

PRIM Board Quarterly Update

Second Quarter 2023



PRIM Executive Director and Chief Investment Officer Michael G. Trotsky, CFA provided the following information to the PRIM Board at its August 15, 2023, meeting:

Executive Director and Chief Investment Officer Report

Fiscal Year 2023 was a very successful and productive year in an abnormally volatile and complex investment environment. The PRIT Fund ended with a record balance of \$96.6 billion for the fiscal year ended June 30, 2023, surpassing the previous record of \$95.7 billion set in fiscal year 2021. Net outflows to pay pension benefits during the year were \$986 million. The PRIT Fund returned 6.0% (5.6%, net) for the fiscal year and posted strong positive gains in each of the last three quarters. In Fiscal Year 2023, U.S. stocks were up 19.7%, developed international stocks were up 17.5%, and emerging markets stocks were up 9.1%, while diversified bonds were down less than 1%. The highest returning PRIT Fund asset classes included Global Equities, up 17.4%, Value-Added Fixed Income, up 7.7%, and Timberland, up 5.9%. Core Fixed Income was weaker, down 2.7%, while Real Estate and Private Equity, which are lagged one quarter, were down 2.8% and 3.5%, respectively. The investment team researched and deployed \$5.4 billion in Board-approved investments in Fiscal Year 2023.

The solid gain in Fiscal Year 2023 followed the tumultuous Fiscal Year 2022 in which U.S. equities were down 10.6%, developed international equities were down 17.7%, emerging markets equities were down 25.2%, and diversified bonds were down 10.3%. The Fiscal Year 2022 PRIT Fund return of -3.0% (-3.4%, net) was a strong result in a very weak market. While PRIM cannot control market returns or the factors that have fueled the recent volatility in the markets, PRIM staff carefully control the construction of the PRIT Fund to perform well in both strong and weak markets. The last three fiscal years have provided an extraordinary test, and we remain pleased and confident in the resiliency of the PRIT Fund and its performance over all time periods and throughout several different market environments. The PRIT Fund's trailing 3-, 5-, and 10-year returns remain strong and consistently above benchmarks and the required actuarial rate of return.

Organizational Updates and Recent Recognition

PRIM is comprised of 68 highly trained, experienced, and dedicated employees after hiring eight new full-time employees and nine seasonal interns in Fiscal Year 2023. Six of the eight new employees are diverse in terms race and/or gender and all interns are diverse. 62% of PRIM's workforce is diverse and 52% of our workforce identifies as female.

The work of PRIM staff continues to receive local and national recognition. In Fiscal Year 2023, PRIM's Private Equity portfolio ranked third out of 176 U.S. public pension plans based on 10-year performance. PRIM ranked eighth in the U.S. for assets managed by diverse managers according to *Pensions & Investments*. PRIM received the Commonwealth's "**Equity in Governance Award**" for the FUTURE Initiative, Institutional Investor's "**Partnership of the Year**" award for our role in the Aggregate Confusion Project, and the **Certificate of Achievement for Excellence in Financial Reporting** from the Government Finance Officers Association for the seventeenth consecutive year. PRIM also successfully completed the CFA Institute's **Global Investment Performance Standards of Integrity and Transparency**, a standard with which only small handful of other pension funds comply. PRIM completed 36 separate audits, including unexpected audits from PERAC and the Office of the State Auditor. All audits resulted in unmodified (clean) opinions with no findings.

More recently, PE-WIN, the Private Equity Women Investor Network, the preeminent organization for senior-level women investment professionals in private equity, recognized PRIM as "**Limited Partner of the Year**" for "empowering women in private equity." The award reflected both PRIM's work on investing with women and diverse managers via the FUTURE Initiative and the strong leadership presence of women on our own Private Equity team. PRIM's Private Equity team also won **Alpha Edge recognition for Alpha Generation** from "Institutional Investor." Institutional Investor cited PRIM's strong leadership culture, collaboration, and thesis-driven approach to manager selection as well as our annual commitment modeling process and our strong long-term performance in the asset class. PRIM also recently received our eighteenth **Certificate of Achievement for Excellence in Financial Reporting**.

