

PRIM Board Quarterly Update

First Quarter 2022



MassPRIM

PRIM Executive Director and Chief Investment Officer Michael G. Trotsky, CFA provided the following information to the PRIM Board at its May 19, 2022, meeting:

Executive Director and Chief Investment Officer Report

Following PRIM's very strong calendar year 2021 performance - a 20% investment gain and record outperformance over the benchmark - market conditions deteriorated in the first calendar quarter of 2022. The Russian invasion of Ukraine on February 24 created an historic humanitarian crisis and dealt global financial markets and world economies a substantial setback.

The war, combined with new COVID flare-ups, rising inflation and interest rates, and continued supply chain disruptions has caused global economic growth to slow significantly. In late April, the International Monetary Fund (IMF) reduced its world economic growth forecast for 2022 to 3.6%, down from a projection of 6.1% only a few months ago. The IMF expects US growth to slow from 5.7% in 2021 to 3.7% in 2022, and 2.3% in 2023. The U.S. economy contracted 1.4% in the first quarter. Changing expectations about the future are detrimental to global markets and global economies; equity and bond price volatility are at highly elevated levels.

However, PRIM is still performing at a very high level. The environment at PRIM can best be described as "all hands-on deck." We have assembled a group of highly trained and talented professionals and we are extremely proud that they are attentive to every detail in the portfolio. We have asked the team to examine every strategy in the portfolio and to increase our communications with each manager.

PRIT Fund performance was negative for the quarter ending in March, but still up substantially for the one-year period. The PRIT Fund was down 2.1% (net) for the quarter, in line with benchmark returns, but for the trailing 12-month period, the Fund is up 12.6%, outperforming the benchmark by 5.5%. The 2.1% decline in the March quarter compares very favorable to the Standard and Poor's 500 Index, which declined 4.6%, Developed International equities declined 5.9%, and Emerging Markets equities declined 7.0%. Bonds were down 5.9% in the quarter and a 60/40 mix of stocks and bonds, a common comparison for a diversified portfolio, was down 5.6% for the quarter.

PRIT Fund Performance

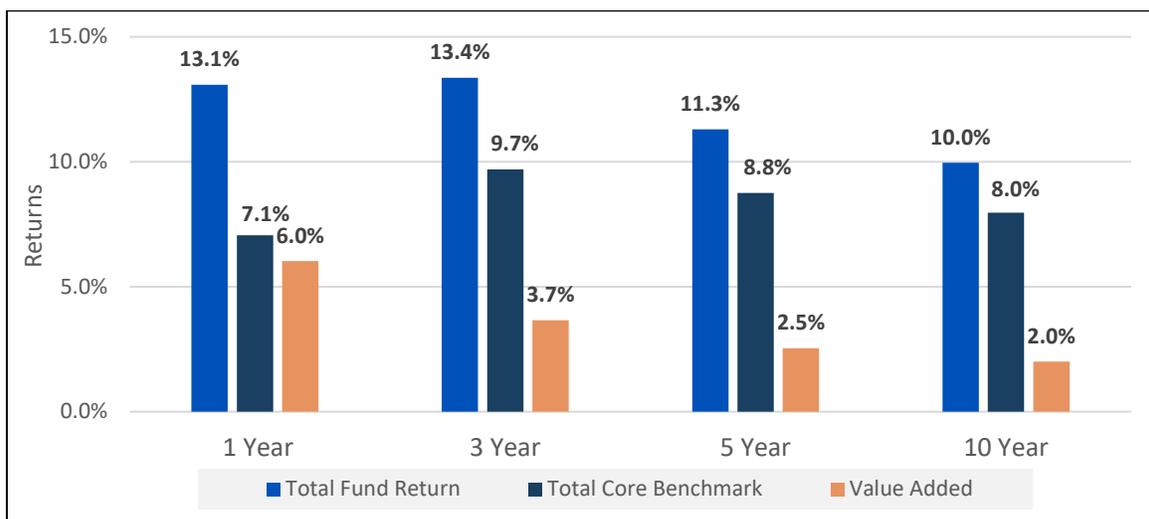
For the one-year period ended March 31, 2022, the PRIT Fund was up 13.1%, (12.6% net), outperforming the total core benchmark of 7.1% by 602 basis point (552 bps net).

