
CREDIT SUISSE US BANK LOANS	377,083,907	0.7	-12.94	-13.73	-13.73	-11.12	-9.82				-3.09	07/01/18
S&P/LSTA Leverage Loan Index			-12.37	-13.05	-13.05	-10.66	-9.16				-4.13	07/01/18
Excess			-0.57	-0.68	-0.68	-0.46	-0.66				1.05	
PINE BRIDGE HIGH QUALITY HY	603,063,980	1.2	-9.45	-10.33	-10.33	-6.95	-4.11				0.29	07/01/18
BBG BARC Ba to B US HY Idx			-10.27	-11.39	-11.39	-7.47	-4.80				0.38	07/01/18
Excess			0.83	1.05	1.05	0.52	0.69				-0.09	
KKR BANK LOANS	9,956,926	0.0										09/01/10
CREDIT/DEBT TRANSITION ACCOUNT	0	0.0										02/01/09
CREDIT/DEBT TERRA MARIA <sup>[28]</sup>	47,771,535	0.1	-8.79	-9.76	-9.76	-7.04	-5.40					01/01/10
HIGH YIELD/BANK LOAN EX OVERLAY	2,475,563,046	4.8	-9.78	-10.90	-10.90	-7.24	-4.80	1.07			2.78	11/01/15
HIGH YIELD CUSTOM BENCHMARK <sup>[29]</sup>			-11.64	-12.76	-12.76	-9.50	-7.38	0.46			3.25	11/01/15
Excess			1.86	1.86	1.86	2.25	2.58	0.61			-0.47	
HIGH YIELD/BANK LOAN OVERLAY	0	0.0										07/01/19
HIGH YIELD/BANK LOAN	2,475,563,046	4.8	-9.78	-10.89	-10.89	-7.18	-4.74	1.09			2.79	11/01/15
HIGH YIELD CUSTOM BENCHMARK <sup>[29]</sup>			-11.64	-12.76	-12.76	-9.50	-7.38	0.46			3.25	11/01/15
Excess			1.87	1.87	1.87	2.31	2.64	0.63			-0.46	
TOTAL DISTRESSED DEBT	617,976,217	1.2	-2.51	-2.40	-2.40	-1.80	-0.83	5.33	6.33	7.58	8.04	01/01/10

**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
<b>TOTAL MEZZANINE DEBT</b>	<b>456,809,409</b>	<b>0.9</b>	<b>0.74</b>	<b>-0.18</b>	<b>-0.18</b>	<b>3.65</b>	<b>4.94</b>	<b>6.60</b>	<b>7.84</b>	<b>8.11</b>	<b>7.67</b>	<b>01/01/10</b>
PERELLA WEINBERG	50,007,742	0.1	0.94	0.94	0.94	0.26	-3.98	-2.10	-3.34		3.95	07/01/10
HFRI ED: Distressed/Restructuring Index			-11.05	-11.80	-11.80	-13.37	-12.02	-2.58	-0.08		2.83	07/01/10
Excess			12.00	12.74	12.74	13.64	8.05	0.48	-3.26		1.12	
<b>TOTAL CREDIT HEDGE FUND</b>	<b>50,007,742</b>	<b>0.1</b>	<b>0.94</b>	<b>0.94</b>	<b>0.94</b>	<b>0.26</b>	<b>-3.98</b>	<b>1.54</b>	<b>1.08</b>		<b>5.34</b>	<b>07/01/10</b>
HFRI ED: Distressed/Restructuring Index			-11.05	-11.80	-11.80	-13.37	-12.02	-2.58	-0.08		2.83	07/01/10
Excess			12.00	12.74	12.74	13.64	8.05	4.13	1.16		2.51	
<b>US CREDIT EX OVERLAY</b>	<b>3,600,356,413</b>	<b>7.0</b>	<b>-7.32</b>	<b>-8.22</b>	<b>-8.22</b>	<b>-5.09</b>	<b>-3.12</b>	<b>2.77</b>	<b>3.70</b>	<b>6.45</b>	<b>7.95</b>	<b>03/01/09</b>
U.S. CREDIT CUSTOM BENCHMARK <sup>[30]</sup>			-11.64	-12.76	-12.76	-9.50	-7.38	0.46	2.45	4.86	6.92	03/01/09
Excess			4.33	4.54	4.54	4.41	4.26	2.31	1.24	1.59	1.02	
<b>NON US CREDIT</b>												
LOGAN CIRCLE HARD CURRENCY EM	442,921,793	0.9	-15.80	-14.98	-14.98	-11.24	-7.52				-0.28	07/01/18
Custom EM HC Benchmark <sup>[31]</sup>			-10.96	-10.13	-10.13	-7.47	-3.93				1.25	07/01/18
Excess			-4.84	-4.85	-4.85	-3.76	-3.60				-1.54	
SSGA LOCAL CURRENCY EM	552,299,121	1.1	-5.98	-7.64	-7.64	-4.71	-1.46				3.15	11/01/18
Custom EM Debt Benchmark <sup>[32]</sup>			-6.06	-7.63	-7.63	-4.61	-1.43				3.17	11/01/18
Excess			0.08	-0.01	-0.01	-0.10	-0.03				-0.02	
<b>NON US CREDIT EX OVERLAY</b>	<b>995,220,914</b>	<b>1.9</b>	<b>-10.98</b>	<b>-11.33</b>	<b>-11.33</b>	<b>-7.98</b>	<b>-4.49</b>	<b>0.20</b>	<b>0.73</b>		<b>-0.58</b>	<b>10/01/10</b>
NON-U.S. CREDIT CUSTOM BENCHMARK <sup>[33]</sup>			-8.51	-8.85	-8.85	-6.01	-2.63	1.60	1.76		0.29	10/01/10
Excess			-2.48	-2.48	-2.48	-1.97	-1.86	-1.40	-1.04		-0.87	



