# April 2017 Board Meeting

## April 05, 2017

### Investment Committee - 12:15 pm

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<tr>
<th>Item</th>
<th>Title</th>
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<th>Presenter</th>
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<tbody>
<tr>
<td>1</td>
<td>Approval of Committee Agenda</td>
<td>Open</td>
<td>Action</td>
<td>Chairperson</td>
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<td>4</td>
<td>Approval of Minutes of the November 16, 2016, Investment Committee Meeting – Open Session</td>
<td>Open</td>
<td>Consent/Action</td>
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<td>5</td>
<td>Corporate Governance Annual Report</td>
<td>Open</td>
<td>Consent/Information</td>
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<td>6</td>
<td>Investment Beliefs – Final Revision</td>
<td>Open</td>
<td>Action</td>
<td>Allan Emkin, PCA</td>
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<td>16</td>
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<td>7</td>
<td>Chief Investment Officer’s Report – Open Session</td>
<td>Open</td>
<td>Informational</td>
<td>Christopher Ailman</td>
<td>10</td>
<td>25</td>
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<td>8</td>
<td>Receive General Consultant – Semi-Annual Performance Report, Period Ending December 31, 2016</td>
<td>Open</td>
<td>Informational</td>
<td>Allan Emkin, PCA</td>
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<td>11</td>
<td>Private Equity Policy Revision – First Reading</td>
<td>Open</td>
<td>Informational</td>
<td>Margot Wirth</td>
<td>21</td>
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<td>12</td>
<td>ESG / 21 Risk Factors Policy Rewrite – First Reading</td>
<td>Open</td>
<td>Informational</td>
<td>Anne Sheehan</td>
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<td>70</td>
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<td>13</td>
<td>Asset Class Policy Revisions to Include New APM Delegation Limits and New Investment Reporting Cycle</td>
<td>Open</td>
<td>Informational</td>
<td>Michelle Cunningham</td>
<td>20</td>
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<td>14</td>
<td>Fiscal Year 2017–18 Work Plan Discussion</td>
<td>Open</td>
<td>Informational</td>
<td>Christopher Ailman</td>
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Attached is the agenda for the April 5, 2017, Investment Committee meeting. For your reference, see the links below.

* [2016-17 Investment Committee Work Plan](#)

* [Investment Committee Charter](#)
AGENDA

OPEN SESSION

Call to Order and Roll Call

Action Item

1. Approval of Committee Agenda

Chairperson

CLOSED SESSION

Consent Agenda – Action

2. Approval of Minutes of the November 16, 2016
Investment Committee Meeting – Closed Session
(Gov. Code, sec. 11126)

Information Items

3.* Confer With and Receive Advice from
Harvey Leiderman, PCA, Meketa
Fiduciary Counsel and Investment Consultants
(Gov. Code, sec. 11126(c)(16))

OPEN SESSION

Consent Agenda – Action

4. Approval of Minutes of the November 16, 2016,
Investment Committee Meeting – Open Session

Consent – Information

5. Corporate Governance Annual Report

Action Item

6. Investment Beliefs – Final Revision
Allan Emkin

Information Items

7. Chief Investment Officer’s Report – Open Session
Christopher Ailman

8. Receive General Consultant – Semi-Annual
Performance Report, Period Ending
December 31, 2016
Allan Emkin
Pension Consulting Alliance
   Micolyn Magee, The Townsend Group  
   10 mins.

    John Haggerty, Meketa Investment Group  
    10 mins.

11. Private Equity Policy Revision – First Reading  
    Margot Wirth  
    10 mins.

12. ESG / 21 Risk Factors Policy Rewrite – First Reading  
    Anne Sheehan  
    20 mins.

13. Asset Class Policy Revisions to Include New APM Delegation Limits and New Investment Reporting Cycle  
    Michelle Cunningham  
    10 mins.

14. Fiscal Year 2017–18 Work Plan Discussion  
    Christopher Ailman  
    15 mins.

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CLOSED SESSION

15. Tactical Investment Strategy Discussion  
    Investment Staff and Consultants  
    30 mins.

16. Chief Investment Officer’s Report – Closed Session (Gov. Code, sec. 11126)  
    Christopher Ailman  
    20 mins.

17. RMS Implementation Update  
    Steven Tong and Carrie Lo  
    15 mins.

18. Closed Session Semi-Annual Reports  
    20 mins.

      Allan Emkin  
      Pension Consulting Alliance  
      20 mins.

      Micolyn Magee, The Townsend Group  
      20 mins.

      John Haggerty and Steve Hartt, Meketa Investment Group  
      20 mins.

   d. Semi-annual Report on Investment Manager Ratings  
      Investment Staff  
      20 mins.

19. Confer With and Receive Advice from Legal Counsel Regarding Pending Litigation  
    (Gov. Code, sec. 11126(e))  
    Brian J. Bartow  
    10 mins.

    Chairperson  
    10 mins.
21.* Review of Information Requests

22. Draft Agenda for the June 7, 2017, Investment Committee Meeting
   Opportunity for Statements from the Public

   ADJOURNMENT

*no written material

Note: Items designated for information are appropriate for committee action if the committee wishes to take action. Items on the agenda of board committees may be referred to the board for discussion and possible action. Agenda items may be taken out of order with the approval of the Chairperson. Board members who are not members of the committee may attend and participate in the discussion of agenda items.
PROPOSED MINUTES

Investment Committee
November 16, 2016
OPEN SESSION
LOCATION: Board Room, 100 Waterfront Place, West Sacramento, CA 95605

COMMITTEE MEMBERS PRESENT
Harry Keiley, Chairperson
Tom Unterman, Vice Chairperson
Dana Dillon
Sharon Hendricks
Joy Higa
Paul Rosenstiel
Nora Vargas
Eraina Ortega, representing the Director of Finance, Michael Cohen
Michelle Zumot, representing the State Superintendent of Public Instruction, Tom Torlakson
Betty Yee, State Controller

OTHER BOARD MEMBERS PRESENT
Steve Juarez, representing the State Treasurer, John Chiang
Frank Moore, representing the State Treasurer, John Chiang
Lynn Paquin, representing the State Controller, Betty Yee

STAFF PRESENT
Jack Ehnes, Chief Executive Officer
Christopher Ailman, Chief Investment Officer
Brian J. Bartow, General Counsel
Lisa Blatnick, Chief of Administrative Services
Grant Boyken, Public Affairs Executive Officer
Ashish Jain, Chief Technology Officer
Cassandra Lichnock, Chief Operating Officer  
Robin Madsen, Chief Financial Officer  
Andrew Roth, Benefits and Services Executive Officer  
Michelle Cunningham, Deputy Chief Investment Officer  
Debra Smith, Chief Operating Investment Officer  
Mike DiRé, Director, Real Estate  
Glenn Hosokawa, Director, Fixed Income  
June Kim, Director, Global Equities  
Paul Shantic, Director, Inflation Sensitive  
Anne Sheehan, Director, Corporate Governance  
Steven Tong, Director, Innovation & Risk  
April Wilcox, Director, Operations  
Margot Wirth, Director, Private Equity  
Aeisha Mastagni, Portfolio Manager, Corporate Governance  
Shifat Hasan, Associate Portfolio Manager  
Jean Kagimoto, Analyst  
Stephen Hamilton, Senior Counsel  

OTHERS PRESENT  
Harvey Leiderman, Reed Smith, (Fiduciary Counsel)  
Sandra Poe, Reed Smith, (Fiduciary Counsel)  
Allan Emkin, Pension Consulting Alliance  
Neil Rue, Pension Consulting Alliance  
Steven Hartt, Meketa Investment Group  
Steven McCourt, Meketa Investment Group  
Mika Malone, Meketa Investment Group  
Micolyne Magee, The Townsend Group  
Jennifer Urdan, Cambridge Associates  
Teresa Barger, Cartica Management, LLC  
Farida Khambata, Cartica Management, LLC  
Raelan Lambert, Pavilion Alternatives Group, LLC  
Eric Young, UTLA  
Loretta Toggenburger, UTLA Retired  
Denise Bradford, CTA  
Phyllis Hall, CTA  
Dave Davini, ACSA  
Lesley Nettles, Fairview Capital  
Jennifer Baker, CTA  
Pat Geyer, CalRTA  
Peter Morse, FACCC  
Paula H. Weiss, CalRTA  
Bob Fesler, UESF-Retired  
Jennifer Urdan, Cambridge Associates  
Sandy Emerson, Fossil Free California  
Susan Sarnoff, Fossil Free California  
Doug Orr, CFT  
Charlotte Goldsmith  
Trudie Leap  
Celine O’Malley  

A quorum being present, Chairperson Keiley called the Open Session meeting of the Investment Committee meeting to order at 12:38 p.m.
I. **APPROVAL OF COMMITTEE AGENDA (Item 1)**

**MOTION** duly made by Ms. Higa, seconded by Controller Yee, and carried to approve the Committee Agenda.

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**RECESS**
The Open Session of the committee meeting recessed at 12:40 p.m. and the committee went into Closed Session. The committee reconvened in Open Session at 2:48 p.m.

Ms. Hendricks and Ms. Higa joined the dais.

II. **APPROVAL OF MINUTES OF THE SEPTEMBER 14, 2016, INVESTMENT COMMITTEE MEETING – OPEN SESSION (Item 9)**

**MOTION** duly made by Ms. Higa, seconded by Controller Yee, and carried to approve the Minutes of the September 14, 2016, Investment Committee Meeting – Open Session.

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III. CORPORATE GOVERNANCE POLICY REVISIONS – FIRST READING (Item 10)

The committee received proposed revisions to CalSTRS Corporate Governance Principals.

Mr. Rosenstiel joined the dais at 2:50 p.m.

PUBLIC COMMENT
The committee heard from Deborah Silvey, Sandy Emerson, Jane Vosburg, Eric Knapp, Susan Sarnoff, Jake Davis, and Darcy Sweeney, each of whom spoke or read statements urging the committee to immediately divest from all fossil fuel companies, particularly Exxon, Chevron and Shell.

IV. GREEN TEAM ANNUAL REPORT (Item 11)

The committee received the Green Initiative Task Force Annual Report.

V. INVESTMENT INSIGHT PROGRAM (Item 12)

The committee received a presentation from Teresa Barger, Senior Managing Partner and Farida Khambata, Global Strategies for Cartica Management LLC on Emerging Markets and the ESG risks and opportunities within the emerging market equity universe as part of the Investment Insight Program. Ms. Khambata provided a detailed history of equity investments in emerging markets and the effect of the US political climate and outlook on certain emerging market countries. Ms. Barger detailed the particular complexities of focusing on ESG factors in emerging market investments in light of the developing nature of the particular countries in the market. Ms. Barger also focused on new evidence of successful emerging market investing. The committee considered the effects of the recent election, trade policy concerns in light of emerging market investments and discussed issues related to coal in emerging markets as well as risks associated with future emerging market investments.

VI. INVESTMENT POLICY AND MANAGEMENT PLAN REVISION – FIRST READING (Item 13)

The committee heard from Mr. Ailman on two proposed changes to the Investment Policy and Management Plan, including additional information on the measurement of expected long term investment risk and return to the total portfolio accelerating implementation of the RMS asset class. Pension Consulting Alliance concurred with staff’s recommended revisions.

MOTION duly made by Mr. Rosenstiel, seconded by Ms. Dillon, and carried to approve the proposed revisions to the Investment Policy and Management Plan.
VII. CORPORATE GOVERNANCE ENGAGEMENT PLAN (Item 14)

The committee received and considered the Fiscal year 2016-217 Corporate Governance Engagement Plan. Ms. Sheehan and Ms. Mastagni presented the committee with a review of the major focus of the plan on issues of executive compensation, proxy access, majority voting standards, environmental issues, political contributions, forthcoming political personnel and legislative changes. The committee considered the proposed changes and inquired about potential regulatory changes to come from the new administration and its effect on the board’s role in corporate governance issues.

Ms. Hendricks left the dais at 3:53 p.m.

MOTION duly made by Controller Yee, seconded by Ms. Vargas, and carried to adopt the Fiscal Year 2016-17 Corporate Governance Engagement Plan.

VIII. CHIEF INVESTMENT OFFICER’S REPORT – OPEN SESSION (Item 18)

The committee received the Chief Investment Officer’s Open Session Report from Mr. Ailman. Mr. Ailman informed the committee that as of October 31, 2016, the portfolio
was valued at approximately $193.7 billion. Mr. Ailman discussed asset allocation targets as well as short and long term performance measures. The report also informed the committee of staff’s view of long term risks to the fund and positive factors which could influence growth.

IX. **ANNUAL INVESTMENT COST REPORT (Item 19)**

The committee received the Annual Investment Cost Report presented by Ms. Smith, Ms. Wilcox and Ms. Hasan, as well as Ms. Lambert from Pavilion Alternatives Group, LLC. Mr. Emkin heralded the report as the most comprehensive one he had seen in the past 30 years and believed it would set the new industry standard. The committee congratulated staff on the work which went into pushing the boundaries, considered how the reporting could be improved even further and how the new cost information could be most effectively used in the future. The committee also discussed how to educate the public on what goes into the new more extensive cost disclosures.

Ms. Hendricks returned to the dais at 4:16 p.m.

X. **RESPONSIBLE CONTRACTOR UPDATE – BID PORTAL PROJECT DEMONSTRATION (Item 20)**

The committee received a presentation from Mr. DiRe and Ms. Kagimoto on the status of CalSTRS’ Responsible Contractor Policy. Mr. DiRe provided a history of the policy and a status on its application to current development projects. Ms. Kagimoto provided a brief demonstration of the new website developed in house by CalSTRS. The committee considered consequences for non-compliance with the policy and whether the policy could be applied more generally outside the real estate asset class. The committee discussed the responses received with respect to the test version of the website.

XI. **INVESTMENT BELIEFS STATEMENT – FIRST READING (Item 15)**

The committee received a memorandum from PCA entitled Investment Beliefs Update: recommended Final Set of Beliefs, dated November 1, 2016.

**MOTION** duly made by Controller Yee, seconded by Mr. Unterman, and carried to adopt the following portions of the CalSTRS Investment Beliefs in Attachment A: Legal Framework, Preamble, and Belief Statements 1-4, 6.

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PUBLIC COMMENT
Reverend Kirsten Spalding from Ceres expressed her preference on proposed language for Investment Belief 5.

The Committee deliberated the two proposed alternatives to Investment Belief 5 concerning corporate governance and environmental social and governance factors. The committee concluded that further revision to the language was appropriate.

MOTION duly made by Ms. Dillon, seconded by Chairperson Keiley, and carried to direct Pension Consulting Alliance, Inc. to further modify Belief Statement 5, based upon the Committee’s concerns, and provide a revised version for the Committee’s consideration.

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Due to time constraints, the committee did not take any action on the proposed Statements 7 & 8, which will be considered at a future meeting.

XII. PRIVATE EQUITY ANALYSIS (Item 21)

The committee received a Private Equity Analysis from Mr. Haggerty of Meketa Investment Group.
XIII. REVIEW INFORMATION REQUESTS (Item 22)

Pursuant to item 19, the committee requested a report reflecting net returns in conjunction with the cost report in order to determine what portion of the total potential returns are captured by the Teachers’ Retirement Fund.

XIV. DRAFT AGENDA FOR NEXT INVESTMENT COMMITTEE MEETING (Item 23)

The committee reviewed the Draft Agenda for the April 5, 2017, committee meeting.

XV. OPPORTUNITY FOR ADDITIONAL STATEMENTS FROM THE PUBLIC

The committee heard from Vice President United Teachers of Los Angeles Betty Forrester who read a statement regarding an attempt by educators within the Alliance College Ready Public Schools, the largest charter school system in Los Angeles, to form a union and management’s anti-union activities.

XVI. ADJOURNMENT

There being no further business to conduct, Chairperson Keiley adjourned the meeting at 5:10 p.m..

______________________________
Jack Ehnes, Chief Executive Officer
And Secretary to the Teachers’ Retirement Board

Harry Keiley, Chairperson

Prepared by: Stephen Hamilton, Senior Counsel
TEACHERS’ RETIREMENT BOARD
INVESTMENT COMMITTEE
Item Number: 5

SUBJECT: Corporate Governance Annual Report

CONSENT: X ATTACHMENT(S): 0

ACTION: _____ DATE OF MEETING: April 5, 2017

INFORMATION: X PRESENTER(S): Anne Sheehan

POLICY
The Corporate Governance Annual report was developed as a “best practice” of the Corporate Governance Unit to communicate and publicly share our yearly activities.

PURPOSE
This agenda item is to present the 2016 Corporate Governance Annual report, which provides information on the priorities and activities of CalSTRS Corporate Governance Program. While this Report has not historically been presented to the Investment Committee, with all the discussion at the Investment Subcommittee this past year surrounding engagement, staff thought it would be helpful to formally present the Annual Report to the Investment Committee.

HISTORY OF THE ITEM
The Corporate Governance Unit published its first annual Corporate Governance Report in 2013, and has continued to publish the report annually since then. The report communicates CalSTRS’ corporate governance philosophy as well as outlining our major initiatives, such as executive compensation, diversity, majority vote standard and sustainability. The report also identifies CalSTRS’ key partnerships with other institutions, how we vote our proxies and the performance of the Corporate Governance portfolio.

EXECUTIVE SUMMARY
This enhanced report provides detailed information on the priorities and activities of the CalSTRS Corporate Governance Program. This year’s report discusses our progress and success in 2016 and it describes the Corporate Governance Unit’s four primary focuses: 1) engagements, 2) proxy voting, 3) portfolio management and 4) legal, regulatory and legislative support. This report also discusses CalSTRS’ corporate governance philosophy, our key partnerships with other institutions and our major initiatives on executive compensation, diversity, majority vote standard and sustainability.
CONCLUSION

This item is being presented to keep the Committee informed of the activities of the Corporate Governance unit. Staff will be available to discuss this item at the meeting.

