



STATE RETIREMENT AGENCY
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MARYLAND
STATE RETIREMENT
and PENSION SYSTEM

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March 11, 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 121
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 December 31, 2019. 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
Sara 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
TOTAL PLAN	56,121,551,423	100.0	1.73	3.98	14.99	5.17	14.99	9.16	6.65	7.53	8.06	07/01/86
TOTAL PLAN POLICY INDEX ^[1]			1.60	3.87	15.93	5.18	15.93	9.03	6.68	7.03		07/01/86
<i>Excess</i>			0.13	0.11	-0.94	-0.01	-0.94	0.13	-0.03	0.50		
TOTAL GROWTH EQUITY	28,435,830,982	50.7	3.08	7.39	20.94	7.76	20.94	13.11	9.42	10.02	6.31	01/01/98
GROWTH EQUITY CUSTOM BENCHMARK ^[2]			2.77	7.00	20.40	7.30	20.40	12.46				01/01/98
<i>Excess</i>			0.31	0.40	0.54	0.45	0.54	0.65				
TOTAL RATE SENSITIVE	10,180,300,681	18.1	-1.19	-1.48	12.26	3.17	12.26	5.67	4.15	4.67	6.98	07/01/86
CUSTOM RATE SENSITIVE BENCHMARK ^[3]			-1.32	-1.78	12.49	3.21	12.49	5.61	4.15	4.04		07/01/86
<i>Excess</i>			0.13	0.30	-0.23	-0.04	-0.23	0.06	0.00	0.63		
TOTAL CREDIT/DEBT STRATEGIES	5,011,426,224	8.9	1.48	2.42	10.55	3.52	10.55	6.23	5.03	7.01	8.89	03/01/09
MSRA CUSTOM CREDIT BENCHMARK ^[4]			1.99	2.60	12.68	3.60	12.68	6.29	5.22	6.05	7.87	03/01/09
<i>Excess</i>			-0.50	-0.18	-2.13	-0.08	-2.13	-0.06	-0.19	0.96	1.02	
TOTAL REAL ASSETS	6,869,679,089	12.2	1.28	1.82	7.07	1.43	7.07	5.78	3.17	3.76	4.23	02/01/06
CUSTOM REAL ASSETS BENCHMARK ^[5]			1.74	3.10	11.13	2.87	11.13	6.84	4.82	3.37	3.67	02/01/06
<i>Excess</i>			-0.47	-1.28	-4.06	-1.44	-4.06	-1.05	-1.65	0.39	0.56	
TOTAL ABSOLUTE RETURN	4,238,026,019	7.6	0.69	0.79	4.03	1.51	4.03	2.60	1.73	3.39	3.20	04/01/08
CUSTOM ABSOLUTE RETURN BENCHMARK ^[6]			1.11	1.92	7.40	2.12	7.40	4.18	3.19	3.17	1.90	04/01/08
<i>Excess</i>			-0.42	-1.13	-3.37	-0.61	-3.37	-1.58	-1.46	0.22	1.30	
TOTAL MULTI ASSET	655,807,791	1.2	1.94	3.35	15.87	4.71	15.87				6.10	07/01/18
TOTAL PLAN POLICY INDEX ^[1]			1.60	3.87	15.93	5.18	15.93				8.24	07/01/18
<i>Excess</i>			0.35	-0.52	-0.06	-0.47	-0.06				-2.14	



SUMMARY OF PERFORMANCE

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
TOTAL CASH	730,480,637	1.3	0.94	1.75	8.34	1.84	8.34	7.71	5.88	4.29	4.07	07/01/08
FTSE 3 MONTH T-BILL			0.14	0.46	2.25	1.03	2.25	1.65	1.05	0.56	0.56	07/01/08
<i>Excess</i>			<i>0.80</i>	<i>1.29</i>	<i>6.09</i>	<i>0.81</i>	<i>6.09</i>	<i>6.06</i>	<i>4.83</i>	<i>3.73</i>	<i>3.51</i>	

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.

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SUMMARY OF PERFORMANCE

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
GROWTH EQUITY												
U.S. EQUITY												
RHUMBLINE RUSSELL 1000	2,547,513,458	4.5	2.84	8.95	31.19	10.45	31.19	14.98	11.45		14.49	11/01/12
Russell 1000			2.89	9.04	31.43	10.59	31.43	15.05	11.48		14.53	11/01/12
<i>Excess</i>			-0.05	-0.09	-0.23	-0.14	-0.23	-0.06	-0.03		-0.03	
RHUMBLINE S&P 600 INDEX	504,419,195	0.9	2.97	8.18	22.73	7.96	22.73				8.41	03/01/17
S&P SMALLCAP 600			2.99	8.21	22.78	8.00	22.78				8.41	03/01/17
<i>Excess</i>			-0.02	-0.04	-0.05	-0.04	-0.05				0.00	
TOTAL US EQUITY PASSIVE	3,051,982,445	5.4	2.86	8.85	29.95	10.11	29.95	14.27			12.80	11/01/15
D.E. SHAW ALL CAP CORE ENHANCED	1,094,694,131	2.0	2.82	9.14	31.82	10.91	31.82	15.27	11.99		13.72	04/01/13
D.E. Shaw All Cap Custom Benchmark ^[1]			2.89	9.04	31.43	10.59	31.43	15.05	11.50		13.36	04/01/13
<i>Excess</i>			-0.07	0.10	0.39	0.32	0.39	0.22	0.49		0.36	
T. ROWE PRICE ENHANCED	1,034,459,963	1.8	2.91	9.58	33.20	11.14	33.20	16.57	12.59	13.89	9.75	05/01/06
S&P 500			3.02	9.07	31.49	10.92	31.49	15.27	11.70	13.56	9.09	05/01/06
<i>Excess</i>			-0.11	0.51	1.71	0.22	1.71	1.30	0.89	0.33	0.66	
RHUMBLINE US SCIENTIFIC BETA	946,805,881	1.7	2.69	5.63	28.39	8.32	28.39	12.71			12.71	01/01/17
SciBeta USA Multi-Beta MStrat 4F-EW TR			2.74	5.69	28.61	8.41	28.61	12.86			12.86	01/01/17
<i>Excess</i>			-0.04	-0.06	-0.22	-0.09	-0.22	-0.15			-0.15	
DURABLE CAPITAL PARTNERS	135,000,000	0.2										12/01/19

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 U.S. EQUITY ACTIVE	3,211,152,018	5.7	2.75	8.11	31.12	10.11	31.12	14.96	11.45	12.76		06/01/94
ACTIVE US EQ BM ^[2]			2.89	7.99	30.57	10.02	30.57	14.40	11.17	13.39		06/01/94
<i>Excess</i>			-0.14	0.12	0.56	0.09	0.56	0.56	0.29	-0.63		
CAPITAL PROSPECTS US SMALL CAP (TM)	412,529,604	0.7	2.48	9.12	25.84	6.43	25.84				8.90	04/01/17
S&P 600 Small Cap USD NET			2.93	8.07	22.20	7.73	22.20				8.25	04/01/17
<i>Excess</i>			-0.44	1.05	3.64	-1.31	3.64				0.65	
ACUITAS US MICRO CAP (TM)	100,280,110	0.2	3.67	6.37	12.59	5.44	12.59				0.38	02/01/17
RUSSELL MICROCAP INDEX (DAILY)			5.70	13.45	22.43	7.26	22.43				7.14	02/01/17
<i>Excess</i>			-2.03	-7.08	-9.84	-1.82	-9.84				-6.76	
US EQUITY TERRA MARIA	512,819,919	0.9	2.72	8.58	23.03	6.24	23.03	7.78	5.96	10.60	7.81	04/01/07
TERRA MARIA US EQUITY BENCHMARK ^[3]			3.35	10.09	24.36	7.41	24.36	9.02	8.23	12.20	8.12	04/01/07
<i>Excess</i>			-0.64	-1.52	-1.34	-1.17	-1.34	-1.24	-2.27	-1.61	-0.31	
TOTAL US EQUITY TM + U.S. EQUITY ACTIVE	3,723,971,937	6.6	2.75	8.18	29.91	9.55	29.91	13.66	10.15	12.41	9.92	07/01/08
TM US EQ + ACTIVE US EQ BM ^[2]			2.95	8.29	29.63	9.63	29.63	13.44	10.71	13.31	10.57	07/01/08
<i>Excess</i>			-0.20	-0.11	0.28	-0.09	0.28	0.22	-0.56	-0.90	-0.66	
U.S. EQUITY EX OVERLAY	6,775,954,383	12.1	2.81	8.53	29.93	9.84	29.93	13.98	10.58	12.79	9.18	04/01/94
MSRA CUSTOM US EQUITY INDEX ^[4]			2.89	9.10	31.02	10.37	31.02	14.57	11.24	13.42		04/01/94
<i>Excess</i>			-0.08	-0.57	-1.09	-0.52	-1.09	-0.59	-0.67	-0.63		
US Equity Tactical	34,640,164	0.1										10/01/18
US Equity Structural	29,754,344	0.1										02/01/17



