



**PENSION RESERVES
INVESTMENT
MANAGEMENT BOARD**

Minutes of the PRIM Real Estate and Timberland Committee Meeting
Wednesday, February 13, 2019

Committee members present:

- Jill S. Hatton, CRE, Chair
- Sarah Kim on behalf of Treasurer Deborah Goldberg
- Lydia Chesnick, Esq.
- Robert Gifford
- Anthony E. Hubbard, Esq (via phone)
- William F. McCall, Jr., CRE (via phone)
- Garlan Morse, Jr., CRE
- Peter O'Connell
- Carly Rose

Committee members not present:

- Jack Lutz, Ph.D.

The PRIM Real Estate and Timberland Committee meeting was called to order at 9:31 a.m.

I. Approval of the Minutes (Voting Item)

The PRIM Real Estate and Timberland Committee approved the minutes of its November 14, 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:

Organizational Update

Mr. Trotsky indicated he was pleased to announce a number of recent staff promotions as follows:

Andre Abouhala on the Public Markets team was promoted to Investment Officer. Andre joined PRIM in 2014 as an Investment Analyst and has become a valuable resource to the team, most recently leading the U.S. micro-cap research and becoming the team's expert in utilizing the eVestment manager database, FactSet portfolio analysis, and the PCS team's proprietary quantitative tools. Andre also earned an MBA from Boston University this past May. Andre will continue to expand his responsibilities in manager monitoring and investment analytics, reporting to David Gurtz, CPA, CFA.

Alyssa Fiore, CFA on the Private Equity team was promoted to Investment Officer. Since joining the Private Equity team in 2016 as an Investment Analyst, Alyssa has made valuable contributions supporting new fund commitments to existing managers, new investment managers and PRIM's expanding co-investment program. Alyssa also supported the team's growth equity research and investment underwriting. Alyssa earned a CFA Charter in November 2017. As an Investment Officer reporting to Mike Bailey, Alyssa will now also have responsibilities for manager monitoring and relationship management. Additionally, she will have a leading role in Private Equity investment research.

Andrew Gromer, CFA on the Public Markets team was promoted to Investment Officer. Andrew joined PRIM in 2016 as an Investment Analyst supporting fixed income investments. More recently, he has also supported the Private Equity team. Andrew is responsible for PRIM's "State of the Industry" research project, which will help guide PRIM's long-term investment strategy. He has participated in several investment industry conference panels where he has spoken on fixed income topics. Andrew earned a CFA Charter in November 2017 and was recently appointed to Chair the CFA Boston Young Leaders Committee. Andrew reports to David Gurtz, CPA < CFA and will continue to expand his responsibilities in manager monitoring and investment analytics.

Bill Li, CFA, CAIA on the Portfolio Completion Strategies team was promoted to Senior Investment Officer - Director of Portfolio Completion Strategies (PCS). Bill joined the Strategy team in 2016 as an Investment Officer and was promoted to Senior Investment Officer in 2017. Bill has expanded and refined PRIM's distinctive suite of analytical tools, manager sourcing processes, idea generation and portfolio construction across several asset class teams. He combines impressive thought creativity and ingenuity with strong technical skills and conceptual understanding. Bill spearheaded the creation of PRIM's hedge fund emerging manager program negotiating new mandates with several hedge fund managers and researched and deployed PRIM's innovative and successful equity hedge program utilizing a put spread collar package of trades. Bill will continue to report to Eric Nierenberg and have responsibility for the oversight of the entire PCS portfolio.

Christina Marcarelli, CAIA on the Real Estate and Timberland team was promoted to Senior Investment Officer. Christina joined the Real Estate and Timberland team as an Investment Officer in 2016 with expertise in asset management, acquisitions and development projects. Christina has been extremely productive since joining PRIM and this past year she successfully led the private real estate RFP process, which resulted in awarding \$1 billion to three real estate investment managers. She also contributed to the team's direct investing platform and portfolio management research. Christina's collaboration with the PRIM Public Markets and Strategy teams has enabled PRIM to expand investments in the Other Credit Opportunities allocation. Additionally, Christina has earned the CAIA charter. Reporting to Tim Schlitzer, Christina will have increased responsibility for manager and property oversight throughout the entire Real Estate and Timberland portfolio.

