

Minutes of the PRIM Administration and Audit Committee Thursday, May 4, 2017

Committee members present:

- Robert L. Brousseau, Chair
- Treasurer Deborah B. Goldberg
- Ted C. Alexiades, CPFO
- Patrick E. Brock
- Eileen Glovsky
- Dennis J. Naughton
- Michele A. Whitham, Esq.

Committee members not present:

- Joseph A. Connolly
- Karen E. Gershman, CPA
- James Hearty
- Theresa T. McGoldrick, Esq.

The PRIM Administration and Audit Committee meeting was called to order at 10:00 a.m.

I. Approval of the Minutes

The Administration and Audit Committee unanimously approved the minutes of the February 2, 2017, meeting.

II. Executive Director/Chief Investment Officer Report

Michael G. Trotsky, CFA, Executive Director and Chief Investment Officer, updated the Committee on numerous matters, including, but not limited to:

Market Summary

Financial markets continue to grind higher despite signals that tax reform, deregulation and infrastructure spending – essentially the Trump pro-growth agenda—may be harder to achieve than originally thought.

In the United States, we continue to see slow economic growth and mixed economic indicators, while Europe is clearly picking up and China may be slowing down. Importantly, in the first calendar quarter we saw sentiment of equity investors and bond investors begin to diverge: equities continued higher while bond yields, particularly long-duration bonds, moved lower. This may signal a change in expectations around the long-term health of the global economy. While equity investors are optimistic and stock prices have moved steadily higher since last November, bond investors have grown more cautious recently, causing long-term yields to move lower.

And while market volatility has been low while markets have moved higher, we are still mindful of the many economic and geopolitical risks that could disrupt this trend in the future. Without additional economic data to confirm a more robust global expansion, equity valuations and expectations remain elevated, and we believe it is prudent to remain cautious, therefore the asset allocation adjustments we made earlier in the year remain appropriate.

PRIT Fund Performance Summary

Mr. Trotsky reviewed PRIT Fund performance with the Committee, highlighting key points including: As of March 31, 2017, the PRIT Fund net asset value stood at \$65.1 billion.

For the quarter ended March 31, 2017, the PRIT Fund was up 4.9%, outperforming the total core

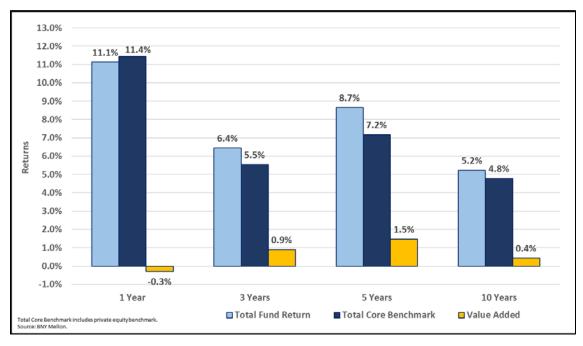
benchmark of 4.2% by 66 basis points.

- This performance equates to an investment gain of \$3.0 billion over the quarter.
- This outperformance equates to \$412 million of value above the benchmark return over the quarter.
- Six of the seven major asset classes outperformed their respective benchmarks over the quarter.

For the one-year ended March 31, 2017, the PRIT Fund was up 11.1%, underperforming the total core benchmark of 11.4% by 30 basis points.

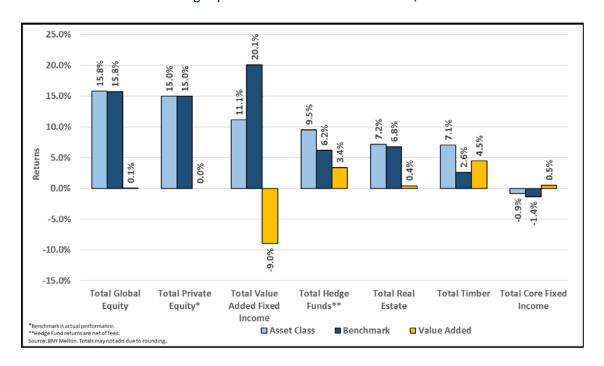
- This performance equates to an investment gain of \$6.7 billion over the year.
- This underperformance equates to \$181 million of value below the benchmark return over the year.
- Six of the seven major asset classes outperformed their respective benchmarks over the year.
- Net total outflows to pay benefits for the one-year ended March 31, 2017, were approximately \$1.5 billion over the year.