**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
Non US Credit Tactical	0	0.0										07/01/19
<b>NON US CREDIT OVERLAY</b>	<b>0</b>	<b>0.0</b>										<b>07/01/19</b>
<b>NON US CREDIT</b>	<b>995,220,914</b>	<b>1.9</b>	<b>-10.98</b>	<b>-11.33</b>	<b>-11.33</b>	<b>-7.97</b>	<b>-4.48</b>	<b>0.20</b>	<b>0.73</b>		<b>-0.58</b>	<b>10/01/10</b>
NON-U.S. CREDIT CUSTOM BENCHMARK <sup>[33]</sup>			-8.51	-8.85	-8.85	-6.01	-2.63	1.60	1.76		0.29	10/01/10
Excess			-2.47	-2.48	-2.48	-1.96	-1.85	-1.40	-1.03		-0.86	
<b>TOTAL CREDIT/DEBT STRATEGIES EX OVERLAY</b>	<b>4,595,577,327</b>	<b>9.0</b>	<b>-8.14</b>	<b>-8.92</b>	<b>-8.92</b>	<b>-5.73</b>	<b>-3.45</b>	<b>1.80</b>	<b>3.00</b>	<b>5.53</b>	<b>7.77</b>	<b>03/01/09</b>
MSRA CUSTOM CREDIT BENCHMARK <sup>[34]</sup>			-10.95	-11.90	-11.90	-8.73	-6.34	0.81	2.36	4.36	6.46	03/01/09
Excess			2.81	2.99	2.99	2.99	2.89	0.99	0.64	1.17	1.30	
<b>TOTAL CREDIT/DEBT STRATEGIES OVERLAY</b>	<b>0</b>	<b>0.0</b>										<b>07/01/19</b>
<b>TOTAL CREDIT/DEBT STRATEGIES</b>	<b>4,595,577,327</b>	<b>9.0</b>	<b>-8.14</b>	<b>-8.90</b>	<b>-8.90</b>	<b>-5.70</b>	<b>-3.41</b>	<b>1.81</b>	<b>3.01</b>	<b>5.54</b>	<b>7.77</b>	<b>03/01/09</b>
MSRA CUSTOM CREDIT BENCHMARK <sup>[34]</sup>			-10.95	-11.90	-11.90	-8.73	-6.34	0.81	2.36	4.36	6.46	03/01/09
Excess			2.81	3.00	3.00	3.03	2.92	1.00	0.64	1.18	1.31	
<b>REAL ASSETS</b>												
<b>REAL ESTATE</b>												
<b>TOTAL REITS EX RECORD CURRENCY</b>	<b>306,275</b>	<b>0.0</b>										<b>04/01/94</b>
RECORD CURRENCY MANAGEMENT-REITS	23,317	0.0										07/01/11
<b>TOTAL REITS EX OVERLAY</b>	<b>329,592</b>	<b>0.0</b>										<b>04/01/94</b>

**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
<b>TOTAL PRIVATE REAL ESTATE</b>	<b>4,705,348,555</b>	<b>9.2</b>	<b>0.98</b>	<b>1.43</b>	<b>1.43</b>	<b>3.49</b>	<b>5.36</b>	<b>7.44</b>	<b>8.78</b>	<b>10.81</b>	<b>9.02</b>	<b>03/01/94</b>
CUSTOM MD PRIVATE REAL ESTATE BM <sup>[35]</sup>			1.05	1.51	1.51	3.86	5.34	7.09	8.97	10.89	9.45	03/01/94
<i>Excess</i>			-0.08	-0.08	-0.08	-0.37	0.02	0.34	-0.19	-0.07	-0.43	
MSIM Cus FTSE EPRA NAREIT Dev ex US(Net) <sup>[36]</sup>			-22.76	-28.53	-28.53	-23.91	-23.97	-3.84	-2.06	3.77		11/01/06
WILSHIRE RESI			-20.05	-25.73	-25.73	-20.76	-19.47	-2.47	0.08	7.76		01/01/78
<b>TOTAL REAL ESTATE</b>	<b>4,705,678,148</b>	<b>9.2</b>	<b>0.98</b>	<b>1.43</b>	<b>1.43</b>	<b>3.53</b>	<b>5.00</b>	<b>7.20</b>	<b>7.84</b>	<b>10.31</b>	<b>6.81</b>	<b>07/01/87</b>
REAL ESTATE CUSTOM INDEX <sup>[37]</sup>			1.05	1.51	1.51	3.86	5.11	7.09	8.15	10.39	8.14	07/01/87
<i>Excess</i>			-0.08	-0.08	-0.08	-0.33	-0.10	0.11	-0.31	-0.09	-1.33	
<b>NATURAL RESOURCE AND INFRASTRUCTURE</b>												
TORTOISE CAPITAL DOMESTIC EQ	50,094,179	0.1	-38.53	-47.97	-47.97	-52.01	-52.38	-23.44	-16.51	-0.24	2.14	08/01/09
S&P MLP Total Return Index			-46.15	-55.88	-55.88	-58.97	-59.21	-26.97	-19.88	-3.92	-1.46	08/01/09
<i>Excess</i>			7.61	7.91	7.91	6.96	6.83	3.53	3.37	3.68	3.59	
HARVEST FUND ADVISORS	171,082,013	0.3	-40.72	-48.83	-48.83	-52.01	-52.24	-23.28	-16.66	1.59	2.96	11/01/09
S&P MLP Total Return Index			-46.15	-55.88	-55.88	-58.97	-59.21	-26.97	-19.88	-3.92	-1.86	11/01/09
<i>Excess</i>			5.42	7.05	7.05	6.96	6.97	3.68	3.21	5.50	4.82	
RHUMBLINE DJ BROOKFIELD GLOBAL INFRA	448,186,558	0.9	-18.40	-24.20	-24.20	-19.89	-16.73				-3.63	11/01/17
DJ Brookfield Global Infra Comp			-18.52	-24.45	-24.45	-20.48	-17.51				-4.98	11/01/17
<i>Excess</i>			0.12	0.26	0.26	0.59	0.78				1.35	
RHUMBLINE GLOBAL NATURAL RESOURCES	217,199,263	0.4	-17.97	-32.71	-32.71	-30.81	-29.95				-11.96	11/01/17
S&P Global Natural Resources (Net)			-18.20	-32.99	-32.99	-31.23	-30.49				-12.73	11/01/17
<i>Excess</i>			0.22	0.28	0.28	0.42	0.54				0.77	



