PENSION RESERVES INVESTMENT MANAGEMENT BOARD

Minutes of the PRIM Real Estate and Timberland Committee Meeting
Wednesday, October 30, 2019

Committee members present:

- Jill Hatton, CRE, Chair
- Sarah Kim (as Treasurer's designee)
- Lydia Chesnick, Esq.
- Anthony Hubbard, Esq.
- Jack Lutz, Ph.D. (via telephone)
- William McCall, Jr., CRE
- Garlan Morse, Jr., CRE
- Peter O'Connell
- Carly Rose
- Robert Gifford

Committee members not present:

- N/A

The PRIM Real Estate and Timberland Committee meeting was called to order at 9:36 a.m.

The PRIM Board has adopted the provision of the Massachusetts Open Meeting Law that permits remote participation in meetings by a member if physical attendance would be unreasonably difficult, as was the case with Dr. Jack Lutz, who accordingly participated in the meeting remotely by telephone, and all votes in the meeting were taken by roll-call.

I. Approval of the Minutes (Voting Item)

The PRIM Real Estate and Timberland Committee (unanimously) approved the minutes of its July 31, 2019 meeting.

II. Executive Director/Chief Investment Officer Comments

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

Market Performance Summary

Worldwide economies continue to slow, some are already in recession, and GDP growth in the U.S. is expected also to continue its decline. Third calendar quarter U.S. GDP growth was 1.9%, down from 2.0% in the second quarter of 2019, and was slightly higher than estimates, mainly due to a solid increase in federal government spending. Business investment declined 3% annualized, which followed a 1% decline in the second quarter. The 1.9% third quarter GDP growth is down from the more than 3% reported in first quarter. Consensus estimates for the fourth calendar quarter and into 2020 continue to anticipate a continued slowdown. The current consensus is for quarterly GDP growth to bottom at approximately 1% in 2020 before rising again in 2021.

Recent economic data has been mixed. For example, the Institute for Supply Management (ISM) manufacturing index of 48.3 in October remains below the 50 threshold that separates expansion from contraction, and the Chicago Purchasing Manager Index dropped to 43.2, hitting a nearly four-year low.

However, recent jobs reports, by contrast, were more positive. The Labor Department reported that 128,000 jobs were added in October, well above the expectation of 75,000. The unemployment rate fell (0.2%) to 3.5% in September, a 50-year low, yet even with the positive surprise, job growth remains below previous levels and below the average monthly rate of more than 160,000 in 2019.

Consumption growth slowed to 2.6% from 4.6% in the second quarter and with job growth slowing from previous levels, further moderation is expected. Perhaps a harbinger of things to come, US retail sales fell in September for the first time in seven months.

Central banks around the world, including the US Federal Reserve Bank, have shifted to an accommodative stance. The Fed lowered the federal funds rate a quarter of a percent last week to a range of 1.50% to 1.75%, the third cut this year, following similar cuts in July and September. At the time of this writing, 71% of the S&P 500 companies have reported quarterly earnings and 76% of them have exceeded analysts' expectations, but corporate earnings have declined for the third consecutive quarter. On average, corporate earnings for the third quarter are 2.7% below last year's level.

Meanwhile, despite the continued slowdown in global growth and a steady stream of mixed economic news, equity market returns strengthened in September and into October as investors continue to climb the proverbial "wall of worry". There is still plenty to worry about: slowing global growth, trade tensions, geopolitical tensions, political gridlock, political infighting globally, and military escalations in the middle east, to name just a few. Yet the S&P 500 index is making regular new all-time highs, while international equities are likewise rebounding. Bond yields are off their lows for the year (the 10-yr hit 1.47% in September), but these ultra-low levels (negative in some geographies) continue to indicate a lack of confidence in the global markets.

At the PRIM Investment Committee meetings in July and in October, we identified several reasons to remain cautious, and we recognized a divergence between economic sentiment and expectations versus actual economic performance. Markets eventually react to mismatches of data and expectations, so we will be watching closely in the coming months for confirming data to support the recently rising equity markets. Something to watch closely is the widely held belief that the consumer (the driving force of economic growth in the U.S.) is healthy, but there are already some worrisome signs: average hourly earnings are down, average weekly hours are down, retail sales were down in September, and monthly employment growth, while still positive, is slowing.