Total PRIT Fund Returns (Gross of Fees) Annualized Returns as of March 31, 2017



PRIT Asset Class Performance (Gross of Fees)

Trailing 1-year Performance as of March 31, 2017



PRIT Core Fund Performance Summary

Gross of Fees Performance
Trailing 1-Year Performance as of March 31, 2017

| Trailing 1-Year Performance: Mar. 31, 2017 | Return | Benchmark Return | Over/(Under) Benchmark (bps) | \$Value (millions) | % of PRIT Fund |
|---|--------|---------------------|------------------------------------|-----------------------|----------------------|
| Total PRIT Fund | 11.1% | 11.4% | (30) | 65,083 | 100% |
| Total Global Equity | 15.8% | 15.8% | 5 | 28,996 | 44.6% |
| Domestic Equity | 17.9% | 18.5% | (56) | 12,829 | 19.7% |
| International Developed | 11.1% | 11.9% | (75) | 11,263 | 17.3% |
| Emerging Markets | 21.4% | 17.0% | 443 | 4,903 | 7.5% |
| Private Equity | 15.0% | 15.0% | 0 | 6,960 | 10.7% |
| Real Estate | 7.2% | 6.8% | 40 | 6,369 | 9.8% |
| Total Timberland | 7.1% | 2.6% | 446 | 2,451 | 3.8% |
| Hedge Funds | 9.5% | 6.2% | 335 | 5,522 | 8.5% |
| Value Added Fixed Income | 11.1% | 20.1% | (899) | 5,354 | 8.2% |
| Core Fixed Income | -0.9% | -1.4% | 50 | 7,606 | 11.7% |

PRIT Asset Class Performance (Gross of Fees)

Annualized Returns as of March 31, 2017

| 1 Year | 3 Year | 5 Year | 10 Year | |
|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--|
| GLOBAL EQUITY 15.8% | PRIVATE EQUITY 15.4% | PRIVATE EQUITY 17.5% | PRIVATE EQUITY 13.7% | |
| PRIVATE EQUITY 15.0% | REAL ESTATE 10.9% | REAL ESTATE 11.3% | TIMBER 6.6% | |
| VALUE-ADDED FIXED INCOME 11.1% | TIMBER 5.6% | GLOBAL EQUITY 9.0% | VALUE-ADDED FIXED INCOME 6.6% | |
| HEDGE FUNDS (NET OF FEES) 9.5% | GLOBAL EQUITY 5.3% | TIMBER 7.0% | REAL ESTATE 6.4% | |
| REAL ESTATE 7.2% | CORE FIXED INCOME 5.3% | HEDGE FUNDS (NET OF FEES) 5.4% | CORE FIXED INCOME 5.0% | |
| TIMBER 7.1% | VALUE-ADDED FIXED INCOME 3.2% | VALUE-ADDED FIXED INCOME 5.1% | GLOBAL EQUITY 4.4% | |
| CORE FIXED INCOME (0.9%) | HEDGE FUNDS (NET OF FEES) 2.7% | CORE FIXED INCOME 4.0% | HEDGE FUNDS (NET OF FEES) 3.1% | |

Organizational Update

Mr. Trotsky informed the Committee of recent changes and awards involving PRIM staff, including:

Luis J. Roman, Ph.D. joined the PRIM team as Senior Investment Officer – Director of Risk Management on April 17. Mr. Trotsky told the Committee: Luis joins us after more than 20 years in the investment industry and academia. Prior to joining PRIM, Luis was the U.S. Head of Multi Asset Class and Alternatives Investment Risk at Columbia Threadneedle Investments, Global Head of Fixed Income Investment Risk at State Street Global Advisors and a Quantitative Analyst at Putnam Investments. He is a recognized expert in the design and implementation of risk management processes for asset management firms. Luis began his career in academia where he was a visiting assistant professor at the University of California in Irvine and the Worcester Polytechnic Institute. He earned his Master's of Science in Applied Mathematics from the University of Chicago and his Ph.D. in Mathematics from the University of Minnesota.