The FUTURE Initiative, the program to increase the diversity of PRIM's investment managers and vendors to at least 20% by increasing access for minorities, female, and disabled investment managers and business partners, had a successful year in Fiscal Year 2023, investing approximately \$2.2 billion with diverse managers over five asset classes. The PRIT Fund currently invests more than \$9.9 billion with diverse investment managers, more than 10% of the PRIT Fund. With a ranking of eighth among the largest 200 funds in the U.S. for our allocation to diverse managers, PRIM is above its ranking in total assets under management. Additionally, PRIM doubled its total deployment to emerging, diverse managers to more than \$470 million.

On Environmental, Social and Governance (ESG) issues, PRIM developed and approved the ESG Committee Charter, members were appointed, and the Committee held its inaugural meeting. PRIM recruited and hired its first-ever Director of Stewardship to support the Committee and its work in the space. PRIM voted 8,979 proxy ballots aligned with its progressive proxy voting guidelines on areas such as board diversity requirements, over-boarded directors, gender pay gaps, labor and human rights, climate change, and executive compensation. PRIM adopted new proxy voting guidelines to vote for shareholder resolutions that require companies to provide access to the full range of reproductive healthcare and comprehensive parental leave and to vote for shareholder resolutions that request companies to provide greater disclosure of corporate campaign financing. PRIM continues to support the MIT Sloan School of Management's Aggregate Confusion Project (ACP) as its first founding member. The goal of ACP is to develop tools to address inconsistencies in the measurement of ESG data, which has become widely recognized as an obstacle in ESG investing.

The focus and efforts of the PRIM team were nothing short of remarkable under the unique circumstances of the year. The team is hard working and dedicated, delivering not only strong investment performance, but also extraordinary non-investment innovation and responsiveness.

