PCA PENSION CONSULTING ALLIANCE

MEMORANDUM

Date: August 15, 2016

To: Members of the Investment Committee
California Public Employees' Retirement System

From: Pension Consulting Alliance, Inc. (PCA)

RE: Real Estate Performance through June 30, 2016

PCA received and reviewed Wilshire's Executive Summary of CalPERS' Investment Performance for the period ending June 30, 2016 as it relates to the Real Estate Portfolio. The following items should be considered in your assessment of Real Estate's performance:

Real Estate Market:

1. The real estate cycle continues towards a later stage, with demand for space picking up, and supply generally being constrained, resulting in higher asking rents and increased occupancy in most domestic property types. In general, the North American commercial real estate markets continue to display sound fundamentals insofar as occupancy demand. Occupancy rates are at peak levels and cap rates are at historic lows. Below average new construction levels (with the exception of multifamily residential) and historically low base rates for mortgage loans continue to be the prevailing conditions in most markets. As demand continues to firm, new construction will increase, though the pace of increase will be moderated by tighter underwriting and regulated lenders subject to new risk based capital rules beginning in 2017. Since overall growth is slow, and partially as a result of the uncertainty associated with Brexit, it is less likely that capital market interest rate increases will continue during the next twelve months. This low interest environment will likely keep the transaction market buoyant for completed and leased properties.
2. The capital markets did not experience the increase in rates which was predicted; however, lenders' underwriting standards tightened on many proposed loans compared to a year ago. The impact of Basel III and scrutiny by regulators makes borrowing somewhat more difficult.
3. Increases in value during the past fiscal year for core risk real estate assets can be attributed primarily to significant pent up demand for property in major, primarily coastal and gateway cities. These types of assets account for a large portion (and increasing percentage) of CalPERS' real estate portfolio. Based on unspent commitments in open end funds and separate accounts, this demand should continue to be strong, and core risk real estate assets should provide relatively attractive risk adjusted current returns compared to other available income-oriented investments. As employment levels continue to increase, it is reasonable

to expect increases in rent, occupancy, and many individual property valuations to continue during the next twelve months, though at a more moderate pace than that which has been achieved in prior years.

4. The same cannot be said for international investments. Uncertainty now prevails over Western European markets due to Brexit. Much volatility, political, currency, demand and other risks continue to be observed in BRIC countries. This is unlikely to change materially during the next twelve months, and it is possible that valuations will continue to decline.

CalPERS' Real Estate:

1. The Real Estate Portfolio continues its positive transformation towards a diversifying, income oriented portion of the Real Assets Program, which provides positive cash flow to the System and provides a counterweight to equity risk.
2. While contributing strong positive total return performance to the Total Fund of 7.14%, the 1-year return lagged the benchmark by 550 basis points for the year. The income portion of the return, 4.82% gross, 4.20% net, exceeded the income of the benchmark; however, the appreciation component, due significantly to the non-core/non-strategic risk assets, did not match the gains in value of the benchmark.
3. The 3- and 5-year returns were -110 basis points and +30 basis points, compared to the benchmark, while the 10-year performance continues to include the results from the Great Financial Crisis, and shows underperformance of -920 basis points compared to the benchmark. In an illiquid asset class populated with multi-year partnerships, longer-term results are more significant than those of a shorter duration.

Real Estate Performance	Quarter	1 Year	3 Year	5 Year	10 Year
Real Estate Returns	2.2%	7.1%	11.5%	12.4%	-0.5%
Real Estate Policy Benchmark	2.0%	12.6%	12.6%	12.1%	8.7%
Difference	0.2%	-5.5%	-1.1%	0.3%	-9.2%

What Worked in FY 2016-17 and What Did Not Work:

Beyond the contribution of cash flows to the Total Fund, it is important for the Investment Committee to consider the following points of progress:

1. Changes in the composition of a private, illiquid portfolio take significant amounts of time to effect, and Staff has made material progress in re-positioning Real Estate to be aligned strategically within the Total Fund. During the past year, the core risk assets continued to be a larger portion of the portfolio (75% target), and by the end of the FY, the non-core/non-strategic portions were significantly reduced.

