



**Minutes of the PRIM Investment Committee Remote Meeting
Tuesday, November 15, 2022**

Committee members present:

- Treasurer Deborah Goldberg, Chair
- Joseph Bonfiglio
- C. LaRoy Brantley
- Michael Even
- Constance Everson, CFA
- Ruth Ellen Fitch, Esq.
- James Hearty
- Peter Monaco
- Paul Shanley, Esq.
- Glenn Strehle, CFA
- Timothy Vaill

Committee members not present:

- Phillip H. Perlmutter
- Philip Rotner

The PRIM Investment Committee meeting was called to order at 9:32 a.m. Chair Treasurer Deborah Goldberg announced that the meeting was being held by internet and telephone in accordance with the provisions of Massachusetts, “Chapter 22 of the Acts of 2022” which was signed into law on February 15, 2022, and most recently amended on July 16, 2022, that includes an extension until March 31, 2023 of the remote meeting provisions of the March 12, 2020, Executive Order “Suspending Certain Provisions of the Open Meeting Law”. Accordingly, all members of the Committee participated remotely via telephone and/or internet enabled audio and video conferencing, and all votes were taken by roll call. Public access to the deliberations of the Committee was likewise provided via telephone, with presentation materials made available on PRIM’s website (www.mapension.com). At the start of the meeting, the names of the members participating remotely were announced.

I. Approval of the Minutes (Voting Item)

The PRIM Investment Committee approved, by unanimous roll-call vote, the minutes of its August 2, 2022, meeting.

II. Executive Director / Chief Investment Officer Comments

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

Mr. Trotsky congratulated Treasurer Goldberg on her recent re-election for her third term as Treasurer and Receiver General. Mr. Trotsky noted the landslide victory as Treasurer Goldberg received the most votes of any candidate running for state-wide office. PRIM staff look forward to working with Treasurer Goldberg and her staff over the next four years.

Mr. Trotsky noted the global challenges of the last two quarters persisted into the September quarter. During the September quarter COVID continued with a significant number of daily cases in the US and worldwide, while the flu and other respiratory illnesses, namely RSV, were on the rise. Interest rates remained stubbornly high, and inflation remained at multi-decade highs; markets digested slowing economic growth worldwide, tightening monetary policy, the Russia/Ukraine war, and continued

geopolitical tensions. This provided a significant headwind for economies and financial markets in the September quarter, making it the third consecutive quarter of market declines. Through this challenging period, the PRIT Fund performance was stronger than the markets and most of our peers. We remain pleased with the resiliency of the Fund and its performance over all time periods, including in the September quarter, and throughout several different market environments.

The Fund was down 4.7%, net, in the September quarter as compared to a 60/40 mix, which was down 6.0%. Market downturns create good buying opportunities, and the PRIM team has been busy identifying many new opportunities. Deployment of capital to new ideas of \$6.9 billion last fiscal year was a 58 percent increase over the previous year. In the current quarter, deployment of new capital is expected to total approximately \$800 million. Rebalancing trades increase during times of elevated market volatility; this ensures the deployment of capital to asset classes with the most significant declines. Rebalancing trades last fiscal year exceeded \$8 billion, and in the first five months of this fiscal year, July through November, rebalancing trades exceeded \$3.5 billion.

The deployment of capital to new ideas and rebalancing of the portfolio was timely as there has been a significant rebound in the markets since the end of the September. The S&P 500, for example, was down more than 15% for the 12-month period ending September but has gained 11.5% in October and November alone.

The outlook for the global economy is uncertain and PRIM does not trade or adjust the portfolio on any projections of the future. We remain pleased with the performance of the PRIT Fund as it is carefully constructed to perform well in a variety of market conditions.

Organizational Update

Mr. Trotsky announced that Jessica Murphy joined PRIM in October as the Manager of Performance Reporting. Jess comes to us from Bank of New York Mellon where she served as Lead Manager within the bank's Performance Reporting Group. Jessica is familiar with PRIM, having served as PRIM's main point of contact for all performance reporting matters for the past 13 years and she brings more than 16 years of performance reporting experience to the organization. At BNY Mellon, Jess also oversaw performance reporting for many other large public pension funds, endowments, and corporate clients. She earned a Bachelor of Science degree in Economics and Finance from Bentley College, and will report into our Chief Investment Operating Officer, Matt Liposky.