- This performance equates to an investment gain of \$11.3 billion, net of fees.
- This outperformance equates to \$5.0 billion of value above the benchmark return, net of fees.
- Net total inflows from contributions for the one-year ended March 31, 2022, were approximately \$76 million.

The following charts summarize the PRIT Fund performance for the twelve months ended March 31, 2022.

Total PRIT Fund Returns

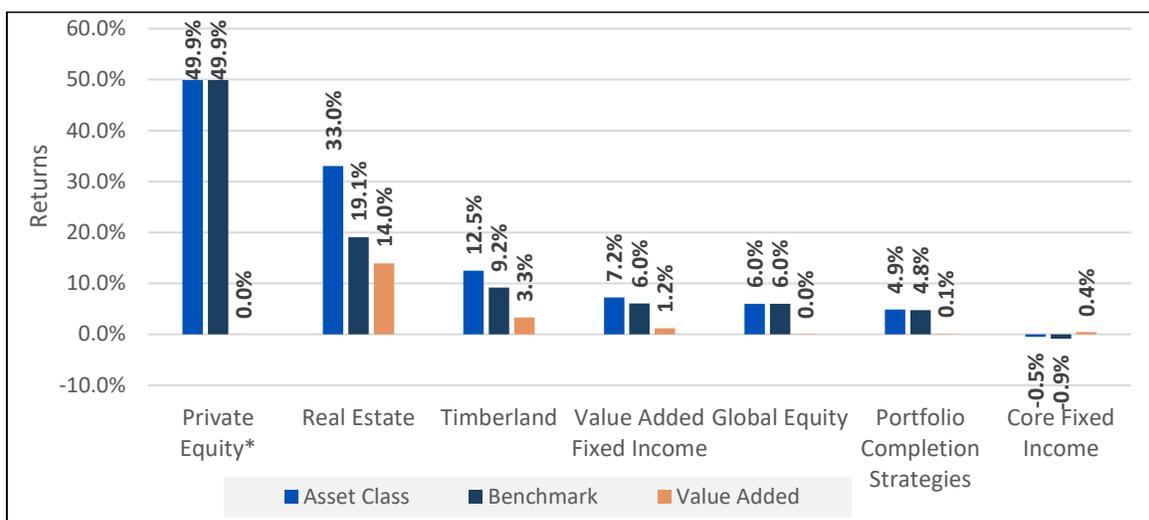
Annualized Returns as of March 31, 2022 (Gross of Fees)



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

PRIT Asset Class Performance Summary

One Year ended March 31, 2022 (Gross of Fees)



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

PRIT Fund Annualized Returns By Asset Class

(March 31, 2022 - Gross of Fees)

| 1 Year | 3 Year | 5 Year | 10 Year |
|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| PRIVATE EQUITY 49.9% | PRIVATE EQUITY 35.8% | PRIVATE EQUITY 29.3% | PRIVATE EQUITY 23.3% |
| REAL ESTATE 33.0% | REAL ESTATE 14.0% | REAL ESTATE 11.9% | REAL ESTATE 11.6% |
| TIMBER 12.5% | GLOBAL EQUITY 13.7% | GLOBAL EQUITY 11.7% | GLOBAL EQUITY 10.3% |
| VALUE-ADDED FIXED INCOME 7.2% | VALUE-ADDED FIXED INCOME 6.6% | VALUE-ADDED FIXED INCOME 5.9% | TIMBER 6.1% |
| GLOBAL EQUITY 6.0% | TIMBER 5.3% | TIMBER 5.3% | VALUE-ADDED FIXED INCOME 5.5% |
| PCS 4.9% | PCS 4.8% | PCS 4.3% | PCS 4.8% |
| CORE FIXED INCOME (0.5%) | CORE FIXED INCOME 4.1% | CORE FIXED INCOME 3.9% | CORE FIXED INCOME 4.0% |

Source: BNY Mellon. Returns as of March 31, 2022

Organizational Updates

Tim Doyle joined PRIM as an Investment Analyst on the Private Equity team, reporting to Alyssa Fiore. Tim joins us from the Mass General Brigham investment office and began his career at Cambridge Associates in their pension practice. Tim has earned a Bachelor of Science in Finance from Boston College.