Prepared by:

Ly Van
Investment Officer II

Approved by:

Anne Sheehan
Director of Corporate Governance

Concur:

Christopher J. Ailman
Chief Investment Officer
TEACHERS’ RETIREMENT BOARD

INVESTMENT COMMITTEE

Subject: Investment Beliefs Statement – Revision

Consent: ____  Attachment(s): 2

Action: X  Date of Meeting: April 5, 2017 / 30 mins.

Information: ____  Presenter: Allan Emkin, Pension Consulting Alliance

Policy

All of the CalSTRS investment portfolios and their beliefs are governed by the CalSTRS Investment Policy and Management Plan, Teachers’ Retirement Board Policy Manual, Section 1000, page A-1.

History of the Item

The goal of drafting investment beliefs is one of the Investment Committee’s core projects for FY 16-17. We started with an education on investment beliefs over a year ago at the October 2015 Teachers’ Retirement Board off-site. The project kicked off with Step 1 at the April 2016 meeting and has been a major part of the last five meetings, including the Board off-site.

Purpose

The majority of the belief statements were approved at the November Investment Committee meeting. The purpose of this item is to consider and to adopt the Investment Belief Statements 6 and 7 as written, and debate the addition of Investment Belief Candidate 8 to the final list of CalSTRS Investment Beliefs.

Background

The Legal Framework, Preamble and first five Investment Beliefs were approved back in November. At that meeting, the Committee discussed the belief regarding ESG and Corporate Governance as well as a belief regarding short fall risk. There was not clear consensus at that time. Additionally, a Board Member proposed one additional belief relating to investment manager alignment, but there was not enough time to discuss that idea.

While the Investment Beliefs are expected to be a living document subject to revision and adjustment over time, the Committee’s initial goal for FY 15-16 and continued into FY 16-17 was to adopt a full set of initial beliefs. The goal at this meeting is to gain a clear consensus on the proposed language for Investment Beliefs 6 and 7, consider the addition of Investment Belief 8, and then complete the initial Investment Beliefs Project for this year. Once approved these would be published on the web and included as part of the Investment Policy and Management Plan packet to the public.
DISCUSSION

1) The first belief for consideration, which PCA initially proposed last spring, was discussed and debated during the summer survey, and again at the November Investment Committee meeting. It is the concept that, as a mature pension plan with a negative cash flow, CalSTRS needs to manage the short-term drawdown risk. The proposed belief states:

**Managing short-term drawdown risk can positively impact CalSTRS ability to meet its long-term obligations.**

As a system, CalSTRS is in a deficit funding position and experiences ongoing negative cash outflows (benefits paid out exceed contributions received during a fiscal year.) Given this status, the system is particularly sensitive to periods when its investments produce negative returns. In such situations, CalSTRS is required to sell assets (due to its negative cash outflow status) when asset values are declining. In contrast, plans that exhibit positive cash inflows can purchase at a discount during such periods.

As a result of this sensitivity, periods of significant negative asset returns will actually impair CalSTRS chances of achieving its long-term funding objectives, even assuming investment markets will recover in later periods. Therefore, CalSTRS must attentively manage short-term drawdown risk when developing the long-term asset allocation and when shifting or rebalancing the portfolio.

2) The second belief under consideration, ESG / Corporate Governance, has drawn significant interest and feedback from direct and in-direct stakeholders. Just prior to the November meeting, stakeholders offered revised language for the Committee’s consideration. Staff and PCA took their input, combined it with comments from the fiduciary counsel and the draft belief initially developed last summer, to craft a new Beliefs Statement that staff believes meets everyone’s requirement and properly states CalSTRS views on ESG and Corporate Governance.

**Responsible corporate governance, including the management of environmental, social and governance (ESG) factors, can benefit long-term investors like CalSTRS.**

Proxy rights attached to shareholder interests in public companies are additional “plan assets” of the system. As a largely passive long term investor, CalSTRS can enhance the value of its plan assets by taking a leadership role in promoting responsible corporate governance.

CalSTRS also believes that, in addition to traditional financial metrics, timely consideration of material environmental, social, and governance, (ESG), factors in the investment process for every asset class, has the potential, over the long-term, to positively impact investment returns and help to better manage risks.
3) The final proposed belief before the Committee concerns alignment of interest between the external investment managers and CalSTRS. This topic was not included in the summer survey of the Committee so it is unclear if it achieves a high level of consensus required to be a Belief Statement. However this topic became a hotly debated topic among stakeholder groups and others during the election season. The recent Fiduciary Counsel guidance on the matter helps establish some guidance and boundaries to the depth of the alignment. To assist, Fiduciary Counsel has re-written the belief statement to meet their guidance. Overall, alignment of interests in our business contracts, like many issues and topics, is a common practice for the investment program; only the Committee can decide if it reaches the level warranted to be a Belief Statement.

**Alignment of interests between CalSTRS and its advisors is critical.**

The economic interest of CalSTRS and its external managers and advisors should be aligned, and transparent. In addition, CalSTRS expects its managers and advisors to recognize the long-term value of CalSTRS’ investment policies relative to best practices, responsible corporate governance, and the impact of ESG-related issues on portfolio performance.

PCA, the lead general consultant will present each of these beliefs and seek the Investment Committee’s consensus. Upon final resolution the full Investment Beliefs Statement can be approved.

**RECOMMENDATION**

PCA and staff recommend the Investment Committee adopt Investment Beliefs 6 and 7 and debate Investment Belief 8 for consideration. Pending the discussion, staff and PCA both recommend the Investment Committee approve the final results, incorporate these three into the existing Belief Statements, and consider the Investment Beliefs document for final adoption.

The last step in the Investment Committee FY 15-16 and 16-17 Investment Beliefs / ESG policy work-plan project, will be the formal revision of the ESG 21-Risk Factor Policy. At the April meeting, the Committee will review an initial draft ESG principle statement. The Subcommittee of the Investment Committee will meet in May to finalize, make suggestions or changes, and then refer the final Policy to the June Investment Committee meeting for adoption. Once finished, it will complete this two-part / two year Investment Committee project.
Date: February 20, 2017

To: CalSTRS Investment Committee (IC)

From: Pension Consulting Alliance, Inc. (PCA)

CC: Allan Emkin | Neil Rue, CFA | John Linder, CFA, CPA

RE: Investment Beliefs: Recommended Final Action

Background

At its November 2016 meeting, the IC approved an initial version of a formal Investment Beliefs Statement (IBS). This approved IBS includes five specific statements relating to (i) diversification, (ii) market efficiency, (iii) investment costs, (iv) internal management, and (v) the illiquidity risk premium. Discussions at the November 2016 IC meeting, as well as discussions at subsequent meetings, considered three other potential Investment Belief Statements. These final three remaining candidate Statements, as detailed in Staff’s accompanying memo are as follows:

1. Managing short-term drawdown risk can positively impact CalSTRS’ ability to meet its long-term financial obligations.
2. Responsible corporate governance, including the management of environmental, social and governance (ESG) factors, can benefit long-term investors like CalSTRS.
3. Alignment of interests between CalSTRS and its advisors is critical.

Summary & Recommendation

PCA recommends that the IC adopt the first two candidate Statements above and conduct final deliberations on the third candidate Statement.

Discussion

As discussed elsewhere throughout IBS-setting process, remaining candidate Statements 1 & 2 evolved out of the investment belief-setting process utilized to determine the other approved Statements. In addition, there has been significant discussions revolving around these two beliefs:
• Remaining candidate Statement 1. There are two reasons for approving this Statement. First, the survey process revealed a borderline favorable consensus view: 100% of CalSTRS Staff survey participants voted in favor of the Statement, while 7 of 11 IC members voted in favor. Second, CalSTRS’s adoption of the 9% allocation to the Risk Mitigation Strategies (RMS) investment class was a direct response to the concern raised in this Statement. This Statement is an explicit recognition of this material change in investment strategy. As a result, PCA recommends its approval.

• Remaining candidate Statement 2. There has been significant discussion and deliberations in an attempt to settle upon the final support language for this Statement (see Staff’s memo for final support language). This Statement reflects CalSTRS’ focus on corporate governance and ESG-related issues, areas where CalSTRS is recognized as a global leader. Because these topics are high-priority to CalSTRS, it would be unwise to exclude this Statement from the IBS. Since, at this stage, the IC has addressed this Statement’s supporting language in significant detail, PCA recommends this Statement’s approval and inclusion in the IBS.

Remaining candidate Statement 3. This Statement arose out of public comment during the September 2016 IC meeting and was not part of the extended investment belief development process. Additional stakeholder input also took place during the IC’s October 2016 offsite meeting as well as subsequent meetings. While there appears to be interest in further examining this Statement, there has been significant debate about whether this Statement should be included in the IBS at this time. If the IC is able to arrive at a consensus view on this Statement at the upcoming April IC meeting, then it could be accepted as part of the formal IBS. If consensus is not found, then this candidate Statement may be referred to the Special Subcommittee for further review and deliberation.
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DRAFT CalSTRS Investment Beliefs

LEGAL FRAMEWORK
Under California Constitution, Article 16, Section 17, and the California Education Code, Part 13 Teachers Retirement Law, Chapter 4, Section 22250:

The board has plenary authority and fiduciary responsibility for investment of moneys of the retirement system, and the sole and exclusive fiduciary responsibility over the assets of the retirement system. The board shall also have sole and exclusive responsibility to administer the system in a manner that will assure prompt delivery of benefits and related services to the members and their beneficiaries.

The assets of the retirement system are trust funds and shall be held for the exclusive purposes of providing benefits to participants in the pension or retirement system and their beneficiaries, minimizing employer contributions, and defraying reasonable expenses of administering the system.

The board shall discharge its duties with respect to the system with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character and with like aims. The board shall diversify the investments of the system so as to minimize the risk of loss and to maximize the rate of return, unless under the circumstances it is clearly not prudent to do so.

The board’s duty to its members and their beneficiaries shall take precedence over any other duty.

PREAMBLE
Consistent with these Constitutional and statutory prescriptions, CalSTRS has broad discretion over the investment of the assets of the fund. These Investment Beliefs provide a foundational framework to all of CalSTRS’ investment decision-makers to invest in a manner that reflects CalSTRS’ unique view of the global investment markets and its vision for participating in these markets to accomplish its fiduciary goal. In this respect, these Investment Beliefs should help to guide CalSTRS’ policy leaders and other decision makers to develop appropriate policies, procedures, and investment plans for CalSTRS’ assets.
APPROVED BELIEF STATEMENTS

Belief 1 – Diversification Benefits

Diversification improves the risk-adjusted profile of an investment portfolio.

Belief 2 – The Global Public Investment Markets are Largely, but Not Completely, Efficient.

Historically, a large percentage of the CalSTRS portfolio has been passively or semi-passively managed, approximating 80% of publicly-traded assets. In today’s internet era, information is processed rapidly at very low cost and acted upon quickly by millions of market players. As a result, there is significant academic and practitioner experience indicating the difficulty in outperforming passive management after fees. In light of this competitive dynamic, there are certain segments of the markets where information processing is more challenging and costly. In these areas astute and well-resourced investors (such as CalSTRS) can utilize unique investment styles and methods to generate net-of-fee returns in excess of those available to a passive buy-and-hold market exposure.


Investment costs, if not managed appropriately, can have a significant (rather than frictional) impact upon overall portfolio performance. CalSTRS, as a large-scale investor, should focus on measuring, monitoring, and minimizing all relevant investment costs.

Belief 4 – Internal Management is a Critical Capability.

In contrast to other investors, CalSTRS commands significant resource flexibility to enable it to execute its investment activities internally. Where feasible, CalSTRS should seek to utilize internal management to best harness and direct its resources.

Belief 5 – CalSTRS can potentially capture an illiquidity risk premium.

Illiquid investments offer investors a return premium due to the inability to quickly buy or sell (or convert such assets to cash) as quickly as liquid or freely traded assets. CalSTRS believes it can capture this risk premium by investing in real estate, private equity and other similar assets.
Candidate Belief 6 – Managing short-term drawdown risk can positively impact CalSTRS’ ability to meet its long-term financial obligations.

As a system, CalSTRS is in a deficit funding position and experiences ongoing negative cash outflows (benefits paid out exceed contributions received during a fiscal year). Given this status, the system is particularly sensitive to periods when its investments produce negative returns. In such situations, CalSTRS may be required to sell assets (due to its negative cash outflow status) when asset values are declining. In contrast, plans that exhibit positive cash inflows can purchase at a discount during such periods. As a result of this sensitivity, periods of significant negative asset returns will actually impair CalSTRS’ chances of achieving its long-term funding objectives, even assuming investment markets will recover in later periods.

Candidate Belief 7 – Responsible corporate governance, including the management of environmental, social and governance (ESG) factors, can benefit long-term investors like CalSTRS.

Proxy rights attached to shareholder interests in public companies are additional "plan assets" of the system. As a largely passive long term investor, CalSTRS can enhance the value of its plan assets by promoting responsible corporate governance.

CalSTRS also believes that, in addition to traditional financial metrics, timely consideration of material environmental, social, and governance, (ESG), factors in the investment process for every asset class, has the potential, over the long-term, to positively impact investment returns and help to better manage risks.

Candidate Belief 8 – Alignment of Interests between CalSTRS and its Advisors is Critical.

The economic interests of CalSTRS and its external managers and advisors should be aligned, and transparent. In addition, CalSTRS expects its managers and advisors to recognize the long-term value of CalSTRS' investment policies relative to best practices, responsible corporate governance and the impact of ESG-related issues on portfolio performance.
POLICY
The Chief Investment Officer’s Report – Open Session is covered under the reporting and monitoring requirements of the overall CalSTRS Investment Policy and Management Plan, Teachers’ Retirement Board Policy Manual, Section 1000, page A-17.

HISTORY OF THE ITEM
This item has been included in the Investment Committee agenda at each meeting to provide the Committee with critical market and asset allocation information to assist in their oversight of the CalSTRS Investment Portfolio.

The most current information on the CalSTRS Investment Portfolio can be found on the web at CalSTRS.com under the Investments tab.

PURPOSE
The purpose of this report is to provide the Committee key bits of information regarding the asset allocation and performance or activities of the investment portfolio.

- Investment portfolio asset allocation as of February 28, 2017 (un-audited)
  - As of February 28, 2017, CalSTRS assets passed $200 billion for the first time in our 104 year history. See Attachment 1 for more details.

- Pension Consulting Alliance’s March 2017 Risk Overview

REPORTS ON THE WEB
Annual and Quarterly investment reports are now available on CalSTRS.com web site in the “Investments” tab under “Reports & Surveys.”

CONCLUSION
In addition to this information, at the Investment Committee meeting, the CIO will present a PowerPoint presentation on current market conditions and global risks on the horizon. Prior to the meeting, the PowerPoint presentation will be posted on the CalSTRS.com website.
Investment Committee
CIO Report

As of February 28, 2017
Investment Portfolio as of February 28, 2017

Chart 1. Portfolio Value

Assets of $202.07 billion est.

Chart 2. Asset Allocation

Global Equity 57.7%

Fixed Income 15.4%

Real Estate 12.6%

Private Equity 8.2%

Inflat 1.0%

RMS 2.4%

Innov. Strat 0.2%

Cash 2.5%

Chart 3. Asset Allocation over the past three years (monthly)
Total Fund Risk (As of January 31, 2017)

The Risk team utilizes the BlackRock Aladdin risk management system for the total plan portfolio. According to the BlackRock risk model, approximately 70 percent of the total risk in the portfolio comes from public equity, versus an approximately 58 percent asset weight. Public equity risk and private equity risk combined comprise about 80 percent of portfolio risk.

