Stanislaus County Employees' Retirement Association
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AGENDA

BOARD OF RETIREMENT
832 12th Street Ste. 600, **Wesley W. Hall Board Room**
Modesto, CA 95354

December 19, 2017
1:30 p.m.

The Board of Retirement welcomes you to its meetings, which are regularly held on the fourth Tuesday of each month. Your interest is encouraged and appreciated.

CONSENT/ACTION ITEMS: Consent matters include routine administrative actions and are identified under the Consent Items heading. All other items are considered to be action items. "Action" means that the Board may dispose of any item by any action, including but not limited to the following acts: approve, disapprove, authorize, modify, defer, table, take no action, or receive and file.

PUBLIC COMMENT: Matters under jurisdiction of the Board, may be addressed by the general public before or during the regular agenda. However, California law prohibits the Board from taking action on any matter which is not on the posted agenda unless it is determined an emergency by the Board of Retirement. Any member of the public wishing to address the Board during the "Public Comment," period shall be permitted to be heard once up to three minutes. Please complete a Public Comment Form and give it to the Chair of the Board. Any person wishing to make a presentation to the Board must submit the presentation in written form, with copies furnished to all Board members. Presentations are limited to three minutes.

BOARD AGENDAS & MINUTES: Board agendas, minutes and copies of items to be considered by the Board of Retirement are customarily posted on the Internet by Friday afternoon preceding a meeting at the following website: www.stancera.org.

Materials related to an item on this Agenda submitted to the Board after distribution of the agenda packet are available for public inspection at StanCERA, 832 12th Street, Suite 600, Modesto, CA 95354, during normal business hours.

AUDIO: All Board of Retirement regular meetings are audio recorded. Audio recordings of the meetings are available after the meetings at http://www.stancera.org/agenda.

NOTICE REGARDING NON-ENGLISH SPEAKERS: Board of Retirement meetings are conducted in English and translation to other languages is not provided. Please make arrangements for an interpreter if necessary.

REASONABLE ACCOMMODATIONS: In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Board Secretary at (209) 525-6393. Notification 72 hours prior to the meeting will enable StanCERA to make reasonable arrangements to ensure accessibility to this meeting.

1. Call Meeting to Order
2. Roll Call
3. Announcements
4. Public Comment
5. Consent Items

   a. Approval of the November 28, 2017 Meeting Minutes View

   b. Monthly Staff Report
      Agenda Item View

   c. Legal/Legislation Update
      Agenda Item View

   d. Approval of Service Retirement(s) – **Government Code Sections 31499.14, 31670, 31662.2 & 31810**

      1. Corcel, Dollie – CSA – Effective – 12-23-17
      2. Crist, Ann – Sheriff – Effective 12-27-17
      3. Crook, Mark – CEO Fire Warden – Effective 12-28-17 *
      4. De Jesus, Arlene – CSA – Effective 12-23-17
      5. Kasbarian, Lisa – HSA – Effective 11-28-17
      6. Leichner, Kevin – Sheriff – Effecitve 12-30-17 *
      7. Mancini, Cherilyn – CSA – Effective 12-23-17
      8. McNett, Thomas – BHRS – Effective 12-01-17
      9. Merrell, Mary Jane – DCSS – Effective 12-05-17

5. Consent Items (Cont.)

10. Picone, Marie – AG Comm – Effective 10-31-17
11. Schneider, Susan – CSA – Effective 12-28-17
12. Siebrecht, Debra – SBT – Effective 12-09-17
13. Szczepaniak, Margaret – HSA – Effective 12-25-17
14. Whitmore, Debra – Planning – Effective 12-02-17