Vivian Liang joined PRIM as an Investment Analyst on the Research team, reporting to Maria Garrahan. Vivian was previously a PRIM Research Intern where she worked within multiple areas of Research: asset allocation, private equity replication, and manager selection tool development. In March, Vivian graduated with a Master of Science degree from the Computational Finance and Risk Management graduate program at the University of Washington.

Amy MacKay joined PRIM as an Administrative Coordinator for the Real Estate and Timberland team, reporting to Tim Schlitzer. Amy previously worked in the Finance Department at Meredith & Grew-Colliers and the Downtown Leasing Group at Whittier Partners-CBRE. Amy is a graduate of Assumption College.

On April 1, 2022 Governor Baker signed into law Chapter 42 of the Acts of 2022. Section 64 of Chapter 42 includes a **Russian Divestment** bill which goes beyond the federal sanctions list and includes all companies that are incorporated in Russia. We are in the process of implementing all directives under this law. The value of the investments covered under the law is very difficult to accurately ascertain because at this time the markets are closed to foreign investors and there is very little reliable price discovery. We own no securities that are on the current U.S. Sanctions list, but under the Massachusetts law's broader directive, we estimate that our position size at the start of the year was \$250 million, on the day after the invasion, February 25, the positions were valued at approximately \$140 million, and currently, our pricing vendors estimate the positions to be worth approximately \$9.6 million. Subject to market availability, our managers are required to sell 50% of the position size within six months and be completely liquidated within one year.

In late March, PRIM became a founding signatory to the CFA Institute’s first-ever **Diversity, Equity, and Inclusion Code** for the investment profession. As a founding signatory of the DEI Code, PRIM cements its position as an industry leading advocate for a new and better investment industry that more closely represents the make-up of our entire society. A commitment to diversity and inclusion, just like ethics, must come from the top. Many years ago, we decided to make cultural changes at PRIM to foster a diverse and inclusive environment. We believe that an industry that embraces many voices and perspectives will produce better investment outcomes and a more inclusive future for the investment profession. Signing the DEI Code means that we are committed to embracing its seven core principles to improve our workplace and our industry. PRIM’s human resources policies already capture these principles, and with the implementation of the FUTURE Initiative following Treasurer Goldberg’s advocacy for investment equity legislation, we are positioned to continue to lead in this area. We are proud of our progress, but there is more we can and will do.

In its February 14, 2022, issue, *Pensions & Investments* reported that PRIM was ranked seventh among the largest 200 funds in the nation for assets managed by diverse managers. This is an indication that our ongoing efforts over the years, combined with our new FUTURE initiative, are putting PRIM at the very top of the heap in terms of progress and many of the funds that have more allocated are far larger than PRIM.

PRIM was nominated for **Public Plan of the Year** for Institutional Investor’s 19th annual Hedge Funds Industry Awards for the 6th straight year. PRIM won the award in 2016 in recognition of our groundbreaking work in separately managed accounts, which is now becoming the industry standard.

At the February 17, 2022, PRIM Board meeting, the Board voted and approved the establishment of a new **ESG (Environmental, Social, and Governance) Committee** for the purpose of advising the Board on ESG-related matters, and to engage an outside consultant to assist in developing a charter. PRIM staff is working closely with the Treasurer’s staff and our outside governance consultant to complete a draft charter.

PRIM Board Actions

Public Markets

Other Credit Opportunities – New Investment Recommendation: ArrowMark PRIM Fund of the One

The PRIM Board approved an initial commitment of up to \$200 million to ArrowMark PRIM Fund of the One (“the Fund”). The Fund is a custom evergreen strategy that will invest in bank regulatory capital relief securities.

Portfolio Completion Strategies

New Investment Recommendation: North Peak

The PRIM Board approved an initial allocation of up to \$175 million to North Peak Capital, 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 a private equity approach to public markets with a differentiated level of research.

Private Equity

Venture Capital Investment Approval Process

The PRIM Board approved the enhanced Venture Capital Investment Approval Process, which authorizes PRIM’s CIO to approve certain new venture capital commitments, not to exceed 20% of the forecasted private equity annual investment plan.