**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
TOTAL ENERGY FUNDS	631,917,843	1.2	-1.02	-1.79	-1.79	-4.85	-4.00	4.61	1.62	6.18	6.11	01/01/10
TOTAL INFRASTRUCTURE	76,276,791	0.1	-6.27	-6.27	-6.27	-6.64	-3.38	-4.32	-1.08	2.39	2.10	10/01/09
TIMBER LP FUNDS	205,467,548	0.4	0.01	3.03	3.03	4.94	6.83	2.78	2.82		6.22	05/01/10
<b>NATURAL RESOURCE AND INFRA EX OVERLAY</b>	<b>1,800,224,195</b>	<b>3.5</b>	<b>-14.74</b>	<b>-20.70</b>	<b>-20.70</b>	<b>-20.70</b>	<b>-19.32</b>	<b>-4.29</b>	<b>-3.12</b>	<b>5.04</b>	<b>6.44</b>	<b>08/01/09</b>
NATURAL RESOURCE AND INFRASTRUCTURE BM <sup>[39]</sup>			-18.33	-29.62	-29.62	-26.97	-25.33	-4.94	1.06	3.78	3.96	08/01/09
Excess			3.59	8.92	8.92	6.27	6.01	0.65	-4.18	1.26	2.48	
Real Assets Tactical	0	0.0										07/01/19
<b>NATURAL RESOURCE AND INFRA OVERLAY</b>	<b>0</b>	<b>0.0</b>										<b>07/01/19</b>
<b>NATURAL RESOURCE AND INFRASTRUCTURE</b>	<b>1,800,224,195</b>	<b>3.5</b>	<b>-14.74</b>	<b>-20.69</b>	<b>-20.69</b>	<b>-20.69</b>					<b>-20.69</b>	<b>07/01/19</b>
NATURAL RESOURCE AND INFRASTRUCTURE BM <sup>[39]</sup>			-18.33	-29.62	-29.62	-26.97					-26.97	07/01/19
Excess			3.59	8.93	8.93	6.28					6.28	
<b>TOTAL REAL ASSETS EX OVERLAY</b>	<b>6,505,902,342</b>	<b>12.7</b>	<b>-3.91</b>	<b>-5.80</b>	<b>-5.80</b>	<b>-4.45</b>	<b>-3.00</b>	<b>3.29</b>	<b>2.20</b>	<b>3.00</b>	<b>3.72</b>	<b>02/01/06</b>
CUSTOM REAL ASSETS BENCHMARK <sup>[39]</sup>			-4.97	-8.97	-8.97	-6.36	-4.88	3.02	2.95	2.40	2.92	02/01/06
Excess			1.07	3.18	3.18	1.91	1.89	0.27	-0.75	0.59	0.80	
<b>TOTAL REAL ASSETS OVERLAY</b>	<b>20,728,933</b>	<b>0.0</b>										<b>01/01/17</b>
<b>TOTAL REAL ASSETS</b>	<b>6,526,631,275</b>	<b>12.8</b>	<b>-3.94</b>	<b>-5.84</b>	<b>-5.84</b>	<b>-4.49</b>	<b>-3.03</b>	<b>3.28</b>	<b>2.20</b>	<b>2.99</b>	<b>3.72</b>	<b>02/01/06</b>
CUSTOM REAL ASSETS BENCHMARK <sup>[39]</sup>			-4.97	-8.97	-8.97	-6.36	-4.88	3.02	2.95	2.40	2.92	02/01/06
Excess			1.03	3.14	3.14	1.87	1.85	0.26	-0.76	0.59	0.79	

**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
<b>ABSOLUTE RETURN</b>												
1977 MERGER ARBITRAGE FUND	175,861,039	0.3	-5.74	-4.87	-4.87	0.38	1.45				7.34	01/01/18
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23	-5.30	-3.67				-0.12	01/01/18
<i>Excess</i>			1.12	2.37	2.37	5.68	5.13				7.46	
SHOALS FINANCIALS OPPORTUNITY FUND, LP	94,908,800	0.2	-0.42	-0.77	-0.77	-10.41	-10.15				-2.48	03/01/18
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23	-5.30	-3.67				-0.46	03/01/18
<i>Excess</i>			6.44	6.46	6.46	-5.11	-6.47				-2.02	
KING STREET CAPITAL	179,743,223	0.4	-8.99	-10.63	-10.63	-11.32	-10.53	-1.51	-0.09		3.02	12/01/11
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23	-5.30	-3.67	1.10	1.26		2.85	12/01/11
<i>Excess</i>			-2.13	-3.40	-3.40	-6.01	-6.85	-2.62	-1.35		0.17	
EMPYREAN CAPITAL FUND	280,580,100	0.5	-8.03	-7.29	-7.29	-7.54	-5.32				-3.59	06/01/18
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23	-5.30	-3.67				-1.24	06/01/18
<i>Excess</i>			-1.17	-0.05	-0.05	-2.23	-1.64				-2.35	
STANDARD GENERAL FUND II	148,171,400	0.3	-16.20	-21.49	-21.49	-30.04	-29.03				-21.46	02/01/19
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23	-5.30	-3.67				-1.97	02/01/19
<i>Excess</i>			-9.35	-14.25	-14.25	-24.74	-25.36				-19.49	
SGM CO-INVESTMENT FUND LP	7,242,110	0.0	-11.60	-25.91	-25.91						-28.08	10/01/19
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23						-5.49	10/01/19
<i>Excess</i>			-4.74	-18.68	-18.68						-22.59	

