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November 18, 2019

Mr. Rob Feckner
Chairman of the Investment Committee
California Public Employees' Retirement System
400 Q Street
Sacramento, CA 95814

RE: PRIVATE EQUITY PROGRAM ANNUAL REVIEW 2019

Dear Mr. Feckner:

In our role as the Board Private Equity Consultant, Meketa Investment Group conducted an annual review of the Private Equity Program ("the Program") for the period ending June 30, 2019. Our review covered the Program's investment performance, implementation, compliance with the Investment Policy for the Program, staffing, and overall compliance with CalPERS' Investment Beliefs. Each area is addressed in this letter, first in summary, followed by additional detail. We provide observations related to certain strategic aspects of the Program, as well as identify certain areas we believe the Board should continue their focus going forward.

Summary Review

Based on our review, Meketa Investment Group identified the following as key developments and observations during the reporting period. All years refer to fiscal years ending June 30, unless otherwise noted.[1]

- **Performance:** The Program's fiscal year end 2019 Net Asset Value ("NAV") was $26.5 billion, a decrease (net of cash flows) of $0.7 billion, or approximately 3%, over prior fiscal year end. While the Program had an overall value increase of over $2 billion, the underlying managers returned substantially more cash (largely from exited investments) than they called for new investments, leading to a net decline in the Program's NAV. The Program's fiscal year 2018-2019 one-year net total return of 7.7% exceeded its Policy Benchmark[2] of 4.0% for the period. However, the three-year, five-year, and ten-year net returns did not meet the Policy Benchmark. We note, however, that the Program's performance

[1] Financial data are as of March 31 for the fiscal years ending June 30, due to the quarter lag in private investment performance reporting from the managers. Investment performance is shown on a time weighted basis.

[2] The current Policy Benchmark is a Custom FTSE All World, All Cap Equity + 150 basis points, lagged by one quarter. Previous benchmark was blend FTSE US + FTSE AW ex US + 3% lagged 1 quarter from September 2011 to June 2018, Wilshire 2500 ex-tobacco +3% between July 2009 and September 2011, and the Custom Young Fund Index prior to July 2009.

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exceeded the CalPERS Global Equity Policy Benchmark (FTSE All World All Capitalization) + 150 basis points in the one-, and five-year time periods, while being just below this benchmark for the three-, and ten-year time periods.[1] As such, the Program has delivered a premium above public equity alternative. Additionally, the Program returns have consistently exceeded the CalPERS Total Plan target return.

- **Implementation:** The Private Equity Staff made $6.7 billion of commitments during the 2018-2019 fiscal year, up from the $5.3 billion committed in the prior fiscal year, and $3.3 billion committed in the 2016-2017 fiscal year. In addition, Staff completed significant work researching the Innovation Horizon, Pillars 3 and 4, respectively. Staff continues to evaluate these Pillars in a deliberate fashion.
- **Policy Compliance:** As of the end of the reporting period, the Program was in compliance with the key parameters of CalPERS Investment Policy for Private Equity Program (the "Policy"), including those related to strategy and manager concentration, as measured by NAV.
- **Staffing:** Subsequent to the fiscal year end, CalPERS hired Greg Ruiz as the Managing Investment Director for Private Equity. On an overall basis, the Private Equity Unit staffing remained relatively steady at 28 positions at the end of the fiscal year (at 30 positions currently), but is down meaningfully from the 50 positions at the end of June 2016. There are three current vacancies.
- **Investment Beliefs:** In our view, the Private Equity Program, as implemented by Staff, is aligned with CalPERS' Investment Beliefs. We note, however, that CalPERS will need to increase the current investment commitment pace to meet the long term target exposure to the private equity asset class.

The Private Equity Program has delivered the strongest returns of all asset classes for CalPERS in the three-, five-, and ten-year time periods and is expected to remain an important contributor to the Plan going forward. The appointment of a permanent MID is expected to help continue the growth and development of the Program. However, as further described in this letter, CalPERS faces certain challenges, both internal and external, that may impact the ability of the Program to meet its strategic role.

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[1] All returns are reported as Total Return net of fees, except if noted.

Investment Performance[1]

The Program's NAV at 2019 fiscal year end was $26.5 billion, an approximately 3% decrease over the last fiscal year's NAV of $27.2 billion. This exposure represents 7.1% of the Total Fund, compared to the 8.0% Target. Additionally, unfunded commitments were $18.5 billion bringing total exposure to $45.0 billion at the end of the fiscal year (up from $41.2 billion of total exposure at prior fiscal year end).