SUMMARY OF PERFORMANCE

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
U.S. EQUITY OVERLAY	64,394,508	0.1										02/01/17
U.S. EQUITY	6,840,348,891	12.2	2.64	7.67	30.02	9.19	30.02	14.00	10.59	12.79	9.18	04/01/94
MSRA CUSTOM US EQUITY INDEX ^[4]			2.89	9.10	31.02	10.37	31.02	14.57	11.24	13.42		04/01/94
<i>Excess</i>			-0.25	-1.43	-1.00	-1.17	-1.00	-0.57	-0.65	-0.62		
INTERNATIONAL DEVELOPED MARKETS												
SSGA INTERNATIONAL FUND	1,312,174	0.0										05/01/03
INTERNATIONAL DEVELOPED EQUITY PASSIVE	1,312,174	0.0										11/01/15
ARTISAN PARTNERS, L.P.	657,876,395	1.2	2.53	6.93	30.46	7.60	30.46	15.52	6.43	7.90	8.92	11/01/03
ARTISAN CUSTOM BENCHMARK ^[5]			3.19	7.86	22.49	6.85	22.49	9.34	5.42	5.57	7.11	11/01/03
<i>Excess</i>			-0.66	-0.93	7.96	0.75	7.96	6.19	1.01	2.33	1.81	
AQR ENHANCED ACWI EX-US	545,523,984	1.0	3.39	8.45	19.62	5.45	19.62	7.11	4.05		3.09	12/01/13
AQR Enhanced Custom Benchmark ^[6]			3.19	7.86	22.49	6.85	22.49	9.34	5.18		3.71	12/01/13
<i>Excess</i>			0.20	0.59	-2.87	-1.40	-2.87	-2.23	-1.13		-0.62	
BROWN CAPITAL MANAGEMENT INT'L	600,464,525	1.1	1.82	7.31	23.13	5.67	23.13	10.67	6.97	7.29	11.57	12/01/08
Brown Capital Management International Custom Benchmark ^[7]			3.40	8.36	22.91	7.45	22.91	9.49	5.26	4.98	8.51	12/01/08
<i>Excess</i>			-1.57	-1.05	0.22	-1.78	0.22	1.18	1.70	2.31	3.05	
DFA INTERNATIONAL CORE EQUITY	440,311,667	0.8	3.93	9.71	22.01	8.22	22.01	9.01	6.43		6.01	05/01/13
MSCI WORLD EX US (NET)			3.19	7.86	22.49	6.85	22.49	9.34	5.42		4.92	05/01/13
<i>Excess</i>			0.74	1.86	-0.48	1.36	-0.48	-0.32	1.01		1.10	

SUMMARY OF PERFORMANCE

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
RHUMBLINE SCI BETA INTL EX-US	691,821,508	1.2	3.70	9.03	18.61	7.30	18.61				7.12	03/01/17
SciBeta Developed ex USA Value Div MS			3.72	9.09	19.04	7.40	19.04				7.63	03/01/17
<i>Excess</i>			-0.03	-0.06	-0.43	-0.10	-0.43				-0.52	
INTERNATIONAL DEVELOPED EQUITY ACTIVE ^[8]	2,936,136,801	5.2	3.02	8.19	22.73	6.82	22.73	10.19	5.14	5.05		01/01/95
CUSTOM INTL DEV EQ ACTIVE BENCHMARK ^[9]			3.36	8.25	21.73	7.10	21.73	9.27	5.29	4.94		01/01/95
<i>Excess</i>			-0.33	-0.06	1.00	-0.29	1.00	0.92	-0.15	0.11		
ATTUCKS INTL DEVELOPED (TM)	465,097,197	0.8	3.57	9.46	22.94	8.60	22.94	9.06	6.85	9.16	11.73	12/01/08
MSCI WORLD EX US NET (DAILY)			3.19	7.86	22.49	6.85	22.49	9.34	5.42	5.32	8.06	12/01/08
<i>Excess</i>			0.38	1.60	0.45	1.75	0.45	-0.28	1.43	3.84	3.66	
FIS INTL SMALL CAP (TM)	329,354,686	0.6	4.98	13.10	25.35	10.17	25.35				8.20	04/01/17
MSCI WORLD EX US SMALL CAP (NET)			4.63	11.40	25.41	11.10	25.41				8.48	04/01/17
<i>Excess</i>			0.35	1.70	-0.06	-0.93	-0.06				-0.28	
LEADING EDGE INTL DEVELOPED (TM)	456,938,990	0.8	3.53	9.75	26.70	8.39	26.70	9.42	6.21	7.52	10.80	12/01/08
MSCI WORLD EX US NET (DAILY)			3.19	7.86	22.49	6.85	22.49	9.34	5.42	5.32	8.06	12/01/08
<i>Excess</i>			0.34	1.89	4.21	1.54	4.21	0.09	0.79	2.21	2.74	
INTL DEVELOPED EQUITY TERRA MARIA ^[8]	1,251,493,807	2.2	3.92	10.50	24.91	8.93	24.91	10.51	6.13	5.96	3.38	11/01/07
TERRA MARIA INTL DEVELOPED EQ BM ^[10]			3.57	8.94	22.98	8.03	22.98	9.83	5.52	5.15	2.05	11/01/07
<i>Excess</i>			0.35	1.56	1.93	0.90	1.93	0.69	0.61	0.81	1.33	
INTL DEVELOPED EQUITY ACTIVE AND TM ^[8]	4,187,630,608	7.5	3.29	8.87	23.38	7.44	23.38	10.28	5.41	5.25	3.28	07/01/08
TM INTL DEV EQ + ACTIVE INTL DEV EQ BM ^[9]			3.42	8.45	22.11	7.38	22.11	9.46	5.36	5.01	3.03	07/01/08
<i>Excess</i>			-0.13	0.42	1.27	0.06	1.27	0.83	0.05	0.25	0.26	

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	27,346	0.0										11/01/04
TOTAL INTL DEV EQUITY EX RECORD CURRENCY ^[8]	4,188,970,128	7.5	3.29	8.87	23.40	7.44	23.40	9.97	5.18	4.95		01/01/95
MSRA CUSTOM INTERNATIONAL INDEX ^[11]			3.19	7.86	22.49	6.85	22.49	9.34	4.97	4.77		01/01/95
<i>Excess</i>			0.10	1.01	0.91	0.58	0.91	0.64	0.21	0.18		
RECORD CURRENCY MANAGEMENT	-2,782,880	-0.0										05/01/09
TOTAL INTL DEVELOPED EQUITY EX OVERLAY ^[8]	4,186,187,248	7.5	3.05	8.39	23.55	7.53	23.55	9.39	5.06	5.30	6.36	01/01/95
MSRA CUSTOM INTERNATIONAL INDEX ^[11]			3.19	7.86	22.49	6.85	22.49	9.34	4.97	4.77	5.42	01/01/95
<i>Excess</i>			-0.14	0.53	1.06	0.68	1.06	0.05	0.10	0.52	0.94	
International Equity Tactical	5,805,608	0.0										01/01/17
International Equity Structural	38,115,086	0.1										02/01/17
TOTAL INTL DEVELOPED EQUITY OVERLAY	43,920,694	0.1										12/01/16
TOTAL INTL DEVELOPED EQUITY	4,230,107,943	7.5	3.22	8.80	24.16	7.99	24.16	9.56	5.16	5.35	6.38	01/01/95
MSRA CUSTOM INTERNATIONAL INDEX ^[11]			3.19	7.86	22.49	6.85	22.49	9.34	4.97	4.77	5.42	01/01/95
<i>Excess</i>			0.03	0.94	1.66	1.13	1.66	0.22	0.19	0.57	0.96	
EMERGING MARKETS												
SSGA EMERGING MARKETS INDEX FUND	138,818,844	0.2	7.44	11.75	18.20	6.98	18.20	11.13	5.13		4.64	06/01/12
MSCI EMERGING MARKETS			7.46	11.84	18.42	7.09	18.42	11.57	5.61		5.29	06/01/12
<i>Excess</i>			-0.02	-0.09	-0.22	-0.11	-0.22	-0.44	-0.48		-0.65	

