

PRIM Board Quarterly Update

SECOND QUARTER 2019

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 August 13, 2019, meeting:

Markets and PRIT Fund Performance Summary

During Fiscal Year 2019 (FY 2019), the PRIT Fund increased by approximately \$4.1 billion to \$74.8 billion despite a challenging market marked by extreme volatility, heightened geopolitical tensions, and deteriorating global economic conditions. The year included sharp sell-offs in equity markets followed by historic snapbacks. For example, the month of December 2018 was the worst month since 1931 with the S&P 500 falling more than 6%. The December quarter was the weakest in many years with the S&P 500 falling nearly 14% and the NASDAQ falling more than 17%. Global markets were even weaker. But that weakness did not last long. In the March 2019 quarter, markets posted the strongest snapback in more than 20 years with the S&P 500 gaining more than 13% and, for the first half of the calendar year through June, the S&P 500 was up more than 17% - the best first half year since 1997. The month of June alone, with the S&P 500 up nearly 7%, was the best June on record since 1955. This environment of extreme swings is difficult for money managers and, for a fund the size of PRIT, it makes tracking our target asset allocation very difficult.

The PRIT Fund's trailing 3-, 5-, and 10-year returns remain strong on both a relative and absolute basis, as was the FY 2019 return, but it lagged the benchmark slightly (by less than half of a percentage point). More than half of the fiscal year slight underperformance was due to the extreme volatility of the markets and the fact that our actual asset allocation diverged from the target allocation on which the benchmark is derived. The target allocation is comprised of an increasing allocation of high performing, illiquid alternative investments such as Private Equity and Private Real Estate. It takes some time to identify worthy managers, funds, and investments in those asset classes, and on average for the fiscal year, we were underweight (relative to our target and our benchmark) to those high performing asset classes, and overweight to modestly-performing Global Equities. So, the real news here is in fact very good news, namely that our asset allocation changes were effective and increased our targets in asset classes that are performing well – it's just taking a while to move the actual assets to these new targets. Additionally, some specific asset classes struggled to keep up with their benchmarks in the volatile environment, but we understand the causes, and our investment staff has already taken necessary steps to address these underperforming areas.

