

PRIM Board Quarterly Update

FIRST QUARTER 2017

Markets Overview and PRIT Fund Performance Summary

PRIM Executive Director and Chief Investor Officer Michael G. Trotsky, CFA provided the following information to the PRIM Board at its May 16, 2017 meeting:

MARKETS OVERVIEW

“Financial markets continue to grind higher despite signals that tax reform, deregulation and infrastructure spending – essentially what has been called the Trump pro-growth agenda—may be harder to achieve than many observers previously thought.

“In the United States, we continue to see slow economic growth and mixed economic indicators, while Europe is clearly picking up and China may be slowing down. Importantly, in the first calendar quarter we saw sentiment of equity investors and bond investors begin to diverge: equities continued higher while bond yields, particularly long-duration bonds, moved lower. This may signal a change in expectations around the long-term health of the global economy. While equity investors are optimistic and stock prices have moved steadily higher since last November, bond investors have grown more cautious recently, causing long-term yields to move lower.

“And while market volatility has been low while markets have moved higher, we are still mindful of the many economic and geopolitical risks that could disrupt this trend in the future. Without additional economic data to confirm a more robust global expansion, equity valuations and expectations remain elevated, and we believe it is prudent to remain cautious, therefore the asset allocation adjustments we made earlier in the year remain appropriate.”

PRIT FUND PERFORMANCE SUMMARY

As of March 31, 2017, the PRIT Fund’s net asset value stood at \$65.1 billion.

For the quarter, the Fund was up 4.9%, outperforming the total core benchmark of 4.2% by 66 basis points.

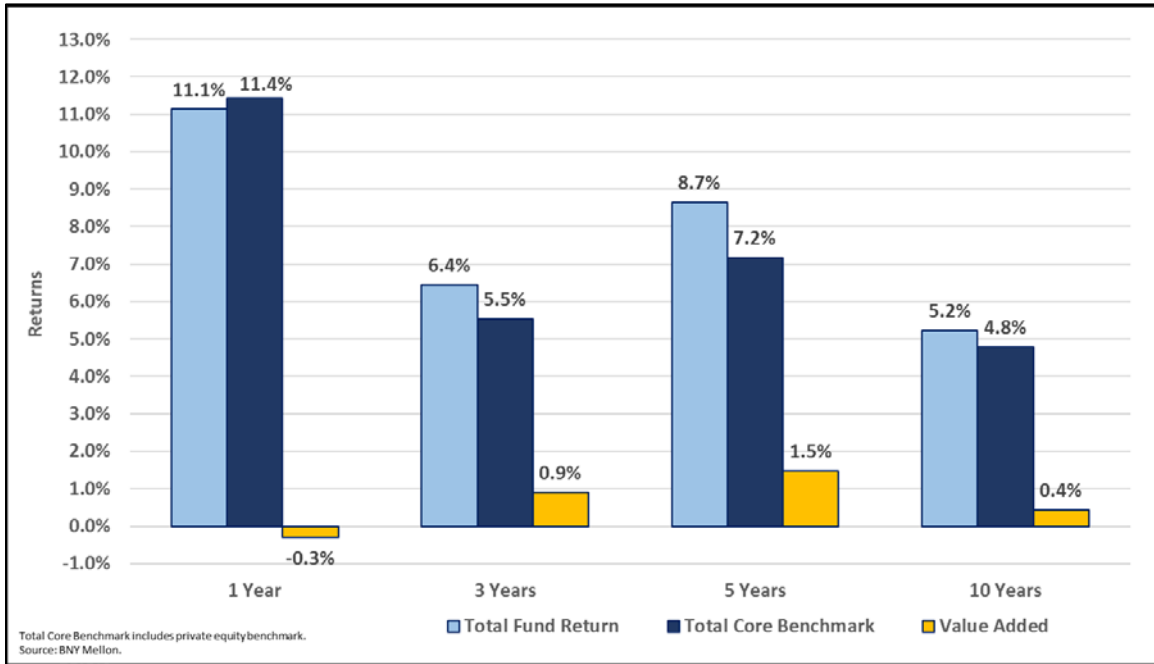
This performance equates to an investment gain of \$3.0 billion over the quarter.

