



**Minutes of the PRIM Investment Committee Remote Meeting
Tuesday, August 2, 2022**

Committee members present:

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

Committee members not present:

- Joseph Bonfiglio
- Peter Monaco
- 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 May 3, 2022, meeting.

II. Executive Director / Chief Investment Officer Comments

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

Mr. Trotsky began by extending condolences to Investment Committee member Phil Rotner and his family as they mourned the recent loss of his mother.

Mr. Trotsky noted that PRIM’s internally developed investment tools have allowed us to construct a portfolio that performs well in both strong and weak markets, and the heightened volatility of the markets over the last two fiscal years has provided an extraordinary test. Last year, in the strong markets of fiscal year 2021, the PRIT Fund recorded its best performance in PRIM’s entire history with a return of 30% (29.5%, net) and was at the top of PRIM’s peer group. The Fund also outperformed its benchmark by a record-setting 8.9%. This year, in fiscal year 2022 (FY 2022), during the weakest market since the Global Financial Crisis (GFC) more than thirteen years ago, the PRIT Fund also performed very strongly and was down only 3% (-3.4%, net), outperforming broad market indices by a wide margin and its benchmark by 1.5% (net). Mr. Trotsky believed that the PRIT Fund results for FY 2022 will similarly rank PRIM at the top

of the peer group. Performing strongly in both up and down markets is the hallmark of a well-constructed portfolio with proven, skillful managers.

Mr. Trotsky noted many of the challenges during the fiscal year were unusual and unexpected. Continuing COVID flare-ups with new variants worldwide, rising interest rates, inflation at multi-decade highs, the Russian invasion of Ukraine, supply chain disruptions, food and energy shortages, labor constraints, and economies worldwide that, at best are teetering on the edge of recession, provided a backdrop too great for markets to bear. For the one-year period ending in June of 2022, U.S. stocks were down 10.6%, developed international stocks were down 17.7% and emerging markets stocks were down 25.2%, while diversified bonds were down 10.3%. A 60%/40% mix of global stocks and bonds was down 13.5% in FY 2022. The PRIT Fund return of -3.0% (-3.4%, net) for FY 2022 is a strong result in a weak market. We should expect market declines and economic cycles to impact the PRIT Fund periodically, and we remain pleased with the resiliency of the 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 above the required actuarial rate of return.

Mr. Trotsky relayed that our diversifying asset classes such as Private Equity, Real Estate, Timberland, and Hedge Funds helped buffer the downturn in the Public Markets, which were down significantly. Private Equity was up more than 27%, Real Estate was up more than 25%, and Timberland was up more than 11%, while Hedge Funds were essentially flat for the fiscal year. In comparison, Global Equities were down more than 16% and Core Fixed Income was down more than 11%.

Mr. Trotsky described the current investment environment as requiring "all hands-on deck" and noted that we have asked each team to examine every strategy in the portfolio and to increase our communications with each manager. 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 believe market downturns, while painful, also create opportunities to improve the portfolio and we continue to identify compelling new investment opportunities. In fact, our deployment of \$6.9 billion of capital to new ideas in FY 2022 was a 58 % increase over the prior year. Additionally, during times of increased volatility, we adhere to our monthly rebalancing discipline, which enables us to redeploy capital to areas hit hardest, while maintaining our commitment to staying within our long-term strategic allocation, which we believe has and will continue to serve us well.

Mr. Trotsky continued by stating that during the fiscal year, PRIM hired and onboarded eleven new full-time employees, an increase from seven in the prior year, and eight of the new hires are diverse. We promoted four of our highest-performing staff members who are all female, and sponsored ten interns, all of whom are diverse. PRIM also became a founding signatory to the new *CFA Institute Diversity, Equity, and Inclusion (DEI) Code for the Investment Profession*, a very important step for PRIM and also the investment management industry.

Mr. Trotsky noted that PRIM successfully launched the FUTURE Initiative, a plan to increase the diversity of PRIM's investment managers and vendors to at least 20% by increasing access for minorities, women, disabled investment managers, and business partners. Mr. Trotsky mentioned the organization is proud of its fast progress. PRIM invested approximately \$3.4 billion with diverse managers over five asset classes during the fiscal year, and an additional commitment of \$1 billion to the new Emerging-Diverse Manager Program utilizing five new expert advisors and more than \$200 million has already been deployed. The PRIT Fund currently invests more than \$7.7 billion, or more than 8% of the PRIT Fund with diverse investment managers. PRIM was ranked seventh among the largest 200 funds in the U.S. for assets managed by diverse managers, far above our rank in size.