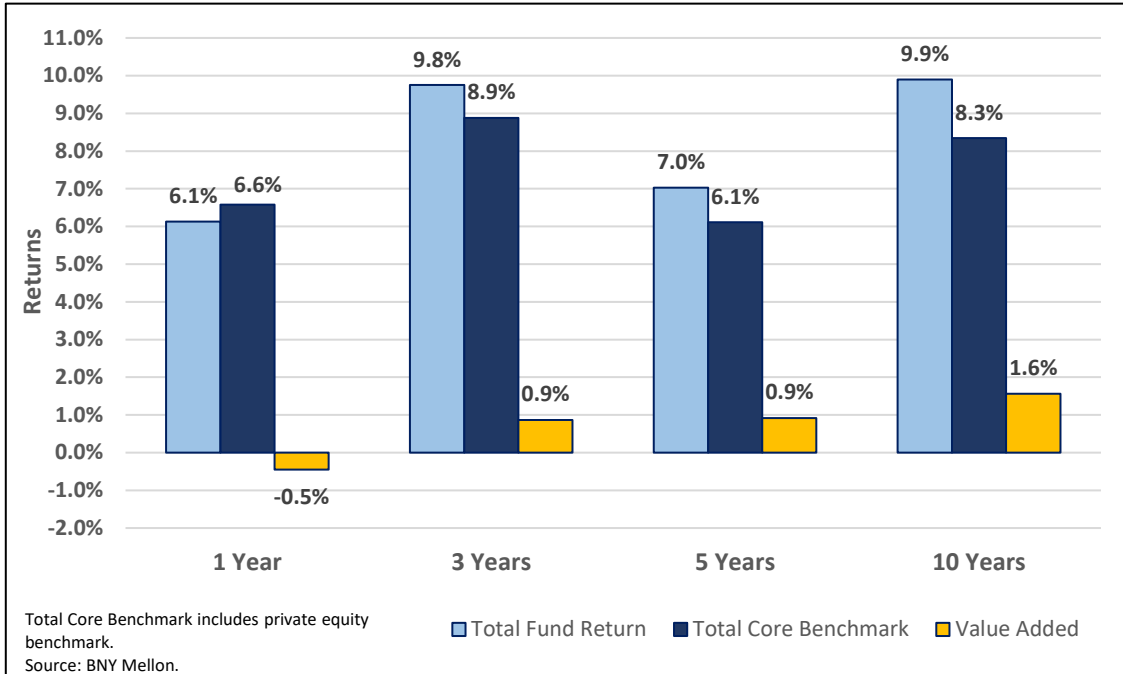
PRIT Fund Performance Summary

As of June 30, 2019, the PRIT Fund net asset value stood at \$74.8 billion. For the one-year ended June 30, 2019, the PRIT Fund was up 6.1%, (5.7% net), underperforming the total core benchmark of 6.6% by 45 basis points (90 bps net).

- This performance equates to an investment gain of \$4.4 billion (\$4.1B, net of fees).
- Net total outflows to pay benefits for the one-year ended June 30, 2019, were approximately \$1.0 billion.

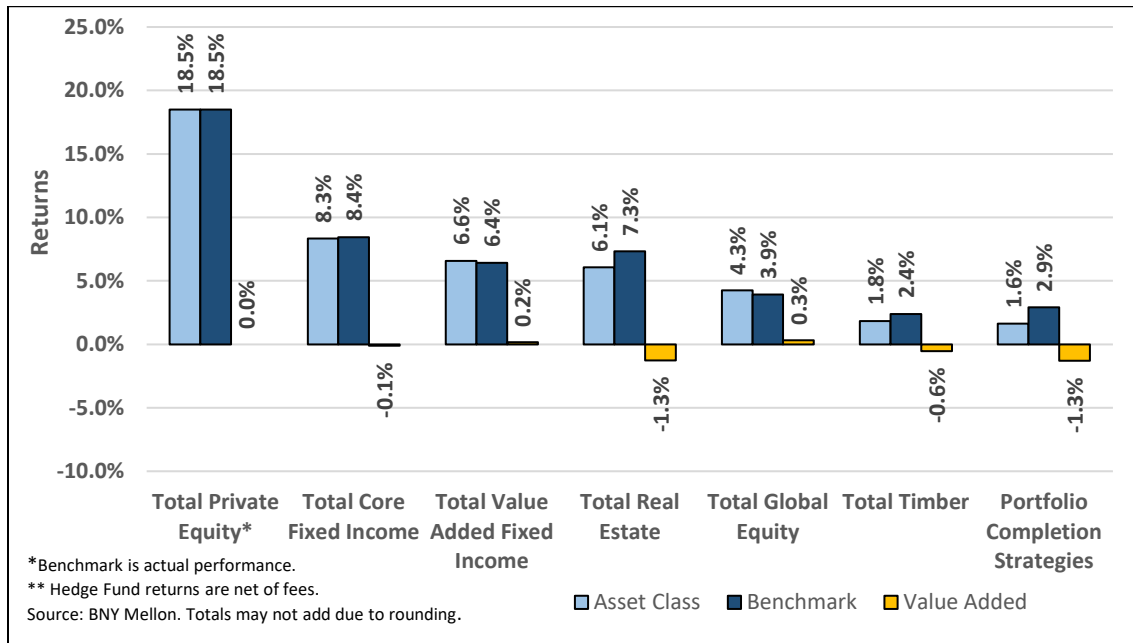
Total PRIT Fund Returns (Gross of Fees)

Annualized Returns as of June 30, 2019



PRIT Asset Class Performance (Gross of Fees)

Trailing 1-year Performance as of June 30, 2019



PRIT Core Fund Performance Summary

Gross of Fees Performance

Trailing 1-Year Performance as of June 30, 2019

| Trailing 1-Year Performance: June 30, 2019 | Return | Benchmark Return | Over/(Under) Benchmark (bps) | \$Value (millions) | % of PRIT Fund |
|--------------------------------------------|--------------|------------------|------------------------------|--------------------|----------------|
| Total PRIT Fund | 6.1% | 6.6% | (45) | 74,836 | 100% |
| Total Global Equity | 4.3% | 3.9% | 32 | 32,268 | 43.2% |
| <i>Domestic Equity</i> | <i>8.5%</i> | <i>8.0%</i> | <i>44</i> | <i>16,351</i> | <i>21.9%</i> |
| <i>International Developed</i> | <i>0.1%</i> | <i>0.3%</i> | <i>(21)</i> | <i>11,265</i> | <i>15.1%</i> |
| <i>Emerging Markets</i> | <i>2.0%</i> | <i>0.5%</i> | <i>147</i> | <i>4,652</i> | <i>6.2%</i> |
| Private Equity | 18.5% | 18.5% | 0 | 8,468 | 11.3% |
| Real Estate | 6.1% | 7.3% | (126) | 6,992 | 9.4% |
| Total Timberland | 1.8% | 2.4% | (55) | 2,888 | 3.9% |
| PCS | 1.6% | 2.9% | (129) | 7,450 | 10.0% |
| Value Added Fixed Income | 6.6% | 6.4% | 16 | 5,883 | 7.9% |
| Core Fixed Income | 8.3% | 8.4% | (11) | 10,162 | 13.6% |

