Private Equity
Annual Program Review

Réal Desrochers
Managing Investment Director

Sarah Corr, Christine Gogan & Mahboob Hossain
Investment Directors

November 14, 2016
# Program Performance Review

<table>
<thead>
<tr>
<th>As of June 30, 2016*</th>
<th>1-YR</th>
<th>3-YR</th>
<th>5-YR</th>
<th>10-YR</th>
<th>20-YR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRIVATE EQUITY</strong></td>
<td>1.7%</td>
<td>10.0%</td>
<td>9.7%</td>
<td>10.2%</td>
<td>11.4%</td>
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<tr>
<td><strong>PE POLICY BENCHMARK</strong></td>
<td>(0.8)%</td>
<td>10.8%</td>
<td>10.6%</td>
<td>12.7%</td>
<td>10.1%</td>
</tr>
<tr>
<td>Excess Return</td>
<td>2.5%</td>
<td>(0.8)%</td>
<td>(0.9)%</td>
<td>(2.6)%</td>
<td>1.4%</td>
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<tr>
<td><strong>Current ALM Return Expectation</strong></td>
<td>9.3%</td>
<td>9.3%</td>
<td>9.3%</td>
<td>9.3%</td>
<td>9.3%</td>
</tr>
<tr>
<td>Excess Return</td>
<td>(7.6)%</td>
<td>0.7%</td>
<td>0.4%</td>
<td>0.9%</td>
<td>2.1%</td>
</tr>
<tr>
<td><strong>CalPERS GE Policy Benchmark</strong></td>
<td>(4.0)%</td>
<td>6.5%</td>
<td>5.9%</td>
<td>5.0%</td>
<td>6.5%</td>
</tr>
<tr>
<td>Excess Return</td>
<td>5.7%</td>
<td>3.5%</td>
<td>3.8%</td>
<td>5.2%</td>
<td>4.9%</td>
</tr>
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</table>

*Source: My State Street Monthly CIO Report & 2013 ALM Workshop
### Program Characteristics

<table>
<thead>
<tr>
<th>Investment Type</th>
<th>Net Asset Value (NAV) As of 6/30/16</th>
<th>% of NAV As of 6/30/16</th>
<th>Net Asset Value (NAV) As of 6/30/12</th>
<th>% of NAV As of 6/30/12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funds</td>
<td>$17.7</td>
<td>67%</td>
<td>$27.2</td>
<td>80%</td>
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<tr>
<td>Fund-of-Funds</td>
<td>$3.8</td>
<td>15%</td>
<td>$4.0</td>
<td>12%</td>
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<tr>
<td>Co-Investments/Direct Investments</td>
<td>$1.8</td>
<td>7%</td>
<td>$1.8</td>
<td>5%</td>
</tr>
<tr>
<td>Separate Accounts</td>
<td>$2.9</td>
<td>11%</td>
<td>$1.1</td>
<td>3%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$26.4</strong>*</td>
<td><strong>67%</strong></td>
<td><strong>$34.3</strong></td>
<td><strong>80%</strong></td>
</tr>
</tbody>
</table>

*Includes currency and distributed securities in the amount of $193mm

**Includes currency and distributed securities in the amount of $181mm

***Based on Market Value as of March 31, 2016

Source: State Street; Private Equity Accounting and Reporting Solution (PEARS)

**By Geography***

- United States 61%
- Europe 22%
- Emerging Markets 13%
- Other 4%

**By Industry***

- Health Care 23%
- Consumer Related 17%
- Financials 15%
- Information Technology 14%
- Industrials 11%
- Energy 8%
- Other 4%

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Source: CalPERS Investment Office Private Equity
2015-16 Accomplishments

- Private Equity Accounting and Reporting Solution (PEARS) went live
- Secondary transaction
- Transparency – Institutional Limited Partners Association (ILPA) Template
- Committed to separate accounts with improved economics

2016-17 Objectives

- Allocate up to $4 Billion
- Review Private Equity’s benchmark
- Continue to reduce complexity
- Examine Business Model
- Further PEARS integration
## Program Expenses

<table>
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<tr>
<th></th>
<th>FY 2015-16</th>
<th>FY 2014-15</th>
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<tbody>
<tr>
<td></td>
<td>AUM ($billions)</td>
<td>Fees Paid ($millions)</td>
</tr>
<tr>
<td>Internal Management</td>
<td>$</td>
<td>$ 9.3</td>
</tr>
<tr>
<td>External Management (net)</td>
<td>$ 26.4</td>
<td>$266.5(^c)</td>
</tr>
<tr>
<td>Consultants Expense</td>
<td>N/A</td>
<td>$ 1.3</td>
</tr>
<tr>
<td>Technology &amp; Operating Expense</td>
<td>N/A</td>
<td>$ 11.3</td>
</tr>
<tr>
<td>Total Program(^b)</td>
<td>$ 26.4</td>
<td>$228.4</td>
</tr>
</tbody>
</table>