- This outperformance equates to \$412 million of value above the benchmark return over the quarter.
- Six of the seven major asset classes outperformed their respective benchmarks over the quarter.

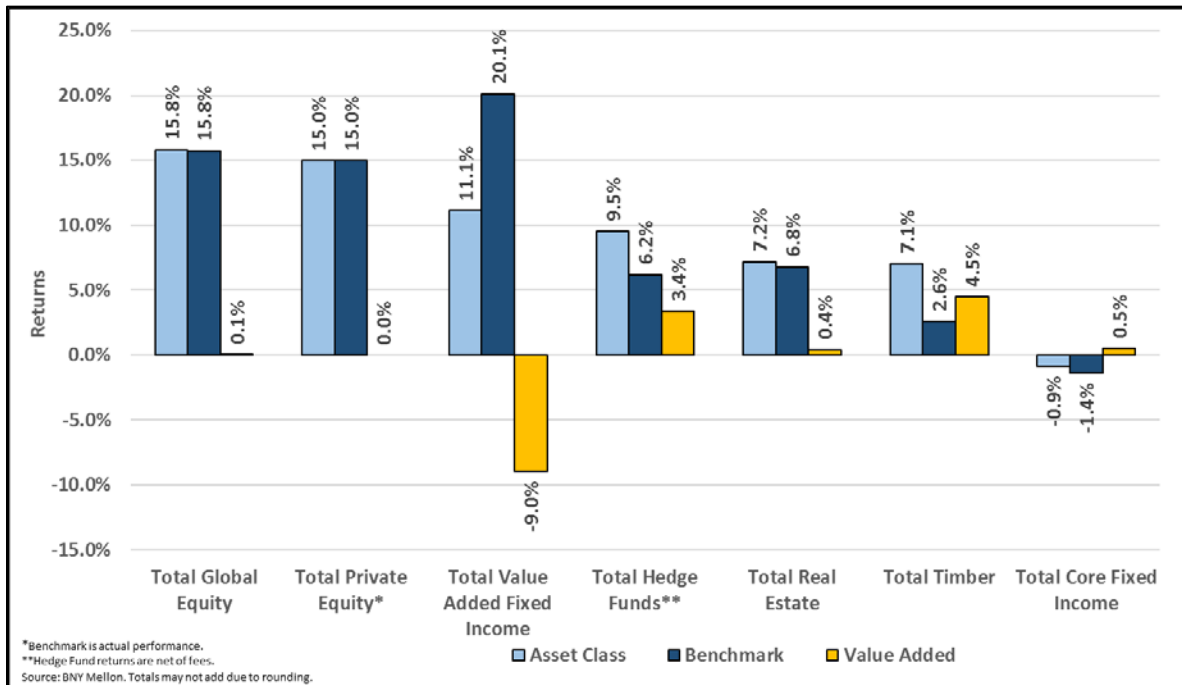
For the one-year, the PRIT Fund was up 11.1%, underperforming the total core benchmark of 11.4% by 30 basis points.

- This performance equates to an investment gain of \$6.7 billion over the year.
- This underperformance equates to \$181 million of value below the benchmark return over the year.
- The underperformance was due primarily to the Private Debt Portfolio lagging a publicly traded benchmark consisting of below-investment-grade high yield bonds.
- The other six of the seven major asset classes all outperformed their respective benchmarks over the year.

