PENSION RESERVES INVESTMENT MANAGEMENT BOARD

Investment Committee Meeting Tuesday, November 17, 2015 9:30 a.m.

<u>Agenda</u>

- I. Approval of the Minutes.
- II. Executive Director/Chief Investment Officer Comments.
- III. Public Markets Portfolio Performance Review.
- IV. Investment Research.
 - a. Inflation Research.
 - b. Corporate Credit Research.
- V. Hedge Funds Portfolio Update.
- VI. Portfolio Completion Strategies: Real Assets Primer.
- VII. Private Equity Portfolio Update.
 - a. Performance Summary and Cash Flows.
 - b. Private Equity Commitment Summary.

Appendices

- A. Minutes of the PRIM Investment Committee Meeting of September 21, 2015.
- B. Callan PRIT Fund Performance Report Color Charts.
- C. BNY Mellon Gross of Fees Performance Report.
- D. Callan Investment Measurement Service Monthly Review.
- E. Investment Research: Inflation Research.
- F. Investment Research: Corporate Credit Research.
- G. Portfolio Completion Strategies: Real Assets Primer.

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PENSION RESERVES INVESTMENT MANAGEMENT BOARD Investment Committee Meeting Tuesday, November 17, 2015 9:30 a.m.

EXPANDED AGENDA

I. Approval of the Minutes.

The minutes of the PRIM Investment Committee meeting of September 21, 2015 are contained at **Appendix A**.

II. Executive Director/Chief Investment Officer Comments.

Michael G. Trotsky, CFA, Executive Director and Chief Investment Officer.

PRIT Core Fund Performance Reports:

- The Callan PRIT Fund Performance Report Color Charts are contained at Appendix B.
- The BNY Mellon Gross of Fees Performance Report is contained at Appendix C.
- The Callan Investment Measurement Service Monthly Review is contained at Appendix D.

III. Public Markets Portfolio Performance Update.

Sarah N. Samuels, CFA, Deputy Chief Investment Officer – Director of Public Markets & Investment Research, Chuck LaPosta, CFA, Senior Investment Officer – Fixed Income. Written materials will be handed out at the meeting.

IV. Investment Research.

a. Inflation Research.

Sarah N. Samuels, CFA, Deputy Chief Investment Officer – Director of Public Markets & Investment Research, and Chuck LaPosta, CFA, Senior Investment Officer – Fixed Income. The presentation is contained at **Appendix E**.

b. Corporate Credit Research.

Sarah N. Samuels, CFA Deputy Chief Investment Officer – Director of Public Markets & Investment Research, Michael R. Bailey, Senior Investment Officer – Director of Private Equity, and Michael M. McGirr, CFA, Senior Investment Officer – Private Equity. The presentation is contained at **Appendix F.**

V. Hedge Fund Portfolio Update.

Eric R. Nierenberg, Ph.D., Senior Investment Officer—Director of Hedge Funds and Low Volatility Strategies.

VI. Portfolio Completion Strategies: Real Assets Primer.

Eric R. Nierenberg, Ph.D., Senior Investment Officer—Director of Hedge Funds and Low Volatility Strategies. The presentation is contained at **Appendix G.**

VII. Private Equity Portfolio Update.

Michael R. Bailey, Senior Investment Officer – Director of Private Equity.

a. Performance Summary and Cash Flows.

PRIM Board Private Equity Portfolio Performance as of October 31, 2015 ¹									
Committed	Contributed ²	Market Value	Total Value	Net IRR ³					
17,052,673,628	14,002,940,013	15,724,258,981	6,674,269,189	22,398,528,170	13.24%				

- 1. Excludes Alternative Fixed Income and Private Natural Resources partnerships.
- 2. Contributions include fees.
- 3. Net IRR since inception, as calculated by Hamilton Lane's Portfolio Reporting System.

2015 Cash flows 1

Quarter	Contributions ²	Distributions	Net Cash Flow
31-Mar-15	283,670,913	395,789,514	112,118,601
30-Jun-15	327,467,876	615,659,051	288,191,175
30-Sep-15	302,830,311	597,241,672	294,411,360
31-Dec-15	-	-	-
TOTAL	\$913,969,100	\$ 1,608,690,237	\$ 694,721,137

- 1. Excludes Alternative Fixed Income and Private Natural Resources partnerships.
- 2. Contributions include fees.

b. Private Equity Commitment Summary.

	Private Equity						
	2015 Investment Summary						
	(\$ in Millions)						
*Denotes existing PRIM relationship				.,			otal
<u>Partnership</u>	Investment Focus		Special Equity		enture <u>Capital</u>		RIT nitment
<u>- artificianip</u>	investment rocus		<u>-quity</u>	2	<u>capitai</u>	Comm	- Incline
Approved as Interim Recommendation	s January 20th						
Catalyst Investors IV, L.P. *				\$	65		
Insight Venture Partners IX, L.P. *				\$	120		
Insight Growth-Buyout Coinvestment Fo	und, L.P. *			\$	40		
Approved at the February 11th Board	Meeting						
Flagship Ventures Fund V, L.P. *				\$	25		
Rhône Partners V, L.P.		\$	106				
Approved as Interim Recommendation	March 2nd				22		
Index Ventures Growth III, L.P. *				\$	32		
Approved at the April 7th Board Meet	ing						
Blackstone Capital Partners VII, L.P. *		\$	225				
TA XII, L.P. *				\$	200		
Thoma Bravo Special Opportunities Fur	nd II, L.P. *	\$	50				
A d d d d d d d d d d d d d d d d d d	t						
<u>Approved at the June 4th Board Meet.</u> Charterhouse Capital Partners X, L.P. *	<u>ing</u>	\$	112				
Quantum Parallel Partners VI-C, L.P. *		\$	45				
—		•					
Approved as Interim Recommendation	<u>September 8th</u>						
Index Ventures Life VII, L.P. *				\$	13		
Approved at the October 13th Board	Montina						
<u>Approved at the October 13th Board I</u> Lovell Minnick Equity Partners IV, L.P.	weeting	\$	100				
Loven willing Equity Furthers TV, E.F.		Y	100				
Total		\$	637	\$	495	\$	1,132
2045 (.	700
2015 Investment Plan Remaining To Be Committed							,700 568
nemaning to be committed						7.	,,,,
	PRIM						
	Alternative Fixed Income						
	2015 Investment Summary						
***	(\$ in Millions)						
*Denotes existing PRIM relationship					Total		
					Total PRIT		
<u>Partnership</u>				Com	mitment		
Approved as Interim Recommendation	s March 2nd						
0 1				\$ \$	75 150		
Oaktree Opportunities Fund X, L.P. *					150		
Oaktree Opportunities Fund X, L.P. * Oaktree Opportunities Fund Xb, L.P. *				Y			
Oaktree Opportunities Fund Xb, L.P. *	ing			Ÿ			
7.7	<u>ing</u>			\$	150		
Oaktree Opportunities Fund Xb, L.P. * Approved at the April 7th Board Meet CVI Credit Value Fund III, L.P.	<u>ing</u>			\$	150		
Oaktree Opportunities Fund Xb, L.P. * Approved at the April 7th Board Meet	ing.						
Oaktree Opportunities Fund Xb, L.P. * Approved at the April 7th Board Meet CVI Credit Value Fund III, L.P.	ing.			\$	150	\$ 7	700

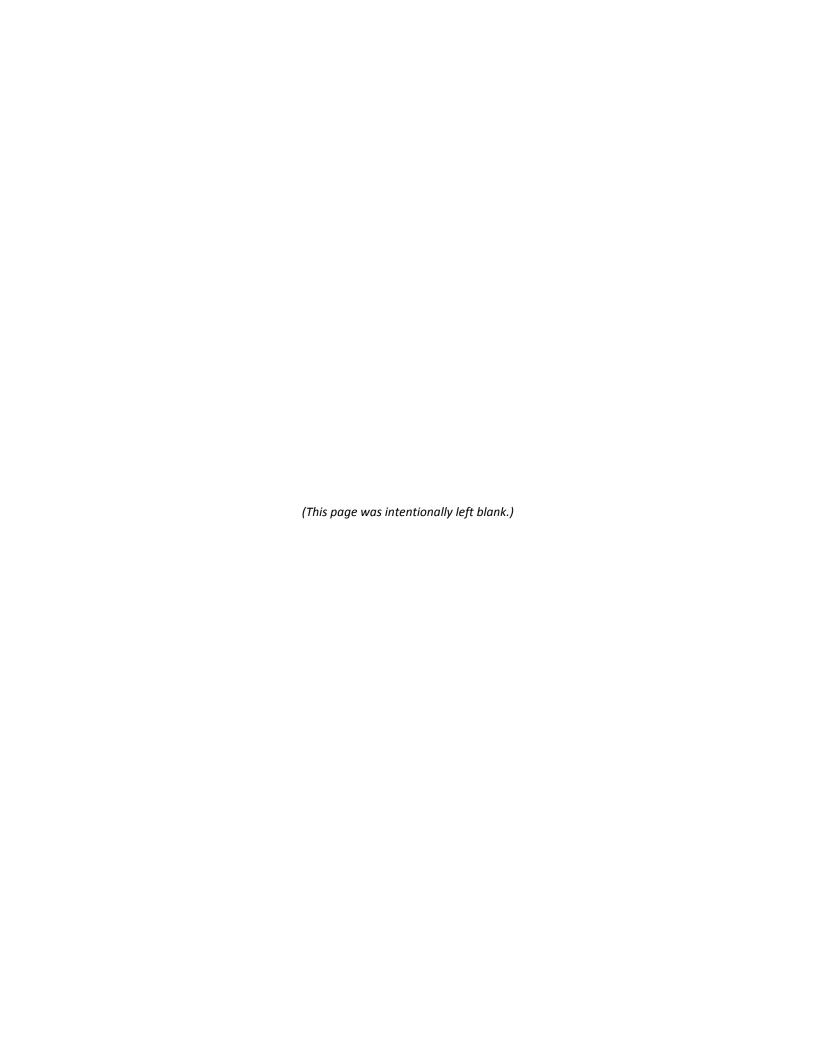
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Appendix A

Minutes from September 21, 2015 Investment Committee Meeting

PRIM Investment Committee Meeting Tuesday, November 17, 2015





Minutes of the PRIM Investment Committee Meeting Monday, September 21, 2015

Committee Member Attendees:

- Treasurer Deborah B. Goldberg, Chair
- Constance M. Everson, CFA (arrived at 9:40 a.m.)
- C. Laroy Brantley
- Ruth Ellen Fitch
- Michael J. Heffernan
- Michael Even, CFA (arrived at 9:37 a.m.)
- Paul E. Shanley, Esquire
- Glenn P. Strehle, CFA
- Timothy L. Vaill

The meeting of the PRIM Investment Committee was called to order at 9:30 a.m.

I. Approval of the Minutes.

The PRIM Investment Committee unanimously approved the Minutes of the July 21, 2015 meeting.

II. Executive Director/Chief Investment Officer Comments.

Michael G. Trotsky, CFA, Executive Director and Chief Investment Officer, provided the committee with an update on the following:

Organizational Updates.

I am delighted to report that PRIM and our people continue to receive national recognition for our innovative and high-performing investment program and for our equally high-performing finance and legal work. A listing of recent awards is as follows:

- ☐ Buyouts Magazine named PRIM as the best-performing private equity portfolio of the 22 largest pensions it evaluates for the 1-year, 3-year, 5-year, and 10-year time periods.
- □ Awarded the 10th consecutive <u>Government Finance Officers Association (GFOA) Certificate of Achievement for Excellence in Financial Reporting.</u>
- ☐ Michael G. Trotsky, CFA, was nominated as one of five finalists for <u>Chief Investment Officer</u> Magazine 2015 "CIO Industry Innovations Award."
 - From the editor: "The central questions of these awards: What is innovation, and who is executing it? To the CIO editorial team and the board of asset owners—the Class of 2015 winners—who advise our judgments, innovation means more than re-labeling old strategies. It means more than producing sub-par returns for above-par prices. At its core, innovation

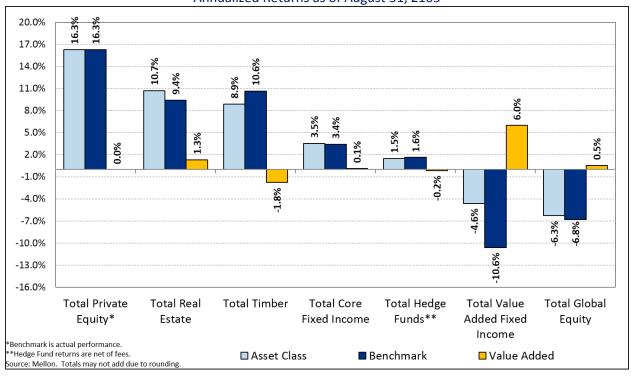
- means matching new challenges with new ideas—ridding the asset management world of its sacred cows and failed strategies. And it means results."
- The other nominees are: New Jersey Division of Investment, Oregon Investment Council, Pennsylvania Public School Employees' Retirement System, and Public Employees' Retirement System of Nevada.
- Award is to be announced on December 3, 2015 at the New York Public Library.
- ☐ Michael Bailey, Senior Investment Officer Director of Private Equity, was nominated for the <u>Investor Intelligence Award for Excellence in Private Equity</u> by Investor Intelligence Network. Sponsored by Institutional Investor Magazine, the Investor Intelligence Awards recognize the most outstanding and innovative public plan sponsors in North America.
- □ Sarah Samuels, CFA, Deputy Chief Investment Officer, was named to <u>Chief Investment Officer</u> <u>Magazine's 2015 "40 Under 40"</u> list.
 - A worldwide award which recognizes up-and-coming asset owners who have made meaningful investment contributions to their organizations.
 - The "40 under 40" list includes asset owners from public and corporate pension plans, endowments and foundations, health care funds, and insurance funds across the globe.
- ☐ Chris Supple, Deputy Executive Director and General Counsel, was awarded the <u>Commonwealth's</u> <u>Citation for Outstanding Performance</u> in a September 24, 2015 State House Ceremony.
 - Awarded for his outstanding work in collaboration with the Treasury and Attorney General's Office when PRIM served as the lead plaintiff in three class action lawsuits.
 - \$473 million recovered from Schering Plough. One of top 25 securities fraud settlements ever and the largest ever from a pharmaceutical company.
 - \$265 million recovered from Massey Energy.
 - \$170 million recovered from Fannie Mae.
 - Chris was also re-appointed to a second term as Chair of the Securities Litigation Committee of the National Association of Public Pension Attorneys (NAPPA).

In other organizational news, Steffanny Rosario joined PRIM in September as the new Executive Assistant to the finance and investment teams. Steffanny joins us from the City of Boston Transportation Department, where she supported both the Commissioner and Deputy Commissioner. Steffanny attended Regis College and is finishing her Bachelors of Arts degree in Global Affairs at UMass Boston.

PRIT Fund Performance.

The markets have been volatile and weak during the past three months as the Chinese slowdown and a surprise devaluation in their currency increased concerns about global growth. Fortunately, the PRIT fund has held up well in the recent market sell-off and the asset allocation changes we have made appear to be quite timely and effective for their purpose. We have been worried for a long time about the strength of the U.S. economic recovery and have long held the belief that conditions have not been supportive of higher interest rates. Furthermore, our valuation work on global equities, along with insightful economic observations, signaled that equity valuations were in a peak zone. Over the past five years, while the PRIT Fund recorded very strong performance (up on average 11 percent annually), we gradually reduced our exposure to equities and implemented strategies to buffer an equities sell-off. As a reminder, we have (1) reduced our global equities allocation from 49 percent to its current target of 40 percent, (2) converted our core fixed income portfolio to include long duration Treasury STRIPS, an asset that typically is negatively correlated to equities, and (3) created and funded a new allocation, Portfolio Completion Strategies, to identify and fund low volatility strategies with low correlation to equities. We continue to monitor market developments closely and have recently begun our annual asset allocation study to ensure that we remain ahead of the curve. We look forward to sharing our findings in the coming months.

PRIT Asset Class Performance (Gross of Fees) Annualized Returns as of August 31, 2105



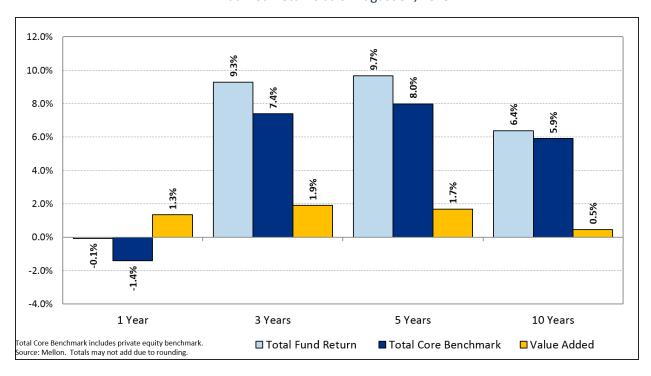
PRIT Core Fund Performance Summary Gross of Fees Performance

Trailing 1-Year Performance as of August 31, 2015

			Over/(Under)		% of
Trailing 1-Year		Benchmark	Benchmark	\$Value	PRIT
Performance: Aug. 31, 2015	Return	Return	(bps)	(millions)	Fund
Total PRIT Fund	-0.1%	-1.4%	132	59,432	100%
Total Global Equity	-6.3%	-6.8%	54	24,927	41.9%
Domestic Equity	0.0%	0.3%	(35)	11,176	18.8%
International Developed	-6.4%	-8.3%	191	9,876	16.6%
Emerging Markets	-21.9%	-21.9%	5	3,874	6.5%
Private Equity	16.3%	16.3%	0	6,699	11.3%
Real Estate	10.7%	9.4%	133	6,106	10.3%
Timberland/Natural Resources	-3.4%	-1.9%	(150)	2,252	3.8%
Hedge Funds	1.5%	1.6%	(16)	5,104	8.6%
Value Added Fixed Income	-4.6%	-10.6%	599	5,043	8.5%
Core Fixed Income	3.5%	3.4%	12	8,315	14.0%

Total PRIT Fund Returns (Gross of Fees)

Annualized Returns as of August 31, 2015



PRIT Asset Class Performance (Gross of Fees)

Annualized Returns as of August 31, 2015

1 Year	3 Year	5 Year	10 Year
Private Equity 16.3%	Private Equity 18.8%	Private Equity 18.3%	Private Equity 16.8%
Real Estate 10.7%	Real Estate 12.3%	Real Estate 13.1%	Timber 8.6%
Timber 8.9%	Global Equity 9.9%	Global Equity 10.3%	Real Estate 8.3%
Core Fixed Income 3.5%	Timber 9.1%	Timber 6.3%	Value-Added Fixed Income 7.3%
Hedge Funds 1.5%	Hedge Funds 7.4%	Value-Added Fixed Income 6.0%	Global Equity 5.6%
Value-Added Fixed Income (4.6%)	Core Fixed Income 3.6%	Hedge Funds 5.7%	Core Fixed Income 5.0%
Global Equity (6.3%)	Value-Added Fixed Income 3.4%	Core Fixed Income 4.6%	Hedge Funds 4.4%

Market Analysis.

Constance M. Everson, CFA gave an update on market conditions. She described four factors contributing to risk and recent equity volatility: 1. a mismatch of investor expectations, compared to the reality of slow growth and demand constraints, 2. narrowness of the stock market, 3. strained trading conditions, and 4. credit slowdowns in some key funding sectors, such as shadow banking and the offshore US dollar credit that grew especially quickly in emerging markets, until 2014. Discussion followed about what to watch for if an equity rally developed, and prospects for a near-term rate hike, which seemed very unlikely, in light of recent data. Discussion followed also about a possible buying opportunity in hard-hit emerging markets, but the opportunity seemed limited at best until global growth and credit conditions had resolved favorably.

III. Public Markets Portfolio Update.

Sarah N. Samuels, CFA, Deputy Chief Investment Officer, Chuck LaPosta, CFA, Senior Investment Officer – Fixed Income, and Andre Clapp, CFA, Ph.D., Senior Investment Officer – Equities provided the committee with an update on the public markets portfolio.

IV. Progress Core Bond Strategy.

Chuck LaPosta, CFA, Senior Investment Officer – Fixed Income. Progress Investment Management Company, LLC, a Manager of Emerging Managers, was placed on PRIM's manager bench in 2013. In light of recent changes to PRIM's Core Fixed Income allocation and careful evaluation of Progress' performance PRIM Staff will remove Progress Core Fixed Income Strategy from the manager bench and fund up to the \$100 million amount approved at the August 8, 2013 Board meeting.

V. Hedge Fund Portfolio Update.

Eric R. Nierenberg, Ph.D., Senior Investment Officer—Director of Hedge Funds and Low Volatility Strategies, provided the Investment committee with an update on the hedge fund portfolio.

VI. Hedge Fund Managed Account Primer and Update.

Eric R. Nierenberg, Ph.D., Senior Investment Officer—Director of Hedge Funds and Low Volatility Strategies, provided the investment committee with a presentation regarding managed accounts.

VII. Private Equity Portfolio Update.

a. Performance Summary and Cash Flows.

Michael R. Bailey, Senior Investment Officer - Director of Private Equity, reviewed private equity performance with the committee. As of August 31, 2015, the net IRR of the private equity portfolio was 13.26%, and the quarterly net cash flow was \$288.2 million.

b. Private Equity Commitment Summary.

Mr. Bailey informed the committee that the total private equity commitments for the calendar year were \$987 million, with \$713 million remaining to be committed. Alternative fixed income commitments for the calendar year were \$375 million, with \$325 million remaining to be committed.

The meeting of the PRIM Investment Committee adjourned at 11:13 a.m.

List of documents and other exhibits used at the meeting:

Appendices

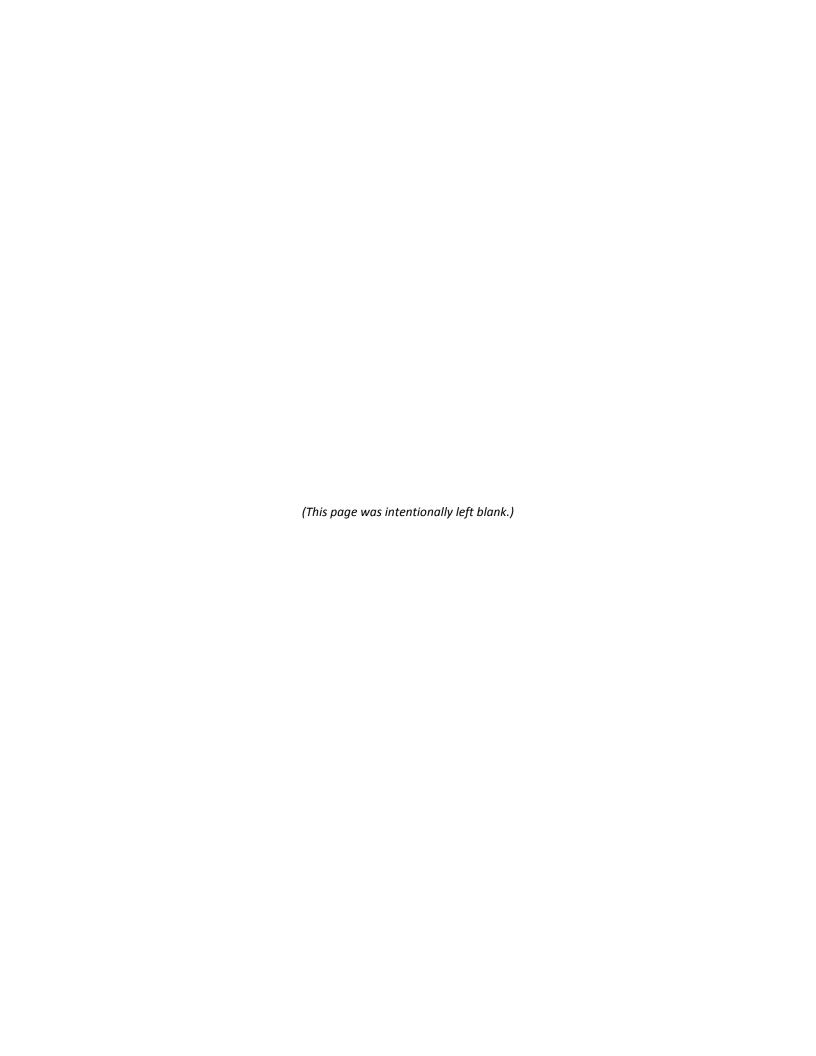
- A. Minutes of the PRIM Investment Committee Meeting of July 21, 2015.
- B. Callan PRIT Fund Performance Report Color Charts.
- C. BNY Mellon Gross of Fees Performance Report.
- D. Callan Investment Measurement Service Monthly Review.
- E. Public Markets Manager Bench Update: PRIM Progress Memorandum.
- F. Public Markets Manager Bench Update: Callan Progress Memorandum.
- G. Hedge Fund Managed Account Primer.



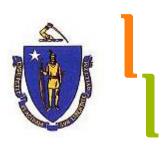
Appendix B

Callan PRIT Fund Performance Report Color Charts

PRIM Investment Committee Meeting Tuesday, November 17, 2015



Callan



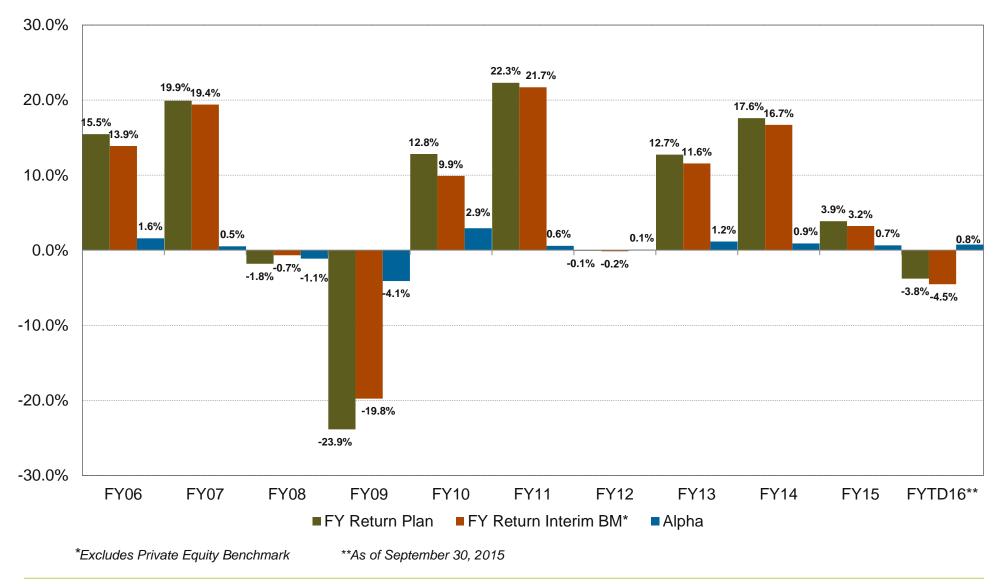
Commonwealth of Massachusetts Pension Reserves Investment Management Board

PRIT Fund Performance Report

Gross of Fees for Period ending September 30, 2015

Total PRIT Fund Fiscal Year Performance

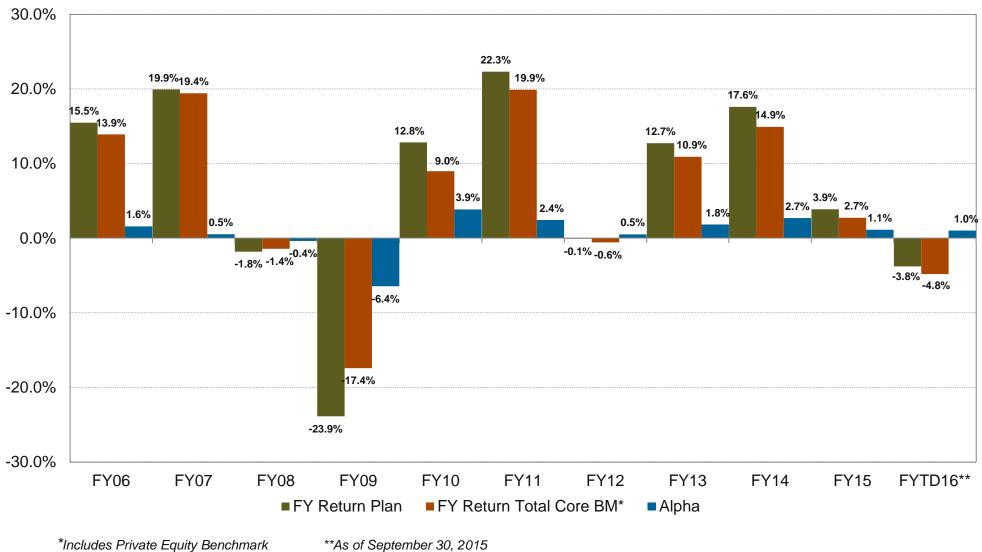
Gross of Fees





Total PRIT Fund Fiscal Year Performance

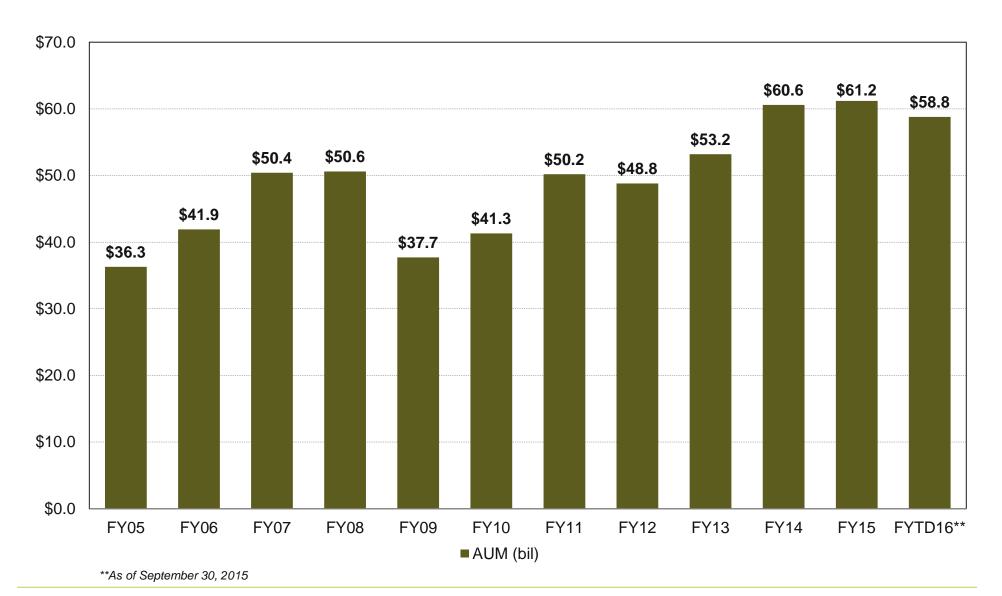
Gross of Fees





**As of September 30, 2015

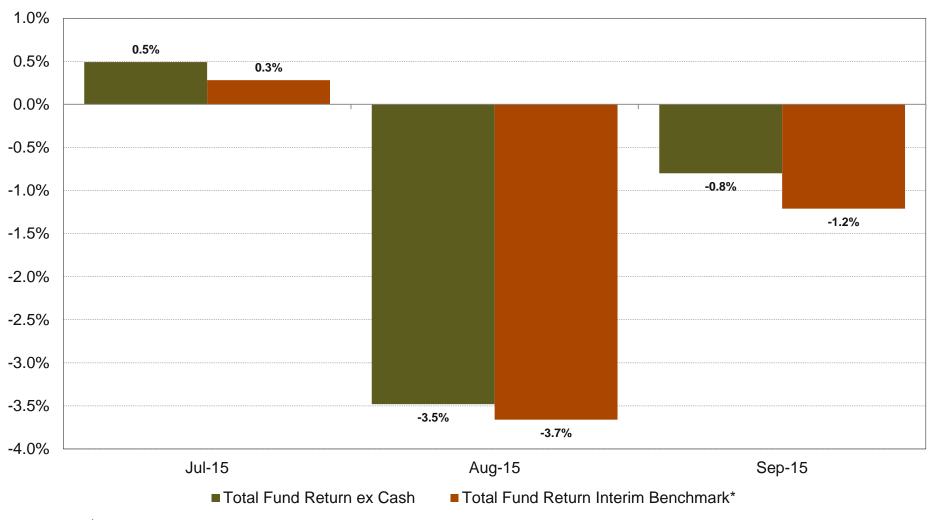
Total PRIT Fund Fiscal Year Market Value (\$Billions)





Total PRIT Fund Monthly Performance FYTD16

Gross of Fees

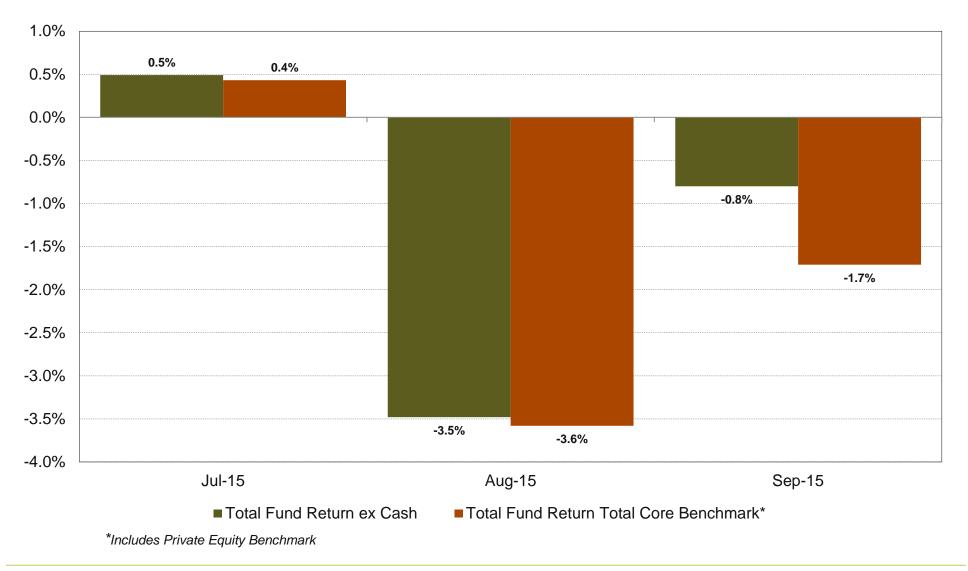


*Excludes Private Equity Benchmark



Total PRIT Fund Monthly Performance FYTD16

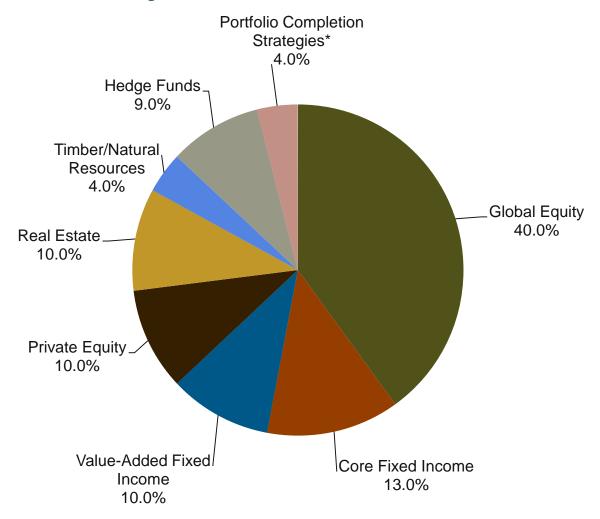
Gross of Fees





PRIT Fund Asset Allocation

Long-Term Asset Allocation Targets

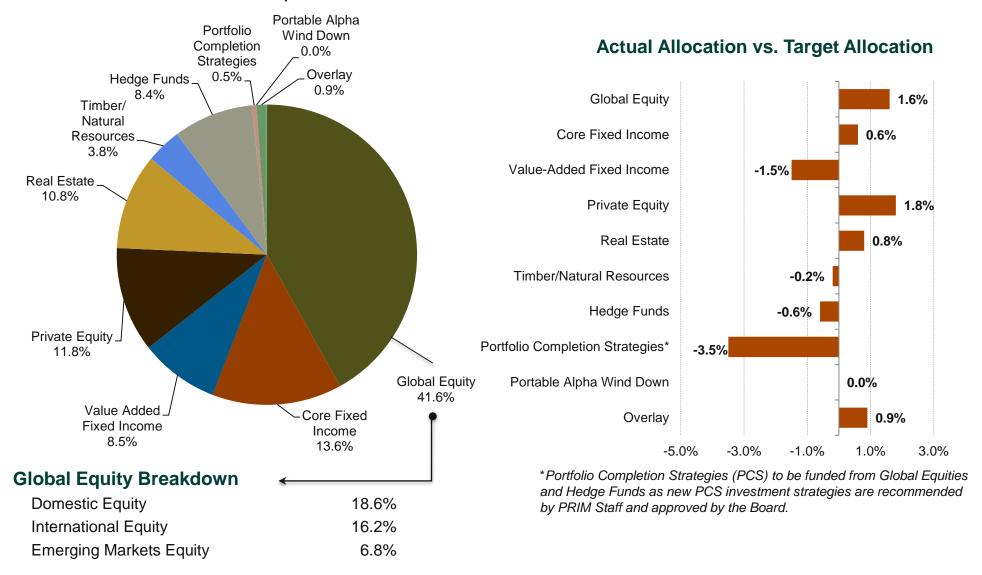


^{*}Portfolio Completion Strategies (PCS) to be funded from Global Equities and Hedge Funds as new PCS investment strategies are recommended by PRIM Staff and approved by the Board.