We think of the recent strength of equity markets in terms of three possibilities:

Scenario 1: The recent strength in equities is a counter-trend move. When trades become as one-sided as they were by late-summer, markets can try out the opposite scenario. In other words, perhaps the market weakness in the summer months was too extreme, and the recent bounce is merely a reversal.

Scenario 2: The recent strength in equities is an early indication of a stronger global economy. Changes in equity sector performance can be a first sign of regime change. If something really different is developing in the global economy, there will need to be evidence in orders and in spending. So far, global conditions are still deteriorating. This could change with confirming data.

Scenario 3: Shares that powered the U.S. market to rebounds from sell-offs in 2018 and 2019, and held it at high levels since, have more recently faltered. We highlighted the historic, but temporary reversal into value stocks recently at the PRIM Investment Committee meeting. If new leadership is not sustained, if the strength in the markets continues to be the result mainly of a narrow group of high performers, then equity markets are still vulnerable.

Bottom line: We will be watching closely for confirming data to support the recently rising equity markets and we continue to believe that the carefully constructed PRIT Fund asset allocation will enable strong performance in any of these potential scenarios.

Organizational Update

With the increase in assets under management and the increase in the number of clients, PRIM is continuing to add to its staff. PRIM currently has eight job openings for which we have received more than 2,500 applications. We recently welcomed one new employee.

Minching Kao joined the Real Estate and Timberland team in October as an Investment Analyst. Most recently, Minching was with Beacon Capital Partners in Boston as a Senior Acquisitions Analyst. Prior to Beacon, Minching held positions at the Boston real estate advisor, GFI Partners, and at National Valuation Consultants, in Denver, CO. Minching holds a bachelor's degree in Finance and English from Tung Hai University and an MBA and Master of Science in Real Estate and Construction Management from the University of Denver.

In the area for recognition for PRIM staff members, Qingmei Li, PRIM's Financial Reporting Manager, was awarded the Treasurer's 2019 Citation for Outstanding Performance. Those selected for this honor have made notable contributions to the office of the Treasurer, its agencies, and the citizens of MA. In early June and for the 14th consecutive year, PRIM was awarded the GFOA's (Government Finance Officer Association's) *Certificate of Achievement for Excellence in Financial Reporting.* This award recognizes the completeness and timeliness of PRIT's Comprehensive Annual Financial Report, the CAFR. Qingmei manages the production of the CAFR and an increasing number of audits that have dramatically increased in complexity in lock-step with PRIM's innovative investment program. She is the driving force behind PRIM's financial statements consistently having clean audit opinions.

Michael McGirr, CFA, has accepted an invitation from the Institutional Limited Partners Association, ILPA, to join its newly created Content Committee. This committee is responsible for creating and curating content that will be beneficial for the ILPA's membership, which includes more than 500 international institutional private equity investors from peer public pensions, corporate pensions, endowments and foundations.

And last, PRIM's Executive Director and Chief Investment Officer, Michael Trotsky, CFA, has been awarded the *Lifetime Achievement Award* from Institutional Investor. He will receive this honor at the annual Allocators' Choice Awards on December 3, 2019 in New York City.