** Indicates Safety Personnel*

e. Approval of Deferred Retirement(s) **– Government Code Section 31700**

NONE

f. Approval of Disability Retirement - **Government Code Section 31724**

1. Herrera, Manuel - HSA, Service-Connected, Effective 07-05-16

6. Executive Director – Investment

a. 1937 Act survey Regarding Alternative Investment
Agenda Item View

b. Cliffwater - Education Regarding Private Equity
Agenda Item View
Attachment 1 View

c. Tax Reform Bill and UBIT (Unintended Business Income Tax)
Agenda Item View

d. Quarter 3 Auxiliary Investment Report
Agenda Item View
Attachment 1 View

7. Verus – Investment Consultant

a. Workplan View

b. November 30, 2017 Flash Report View

8. Executive Director – Administrative

a. Cheiron Actuaries - June 30, 2017 Actuarial Valuation -
Agenda Item View
Attachment 1 View

b. Information Technology Solutions (ITS) Project Update
Agenda Item View

9. Closed Session

a. Risk Parity Contract Negotiation –Government Code
Section 54956.81

b. 2017 Executive Director's Annual Review Public Employment
Government Code Section 54954.5

9. Closed Session(Cont.)

   c. Conference with Legal Counsel – Pending Litigation – One Case:
      O'Neal et al v. Stanislaus County Employees' Retirement Association
      Stanislaus County Superior Court Case No. 648469
      Government Code Section 54956.9(d)(1)

   d. Conference with Legal Counsel – Pending Litigation – One Case:
      Stanislaus County Employees' Retirement Association v. Buck Consultants, LLC, Mediation Pursuant to Evidence Code Sections 1115, 1119, 1152
      Government Code Section 54956.9d)(4)

10. Members' Forum (Information and Future Agenda Requests Only)

11. Adjournment

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BOARD OF RETIREMENT MINUTES
November 28, 2017

1. Call Meeting to Order

Meeting called to order 1:30 p.m. by Trustee Gharat, Chair

2. Roll Call

Trustees Present: Darin Gharat, Mike Lynch, Sam Sharpe, Jim DeMartini, Donna Riley, Jeff Grover, Michael O'Neal, Lauren Klein and Mandip Dhillon

Trustees Absent:

Alternate Trustee: Rhonda Biesemeier, Alternate Retiree Representative

Staff Present: Rick Santos, Executive Director
Natalie Elliott, Interim Fiscal Services Manager
Kellie Gomes, Executive Board Assistant

Others Present: Fred Silva, General Legal Counsel

1. Call Meeting to Order

2. Roll Call

3. Announcements

4. Public Comment

5. Consent Items
   a. Approval of the October 24, 2017 Meeting Minutes

   b. Monthly Staff Report

   c. Legal/Legislation Update

   d. Approval of the 2018 StanCERA Master Calendar

   e. Receipt of the 2018 Board of Retirement Standing Committee Assignments

   g. Approval of the Due Diligence Investment Manager Schedule

   h. Approval of Service Retirement(s) – **Government Code Sections 31499.14, 31670, 31662.2 & 31810**

      1. Gonzalez, Darlene – BHRS – Effective – 11-07-17
      2. Murray, Eugene – HSA – Effective 11-11-17
      3. Sanchez, Melissa – BHRS – Effective 10-20-17
      4. Simpson, Barbara – HSA – Effective 11-22-17

** Indicates Safety Personnel*

5. Consent Items (Cont.)

i. Approval of Deferred Retirement(s) **– Government Code Section 31700**

1. Manzo, Sonya – Probation – Effective 10-07-17*

** Indicates Safety Personnel*

Motion was made by Trustee Riley and seconded by Trustee O'Neal to accept the consent items as presented

Motion carried unanimously

6. Committee Reports and Recommendations for Action

STANDING COMMITTEES

a. Internal Governance Committee

i. Discussion and Action to accept the Internal Governance Committees' Recommendation Regarding:

- The June 30, 2017 and 2016 Comprehensive Annual Financial Report (CAFR) and Independent Auditor Report