Mr. Trotsky continued his report by mentioning that on Environmental, Social and Governance (ESG) issues, following the Treasurer's leadership, PRIM began work on creating the structure and charter of the

new and unique ESG advisory committee, which the Board approved in February. This new ESG Committee will advise the Board on ESG-related matters. PRIM voted 11,369 proxy ballots aligned with PRIM's progressive proxy voting guidelines on areas such as board diversity requirements, over-boarded directors, gender pay gaps, labor and human rights, and executive compensation, and adopted a new proxy voting guideline to vote against all directors at companies targeted by the Climate Action 100+. PRIM continues to support the MIT Sloan School of Management's Aggregate Confusion Project (ACP) as its first founding member. The goal of the ACP is to develop tools to address inconsistencies in the measurement of ESG data, which has become widely recognized as a substantial challenge to impactful ESG investing. The ACP welcomed four additional new members: MFS Investment Management, AQR Capital Management, Qontigo, and Asset Management One. These new members represent a range of geographic and professional perspectives in the investment world.

Lastly, PRIM launched a new series of educational seminars during the year, 13 in total, on subjects including: PRIT Fund Leverage Finance Options, Public and Private Crossover Funds, Venture Capital Investing, ESG Landscape, Climate Finance, Cash Transaction Processes and Procedures, Cyber Security, Private Equity Replication, a primer on the Blockchain Ecosystem, a primer on Insider Trading, and a training on external communications protocols. These seminars were provided to PRIM Board and Committee members, staff, and clients.

Mr. Trotsky noted the list of non-investment projects was longer than usual during the fiscal year and many projects were unexpected and unavoidable; these diversions of resources came at a time when the markets were exceedingly turbulent. For example, we spent approximately six weeks providing technical assistance to the Legislature, the Governor, and the Treasurer's team in support of the newly passed Russian divestment law. Other resource intensive and unexpected projects include a PERAC Audit, a State Auditor audit, a comprehensive IT security review in light of the recent global uptick in nefarious activities, support of the Attorney General's lawsuit against Exxon Mobile, support of a securities class action lawsuit on foreign exchange trading, and support and response to an unprecedented level of media requests and public information requests for matters related to our investment program, proxy voting policies, diversity, inclusion and ESG-related matters. We must all realize that PRIM is currently resource constrained; we will continue to recruit talent and grow the team as quickly as possible, but that is no small feat in today's employment environment.

Organizational Update

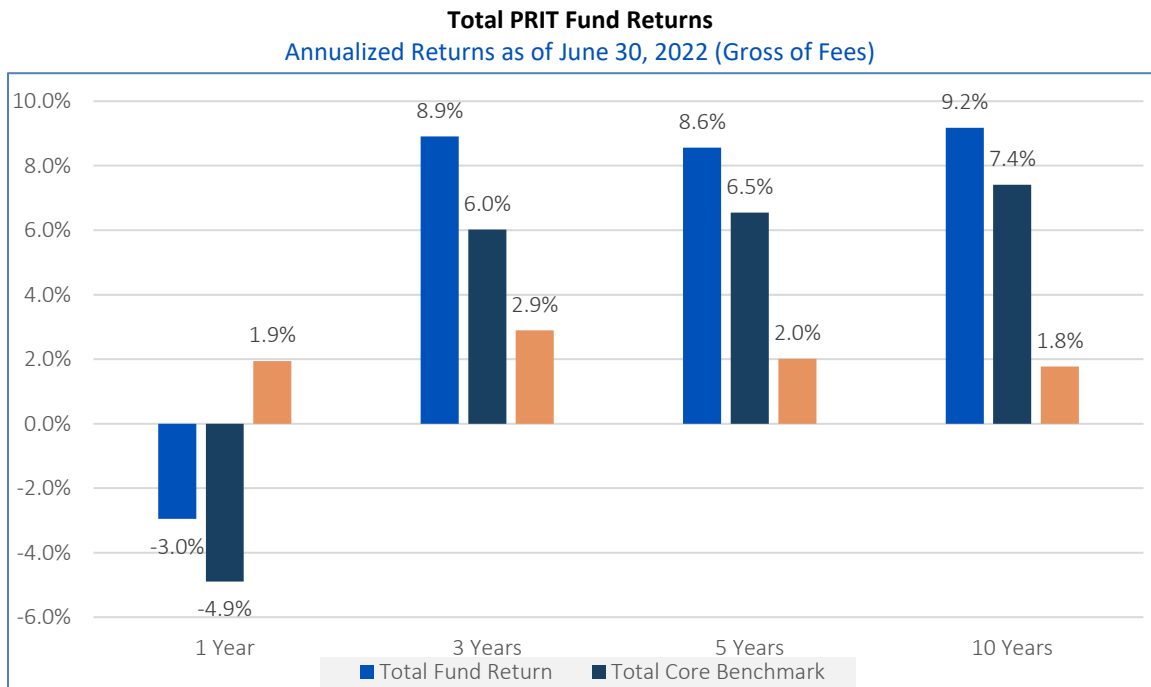
Mr. Trotsky informed the Committee that in June, PRIM's Private Equity Portfolio was ranked #3 among 176 U.S. public pension funds based on 10-year performance by the American Investment Council's Public Pension Study. In July, Institutional Investor nominated PRIM as a finalist in the 5th Annual Allocator's Choice Award in the "Partnership of the Year" category for the MIT Sloan Sustainability Initiative's Aggregate Confusion Project for "working to reduce the level of noise in ESG measurement by improving data available to managers and allocators." PRIM was also awarded the Government Finance Officer Association's Certificate of Achievement for Excellence in Financial Reporting for the 17th consecutive year. A strong testimony to the timeliness and transparency of our financial reporting.