Sara Coelho was promoted to Finance Manager. Sara was hired in November of 2018 and has excelled first as a Corporate Accountant and then as a Senior Corporate Accountant. Sara's work ensures that PRIM's month-end close is completed timely and accurately. Sara has also expanded her role with payroll, time and attendance, and benefits by becoming an expert on Replicon, the human resources system. She has also taken on a larger role with supervision of finance staff and reviews a large volume of their work. Sara earned a Bachelor of Science in Finance and Accounting Management from Northeastern University.

Mini Kouame was promoted to Investment Officer on the Research team. Hired in July of 2021, Mini is responsible for multiple research initiatives, including ESG research and blockchain research. Mini earned an MBA from ESCP Europe, a top university in Europe and a master's degree from Harvard's Kennedy School. Prior to the Kennedy School, Mini spent eight years in management consulting where he provided solutions to top-level executives using a strategic, data-driven approach. Mini is currently enrolled in the prestigious Certificate in Quantitative Finance (CQF) where he will continue to build upon his data science skillset.

Liu Liu was promoted to Investment Officer on the PCS team. Hired first as an intern in 2017, Liu quickly gained the confidence of her managers and was offered a full-time position in September of 2018. Liu has

earned both a CFA charter and CAIA charter during that time. Liu has a master's in finance from Brandeis University and a bachelor's degree in finance from Shanghai Jiao Tong University.

Chuck LaPosta was promoted to Director of Fixed Income on the Public Markets team. Since being hired in September of 2013, Chuck has become PRIM's fixed income expert and he continues to identify unique opportunities by working collaboratively with other PRIM asset class teams. He is an excellent communicator of fixed income investments, concepts, and trends, which can be quite complex.

Recognition

On September 13th at a ceremony in New York City, *Institutional Investor* recognized PRIM for our leading work on ESG, by bestowing on PRIM and our partners on the MIT Sloan School Aggregate Confusion project the "Partnership of the Year" award. The project works to "reduce the level of noise in ESG measurement" by improving data available to managers and allocators. We extend our congratulations to the entire team, and to PRIM's Director of Research, Maria Garrahan, who spoke on our behalf on accepting the award. This recognition reflects the leading role our team and partners are playing in driving the research in this evolving area.

Tony Falzone, PRIM's Deputy Executive Director and Chief Operating Officer and Jay Leu, PRIM's Director of Risk, were recently selected by Treasurer Goldberg as recipients for this year's Performance Recognition Program. Each of them has been selected to receive a citation from the Treasurer later this month at a ceremony to recognize their outstanding performance in their respective areas.

The Governor's office will recognize PRIM's FUTURE Initiative, the effort to increase the use of diverse investment managers and vendors, for the Commonwealth Equity in Governance Award. The ceremony for this award will be held by the Governor's office on December 14th at the Boston Convention Center. David Gurtz, Deputy Chief Investment Officer, and the entire team worked to create and successfully execute PRIM's FUTURE Initiative, the program to implement the Investment Equity legislation created and championed by Treasurer Goldberg and her staff and signed into law in January of 2021.

