



**PENSION RESERVES
INVESTMENT
MANAGEMENT BOARD**

Minutes of the PRIM Real Estate and Timberland Committee Meeting
Wednesday, November 14, 2018

Committee members present:

- Jill S. Hatton, CRE, Chair
- Sarah Kim on behalf of Treasurer Deborah Goldberg
- Lydia Chesnick, Esq.
- Anthony E. Hubbard, Esq (via phone)
- Jack Lutz, Ph.D.
- William F. McCall, Jr., CRE
- Carly Rose

Committee members not present:

- Robert Gifford
- Garlan Morse, Jr., CRE
- Peter O'Connell

The PRIM Real Estate and Timberland Committee meeting was called to order at 9:30 a.m.

I. Approval of the Minutes (Voting Item)

The PRIM Real Estate and Timberland Committee approved the minutes of its May 2, 2018 and August 1, 2018, meetings.

II. Executive Director/Chief Investment Officer Comments

Michael G. Trotsky, CFA, Executive Director and Chief Investment Officer, made comments to the Committee, including:

Mr. Trotsky began by congratulating Treasurer Goldberg on her resounding re-election. The Treasurer thanked everyone for their support and emphasized continuing "onward and upward".

Organizational Updates

PRIM has hired five new full-time employees and two interns since the last meeting.

Iris Sosa joined PRIM in August as an executive assistant supporting the Executive Director/Chief Investment Officer. Ms. Sosa joined PRIM after nearly 15 years of supporting the CEO of Santander Bank, and prior to that was an executive assistant at the Boston Housing Authority.

Maureen Aquino also joined PRIM in August as PRIM's new receptionist. Ms. Aquino has almost 20 years of experience as an Office Manager and Receptionist working for AIG in New York and holds a bachelor's degree from William Patterson University.

Grace Gao joined PRIM in October as an Investment Research Analyst in the Strategy group, reporting to Eric Nierenberg. Ms. Gao recently received her master's degree in finance from MIT Sloan. She previously interned at Baidu, Bain & Company, and PwC, and earned her bachelor's degree in finance from Peking University in China.

Liu Liu joined PRIM in October on a permanent basis as an Investment Analyst after spending 18 months as an intern working in PRIM's Strategy team, reporting to Eric Nierenberg. Ms. Liu received her master's

degree in finance from the Brandeis International Business School and earned her bachelor's degree in finance from Shanghai Jiao Tong University in China.

Sara Coelho joined PRIM in November as a Corporate Accountant on the Finance team. Ms. Coelho spent several years at Bulger Partners as an accounting analyst and accounts payable clerk, and has a bachelor's degree in finance and accounting management from Northeastern University. She reports to Dan Eckman.

The Strategy group also welcomed two new interns this fall. **Anita Huang** is currently a graduate student at the Brandeis International School of Business, majoring in economics and finance, and **Shijia Chen** recently received her master's degree in International economics and finance from Johns Hopkins University.

Also, we congratulate **Christina Marcarelli**, an Investment Officer on the Real Estate team, on receiving the Chartered Alternative Investment Analyst (CAIA) credential. The CAIA curriculum is designed to provide a broad knowledge in alternative investments including Real Assets, Hedge Funds, Private Equity and structured products. The credential requires the passing of 2 exams, at 2 levels, and typically requires 12-18 months and more than 200 hours of study.

We are now 45 people strong, with the following degrees/certifications: 2 Ph.D., 10 Masters Degrees, one J.D., 10 CFAs, 6 CPAs, 2 CAIAs, and 19 CFA Investment Foundations Program Certificates.

And last, **Andrew Gromer**, an Investment Analyst on the Public Markets team, was appointed Chair of the CFA Boston Society Young Leaders Committee. As Chair, Andrew will organize events for the Society's new generation of investment professionals focused on engagement, career development, and networking. It is a very vibrant and active committee.

The September quarter-end was strong, but market volatility returned in October and November as global equities sold off sharply. The VIX spiked to 21.2 in October after reaching a low of 12.1 during the September quarter. The five-year average for the VIX is 14.8. October 2018 was the third worst month for the S&P 500 since the world financial crisis, with the S&P down 6.8%, the worst month since September 2011 when the S&P was down more than 7%. September 2011 was one month before the US debt downgrade and market sell-off that occurred amid continuing concerns about the European debt crisis. The only other worse month was in May 2010 when the S&P was down 8% in the aftermath of the "Flash Crash", which was caused in part by the early stages of the European debt crisis. One of the big challenges that surfaced recently is the stand-off between Brussels (the EU) and Rome concerning Italy's dire fiscal situation.