PRIT Asset Class Performance (Gross of Fees)

Annualized Returns as of June 30, 2019

| 1 Year | 3 Year | 5 Year | 10 Year |
|------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|
| PRIVATE EQUITY 18.5% | PRIVATE EQUITY 20.5% | PRIVATE EQUITY 17.8% | PRIVATE EQUITY 18.3% |
| CORE FIXED INCOME 8.3% | GLOBAL EQUITY 12.1% | REAL ESTATE 9.3% | GLOBAL EQUITY 10.9% |
| VALUE-ADDED FIXED INCOME 6.6% | REAL ESTATE 7.4% | GLOBAL EQUITY 6.5% | REAL ESTATE 10.5% |
| REAL ESTATE 6.1% | VALUE-ADDED FIXED INCOME 6.9% | TIMBER 5.6% | VALUE-ADDED FIXED INCOME 8.7% |
| GLOBAL EQUITY 4.3% | TIMBER 6.0% | CORE FIXED INCOME 4.8% | CORE FIXED INCOME 5.4% |
| TIMBER 1.8% | TOTAL PCS 5.4% | VALUE-ADDED FIXED INCOME 3.7% | TOTAL PCS 5.0% |
| TOTAL PCS 1.6% | CORE FIXED INCOME 1.7% | TOTAL PCS 3.0% | TIMBER 3.3% |

ORGANIZATIONAL UPDATE

Organizationally, Fiscal Year 2019 was another outstanding year. No senior-level employees departed, and consistent with the Board-approved hiring plans, we filled six staff vacancies with top talent. We are staffed with exceptional investment and finance professionals, and all our job postings attract literally hundreds of talented and well-qualified applicants. Our team continues to be recognized around the nation for the success and innovation of our investment program and for the transparency and completeness of our financial reporting. Our comparatively small staff researched and deployed approximately \$5.7 billion in new Board-approved investments in FY 2019 – a new milestone for PRIM’s productivity.

Fiscal Year 2019 Highlights

1. For the second consecutive year, **PRIM Private Equity ranked #1** in private equity returns among 163 U.S. public pension funds based on 10-year performance. PRIM is the only fund that has been in the Top 5 of all private equity portfolios in every year the *American Investment Council* has performed the study – including #1 rankings in 2019, 2018, 2015 and 2013.
2. For the 14th consecutive year, PRIM was awarded the Government Finance Officer Association’s **Certificate of Achievement for Excellence in Financial Reporting** for the completeness and timeliness of our Comprehensive Annual Financial Report.
3. PRIM’s Executive Director and Chief Investment Officer was elected to Chair of the CFA Society of Boston in early June for a one-year term following in the footsteps of Investment Committee member, Glenn Strehle, who himself was a former Chair of the CFA Society Boston. As a reminder, the CFA Society Boston serves more than 6000 members in the greater Boston area. The CFA Society Boston is the local chapter of the International CFA Institute which serves 175,000 members in more than 164 countries (157 societies).
4. Staff identified and recommended, and the Board approved, \$5.7 billion in new investments during FY 2019.
 - a. Funded 16 PE Funds totaling \$1.8B.
 - b. Added six new managers to the PCS portfolio for \$1.4B.
 - c. Developed and launched an innovative new Emerging Managers Direct Hedge Fund program for \$200M.
 - d. Selected three new Real Estate investment managers - \$1B in capital committed.
 - e. Invested additional \$100M (33%) in industrial development – warehousing space.
 - f. Acquired 191,000 acres of prime timberland in New Zealand for \$210 million.
5. The Project SAVE Phase II Initiative deployed approximately \$698 million in lower fee, directly managed structures.
 - a. Completed two new direct Real Estate purchases (53 State St and 125 High St) totaling \$530 million in equity plus debt.
 - b. Completed 10 new Private Equity co-investments totaling \$168 million.