During the fiscal year, the Program experienced a strong net cash inflow of $2.7 billion ($7.4 billion distributions and $4.6 billion contributions) in addition to a $2.1 billion value increase. Since 2011, CalPERS has received nearly $34 billion in net cash flow from the Program.

	NAV ($ mm)	**1 Year (%)**	**3 Year (%)**	**5 Year (%)**	**10 Year (%)**
Buyouts	18,060	8.2	14.2	11.0	14.3
Credit	1,992	1.8	6.0	2.2	14.8
Growth/Expansion	3,715	5.5	14.8	10.9	14.0
Opportunistic	2,109	13.0	10.6	14.0	13.4
Venture	550	16.9	3.8	3.2	6.7
Other	45				
CalPERS PE Program	**26,472**	**7.7**	**12.5**	**9.6**	**14.0**
Policy Benchmark[2]		*4.0*	*14.1*	*10.3*	*16.6*
Excess vs. Policy Benchmark (%)		3.7	-1.6	-0.8	-2.5
FTSE All World + 150 bp (%)		*4.4*	*12.7*	*8.5*	*14.1*
Excess vs. FTSE All World + 150 bp (%)		3.4	-0.2	1.0	-0.1

The Program's 2019 one-year net total return of 7.7% exceeded the Policy Benchmark[2] of 4.0% for the one-year period. However, the Program's three-year, five-year, and ten-year net returns did not meet the Policy Benchmark.

Effective July 1, 2018, the Policy Benchmark was changed to FTSE All World All Capitalization (the Global Equity benchmark) plus 150 basis points. On a *pro forma* basis, the Program's performance exceeded the CalPERS Global Equity Policy Benchmark plus 150 basis points in the one- and five-year time periods, and was just below this benchmark for the three- and ten-year time periods. As such, the Program has delivered a premium above public equity alternative. Additionally, we note that the Program's has delivered the strongest performance among all CalPERS assets in the three-, five-, and ten-year time periods and has consistently outperformed the CalPERS Total Plan target.

[1] Financial data are as of March 31 for the fiscal years ending June 30, due to the quarter lag in private investment performance reporting from the managers.

[2] The current Policy Benchmark is a Custom FTSE All World, All Cap Equity + 150 basis points, lagged by one quarter. Previous benchmark was blend FTSE US + FTSE AW ex US + 3% lagged 1 quarter from September 2011 to June 2018, Wilshire 2500 ex-tobacco +3% between July 2009 and September 2011, and the Custom Young Fund Index prior to July 2009.

Within the Program, the Buyout, Growth/Expansion, and Opportunistic strategies, which also have the largest allocation, have generally contributed to outperformance, while Venture and certain segments of Credit have underperformed historically.