This all only adds to the brew of caution that we identified last quarter. At the last meeting of the Board, we discussed the risks in the market and we compared current conditions to those of mid-2014 through early 2016, when there was an unprovoked global economic slowdown that led to a correction in world financial markets. Not much has changed on the economic front in the last few months to change our view. US GDP growth is growing at a 3.5% clip, the employment picture is bright, wages are finally rising, and so too is inflation. With this backdrop, the US Fed seems intent on raising rates one more time this year and three times next year. Meanwhile, economies in the rest of the world, including Europe, China and Japan, are slowing. At our last meeting, we pointed out that we were observing some of the same market characteristics that we observed in the mid 2014 to 2016 downturn – and today we still observe many of the same conditions, namely: 1) narrowing stock markets as the first quarter equity rebound left many global markets, and many US sectors; 2) liquidity issues – it became difficult to secure US dollars from outside the US in 2015, and note that global funding conditions are still very tight for dollar funding; 3) the economic situation – there were vulnerabilities in the global economy before there were tariffs, and tariffs are an additional negative for global growth, and most believe that a change in control of the

U.S. House of Representative as a result of the mid-term elections is not likely to impact or restrain the Trump Administration's protectionist trade policies.

We also note that equity markets generally peak at the peak acceleration of earnings, and not on the earnings peak itself, and S&P earnings were up approximately 20% on an 8% growth in sales for the second quarter and are expected to show similar if not better growth in Q3. Consensus is that it will be hard to maintain that strong level of growth going forward.

And last, in regard to the mid-term elections and the firing of Attorney Jeff Sessions immediately afterward, it seems increasingly likely that we could have two years of political gridlock before the next general election. President Trump warns of a "war-like" atmosphere in Washington, and pundits generally have reduced the prospects of enacting bipartisan fiscal stimulus (infrastructure spending, for example) and have increased the prospects of having a prolonged government shutdown.

We believe the PRIT Fund is appropriately positioned for weakness in world equity markets. Our main focus during the past several years has been to reduce our global equity exposure while identifying diversifying assets in our Portfolio Completion Strategies allocation. However, it is important to note that the PRIT Fund is not completely immune to a global equities downturn, since in order to achieve our long-term 7.35% target return rate, our Fund is by necessity growth and equity focused.

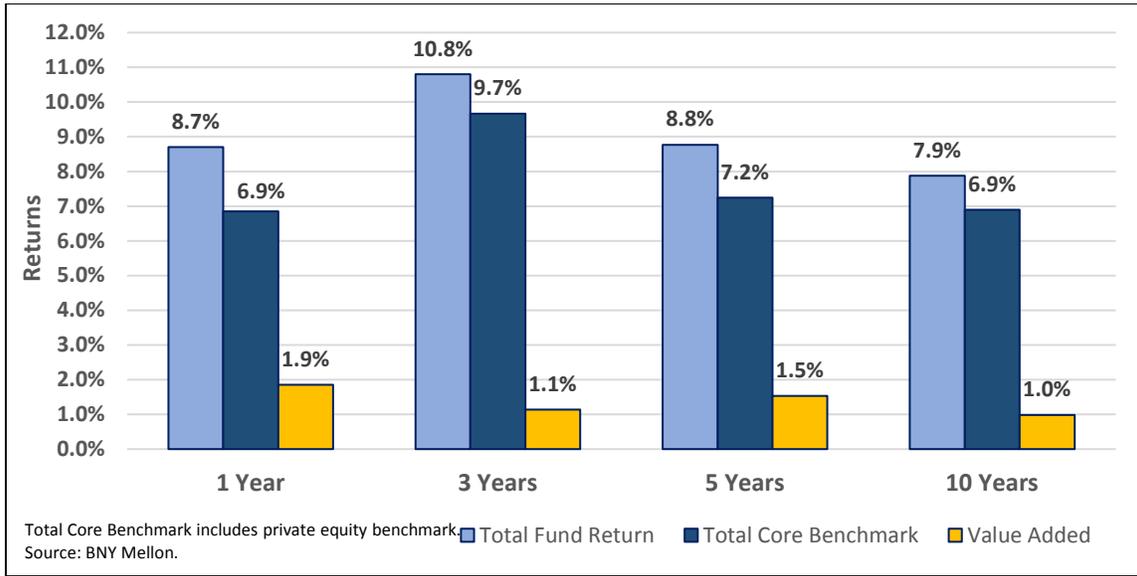
PRIT Fund Performance Summary

As of September 30, 2018, the PRIT Fund net asset value stood at \$73.8 billion. For the one-year ended September 30, 2018, the PRIT Fund rose 8.7% gross (8.2% net), outperforming the total core benchmark of 6.9% by 182 basis points (136 bps net).