PRIT Fund Performance Summary

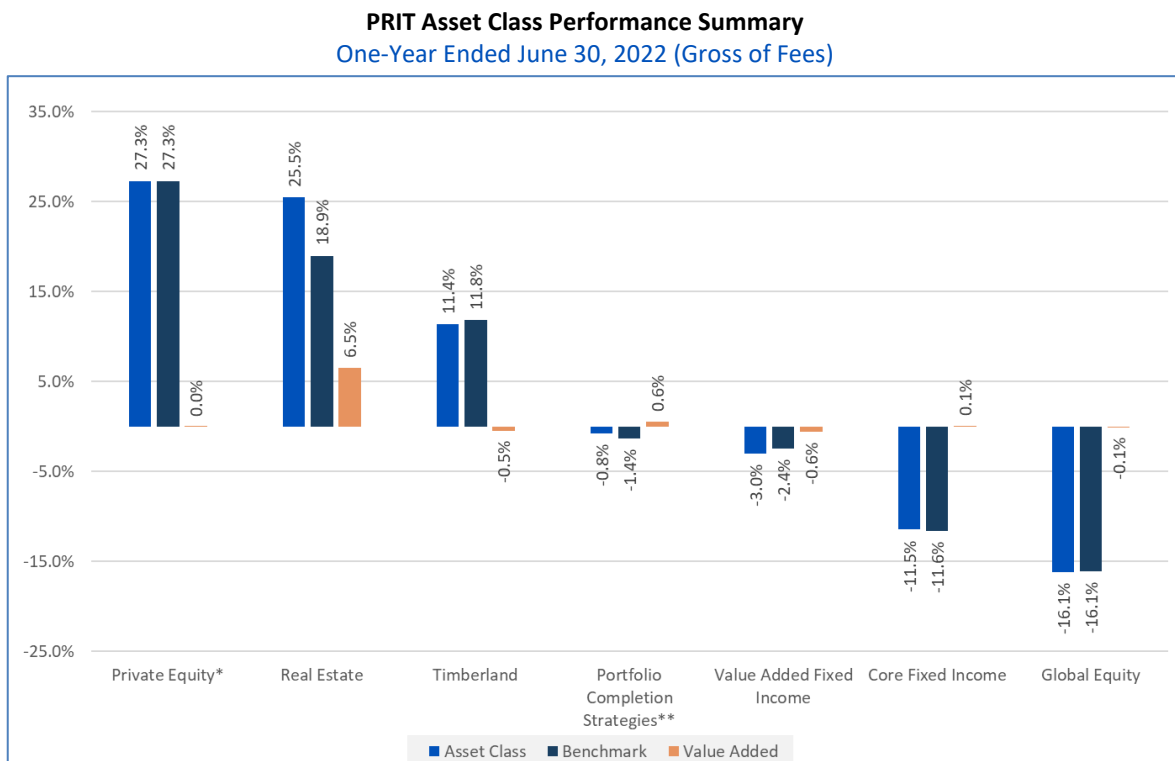
Mr. Trotsky noted the markets were challenged last fiscal year with a confluence of world-wide issues that led to rising inflation, higher interest rates, and slowing growth. After a significant near 20% correction in world-wide equity markets during the first half of the calendar year (the worst first half in more than 50 years), markets thankfully rebounded strongly in the month of July. The rebound in July coincides with an apparent peak in bond yields and some encouraging signs that, just possibly, inflation, recently at 9.1%, has begun to moderate, too. The main risks going forward sound very familiar: in our opinion the risks