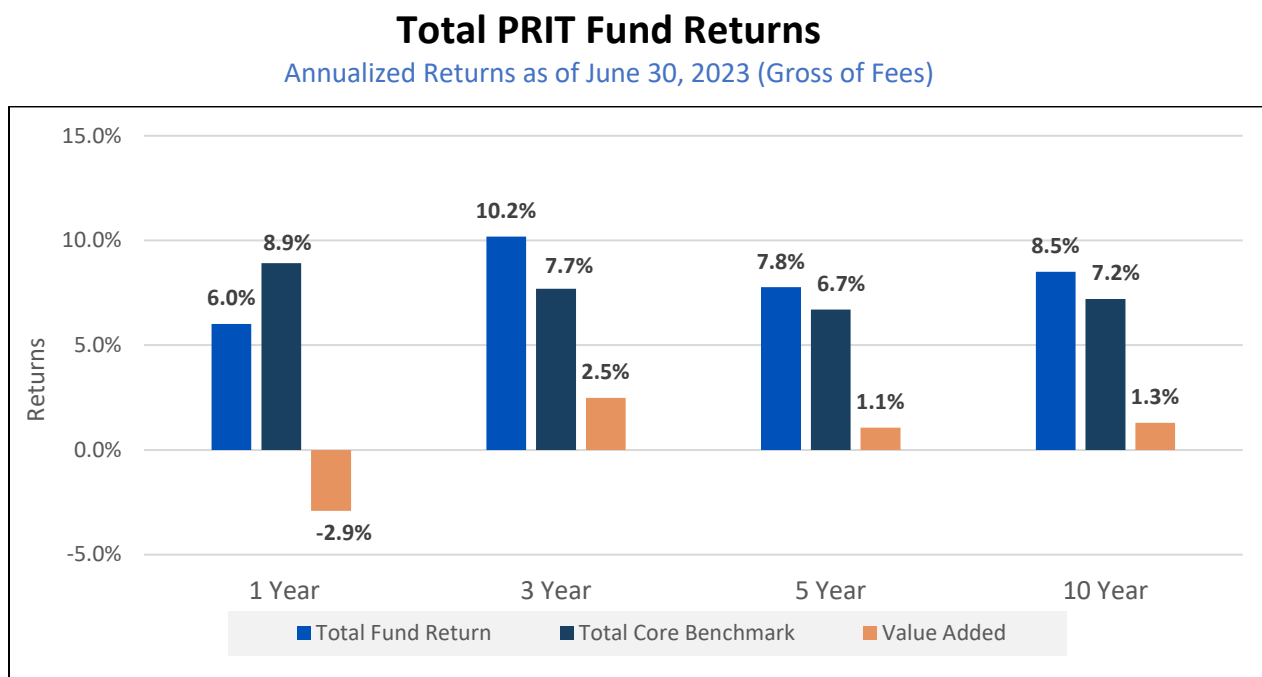
PRIT Fund Performance

The PRIT Fund gained 6.0% (5.6%, net) for the fiscal year ended June 30, 2023, underperforming the benchmark by 3.3%, net of fees. Assets under management at fiscal year-end were \$96.6 billion and net outflows to pay benefits were \$986 million. The entire underperformance during the fiscal year was due to the Private Equity portfolio, which has two significant near-term benchmark mismatches. First, the portfolio is valued on a one-quarter lag, meaning the portfolio reflects valuations only through March 31, 2023, and does not include the strong June quarter. Additionally, the Private Equity benchmark is a seven-year annualized public market benchmark plus a 3% liquidity premium. The benchmark return in the period, reflecting a very strong seven-year market return, was 14.4%. This created a significant benchmark mismatch in the fiscal year. Private Equity is a long-term asset class and comparing a one-year, lagged return to a long-term, smoothed benchmark will periodically create significant near-term mismatches. We expect this anomaly to reverse over time.

The PRIT Fund's trailing 3-, 5-, and 10-year returns remain strong, above benchmark, and above the Actuarial Rate of Return, which is currently 7.0%.

The Sharpe Ratio for the PRIT Fund, a standard measure of risk adjusted returns, has been consistently higher than a passive 60/40 mix of global stocks and bonds. This, combined with our consistent outperformance, is an indication that the PRIM portfolio is consistently delivering higher returns and lower risk than the popular diversified portfolio benchmark.

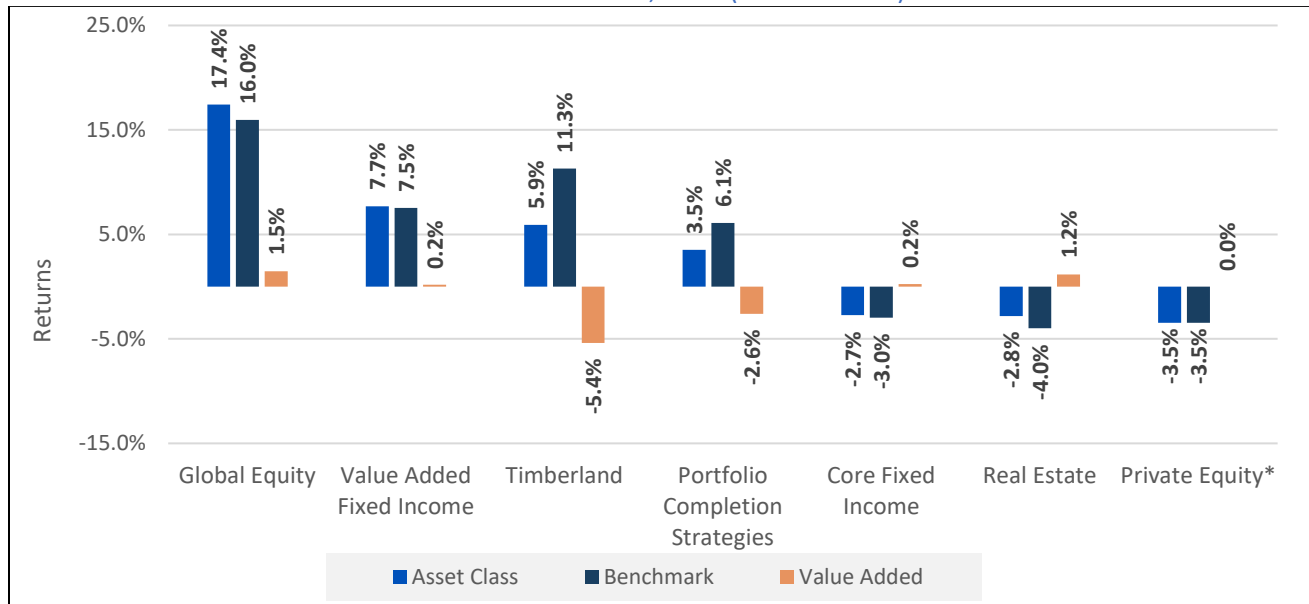
The following charts summarize the PRIT Fund performance for the one year ended June 30, 2023.