Bill Li, CFA, CAIA – Investment Officer – Hedge Funds and Low Volatility Strategies, recently earned the Chartered Alternative Investment Analyst (CAIA) designation after passing the required two-part exam. The CAIA curriculum covers a broad knowledge base in alternative investments including hedge funds, private equity, real assets and structured products.

For the second consecutive year, PRIM's PCS team (Eric R. Nierenberg, Ph.D. and Bill Li, CFA, CAIA) have been named finalists at the Institutional Investor Magazine's 15th Annual Hedge Fund Industry Awards to be held in June in New York City. The award recognizes excellence in innovation and thought leadership in the Hedge Fund space. Our team joins four other finalists from North America in the Large Public Plan category. As a reminder, PRIM won this award last year. It is highly unusual to be nominated for the same award two years in a row, and a fitting tribute to the leadership that PRIM has demonstrated in the Hedge Fund sector.

Investment Team Personnel Moves

- We are rolling out a series of personnel moves focused on enhancing PRIM's role as a leading innovator and performance leader among public pension funds.
- Michael R. Bailey, Senior Investment Officer for Private Equity, will become the second person to take
 part in PRIM's Professional Development Program, which rotates asset class heads through teams
 other than their own. Michael joined PRIM in 2013.
- Sarah N. Samuels, CFA, CAIA, Deputy Chief Investment Officer, will add responsibility for Hedge Funds to her current responsibilities overseeing Public Markets. Sarah was the first participant in PRIM's Professional Development Program. She joined PRIM in 2011.
- Eric R. Nierenberg, Ph.D., who, since joining PRIM in 2012 has been Senior Investment Officer –
 Director of Hedge Funds and Low Volatility Strategies, has been named PRIM's Chief Strategy Officer.
 In this new role, Eric will look across the entire \$65 billion investment portfolio for innovative approaches to identify diversification strategies, enhance returns and reduce fees.

Dr. Nierenberg's designation as PRIM's Chief Strategy Officer is effective immediately. The re-aligning of responsibilities related to Hedge Funds will be a gradual process with no fixed timetable.

III. Interim Meeting with Auditors

David M. Gurtz, CPA, CFA, Chief Operating Officer and Chief Financial Officer, introduced Dave Gagnon, KPMG Audit Partner and PRIM's lead engagement partner, and Jen Serrano, KPMG Audit Manager. As of December 31, 2016, KPMG had audited approximately 17% of the PRIT Fund. These audits included the entire Real Estate portfolio, two Timberland portfolios and 12 Hedge Fund and PCS portfolios.

Mr. Gagnon first addressed a recent incident that caused KPMG to terminate six employees, including the head of its audit practice in the U.S., after it was discovered that these individuals were given improper confidential information regarding planned audit inspections by its regulator, the Public Company Accounting Oversight Board (PCAOB). Mr. Gagnon noted that once KPMG became aware of this, KPMG conducted an investigation and determined that these six employees violated the firm's code of conduct and were terminated immediately. Frank Casal has been named the new Vice Chair of Audit, having served some of KPMG's largest clients. Mr. Casal is from KPMG's Boston office.

Mr. Gagnon and Ms. Serrano updated the Committee on the audit plan, which includes the KPMG team and planned test work, for the June 30, 2017, audits of PRIM and the PRIT Fund. Mr. Gagnon noted that the June 30, 2017, audited financial statements of PRIM, the PRIT Fund and the Comprehensive Annual Financial Report (CAFR) will be presented at the November 2017 Committee meeting.

Mr. Gagnon informed the Committee that the PRIT Core Realty Holdings, LLC (PRIT Core Realty) financial statements audit as of December 31, 2016, resulted in an unqualified opinion. This audit, which is required due to PRIM's real estate leverage program, encompasses the PRIT Fund's entire real estate asset sleeve including core and non-core properties, commingled fund investments and real estate investment trust (REIT) securities.

Mr. Gagnon noted that the audit of the timberland portfolio managed by the Campbell Group resulted in an unqualified opinion while the audit of the other timberland portfolio, managed by FIA, is underway and the reporting deadline is expected to be met without issue.

