

December 2015



PENSION RESERVES
INVESTMENT
MANAGEMENT BOARD

PRIM Board Update

Massachusetts Pension Reserves Investment Management Board

PRIT Core Fund Performance for calendar 2015

Amid a difficult investing climate marked by exceptional volatility in global equity markets, the PRIT Core Fund ended calendar 2015 with a return of 1.10% — considerably better than the -1.2 percent return that would have been generated by a traditional 60%/40% split between global equities and investment-grade bonds.

Moreover, the PRIT Core return of 1.10% beat the Policy Benchmark return of -0.23%, a difference of 133 basis points. The Policy Benchmark is a passive yardstick that measures how well PRIM is implementing asset allocation.

These returns followed several years during which PRIM's investment team gradually moved the PRIT fund into a defensive posture. Most notably, the staff reduced global equity exposure to 40% from 49%, redeploying those assets in vehicles including long-duration bonds and low volatility hedge funds that aren't correlated to equities.

The strongest performer for the calendar year was private equity, which returned 16.51%. Core real estate followed with an 11.92% return.

Overall, PRIM's alternative investments, i.e. private equity and real estate have, been the engine driving returns for the past 1-, 3-, 5-, and 10-year periods.

The asset class with the lowest return for the calendar year was emerging markets, posting a return of -12.81%. Fortunately, it's one of the PRIT fund's smaller asset classes. Furthermore, while disappointing, the figure is better than its benchmark.

Please see the chart accompanying this piece showing the PRIT fund vs. one month, fiscal 2016, fourth-quarter 2015, one-year, three-year, five-year and 10-year benchmarks.

Market Snapshot for December 2015

U.S. Gross Domestic Product ("GDP") was revised to 2.0% for 3Q15, down from the previous estimate of 2.1%, in the Commerce Department's final assessment. Unemployment remained level at 5.0%, the lowest since April 2008. Jobless claims, a proxy for layoffs, rose to 277,000, the highest reading for initial claims since April. The U.S. Institute for Supply Management ("ISM") Purchasing Manufacturing Index ("PMI") contracted for the second consecutive month at 48.2 versus 48.6 in November, the weakest since June 2009 (a reading below 50 indicates that the manufacturing sector of the economy is contracting). The ISM highlighted flat revenue, deflation in commodities, and tightened inventories as the main focus weighing on U.S. manufacturers. As was widely anticipated, the Federal Reserve (the "Fed") raised its target

funds rate to 25 basis points ("bps") on December 16th, the first rate hike since 2006. The U.S. Dollar Index depreciated 1.5% as strong Eurozone data (53.2 PMI) put pressure on the Dollar. In turn, the Euro appreciated 2.9% in December. Oil prices fell to 37.0 a barrel (-11.1% in December).

U.S. equities fell in December, amid a sharp selloff in oil process and energy shares. Large cap equities lost 1.6%, but outperformed small cap equities, which returned -5.0%.

International equities fell 1.4% in December. European equities declined 2.6% on weak Chinese economic data, as the Euro appreciated. A stronger Euro makes it difficult for European companies to export goods. Japanese equities rose 0.3% on expectations of added monetary easing by the Bank of Japan ("BoJ") and the Yen depreciated 2.4%. A weaker Yen boosts the earnings of exporters and increases investor demand for Japanese shares.

Emerging markets equities fell 2.2% in December. Chinese shares returned -1.3% on concerns over growth, weak economic data, and thin trading due to the holidays. Russian equities lost 10.3% as the price of crude oil, the nation's main export, fell sharply.

The 20-year STRIPS index rose 0.4% in December, returning -3.7% in calendar year 2015. U.S. Treasury 20-year STRIPS yields were 1 bp lower in December, 3.06% versus 3.07% in November.

Looking forward

As we enter the new year, we are seeing increased volatility in the global equity markets; however, we believe the PRIT Core portfolio is positioned appropriately to meet the challenges that lie ahead.

Our exposure to risk, as previously mentioned, has been curtailed significantly. Investments in areas that tend to do well when equities struggle are performing consistent with expectations. Staff is exploring interesting opportunities in areas that would be new to PRIM.