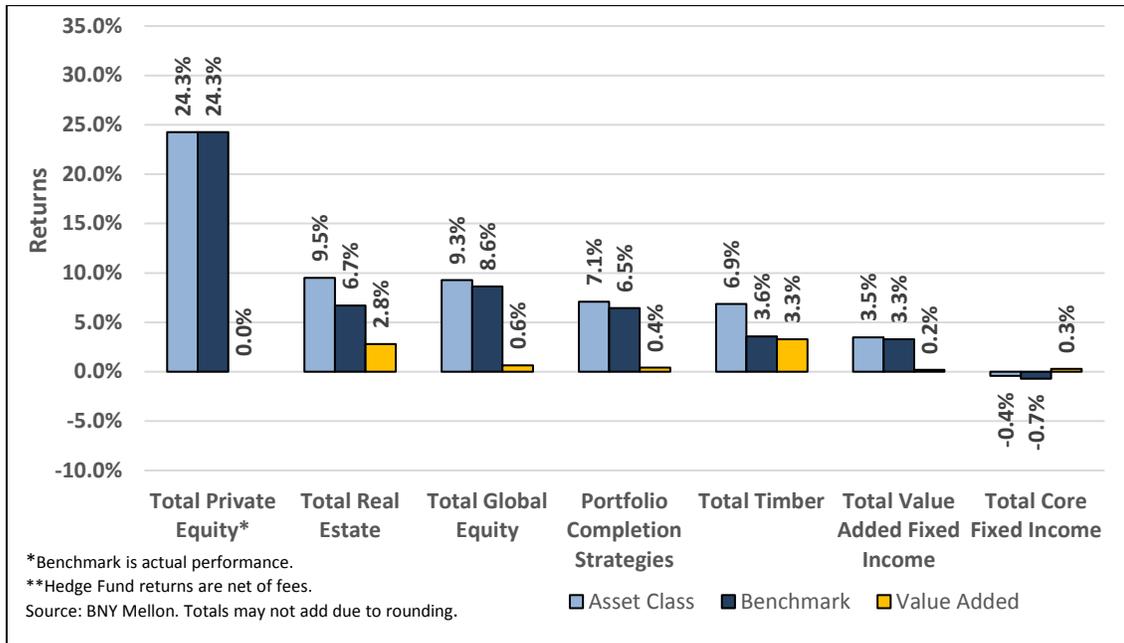
- This performance equates to an investment gain of \$5.7 billion, net of fees.
- This outperformance equates to \$944 million of value above the benchmark return, net of fees.
- All seven major asset classes outperformed their respective benchmarks.
- Net total outflows to pay benefits for the one-year ended September 30, 2018, were approximately \$1.3 billion.

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Total PRIT Fund Returns (Gross of Fees)
Annualized Returns as of September 30, 2018



PRIT Asset Class Performance (Gross of Fees)
One Year Ended September 30, 2018



PRIT Core Fund Performance Summary

Gross of Fees Performance

Trailing 1-Year Performance as of September 30, 2018

Trailing 1-Year Performance: September 30, 2018	Return	Benchmark Return	Over/(Under) Benchmark (bps)	\$Value (millions)	% of PRIT Fund
Total PRIT Fund	8.7%	6.9%	182	73,847	100%
Total Global Equity	9.3%	8.6%	63	31,083	42.1%
<i>Domestic Equity</i>	<i>18.3%</i>	<i>17.8%</i>	<i>48</i>	<i>14,675</i>	<i>19.9%</i>
<i>International Developed</i>	<i>3.6%</i>	<i>3.1%</i>	<i>52</i>	<i>11,916</i>	<i>16.1%</i>
<i>Emerging Markets</i>	<i>-1.3%</i>	<i>-1.7%</i>	<i>33</i>	<i>4,493</i>	<i>6.1%</i>
Private Equity	24.3%	24.3%	0	8,010	10.9%
Real Estate	9.5%	6.7%	281	6,421	8.7%
Total Timberland	6.9%	3.6%	328	2,635	3.6%
PCS	7.1%	6.5%	69	10,036	13.6%
Value Added Fixed Income	3.5%	3.3%	19	5,864	7.9%
Core Fixed Income	-0.4%	-0.7%	29	9,063	12.3%