George Tsipakis on the Investment Operations team was promoted to Director of Investment Operations. George joined the Investment Operations team in 2016 as Manager of Real Estate and Timberland reporting. He has quickly demonstrated the analytical skills necessary to enable the team to innovate, particularly in the real estate direct investing platform. George also restructured PRIM's investment cash operations and improved the team's investment support capacity. George reports to Matt Liposky and will manage a team of four finance and operations professionals responsible for asset class reporting.

Mr. Trotsky also shared with the Committee that **Morgan Burns, CFA, CPA**, an Accounting Assistant on the Finance team, recently appeared on the television game show *Jeopardy*, and did a fantastic job, placing second of three.

Mr. Trotsky also informed the Committee that PRIM has adopted the Global Investment Performance Standards (GIPS) from CFA Institute and is one of only a handful of large public pension funds to do so. Mr. Trotsky added that adopting these standards demonstrates a commitment to transparency, ethical best practices and strong internal controls, and thanked Matt Liposky, PRIM's Chief Investment Operating Officer, for leading the effort.

PRIT Fund Performance Summary

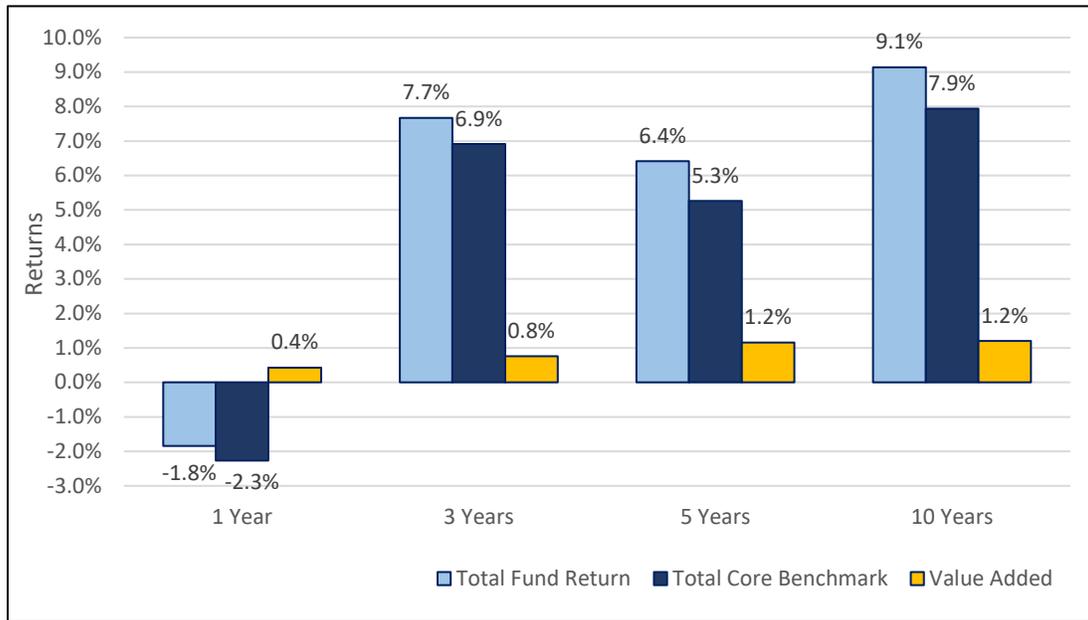
Mr. Trotsky reported investment performance as follows:

As of December 31, 2018, the PRIT Fund net asset value stood at \$69.3 billion. For the one-year ended December 31, 2018, the PRIT Fund was down 1.8%, (-2.3% net), outperforming the total core benchmark of -2.3% by 43 basis points (0 bps net).