**Chart 4. Sources of Portfolio Risk**

<table>
<thead>
<tr>
<th>Source</th>
<th>Expected Volatility</th>
<th>Risk (bps)</th>
<th>Risk (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real Estate</td>
<td>32 bps</td>
<td>102 bps</td>
<td>10.1%</td>
</tr>
<tr>
<td>Equity Risk (Private)</td>
<td>99 bps</td>
<td>99 bps</td>
<td>9.8%</td>
</tr>
<tr>
<td>Equity Risk (Public)</td>
<td>711 bps</td>
<td>711 bps</td>
<td>70.3%</td>
</tr>
<tr>
<td>Country</td>
<td>32 bps</td>
<td>32 bps</td>
<td>3.1%</td>
</tr>
<tr>
<td>All Other Sources</td>
<td>67 bps</td>
<td>67 bps</td>
<td>6.6%</td>
</tr>
</tbody>
</table>

**CalSTRS Market Exposures**

Across all asset classes, the fund has significant market value exposure to the U.S. and Europe. Market value exposure is only one way to measure geographic concentration, however. Publicly-traded companies report sources of revenue by country, making it possible to compare the market value exposures of the portfolio to the revenue exposures of a public equity benchmark. The map below compares the top 10 exposures by market value of the total CalSTRS portfolio to the top 10 exposures by revenue of the CalSTRS Custom Global Equity benchmark. The U.S. comprises 75.5 percent of the fund market value, versus 41.8 percent revenue exposure for the CalSTRS Global Equity benchmark. The difference between market value exposure and revenue exposure underscores the global footprint of publicly-traded multi-national companies. China is particularly notable for the difference between market value exposure and revenue exposure. China is a relatively small market value exposure in the total portfolio but is the second-largest source of revenue for publicly-traded companies. Table 1 compares the ranking of each country by market value exposure to its ranking based on revenue exposure. When using revenue exposure to measure geographic concentration, the U.S. becomes relatively less important; the relative importance of some European countries changes; and some emerging markets become relatively more important (in particular China and Brazil).
Total Portfolio – Top 10 Market Value and Revenue Exposures (As of January 31, 2017)

Table 1. Market Value Exposure Ranking vs. Revenue Ranking

<table>
<thead>
<tr>
<th>Country</th>
<th>Market Value Rank*</th>
<th>Revenue Rank*</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Japan</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Canada</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>France</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Germany</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Switzerland</td>
<td>7</td>
<td>19</td>
</tr>
<tr>
<td>Australia</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Netherlands</td>
<td>9</td>
<td>17</td>
</tr>
<tr>
<td>Taiwan</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>China</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>Brazil</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>India</td>
<td>16</td>
<td>10</td>
</tr>
</tbody>
</table>

Table 2. CalSTRS Top 10 Exposures

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Market Value (000s)</th>
<th>% Total Fund</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Govt</td>
<td>19,333,305</td>
<td>9.72%</td>
</tr>
<tr>
<td>Apple</td>
<td>1,784,383</td>
<td>0.90%</td>
</tr>
<tr>
<td>Microsoft</td>
<td>1,419,150</td>
<td>0.71%</td>
</tr>
<tr>
<td>Alphabet</td>
<td>1,350,248</td>
<td>0.68%</td>
</tr>
<tr>
<td>Berkshire</td>
<td>960,781</td>
<td>0.48%</td>
</tr>
<tr>
<td>JPMorgan</td>
<td>958,870</td>
<td>0.48%</td>
</tr>
<tr>
<td>Exxon</td>
<td>935,884</td>
<td>0.47%</td>
</tr>
<tr>
<td>Amazon</td>
<td>911,129</td>
<td>0.46%</td>
</tr>
<tr>
<td>Johnson &amp; Johnson</td>
<td>893,329</td>
<td>0.45%</td>
</tr>
<tr>
<td>General Electric</td>
<td>885,790</td>
<td>0.45%</td>
</tr>
<tr>
<td><strong>Total Top 10</strong></td>
<td><strong>29,432,868</strong></td>
<td><strong>14.79%</strong></td>
</tr>
</tbody>
</table>

*Based on total CalSTRS fund market value and revenue exposures of CalSTRS Custom Global Equity Benchmark as of 1/31/17.
### Table 3. Public Equity

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Mkt Val (000s)</th>
<th>% Public Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple</td>
<td>1,724,289</td>
<td>1.51%</td>
</tr>
<tr>
<td>Microsoft</td>
<td>1,363,453</td>
<td>1.20%</td>
</tr>
<tr>
<td>Alphabet</td>
<td>1,350,974</td>
<td>1.19%</td>
</tr>
<tr>
<td>Exxon Mobil</td>
<td>916,320</td>
<td>0.80%</td>
</tr>
<tr>
<td>Amazon</td>
<td>898,446</td>
<td>0.79%</td>
</tr>
<tr>
<td>Johnson and Johnson</td>
<td>888,433</td>
<td>0.78%</td>
</tr>
<tr>
<td>Berkshire</td>
<td>822,329</td>
<td>0.72%</td>
</tr>
<tr>
<td>General Electric</td>
<td>818,314</td>
<td>0.72%</td>
</tr>
<tr>
<td>Facebook</td>
<td>814,504</td>
<td>0.71%</td>
</tr>
<tr>
<td>JP Morgan</td>
<td>810,010</td>
<td>0.71%</td>
</tr>
<tr>
<td><strong>Total Top 10</strong></td>
<td><strong>10,407,701</strong></td>
<td><strong>9.13%</strong></td>
</tr>
</tbody>
</table>

### Table 4. Fixed Income

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Mkt Val (000s)</th>
<th>% FI</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Government*</td>
<td>17,105,178</td>
<td>55.95%</td>
</tr>
<tr>
<td>Bank of America</td>
<td>215,253</td>
<td>0.70%</td>
</tr>
<tr>
<td>Goldman Sachs</td>
<td>194,688</td>
<td>0.64%</td>
</tr>
<tr>
<td>Wells Fargo</td>
<td>158,298</td>
<td>0.52%</td>
</tr>
<tr>
<td>Mexico Government**</td>
<td>155,764</td>
<td>0.51%</td>
</tr>
<tr>
<td>AT&amp;T</td>
<td>152,228</td>
<td>0.50%</td>
</tr>
<tr>
<td>Morgan Stanley</td>
<td>151,334</td>
<td>0.49%</td>
</tr>
<tr>
<td>JP Morgan</td>
<td>149,376</td>
<td>0.49%</td>
</tr>
<tr>
<td>Citigroup</td>
<td>149,169</td>
<td>0.49%</td>
</tr>
<tr>
<td>Berkshire</td>
<td>138,977</td>
<td>0.45%</td>
</tr>
<tr>
<td><strong>Total Top 10</strong></td>
<td><strong>18,570,265</strong></td>
<td><strong>60.74%</strong></td>
</tr>
</tbody>
</table>

*US Treasuries, Agency MBS and other govt Agency debt
** PEMEX and Mexico Govt debt

### Table 5. Private Equity

<table>
<thead>
<tr>
<th>Fund</th>
<th>Mkt Val (000s)</th>
<th>% of PE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blackstone Partners V</td>
<td>436,996</td>
<td>2.60%</td>
</tr>
<tr>
<td>TPG Partners V</td>
<td>396,916</td>
<td>2.36%</td>
</tr>
<tr>
<td>Providence Partners VI</td>
<td>381,314</td>
<td>2.27%</td>
</tr>
<tr>
<td>TPG Partners VI</td>
<td>297,385</td>
<td>1.77%</td>
</tr>
<tr>
<td>Blackstone Partners VI</td>
<td>285,104</td>
<td>1.69%</td>
</tr>
<tr>
<td>Cortec Group Fund V</td>
<td>280,347</td>
<td>1.67%</td>
</tr>
<tr>
<td>CVC European Partners V</td>
<td>248,386</td>
<td>1.48%</td>
</tr>
<tr>
<td>First Reserve Fund XII</td>
<td>248,017</td>
<td>1.47%</td>
</tr>
<tr>
<td>Permira IV</td>
<td>239,113</td>
<td>1.42%</td>
</tr>
<tr>
<td>Permira V</td>
<td>232,212</td>
<td>1.38%</td>
</tr>
<tr>
<td><strong>Total Top 10</strong></td>
<td><strong>3,045,790</strong></td>
<td><strong>18.10%</strong></td>
</tr>
</tbody>
</table>

as of 9/30/2016

### Table 6. Real Estate

<table>
<thead>
<tr>
<th>Manager</th>
<th>Mkt Val (000s)</th>
<th>% of RE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>3,990,508</td>
<td>16.10%</td>
</tr>
<tr>
<td>CBRE</td>
<td>2,805,222</td>
<td>11.32%</td>
</tr>
<tr>
<td>BlackRock</td>
<td>1,544,916</td>
<td>6.23%</td>
</tr>
<tr>
<td>GI Partners</td>
<td>1,458,051</td>
<td>5.88%</td>
</tr>
<tr>
<td>Fortress</td>
<td>1,239,799</td>
<td>5.00%</td>
</tr>
<tr>
<td>Clarion</td>
<td>1,199,880</td>
<td>4.84%</td>
</tr>
<tr>
<td>Fairfield</td>
<td>1,199,314</td>
<td>4.84%</td>
</tr>
<tr>
<td>Blackstone</td>
<td>1,152,767</td>
<td>4.65%</td>
</tr>
<tr>
<td>PCCP</td>
<td>915,629</td>
<td>3.70%</td>
</tr>
<tr>
<td>Lionstone</td>
<td>829,028</td>
<td>3.35%</td>
</tr>
<tr>
<td><strong>Total Top 10</strong></td>
<td><strong>16,335,113</strong></td>
<td><strong>65.92%</strong></td>
</tr>
</tbody>
</table>

as of 12/31/2016
Valuations
For most of the larger asset classes in the portfolio, the price of the asset at any given time is an important component of expected return, particularly over the medium term (three to five years). Metrics like the price-to-earnings ratio (P/E ratio) are particularly useful because they tend to fluctuate over time around a long-term average. Credit spreads, the incremental yield for corporate bonds over treasuries, and the premium paid for buyouts in Private Equity are similarly useful metrics. Higher prices tend to precede periods of lower returns, an important consideration for the risk-return opportunities across the portfolio. One challenge in comparing valuations of different asset classes is the lack of a common scale: it's difficult to compare a public market P/E ratio with credit spreads in high yield, for example, as they have very different scales and historical distributions. Chart 3 below shows several common measures of valuation converted to a common scale for comparability.

Chart 5. Asset Class Valuations
Market Volatility

The volatility index presented in the two charts below is an indicator of general market turbulence. The red lines provide a threshold by which to judge whether a day is an "outlier" or not. The longer-term chart shows that, historically, periods of higher turbulence tend to cluster in time. The clustering of turbulent periods means that if a particular day is an outlier, the following day is much more likely to be an outlier. Several days in a row of outliers are a strong indicator that market turbulence could persist for many weeks or months. The spike in recent volatility coincides with the U.S. election vote, after which markets returned to normal levels. Since the U.S. election vote, markets have been relatively calm.

Chart 6. Market Turbulence - Long Term

Chart 7. Market Turbulence - Recent
Takeaways

- U.S. public equity valuations (based on normalized price/earnings ratios, keep climbing, hitting levels only surpassed in the late 1990’s tech bubble.

- U.S. credit spreads continued to narrow in both investment grade and high yield. Both spread levels are richer than average.

- Non-U.S. developed and emerging market equity valuations remain historically cheap relative to their own histories, and relative to U.S. levels.

- With the Fed tightening in December and anticipated to tighten further this spring, the yield curve flattened.

- Private equity valuation multiples pulled back slightly (they are still at relatively high levels), likely attributable to recent interest rate increases and policy uncertainty.

- With the 10-year Treasury interest rate moving up to 2.5%, spreads between the cap rate on core real estate and the 10-year Treasury rate (a measure of valuation), tightened to levels not seen since before the global financial crisis (expensive).

- Inflation indicators remain well behaved, as U.S. dollar strength has kept commodity prices at decade lows. Break even inflation levels remain stable.

- Equity volatility levels remain at bottom decile levels.

Developed Public Equity Markets

U.S. Equity Market P/E Ratio\(^1\) versus Long-Term Historical Average

1. P/E ratio is a Dollar P/E 30 based on 10-year real S&P 500 earnings over S&P 500 index level.
Three asset classes remain at unfavorable pricing levels.

Interest rate risk remains at the top of its historic range.

CONSENT: _____  ATTACHMENT(S): 2

ACTION: _____  DATE OF MEETING: April 5, 2017 / 10 mins.

INFORMATION: X  PRESENTER(S): Allan Emkin, Pension Consulting Alliance

POLICY

This item is governed and required by the CalSTRS Investment Policy and Management Plan (Teachers’ Retirement Board Policy Manual, Section 1000, Page A-1) and is a crucial part of the Investment Committee’s annual work plan.

HISTORY OF THE ITEM

On a semi-annual basis, in September and April, the General Consultant reviews the performance report for the CalSTRS Total Fund. This report is critical to the monitoring and oversight responsibility of the Investment Committee. Additionally, the semi-annual reporting packet has been streamlined to align with the new investment reporting guidelines approved in June 2016.

PURPOSE

The Investment Committee’s General Consultant Mr. Allan Emkin, managing partner of Pension Consulting Alliance, will review the report of the Teachers’ Retirement Fund’s investment performance for the calendar year 2016, and the three, five and ten year results ending December 31, 2016. Since the reporting period is for mid-fiscal, it will focus on longer term trends over returns.

Staff has added a one page, double-sided, investment performance “At-A-Glance” to provide the Committee and public with a quick reference sheet (Attachment 1). This report can be completely customized to meet the Committee’s needs.

Pension Consulting Alliance has developed an abridged performance summary (Attachment 2). Mr. Emkin will alert the Investment Committee of any issue or area that requires greater focus and attention.

Pension Consulting Alliance along with State Street Bank Investment Analytics provides the semi-annual report; a link has been provided. This report can be customized to suit the needs of the Investment Committee. All of the data within this report is developed by State Street Bank & Trust, the master custodian and the investment performance book of record for the portfolio.
RECOMMENDATION

Staff recommends that upon hearing the oral report from Mr. Allan Emkin, the Investment Committee receive the report for the record.
Investment Performance At-a-Glance December 31, 2016

PACE: THE GOAL: average 7.5% over 30 years

7.0% 5.0% 9.7% 5.7% 8.1%

20 Years 10 Years 5 Years 3 Years 2016

All returns are NET of investment fees

Summary of Market Returns in 2016:
The U.S. equity market rose 12% in the past year, but it was far from a straight climb. In fact, the market declined about 10% in the first 45 days of 2016. Bolstered with a post-election rally it produced double digit returns. Non-U.S. stock dropped in value, due to the Brexit vote declining nearly -10% on the year.

U.S. Govt. Bonds declined in value as interest rates rose during the year. The longer term asset classes, such as Real Estate, continued to post strong results.

Asset Allocation as of December 31, 2016

Total Fund returns over the past ten years

Asset mix over the past three years
Investment Performance At-a-Glance December 31, 2016

**Legend:**
- CalSTRS portfolio
- Benchmark

**Performance of the four main Asset Classes over time** (returns are NET of fees)

**GLOBAL EQUITY**

- **10 Years:**
  - CalSTRS: 5.0%
  - Reference Portf.: 5.2%
  - Policy Return: 5.8%

- **5 Years:**
  - CalSTRS: 7.5%
  - Reference Portf.: 7.5%
  - Policy Return: 10.4%

**PRIVATE EQUITY**

- **10 Years:**
  - CalSTRS: 9.7%
  - Reference Portf.: 11.4%
  - Policy Return: 5.0%

- **5 Years:**
  - CalSTRS: 11.0%
  - Reference Portf.: 12.3%
  - Policy Return: 9.4%

**FIXED INCOME**

- **10 Years:**
  - CalSTRS: 4.9%
  - Reference Portf.: 3.2%
  - Policy Return: 3.9%

- **5 Years:**
  - CalSTRS: 4.5%
  - Reference Portf.: 3.5%
  - Policy Return: 3.3%

**REAL ESTATE**

- **10 Years:**
  - CalSTRS: 2.2%
  - Reference Portf.: 11.6%
  - Policy Return: 11.6%

- **5 Years:**
  - CalSTRS: 7.4%
  - Reference Portf.: 11.0%
  - Policy Return: 9.6%

The Actuary (ARR) is the Actuary assumed rate of return for funding the System.

* Reference Portfolio is the Morningstar Moderate Target Risk Retirement Fund composite

As a long-term investor, the key is 5 and 10 year time periods.
CALIFORNIA STATE TEACHERS' RETIREMENT SYSTEM
ABRIDGED PERFORMANCE SUMMARY

Open Session
April 2017
Introduction

The CalSTRS Total Portfolio had an aggregate value of $197.5 billion as of December 31, 2016. During the latest 6-month period, the Total Portfolio increased by $8.2 billion. Over the latest year, the Total Portfolio increased by $11.8 billion.

Asset Allocation Trends

The Board recently adopted new long-term, strategic asset allocation targets to be implemented over several years. The current strategic asset allocation targets, as adopted by the Board, are listed on page 3.

The Total Portfolio ended the latest 6-month period with each strategic class being generally in-line (+/-1%) with their respective policy targets. New target allocations were approved as a result of the 2015 asset-liability study and will be implemented over time.

During the latest 6-month period, the actual weightings of the Fixed Income, Real Estate, and Private Equity classes decreased by (2%), (1%), and (1%), respectively, while Global Equity increased by 2%. The actual weightings of the Cash and Inflation Sensitive classes remained the same. Furthermore, the Risk Mitigating Strategies class was added to the portfolio in this period.

### Trailing Period Investment Performance
(Net-of-Manager Fees)

<table>
<thead>
<tr>
<th>Performance vs. Policy Benchmark</th>
<th>10 Year</th>
<th>5 Year</th>
<th>3 Year</th>
<th>1 Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Portfolio</td>
<td>5.0</td>
<td>9.7</td>
<td>5.7</td>
<td>8.1</td>
</tr>
<tr>
<td>Policy Benchmark</td>
<td>5.8</td>
<td>10.4</td>
<td>6.2</td>
<td>8.0</td>
</tr>
<tr>
<td><strong>Excess Return</strong></td>
<td><strong>-0.8</strong></td>
<td><strong>-0.7</strong></td>
<td><strong>-0.5</strong></td>
<td><strong>0.1</strong></td>
</tr>
<tr>
<td>CMA Benchmark</td>
<td>7.5</td>
<td>7.5</td>
<td>7.5</td>
<td>8.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Performance vs. Median Fund</th>
<th>10 Year</th>
<th>5 Year</th>
<th>3 Year</th>
<th>1 Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Portfolio</td>
<td>5.0</td>
<td>9.7</td>
<td>5.7</td>
<td>8.1</td>
</tr>
<tr>
<td>Median Fund</td>
<td>5.5</td>
<td>9.0</td>
<td>5.3</td>
<td>7.9</td>
</tr>
<tr>
<td><strong>Excess Return</strong></td>
<td><strong>-0.5</strong></td>
<td><strong>0.7</strong></td>
<td><strong>0.4</strong></td>
<td><strong>0.2</strong></td>
</tr>
</tbody>
</table>

1 The Total Portfolio benchmark consists of passively managed strategic class portfolios held at policy weightings.

2 Capital Market Assumptions Benchmark: Historical blend of approved capital market assumptions and policy allocation weightings.

3 TUCS® Universe - Public Funds > $10 Billion. Mixture of net and gross-of-fees.
Calendar Year Portfolio Performance

The CalSTRS Total Portfolio generated positive absolute results over the last eight 12-month periods ending December 31*. The Total Portfolio has outperformed the policy target benchmark in four of the last eight years ending in December and matched or outperformed the median fund4 in six of the last eight years ending December 31*.

Trailing 12-Month Performance* (for year ended December 31*)

![Trailing 12-Month Performance Chart]

Source: State Street
Note: CMA Benchmark is not shown due to lack of comparability.

Portfolio Valuation

The CalSTRS Total Portfolio had an aggregate value of $197.5 billion as of December 31, 2016. During the latest 6-month period, the Total Portfolio increased by $8.2 billion. Over the latest year, the Total Portfolio increased by $11.8 billion.