SUMMARY OF PERFORMANCE

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
EMERGING MARKETS EQUITY PASSIVE	138,818,844	0.2	7.44	11.75	18.27	6.98	18.27	12.13			9.64	11/01/15
MSCI EMERGING MARKETS			7.46	11.84	18.42	7.09	18.42	11.57			9.34	11/01/15
<i>Excess</i>			<i>-0.02</i>	<i>-0.09</i>	<i>-0.15</i>	<i>-0.11</i>	<i>-0.15</i>	<i>0.55</i>			<i>0.29</i>	
BAILLIE GIFFORD EMERGING MARKETS	846,644,825	1.5	8.24	12.99	28.20	9.16	28.20	18.74			13.24	11/01/15
MSCI EMERGING MARKETS			7.46	11.84	18.42	7.09	18.42	11.57			9.34	11/01/15
<i>Excess</i>			<i>0.78</i>	<i>1.15</i>	<i>9.77</i>	<i>2.07</i>	<i>9.77</i>	<i>7.16</i>			<i>3.89</i>	
DFA EMERGING MARKETS	1,035,292,161	1.8	7.04	10.55	16.04	5.93	16.04	10.32			12.43	02/01/16
MSCI EMERGING MARKETS			7.46	11.84	18.42	7.09	18.42	11.57			13.67	02/01/16
<i>Excess</i>			<i>-0.42</i>	<i>-1.28</i>	<i>-2.38</i>	<i>-1.16</i>	<i>-2.38</i>	<i>-1.25</i>			<i>-1.24</i>	
ACADIAN EMRG MKTS MANAGED VOLATILITY EQ	266,423,600	0.5	5.90	5.72	9.20	1.20	9.20	9.79			7.51	04/01/16
MSCI EMERGING MARKETS			7.46	11.84	18.42	7.09	18.42	11.57			10.62	04/01/16
<i>Excess</i>			<i>-1.56</i>	<i>-6.12</i>	<i>-9.22</i>	<i>-5.89</i>	<i>-9.22</i>	<i>-1.78</i>			<i>-3.11</i>	
POLUNIN CAPITAL PARTNERS	441,515,981	0.8	6.57	12.49	17.34	7.05	17.34	9.59			11.10	04/01/16
MSCI EMERGING MARKETS			7.46	11.84	18.42	7.09	18.42	11.57			10.62	04/01/16
<i>Excess</i>			<i>-0.89</i>	<i>0.65</i>	<i>-1.08</i>	<i>-0.04</i>	<i>-1.08</i>	<i>-1.98</i>			<i>0.48</i>	
AXIOM INTERNATIONAL INVESTORS	885,309,420	1.6	7.19	12.23	25.32	10.04	25.32	14.24			12.58	05/01/16
MSCI EMERGING MARKETS			7.46	11.84	18.42	7.09	18.42	11.57			10.71	05/01/16
<i>Excess</i>			<i>-0.27</i>	<i>0.39</i>	<i>6.90</i>	<i>2.95</i>	<i>6.90</i>	<i>2.67</i>			<i>1.87</i>	

SUMMARY OF PERFORMANCE

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
WESTWOOD GLOBAL INVESTMENTS	626,121,628	1.1	7.06	10.88	12.71	9.78	12.71	9.41	5.64	5.69	11.88	12/01/08
MSCI EMERGING MARKETS			7.46	11.84	18.42	7.09	18.42	11.57	5.61	3.68	9.60	12/01/08
<i>Excess</i>			-0.40	-0.96	-5.71	2.69	-5.71	-2.16	0.03	2.01	2.29	
MARSHALL WACE TOPS CHINA A	283,574,586	0.5	9.40	13.42	46.38	10.99	46.38				34.87	11/01/18
MSCI China A Share Net			8.36	10.34	37.48	7.17	37.48				29.47	11/01/18
<i>Excess</i>			1.03	3.08	8.89	3.82	8.89				5.40	
TT INTERNATIONAL EMERGING MARKETS	429,720,760	0.8	8.23	14.21							9.39	08/01/19
MSCI Emerging Markets IMI Index (Net)			7.32	11.59							8.16	08/01/19
<i>Excess</i>			0.91	2.63							1.23	
RWC PARTNERS EMERGING MARKETS	319,331,400	0.6	6.44								6.44	12/01/19
MSCI EMERGING MARKETS			7.46								7.46	12/01/19
<i>Excess</i>			-1.02								-1.02	
TRANSITION ACCOUNT EMERGING MARKETS	0	0.0										05/01/16
TOTAL EMERGING MARKET ACTIVE	5,134,105,409	9.1	7.35	11.68	20.66	8.02	20.66	12.54	6.86		4.43	07/01/10
MSCI EMERGING MARKETS			7.46	11.84	18.42	7.09	18.42	11.57	5.61		4.57	07/01/10
<i>Excess</i>			-0.11	-0.16	2.24	0.93	2.24	0.96	1.25		-0.15	
EMERGING MARKETS EQUITY TERRA MARIA	378,942,630	0.7	6.80	10.46	18.18	4.53	18.18					11/01/15
MSCI EMERGING MARKETS			7.46	11.84	18.42	7.09	18.42					11/01/15
<i>Excess</i>			-0.66	-1.38	-0.24	-2.56	-0.24					

SUMMARY OF PERFORMANCE

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
EMERGING MARKETS ACTIVE AND TM	5,513,048,040	9.8	7.31	11.60	20.49	7.77	20.49	12.36			10.23	11/01/15
MSCI EMERGING MARKETS			7.46	11.84	18.42	7.09	18.42	11.57			9.34	11/01/15
<i>Excess</i>			<i>-0.15</i>	<i>-0.24</i>	<i>2.07</i>	<i>0.68</i>	<i>2.07</i>	<i>0.79</i>			<i>0.89</i>	
TOTAL EMERGING MARKETS EQUITY EX OVERLAY	5,651,866,883	10.1	7.32	11.60	20.43	7.75	20.43	12.44			9.85	11/01/15
MSCI EMERGING MARKETS			7.46	11.84	18.42	7.09	18.42	11.57			9.34	11/01/15
<i>Excess</i>			<i>-0.14</i>	<i>-0.24</i>	<i>2.01</i>	<i>0.66</i>	<i>2.01</i>	<i>0.87</i>			<i>0.50</i>	
Emrg Mkts Structural Overlay	-343	-0.0										02/01/17
Emrg Mkts Tactical Overlay	49,170,032	0.1										10/01/17
TOTAL EMERGING MARKETS OVERLAY	49,169,689	0.1										02/01/17
TOTAL EMERGING MARKETS EQUITY	5,701,036,572	10.2	7.69	12.34	21.69	8.04	21.69	12.78			10.09	11/01/15
MSCI EMERGING MARKETS			7.46	11.84	18.42	7.09	18.42	11.57			9.34	11/01/15
<i>Excess</i>			<i>0.23</i>	<i>0.50</i>	<i>3.26</i>	<i>0.95</i>	<i>3.26</i>	<i>1.21</i>			<i>0.74</i>	
GLOBAL EQUITY												
BAILLIE GIFFORD	745,983,356	1.3	5.91	19.91	34.78	12.68	34.78	27.06	17.67	15.02	11.31	02/01/08
MSCI AC WORLD INDEX NET			3.52	8.95	26.60	8.92	26.60	12.44	8.41	8.79	5.85	02/01/08
<i>Excess</i>			<i>2.39</i>	<i>10.96</i>	<i>8.18</i>	<i>3.75</i>	<i>8.18</i>	<i>14.62</i>	<i>9.26</i>	<i>6.23</i>	<i>5.46</i>	
LONGVIEW PRTNRS GLOBAL EQUITY	789,498,406	1.4	2.67	10.59	25.03	11.99	25.03	14.39	10.70	12.93	13.14	10/01/09
MSCI AC WORLD INDEX NET			3.52	8.95	26.60	8.92	26.60	12.44	8.41	8.79	9.04	10/01/09
<i>Excess</i>			<i>-0.85</i>	<i>1.64</i>	<i>-1.57</i>	<i>3.07</i>	<i>-1.57</i>	<i>1.95</i>	<i>2.29</i>	<i>4.14</i>	<i>4.10</i>	

SUMMARY OF PERFORMANCE

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
AQR CAPITAL - GLOBAL EQUITY	1,040,571,475	1.9	3.50	9.43	22.23	8.00	22.23	9.63	6.79		9.53	08/01/10
MSCI AC WORLD INDEX NET			3.52	8.95	26.60	8.92	26.60	12.44	8.41		9.59	08/01/10
<i>Excess</i>			-0.03	0.48	-4.37	-0.92	-4.37	-2.81	-1.61		-0.06	
D.E. SHAW INV - GLOBAL EQUITY	980,050,467	1.7	2.95	8.21	24.67	8.40	24.67	12.37	8.82		11.02	08/01/10
MSCI WORLD INDEX			3.00	8.56	27.67	9.14	27.67	12.57	8.74		10.38	08/01/10
<i>Excess</i>			-0.05	-0.35	-3.00	-0.74	-3.00	-0.20	0.08		0.63	
TOTAL GLOBAL EQUITY ACTIVE	3,556,581,307	6.3	3.65	11.38	26.00	9.94	26.00	14.11	9.57	10.24	7.76	10/01/05
MSCI AC WORLD INDEX NET			3.52	8.95	26.60	8.92	26.60	12.44	8.41	8.79	6.70	10/01/05
<i>Excess</i>			0.13	2.43	-0.60	1.02	-0.60	1.67	1.17	1.46	1.06	
MARSHALL WACE EUREKA FUND	603,248,479	1.1	2.24	4.65	13.36	5.31	13.36	8.76	8.18		10.35	10/01/12
HFRI Equity Hedge (Total) Index			2.46	5.64	13.66	4.06	13.66	6.14	4.54		5.55	10/01/12
<i>Excess</i>			-0.22	-0.99	-0.30	1.25	-0.30	2.62	3.64		4.80	
HOPLITE ONSHORE	3,400,678	0.0										02/01/13
INDUS PACIFIC OPPORTUNITIES FUND	5,930,203	0.0										06/01/13
TOTAL EQUITY HEDGE FUND	612,579,360	1.1	2.03	4.38	11.31	3.47	11.31	4.21	2.44		4.41	07/01/12
HFRI Equity Hedge (Total) Index			2.46	5.64	13.66	4.06	13.66	6.14	4.54		5.84	07/01/12
<i>Excess</i>			-0.44	-1.26	-2.35	-0.59	-2.35	-1.93	-2.11		-1.43	
TOTAL GLB EQ TM + GLB EQ ACTIVE + HF	4,169,160,667	7.4	3.41	10.36	23.39	9.12	23.39	11.50	7.74	8.97	6.40	07/01/08
TM GLOBAL + ACTIVE GLOBAL BM + EQ HF ^[2]			3.24	8.32	24.17	8.09	24.17	10.92	7.50	8.19	5.81	07/01/08
<i>Excess</i>			0.17	2.04	-0.78	1.02	-0.78	0.58	0.23	0.78	0.59	