PRIT Fund Asset Allocation

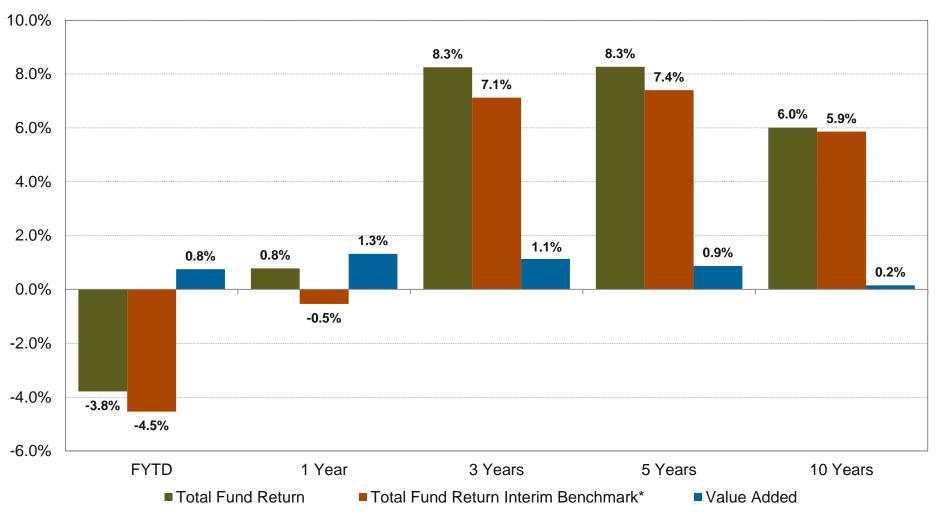
Actual Allocation as of September 30, 2015





Total PRIT Fund Performance (\$58.8 Billion in Assets)

Gross of Fees as of September 30, 2015

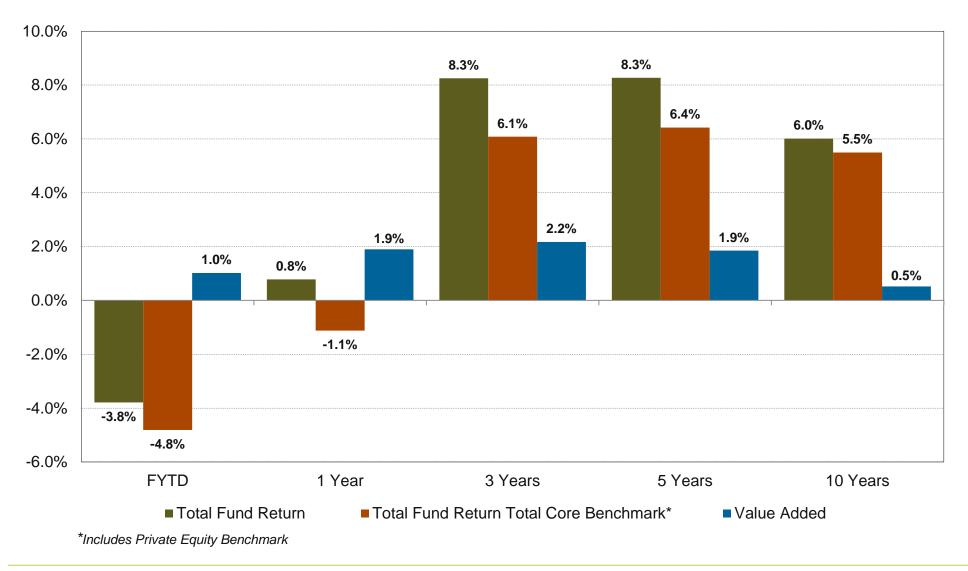


*Excludes Private Equity Benchmark



Total PRIT Fund Performance (\$58.8 Billion in Assets)

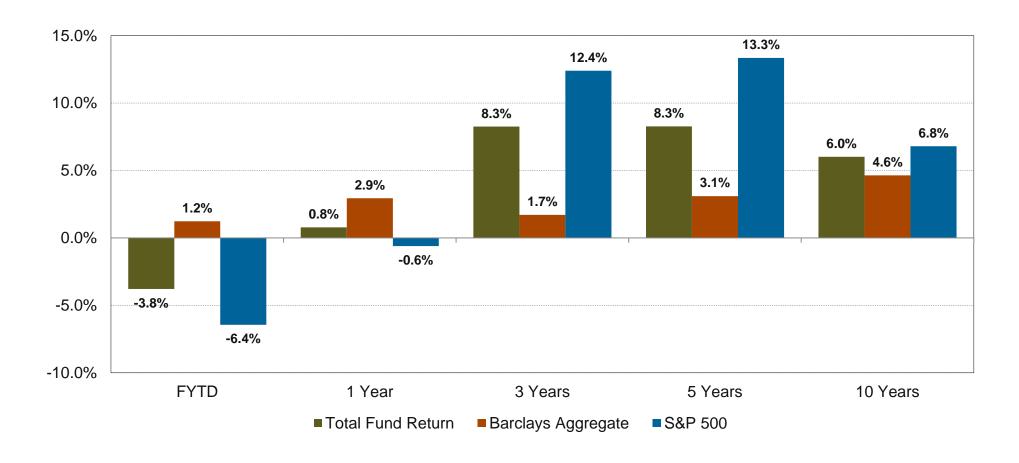
Gross of Fees as of September 30, 2015





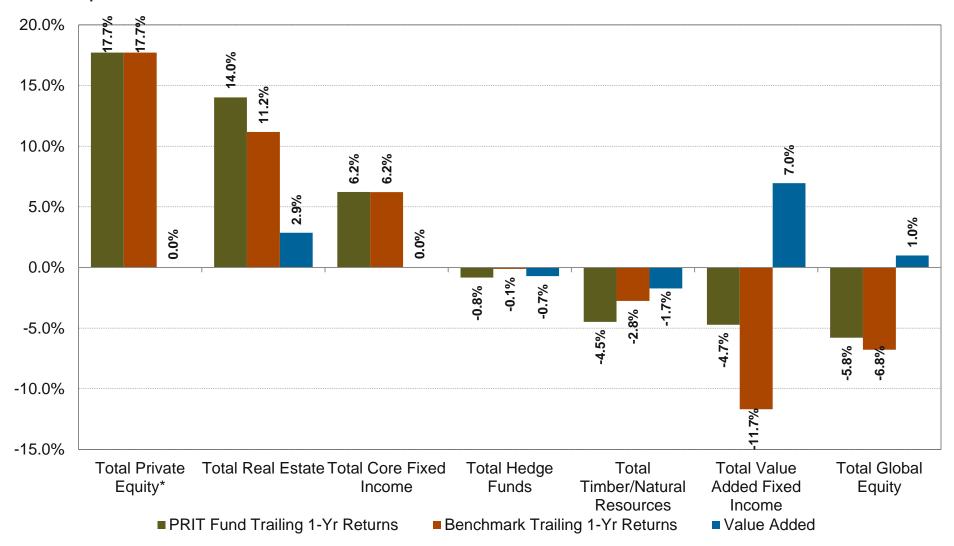
Total PRIT Fund Performance

Gross of Fees compared to Bonds and Stocks as of September 30, 2015



PRIT Asset Class Gross Performance – Trailing 1-Year

as of September 30, 2015

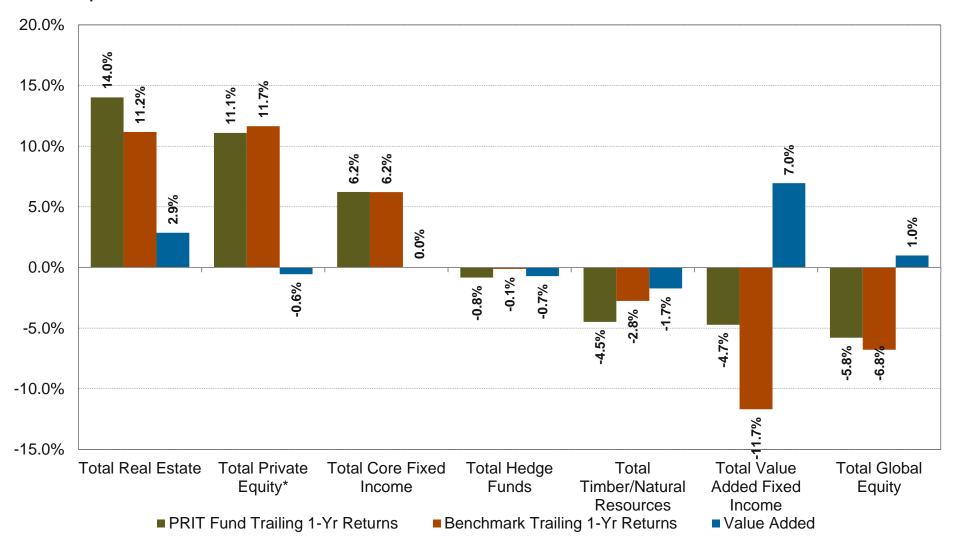


*Benchmark is actual performance



PRIT Asset Class Gross Performance – Trailing 1-Year

as of September 30, 2015



*PE Performance is 7yr Annualized Return. Benchmark is 7yr Annualized Russell 3000 +3%



Total PRIT Fund Performance Attribution

Gross of Fees as of September 30, 2015

September Attribution

Actual Weight	Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Retum
14%	13%	0.67%	0.78%	(0.01%)	0.01%	(0.00%)
9%	10%	(1.24%)	(3.71%)	0.21%	0.02%	0.23%
10%	10%	2.50%	2.76%	(0.03%)	0.01%	(0.02%)
4%	4%	(0.90%)	(1.36%)	0.02%	(0.00%)	0.02%
11%	10%	5.98%	1.02%	0.55%	0.02%	0.58%
1%	0%	(1.58%)	(1.58%)	0.00%	0.00%	0.00%
0%	0%	(1.67%)	(1.67%)	0.00%	0.00%	0.00%
0%	0%	1.46%	0.26%	0.01%	0.00%	0.01%
42%	43%	(3.39%)	(3.69%)	0.13%	0.00%	0.13%
9%	10%	(2.42%)	(1.91%)	(0.04%)	0.00%	(0.04%)
_	14% 9% 10% 4% 11% 1% 0% 0%	14% 13% 9% 10% 10% 10% 4% 4% 11% 10% 1% 0% 0% 0% 0% 0% 42% 43%	14% 13% 0.67% 9% 10% (1.24%) 10% 2.50% 4% 4% (0.90%) 11% 10% 5.98% 1% 0% (1.58%) 0% 0% (1.67%) 0% 0% 1.46% 42% 43% (3.39%)	14% 13% 0.67% 0.78% 9% 10% (1.24%) (3.71%) 10% 10% 2.50% 2.76% 4% 4% (0.90%) (1.36%) 11% 10% 5.98% 1.02% 1% 0% (1.58%) (1.58%) 0% 0% (1.67%) (1.67%) 0% 0% 1.46% 0.26% 42% 43% (3.39%) (3.69%)	14% 13% 0.67% 0.78% (0.01%) 9% 10% (1.24%) (3.71%) 0.21% 10% 10% 2.50% 2.76% (0.03%) 4% 4% (0.90%) (1.36%) 0.02% 11% 10% 5.98% 1.02% 0.55% 1% 0% (1.58%) (1.58%) 0.00% 0% 0% (1.67%) (1.67%) 0.00% 0% 0% 1.46% 0.26% 0.01% 42% 43% (3.39%) (3.69%) 0.13%	14% 13% 0.67% 0.78% (0.01%) 0.01% 9% 10% (1.24%) (3.71%) 0.21% 0.02% 10% 10% 2.50% 2.76% (0.03%) 0.01% 4% 4% (0.90%) (1.36%) 0.02% (0.00%) 11% 10% 5.98% 1.02% 0.55% 0.02% 1% 0% (1.58%) 0.00% 0.00% 0.00% 0% 0% (1.67%) (1.67%) 0.00% 0.00% 0% 0% 1.46% 0.26% 0.01% 0.00% 42% 43% (3.39%) (3.69%) 0.13% 0.00%

Total (0.80%) = (1.71%) +0.83% + 0.07% 0.90%

Fiscal Year to Date Attribution

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Retum	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Core Fixed Income	14%	13%	3.22%	3.42%	(0.03%)	0.04%	0.02%
Value Added Fixed Income	8%	10%	(3.52%)	(8.59%)	0.43%	0.06%	0.49%
Real Estate	10%	10%	2.59%	2.25%	0.03%	0.01%	0.04%
Timber/Natural Resources	4%	4%	(3.45%)	(3.55%)	0.00%	(0.01%)	(0.00%)
Private Equity	11%	10%	5.66%	3.01%	0.29%	0.06%	0.35%
Overlay	1%	0%	(3.92%)	(3.92%)	0.00%	0.01%	0.01%
Portable Alpha	0%	0%	(3.59%)	(3.59%)	0.00%	0.00%	0.00%
Portfolio Completion Stra	0%	0%	3.30%	0.79%	0.00%	(0.01%)	(0.00%)
Global Equity	43%	43%	(9.63%)	(10.16%)	0.24%	(0.02%)	0.21%
Hedge Funds	9%	10%	(4.45%)	(3.66%)	(0.07%)	(0.03%)	(0.09%)

Total (3.79%) = (4.81%) +0.91% + 0.12% 1.02%

One Year Attribution

A A Oliver	Effective Actual	Effective Target	Actual	Target	Manager	Asset	Total Relative
Asset Class	Weight	Weight	Return	Return	Effect	Allocation	Retum
Core Fixed Income	15%	13%	6.23%	6.21%	0.00%	(0.02%)	(0.02%)
Value Added Fixed Income	8%	10%	(4.72%)	(11.68%)	0.63%	0.17%	0.80%
Real Estate	10%	10%	14.03%	11.17%	0.24%	(0.02%)	0.22%
Timber/Natural Resources	4%	4%	(4.48%)	(2.76%)	(0.07%)	(0.01%)	(0.08%)
Private Equity	11%	10%	17.72%	11.65%	0.62%	0.09%	0.70%
Overlay	1%	0%	(0.79%)	(0.79%)	0.00%	0.00%	0.00%
Portable Alpha	0%	0%	(8.66%)	(8.66%)	0.00%	(0.01%)	(0.01%)
Portfolio Completion Stra	0%	0%	`- ′	- '-	(0.01%)	(0.01%)	(0.01%)
Global Equity	42%	43%	(5.79%)	(6.78%)	0.44%	(0.07%)	0.37%
Hedge Funds	9%	10%	(0.83%)	(0.12%)	(0.06%)	(0.03%)	(0.09%)
Total			0.78% =	(1.12%) +	1.80% +	0.10%	1.90%

| I otal 0.78% = (1.12%) +1.80% + 0.10%



Total Global Equity Performance Attribution

Gross of Fees as of September 30, 2015

September Attribution

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relativ e Return
Large Cap Equity Small/SMID Equity International Equity Emerging Equity	35% 10% 40% 16%	35% 9% 40% 16%	(2.51%) (4.26%) (4.52%) (1.98%)	(2.47%) (4.47%) (5.01%) (2.60%)	(0.01%) 0.02% 0.19% 0.10%	0.01% (0.00%) 0.01% (0.00%)	(0.01%) 0.02% 0.20% 0.10%
Total			(3.39%) =	(3.69%) +	0.30% +	0.01%	0.31%

Fiscal Year to Date Attribution

Asset Class Large Cap Equity Small/SMID Equity International Equity Emerging Equity	Effective Actual Weight 35% 10% 40% 16%	Effective Target Weight 35% 9% 40% 16%	Actual Return (6.51%) (10.36%) (9.66%) (15.79%)	Target Return (6.44%) (10.59%) (10.33%) (17.46%)	Manager Effect (0.02%) 0.02% 0.26% 0.27%	Asset Allocation 0.01% (0.01%) (0.00%) 0.00%	Total Relativ e Return (0.02%) 0.02% 0.26% 0.28%
Total			(9.63%) =	(10.16%) +	0.53% +	(0.00%)	0.53%

One Year Attribution

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relativ e Return
Large Cap Equity Small/SMID Equity International Equity Emerging Equity	36% 10% 39% 16%	35% 9% 40% 16%	(0.48%) (1.44%) (6.46%) (17.66%)	(0.61%) 0.45% (9.13%) (18.19%)	0.05% (0.17%) 1.05% 0.08%	0.01% (0.02%) 0.01% (0.03%)	0.06% (0.19%) 1.06% 0.05%
Total			(5.79%) =	(6.78%) +	1.01% +	(0.02%)	0.99%





Major Contributors Gross Performance – Trailing 1-Year

as of September 30, 2015

	% of PRIT Fund	1-Year Relative Performance (BPS)	One Year	3 Years	5 Years	10 Years	Since Inception	Inception
DISTRESSED DEBT	2.3%	57.31	1.25	12.10	11.67	11.34	14.16	07/31/2001
Altman NYU Saloman Center Combined Defaulted Public Bond & Bank Loan Index			-23.53	-1.25	0.51	4.87	9.46	
Value Added (bps)			2479	1335	1116	647	470	
MARATHON ASSET MANAGEMENT	3.9%	28.52	-1.46	9.62	7.48	6.89	8.40	10/31/1996
Custom MSCI EAFE Standard Index Net Divs			-8.81	5.65	3.89	2.95	4.16	
Value Added (bps)			734	397	359	394	424	
AEW	1.9%	9.33	17.81	14.58			14.41	01/31/2011
NCREIF Property One Qtr Lag			12.98	11.63	-	-	12.53	
Value Added (bps)			484	295	-	-	188	
BAILLIE GIFFORD	2.8%	7.32	-6.22	5.71	5.45	5.20	7.09	08/31/2004
Custom MSCI EAFE Standard Index Net Divs			-8.81	5.65	3.89	2.95	5.05	
Value Added (bps)			259	6	156	225	204	
INTECH	1.4%	5.70	3.35	13.90	14.43		7.40	01/31/2006
S&P 500			-0.61	12.40	13.34	-	6.75	
Value Added (bps)			397	150	109	-	65	
SSGA WORLD EX-US	8.1%	5.47	-8.79	5.63	4.24	3.60	5.74	03/31/1992
Custom MSCI World Ex-US IMI Net Divs			-9.46	4.96	3.63	2.96	5.26	
Value Added (bps)			67	67	61	64	48	
JP MORGAN	1.3%	3.16	15.38	9.84	12.54	7.33	10.52	09/30/2000
NCREIF Property One Qtr Lag			12.98	11.63	-	-	9.14	
Value Added (bps)			240	-180	-	-	138	
CENTERSQUARE GLOBAL REIT	1.3%	2.46	5.36	7.66			8.33	05/31/2012
FTSE EPRA NAREIT Developed Net Total Return			3.43	6.92	-	-	7.63	
Value Added (bps)			194	74	-	-	70	
LOOMIS SAYLES CORE	1.9%	1.72	3.83	2.93	4.45	5.46	7.48	05/31/1990
Barclays Capital Aggregate			2.94	1.71	3.10	4.64	6.50	
Value Added (bps)			89	122	136	82	97	
ING	0.8%	1.57	2.92	4.53	5.57		5.79	07/31/2008
S&P LSTA Levaraged Loan			0.92	3.25	4.51	-	5.22	
Value Added (bps)			199	128	106	-	57	

^{*}The relative outperformance is calculated by multiplying the outperformance versus the benchmark times the allocation to the overall PRIT fund.



Major Detractors Gross Performance – Trailing 1-Year

as of September 30, 2015

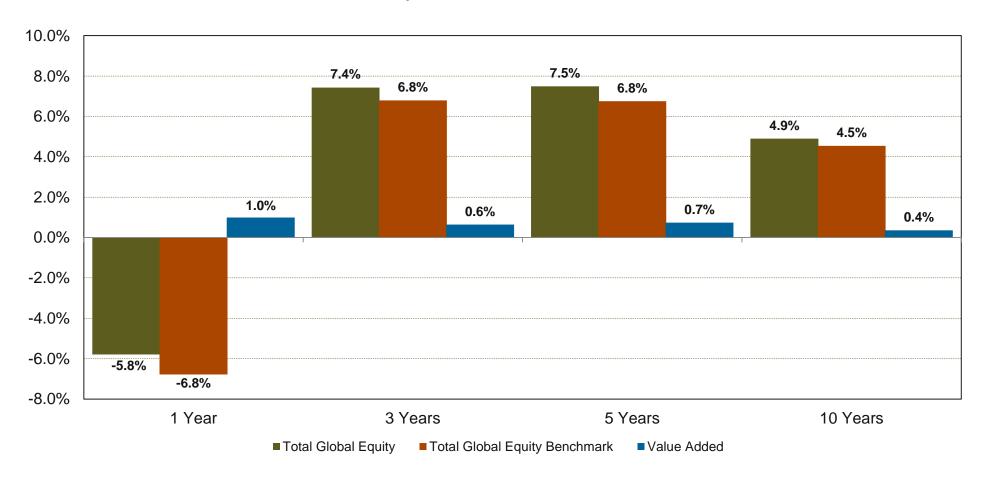
	% of PRIT Fund	1-Year Relative Performance (BPS)	One Year	3 Years	5 Years	10 Years	Since Inception	Inception
THE CAMPBELL GROUP	0.9%	-5.56	3.90	7.61			6.18	11/30/2011
NCREIF Timber Index One Qtr Lag			10.02	9.77	-	-	7.71	
Value Added (bps)			-612	-	-	-	-153	
HUBER	0.4%	-5.09	-15.03				-2.64	05/31/2013
Russell 2000 Value			-1.60	-	-	-	5.21	
Value Added (bps)			-1342	-	-	-	-785	
PAAMCO	1.5%	-3.20	-2.22	6.71	4.86	4.66	4.77	08/31/2004
100% HFRI Fund of Funds Composite Index			-0.12	4.13	2.74	4.51	4.71	
Value Added (bps)			-210	258	212	15	5	
INVESCO CORE	1.9%	-3.10	11.31	13.33	13.52	8.87	9.90	05/31/1995
NCREIF Property One Qtr Lag			12.98	11.63	12.72	8.16	9.77	
Value Added (bps)			-166	-	-	-	13	
SOUTHERNSUN	0.2%	-3.06	-13.19				6.59	05/31/2013
Russell 2500			0.38	-	-	-	8.45	
Value Added (bps)			-1357	-	-	-	-186	
TA ASSOCIATES	2.0%	-2.85	11.52	10.58	11.60	7.69	8.99	09/30/2000
NCREIF Property One Qtr Lag			12.98	11.63	12.72	8.16	9.14	
Value Added (bps)			-146	-105	-112	-48	-16	
DIRECT HEDGE FUNDS	6.8%	-2.21	-0.44	6.18			5.77	11/30/2011
HFRI Fund of Funds Composite Index			-0.12	4.13	-	-	3.76	
Value Added (bps)			-32	205	-	-	200	
SSGA S&P 500	11.8%	-2.00	-0.78	12.46			14.40	12/31/2011
S&P 500			-0.61	12.40	-	-	14.32	
Value Added (bps)			-17	6	-	-	8	
PIMCO DOMESTIC	1.5%	-1.79	-1.84	12.16	13.96		7.07	02/28/2006
S&P 500			-0.61	12.40	13.34	-	6.52	
Value Added (bps)			-123	-	-	-	54	
PIMCO EMD	0.5%	-1.76	-5.49	-0.63	3.49	6.30	7.24	02/29/2004
JPM EMBI Global			-1.96	0.51	4.40	6.76	7.49	
Value Added (bps)			-353	-114	-91	-46	-25	

^{*}The relative underperformance is calculated by multiplying the underperformance versus the benchmark times the allocation to the overall PRIT fund.



PRIT Global Equity (\$24.5 Billion)

Gross of Fees Performance as of September 30, 2015

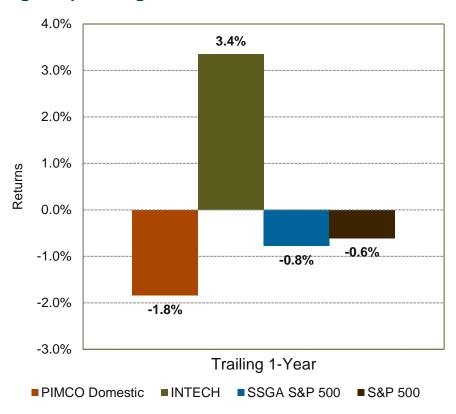




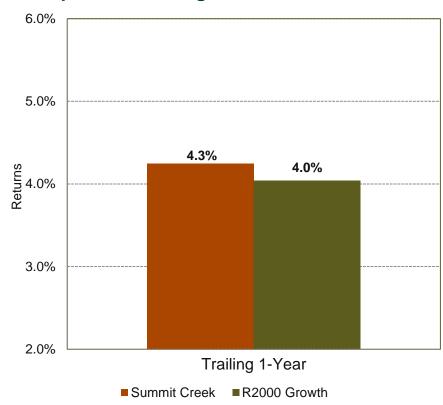
Domestic Equity Managers

as of September 30, 2015

Large Cap Managers vs. S&P 500



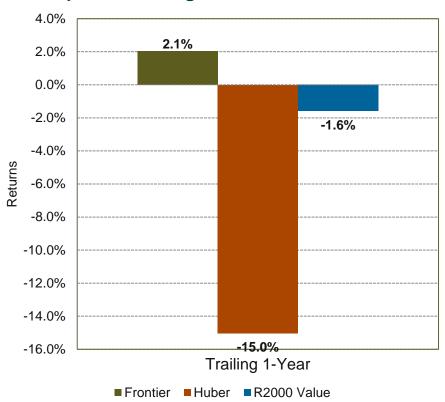
Small Cap Growth Manager vs. R2000 Growth



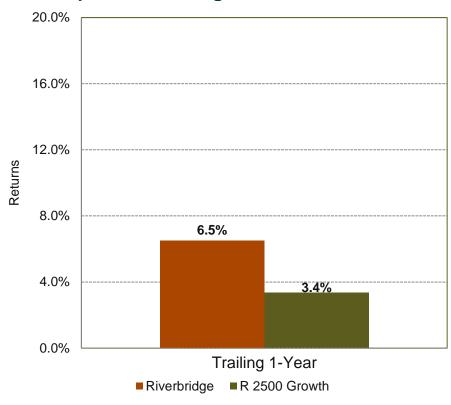
Domestic Equity Managers

as of September 30, 2015

Small Cap Value Managers vs. Russell 2000 Value



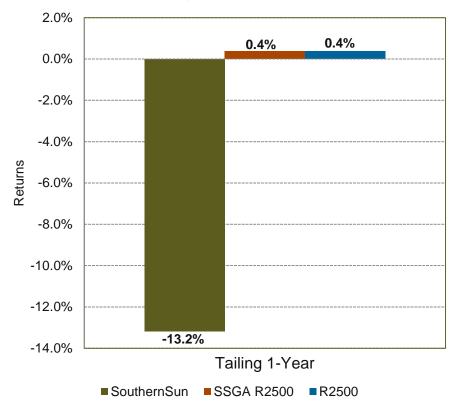
Smid Cap Growth Manager vs. Russell 2500



Domestic Equity Managers

as of September 30, 2015

Smid Cap Core Managers vs. Russell 2500

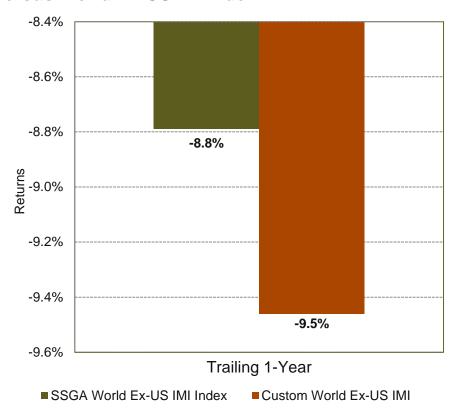




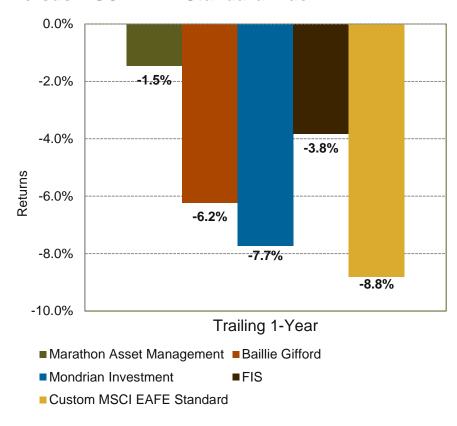
PRIT International Equity Managers

as of September 30, 2015

Versus World Ex-US IMI Index



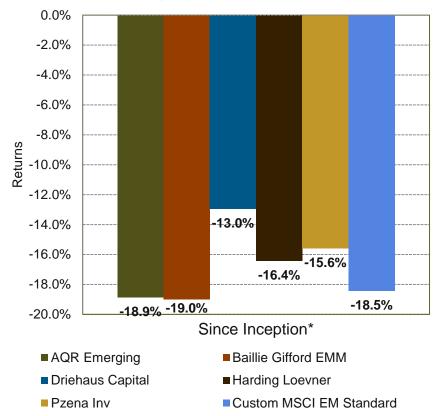
Versus MSCI EAFE Standard Index



PRIT Emerging Markets Equity Managers

as of September 30, 2015

Versus MSCI Emerging Markets Standard Index



^{* &}quot;Since Inception" figure used due to lack of trailing 1-year returns. Inception date of 3/31/2015 for AQR Emerging, Baillie Gifford EMM, Driehaus Capital, Harding Loevner and Pzena Inv.

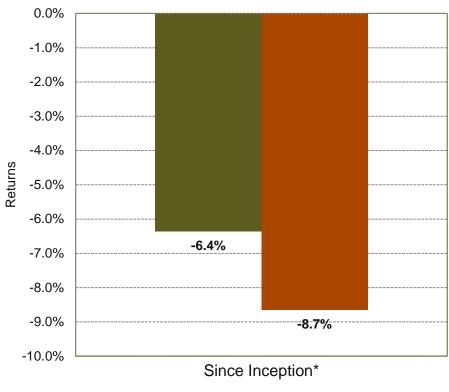
Versus MSCI Emerging Markets Small Cap Index



PRIT Emerging Markets Equity Managers

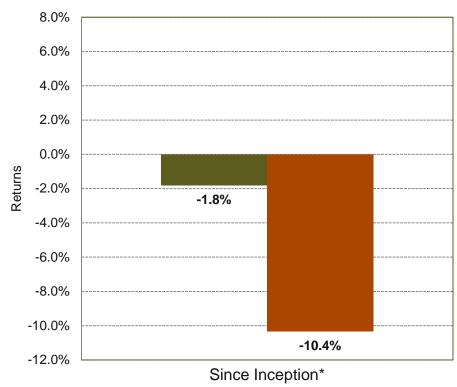
as of September 30, 2015

Versus MSCI Frontier Markets Country Capped Index



■ City of London ■ MSCI Frontier Markets Country Capped Net Divs

Versus MSCI Frontier Markets Country Capped Index



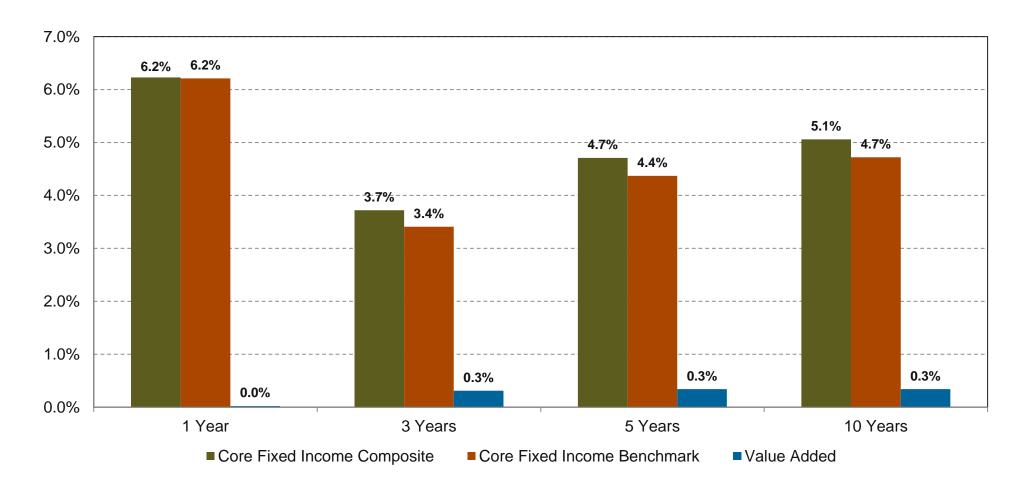
■ Acadian Frontier ■ MSCI Frontier Markets Country Capped Net Divs

^{* &}quot;Since Inception" figure used due to lack of trailing 1-year returns. Inception date of 2/28/2015 for City of London.

^{* &}quot;Since Inception" figure used due to lack of trailing 1-year returns. Inception date of 4/30/2015 for Acadian Frontier.

PRIT Core Fixed Income (\$8.0 Billion)

Gross of Fees Performance as of September 30, 2015

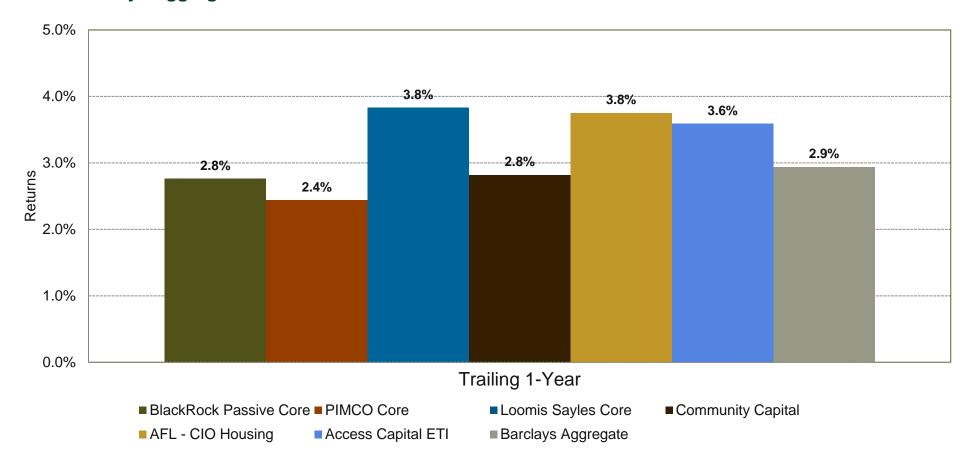




PRIT Fixed Income Managers

as of September 30, 2015

Versus Barclays Aggregate

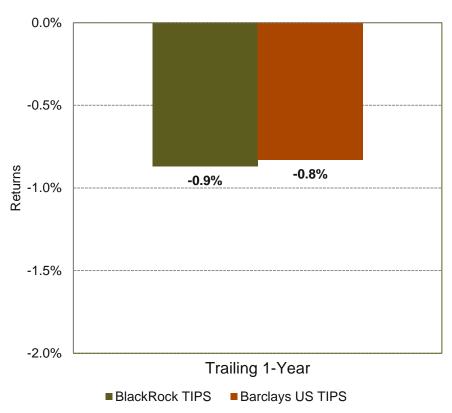




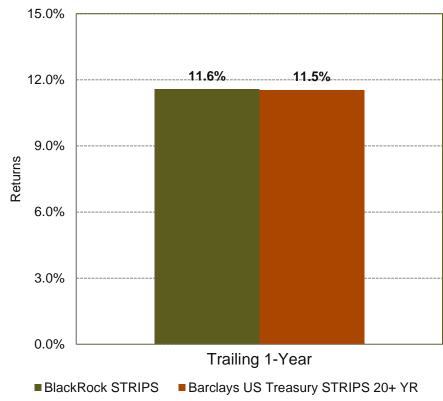
PRIT Fixed Income Managers

as of September 30, 2015

BlackRock Versus Barclays U.S. TIPS



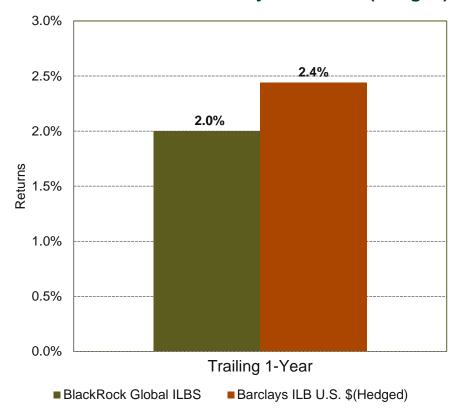
BlackRock STRIPS vs. BC U.S. Treasury STRIPS 20+ Year



PRIT Fixed Income Managers

as of September 30, 2015

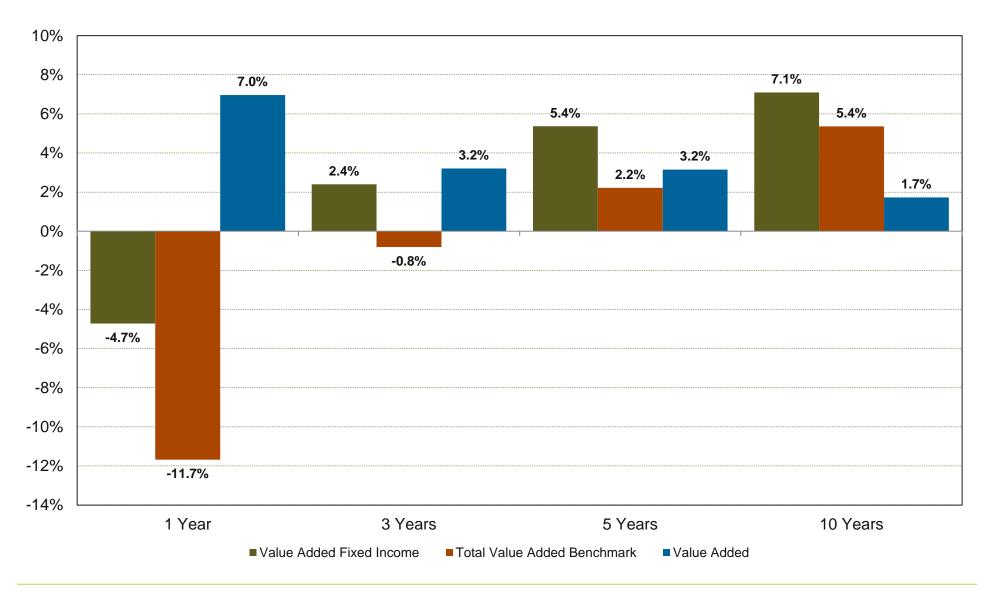
BlackRock Global vs. Barclays ILB U.S.\$ (Hedged)





PRIT Value Added Fixed Income (\$5.0 Billion)

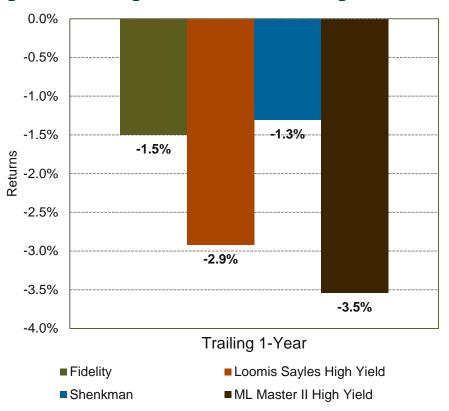
Gross of Fees Performance as of September 30, 2015