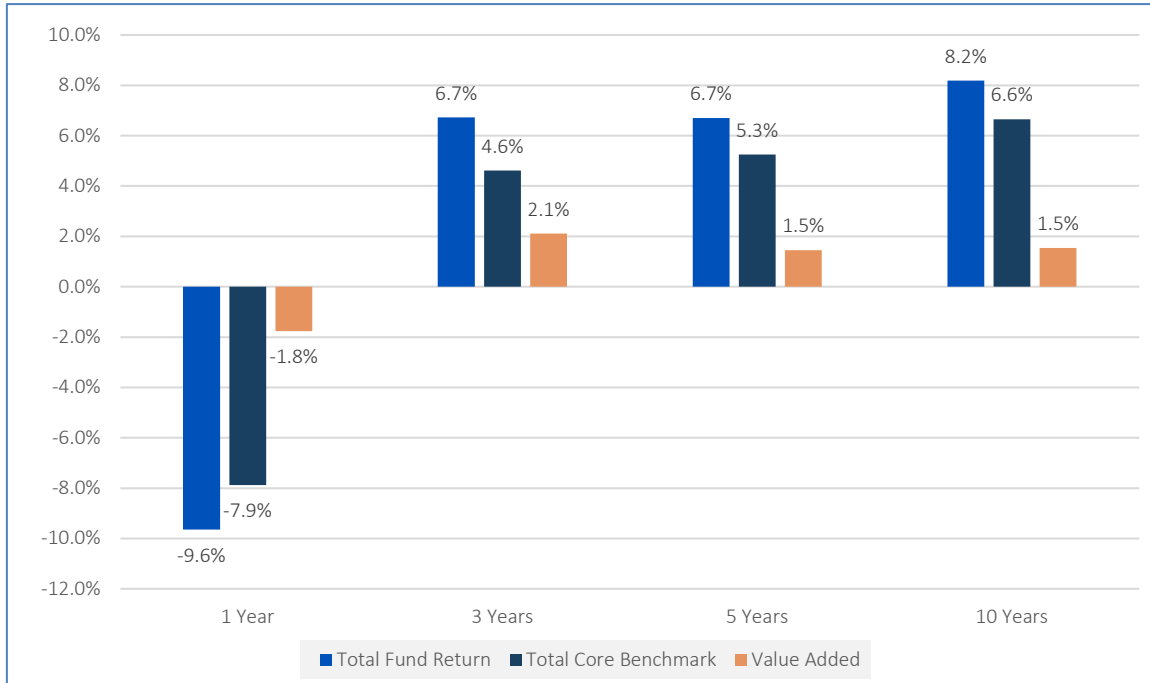
Treasurer Goldberg has been selected to receive the Northeast Women in Public Finance Freda Johnson Lifetime Achievement Award. "The award recognizes a woman serving or who has served in a position for a public or non-profit issuer who exemplifies the qualities that Freda Johnson brought to our industry as a trailblazer, leader, innovator, and mentor."

PRIT Fund Performance

Mr. Trotsky noted for the one-year ended September 30, 2022, the PRIT Fund was down -9.6%, (-10.1% net), underperforming the total core benchmark of -7.9% by 178 basis points (220 bps net). The following chart summarizes the PRIT Fund performance for the one-year ended September 30, 2022.

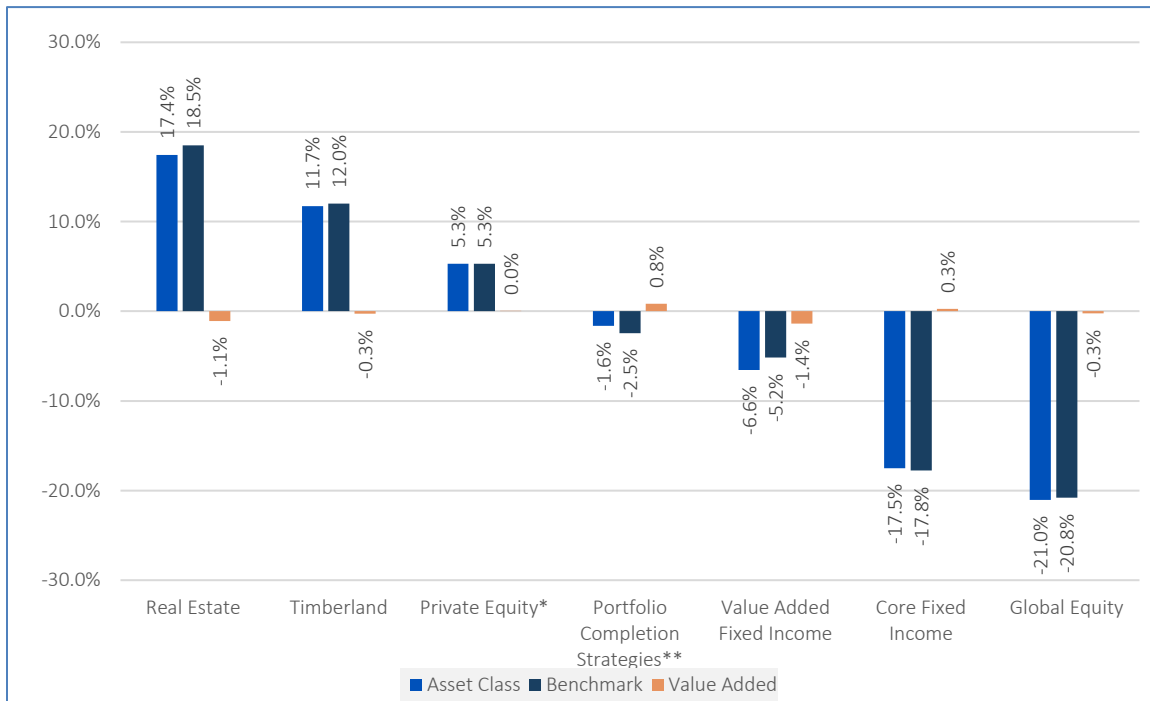
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Total PRIT Fund Returns
Annualized Returns as of September 30, 2022 (Gross of Fees)