Investment Recommendations: Insight Partners Vision Capital II, L.P. and Insight Partners Fund XI Follow-on Fund, L.P.

The PRIM Board approved a commitment of up to \$50 million to Insight Partners Vision Capital II, L.P. and a commitment of up to \$20 million to Insight Partners Fund XI Follow-On Fund. PRIM has invested in 15 prior Insight Partners (“Insight”) funds and three 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.

Follow-on Investment Recommendation: Medicxi IV, L.P.

The PRIM Board approved a commitment of up to €40 million to Medicxi IV, L.P. PRIM has invested in five prior Medicxi Ventures (“Medicxi”) funds since 2012. Medicxi’s senior team has worked together for an average of 12 years. Medicxi invests in seed, early- and late-stage biotech assets and companies across several therapeutic areas.

Follow-on Investment Recommendation: Technology Crossover Ventures XII, L.P.

The PRIM Board approved a commitment of up to \$200 million to Technology Crossover Ventures XII, L.P. PRIM has invested in six prior Technology Crossover Ventures (“TCV”) funds and three TCV co-investments since 2006. TCV is an established growth equity investment firm with a strong and consistent track record. TCV’s senior team has worked together for an average of 11 years. Fund XII will target growth equity positions in both private and public technology companies in North America and Europe.

New Investment Recommendation: Sequoia Capital China Seed Fund III, L.P.; Venture IX, L.P.; Growth VII, L.P.; and Expansion Fund I, L.P.

The PRIM Board approved a total commitment of up to \$150 million to be split into: up to \$8.2 million to Sequoia Capital China Seed III, L.P.; up to \$18.8 million to Sequoia Capital China Venture IX, L.P.; up to \$61.5 million to Sequoia Capital China Growth VII, L.P.; and up to \$61.5 million to Sequoia Capital China Expansion I, L.P. Sequoia Capital China (“Sequoia China”) makes venture capital and growth equity investments in seed, early-stage, late-stage, and growth equity stage companies in China in the technology, consumer, and healthcare sectors. Sequoia China’s partners have worked together for an average of 11 years.

Real Estate

Timberland Appraisal Request for Qualifications (RFQ) Search Committee Recommendation

The PRIM Board approved the placement of nine firms on PRIM’s list of approved timberland appraisers. Each firm will be eligible to bid on timberland appraisal assignments that are scheduled to occur for calendar years ending 2022, 2023 and 2024. The firms are as follows: American Forest Management; Forest Resource Consultants; Legacy Appraisal Services; Mason, Bruce & Girard; Margules Groome Consulting Limited; Sewall Forestry & Natural Resources Consulting; Sizemore & Sizemore; The Healy Company; and Timberland Appraisal Inc.

Finance and Administration

PRIM Board Fiscal Year 2023 Budget

The PRIM Board approved the Fiscal Year 2023 Budget. The budget reflects the investment management, advisory, and operational costs necessary to implement, measure, and monitor the approximated \$103 billion in investments of the Pension Reserves Investment Trust (PRIT) Fund.

The projected FY2023 budget of \$518 million is 50 basis points (bps) of projected average PRIT Fund assets (\$103 billion). The expense ratio has remained steady, even while consistently growing the investment program to include more high-performing, higher-fee strategies, and while growing PRIM’s internal resources to pursue several innovative, industry-leading key initiatives. As is our custom, budgeted

expenses for FY2023 are conservative and foresee continued asset growth. Actual expenses incurred may vary because most expenses are a function of asset levels and investment performance is not predictable.

Legal Services Request for Qualifications (RFQ)

The PRIM Board approved the issuance of a Request for Qualifications (RFQ) for investment legal services. Incumbent providers will be invited to respond. The Board last approved a roster of law firms with a variety of legal specialties in April and June of 2016.

Client Services Webinars

The Client Services team hosted two informational webinars for our clients.

The PRIM cash transaction processes and procedures webinar featured Jennifer Cole, PRIM’s Manager of Client Reporting and Cash Management and was held March 9, 2022.

The PRIM cybersecurity and technology webinar was led by David Griswold, PRIM’s Director of Information Technology and was held on April 27, 2022.

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.