PENSION CONSULTING ALLIANCE

MEMORANDUM

Date: January 18, 2017

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

From: Pension Consulting Alliance, Inc. (PCA)

RE: Real Estate Performance as of December 31, 2016

PCA received and reviewed Wilshire's Executive Summary of CalPERS' Investment Performance for the period ending December 31, 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 Markets:

1. The real estate **space markets'** cycle continues towards equilibrium. Generally, demand for space increased during July through December 2016, and new supply was relatively constrained. Net operating income continued to increase at a moderate pace. 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, albeit slightly increased, base rates for mortgage loans continue to be the prevailing conditions in most markets.

2. The real estate capital markets are flush with allocations of equity and debt for new investments, seeking better risk adjusted returns (compared to other asset classes), which have been delivered during the past several years. Prices for completed and leased investment grade property assets, such as the ones which CalPERS' managers seek, have risen to equal or exceed those seen prior to the 2007-08 market peaks. Also, there are few distressed sellers. Prices for the "raw materials" which value added and opportunistic property GPs acquire to reposition or develop new properties have also been bid up significantly (as described by the lower target yields being offered by fund-raisers) and in many cases may reflect only a marginally acceptable, or worse, risk-adjusted projected level of net returns.

3. The changed political landscape will have positive and negative implications for commercial real estate. Expected in the near term are changes in regulations concerning mortgage lending, which are expected to be relaxed compared to the previously anticipated increases in required risk based capital for regulated lenders. Forecast reductions in corporate tax rates, and the ability to "re-patriate"

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off shore cash may increase the amount of capital available to invest in physical occupancies.

In the first half of FY 2016-2017, space demand continued to firm on the strength of increased employment and wage gains. Typically, as a single factor, this would stimulate new construction. However, looking forward, the prospect of major, inward looking changes in trade policies could impede domestic firms whose growth depends on overseas purchasers of products.

The capital markets did not experience the increase in rates which was predicted; however, lenders' underwriting standards, which tightened on many proposed loans compared to a year ago, may well loosen again. This low interest environment will likely keep the transaction market buoyant for completed and leased properties. Global political uncertainty will likely continue to make existing completed and leased US property assets attractive for flight capital.

4. Increases in value during the past six months 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, and as Staff's report indicates, the System was not able to acquire the volume of new investments which it projected.

   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, and with less reliability.

5. The same level of confidence in the maintenance of valuation levels cannot necessarily be said for international investments. Uncertainty now prevails over Western European markets due to unknown Brexit terms (the UK government has proposed a relatively clean break with the EU, but practical conditions are likely years away from being completed) and upcoming elections in other developed countries. Estimates of growth are tepid at best.

   Much volatility, political, currency, demand and other risks continue to be observed in BRIC countries, where CalPERS has most of its international real estate net asset value. This is unlikely to change materially during the next twelve months, and it is quite possible that US dollar denominated 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. Additional divestitures of non-strategic assets occurred in 2H 2016 as pieces of the bulk Project Knight sale closed.
2. While contributing strong positive total return performance to the Total Fund of 6.8%, the 1-year return lagged the benchmark by 230 basis points for the year ending 12/31/16.
3. The 3- and 5-year returns were +30 basis points and +90 basis points, compared to the benchmark. The 10-year performance continues to contain a material amount of non-strategic assets and includes the results from the Great Financial Crisis. It shows underperformance of -950 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	1.8%	6.8%	11.7%	12.5%	-1.2%
Real Estate Policy Benchmark	1.8%	9.1%	11.4%	11.6%	8.3%
Difference	0.0%	-2.3%	0.3%	0.9%	-9.5%

What Worked in 1H FY 2016-2017 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 continued to make worthwhile progress in re-positioning Real Estate to be aligned strategically within the Total Fund 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, which will increase the efficiency of Staff oversight;
    c. strengthening portfolio management processes and tools which have also made risk management and reporting techniques more similar to best practices in the public market asset classes
    d. 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;

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e. reducing high fee, high promote compensation structures, driving down the average cost of externally managed accounts; and

2. Per Staff's analysis, the 230 basis points of one-year underperformance can be attributed primarily to non-core/non-strategic investments:

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

    Item a. is a onetime event. Item b. 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:
    b. higher levels of non-stabilized assets; and
    c. 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 c. was materially negative to performance, while Item a. was slightly additive.

4. During the first half of FY 2016-17, CalPERS' experience of the past several years continued insofar as less new capital was invested, $1.6 billion compared to the $4.7 billion which has been approved for the fiscal year. 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.

<u>Lessons Learned:</u>

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 designed a strategy, and instituted 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

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other asset class professionals into the real estate investment process, the group has improved context.

3. 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.

4. 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.

5. The risks of political uncertainty, and how they impact property markets, were generally thought to apply primarily to developing nations. Events during the first half of the 2016-2017 FY now suggest that these uncertainties will apply to domestic and developed markets too, particularly for property assets which are being developed to meet anticipated but now changing demands from users, vastly different tax and trade policies and capital market conditions. PROCEED WITH 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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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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