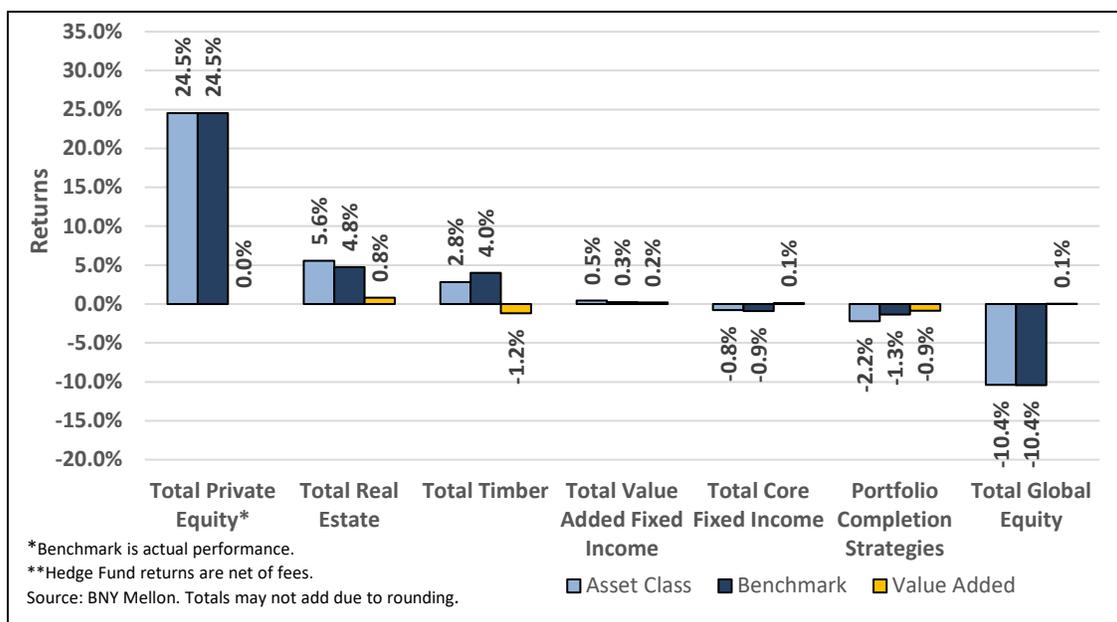
- This performance equates to an investment loss of \$1.6 billion, net of fees.
- Net total outflows to pay benefits for the one-year ended December 31, 2018, were approximately \$1.0 billion.

Mr. Trotsky made reference in his remarks to the following charts:

Total PRIT Fund Returns (Gross of Fees)
Annualized Returns as of December 31, 2018



PRIT Asset Class Performance (Gross of Fees)
Trailing 1-year Performance as of December 31, 2018



PRIT Core Fund Performance Summary
Gross of Fees Performance

Trailing 1-Year Performance as of December 31, 2018

Trailing 1-Year Performance: December 31, 2018	Return	Benchmark Return	Over/(Under) Benchmark (bps)	\$Value (millions)	% of PRIT Fund
Total PRIT Fund	-1.8%	-2.3%	43	69,285	100%
Total Global Equity	-10.4%	-10.4%	5	26,109	37.8%
<i>Domestic Equity</i>	-5.1%	-5.4%	29	11,713	17.0%
<i>International Developed</i>	-14.5%	-14.2%	(28)	10,277	14.9%
<i>Emerging Markets</i>	-15.2%	-15.2%	(3)	4,119	6.0%
Private Equity	24.5%	24.5%	0	8,335	12.1%
Real Estate	5.6%	4.8%	81	6,476	9.4%
Total Timberland	2.8%	4.0%	(117)	2,843	4.1%
PCS	-2.2%	-1.3%	(85)	9,787	14.2%
Value Added Fixed Income	0.5%	0.3%	20	5,749	8.3%
Core Fixed Income	-0.8%	-0.9%	12	8,975	13.0%

PRIT Asset Class Performance (Gross of Fees)