SUMMARY OF PERFORMANCE

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
GLOBAL EQUITY TRANSITION ACCOUNT	4,574,091	0.0										06/01/11
TOTAL GLOBAL EQUITY EX RECORD CURRENCY	4,173,734,758	7.4	3.41	10.35	23.39	9.11	23.39	11.57	7.80	9.08	6.96	10/01/05
MSRA CUSTOM GLOBAL INDEX ^[12]			3.52	8.95	26.60	8.92	26.60	12.44	8.41	8.87	6.79	10/01/05
<i>Excess</i>			-0.11	1.40	-3.21	0.19	-3.21	-0.88	-0.61	0.20	0.17	
RECORD CURRENCY - GLOBAL	968,733	0.0										05/01/09
TOTAL GLOBAL EQUITY EX OVERLAY	4,174,703,491	7.4	3.33	10.13	23.45	9.17	23.45	11.45	7.79	9.21	7.05	10/01/05
MSRA CUSTOM GLOBAL INDEX ^[12]			3.52	8.95	26.60	8.92	26.60	12.44	8.41	8.87	6.79	10/01/05
<i>Excess</i>			-0.19	1.18	-3.15	0.25	-3.15	-0.99	-0.61	0.33	0.26	
PUBLIC EQUITY												
TOTAL PUBLIC EQUITY EX OVERLAY	20,788,712,005	37.0	4.15	9.64	24.87	8.75	24.87	11.88	8.01	9.11		04/01/94
PUBLIC EQ BM 2 ^[13]			4.33	9.61	24.94	8.49	24.94	12.15	8.34	8.97		04/01/94
<i>Excess</i>			-0.18	0.04	-0.07	0.26	-0.07	-0.27	-0.32	0.13		
TOTAL PUBLIC EQUITY OVERLAY	157,484,891	0.3										12/01/16
TOTAL PUBLIC EQUITY	20,946,196,897	37.3	4.23	9.61	25.34	8.69	25.34	12.02	8.09	9.15		04/01/94
PUBLIC EQ BM 2 ^[13]			4.33	9.61	24.94	8.49	24.94	12.15	8.34	8.97		04/01/94
<i>Excess</i>			-0.10	0.01	0.40	0.20	0.40	-0.13	-0.24	0.18		
PRIVATE EQUITY												
TOTAL PRIVATE EQUITY	7,489,634,086	13.3	0.18	2.01	10.31	5.49	10.31	16.31	14.46	14.43	8.27	03/01/94
Custom MD/SS PEI Index ^[14]			-0.98	0.82	8.03	4.40	8.03	12.67	10.47	12.12		03/01/94
<i>Excess</i>			1.17	1.19	2.29	1.09	2.29	3.64	3.99	2.31		



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 GROWTH EQUITY	28,435,830,982	50.7	3.08	7.39	20.94	7.76	20.94	13.11	9.42	10.02	6.31	01/01/98
GROWTH EQUITY CUSTOM BENCHMARK ^[15]			2.77	7.00	20.40	7.30	20.40	12.46				01/01/98
<i>Excess</i>			0.31	0.40	0.54	0.45	0.54	0.65				
RATE SENSITIVE												
NOMINAL FIXED INCOME												
SSGA US GOVT LONG BOND INDEX	1,319,855,186	2.4	-2.74	-4.06	14.78	3.48	14.78	6.91			3.79	11/01/16
BBG BARC US Gov Lg Idx			-2.76	-4.06	14.75	3.45	14.75	6.95			3.86	11/01/16
<i>Excess</i>			0.01	0.01	0.03	0.03	0.03	-0.04			-0.08	
SSGA US SECURITIZED INDEX	446,490,988	0.8	0.19	0.52	6.29	1.91	6.29	3.06			2.31	11/01/16
BBG BARC Sec Idx			0.24	0.63	6.44	2.04	6.44	3.29			2.55	11/01/16
<i>Excess</i>			-0.05	-0.11	-0.15	-0.14	-0.15	-0.23			-0.24	
SSGA US LONG INVEST GRADE CORP INDEX	93,766,176	0.2	0.11	1.28	24.33	7.13	24.33	8.88			7.17	11/01/16
BBG BARC Lg Corp			0.11	1.33	23.89	7.01	23.89	8.81			7.25	11/01/16
<i>Excess</i>			-0.00	-0.05	0.44	0.12	0.44	0.08			-0.09	
SSGA US INTERM INVEST GRADE INDEX	100,531,461	0.2	0.45	1.16	10.30	2.94	10.30	4.63			3.84	11/01/16
BBG BARC US Corp Int Inv Grd Idx			0.43	1.10	10.14	2.86	10.14	4.52			3.76	11/01/16
<i>Excess</i>			0.02	0.06	0.16	0.08	0.16	0.11			0.08	
SSGA PASSIVE FIXED INCOME	1,960,643,812	3.5	-1.80	-2.56	13.15	3.31	13.15	6.27	4.26	4.21	4.39	05/01/03
SSGA Aggregate Bond Custom Benchmark ^[16]			-1.74	-2.42	13.44	3.44	13.44	6.20	4.37	4.24		05/01/03
<i>Excess</i>			-0.06	-0.14	-0.29	-0.13	-0.29	0.07	-0.10	-0.04		



SUMMARY OF PERFORMANCE

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
US NOMINAL FIXED INCOME PASSIVE	1,960,643,812	3.5	-1.80	-2.56	13.15	3.31	13.15	6.27			4.75	11/01/15
US NOMINAL FI PASSIVE BENCHMARK ^[17]			-1.74	-2.42	13.44	3.44	13.44	6.20			4.84	11/01/15
<i>Excess</i>			<i>-0.06</i>	<i>-0.14</i>	<i>-0.29</i>	<i>-0.13</i>	<i>-0.29</i>	<i>0.07</i>			<i>-0.10</i>	
PIMCO	1,513,565,509	2.7	-1.43	-1.78	13.39	3.19	13.39	6.61	4.60	4.50		06/01/84
PIMCO Custom Blended Index ^[18]			-1.74	-2.42	13.44	3.44	13.44	6.20	4.37	4.24		06/01/84
<i>Excess</i>			<i>0.32</i>	<i>0.65</i>	<i>-0.05</i>	<i>-0.25</i>	<i>-0.05</i>	<i>0.42</i>	<i>0.23</i>	<i>0.25</i>		
WESTERN ASSET MANAGEMENT	2,655,373,946	4.7	-1.54	-2.19	15.12	3.76	15.12	7.09	5.14	5.81	6.07	09/01/03
WESTERN ASSET MANAGEMENT CUSTOM BM ^[19]			-1.74	-2.42	13.44	3.44	13.44	6.20	4.33	4.22	4.57	09/01/03
<i>Excess</i>			<i>0.21</i>	<i>0.23</i>	<i>1.68</i>	<i>0.32</i>	<i>1.68</i>	<i>0.89</i>	<i>0.81</i>	<i>1.59</i>	<i>1.51</i>	
DOUBLELINE US SECURITIZED	433,264,164	0.8	0.17	0.39	6.39	1.71	6.39				3.42	10/01/17
BBG BARC Sec Dly			0.24	0.63	6.44	2.04	6.44				3.34	10/01/17
<i>Excess</i>			<i>-0.07</i>	<i>-0.25</i>	<i>-0.05</i>	<i>-0.33</i>	<i>-0.05</i>				<i>0.09</i>	
GARDA FIRVO	329,800,000	0.6	1.07	1.98	10.26	4.30	10.26	6.10			6.17	04/01/16
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92	7.40	2.12	7.40	4.18			4.64	04/01/16
<i>Excess</i>			<i>-0.04</i>	<i>0.06</i>	<i>2.86</i>	<i>2.18</i>	<i>2.86</i>	<i>1.91</i>			<i>1.54</i>	
DODGE & COX - FI CORE	348,144,912	0.6	0.39	1.49	15.63	4.58	15.63	6.69	5.35	5.22	5.94	03/01/09
CORE BOND CUSTOM BENCHMARK ^[21]			0.32	1.18	14.54	4.27	14.54	5.93	4.28	4.20	4.55	03/01/09
<i>Excess</i>			<i>0.07</i>	<i>0.31</i>	<i>1.09</i>	<i>0.32</i>	<i>1.09</i>	<i>0.76</i>	<i>1.06</i>	<i>1.02</i>	<i>1.39</i>	
WESTERN ASSET - ISRAEL BD	23,124,626	0.0	0.17	0.70	5.73	1.60	5.73	3.32	1.45	1.99	2.69	06/01/05
WESTERN ASSET ISRAEL BOND INDEX			-0.02	0.11	8.10	1.99	8.10	3.97	3.25	3.08	1.49	06/01/05
<i>Excess</i>			<i>0.19</i>	<i>0.59</i>	<i>-2.37</i>	<i>-0.39</i>	<i>-2.37</i>	<i>-0.65</i>	<i>-1.80</i>	<i>-1.10</i>	<i>1.20</i>	