Portfolio Valuation as of December 31, 2016

<table>
<thead>
<tr>
<th></th>
<th>Dec 31, 2016</th>
<th>June 30, 2016</th>
<th>Semi-Annual Change^</th>
<th>Percentage Change*</th>
<th>Dec 31, 2015</th>
<th>Annual Change^</th>
<th>Percentage Change*</th>
</tr>
</thead>
<tbody>
<tr>
<td>CalSTRS</td>
<td>$197.5</td>
<td>$189.2</td>
<td>$8.2</td>
<td>4.4%</td>
<td>$185.6</td>
<td>$11.8</td>
<td>6.4%</td>
</tr>
</tbody>
</table>

Source: State Street

*Differences due to rounding error
*Includes investment performance and net contributions

4 TUCS® Universe – Public Funds > $10 Billion. Mixture of net and gross-of-fees.
Actual vs. Target Allocations

The Total Portfolio ended the latest 6-month period with each strategic class being generally in-line (+/-1%) with their respective policy targets. New target allocations were approved as a result of the 2015 asset-liability study and will be implemented over time.

As of December 31, 2016 (differences due to rounding)

<table>
<thead>
<tr>
<th>Segment</th>
<th>Actual ($Mil)</th>
<th>Actual %</th>
<th>Target %</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Portfolio</td>
<td>197,454</td>
<td>100</td>
<td>100</td>
<td>---</td>
</tr>
<tr>
<td>Global Equity</td>
<td>111,876</td>
<td>57</td>
<td>56</td>
<td>1</td>
</tr>
<tr>
<td>Fixed Income</td>
<td>30,461</td>
<td>15</td>
<td>16</td>
<td>-1</td>
</tr>
<tr>
<td>Private Markets</td>
<td>41,983</td>
<td>21</td>
<td>23</td>
<td>-2</td>
</tr>
<tr>
<td>Real Estate</td>
<td>25,797</td>
<td>13</td>
<td>14</td>
<td>-1</td>
</tr>
<tr>
<td>Private Equity</td>
<td>16,187</td>
<td>8</td>
<td>9</td>
<td>-1</td>
</tr>
<tr>
<td>Inflation Sensitive</td>
<td>2,027</td>
<td>1</td>
<td>1</td>
<td>---</td>
</tr>
<tr>
<td>Risk Mitigating</td>
<td>4,096</td>
<td>2</td>
<td>2</td>
<td>---</td>
</tr>
<tr>
<td>Innovative Strategies</td>
<td>532</td>
<td>&lt;1</td>
<td>0</td>
<td>---</td>
</tr>
<tr>
<td>Cash</td>
<td>6,249</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: State Street

During the latest 6-month period, the actual weightings of the classes generally remained the same. The Fixed Income, Real Estate, and Private Equity classes decreased by (2%), (1%), and (1%), respectively, while Global Equity increased by 2%. During the latest 12-month period, the actual weightings of the Cash and Global Equity classes increased by 1% each, whereas the actual weightings of the Fixed Income, Real Estate, and Private Equity classes decreased by (1%) each. The Risk Mitigating Strategies class was included in the portfolio during the latest 6-month period, effectively replacing the Absolute Return class.

Actual Strategic Allocation Comparison (differences due to rounding)
Strategic Class Performance – Trailing Periods (Net-of-Manager Fees)

The Total Portfolio’s Global Equity class outperformed its policy benchmark over the trailing 3-, 5-, and 10-year time periods. The Fixed Income class outperformed its benchmark over all trailing time periods. The Real Estate class matched or outperformed its benchmark over the trailing 1- and 5-year periods. The Private Equity class matched its benchmark over the 1-year period but underperformed its benchmark over all other trailing periods. The Inflation Sensitive class outperformed its benchmark over the 1-year period but underperformed over the remaining trailing time periods. The Risk Mitigating Strategies class underperformed its benchmark over the latest 1-year period but outperformed over the remaining trailing time periods. The Innovative Strategies class underperformed its benchmark over all trailing time periods with a reported benchmark return.

Periods ending December 31, 2016

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>10 Year</th>
<th>5 Year</th>
<th>3 Year</th>
<th>1 Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Portfolio</td>
<td>5.0</td>
<td>9.7</td>
<td>5.7</td>
<td>8.1</td>
</tr>
<tr>
<td>Policy Benchmark</td>
<td>5.8</td>
<td>10.4</td>
<td>6.2</td>
<td>8.0</td>
</tr>
<tr>
<td>CMA Benchmark*</td>
<td>7.5</td>
<td>7.5</td>
<td>7.5</td>
<td>8.4</td>
</tr>
<tr>
<td>Global Equity**</td>
<td>5.0</td>
<td>11.4</td>
<td>4.8</td>
<td>9.4</td>
</tr>
<tr>
<td>Policy Benchmark</td>
<td>5.0</td>
<td>11.4</td>
<td>4.8</td>
<td>9.6</td>
</tr>
<tr>
<td>Fixed Income</td>
<td>4.9</td>
<td>3.2</td>
<td>3.5</td>
<td>3.9</td>
</tr>
<tr>
<td>Policy Benchmark</td>
<td>4.5</td>
<td>2.5</td>
<td>3.1</td>
<td>3.3</td>
</tr>
<tr>
<td>Private Markets</td>
<td>6.0</td>
<td>12.1</td>
<td>10.4</td>
<td>9.2</td>
</tr>
<tr>
<td>Policy Benchmark</td>
<td>9.1</td>
<td>14.8</td>
<td>11.1</td>
<td>8.5</td>
</tr>
<tr>
<td>Real Estate</td>
<td>2.2</td>
<td>11.6</td>
<td>11.0</td>
<td>9.6</td>
</tr>
<tr>
<td>Policy Benchmark</td>
<td>7.4</td>
<td>11.6</td>
<td>11.4</td>
<td>9.1</td>
</tr>
<tr>
<td>Private Equity</td>
<td>9.3</td>
<td>12.3</td>
<td>9.4</td>
<td>8.5</td>
</tr>
<tr>
<td>Policy Benchmark</td>
<td>10.1</td>
<td>18.1</td>
<td>11.0</td>
<td>8.5</td>
</tr>
<tr>
<td>Inflation Sensitive</td>
<td>---</td>
<td>3.5</td>
<td>2.6</td>
<td>9.2</td>
</tr>
<tr>
<td>Policy Benchmark</td>
<td>---</td>
<td>4.3</td>
<td>4.1</td>
<td>5.6</td>
</tr>
<tr>
<td>Risk Mitigating Strategies***</td>
<td>---</td>
<td>1.3</td>
<td>-0.7</td>
<td>-9.9</td>
</tr>
<tr>
<td>Policy Benchmark</td>
<td>---</td>
<td>-1.5</td>
<td>-1.6</td>
<td>-7.5</td>
</tr>
<tr>
<td>Innovative Strategies</td>
<td>---</td>
<td>0.6</td>
<td>1.0</td>
<td>1.4</td>
</tr>
<tr>
<td>Policy Benchmark</td>
<td>---</td>
<td>---</td>
<td>2.3</td>
<td>4.7</td>
</tr>
<tr>
<td>Cash</td>
<td>0.4</td>
<td>1.3</td>
<td>0.7</td>
<td>0.7</td>
</tr>
<tr>
<td>Policy Benchmark</td>
<td>0.8</td>
<td>0.1</td>
<td>0.2</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Key: Red = relative underperformance  
Green = relative outperformance (or matched performance)  
Black = no assigned benchmark return

*Capital Market Assumptions Benchmark: Historical blend of approved capital market assumptions and policy allocation weightings.  
**Total Public Equity (includes corporate governance and sustainability public equity assets).  
***Absolute Return class prior to 7/1/16.
## Strategic Class Attribution (Gross-of-Manager Fees)

<table>
<thead>
<tr>
<th></th>
<th>Portfolio Weight</th>
<th>Benchmark Weight</th>
<th>Portfolio Return</th>
<th>Benchmark Return</th>
<th>Allocation</th>
<th>Selection</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Equity</td>
<td>55.1%</td>
<td>56%</td>
<td>7.5%</td>
<td>7.6%</td>
<td>$ (0.1)</td>
<td>$ (0.1)</td>
<td>$ (0.1)</td>
</tr>
<tr>
<td>Fixed Income</td>
<td>16.9%</td>
<td>16%</td>
<td>-1.5%</td>
<td>-2.1%</td>
<td>$ (0.0)</td>
<td>$ 0.2</td>
<td>$ 0.2</td>
</tr>
<tr>
<td>Private Equity</td>
<td>8.6%</td>
<td>9%</td>
<td>6.5%</td>
<td>6.6%</td>
<td>$ (0.0)</td>
<td>$ (0.0)</td>
<td>$ (0.1)</td>
</tr>
<tr>
<td>Real Estate</td>
<td>14.1%</td>
<td>14%</td>
<td>5.4%</td>
<td>3.8%</td>
<td>$ (0.0)</td>
<td>$ 0.4</td>
<td>$ 0.4</td>
</tr>
<tr>
<td>Risk Mitigating Strategies</td>
<td>1.0%</td>
<td>2%</td>
<td>-8.1%</td>
<td>-7.5%</td>
<td>$ 0.1</td>
<td>$ (0.0)</td>
<td>$ 0.1</td>
</tr>
<tr>
<td>Inflation Sensitive</td>
<td>1.0%</td>
<td>1%</td>
<td>3.1%</td>
<td>1.7%</td>
<td>$ (0.0)</td>
<td>$ 0.0</td>
<td>$ 0.0</td>
</tr>
<tr>
<td>Innovative Strategies</td>
<td>0.3%</td>
<td>0%</td>
<td>1.6%</td>
<td>4.0%</td>
<td>$ (0.0)</td>
<td>$ (0.0)</td>
<td>$ (0.0)</td>
</tr>
<tr>
<td>Cash</td>
<td>2.9%</td>
<td>2%</td>
<td>0.4%</td>
<td>0.2%</td>
<td>$ (0.1)</td>
<td>$ 0.0</td>
<td>$ (0.1)</td>
</tr>
<tr>
<td>Strategic Overlay</td>
<td>0.1%</td>
<td>0%</td>
<td>1.2%</td>
<td>0.0%</td>
<td>$ (0.0)</td>
<td>$ 0.0</td>
<td>$ (0.0)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>5.2%</strong></td>
<td><strong>4.9%</strong></td>
<td><strong>$ (0.2)</strong></td>
<td><strong>$ 0.5</strong></td>
<td><strong>$ 0.4</strong></td>
</tr>
</tbody>
</table>

Source: State Street

Notes:
- Portfolio weights represent beginning weights for the period
- Dollar impacts ($billions) are based on average monthly market values and may not sum due to rounding
- Due to significant changes in the portfolio, only the latest 6-month plan attribution is displayed

CONSENT: _____  ATTACHMENT(S): 0

ACTION: _____  DATE OF MEETING: April 5, 2017 / 10 mins.

INFORMATION:  X  PRESENTER(S): Micolyn Magee, The Townsend Group

POLICY
This item is required and governed under the reporting guidelines of the CalSTRS Real Estate Investment Policy (Teachers’ Retirement Board Policy Manual, Section 1000, Page J-1) and is a crucial part of the Investment Committee’s annual work plan.

HISTORY OF THE ITEM
On a semi-annual basis, in September and April, the Real Estate Consultant reviews the performance report for the CalSTRS Real Estate Portfolio. Due to the timing of appraisals and partnership reporting timelines, this report is lagged one quarter. Additionally, the semi-annual reporting packet has been condensed to align with the new investment reporting guidelines approved in June 2016.

PURPOSE
Due to the specialized nature of this asset class, the Investment Committee has retained a specialty consultant, who provides a Real Estate performance report; a link has been provided. While the report includes the quarterly and annual returns, as a long-term investor coupled with the long-term nature of the asset class, the Investment Committee is encouraged to focus primarily on the three, five and ten year results.

1. Micolyn Magee of The Townsend Group will present an oral report highlighting key issues across the CalSTRS Real Estate Portfolio.

2. The performance reporting function for the portfolio is prepared by State Street Bank’s PrivateEdge Group. PrivateEdge prepares the report and can customize it to meet Committee needs. The Townsend Group will highlight and comment on the performance of the portfolio based on data in the report.

3. Ms. Magee will use this opportunity and the closed session briefing to alert the Committee of any areas of concern, needed policy revisions or issues that warrant further review.
RECOMMENDATION

Staff recommends that, upon the oral report from Ms. Magee, the Investment Committee receive the report for the record.
SUBJECT: Receive Private Equity – Semi-Annual Performance Report,  
Period Ending September 30, 2016

CONSENT: _____  
ATTACHMENT(S): 0

ACTION: _____  
DATE OF MEETING: April 5, 2017 / 10 mins.

INFORMATION: X  
PRESENTER(S): John Haggerty & Steve Hartt,  
Meketa Investment Group

POLICY

This item required and governed under the reporting guidelines of the CalSTRS Private Equity Investment Policy, (Teachers’ Retirement Board Policy Manual, Section 1000, Page H-1) and is a crucial part of the Investment Committee’s annual work plan.

HISTORY OF THE ITEM

On a semi-annual basis, in September and April, the Private Equity Consultant reviews the performance report for the CalSTRS Private Equity Portfolio. Due to the delay in receiving partnership data, this report is lagged by one quarter. Additionally, the semi-annual reporting packet has been condensed to align with the new investment reporting guidelines approved in June 2016.

PURPOSE

Due to the specialized nature of this asset class, the Investment Committee has retained a specialty consultant, who provides a Private Equity performance report; a link has been provided. While the report includes one year returns, as a long-term investor coupled with the long-term nature of the asset class, the Investment Committee is encouraged to focus on the three, five and ten year results because they are less volatile and more indicative of the long-term performance trend of the underlying portfolio. One-year results are less meaningful in an asset class where the typical holding period for a portfolio company is four to five years.

- Mr. Haggerty and Mr. Hartt of Meketa Investment Group, the Investment Committee’s Private Equity Consultants, will present an oral report highlighting key issues across the CalSTRS Private Equity Portfolio.
- The portfolio data in the report is prepared by State Street Bank’s Private Edge Group with input from Meketa Investment Group; it is fully customizable to meet Investment Committee needs.
- Mr. Haggerty and Mr. Hartt will use this opportunity to alert the Committee of any areas of concern, needed policy revisions, or issues that warrant further review.
RECOMMENDATION

Staff recommends that, upon the oral report from Mr. Haggerty and Mr. Hartt, the Investment Committee receive the report for the record.
POLICY

The CalSTRS Private Equity Investment Policy (Teachers’ Retirement Board Policy Manual, Section 1000, Page H-1), which governs the management of the Private Equity program, seeks to ensure that a portfolio of private equity investments is developed to meet the California State Teachers’ Retirement System’s objectives, within acceptable risk parameters.

HISTORY OF THE ITEM

CalSTRS reviews its policies periodically as deemed appropriate in light of evolving market conditions, practices and opportunities. The Investment Committee last modified the Private Equity program benchmark in July 2008 when the State Street Private Equity Index was selected as the benchmark for time periods less than ten years.

PURPOSE

Staff and the Private Equity program advisor (Meketa) are in the process of analyzing and developing proposed changes to the Private Equity program benchmark. Staff and the advisor plan to make a formal recommendation to modify the benchmark at the June meeting of the Investment Committee. The purpose of this item is to preview the proposal and introduce some of the basic concepts involved. A more detailed discussion will be presented in June.

DISCUSSION

The benchmarking of private equity performance presents a number of challenges for investors due to the lack of readily available complete performance data for the industry and the long-lived nature of most private equity investment vehicles. While the long term objective of the CalSTRS Private Equity program is clear (producing investment returns in excess of the public equity markets), the challenge is to evaluate fairly the performance of the asset class over shorter time periods. Market participants generally assess private equity performance by comparing performance to a public equity benchmark plus a spread, or alternatively to a peer benchmark that consists of a representative set of private equity funds available to investors.

Prior to July 2008, CalSTRS used a public benchmark plus a spread as its primary benchmark for private equity. The decision was made to adopt a peer benchmark despite the lack of transparency with respect to the underlying funds in the benchmark because the performance of
private equity tends to lag the public market during periods of strongly trending (up or down) public equity markets.

The shift to a peer benchmark eliminated the periodic lack of correlation between private equity and the public market but there continue to be ongoing differences between the performance of the CalSTRS private equity program and the benchmark. Staff has analyzed the sources of these differences and concluded that a source of significant noise in the performance comparison arises from differences between the composition of the CalSTRS portfolio over time and the benchmark portfolio. The proposed policy change contained in Attachment 1 customizes the State Street Private Equity Index to reflect the commitment pacing and composition across sub-asset classes of the CalSTRS Private Equity program.

Prepared by:

Margot J. Worth
Director, Private Equity
PRIVATE EQUITY INVESTMENT POLICY

INVESTMENT BRANCH

JULY 2014 JUNE 2017
I. Private Equity Investments Investment Policy

EXECUTIVE SUMMARY

In accordance with the CalSTRS Investment Policy and Management Plan, IPMP, California State Teachers' Retirement System Board, Board, has a commitment to illiquid equity and equity related funds actively managed by specialized professionals to achieve a total rate of return superior to public equity vehicles.

The portfolio holding these assets is identified as Private Equity. CalSTRS Private Equity assets are to be invested, administered, and managed in a prudent manner for the sole benefit of its participants and beneficiaries, in accordance with the California Constitution, the California State Teachers’ Retirement Law, and other applicable statutes. No investment instrument or activity prohibited by the IPMP shall be authorized for the Private Equity Portfolio. This portfolio can include limited partnerships, direct investments, co-investments, and secondary interests in the following market segments:

- Leveraged Buyout
- Venture Capital
- Distressed Debt
- Mezzanine Financing
- Natural Resources
- Proactive Private Equity – (New & Next Generation and the Urban/Rural growth program)

The primary objective for the Private Equity Portfolio, PEP, is to provide enhanced investment returns over those available in the public market. The increased risk associated with the structure, liquidity, and leverage requires a higher net total rate of return.

