

PRIM Board Quarterly Update

December 31, 2016

Markets Overview and PRIT Fund Performance Summary

PRIM Executive Director and Chief Investor Officer Michael G. Trotsky, CFA delivered the following information to the PRIM Board at its February 14, 2017 meeting:

MARKETS OVERVIEW

The U.S. Presidential election has had a major impact on global markets. Since the election (and through February 13, 2017): domestic equities were up 9.9%, domestic small-cap equities were up 17.2%, developed international equities were up 6.5% and emerging equities were up 4.9%, while diversified bonds were down 1.9%. We have also seen the Dow rise to above 20,000. With the backdrop of some slightly better economic news, and in the wake of a 25 basis point hike in the Federal Funds Rate, we have seen economists raise their forecasts for GDP growth, inflation and bond yields for 2018 as follows: GDP growth has increased to 3% from 2%, inflation to 2.5% from 1.5% and 10-Year Treasury yields have increased to 3.25% from 2.4%. Economic indicators have been mostly positive. ISM Manufacturing was revised slightly to a 2-year high of 55 in January. Wage growth of 2.8% in December reached a 7-year high. CPI was above 2% in December and consumer confidence rose to 98.2 in December, by some measures set a decade high level. Still, GDP growth for the year 2016 came in at just 1.6%, the 11th straight year below 3% and the worst economic growth since 2011. The Eurozone posted growth of 1.7% for 2016, the first time since 2008 that growth there exceeded growth in the U.S.

Markets have been focused on several stimulative aspects of the Trump platform. Tax reform, fiscal stimulus, infrastructure spending and deregulation are expected to boost growth and have driven equity markets and bond yields higher, but we also are seeing some glimpses of policies which may reduce growth longer term. We've seen aggressive new policies on immigration, tariffs and trade in the last few weeks. The Trans-Pacific Partnership Agreement (TPP) appears to be dead and North American Free Trade Agreement (NAFTA) will be renegotiated; the outcome is unknown. Longer term, we believe there are many risks to the economy and to the financial markets.