Mr. Gagnon updated the Committee on the 12 Hedge Fund and PCS managed account portfolio audits. This was the second year of these audits and all 12 portfolios resulted in unqualified opinions.

Mr. Naughton asked for an explanation of protocols for instances where auditors suspect fraud. Mr. Gagnon responded that KPMG would first need to determine whether the suspected fraudulent event

was internal or external. If it were external, KPMG would bring the issue first to PRIM senior management and then to this Committee, through its Chair. If it were internal, relating to a member of management, then KPMG would go directly to the Chair of this Committee. Either way, Mr. Gagnon stated, KPMG would, ultimately, communicate any fraudulent activity to this Committee.

Mr. Gurtz thanked KPMG and PRIM's finance team for their hard work to complete the December 31, 2016, audits.

Mr. Gurtz also noted that PRIM had earned its 12th Government Finance Officer Association (GFOA) Certificate of Achievement for Excellence in Financial Reporting award for the June 30, 2016, CAFR.

IV. Results of Equal Pay Audit and Equal Pay Presentation

Mr. Gurtz said that as part of PRIM's Diversity initiatives, PRIM staff is following the strategies detailed in *Equal Pay MA: Employer Tool Kit,* created by Treasurer Goldberg's office. Equal Pay MA is a website dedicated to promoting wage equality and offering tools and strategies for employers and employees who want to close any gender wage gaps. The website includes resources such as a guide designed to explain how to identify, understand and promote equal pay in the workplace. The *Employer Tool Kit's* first strategy to promote equal pay within a firm's current workforce is to "perform an internal equal pay audit and correct discrepancies." PRIM staff commissioned McLagan, PRIM's consultant, to conduct a gender pay audit, to determine if PRIM has a gender wage gap. Mike Oak, an associate partner in McLagan's asset management practice, presented McLagan's findings to the Committee.

Mr. Oak began his presentation by stating that McLagan was hired to answer the question: Does PRIM provide equal pay for equal work? Are men paid more, less, or the same than women for the same position at PRIM? Mr. Oak stated that based on the audit, there is no evidence of a gender pay gap at PRIM.

Mr. Oak noted that at PRIM, for each job classification there is a minimum and maximum salary range, with the midpoint being the middle of the salary range. McLagan found that PRIM's female employees are paid slightly more competitively than their male counterparts, as measured by salary variance to midpoint, (i.e., on average, males are positioned 6% below their midpoints while females are positioned 3% below). Mr. Oak explained that McLagan also considered the performance and tenure of employees when comparing salaries. For example, a person meeting performance expectations and working in a position for 2-3 years would have a predicted salary at the midpoint, while a star employee, who is exceeding performance expectations and working in the position for over five years, would have a predicted salary 20% above the midpoint. Based on McLagan's predicted salaries, 60% the female employees at PRIM are paid at, or above, their predicted salary levels compared to 35% of the male employees at PRIM. Mr. Oak noted that these differences are not statistically meaningful given the relatively small sample size of PRIM's staff.

Treasurer Goldberg commented that Treasury also conducted a gender wage study and found that Treasury also has no pay gap. Treasurer Goldberg noted it would be interesting to see if the data holds true as PRIM adds more women, and that at Treasury there are more woman then men on staff.

Mr. Oak noted that within the investment management industry, only 20% of employees are women, with just 12-13% of women holding senior level positions. Therefore, the pool of female applicants is the challenge in the investment industry.

Mr. Brousseau asked Mr. Oak if McLagan's other clients have performed similar gender wage audits. Mr. Oak said that he was not aware of another client that has performed a similar gender wage audit.

Mr. Gurtz highlighted the other four steps outlined in the *Tool Kit* and what PRIM has done in those areas. The second step in the *Tool Kit* is to *Establish Systems to Maintain Equal Pay*. Mr. Gurtz noted that PRIM has established systems to maintain equal pay via a competitive and transparent compensation philosophy and plan and an annual performance evaluation process that objectively reviews all employees. The third step is to *Create a Gender-Neutral Workplace Culture*. PRIM works to create a gender-neutral workplace culture by providing a paid parental leave policy and predictable work schedules for employees. The fourth step is to *Educate Employees About Their Rights*. PRIM encourages open conversations regarding pay, with both Mr. Trotsky and Mr. Gurtz noting that they have had open and frank pay discussions with several staff members. Lastly, the *Tool Kit* recommends: *Invest in Your Current Talent*. Mr. Gurtz noted that PRIM encourages all PRIM employees to seek out professional development and educational opportunities and PRIM has the Professional Development Program, which allows the strongest employees to continue expanding their skill sets.