PRIT Fund Performance Summary

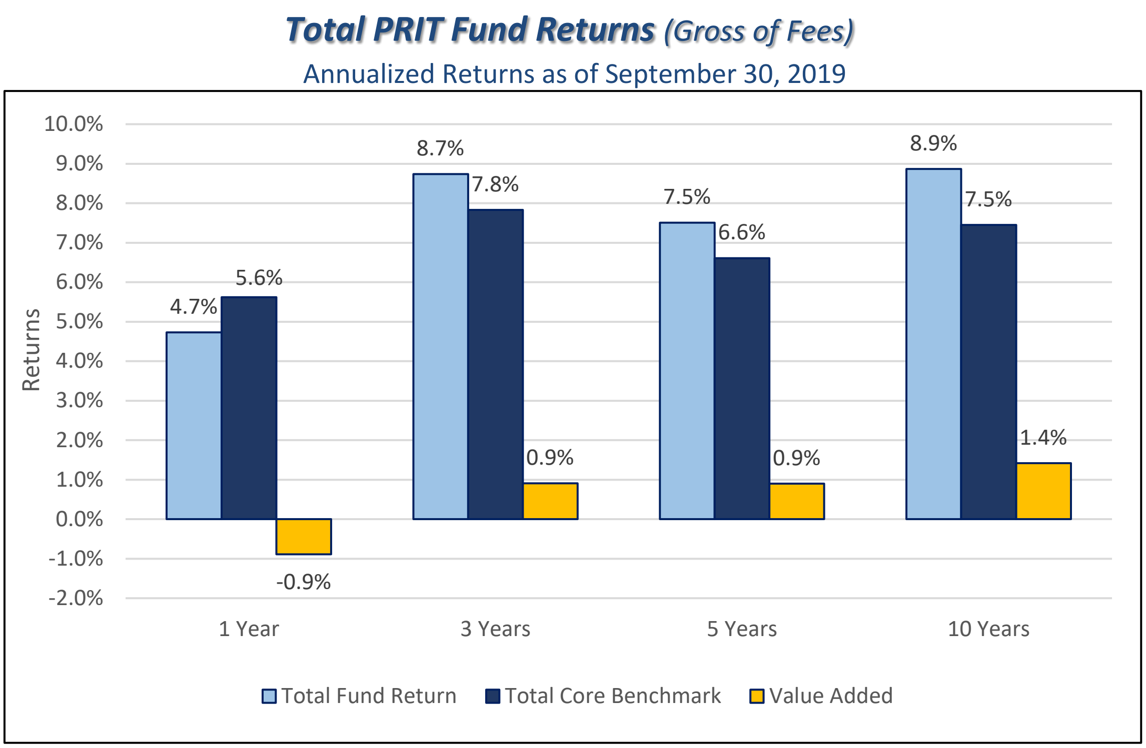
Last quarter, we highlighted that the largest component of the relative underperformance for the trailing 12 months was due to the *"Actual v. Target Weight Divergence Effect."* This divergence is caused by being unable to precisely match the actual PRIT Fund assets to the target allocation of illiquid alternative investments. This was still the case in the September quarter. We were overweight poorly performing global equities as a result of being underweight the target private equity allocation, which performed strongly. This was the major source of the underperformance reported relative to the PRIT Fund's benchmark.

The PRIT Fund benchmark is based on its target asset allocation and not on the actual allocation. It is not always advisable, practical, or even possible, to identify and invest in PRIM's high-performing, illiquid alternative investments such as private equity quickly enough to match the target allocation, particularly in volatile market environments. The current comparison to the target allocations penalized us during the last 12 months for not being able to invest quickly enough in PRIT's higher-performing, illiquid alternatives – Private Equity in particular. We will be addressing this divergence effect with a possible solution for consideration during the next Board meeting in February, but the real news here is good, namely that the PRIT Fund's target allocations are performing well, it just takes time to reach the targets.

The other much smaller contributor to underperformance for the 1-year period was due to weakness in a few specific strategies that we have discussed for several quarters, such as Real Assets, the Put Spread Collar strategy (Equity Hedged program), Real Estate, and Private Debt. We understand the reasons for the underperformance, we believe that they are temporary in nature, and in all cases, we have taken necessary steps to address these underperforming areas. In fact, each of the underperforming areas had a much stronger September quarter, and the PRIT Fund's longer term 3-, 5-, and 10-year performance remains strong.

- For the one-year as of September 30, 2019, the PRIT Fund was up 4.7% (4.3% net), underperforming the total core benchmark of 5.6% by 89 basis points (133 bps, net).
- This performance equates to an investment gain of $3.5 billion ($3.2B, net of fees).
- Net total outflows to pay benefits for the one-year ended September 30, 2019 were approximately $960 million.