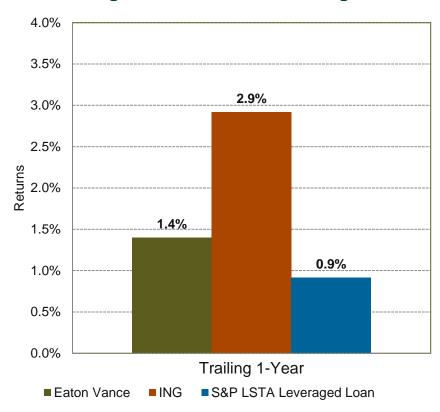
PRIT Value Added Fixed Income Managers

as of September 30, 2015

High Yield Managers vs. ML Master II High Yield



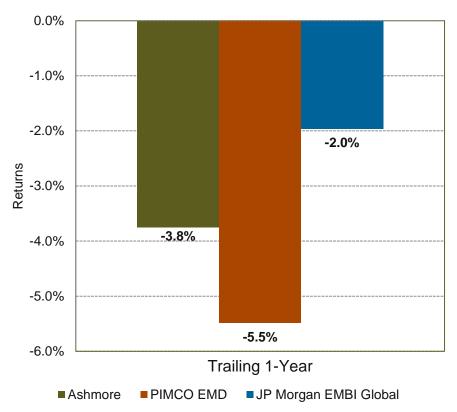
Bank Loan Managers vs. S&P LSTA Leveraged Loan



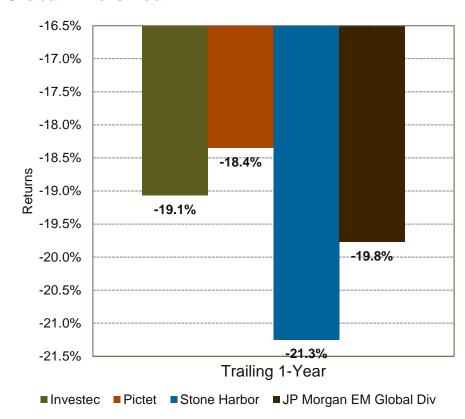
PRIT Value Added Fixed Income Managers

as of September 30, 2015

Emerging Debt Managers vs. JP Morgan EMBI Global



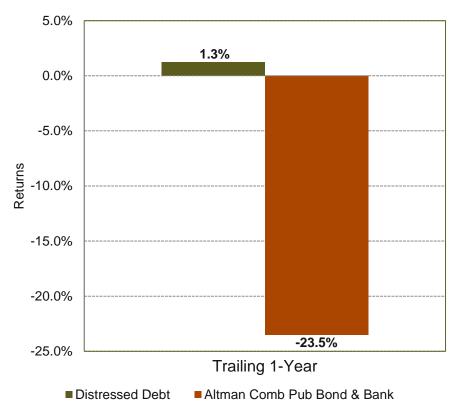
Emerging Markets Debt Local vs. JP Morgan EM Global Diversified



PRIT Value Added Fixed Income Managers

as of September 30, 2015

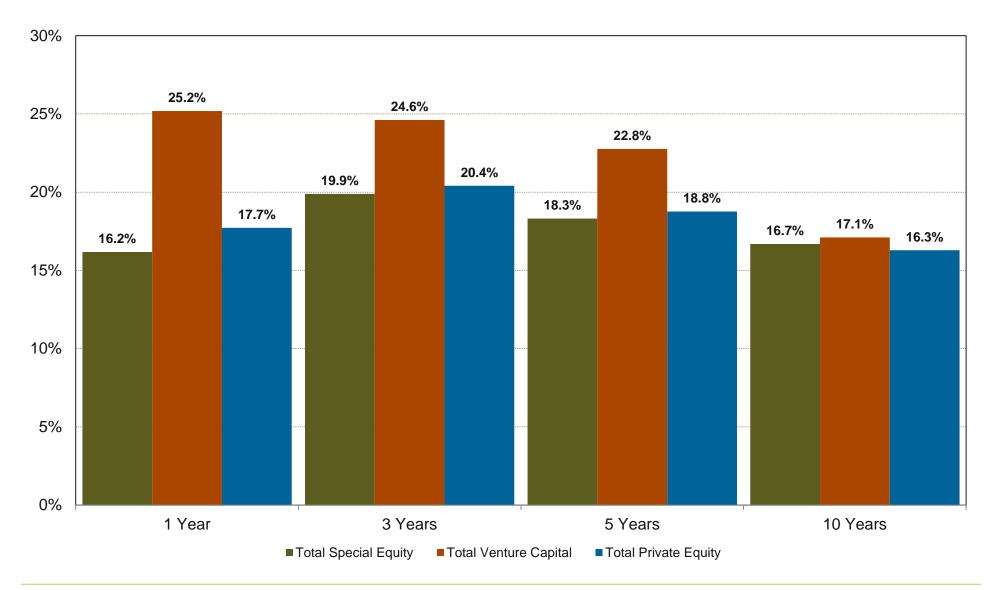
Distressed Debt vs. Altman Comb Pub Bond & Bank





PRIT Private Equity (\$6.9 Billion)

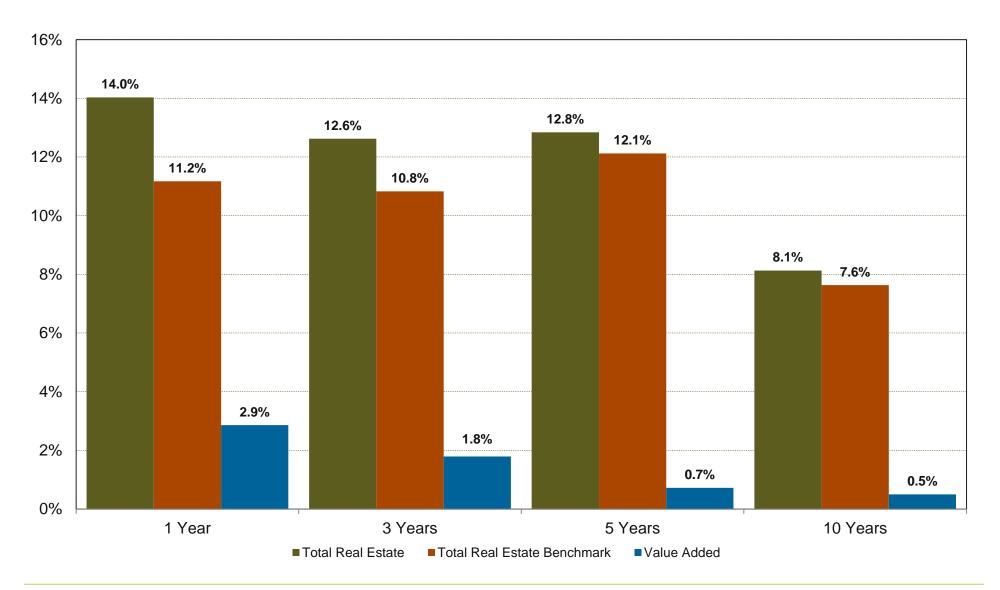
Gross of Fees Performance as of September 30, 2015





PRIT Real Estate (\$6.3 Billion)

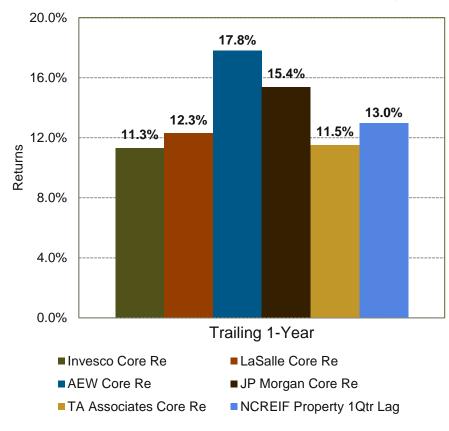
Gross of Fees Performance as of September 30, 2015



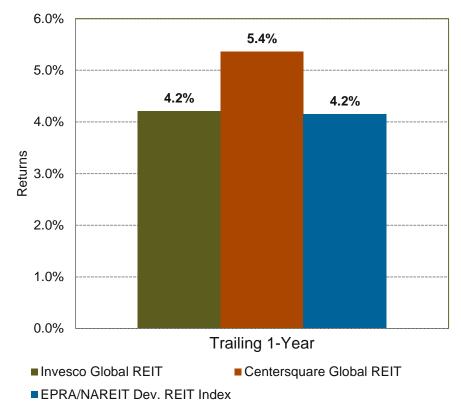
PRIT Real Estate Managers

as of September 30, 2015

Real Estate (SA) vs. NCREIF (One Quarter Lag)

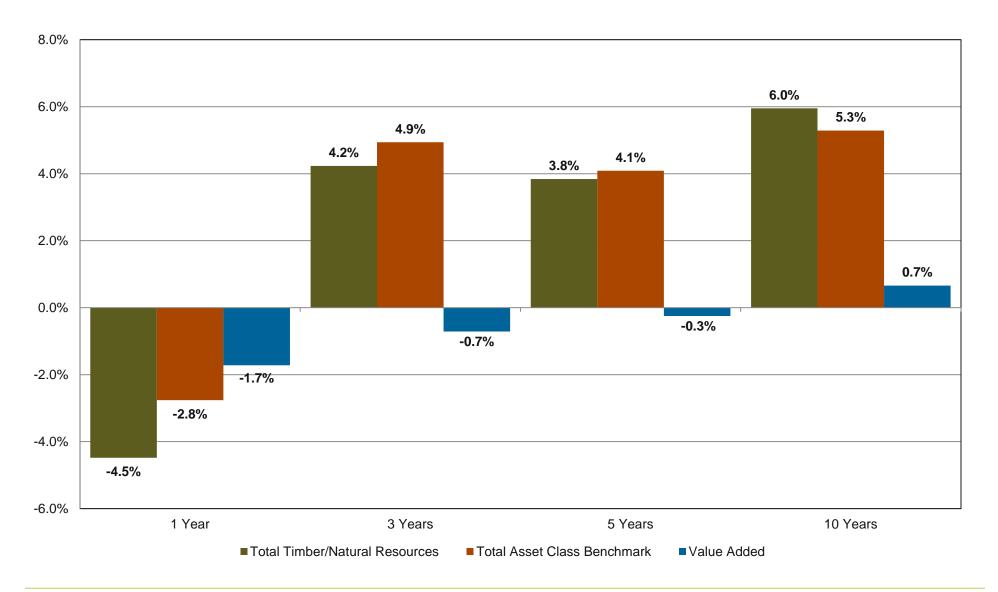


Global REIT Managers vs. EPRA/NAREIT Developed REIT Index



PRIT Timber/Natural Resources (\$2.2 Billion)

Gross of Fees Performance as of September 30, 2015



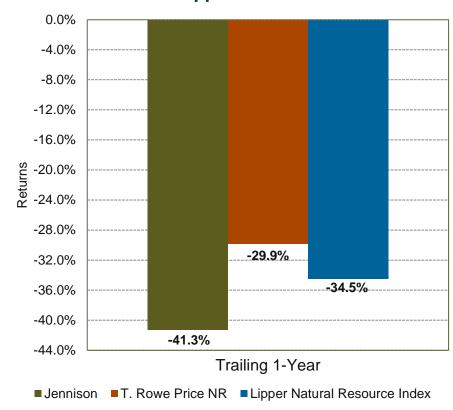
PRIT Timber/Natural Resource Managers

as of September 30, 2015

Timber Managers vs. NCREIF Timber (One Qtr Lag)



Natural Resources vs. Lipper Natural Resource Index



PRIT Private Natural Resource Managers

as of September 30, 2015

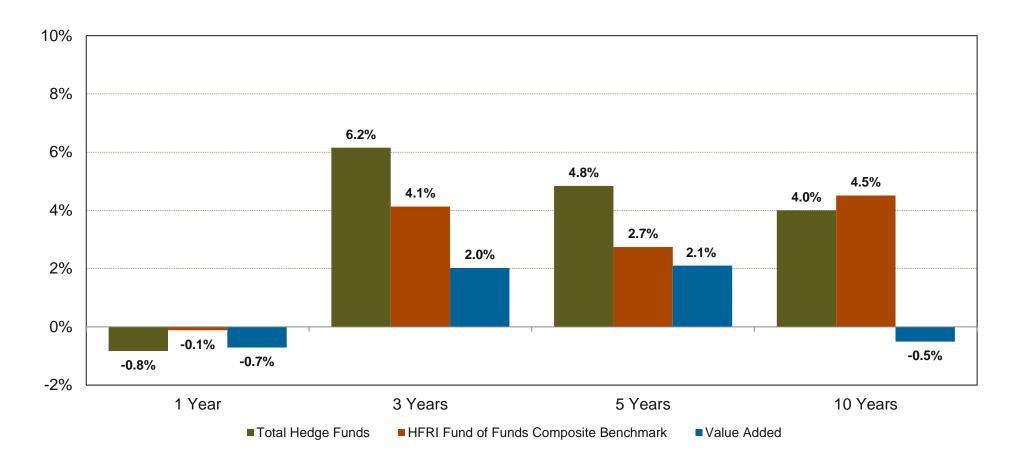
Private Natural Resources vs. Private Natural Resources Benchmark



■ Private Natural Resources ■ Private Natural Resources Benchmark

PRIT Hedge Funds (\$5.0 Billion)

NET of Fees Performance as of September 30, 2015

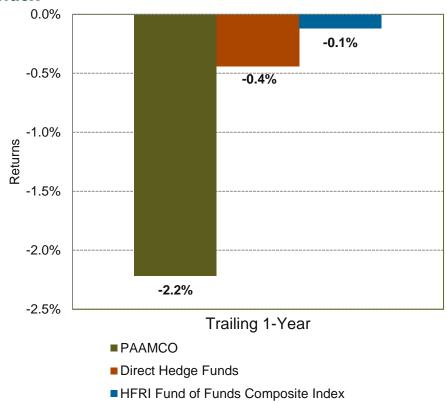




PRIT Hedge Fund Managers

NET of Fees Performance as of September 30, 2015

Hedge Funds Versus HFRI Fund of Funds Composite Index





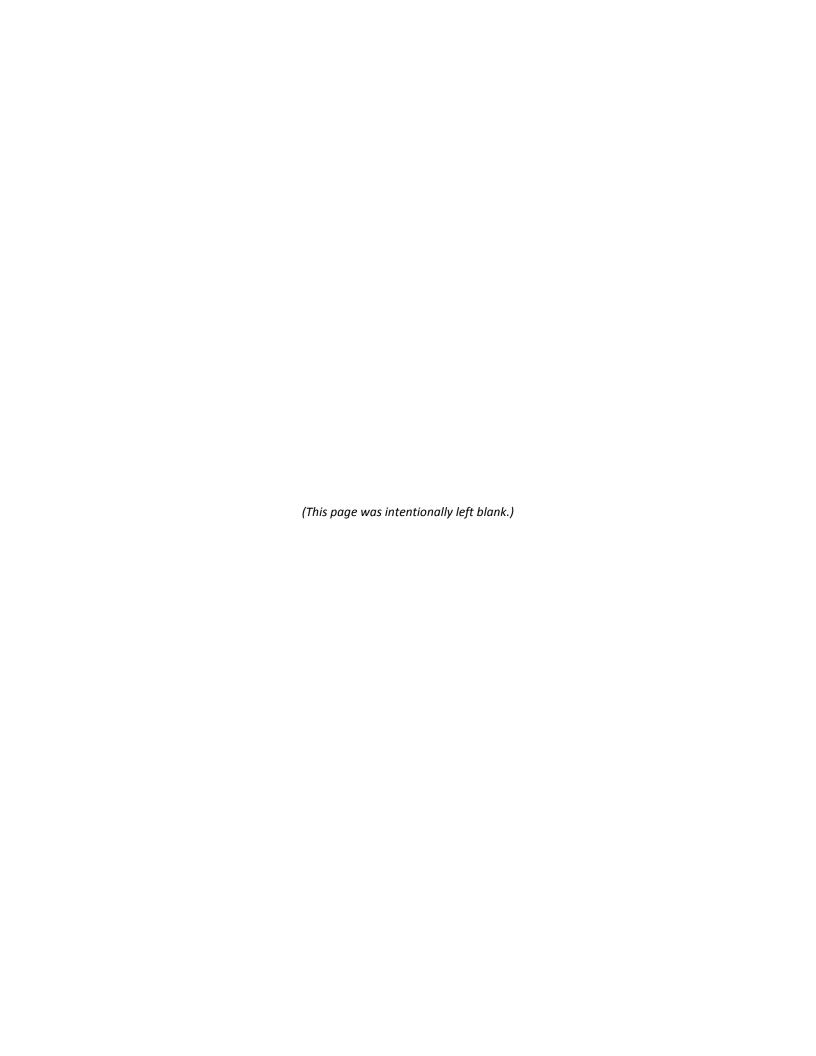




Appendix C

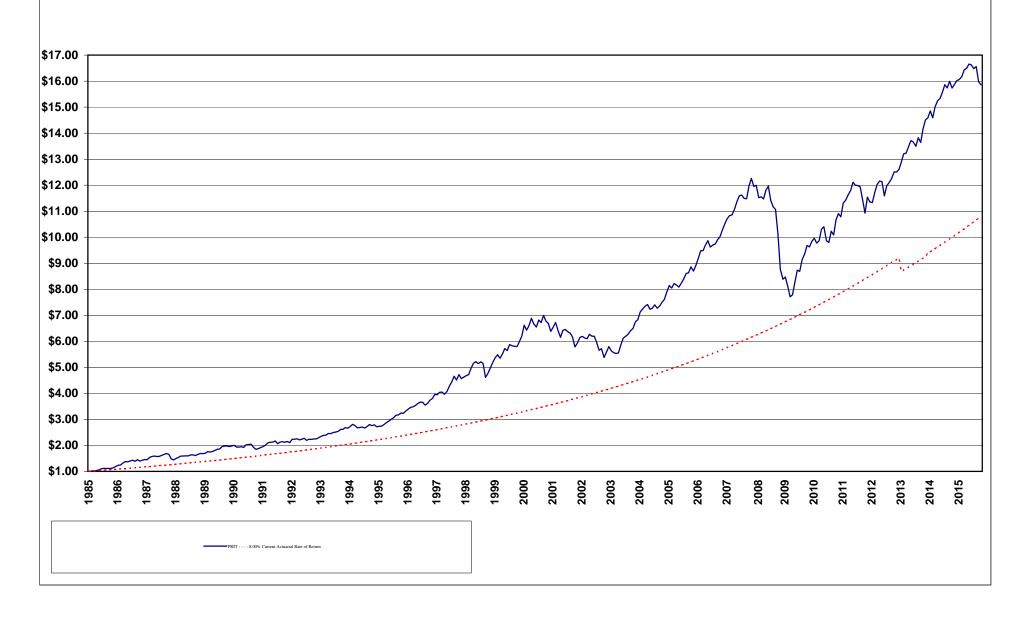
BNY Mellon Gross of Fees Performance Report

PRIM Investment Committee Meeting Tuesday, November 17, 2015



Pension Reserves Investment Management Board Performance Measurement September 30, 2015

Growth of a Dollar invested in the PRIT Fund Monthly, December 31, 1984 to September 30, 2015 \$1.00 invested in the PRIT Fund on January 1, 1985 would have grown to \$15.85 by September 30, 2015



	NAV \$ (M)	Target Allocation %	Actual Allocation %	Month	QTR/FY '16	Calendar YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
GLOBAL EQUITY	24,468,993	42.5%	41.6%	-3.39	-9.63	-6.37	-5.79	7.43	7.49	4.90	4.85
CORE FIXED INCOME	7,966,124	13.0%	13.6%	0.67	3.22	-1.21	6.23	3.72	4.71	5.06	7.68
VALUE-ADDED FIXED INCOME	4,989,555	10.0%	8.5%	-1.24	-3.52	-2.78	-4.72	2.40	5.37	7.09	8.38
PRIVATE EQUITY	6,938,782	10.0%	11.8%	5.98	5.66	15.47	17.72	20.40	18.76	16.28	14.66
REAL ESTATE	6,344,612	10.0%	10.8%	2.50	2.59	7.92	14.03	12.62	12.84	8.13	6.45
TIMBER/NATURAL RESOURCES	2,231,617	4.0%	3.8%	-0.90	-3.45	-4.50	-4.48	4.23	3.84	5.95	7.68
HEDGE FUNDS (NET OF FEES)	4,962,151	10.0%	8.4%	-2.42	-4.45	-1.99	-0.83	6.15	4.84	4.00	4.50
PORTFOLIO COMPLETION STRATEGIES	297,859	0.5%	0.5%	1.46	3.30	-1.96					-1.96
PORTABLE ALPHA WIND DOWN (NET OF FEES)	27,173	0.0%	0.0%	-1.67	-3.59	-8.77	-8.66	-3.82	-3.03		-5.87
OVERLAY	540,260	0.0%	0.9%	-1.58	-3.92	-3.26	-0.79				3.65
TOTAL CORE	58,767,125	100%	100%	-0.80	-3.79	-1.27	0.78	8.25	8.27	6.01	9.35
INTERIM BENCHMARK (target allocation without private equity benchmark) 1				-1.21	-4.54	-1.73	-0.54	7.12	7.40	5.86	9.85
TOTAL CORE BENCHMARK (target allocation with private equity benchmark) ²				-1.71	-4.81	-2.35	-1.12	6.08	6.42	5.49	9.72
PARTICIPANTS CASH	45,601			0.02	0.05	0.12	0.15	0.14	0.15	1.47	3.99
TEACHERS' AND EMPLOYEES' CASH	27,427			0.02	0.04	0.12	0.15	0.14	0.15	1.21	2.76
TOTAL FUND	58,840,153			-0.80	-3.77	-1.26	0.78	8.22	8.24	6.00	9.40

				,								
	NAV \$ (M)	%	Month	QTR/FY '16	Calendar YTD	1 Year	3 Year	5 Year	10 Year	Manager ITD	Manager Benchmark - ITD	Inception Month
DOMESTIC EQUITY												
INTECH	844,704	1.4%	-1.78	-4.67	-2.79	3.35	13.90	14.43		7.40	6.75	1/31/2006
PIMCO DOMESTIC	854,456	1.5%	-3.31	-7.80	-6.32	-1.84	12.16	13.96		7.07	6.52	2/28/2006
SSGA S&P 500	6,952,038	11.8%	-2.50	-6.57	-5.44	-0.78	12.46			14.40	14.32	12/31/2011
CLOSED PORTFOLIOS	0	0.0%										
TOTAL LARGE CAP MANAGERS	8.651.198	14.7%	-2.51	-6.51	-5.28	-0.48	12.58	15.17	7.62	6.94	6,28	7/31/1997
S&P 500	0,031,190	14.770	-2.47	-6.44	-5.29	-0.46	12.40	13.17	6,80	0.94	0.28	1/31/1991
and the county	102.024	0.20/	224	0.00	2.72	4.25				11.00	10.45	5/21/2012
SUMMIT CREEK RUSSELL 2000 GROWTH	192,934	0.3%	-3.34 -6.32	-9.02 -13.06	-2.72 -5.47	4.25				11.09	10.47	5/31/2013
RUSSELL 2000 GROWIH			-0.32	-13.00	-3.47	4.04						
FRONTIER	169,842	0.3%	-2.07	-7.12	-4.76	2.05				9.04	5.21	5/31/2013
HUBER	222,631	0.4%	-4.57	-13.86	-14.10	-15.03				-2.64	5.21	5/31/2013
TOTAL SMALL CAP VALUE	392,474	0.7%	-3.51	-11.07	-10.29	-8.40				1.77	5.21	5/31/2013
RUSSELL 2000 VALUE			-3.46	-10.73	-10.06	-1.60						
RIVERBRIDGE	154,772	0.3%	-4.07	-7.32	-2.85	6.50				9.33	10.96	5/31/2013
RUSSELL 2500 GROWTH	101,772	0.570	-5.47	-11.05	-3.85	3.35				7.55	10.70	5/51/2015
SOUTHERNSUN	132,742	0.2%	-6.11	-14.36	-10.49	-13.19				6.59	8.45	5/31/2013
SSGA R2500	1,426,595	2.4%	-4.44	-10.28	-6.07	0.37	12.18			13.39	13.54	12/31/2011
TOTAL SMID CAP CORE	1,559,337	2.7%	-4.59	-10.64	-6.46	-0.95	12.02			13.26	13.54	12/31/2011
RUSSELL 2500			-4.47	-10.30	-5.98	0.38	12.39					
TOTAL SMALL/SMID CAP EQUITY	2,299,517	3.9%	-4.26	-10.36	-6.61	-1.44	11.28			12.67	13.38	12/31/2011
70.5% RUSSELL 2500/5.5% RUSSELL 2500 GROWTH/6.5% RUSSELL 2000 GROWTH/17.5%	, , .											
RUSSELL 2000 VALUE ³			-4.47	-10.59	-6.54	0.45	12.20					
	_											
CLOSED PORTFOLIOS	0	0.0%										
DOMESTIC EQUITY CASH	(636)	0.0%										
TOTAL DOMESTIC EQUITY	10,950,079	18.6%	-2.88	-7.33	-5.53	-0.64	12.34	13.15	5.63	10.06	10.31	2/28/1985
ASSET CLASS BENCHMARK: 78.9% S&P 500/14.88% RUSSELL 2500/1.16%												
RUSSELL 2500 GROWTH/1.37% RUSSELL 2000 GROWTH/			-2.90	-7.32	-5.53	-0.35	12.37	13.18	6.51			
3.69% RUSSELL 2000 VALUE ⁴												

	renous	Enumg Sep	nember 30,	2013								
	NAV \$ (M)	%	Month	QTR/FY '16	Calendar YTD	1 Year	3 Year	5 Year	10 Year	Manager ITD	Manager Benchmark - ITD	Inception Month
INTERNATIONAL EQUITY												
SSGA WORLD EX-US	4,788,374	8.1%	-4.84	-10.21	-5.59	-8.79	5.63	4.24	3.60	5.74	5.26	3/31/1992
CUSTOM MSCI WORLD EX-US IMI NET DIVS 5	,,,	****	-4.90	-10.32	-6.04	-9.46	4.96	3.63	2.96			
MARATHON ASSET MANAGEMENT	2,281,930	3.9%	-4.15	-7.54	1.15	-1.46	9.62	7.48	6.89	8.40	4.16	10/31/1996
BAILLIE GIFFORD	1,662,230	2.8%	-3.68	-11.07	-4.68	-6.22	5.71	5.45	5.20	7.09	5.05	8/31/2004
MONDRIAN INVESTMENT	717,453	1.2%	-5.61	-9.71	-4.76	-7.72	7.08	5.10		-0.06	-0.82	6/30/2008
FIS	98,945	0.2%	-4.49	-8.50	-2.36	-3.83				-0.20	-2.50	10/31/2013
SSGA TRANSITION INTERNATIONAL EQUITY CLOSED PORTFOLIOS	14	0.0%										
INTERNATIONAL EQUITY CASH	565	0.0%										
CUSTOM MSCI EAFE STANDARD INDEX NET DIVS ⁶	303	0.0%	-5.13	-10.34	-5.45	-8.81	5.65	3.89	2.95			
TOTAL INTERNATIONAL EQUITY	9,549,511	16.2%	-4.52	-9.66	-3.72	-6.46	6.73	5.36	4.17	7.73	6.19	7/31/1986
	9,549,511	10.2 /0	-4.32	-9.00	-3.72	-0.40	0.73	3.30	4.17	1.13	0.19	7/31/1900
ASSET CLASS BENCHMARK: 50% CUSTOM MSCI WORLD EX-US IMI NET DIVS, 50% CUSTOM MSCI EAFE STANDARD INDEX NET DIVS ⁷			5.01	10.22	5.74	0.13	5.10	2.7/	2.02			
			-5.01	-10.33	-5.74	-9.13	5.18	3.76	3.02			
EMERGING MARKETS EQUITY	1.011.260	1.7%	2.44	17.49	1422	17.02	4.20	2.02		1.45	1.70	5/21/2010
SSGA EMERGING MKTS	1,011,360	1.7%	-2.44	-17.48	-14.33	-17.92	-4.28	-2.93		-1.45	-1.79	5/31/2010
CUSTOM MSCI EM IMI NET DIVS ⁸			-2.51	-17.68	-14.70	-18.32	-4.47	-3.29				
AQR EMERGING	517,221	0.9%	-2.31	-17.51						-18.86	-18.45	3/31/2015
BAILLIE GIFFORD EMM	574.033	1.0%	-0.08	-16.89						-19.01	-18.45	3/31/2015
DRIEHAUS CAPITAL	549,734	0.9%	-2.34	-13.42						-12.95	-18.45	3/31/2015
HARDING LOEVNER	381,862	0.6%	-3.27	-15.61						-16.43	-18.45	3/31/2015
PZENA INV	530,926	0.9%	-2.27	-15.46						-15.59	-18.45	3/31/2015
EMERGING MARKETS TRANSITION	19,342	0.0%										
TOTAL EMERGING MARKETS CORE	2,573,119	4.4%	-1.96	-15.72	-15.80	-18.59	-5.21	-3.83	3.24	8.71	4.61	2/28/1990
CUSTOM MSCI EM STANDARD INDEX NET DIVS 9			-2.92	-17.85	-15.48	-18.83	-4.97	-3.44	4.41			
CLOSED PORTFOLIOS	52	0.0%										
EMERGING MARKETS CASH	300	0.0%										
ACADIAN	123,953	0.2%	0.92	-15.05	-9.25	-13.87	8.68			9.34	-0.39	5/31/2012
WASATCH	92,531	0.2%	-1.24	-13.03	-8.97	-10.38	-0.28			-0.56	-0.39	5/31/2012
TOTAL EMERGING MARKETS SMALL CAP	216,484	0.4%	-0.01	-14.09	-9.13	-12.41	2.44			2.42	-0.39	5/31/2012
CUSTOM MSCI EM SMALL CAP NET DIVS 10	210,101	0.170	0.00	-16.50	-9.47	-14.93	-0.97			2.12	0.07	3/31/2012
ACADIAN FRONTIER	75,715	0.1%	-1.54	-5.77						-1.82	-10.35	4/30/2015
CITY OF LONDON TOTAL FRONTIER	92,374	0.2%	-2.64	-9.07						-6.36	-8.65	2/28/2015
TOTAL FRONTIER CUSTOM MSCI FRONTIER MKTS COUNTRY CAPPED INDEX NET DIVS	168,089	0.3%	-2.15 -2.43	-7.88 -10.65						-5.20	-8.65	2/28/2015
TOTAL EMERGING MARKETS	3,969,402	6.8%	-1.98	-15.79	-14.42	-17.66	-4.20	-2.82	3.68	8.88	4.66	2/28/1990
ASSET CLASS BENCHMARK ¹¹			-2.60	-17.46	-14.55	-18.19	-4.42	-3.26	4.54			
TOTAL GLOBAL EQUITY ¹²	24,468,993	41.6%	-3.39	-9.63	-6.37	-5.79	7.43	7.49	4.90	4.85	3.85	1/31/2001
ACCUTE CLASS DENGLIMADY, AND DOMESTIC FOLIETY DAVIGOUR DEFENDATIONS.												
ASSET CLASS BENCHMARK: 44% DOMESTIC EQUITY BM/40% INTERNATIONAL EQUITY BM/16% EMERGING MARKETS BM ¹³			-3.69	-10.16	-7.00	-6.78	6.79	6.75	4.54			
Bill 10/9 Enteroling markets bill			2.07	10.10	,,,,,	5.70	0.,,	0., 5				

	NAV \$ (M)	%	Month	QTR/FY '16	Calendar YTD	1 Year	3 Year	5 Year	10 Year	Manager ITD	Manager Benchmark - ITD	Inception Mont
DOMESTIC INVESTMENT GRADE FIXED INCOME	502.520		0.60		0.00	2.74		2.1.1	4.50		5.63	6/20/100
BLACKROCK PASSIVE PIMCO CORE	793,529 789,180	1.4%	0.68	1.19 0.14	0.99 0.50	2.76 2.44	1.67 1.70	3.14 3.21	4.72 5.40	5.62 7.28	5.63 6.40	6/30/199 9/30/199
LOOMIS SAYLES CORE	1,132,581	1.5%	0.60	1.05	1.77	3.83	2.93	4.45	5.46	7.48	6.50	5/31/199
COMMUNITY CAPITAL MANAGEMENT	28,060	0.0%	0.97	1.68	2.11	2.82	2.34	3.30	5.40	4.92	5.04	7/31/200
AFL - CIO HOUSING INVESTMENT	126,260	0.2%	0.85	1.47	1.95	3.75	1.99	3.34		5.11	4.85	8/31/200
ACCESS CAPITAL - ETI	103,474	0.2%	0.42	0.94	1.89	3.59	2.28	3.39	4.62	4.36	4.33	4/30/200
TOTAL AGGREGATE ¹⁴	2,973,084	5.1%	0.48	0.87	1.32	3.27	2.08	3.49	4.95	5.71	5.36	7/31/199
BARCLAYS CAPITAL AGGREGATE			0.68	1.23	1.13	2.94	1.71	3.10	4.64			
BLACKROCK - STRIPS	3,160,316	5.4%	1.53	7.63	-2.62	11.57				16.99	16.91	4/30/201
BC US TREASURY STRIPS 20+ YR INDEX			1.53	7.60	-2.70	11.54						
CLOSED PORTFOLIOS	1	0.0%										
FIXED INCOME CASH	66	0.0%										
TOTAL DOMESTIC INVESTMENT GRADE FIXED INCOME	6,133,467	10.4%	1.02	4.38	-1.33	7.66	4.59	5.02	5.78	6.28	5.84	7/31/199
DOMESTIC INVESTMENT GRADE FIXED INCOME BM ¹⁵			1.11	4.55	-1.42	7.54	4.25	4.63	5.41			
INFLATION-LINKED FIXED INCOME												
BLACKROCK - TIPS	587,788	1.0%	-0.61	-1.17	-0.77	-0.87	-1.86	2.49	3.98	5.36	5.42	4/30/200
BARCLAYS CAPITAL US TIPS			-0.59	-1.15	-0.80	-0.83	-1.83	2.55	4.01			
BLACKROCK ILBs	1,244,869	2.1%	-0.41	-0.45	-0.38	2.00	1.84	3.89	0.93	0.93	0.47	10/31/200
CLOSED PORTFOLIOS	<u>-</u>	0.0%										
TOTAL ILBs	1,244,869	2.1%	-0.41	-0.45	-0.38	2.00	1.84	3.89	0.78	0.78	0.47	10/31/200:
BC LB US\$ HEDGED ¹⁶			-0.21	0.01	-0.15	2.44	1.54	3.69	0.47			
TOTAL INFLATION-LINKED FIXED INCOME	1,832,657	3.1%	-0.47	-0.68	-0.51	1.06	0.60	3.50	1.43	3.56	1.23	4/30/200
33% BC US TIPS/67% BC ILB US\$ HEDGED ¹⁷			-0.33	-0.37	-0.36	1.36	0.42	3.32	1.23			
TOTAL CORE FIXED INCOME	7,966,124	13.6%	0.67	3.22	-1.21	6.23	3.72	4.71	5.06	7.68	7.13	9/30/198
ASSET CLASS BENCHMARK ¹⁸			0.78	3.42	-1.24	6.21	3.41	4.37	4.72			
ASSET CLASS BENCHMARK ¹⁸			0.78	3.42	-1.24	6.21	3.41	4.37	4.72			

	NAV \$ (M)	%	Month	QTR/FY '16	Calendar YTD	1 Year	3 Year	5 Year	10 Year	Manager ITD	Manager Benchmark - ITD	Inception Month
VALUE-ADDED FIXED INCOME												
FIDELITY	307,475	0.5%	-2.11	-3.05	-0.45	-1.50	4.82	7.40	7.61	9.82	8.78	1/31/1990
LOOMIS SAYLES HIGH YIELD	309,763	0.5%	-2.53	-5.54	-2.78	-2.92	4.56	7.20	8.92	8.83	6.91	7/31/1997
SHENKMAN	289,260	0.5%	-2.38	-4.64	-1.03	-1.31	3.38	5.65	6.51	6.50	7.19	4/30/2004
HIGH YIELD DEBT CASH	92	0.0%										
TOTAL HIGH YIELD BONDS	906,590	1.5%	-2.33	-4.41	-1.41	-1.90	4.27	6.75	7.39	8.12	8.26	7/31/2001
ML MASTER II HY CONSTRAINED INDEX ¹⁹			-2.56	-4.88	-2.50	-3.54	3.47	5.94	7.21			
EATON VANCE	465,385	0.8%	-0.52	-0.99	1.43	1.40	3.11	4.47		5.23	5.22	7/31/2008
ING	463,271	0.8%	-0.50	-0.46	2.54	2.92	4.53	5.57		5.79	5.22	7/31/2008
TOTAL BANK LOANS	928,656	1.6%	-0.51	-0.73	1.98	2.15	3.82	5.01		5.51	5.22	7/31/2008
S&P LSTA LEVERAGED LOAN			-0.65	-1.35	1.44	0.92	3.25	4.51				
ASHMORE	470,543	0.8%	-1.84	-3.79	0.44	-3.75	-0.21	3.75	7.38	8.94	7.49	1/31/2004
PIMCO EMD	292,595	0.5%	-2.78	-4.81	-2.06	-5.49	-0.63	3.49	6.30	7.24	7.49	2/29/2004
TOTAL EMERGING MARKET DEBT	763,139	1.3%	-2.20	-4.19	-0.54	-4.43	-0.38	3.65	6.35	7.80	7.49	1/31/2004
JPM EMBI GLOBAL			-1.38	-2.04	-0.32	-1.96	0.51	4.40	6.76			
INVESTEC	277.729	0.5%	-3.02	-10.26	-14.80	-19.07	-8.21			-6.74	-7.02	5/31/2012
PICTET	460,532	0.8%	-2.93	-9.03	-13.87	-18.35	-8.79			-7.40	-7.02	5/31/2012
STONE HARBOR	271,810	0.5%	-3.39	-11.57	-14.75	-21.25	-10.45			-8.79	-7.02	5/31/2012
TOTAL EMERGING MARKET DEBT LOCAL	1,010,070	1.7%	-3.08	-10.09	-14.39	-19.38	-9.09			-7.60	-7.02	5/31/2012
JPM GBI EM GLOBAL DIVERSIFIED			-2.97	-10.54	-14.91	-19.77	-8.72					
PUBLIC VALUE-ADDED FIXED INCOME	3,608,455	6.1%	-2.06	-5.09	-4.27	-6.82	-0.91	2.95	5.51	7.08	7.26	7/31/2001
ASSET CLASS BENCHMARK ²⁰ PUBLIC VALUE-ADDED FIXED INCOME BENCHMARK			-1.94	-4.98	-4.73	-7.07	-0.95	2.91	5.59			
DISTRESSED DEBT DISTRESSED DEBT CASH	1,358,828 22,272	2.3%	0.97	0.84	1.35	1.25	12.10	11.67	11.34	14.16	9.46	7/31/2001
TOTAL DISTRESSED DEBT	1,381,100	2.4%	0.96	0.84	1.34	1.25	12.07	11.64	11.37	14.18	9.46	7/31/2001
ALTMAN NYU SALOMON CENTER COMBINED DEFAULTED PUBLIC BOND & BANK LOAN INDEX ²¹			-8.58	-18.05	-16.01	-23.53	-1.25	0.51	4.87			
TOTAL VALUE-ADDED FIXED INCOME ²²	4,989,555	8.5%	-1.24	-3.52	-2.78	-4.72	2.40	5.37	7.09	8.38	7.44	7/31/2001
ASSET CLASS BENCHMARK ²³ VALUE-ADDED FIXED INCOME BENCHMARK			-3.71	-8.59	-7.80	-11.68	-0.81	2.22	5.36			