Motion was made by Trustee Riley and seconded by Trustee Grover to accept the June 30, 2017 and 2016 Comprehensive Annual Financial Report (CAFR) and Independent Auditor Report items as presented

Motion carried unanimously

7. Executive Director – Administrative

a. Information Technology Solutions (ITS) Project Update

b. Deferred Member Applications

8. Verus – Investment Consultant

a. Workplan

b. October 31, 2017 Flash Report

c. Investment Performance Quarter 3 Review

All of the above items were presented by Verus Consultant, Ed Hoffman

9.. Executive Director – Investment

None

10. Closed Session

Motion was made by Trustee Dhillon and seconded by Trustee O'Neal to go into closed session at 2:06 p.m.

Motion carried unanimously

a. Discussion and Action: Discussion and Action : Real Estate Debt Search
Government Code Section 54956.81

   1. Prudential

   2. Brookfield

b. Discussion and Action: Risk Parity Contract Negotiation –
Government Code Section 54956.81

c. Discussion and Action: Approval of Disability Retirement –
Government Code Section 31532

d. Conference with Legal Counsel – Pending Litigation – One Case:
O'Neal et al v. Stanislaus County Employees' Retirement Association
Stanislaus County Superior Court Case No. 648469
Government Code Section 54956.9(d)(1)

e. Conference with Legal Counsel – Pending Litigation – One Case:
Stanislaus County Employees' Retirement Association v. Buck Consultants, LLC, Mediation Pursuant to Evidence Code Sections 1115, 1119, 1152
Government Code Section 54956.9d)(4)

Motion was made by Trustee O'Neal and seconded by Trustee Dhillon to go into Open session at 4:17p.m.

Motion carried unanimously

Read Out from closed session was read by Kellie Gomes as follows:

Item 10a. Motion was made by Trustee Grover and Seconded by Trustee O'Neal to instruct staff and Verus to conduct on site due diligence with Prudential and bring back a recommendation for the full real estate allocation including core, value added, and debt strategies.

Motion carried unanimously

Item 10c- Motion was made by Trustee Lynch and seconded by Trustee Grover to grant the applicant's request to delay the board's decision until June, 2018

Motion carried unanimously

10. Members' Forum (Information and Future Agenda Requests Only)

Chair Darin Gharat gave his condolences to StanCERA staff Dawn Lea and her family on the recent loss of her son.

11. Adjournment

Meeting adjourned at 4:22 p.m.

Respectfully submitted,

Rick Santos, Executive Director

APPROVED AS TO FORM:
Fred Silva, GENERAL LEGAL COUNSEL

By: ______________________
Fred Silva, General Legal Counsel

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December 19, 2017
Retirement Board Agenda Item

TO: Retirement Board

FROM: Rick Santos, Executive Director

I. SUBJECT: Monthly Staff Report

II. ITEM NUMBER: 5.b

III. ITEM TYPE: Information Only

IV. STAFF RECOMMENDATION: None

V. ANALYSIS:

a) *Member & Employer Services – Member & Employer Services* – During the month of November, Member and Employer Services Staff processed 66 new hires (12 Safety and 54 General), 14 terminations, 24 member requests resulting in 60 estimates and 22 member requests resulting in 44 buy back contracts. There were 37 individual counseling sessions.

Staff continues to devote many hours to meeting with the Tegrit Analysts to continue defining the business rules necessary to ensure that StanCERA's needs will be met with the Arrivos system. Staff is now using the Arrivos Imaging System.

Staff continues to audit member files in anticipation of the data conversion that will be required with the implementation of the Arrivos pension administration system.

Staff is also implementing a manual work flow process to bridge the gap between today and when our system goes live in 2019. This manual process is necessary since all incoming documents are now being scanned and indexed and control of these documents from start to finish is necessary to ensure the integrity of our system and work processes.

b) *Investment Governance and Compliance* – Staff has been finishing up the recruitment for the Retirement Investment Office Position. The new candidate is expected to begin at StanCERA on January 16th.

c) *Fiscal Services* – Employer and employee contributions totaling $7,953,179 were received through 13 different payroll batches in October. 13 contribution refunds and death benefit payouts totaling $133,472 were processed. The retiree payroll for November totaled $9,882,948 and was processed as scheduled.