The Board established the asset allocation and strategic objectives for the Private Equity Portfolio. The management of all types of investments is performed by internal and external professionals who are monitored and evaluated by internal investment officers and an external alternative investment consultant. CalSTRS believes that environmental, social, and governance, ESG, issues can affect the performance of our investments. As a result, the CalSTRS 21 Risk Factors have been developed as a tool that both internal and external investment managers are expected to use to assess the impact of ESG risk when making an investment on behalf of CalSTRS. The internal investment officers operate under the direction of the Chief Investment Officer or designee. The external alternative investment consultant reports directly to the CalSTRS Board. As with all other plan assets, these policies cannot be altered without explicit direction from the Board.

This manual will establish the policies and procedures involved in the management of private equity investments. The policies are designed to set boundaries for expected performance, diversification, and investment structure. The procedures are designed to provide guidelines for the implementation of the approved policies. A flow chart is provided to establish context for the policies presented.
PRIVATE EQUITY PROGRAM

The following represent the approved policies to be utilized in the management of the private equity segment of the total investment portfolio. The policies are designed to set boundaries for the expected performance and structure. Policies approved by the CalSTRS Board cannot be altered without explicit direction from the CalSTRS Board.

1. The Private Equity Portfolio of the California State Teachers' Retirement System is invested in a prudent manner for the sole benefit of CalSTRS participants and beneficiaries in accordance with the Teachers' Retirement Law and other applicable statutes.

2. The Private Equity Portfolio shall be invested to provide enhanced investment returns. Generating high rates of return shall always be the primary objective with diversification being an ancillary benefit. The Private Equity Portfolio performance benchmark for measurement periods ten years and beyond, shall be the dollar weighted return for the Russell 3000 Index plus 3 percent. Performance calculation will use the internal rate of return, IRR, methodology as recommended by CFA Institute’s Global Investment Performance Standards.

   The performance benchmark for time periods less than ten years shall be the State Street Private Equity Index and the CalSTRS Custom Private Equity Index. Performance calculation will use the internal rate of return, IRR, methodology as recommended by CFA Institute’s Global Investment Performance Standards.

   The appropriateness and validity of the benchmark relative to the PEP shall be assessed every 3 years to ensure ongoing relevance and data integrity.

3. Diversification within the Private Equity Portfolio is critical to control risk and maximize returns. The specific investments shall be aggregated, evaluated, and monitored to control unintended biases. Diversification can occur across the following parameters.

   a. **Market Segment** -- The market segments are defined as Leveraged Buyout, Venture Capital, Distressed Debt, Mezzanine Financing, and Natural Resources.

   b. **Vintage Group** -- Vintage group is defined by the closing date of the limited partnership. Investments within market segments shall be stratified by vintage group to mitigate the impact of fund flow trends within each segment.

   c. **Economic Sector** -- Economic sectors are described by the standard Value-Line categories such as finance, technology, medical health, or electronic.

   d. **Geographic Location** -- Geographic regions are defined as the location of the head office of the company. The geographic breakdown is expressed as West Coast, Southwest/Rockies, Southeast, Northeast, Mid-West, Mid-Atlantic, United Kingdom, Europe, Canada, and Other International.
Investments shall not be approved for the sole purpose of aligning one specific diversification range. Projected rate of return, risk, and other policies shall receive consideration in addition to diversification.

4. A strategic target and range shall be established for the market segment criteria. The target and range may change over time as conditions warrant as approved by the Investment Committee. The target and range criteria are included as Exhibit 1. The diversification criteria will be reviewed on an annual basis.

5. No investment vehicle or activity prohibited by the Investment Resolution adopted by the Board in 1984, as amended from time to time will be authorized for the Private Equity Portfolio.

6. Authorization letters which indicate who may sign on behalf of CalSTRS shall be included at the time of closing. Whenever a change in authorized signers take place, the limited partnerships shall be notified in writing within 24 hours in the event of termination, and as soon as possible in the event of a newly authorized signer(s).

7. Prior to being processed by the Operations Area, all cash contribution and stock sales transaction tickets shall be signed by two Investment Officers.

8. Graduated limitations of daily trading authority for aggregate alternative investment portfolio transactions are as follows:

   Investment Officer I  $  15 million  
   Investment Officer II $  50 million  
   Investment Officer III $  70 million  
   Portfolio Manager     $100 million  
   Director of Private Equity $400 million  
   Chief Investment Officer $  1.5 billion

9. The Private Equity Portfolio will be managed according to an annual business plan whose main business components will encompass an analysis of the investment environment, a review of the investment strategy, a review of the diversification targets, and a resource allocation budget.

10. The alternative investment consultant will prepare and present portfolio management reports on a semi-annual basis. The management report will provide information on portfolio diversification, largest holdings, common holdings, partnership performance, co-investment holdings, and committed and funded status.

11. The rejection decision for limited partnerships, direct investments, co-investments, and secondary interests is delegated to staff, with the stipulation that all investment opportunities receive equal opportunity and are subject to the appropriate amount of due diligence as defined in the Private Equity Procedures.
12. Risks resulting from foreign currency exposure shall be managed at the overall CalSTRS Fund level. Where appropriate, gain or loss attributable to foreign currency exchange rate movement will be reported as a separate line item in Private Equity’s portfolio and performance reporting.

13. This policy covers the purchase, sale, and transfer of partnership interests; secondary interests; co-investments; and direct investments in a General Partnership or in the management companies of General Partnerships. The subject investments may be in private and public vehicles and securities.

**PARTNERSHIP INVESTMENTS**

14. The approval decision under delegation as it relates to limited partnerships, follow-on limited partnerships, and limited partnership public vehicles shall be completed following a positive written recommendation by CalSTRS Staff and either 1) an alternative investment advisor, or 2) an independent fiduciary. The investment analysis and due diligence will be conducted in the same manner as previously reviewed by the Investment Committee.

15. The approval decision for “follow-on limited partnerships” is delegated to staff considering the following stipulations:
   a. Applicable only to limited partnerships sponsored by general partner(s) included in the CalSTRS Private Equity Portfolio.
   b. Due diligence process shall be consistent and appropriate as defined in the Private Equity Procedures.
   c. Maximum amount of the commitment shall not exceed $500 million or 15 percent of the total amount of the partnership capitalization, whichever is less.
   d. A final report will be presented to the Investment Committee as soon as practical after the commitment is completed.

16. The approval decision for “limited partnerships” is delegated to staff considering the following stipulations:
   a. Due diligence process shall be consistent and appropriate as defined in the Private Equity Procedures.
   b. Maximum amount of the commitment shall not exceed $250 million or 15 percent of the total amount of the partnership capitalization, whichever is less.
   c. A final report will be presented to the Investment Committee as soon as practical after the commitment is completed.
SECONDARY PARTNERSHIPS

17. The approval decision under delegation, as it relates to investing in limited partnerships that purchase secondary interests, shall be completed following a positive written recommendation by CalSTRS Staff and either 1) the alternative investment advisor, or 2) a project consultant. The approval decision under delegation as it relates to purchasing secondary interests shall be completed following a positive written recommendation by CalSTRS Staff and 1) either the alternative investment advisor, or 2) an independent fiduciary. The investment analysis and due diligence will be conducted in the same manner as previously reviewed by the Investment Committee.

18. The approval decision for “secondary limited partnership” interests is delegated to staff considering the following stipulations:

   a. Due diligence process shall be consistent and appropriate as defined in the Private Equity Procedures.
   b. Maximum amount of the commitment shall not exceed $100 million or 20 percent of the total amount of the partnership capitalization, whichever is less.
   c. A final report will be presented to the Investment Committee as soon as practical after the commitment is completed.
   d. Secondary partnership investments may be made in partnerships in which CalSTRS is not a limited partner.

CO-INVESTMENTS, DIRECT INVESTMENTS IN GENERAL PARTNERSHIPS AND SEPARATELY MANAGED ACCOUNTS

19. The approval decision under delegation as it relates to co-investments, and direct investments in General Partnerships and General Partnership management companies, and separately managed accounts shall be completed following a positive written recommendation by the CalSTRS Staff and either 1) an alternative investment advisor, or 2) an independent fiduciary. The investment analysis and due diligence will be conducted by the CalSTRS Staff (as identified in the Alternative Investment Procedures) and by the above external entity. CalSTRS Staff and the above external entity must each provide a positive written recommendation.

20. The approval decision for co-investments is delegated to staff considering the following stipulations:

   a. Co-investments shall be made on the same (or better) terms and conditions as provided to the partnership.
   b. Due diligence process shall be consistent and appropriate as defined in the Private Equity Procedures.
c. Maximum amount of each commitment shall not exceed the smallest of $125 million, 5 percent of the size of the Partnership, or 80 percent of the CalSTRS General Partner’s commitment to the transaction.
d. Co-investments may be made alongside an existing CalSTRS General Partner, provided the strategy and objectives of the Partnership investing in the transaction are consistent with those of the Partnership in which CalSTRS has a commitment.
e. A final report will be presented to the Investment Committee as soon as practical after the commitment is completed.
f. A co-investment may take the form of equity, convertible preferred equity or a comparable instrument which provides an equity type of return.

21. The approval decision for direct investments in General Partnerships and the management companies of General Partnerships is delegated to staff considering the following stipulations:
   a. Due diligence process shall be consistent and appropriate as defined in the Private Equity Procedures,
   b. Maximum amount of each commitment shall not exceed 10 percent of the size of the Alternative Investment Portfolio,
   c. Ownership percentage of the direct investment can be up to 35 percent,
   d. A final report will be presented to the Investment Committee as soon as practical after the commitment is completed.

22. The approval decision for investments in separately managed accounts is delegated to staff considering the following stipulations:
   a. Separately managed account investments shall be made only with established managers with proven track records.
   b. Due diligence process shall be consistent and appropriate as defined in the Private Equity Procedures Manual.
   c. Maximum amount of commitment shall not exceed $500 million for an “existing” general partner relationship or $250 million for a “new” general partner relationship.
   d. The general partner’s commitment to the separately managed account investment vehicle must be at least 1 percent of the vehicle’s capital. The investment vehicle must be a limited partnership, LP, or limited liability corporation, LLC.

A final report will be presented to the Investment Committee as soon as practical after the commitment is completed.
PROACTIVE PORTFOLIO

Within Private Equity, there is a Proactive Portfolio, which provides a framework for selecting private equity investments in an opportunistic and disciplined manner which focuses on unique opportunities and innovative strategies. These programs include:

a. The Urban and Rural Program started in 2001, which seeks investments consistent with the Board’s Policy on California Investments in the emerging space.

b. The New and Next Generation Program started in 2003, which seeks to capture innovative strategies (i.e., new market opportunities and/or new drivers of value creation due to changing demographics, etc.)

c. Additional strategies may be added to the portfolio at the direction of the Investment Committee.

23. **General:** Given the unique nature of the proactive strategies, CalSTRS will use Fund-of-Funds, FOF, managers that specialize within each segment of these unique and innovative areas to lead the investment program. Staff may expand the program to invest in limited partnerships or co-investments that have been approved and included in the FOF Portfolio (side by side with the fund-of-funds). Since these innovative proactive investments carry different risks than traditional mainstream funds, a specialized advisor may be selected from a pool of approved specialized advisors, in addition to the FOF advisor or independent fiduciary. All investment analyses and due diligence will be conducted in the same manner as previously reviewed by the Investment Committee. All side by side investments shall be completed following a positive written recommendation by the CalSTRS Staff and either 1) an alternative investment advisor, 2) a specialized advisor, or 3) an independent fiduciary.

24. **Fund-of-Funds:** The approval decision under delegation as it relates to new Proactive Portfolio fund-of-funds investments is delegated to staff considering the following stipulations:

a. Due diligence process shall be consistent and appropriate as defined in the Proactive Portfolio procedures.

b. Maximum amount of the commitment for a FOF new to CalSTRS or with a new strategy shall not exceed $100 million.

c. Maximum amount of the commitment for a follow-on investment with a FOF shall not exceed $250 million.

d. A final report will be presented to the Investment Committee as soon as practical after the commitment is completed.

25. **New Co-Investment/FOF Side-by-Side Investment:** The approval decision for new co-investments or investment in a limited partnership that is side-by-side with a FOF is delegated to staff considering the following stipulations:
a. Co-investments/side-by-side investments shall be made on the same (or better) terms and conditions as provided to the partnership.
b. Due diligence process shall be consistent and appropriate as defined in the Proactive Portfolio Procedures.

c. Maximum amount of each commitment shall not exceed $55 million or 30 percent of the CalSTRS total commitment to that partnership, whichever is less.

d. A final report will be presented to the Investment Committee as soon as practical after the commitment is completed.

e. Co-investments/side-by-side within the Proactive Portfolio is limited to fund investing in the United States, Canada, Mexico and Puerto Rico. (The business activities of the co-investment must be primarily in the United States.)

f. A co-investment may take the form of equity, convertible preferred equity, or a comparable instrument which provides an equity-type of return.

26. **Follow-On Co-Investment/FOF Side-by-Side Investment:** The approval decision for follow-on investment in a limited partnerships within the Proactive Portfolio is delegated to staff considering the following stipulations:

a. Due diligence process shall be consistent and appropriate as defined in the Proactive Portfolio Procedures.

b. Maximum amount of the commitment shall not exceed $100 million or 30 percent of the total amount of the partnership capitalization.

c. A final report will be presented to the Investment Committee as soon as practical after the commitment is completed.

d. Co-investments/side-by-side within the Proactive Portfolio is limited to fund investing in the United States, Canada, Mexico, and Puerto Rico. (The business activities of the co-investment must be primarily in the United States.)

e. A co-investment may take the form of equity, convertible preferred equity or a comparable instrument which provides an equity type of return.

The March 3, 1999 alternative investment presentation to the Investment Committee, in addition to Alternative Investment Procedures, glossary of terms, and desk manual, are incorporated into this policy by reference.

*Adopted June 1998
Revised July 1998
Revised April 1999*
Revised to increase flexibility regarding secondary transactions on April 2001
Revised March 2002
Revised for clarification of returns calculations using dollar-weighted IRR on June 2003
Revised to expand eligible regions to rest of world on June 2004
Revised to change level of delegated authority on July 2005
Revised to increase co-investment limits and layout proactive portfolio process on June 2006
Revised to adjust Benchmark on May 2007
Revised for co-investments ROW, sale policy and direct GP Investment on July 13, 2007
Revised for daily trading authority limits, and sector targets and ranges on November 1, 2007
Revision of financial benchmark July 10, 2008
Revision for separately managed accounts on July 12, 2012
Revised to add ESG Risks Policy reference on September 10, 2013
Revised to clarify the benchmark for different time periods, July 11, 2014
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Glossary

Acquisitions – See Leveraged Buyouts.

Acquisitions – Add On – Add-on acquisitions, or platform investing, is a growth strategy, which involves the acquisition of a company that will be the base (or platform) from which future acquisitions will be made. This strategy invests in consolidating industries by teaming with key industry management to build companies through acquisition and internal growth. Initially, an industry with an unrecognized market niche, high growth potential and no clear market leader is identified. If a suitable company cannot be identified, the investment manager may recruit a management team to run the new business. The company’s management and the investment manager, acting as a team, will identify and negotiate to buy additional companies within the target industry. A “critical mass” is achieved when the investment manager consolidates formerly entrepreneurial-managed, fragmented operating units into a single portfolio company with standard operating procedures. As a result, the larger company becomes visible and attractive to a wider group of potential buyers. Other companies in the market typically are willing to pay a higher price earnings multiple to buy the portfolio company than paid by the investment manager for its component parts.

Advisory Board – Advisory Boards play a role in the governance issues relating to the fundamental aspects of the fund, such as decisions on valuations and management conflicts of interests. Generally, a majority of the composition of the Advisory Board is comprised of the largest limited partners in the limited partnership.

Aggregation of Profits and Losses – Aggregation of profit and losses ensures a fairer profit sharing between the general partner and the limited partners. This calculation is based on the entire performance of the portfolio rather than on a deal by deal basis.

Alternative Investment – Private Equity

Buyouts – See Leveraged Buyouts.

CalSTRS Custom Private Equity Index – The custom index is the State Street Private Equity IndexSM customized to reflect the pacing of CalSTRS commitments by sub-asset class in private equity.

Carried Interest – The mechanism by which general partners are compensated for their performance. The general partner’s carried interest is its share of the partnership’s profits, and generally ranges from 10 percent to 30 percent of the total. A 20 percent carried interest has become the industry norm.
CO-INVESTMENTS – Privately negotiated purchase of equity or quasi-equity from private or publicly traded entities. Such investments involve the purchase of non-registered securities, which by their private, illiquid nature command a premium over comparable publicly traded securities. These will not be stand-alone investments and will always be made alongside a partnership investment on pari-passu, or better terms, than the partnership is making its direct investment.

COMMINGLED PARTNERSHIP FUND – A typical private equity partnership fund arrangement in which the capital from many limited partners is pooled together and invested by a managing general partner in a pari passu manner. The term “partnership investing” usually refers to a commingled partnership fund.

CONVERTIBLE PREFERRED STOCK – A class of stock having different rights than Common Stock, including a liquidation preference over Common Stock; and allowing the Preferred Shareholder to convert Preferred shares into Common shares at some specified conversion ratio. Conversion typically occurs in conjunction with and initial public offering, providing a means of liquidation for the Preferred Shareholder.

DIRECT INVESTMENTS – Direct Investments are made outside of a limited partnership structure. While a co-investment is made alongside of a limited partnership investment, a direct investment is not. Direct investments need a greater level of due diligence and involve a greater level of risk in comparison to a co-investment.