Source: BNY Mellon. Totals may not add due to rounding. Total Core Benchmark includes private equity benchmark.

PRIT Asset Class Performance Summary
One-Year Ended September 30, 2022 (Gross of Fees)



Source: BNY Mellon. Totals may not add due to rounding. *Benchmark is actual performance. **Hedge Fund returns are net of fees.

PRIT Fund Annualized Returns by Asset Class
As of September 30, 2022 (Gross of Fees)

1 Year	3 Year	5 Year	10 Year
REAL ESTATE 17.4%	PRIVATE EQUITY 27.4%	PRIVATE EQUITY 24.1%	PRIVATE EQUITY 21.5%
TIMBER 11.7%	REAL ESTATE 13.0%	REAL ESTATE 11.1%	REAL ESTATE 11.1%
PRIVATE EQUITY 5.3%	TIMBER 5.7%	TIMBER 5.1%	GLOBAL EQUITY 7.6%
PORTFOLIO COMPLETION STRATEGIES (1.6%)	GLOBAL EQUITY 4.0%	GLOBAL EQUITY 4.3%	TIMBER 6.3%
VALUE-ADDED FIXED INCOME (6.6%)	VALUE-ADDED FIXED INCOME 3.0%	VALUE-ADDED FIXED INCOME 3.6%	PORTFOLIO COMPLETION STRATEGIES 4.3%
CORE FIXED INCOME (17.5%)	PORTFOLIO COMPLETION STRATEGIES 2.6%	PORTFOLIO COMPLETION STRATEGIES 2.9%	VALUE-ADDED FIXED INCOME 4.2%
GLOBAL EQUITY (21.0%)	CORE FIXED INCOME (3.4%)	CORE FIXED INCOME 0.5%	CORE FIXED INCOME 2.0%

Source: BNY Mellon

Investment Committee member Connie Everson, CFA, provided her comments on the economy and markets.

III. Risk Management Update

James Leu, CFA, FRM, Senior Investment Officer – Director of Risk Management, provided the Risk Management update, noting the risk environment in the third quarter of 2022 was marked by continued high volatility and weakness in the equity, credit, and Treasury markets.

Mr. Leu noted in this volatile environment, the Risk team continues to focus on monitoring existing managers and conducting investment due diligence on potential new managers and portfolio construction. Mr. Leu highlighted, as an example, working closely with the Public Markets team on managing the value factor exposure in the Global Equity portfolio.

IV. Public Markets

Performance Summary

Michael McElroy, CFA, Senior Investment Officer - Director of Public Markets, provided an update on Public Markets performance. Mr. McElroy noted when markets exhibit this type of unpredictable or unprecedented behavior, it is important to remember one of our key investing beliefs; investing actively where we believe we get rewarded for taking risk, and passively where we believe managers will struggle to deliver long-term excess returns.

Mr. McElroy noted while equity markets were down in the third quarter there was a range of returns experienced depending on what capitalization and geography the portfolio had exposure to, U.S. equities were down about 4%, yet U.S. small-cap and micro-cap US growth stocks had positive returns. Non-U.S. developed and emerging markets large-cap stocks declined about 10% in the quarter, but emerging

markets small-cap stocks declined only 5%. Within this environment, the PRIT Fund Global Equities portfolio slightly outperformed in the quarter. Our U.S. managers performed in-line, our non-US developed managers lagged and our emerging markets managers outperformed. Absolute returns were negative for the one-year period. PRIT Fund Global Equities slightly underperformed, with our US exposure outperforming (impressive, given 85% of this allocation is passive), our non-US developed managers underperforming (with growth-oriented managers particularly challenged) and our emerging markets managers outperforming.