PRIT Asset Class Performance (Gross of Fees)

Annualized Returns as of September 30, 2018

1 Year	3 Year	5 Year	10 Year
PRIVATE EQUITY 24.3%	PRIVATE EQUITY 19.3%	PRIVATE EQUITY 20.1%	PRIVATE EQUITY 14.9%
REAL ESTATE 9.5%	GLOBAL EQUITY 14.1%	REAL ESTATE 10.5%	GLOBAL EQUITY 8.9%
GLOBAL EQUITY 9.3%	REAL ESTATE 9.1%	GLOBAL EQUITY 9.1%	VALUE-ADDED FIXED INCOME 7.5%
TOTAL PCS 7.1%	VALUE-ADDED FIXED INCOME 6.9%	TIMBER 7.2%	REAL ESTATE 7.2%
TIMBER 6.9%	TIMBER 5.6%	TOTAL PCS 4.9%	CORE FIXED INCOME 4.8%
VALUE-ADDED FIXED INCOME 3.5%	TOTAL PCS 5.5%	VALUE-ADDED FIXED INCOME 4.4%	TIMBER 4.6%
CORE FIXED INCOME (0.4%)	CORE FIXED INCOME 2.2%	CORE FIXED INCOME 3.9%	TOTAL PCS 4.6%

III. Performance Review and Market Update

Timothy Schlitzer, CRE, CFA, Senior Investment Officer - Director of Real Estate and Timberland, updated the Committee on real estate and timberland performance.

Mr. Schlitzer provided a summary of the information contained in the Committee materials.

- Total Real Estate returned 9.5%, 281 basis points higher than the asset class benchmark during the previous 12-month period.
- Timberland returned 6.8% during this period, 328 basis points above the asset class benchmark.
- Real estate was valued at \$6.4 billion or 8.7% of the PRIT Fund at quarter end. This represents a dollar underweight to the mid-point of PRIM's range of \$964 million.
- Timberland is valued at \$2.6 billion or 3.6% of the PRIT Fund, a dollar underweight to the asset class mid-point of approximately \$319 million.
- The private real estate portfolio returned 11.1%, 396 basis points above benchmark.
- PRIM's capital structure continued to be accretive with levered returns adding approximately 300 basis points to the private core return.
- Non-core real estate outperformed the NCREIF benchmark by 133 basis points.
- The warehouse segment significantly outperformed the major property types for the prior year. Staff are comfortable with PRIM's overweight to industrial properties as well as the underweight to retail.
- Timberland performance relative to benchmark was enhanced by PRIM's Australian timberland investment as well as exposure to Oregon and higher Black Cherry prices in the Northeast.

PRIM staff provided the Committee with the following updates:

John F. La Cara, Senior Investment Officer – Real Estate & Timberland and Maria Garrahan, Investment Officer – Portfolio Completion Strategies, discussed their collaborative research on public and private real estate portfolio construction. Mr. La Cara mentioned that they would present a more formal review upon project completion, expected to be at the February meeting.

Mr. La Cara provided an update on the hurricane damage at Bear Creek, PRIM's timberland investment in Florida. Mr. La Cara stated that Hurricane Michael passed directly over the property, causing significant damage to the standing timberland. Ms. Chesnick asked about the investment manager's insurance coverage on the property. Mr. La Cara stated that there was insurance coverage in place but that it may only cover 10-20% of the losses. He also stated that this level of coverage was not atypical in the timberland asset class due to the high cost of insurance.

Mr. La Cara and Christina A. Marcarelli, CAIA, Investment Officer – Real Estate & Timberland informed the members that they conducted a market tour of Chile in October. Mr. La Cara characterized Chile as a developed timberland market, comparable to Australia and New Zealand, within a more emerging country. Ms. Marcarelli commented on the industry structure in Chile and pointed out that FIA has managed timberland in Chile on behalf of other clients for approximately four years and has tracked the market for close to 10 years.