are that inflation fails to moderate, consumer and business spending falters, and corporate earnings weaken more than anticipated.

Mr. Trotsky referenced the following charts and graphs:



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



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 June 30, 2022 (Gross of Fees)

1 Year	3 Year	5 Year	10 Year
PRIVATE EQUITY 27.3%	PRIVATE EQUITY 31.9%	PRIVATE EQUITY 27.1%	PRIVATE EQUITY 22.4%
REAL ESTATE 25.5%	REAL ESTATE 14.1%	REAL ESTATE 11.5%	REAL ESTATE 11.5%
TIMBER 11.4%	GLOBALEQUITY 6.3%	GLOBALEQUITY 7.0%	GLOBALEQUITY 9.1%
PORTFOLIO COMPLETION STRATEGIES (0.8%)	TIMBER 5.8%	TIMBER 5.4%	TIMBER 6.4%
VALUE-ADDED FIXED INCOME (3.0%)	VALUE-ADDED FIXED INCOME 3.6%	VALUE-ADDED FIXED INCOME 4.2%	VALUE-ADDED FIXED INCOME 4.7%
CORE FIXED INCOME (11.5%)	PORTFOLIO COMPLETION STRATEGIES 2.9%	PORTFOLIO COMPLETION STRATEGIES 3.5%	PORTFOLIO COMPLETION STRATEGIES 4.6%
GLOBALEQUITY (16.1%)	CORE FIXED INCOME 0.0%	CORE FIXED INCOME 1.9%	CORE FIXED INCOME 2.9%

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 second quarter of 2022 was marked by high volatility weakness in the equity markets, credit markets and Treasury markets, rising interest rates, and widening credit spreads.

Mr. Leu noted in this volatile environment, the Risk team will be focusing on monitoring of existing managers, investment due diligence on new managers and portfolio construction. In the Private Equity area, we will monitor the impact of rising interest rates, revaluation of equity market especially growth assets, rising rates and widening spreads, especially related to use of leverage loans, buyout financing, realizations, and distributions.

IV. Diverse Investment Manager (FUTURE Initiative) Update

David Gurtz, CPA, CFA, Deputy Chief Investment Officer, provided an update on the FUTURE Initiative activities over the last six months. Mr. Gurtz noted in the first half of 2022, PRIM allocated or committed over \$1 billion to diverse investment managers and later in the meeting, staff would be recommending another \$750 million to diverse managers.

Mr. Gurtz noted the \$1 billion dollar Emerging-Diverse Manager Program, designed to reduce barriers for diverse managers is up and running. To date our manager-of-managers, have invested \$230 million with nine emerging-diverse managers in four different asset classes. Each asset class team is holding monthly meetings with these manager-of-managers to discuss their pipelines and potential next investments.

Mr. Gurtz further stated that during the last committee meeting, PRIM staff recommended a commitment to Insight Partners Vision Fund II, a fund dedicated to investing in emerging-diverse venture capital managers. PRIM's \$30 million commitment makes us one of the largest limited partners in this unique Fund.

Mr. Gurtz noted PRIM became a founding signatory and champion of the CFA Institute's DEI Code. Later this fall, Lenox Park Solutions will conduct our second annual DEI survey of our investment managers which allows us to track the efforts and progress our managers are making to improve the diversity within their organizations. This information assists with the preparation of our annual report to the Legislation detailing our advancement towards the legislation's goals. Lastly, PRIM prepared and submitted our first annual report to the Legislation in January of this year.

V. Public Markets

a. Performance Summary

Michael McElroy, CFA, Senior Investment Officer - Director of Public Markets, provided an update on Public Markets performance. Mr. McElroy noted Public Markets exposure represents over sixty percent of the PRIT Fund and given its broad diversification we expect it should weather most market environments.