DEBT RELATED INVESTMENT STRATEGIES – Debt related investments include subordinated debt and distressed debt investment strategies. Subordinated debt is often used to help finance leveraged buyouts or other similar transactions. Subordinated debt typically takes the form of mezzanine securities, junk bonds, convertible preferred stock, and other high yielding debt oriented securities. Although considered debt-oriented, securities at the subordinated debt or mezzanine level typically possess equity conversion features, rights, and warrants. Investors at the subordinated debt level are junior to the senior debt holders in a leveraged buyout transaction, meaning they receive interest payments after the senior debt has been satisfied and they share in liquidation after the senior paper holders have made their claims. However, subordinated debt suppliers are senior to the common equity holders of the company.

Distressed debt investments are a form of recovery investing that focus on the debt of a distressed company. Distressed debt investing is defined as the investment in debt securities (generally senior-secured debt) of troubled or bankrupt companies. Also see Restructuring/Recovery investments.

DISTRESSED DEBT – See Debt Related Investment Strategies

DISTRIBUTIONS – Cash and/or securities paid out to the limited partners from the limited partnership.

EMERGING – In private equity, first- second- and third-time funds are considered to be in the emerging space. The firm must have a maximum of 55 percent non-employee-owned ownership – that is, employees at the firm must own at least 45 percent of the equity of the firm. Generally, a firm has $600 million or less in assets under management (AUM) for expansion/buyout funds or $300 million
or less in assets under management for venture capital funds. For the purposes of this definition: (1) Direct or indirect ownership (though a different legal entity owned by the employees) is included in the 45 percent employee ownership; and, (2) The word employee includes principals, members, partners or any other individuals who are actively involved in the day-to-day operation of the firm.

**EQUITY EXPANSION** – Equity expansion investments involve the purchase of substantial, long-term minority equity positions in undervalued, privately or publicly held companies. This strategy is similar in style to later stage venture capital investments, except that equity expansion investments are generally larger, and are typically less technology oriented. These small and medium sized companies have grown from the start-up stage to profitability and are poised for continued rapid growth.

**FIRST TIME LIMITED PARTNERSHIPS** – All funds not identified as follow-on.

**FOLLOW-ON LIMITED PARTNERSHIPS** – The second and all subsequent funds raised by a management team that are included in STRS’ portfolio and rated as Tier 1 or Tier 2. Funds formed by a management team that had substantial changes in the investment team and/or their investment strategy and/or scope of their business from domestic to international will not be classified under this category.

**GENERAL PARTNER** – Managing partner of a limited partnership responsible for performing the day-to-day administrative operations of the partnership and acting as investment advisor to the partnership. The general partner typically invests 1 percent of the capital and retains 20 percent of the profits.

**HURDLE RATE** – A rate of return that must be met before the General Partner can share in the carried interest.

**INITIAL PUBLIC OFFERING (IPO)** – The sale or distribution of a stock or a portfolio company to the public for the first time.

**INTERNAL RATE OF RETURN (IRR)** – The discount rate at which the present value of future cash flows of an investment equals the cost of the investment. It is determined when the net present value of the cash outflows (the cost of the investment) and the cash inflows (returns on the investment) equal zero, the rate of discount being used is the IRR.

**INTERNATIONAL BUYOUT** – An international buyout fund is a limited partnership that generally focuses on acquisition, equity expansion, or later stage investment strategies; however, the fund’s primary geographic focus is outside of the United States.

**J-CURVE** – The J-Curve phenomenon is the effect of the cash flow behavior of a partnership. It can be summarized as the first year’s investment expenses of investing in a fund that has yet to harvest its capital gains in the future. This normally translates into a negative IRR in the early years of the fund. The plot of the partnership values versus time generally resembles a “J.”
JUST IN TIME CAPITAL CALL – The practice is to take capital calls as needed on a transaction per transaction basis.

KEY MAN PROVISION – Limited partners are demanding the right to suspend the funding of the partnership if some of the key people were to leave the firm. This provision is designed to assure the continuity of the firm, and to assure that success (if related to various individuals) stays within the firm.

LEVERAGED BUYOUTS (ACQUISITIONS) – Acquisitions involve the purchase of all or part of the stock or assets of a company utilizing a significant amount of borrowed capital and a relatively small portion of equity capital. Borrowed capital typically consists of some combination of senior and subordinated debt. The company may be privately or publicly owned, or a subsidiary or division of a privately or publicly owned company. Acquisitions generally include companies with stable cash flows, high market share, and high profit margins, selling low or non-technology products in industries not subject to wide profitability swings.

The general goal behind an acquisition investment is to acquire a company, division, or subsidiary that is currently undervalued, and whose assets may be underutilized, and restructure and revitalize it. Ideally, the revitalized company can then be sold, recapitalized, or taken public at a substantial premium to its pre-buyout value.

LIMITED PARTNER – The investors in a limited partnership, generally providing 99 percent of the capital and receiving 80 percent of the profits. Limited partners do not participate in the management of the partnership’s activities. However, they normally have the right to vote to approve or disapprove amendments made to the limited partnership agreement.

LIMITED PARTNERSHIPS – Organization made up of a General Partner, who manages the operations, and limited partners, who invest capital but have limited liability. Limited partners are not involved in the day-to-day management of the partnership and generally cannot lose more than their capital contribution.

LOOKBACK PROVISION – The lookback provision guarantees that the stated profit allocation is met at the end of the partnership’s term with respect to the limited partners.

MANAGEMENT FEES – The management fee is designed to compensate the general partner. This fee is used to provide the partnership with such resources as investment and clerical personnel, office space, and administrative services required by the partnership. Generally, the fee ranges from 1.5 percent to 3.0 percent of capital commitments.

MEZZANINE (ALSO SEE SUBORDINATED DEBT) – Mezzanine investments are in unsecured or junior obligations in financing. They typically earn a current coupon or dividend and have warrants on common stocks or conversion features to enhance returns.

MULTIPLE OF MONEY – Multiple of money is often used to measure performance. This is a cumulative return, identifying the return on an investment over the term of the partnership. A multiple that is greater than one indicates that the partnership’s total value exceeds the amount of
capital contributed to date, whereas, a multiple less than one indicates that the partnership’s total value is less than the amount of capital contributed. In summary, achieving a high annualized rate of return over a long period of time is more impressive than achieving a high annualized rate of return over a shorter period of time.

**NATURAL RESOURCES** – These investments utilize investment strategies that derive their return from the management of and the independent price movements in a particular resource. These investments are more specialized with a corresponding increase in risk. Sub-categories of this group include *Oil and Gas* – provides funding for the purchase or development of energy producing properties or companies operating within that sector, and *Timberland/Farmland* – provides funding for the purchase, development, and/or lease of land for both growth and income-oriented strategies.

**NEW LIMITED PARTNERSHIPS** – Funds that are new to the CalSTRS Alternative Investment Portfolio, these may include mature General Partners’ raising fund 4 or greater.

**NEW & NEXT GENERATION PARTNERSHIPS** – The New & Next generation program was established by the Investment Committee in 2003. It involves partnerships that are raising their first-, second-, and third-time institutional funds or partnerships formed by junior or senior level partners that have left a prior partnership to form a new general partner.

**OIL AND GAS** – See Natural Resources

**PARTICIPANTS** – Three major participants in the private equity market are investors (suppliers of capital), issuers (users of capital), and specialized intermediaries. These three participants are further defined below:

**INVESTORS** -- include a variety of groups such as public and corporate pension funds, endowments, and foundations, bank holding companies, insurance companies, and wealthy families. Currently, public and corporate pension plans are the largest source of private equity.

**ISSUERS** -- includes thousands of start-up businesses that are established annually. In addition, some estimates suggest there are approximately 120,000 private companies in the United States with revenues greater than $10 million, representing a market far greater than the 10,000 to 15,000 publicly traded companies.

**SPECIALIZED INTERMEDIARIES** -- invest as principals rather than as agents, and generally take the form of limited partnerships. Institutional investors acquire limited partnership interests and become limited partners, while professional private equity managers serve as general partners. Although some institutional investors directly acquire private equity securities, 80 percent of all private equity investments are managed via the limited partnership vehicle. By investing through the limited partnership vehicle, rather than directly in issuing companies, investors achieve extensive diversification and employ the specialized talents of the general partners. The general partner provides the
labor-intensive responsibilities of evaluating, conducting due diligence, negotiating, monitoring, and adding value, and eventually liquidating the private equity investments.

**PARTNERSHIP EXPENSES** – Expenses borne by the partnership including costs associated with the organization of the partnership, the purchase, holding, or sale of securities, and legal and auditing expenses.

**PARTNERSHIP TERM** – The term of the partnership is normally ten years, with the general partner reserving the right to terminate the partnership early or extend the term for a set period of time. This is generally subject to the approval by the limited partners.

**PORTFOLIO COMPANIES** – Portfolio companies are any of the companies in which the private equity partnerships have an investment.

**PROACTIVE PORTFOLIO** – A strategy interwoven in all asset classes within CalSTRS portfolio whereby a framework is provided for selecting investments in an opportunistic and disciplined manner when these investments are in (1) the emerging space, and/or (2) to capture innovative strategies (i.e., new market opportunities and/or new drivers of value creation due to changing demographics, etc.), and/or (3) investments consistent with the Board’s Policy on California Investments. The Proactive Portfolio may take the form of a specific program or it can be managed by the individual portfolio managers in the normal course of business.

**RESTRUCTURING/RECOVERY** – Recovery investments involve the investment of capital in companies experiencing anywhere from relatively minor, to extreme difficulties, to companies involved in bankruptcy proceedings. Recovery investing takes advantage of discounted securities of unhealthy, bankrupt (or near); under-performing, and/or under-capitalized companies and either ride or steer them back to recovery. To accomplish this goal, the various funds available use a variety of strategies. The strategies vary by the activity level and/or degree of control required by the acquirers, types of securities utilized, and the relative health of the target companies sought (from bankrupt to nearly healthy). Also, like LBO and venture capital managers, managers of ailing company funds each have a particular target company size preference and some have industry or sector preferences.

Distressed debt investments are a form of recovery investing that focus on the debt of a distressed company. Distressed debt investing is defined as the investment in debt securities (generally senior-secured debt) of troubled or bankrupt companies.

**SECONDARY LIMITED PARTNERSHIP INTERESTS** – Privately negotiated purchase of limited partnership interests or investment company interest. Such investments involve the purchase of a pro-rata ownership of non-registered securities, which are currently in, or will be a future purchase of, the partnership portfolio.

**SEPARATELY MANAGED ACCOUNT** – An investment fund managed for one investor rather than many. The fund may have a specialized mandate or may invest alongside a commingled partnership fund. To be contrasted with a commingled partnership fund.

**SPECIAL EQUITY** – See all non-venture capital related investment strategies, such as
Leveraged Buyouts, Acquisitions, Special Situations, Mezzanine Investments, Subordinated Debt, Hedge Funds, and Natural Resources.

**SPECIAL SITUATIONS** – Special Situation funds represents a “catchall” for non-traditional investments that do not fit either of the above groupings. These will include minority, but often control positions in public companies, “white knight” efforts to support management’s to achieve long-term objectives, turnarounds and bankruptcy reorganizations, and other special situation profit opportunities. It is not the intention to invest in “unfriendly” business take-overs.

**SUBORDINATED DEBT** – See Debt Related investment strategies.

**TIMBERLAND/FARMLAND** – See Natural Resources

**TRANSACTION FEE OFFSETS** – Transaction fee offsets are designed to eliminate misplaced management fees and align the actions of the general partner whose aim is to generate high capital gains, and not to earn additional fees for the firm. The general provision is that the earned fee will reduce the limited partners’ management fees.

**URBAN AND RURAL PROGRAM** – The Urban and Rural program was established by the Investment Committee in 2001 to seek private equity investment in the inner city and underserved portions of California and the U.S.

**VENTURE CAPITAL** – Venture capital refers to investments in young, emerging growth companies in different stages of development. The stages of venture capital investing include the following:

- **SEED STAGE** -- an entrepreneur seeking capital to conduct research or finish a business plan;

- **EARLY STAGE** -- a company developing products and seeking capital to commence manufacturing;

- **LATE STAGE** -- a profitable or near-profitable high growth company seeking further expansion capital. The common theme underlying all venture capital investments is the high-growth nature of the industries in which the investee companies operate and the active role played by the investor to identify additional management expertise and provide general business advice.

**VENTURE ECONOMICS**

Venture Economics is the leading compiler and publisher of private equity investment data. Accordingly, Venture Economics compiles data from over 588 venture capital limited partnerships formed from 1969 to 2000, and over 215 buyout and mezzanine funds formed between 1976 and 2000. With this data, Venture Economics computes the internal rates of returns (IRRs) on a vintage year basis including pooled, upper, median, and lower quartile returns for each sub-category.
**UPPER QUARTILE** -- The point at which 25 percent of all returns in a group are greater and 75 percent are lower.

**MEDIAN QUARTILE** -- The mid-point of all returns, with half the sample less than or equal to the median, and half of the sample greater than or equal to the median.

**LOWER QUARTILE** -- The point at which 75 percent of all returns in a group are greater and 25 percent are lower.

**POOLED RETURNS** -- This is a composite of all median and upper quartile returns.

**VINTAGE YEAR** – The year of fund formation and its first takedown of capital. By placing a fund into a particular vintage year, the limited partner can compare the performance of a given fund with all other similar type funds formed in that particular vintage year. In addition, that vintage year return can then be compared to an industry benchmark which is provided by Venture Economics.
SUBJECT: ESG/21 Risk Factors Policy Rewrite – First Reading

CONSENT: _____ ATTACHMENT(S): 1


INFORMATION: X PRESENTER: Christopher Ailman, Anne Sheehan, Brian Rice, PCA and Meketa

POLICY
This item pertains to the CalSTRS Environmental, Social, and Governance Risks Policy, ESG, which is part of the overall Investment Policy and Management Plan as Attachment A.

PURPOSE AND HISTORY
The purpose of this item is just an initial review of the first edition of a completely revised ESG Policy for CalSTRS. Following discussion at the January Subcommittee meeting, staff was directed to develop a new principles-based ESG Policy and move the 21 Risk Factor down to staff internal guidelines. This new Policy was slated for the March Subcommittee agenda, but once that meeting was canceled, the Chair felt it best for the full Investment Committee to have a chance to review the new Policy language. This more principles-based Policy takes into account some of the concepts, ideas and approaches adopted by other organizations in their ESG policies. The draft Policy will go back to the Subcommittee for final editing and revision at their May meeting and then be brought back to the Investment Committee at the June meeting for final adoption. In preparing their presentation, staff has reviewed a number of policies from other organizations.

BACKGROUND
The origin of CalSTRS ESG Policy goes back to 1978 when the Teachers’ Retirement Board approved the Statement of Investment Responsibility. This Statement recognized that CalSTRS operated in a complex social-economic environment and had a responsibility to require that corporations held in the portfolio met a high standard of conduct in their operations, and addressed those corporate activities that harm people or the environment. The Statement of Investment Responsibility was the guiding document around ESG until 2006.

In 2006, the CalSTRS Statement of Investment Responsibility was revised to align it with the CalSTRS Investment Policy and Management Plan, the controlling document of the Investment Branch. During this revision, the CalSTRS 20 ESG Risk Factors, developed in 2004 to support CalSTRS public equity investment in emerging markets, were integrated into investment policy and clear guidelines for addressing ESG risks, including proxy voting and corporate engagement, were codified.
Since 2006, a number of ESG-related policy revisions have taken place. In 2008, CalSTRS 20 ESG Risk Factors were updated and became the 21 Risk Factors. Also in 2008, the Statement of Investment Responsibility was revised and became the Statement of Shareowner ESG Responsibility. In 2011, the Statement of Shareowner ESG Responsibility and the CalSTRS 21 Risk Factors were integrated into the Corporate Governance Policy to better promote CalSTRS ESG principles and make these principles more accessible to financial market participants. Most recently, in 2013, ESG language was integrated into the investment program policies within the Teachers’ Retirement Board Policy Manual.

DISCUSSION

At the January Subcommittee meeting, staff presented the concept that CalSTRS ESG / 21 Risk Factor Policy is both rules and principles-based. In contrast, staff found that all our global peers have stated their ESG views in the form of principles. After a discussion, the Subcommittee concluded that the 21 Risk Factors should be removed from the Policy and dropped down to staff guidelines. Further the Subcommittee directed staff to develop an ESG Policy that was principles-based to match our peers.

Listed below are some of the belief / ESG principles statements of various peers:

- Our goal is to invest responsibly to provide long-term, secure pensions for our beneficiaries.
- Our primary concern is for the long-term value of our assets; environmental, social and governance matters are addressed to the extent they influence risk and return.
- Stewardship by shareholders creates long-term value in companies.
- We seek sustainable returns from well governed and sustainable assets.
- We actively seek methods to demonstrate the financial and social impact of the choices with regard to responsible investment.
- Considering environmental, social and governance factors when selecting and managing investments allows the Plan Sponsor to manage long-term investment risk with a view of protecting and enhancing the financial value of our investments. Responsible investing also includes contributing to initiatives that enhance the stability and integrity of the global capital markets.
- The Investment Committee, staff, consultants, and investment managers will incorporate ESG issues into investment analysis and decision-making processes.
- We apply long-term thinking to deliver long-term sustainable returns.
- We actively look for attractive investments that promote sustainability.
- We look critically at the behavior and activities of entities in which we invest.
- Knowledge and reason inform our responsible investing decision and activities.
- Our activities as a responsible investor fall into these core areas: integrations of ESG factors into the investment process; engagement, voting and stewardship of our investments, market transforming activities with peers, and active engaged stewardship of our assets.
- Aligning with like-minded investors and organizations can be more effective than working in isolation.
- As a significant investor, we have the responsibility to advance responsible investing within our industry.
• We seek to be transparent and accountable with regard to our responsible investment activities.
• Achieve improvements in ESG through effective partnerships that have robust oversight.
• We actively dialogue with companies in order to achieve sustainability and good corporate governance.
• We seek appropriate disclosure on material ESG issues by the entities in which we invest.
• Engagement is a more effective means to initiate change than divestment.
• We actively exercise our rights as shareholder.
• Through (part of the) investments for Members, we seek to contribute actively to solutions to societal issues.
• Seek to innovate, demonstrate and promote Responsible Investing leadership and ESG best practice.