**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
CONTRARIAN EMMA 2	126,212,378	0.2	-28.22	-36.89	-36.89						-36.89	01/01/20
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23						-7.23	01/01/20
Excess			-21.36	-29.66	-29.66						-29.66	
<b>EVENT DRIVEN STRATEGIES</b>	<b>1,012,719,049</b>	<b>2.0</b>	<b>-11.58</b>	<b>-14.38</b>	<b>-14.38</b>	<b>-16.68</b>	<b>-15.40</b>					<b>07/01/17</b>
HFRI FoF CONSERVATIVE + 100 bps			-6.86	-7.23	-7.23	-5.30	-3.67					07/01/17
Excess			-4.72	-7.14	-7.14	-11.37	-11.72					
BRIDGEWATER PURE ALPHA	474,803,000	0.9	-13.16	-20.55	-20.55	-17.62	-17.64	-5.19	-3.58	2.77	2.82	05/01/08
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23	-5.30	-3.67	1.10	1.26	2.25	1.18	05/01/08
Excess			-6.30	-13.32	-13.32	-12.32	-13.96	-6.30	-4.83	0.52	1.64	
GRAHAM TACTICAL TREND	226,770,053	0.4	-3.53	-8.27	-8.27	-2.64	3.82	-0.93			-3.34	07/01/15
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23	-5.30	-3.67	1.10			1.26	07/01/15
Excess			3.33	-1.04	-1.04	2.67	7.49	-2.03			-4.61	
FORT GLOBAL CONTRARIAN	224,817,200	0.4	-4.16	-3.23	-3.23	-0.77	3.53				5.20	03/01/18
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23	-5.30	-3.67				-0.46	03/01/18
Excess			2.70	4.00	4.00	4.53	7.20				5.66	
TUDOR MANIYAR MACRO FUND	215,886,200	0.4	4.61	7.74	7.74						7.94	08/01/19
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23						-5.61	08/01/19
Excess			11.47	14.97	14.97						13.55	
<b>GLOBAL MACRO/GTAA STRATEGIES</b>	<b>1,142,276,453</b>	<b>2.2</b>	<b>-6.58</b>	<b>-10.61</b>	<b>-10.61</b>	<b>-7.38</b>	<b>-5.40</b>	<b>-2.49</b>	<b>-2.75</b>	<b>0.87</b>	<b>1.31</b>	<b>04/01/08</b>
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23	-5.30	-3.67	1.10	1.26	2.25	1.22	04/01/08
Excess			0.28	-3.38	-3.38	-2.08	-1.73	-3.59	-4.01	-1.38	0.09	

**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
NEPHILA PALMETTO FUND	160,323,959	0.3	-0.91	-0.42	-0.42	-1.11	0.32	-3.12	-0.38		0.82	01/01/14
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23	-5.30	-3.67	1.10	1.26		1.73	01/01/14
<i>Excess</i>			5.95	6.82	6.82	4.19	3.99	-4.23	-1.64		-0.91	
NIMBUS WEATHER FUND LTD	115,506,400	0.2	0.47	19.57	19.57	21.88	22.44				4.17	06/01/17
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23	-5.30	-3.67				0.92	06/01/17
<i>Excess</i>			7.32	26.80	26.80	27.18	26.11				3.24	
PRIVATE MARKET FUNDS	62,989,480	0.1	0.03	-10.82	-10.82	-23.01	-24.87				-3.73	06/01/18
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23	-5.30	-3.67				-1.24	06/01/18
<i>Excess</i>			6.89	-3.58	-3.58	-17.71	-21.20				-2.49	
HSCM BERMUDA FUND	205,427,850	0.4	0.83	0.83	0.83	7.12					7.12	07/01/19
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23	-5.30					-5.30	07/01/19
<i>Excess</i>			7.69	8.06	8.06	12.43					12.43	
OPPORTUNISTIC	544,247,689	1.1	0.14	2.49	2.49	1.65	2.15	-1.56	0.58		1.60	01/01/14
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23	-5.30	-3.67	1.10	1.26		1.73	01/01/14
<i>Excess</i>			7.00	9.73	9.73	6.96	5.82	-2.66	-0.67		-0.13	
HUDSON BAY FUND	488,009,250	1.0	0.70	3.02	3.02	6.87	7.39	8.84	6.00		5.06	10/01/14
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23	-5.30	-3.67	1.10	1.26		1.54	10/01/14
<i>Excess</i>			7.56	10.26	10.26	12.18	11.06	7.73	4.74		3.52	
ARISTEIA CAPITAL	357,294,300	0.7	-3.96	-3.62	-3.62	-1.10	1.21	4.08	3.90		3.58	12/01/14
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23	-5.30	-3.67	1.10	1.26		1.62	12/01/14
<i>Excess</i>			2.90	3.62	3.62	4.20	4.88	2.98	2.64		1.96	

**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
<b>ARISTEIA CO-INVEST</b>	23,941,685	0.0	-3.69	0.09	0.09	12.16	19.60	13.34			9.57	03/01/16
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23	-5.30	-3.67	1.10			2.40	03/01/16
<i>Excess</i>			3.17	7.32	7.32	17.46	23.27	12.24			7.17	
<b>EXODUS POINT</b>	421,830,703	0.8	-0.74	0.87	0.87	4.05	5.44				4.46	08/01/18
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23	-5.30	-3.67				-1.56	08/01/18
<i>Excess</i>			6.12	8.10	8.10	9.36	9.12				6.02	
<b>VOLORIDGE FUND</b>	192,579,400	0.4	5.72									01/01/20
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86									01/01/20
<i>Excess</i>			12.58									
<b>RELATIVE VALUE STRATEGIES</b>	1,483,655,337	2.9	-0.33	-0.30	-0.30	3.06	4.56	4.34	2.80		3.18	01/01/14
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23	-5.30	-3.67	1.10	1.26		1.73	01/01/14
<i>Excess</i>			6.53	6.94	6.94	8.37	8.24	3.23	1.55		1.44	
<b>BLACKROCK ABSOLUTE RETURN STRUCTURAL</b>	80,841	0.0	-5.79	-7.76	-7.76	-5.00	-3.26				-1.05	06/01/18
<b>TOTAL ABSOLUTE RETURN</b>	4,183,393,972	8.2	-5.03	-6.77	-6.77	-5.36	-3.84	-0.13	-0.15	2.42	2.53	04/01/08
CUSTOM ABSOLUTE RETURN BENCHMARK <sup>[20]</sup>			-6.86	-7.23	-7.23	-5.30	-3.67	1.10	1.26	2.25	1.22	04/01/08
<i>Excess</i>			1.83	0.46	0.46	-0.06	-0.16	-1.23	-1.41	0.17	1.31	
<b>MULTI ASSET</b>												
<b>BRIDGEWATER ALL WEATHER</b>	421,574,525	0.8	-9.81	-9.88	-9.88	-6.05	-2.54	2.69	2.01	6.24	6.94	07/01/09
CUSTOM BRIDGEWATER BENCHMARK <sup>[40]</sup>			-6.86	-7.23	-7.23	-5.30	-3.67	1.10	1.26	4.11	4.65	07/01/09
<i>Excess</i>			-2.95	-2.64	-2.64	-0.74	1.13	1.59	0.75	2.13	2.30	