Source: BNY Mellon. Total Core Benchmark includes private equity benchmark.

PRIT Performance by Asset Class

One Year ended June 30, 2023 (Gross of Fees)



Source: BNY Mellon. Totals may not add due to rounding. *Benchmark is actual performance.

PRIT Fund Periodic Table of Returns

As of June 30, 2023 (Gross of Fees)

1 Year	3 Year	5 Year	10 Year
GLOBAL EQUITY 17.4%	PRIVATE EQUITY 28.5%	PRIVATE EQUITY 21.3%	PRIVATE EQUITY 20.3%
VALUE-ADDED FIXED INCOME 7.7%	REAL ESTATE 12.6%	REAL ESTATE 8.9%	REAL ESTATE 9.8%
TIMBER 5.9%	GLOBAL EQUITY 11.9%	GLOBAL EQUITY 8.0%	GLOBAL EQUITY 9.0%
PCS 3.5%	TIMBER 8.4%	VALUE-ADDED FIXED INCOME 5.0%	TIMBER 6.3%
CORE FIXED INCOME (2.7%)	VALUE-ADDED FIXED INCOME 7.3%	TIMBER 5.0%	VALUE-ADDED FIXED INCOME 4.7%
REAL ESTATE (2.8%)	PCS 5.9%	PCS 2.8%	PCS 3.8%
PRIVATE EQUITY (3.5%)	CORE FIXED INCOME (5.1%)	CORE FIXED INCOME 1.1%	CORE FIXED INCOME 2.6%

Source: BNY Mellon. Returns as of June 30, 2023

PRIM Board Actions

Public Markets

Other Credit Opportunities Benchmark Recommendation

The PRIM Board approved changing the Other Credit Opportunities (OCO) benchmark to (50% Morningstar LSTA US Leveraged Loan Index and 50% ICE BofA US High Yield Master II Constrained Index) + 200bps (lagged one month), anticipated effective October 1, 2023. Additionally, PRIM's implementation or secondary benchmark for OCO will be changed to the Burgiss Mezzanine Debt peer universe index.

Other Credit Opportunities – New Investment recommendation: Blue Owl Technology Fund – SMA

The PRIM Board approved an initial investment of \$200 million to the Blue Owl Technology Fund - Separately Managed Account (SMA). The SMA will be based on the Blue Owl Technology Finance II strategy. Blue Owl Technology Finance II predominately makes senior secured loans to sponsor-backed software companies. Additionally, Blue Owl was added to the OCO co-investment program in accordance with the Board-approved PCS and OCO co-investment guidelines in assessing opportunities.

Portfolio Completion Strategies

New Investment Recommendation: Oaktree Value Opportunity Fund - SMA

The PRIM Board approved an initial investment of up to \$175 million to Oaktree VOF, to be invested through a PRIM separately managed account. The strategy seeks to generate attractive risk-adjusted returns over a multi-year investment horizon using an opportunistic long/short approach in stressed, distressed, and value-oriented investments. Additionally, Oaktree was added to the Portfolio Completion Strategies (PCS) co-investment program in accordance with the Board-approved PCS and OCO co-investment guidelines in assessing opportunities.

Private Equity

Follow-on Investment Recommendation: Insight Partners XIII, L.P. and Insight Partners XIII Growth Buyout Fund, L.P.

The PRIM Board approved a commitment of up to \$150 million to Insight Partners XIII, L.P. and up to \$50 million to Insight Partners XIII Growth Buyout Fund, L.P. PRIM has invested in 16 prior Insight Partners ("Insight") funds and made four co-investments since 2005. Insight is a sector specialist private equity group focused on primarily investing in growth-stage software, software-enabled services, and Internet businesses.

The Client Services team will continue to meet with the retirement boards of PRIM's member retirement systems throughout the year. To schedule a visit, please contact Francesco at fdaniele@mapension.com, Laura at lstrickland@mapension.com, Emily at egreen@mapension.com, or call 617-946-8401. We look forward to seeing you soon.