In addition to the concept of principles, the Subcommittee discussed the need for a materiality threshold within the Policy. At the January 2017 Subcommittee meeting, we discussed the U.S. Supreme Court’s definition of materiality, used by Sustainability Accounting Standards Board, SASB: ‘information is material if there is a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the total mix of information made available.’ The Committee asked staff to articulate what dollar amount or percentage would have a ‘material impact’ on the portfolio.

The definition of materiality varies immensely based on the level of impact to the “end user” of the information. When defining materiality, the first determinant is to identify the end user of the information. For financial statements, the end user is the reader of those statements. For this discussion, the end users are the members of the Teachers’ Retirement System and the Teachers’ Retirement Board. Staff’s approach to determining a level of materiality for ESG issues, involves consideration of both quantitative and qualitative components.

The CalSTRS Divestment Policy provides the framework for the qualitative component. It outlines criteria for responding to external or internal initiatives to divest of individual or groups of securities for the purpose of achieving certain goals that do not appear to be directly investment related. Per the current Divestment Policy, consistent with its fiduciary responsibility and the concepts of diversification and passive index management, the Investment Committee will not systemically exclude or include any investments in companies, industries, countries or geographic areas, except in cases where: one of the CalSTRS 21 Risk Factors is violated over a sustained time frame to the extent that it becomes an economic risk to the Fund, a potential for material loss of revenue exists, and where it weakens the trust of a significant portion of members of the System.

Since our global complex investment portfolio is well diversified, a single holding may not have a material financial impact on the Fund; therefore, the basis for our quantitative component could look to industries and/or sectors. This would involve an analysis of the ESG industry/sector and the level of impact on the financial condition of any asset class or classes. Using this methodology, an initial ESG materiality threshold could be deemed to have a material impact if it potentially affects an asset class by more than one percent.
ESG issues can have either acute or progressive impacts. They can occur over different time frames and at different levels of likelihood. The definition of materiality needs to be understood by the investment staff, investment managers, and our stakeholders.

CONCLUSION

The attached working draft is a fully revised initial draft of a new ESG Policy. It insures ESG integration into the investment decision and review process across all asset classes, engagement rather than divestment as our preferred approach, and a focus on material impact to the investment portfolio.

CalSTRS Office of the General Counsel has reviewed this working draft and has raised some issues of language revolving around materiality, liability and the end-user of the draft policy. Staff appreciates their input and will continue to work with them to ensure appropriate language is captured.

Staff and the investment consultant’s would also appreciate hearing the Investment Committee and the stakeholder’s comments and ideas about this initial draft, as well as the overall concept of a principles rather than rules-based approach.

NEXT STEPS

After the April meeting, the draft will go back to the Subcommittee at their May meeting for further revision and refinement. The Subcommittee can work out the exact wording and structure that achieves the proper balance. The Subcommittee will then recommend a final Policy to the Investment Committee for final adoption at the June meeting. Therefore, in addition to this meeting, we will have two more opportunities for the Board members, consultants, and stakeholders to perfect this Policy document.

Prepared and recommended by:

Brian Rice,
Portfolio Manager

Anne Sheehan,
Director of Corporate Governance

Reviewed by:

Michelle Cunningham,
Deputy Chief Investment Officer

Approved by:

Christopher J. Ailman, Chief Investment Officer
INTRODUCTION

CalSTRS ESG Policy is one of the CalSTRS’ oldest Investment policies dating back to 1978 when the TRB adopted/approved the Statement of Investment Responsibility (SIR). The SIR was the first policy recognizing that CalSTRS operates in a complex social-economic environment and has an obligation to hold its portfolio companies responsible for their conduct and operations. The SIR was the guiding ESG Policy for CalSTRS until 2006 when it was replaced by the Statement of Shareowner ESG Responsibility which incorporated the 21 Risk Factors into the Investment Policy and Management Plan (IPMP). This Policy will replace all previous ESG policies.

CalSTRS embraces its mission of securing the financial future and sustaining the trust of California’s educators. Since CalSTRS must invest for long periods of time to pay for future benefits promised to California teachers, our actions to invest predominately reflects a judgment that the ownership will produce a sustainable rate of return which will make it an profitable investment and help CalSTRS meet its long-term obligations.

As a significant investor in the capital markets with a very long-term investment horizon, the success of CalSTRS is linked to global economic growth and prosperity. CalSTRS invests a multi-billion dollar fund in a unique and complex social-economic milieu and recognizes investment activities impact other facets of the economy and the globe. Actions and activities that detract from the likelihood and potential of global growth are not in the long-term interests of the Fund. Acknowledging and assessing risks in the present help mitigate the impact that they may have to the Fund and California teachers in the future. Therefore, consideration and integration of environmental, social, and governance (ESG) issues is consistent with the Board fiduciary duties and is fundamental to the vitality of the Fund.

As an active owner, CalSTRS incorporates ESG across all asset classes and into its ownership policies and practices. Since CalSTRS is a long-term investor and may hold its investment for decades, short-term gains at the expense of long-term gains are not in the best interest of the Fund. Sustainable returns over long periods are in the economic interest of the Fund. Conversely, unsustainable practices that hurt long-term profits are risks to the Fund. Understanding and assessing material risks, including financial risks, and returns of an investment is an inherent requirement of fulfilling CalSTRS responsibility to its beneficiaries. CalSTRS recognizes that the time horizons, sometimes a decade or longer, associated with ESG issues makes defining sustainability difficult and that predicting the future ramifications of ESG issues across these long-term horizons is an inexact science. Accordingly, the following Principles are established to guide and manage the consideration of ESG risks and opportunities within our portfolio.

PRINCIPLES

- Our goal is to provide long-term, secure pensions for our beneficiaries and we believe that sustainable returns come from well governed investments that consider environmental, social and governance risks and opportunities over the near-term and long-term as foreseeable.

- We will integrate ESG considerations throughout our investment process and across our asset classes and will be transparent and accountable with regard to these investment activities.
We will engage on **material** ESG issues with the entities in which we invest and we will actively participate in a dialogue with our portfolio companies and fund managers around sustainability initiatives and efforts. We do not believe that divestment is an effective strategy for addressing long-term and persistent ESG risks. Divestment eliminates our rights as a shareholder to engage with management and raise awareness of long-term risks and encourage change of practices. Moreover, divestment has been ineffective in bringing about social change.

We believe that engagement is the most effective means to initiate change and we will align with like-minded investors and organizations in order to be more effective in our engagement efforts.

We will actively exercise our rights as investors in a sustainable manner and will support financial market activities that align with our sustainability beliefs.

To help manage and guide the risks and opportunities of investing a global portfolio in a complex environment, CalSTRS has developed a series of procedures and guidelines to follow when faced with **material** environmental, social, or governance risks. It is important to note that fiduciary standards do not allow CalSTRS to select or reject investments based solely on social criteria. When faced with a corporate decision that potentially violates CalSTRS Policies, the Investment Staff, CIO and Investment Committee will undertake the following actions:

**A.** Staff’s approach to determining an initial ESG materiality threshold involves consideration of both quantitative and qualitative components. Using this methodology, an initial materiality threshold could be deemed to have a material impact if 1) it potentially affects an asset class by more than one percent, and 2) where one or more of the ESG risks are violated over a sustained time frame to the extent that it becomes an economic risk to the Fund, a potential for material loss of revenue exists, and where it weakens the trust of a significant portion of members of the System.

**B.** The CIO will assess the gravity of the situation both as an ESG risk and as to the Fund. The extent of the responsibility of CalSTRS to devote resources to address these issues will be determined by: 1) the materiality of the investment in the corporation, and 2) the gravity of the violation of CalSTRS Policies.

**C.** At the CIO’s direction, the Investment Staff will directly engage corporate management to seek information and understanding of the corporate decision and its ramifications on ESG issues.

Following the initial engagement, the CIO and investment staff may brief the Investment Committee of the findings and recommend any further action of engagement or need to commit further resources.

In addition, to further assist CalSTRS Staff and external investment managers in their investment analysis and decision-making, CalSTRS has developed a sample list of ESG risks. This list is not exhaustive and does not attempt to identify all forms of risk that may be appropriate to consider in a given investment transaction. Risk factors should be reviewed for materiality, which can vary by company, industry and geography.
Since no simple assessment provides an answer to a complex situation, CalSTRS expects all investment managers, both internal and external, to assess the materiality of risks when making an investment and to balance risk and the expected rate of return.

* Through our longstanding consideration of ESG issues at CalSTRS we have developed guidelines and processes for identifying and engaging on ESG topics and we will continue to refine ESG issues as material risks emerge.

### Examples of ESG Risk Factors*

<table>
<thead>
<tr>
<th>Environmental</th>
<th>Social</th>
<th>Governance</th>
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</thead>
<tbody>
<tr>
<td>Biodiversity Impacts</td>
<td>Discrimination Based on Race, Gender, Sexual Orientation, Disability, Language, or Social Status</td>
<td>Accounting</td>
</tr>
<tr>
<td>Climate Change</td>
<td>Human Health</td>
<td>Auditing</td>
</tr>
<tr>
<td>Energy Management</td>
<td>Respect for Civil Liberties</td>
<td>Banking Supervision</td>
</tr>
<tr>
<td>Environmental Accidents and Remediation</td>
<td>Respect for Human Rights</td>
<td>Data Dissemination</td>
</tr>
<tr>
<td>Fuel Management and Transportation</td>
<td>Respect for Political Rights</td>
<td>Compensation</td>
</tr>
<tr>
<td>GHG Emissions and Air Pollution</td>
<td>Worker Health and Safety</td>
<td>Fiscal Transparency</td>
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<tr>
<td>Waste Management and Effluents</td>
<td>War/Conflicts/Acts of Terrorism</td>
<td>Insolvency Framework</td>
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<tr>
<td>Water Use and Management</td>
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<td>Monetary Transparency</td>
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<td></td>
<td></td>
<td>Money Laundering</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Payment System: Central Bank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Securities Regulation</td>
</tr>
</tbody>
</table>
SUBJECT: Asset Class Policy Revisions to Include New Associate Portfolio Manager, APM, Delegation Limits and New Investment Reporting Cycle – First Reading

CONSENT: _____ ATTACHMENT(S): 13

ACTION: _____ DATE OF MEETING: April 5, 2017 / 10 mins.

INFORMATION: X PRESENTER(S): Michelle Cunningham

POLICY

The strategic asset allocation and investment structure for the CalSTRS Defined Benefit, Defined Benefit Supplement, and Cash Balance investment portfolios are controlled by the CalSTRS Investment Policy and Management Plan, IPMP. Additionally, the role, objective(s), and risk constraints for each asset class/strategy are reflected within their individual governing policy.

HISTORY OF THE ITEM

CalSTRS reviews its policies periodically and updates them as appropriate given evolving market practices and the investment standard. A complete summary of the policy revisions and effective dates can be found at the end of each asset class/strategy policy.

PURPOSE

The purpose of this item is primarily to; 1) recommend a revision to policy to update investment delegation limits for the new Associate Portfolio Manager, APM, classification across the asset classes/strategies that were not updated last fiscal year, and 2) to reflect the new investment reporting structure approved by the Investment Committee at the June 2016 meeting. This is also an opportunity to recommend other revisions to asset class/strategy policy that are more “housekeeping” or clarifying in nature.

DISCUSSION

The APM classification was implemented across the Investment Branch in March 2016. Corporate Governance, Global Equity, and Infrastructure each had policy updates subsequent to the APM recruitment and already reflect the new delegation within their current policy. For those asset classes/strategies that were not updated last fiscal year, the APM delegation was defaulted to the Investment Officer III level, until this revision.

In addition, based upon a request by the Investment Committee leadership in November 2015, staff, consultants and fiduciary counsel conducted a comprehensive review over the following six months of all investment reports which had been designed over the years for the Committee to monitor investment staff decisions, activity and the status of various investment data versus stated investment objectives. In June 2016, the Investment Committee
adopted the new investment reporting structure, effective fiscal year 2016/17. This recommendation reflects the new investment reporting cycle for reports referenced within each asset class/strategy policy.

The proposed revisions also include “housekeeping” or clarifying language, none of which will result in a substantive change to the oversight or management of the assets classes/strategies. To facilitate the Committee’s review of this item, the recommended changes for each asset class/strategy policy are summarized as follows, with the recommended policy language for each asset class/strategy as separate attachments.

1) Add the APM delegation limits:
   - Fixed Income, Attachment 2
   - Currency Management, Attachment 3
   - Private Equity, Attachment 5
   - Real Estate, Attachment 6
   - Innovation Portfolio, Attachment 9
   - Inflation Sensitive, Attachment 10
   - Risk Mitigating Strategies, Attachment 11

2) Update the reporting section to reflect the new investment reporting cycle:
   - Global Equity, Attachment 1
   - Fixed Income, Attachment 2
   - Infrastructure, Attachment 7
   - Divestment Policy, Attachment 8
   - Inflation Sensitive, Attachment 10

3) “Housekeeping” or clarifying language
   - Edit the soft dollar language within the Global Equity Policy to include flexibility in implementing the phase out of soft dollars with our asset managers approved by the Investment Committee in June 2016, Attachment 1
   - Update Securities Lending Exhibit to add in APM, Attachment 4

RECOMMENDATION

Staff recommends and the two board consultants, Pension Consulting Alliance and Meketa Investment Group, concur, the Investment Committee consider the proposed revisions to the asset class/strategy policy. Staff will incorporate feedback from the Committee into the policy and bring it back for a second reading at the June 2017 meeting unless the Board decides to approve the recommended changes at this meeting, which would then be considered an action item.
Prepared and recommended by:

June Kim,  
Director of Global Equities

Glenn Hosokawa,  
Director of Fixed Income

Mike DiRé,  
Director of Real Estate

Margot Wirth,  
Director of Private Equity

Anne Sheehan,  
Director of Corporate Governance

Reviewed by:

Michelle Cunningham,  
Deputy Chief Investment Officer

Approved by:

Christopher J. Ailman,  
Chief Investment Officer
Updates to **Global Equity Investment Policy**

6. **Global Equity Internal/External Management (page B-4)**

   v. The use of soft dollars by investment managers shall not be allowed. Global Equity staff will assess the need for each Global Equity manager to utilize soft dollars for research and then amend each manager’s Investment Guidelines as necessary.

8. **Monitoring and Reporting (page B-5)**

   i. Global Equity Quarterly Status Semi-Annual Report – prepared by staff (quarterly)

   iii. **Trading Parameters:** The following parameters apply with respect to non-cumulative daily trade limits within the internally-managed Global Equity portfolios.

<table>
<thead>
<tr>
<th>Role</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment Officer I</td>
<td>Up to 1% per internally managed portfolio</td>
</tr>
<tr>
<td>Investment Officer II</td>
<td>Up to 2% per internally managed portfolio</td>
</tr>
<tr>
<td>Investment Officer III</td>
<td>Up to 2.5% per internally managed portfolio</td>
</tr>
<tr>
<td>Associate Portfolio Manager</td>
<td>Up to 3% per internally managed portfolio</td>
</tr>
<tr>
<td>Portfolio Manager</td>
<td>Up to 4% per internally managed portfolio</td>
</tr>
<tr>
<td>Director of Global Equity</td>
<td>Up to 5% of Total Internal Management</td>
</tr>
</tbody>
</table>

   **Global Equity Portfolio**
   - Chief Investment Officer
   - Deputy Chief Investment Officer
   - Up to 10% of Total Internal Management
   - Global Equity Portfolio
   - Chief Investment Officer
   - Up to 10% of Total Global Equity Portfolio
Attachment 1
Investment Committee – Item 13
April 5, 2017

Exhibit 1 (page B-9)

PORTFOLIO MANAGER /
ASSOCIATE PORTFOLIO MANAGER

Develops and Implements
Policy Strategy

Revision Date

Revised to support additional internal asset management on April 4, 2014
Revised to support the transition to global index weights and to define APM trading limits
June 8, 2016
Revised language on soft dollars, updated flowchart (Exhibit 1) to reflect APM in the hierarchy
and reflect new reporting frequency on April 5, 2017

Comment [ST5]: Updated exhibit to reflect APM in the hierarchy.

Comment [ST6]: Updated to incorporate all the revisions
Updates to **Fixed Income Investment Policy**

6. **Risk Management: (page D-4)**
   
   d. **Trading Parameters** – The following parameters apply with respect to the **bond cumulative** daily trade activity within the internally managed portfolios, which include core and opportunistic fixed income assets. For overlay and transition management portfolios, tighter trading parameters may be applied.