**SUMMARY OF PERFORMANCE**

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
BLACKROCK CASH EQUITIZATION	705,531,749	1.4	-11.53	-14.92	-14.92	-9.69	-7.37	2.20			4.65	12/01/16
FTSE 3 MONTH T-BILL			0.13	0.39	0.39	1.42	2.04	1.74			1.61	12/01/16
<i>Excess</i>			-11.66	-15.31	-15.31	-11.11	-9.41	0.46			3.04	
<b>TOTAL MULTI ASSET</b>	<b>1,127,106,275</b>	<b>2.2</b>	<b>-10.89</b>	<b>-12.89</b>	<b>-12.89</b>	<b>-8.79</b>	<b>-5.79</b>				<b>-2.76</b>	<b>07/01/18</b>
TOTAL PLAN POLICY INDEX <sup>[41]</sup>			-6.43	-8.47	-8.47	-3.73	-0.56				1.76	07/01/18
<i>Excess</i>			-4.46	-4.42	-4.42	-5.05	-5.23				-4.52	
<b>CASH</b>												
MARYLAND MONEY MARKET ACCOUNT	269,464,566	0.5	0.09	0.37	0.37	1.45	2.07	1.93	1.32		0.74	01/01/11
FTSE 3 MONTH T-BILL			0.13	0.39	0.39	1.42	2.04	1.74	1.12		0.63	01/01/11
<i>Excess</i>			-0.03	-0.01	-0.01	0.03	0.03	0.19	0.19		0.11	
SELF LIQUIDATING ACCOUNT	2,204,983	0.0	-0.51	1.49	1.49	5.19	9.75					06/01/84
<b>TOTAL CASH</b>	<b>276,052,400</b>	<b>0.5</b>	<b>-0.57</b>	<b>-1.34</b>	<b>-1.34</b>	<b>0.47</b>	<b>4.17</b>	<b>6.75</b>	<b>5.55</b>	<b>4.07</b>	<b>3.87</b>	<b>07/01/08</b>
FTSE 3 MONTH T-BILL			0.13	0.39	0.39	1.42	2.04	1.74	1.12	0.60	0.58	07/01/08
<i>Excess</i>			-0.69	-1.73	-1.73	-0.95	2.13	5.01	4.42	3.48	3.29	
<b>TOTAL PLAN</b>	<b>51,138,787,452</b>	<b>100.0</b>	<b>-6.41</b>	<b>-8.29</b>	<b>-8.29</b>	<b>-3.55</b>	<b>-0.69</b>	<b>4.65</b>	<b>4.39</b>	<b>6.22</b>	<b>7.72</b>	<b>07/01/86</b>
TOTAL PLAN POLICY INDEX <sup>[41]</sup>			-6.43	-8.47	-8.47	-3.73	-0.56	4.52	4.45	5.79		07/01/86
<i>Excess</i>			0.02	0.17	0.17	0.18	-0.13	0.12	-0.06	0.43		
TOTAL PLAN CUSTOM STATIC INDEX <sup>[42]</sup>			-6.53	-8.77	-8.77	-4.02	-0.85	4.50	4.53	6.03		07/01/08

# State Retirement Agency of Maryland

Rates of Return -  
Periods Ending March 31, 2020



## ENDNOTES

- [1] Since 12/01/2016: 100% Russell 1000  
From 04/01/2013 to 11/30/2016: 100% Russell 3000
- [2] Benchmark is dynamically calculated using Beginning Market Value weights of the underlying portfolios and their benchmarks
- [3] Since 11/01/2008: Benchmark is dynamically calculated using Average Balance (BMV+ Weighted Net Cash Flows) weights of the underlying portfolios and their corresponding indices. From 09/01/2008 - 10/31/2008: Benchmark was dynamically calculated based on the beginning weights of the underlying portfolios and their corresponding indices From 05/01/2008 - 08/31/2008: 11.1% S&P 500; 13.3% Russell 1000 Value; 33.3% Russell 1000 Growth; 16.7% Russell Mid Cap Growth; 25.6% Russell 2000 Value 11/01/2007 - 04/30/2008: 10.9% S&P 500; 13.1% Russell 1000 Value; 33.3% Russell 1000 Growth; 17.2% Russell Mid Cap Growth; 25.6 Russell 2000 Value Prior to 11/01/2007: 11% S&P 500; 13.1% Russell 1000 Value; 32% Russell 1000 Growth; 16.5% Russell Mid Cap Growth; 27.4% Russell 2000 Value
- [4] Since 07/01/2008: 100% Russell 3000  
From 01/01/2005 to 6/30/2008: 100% Dow Jones Willshire 5000  
Prior to 01/01/2005: 100% Russell 3000
- [5] From 11/01/2003: 100% of MSCI AC WORLD ex US (NET)  
From 07/01/2012: 100% of MSCI WORLD EX US (NET)
- [6] Since 04/01/2016: 100% MSCI WORLD EX US (NET).  
From 01/01/2013 to 03/31/2016: 100% MSCI AC World ex US Net.
- [7] Since 06/01/2016: 100% MSCI World Ex US IMI Net  
From 12/01/2008 to 05/31/2016: 100% MSCI All Country World ex US IMI Net
- [8] Returns for periods prior to 11/01/2015 also included Emerging Market Equity portfolios.
- [9] Benchmark is dynamically calculated using Beginning Market Value weights of the underlying portfolios and their benchmarks. Returns for periods prior to 11/01/2015 also included Emerging Market Equity portfolios.
- [10] Since 11/01/2008: Benchmark is dynamically calculated using Average Balance (BMV+ Weighted Net Cash Flows) weights. Prior to 11/01/2008: 100% MSCI EAFE (net).  
Returns for periods prior to 11/01/2015 also included Emerging Market Equity portfolios.
- [11] Since 11/01/2015: 100% MSCI WORLD EX US (NET)  
From 07/01/2010 to 10/31/2015: 100% MSCI All Country World ex. U.S.  
From 07/01/2009 to 06/30/2010: 100% MSCI All Country World ex. U.S. IMI Net  
From 01/01/2003 to 06/30/2009: 100% MSCI All Country World ex. U.S.  
Prior to 01/01/2003: 100% MSCI EAFE
- [12] Since 07/01/2010: 100% MSCI AC WORLD NET  
From 07/01/2009 to 06/30/2010: 100% MSCI ACWI IMI NET  
Prior to 07/01/2009: 100% MSCI AC WORLD NET
- [13] Since 10/01/2017: Weighted off Transitional Targets; 43.243% Russell 3000, 27.027% MSCI World ex. U.S. (Net), 29.730% MSCI EM  
From 07/01/2016 to 09/30/2017: Weighted off Transitional Targets; 44.445% Russell 3000, 33.333% MSCI World ex. U.S. (Net), 22.222% MSCI EM  
From 01/01/2016 to 06/30/2016: Weighted off Transitional Targets; 45.946% Russell 3000, 37.838% MSCI World ex. U.S. (Net), 16.216% MSCI EM  
From 11/01/2015 to 12/31/2015: Weighted off Transitional Targets; 47.369% Russell 3000, 42.105% MSCI World ex. U.S. (Net), 10.526% MSCI EM  
Prior to 11/01/2015: Benchmark is dynamically calculated using the weights of the US Equity, International Equity, and Global Equity aggregates and the corresponding asset class benchmarks
- [14] The Private Equity benchmark is the State Street Private Equity Index (1 quarter lag). However, in non-quarter end months, the actual Private Equity return will be applied. In the third month of the quarter, the return will be calculated so that when geometrically linked with months 1 and 2, the three month return equals the published SS PEI (1 quarter lag).