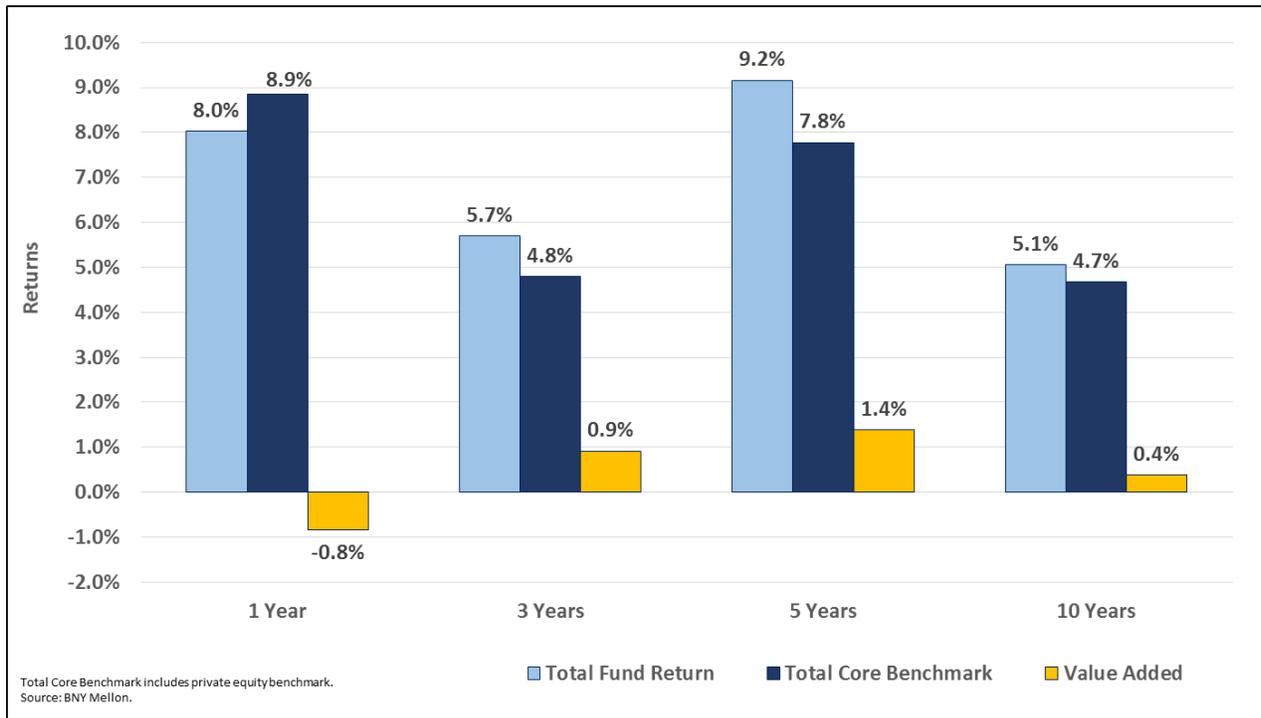
PRIT FUND PERFORMANCE SUMMARY

As of December 31, 2016 the PRIT Fund net asset value stood at \$62.7 billion.

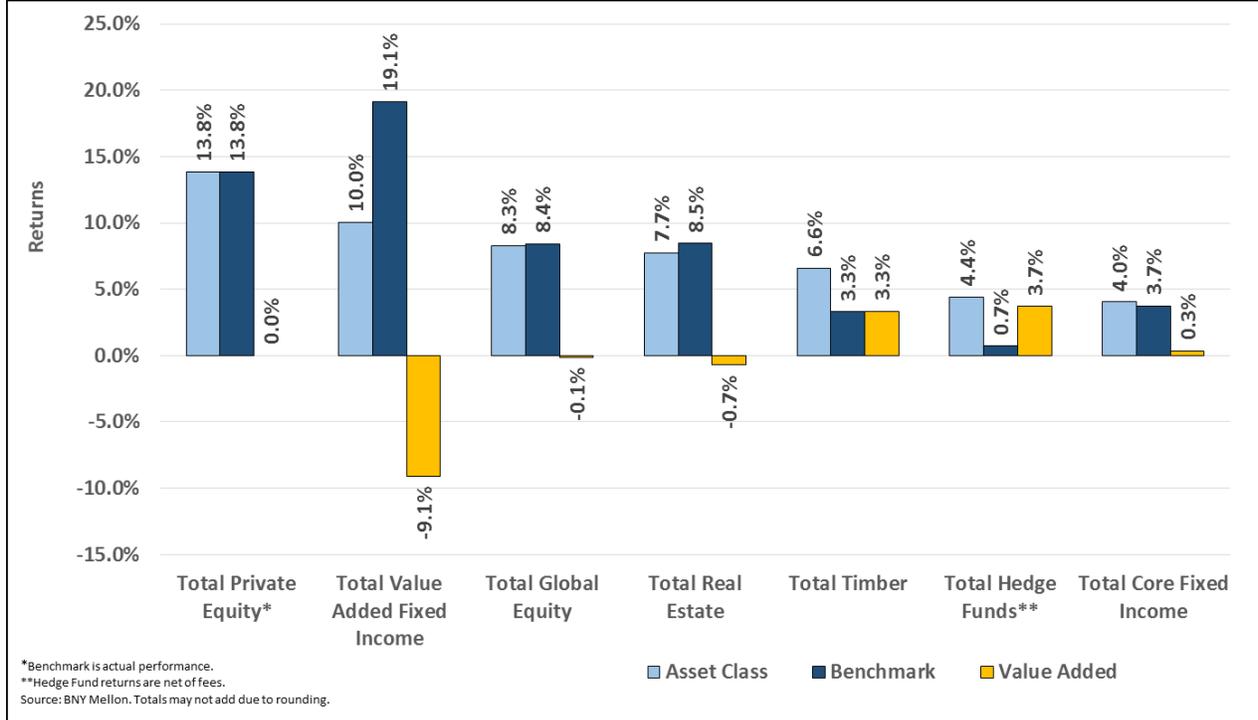
- For the quarter ended December 31, 2016, the PRIT Fund was down -0.2%, underperforming the total core benchmark of 0.1% by 32 basis points.
 - This performance equates to an investment loss of \$126 million over the quarter.
 - This underperformance equates to \$202 million of value below the benchmark return.