Annualized Returns as of December 31, 2018

1 Year	3 Year	5 Year	10 Year
PRIVATE EQUITY 24.5%	PRIVATE EQUITY 20.8%	PRIVATE EQUITY 19.8%	PRIVATE EQUITY 15.9%
REAL ESTATE 5.6%	REAL ESTATE 7.4%	REAL ESTATE 9.7%	GLOBAL EQUITY 10.2%
TIMBER 2.8%	GLOBAL EQUITY 7.0%	TIMBER 5.6%	VALUE-ADDED FIXED INCOME 9.1%
VALUE-ADDED FIXED INCOME 0.5%	VALUE-ADDED FIXED INCOME 6.8%	GLOBAL EQUITY 4.5%	REAL ESTATE 9.0%
CORE FIXED INCOME (0.8%)	TIMBER 5.9%	CORE FIXED INCOME 4.2%	CORE FIXED INCOME 5.2%
TOTAL PCS (2.2%)	TOTAL PCS 3.3%	VALUE-ADDED FIXED INCOME 3.8%	TOTAL PCS 5.0%
GLOBAL EQUITY (10.4%)	CORE FIXED INCOME 2.9%	TOTAL PCS 2.8%	TIMBER 3.0%

Summary of 2019 Annual Plan Highlights

Mr. Trotsky described to the Committee that each year, each senior staff member and each asset class head prepares an annual plan for 2019. Mr. Trotsky noted that PRIM's Investment Team's Annual Plans are attached as Appendix D and staff is seeking feedback and comment so that the plans may then be presented to the Board at its February 26th meeting for its feedback and comment.

Public Markets and Project SAVE – Phase II

- *Public Markets*
 - Project SAVE – Phase II: Implement internal investment management strategies
 - Partner with asset management firms for PRIM to “Be The First Call”
 - Continue to identify Other Credit Opportunities investments
 - Conduct routine review and update of the Investment Policy Statement
 - Research sector/country-specific investments utilizing factor decomposition techniques.
 - Research concentrated equity managers
 - Project SAVE – Phase II: Continue researching seeding platform opportunities
 - Research high yield and fallen angel investment strategies
 - Continue to upgrade analytical tools to improve investment research/analysis
 - Hire a senior investment officer and an investment analyst
- *Project SAVE – Phase II*
 - Develop business plan to implement an internally-managed Short-Term Fixed Income portfolio.
 - Research front, middle and back office systems and tools required to implement direct investment strategy.

Strategy and PCS

- *Strategy & Asset Allocation*
 - Internal management projects partnering across teams: Short-Term Fixed Income, Concentrated Portfolio, Alternatives Replication, and Real Estate M&A.
 - Expand scope and size of the equity risk mitigation strategy.
 - Refine asset allocation framework through further research quantifying expert opinions.
 - Continue developing an equity market re-risking rulebook/strategy.
 - Expand pool of lecturers and audience for ‘PRIM University’ seminars.
 - Build out research database infrastructure for quantitative equity research.
 - Research team hiring.
- *Risk Management*
 - Hire Risk Director.
 - Roll out regular reporting of PRIT Fund's drawdown vulnerability analysis.
 - Review and aggregate risk systems.
- *Portfolio Completion Strategies*
 - Direct HF:
 - Continue reviewing legacy and existing accounts and recommend actionable items.
 - Ramp up the emerging managers direct HF program from \$150mil to \$500mil allocation.
 - Further identify opportunities in emerging markets for potential investment.

- Fund of Funds: Finish restructuring the Fund of Funds mandate.
- Real Assets: Design evaluation metrics for real asset investments.
- Technology: Fully implement Dynamo CRM system into the team's workflow process.
- Hiring: Add one staff member to the PCS team.

Private Equity

- Implement PRIT Fund asset allocation changes
 - Increase private equity target allocation to PRIT Fund
 - Commit \$1.4 billion to \$2.0 billion to funds
 - Raise co-investment capacity to 20% of annual fund commitments
- Increase investment activity pacing while improving portfolio quality
 - Source managers new to PRIM in target markets
 - Study investment process improvements that remove bottlenecks
 - Explore creative solutions in partnership with third parties
- Develop the team
 - Hire and train investment professionals
 - Collaborate on analytical tools with other PRIM teams
 - Source ideas for Portfolio Completion Strategies and Other Credit Opportunities
- Further integrate the new CRM infrastructure into work streams
- Research private equity investment strategies, sectors and geographies

Communications Strategy

Mr. Trotsky presented a Communications Strategy Update to the Committee mentioning the challenges that exist when trying to communicate PRIM's complexity and sophistication to all the different stakeholders. He also spoke about the transition of the media landscape from traditional to digital media, and the need for PRIM to modernize its communication efforts.