6. The Project SAVE Phase I initiative realized approximately \$193 million in annualized value. The original goal was \$100 million.
7. PRIM was nominated for the “**Plan of the Year**” award for the unprecedented fourth year in a row by Institutional Investor magazine.
8. PRIM has been recognized for adopting the **CFA Institute’s Global Investment Performance Standards (GIPS)** of integrity and transparency. PRIM is now one of only a handful of large public pension plans to comply with GIPS, the worldwide performance reporting standard.
9. Bill Li was inducted into the **EQDerivatives Investing Hall of Fame**, which recognizes individuals who have led the line in volatility and alternative risk premia thought leadership (May 2019).
10. For the second year in a row, Eric Nierenberg has been listed on **Institutional Investor’s “Most Wanted Allocators”** list. This is the global “Top 50” list of allocators deemed to be most coveted for potential future chief investment officer roles.
11. PRIM recruited and on-boarded six new full-time employees.
12. PRIM promoted six staff members.
13. No senior level employees departed in FY 19.
14. Implemented robust Diversity and Inclusion Initiatives.

New Hires

Marliese Lawson joined PRIM in July as the ED/CIO’s administrative assistant. Prior to joining PRIM, Marliese worked at Health Net Federal Services (HNFS), a global health care services company, as an Executive Assistant. Prior to that she was an Executive Assistant at the accounting firm, Perry-Smith, LLP. Marliese is a graduate of Gordon College, with a degree in English Literature, and from Salem State University, with a Master’s degree in English.

Sarah Zatoonian joined the Private Equity team in June as an Investment Analyst. Sarah was most recently at the College of the Holy Cross Investment Office where she was a member of a four-person team responsible for the oversight and management of the College’s long-term investment portfolios for the Endowment and Pension. Sarah holds dual Bachelor degrees in Economics and Classics, both from the College of the Holy Cross.

Jay Leu joined PRIM in July as Director of Risk Management. Jay brings over 30 years of investment industry experience and was most recently Director of Risk Management at Aesir Capital Management, a long/short credit hedge fund. Prior to that, Jay was the lead portfolio manager and business unit head of Structured U.S. Equity at Lee Munder Capital Group. He held the Chief Investment Officer position at Independence Investment Associates (which Lee Munder acquired) and at Pacific Capital Fixed Income Advisor. Jay began his career at State Street Global Advisors as both a Domestic and Global Fixed Income portfolio manager. Jay is also currently an adjunct professor of finance at Brandeis University’s International Business School where he teaches International Portfolio Management, Fixed Income Investments, and Investment Management. Jay holds a Bachelor’s degree in Chemical Engineering and a Master’s degree in Finance, both from M.I.T.

Seven new interns joined the PRIM team for the summer season. One joined us from the Women in Finance Fellowship program from Treasurer Deborah Goldberg's Office of Economic Empowerment, one from the CFA Society Boston's Women in Investment Management internship program, another from Girls Who Invest, and four who are graduate students at Brandeis University's International Business School.

PRIM BOARD ACTIONS –August 13, 2019

Portfolio Completion Strategies

At its August 13, 2019 meeting, the PRIM Board approved the following recommendation of the Investment Committee and PRIM Staff:

The PRIM Board approved an initial allocation of \$ \$150 million to **RV Capital Asia Opportunity Strategy Managed Account**. The Fund employs a Discretionary Macro strategy, trading rates, FX, and credit in the vast Asia Pacific region. RV Capital is a Singapore-based manager that adopts a top-down approach and trades macro themes. The Fund's investment universe includes the 13 largest economies in Asia Pacific: Australia, China Mainland, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, New Zealand, Philippines, Singapore, Taiwan and Thailand. RV Capital only trades liquid asset classes (rates, FX, and credit).

Public Markets

Request for Proposals ("RFP")

The PRIM Board authorized the issuance of an RFP for Passive Short-Term Fixed Income Investment Management Services. The RFP was issued on August 2, 2019, and responses are due on August 30, 2019.

The Client Services team -- Paul Todisco and Francesco Daniele – will continue to meet with 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 call 617-946-8401. We look forward to seeing you soon.