Staff continues to partner with Member Services in defining the business rules for the new pension software. Staff continues to meet with Tegrit to define employer payroll upload business rules for the Arrivos system. Partnering with our employers, County payroll individuals are being invited to attend some of these meetings.

VI. RISK: None

VII. STRATEGIC PLAN: Strategic Objective IV: Refine StanCERA's business and policy practices in ways that enhance stakeholder awareness, the delivery of member services and the ability of the Organization to administer the System effectively and efficiently*

VIII. ADMINISTRATIVE BUDGET IMPACT: NONE

Rick Santos, Executive Director

Natalie Elliott

Natalie Elliott, Interim Fiscal Services Manager

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December 19, 2017
Retirement Board Agenda Item

TO: Retirement Board

FROM: Natalie Elliott, Interim Fiscal Services Manager

I. SUBJECT: Litigation Update

II. ITEM NUMBER:5.c

III. ITEM TYPE: Information Only

IV. STAFF RECOMMENDATION: None

V. ANALYSIS: Several litigations in various County Superior Courts and the California Supreme Court could have implications for StanCERA should the courts agree with the plaintiffs.

Challenges to Adoption of Enhanced Benefit Formulas
There are two court cases, Sonoma County Employees' Retirement Association and City of San Rafael, where the plaintiffs seek to recind retirement formula enhancements provided to pre-PEPRA active and retired members based on allegations for failure to comply with public notice provisions and conflict of interest rules applicable to the making of contracts. The City of San Rafael plaintiff is also asking for member contributions paid to support the enhanced benefits be returned.

Challenges to CERL System Management of Reserves
San Joaquin County Employees' Retirement Association where one allegation is disposal of fiduciary duty of loyalty with a possible violation of terms of the post-*Ventura* settlement agreement by maintaining a 3% contingency reserve rather than a 1% contingency reserve as well as other uses of funds in the undistributed earnings reserve.

Challenges to Constituionality of PEPRA Provisions
There are three court cases, CalPERS, Marin County Employees' Retirement Association, and the County of San Joaquin, where in one the plaintiff is challenging the Legislature's elimination of the right to purchase "air time" service after January 1, 2013. The other plaintiff is challenging Legislature's amendment of compensation earnable definition and the retirement systems' implementation of it to exclude from final compensation on-call/standby pay, in-kind conversions, and administrative response pay after January 1, 2013. The third plaintiff is challenging the right of the employer to eliminate contribution pick-ups prior to 2018.

To date, not a single court decision regarding any legal challenges against PEPRA has gone against the retirement systems and employers.

VI. RISK: None

VII. STRATEGIC PLAN: Strategic Objective IV: Refine StanCERA's business and policy practices in ways that enhance stakeholder awareness, the delivery of member services and the ability of the Organization to administer the System effectively and efficiently.

VIII. ADMINISTRATIVE BUDGET IMPACT: NONE

Natalie Elliott

Natalie Elliott, Interim Fiscal Services Manager

Rick Santos, Executive Director

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December 19, 2017
Retirement Board Agenda Item

TO: Retirement Board

FROM: Rick Santos, Executive Director

I. SUBJECT: 1937 Act Survey Regarding Alternative Investments

II. ITEM NUMBER: 6.a

III. ITEM TYPE: Information/Discussion

IV. STAFF RECOMMENDATION: None

V. ANALYSIS:

Several months ago the Board asked staff to reach out to other 1937 Act Systems to try to develop an understanding for how other Trustees feel about investing in and maintaining exposure in alternative type investments. Staff asked 5 questions related to issues similar to that which the Board is seeing or dealing with today. Staff also asked for return/cash flow information on alternative investments from some of these other Systems. We received information from 6 systems, most being similar in size to StanCERA. The following is a summary of actual answers to the following questions:

1. Prior to actually deploying capital to these types of investments, did/does your Board require significant amounts of education?

   a. *No, our Board hired an outside consultant specifically to deploy and manage the alternative process. However, they no longer invest in fund of funds due to high fees and lack of transparency*
   b. *Our Board decided not to invest in these assets because of the necessity to use funds of funds, uncertainty about compliance with AB2833 and headline risk*
   c. *Our Board requires significant amounts of education to see how it fits within our overall portfolio structure*
   d. *Yes; our investment policy requires us become educated on the investment, the firm, their management team, expected returns and risks and the valuation process*
   e. *Yes; they continue to want and need more education on all our alternatives. Even so, there remains a significant number of "doubters" on the Board*

2. Does your Board focus on the returns/performance of each individual investment/fund/manager or do they consider the asset class performance holistically?

   a. *The Board reviews the specialty consultant's report on a quarterly basis*
   b. *My Board focuses on the entire asset class' performance with only small forays into reviewing individual managers and only because of poor performance over a period of time*
   c. *Our Board typically looks at the asset class holistically and doesn't get bogged down with specific managers*
   d. *Staff only provides information on a quarterly basis at the asset class level. The consultant provides a report that includes returns at the individual manager level*

e. *Yes and no; They look at individual manager performance first, over the short and long term. Then they focus on performance of the asset class. The Board understands they should take a holistic view but short term performance is very distracting*
f. *Regarding our only private investment, credit, the Board takes a holistic view*

3. How much emphasis does your Board place on monitoring fees and their overall impact on performance?

    a. *The Board defers to the private consultant to monitor fees and report to the Board*
    b. *Our Board is extremely fee sensitive and one of the reasons we have not delved too deeply into the private markets is because of the fee structure*
    c. *Fees are very important to the Board. Investment staff has worked to align the fees paid to managers with Trust Fund objectives*
    d. *The Board conducts a substantial amount of discussion and diligence around fees. Fees are the biggest single drag on performance*
    e. *Very strong emphasis on fees*

4. In general, has your Board's view evolved over the short to intermediate term regarding the value of these investments' contribution to the overall portfolio? If so, in what way?

    a. *We have been considering private credit/equity for a couple of years, in part because we are not allocated to that segment of the market and during our asset/liability studies, the optimizer says we should be allocating to that sector. We now believe and have recently been more drawn to the private credit space because we see inefficiencies in the global credit markets and opportunities to capture mispricing*
    b. *Yes. And in fact, we have recently adopted an underwriting model in assessing and investing in new and private markets*
    c. *The Board's view of private equity was neutral to negative from 2008 to 2013 which was a very difficult period for funding private equity investments. Since 2013 the view has improved as capital has been put to work and distributions are coming back to the plan. Returns have been as expected and new commitments have been made.*
    d. *I think a significant number of Board members would prefer to not invest in alternatives at all. However, they've come to believe that doing so is the only way they can meet the return assumption (7.25%) so they've embraced private credit and other alternatives investments as a necessary evil.*

5. In general, does your Board feel return expectations from these investments has been realized?

    a. *My Board understands that these are long term investments and illiquid. Therefore the Board is not looking at ROI's until 5 to 7 years out*
    b. *We are early in our private credit investment period so we do not have sufficient performance data to respond*
    c. *Results from our legacy private market investments have been very mixed*
    d. *Yes; based on our current performance*
    e. *It's still too early to say. The investment in private credit is only about a year old, so we have a ways to go before the capital actually invested becomes meaningful*

Return Information

Requests for performance measures and cash flow produced sparse information. While some felt that their data was simply not mature enough, we did receive actual cash flow data from a couple Systems with fund vintage years dating back to 2011. The results were very mixed. The range in calculated IRR's were so broad, that the ability to detect any type of perisistence was simply not there.