# State Retirement Agency of Maryland

Rates of Return -  
Periods Ending March 31, 2020



## ENDNOTES

- [15] Benchmark is a dynamic blend of the Public Equity Benchmark and the State Street Private Equity Index based off of sub-asset class weights used in the policy benchmark.
- [16] Since 10/01/2017: 66.67% Barclays US Government Long Bond Index, 16.67% Barclays US Investment Grade Corporate Index, 16.66% Barclays US Securitized Index  
From 11/01/2015 to 09/30/2017: 62.50% Barclays US Government Long Bond Index, 18.75% Barclays US Investment Grade Corporate Index, 18.75% Barclays US Securitized Index  
From 07/01/2013 to 10/31/2015: 100% Barclays US Intermediate Aggregate Index  
Prior 07/01/2013: 100% Barclays Aggregate Bond
- [17] Since 10/01/2017: 66.67% Barclays US Government Long Bond Index, 16.67% Barclays US Investment Grade Corporate Index, 16.66% Barclays US Securitized Index  
From 11/01/2015 to 09/30/2017: 62.50% Barclays US Government Long Bond Index, 18.75% Barclays US Investment Grade Corporate Index, 18.75% Barclays US Securitized Index
- [18] Since 10/01/2017: 66.67% Barclays US Government Long Bond Index, 16.67% Barclays US Investment Grade Corporate Index, 16.66% Barclays US Securitized Index  
From 11/01/2015 to 09/30/2017: 62.50% Barclays US Government Long Bond Index, 18.75% Barclays US Investment Grade Corporate Index, 18.75% Barclays US Securitized Index  
From 07/01/2013 to 10/31/2015: 100% Barclays US Intermediate Aggregate Index  
07/01/2009 to 06/30/2013: 100% Barclays Aggregate Bond  
11/01/2003 to 06/30/2009: 100% Barclays US Universal Index  
Prior to 11/01/2003: 100% Citigroup BIG
- [19] Since 10/01/2017: 66.67% Barclays US Government Long Bond Index, 16.67% Barclays US Investment Grade Corporate Index, 16.66% Barclays US Securitized Index  
10/01/2015 to 09/30/2017: 62.50% Barclays US Government Long Bond Index, 18.75% Barclays US Investment Grade Corporate Index, 18.75% Barclays US Securitized Index  
07/01/2013 to 09/30/2015: 100% Barclays US Intermediate Aggregate Index  
07/01/2009 to 06/30/2013: 100% Barclays Aggregate Bond Index  
Prior to 07/01/2009: 100% Barclays US Universal Index
- [20] Since 11/01/2015: HFRI Fund of Funds Conservative + 100 bps.  
From 07/01/2014 to 10/31/2015: HFRI FOF: Conservative Index.  
From 07/01/2008 to 06/30/2014 benchmark was HFRI Fund of Funds index.  
Prior to 07/01/2008 benchmark was the Citigroup 3-Month T-bill + 500 bps.
- [21] Since 10/01/2017: 100% Barclays US Investment Grade Corporate Index  
From 12/01/2015 to 09/30/2017: 62.50% Barclays US Government Long Bond Index, 18.75% Barclays US Investment Grade Corporate Index, 18.75% Barclays US Securitized Index  
From 07/01/2013 to 11/31/2015: 100% Barclays US Intermediate Aggregate Index  
Prior 07/01/2013: 100% Barclays Aggregate Bond
- [22] Since 10/01/2017: 66.67% Barclays US Government Long Bond Index, 16.67% Barclays US Investment Grade Corporate Index, 16.66% Barclays US Securitized Index  
From 11/01/2015 to 09/30/2017: 62.50% Barclays US Government Long Bond Index, 18.75% Barclays US Investment Grade Corporate Index, 18.75% Barclays US Securitized Index  
From 07/01/2013 to 10/31/2015: 80% BC Aggregate Intermediate, 20% BC Global Aggregate 1-10 Year Hedged  
From 07/01/2010 to 06/30/2013: 80% BC Aggregate, 20% BC Global Bond Aggregate Hedged  
From 01/01/2010 to 06/30/2010: 80% BC Aggregate, 20% BC Global Bond Aggregate Unhedged  
From 07/01/2009 to 12/31/2009: Benchmark is dynamically calculated using Beginning Market Value weights of the underlying portfolios and their benchmarks  
Prior to 07/01/2009: Benchmark is BC US Universal
- [23] Benchmark is dynamically calculated based on the Average Balance (BMV + Weighted Net Cash Flows) weights of the underlying portfolios and their corresponding indices
- [24] Since 11/01/2015: 66.67% Barclays US Government Long Bond Index, 16.67% Barclays US Investment Grade Corporate Index, 16.66% Barclays US Securitized Index  
From 11/01/2015 to 09/30/2017: 62.50% Barclays US Government Long Bond Index, 18.75% Barclays US Investment Grade Corporate Index, 18.75% Barclays US Securitized Index  
From 07/01/2013 to 10/31/2015: 100% Barclays US Intermediate Aggregate Index  
Prior 07/01/2013: 100% Barclays Aggregate Bond
- [25] As of 12/01/2012: 100% of Barclays US TIPS Index, B Series  
From 02/01/2006 to 11/30/2012: 100% of Barclays Global Inflation Linked:US TIPS, L Series