Staff effected a major, positive change during the past year in the sale of more than $2.5 billion of disparate, underperforming, non-strategic Legacy investments. This series of transactions contributed to moving the portfolio closer in line with the Strategic Plan approved by the IC in the following ways:

a. **reducing expected volatility** by eliminating many of the investments which did not contribute to the role of real estate insofar as they were not providing diversification to equity risk nor delivering reliable cash flow;
b. **reducing the number of managers** from 54 to 29, which will increase the efficiency of Staff oversight;
c. **improving governance by removing CalPERS from positions of non-control**: most of the interests sold were limited partnership interests which offered little or no ability to influence the underlying assets;
d. **reducing the number of high fee, high promote compensation structures**, driving down the average cost of externally managed accounts; and
e. **reducing the risk of market timing** from the portfolio, as the Legacy assets and strategies' capital gains were highly dependent on exiting.

2. Per Staff's analysis, the 550 basis points of one-year underperformance can be attributed to non-core/non-strategic investments. Some of the primary contributors to the underperformance were:

   a. a write-down/reclassification of CenterPoint
   b. the write-down and the sale of non-core/non-strategic Legacy partnership interests; and
   c. investments in emerging markets

   Item b. is a onetime event. Item c. requires close scrutiny and may warrant additional action.
3. Compared to the benchmark performance, it should be noted that CalPERS' portfolio diverges insofar as:

   a. higher leverage levels; and
   b. types of assets (e.g. Housing, Land) and locations of assets (e.g. Brazil, Russia, China) which are not part of the benchmark.

   Each of these elements will provide benefits in some market periods and detriments in others. Last year, Item b. was materially negative to performance, while Item a. was slightly additive.
4. During FY 2016-17, CalPERS' experience of the past several years continued insofar as less new capital was invested ($2.9 billion) than had been approved ($7.9 billion). Demand for the types of assets that CalPERS seeks was high and competition fierce. Managers and Staff demonstrated good discipline in not chasing acquisitions. The decision making processes continued to be improved, which will reduce the potential for future losses. Certain Sovereign Wealth Funds whose capital was pegged to oil prices became less active competitors for trophy assets; however, they were replaced by increased appetite from retirement systems, flight capital and

other institutions whose need for current income was unsatisfied by fixed income choices.

Lessons Learned:

1. The shift to a diversifying, reliable income oriented investment program requires patience. This patience will be rewarded as the footings which are being established take root.
2. The IC and Staff have instituted strategy, policies and procedures which improve alignment, accountability and cohesion within the Real Assets portfolio, which will make managing the assets less risky in the future. By incorporating other asset class professionals into the real estate investment process, the group has improved context.
3. The MID has brought stability, consistency and renewed enthusiasm to the group and morale has improved.
4. The lessons of what kinds of risk and how much risk is being undertaken are better understood by Staff than in the past. Improved portfolio management tools and attribution analyses are now available to monitor the portfolio and make adjustments.
5. The ability of CalPERS (or most other institutional investors of similar size) to be effective at scale in higher risk strategies and off shore locations is not proven. Much effort and costs have been expended into trying to design a program of non-core property investments. To date, CalPERS has not been paid an adequate return for the risks undertaken. The current Strategic Plan provides for a minority of the portfolio to be invested outside of core. Given the liabilities, resources, and structure of the System, future non-core investments should be approached with extreme caution.

PCA is available to take any questions of the Investment Committee.

Respectfully,

David Glickman
Managing Director

Christy Fields
Managing Director

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Supplement for real estate and private equity partnerships:

While PCA has reviewed the terms of the Fund referred to in this document and other accompanying financial information on predecessor partnerships, this document does not constitute a formal legal review of the partnership terms and other legal documents pertaining to the Fund. PCA recommends that its clients retain separate legal and tax counsel to review the legal and tax aspects and risks of investing in the Fund. Information presented in this report was gathered from documents provided by third party sources, including but not limited to, the private placement memorandum and related updates, due diligence responses, marketing presentations, limited partnership agreement and other supplemental materials. Analysis of information was performed by PCA.

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