VI. RISK: None

VII. STRATEGIC PLAN: Strategic Objective IV: Refine StanCERA's business and policy practices in ways that enhance stakeholder awareness, the delivery of member services and the ability of the Organization to administer the System effectively and efficiently.

VIII. ADMINISTRATIVE BUDGET IMPACT:

____
Rick Santos, Executive Director

Natalie Elliott
____
Natalie Elliott, Interim Fiscal Services Manager

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December 19, 2017
Retirement Board Agenda Item

TO: Retirement Board

FROM: Rick Santos, Executive Director

I. SUBJECT: Private Equity Education

II. ITEM NUMBER: 6.b

III. ITEM TYPE: Information/Discussion

IV. STAFF RECOMMENDATION: None

V. ANALYSIS:

Recently, the Board of Retirement asked staff to bring back additional education on the private equity asset class. As a result, staff reached out to Cliffwater (a private equity consultant) to present additional material (Attachment 1) on this asset class. Cliffwater's presentation will focus on the following aspects of private equity:

- Persistence in performance
- Implementation strategies
- Correlation with public equities
- How the Board should be evaluating these investments
- Why this space is attractive to public pension plans
- Why manager selection is important

This presentation is an information and discussion item only and staff will not be asking the Board for any other decision today. However, if the Board still has any questions or concerns regarding the asset class or its implementation, staff will address this more specifically at a future board meeting.

VI. RISK: None

VII. STRATEGIC PLAN: Strategic Objective IV: Refine StanCERA's business and policy practices in ways that enhance stakeholder awareness, the delivery of member services and the ability of the Organization to administer the System effectively and efficiently.

VIII. ADMINISTRATIVE BUDGET IMPACT:

Rick Santos, Executive Director

Natalie Elliott, Interim Fiscal Services Manager

12/19/17
ITEM NUMBER: 7.b
ATTACHEMENT I

CLIFFWATER LLC

Los Angeles • New York

Stanislaus County Employees' Retirement Association
An Examination of Private Equity Performance

December 19, 2017

Private Equity Overview

Private equity is the investment in non-publicly traded securities (equity and debt)

- Investment objective is typically to earn a 3% premium over publicly traded securities (Russell 3000 + 3%), but performance will vary quarter to quarter so a better measure of implementation effectiveness is typically used (e.g., Cambridge Associates LLC Global Private Equity & Venture Capital Index)
- Investments are illiquid and long term in nature (e.g., up to 10 years)
- Returns generally will be negative during initial investment period (years 1-3)
  - Return on investment not expected until year 3 or later (“j curve”)
- Evaluation metrics are different than public equities (internal rates of return, peer group comparisons)
- Timing is dictated by GPs, not investors; nimble decision making process is required
- Access to top tier GPs is crucial in building out a successful private equity program as there is wide performance dispersion across managers

Major categories:

- ***Buyouts*** includes investments in acquisitions, recovery investments, subordinated debt, and special situations (a category which represents a diversified strategy across many sub-categories)
- ***Venture capital/growth equity*** includes investments in companies in a range of stages of development from start-up/seed-stage, early stage, and later/expansion stage
- ***Opportunistic*** includes investments in categories such as distressed debt (debt instruments of companies which may be publicly traded or privately held that are financially distressed and are either in bankruptcy or likely candidates for bankruptcy), mezzanine, secondaries, drug royalties, etc.