	NAV \$ (M)	%	Month	QTR/FY '16	Calendar YTD	1 Year	3 Year	5 Year	10 Year	Manager ITD	Manager Benchmark - ITD	Inception Mon
PRIVATE EQUITY												
SPECIAL EQUITY	18,836	0.0%	-1.51	-1.47	6.83	-0.26	19.97	17.39	13.90	14.78		9/30/198
SPECIAL EQUITY - 2000	13,503	0.0%	9.87	9.87	24.65	39.73	29.71	21.09	18.30	16.83		2/29/200
SPECIAL EQUITY - 2000	59,415	0.0%	1.62	1.29	13.16	11.58	21.06	15.64	18.40	20.31		4/30/200
SPECIAL EQUITY - 2001 SPECIAL EQUITY - 2002		0.1%	8.19	8.70	14.43	-0.79	10.07	24.24	25.62	18.45		
SPECIAL EQUITY - 2002 SPECIAL EOUITY - 2003	4,864	0.0%	1.57	1.55	3.51	5.94	11.70	12.05	15.82	15.43		7/31/200 7/31/200
	81,126											
SPECIAL EQUITY - 2004	83,814	0.1%	9.19	8.57	24.49	25.32	25.40	22.11	15.35	13.37		7/31/200
SPECIAL EQUITY - 2005	402,229	0.7%	6.08	6.13	13.22	13.97	18.23	17.75	12.79	12.15		6/30/200
SPECIAL EQUITY - 2006	635,343	1.1%	5.04	4.84	11.00	11.68	19.40	18.51		6.11		4/30/200
SPECIAL EQUITY - 2007	878,451	1.5%	6.73	6.71	12.76	12.84	17.38	15.82		8.18		7/31/200
SPECIAL EQUITY - 2008	911,721	1.6%	9.02	9.09	19.59	22.08	25.00	22.50		10.46		4/30/200
SPECIAL EQUITY - 2009	202,268	0.3%	6.29	6.28	19.76	28.56	26.89	23.95		11.26		8/31/200
SPECIAL EQUITY - 2010	498,372	0.8%	5.61	5.37	11.75	15.30	18.32			5.65		1/31/201
SPECIAL EQUITY - 2011	610,952	1.0%	6.82	6.07	26.26	30.88	19.87			-25.24		7/31/201
SPECIAL EQUITY - 2012	232,384	0.4%	0.48	0.95	7.04	8.22	18.39			-12.95		8/31/201
SPECIAL EQUITY - 2013	183,050	0.3%	3.82	2.14	5.58	7.45				4.35		6/30/201
SPECIAL EQUITY - 2014	219,636	0.4%	3.01	0.74	0.38	1.87				-10.81		5/31/201
SPECIAL EQUITY - 2015	82,916	0.1%	-0.07	-2.45						-5.81		3/31/201
TOTAL SPECIAL EQUITY	5,118,880	8.7%	5.94	5.67	14.27	16.17	19.88	18.31	16.68	16.26		9/30/198
·												
VENTURE CAPITAL	12,446	0.0%	-3.92	-3.92	2.36	7.09	8.93	9.18	15.06	11.25		4/30/198
VENTURE CAPITAL - 2000	63,904	0.1%	1.30	0.58	3.27	0.72	8.37	11.30	10.20	6.21		2/29/200
VENTURE CAPITAL - 2001	35,791	0.1%	-0.13	1.05	7.02	9.84	11.10	10.79	11.61	12.21		2/28/200
VENTURE CAPITAL - 2002	13,978	0.0%	-1.04	-1.04	-0.39	7.99	5.02	3.44	0.03	-0.08		4/30/200
VENTURE CAPITAL - 2003	31,582	0.1%	2.81	3.26	26.57	22.81	37.38	22.87	15.10	13.61		2/29/200
VENTURE CAPITAL - 2004	32,962	0.1%	-6.86	-6.86	21.11	24.12	21.46	35.73	27.04	24.63		2/28/200
VENTURE CAPITAL - 2005	117,552	0.2%	3.69	3.53	21.86	24.59	23.14	19.98	12.04	11.26		3/31/200
VENTURE CAPITAL - 2006	132,293	0.2%	-0.43	-0.43	6.89	11.44	17.41	17.49	12.04	10.85		4/30/200
VENTURE CAPITAL - 2007	197,308	0.3%	10.26	10.14	18.93	25.48	27.59	28.54		17.47		4/30/200
VENTURE CAPITAL - 2007 VENTURE CAPITAL - 2008	32,604	0.1%	4.83	4.83	11.38	14.58	27.98	38.89		24.86		7/31/200
VENTURE CAPITAL - 2008 VENTURE CAPITAL - 2009	253,516	0.1%	10.47	8.15	22.56	28.45	25.43	21.76		13.45		8/31/200
VENTURE CAPITAL - 2009 VENTURE CAPITAL - 2010	284,725	0.5%	11.45	11.24	44.35	47.32	37.42	25.37		18.84		4/30/201
								23.37				
VENTURE CAPITAL - 2011	96,384	0.2%	6.30	6.25	25.15	27.61	26.36			13.70		2/28/201
VENTURE CAPITAL - 2012	230,444	0.4%	6.44	5.82	23.24	29.10	23.46			12.27		5/31/201
VENTURE CAPITAL - 2013	51,280	0.1%	8.64	8.64	17.72	17.41				6.90		6/30/201
VENTURE CAPITAL - 2014	51,053	0.1%	2.87	1.84	4.93	2.97				-1.43		6/30/201
VENTURE CAPITAL - 2015	4,542	0.0%	-3.54	-3.54						-12.23		3/31/201
TOTAL VENTURE CAPITAL	1,642,363	2.8%	6.48	5.97	21.39	25.18	24.61	22.76	17.10	13.14		4/30/198
PRIVATE EQUITY CASH	177,538	0.3%										
TOTAL PRIVATE EQUITY	6,938,782	11.8%	5.98	5.66	15.47	17.72	20.40	18.76	16.28	14.66	17.18	4/30/198
ASSET CLASS BENCHMARK ²⁴			5.98	5.66	15.47	17.72	20.40	18.76	16.28			
7 YEAR ANNUALIZED RETURN PE ²⁵			1.02	2.91	8.30	11.10	12.34	14.26		14.77	7.78	7/31/200

NAV \$ (M)	%	Month	QTR/FY	Calendar	1 Year	3 Year	5 Year	10 Year	Manager	Manager Benchmark -	Inception Mont
										ITD	
1,095,351	1.9%	1.42	2.15	4.92	11.31	13.33	13.52	8.87	9.90	9.77	5/31/1995
1,509,154	2.6%	2.17	2.72	9.72	12.30	13.44	14.18	8.73	10.50	9.70	1/31/1995
1,133,978	1.9%	1.76	2.42	10.82	17.81	14.58			14.41	12.53	1/31/2011
772,485	1.3%	2.28	3.05	8.59	15.38	9.84	12.54	7.33	10.52	9.14	9/30/2000
1,147,723	2.0%	2.71	3.50	10.23	11.52	10.58	11.60	7.69	8.99	9.14	9/30/2000
-	0.0%										
5,658,692	9.6%	2.06	2.75	8.86	13.27	12.24	13.09	8.09	9.98	9.74	12/31/1994
(994 551)	-1 7%										
-	0.0%										
4,664,141	7.9%	2.49	3.20	10.25	15.55				15.11	12.20	2/28/2013
451 882	0.8%	5.28	5.64	12.31	17.48	10.83			12.68	11.60	1/31/2012
451,882	0.8%	5.28	5.64	12.31	17.48	10.83			12.68	11.60	1/31/2012
4.956	0.00/	11.65	11.65	10.60	11.20	5.00	4.72	576	E (O	9.73	5/31/2005
****											7/31/2005
								0.07			12/31/2006
								4.07			5/31/2005
12,339	0.070	-1.92	-1.92	-1.70	1.56	2.14	1.02	-4.77	-4.04	0.72	3/31/2002
464,421	0.8%	5.05	5.40	11.80	16.91	10.31	8.36	-1.96	-1.95	8.72	5/31/2005
5,128,562	8.7%	2.71	3.39	10.39	15.74	14.39	14.36	8.87	11.03	9.70	11/30/1994
					•						•
	1,095,351 1,509,154 1,133,978 772,485 1,147,723 - 5,658,692 (994,551) - 4,664,141 451,882 451,882 4,856 1,190 6,493 12,539	1,095,351 1.9% 1,509,154 2.6% 1,133,978 1.9% 772,485 1.3% 1,147,723 2.0% - 0.0% 5.658,692 9.6% (994,551) -1.7% - 0.0% 4,664,141 7.9% 451,882 0.8% 451,882 0.8% 4,856 0.0% 1,190 0.0% 6,493 0.0% 12,539 0.0%	1,095,351 1.9% 1.42 1,509,154 2.6% 2.17 1,133,978 1.9% 1.76 772,485 1.3% 2.28 1,147,723 2.0% 2.71 - 0.0% 5,658,692 9.6% 2.06 (994,551) -1.7% - 0.0% 4,664,141 7.9% 2.49 451,882 0.8% 5.28 4451,882 0.8% 5.28 4,856 0.0% -11.65 1,190 0.0% 15.47 6,493 0.0% 2.91 12,539 0.0% -1.92	1,095,351 1.9% 1.42 2.15 1,509,154 2.6% 2.17 2.72 1,133,978 1.9% 1.76 2.42 772,485 1.3% 2.28 3.05 1,147,723 2.0% 2.71 3.50 - 0.0% 5,658,692 9.6% 2.06 2.75 (994,551) -1.7% - 0.0% 4,664,141 7.9% 2.49 3.20 451,882 0.8% 5.28 5.64 451,882 0.8% 5.28 5.64 4,856 0.0% -11.65 -11.65 1,190 0.0% 15.47 15.47 6,493 0.0% 2.91 2.91 12,539 0.0% -1.92 -1.92	1,095,351 1.9% 1.42 2.15 4.92	1,095,351 1,9% 1.42 2.15 4.92 11.31	1,095,351 1.9% 1.42 2.15 4.92 11.31 13.33 1,509,154 2.6% 2.17 2.72 9.72 12.30 13.44 1,133,978 1.9% 1.76 2.42 10.82 17.81 14.58 772,485 1.3% 2.28 3.05 8.59 15.38 9.84 1,147,723 2.0% 2.71 3.50 10.23 11.52 10.58 - 0.0% - 0.0% 5,658,692 9.6% 2.06 2.75 8.86 13.27 12.24 (994,551) -1.7% - 0.0% 4,664,141 7.9% 2.49 3.20 10.25 15.55 451,882 0.8% 5.28 5.64 12.31 17.48 10.83 451,882 0.8% 5.28 5.64 12.31 17.48 10.83 4,856 0.0% -11.65 -11.65 -10.69 -11.28 -5.00 1,190 0.0% 15.47 15.47 41.05 69.99 25.14 6,493 0.0% 2.91 2.91 0.51 1.38 4.10 12,539 0.0% -1.92 -1.92 -1.78 1.58 2.14 464,421 0.8% 5.05 5.40 11.80 16.91 10.31	1,095,351 1.9% 1.42 2.15 4.92 11.31 13.33 13.52	1,095,351 1.9% 1.42 2.15 4.92 11.31 13.33 13.52 8.87	1,095,351 1.9% 1.42 2.15 4.92 11.31 13.33 13.52 8.87 9.90 1,509,154 2.6% 2.17 2.72 9.72 12.30 13.44 14.18 8.73 10.50 1,133,978 1.9% 1.76 2.42 10.82 17.81 14.58 14.41 772,485 1.3% 2.28 3.05 8.59 15.38 9.84 12.54 7.33 10.52 1,147,723 2.0% 2.71 3.50 10.23 11.52 10.58 11.60 7.69 8.99 - 0.0% - 0.0% 5,658,692 9.6% 2.06 2.75 8.86 13.27 12.24 13.09 8.09 9.98 (994,551) -1.7% - 0.0% - 0.0% - 0.0% 4,664,141 7.9% 2.49 3.20 10.25 15.55 15.11 451,882 0.8% 5.28 5.64 12.31 17.48 10.83 12.68 451,882 0.8% 5.28 5.64 12.31 17.48 10.83 12.68 4,856 0.0% -11.65 -11.65 -10.69 -11.28 -5.00 -4.72 -5.76 -5.69 1,190 0.0% 15.47 15.47 41.05 69.99 25.14 18.00 0.07 0.06 6,493 0.0% 2.91 2.91 0.51 1.38 4.10 5.15 -4.05 12,539 0.0% -1.92 -1.92 -1.78 1.58 2.14 1.82 -4.97 -4.84 464,421 0.8% 5.05 5.40 11.80 16.91 10.31 8.36 -1.96 -1.95	NAV \$ (M)

NAV \$ (M)	%	Month	QTR/FY '16	Calendar YTD	1 Year	3 Year	5 Year	10 Year	Manager ITD	Manager Benchmark - ITD	Inception Month
262 090	0.4%	1.59	-0.74	-3 36	4.21	7.65			8 38	7.63	5/31/2012
											5/31/2012
	0.2%		-0.74						-1.29		8/31/2014
			-0.81		4.81	7.24			7.81	7.63	5/31/2012
, , , , , ,		1.23	-1.45	-4.29	3.43	6.92					
25											
20	0.0%										
1,152,499	2.0%	1.63	-0.80	-3.06	4.84	7.25	8.67	4.87	9.43	7.96	6/30/1998
		1.23	-1.45	-4.29	3.43	6.92	8.61	4.41			
(108)	0.0%										
63,659	0.1%										
0	0.0%										
6,344,612	10.8%	2.50	2.59	7.92	14.03	12.62	12.84	8.12	10.67	9.83	12/31/1994
6 344 612	10.8%	2.50	2 59	7 92	14.03	12 62	12.84	8 13	6.45	7 95	1/31/1986
0,544,012	10.0 / 0	2.00	2.07	7.52	14.05	12.02	12.04	0.13	0.75	7.75	1/31/1700
		2.76	2.25	7.17	11.17	10.83	12.12	7.63			
	262,090 747,101 143,261 1,152,453 25 20 1,152,499 (108) 63,659 0	262,090 0.4% 747,101 1.3% 143,261 0.2% 1,152,453 2.0% 25 20 0.0% 1,152,499 2.0% (108) 0.0% 63,659 0.1% 0 0.0% 6,344,612 10.8%	262,090 0.4% 1.59 747,101 1.3% 1.65 143,261 0.2% 1.58 1,152,453 2.0% 1.63 1.23 25 20 0.0% 1,152,499 2.0% 1.63 1.23 (108) 0.0% 63,659 0.1% 0 0.0% 6,344,612 10.8% 2.50	262,090 0.4% 1.59 -0.74 747,101 1.3% 1.65 -0.84 143,261 0.2% 1.58 -0.74 1,152,453 2.0% 1.63 -0.81 1.23 -1.45 25 20 0.0% 1,152,499 2.0% 1.63 -0.80 1.23 -1.45 (108) 0.0% 63,659 0.1% 0 0.0% 6,344,612 10.8% 2.50 2.59	262,090 0.4% 1.59 -0.74 -3.36 747,101 1.3% 1.65 -0.84 -2.86 143,261 0.2% 1.58 -0.74 -3.43 1.152,453 2.0% 1.63 -0.81 -3.09 1.23 -1.45 -4.29 25 20 0.0% 1.63 -0.80 -3.06 1.23 -1.45 -4.29 (108) 0.0% 63,659 0.1% 0 0.0% 6,344,612 10.8% 2.50 2.59 7.92	NAV \$ (M)	NAV \$ (M)	16	NAV \$ (M)	NAV S (M)	NAV \$ (M) %

	NAV \$ (M)	%	Month	QTR/FY '16	Calendar YTD	1 Year	3 Year	5 Year	10 Year	Manager ITD	Manager Benchmark - ITD	Inception Month
TIMBER												
FOREST INVESTMENTS	1,124,190	1.9%	1.90	1.90	3.39	9.56	9.80	6.78	7.57	7.67	7.33	1/31/2002
THE CAMPBELL GROUP	533,361	0.9%	-0.72	-3.11	0.14	3.90	7.61			6.18	7.71	11/30/2011
TIMBER CASH	7,502	0.0%										
TOTAL TIMBER	1,665,053	2.8%	1.04	0.23	2.32	7.72	9.21	6.48	8.67	9.68	7.33	1/31/2002
NCREIF TIMBER INDEX ONE QTR LAG ³⁰			0.51	0.51	8.43	10.02	9.77	6.10	8.26			
NATURAL RESOURCES - PUBLIC												
JENNISON	146,053	0.2%	-10.26	-22.61	-25.11	-41.29	-12.47	-7.92		-8.33	-9.87	7/31/2008
T.ROWE PRICE NR	160,000	0.3%	-7.60	-17.22	-19.92	-29.86	-4.50	-1.39		-6.27	-9.87	7/31/2008
PUBLIC NATURAL RESOURCES CASH	4	0.0%										
TOTAL NATURAL RESOURCES PUBLIC	306,056	0.5%	-8.89	-19.88	-22.47	-35.82	-8.66	-4.69		-7.24	-9.87	7/31/2008
LIPPER NATURAL RESOURCES GLOBAL FUND INDEX			-8.64	-20.77	-22.54	-34.50	-9.33	-5.56				
NATURAL RESOURCES- PRIVATE												
NATURAL RESOURCES- PRIVATE	252,193	0.4%	-2.86	-2.91	-17.06	-16.08	-3.38	4.18		1.07	0.64	8/31/2008
PRIVATE NATURAL RESOURCES CASH	8,314	0.0%										
TOTAL NATURAL RESOURCES PRIVATE	260,507	0.4%	-2.79	-2.83	-16.93	-15.94	-3.23	4.34		0.64	0.64	8/31/2008
BENCHMARK - NAT. RES. PRIVATE 31			-2.79	-2.83	-16.93	-15.94	-3.23	4.34				
TOTAL TIMBER/NATURAL RESOURCES	2,231,617	3.8%	-0.90	-3.45	-4.50	-4.48	4.23	3.84	5.95	7.68	5.18	1/31/2002
ASSET CLASS BENCHMARK ³²			-1.36	-3.55	-0.46	-2.76	4.94	4.09	5.29			

	T CTTOGES	zname sep	remoer co	, 2010								
	NAV \$ (M)	%	Month	QTR/FY '16	Calendar YTD	1 Year	3 Year	5 Year	10 Year	Manager ITD	Manager Benchmark - ITD	Inception Montl
HEDGE FUNDS (NET OF FEES) ARDEN HFOF LIQUIDATION	38,115	0.1%	-1.29	-2.87	-0.48	-1.38	5.54			5.54		10/31/2012
IVY LIQUIDATION	4,613	0.0%	-1.44	-1.69	1.17	2.61	6.06	2.42		2.54		3/31/2009
PAAMCO	896,072	1.5%	-2.05	-5.15	-2.04	-2.22	6.71	4.86	4.66	4.77	4.71	8/31/2004
100% HFRI FUND OF FUNDS COMPOSITE INDEX ³³			-1.91	-3.66	-1.06	-0.12	4.13	2.74	4.51			
DIRECT HEDGE FUNDS	4,023,334	6.8%	-2.52	-4.30	-2.09	-0.44	6.18			5.77	3.76	11/30/2011
HFRI FUND OF FUNDS COMPOSITE INDEX ³⁴			-1.91	-3.66	-1.06	-0.12	4.13					
HEDGE FUND CASH	17	0.0%										
TOTAL HEDGE FUNDS (NET OF FEES)	4,962,151	8.4%	-2.42	-4.45	-1.99	-0.83	6.15	4.84	4.00	4.50	4.72	7/31/2004
ASSET CLASS BENCHMARK:												
HFRI FUND OF FUNDS COMPOSITE INDEX 35			-1.91	-3.66	-1.06	-0.12	4.13	2.74	4.51			
PORTFOLIO COMPLETION STRATEGIES	297,859	0.5%	1.46	3.30	-1.96					-1.96	2.38	1/31/2015
	· · · · · · · · · · · · · · · · · · ·											
PORTFOLIO COMPLETION STRATEGIES COMPOSITE INDEX ³⁶			0.26	0.79	2.38							

PENSION RESERVES INVESTMENT TRUST SUMMARY OF MANAGER PERFORMANCE RATES OF RETURN (GROSS OF FEES) Periods Ending September 30, 2015

		-										
	NAV \$ (M)	%	Month	QTR/FY '16	Calendar YTD	1 Year	3 Year	5 Year	10 Year	Manager ITD	Manager Benchmark - ITD	Inception Month
DODEL DI E AL DILA WIND DOWN AVET OF FEEG												
PORTABLE ALPHA WIND DOWN (NET OF FEES) AUSTIN CAPITAL	1,455	0.0%	0.03	0.15	0.60	3.50	-11.83	-11.13		-9.49	-1.06	9/30/2008
CRESTLINE	10,753	0.0%	-2.84	-4.19	-13.38	-13.37	-4.28	-1.69		0.24	-0.46	9/30/2006
STRATEGIC	14,842	0.0%	-0.98	-3.53	-5.89	-6.41	-1.33	-2.62		-1.02	-0.74	10/31/2006
TOTAL FUND OF FUNDS (NET OF FEES)	27.049	0.0%	-1.67	-3.59	-8.85	-8.76	-3.85	-2.98		-0.95	-0.46	9/30/2006
()												
CLOSED PORTFOLIOS	-	0.0%										
PORTABLE ALPHA CASH	124	0.0%										
TOTAL PORTABLE ALPHA WIND DOWN (NET OF FEES)	27,173	0.0%	-1.67	-3.59	-8.77	-8.66	-3.82	-3.03		-5.87	-0.46	9/30/2006
ASSET CLASS BENCHMARK:												
HFRI FUND OF FUNDS COMPOSITE INDEX ³⁷			-1.91	-3.66	-1.06	-0.12	4.13	2.74				
OVERLAY												
CLIFTON	123,164	0.2%	-2.44	-6.31	-5.51	-2.36				3.55	3.55	10/31/2013
OVERLAY CASH	417,097	0.7%										
TOTAL OVERLAY	540,260	0.9%	-1.58	-3.92	-3.26	-0.79				3.65	3.65	10/31/2013
ASSET CLASS BENCHMARK ³⁸			1.50	2.02	2.26	-0.79						
ASSEI CLASS BENCHMAKK			-1.58	-3.92	-3.26	-0.79						

PENSION RESERVES INVESTMENT TRUST SUMMARY OF MANAGER PERFORMANCE RATES OF RETURN (GROSS OF FEES) Periods Ending September 30, 2015

	NAV \$ (M)	%	Month	QTR/FY '16	Calendar YTD	1 Year	3 Year	5 Year	10 Year	Manager ITD	Manager Benchmark - ITD	Inception Month
TOTAL CORE	58,767,125	99.9%	-0.80	-3.79	-1.27	0.78	8.25	8.27	6.01	9.35		2/28/1985
CASH FUND PARTICIPANTS' CASH (NET OF FEES)	45,601	0.1%	0.02	0.05	0.12	0.15	0.14	0.15	1.47	3.99	3.82	7/31/1985
MERRILL LYNCH 90 DAY T BILL			0.00	0.01	0.02	0.03	0.06	0.08	1.33			
MASS STATE TEACHERS CASH (NET OF FEES) MASS STATE EMPLOYEES CASH (NET OF FEES)	9,672 17.755	0.0%	0.02 0.02	0.04 0.05	0.12 0.12	0.15 0.15	0.14 0.14	0.15 0.15	1.22 1.22	2.59 2.59	2.60 2.60	7/31/1996 7/31/1996
MERRILL LYNCH 90 DAY T BILL ³⁹	17,733	0.076	0.02	0.03	0.02	0.13	0.14	0.13	1.47	2.39	2.00	7/31/1990
TEACHERS' AND EMPLOYEES' CASH	27,427	0.0%	0.02	0.04	0.12	0.15	0.14	0.15	1.21	2.76		7/31/1996
TOTAL FUND	58,840,153	100.0%	-0.80	-3.77	-1.26	0.78	8.22	8.24	6.00	9.40		1/31/1985
POLICY RETURN ⁴⁰ TOTAL CORE BENCHMARK			-1.34 -1.71	-4.06 -4.81	-1.97 -2.35	0.12 -1.12	7.40 6.08	7.80 6.42	6.17 5.49	9.46 9.72		
												,

PENSION RESERVES INVESTMENT TRUST FOOTNOTES RATES OF RETURN

Periods Ending September 30, 2015

Direct Real Estate

- (1) Direct core and value real estate performance is time series weighted and based on property distributed income and capital appreciation/depreciation resulting from external appraisals and dispositions. PRIM's real estate appraisal policy requires that approximately one quarter of the directly owned properties be appraised by a real estate appraiser with an MAI designation every quarter. The goal is to obtain updated market values for each property annually.
- (2) The NCREIF Property Index (NPI) is an unleveraged, time series composite measurement of the investment performance of a large group of commercial real estate properties. The NPI is released 25 days after the end of each quarter. Because Mellon's performance report is released earlier, the NPI used as benchmark is lagged one quarter.
- (3) Direct Real Estate Manager NAV's are net of property level debt.

Timber/Natural Resources

- (4) PRIM's Timber/Natural resources appraisal policy states that all timber/natural resources properties be externally appraised every three years using a full narrative report format. These reports (and property values) are then updated annually by a Timber/Natural Resources Appraiser to reflect changes in timber markets, inventories and land values. The goal is to obtain market values for each timberland annually.
- (5) PRIM's timber portfolio currently does not utilize leverage.
- (6) The NCREIF Timber/Natural Resources Index (NTI) is an unleveraged, time series composite measurement of the investment performance of individual timber properties. The NTI is released 25 days after the end of each quarter. Because Mellon's performance report is released earlier, the NTI used as benchmark is lagged one quarter.

REITs

- (7) The FTSE NAREIT ALL EQUITY REITS Index is an unmanaged index of publicly traded U.S., tax-qualified REITs that have 75% or more of their gross assets invested in the equity ownership of real estate. This index does not include Real Estate Operating Companies (REOCs) although these are acceptable investments as part of the manager's guidelines and included in PRIM's REIT holdings.
- (8) The FTSE NAREIT ALL EQUITY REITS index can be considered a "leveraged" index given that the majority of the REITs included in the index use leverage as part of their investment strategy.

ETI

(9) Real estate ETI Funds are primarily invested in development projects with a three to five year lifecycle. These investments require substantial capital investment with very little income during the initial stage of the cycle, resulting in a J curve return profile. The returns are expected later in the cycle, upon project completion and lease up. For lack of a better benchmark, the NPI which is a core property benchmark used to track stabilized, institutional grade properties is used by PRIM. However, Staff is focused more on deal flow quality and on returns generated relative to the risk adjusted returns projected by Managers in their offering memoranda.

Private Equity

(10) Private Equity performance represents time weighted returns reflecting the most recent partnership financial statement valuations (typically lagging one calendar quarter) adjusted for actual cash flows through the reporting date. The Private Equity portfolio consists primarily of assets that are illiquid in nature, and valuations are determined by the General Partner based on current industry fair market value practices. Limited Partnership valuations are reviewed through a formal audit process annually, and valuations are also commonly reviewed by partnership advisory boards on a quarterly basis.

Hedge Fund of Funds

(11) The Hedge Fund of Fund valuations are net of underlying manager fees and net of all Hedge Fund manager administrative, base and performance fees,

PENSION RESERVES INVESTMENT TRUST BENCHMARK/COMPOSITE FOOTNOTES RATES OF RETURN Periods Ending September 30, 2015

Interim Benchmark

(1) Interim benchmark is calculated by applying the investment performance of the asset class benchmarks to the Fund's asset allocation targets. The PE component of this uses the S&P 500 + 5% through 6/30/2000; currently Actual PE Performance (formally labeled Interim Policy Benchmark)

Total Core Benchmark

(2) The Total Core benchmark is calculated by applying the investment performance of the asset class benchmarks to the Fund's asset allocation targets. The Private Equity benchmark used for the Total Core benchmark calculation is the 7-year annualized return of the Russell 3000+3% (formally labeled Policy Benchmark)

Domestic Equity

(3) Russell 2500 through 6/30/14; currently 70.5% Russell 2500/5.5% Russell 2500 Growth/6.5% Russell 2000 Growth/17.5% Russell 2000 Value

(4) Dow Jones Wilshire 5000 through 04/30/08; Russell 3000 through 06/30/2009; 78% Russell 3000/22% 3 Month Libor + 3% through 12/31/2009; Russell 3000 through 10/31/2011; 80% S&P 500/20% Russell 2500 through 6/30/2014; currently 78.9% S&P 500/14.88% Russell 2500 (Towth/1.37% Russell 2000 Growth/1.37% Russell 2000 Growth/3.69% Russell 2000 Value

International

(5) MSCI EAFE Net Dividends through 9/30/2007; MSCI EAFE Net Dividends Provisional Standard Index through 5/31/2008; MSCI EAFE Net Dividends Standard Index through 12/31/2009; MSCI World ex-US IMI Net Dividends through 12/31/2010; currently Custom World ex-US IMI Net Dividends, customized to exclude legislatively prohibited tobacco, Sudan and Iran securities.

(6) MSCI EAFE Net Dividends through 9/30/2007; MSCI EAFE Net Dividends Provisional Standard Index through 5/31/2008; MSCI EAFE Net Dividends Standard Index through 12/31/2010; currently Custom MSCI EAFE Net Dividends Standard Index, customized to exclude legislatively prohibited tobacco, Sudan and Iran securities.

(7) MSCI EAFE Net Dividends through 9/30/2007; MSCI EAFE Net Dividends Provisional Standard Index through 5/31/2008; MSCI EAFE Net Dividends Standard Index through 12/31/2009; MSCI World ex-US IMI Net Dividends through 18/31/2014; currently 50% custom MSCI World Ex-US IMI Net Dividends, 50% Custom MSCI EAFE Standard Index Net Dividends, customized to exclude legislatively prohibited tobacco, Sudan and Iran securities. (Current blend is maintained by MSCI)

Emerging Markets

(8) MSCI Emerging Markets IMI Net Dividends through 12/31/2010; currently Custom MSCI Emerging Markets IMI Net Dividends, customized to exclude legislatively prohibited tobacco, Sudan and Iran securities.

(9) MSCI EMF through 6/30/2004; MSCI Emerging Markets Net Dividends through 9/30/2007; MSCI Emerging Markets Net Dividends Provisional Standard Index through 5/31/2008; MSCI Emerging Markets Net Dividends Standard Index through 12/31/2010; currently Custom MSCI Emerging Markets Net Dividends Standard Index, customized to exclude legislatively prohibited tobacco. Sudan and Iran securities.

(10) MSCI Emerging Markets Small Cap Net Dividendss Index through 8/31/2014; currently Custom MSCI Emerging Market Small Cap Net Dividends, customized to exclude legislatively prohibited tobacco, Sudan and Iran securities.

(11) MSCI EMF through 6/30/2004; MSCI Emerging Markets Net Dividends through 9/30/2007; MSCI Emerging Markets Net Dividends Provisional Standard Index through 5/31/2008; MSCI Emerging Markets Net Dividends Standard Index through 4/30/2010; MSCI Emerging Markets MII Net Dividends through 12/31/2010; Custom MSCI Emerging Markets IMI Net Dividends, 5/30 Custom MSCI EM IMI Net Dividends, 43% Custom MSCI EM Standard Net Dividends, 8/31/2014; 5/30% Custom MSCI EM Standard Net Dividends, 8/31/2014; Custom MSCI EM Standard Net Dividends, 8/30 Custom MSCI EM Standard Net Dividends through 2/28/2015. Weights were based on the beginning adjusted monthly market value of each index group, customized to exclude legislatively prohibited tobacco, Sudan and Iran securities through 8/31/2015. Currently 25% Custom MSCI EM Standard Net Divis, 8/4 MSCI EM Standard Net Divis, 8/4 Custom MSCI EM Standard Net Divis, 8/4 Custom MSCI EM Standard Net Divis (Current blend is maintained by MSCI)

Global Equity

(12) The Total Global Equity composite inception date coincides with the establishment of the MSCI All Country World Index on January 1, 2001.

(13) MSCI All Country World Net Index through 4/30/2010; MSCI All Country World IMI Net Dividends through 12/31/2010; Custom MSCI All Country World IMI Net Dividends, customized to exclude legislatively prohibited tobacco, Sudan and Iran securities through 10/31/2011; 35% S&P 500/8% Russell 2500/42% Custom MSCI World Ex-US IMI Net Dividends In Dividends through 4/30/2012; 35% S&P 500/9% Russell 2500/40% Custom MSCI World Ex-US IMI Net Dividends In Dividends through 6/30/2014; currently 4/4% Domestic Equity BM/16% Emerging Markets BM

Core Fixed Income

(14) Effective 2/28/2015, the Total Aggregate performance was changed to include the complete performance histories of Economically Targeted Investment managers: Access Capital, Community Capital Management, and AFL-CIO Housing Investment. As a result, prior period Total Aggregate performance was revised from 4/30/2004-1/31/2015.

(15) 100% BC Aggregate through 2/28/2014; 34% BC Agg/66% BC STRIPS 20+ through 2/28/2015; currently Domestic Investment Grade Fixed Income benchmark is calculated by applying the investment performance of the sub asset class benchmarks to the sub asset class weights within the core fixed income portfolio.

(16) BC Aggregate through 6/01; 67% BC Aggregate / 20% BC US TIPS/13% Custom Commodities BM; Custom Commodities BM through 06/30/2009; currently BC ILB US\$ Hedged

(17) 33% BC US TIPS/67% BC ILB US\$ Hedged

(18) 77% BC Aggregate / 8% BC US TIPS/15% BC ILB US\$ Hedged through 2/28/2014; currently weights are based on the beginning adjusted monthly market value of each index group.

Value-Added Fixed Income

(19) CSFB Thru 07/2002; ML Master II HY Thru 02/2007; currently ML Master II HY Constrained Index

(20) Public Value Added benchmark is calculated by applying the investment performance of the sub asset class benchmarks to the sub asset class weights within the public value added fixed income portfolio. These weightings will be automatically adjusted at the end of every quarter for usage in the upcoming quarter.

(21) Actual Performance through 2/07; ML Master II FI Constrained Index through 12/31/2009; currently Altman NYU Salomon Center Combined Defaulted Public Bond & Bank Loan Index

(22) The Total Value-Added Fixed Income composite inception date coincides with PRIM's initiative to separate High Yield from Core Fixed Income. Underlying manager market values and cash flows are unavailable prior to July 1, 2001.

(23) CSFB through 7/02 / 43% ML Master II HY Index/43% JPM EMBI Global/14% Actual Distressed Debt through 06/08 60% ML Master II HY Constrained Index and 40% JPM EMBI Global/50% ML Master II HY Constrained Index/ 25% JPM EMBI Global/17% S&P LSTA Leveraged Index through 06/30/2009; 58% ML Master II HY Constrained Index/ 25% JPM EMBI Global/17% S&P LSTA Leveraged Index in

through 9/30/2011; 21.58% ML. Master II HY Constrained Index/11.08% S&P LSTA Leveraged Loan Index/22.24% JPM EMBI Global/45.10% Altman Index through 12/31/2011; 27.90% ML Master II HY Constrained Index/13.58% S&P LSTA Leveraged Loan Index/20.65% JPM EMBI Global/37.87% Altman Index through 3/31/2012; 28.24% ML Master II HY Constrained Index/10.65% S&P LSTA Leveraged Loan Index/10.63% S&P LSTA Leveraged Loan Index/10.63% S&P LSTA Leveraged Loan Index/10.64% JPM EMBI Global/20.36% JPM GBI-EM Global Diversified/28.85% Altman Index through 6/30/2012; 18.21% ML Master II HY Constrained Index/11.24% S&P LSTA Leveraged Loan Index/11.25% JPM EMBI Global/21.03% JPM GBI-EM Global Diversified/32.12% Altman Index through 9/30/2012; 18.29% ML Master II HY Constrained Index/11.94% S&P LSTA Leveraged Loan Index/11.94% S&P LSTA Le

Private Equity

(24) Through 6/30/2000, S&P 500 + 5%; currently Actual Performance. This benchmark is used in the Interim Policy Benchmark.

(25) The 7 Year Annualized performance is used in the Policy Return and Policy Benchmark.