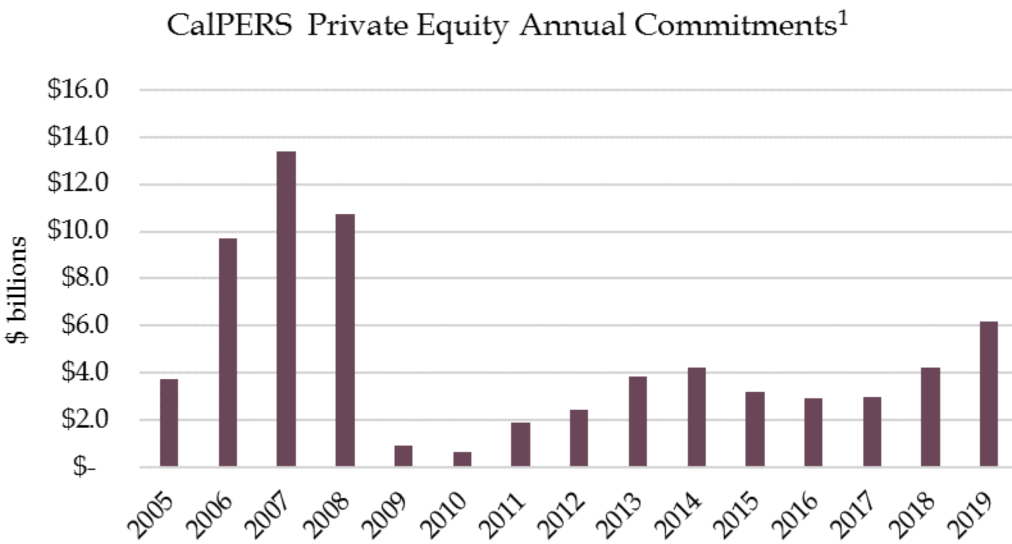
Implementation

Staff committed $6.7 billion to 17 funds and one Separate Managed Account during the 2018-2019 fiscal year. This commitment amount was slightly above the $6 billion target allocation largely due to the completion of a separate account program for emerging managers that was initially planned to be completed in the prior fiscal year. Staff did not report any situations in which it was not able to obtain the commitment allocation it sought from the manager.

Overall, staff received 61 proposals during the fiscal year of which nine were referred to the Emerging Manager advisor. Of the 18 commitments made, 15 were to existing Core managers, while two were New managers (but with prior exposure through California Emerging Ventures II or Capital Link Fund), and one was a Transition manager. By comparison, CalPERS received 89 proposals during the 2017-2018 fiscal year and committed approximately $5.3 billion to 19 vehicles of which two were from Transition managers and one from a New manager (but with prior exposure through the Emerging Manager program).

Staff has done substantial work in developing its strategy for a co-investments program. As we have noted, we believe co-investments are a logical investment strategy for a plan like CalPERS. Subsequent to the end of the 2018-2019 fiscal year, the Board approved a revised Total Fund Policy, which, among other things, included modifications to the Prudent Person Requirements ("PPO") for private equity co-investments. This modification should provide Staff with additional flexibility to respond rapidly to co-investment opportunities, while focusing the PPO requirement on the larger co-investment transactions. Staff continues to work extensively on the co-investment program with a focus on ensuring that CalPERS is well positioned to source, evaluate, and execute effectively.

Additionally, we note that Staff completed only one Separate Managed Account in each of the two most recent fiscal years. We believe that SMAs could provide efficiencies and cost savings for CalPERS compared to co-mingled fund investments.



As we highlighted in prior Program Reviews, one of the key challenges faced by CalPERS is to deploy capital in a steady manner and at scale in order to maintain the desired allocation to the private equity asset class. As shown above, CalPERS annual commitment pace has varied dramatically since 2005. Staff has stated that it believes that they will need to commit $10 billion or more per year in order to maintain an 8% allocation to private equity. As such, Staff has undertaken a number of initiatives to expand the investment set, grow the Program, and generate attractive returns.

- **Co-Investments:** As discussed previously, Staff is working to develop a comprehensive plan for sourcing, analyzing, executing, and managing private equity co-investments, with a focus on opportunities sourced from CalPERS' core managers.
- **Expansion beyond Core 30:** Staff has sought to expand the list of managers with a continued focus on high quality general partners. The expansion of the manager set provides opportunity, not only to increase scale, but also pursue strategies beyond the mega and large buyouts in order to add portfolio diversification.
- **Strategic Plan:** Staff has proposed a Strategic Plan based on the four Pillars. As discussed, the Pillars are in different stages of development but the concept is to provide additional ways for CalPERS to invest in attractive opportunities at scale.

The Board, Staff, and Meketa are aware of the challenges facing the Program in making attractive investments in scale. Staff is making efforts to address these challenges including increasing the investment commitment pace from prior

[1] Commitments based on vintage year of investment.

years, executing on co-investments, and working to develop each of the four Pillars. Going forward, we recommend that the Board continue to seek regular updates on these initiatives.

Policy Compliance

As of the end of the fiscal year, the Program was in compliance with the key Policy parameters, including those related to strategy and manager concentration, as measured by NAV.

Strategy	NAV[1] ($ mm)	Percent of Total NAV (%)	CalPERS Target (%)	Target Range (%)
Buyout	18,060	68.2	65	55-75
Credit	1,992	7.5	10	0-15
Growth/Expansion	3,715	14.0	15	5-20
Opportunistic	2,109	8.0	10	0-15
Venture	550	2.1	1	0-7
Other[2]	45	NA	NA	NA
Total Program	**26,472**	**7.1[3]**	**8[4]**	**+/- 4%**

Meketa Investment Group reviewed all commitments during the 2018-2019 fiscal year and each commitment complied with CalPERS investment policy and limitations.