Mr. Trotsky made reference in his remarks to the following charts:



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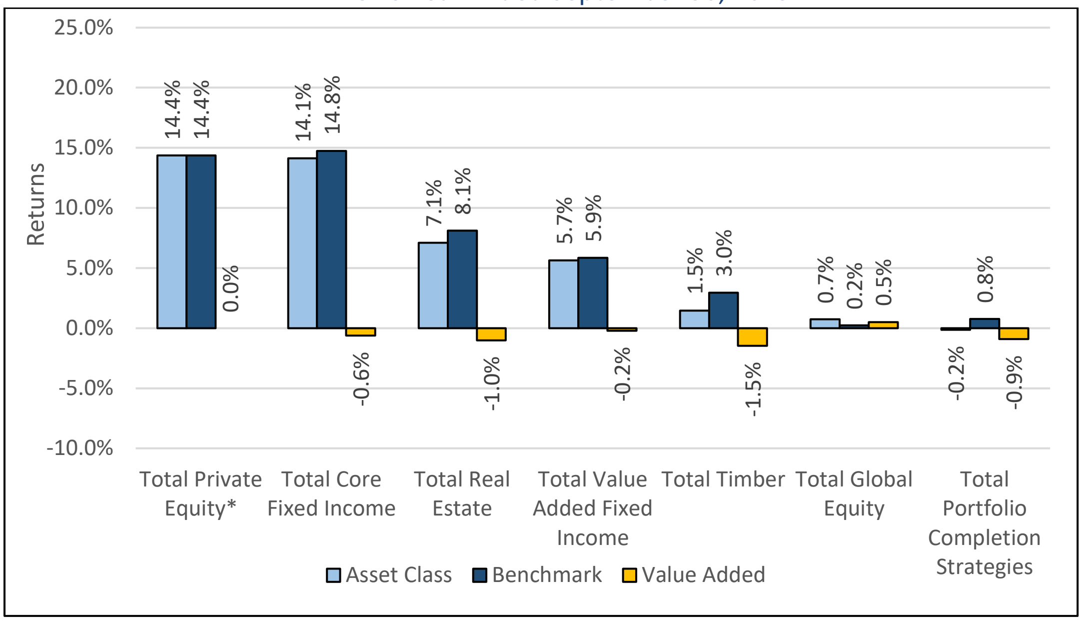
PRIT Asset Class Performance (Gross of Fees)

One Year Ended September 30, 2019



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PRIT Fund Periodic Table of Returns *(Gross of Fees)*

Annualized Returns as of September 30, 2019

1 Year	3 Year	5 Year	10 Year
PRIVATE EQUITY 14.4%	PRIVATE EQUITY 20.6%	PRIVATE EQUITY 18.0%	PRIVATE EQUITY 18.5%
CORE FIXED INCOME 14.1%	GLOBAL EQUITY 9.8%	REAL ESTATE 9.7%	REAL ESTATE 10.5%
REAL ESTATE 7.1%	REAL ESTATE 7.4%	GLOBAL EQUITY 7.1%	GLOBAL EQUITY 9.0%
VALUE-ADDED FIXED INCOME 5.7%	VALUE-ADDED FIXED INCOME 6.0%	CORE FIXED INCOME 5.3%	VALUE-ADDED FIXED INCOME 7.4%
TIMBER 1.5%	TIMBER 5.7%	TIMBER 5.2%	CORE FIXED INCOME 5.3%
GLOBAL EQUITY 0.7%	PORTFOLIO COMPLETION STRATEGIES 4.7%	VALUE-ADDED FIXED INCOME 4.2%	PORTFOLIO COMPLETION STRATEGIES 4.6%
PORTFOLIO COMPLETION STRATEGIES (0.2%)	CORE FIXED INCOME 2.8%	PORTFOLIO COMPLETION STRATEGIES 3.1%	TIMBER 3.3%

III. Performance Review and Market Update

Timothy Schlitzer, CRE, CFA, Senior Investment Officer - Director of Real Estate and Timberland, updated the Committee on real estate and timberland performance.

Mr. Schlitzer provided a summary of performance information as follows:

- PRIM’s portfolio continues to benefit from a strong economic and employment environment, but recession risk has increased.
- The low interest rate environment has increased potential cash on cash returns and kept cap rates low, supporting values but also acquisition prices.