Mr. McElroy noted the second quarter saw an acceleration of the behavior we observed in Q1 as developed markets declined by around 15-16% in the second quarter of 2022. Emerging markets stocks declined approximately 12% in the quarter while Chinese stocks were up 3% in the quarter, however they declined nearly 32% over the fiscal year. Developed and Emerging Equity market returns were negative for the fiscal year and aggregate global equity was down approximately 16% over the past year. Value again outperformed growth in all markets in Q2, a shift that started last year and we expect to continue. On a benchmark-relative basis, our global equity portfolio performed in-line in the second quarter. US-based managers slightly outperformed, whereas our non-US managers in aggregate slightly underperformed, mostly due to weak performance from growth-oriented managers. For the fiscal year we saw a similar profile, US managers slightly ahead, developed international managers lagging our benchmark and emerging markets managers were in-line. Even with this mixed performance, manager and style diversification kept the overall global equity performance in-line with (negative) benchmark returns.

Inflation continues to be a major theme, while the current headline inflation rate of just under 9% is higher than our last meeting in May, longer-term inflation expectations (five-year forward breakeven) are running under 2.5%. The inverted yield curve can portend a recession, so we are asking our managers about their views on duration and depth of this, as well as how they position for the rebound. Common themes related to inflation are around the impact of energy prices and labor costs, and the ability of companies to exact pricing power. Though company fundamentals are still generally strong, managers expect a bit of a turnover in the next 1-2 quarters.

Mr. McElroy stated that in terms of portfolio characteristics and positioning, managers have been reducing duration of the fixed income portfolios, though they are now seeing some value in longer-duration assets as they have sold off. On the equity side, value-oriented equity managers (shorter duration) have been outperforming longer-duration growth managers. We are closely monitoring our growth and value factor exposures in the PRIT portfolio, as well as other factors like debt burden. Overall, we continue to have good factor balance in the aggregate portfolio.

Finally, he stated that PRIM remains focused on monitoring both our geopolitical and economic risks. Volatility remains high in equity and fixed income markets, which has been amplified by the continued Ukraine/Russian war, and the slowdown in China due to COVID as well as property market concerns. Increasing energy prices have impacted countries that are more externally dependent for energy needs. Additionally, the sell-off in cryptocurrency in Q2 heightened fears of potential financial system stress, though these concerns seem to have receded recently. Though high volatility should be a good environment for active managers to add value, managing all these risks simultaneously is extremely

challenging. As previously mentioned, because of the diversified nature of our public market's portfolio, the aggregate risk for the overall equity and fixed income exposure will remain low on a benchmark-relative basis.

b. Manager Recommendation – Developed International Value Equity (Voting Item)

Andre Abouhala, Investment Officer - Public Markets, presented PRIM staff's recommendation to allocate \$1.0 billion to three active international value equity managers: Columbia Threadneedle (\$450m), Causeway (\$300m), and Pzena (\$250m). Mr. Abouhala noted funding for this investment would be sourced from the existing passive World ex-US portfolio and would not change the Fund's exposure to equities. This allocation would increase the active/passive split from 60/40% to 70/30% which is a small change, but one that will have an impact on PRIM's three most important core investments considerations: risk, return, and cost.

Mr. Abouhala stated that from a risk perspective, the addition of these three managers would marginally increase the total risk of the portfolio, while moderately increasing our active risk. This is primarily due to allocating \$1 billion from passive to active, not because these managers are inherently riskier than the existing active manager roster. From a return perspective, all three strategies have demonstrated excellent alpha capability versus the value benchmark over long time periods. All have an information ratio of 0.5 or above since inception, indicating they are achieving appropriate excess returns for their level of active risk. Regarding cost, from an absolute standpoint, International Large Cap is the lowest cost asset class across active public equities. We were able to negotiate competitive fee terms with each manager.

Mr. Abouhala commented they are all established firms with large institutional businesses. Causeway and Pzena are both diverse investment firms. Causeway is a women owned firm, and Pzena's portfolio management team is women-led and diverse. All have long track records of managing international equity strategies with differentiated approaches to portfolio management and construction.