Each of the Total Fund and Private Equity Policies were modified in June and August, 2018, respectively. Among other items, the target ranges for Buyouts and Credit were modified to more closely reflect the opportunity set available for the Program. As per the letters we provided the Board, we concurred with the changes proposed by Staff.

Staffing and Resources

As of June 30, 2019 the Private Equity Program had a total of 28 positions (compared to 30 positions at June 1, 2018) and 5 vacancies including a permanent Managing Investment Director ("MID"). As of October 1, 2019, the Program had 30 positions including Greg Ruiz as MID, and 3 vacancies.

Currently, the PE team has six investment teams each led by an Investment Manager to review, underwrite and monitor investments. Additionally, the Risk Research Analytics & Performance ("RRAP") continues to provide investment and portfolio risk reporting for the Program.

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[1] Source: State Street.
[2] Includes currency and stock holdings.
[3] PE program NAV as a percent of total CalPERS portfolio as of 6/30/2019.
[4] CalPERS Strategic Asset Allocation Target for Private Equity is 8%.

We believe the staffing levels are sufficient to execute on the current investment strategy. However, we and Staff believe the Program's investment pace will need to increase in the near future in order to meet CalPERS' objectives. As a result, the Program will likely need staff with additional skills to identify, execute, and monitor an increasingly complex portfolio.

With respect to Meketa providing resources related to the Program during Fiscal 2018-2019, we supported the Program in the following ways:

- **Private Equity Investment Review Committee ("IRC"):** Attended by phone 34 IRCs, including reviewing materials related to opportunity pipeline, prospect screening, active due diligences, performance analysis and reporting, manager reviews and amendment requests, policy and guidance matters, and providing comments as applicable.
- **Bi-Weekly Call with Senior Leadership:** Received updates on Private Equity Portfolio and related strategies, discussions related to Private Equity Strategic Plan ("Four Pillars"), prospective new investments, existing investments and managers, staffing, policy and guidance, and Total Fund developments.
- **Policy Review and Comment:** Reviewed, provided informal comments, and formal opinions on policy revisions affecting the Private Equity Program.
- **Periodic Reports:** Prepared Annual and Semi-Annual Reports for FY 2018, and H2 2018 and H1 2019, respectively.
- **Investment Review Letters:** Completed 18 investment review letters.

Investment Beliefs

In our view, the Private Equity Program, as implemented by Staff, is aligned with CalPERS' Investment Beliefs and remains largely in line with our observations last year. We highlight several Beliefs that are particularly important to the private equity asset class.

- **Liabilities must influence the asset structure (Belief #1):** Private Equity managers tend to hold investments for multi-year periods in order to generate their returns.
- **A long time horizon is a responsibility and an advantage (#2):** Private Equity is a long-term asset class and matches well with CalPERS' long term liabilities and time horizon.
- **Strategic asset class allocation is the dominant determinant of portfolio risk and return (#6):** CalPERS Private Equity exposure is currently slightly below the Interim Target. At current investment pacing the Program may fall short of the investment target.
- **CalPERS will take risk only where we have a strong belief we will be rewarded (#7):** CalPERS' Private Equity Program has historically produced strong long-term returns.

- **Costs matter and need to be effectively managed (#8):** Private equity is an expensive asset class.
- **Risk to CalPERS is multi-faceted and not fully captured through measures such as volatility or tracking error (#9):** The private equity asset class has additional risks including illiquidity, transparency, leverage, and currency.
- **Strong processes and teamwork and deep resources are needed to achieve CalPERS' goals and objectives (#10):** The appointment of the new MID is an important step in continuing the development of CalPERS' private equity program. However, as we have noted in prior letters, the CalPERS private equity team, while large and experienced, has shrunk in recent years. The Program will likely require additional staffing and skills to effectively manage the increasingly complex portfolio.

Conclusion

Private Equity has delivered strong returns for CalPERS and is expected to remain an important contributor of returns going forward. With the appointment of a permanent PE MID, the Program is poised to continue its growth and development. CalPERS has many advantages including large size and an experienced Staff. Staff will need to continue its work in developing creative alternatives, including the restart of the co-investment program and continued consideration of the Four Pillars strategy, for deploying capital in attractive investments at scale.

Please do not hesitate to contact us if you have questions or require additional information.

Sincerely,

Stephen P. McCourt, CFA
Managing Principal

Judy Chambers
Managing Principal

Steven Hartt, CAIA
Principal

SPM/SKH/JC/jls