### FY 2015-16 Profit Sharing ($millions)
- Profit Sharing Distributed: $539.0

### FY 2015-16 CalPERS Realized Gain ($millions)
- CalPERS Realized Gain: $3,258.8

\(^a\) All BPS fees paid figures are calculated on Total Program AUM
\(^b\) Some totals may not reconcile due to rounding
\(^c\) Does not include Management Fees paid by the underlying Funds in the Fund of Fund. These fees totaled approximately $46 million
\(^d\) In addition to Management Fees, Partnership Expenses were included in this figure (Legal fees, Audit fees, etc.). Partnership Expenses in FY 2015-16 total approximately $75 million
## Review Outline

<table>
<thead>
<tr>
<th>Section</th>
<th>Pages</th>
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<td>25-26</td>
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I. Program Overview
Private Equity: Program Role

• Primary Role
  – Private Equity allocations are a means of enhancing equity returns through a value-added approach to investment management of a diverse set of portfolio companies and to capture the illiquidity premium. The major driver for returns is appreciation, with negligible cash yield.
    – ALM Workshop 2013

• Driver of total performance
  – Price appreciation

• Risks
  – Growth risks
  – Illiquid
  – Leverage
  – Unfunded commitments
Program Investment Philosophy

- Long-term investor
- Manager selection and alignment of interest are important to PE’s success
- Over-diversification negatively impacts performance
- Costs matter
Current Policy Benchmark

\[
\frac{2}{3} \text{FTSE US} + \frac{1}{3} \text{FTSE ROW}^* + 300 \text{bps}
\]

*(2/3 FTSE U.S. Total Market Index + 1/3 FTSE All World ex-U.S. Total Market Index) + 300 bps lagged by one quarter.
Program Characteristics

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Net Asset Value*</th>
<th>Current*</th>
<th>Target</th>
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<tr>
<td>Buyouts</td>
<td>$15.1</td>
<td>57%</td>
<td>60%</td>
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<tr>
<td>Growth/Expansion</td>
<td>$4.4</td>
<td>17%</td>
<td>15%</td>
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<td>Credit Related</td>
<td>$2.8</td>
<td>11%</td>
<td>15%</td>
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<td>Opportunistic</td>
<td>$2.6</td>
<td>10%</td>
<td>10%</td>
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<tr>
<td>Venture Capital</td>
<td>$1.3</td>
<td>5%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$26.4</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

*Based on NAV as of June 30, 2016; $s in billions; Includes currency and distributed securities in the amount of $193mm
Source: State Street
# Investment Process

## Investment Review Committee (IRC)
- **Purpose:** Consistent review of investments and portfolio
- **Timing:** Weekly
- **Participants:**
  - 1 Managing Investment Director (MID); 3 Investment Directors (IDs) (PE)
  - 1 MID (Real Assets)
  - 1 ID (Global Fixed Income)
  - 1 Investment Manager (IM) (Asset Allocation)
  - 1 IM (ICOR)
  - Board Consultant

## Investment Underwriting:
- Sourcing
- Due Diligence
- Investment Recommendations
- Legal Negotiations

## Portfolio Construction
- Pacing Analysis
- Forward Calendar
- House View
- Sourcing
- Screening
- Due Diligence
- Portfolio Rebalancing

## Risk, Research, Analytics & Performance:
- Portfolio diversification
- Purchase price multiple
- Market Overview
- Capital Allocation and pacing
- Benchmark
- Risk analysis
- Performance attribution

## Administrative
- Annual capital allocation and pacing recommendation, Market Overview, and House View
- Due diligence and approval of new investments
- Monitor existing portfolio and develop portfolio insight
- IRC

---

3 Stakeholders

Private Equity Annual Program Review
II. Market Environment
Market Environment - Fundraising

**Fundraising by Geography**

- Strong fundraising market and record levels of dry powder ($954 billion*) creating competitive environment for purchasing assets
- Fundraising for Buyout strategy accounted for nearly half of overall fundraising in 1H 2016

Source: Preqin

*Includes the following strategies: Buyout, Growth, Distressed/Mezzanine and Venture
High market prices continue to make it challenging to find attractively valued assets