(26) Wilshire 5000 + 3% through 4/30/2008; Currently 7 Year Annualized Russell 3000 + 3%

PENSION RESERVES INVESTMENT TRUST BENCHMARK/COMPOSITE FOOTNOTES RATES OF RETURN

Periods Ending September 30, 2015

Real Estate - Private/Public

- (27) On 06/30/02 PRIM instituted portfolio leverage of up to 40%; increased to 50% leverage on 02/03/04. Portfolio leverage was paid down in September 2005 (\$450 million), October 2005 (\$200 million), and July 2007 (\$450 million). Composite includes Value Added Separate Account opened 4/30/2007 and closed 12/31/2010.
- (28) FTSE NAREIT ALL EQUITY REITS through 3/31/2008; 63% FTSE NAREIT ALL EQUITY REITS/27% NAREIT Global REIT/10% NAREIT International REIT through 06/30/09; 50% FTSE NAREIT ALL EQUITY REITS/50% FTSE EPRA NAREIT Developed Ex US REIT through 4/30/2012; currently 100% FTSE EPRA NAREIT Developed Net Total Return
- (29) NCREIF through 6/30/03; 67% NCREIF/33% FTSE NAREIT ALL EQUITY REITS through 12/31/06: NCREIF + Ratio of 2% FTSE NAREIT ALL EQUITY REITS to PRIT Fund through 03/31/08: 73% NCREIF Property One Otr Lag/17% FTSE NAREIT ALL EQUITY REITS/7.25% NAREIT Global REIT/2.75% NAREIT Intl REIT through 06/30/09; 82% NCREIF Property One Qur Lag/9% FTSE NAREIT ALL EQUITY REITS/9% FTSE EPRA NAREIT Developed Ex US REIT through 7/31/09; 80% NCREIF Property One Qtr Lag/10% FTSE NAREIT ALL EQUITY REITS/10% FTSE EPRA NAREIT Developed Ex US REIT through 4/30/2012; currently 80% NCREIF PROPERTY ONE QTR LAG/20% FTSE EPRA NAREIT Developed Net Total

Timber/Natural Resources

- (30) NCREIF Timber Index through 6/30/03; NCREIF Timber Index Ex-PRIM through 2/28/2010; currently NCREIF Timber Index
- (31) Currently Private Natural Resources Actual Performance.
- (32) NCREIF Timber Index through 6/30/03; NCREIF Timber Index Ex-PRIM through 06/30/08; 50% NCREIF Timber Index Ex-PRIM/ 42% Lipper Natural Resources Global Fund Index/ 8% Actual Natural Resources Private through 2/28/2010; 50% NCREIF Timber Index/ 42% Lipper Natural Resources Global Fund Index/ 8% Actual Natural Resources Private through 10/31/2011; 53% NCREIF Timber Index/ 39% Lipper Natural Resources Global Fund Index/ 8% Actual Natural Resources Private through 2/28/2014; currently the Timber/Natural Resources benchmark is calculated by applying the investment performance of the sub asset class benchmarks to the sub asset class weights within the Timber/Natural Resources portfolio. These weightings will be automatically adjusted at the end of every quarter for usage in the upcoming quarter.

Hedge Funds

- (33) ML 90 Day T-Bill + 4% through 12/31/2009; currently HFRI Fund of Funds Composite Index. (HFRI indices Flash returns are used through 12/31/11. Current returns reflect most up to date performance and are subject to change)
- (34) HFRI Fund of Funds Composite Index. (HFRI indices Flash returns are used through 12/31/11. Current returns reflect most up to date performance and are subject to change)
- (35) ML 90 Day T-Bill + 4% through 12/31/2009; currently HFRI Fund of Funds Composite Index. (HFRI indices Flash returns are used through 12/31/11. Current returns reflect most up to date performance and are subject to change)

Portfolio Completion Strategies

(36) Portfolio Completion Strategies Composite Index is calculated by applying the underlying benchmark return for each manager to the manager's weight within the Portfolio Completion Strategies Composite. These weights are based on the beginning adjusted monthly market value of each portfolio.

Portable Alpha Wind Down

(37) S&P 500 Index through April 2008; Russell 3000 Index through July 2009; US 3 Month Libor + 3% through 12/31/2009; currently HFRI FOF Composite Index. (HFRI indices - Flash returns are used through 12/31/11. Current returns reflect most up to date performance and are subject to change)

Overlay

(38) Actual performance

Total Fund

(39) ML 90 Day T-Bill through 6/30/03; ML 3-Month Libor through 03/31/08; currently ML 90 Day T-Bill

Policy Return
(40) The Policy Return is calculated by applying the investment performance of each asset class times its actual allocation. The Private Equity portion of the Policy Return is the 7-year annualized return of the Private Equity asset class monthized.

Pension Reserves I 9/30/2015				P&R.	A vs. Manager	-			Market Va BP Impa	
Fund #	Fund Name	Tol.	Tol.	Ending MV	1 Mo. ROR	YTD ROR	Prior Mo. MKV Diff.	12/2014 MKV Diff.	1 Mo.	YTD
DOMESTIC EQUI	ITY									
PRMF12100002	Intech	10bp	25bp	1,085	0.00	0.19	974	666	0.00	0.00
PRMF12300002	PIMCO Domestic	25bp	25bp	(1,107,823)	-0.01	-0.02	(1,077,685)	(986,048)	0.00	-0.01
PRMF12900002	SSGA S&P 500	10bp	25bp	9,433	0.04	0.08	8,354	10,455	0.00	0.00
PRMF12910002	SSGA Russell 2500	10bp	25bp	57,759	0.00	0.00	57,420	2,433	0.00	0.00
PRMF13100002	Frontier Capital Management	10bp	25bp	989	0.00	0.00	850	514	0.00	0.00
PRMF13200002	Huber Capital Management	10bp	25bp	(15,540)	-0.01	-0.04	2,757	1,041	-0.01	-0.01
PRMF13300002	Riverbridge Partners	10bp	25bp	745	0.05	0.05	712	541	0.00	0.00
PRMF13400002	Southern Sun Asset Mgmt	10bp	25bp	2,428	0.00	0.01	812	652	0.00	0.00
PRMF13500002	Summit Creek Advisors	10bp	25bp	1,176	0.00	-0.02	1,041	508	0.00	0.00
PRMF33000002	Invesco Global REIT	10bp	25bp	198,019	0.00	0.05	161,469	123,108	0.01	0.03
PRMF33100002	CenterSquare Global REIT	10bp	25bp	577,767	0.02	-0.06	432,760	304,227	0.02	0.04
PRMF33200002	Invesco Global REIT Transition	10bp	25bp	433,127	0.00	0.06	413,874	377,930	0.01	0.01
PRMF37200002	T.Rowe Price NR	10bp	25bp	(6,154)	0.00	0.00	(9,026)	(5,707)	0.00	0.00
PRMF37210002	Jennison Natural Resources	10bp	25bp	(49,564)	0.05	-0.05	(133,993)	54,409	0.05	-0.05
INTERNATIONAL	L EQUITY									
PRMF40000002	SSGA World Ex-US	25bp	25bp	(45,463)	0.01	0.04	868,816	46,822	-0.02	0.00
PRMF40120002	Mondrian Investment	25bp	25bp	35,698	0.00	0.00	47,256	27,943	0.00	0.00
PRMF40400002	Marathon Asset Management	25bp	25bp	1,861,310	-0.05	0.15	3,237,119	1,831,301	-0.06	0.00
PRMF40500002	Baillie Gifford	25bp	25bp	(28,507)	-0.01	0.00	12,622	(38,823)	0.00	0.00
PRMG46000000	FIS	25bp	25bp	233,790	0.11	0.12	138,695	110,017	0.09	0.12

Pension Reserves I	Investment Trust												
9/30/2015	5	Rem. Dif	f.]	Performance & R	isk Analytics				Investment	Manager -	
Fund #	Fund Name	1 Mo.	YTD	Comments	Ending MV	Accrued Mgmt Fees	Adjusted NAV for fees	1 Mo. ROR	YTD ROR	Prior Mo. Market Value	Current Mo. Market Value	1 Mo. ROR	YTD ROR
	L	1 1110.	112		<u> </u>	Mighit I ces	TULLY TOLLEG	NON	KOK	market value	Market value	KOK	NOR
DOMESTIC EQU	ITY												
PRMF12100002	Intech	0.00	0.19		844,703,801	951,939	845,655,740		-2.79	860,947,938			-2.98
PRMF12300002	PIMCO Domestic	-0.01	-0.01		854,456,154	596,649	855,052,803	-3.31	-6.32	884,316,117	856,160,626	-3.30	-6.30
PRMF12900002	SSGA S&P 500	0.04	0.08		6,952,037,965	160,240	6,952,198,205	-2.50	-5.44	7,030,285,856	6,952,188,772	-2.54	-5.52
PRMF12910002	SSGA Russell 2500	0.00	0.00		1,426,595,410	33,792	1,426,629,202	-4.44	-6.07	1,492,923,745	1,426,571,443	-4.44	-6.07
PRMF13100002	Frontier Capital Management	0.00	0.00		169,842,488	391,763	170,234,251	-2.07	-4.76	173,839,009	170,233,262	-2.07	-4.76
PRMF13200002	Huber Capital Management	0.00	-0.03		222,631,290	734,139	223,365,430	-4.57	-14.10	234,074,039	223,380,969	-4.56	-14.06
PRMF13300002	Riverbridge Partners	0.05	0.05		154,772,077	296,518	155,068,595	-4.07	-2.85	161,650,628	155,067,849	-4.12	-2.90
PRMF13400002	Southern Sun Asset Mgmt	0.00	0.00		132,741,636	251,794	132,993,430	-6.11	-10.49	141,643,276	132,991,002	-6.11	-10.50
PRMF13500002	Summit Creek Advisors	0.00	-0.02		192,934,210	462,889	193,397,099	-3.34	-2.72	200,069,708	193,395,923	-3.34	-2.70
PRMF33000002	Invesco Global REIT	-0.01	0.02		262,090,473	297,719	262,388,192	1.59	-3.36	258,283,350	262,190,174	1.58	-3.40
PRMF33100002	CenterSquare Global REIT	0.00	-0.10		747,101,442	615,069	747,716,511	1.65	-2.86	735,559,722	747,138,743	1.63	-2.80
PRMF33200002	Invesco Global REIT Transition	-0.01	0.05		143,261,315	162,732	143,424,047	1.58	-3.43	141,187,666	142,990,921	1.58	-3.50
PRMF37200002	T.Rowe Price NR	0.00	0.00		159,999,972	256,453	160,256,425	-7.60	-19.92	173,442,357	160,262,579	-7.60	-19.92
PRMF37210002	Jennison Natural Resources	-0.01	0.01		146,052,522	178,282	146,230,804	-10.26	-25.11	162,958,102	146,280,369	-10.31	-25.06
INTERNATIONA	L EQUITY												
PRMF40000002	SSGA World Ex-US	0.03	0.04		4,788,374,416	109,797	4,788,484,214	-4.84	-5.59	4,956,820,056	4,788,529,677	-4.85	-5.63
PRMF40120002	Mondrian Investment	0.00	0.00		717,452,706	668,669	718,121,375	-5.61	-4.76	760,797,759	718,085,677	-5.61	-4.76
PRMF40400002	Marathon Asset Management	0.01	0.15		2,281,930,055	1,920,433	2,283,850,488	-4.15	1.15	2,382,781,143	2,281,989,178	-4.10	1.00
PRMF40500002	Baillie Gifford	0.00	0.00		1,662,229,847	1,181,832	1,663,411,680	-3.68	-4.68	1,676,890,551		-3.67	-4.68
PRMG46000000	FIS	0.02	0.00		98,944,835	168,399	99,113,234	-4.49	-2.36	103,772,035	98,879,444	-4.60	-2.48

Pension Reserves Investment Tr	ust		nen					Market Val	
9/30/2015			P&R	A vs. Manager	-	T		BP Impa	ct
Fund # Fund Name	Tol.	Tol.		1 Mo.	YTD	Prior Mo.	12/2014		
			Ending MV	ROR	ROR	MKV Diff.	MKV Diff.	1 Mo.	YTD
EMERGING MARKETS									
PRMF60700002 SSGA Emer	ging Mkts 25bp	25bp	5,544	0.12	0.23	(225,347)	927,589	0.02	-0.0
PRMF60800002 Acadian Ass	et Management 25bp	25bp	(10,963)	-0.01	0.00	(2,949)	(16,736)	-0.01	0.0
PRMF60900002 Wasatch Ad	visors, Inc. 25bp	25bp	(189,655)	-0.18	-0.55	(29,327)	383,470	-0.17	-0.5
PRMF61000002 Acadian Fro	ntier 25bp	25bp	(32,618)	-0.07	0.00	17,080	-	-0.08	0.0
PRMF61100002 AQR Emerg	ing 25bp	25bp	(71,539)	0.12	0.00	(66,033)	-	0.00	0.0
PRMF61200002 Baillie Giffor	rd EMM 25bp	25bp	(7,379)	0.00	0.00	5,470	-	0.00	0.0
PRMF61300002 City of Lond	lon 25bp	25bp	172,691	-0.11	0.00	224,223	-	-0.05	0.00
PRMF61400002 Driehaus Ca	pital 25bp	25bp	(191,109)	-0.19	0.00	685,892	-	-0.16	0.0
PRMF61500002 Harding Loc	evner 25bp	25bp	134,599	-0.01	0.00	11,307	-	0.03	0.0
PRMF61600002 Pzena Inv	25bp	25bp	(130,739)	0.02	0.00	(251,631)	-	0.02	0.0
FIXED INCOME									
PRMF50700002 Blackrock P	assive 25bp	25bp	482,940	-0.02	0.09	619,575	230,157	-0.02	0.08
PRMF50300002 PIMCO Cor		25bp	(1,030,500)	0.02	-0.05	(1,170,542)	(529,760)	0.02	-0.0
PRMF50410002 Loomis Sayl		25bp	5,647,330	0.01	-0.03	5,914,646	(4,265)	-0.02	0.4
PRMF50870002 Blackrock S		25bp	200,000,012	0.00	0.00	33	-	0.00	4.22
PRMF51100002 Blackrock T		25bp	(387,511)	-0.02	0.05	(274,019)	(711,218)	-0.02	0.05
PRMF52000002 Blackrock II		25bp	(1,597,751)	0.04	0.14	(2,062,174)	(3,426,851)	0.04	0.15
HIGH YIELD	•			•					
	nagement Trust 25bp	25bp	2,378	0.03	0.03	(100,703)	(92,158)	0.03	0.03
	es - High Yield 25bp	25bp	4,314,062	0.01	0.02	14.997	113,925	1.35	1.32
PRMF51010002 Voya	25bp	25bp	-	0.00	0.01		-	0.00	0.00
PRMF51020002 Eaton Vance		25bp	-	0.01	0.00	-	-	0.00	0.00
PRMF50850002 Community	Capital 25bp	25bp	(43,978)	-0.10	-0.26	(15,495)	(10,293)	-0.10	-0.12
PRMF50860002 AFL - CIO*	25bp	25bp	•	0.00	0.00	-	48	0.00	0.0
PRMF51400002 PIMCO EM	D 25bp	25bp	(1,359,500)	0.02	0.04	(1,457,777)	(1,529,133)	0.03	0.0
PRMF51500002 Ashmore Inv	vestment Mgmt 25bp	25bp	(73,892,372)	-0.02	-0.13	-	-	-15.43	-15.7
	Capital Mgmt 25bp	25bp	(980,627)	0.01	-0.13	(1,048,360)	(611,552)	0.02	-0.13
PRMF51900002 Merrill Lyno	ch Access Capital* 25bp	25bp		0.00	-0.01	-	0	0.00	0.00
PRMF52110002 Investec Ass	et Management 25bp	25bp	(902,265)	-0.09	-0.17	(681,113)	(454,665)	-0.08	-0.1
PRMF52120002 Pictet Asset	Management 25bp	25bp	(403,052)	-0.05	0.06	(140,197)	(474,713)	-0.06	0.0
PRMF52130002 Stone Harbo	r Investment Prtnrs 25bp	25bp	(905,565)	-0.18	-0.18	(422,378)	(517,569)	-0.17	-0.13
HEDGE FUNDS	<u> </u>					·			
PRMF77330002 Replication	Portfolio 25bp	25bp	300	0.00	0.00	146	-	0.00	0.00
OVERLAY	•			•	<u>.</u>				
PRMF14000002 Clifton	25bp	25bp	(6,856)	-0.04	0.03	27,245	3,100	-0.02	-0.0
	therefore net returns are used for rec			3.04	0.05	21,245	5,100	0.02	V.U.

^{*} Managers provide net-of-fee reports therefore net returns are used for reconciliation purposes.

¹⁾ Wasatch - YTD return difference are the result of beginning and ending market value differences. Mellon Service Delivery is comfortable with our pricing sources.

²⁾ Community Capital - Community Capital - YTD return difference is due to monthly beginning and ending market value differences. Mellon Service Delivery is comfortable with our pricing sources.

9/30/20	s Investment Trust	Rem. Dif	f.		1	Performance & R	isk Analytics				Investment N	Ianager -	
Fund #	Fund Name			Comments	Ending MV	Accrued	Adjusted	1 Mo.	YTD	Prior Mo.	Current Mo.	1 Mo.	YTD
runu #	runu Name	1 Mo.	YTD	Comments	Ending W V	Mgmt Fees	NAV for fees	ROR	ROR	Market Value	Market Value	ROR	ROR
EMERGING MA	ADVETÉ	_											
PRMF60700002	SSGA Emerging Mkts	0.09	0.28		1,011,359,552	78,551	1,011,438,103	-2.44	-14.33	986,759,803	1,011,432,559	-2.56	-14.5
PRMF60800002	Acadian Asset Management	0.09	0.28		123,952,880	328,586	124,281,466	0.92	-9.25	123,144,159		0.93	-14.3
PRMF60900002	Wasatch Advisors, Inc.	-0.01		1) See below	92,530,658	240,678	92,771,336	-1.24	-9.25	93,932,626			-8.4
PRMF61000002	Acadian Frontier	0.01	0.01	1) See below	75,714,720	235,754	75,950,474	-1.54	0.00	62,134,898			-0.
PRMF611000002	AOR Emerging	0.01	0.00		517,221,399	235,754	517,221,399	-2.31	0.00	504,477,725		-2.43	
PRMF61200002	Baillie Gifford EMM	0.12	0.00		574,033,487	842,640	574,876,127	-0.08	0.00	550,340,591	574,883,506		
PRMF61300002	City of London	-0.06	0.00		92,374,010	168,032	92,542,042	-2.64	0.00	95,052,361			
PRMF61400002	Driehaus Capital	-0.03	0.00		549,733,617	654,401	550,388,018	-2.34	0.00	538,596,361		-2.35	
PRMF61500002	Harding Loevner	-0.03	0.00		381.861.977	685,989	382,547,967	-3.27	0.00	370,464,536			
PRMF61600002	Pzena Inv	0.00	0.00		530,925,987	820,321	531,746,308	-2.27	0.00	519,102,712			
FIXED INCOMI					223,523,531	,	222,110,000			,,			
PRMF50700002	Blackrock Passive	0.00	0.01		793,529,158	26,248	793,555,406	0.68	0.99	888,162,646	793,072,465	0.70	0.9
PRMF50300002	PIMCO Core	0.00	0.00		789,180,206	1,771,581	790,951,786	0.04	0.50	790,675,380		0.02	0.:
PRMF50410002	Loomis Sayles - Core	0.03	-0.48		1,132,580,628	384,070	1,132,964,698	0.60	1.77	1,126,193,039		0.60	1.3
PRMF50870002	Blackrock STRIPS	0.00	-4.22		3,160,315,773	103,432	3,160,419,205	1.53	-2.62	3,412,771,598		1.53	-2.0
PRMF51100002	Blackrock Tips	0.00	-0.01		587,788,284	18,139	587,806,424	-0.61	-0.77	591,388,303	588,193,935	-0.59	-0.8
PRMF52000002	Blackrock ILB	0.00	0.00		1,244,868,726	378,454	1,245,247,180	-0.41	-0.38	1,250,397,812			-0.5
HIGH YIELD	•								1				
PRMF50100002	Fidelity Management Trust	0.00	0.00		307,475,302	546,011	308,021,314	-2.11	-0.45	314,657,007	308,018,936	-2.14	-0.4
PRMF50420002	Loomis Sayles - High Yield	-1.34	-1.30		309,762,839	374,436	310,137,275	-2.53	-2.78	318,172,088	305,823,213	-2.53	-2.8
PRMF51010002	Voya	0.00	0.01		463,271,035	0	463,271,035	-0.50	2.54	465,742,355	463,271,035	-0.50	2.5
PRMF51020002	Eaton Vance	0.01	0.00		465,385,013	0	465,385,013	-0.52	1.43	468,058,946	465,385,013	-0.53	1.4
PRMF50850002	Community Capital	0.00	-0.13	2) See below	28,060,098	27,884	28,087,981	0.97	2.11	27,818,348	28,131,959	1.07	2.3
PRMF50860002	AFL - CIO*	0.00	0.00		126,259,662	0	126,259,662	0.84	1.84	125,213,758	126,259,662	0.84	1.8
PRMF51400002	PIMCO EMD	-0.02	-0.01		292,595,352	262,808	292,858,160	-2.78	-2.06	301,217,054	294,217,660	-2.79	-2.1
PRMF51500002	Ashmore Investment Mgmt	15.41	15.60		470,543,349	-1,013,607	469,529,741	-1.84	0.44	478,932,938	543,422,113	-1.82	0.:
PRMF51800002	Shenkman Capital Mgmt	-0.01	0.00		289,259,962	283,822	289,543,784	-2.38	-1.03	296,590,541	290,524,411	-2.39	-0.9
PRMF51900002	Merrill Lynch Access Capital*	0.00	-0.01		103,474,104	0	103,474,104	0.37	1.42	103,090,075	103,474,104	0.37	1.4
PRMF52110002	Investec Asset Management	-0.01	-0.02		277,728,552	406,541	278,135,094	-3.02	-14.80	286,797,679		-2.93	-14.0
PRMF52120002	Pictet Asset Management	0.00	0.05		460,532,131	996,471	461,528,602	-2.93	-13.87	475,472,119		-2.88	-13.9
PRMF52130002	Stone Harbor Investment Prtnrs	-0.01	-0.05		271,809,664	390,675	272,200,339	-3.39	-14.75	281,750,579	273,105,904	-3.21	-14.5
HEDGE FUNDS					100 110 100		40 4 4 2 = 1 2 2 1	10-1	2.00	107 110 **=	100422000	10-1	
PRMF77330002	Replication Portfolio	0.00	0.00		102,142,100	25,000	102,167,100	-4.92	-3.90	107,449,950	102,166,800	-4.92	-3.9
OVERLAY													
PRMF14000002	Clifton	-0.01	0.04		123,163,722	93,296	123,257,018	-2.44	-5.51	141,856,774	123,263,874	-2.40	-5.

^{*} Managers provide net-of-fee reports therefore net returns are use

¹⁾ Wasatch - YTD return difference are the result of beginning and ending market value differences. Mellon Service Delivery is comfortable with our pricing sources.

²⁾ Community Capital - Community Capital - YTD return difference is due to monthly beginning and ending market value differences. Mellon Service Delivery is comfortable with our pricing sources.

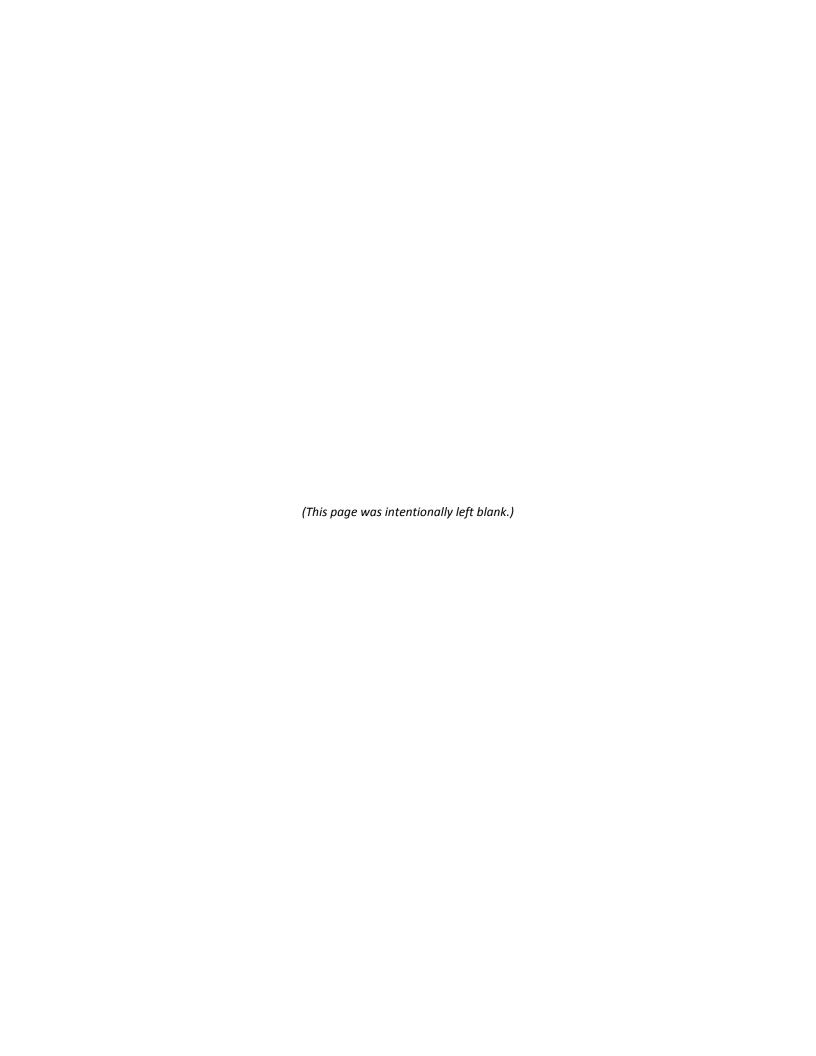




Appendix D

Callan Investment Measurement Services Monthly Review

PRIM Investment Committee Meeting Tuesday, November 17, 2015



Callan

September 30, 2015

Massachusetts Pension Reserves Investment Management Board

Investment Measurement Service Monthly Review

Table of Contents Massachusetts Pension Reserves Investment Management Board September 30, 2015

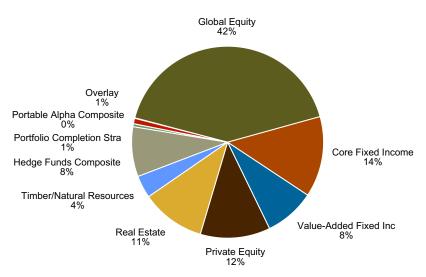
Actual vs Target Asset Allocation	•
Monthly Total Fund Attribution	
Cumulative Total Fund Attribution	3
Total Fund	10
Global Equity	14
Core Fixed Income	16
Value-Added Fixed Income	18
Private Equity	20
Real Estate	22
Timber/Natural Resources	24
Portfolio Completion Strategy	26
Hedge Funds	28
Portable Alpha Wind Down	30
Total Overlay	32



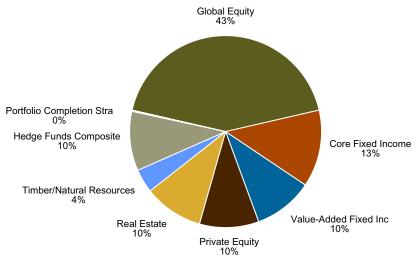
Actual vs Target Asset Allocation

The first chart below shows the Fund's asset allocation as of September 30, 2015. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

Actual Asset Allocation



Target Asset Allocation



	\$000s	Percent	Percent	Percent	\$000s
Asset Class	Actual	Actual	Target	Difference	Difference
Global Equity	24,468,993	41.6%	42.8%	(1.2%)	(683,337)
Core Fixed Income	7,966,124	13.6%	13.0%	0.6%	326,397
Value-Added Fixed Inc	4,989,555	8.5%	10.0%	(1.5%)	(887,158)
Private Equity	6,938,782	11.8%	10.0%	1.8%	1,062,069
Real Estate	6,344,612	10.8%	10.0%	0.8%	467,899
Timber/Natural Resource	s 2,231,617	3.8%	4.0%	(0.2%)	(119,068)
Hedge Funds Composite	4,962,151	8.4%	10.0%	(1.6%)	(914,561)
Portfolio Completion Stra	297,859	0.5%	0.2%	0.3%	180,324
Portable Alpha Composit	e 27,173	0.0%	0.0%	0.0%	27,173
Overlay	540,260	0.9%	0.0%	0.9%	540,260
Total	58,767,125	100.0%	100.0%		

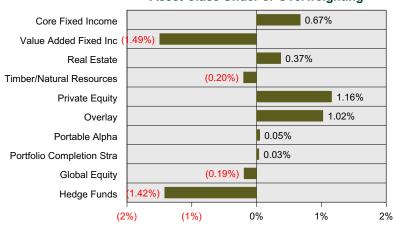
^{*}Current Month Target Performance is calculated using monthly rebalancing.



Monthly Total Fund Relative Attribution - September 30, 2015

The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.

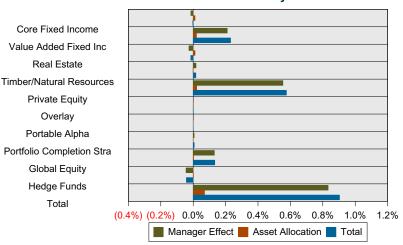




Actual vs Target Returns

(6%) (4%) (2%) 0% 2% 4% 6% 8%

Relative Attribution by Asset Class



Relative Attribution Effects for Month ended September 30, 2015

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Core Fixed Income	14%	13%	0.67%	0.78%	(0.01%)	0.01%	(0.00%)
Value Added Fixed Inc	9%	10%	(1.24%)	(3.71%)	0.21%	0.02%	0.23%
Real Estate	10%	10%	2.50%	2.76%	(0.03%)	0.01%	(0.02%)
Timber/Natural Resources	4%	4%	(0.90%)	(1.36%)	0.02%	(0.00%)	0.02%
Private Equity	11%	10%	5.98%	1.02%	0.55%	0.02%	0.58%
Overlay	1%	0%	(1.58%)	(1.58%)	0.00%	0.00%	0.00%
Portable Alpha	0%	0%	(1.67%)	(1.67%)	0.00%	0.00%	0.00%
Portfolio Completion Stra	0%	0%	`1.46%´	0.26%	0.01%	0.00%	0.01%
Global Equity	42%	43%	(3.39%)	(3.69%)	0.13%	0.00%	0.13%
Hedge Funds	9%	10%	(2.42%)	(1.91%)	(0.04%)	0.00%	(0.04%)
Total			(0.80%) =	(1.71%) +	0.83% +	0.07%	0.90%

^{*} Current Month Target = 42.5% Global Equity Benchmark (12), 13.0% Core Fixed Income Benchmark, 10.0% Value-Added FI Benchmark (21), 10.0% Real Estate Benchmark (27), 10.0% Hedge Fund Benchmark (33), 10.0% 7 YEAR ANNUALIZED Rus 3000+3% (24), 4.0% Timberland/Natural Benchmark (30) and 0.5% MassPRIM-Portfolio Completion Stat BM.

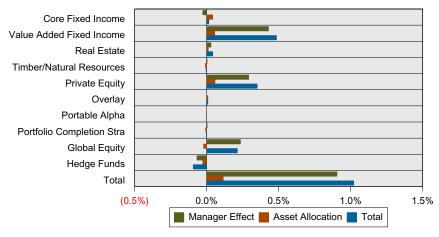
Attribution is run on Gross returns.



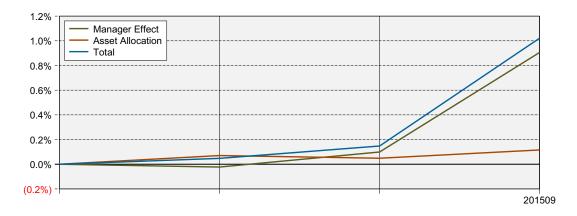
Cumulative Total Fund Relative Attribution - September 30, 2015

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

Three Months Relative Attribution Effects



Cumulative Relative Attribution Effects



Three Months Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Core Fixed Income	14%	13%	3.22%	3.42%	(0.03%)	0.04%	0.02%
Value Added Fixed Income	8%	10%	(3.52%)	(8.59%)	0.43%	0.06%	0.49%
Real Estate	10%	10%	2.59%	2.25%	0.03%	0.01%	0.04%
Timber/Natural Resources	4%	4%	(3.45%)	(3.55%)	0.00%	(0.01%)	(0.00%)
Private Equity	11%	10%	`5.66%	3.01%	0.29%	0.06%	0.35%
Overlay	1%	0%	(3.92%)	(3.92%)	0.00%	0.01%	0.01%
Portable Alpha	0%	0%	(3.59%)	(3.59%)	0.00%	0.00%	0.00%
Portfolio Completion Stra	0%	0%	3.30%	0.79%	0.00%	(0.01%)	(0.00%)
Global Equity	43%	43%	(9.63%)	(10.16%)	0.24%	(0.02%)	0.21%
Hedge Funds	9%	10%	(4.45%)	`(3.66%)	(0.07%)	(0.03%)	(0.09%)
Total			(3.79%) =	(4.81%) +	0.91% +	0.12%	1.02%

^{*} Current Month Target = 42.5% Global Equity Benchmark (12), 13.0% Core Fixed Income Benchmark, 10.0% Value-Added FI Benchmark (21), 10.0% Real Estate Benchmark (27), 10.0% Hedge Fund Benchmark (33), 10.0% 7 YEAR ANNUALIZED Rus 3000+3% (24), 4.0% Timberland/Natural Benchmark (30) and 0.5% MassPRIM-Portfolio Completion Stat BM.

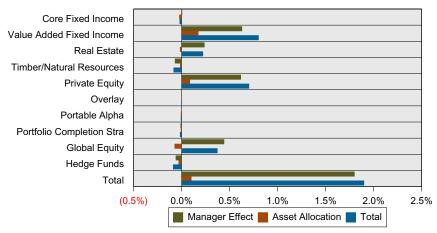
Attribution is run on Gross returns.



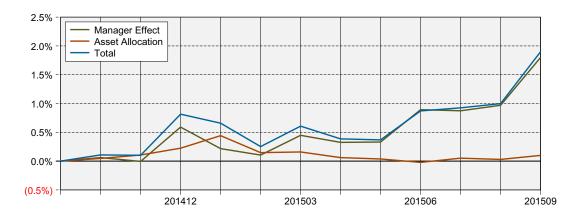
Cumulative Total Fund Relative Attribution - September 30, 2015

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

One Year Relative Attribution Effects



Cumulative Relative Attribution Effects



One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Core Fixed Income	15%	13%	6.23%	6.21%	0.00%	(0.02%)	(0.02%)
Value Added Fixed Income	8%	10%	(4.72%)	(11.68%)	0.63%	0.17%	0.80%
Real Estate	10%	10%	14.03%	11.17%	0.24%	(0.02%)	0.22%
Timber/Natural Resources	4%	4%	(4.48%)	(2.76%)	(0.07%)	(0.01%)	(0.08%)
Private Equity	11%	10%	17.72%	11.65%	0.62%	0.09%	0.70%
Overlay	1%	0%	(0.79%)	(0.79%)	0.00%	0.00%	0.00%
Portable Alpha	0%	0%	(8.66%)	(8.66%)	0.00%	(0.01%)	(0.01%)
Portfolio Completion Stra	0%	0%	- '-	- '-	(0.01%)	(0.01%)	(0.01%)
Global Equity	42%	43%	(5.79%)	(6.78%)	0.44%	(0.07%)	0.37%
Hedge Funds	9%	10%	(0.83%)	(0.12%)	(0.06%)	(0.03%)	(0.09%)
Total			0.78% =	(1.12%) +	1.80% +	0.10%	1.90%

^{*} Current Month Target = 42.5% Global Equity Benchmark (12), 13.0% Core Fixed Income Benchmark, 10.0% Value-Added FI Benchmark (21), 10.0% Real Estate Benchmark (27), 10.0% Hedge Fund Benchmark (33), 10.0% 7 YEAR ANNUALIZED Rus 3000+3% (24), 4.0% Timberland/Natural Benchmark (30) and 0.5% MassPRIM-Portfolio Completion Stat BM.

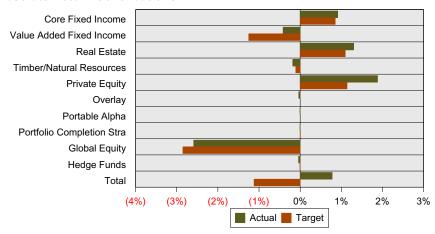
Attribution is run on Gross returns.



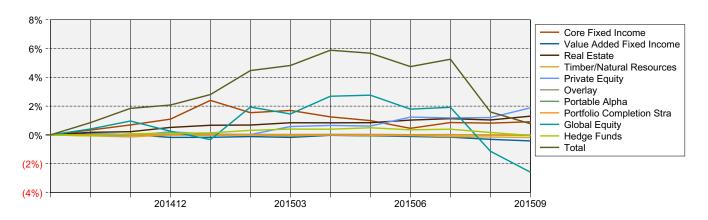
Cumulative Total Fund Absolute Attribution - September 30, 2015

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of absolute total fund Performance and target performance. These cumulative results quantify the longer-term contribution of each asset class to absolute total fund return as well as the target return.

One Year Absolute Return Contributions



Cumulative Absolute Return Contributions



One Year Absolute Attribution Effects

	Effective Actual Weight	Actual Return	Absolute Return Contribution	Effective Target Weight	Target Return	Target Return Contribution	Return Contribution Difference
Core Fixed Income	15%	6.23%	0.91%	13%	6.21%	0.85%	0.06%
Value Added Fixed Income	8%	(4.72%)	(0.42%)	10%	(11.68%)	(1.25%)	0.83%
Real Estate	10%	14.03%	`1.30%´	10%	`11.17%´	`1.09%	0.21%
Timber/Natural Resources	4%	(4.48%)	(0.18%)	4%	(2.76%)	(0.11%)	(0.07%)
Private Equity	11%	17.72%	`1.88%´	10%	11.65%	`1.14%′	`0.74%´
Overlay	1%	(0.79%)	(0.04%)	0%	(0.79%)	0.00%	(0.04%)
Portable Alpha	0%	(8.66%)	(0.01%)	0%	(8.66%)	0.00%	(0.01%)
Portfolio Completion Stra	0%	(1.96%)	(0.00%)	0%	2.38%	0.01%	(0.01%)
Global Equity	42%	(5.79%)	(2.59%)	43%	(6.78%)	(2.85%)	`0.26%´
Hedge Funds	9%	(0.83%)	(0.04%)	10%	(0.12%)	(0.00%)	(0.04%)

Total Fund Return 0.78% Target Return (1.12%) 1.90%

^{*} Current Month Target = 42.5% Global Equity Benchmark (12), 13.0% Core Fixed Income Benchmark, 10.0% Value-Added FI Benchmark (21), 10.0% Real Estate Benchmark (27), 10.0% Hedge Fund Benchmark (33), 10.0% 7 YEAR ANNUALIZED Rus 3000+3% (24), 4.0% Timberland/Natural Benchmark (30) and 0.5% MassPRIM-Portfolio Completion Stat BM.