- Four of the seven major asset classes outperformed their respective benchmarks.
- For the one-year ended December 31, 2016, the PRIT Fund was up 8.0%, underperforming the total core benchmark of 8.9% by 83 basis points.
 - This performance equates to an investment gain of \$4.8 billion.
 - This underperformance equates to \$494 million of value below the benchmark return.
 - The underperformance was due primarily to the Private Debt Portfolio lagging a publicly traded benchmark consisting of below-investment-grade high yield bonds.
 - Four of the seven major asset classes outperformed their respective benchmarks. Net total outflows to pay benefits for the one-year ended December 31, 2016 were approximately \$1.4 billion.

Total PRIT Fund Returns (Gross of Fees)
Annualized Returns as of December 31, 2016



PRIT Asset Class Performance (Gross of Fees)
Trailing 1-year Performance as of December 31, 2016



PRIT Core Fund Performance Summary
Gross of Fees Performance
Trailing 1-Year Performance as of December 31, 2016

Trailing 1-Year Performance: Dec. 31, 2016	Return	Benchmark Return	Over/(Under) Benchmark (bps)	\$Value (millions)	% of PRIT Fund
Total PRIT Fund	8.0%	8.9%	(83)	62,491	100%
Total Global Equity	8.3%	8.4%	(14)	27,009	43.2%
Domestic Equity	12.9%	13.7%	(81)	12,175	19.5%
International Developed	1.8%	1.9%	(9)	10,492	16.8%
Emerging Markets	11.9%	9.8%	205	4,342	6.9%
Private Equity	13.8%	13.8%	0	6,935	11.1%
Real Estate	7.7%	8.5%	(71)	6,256	10.0%
Total Timberland	6.6%	3.3%	332	2,251	3.6%
Hedge Funds	4.4%	0.7%	369	5,623	9.0%
Value Added Fixed Income	10.0%	19.1%	(911)	5,204	8.3%
Core Fixed Income	4.0%	3.7%	32	7,657	12.3%

PRIT Asset Class Performance (Gross of Fees)

Annualized Returns as of December 31, 2016

1 Year	3 Year	5 Year	10 Year
PRIVATE EQUITY 13.8%	PRIVATE EQUITY 16.8%	PRIVATE EQUITY 17.4%	PRIVATE EQUITY 14.1%
VALUE-ADDED FIXED INCOME 10.0%	REAL ESTATE 11.4%	REAL ESTATE 11.8%	TIMBER 6.9%
GLOBAL EQUITY 8.3%	TIMBER 5.6%	GLOBAL EQUITY 9.9%	REAL ESTATE 6.5%
REAL ESTATE 7.7%	CORE FIXED INCOME 5.5%	TIMBER 6.7%	VALUE-ADDED FIXED INCOME 6.5%
TIMBER 6.6%	GLOBAL EQUITY 3.3%	HEDGE FUNDS (NET OF FEES) 5.7%	CORE FIXED INCOME 5.1%
HEDGE FUNDS (NET OF FEES) 4.4%	VALUE-ADDED FIXED INCOME 2.8%	VALUE-ADDED FIXED INCOME 5.3%	GLOBAL EQUITY 3.9%
CORE FIXED INCOME 4.0%	HEDGE FUNDS (NET OF FEES) 2.7%	CORE FIXED INCOME 4.0%	HEDGE FUNDS (NET OF FEES) 3.3%

2017 Asset Allocation Recommendations

Each calendar year, PRIM staffs presents to the Committees and Board the results of months of work to determine the asset allocation policy for the PRIT Fund. The Investment Committee and Board unanimously approved this year's recommendations following presentations in February.

We are guided by the 7.50% required rate of return and therefore the portfolio requires an equity and growth focus. This means global equities, private equity, real estate and value added fixed income play very important parts in the portfolio. Most other asset classes serve to dampen the volatility of those equity-centric, volatile asset classes.

The economic cycle is nine years old and as a result, there are a number of uncertainties that factored into this year's study. Among the factors: equity valuations are relatively expensive; inflation, while still subdued, is increasing; interest rates are still near historic lows; private equity valuations are high, but the return premium to public equities has been positive in all environments; real estate valuations are somewhat elevated, but the market is healthy; and portfolio completion strategies, which now includes hedge funds, continues to emphasize strategies uncorrelated to equities.