III. PRIM Asset Allocation

Mr. Trotsky described that PRIM is guided by the mandated rate of return which is 7.35%, and as a backdrop for the asset allocation overview, provided the Committee with PRIM's top core investment beliefs as follows:

- We believe that nobody can predict the future, so we don't try.
- We believe nobody can predict the direction of the stock market, so we don't try.
- We don't make tactical asset allocation decisions, or any investment decisions based on market or economic predictions.
- We believe that any investment must be evaluated on three equally important parameters: risk, return and cost. Too often, especially in years like we just had, investors are focused more on return than they are on risk and cost.
- We value a basis point of cost reduction more than a basis point of return. Why? We can count on cost savings every year, but nobody ever really knows what the markets will deliver.

Mr. Trotsky invited Maria Garrahan, Investment Officer, Portfolio Completion Strategies, to present the asset allocation overview.

Ms. Garrahan described that PRIM focuses on achieving a dual objective, 1) seeking to meet the actuarial return of 7.35% and 2) providing adequate downside protection. PRIM defines downside protection as minimizing the probability of a drawdown greater than 20% within the next three years.

Last year, a new asset allocation framework was introduced using principal component analysis (PCA) to explore asset allocation through a different lens. Ms. Garrahan described the analogy of viewing the PRIT fund portfolio as a soup. The ingredients are the asset classes, (equities, bonds, real estate) and the underlying components, principal components, are like the nutrients within the soup. PRIM’s goal is to design the asset allocation (the soup) with a balance of principal components (nutrients) that increases the probability of achieving the dual objective.

The team developed a systematic framework to determine which nutrients (components) offer the most meaningful additions and reductions to the portfolio. The asset allocation process blends this quantitative analysis with insights from NEPC while addressing feasibility/practicality concerns from PRIM’s asset class heads. Ms. Garrahan referred to the following chart summarizing the proposed asset allocation changes:

	<i>AA 2019 Target Range</i>	<i>AA 2018 Target Range</i>	<i>Changes in Target Range</i>
Global Equity (including Put Spread Collar)	34% -- 44%	37% -- 47%	-3%
Core Fixed Income	12% -- 18%	9% -- 15%	+3%
Value-Added Fixed Income	5% -- 11%	7% -- 13%	-2%
Private Equity	10% -- 16%	9% -- 15%	+1%
Real Estate	7% -- 13%	7% -- 13%	
Timberland	1% -- 7%	1% -- 7%	
Portfolio Completion Strategies	8% -- 14%	7% -- 13%	+1%
Probability of Achieving Dual Objective	60%	55%	

IV. 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 Appendix H of the Committee materials.

- Real estate was valued at \$6.5 billion or 9.4% of the PRIT Fund at quarter end.
- Timberland was valued at \$2.8 billion or 4.1% of the PRIT Fund at quarter end.
- PRIM’s private real estate managers purchased six core investments and one non-core investment during the year. Five properties were sold. There have been no significant changes to PRIM’s strategic weights.
- Total Real Estate returned 5.6%, 81 basis points higher than the asset class benchmark during the previous 12-month period.
- The private real estate portfolio returned 9.5%, 235 basis points above benchmark. Mr. Schlitzer noted the underperformance in the LaSalle core portfolio as well as several organizational changes at the firm. Staff continues to have conviction in the quality of the portfolio and management and will work with the investment manager to implement any necessary adjustments.