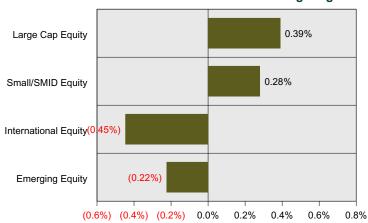
Attribution is run on Gross returns.



Monthly Total Fund Relative Attribution - September 30, 2015

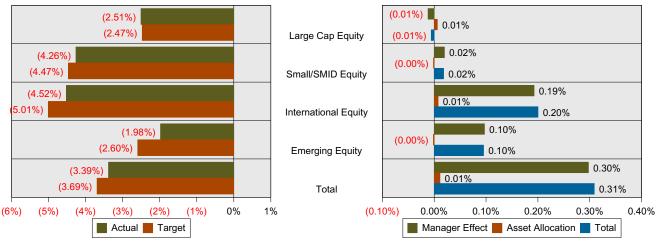
The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.

Asset Class Under or Overweighting



Actual vs Target Returns

Relative Attribution by Asset Class



Relative Attribution Effects for Month ended September 30, 2015

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity	35%	35%	(2.51%)	(2.47%)	(<mark>0.01%)</mark>	0.01% (0.00%)	(0.01%)
Small/SMID Equity	10%	9%	(4.26%)	(4.47%)	0.02%		0.02%
International Equity <u>Emerging Equity</u>	40%	40%	(4.52%)	(5.01%)	0.19%	0.01%	0.20%
	16%	16%	(1.98%)	(2.60%)	0.10%	(0.00%)	0.10%
Total			(3.39%) =	(3.69%) +	0.30% +	0.01%	0.31%

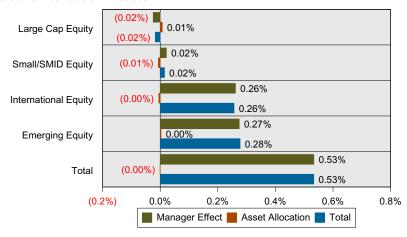
^{*} Current Month Target = 40.0% Custom World Ex-US IMI Net Divs (7), 34.7% S&P 500 Index, 16.0% Custom MSCI EM IMI Net Divs (10), 6.5% Russell 2500 Index, 1.6% Russell 2000 Value Index, 0.6% Russell 2000 Growth Index and 0.5% Russell 2500 Growth Index. Attribution is run on Gross returns.



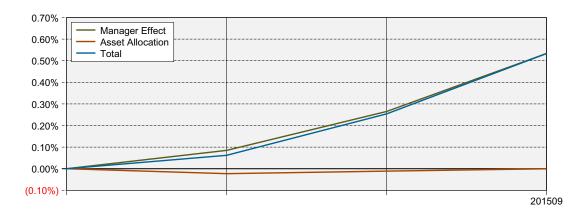
Cumulative Total Fund Relative Attribution - September 30, 2015

The charts below accumulate the Total Global Equity Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total global equity fund performance relative to target. These cumulative results quantify the longer-term sources of total global equity fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total global equity fund excess return into Asset Allocation Effect and Manager Selection Effect.

Three Months Relative Attribution Effects



Cumulative Relative Attribution Effects



Three Months Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap Equity Small/SMID Equity International Equity Emerging Equity	35% 10% 40% 16%	35% 9% 40% 16%	(6.51%) (10.36%) (9.66%) (15.79%)	(6.44%) (10.59%) (10.33%) (17.46%)	(0.02%) 0.02% 0.26% 0.27%	0.01% (0.01%) (0.00%) 0.00%	(0.02%) 0.02% 0.26% 0.28%
Total			(9.63%) =	(10.16%) +	0.53% +	(0.00%)	0.53%

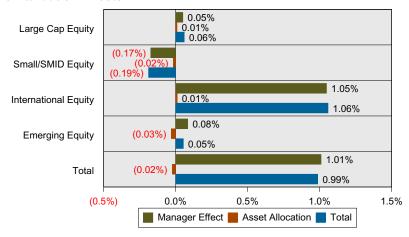
^{*} Current Month Target = 40.0% Custom World Ex-US IMI Net Divs (7), 34.7% S&P 500 Index, 16.0% Custom MSCI EM IMI Net Divs (10), 6.5% Russell 2500 Index, 1.6% Russell 2000 Value Index, 0.6% Russell 2000 Growth Index and 0.5% Russell 2500 Growth Index. Attribution is run on Gross returns.



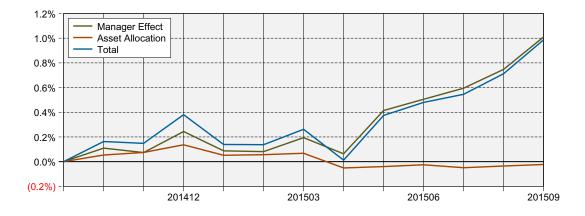
Cumulative Total Fund Relative Attribution - September 30, 2015

The charts below accumulate the Total Global Equity Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total global equity fund performance relative to target. These cumulative results quantify the longer-term sources of total global equity fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total global equity fund excess return into Asset Allocation Effect and Manager Selection Effect.

One Year Relative Attribution Effects



Cumulative Relative Attribution Effects



One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative <u>Return</u>
Large Cap Equity Small/SMID Equity International Equity Emerging Equity	36% 10% 39% 16%	35% 9% 40% 16%	(0.48%) (1.44%) (6.46%) (17.66%)	(0.61%) 0.45% (9.13%) (18.19%)	0.05% (<mark>0.17%)</mark> 1.05% 0.08%	0.01% (0.02%) 0.01% (0.03%)	0.06% (<mark>0.19%)</mark> 1.06% 0.05%
Total	1070	1070	(5.79%) =		1.01% +	(0.02%)	0.99%

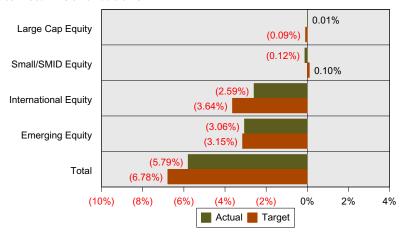
^{*} Current Month Target = 40.0% Custom World Ex-US IMI Net Divs (7), 34.7% S&P 500 Index, 16.0% Custom MSCI EM IMI Net Divs (10), 6.5% Russell 2500 Index, 1.6% Russell 2000 Value Index, 0.6% Russell 2000 Growth Index and 0.5% Russell 2500 Growth Index. Attribution is run on Gross returns.



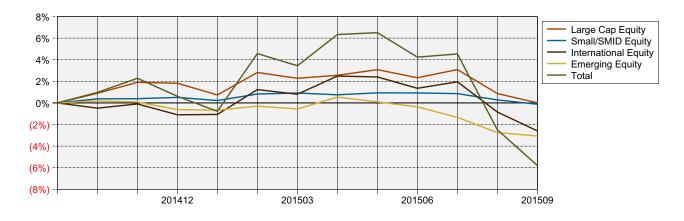
Cumulative Total Fund Absolute Attribution - September 30, 2015

The charts below accumulate the Total Global Equity Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total global equity fund performance relative to target. These cumulative results quantify the longer-term sources of total global equity fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total global equity fund excess return into Asset Allocation Effect and Manager Selection Effect.

One Year Absolute Return Contributions



Cumulative Absolute Return Contributions



One Year Absolute Attribution Effects

Asset Class	Effective Actual Weight	Actual Return	Absolute Return Contribution	Effective Target Weight	Target Return	Target Return Contribution	Return Contribution Difference
Large Cap Equity	36%	(0.48%)	0.01%	35%	(0.61%)	(0.09%)	0.10%
Small/SMID Equity	10%	(1.44%)	(0.12%)	9%	0.45%	0.10%	(<mark>0.22%)</mark>
International Equity	39%	(6.46%)	(2.59%)	40%	(9.13%)	(3.64%)	1.05%
Emerging Equity	16%	(17.66%)	(3.06%)	16%	(18.19%)	(3.15%)	0.09%

Total Fund Return (5.79%)



Target Return (6.78%)

0.99%

^{*} Current Month Target = 40.0% Custom World Ex-US IMI Net Divs (7), 34.7% S&P 500 Index, 16.0% Custom MSCI EM IMI Net Divs (10), 6.5% Russell 2500 Index, 1.6% Russell 2000 Value Index, 0.6% Russell 2000 Growth Index and 0.5% Russell 2500 Growth Index. Attribution is run on Gross returns.

The table below contrasts the distribution of assets across the Fund's investment managers as of January 31, 2015, with the distribution as of December 31, 2014. All Returns and market values provided by custodian.

Asset Distribution Across Investment Managers

	September 3	September 30, 2015		August 31, 2015		
	Market Value %	of Total Fund	Market Value %	of Total Fund		
Total Global Equity	\$24,468,992,504	41.59%	\$24,926,617,925	41.89%		
Intech	844,703,801	1.44%	860,270,264	1.45%		
PIMCO Stock Plus	854,456,154	1.45%	883,910,019	1.49%		
SSgA S&P 500	6,952,037,965	11.82%	7,030,009,033	11.81%		
Summit Creek SCG	192,934,210	0.33%	199,754,002	0.34%		
Frontier SCV	169,842,488	0.29%	173,574,723	0.29%		
Huber SCV	222,631,290	0.38%	233,572,049	0.39%		
Riverbridge SMIDG	154,772,077	0.26%	161,448,616	0.27%		
SouthernSun SMID	132,741,636	0.23%	141,470,940	0.24%		
SSgA Russell 2500	1,426,595,410	2.42%	1,492,864,963	2.51%		
Domestic Eq. Cash	-635,592	(0.00%)	-551,156	(0.00%)		
SSgA World ex-US	4,788,374,416	8.14%	4,956,632,812	8.33%		
Marathon Asset Mgmt	2,281,930,055	3.88%	2,379,476,720	4.00%		
Baillie Gifford	1,662,229,847	2.82%	1,676,091,241	2.82%		
Mondrian Investment Partners	717,452,706	1.22%	759,627,721	1.28%		
FIS	98,944,835	0.17%	103,480,943	0.17%		
International Equity Cash	564,679	0.00%	664,625	0.00%		
SSgA Emerging Markets	1,011,359,552	1.72%	986,624,091	1.66%		
AQR Emerging	517,221,399	0.88%	504,477,725	0.85%		
Baillie Gifford EMM	574,033,487	0.98%	549,785,111	0.92%		
Driehaud Capital	549,733,617	0.93%	537,460,313	0.90%		
Harding Loevner	381,861,977	0.65%	370,005,338	0.62%		
Pzena Inv	530,925,987	0.90%	517,732,196	0.87%		
Acadian EM SC	123,952,880	0.21%	122,922,159	0.21%		
Wasatch EM SC	92,530,658	0.16%	93,499,217	0.16%		
Acadian FM	75,714,720	0.13%	61,993,906	0.10%		
City of London FM	92,374,010	0.16%	94,938,246	0.16%		
Emerging Markets Transition	19,342,452	0.03%	34,557,636	0.06%		
Emerging Markets Cash	299,817	0.00%	255,142	0.00%		
Core Fixed Income	\$7,966,123,629	13.54%	\$8,314,710,096	13.97%		
Blackrock Passive (Core)	793,529,158	1.35%	888,128,839	1.49%		
PIMCO (Core)	789,180,206	1.34%	788,969,971	1.33%		
Loomis Sayles Core Corporate	1,132,580,628	1.92%	1,125,542,998	1.89%		
Blackrock STRIPS	3,160,315,773	5.37%	3,412,582,329	5.73%		
Blackrock TIPS	587,788,284	1.00%	591,358,826	0.99%		
Blackrock Global ILBs	1,244,868,726	2.12%	1,249,764,073	2.10%		
Access Capital/Merrill Lnch ETI	103,474,104	0.18%	103,090,075	0.17%		
Community Capital Management	28,060,098	0.05%	27,799,821	0.05%		
AFL-CIO Housing Investor Trust	126,259,662	0.21%	125,213,758	0.21%		
Core FI Closed Portfolios	757	0.00%	748	0.00%		
Core Fixed Cash	66,232	0.00%	2,258,658	0.00%		
Value Added Fixed Income	\$4,989,555,024	8.48%	\$5,043,157,449	8.47%		
Fidelity (High Yield)	307,475,302	0.52%	314,200,071	0.53%		
Loomis Sayles High Yield	309,762,839	0.53%	317,531,528	0.53%		
Shenkman	289,259,962	0.49%	296,107,076	0.50%		
FI Distressed Debt Cash	22,271,940	0.04%	-15,530,997	(0.03%)		
FI High Yield Debt Cash	91,799	0.00%	126,203	0.00%		
Eaton Vance Bank Loans	465,385,013	0.79%	468,058,946	0.79%		
ING Bank Loans	463,271,035	0.79%	465,742,355	0.78%		
Ashmore Emerging Markets Debt	470,543,349	0.80%	479,592,759	0.81%		
PIMCO Emerging Debt	292,595,352	0.50%	301,039,917	0.51%		
Investec EM Debt	277,728,552	0.47%	286,107,160	0.48%		
Pictet EM Debt	460,532,131	0.78%	474,641,403	0.80%		
Stone Harbor EM Debt	271,809,664	0.46%	281,488,338	0.47%		
Distressed Debt Portfolio	1 358 828 086	2 31%	1 374 052 690	2 31%		

1,358,828,086

2.31%



Distressed Debt Portfolio

1,374,052,690

2.31%

The table below contrasts the distribution of assets across the Fund's investment managers as of January 31, 2015, with the distribution as of December 31, 2014. All Returns and market values provided by custodian.

Asset Distribution Across Investment Managers

	September 3	30, 2015	August 31,	August 31, 2015		
	Market Value %	of Total Fund	Market Value % d	of Total Fund		
rivate Equity	\$6,938,781,877	11.79%	\$6,699,371,458	11.26%		
Special Equity	18,836,296	0.03%	19,154,826	0.03%		
Special Equity 2000	13,503,316	0.02%	12,290,067	0.02%		
Special Equity 2001	59,414,635	0.10%	58,505,732	0.10%		
Special Equity 2002	4,863,733	0.01%	4,495,701	0.01%		
Special Equity 2003	81,125,613	0.14%	92,612,144	0.16%		
Special Equity 2004	83,814,223	0.14%	77,372,906	0.13%		
Special Equity 2005	402,228,999	0.68%	385,869,008	0.65%		
Special Equity 2006	635,343,270	1.08%	620,322,648	1.04%		
Special Equity 2007	878,450,821	1.49%	841,984,676	1.41%		
Special Equity 2008	911,721,127	1.55%	875,237,225	1.47%		
Special Equity 2009	202,268,351	0.34%	232,228,186	0.39%		
Special Equity 2010	498,372,493	0.85%	483,109,007	0.81%		
Special Equity 2011	610,951,729	1.04%	572,440,736	0.96%		
Special Equity 2012	232,384,458	0.39%	230,454,449	0.39%		
Special Equity 2013	183,049,728	0.31%	168,464,399	0.28%		
Special Equity 2014	219,635,586	0.37%	212,420,569	0.36%		
Special Equity 2015	82,915,978	0.14%	80,336,981	0.13%		
Venture Capital	12,445,620	0.02%	12,953,229	0.02%		
Venture Capital 2000	63,904,180	0.11%	66,840,764	0.11%		
Venture Capital 2001	35,790,550	0.06%	36,656,826	0.06%		
Venture Capital 2002	13,978,130	0.02%	14,159,907	0.02%		
Venture Capital 2003	31,582,284	0.05%	30,762,823	0.05%		
Venture Capital 2004	32,961,846	0.06%	36,050,216	0.06%		
Venture Capital 2005	117,551,789	0.20%	117,358,713	0.20%		
Venture Capital 2006	132,292,911	0.20%	135,519,347	0.23%		
Venture Capital 2007	197,308,109	0.34%	180,641,136	0.30%		
Venture Capital 2008	32,603,661	0.06%	31,509,807	0.05%		
Venture Capital 2009	253,515,925	0.43%	226,185,673	0.38%		
Venture Capital 2010	284,724,901	0.48%	257,393,620	0.43%		
Venture Capital 2011	96,384,049	0.16%	90,916,514	0.15%		
Venture Capital 2012	230,444,250	0.39%	215,418,266	0.36%		
Venture Capital 2013	51,279,685	0.09%	43,821,323	0.07%		
Venture Capital 2014	51,053,065	0.09%	49,229,285	0.08%		
Venture Capital 2015	4,542,379	0.01%	3,496,814	0.01%		
Private Equity Cash	177,538,183	0.30%	183,157,950	0.31%		
eal Estate	\$6,344,611,556	10.78%	\$6,105,538,763	10.26%		
Invesco Core	1.095.350.693	1.86%	1,117,221,044	1.88%		
LaSalle Core	1,509,154,305	2.56%	1,481,033,775	2.49%		
AEW Core	1,133,977,987	1.93%	1,126,756,489	1.89%		
JP Morgan I.M.	772,485,245	1.31%	755,891,685	1.27%		
TA Associates		1.95%		1.88%		
	1,147,723,488		1,120,069,371			
Core Real Estate Portfolio Debt	-994,550,786	(1.69%)	-994,521,816	(1.67%)		
Canyon-Johnson II	4,856,208	0.01%	5,518,556	0.01%		
Intercontinental IV	1,189,599	0.00%	1,035,695	0.00%		
New Boston Urban I	6,492,889	0.01%	7,428,285	0.01%		
Non Core 2011	451,882,271	0.77%	424,796,635	0.71%		
INVESCO Global REIT	262,090,473	0.45%	257,777,801	0.43%		
CenterSquare Global REIT	747,101,442	1.27%	734,519,084	1.23%		
EII (INVESCO TRAN)	143,261,315	0.24%	140,911,536	0.24%		
RREEF/European Investors Tran	25,434	0.00%	25,629	0.00%		
	-108,470	(0.00%)	-55.159	(0.00%)		
Real Estate Leverage Cash			00,100	(0.0070)		
Real Estate Leverage Cash REIT Cash	20,083	0.00%	44.328	0.00%		



The table below contrasts the distribution of assets across the Fund's investment managers as of January 31, 2015, with the distribution as of December 31, 2014. All Returns and market values provided by custodian.

Asset Distribution Across Investment Managers

	September 30, 2015		August 31, 2015		
	Market Value %	of Total Fund	Market Value %	of Total Fund	
Timber/Natural Resources	\$2,231,616,885	3.79%	\$2,251,895,079	3.78%	
Forest Investment Associates	1,124,189,980	1.91%	1,109,272,886	1.86%	
The Campbell Group	533,360,759	0.91%	538,300,957	0.90%	
Timber Cash	7,502,437	0.01%	56,213	0.00%	
Jennison Natural Resources	146,052,522	0.25%	162,393,484	0.27%	
T Rowe Natural Resources	159,999,972	0.27%	172,962,599	0.29%	
Public Natural Resources Cash	3,951	0.00%	7,854	0.00%	
Private Natural Resources	252,193,278	0.43%	268,916,736	0.45%	
Private Natural Resources Cash	8,313,986	0.01%	-15,649	(0.00%)	
Portfolio Completion Strategy	\$297,858,503	0.51%	\$293,636,301	0.49%	
Portfolio Completion Strategy	297,858,503	0.51%	293,636,301	0.49%	
Hedge Funds	\$4,962,151,120	8.43%	\$5,104,040,966	8.58%	
Arden HFOF (Liquidating)	38,114,744	0.06%	46,207,164	0.08%	
Ivy (Liquidating)	4,612,899	0.01%	4,680,156	0.01%	
PAAMCO	896,072,422	1.52%	914,845,783	1.54%	
Direct Hedge Funds	4,023,334,223	6.84%	4,077,273,486	6.85%	
Hedge Fund Cash	16,832	0.00%	61,034,377	0.10%	
Portable Alpha	\$27,173,218	0.05%	\$27,633,676	0.05%	
Austin Capital Management	1,455,024	0.00%	1,576,199	0.00%	
Crestline Advisors	10,752,686	0.02%	11,066,508	0.02%	
Strategic Investment	14,841,765	0.03%	14,988,456	0.03%	
Portable Alpha Cash	123,743	0.00%	2,513	0.00%	
Total Overlay	\$540,260,310	0.92%	\$665,344,830	1.12%	
Clifton Overlay	123,163,722	0.21%	141,790,266	0.24%	
Overlay Cash	417,096,588	0.71%	523,554,564	0.88%	
Participant Cash	45,601,124	0.08%	50,554,656	0.08%	
Teachers and Employees Cash	27,426,882	0.05%	26,891,585	0.05%	
Total Fund	\$58,840,152,633	100.0%	\$59,509,392,784	100.0%	



Investment Manager Returns

The table below details the rates of return for the fund's investment managers over various time periods ended September 30, 2015. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended September 30, 2015

	Last	Fiscal	Last 12	Last 36	Last 60
	Month	YTD	Months	Months	Months
Гotal Fund ex-cash (Core)	(0.80%)	(3.79%)	0.78%	8.25%	8.27%
Interim Benchmark (1)	(1.21%)	(4.54%)	(0.54%)	7.12%	7.40%
Total Core Bechmark (2)	(1.71%)	(4.81%)	(1.12%)	6.08%	6.42%
Global Equity	(3.39%)	(9.63%)	(5.79%)	7.43%	7.49%
Global Equity Benchmark (13)	(3.69%)	(10.16%)	(6.78%)	6.79%	6.75%
Core Fixed Income	0.67%	3.22%	6.23%	3.72%	4.71%
Core Fixed-Income Bench (18)	0.78%	3.42%	6.21%	3.41%	4.37%
Value-Added Fixed Income	(1.24%)	(3.52%)	(4.72%)	2.40%	5.37%
Value-Added Benchmark (23)	(3.71%)	(8.59%)	(11.68%)	(0.80%)	2.22%
Private Equity	5.98%	5.66%	17.72%	20.40%	18.76%
Private Equity Benchmark (24)	5.98%	5.66%	17.72%	20.40%	18.76%
Private Equity Benchmark (24)	1.02%	3.01%	11.65%	9.76%	8.81%
1 mate Equity Benefithank (Ee)	1.0270	0.0170	11.0070	0.1 0 70	0.0170
Real Estate	2.50%	2.59%	14.03%	12.62%	12.84%
Real Estate Benchmark (29)	2.76%	2.25%	11.17%	10.83%	12.11%
Timber/Natural Resources	(0.90%)	(3.45%)	(4.48%)	4.23%	3.84%
Timber/Natural Benchmark (32)	(1.36%)	(3.55%)	(2.76%)	4.94%	4.09%
Portfolio Completion Strategy	1.46%	3.30%	_	_	_
Portfolio Completion Benchmark (36)	0.26%	0.79%	-	-	-
Hedge Funds	(2.42%)	(4.45%)	(0.83%)	6.15%	4.84%
Hedge Funds Benchmark (35)	(2.42 %)	(3.66%)	(0.03%)	4.13%	2.73%
Heage Fullas Belicililark (33)	(1.9170)	(3.00 %)	(0.1270)	4.1370	2.13/0
Portable Alpha	(1.67%)	(3.59%)	(8.66%)	(3.82%)	(3.03%)
Portable Alpha Benchmark (37)	(1.91%)	(3.66%)	(0.12%)	4.13%	2.73%
Total Overlay	(1.58%)	(3.92%)	(0.79%)	_	_
Total Overlay Benchmark (38)	(1.58%)	(3.92%)	(0.79%)	-	-
Participant Cash	0.02%	0.05%	0.15%	0.14%	0.15%
Teachers and Employees Cash	0.02%	0.04%	0.15%	0.14%	0.15%
Merrill Lynch 90 Day Tbill (39)	0.00%	0.01%	0.02%	0.06%	0.08%
otal Fund	(0.80%)	(3.77%)	0.78%	8.22%	8.24%
Interim Benchmark (1)	(1.21%)	(4.54%)	(0.54%)	7.12%	7.40%
Total Core Bechmark (2)	(1.71%)	(4.81%)	(1.12%)	6.08%	6.42%

^{*} Current Month Target = 42.5% Global Equity Benchmark (12), 13.0% Core Fixed Income Benchmark, 10.0% Value-Added FI Benchmark (21), 10.0% Real Estate Benchmark (27), 10.0% Hedge Fund Benchmark (33), 10.0% 7 YEAR ANNUALIZED Rus 3000+3% (24), 4.0% Timberland/Natural Benchmark (30) and 0.5% MassPRIM-Portfolio Completion Stat BM. All returns reported gross-of-fee.



The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2015, with the distribution as of August 31, 2015.

Asset Distribution Across Investment Managers

	September 3	September 30, 2015		, 2015
	Market Value % o		Market Value % o	
Domestic Equity	\$10,950,079,451	44.75%	\$11,176,323,453	44.84%
Large Cap	\$8,651,197,919	35.36%	\$8,774,189,316	35.20%
Intech	844,703,801	3.45%	860,270,264	3.45%
PIMCO Stock Plus	854,456,154	3.49%	883,910,019	3.55%
SSgA S&P 500	6,952,037,965	28.41%	7,030,009,033	28.20%
Small/SMID Cap Core	\$2,299,517,111	9.40%	\$2,402,685,294	9.64%
Small Cap Growth				
Summit Creek SCG	192,934,210	0.79%	199,754,002	0.80%
Small Cap Value	\$392,473,778	1.60%	\$407,146,772	1.63%
Frontier SCV	169,842,488	0.69%	173,574,723	0.70%
Huber SCV	222,631,290	0.91%	233,572,049	0.94%
SMID Growth				
Riverbridge SMIDG	154,772,077	0.63%	161,448,616	0.65%
SMID Cap Core	\$1,559,337,046	6.37%	\$1,634,335,904	6.56%
SouthernSun SMID	132,741,636	0.54%	141,470,940	0.57%
SSgA Russell 2500	1,426,595,410	5.83%	1,492,864,963	5.99%
Domestic Eq. Cash	-635,592	(0.00%)	-551,156	(0.00%)
International Equity	\$9,549,510,904	39.03%	\$9,875,988,483	39.62%
SSgA World ex-US	4.788.374.416	19.57%	4,956,632,812	19.88%
Marathon Asset Mgmt	2,281,930,055	9.33%	2,379,476,720	9.55%
Baillie Gifford	1,662,229,847	6.79%	1,676,091,241	6.72%
Mondrian Investment Partners	717,452,706	2.93%	759,627,721	3.05%
FIS	98,944,835	0.40%	103,480,943	0.42%
International Equity Cash	564,679	0.00%	664,625	0.00%
Emerging Markets	\$3,969,402,149	16.22%	\$3,874,305,989	15.54%
SSgA Emerging Markets	1,011,359,552	4.13%	986,624,091	3.96%
AQR Emerging	517,221,399	2.11%	504,477,725	2.02%
Baillie Gifford EMM	574,033,487	2.35%	549,785,111	2.21%
Driehaud Capital	549,733,617	2.25%	537,460,313	2.16%
Harding Loevner	381,861,977	1.56%	370,005,338	1.48%
Pzena Inv	530,925,987	2.17%	517,732,196	2.08%
Emerging Markets Small Cap	\$216,483,538	0.88%	\$216,421,376	0.87%
Acadian EM SC	123,952,880	0.51%	122,922,159	0.49%
Wasatch EM SC	92,530,658	0.38%	93,499,217	0.38%
Total Frontier	\$168,492,515	0.69%	\$157,187,259	0.63%
Acadian Frontier	75,714,720	0.31%	61,993,906	0.25%
City of London EM	92,374,010	0.38%	94,938,246	0.38%
Emerging Markets Transition	19,342,452	0.08%	34,557,636	0.14%
Emerging Markets Cash	299,817	0.00%	255,142	0.00%
Total Global Equity	\$24,468,992,504	100.0%	\$24,926,617,925	100.0%



Investment Manager Returns

The table below details the rates of return for the fund's investment managers over various time periods ended September 30, 2015. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended September 30, 2015

			Last	Last	Last
	Last	Fiscal	12	36	60
Damastia Familia	Month	YTD (7.22%)	Months	Months	Months
Domestic Equity Domestic Equity Benchmark (4)	(2.88%) (2.90%)	(7.33%) (7.32%)	(0.64%) (0.35%)	12.34% 12.37%	13.15% 13.18%
arge Cap	(2.51%)	(6.51%)	(0.48%)	12.58%	15.17%
Intech PIMCO Stock Plus	(1.78%) (3.31%)	(4.67%) (7.80%)	3.35% (1.84%)	13.90% 12.16%	14.43% 13.96%
SSgA S&P 500	(2.50%)	(6.57%)	(0.78%)	12.16%	13.90 %
S&P 500 Index	(2.47%)	(6.44%)	(0.61%)	12.40%	13.34%
Small/SMID Cap Core	(4.26%) (4.47%)	(10.36%)	(1.44%)	11.28% 12.20%	-
Small/SMID Benchmark (3)	(4.47%)	(10.59%)	0.45%	12.20%	-
mall Cap Growth Summit Creek SCG	(3.34%)	(9.02%)	4.25%	_	_
Russell 2000 Growth Index	(6.32%)	(13.06%)	4.04%	12.85%	13.26%
mall Cap Value	(3.51%)	(11.07%)	(8.40%)	-	-
Frontier SCV	(2.07%)	(7.12%)	2.05%	-	-
Huber SCV	(4.57%)	(13.86%)	(15.03%)	- 0.400/	40.470/
Russell 2000 Value Index	(3.46%)	(10.73%)	(1.60%)	9.18%	10.17%
MID Cap Growth Riverbridge SMIDG	(4.07%)	(7.32%)	6.50%	-	-
Russell 2500 Growth Index	(5.47%)	(11.05%)	3.35%	13.79%	13.93%
MID Cap Core	(4.58%)	(10.64%)	(0.95%)	12.02%	-
SouthernSun SMID SSgA Russell 2500	(6.11%) (4.44%)	(14.36%) (10.28%)	(13.19%) 0.37%	- 12.18%	-
Russell 2500 Index	(4.47%)	(10.30%)	0.38%	12.39%	12.69%
nternational Equity International Equity Benchmark (7)	(4.52%) (5.01%)	(9.66%) (10.33%)	(6.46%) (9.13%)	6.73% 5.18%	5.36% 3.76%
. ,	, ,		, ,		
SSgA World ex-US International Equity Benchmark (5)	(4.84%) (4.90%)	(10.21%) (10.32%)	(8.79%) (9.46%)	5.63% 4.96%	4.24% 3.63%
Marathon Asset Mgmt	(4.15%)	(7.54%)	(1.46%)	9.62%	7.48%
Baillie Gifford	(3.68%)	(11.07%)	(6.22%)	5.71%	5.45%
Mondrian Investment Partners	(5.61%)	(9.71%)	(7.72%)	7.08%	5.10%
FIS International Equity Benchmark (6)	(4.49%) (5.13%)	(8.50%) (10.34%)	(3.83%) (8.81%)	- 5.65%	3.89%
Emerging Markets	(1.98%)	(15.79%)	(17.66%)	(4.20%)	(2.82%)
EM Benchmark (8)	(2.60%)	(17.46%)	(18.19%)	(4.42%)	(3.26%)
SSgA Emerging Markets CUSTOM MSCI EM IMI NET DIVS (8)	(2.44%) (2.51%)	(17.48%) (17.68%)	(17.92%) (18.32%)	(4.28%) (4.47%)	(2.93%) (3.29%)
AQR Emerging	(2.31%)	(17.51%)	(.5.5270)	- ' ' ' ' ' '	(0.2070)
Baillie Gifford EMM	(0.08%)	(16.89%)	-	-	-
Driehaud Capital	(2.34%)	(13.42%)	-	-	-
Harding Loevner Pzena Inv	(3.27%) (2.27%)	(15.61%) (15.46%)	-	-	-
Custom MSCI EM STANDARD INDEX (9)	(2.92%)	(17.85%)	(18.83%)	(4.97%)	(3.44%)
merging Markets Small Cap	(0.01%)	(14.09%)	(12.41%)	2.44%	_
Acadian EM SC	0.92%	(15.05%)	(13.87%)	8.68%	-
Wasatch EM SC	(1.24%)	(12.77%)	(10.38%)	(0.28%)	-
Custom MSCI Emer Mkt SC (10)	0.00%	(16.50%)	(14.92%)	(0.97%)	-
otal Frontier	(2.15%)	(7.88%)	-	-	_
Acadian Frontier	(1.54%)	(5.77%)	-	-	-
City of London EM	(2.64%)	(9.07%)	-	-	-
Custom MSCI Frontier Mkt Capped Net	(2.43%)	(10.65%)	-	<u>-</u>	
ilobal Equity (12)	(3.39%)	(9.63%)	(5.79%)	7.43%	7.49%
Global Equity Benchmark (13)	(3.69%)	(10.16%)	(6.78%)	6.79%	6.75%



The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2015, with the distribution as of August 31, 2015.

Asset Distribution Across Investment Managers

	September	30, 2015	August 31, 2015		
	Market Value % of	of Asset Class	Market Value % of	of Asset Class	
Domestic Investment Grade Fixed Inc	ome\$6,133,466,618	76.99%	\$6,473,587,196	77.86%	
Total Aggregate	\$2,973,083,856	37.32%	\$3,058,745,462	36.79%	
Blackrock Passive (Core)	793,529,158	9.96%	888,128,839	10.68%	
PIMCO (Core)	789,180,206	9.91%	788,969,971	9.49%	
Loomis Sayles Core Corporate	1,132,580,628	14.22%	1,125,542,998	13.54%	
Access Capital/Merrill Lynch ETI	103,474,104	1.30%	103,090,075	1.24%	
Community Capital Management	28,060,098	0.35%	27,799,821	0.33%	
AFL-CIO Housing Investor Trust	126,259,662	1.58%	125,213,758	1.51%	
Blackrock STRIPS	\$3,160,315,773	39.67%	\$3,412,582,329	41.04%	
TIPS & ILBs Fixed Income	\$1,832,657,010	23.01%	\$1,841,122,899	22.14%	
Blackrock TIPS	587,788,284	7.38%	591,358,826	7.11%	
Blackrock Global ILBs	1,244,868,726	15.63%	1,249,764,073	15.03%	
Core Fixed Cash	66,232	0.00%	2,258,658	0.03%	
Core FI Closed Portfolios	757	0.00%	748	0.00%	
Core Fixed Income	\$7,966,123,629	100.0%	\$8,314,710,096	100.0%	



Investment Manager Returns

The table below details the rates of return for the fund's investment managers over various time periods ended September 30, 2015. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended September 30, 2015

	Last Month	Fiscal YTD	Last 12 Months	Last 36 Months	Last 60 Months
Domestic Investment Grade Fixed Income Domestic Invest Grade Fixed (15)	2 1.02% 1.11%	4.38% 4.55%	7.67% 7.54%	4.59% 4.25%	5.01% 4.63%
Total Aggregate (14)	0.48%	0.87%	3.27%	2.08%	3.49%
Blackrock Passive (Core)	0.68%	1.19%	2.76%	1.67%	3.14%
PIMCO (Core)	0.03%	0.14%	2.44%	1.69%	3.21%
Loomis Sayles Core Corporate	0.60%	1.05%	3.83%	2.93%	4.45%
Community Capital Management	0.97%	1.68%	2.82%	2.34%	3.30%
AFL-CIO Housing Investor Trust	0.85% 0.42%	1.47% 0.94%	3.75% 3.59%	1.99% 2.28%	3.34% 3.39%
Access Capital/Merrill Lynch ETI Barclays Aggregate Index	0.42%	1.23%	3.59% 2.94%	2.20% 1.71%	3.39% 3.10%
Blackrock STRIPS Barclays US Strip 20+ Idx	1.53% 1.53%	7.62% 7.60%	11.57% 11.54%	<u>-</u> 3.44%	- 9.46%
TIPS & ILBs Fixed Income 33% BC Tips/67% BC ILB Hedged (17)	(0.47%) (0.33%)	(0.68%) (0.37%)	1.06% 1.36%	0.60% 0.42%	3.50% 3.32%
Blackrock TIPS	(0.61%)	(1.17%)	(0.87%)	(1.86%)	2.49%
Barclays US TIPS Index	(0.59%)	(1.15%)	(0.83%)	(1.83%)	2.55%
Blackrock Global ILBs BC ILB US Hedged (16)	(0.41%) (0.21%)	(<mark>0.45%)</mark> 0.01%	2.00% 2.44%	1.84% 1.54%	3.89% 3.69%
Core Fixed Income Core Fixed-Income Bench (18)	0.67% 0.78%	3.22% 3.42%	6.23% 6.21%	3.72% 3.41%	4.71% 4.37%



The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2015, with the distribution as of August 31, 2015.