SUMMARY OF PERFORMANCE

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
US NOMINAL FIXED INCOME ACTIVE	5,303,273,159	9.4	-1.08	-1.36	13.54	3.51	13.54	6.57	4.79	4.97	5.19	07/01/08
CUSTOM NOMINAL FIXED INCOME BENCHMARK ^[22]			-1.74	-2.42	13.44	3.44	13.44	6.20	4.36	4.15	4.48	07/01/08
<i>Excess</i>			0.67	1.06	0.11	0.06	0.11	0.37	0.43	0.82	0.70	
US NOMINAL FIXED INCOME TERRA MARIA	596,541,057	1.1	0.03	0.31	8.09	2.24	8.09	3.74	2.99	3.82	5.30	11/01/08
TERRA MARIA FI BENCHMARK ^[23]			0.05	0.34	7.77	2.21	7.77	3.52	2.77	3.44	5.97	11/01/08
<i>Excess</i>			-0.02	-0.03	0.32	0.04	0.32	0.23	0.22	0.37	-0.67	
TOTAL RATE SENSITIVE (CP)	596,541,057	1.1	0.03	0.31	8.09	2.24	8.09	3.74	3.07	4.08	5.17	11/01/08
RATE SENSITIVE (CP) BENCHMARK ^[23]			0.05	0.34	7.77	2.21	7.77	3.52	2.84	3.54	4.43	11/01/08
<i>Excess</i>			-0.02	-0.03	0.32	0.04	0.32	0.22	0.23	0.54	0.73	
TOTAL US NOMINAL FI ACTIVE + TM	5,899,814,215	10.5	-0.97	-1.20	12.99	3.38	12.99	6.29	4.61	4.86	5.10	07/01/08
CUSTOM NOMINAL FIXED INCOME BENCHMARK ^[22]			-1.74	-2.42	13.44	3.44	13.44	6.20	4.36	4.15	4.48	07/01/08
<i>Excess</i>			0.78	1.22	-0.45	-0.06	-0.45	0.09	0.26	0.71	0.61	
US NOMINAL FIXED INCOME	7,860,458,028	14.0	-1.18	-1.54	13.01	3.36	13.01	6.28	4.56	4.74	5.17	07/01/08
US NOMINAL FIXED INCOME BENCHMARK ^[24]			-1.74	-2.42	13.44	3.44	13.44	6.20	4.37	4.24	4.56	07/01/08
<i>Excess</i>			0.57	0.88	-0.43	-0.08	-0.43	0.08	0.20	0.50	0.61	
NOMINAL FIXED INCOME EX OVERLAY	7,860,458,134	14.0	-1.18	-1.54	13.01	3.36	13.01	6.28	4.54	4.86	7.04	07/01/86
CUSTOM NOMINAL FIXED INCOME BENCHMARK ^[22]			-1.74	-2.42	13.44	3.44	13.44	6.20	4.36	4.15		07/01/86
<i>Excess</i>			0.57	0.88	-0.43	-0.08	-0.43	0.08	0.18	0.72		
Nominal FI Tactical	76,290,196	0.1										01/01/17



SUMMARY OF PERFORMANCE

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
Nominal FI Structural	22,964,114	0.0										01/01/17
NOMINAL FIXED INCOME OVERLAY	99,254,309	0.2										01/01/17
NOMINAL FIXED INCOME	7,959,712,444	14.2	-1.61	-2.09	13.35	3.44	13.35	6.35	4.58	4.89	7.04	07/01/86
CUSTOM NOMINAL FIXED INCOME BENCHMARK ^[22]			-1.74	-2.42	13.44	3.44	13.44	6.20	4.36	4.15		07/01/86
<i>Excess</i>			0.14	0.33	-0.09	-0.00	-0.09	0.15	0.22	0.74		
INFLATION SENSITIVE												
SSGA PASSIVE US TIPS	99,882,185	0.2	0.33	0.72	8.71	2.15	8.71	3.41	2.65		0.95	12/01/12
BBG BARC US TIPS Idx			0.31	0.74	8.75	2.23	8.75	3.44	2.66		1.00	12/01/12
<i>Excess</i>			0.01	-0.02	-0.04	-0.07	-0.04	-0.03	-0.02		-0.05	
MD TIPS	2,120,706,084	3.8	0.32	0.77		2.20					2.20	07/01/19
BBG Barc US Gov Infi-Lkd All Maturities			0.31	0.74		2.23					2.23	07/01/19
<i>Excess</i>			0.01	0.03		-0.02					-0.02	
TOTAL U.S. TIPS	2,220,588,269	4.0	0.32	0.76	8.74	2.20	8.74	3.42	2.65	3.33	4.08	02/01/06
CUSTOM US TIPS MD BM ^[25]			0.31	0.74	8.75	2.23	8.75	3.44	2.66	3.38	3.89	02/01/06
<i>Excess</i>			0.01	0.02	-0.01	-0.03	-0.01	-0.02	-0.01	-0.06	0.19	
INFLATION SENSITIVE FI EX OVERLAY	2,220,588,269	4.0	0.32	0.77	8.72	2.21	8.72	3.41	2.75	3.68	3.81	07/01/08
CUSTOM INFLATION SENSITIVE BENCHMARK ^[26]			0.31	0.74	8.75	2.23	8.75	3.44	2.76	3.73	3.61	07/01/08
<i>Excess</i>			0.01	0.03	-0.03	-0.02	-0.03	-0.03	-0.02	-0.05	0.20	
Inflation Sensitive FI Tactical	-32	-0.0										07/01/17

SUMMARY OF PERFORMANCE

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
INFLATION SENSITIVE FIXED INCOME OVERLAY	-32	-0.0										07/01/17
INFLATION SENSITIVE FIXED INCOME	2,220,588,238	4.0	0.33	0.79	8.76	2.24	8.76	3.37	2.72	3.66	3.80	07/01/08
CUSTOM INFLATION SENSITIVE BENCHMARK ^[26]			0.31	0.74	8.75	2.23	8.75	3.44	2.76	3.73	3.61	07/01/08
<i>Excess</i>			0.02	0.05	0.01	0.01	0.01	-0.07	-0.04	-0.06	0.19	
TOTAL RATE SENSITIVE EX OVERLAY	10,081,046,404	18.0	-0.85	-1.04	12.00	3.10	12.00	5.62	4.12	4.65	6.97	07/01/86
CUSTOM RATE SENSITIVE BENCHMARK ^[27]			-1.32	-1.78	12.49	3.21	12.49	5.61	4.15	4.04		07/01/86
<i>Excess</i>			0.47	0.74	-0.49	-0.11	-0.49	0.01	-0.03	0.61		
TOTAL RATE SENSITIVE OVERLAY	99,254,278	0.2										01/01/17
TOTAL RATE SENSITIVE	10,180,300,681	18.1	-1.19	-1.48	12.26	3.17	12.26	5.67	4.15	4.67	6.98	07/01/86
CUSTOM RATE SENSITIVE BENCHMARK ^[27]			-1.32	-1.78	12.49	3.21	12.49	5.61	4.15	4.04		07/01/86
<i>Excess</i>			0.13	0.30	-0.23	-0.04	-0.23	0.06	0.00	0.63		
CREDIT/DEBT												
US CREDIT												
PIMCO HIGH QUALITY HY	1,579,906,198	2.8	1.63	2.63	15.58	4.54	15.58				8.94	07/01/18
BBG BARC Ba to B US HY Idx			1.52	2.52	15.18	4.42	15.18				8.84	07/01/18
<i>Excess</i>			0.11	0.11	0.40	0.12	0.40				0.10	
CREDIT SUISSE US BANK LOANS	460,655,922	0.8	1.35	1.69	8.76	3.02	8.76				6.37	07/01/18
S&P/LSTA Leverage Loan Index			1.60	1.73	8.64	2.74	8.64				4.48	07/01/18
<i>Excess</i>			-0.25	-0.04	0.12	0.28	0.12				1.89	