- PRIM's capital structure continued to be accretive with levered returns adding approximately 183 basis points to the private core return.
- Non-core real estate outperformed the NCREIF benchmark by 268 basis points.
- Timberland returned 6.8% during this period, 117 basis points below the asset class benchmark. Performance was negatively impacted by the loss of standing timber and market impact of Hurricane Michael which hit the Florida panhandle in October 2018.
- PRIM acquired two large properties during the year, one in the U.S. and one in New Zealand for a total of approximately 372,000 acres.

V. Real Estate Policy Recommendation (Voting Item)

John F. La Cara, Senior Investment Officer, Real Estate & Timberland presented a Real Estate Policy Recommendation to the Committee. Mr. La Cara compared the private real estate performance to REITs, including risk-adjusted returns, volatility and correlations. He also reviewed the performance of alternative sectors in the space.

Mr. La Cara stated that the following conclusion were reached:

- REITs offer less diversification benefit than private real estate.
- REITs are highly correlated to public equity markets and have higher volatility than private real estate.
- the PRIM Fund's risk/return profile would be enhanced by reducing REIT exposure in favor of private real estate.

Accordingly, we recommend that the range for investing in REITs be decreased to 0% to 30% from 10% to 30% with a long-term objective of being invested 100% in private real estate. We also recommend an increase in the target range for private Core real estate to 60-100% from 60-80%.

The Real Estate and Timberland Committee (unanimously) recommended to the PRIM Board that the Board approve the recommended change to PRIM's Investment Policy Statement as described in Appendix I of the Expanded Agenda, and further to authorize the Executive Director to take all actions necessary to effectuate this vote.

VI. 2019 Real Estate and Timberland Annual Plan

Mr. Schlitzer presented the Real Estate and Timberland team's annual plan, summarized as follows:

- Finalize the Investment Management Agreements and onboarding of three new private real estate separate account managers. Begin overseeing sourcing on \$1 billion of newly committed capital.
- Collaborate with Strategy team to finalize and implement real estate and PCA (Principal Component Analysis) findings on public and private real estate mix.
- Develop real estate portfolio debt signals for a potential deleveraging scenario
- Evaluate specialty property types beginning with senior housing
- Identify investment analyst candidates
- Implement Dynamo software in PRIM's management and investment process
- Evaluate current private market investment manager fee structures
- Conduct a Request for Qualifications for timberland appraisers
- Conduct an in-depth review of the Pacific Northwest timberland portfolio
- Continue to collaborate with the public markets team to evaluate Other Credit Opportunities (OCO)

- Work with PRIM's existing private real estate investment managers to execute the annual business plans (leasing, capital, dispositions). Refine the internal tools used to identify operational and capital market risks in a late cycle environment.

VII. 2019 Real Estate Internal Management Plan (Voting Item)

Mr. Schlitzer presented the 2019 Real Estate Internal Management Plan for approval, summarized as follows:

- Complete 1-3 investments
- Effectively monitor and exercise decision authority on PRIM's existing investments
- Continue to source and develop strategic relationships with the operator, developer and brokerage communities
- Hire an analyst to assist with pipeline management, underwriting and due diligence.
- Continue to incorporate PRIM's information technology and research resources into the direct investment process

The Real Estate and Timberland Committee (unanimously) recommend to the PRIM Board the approval of the 2019 Real Estate Internal Management Plan as described in Appendix K of the Expanded Agenda, and further to authorize the Executive Director to take all actions necessary to effectuate this vote.

The PRIM Real Estate and Timberland Committee meeting adjourned at 12:00 p.m.

List of documents and exhibits used during the meeting:

- *Minutes of the PRIM Real Estate and Timberland Committee Meeting of November 14, 2018*
- *PRIT Fund Performance Report*
- *BNY Mellon Gross of Fees Performance Report*
- *2019 Investment Team Annual Plans*
- *Communications Strategy Executive Summary Presentation*
- *2019 Asset Allocation Presentation*
- *NEPC Asset Allocation Presentation*
- *Real Estate and Timberland Performance Charts*
- *Public Real Estate Research Presentation*
- *2019 Real Estate and Timberland Annual Plan*
- *2019 Real Estate Internal Management Plan*