Asset Distribution Across Investment Managers

	September	30, 2015	August 31, 2015		
	Market Value % o	of Asset Class	Market Value % of	of Asset Class	
Total High Yield	\$906,589,902	18.17%	\$927,964,878	18.40%	
Pyramis (High Yield)	307,475,302	6.16%	314,200,071	6.23%	
Loomis Sayles High Yield	309,762,839	6.21%	317,531,528	6.30%	
Shenkman	289,259,962	5.80%	296,107,076	5.87%	
FI High Yield Debt Cash	91,799	0.00%	126,203	0.00%	
Total Bank Loans	\$928,656,049	18.61%	\$933,801,301	18.52%	
Eaton Vance Bank Loans	465,385,013	9.33%	468,058,946	9.28%	
ING Bank Loans	463,271,035	9.28%	465,742,355	9.24%	
Total Emerging Debt	\$763,138,701	15.29%	\$780,632,676	15.48%	
Ashmore Emerging Markets Debt	470,543,349	9.43%	479,592,759	9.51%	
PIMCO Emerging	292,595,352	5.86%	301,039,917	5.97%	
Total EM Debt - Local	\$1,010,070,347	20.24%	\$1,042,236,901	20.67%	
Investec	277,728,552	5.57%	286,107,160	5.67%	
Pictet	460,532,131	9.23%	474,641,403	9.41%	
Stone Harbor	271,809,664	5.45%	281,488,338	5.58%	
Distressed Debt Portfolio	1,358,828,086	27.23%	1,374,052,690	27.25%	
Distressed Debt Cash	22,271,940	0.45%	-15,530,997	(0.31%)	
Value Added Fixed Income	\$4,989,555,024	100.0%	\$5,043,157,449	100.0%	



Investment Manager Returns

The table below details the rates of return for the fund's investment managers over various time periods ended September 30, 2015. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended September 30, 2015

			Last	Last	Last
	Last	Fiscal	12	36	60 Maratia
Total High Yield	Month	YTD (4.41%)	Months (1.90%)	Months 4.27%	Months 6.75%
	(2.33%)	,	, ,		
Pyramis (High Yield)	(2.11%)	(3.05%)	(1.50%)	4.82%	7.40% 7.20%
Loomis Sayles High Yield	(2.53%)	(5.54%)	(2.92%)	4.56%	
Shenkman	(2.38%)	(4.64%)	(1.31%)	3.38%	5.65%
ML Master II HY Benchmark (19)	(2.56%)	(4.88%)	(3.54%)	3.47%	5.94%
Total Bank Loans	(0.51%)	(0.73%)	2.15%	3.82%	5.01%
Eaton Vance Bank Loans	(0.52%)	(0.99%)	1.40%	3.11%	4.47%
ING Bank Loans	(0.50%)	(0.46%)	2.92%	4.53%	5.57%
S&P/LSTA Leveraged Loan	(0.65%)	(1.35%)	0.92%	3.25%	4.48%
Total Emerging Debt	(2.20%)	(4.19%)	(4.43%)	(0.38%)	3.65%
Ashmore Emerging Markets Debt	(1.84%)	(3.79%)	(3.75%)	(0.21%)	3.75%
PIMCO Emerging	(2.78%)	(4.81%)	(5.49%)	(0.63%)	3.49%
JPM EMBI Global	(1.38%)	(2.04%)	(1.96%)	0.51%	4.40%
Total EM Debt - Local	(3.08%)	(10.09%)	(19.38%)	(9.09%)	_
Investec	(3.02%)	(10.26%)	(19.07%)	(8.21%)	_
Pictet	(2.93%)	(9.03%)	(18.35%)	(8.79%)	_
Stone Harbor	(3.39%)	(11.57%)	(21.25%)	(10.45%)	
JPM GBI EM GI Diversified	(2.97%)	(10.54%)	(19.77%)	(8.72%)	(3.56%)
of the GBI Elvi Gi Biversined	(2.01 70)	(10.0470)	(13.7770)	(0.7270)	(0.0070)
Public Value-Add Fixed Income	(2.06%)	(5.09%)	(6.82%)	(0.91%)	2.95%
Public VAFI BM (20)	(1.94%)	(4.98%)	(7.05%)	(0.95%)	2.91%
Distressed Debt Portfolio	0.97%	0.84%	1.25%	12.10%	11.67%
Altman Benchmark (21)	(8.58%)	(18.05%)	(23.53%)	(1.23%)	0.52%
/ union Denominary (21)	(0.5070)	(10.0070)	(20.0070)	(1.2070)	0.02 /0
Value Added Fixed Income (22)	(1.24%)	(3.52%)	(4.72%)	2.40%	5.37%
Value-Added Benchmark (23)	(3.71%)	(8.59%)	(11.68%)	(0.80%)	2.22%



The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2015, with the distribution as of August 31, 2015.

Asset Distribution Across Investment Managers

	September	September 30, 2015		August 31, 2015		
	Market Value % o		Market Value % o			
Total Special Equity	\$5,118,880,358	73.77%	\$4,967,299,262	74.15%		
Special Equity	18,836,296	0.27%	19,154,826	0.29%		
Special Equity 2000	13,503,316	0.19%	12,290,067	0.18%		
Special Equity 2001	59,414,635	0.86%	58,505,732	0.87%		
Special Equity 2002	4,863,733	0.07%	4,495,701	0.07%		
Special Equity 2003	81,125,613	1.17%	92,612,144	1.38%		
Special Equity 2004	83,814,223	1.21%	77,372,906	1.15%		
Special Equity 2005	402,228,999	5.80%	385,869,008	5.76%		
Special Equity 2006	635,343,270	9.16%	620,322,648	9.26%		
Special Equity 2007	878,450,821	12.66%	841,984,676	12.57%		
Special Equity 2008	911,721,127	13.14%	875,237,225	13.06%		
Special Equity 2009	202,268,351	2.92%	232,228,186	3.47%		
Special Equity 2010	498,372,493	7.18%	483,109,007	7.21%		
Special Equity 2011	610,951,729	8.80%	572,440,736	8.54%		
Special Equity 2012	232,384,458	3.35%	230,454,449	3.44%		
Special Equity 2013	183,049,728	2.64%	168,464,399	2.51%		
Special Equity 2014	219,635,586	3.17%	212,420,569	3.17%		
Special Equity 2015	82,915,978	1.19%	80,336,981	1.20%		
Total Venture Capital	\$1,642,363,334	23.67%	\$1,548,914,262	23.12%		
Venture Capital	12,445,620	0.18%	12,953,229	0.19%		
Venture Capital 2000	63,904,180	0.92%	66,840,764	1.00%		
Venture Capital 2001	35,790,550	0.52%	36,656,826	0.55%		
Venture Capital 2002	13,978,130	0.20%	14,159,907	0.21%		
Venture Capital 2003	31,582,284	0.46%	30,762,823	0.46%		
Venture Capital 2004	32,961,846	0.48%	36,050,216	0.54%		
Venture Capital 2005	117,551,789	1.69%	117,358,713	1.75%		
Venture Capital 2006	132,292,911	1.91%	135,519,347	2.02%		
Venture Capital 2007	197,308,109	2.84%	180,641,136	2.70%		
Venture Capital 2008	32,603,661	0.47%	31,509,807	0.47%		
Venture Capital 2009	253,515,925	3.65%	226,185,673	3.38%		
Venture Capital 2010	284,724,901	4.10%	257,393,620	3.84%		
Venture Capital 2011	96,384,049	1.39%	90,916,514	1.36%		
Venture Capital 2012	230,444,250	3.32%	215,418,266	3.22%		
Venture Capital 2013	51,279,685	0.74%	43,821,323	0.65%		
Venture Capital 2014	51,053,065	0.74%	49,229,285	0.73%		
Venture Capital 2015	4,542,379	0.07%	3,496,814	0.05%		
Private Equity Cash	177,538,183	2.56%	183,157,950	2.73%		
Private Equity	\$6,938,781,877	100.0%	\$6,699,371,458	100.0%		



Investment Manager Returns

The table below details the rates of return for the fund's investment managers over various time periods ended September 30, 2015. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended September 30, 2015

			Last	Last	Last
	Last	Fiscal	12	36	60
	Month	YTD	Months	Months	Months
Total Special Equity	5.94%	5.67%	16.17%	19.88%	18.31%
Special Equity	(1.51%)	(1.47%)	(0.26%)	19.97%	17.39%
Special Equity 2000	9.87%	9.87%	39.73%	29.71%	21.09%
Special Equity 2001	1.62%	1.29%	11.58%	21.06%	15.64%
Special Equity 2002	8.19%	8.70%	(0.79%)	10.07%	24.24%
Special Equity 2003	1.57%	1.55%	5.94%	11.70%	12.05%
Special Equity 2004	9.19%	8.57%	25.32%	25.40%	22.11%
Special Equity 2005	6.08%	6.13%	13.97%	18.23%	17.75%
Special Equity 2006	5.04%	4.84%	11.68%	19.40%	18.51%
Special Equity 2007	6.73%	6.71%	12.84%	17.38%	15.82%
Special Equity 2008	9.02%	9.09%	22.08%	25.00%	22.50%
Special Equity 2009	6.29%	6.28%	28.56%	26.89%	23.95%
Special Equity 2010	5.61%	5.37%	15.30%	18.32%	-
Special Equity 2011	6.82%	6.07%	30.88%	19.86%	-
Special Equity 2012	0.48%	0.95%	8.22%	18.39%	-
Special Equity 2013	3.82%	2.14%	7.45%	-	-
Special Equity 2014	3.01%	0.74%	1.87%	-	-
Special Equity 2015	(0.07%)	(2.45%)	-	-	-
Total Venture Capital	6.48%	5.97%	25.18%	24.61%	22.76%
Venture Capital	(3.92%)	(3.92%)	7.09%	8.93%	9.18%
Venture Capital 2000	1.30%	0.58%	0.72%	8.37%	11.30%
Venture Capital 2001	(0.13%)	1.05%	9.84%	11.10%	10.78%
Venture Capital 2002	(1.04%)	(1.04%)	7.99%	5.02%	3.44%
Venture Capital 2003	2.81%	3.26%	22.81%	37.38%	22.87%
Venture Capital 2004	(6.86%)	(6.86%)	24.12%	21.46%	35.73%
Venture Capital 2005	3.69%	3.53%	24.59%	23.14%	19.98%
Venture Capital 2006	(0.43%)	(0.43%)	11.44%	17.41%	17.49%
Venture Capital 2007	10.26%	10.14%	25.48%	27.59%	28.54%
Venture Capital 2008	4.83%	4.83%	14.58%	27.98%	38.89%
Venture Capital 2009	10.47%	8.15%	28.45%	25.43%	21.76%
Venture Capital 2010	11.45%	11.24%	47.32%	37.42%	25.37%
Venture Capital 2011	6.30%	6.25%	27.61%	26.36%	-
Venture Capital 2012	6.44%	5.82%	29.10%	23.46%	-
Venture Capital 2013	8.64%	8.64%	17.41%	-	-
Venture Capital 2014	2.87%	1.84%	2.97%	-	-
Venture Capital 2015	(3.54%)	(3.54%)	-	-	-
Private Equity	5.98%	5.66%	17.72%	20.40%	18.76%
Private Equity Benchmark (24)	5.98%	5.66%	17.72%	20.40%	18.76%
Private Equity Benchmark (26)	1.02%	3.01%	11.65%	9.76%	8.81%



The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2015, with the distribution as of August 31, 2015.

Asset Distribution Across Investment Managers

	September	· 30, 2015	August 31, 2015		
	Market Value %	of Asset Class	Market Value %	of Asset Class	
Private Real Estate	\$5,128,561,898	80.83%	\$5,045,229,720	82.63%	
Private Core Real Estate	\$5,658,691,718	89.19%	\$5,600,972,364	91.74%	
Invesco Core	1,095,350,693	17.26%	1,117,221,044	18.30%	
LaSalle Core	1,509,154,305	23.79%	1,481,033,775	24.26%	
AEW Core	1,133,977,987	17.87%	1,126,756,489	18.45%	
JP Morgan I.M.	772,485,245	12.18%	755,891,685	12.38%	
TA Associates	1,147,723,488	18.09%	1,120,069,371	18.35%	
Core Real Estate Debt	-994,550,786	(15.68%)	-994,521,816	(16.29%)	
Total Non-Core	\$464,420,967	7.32%	\$438,779,172	7.19%	
Total ETI	\$12,538,696	0.20%	\$13,982,536	0.23%	
Canyon-Johnson II	4,856,208	0.08%	5,518,556	0.09%	
Intercontinental IV	1,189,599	0.02%	1,035,695	0.02%	
New Boston Urban I	6,492,889	0.10%	7,428,285	0.12%	
Non Core 2011	451,882,271	7.12%	424,796,635	6.96%	
Total REITs	\$1,152,498,746	18.17%	\$1,133,278,378	18.56%	
Global REITS	\$1,152,453,230	18.16%	\$1,203,460,820	19.71%	
INVESCO Global REIT	262,090,473	4.13%	257,777,801	4.22%	
CenterSquare Global REIT	747,101,442	11.78%	734,519,084	12.03%	
EII (INVESCO TRAN)	143,261,315	2.26%	140,911,536	2.31%	
RREEF/European Investors Tran	25,434	0.00%	25,629	0.00%	
REIT Cash	20,083	0.00%	44,328	0.00%	
Real Estate Leverage Cash	-108,470	(0.00%)	-55,159	(0.00%)	
Core Real Estate Cash	63,659,340	1.00%	-72,914,203	(1.19%)	
Total Real Estate	\$6,344,611,556	100.0%	\$6,105,538,763	100.0%	



Investment Manager Returns

The table below details the rates of return for the fund's investment managers over various time periods ended September 30, 2015. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended September 30, 2015

			Last	Last	Last
	Last	Fiscal	12	36	60
	Month	YTD	Months	Months	Months
Total Private Real Estate (27)	2.71%	3.39%	15.74%	14.39%	14.36%
Private Core Real Estate	2.06%	2.75%	13.27%	12.24%	13.09%
Invesco Core	1.42%	2.15%	11.31%	13.33%	13.52%
LaSalle Core	2.17%	2.72%	12.30%	13.44%	14.18%
AEW Core	1.76%	2.42%	17.81%	14.58%	-
JP Morgan I.M.	2.28%	3.05%	15.38%	9.84%	12.54%
TA Associates	2.71%	3.50%	11.52%	10.58%	11.60%
NCREIF Property 1Q Lag	3.14%	3.14%	12.98%	11.63%	12.72%
Total Non-Core Real Estate	5.05%	5.40%	16.91%	10.31%	8.36%
ETI (Partnerships)	(1.92%)	(1.92%)	1.58%	2.14%	1.82%
Canyon-Johnson II	(11.65%)	(11.65%)	(11.28%)	(5.00%)	(4.72%)
Intercontinental IV	15.47%	15.47%	69.99%	25.14%	18.00%
New Boston Urban I	2.91%	2.91%	1.38%	4.10%	5.15%
Non Core 2011	5.28%	5.64%	17.48%	10.83%	-
NCREIF Property 1Q Lag	3.14%	3.14%	12.98%	11.63%	12.72%
Total REITs	1.63%	(0.80%)	4.84%	7.25%	8.67%
REIT Benchmark (28)	1.23%	(1.45%)	3.43%	6.91%	8.60%
Global REITS	1.63%	(0.81%)	4.81%	7.24%	_
INVESCO Global REIT	1.59%	(0.74%)	4.21%	7.65%	-
CenterSquare Global REIT	1.65%	(0.84%)	5.36%	7.66%	_
EII (INVESCO TRAN)	1.58%	(0.74%)	-	-	_
EPRA/NAREIT Dev Net Total ldx	1.23%	(1.45%)	3.42%	6.91%	-
Real Estate	2.50%	2.59%	14.03%	12.62%	12.84%
Real Estate Benchmark (29)	2.76%	2.25%	11.17%	10.83%	12.11%



Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2015, with the distribution as of August 31, 2015.

Asset Distribution Across Investment Managers

	September 30, 2015		August 3	1, 2015
	Market Value %	of Asset Class	Market Value %	of Asset Class
Total Timber	\$1,665,053,176	74.61%	\$1,647,630,056	73.17%
Forest Investment Associates	1,124,189,980	50.38%	1,109,272,886	49.26%
The Campbell Group	533,360,759	23.90%	538,300,957	23.90%
Timber Cash	7,502,437	0.34%	56,213	0.00%
Natural Resources - Public	\$306,056,445	13.71%	\$335,363,937	14.89%
Jennison Natural Resources	146,052,522	6.54%	162,393,484	7.21%
T. Rowe Natural Resources	159,999,972	7.17%	172,962,599	7.68%
Public Natural Resources Cash	3,951	0.00%	7,854	0.00%
Natural Resources - Private	\$260,507,264	11.67%	\$268,901,087	11.94%
Private Natural Resources	252,193,278	11.30%	268,916,736	11.94%
Private Natural Resources Cash	8,313,986	0.37%	-15,649	(0.00%)
Total Timber/Natural Resources	\$2,231,616,885	100.0%	\$2,251,895,079	100.0%



Investment Manager Returns

The table below details the rates of return for the fund's investment managers over various time periods ended September 30, 2015. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended September 30, 2015

			Last	Last	Last
	Last	Fiscal	12	36	60
	Month	YTD	Months	Months	Months
Total Timber	1.04%	0.23%	7.72%	9.21%	6.48%
Forest Investment Associates	1.90%	1.90%	9.56%	9.80%	6.78%
The Campbell Group	(0.72%)	(3.11%)	3.90%	7.61%	-
NCREIF Timber Index 1 Qtr Lag (30)	0.51%	0.51%	10.02%	9.77%	6.10%
Natural Resources Public	(8.89%)	(19.88%)	(35.82%)	(8.66%)	(4.69%)
Jennison Natural Resources	(10.26%)	(22.61%)	(41.29%)	(12.47%)	(7.92%)
T. Rowe Natural Resources	(7.60%)	(17.22%)	(29.86%)	(4.50%)	(1.39%)
Lipper Glbl Nat Res Idx	(8.64%)	(20.77%)	(34.50%)	(9.33%)	(5.57%)
Total Natural Resources Private	(2.79%)	(2.83%)	(15.94%)	(3.23%)	4.34%
Private Natural Resources	(2.86%)	(2.91%)	(16.08%)	(3.38%)	4.18%
Natural Resource Private Bench (31)	(2.79%)	(2.83%)	(15.94%)	(3.23%)	4.34%
Timber/Natural Resources	(0.90%)	(3.45%)	(4.48%)	4.23%	3.84%
Timber/Natural Benchmark (32)	(1.36%)	(3.55%)	(2.76%)	4.94%	4.09%



Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2015, with the distribution as of August 31, 2015.

Asset Distribution Across Investment Managers

	September 30, 2015		August 31, 2015	
	Market Value %	of Asset Class	Market Value %	of Asset Class
Portfolio Completion Strategy	297,858,503	100.00%	293,636,301	100.00%
Total Portfolio Completion Strategy	\$297,858,503	100.0%	\$293,636,301	100.0%



Investment Manager Returns

The table below details the rates of return for the fund's investment managers over various time periods ended September 30, 2015. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended September 30, 2015

	Last Month	Fiscal YTD	Last 12 Months	Last 36 Months	Last 60 Months
Portfolio Completion Strategy	1.46%	3.30%	-	-	
Total Portfolio Completion Strategy Total Portfolio Completion BM (36)	1.46% 0.26%	3.30% 0.79%	-	<u>.</u> -	-



Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2015, with the distribution as of August 31, 2015.

Asset Distribution Across Investment Managers

	September 30, 2015		August 31, 2015		
	Market Value % o	of Asset Class	Market Value % of	of Asset Class	
Arden HFOF (Liquidating)	38,114,744	0.77%	46,207,164	0.91%	
Ivy (Liquidating)	4,612,899	0.09%	4,680,156	0.09%	
PAAMCO	896,072,422	18.06%	914,845,783	17.92%	
Direct Hedge Funds	4,023,334,223	81.08%	4,077,273,486	79.88%	
Hedge Fund Cash	16,832	0.00%	61,034,377	1.20%	
edge Funds Composite	\$4,962,151,120	100.0%	\$5.104.040.966	100.0%	



Investment Manager Returns

The table below details the rates of return for the fund's investment managers over various time periods ended September 30, 2015. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended September 30, 2015

	Last Month	Fiscal YTD	Last 12 Months	Last 36 Months	Last 60 Months
Arden HFOF (Liquidating) Ivy Liquidating	(1.29%)	(2.87%)	(1. <mark>38%)</mark>	5.54%	-
	(1.44%)	(1.69%)	2.61%	6.06%	2.42%
PAAMCO	(2.05%)	(5.15%)	(2.22%)	6.71%	4.86%
HFRI Composite Index (33)	(1.91%)	(3.66%)	(0.12%)	4.13%	2.73%
Direct Hedge Funds	(2.52%)	(4.30%)	(0.44%)	6.18%	-
HFRI Composite Index (34)	(1.91%)	(3.66%)	(0.12%)	4.13%	2.73%
Hedge Funds Total Hedge Funds Benchmark (35)	(2.42%) (1.91%)	(4.45%) (3.66%)	(0.83%) (0.12%)	6.15% 4.13%	4.84% 2.73%



Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2015, with the distribution as of August 31, 2015.

Asset Distribution Across Investment Managers

	September	30, 2015	August 31, 2015	
	Market Value % of	of Asset Class	Market Value % of	of Asset Class
Portable Alpha	\$27,049,475	99.54%	\$27,631,163	99.99%
Austin Capital Management	1,455,024	5.35%	1,576,199	5.70%
Crestline Advisors	10,752,686	39.57%	11,066,508	40.05%
Strategic Investment	14,841,765	54.62%	14,988,456	54.24%
Portable Alpha Cash	123,743	0.46%	2,513	0.01%
Total Portable Alpha Wind Down	\$27,173,218	100.0%	\$27,633,676	100.0%



Investment Manager Returns

The table below details the rates of return for the fund's investment managers over various time periods ended September 30, 2015. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended September 30, 2015

			Last	Last	Last
	Last	Fiscal	12	36	60
	Month	YTD	Months	Months	Months
Portable Alpha	(1.67%)	(3.59%)	(8.76%)	(3.85%)	(2.98%)
Austin Capital Management	0.03%	0.15%	3.50%	(11.83%)	(11.13%)
Crestline Advisors	(2.84%)	(4.19%)	(13.37%)	(4.28%)	(1.69%)
Strategic Investment	(0.98%)	(3.53%)	(6.41%)	(1.33%)	(2.62%)
Total Portable Alpha	(1.67%)	(3.59%)	(8.66%)	(3.82%)	(3.03%)
Portable Alpha Benchmark (37)	(1.91%)	(3.66%)	(0.12%)	4.13%	2.73%



Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2015, with the distribution as of August 31, 2015.

Asset Distribution Across Investment Managers

	September 30, 2015		August 31, 2015		
	Market Value % o	of Asset Class	Market Value % o	of Asset Class	
Clifton Overlay	123,163,722	22.80%	141,790,266	21.31%	
Overlay Cash	417,096,588	77.20%	523,554,564	78.69%	
Total Overlay	\$540,260,310	100.0%	\$665,344,830	100.0%	



Investment Manager Returns

The table below details the rates of return for the fund's investment managers over various time periods ended September 30, 2015. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended September 30, 2015

	Last	Fiscal	Last 12	Last 36	Last 60
	Month	YTD	Months	Months	Months
Clifton Overlay	(2.44%)	(6.31%)	(2.36%)	-	-
Total Overlay	(1.58%)	(3.92%)	(0.79%)	-	-
Total Overlay Benchmark (38)	(1.58%)	(3.92%)	(0.79%)	-	-



Interim Benchmark

(1) Interim benchmark is calculated by applying the investment performance of the asset class benchmarks to the Fund's asset allocation targets. The PE component of this uses the S&P 500 + 5% through 6/30/2000; currently Actual PE Performance (formally labeled Interim Policy Benchmark)

Total Core Benchmark

(2) The Total Core benchmark is calculated by applying the investment performance of the asset class benchmarks to the Fund's asset allocation targets. The Private Equity benchmark used for the Total Core benchmark calculation is the 7-year annualized return of the Russell 3000 +3% (formally labeled Policy Benchmark)

Domestic Equity

- (3) Russell 2500 through 6/30/14; currently 70.5% Russell 2500/5.5% Russell 2500 Growth/6.5% Russell 2000 Growth/17.5% Russell 2000 Value
- (4) Dow Jones Wilshire 5000 through 04/30/08; Russell 3000 through 06/30/2009; 78% Russell 3000/22% 3 Month Libor + 3% through 12/31/2009; Russell 3000 through 10/31/2011; 80% S&P 500/20% Russell 2500 through 6/30/2014; currently 78.9% S&P 500/14.88% Russell 2500/1.16% Russell 2500 Growth/1.37% Russell 2000 Growth/3.69% Russell 2000 Value

International

- (5) MSCI EAFE Net Dividends through 9/30/2007; MSCI EAFE Net Dividends Provisional Standard Index through 5/31/2008; MSCI EAFE Net Dividends Standard Index through 12/31/2009; MSCI World ex-US IMI Net Dividends through 12/31/2010; currently Custom World ex-US IMI Net Dividends, customized to exclude legislatively prohibited tobacco, Sudan and Iran securities.
- (6) MSCI EAFE Net Dividends through 9/30/2007; MSCI EAFE Net Dividends Provisional Standard Index through 5/31/2008; MSCI EAFE Net Dividends Standard Index through 12/31/2010; currently Custom MSCI EAFE Net Dividends Standard Index, customized to exclude legislatively prohibited tobacco, Sudan and Iran securities.
- (7) MSCI EAFE Net Dividends through 9/30/2007; MSCI EAFE Net Dividends Provisional Standard Index through 5/31/2008; MSCI EAFE Net Dividends Standard Index through 12/31/2009; MSCI World ex-US IMI Net Dividends through 12/31/2010; Custom World ex-US IMI Net Dividends through 8/31/2014; currently 50% custom MSCI World Ex-US IMI Net Dividends, 50% Custom MSCI EAFE Standard Index Net Dividends, customized to exclude legislatively prohibited tobacco, Sudan and Iran securities. (Current blend is maintained by MSCI)

Emerging Markets

- (8) MSCI Emerging Markets IMI Net Dividends through 12/31/2010; currently Custom MSCI Emerging Markets IMI Net Dividends, customized to exclude legislatively prohibited tobacco, Sudan and Iran securities.
- (9) MSCI EMF through 6/30/2004; MSCI Emerging Markets Net Dividends through 9/30/2007; MSCI Emerging Markets Net Dividends Provisional Standard Index through 5/31/2008; MSCI Emerging Markets Net Dividends Standard Index through 12/31/2010; currently Custom MSCI Emerging Markets Net Dividends Standard Index, customized to exclude legislatively prohibited tobacco, Sudan and Iran securities.
- (10) MSCI Emerging Markets Small Cap Net Dividendss Index through 8/31/2014; currently Custom MSCI Emerging Market Small Cap Net Dividends, customized to exclude legislatively prohibited tobacco, Sudan and Iran securities.
- (11) MSCI EMF through 6/30/2004; MSCI Emerging Markets Net Dividends through 9/30/2007; MSCI Emerging Markets Net Dividends Provisional Standard Index through 5/31/2008; MSCI Emerging Markets Net Dividends Standard Index through 4/30/2010; MSCI Emerging Markets IMI Net Dividends through 12/31/2010; Custom MSCI Emerging Markets IMI Net Dividends through 8/31/2014; 50% Custom MSCI EM IMI Net Dividends, 43% Custom MSCI EM Standard Net Dividends, 7% Custom MSCI EM Small Cap Net Dividends through 1/31/2015; 25% Custom MSCI EM IMI Net Dividends, 67.37% Custom MSCI EM Standard Net Dividends, 7% Custom MSCI EM Small Cap Net Dividends, .63% Custom MSCI Frontier Markets Country Capped Net Dividends through 2/28/2015. currently weights are based on the beginning adjusted monthly market value of each index group, customized to exclude legislatively prohibited tobacco, Sudan and Iran securities. (Current blend is maintained by MSCI)

Global Equity

- (12) The Total Global Equity composite inception date coincides with the establishment of the MSCI All Country World Index on January 1, 2001.
- (13) MSCI All Country World Net Index through 4/30/2010; MSCI All Country World IMI Net Dividends through 12/31/2010; Custom MSCI All Country World IMI Net Dividends, customized to exclude legislatively prohibited tobacco, Sudan and Iran securities through 10/31/2011; 35% S&P 500/8% Russell 2500/42% Custom MSCI World Ex-US IMI Net Dividends/15% Custom MSCI EM IMI Net Dividends through 4/30/2012; 35% S&P 500/9% Russell 2500/40% Custom MSCI World Ex-US IMI Net Dividends/16% Custom MSCI EM IMI Net Dividends through 6/30/2014; currently 44% Domestic Equity BM/40% International Equity BM/16% Emerging Markets BM



Core Fixed Income

- (14) Effective 2/28/2015, the Total Aggregate performance was changed to include the complete performance histories of Economically Targeted Investment managers: Access Capital, Community Capital Management, and AFL-CIO Housing Investment. As a result, prior period Total Aggregate performance was revised from 4/30/2004-1/31/2015.
- (15) 100% BC Aggregate through 2/28/2014; 34% BC Agg/66% BC STRIPS 20+ through 2/28/2015; currently Domestic Investment Grade Fixed Income benchmark is calculated by applying the investment performance of the sub asset class benchmarks to the sub asset class weights within the core fixed income portfolio.
- (16) BC Aggregate through 6/01; 67% BC Aggregate / 20% BC US TIPS/13% Custom Commodities BM ; Custom Commodities BM through 06/30/2009; currently BC ILB US\$ Hedged
- (17) 33% BC US TIPS/67% BC ILB US\$ Hedged
- (16) 80% ML MTGS 30 YR / 20% ML US TREAS 1-10 YR through 12/31/08; currently BC Securitized Index
- (18) 77% BC Aggregate / 8% BC US TIPS/15% BC ILB US\$ Hedged through 2/28/2014; currently weights are based on the beginning adjusted monthly market value of each index group.

Value-Added Fixed Income

- (19) CSFB Thru 07/2002; ML Master II HY Thru 02/2007; currently ML Master II HY Constrained Index
- (20) Public Value Added benchmark is calculated by applying the investment performance of the sub asset class benchmarks to the sub asset class weights within the public value added fixed income portfolio. These weightings will be automatically adjusted at the end of every quarter for usage in the upcoming quarter.
- (21) Actual Performance through 2/07; ML Master II FI Constrained Index through 12/31/2009; currently Altman NYU Salomon Center Combined Defaulted Public Bond & Bank Loan Index
- (22) The Total Value-Added Fixed Income composite inception date coincides with PRIM's initiative to separate High Yield from Core Fixed Income. Underlying manager market values and cash flows are unavailable prior to July 1, 2001.
- (23) CSFB through 7/02 / 43% ML Master II HY Index/43% JPM EMBI Global/14% Actual Distressed Debt through 02/07/ through 06/08 60% ML Master II HY Constrained Index and 40% JPM EMBI Global/ 50% ML Master II HY Constrained Index/ 33% JPM EMBI Global/17% S&P LSTA Leveraged Index through 06/30/2009; 58% ML Master II HY Constrained Index/ 25% JPM EMBI Global/17% S&P LSTA Leveraged Index through 12/31/2009; 24% ML Master II HY Constrained Index/17% S&P LSTA Leveraged Index/20% JPM EMBI Global/39% Altman Index through 03/31/2010; 24.20% ML Master II HY Constrained Index/16.56% S&P LSTA Leveraged Index/19.43% JPM EMBI Global/39.81% Altman Index through 06/30/2010; 22.10% ML Master II HY Constrained Index/14.60% S&P LSTA Leveraged Loan Index/20.65% JPM EMBI Global/42.65% Altman Index through 09/30/2010; 22.46% ML Master II HY Constrained Index/12.92% S&P LSTA Leveraged Loan Index/21.56% JPM EMBI Global/43.06% Altman Index through 12/31/2010; 22.14% ML Master II HY Constrained Index/11.13% S&P LSTA Leveraged Loan Index/21.60% JPM EMBI Global/45.13% Altman Index through 3/31/2011; 23.15% ML Master II HY Constrained Index/9.45% S&P LSTA Leveraged Loan Index/22.74% JPM EMBI Global/44.66% Altman Index through 6/30/2011; 23.95% ML Master II HY Constrained Index/9.21% S&P LSTA Leveraged Loan Index/22.96% JPM EMBI Global/43.88% Altman Index through 9/30/2011; 21.58% ML Master II HY Constrained Index/11.08% S&P LSTA Leveraged Loan Index/22.24% JPM EMBI Global/45.10% Altman Index through 12/31/2011; 27.90% ML Master II HY Constrained Index/13.58% S&P LSTA Leveraged Loan Index/20.65% JPM EMBI Global/37.87% Altman Index through 3/31/2012; 28.24% ML Master II HY Constrained Index/13.30% S&P LSTA Leveraged Loan Index/20.71% JPM EMBI Global/37.75% Altman Index through 4/30/2012; 23.55% ML Master II HY Constrained Index/10.63% S&P LSTA Leveraged Loan Index/16.61% JPM EMBI Global/20.36% JPM GBI-EM Global Diversified/28.85% Altman Index through 6/30/2012; 18.21% ML Master II HY Constrained Index/11.24% S&P LSTA Leveraged Loan Index/17.63% JPM EMBI Global/20.80% JPM GBI-EM Global Diversified/32.12% Altman Index through 9/30/2012; 18.29% ML Master II HY Constrained Index/11.98% S&P LSTA Leveraged Loan Index/18% JPM EMBI Global/21.03% JPM GBI-EM Global Diversified/30.70% Altman Index through 12/31/2012; 19.40% ML Master II HY Constrained Index/11.90% S&P LSTA Leveraged Loan Index/18.28% JPM EMBI Global/21.32% JPM GBI-EM Global Diversified/29.10% Altman Index through 2/28/2013; Value Added benchmark is calculated by applying the investment performance of the sub asset class benchmarks to the sub asset class weights within the value added fixed income portfolio. These weightings will be automatically adjusted at the end of every quarter for usage in the upcoming quarter.

Private Equity

- (24) Through 6/30/2000, S&P 500 + 5%; currently Actual Performance. This benchmark is used in the Interim Policy Benchmark
- (25) The 7 Year Annualized performance is used in the Policy Return and Policy Benchmark.
- (26) Wilshire 5000 + 3% through 4/30/2008; Currently 7 Year Annualized Russell 3000 + 3%



Real Estate - Private/Public

(27) On 06/30/02 PRIM instituted portfolio leverage of up to 40%; increased to 50% leverage on 02/03/04. Portfolio leverage was paid down in September 2005 (\$450 million), October 2005 (\$200 million), and July 2007 (\$450 million). Composite includes Value Added Separate Account opened 4/30/2007 and closed 12/31/2010.

(28) FTSE NAREIT ALL EQUITY REITS through 3/31/2008; 63% FTSE NAREIT ALL EQUITY REITS/27% NAREIT Global REIT/10% NAREIT International REIT through 06/30/09; 50% FTSE NAREIT ALL EQUITY REITS/50% FTSE EPRA NAREIT Developed Ex US REIT through 4/30/2012; currently 100% FTSE EPRA NAREIT Developed Net Total Return (29) NCREIF through 6/30/03; 67% NCREIF/33% FTSE NAREIT ALL EQUITY REITS through 12/31/06; NCREIF + Ratio of

(29) NCREIF through 6/30/03; 67% NCREIF/33% FISE NAREIT ALL EQUITY REITS through 12/31/06; NCREIF + Ratio of 2% FTSE NAREIT ALL EQUITY REITS to PRIT Fund through 03/31/08; 73% NCREIF Property One Qtr Lag/17% FTSE NAREIT ALL EQUITY REITS/7.25% NAREIT Global REIT/2.75% NAREIT Intl REIT through 06/30/09; 82% NCREIF Property One Qtr Lag/9% FTSE NAREIT ALL EQUITY REITS/9% FTSE EPRA NAREIT Developed Ex US REIT through 7/31/09; 80% NCREIF Property One Qtr Lag/10% FTSE NAREIT ALL EQUITY REITS/10% FTSE EPRA NAREIT Developed Ex US REIT through 4/30/2012; currently 80% NCREIF PROPERTY ONE QTR LAG/20% FTSE EPRA NAREIT Developed Net Total Return

Timber/Natural Resources

(30) NCREIF Timber Index through 6/30/03; NCREIF Timber Index Ex-PRIM through 2/28/2010; currently NCREIF Timber Index (31) Currently Private Natural Resources Actual Performance.

(32) NCREIF Timber Index through 6/30/03; NCREIF Timber Index Ex-PRIM through 06/30/08; 50% NCREIF Timber Index Ex-PRIM/ 42% Lipper Natural Resources Global Fund Index/ 8% Actual Natural Resources Private through 2/28/2010; 50% NCREIF Timber Index/ 42% Lipper Natural Resources Global Fund Index/ 8% Actual Natural Resources Private through 10/31/2011; 53% NCREIF Timber Index/ 39% Lipper Natural Resources Global Fund Index/ 8% Actual Natural Resources Private through 2/28/2014; currently the Timber/Natural Resources benchmark is calculated by applying the investment performance of the sub asset class benchmarks to the sub asset class weights within the Timber/Natural Resources portfolio. These weightings will be automatically adjusted at the end of every quarter for usage in the upcoming quarter.

Hedge Funds

(33) ML 90 Day T-Bill + 4% through 12/31/2009; currently HFRI Fund of Funds Composite Index. (HFRI indices - Flash returns are used through 12/31/11. Current returns reflect most up to date performance and are subject to change)

(34) HFRI Fund of Funds Composite Index. (HFRI indices - Flash returns are used through 12/31/11. Current returns reflect most up to date performance and are subject to change)

(35) ML 90 Day T-Bill + 4% through 12/31/2009; currently HFRI Fund of Funds Composite Index. (HFRI indices - Flash returns are used through 12/31/11. Current returns reflect most up to date performance and are subject to change)

Portfolio Completion Strategies

(36) Portfolio Completion Strategies Composite Index is calculated by applying the underlying benchmark return for each manager to the manager's weight within the Portfolio Completion Strategies Composite. These weights are based on the beginning adjusted monthly market value of each portfolio.

Portable Alpha Wind Down

(37) S&P 500 Index through April 2008; Russell 3000 Index through July 2009; US 3 Month Libor + 3% through 12/31/2009; currently HFRI FOF Composite Index. (HFRI indices - Flash returns are used through 12/31/11. Current returns reflect most up to date performance and are subject to change)

Overlay

(38) Actual performance

Total Fund

(39) ML 90 Day T-Bill through 6/30/03; ML 3-Month Libor through 03/31/08; currently ML 90 Day T-Bill

Policy Return

(40) The Policy Return is calculated by applying the investment performance of each asset class times its actual allocation. The Private Equity portion of the Policy Return is the 7-year annualized return of the Private Equity asset class monthized.