SUMMARY OF PERFORMANCE

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
PINE BRIDGE HIGH QUALITY HY	672,549,911	1.2	1.58	2.31	15.86	3.77	15.86				7.88	07/01/18
BBG BARC Ba to B US HY Idx			1.52	2.52	15.18	4.42	15.18				8.84	07/01/18
<i>Excess</i>			0.06	-0.21	0.68	-0.65	0.68				-0.96	
KKR BANK LOANS	16,547,143	0.0										09/01/10
CREDIT/DEBT TRANSITION ACCOUNT	0	0.0										02/01/09
CREDIT/DEBT TERRA MARIA ^[28]	52,939,370	0.1	1.07	1.72		3.02						01/01/10
HIGH YIELD/BANK LOAN EX OVERLAY	2,782,984,698	5.0	1.60	2.42	14.18	4.11	14.18	5.58			5.83	11/01/15
HIGH YIELD CUSTOM BENCHMARK ^[29]			1.92	2.44	13.17	3.74	13.17	5.96			6.89	11/01/15
<i>Excess</i>			-0.32	-0.02	1.00	0.37	1.00	-0.38			-1.05	
TOTAL DISTRESSED DEBT	611,014,855	1.1	0.23	0.15	0.98	0.61	0.98	7.59	6.98	8.51	8.51	01/01/10
TOTAL MEZZANINE DEBT	443,780,071	0.8	-0.16	3.08	3.36	3.84	3.36	8.03	7.37	7.88	7.88	01/01/10
PERELLA WEINBERG	51,237,743	0.1	0.00	-0.42	-4.87	-0.68	-4.87	-3.55	-3.16		3.95	07/01/10
HFRI ED: Distressed/Restructuring Index			0.87	-0.41	2.61	-2.11	2.61	2.33	2.56		4.24	07/01/10
<i>Excess</i>			-0.87	-0.02	-7.48	1.43	-7.48	-5.88	-5.71		-0.29	
TOTAL CREDIT HEDGE FUND	51,237,743	0.1	0.00	-0.42	-4.72	-0.68	-4.72	1.49	1.13		5.38	07/01/10
HFRI ED: Distressed/Restructuring Index			0.87	-0.41	2.61	-2.11	2.61	2.33	2.56		4.24	07/01/10
<i>Excess</i>			-0.87	-0.02	-7.32	1.43	-7.32	-0.85	-1.43		1.14	

SUMMARY OF PERFORMANCE

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
US CREDIT EX OVERLAY	3,889,017,367	6.9	1.15	2.06	9.98	3.41	9.98	6.62	5.70	7.05	8.99	03/01/09
U.S. CREDIT CUSTOM BENCHMARK ^[30]			1.92	2.44	13.17	3.74	13.17	5.96	5.79	6.66	8.44	03/01/09
<i>Excess</i>			<i>-0.76</i>	<i>-0.37</i>	<i>-3.19</i>	<i>-0.33</i>	<i>-3.19</i>	<i>0.66</i>	<i>-0.09</i>	<i>0.40</i>	<i>0.55</i>	
NON US CREDIT												
LOGAN CIRCLE HARD CURRENCY EM	562,383,014	1.0	2.59	3.48	16.50	4.40	16.50				11.02	07/01/18
Custom EM HC Benchmark ^[31]			1.73	2.44	12.59	2.96	12.59				8.92	07/01/18
<i>Excess</i>			<i>0.86</i>	<i>1.04</i>	<i>3.91</i>	<i>1.44</i>	<i>3.91</i>				<i>2.10</i>	
SSGA LOCAL CURRENCY EM	560,025,843	1.0	2.65	3.74	9.00	3.17	9.00				11.13	11/01/18
Custom EM Debt Benchmark ^[32]			2.73	3.91	9.14	3.26	9.14				11.16	11/01/18
<i>Excess</i>			<i>-0.08</i>	<i>-0.17</i>	<i>-0.14</i>	<i>-0.09</i>	<i>-0.14</i>				<i>-0.02</i>	
NON US CREDIT EX OVERLAY	1,122,408,856	2.0	2.62	3.61	12.54	3.78	12.54	6.21	2.43		0.71	10/01/10
NON-U.S. CREDIT CUSTOM BENCHMARK ^[33]			2.23	3.18	10.87	3.12	10.87	6.51	2.83		1.31	10/01/10
<i>Excess</i>			<i>0.39</i>	<i>0.43</i>	<i>1.67</i>	<i>0.66</i>	<i>1.67</i>	<i>-0.30</i>	<i>-0.41</i>		<i>-0.60</i>	
TOTAL CREDIT/DEBT STRATEGIES EX OVERLAY	5,011,426,224	8.9	1.48	2.41	10.52	3.49	10.52	6.22	5.03	7.00	8.88	03/01/09
MSRA CUSTOM CREDIT BENCHMARK ^[34]			1.99	2.60	12.68	3.60	12.68	6.29	5.22	6.05	7.87	03/01/09
<i>Excess</i>			<i>-0.51</i>	<i>-0.20</i>	<i>-2.16</i>	<i>-0.11</i>	<i>-2.16</i>	<i>-0.07</i>	<i>-0.20</i>	<i>0.95</i>	<i>1.01</i>	
REAL ASSETS												
REAL ESTATE												
TOTAL REITS EX RECORD CURRENCY	324,438	0.0										04/01/94
RECORD CURRENCY MANAGEMENT-REITS	261,042	0.0										07/01/11

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 REITS EX OVERLAY	585,480	0.0										04/01/94
TOTAL PRIVATE REAL ESTATE	4,690,765,576	8.4	0.21	1.59	5.44	2.03	5.44	7.63	9.51	10.96	9.05	03/01/94
CUSTOM MD PRIVATE REAL ESTATE BM ^[35]			-0.07	1.31	5.59	2.32	5.59	7.30	9.34	10.49	9.48	03/01/94
<i>Excess</i>			0.28	0.28	-0.16	-0.28	-0.16	0.33	0.17	0.48	-0.43	
MSIM Cus FTSE EPRA NAREIT Dev ex US(Net) ^[36]			0.49	1.75	21.90	6.46	21.90	8.28	5.57	7.38		11/01/06
WILSHIRE RESI			-0.64	-1.07	25.79	6.70	25.79	7.88	7.21	12.11		01/01/78
TOTAL REAL ESTATE	4,691,351,055	8.4	0.20	1.59	6.89	2.07	6.89	7.36	8.58	10.53	6.81	07/01/87
REAL ESTATE CUSTOM INDEX ^[37]			-0.07	1.31	7.32	2.32	7.32	7.30	8.56	10.33	8.16	07/01/87
<i>Excess</i>			0.28	0.28	-0.44	-0.25	-0.44	0.06	0.02	0.21	-1.34	
NATURAL RESOURCE AND INFRASTRUCTURE												
TORTOISE CAPITAL DOMESTIC EQ	96,280,910	0.2	7.92	-1.70	8.24	-7.76	8.24	-3.23	-5.27	7.31	8.80	08/01/09
S&P MLP Total Return Index			7.99	-3.09	9.78	-7.01	9.78	-2.90	-6.23	5.10	6.56	08/01/09
<i>Excess</i>			-0.06	1.39	-1.54	-0.75	-1.54	-0.34	0.96	2.21	2.24	
HARVEST FUND ADVISORS	257,195,058	0.5	7.77	-1.09	11.51	-6.20	11.51	-2.70	-5.18	9.71	10.05	11/01/09
S&P MLP Total Return Index			7.99	-3.09	9.78	-7.01	9.78	-2.90	-6.23	5.10	6.32	11/01/09
<i>Excess</i>			-0.22	2.00	1.73	0.81	1.73	0.20	1.05	4.61	3.73	
RHUMBLINE DJ BROOKFIELD GLOBAL INFRA	591,241,331	1.1	5.51	3.70	27.56	5.67	27.56				9.05	11/01/17
DJ Brookfield Global Infra Comp			5.47	3.52	26.53	5.26	26.53				7.52	11/01/17
<i>Excess</i>			0.04	0.18	1.02	0.42	1.02				1.53	