Total PRIT Fund Returns (Gross of Fees)
Annualized Returns as of March 31, 2017



PRIT Asset Class Performance (Gross of Fees)
Trailing 1-year Performance as of March 31, 2017



PRIT Core Fund Performance Summary
Gross of Fees Performance
 Trailing 1-Year Performance as of March 31, 2017

Trailing 1-Year Performance: Mar. 31, 2017	Return	Benchmark Return	Over/(Under) Benchmark (bps)	\$Value (millions)	% of PRIT Fund
Total PRIT Fund	11.1%	11.4%	(30)	65,083	100%
Total Global Equity	15.8%	15.8%	5	28,996	44.6%
<i>Domestic Equity</i>	<i>17.9%</i>	<i>18.5%</i>	<i>(56)</i>	<i>12,829</i>	<i>19.7%</i>
<i>International Developed</i>	<i>11.1%</i>	<i>11.9%</i>	<i>(75)</i>	<i>11,263</i>	<i>17.3%</i>
<i>Emerging Markets</i>	<i>21.4%</i>	<i>17.0%</i>	<i>443</i>	<i>4,903</i>	<i>7.5%</i>
Private Equity	15.0%	15.0%	0	6,960	10.7%
Real Estate	7.2%	6.8%	40	6,369	9.8%
Total Timberland	7.1%	2.6%	446	2,451	3.8%
Hedge Funds	9.5%	6.2%	335	5,522	8.5%
Value Added Fixed Income	11.1%	20.1%	(899)	5,354	8.2%
Core Fixed Income	-0.9%	-1.4%	50	7,606	11.7%

PRIT Asset Class Performance (Gross of Fees)
 Annualized Returns as March 31, 2017

1 Year	3 Year	5 Year	10 Year
GLOBAL EQUITY 15.8%	PRIVATE EQUITY 15.4%	PRIVATE EQUITY 17.5%	PRIVATE EQUITY 13.7%
PRIVATE EQUITY 15.0%	REAL ESTATE 10.9%	REAL ESTATE 11.3%	TIMBER 6.6%
VALUE-ADDED FIXED INCOME 11.1%	TIMBER 5.6%	GLOBAL EQUITY 9.0%	VALUE-ADDED FIXED INCOME 6.6%
HEDGE FUNDS (NET OF FEES) 9.5%	GLOBAL EQUITY 5.3%	TIMBER 7.0%	REAL ESTATE 6.4%
REAL ESTATE 7.2%	CORE FIXED INCOME 5.3%	HEDGE FUNDS (NET OF FEES) 5.4%	CORE FIXED INCOME 5.0%
TIMBER 7.1%	VALUE-ADDED FIXED INCOME 3.2%	VALUE-ADDED FIXED INCOME 5.1%	GLOBAL EQUITY 4.4%
CORE FIXED INCOME (0.9%)	HEDGE FUNDS (NET OF FEES) 2.7%	CORE FIXED INCOME 4.0%	HEDGE FUNDS (NET OF FEES) 3.1%

PRIM Developments

BOB BROUSSEAU AND PAUL SHANLEY RE-ELECTED TO PRIM BOARD

PRIM Board members Robert Brousseau and Paul Shanley, Esq., have been re-elected by active and retired members of the State Teachers' Retirement System and the State Employees' Retirement System, respectively. Mr. Brousseau, a retired classroom teacher, is PRIM's longest-serving Board member, having joined in 1987. Mr. Shanley is a former Deputy State Treasurer/General Counsel with extensive experience in pension investment and administration, and in pension law. Their new terms will begin July 20, 2017, and continue through July 19, 2020.

BOARD ADDS NEW MEMBER TO INVESTMENT COMMITTEE

Philip Rotner, who since 2010 has been Chief Investment Officer at Children's Hospital Corp., the parent of Boston Children's Hospital, has joined PRIM's Investment Committee. Prior to joining Children's, Mr. Rotner worked for 18 years at the Massachusetts Institute of Technology Endowment (MITIMCo), where he served as Managing Director of Private Equity. He also worked at Bank of Boston and Bank of Tokyo Trust Company. Mr. Rotner holds a B.A. in Economics and Asian Studies from Amherst College, and an MBA from the University of Chicago.