# State Retirement Agency of Maryland

Rates of Return -  
Periods Ending March 31, 2020



## ENDNOTES

- [26] Since 11/01/2015: 100% Barclays US TIPS Index  
From 12/01/2012 to 10/31/2015: 50% Barclays Global Inflation Linked:US TIPS; 50% Barclays World Inflat-Linked Bond Index  
Prior to 11/30/2012: 65% Barclays Global Inflation Linked:US TIPS; 35% Barclays World Inflat-Linked Bond Index
- [27] Since 10/01/2017: 53% Barclays Long-Term Government, 13% Barclays Securitized, 13% Barclays Corporate, 21% Barclays U.S. TIPS  
From 07/01/2016 to 09/30/2017: 48% Barclays Long-Term Government, 14% Barclays Securitized, 14% Barclays Corporate, 24% Barclays U.S. TIPS  
From 11/01/2015 to 06/30/2016: 50% Barclays Long-Term Government, 15% Barclays Securitized, 15% Barclays Corporate, 20% Barclays U.S. TIPS  
From 07/01/2013 to 10/31/2015: 80% BC Aggregate Intermediate, 20% BC Global Aggregate 1-10 Year Hedged  
From 07/01/2010 to 06/30/2013: 80% BC Aggregate, 20% BC Global Bond Aggregate Hedged  
From 01/01/2010 to 06/30/2010: 80% BC Aggregate, 20% BC Global Bond Aggregate Unhedged  
From 07/01/2009 to 12/31/2009: Benchmark is dynamically calculated using Beginning Market Value weights of the underlying portfolios and their benchmarks  
Prior to 07/01/2009: Benchmark is BC US Universal.  
Formerly named "Custom Fixed Income Benchmark" prior to 11/01/2015.
- [28] As of 01/01/2010 all high yield and convertible managers were moved out of the Fixed Income asset class and into the Credit/Debt asset class. Historical returns for high yield and convertible managers remain in Fixed Income composite.
- [29] 80% Barclays US High Yield, 20% S&P/LSTA Leveraged Loan
- [30] Since 11/01/2015: 80% Barclays US High Yield, 20% S&P/LSTA Leveraged Loan.  
From 07/01/2013 to 10/31/2015: 62.5% Barclays US High Yield, 25% Barclays Credit, 12.5% S&P/LSTA Leveraged Loan.  
From 01/01/2010 to 06/30/2013: 50% Barclays Credit, 50% Barclays Corp High Yield.  
From 03/01/2009 to 12/31/2009: 75% Barclays Credit, 25% Barclays Corp High Yield.
- [31] 50% BBG Barc EM Hard Cur Agg: Sovereign/50% BBG Barc EM USD Aggregate Corporate TR
- [32] Since 10/01/2017: 100% Bloomberg EM Local Govt -30 BPS  
Prior to 10/01/2017: 100% JP Morgan GBI EM Global Diversified (G)
- [33] Since 10/01/2017: 50% BBG Barc EM Local Govt -30bps, 25% BBG Barc EM Hard Cur Agg: Sovereign, 25% BBG Barc EM USD Aggregate Corporate TR.  
From 11/01/2015 to 09/30/2017: 50% JP Morgan GBI EM Global Diversified, 25% JP Morgan EMBI Global Diversified, 25% JPMorgan CEMBI Broad.  
Prior to 11/01/2015: 100% JP Morgan GBI EM Global Diversified.
- [34] Since 10/01/2017: 78% US Credit Benchmark, 22% non-U.S Credit Benchmark.  
From 01/01/2016 to 09/30/2017: 67% US Credit Benchmark, 33% non-U.S Credit Benchmark.  
From 11/01/2015 to 12/31/2015: 75% US Credit Benchmark, 25% non-U.S Credit Benchmark.  
From 07/01/2013 to 10/31/2015: 50% BC High Yield / 20% BC Credit / 20% JP Morgan GBI EM Global Diversified/ 10% S&P/LSTA Leveraged Loan Index  
From 01/01/2010 to 06/30/2013: 50% BC Credit / 50% BC High Yield  
Prior to 01/01/2010: 75% BC Credit / 25% BC High Yield
- [35] The Private Real Estate benchmark is the NCREIF ODCE (1 quarter lag) since 07/01/2013. However, in non-quarter end months, the actual Maryland Private Real Estate return will be applied. In the third month of the quarter, the return will be calculated so that when geometrically linked with months 1 and 2, the three month return equals the published NCREIF ODCE (1 quarter lag).  
Prior 07/01/2013, the Private Real Estate benchmark is the NCREIF PROPERTY INDEX QTR LAG.
- [36] Since 11/2007 benchmark is 100% FTSE EPRA NAREIT Developed Ex US (Net) index. Prior to 11/2007, the net version of the index was calculated by and provided to State Street by MSIM