Average debt multiples in the U.S. declined from 5.8x/EBITDA in 2014 to 5.3x/EBITDA in 1H 2016
Market Environment – Exits & Liquidity

- Exit markets have been extremely robust over the last few years but slowing down in 1H 2016 amidst decrease in M&A and IPO activity

*Source: Preqin*
III. Portfolio Positioning
Commitments and Unfunded

As of June 30, 2016

Source: Private Equity Accounting and Reporting Solution (PEARS)
Cash Flow by Fiscal Year

- PE provided net cash flow of $24.2 billion since FY 2010/2011

As of June 30, 2016
Source: Private Equity Accounting and Reporting Solution (PEARS)
PE Portfolio Key Risks

• Vintage year concentration:
  – 53.3% of the NAV is concentrated in Vintage Years 2006 – 2008

• Transparency:
  – Slow adoption by other industry participants of the ILPA Fee Reporting Template

• Fund of Funds:
  – In general, are a low returning asset, and are very slow to return cash

As of June 30, 2016
IV. Business Review
Functional Organizational Chart

- CalPERS Private Equity Program
  - MID
    - Investment Underwriting
    - Investment Management
    - Risk, Research, Analytics & Performance
  - Administration
Staffing Overview

**TOTAL PROGRAM**
- 50 total positions within Private Equity

**STAFFING UPDATES**
- Hired 8 investment and administrative staff
- Promoted 5 Private Equity professionals

**CURRENT VACANCIES**
- 1 Associate Investment Manager
- 4 Investment Officers

As of June 30, 2016
Private Equity Vision 2020

- Reduce complexity by concentrating the portfolio
- Focus on cost effective structures with better alignment
- Organize the portfolio into two categories:

**Strategic Portfolio:**
Funds, Separate Accounts, Compounding Capital, Co-Investments

- Since inception Net IRR: 15.9%

**Actively Managed Legacy Portfolio**

- Since inception Net IRR: 8.7%
## PE Projects Update

<table>
<thead>
<tr>
<th>Project</th>
<th>Objectives</th>
<th>Accomplishments &amp; Upcoming Activities</th>
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</thead>
<tbody>
<tr>
<td>Transparency</td>
<td>Support industry-wide transparency initiatives through ILPA and other industry participants</td>
<td>Supported ILPA on Fee Transparency Initiative</td>
</tr>
</tbody>
</table>
| PEARs     | Implement a new service and technology solution to manage and account for private equity portfolio data and activity while increasing PE data transparency | • Monitoring and performance report automation  
                           • On-going implementation                                               |
PE Fee & Profit Sharing Transparency

Objective
• Industry adoption of the Institutional Limited Partners Association (ILPA) framework for transparency of fees and profit sharing

Key Performance Indicators
• Ensure 100% of CalPERS strategic private equity partnerships complete the ILPA fee reporting template and provide profit sharing information within 5 years

Quarterly ILPA Fees Templates

<table>
<thead>
<tr>
<th>Quarter</th>
<th>% of Strategic Funds Submitted</th>
<th>% of Other Funds Submitted</th>
</tr>
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<tbody>
<tr>
<td>Q3 2015</td>
<td>63%</td>
<td>43%</td>
</tr>
<tr>
<td>Q4 2015</td>
<td>71%</td>
<td>53%</td>
</tr>
<tr>
<td>Q1 2016</td>
<td>73%</td>
<td>50%</td>
</tr>
<tr>
<td>Q2 2016</td>
<td>74%</td>
<td>51%</td>
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Summary of PE Sustainable Investment Practices

**Screening**
- Manager Assessment Tool (MAT)

**Diligence**
- Due diligence questions and discussions with General Partner
- ESG Section of Final Diligence Report (circulated to IRC members, PE Staff, CIO, COIO)
- Discuss ESG issues identified at Investment Review Committee, as appropriate

**Contracting**
- Standard contract language across asset classes which has been incorporated into standard side letter:
  - Managers have, or will commit to have, an investment process which incorporates ESG factors
  - Managers will incorporate relevant ESG factors and Sustainable Investment activities into reporting

**Monitoring**
- Document ESG-related issues in periodic meeting notes prepared for review at IRC
- For top 10 managers, inquire about ESG at annual LPAC meeting
Conclusion

• Private Equity (PE) has met the return expectation of the Asset Liability Management (ALM) Assumptions over the 3, 5, 10 and 20 year horizon
• PE is progressing with significant restructuring and portfolio rebalancing
• PEARS has been operational for a year and functionality continues to be built out
• Environmental, Social, and Governance (ESG) considerations integrated in the investment and monitoring process
• Overall, PE is progressing, reducing costs and complexity