Mr. Gurtz also mentioned that PRIM is in the process of updating the Employee Manual, which details workplace harassment and violence policies to ensure a safe space for all employees, and PRIM plans to conduct periodic wage audits in the future to ensure PRIM continues to have no gender pay gaps.

Ms. Glovsky recommended that PRIM conduct workplace harassment trainings in person rather than online.

V. Draft Fiscal Year 2018 Operating Budget (Voting Item)

Mr. Gurtz and Dan C. Eckman, CPA, Director of Finance and Administration, presented the Draft Fiscal Year (FY) 2018 PRIM Operating Budget. Mr. Gurtz thanked Cathy Hodges, Senior Manager of Finance, and the rest of the Finance team for its work on the proposed budget.

Mr. Gurtz noted the total FY 2018 Budget is projected to be \$359 million, or 56 basis points (bps) of the projected average PRIT Fund assets. This year's budget is based on projected average PRIT Fund assets of \$64 billion, which is a 6.7% increase of assets compared to last year's projected average assets of \$60 billion. As most of PRIM's fees relate directly to assets, higher average assets will result in higher fees. Therefore, the FY 2018 budget is 3.9%, or \$13.5 million, larger than FY 2017 Budget, however in basis points, the budget decreases from 58 bps to 56 bps.

Mr. Gurtz explained the budget is composed of 3 sections: Investment Management Fees, Third-Party Service Providers, and Operations. Investment Management Fees comprise approximately 92.5% of the total budget. These fees are paid to investment managers to invest the assets of the PRIT Fund. These fees are grouped by asset class. The PRIT Fund's asset allocation drives fee structure. For example, the Global Equities target asset allocation is 40% of the PRIT Fund, the largest asset class – yet only requires 15% of the total budget to implement. This is due to the availability and use of inexpensive passive management for a portion of the global equities portfolio – thus significantly driving costs down. Contrast that with Private Equity, historically PRIM's highest-returning asset class and at an 11% allocation now, which was just increased from 10% at the February Board meeting, and is an expensive asset class, with no ability to passively replicate it, and therefore requires 31% of PRIM's FY 2018 budgeted fees. Again, through Project SAVE, PRIM staff has worked to drive down these costs.

Mr. Gurtz went on to explain that this budget is based on continued asset growth, using NEPC's 5-7-year growth assumptions, however, future performance is not predictable, so actual fees will vary, but PRIM's budget provides a very good approximation of projected expenses. Also, no performance fees, incentive fees or carried interest are projected in this budget as it is difficult, if not impossible, to estimate future performance.

Mr. Gurtz noted the next section of the budget is the Third-Party Service Providers which include the projected fees for all of PRIM's advisers, consultants, custodian, auditor, tax, legal, risk systems and

investment analytical tools. Most of these vendors are obtained through competitive RFPs. These fees sum to \$13.5 million, or 3.8% of the total budget, just over 2 bps.

Mr. Gurtz noted the last section of the budget is Operations and includes budgeted expenses for PRIM staff compensation and benefits, rent, insurance, office supplies, computers and technology, and other goods and services necessary to run PRIM. The Operations budgeted fees amount to just over \$13 million, or 3.7% of the total budget, or just over 2 bps.

Ms. Glovsky asked if PRIM owns the disaster recovery (DR) equipment it uses? Anthony Falzone, Chief Technology Officer, responded that PRIM does own its DR equipment. He said that as PRIM replaces equipment used for primary IT functions, the equipment being replaced is deployed as DR equipment when appropriate.

Mr. Brousseau thanked Mr. Gurtz and his team for the budget presented and mentioned that PRIM started showing basis points in its budget presentation last year, which allows better comparison of expenses from one asset class to another and from one year to the next.