PRIM HIRES NEW HEAD OF RISK MANAGEMENT

Luis Roman, Ph.D., has joined PRIM as Senior Investment Officer – Director of Risk Management. Luis came to PRIM after more than 20 years in investments and academia. Most recently he was the U.S. Head of Multi-Asset and Alternatives Investment Risk Management at Columbia Threadneedle Investments in Boston. Prior to that, Luis was Global Head of Fixed Income Investment Risk Management at State Street Global Advisors and a Quantitative Analyst at Putnam Investments. Luis began his career in academia, where he was a visiting assistant professor at Worcester Polytechnic Institute and the University of California - Irvine. Luis earned his Masters of Science in Applied Mathematics from the University of Chicago and his Ph.D. in Mathematics from the University of Minnesota. The position Dr. Roman now holds at PRIM was previously held by David Gurtz, CPA, CFA, who now is PRIM's Chief Operating Officer and Chief Financial Officer.

PRIM STAFF AWARDS AND RECOGNITION

PRIM staff continue to earn new educational certifications and industry honors. Bill Li, CFA, of the PCS team, recently earned his CAIA charter from the Chartered Alternative Investment Analyst Association. The Chartered Alternative Analyst Designation is earned after passing a rigorous two-part exam. The curriculum covers a broad knowledge base in alternative investments including Hedge Funds, Private Equity, Real Assets and Structured Products. In other honors for PRIM's investment team, Sarah Samuels has been named to Institutional Investor magazine's 2017 list of Hedge Fund Rising Stars, and the PRIM Board overall has been named a finalist in the "Public Plan of the Year, Large" category of this year's Institutional Investor Hedge Fund Industry Awards program. PRIM won the category award last year.

On the operations side of PRIM, the Government Finance Officers Association has awarded its Certificate of Achievement for Excellence in Financial Reporting to PRIM for the 12th consecutive year. The achievement is the highest form of recognition in the area of governmental accounting and financial reporting.

EXPANSION OF STAFF RESPONSIBILITIES WILL HELP PRIM CONTINUE PUSH FOR INNOVATION

PRIM Executive Director and Chief Investment Officer Michael G. Trotsky, CFA, has expanded the roles of three top-performing members of the PRIM investment staff as part of ongoing efforts to bring innovation to every aspect of PRIM's operations. Michael R. Bailey, Senior Investment Officer for Private Equity, will become the second person to take part in PRIM's Professional Development Program, which rotates asset class heads through all of PRIM's investment teams. Mr. Bailey will share insights gleaned over many years

as an investor with colleagues on the Real Estate, Hedge Fund and Public Markets teams while also learning more about those asset classes from the teams' members. Sarah N. Samuels, CFA, CAIA, Deputy Chief Investment Officer, who was the first participant in PRIM's Professional Development Program, will add responsibility for Hedge Funds to her current responsibilities overseeing Public Markets. Eric R. Nierenberg, Ph.D., who since joining PRIM in 2012 has been Senior Investment Officer for Hedge Funds and Low Volatility Strategies, has been named PRIM's Chief Strategy Officer.

PRIM TO USE INNOVATIVE TOOL TO REDUCE RISK

The PRIM Board approved implementation of a plan developed by PRIM's Portfolio Completion Strategies team, Eric Nierenberg, Ph.D., and Bill Li, CFA, CAIA, to deploy a put spread collar to reduce the volatility of the PRIT Fund. PRIM hired Goldman Sachs Asset Management, which will run the strategy, to create a version of GSAM's off-the-shelf put spread collar product that was modified to include custom specifications for PRIM. The strategy was thoroughly simulated and tested in various historical market environments.

The Client Services team -- Paul Todisco, Francesco Daniele and Sam Olivier -- will continue meeting the retirement boards of PRIM's member retirement systems throughout the year. To schedule a visit, please contact Paul at ptodisco@mapension.com, Francesco at fdaniele@mapension.com or Sam at solivier@mapension.com, or call 617-946-8401. We look forward to seeing you soon.