Causeway utilizes a hybrid approach with their investment team which is organized into two groups: fundamental and quantitative. The fundamental team is responsible for in-depth bottom-up research. The quantitative staff develops and maintains a proprietary risk model which provides a roadmap for portfolio construction. Both teams are led by Sarah Ketterer and Harry Hartford, who co-founded the firm in 2001.

Based in Boston, Columbia Threadneedle's strategy is led by Fred Copper, who has been investing in international markets for 30 years. Their process is built on the blend of fundamental, quantitative, and macro analysis. Their top-down framework is unique in that they are seeking to understand where a particular stock is in the business cycle and how the cost of doing business is likely to change. This shows up in their subtle positioning of the portfolio relative to their macro views.

Pzena employs a classic value approach, seeking to buy good businesses at low prices, focusing on companies that are mispriced relative to their historical earnings power. The strategy is led by Allison Fisch, Caroline Cai, and John Goetz. In addition to the three portfolio managers, the strategy is supported by a centralized investment team. PRIM has an existing relationship with Pzena in Emerging Markets, with \$1 billion in assets and they have outperformed by over 2%, net of fees. Ms. Fisch and Ms. Cai are portfolio managers for that strategy as well.

The PRIM Investment Committee voted, by unanimous roll-call vote, to approve a recommendation to the PRIM Board to approve initial allocations of up to \$450 million to Columbia Threadneedle Investments; \$300 million to Causeway Capital Management; and \$250 million to Pzena Investment Management to provide active investment management services for a World ex-US Value equity

mandate, as described in the Expanded Agenda, and further to authorize the Executive Director to take all actions necessary to effectuate this vote.

VI. Portfolio Completion Strategies Performance Summary

Bill Li, CFA, CAIA, Senior Investment Officer – Director of Portfolio Completion Strategies, provided an update on PRIM’s Hedge Fund portfolio for the fiscal year. Mr. Li stated that although the portfolio had a slight decline, it outperformed the benchmark. While the Hedge Fund portfolio was not completely immune to the challenging environment, it continued to deliver diversification and buffer to the over-all PRIT Fund.

Regarding fiscal year performance, Mr. Li noted PRIM’s Stable Value portfolio had an excellent year returning a positive 3.6%. PRIM’s investment partners continue to emphasize a low net risk exposure plus nimbleness to capture relative value. Despite having a negative year, PRIM’s Directional portfolio managed to perform better than most other risk assets. Notably, Commodity Trading Advisors (CTAs) capitalized on the trending commodities and currencies, while other sub-strategies saw a dispersion of outcomes but overall maintained the ability to express vigilance by short selling.

VII. Private Equity

Michael McGirr, CFA, Senior Investment Officer - Director of Private Equity, provided an update on Private Equity market performance. Mr. McGirr noted that global mergers and acquisitions activity which totaled \$2.2 trillion in the first half of 2022 was down 21% compared to the same period last year. Global private equity activity rose by 3.3% while the number of private equity deals fell precipitously. U.S. private equity saw 4,000 deals executed for a combined value greater than \$400 billion. U.S. private equity backed volume was up 1% according to Refinitive. U.S. venture capital backed by IPOs reached a 13 year quarterly low with only 8 IPOs in Q2 2022.

Mr. McGirr noted Private Equity was down -2.5% gross (-2.75% net). The trailing 1-year return remained strong at +27.3% gross (26.0% net). Specifically, Buyouts were down 0 to -3% for the quarter and up 25-28% for the 1-year; General Equity were down -4% for the quarter and up 23% for the 1-year; Venture Capital was -8% for the quarter and up over 31% for the 1-year; and Currency, EUR was a detractor of 25 bps of performance in Q2 2022. The Private Equity net asset value decreased to \$16.9 billion but increased as a percent of the PRIT Fund; (18.4% of PRIT). Including the recommendations from this meeting, Private Equity will have roughly committed \$2.2 billion, which puts us on pace to reach our targeted goal for 2022 of between \$2.7B to \$3.3B for the calendar year.

The PRIM Investment Committee meeting adjourned at 11:41 a.m.

List of documents and exhibits used during the meeting:

- *Minutes of the PRIM Investment Committee Meeting on May 3, 2022*
- *PRIT Fund Performance Report (June 30, 2022)*
- *BNY Mellon Gross of Fees Performance Report (June 30, 2022)*
- *FUTURE Initiative Update Presentation*
- *Developed International Value Equity Recommendation Presentation*
- *Callan Memorandum on Developed International Value Equity Managers*