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 GLOBAL NATURAL RESOURCES	322,803,085	0.6	5.92	9.46	16.92	2.83	16.92				4.18	11/01/17
S&P Global Natural Resources (Net)			5.89	9.38	16.41	2.62	16.41				3.36	11/01/17
<i>Excess</i>			0.03	0.08	0.51	0.21	0.51				0.82	
TOTAL ENERGY FUNDS	628,787,398	1.1	0.26	0.73	-6.83	-3.12	-6.83	6.26	-1.55	6.46	6.46	01/01/10
TOTAL INFRASTRUCTURE	81,432,984	0.1	0.07	0.89	-1.52	-0.39	-1.52	-3.54	1.50	3.06	2.80	10/01/09
TIMBER LP FUNDS	200,587,269	0.4	0.00	-0.30	0.72	1.85	0.72	2.29	2.42		6.05	05/01/10
NATURAL RESOURCE AND INFRA EX OVERLAY	2,178,328,034	3.9	3.62	2.29	7.86	-0.00	7.86	4.25	-0.16	7.97	8.99	08/01/09
NATURAL RESOURCE AND INFRASTRUCTURE BM ^[38]			5.72	7.02	20.61	3.77	20.61	8.24	8.80	7.70	7.62	08/01/09
<i>Excess</i>			-2.10	-4.72	-12.75	-3.77	-12.75	-3.99	-8.96	0.26	1.37	
TOTAL REAL ASSETS EX OVERLAY	6,869,679,089	12.2	1.28	1.82	7.07	1.43	7.07	5.78	3.17	3.76	4.23	02/01/06
CUSTOM REAL ASSETS BENCHMARK ^[39]			1.74	3.10	11.13	2.87	11.13	6.84	4.82	3.37	3.67	02/01/06
<i>Excess</i>			-0.47	-1.28	-4.06	-1.44	-4.06	-1.05	-1.65	0.39	0.56	
TOTAL REAL ASSETS OVERLAY	0	0.0										01/01/17
TOTAL REAL ASSETS	6,869,679,089	12.2	1.28	1.82	7.07	1.43	7.07	5.78	3.17	3.76	4.23	02/01/06
CUSTOM REAL ASSETS BENCHMARK ^[39]			1.74	3.10	11.13	2.87	11.13	6.84	4.82	3.37	3.67	02/01/06
<i>Excess</i>			-0.47	-1.28	-4.06	-1.44	-4.06	-1.05	-1.65	0.39	0.56	

SUMMARY OF PERFORMANCE

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
ABSOLUTE RETURN												
1977 MERGER ARBITRAGE FUND	184,856,842	0.3	1.17	2.29	8.99	5.51	8.99				11.01	01/01/18
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92	7.40	2.12	7.40				3.70	01/01/18
<i>Excess</i>			0.06	0.37	1.59	3.39	1.59				7.31	
SHOALS FINANCIALS OPPORTUNITY FUND, LP	95,649,600	0.2	-1.11	-7.50	-7.35	-9.71	-7.35				-2.39	03/01/18
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92	7.40	2.12	7.40				3.65	03/01/18
<i>Excess</i>			-2.22	-9.42	-14.75	-11.84	-14.75				-6.04	
KING STREET CAPITAL	201,119,478	0.4	1.02	1.35	1.98	-0.77	1.98	2.61	2.24		4.56	12/01/11
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92	7.40	2.12	7.40	4.18	3.19		3.91	12/01/11
<i>Excess</i>			-0.09	-0.57	-5.42	-2.89	-5.42	-1.58	-0.95		0.65	
EMPYREAN CAPITAL FUND	302,631,600	0.5	0.80	-1.14	3.76	-0.27	3.76				0.55	06/01/18
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92	7.40	2.12	7.40				3.37	06/01/18
<i>Excess</i>			-0.31	-3.06	-3.64	-2.39	-3.64				-2.82	
STANDARD GENERAL FUND II	188,718,200	0.3	1.03	0.77		-10.90					-3.79	02/01/19
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92		2.12					5.38	02/01/19
<i>Excess</i>			-0.08	-1.15		-13.02					-9.17	
SGM CO-INVESTMENT FUND LP	9,775,010	0.0	2.30	-2.93							-2.93	10/01/19
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92							1.92	10/01/19
<i>Excess</i>			1.19	-4.85							-4.85	
CONTRARIAN EMMA 2	100,000,000	0.2										12/01/19



SUMMARY OF PERFORMANCE

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
EVENT DRIVEN STRATEGIES	1,082,750,730	1.9	0.71	-0.40	1.42	-2.69	1.42					07/01/17
HFRI FoF CONSERVATIVE + 100 bps			1.11	1.92	7.40	2.12	7.40					07/01/17
<i>Excess</i>			<i>-0.40</i>	<i>-2.32</i>	<i>-5.98</i>	<i>-4.81</i>	<i>-5.98</i>					
BRIDGEWATER PURE ALPHA	595,813,087	1.1	1.97	4.14	-1.64	3.69	-1.64	2.79	3.59	5.44	4.93	05/01/08
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92	7.40	2.12	7.40	4.18	3.19	3.17	1.86	05/01/08
<i>Excess</i>			<i>0.86</i>	<i>2.22</i>	<i>-9.04</i>	<i>1.56</i>	<i>-9.04</i>	<i>-1.40</i>	<i>0.41</i>	<i>2.27</i>	<i>3.07</i>	
GRAHAM TACTICAL TREND	299,811,497	0.5	-3.23	-0.81	18.27	6.14	18.27	1.85			-1.65	07/01/15
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92	7.40	2.12	7.40	4.18			3.05	07/01/15
<i>Excess</i>			<i>-4.34</i>	<i>-2.73</i>	<i>10.86</i>	<i>4.02</i>	<i>10.86</i>	<i>-2.34</i>			<i>-4.70</i>	
FORT GLOBAL CONTRARIAN	232,322,200	0.4	-0.54	-1.30	16.60	2.54	16.60				7.83	03/01/18
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92	7.40	2.12	7.40				3.65	03/01/18
<i>Excess</i>			<i>-1.65</i>	<i>-3.22</i>	<i>9.20</i>	<i>0.42</i>	<i>9.20</i>				<i>4.18</i>	
TUDOR MANIYAR MACRO FUND	200,373,800	0.4	1.69	1.63							0.19	08/01/19
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92							1.79	08/01/19
<i>Excess</i>			<i>0.58</i>	<i>-0.29</i>							<i>-1.61</i>	
GLOBAL MACRO/GTAA STRATEGIES	1,328,320,584	2.4	0.27	1.64	4.87	3.61	4.87	1.50	0.10	2.29	2.31	04/01/08
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92	7.40	2.12	7.40	4.18	3.19	3.17	1.90	04/01/08
<i>Excess</i>			<i>-0.84</i>	<i>-0.28</i>	<i>-2.53</i>	<i>1.48</i>	<i>-2.53</i>	<i>-2.68</i>	<i>-3.09</i>	<i>-0.88</i>	<i>0.41</i>	
NEPHILA PALMETTO FUND	184,904,370	0.3	0.70	-2.94	1.52	-0.69	1.52	-2.93	-0.23		0.92	01/01/14
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92	7.40	2.12	7.40	4.18	3.19		3.09	01/01/14
<i>Excess</i>			<i>-0.41</i>	<i>-4.87</i>	<i>-5.89</i>	<i>-2.82</i>	<i>-5.89</i>	<i>-7.11</i>	<i>-3.42</i>		<i>-2.17</i>	

SUMMARY OF PERFORMANCE

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
NIMBUS WEATHER FUND LTD	96,602,600	0.2	0.56	0.74	-2.77	1.93	-2.77				-2.41	06/01/17
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92	7.40	2.12	7.40				4.01	06/01/17
<i>Excess</i>			-0.55	-1.18	-10.17	-0.19	-10.17				-6.42	
PRIVATE MARKET FUNDS	66,199,461	0.1	0.02	-11.60	-13.94	-13.67	-13.94				2.87	06/01/18
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92	7.40	2.12	7.40				3.37	06/01/18
<i>Excess</i>			-1.09	-13.52	-21.34	-15.79	-21.34				-0.50	
HSCM BERMUDA FUND	203,743,361	0.4	-0.49	0.19		6.25					6.25	07/01/19
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92		2.12					2.12	07/01/19
<i>Excess</i>			-1.61	-1.73		4.12					4.12	
OPPORTUNISTIC	551,449,792	1.0	0.15	-2.54	-0.76	-0.82	-0.76	-2.30	0.16		1.25	01/01/14
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92	7.40	2.12	7.40	4.18	3.19		3.09	01/01/14
<i>Excess</i>			-0.96	-4.46	-8.17	-2.94	-8.17	-6.48	-3.03		-1.84	
HUDSON BAY FUND	473,694,000	0.8	1.46	2.11	8.23	3.74	8.23	8.36	5.78		4.71	10/01/14
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92	7.40	2.12	7.40	4.18	3.19		3.08	10/01/14
<i>Excess</i>			0.35	0.19	0.83	1.62	0.83	4.18	2.59		1.63	
ARISTEIA CAPITAL	370,695,000	0.7	1.78	2.05	6.15	2.61	6.15	6.01	4.59		4.51	12/01/14
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92	7.40	2.12	7.40	4.18	3.19		3.22	12/01/14
<i>Excess</i>			0.67	0.13	-1.25	0.49	-1.25	1.82	1.40		1.29	
ARISTEIA CO-INVEST	23,920,019	0.0	1.21	7.79	17.62	12.06	17.62	13.74			10.19	03/01/16
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92	7.40	2.12	7.40	4.18			4.60	03/01/16
<i>Excess</i>			0.10	5.87	10.21	9.94	10.21	9.55			5.59	