IV. Private Real Estate Request for Proposals (RFP) Recommendation (Voting Item)

Ms. Marcarelli provided a recommendation that the Committee approve and recommend to the PRIM Board the engagement of three new Private Real Estate Separate Account managers. The three managers are CBRE Global Investors, Stockbridge Core & Value Advisors and DivcoWest. The recommended allocations for each manager were \$400 million to CBRE, \$400 million to Stockbridge and \$200 million to DivcoWest, for a total allocation of \$1 billion. Ms. Marcarelli confirmed that one of the benefits of a

separate account structure is that allocations can be adjusted as necessary depending on transaction flow and the needs of the portfolio.

Ms. Marcarelli provided an overview of the RFP process including selection criteria, significant dates, the number of responses and which firms were interviewed by the Search Committee. Lastly, Ms. Marcarelli provided a summary of the Search Committee's written materials describing each of the three firms being recommended.

Ms. Marcarelli noted that each of these firms is unique in terms of size, platform, or strategy, and have demonstrated their ability to outperform PRIM's long term return benchmark. All three groups will be additive to PRIM's portfolio and are expected to create additional investment opportunities.

Mr. Trotsky noted that fees were thoroughly negotiated, and that the PRIM team were able to negotiate favorable terms. Ms. Marcarelli agreed and added that PRIM staff and the Search Committee were pleased with the result of the search process and fee negotiations to date and believe that the fee structures should create strong alignment between PRIM and the managers.

The Real Estate and Timberland Committee (unanimously) recommended to the PRIM Board the designation, subject to successful contract negotiations, of CBRE Global Investors, Stockbridge Real Estate, and DivcoWest to provide Private Real Estate Investment Management Services to PRIM.

V. Real Estate Appraisal Request for Proposals (RFP) Recommendation (Voting Item)

Ms. Marcarelli presented a recommendation that the Committee approve and recommend to the PRIM Board the engagement of the Altus Group for annual appraisal services for a three-year term. The engagement will commence January 1, 2019 and end December 31, 2021.

Ms. Marcarelli provided an overview of the RFP process including selection criteria, significant dates, the number of responses and which firms were interviewed by the Search Committee. She also provided a summary of the Search Committee's written materials. Altus Group is the incumbent appraisal provider and has provided PRIM with high-quality, timely appraisal reports during the current engagement. They have demonstrated strong knowledge of PRIM's assets and the various markets where they are located. Altus is one of the largest appraisal service providers in the world and has significant experience servicing institutional investors and investment managers.

Ms. Marcarelli noted that Altus has demonstrated significant and consistent investment in technology. The firm has an advanced platform for managing the appraisal process, and, more importantly, a sophisticated process for compiling data to help analyze appraisal metrics across properties and markets. These tools represent an important differentiator when compared to the other respondents. Altus has also recently introduced an enhanced attribution tool, which PRIM will have access to, providing staff with increased transparency into the property-level drivers of portfolio performance.

Ms. Hatton commented that while we typically like to see appraiser rotation, Altus' size allows them to rotate individual appraisers, which will still provide PRIM with "fresh eyes." Ms. Marcarelli agreed with the comment and added that a significant aspect of Altus' valuation business relates to appraisal management where they are receiving and reviewing third-party appraisals. This provides them with external market data and third-party appraisal metrics, increasing information flow and accuracy.

The recommendation was approved and recommended to the PRIM Board.

The Real Estate and Timberland Committee (unanimously) recommended to the PRIM Board for the designation, subject to successful contract negotiations, of Altus Group to provide Real Estate Appraisal Services to PRIM.

The PRIM Real Estate and Timberland Committee meeting adjourned at 10:49 a.m.

List of documents and exhibits used during the meeting:

- *Minutes of the PRIM Real Estate and Timberland Committee Meeting of May 2, 2018*
- *Minutes of the PRIM Real Estate and Timberland Committee Meeting of August 1, 2018*
- *PRIT Fund Performance Report*
- *BNY Mellon Gross of Fees Performance Report*
- *Real Estate and Timberland Performance Charts*
- *Private Real Estate RFP Recommendation*
- *Townsend Group Private Real Estate RFP Recommendation*
- *Real Estate Appraisal RFP Recommendation*
- *Townsend Group Real Estate Appraisal RFP Recommendation*