Interest rates were higher in third quarter, both in comparison to second quarter and one year ago. Higher rates impacted returns in both Core and Value-Added Fixed Income. Absolute returns for Q3 ranged from +1% to -13%. On a benchmark-relative basis, the PRIT Core Fixed Income portfolio performed in-line, and Value-Added Fixed Income slightly underperformed. On a one-year basis, the PRIT Core Fixed Income portfolio outperformed benchmarks, while Value-Added Fixed Income underperformed due to Emerging-Markets Debt and Bank Loans exposure. Although credit spreads widened, they still remain below long-term averages, and far from levels reached in either 2008 or 2020.

Mr. McElroy noted inflation continues to be a concern and the trajectory or duration of rate increases needed to dampen inflation has impacted the value of long-duration investments (where much of the investment's value is concentrated toward the end of the investment period). Equities and some bonds are long-duration instruments and lose value as higher rates decrease the present value of those long-term cash flows investors expect. The longer duration of these assets makes it important (though sometimes difficult) to view their portfolio contribution through a long-term lens; even with the recent correction, long-term results remain very strong in equities, and fixed income has proved to be a good diversifier to equities.

Mr. McElroy noted that, it has been a turbulent environment, and PRIM has built the Public Markets portfolio to weather this turbulence. Though never happy with the negative absolute returns, PRIM is encouraged by the diversification our managers have provided. While relative returns have been challenged in the near-term in some areas, they remain strong over the long-term in both equities and fixed income. The aggregate risk of the overall equity and fixed income portfolios remains low, and risk factors are balanced across our managers.

V. Portfolio Completion Strategies Performance Summary

Bill Li, CFA, CAIA, Senior Investment Officer – Director of Portfolio Completion Strategies, provided an update on PRIM's Portfolio Completion Strategies (PCS) portfolio noting the portfolio declined 0.43% in Q3, in line with the benchmark. This performance demonstrates that the PCS portfolio has impressive resiliency given the volatile and negative markets. Year-to-date, PCS remained over 18% ahead of a 60/40 equity/bond mix.

Regarding performance, Mr. Li noted PRIM's Stable Value Hedge Fund portfolio delivered a positive 1.3%, as our managers hedged away as much market risk as possible. PRIM's Directional Hedge Fund portfolio decreased by 5.2%, which while negative in absolute returns is still better than general markets (barometer 60 ACWI/40Agg). Real Assets returned a positive 1.2% in third quarter. In this chaotic macro environment, the few positive areas were found in trend-following, such as rising interest rates and rising US dollar that are embraced by Commodity Trading Advisor (CTA) funds. A new macro environment equilibrium/balance appears to be forming as consumers, businesses and investors are calibrating to a moderate interest rate.

VI. Private Equity

Michael McGirr, CFA, Senior Investment Officer - Director of Private Equity, provided an update on Private Equity market performance. Mr. McGirr noted higher rates and inflation have finally slowed down the global mergers and acquisitions market as well as the private equity market. Private equity dropped 20% in Q3.

Mr. McGirr noted PRIM's approach to private equity reflects long-term, strategic-thinking, and PRIM's long-term performance remains strong: 27% 3-year, 24% 5-year, and 22% at 10-year gross. Private Equity was down 5.7% gross (-6% net) in Q3 2022, while the trailing 1-year return was a positive 5.3% gross (4.2% net). For the 1-year Venture Capital was up 1.3%; Growth Equity was down 9%; Buyouts were up 5-12% for the 1-year; and currency, specifically the EURO was a detractor. The Private Equity net asset value decreased to \$16.1 billion and decreased slightly as a percent of the PRIT Fund; (18.2% of PRIT). Private Equity is split 74% in buyouts, 15% in Growth Equity and 11% in Venture Capital.

The PRIM Investment Committee meeting adjourned at 11:14 a.m.

List of documents and exhibits used during the meeting:

- *Minutes of the PRIM Investment Committee Meeting on August 2, 2022*
- *PRIT Fund Performance Report (September 30, 2022)*
- *BNY Mellon Gross of Fees Performance Report (September 30, 2022)*