- Construction and costs remain elevated – moderating construction somewhat. The exception continues to be multifamily. PRIM is observing the impact of new supply in several markets. Notably, recent housing starts data indicate that multifamily starts dropped 28%.
- Retail is still a challenge for the market. PRIM is observing the impact of declining investor sentiment on underwriting in terms of both discount rates and capital expenditures. PRIM is underweight the retail sector.
- The US REIT market is up 28% YTD. The market premium to the physical asset values in the US is 14% compared to the global average of -5%.
- Notable sector returns are industrial up 49%, office up 25%, residential up 37%, and regional malls down 5%. Timberland companies are up 35% YTD. We continue to see wide dispersion by type.
- Housing starts were down 9.4% in September versus August but up 1.6% year over year. Single family housing rose slightly, up 0.3%. Multifamily starts dropped 28%.
- Slow housing markets combined with the impact of tariffs and slowing Asian demand have had a negative impact on prices.
- Timberland capital markets have been inactive this year. There have been only two trades over $100 million this year.
- Total timberland returns were 1.5% for the year, 148 basis points under the NCREIF benchmark. After unlagging the benchmark, the underperformance moved to 63 basis points.
- The underperformance is primarily concentrated in one of the separate accounts and is due to a $74 million loss resulting from Hurricane Michael.

IV. Real Estate Debt - Investment Policy Recommendation (Voting Item)

Staff presented its proposed changes, accompanied by a recommendation from Chatham Financial, to the real estate debt section of PRIM's Investment Policy Statement. Staff elaborated that the rationale for the proposed changes was to align certain debt policy metrics with information from the real estate portfolio's financial statements and reporting documents provided to PRIM's unsecured lenders. Members of the Committee provided feedback on language used to measure the spread of appraisal-based discount rates and borrowing rates and other proposed revisions. As a result, no vote was taken, and the item will be revisited at the February meeting.

V. Real Estate Debt - Transaction Update

Staff provided an update on a pending issuance of private notes. Staff reminded the Committee that the new notes would replace $175 million in Series A Notes maturing in February 2020. Staff informed the committee that spreads have tightened since the last notes issuance and conveyed estimated pricing for the new series. Additionally, staff communicated possible scenarios for the size of issuance and related impact to the weighted average maturity and borrowing rate of the real estate debt program. The expected timeline of the transaction was also discussed.

VI. Research Presentation -Seniors Housing

Christina Marcarelli, CAIA, Senior Investment Officer - Real Estate and Timberland, and Maria Garrahan, Investment Officer – Portfolio Completion Strategies, presented research on Senior Housing, an alternative asset class within real estate. The research was a collaboration between the Real Estate team and the Research team. Ms. Garrahan presented the macroeconomic component of the research.

Ms. Marcarelli discussed attributes of Senior Housing, which has historically been divided into four categories: Independent Living, Assisted Living, Memory Care, and Skilled Nursing, differing by level of care and services. Opportunities and risks within the sector were discussed in detail. Positive demand drivers like aging population, increased life expectancy, and needs-driven demand were discussed. Many of these demand drivers have resulted in outperformance within the sector across most time periods.

Challenges within the sector include operational intensity, tightening operating margins, and increased supply which has adversely affected occupancy and absorption. Ms. Marcarelli and Ms. Garrahan discussed other risks faced by the sector including advancement in technology and aging-in-place, which could create headwinds to demand.

Senior Housing was described as an intriguing sector with many positive demand characteristics, but not without risks. The population of older adults will inevitably increase, however, whether the increased population will translate into increased demand for seniors housing is difficult to determine. Returns are compelling, but data is somewhat limited. Like many niche property types, operations are highly specialized, and a strong operating partner is critical to the success of the investment.

The committee engaged in a short discussion on the topic. It was noted that PRIM is taking a contrarian view on seniors housing by researching not only the demand drivers but also many of the risks and challenges explored.

PRIM staff will continue to monitor the sector and if a compelling investment opportunity presents itself, a formal recommendation would follow.

The PRIM Real Estate and Timberland Committee meeting adjourned at 11:20 p.m.

List of documents and exhibits used during the meeting:

- *Minutes of the PRIM Real Estate and Timberland Committee Meeting of July 31, 2019*
- *PRIT Fund Performance Report*
- *BNY Mellon Gross of Fees Performance Report*
- *Real Estate and Timberland Performance Charts*
- *Real Estate Debt Revised Policy – Clean*
- *Real Estate Debt Revised Policy – Redlined*
- *Real Estate Debt Policy Recommendation - Chatham Financial*
- *Real Estate Debt Transaction Update Presentation*
- *Seniors Housing Presentation*