SUMMARY OF PERFORMANCE

	Market Value	% of Plan	1 MO	3 MO	YTD	FYTD	1 YR	3 YRS	5 YRS	10 YRS	ITD	Inception Date
EXODUS POINT	319,782,000	0.6	0.79	2.30	6.44	3.15	6.44				4.60	08/01/18
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92	7.40	2.12	7.40				3.53	08/01/18
<i>Excess</i>			-0.32	0.38	-0.97	1.03	-0.97				1.07	
RELATIVE VALUE STRATEGIES	1,188,091,019	2.1	1.37	2.25	7.08	3.37	7.08	4.74	3.17		3.36	01/01/14
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92	7.40	2.12	7.40	4.18	3.19		3.09	01/01/14
<i>Excess</i>			0.26	0.33	-0.32	1.25	-0.32	0.55	-0.01		0.26	
BLACKROCK ABSOLUTE RETURN STRUCTURAL	86,999,292	0.2	1.20	2.67	9.36	3.00	9.36				3.95	06/01/18
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92	7.40	2.12	7.40				3.37	06/01/18
<i>Excess</i>			0.09	0.75	1.96	0.88	1.96				0.58	
TOTAL ABSOLUTE RETURN	4,238,026,019	7.6	0.69	0.79	4.03	1.51	4.03	2.60	1.73	3.39	3.20	04/01/08
CUSTOM ABSOLUTE RETURN BENCHMARK ^[20]			1.11	1.92	7.40	2.12	7.40	4.18	3.19	3.17	1.90	04/01/08
<i>Excess</i>			-0.42	-1.13	-3.37	-0.61	-3.37	-1.58	-1.46	0.22	1.30	
MULTI ASSET												
BRIDGEWATER ALL WEATHER	467,781,156	0.8	1.75	2.61	16.74	4.25	16.74	7.39	4.92	7.74	8.18	07/01/09
CUSTOM BRIDGEWATER BENCHMARK ^[40]			1.11	1.92	7.40	2.12	7.40	4.18	3.19	4.95	5.51	07/01/09
<i>Excess</i>			0.64	0.69	9.33	2.13	9.33	3.21	1.73	2.80	2.66	
BLACKROCK CASH EQUITIZATION	188,026,635	0.3	2.41	5.24	22.23	6.14	22.23	9.23			10.68	12/01/16
FTSE 3 MONTH T-BILL			0.14	0.46	2.25	1.03	2.25	1.65			1.61	12/01/16
<i>Excess</i>			2.27	4.78	19.98	5.12	19.98	7.58			9.07	



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 MULTI ASSET	655,807,791	1.2	1.94	3.35	15.87	4.71	15.87				6.10	07/01/18
TOTAL PLAN POLICY INDEX ^[41]			1.60	3.87	15.93	5.18	15.93				8.24	07/01/18
<i>Excess</i>			<i>0.35</i>	<i>-0.52</i>	<i>-0.06</i>	<i>-0.47</i>	<i>-0.06</i>				<i>-2.14</i>	
CASH												
MARYLAND MONEY MARKET ACCOUNT	601,330,052	1.1	0.18	0.49	2.31	1.07	2.31	1.86	1.25		0.72	01/01/11
FTSE 3 MONTH T-BILL			0.14	0.46	2.25	1.03	2.25	1.65	1.05		0.61	01/01/11
<i>Excess</i>			<i>0.04</i>	<i>0.03</i>	<i>0.06</i>	<i>0.04</i>	<i>0.06</i>	<i>0.21</i>	<i>0.20</i>		<i>0.11</i>	
SELF LIQUIDATING ACCOUNT	2,196,317	0.0	-1.80	0.08	12.01	3.65	12.01					06/01/84
TOTAL CASH	730,480,637	1.3	0.94	1.75	8.34	1.84	8.34	7.71	5.88	4.29	4.07	07/01/08
FTSE 3 MONTH T-BILL			0.14	0.46	2.25	1.03	2.25	1.65	1.05	0.56	0.56	07/01/08
<i>Excess</i>			<i>0.80</i>	<i>1.29</i>	<i>6.09</i>	<i>0.81</i>	<i>6.09</i>	<i>6.06</i>	<i>4.83</i>	<i>3.73</i>	<i>3.51</i>	
TOTAL PLAN	56,121,551,423	100.0	1.73	3.98	14.99	5.17	14.99	9.16	6.65	7.53	8.06	07/01/86
TOTAL PLAN POLICY INDEX ^[41]			1.60	3.87	15.93	5.18	15.93	9.03	6.68	7.03		07/01/86
<i>Excess</i>			<i>0.13</i>	<i>0.11</i>	<i>-0.94</i>	<i>-0.01</i>	<i>-0.94</i>	<i>0.13</i>	<i>-0.03</i>	<i>0.50</i>		
TOTAL PLAN CUSTOM STATIC INDEX ^[42]			1.65	3.95	15.98	5.21	15.98	9.12	6.83	7.30		07/01/08

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).

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

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

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.

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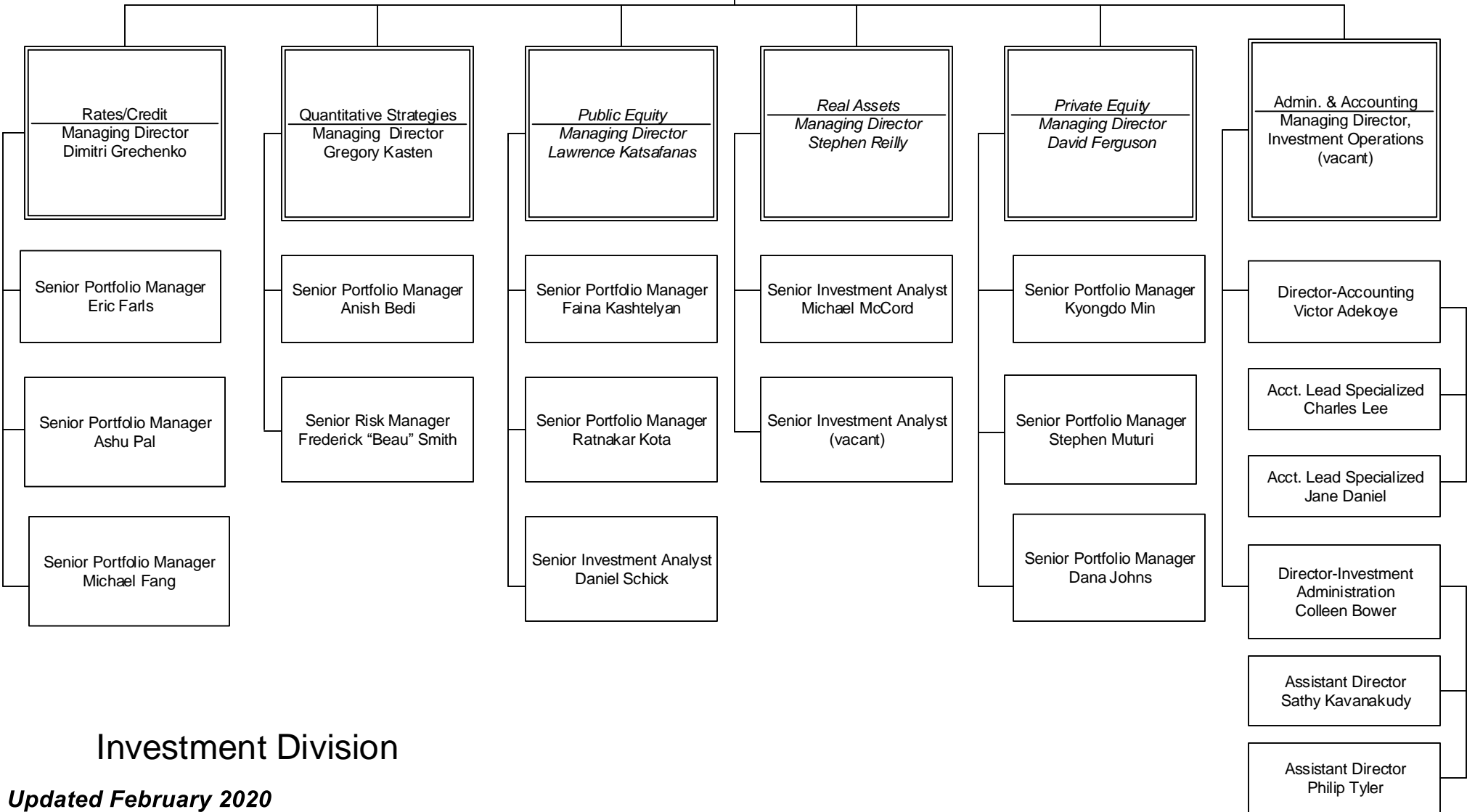
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Investment Division

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