# State Retirement Agency of Maryland

Rates of Return -  
Periods Ending March 31, 2020



## ENDNOTES

- [37] Since 07/01/2019, 100% NCREIF ODCE (one qtr lag).  
Prior to 07/01/2016, a static blend of 85% NCREIF ODCE (one qtr lag) and 15% FTSE EPRA/NAREIT Developed Net Index.  
Prior to 07/01/2016, a dynamic blend of the NCREIF ODCE (one qtr lag), and the FTSE EPRA/NAREIT Developed Net Index.  
Prior to 05/01/2014, a dynamic blend of the Wilshire RESI, NCREIF ODCE (one qtr lag), and the MSIM Custom EPRA/NAREIT Global ex US  
Prior to 07/01/2013, a dynamic blend of the Wilshire RESI, NCREIF Property (one qtr lag), and the MSIM Custom EPRA/NAREIT Global ex US  
Prior to 07/01/2008: 50% Wilshire RESI & 50% NCREIF Property (one qtr lag)
- [38] Since 10/01/2017: 60% S&P Global Natural Resources Index (Net); 40% DJ Brookfield Global Infra Comp.  
From 07/01/2016 to 09/30/2017: 75% S&P Global Natural Resources Index (Net); 25% DJ Brookfield Global Infra Comp.  
From 11/01/2015 to 06/30/2016: 100% of CPI + 5%; 10% Max.  
From 08/01/2009 to 10/31/2015: 100% of CPI + 5%; 8% Max.
- [39] Since 10/01/2017: Benchmark is dynamically calculated using the beginning market values of the Real Estate and Natural Resource/Infrastructure sub-asset classes and their corresponding benchmarks.  
From 11/01/2015 to 09/30/2017: Benchmark is dynamically calculated using the beginning market values of the Real Estate, Commodities and Natural Resource/Infrastructure sub-asset classes and their corresponding benchmarks.  
From 12/01/2012 to 10/31/2015: 30% - DJ UBS Commodities Index (Total Return), 10% - CPI + 5%; 8% Max , 60% - 50% BC US TIPS Index/50% BC World Inflat-Linked Bond Index  
From 07/01/2011 to 11/30/2012: 30% - DJ UBS Commodities Index (Total Return), 10% - CPI + 5%; 8% Max , 60% - 65% BC US TIPS Index/35% BC Global Inflation Linked (USD Hedged) Index  
From 07/01/2009 to 06/30/2011: 20% - DJ UBS Commodities Index (Total Return), 20% - CPI + 5%; 8% Max , 60% - 65% BC US TIPS Index/35% BC Global Inflation Linked (USD Hedged) Index  
07/01/2008 to 06/30/2009: Benchmark is dynamically calculated using Beginning Market Value weights of the underlying portfolios and their benchmarks Prior to 07/01/2008: 100% Barclays US TIPS Index  
Prior to 07/01/2008: 100% Barclays US TIPS Index  
Formerly named "Custom Real Return Benchmark" prior to 11/01/2015.
- [40] Since 07/01/2014 Benchmark is 100% of Custom Absolute Return Benchmark.  
From 07/01/2011 to 06/30/2014 Benchmark is composed of 100% 3 month T-Bill + 6.5%  
From 07/01/2009 to 06/30/2011 Benchmark is composed of 75% Barclays Capital US TIPS , 10% DJ-AIG Commodities Total Return Index and 15% MSCI ACWI.
- [41] Since 07/01/2008: Calculated monthly using transitional weights and asset class benchmarks. Prior to 07/01/2008: MSRA TOTAL PLAN STATIC POLICY.
- [42] Calculated monthly using the strategic target weights and asset class benchmarks.

This report was prepared for you by State Street Bank and Trust Company (or its affiliates, "State Street") utilizing scenarios, assumptions and reporting formats as mutually agreed between you and State Street. While reasonable efforts have been made to ensure the accuracy of the information contained in this report, there is no guarantee, representation or warranty, express or implied, as to its accuracy or completeness. This information is provided "as-is" and State Street disclaims any and all liability and makes no guarantee, representation, or warranty with respect to your use of or reliance upon this information in making any decisions or taking (or not taking) any actions. State Street does not verify the accuracy or completeness of any data, including data provided by State Street for other purposes, or data provided by you or third parties. You should independently review the report (including, without limitation, the assumptions, market data, securities prices, securities valuations, tests and calculations used in the report), and determine that the report is suitable for your purposes.

State Street provides products and services to professional and institutional clients, which are not directed at retail clients. This report is for informational purposes only and it does not constitute investment research or investment, legal or tax advice, and it is not an offer or solicitation to buy or sell any product, service, or securities or any financial instrument, and it does not transfer rights of any kind (except the limited use and redistribution rights described below) or constitute any binding contractual arrangement or commitment of any kind. You may use this report for your internal business purposes and, if such report contains any data provided by third party data sources, including, but not limited to, market or index data, you may not redistribute this report, or an excerpted portion thereof, to any third party, including, without limitation, your investment managers, investment advisers, agents, clients, investors or participants, whether or not they have a relationship with you or have a reasonable interest in the report, without the prior written consent of each such third party data source. You are solely responsible and liable for any and all use of this report.

Andrew Palmer  
Chief Investment Officer

Executive Associate II  
Antionette Butcher

Associate  
(vacant)

Deputy Chief Investment Officer  
Robert Burd

Senior Compliance Manager  
Toni Voglino

Senior Investment Compliance Analyst  
Mildred "Mimi" Forbes

Rates/Credit  
Managing Director  
Dimitri Grechenko

Quantitative Strategies  
Managing Director  
Gregory Kasten

Public Equity  
Managing Director  
Lawrence Katsafanas

Real Assets  
Managing Director  
Stephen Reilly

Private Equity  
Managing Director  
David Ferguson

Admin. & Accounting  
Managing Director,  
Investment Operations  
(vacant)

Senior Portfolio Manager  
Eric Fatts

Senior Portfolio Manager  
Anish Bedi

Senior Portfolio Manager  
Faina Kashtelyan

Senior Investment Analyst  
Michael McCord

Senior Portfolio Manager  
Kyongdo Min

Director-Accounting  
Victor Adekoye

Senior Portfolio Manager  
Ashu Pal

Senior Risk Manager  
Frederick "Beau" Smith

Senior Portfolio Manager  
Ratnakar Kota

Senior Investment Analyst  
(vacant)

Senior Portfolio Manager  
Stephen Muturi

Acct. Lead Specialized  
Charles Lee

Senior Portfolio Manager  
Michael Fang

Senior Investment Analyst  
Daniel Schick

Senior Portfolio Manager  
Dana Johns

Acct. Lead Specialized  
Jane Daniel

Associate  
Minh Ngugen

Director-Investment  
Administration  
Colleen Bower

Assistant Director  
Sathy Kavanakudy

Assistant Director  
Philip Tyler

Investment Division