   - Investment Officer I: up to 2% of related internally managed portfolio
   - Investment Officer II: up to 4% of related internally managed portfolio
   - Investment Officer III: up to 6% of related internally managed portfolio
   - Associate Portfolio Manager: up to 8% of related internally managed portfolio
   - Portfolio Manager: up to 10% of related internally managed portfolio
   - Director of Fixed Income: up to 5% of total Fixed Income portfolio
   - Deputy Chief
   - Investment Officer and Deputy: up to 10% of total Fixed Income portfolio
   - Chief Investment Officer: up to 10% of total Fixed Income portfolio

9. **Monitoring and Reporting: (page D-5)**
   
   b. **Fixed Income Quarterly Status** **Semi-Annual Report** – prepared by staff
   
   d. **Semi-Annual Report on Investment Manager Ratings Report** – prepared by staff (semi-annually)

**Exhibit 1 (page D-7)**

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**PORTFOLIO MANAGER**

**ASSOCIATE PORTFOLIO MANAGER**

*Develops and Implements Portfolio Strategy*
Revision Date

Revised to remove reference to presentation of annual report on April 4, 2014
Revised to update benchmark on November 16, 2016
Revised to define APM trading limits, updated flowchart (Exhibit 1) to reflect APM in the hierarchy and reflect new reporting frequency on April 5, 2017

Comment [st7]: Noted new revision date
Updates to Currency Management Program Policy

6. Risk Management: (page F-4)

   e. Trading Parameters - The following parameters apply with respect to the non-cumulative daily currency trade activity within the core CMP:

      | Role                     | Limit                        |
      |--------------------------|------------------------------|
      | Investment Officer I     | up to 1% of the core (notional) program |
      | Investment Officer II    | up to 2% of the core (notional) program |
      | Investment Officer III   | up to 3% of the core (notional) program |
      | Associate Portfolio Manager | up to 4% of the core (notional) program |
      | Portfolio Manager        | up to 5% of the core (notional) program |
      | Director of Fixed Income | up to 5% of the total non-USD holdings |
      | Deputy Chief Investment Officer | and up to 10% of the total non-USD holdings |
      | Deputy Chief Investment Officer | up to 10% of the total non-USD holdings |

9. Monitoring and Reporting: (page F-5)


Exhibit 1 (page F-6)

Revision Date

Revised to remove reference to presentation of annual report on April 4, 2014
Revised to define APM trading limits and updated flowchart (Exhibit 1) to reflect APM in the hierarchy on April 5, 2017
 Updates to **Securities Lending Program Policy**

**Exhibit 1 (page G-5)**

PORTFOLIO MANAGER/
ASSOCIATE PORTFOLIO MANAGER
Develops and Implements Portfolio Strategy

**Revision Date**

Revised to add ESG language on April 4, 2014
Revised flowchart (Exhibit 1) to reflect APM in the hierarchy on April 5, 2017
8. Graduated limitations of non-cumulative daily trading authority for aggregate alternative investment portfolio transactions are as follows:

<table>
<thead>
<tr>
<th>Role</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment Officer I</td>
<td>$15 million</td>
</tr>
<tr>
<td>Investment Officer II</td>
<td>$50 million</td>
</tr>
<tr>
<td>Investment Officer III</td>
<td>$70 million</td>
</tr>
<tr>
<td>Associate Portfolio Manager</td>
<td>$85 million</td>
</tr>
<tr>
<td>Portfolio Manager</td>
<td>$100 million</td>
</tr>
<tr>
<td>Director of Private Equity</td>
<td>$400 million</td>
</tr>
<tr>
<td>Deputy Chief Investment Officer</td>
<td>$1.5 billion</td>
</tr>
<tr>
<td>Chief Investment Officer</td>
<td>$1.5 billion</td>
</tr>
</tbody>
</table>

**Revision Date**

Revised to remove reference to presentation of annual report on April 4, 2014

Revised to define APM and DCIO trading limits on April 5, 2017
Updates to **Real Estate Investment Policy**

**CASH TRANSFER LIMITATIONS (page J-13)**

The following non-cumulative limits apply with respect to Real Estate Investment staff or executive officers signing for cash disbursements for Real Estate investment portfolio transactions:

- Investment Officer I $15 million
- Investment Officer II $50 million
- Investment Officer III $70 million
- Associate Portfolio Manager $100 million
- Portfolio Manager $1200 million
- Director of Real Estate $400 million
- Deputy Chief Investment Officer $1.5 billion
- Chief Investment Officer $1.5 billion
- Chief Executive Officer $1.5 billion

**Revision Date**

Revised to change benchmark to ODCE on April 4, 2014
Revised to update two sections of the policy document to align the portfolio to current market conditions and the conclusions contained in the 2015 Asset Allocation Study on November 4, 2015
Revised to define APM trading limits and modify PM trading limits on April 5, 2017
Revised to incorporate all the revisions
Investment Committee – Item 13
April 5, 2017

Updates to Infrastructure Investment Policy

I. Discretionary Authority (page L-11)

1. Staff has discretion to approve an initial commitment of CalSTRS equity to a new general partner up to $300 million, for Eligible Ownership Vehicles identified in section F above. Staff then has discretion to approve follow-on commitments to the same general partner for up to another $300 million.

   Thereafter, if a single general partner manages a total portfolio in excess of $750 million, additional allocations or commitments may still be approved by staff, but are subject to review by the Investment Committee if the Committee so requests. Staff will inform the Committee of firms under consideration via the transactions pipeline semi-annual quarterly report.

2. For Eligible Ownership Vehicles such as separate accounts/co-investments and/or direct investments/joint ventures/consortiums, where CalSTRS has more governance rights (as defined in section F above) and where the general partners are approved within the above referenced general partner discretionary limits, or firms that have been selected through a request for proposal process, staff has discretion to approve individual assets. However, no single asset above $250 million will be approved by staff. Staff will inform the Investment Committee when such decisions are made through the semi-annual quarterly investment reports.

Revision Date

Revised to provide staff discretion and remove obsolete glossary terms, February 7, 2014

To revise the program benchmark and to provide more clarity to program guidelines, February 6, 2015

To primarily revise the benchmark objective and individual asset discretionary limit, April 8, 2016

Revised to reflect new reporting frequency on April 5, 2017
Updates to Divestment Policy

REPORTING (page M-2)

On at least a semi-annual quarterly basis, the Chief Investment Officer will prepare a comprehensive report that shows the performance difference between any divestment taken under this Policy and the unmodified CalSTRS benchmark of the respective asset class.

Revision Date

Approved: March 5, 2009
Revised to reflect new reporting frequency on April 5, 2017
Updates to Innovation Portfolio Investment Policy

POLICY (page N-3)

1. CalSTRS’ investment personnel have authority to manage the Portfolio. If prudent, CalSTRS may elect to manage a strategy internally. Any internally managed strategy will be approved by the Chief Investment Officer and General Consultant. The delegated non-cumulative daily limits for approval of a commitment, internal management trading and/or cash transfers to a strategy are designated below. Directors of other asset classes may approve transactions with the consent of the CIO or Director of Innovation and Risk.

<table>
<thead>
<tr>
<th>Position</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief Investment Officer</td>
<td>$500 million</td>
</tr>
<tr>
<td>Director of Innovation &amp; Risk</td>
<td>$300 million</td>
</tr>
<tr>
<td>Director</td>
<td>$300 million</td>
</tr>
<tr>
<td>Portfolio Manager</td>
<td>$200 million</td>
</tr>
<tr>
<td>Investment Officer III</td>
<td>$50 million</td>
</tr>
<tr>
<td>Investment Officer I and II</td>
<td>$15 million</td>
</tr>
<tr>
<td>Investment Officer I and II</td>
<td>$15 million</td>
</tr>
<tr>
<td>Investment Officer III</td>
<td>$15 million</td>
</tr>
<tr>
<td>Associate Portfolio Manager</td>
<td>$100 million</td>
</tr>
<tr>
<td>Portfolio Manager</td>
<td>$200 million</td>
</tr>
<tr>
<td>Director</td>
<td>$200 million</td>
</tr>
<tr>
<td>Director of Innovation &amp; Risk</td>
<td>$300 million</td>
</tr>
<tr>
<td>Deputy Chief Investment Officer</td>
<td>$500 million</td>
</tr>
<tr>
<td>Chief Investment Officer</td>
<td>$500 million</td>
</tr>
</tbody>
</table>

Revision Date

Revised to update portfolio AUM and delegated limits December 2, 2013
Revised to clarify trading limit language April 8, 2016
Revised to define APM and DCIO trading limits on April 5, 2017

Comment [st1]: Housekeeping item: keep language consistent throughout all policies.
Comment [st2]: Housekeeping: Updated for consistency (ordering from low to high).
Comment [st3]: Updated to define APM trading limits
Comment [st4]: Housekeeping item: removed duplicate Director authority
Comment [st5]: Updated to define DCIO trading limits
Comment [st6]: Updated to incorporate all the revisions
Updates to **Inflation Sensitive Portfolio Investment Policy**

**Risk Management: (page Q-5 & Q-6)**

D. Trading parameters – the following trading parameters are non-cumulative and apply with respect to daily trading activity within any internally managed portion of the Portfolio. For transition management portfolios, tighter trading parameters may be applied:

- **Investment Officer I** up to 2% of related internally managed portfolio
- **Investment Officer II** up to 4% of related internally managed portfolio
- **Investment Officer III** up to 6% of related internally managed portfolio
- **Associate Portfolio Manager** up to 8% of related internally managed portfolio
- **Portfolio Manager** up to 10% of related internally managed portfolio
- **Director of Inflation Sensitive** up to 5% of total Inflation Sensitive Portfolio
- **Deputy Chief Investment Officer** up to 10% of total internal Inflation Sensitive management Portfolio
- **Chief Investment Officer** up to 10% of total internal Inflation Sensitive management Portfolio

F. Cash Transfer Limitations – the following limits are non-cumulative and apply with respect to Inflation Sensitive investment officers signing for daily cash disbursements for investment portfolio transactions:

- **Investment Officer I** $20 million
- **Investment Officer II** $30 million
- **Investment Officer III** $50 million
- **Associate Portfolio Manager** $65 million
- **Portfolio Manager** $75 million
- **Director of Inflation Sensitive** $200 million
Attachment 10
Investment Committee – Item 13
April 5, 2017

Deputy Chief Investment Officer $500 million
Chief Investment Officer $500 million

**Monitoring and Reporting: (page Q-7)**

a. **Inflation Sensitive** Semi-Annual Quarterly Status Report – prepared by staff.

c. **Semi-Annual Report on Investment Manager Ratings** Semi-Annual Report – prepared by staff, (semi-annually)

**Revision Date**

*Adopted by the Teachers’ Retirement Board on September 2, 2015*
*Revised to define APM trading and cash transfer limits and reflect new reporting frequency on April 5, 2017*

*Comment [ST5]:* Updated language to reflect new reporting frequency
*Comment [ST6]:* Housekeeping: Updated for consistency with GE policy
*Comment [ST7]:* Updated to incorporate all the revisions
 Updates to Risk Mitigating Strategies Class Policy

POLICY (page R-3)

9. CalSTRS’ investment personnel have authority to manage the RMS class. If prudent, CalSTRS may elect to manage a strategy internally. Any internally managed strategy will be approved by the Chief Investment Office and General Consultant. The delegated bond cumulative daily limits (non-cumulative) for approval of commitment, internal management trading and/or cash transfers to a strategy are designated below:

<table>
<thead>
<tr>
<th>Role</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief Investment Officer</td>
<td>0.50% of Total Fund</td>
</tr>
<tr>
<td>Deputy Chief Investment Officer</td>
<td>0.50% of Total Fund</td>
</tr>
<tr>
<td>Director</td>
<td>0.25% of Total Fund</td>
</tr>
<tr>
<td>Portfolio Manager</td>
<td>0.15% of Total Fund</td>
</tr>
<tr>
<td>Investment Officer III</td>
<td>0.05% of Total Fund</td>
</tr>
<tr>
<td>Investment Officer II</td>
<td>0.01% of Total Fund</td>
</tr>
<tr>
<td>Investment Officer I</td>
<td>0.0025% of Total Fund</td>
</tr>
<tr>
<td>Investment Officer II</td>
<td>0.01% of Total Fund</td>
</tr>
<tr>
<td>Investment Officer III</td>
<td>0.05% of Total Fund</td>
</tr>
<tr>
<td>Associate Portfolio Manager</td>
<td>0.10% of Total Fund</td>
</tr>
<tr>
<td>Portfolio Manager</td>
<td>0.15% of Total Fund</td>
</tr>
<tr>
<td>Director of Innovation &amp; Risk</td>
<td>0.25% of Total Fund</td>
</tr>
<tr>
<td>Deputy Chief Investment Officer</td>
<td>0.50% of Total Fund</td>
</tr>
<tr>
<td>Chief Investment Officer</td>
<td>0.50% of Total Fund</td>
</tr>
</tbody>
</table>

Revision Date

Policy for Risk Mitigating Strategies Class First Reading and Adoption February 3, 2016

Revised to define APM trading limits on April 5, 2017

Comment [st1]: Housekeeping: keeping language consistent throughout all policies.

Comment [st2]: Housekeeping: Updated for consistency (ordering from low to high).

Comment [st3]: Updated to define APM trading limits

Comment [st4]: Housekeeping: Updated to reflect Director title

Comment [st5]: Updated to incorporate all the revisions
Date:  March 9, 2017

To: CalSTRS Investment Committee (IC)

From: Pension Consulting Alliance, Inc. (PCA)

CC: CalSTRS CIO

RE: Investment Policy Revisions Concurrence Memo

On February 24, 2017, Staff provided PCA with updated draft revision language for various Asset Class Policies (ACPs) as part of the policy revision process. These updates are “housecleaning” in nature and solidify decisions that the IC has made earlier. The changes relate to two specific topics: (i) trading/portfolio management authority levels for the recently-established Associate Portfolio Manager (APM) position and (ii) codifying the semi-annual reporting frequency across additional functional areas within the Investment Division. Staff is seeking PCA’s concurrence with these proposed updates. In summary, PCA concurs with Staff’s proposed revisions.

Discussion

Staff’s executive summary memo adequately outlines the requested ACPs changes. PCA reviewed the proposed APM trading/portfolio management authority levels and found them appropriate and reasonable. PCA also concurs with the suggested changes to moving to semi-annual reporting frequencies. Such streamlining to the reporting process should better serve the IC in their decision-making processes.

Given the “housekeeping” nature of these changes and their relatively modest impact, PCA believes it would be appropriate to adopt the proposals at this time, assuming no major material changes surface during the IC’s deliberations on this agenda item.
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To: Investment Committee, CalSTRS  
From: Stephen McCourt, Mika Malone, Meketa Investment Group  
Date: April 5, 2017  
Re: Revisions to Asset Class Policies

In February, the CalSTRS Investment Staff ("Staff") provided Meketa Investment Group with a revised set of Asset Class Policies ("Policies") for review. *Meketa Investment Group concurs with each of the changes recommended in the revised Policies presented to the Investment Committee.*

The changes reflect the new Associate Portfolio Manager ("APM") position at CalSTRS and appropriate trading/delegation limits for that position. The Policies were also updated to reflect the new investment reporting cycle to the Investment Committee, and to allow Staff to phase out soft dollar payments with asset managers (previously approved by the Investment Committee).

Meketa Investment Group does not have any concerns with the changes proposed by Staff.

If you have any questions, please feel free to contact us at (760) 795-3450.

SPM/MLM/nca
POLICY
The development of the Investment Committee work plan and setting annual objectives/projects is covered by the Board Governance Policy, Section 500, within the Teachers’ Retirement Board Policy Manual.

PURPOSE
This is a two-step process for the Investment Committee to first identify, and second, select one or two key projects for the Investment Committee’s upcoming fiscal year agenda.

HISTORY OF THE ITEM
The Investment Committee first developed a formal work plan over a decade ago as a vital time and resource management tool. The Committee work plan becomes a road map to help investment staff, the four independent investment consultants, external stakeholder groups, and most importantly, the Committee, manage the most precious resource of all, time.

Historically, the Investment Committee manages the first two steps in the process. Step one, in April, the Committee identifies a list of potential topics. Step 2, in June, the Committee votes to select the top one or two topics. The final step is the Retirement Board approves the Investment Committee FY work plan and objectives.

DISCUSSION
This year both of the investment consultants and the Chair of the Investment Committee recommend the key objective be:

- Study alternative business models for the direct and co-investment investment activity

This topic has arisen numerous times over the course of the past two years. Sequentially it was the third step in the internal investment management plan approved by the Investment Committee back in June 2011. At that time, it was not called an alternative business model, but even back six years ago, the Investment Committee, staff, and the consultants understood that to expanding internal management would require additional recourses and new operating model. This topic also dovetails into the overall Committee objective to lower costs.
The discussion and consideration of alternative business models may well traverse beyond just FY 17-18 and carry into the following fiscal year. While few U.S. plan sponsor have considered alternative models, many Non-U.S. funds, such as the Dutch funds, Canadian funds and even the Australian fund have implemented various new investment management platforms. Some have existed over ten years and run full cycle with their parent organizations. The most recent to implement a new business model for a portion of their investments is Gordon Fyfe, CEO and CIO of the British Columbia Investment Management Corporation, bcIMC, which is the firm that manages the Province of British Columbia pensions and investment assets.

If approved, this topic would be recommended to the Retirement Board at the June Board meeting as the FY 17-18 core Investment Committee work plan objective.

CURRENT INVESTMENT COMMITTEE OBJECTIVES

The primary objective for the Investment Committee and the Investment Branch is achieving the Actuary’s assumed rate of return at a minimum level of risk. In addition to this effort, the Investment Committee has also supported three multi-year projects: integrating ESG / sustainability into the investment process; expanding the diversity of the management of investments; and the effort to increase internal management. The Committee may want to re-evaluate and re-prioritized those efforts into the overall project planning process to help provide guidance for the staff and consultants on the allocation of time and resources. The chart below is meant to illustrate the rank and importance of the program objectives and workload for the Investment Branch.

As a short re-cap, in the past two years, the Investment Committee, staff, and the consultants have completed the quadrennial Asset Allocation Study, begun the implementation of the new RMS Asset Class, completed a revision of the ESG / 21 Risk Factor Policy, reviewed the special mandates, and engaged in a comprehensive cost assessment report. That is quite a list of accomplishments.
Looking forward into the next fiscal year, staff will continue to implement the RMS Asset Class; shift to a pure global equity portfolio; move the portfolio toward the long-term asset allocation targets; and continue to enhance the cost reporting across the portfolio, all of which are included in the Investment Committee FY 17-18 work plan.

CONCLUSION

PCA, Meketa, and staff recommend the Investment Committee adopt the project to study alternative business models for the direct and co-investment investment activity for the fiscal year 17-18 work plan. At the June Board meeting, the Retirement Board will receive the recommendation of the Investment Committee Chair and approve the new fiscal year Committee work plan.