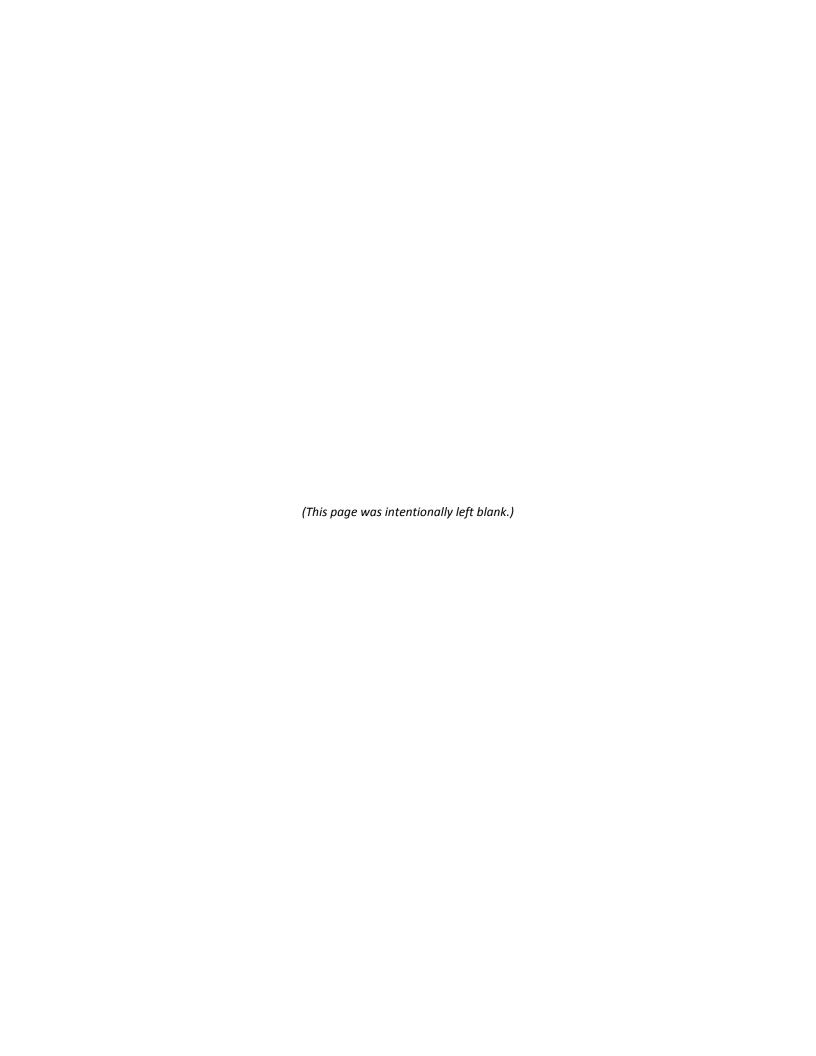




Appendix E

Investment Research: Inflation Research

PRIM Investment Committee Meeting Tuesday, November 17, 2015



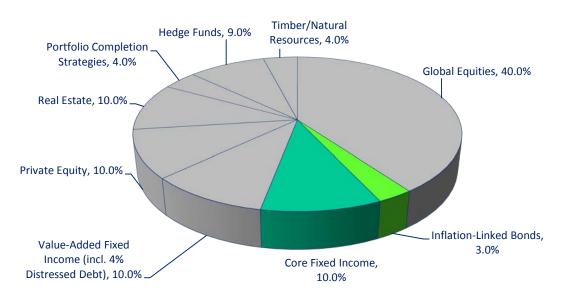


Inflation Research

Sarah Samuels, CFA & Chuck LaPosta, CFA



Inflation-Linked Bonds Within Core Fixed Income

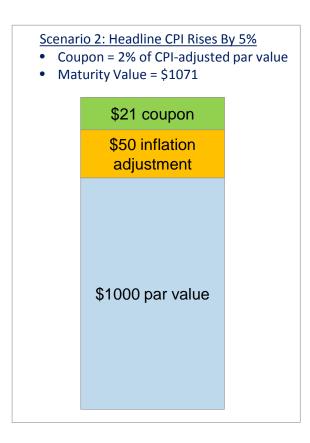


	Inflation-Linked Bonds		Core Fixe	d Income
	U.S. TIPS	Global Inflation-Linked Bonds (ILBs)	Barclays Agg	Long STRIPS
Strategy	Indexed	Active	Active & Indexed	Indexed
Assets (\$ bn)	\$0.6	\$1.2	\$3.0	\$3.2
Nominal Yield	2.2%	1.7%	2.5%	3.0%
Duration	7.7 years	14.3 years	5.5 years	26.0 years
Country Exposure	U.S.	U.S., Euro, U.K., Japan, Canada, Other	Mostly U.S.	U.S.

Inflation-Linked Bond Mechanics: Case Study

☐ Case Study: we purchase a \$1000 par value inflation-linked bond with 2% coupon and one year to maturity.

Scenario 1: Headline CPI Doesn't Change Coupon = 2% of par value Maturity Value = \$1020 \$20 coupon \$1000 par value







Objectives & Summary of Findings

Objectives of Research.

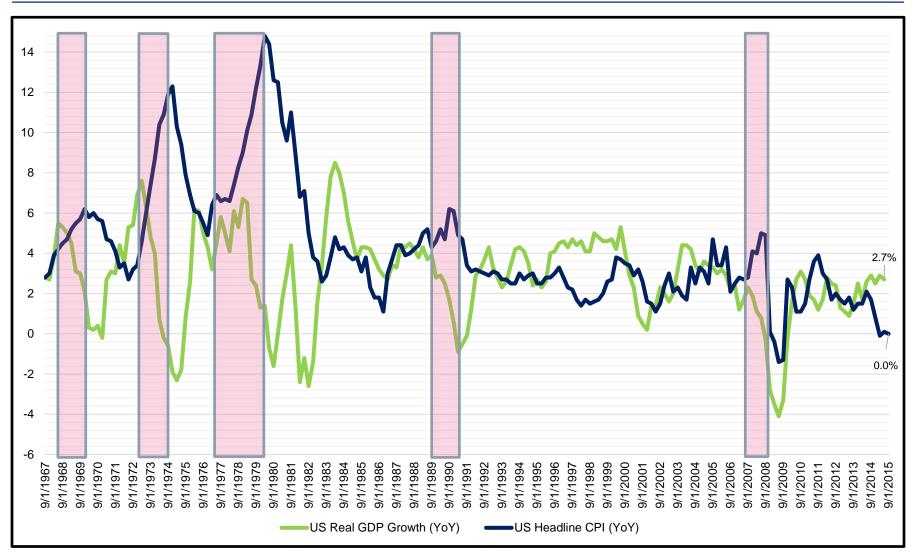
- □ Review inflation-hedging assets in PRIT Fund.
- □ Evaluate the role of Inflation-Linked Bonds (ILBs) in PRIT Fund.

Summary of Findings.

- □ During most inflationary regimes (0-5% CPI), equities and the PRIT Fund are well-positioned.
- Although stagflationary environments (falling growth, high inflation) are rare, our research shows that ILBs would perform well, supported by the following analyses.
 - Historical scenario analysis.
 - Construction of hypothetical U.S. TIPS returns during 1970's periods of stagflation by using statistical analysis.
 - Analysis of U.K. inflation-linked bonds, which have a longer history than U.S. TIPS.
 - Cost-benefit analysis of U.S. TIPS.



Historical Inflation & GDP Growth

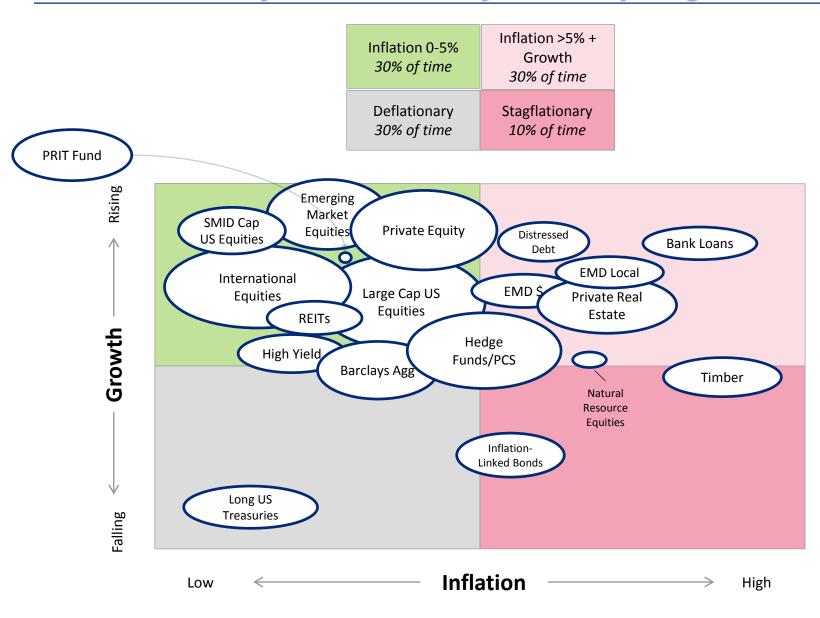


Sources: FactSet, Bloomberg

Stagflationary



Asset Class Performance & Inflationary Regimes

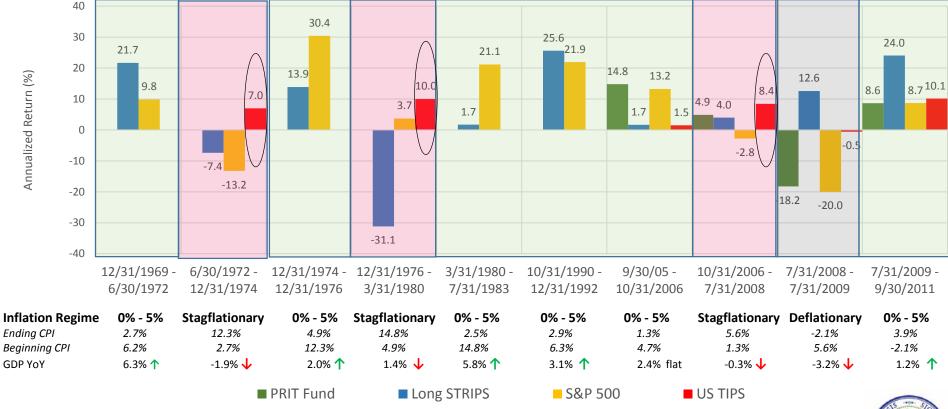




Scenario Analysis: Asset Class Performance & Inflationary Regimes

- Equities and the PRIT Fund perform well in periods of rising growth and positive inflation (60% of the time).
- □ Returns for Equities and the PRIT Fund suffer in periods of stagflation.
- ☐ Inflation-Linked Bonds are expected to perform well 40% of the time:
 - □ U.S. TIPS are the best performing asset class in stagflationary periods (10% of the time).
 - □ U.S. TIPS outperform risk assets in deflationary environments (30% of the time).

Asset Class Returns in Various Inflationary Regimes



Sources: PRIM Staff, FactSet, Bloomberg



Summary of Findings & Investment Recommendation

Summary of Findings

- □ During most inflationary regimes (0-5% CPI), equities and the PRIT Fund are well-positioned.
- □ Although stagflationary environments are rare, our research shows that Inflation-Linked Bonds would perform well.
 - Hypothetical U.S. TIPS returns in 1970's stagflationary environments: U.S. TIPS were best performing asset class (vs. equities and bonds).
 - UK inflation-linked bond actual performance in 1988 1990: UK inflation-linked bonds were best performing asset class (vs. equities and bonds).
- Benefits outweigh costs of owning Inflation-Linked Bonds.

Costs of Owning Inflation-Linked Bonds	Benefits of Owning Inflation-Linked Bonds	
Current 10yr Breakeven: 139 bps	U.S. TIPS and Global ILBs have negative correlation (-0.16) to equities.	
Return Discount to Nominal Treasuries: 35 bps per year (last 10 yrs)	Favorable Sharpe ratio (U.S. TIPS 0.9, Global ILBs 1.2)*	
Global ILB real yield is -0.15%	10yr U.S. TIPS breakevens are nearly 3 σ cheap relative to 5yr historical average.	
	10yr U.S. TIPS real yields are also cheap: 70 bps vs. 20 bps 5yr average.	
	U.S. TIPS have historically outperformed risk assets in "bottom two" quadrants.	

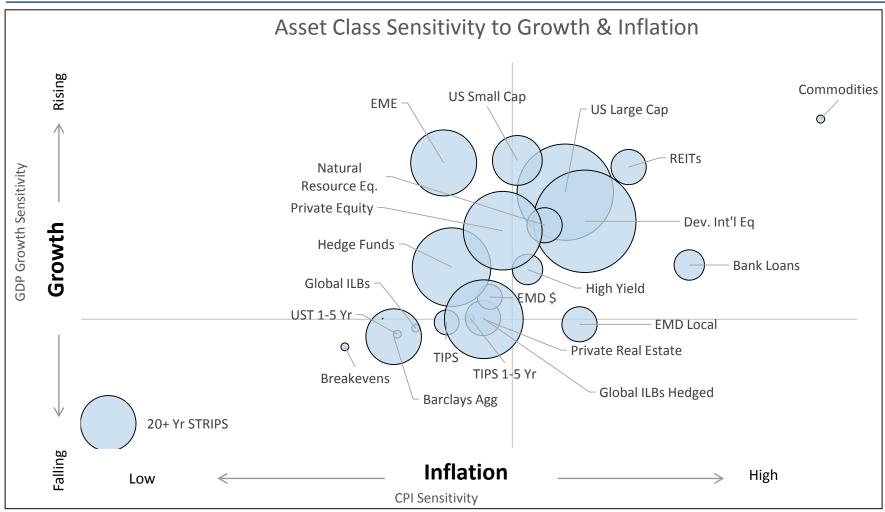
^{*}Since 2000, U.S. TIPS return 6%, vol 6.7%; Global ILBs return 5.5%, vol 4.7%.

Investment Recommendation

- We recommend maintaining the current Inflation-Linked Bond allocation.
- ☐ Global ILBs: similar inflation protection to U.S. TIPS, similar returns to U.S. TIPS, and offer greater alpha potential.



Appendix: Regime Framework Supporting Analysis



- Quarterly data since 2000.
- Doesn't include stagflationary time periods. Homogeneous time period narrow distribution of CPI/GDP

Sources: PRIM Staff, FactSet, Bloomberg



Appendix: Implied U.S. TIPS Returns During Stagflationary Periods

- □ U.S. TIPS did not exist prior to 1997.
- Therefore, PRIM conducted two analyses to evaluate the stagflationary benefits of U.S. TIPS:
 - 1. Constructed hypothetical U.S. TIPS returns for the 1970's.
 - Measured sensitivity of real rates to changes in growth and inflation.
 - Used economic and market conditions from 6/30/72-12/31/74 and 12/31/76-3/31/80.
 - ➤ U.S. TIPS outperformed S&P 500 and nominal Treasuries in both periods, as shown in the prior page.
 - 2. Evaluated U.K. Inflation-Linked Bonds as a proxy (longer history than U.S. TIPS).
 - The U.K. experienced a period of rising inflation and falling growth from 12/31/87-9/30/90.
 - U.K. Inflation-Linked Bonds outperformed U.K. Nominal Treasuries and U.K. equities.

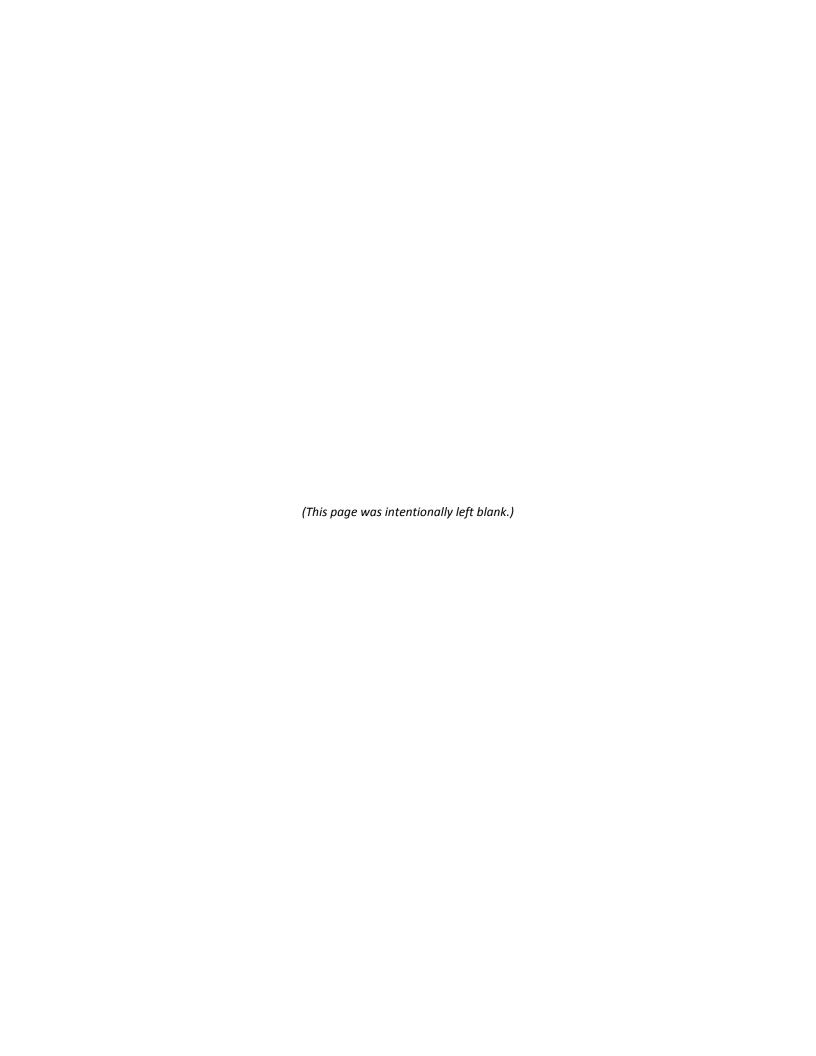




Appendix F

Investment Research: Corporate Credit Research

PRIM Investment Committee Meeting Tuesday, November 17, 2015





Corporate Credit: Public vs. Private

Presentation to the PRIM Investment Committee November 17, 2015

Joint Research Project
Michael R. Bailey
Chuck LaPosta, CFA
Michael McGirr, CFA
Sarah N. Samuels, CFA



Objectives

- ☐ Review credit in PRIT Fund.
- Evaluate credit market risk/return.
- Apply framework to credit investing options.



Corporate Credit Definitions

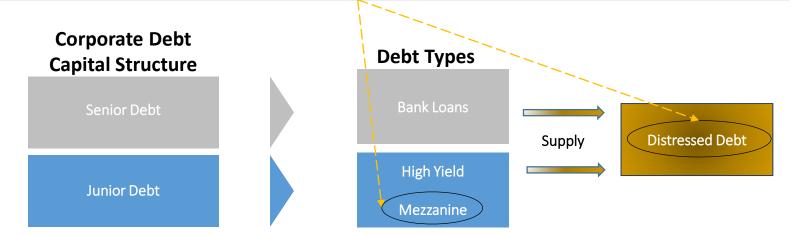
Private Debt Opportunities

Mezzanine

Private, junior debt capital provided to a private equity general partner as a portion of the financing required in a leveraged buyout transaction.

Distressed debt

Obligations of corporations that are undergoing financial distress or likely to be reorganized, including those in bankruptcy.

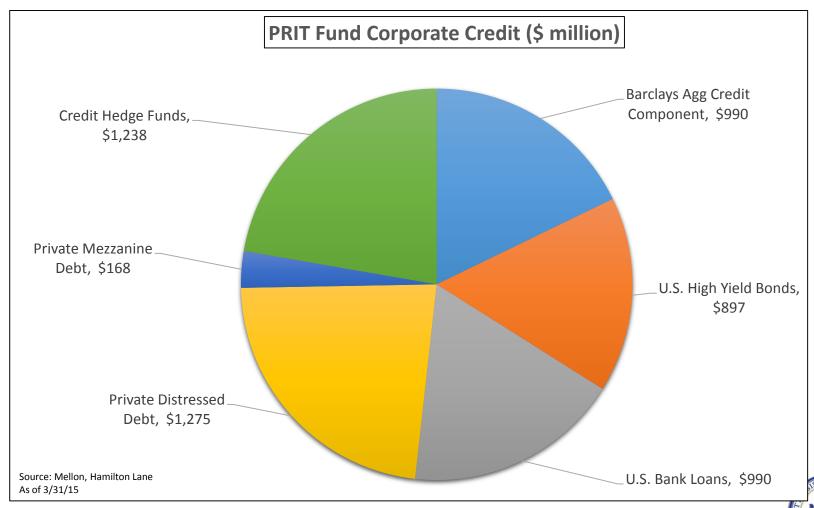




PRIT Fund Corporate Credit Exposure

Total corporate credit exposure across PRIT Fund:

- 9% of the PRIT Fund.
- \$5.5 billion.



Economic Cycles & Distressed Debt

- Distressed debt opportunities are episodic, and tend to arise during contractions and recoveries.
- Skillful distressed debt managers are most active when opportunities increase during contractionary and recovery periods.
- Seeds of distressed debt opportunity are sown in mid and late cycle.

High

Private Distressed Debt Return Potential

Low

Mid

- Rates rise slowly
- Inflation rising
- YC flattens
- Unemployment falling
- Inventories rising
- Capex accelerates
- Profits accelerate
- IP rebounds/peaks

Late

- Defaults rates rise
- Rates rising/peak
- Credit spreads widen
- Inflation rising
- YC flat or inverted
- Unemployment falling/bottom
- Inventories rising/peak
- Capex rising/peak
- Profits rising/peak
- IP rolls over

Contraction

- Default rates peak
- Rates falling
- Inflation falling
- Unemployment rising
- Inventories falling
- Capex falling/bottom
- Profits falling
- IP falling

Recovery

- Rates still low/falling
- Inflation still low/falling
- YC steepens
- Unemployment high
- Inventories low
- Capex rising
- Profits bottom & rise
- Credit spreads tighten
- IP rising



PRIM Investment Approach

Active Management Framework

PRIM's investment approach is to put more active dollars to work in asset classes that pass the following tests:

- Test #1: Median manager outperforms benchmark (public market alternative) net of fees.
- Test #2: The dispersion of the best and the worst managers is high.



Private Debt Test Results

Active Management Framework

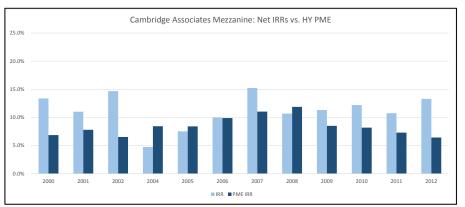
Private Debt Types	Test #1: Does Median Manager Beat Market Alternative?	Test #2: Is Dispersion Of Managers High?
Mezzanine Debt	Inconclusive	No
Private Distressed Debt	Inconclusive	Yes



Active Management Test #1: Does Median Manager Beat Market Alternative? Private Debt Public Market Equivalent Analysis

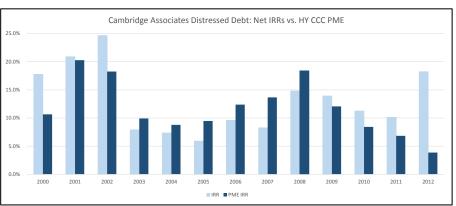
Mezzanine

- Low levels of dispersion.
- Returns are range bound.
- We are wary of results due to "small n," small number of funds in universe.



Distressed Debt

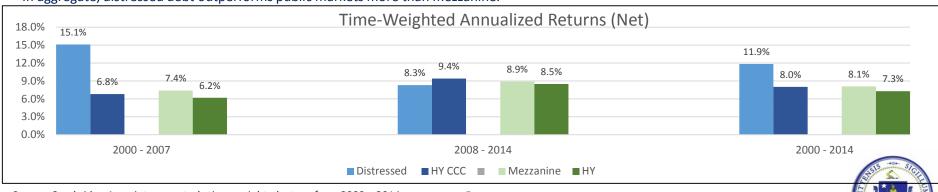
- Alpha is lumpy.
- Timing is an important source of alpha.



Source: Cambridge Associates quarterly pooled average cash flow data from 2000 – 2012. Data as of 3/31/15 (USD).

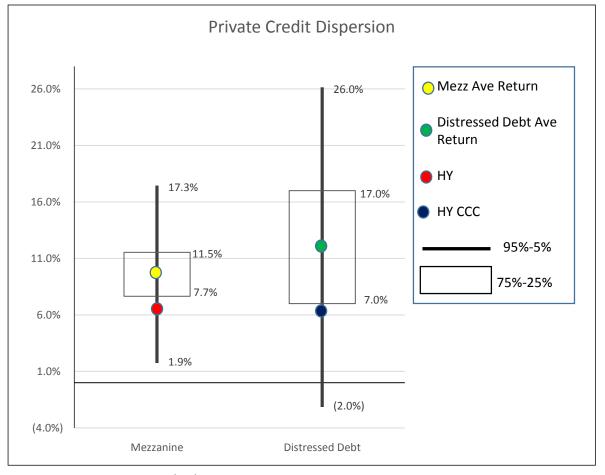
Time-Weighted Returns

- Alpha varies depending on time period.
- In aggregate, distressed debt outperforms public markets more than mezzanine.



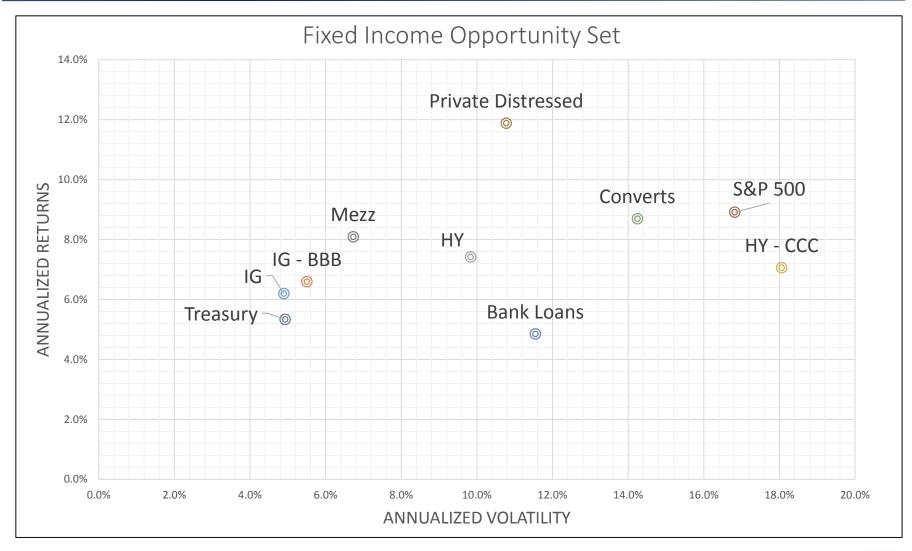
Active Management Test #2: Is Dispersion Of Managers High? Dispersion of Net IRR Across Managers

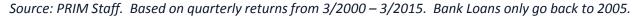
- Distressed debt funds exhibit a higher level of dispersion than do Mezzanine funds.
 - Distressed debt fund exhibit more outperformance relative to public markets.





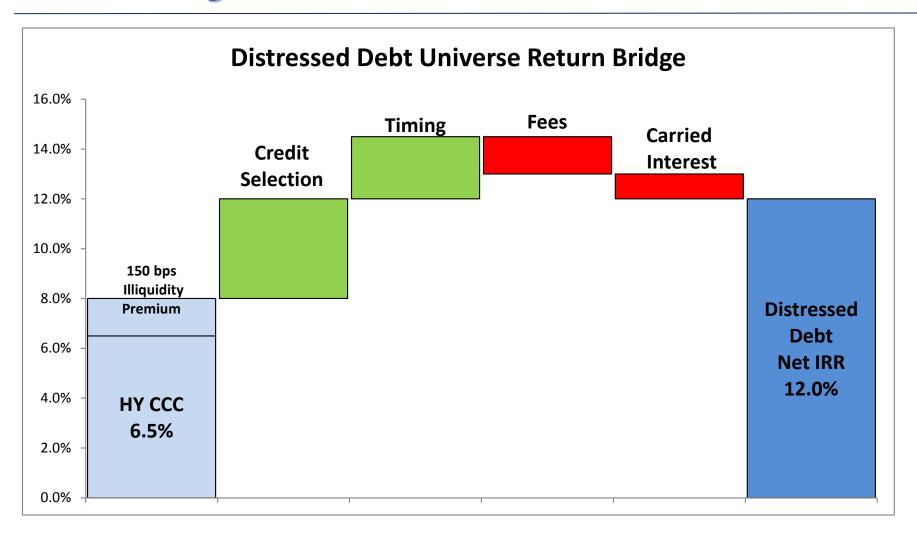
Risk vs. Return







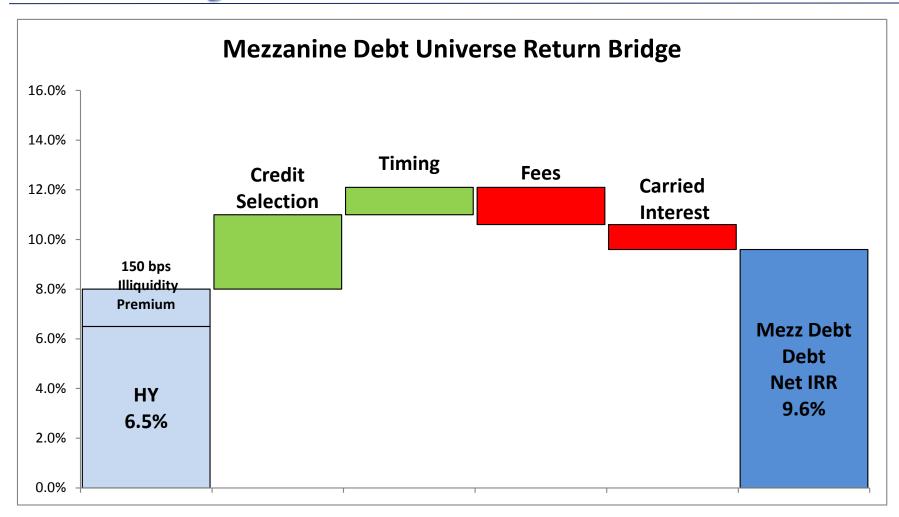
Return Bridge - Distressed Debt



Source: PRIM Staff.



Return Bridge – Mezzanine



Source: PRIM Staff.



Summary of Findings & Investment Recommendation

Summary of Research Findings

- Data is inconclusive on whether private distressed debt and mezzanine debt strategies, in aggregate, outperform public market equivalents (high yield).
- However, dispersion of private distressed debt manager performance is high, and PRIM staff has tools to identify high-performing private distressed debt managers.

Investment Recommendation

- De-emphasize mezzanine strategies going forward.
- Emphasize distressed debt opportunities, incorporating research findings into underwriting process.
 - Seek managers with skill in credit selection.
 - Seek managers with demonstrated skill in timing cycles.
- Explore more favorable economic terms.
- Research other types of credit, such as private lending.
- Continue research to evaluate where Credit Hedge Funds fit in the credit investment spectrum.



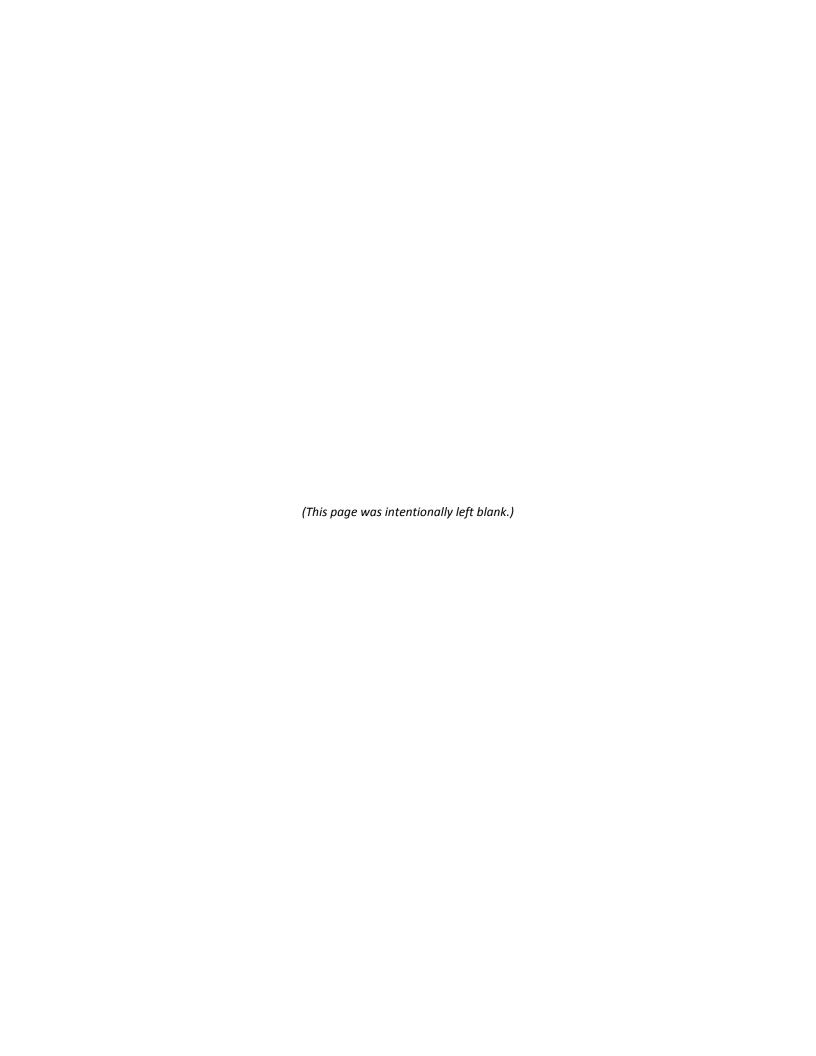




Appendix G

Portfolio Completion Strategies: Real Assets Primer

PRIM Investment Committee Meeting Tuesday, November 17, 2015





Portfolio Completion Strategies

Eric R. Nierenberg, Ph.D.



Portfolio Completion Strategies Overview

Asset Allocation Changes

- Approved a 4% allocation to Portfolio Completion Strategies (PCS)
- ☐ To be funded as follows:
 - Reduce Global Equities by 3%
 - Reduce Hedge Funds by 1%
- Specific strategies to be vetted by PRIM investment staff and presented to Investment Committee and Board for approval.

Objective of Portfolio Completion Strategies

- Improve PRIT Fund overall diversification benefits.
- Enhance PRIT Fund risk/return profile.
- Increase collaboration across teams.
- Source unique, uncorrelated strategies without a home within current asset allocation framework.



Portfolio Completion Strategies

Strategies Under Consideration

- Alternative Risk Premia
- Unconstrained/Absolute Return Fixed Income
- ☐ Tangible / Intangible Assets (Real Assets)

Investments Completed To Date:

☐ Alternative Risk Premia: \$500 million





Portfolio Completion Strategies An Introduction to Tangible / Intangible Assets (Real Assets)

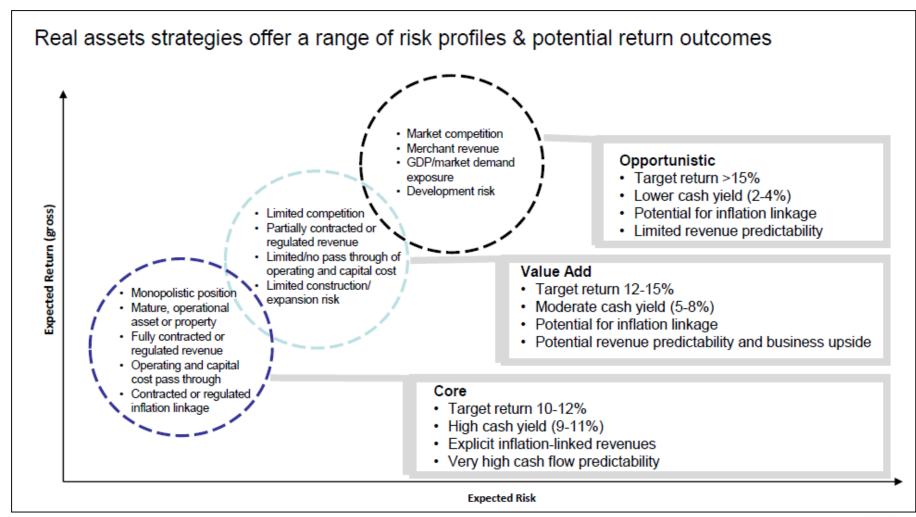


Tangible and Intangible Assets

- Tangible Assets (Real Assets).
 - Agriculture & Forestry.
 - Infrastructure.
 - Property & Equipment.
 - Energy & Minerals.
- ☐ Intangible Assets (Non-Real Assets).
 - Royalties.
 - Liens.
 - Insurance risk.
 - Other.



Risk/Return does not depend on physical characteristics





Process, Evaluation, Structuring

- Process.
 - PCS team evaluates and sources opportunities in conjunction with existing asset classes and teams.
- Evaluation.
 - Expected Return, Volatility, Correlation.
 - Quantitative and qualitative assessments.
- Structuring.
 - Risks and Returns often fit between core & opportunistic.
 - Structures & fees need to be an appropriate fit for risk/return profile.



Research

- ☐ PCS contributors have evaluated dozens of opportunities in the real asset universe.
- Based on due diligence and underlying investment characteristics, have identified several areas of focus.
 - Agriculture: Permanent crops.
 - Land banking.
 - Infrastructure.
 - Insurance.



Example A – Infrastructure Fund

- Opportunity.
 - 10 year infrastructure fund. Example: new build 4 lane U.S. highway.
 - Targeting 16% gross IRR and 2.0x gross MOIC.
- Does PRIM own similar assets?
 - No. PCS team determines opportunity does not fit into PRIM's traditional asset classes.
 - PCS → Tangible / Intangible Assets → Infrastructure.
- Evaluation:
 - Expected Return: 2.5%-3.5% unlevered yields.
 - Risk/Volatility: 90% LTV. Government Subsidized debt. Development risk.
 - Correlation: highway traffic is pro-cyclical.
- Conclusion: Pass



Example B – Agriculture Fund: Row Crops

- Opportunity.
 - Farmland fund. Examples: Corn, wheat, soybeans.
- Does PRIM own similar assets?
 - No. PCS team determines opportunity does not fit into PIRM's traditional asset classes.
 - PCS → Tangible / Intangible Assets → Agriculture.
- Evaluation:
 - Expected Return: 2.5%-4.5% yield; aggressive assumptions on land price appreciation.
 - Risk/Volatility: Operating (commodity price) risk. 50% LTV leverage.
 - Correlation: commodity prices display low correlation to other asset classes.
- Conclusion: Pass.



Pipeline – Active Opportunity

- Opportunity: Permanent Crops (tree fruits, tree nuts).
- □ Firm: Extremely experienced team; 2 year old firm.
 - 100% employee owned.
 - Manager selects client base.
- □ Strategy: Farmland-Plus.
 - Value-add approach. Production and Processing.
 - Real asset ownership with investments in supply chain.
 - Olives, grapes, apples, blueberries, integrated dairy.
 - Flexible investment approach helps solve problems for farmers.
 - Targeted returns 8.5%-12% unlevered yields vs. 3%-4% for row crops.
- □ Structure: Separately Managed Account.
 - Lower fees. Direct control and ownership. Aligned incentives.
 - Potential to invest large amounts of capital w/ tiered fee structure.
- □ Conclusion: Ongoing Due-Diligence.