The PRIT Fund's 40% Global Equity allocation remained the same, with no changes to the targets within the sub-portfolios: domestic equities, 18%, developed international equities, 16%, and emerging markets equities, 6%. The Fund's 10% allocation targets for value-added fixed income (VAFI) and real estate did

not change. The Private Equity target allocation increased to 11% from 10%. Timberland also remained at 4%. Core fixed income was reduced to 12% from 13%, and the 4% allocation to portfolio completion strategies was merged with the 9% allocation to hedge funds allocation for a combined PCS allocation of 13% to better-reflect the way PRIM implements its hedge funds program and the role of hedge funds within the PRIT Fund. ***(Please Note: This will not change the way local retirement systems invest in PRIT's' Hedge Fund Portfolio through Segmentation or the performance reporting of Hedge Funds.)***

Based on the 2017 capital market assumptions provided by PRIM's asset allocation consultant, NEPC, the expected returns of the recommended targets are 6.8% for the 5-7-year period, and 7.8% over a 30-year period.

PRIM Developments

SANTA CLARA LAND PURCHASE

In December 2016, PRIM closed on its first ever direct real estate transaction: \$112 million for the acquisition of 21 acres of land in Santa Clara, California – the heart of Silicon Valley – and a long-term 60-plus year ground lease with a major real estate developer that owns three prime office buildings on the parcel. By owning the land directly rather than through an investment manager, PRIM expects to save \$11 million in fees over the next 20 years. PRIM Executive Director and Chief Investment Officer Michael G. Trotsky, CFA said the direct purchase is a natural extension of PRIM's project SAVE program: "This is precisely the sort of innovation and efficiency we have been aggressively seeking."

ACTIVE DEVELOPED INTERNATIONAL SMALL CAP

Following an RFP process by PRIM staff, the PRIM Board on February 14 approved five new developed international small cap managers to invest a total of \$900 million. This follows a decision by PRIM staff to utilize an active strategy for a portion of this allocation. PRIM pursues active strategies when, (1) the median managers in the asset class consistently outperform the index, and (2) there is a wide dispersion between the best and worst managers. The new managers approved by the Board for developed internal small cap equities and the amounts allocated to them are: Acadian, \$300,000,000; AQR, \$150,000,000; LMCG, \$100,000,000; Strategic Global Advisors (SGA), \$100,000,000; and TimesSquare Capital management, \$250,000,000. Funds will be re-allocated to these managers from the PRIT Fund's Russell 2500 Index passive portfolio.

PLANS FOR 2017

The Board reviewed the 2017 annual plans. Highlights are as follows:

Public Markets and Investment Research

- Conduct an in-depth liquidity study evaluate liquidity needs vs. the current asset allocation.
- Build out new Other Credit Opportunities allocation with Value-Add Fixed Income (throughout 2017).

Portfolio Completion Strategies

- Research and potentially implement equity hedging strategy.
- Conduct search for emerging hedge fund managers within Global Macro/Commodity Trading Advisor (CTA) strategies.

Private Equity

- Increase target private equity allocation to 11% of the PRIT Fund.
- Expand co-investment program targeting up to \$ 140 million (10% of the \$1.4 billion target commitment to Vintage Year 2017).

Risk Management

- Complete search for Director of Risk Management.
- Project SAVE Part II – complete research to determine if internal investment is a viable value-enhancing strategy for PRIM.

Real Estate and Timberland

- Capital Allocation of \$200 million for Direct Real Estate Investments.
- Conduct RFP process for real estate and timberland consulting services.

Finance and Administration, Investment Operations, and Technology

- Complete required PRIM Board Charter Review.
- Complete and present wage gap analysis.

Client Services

- On-board two new client services employees, Francesco Daniele, senior client services officer, and Samuel Olivier, client services analyst.
- Conduct 2017 PRIM Board Elections for the State Employees Retirement System elected member, and the Massachusetts Teachers Retirement System elected member.
- Conduct the 2017 PRIM Investors' Conference, tentatively scheduled for November 9 (location to be determined).

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.