The Administration and Audit Committee unanimously approved a recommendation to the PRIM Board to approve the Draft Fiscal Year 2018 PRIM Operating Budget, as presented and as contained in Appendix D of the Expanded Agenda, and further to authorize the Executive Director to take all actions necessary to effectuate this vote.

VI. Results of the PRIM Board Self-Evaluation

Mr. Brousseau, Chair of the Administration and Audit Committee, introduced Tom Iannucci and Jenny Tam from Cortex Research, who presented the results of the Board self-evaluation, via telephone. Mr. Brousseau mentioned that all Board members completed the survey and participated in a follow-up telephone conversation with Cortex.

Mr. Iannucci noted that the first pages of Cortex's Report of Findings provide a high-level summary of the results, and in general the Board is very pleased with its performance and the management team at PRIM. Appendix C of the report is the summary list of the recommended actions and it listed five areas that were suggested by Trustees to further enhance the Board's effectiveness.

The first area was Board and Committee meeting packages. The report recommended PRIM consider whether more-detailed committee memos should accompany Committee recommendations to the Board to provide Trustees who may not have attended Committee meetings additional background on the Committees' decision-making processes, and rationales. Members also suggested that Board meeting packages include biographies of newly appointed and elected Trustees. And finally, they recommend that staff investigate moving to paperless meeting packages.

The second area was Board and Committee meeting administration feedback and included a reminder that Board and Committee members need to arrive at meetings on time to enhance effectiveness of the meetings. Trustees also suggested PRIM consider arranging for a larger room for the meetings if they get to be too crowded. Also, a suggestion was made to ask management to review the feasibility of modifying the Committee meeting schedule so that Committee meetings are not held on three consecutive days.

The third area was Open Meeting Laws and a recommendation was made that PRIM consider scheduling an in-house educational session about the Open Meeting Laws.

The fourth area was Committee composition, with a recommendation to review the manner in which the Board structures and utilizes its Committees, including the number of Committee members, term lengths and the appointment process. Mr. Iannucci noted that this will be reviewed as part of the Governance Manual review.

The final area was the Board's focus, and for the Board to consider ways to focus on long-term strategic issues, such as asset allocation, staffing and risk management, and less on manager selection. Again, Mr. lannucci noted that this will be reviewed as part of the Governance Manual review. The Trustees also recommended that at the Board retreat, the Board should discuss the role, in relation to fiduciary duty, of promoting social and environmental goals and objectives, and the feasibility of promoting workplace diversity programs among PRIM's vendors.

Mr. Naughton mentioned that he did not understand the suggestion by the Board members in regards to the open meeting law as the meetings have always been open to the public. Ms. Glovsky noted that people may feel constrained because they don't understand what they can and can't speak about during an open meeting.

Mr. Brousseau noted that the request to change the committee meeting schedule has been made several times previously but found to be not feasible, and that if someone has a plan as to how this could be done, he or she can suggest it to staff.

Treasurer Goldberg highlighted some comments about social good versus business imperative and duty. Treasurer Goldberg stated that PRIM has tried to educate members regarding what the best public pensions funds are doing and that good governance is not only a social good but a business imperative and consequently many of the proposals PRIM has made and will make are based on good governance and business imperative. Treasurer Goldberg recommended that at the Board retreat, the Board discuss what it means in the 21st century to be a fiduciary of a public pension plan.

VII. Legal/Legislative Update

PRIM's General Counsel updated the Committee on legislative proposals to enlarge the PRIM Board, and indicated also that the Governor's budget in January had contained a provision that would permit the MBTA to invest its assets in the PRIT Fund, and that the more recent House budget also contained the same provision.

VIII. Other Matters

The Committee members briefly discussed the following topics:

- a. March 2017 Operating PRIM Budget
- b. Travel and Staff Development
- c. Client Service

The PRIM Administration and Audit Committee meeting adjourned at 12:20 p.m.

List of documents and exhibits used during the meeting:

- Minutes of the PRIM Administration and Audit Committee Meeting of February 2, 2017
- KPMG's Fiscal Year 2017 Audit Plan
- McLagan's Equal Pay Audit Presentation
- Draft Fiscal Year 2018 Operating Budget
- March 2017 PRIM Operating Budget
- Travel and Staff Development