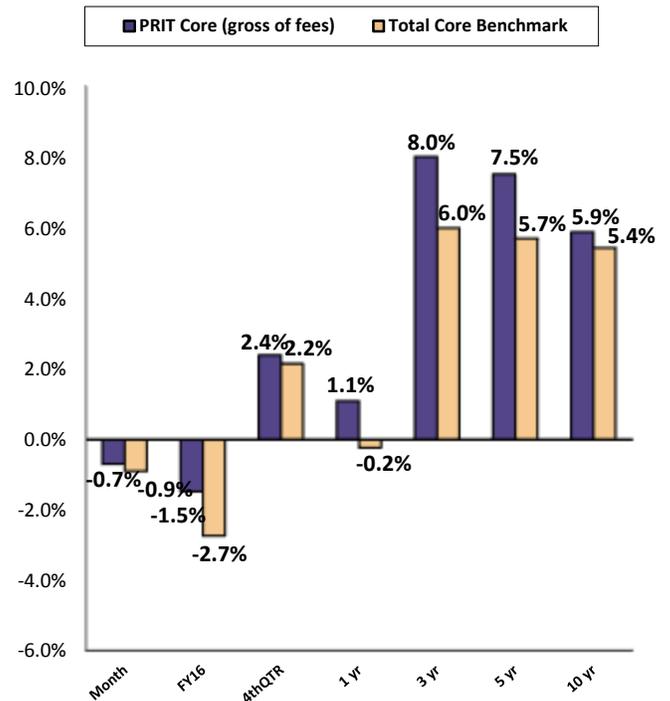
PRIT FUND ASSETS: \$59,639,033,000

PRIT Core Fund Recap – December 31, 2015

Portfolio	Month	4thQTR	1-Year
PRIT Core Total	-0.69%	2.40%	1.10%
U.S. Equity	-2.16%	6.12%	0.26%
International Equity	-1.22%	5.15%	1.24%
Emerging Markets Equity	-1.92%	1.89%	-12.81%
Core Fixed Income	-0.31%	-0.76%	-1.96%
Public Value Added FI*	-2.03%	-0.45%	-4.70%
Total Value Added FI**	-2.42%	-1.39%	-4.14%
Private Equity	1.91%	0.90%	16.51%
Core Real Estate	2.56%	3.71%	11.92%
Timber/Natural Resources	-3.49%	-2.04%	-6.44%
Hedge Funds (net of fees)	-0.72%	0.18%	-1.81%
Portfolio Completion Strategies	1.27%	1.26%	-0.73%

Returns are gross of fees unless otherwise noted. Timber/Natural Resources, Total Value-Added Fixed Income, and Portfolio Completion Strategies sleeves are currently not available through Segmentation; however, the *Public Value Added Fixed Income sleeve is available as of April 1, 2013. **Total Value-Added FI includes returns of Public Value-Added FI and Private Debt. Private Equity is available to Segmented Systems through the Vintage Year Program.

PRIT Core Fund as of 12/31/2015



Market Recap December 31, 2015

Global Equity Markets

U.S. Equities:

Index	Month	4 th QTR	1-Year
S&P 500	-1.58%	7.04%	1.38%
Russell 2000 Growth	-4.77%	4.23%	-1.38%
Russell 2000 Value	-5.27%	2.88%	-7.47%
Russell 2500 Growth	-3.53%	3.81%	-0.19%
Russell 2500	-4.07%	3.28%	-2.90%

International Equities:

Index	Month	4 th QTR	1-Year
Custom World IMI Ex-US	-1.51%	4.16%	-2.13%
MSCI Emerging Mkts. IMI	-1.85%	1.10%	-13.76%

Fixed Income

Index	Month	4 th QTR	1-Year
Barclays Aggregate	-0.32%	-0.57%	0.55%
BC US Treas 20+Yr STRIPS	0.38%	-1.08%	-3.74%
ML High Yield Master II	-2.58%	-2.16%	-4.61%
JPM EM Debt Global	-1.50%	1.55%	1.23%
JPM GBI EMI Global Div.	-2.23%	-0.01%	-14.92%

Real Estate

NCREIF 1-Qtr Lag Private	3.09%	3.09%	13.48%
FTSE EPRA NAREIT Global	0.92%	4.37%	-0.10%

Hedge Funds

Index	Month	4 th QTR	1-Year
HFRI Fund of Funds	-0.53%	0.65%	-0.34%

Senior Client Service Officer
 Paul Todisco - (617) 946-8423
 ptodisco@mapension.com