Asset Allocation Trends Overview

Over the past 10 years, state pensions have shifted into alternatives

- Alternatives have more than doubled from 10% to 26%
- Exposure to public equities has been reduced

Endowments have an average alternatives allocation of 53% versus 26% for state pensions

- Hedge funds represent a larger allocation within the endowments' alternatives allocation

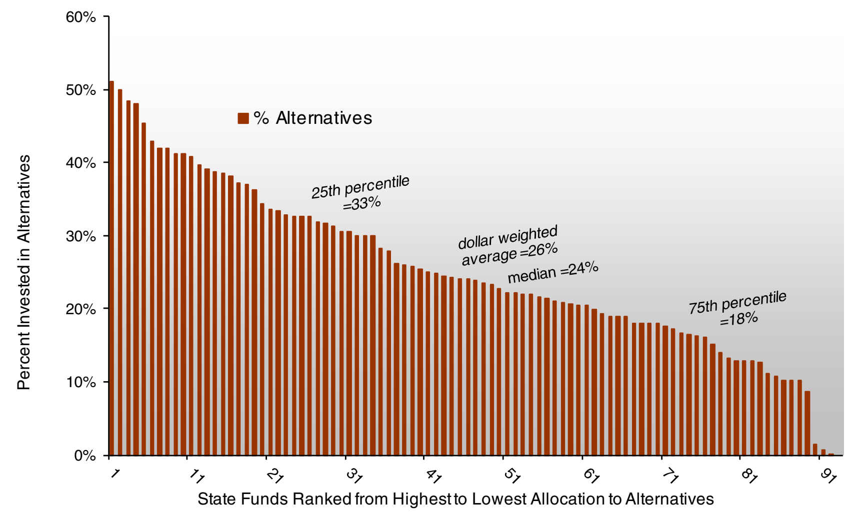
As a percentage of alternatives, state pensions have a heavier exposure to private equity & real estate while endowments have a heavier exposure to hedge funds

- Hedge funds are the newest alternative asset class for most state pensions, representing a 4% allocation; allocation has been stable

Changes to Overall State Pension Asset Allocation (asset-weighted)

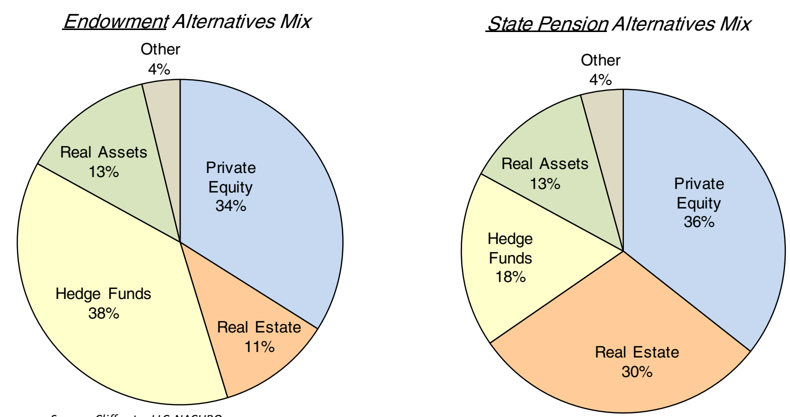
	2006	2011	2012	2013	2014	2015	2016	YoY Change
Public Equities	61%	51%	49%	50%	51%	50%	48%	-2%
Fixed Income	26%	25%	25%	22%	23%	23%	24%	1%
Alternatives	10%	21%	24%	25%	24%	24%	26%	2%
Cash	2%	3%	2%	3%	2%	3%	2%	-1%
Total	100%	100%	100%	100%	100%	100%	100%	

Distribution of 2016 Alternative Allocations among State Pensions



Source: Cliffwater LLC, CAFRs

Composition of Alternative Investments for Fiscal 2016



Source: Cliffwater LLC, NACUBO

Source: Cliffwater 2017 Report on State Pension Asset Allocation and Performance. The 2016 state pension asset allocation data is based upon 93 state pension systems, including those whose fiscal 2016 end is not June 30. The source for endowment data is the 2016 NACUBO-Commonfund Study of Endowments. The endowment asset allocation data is based upon all 805 participating endowments.

Private Equity Performance Over the Long Term

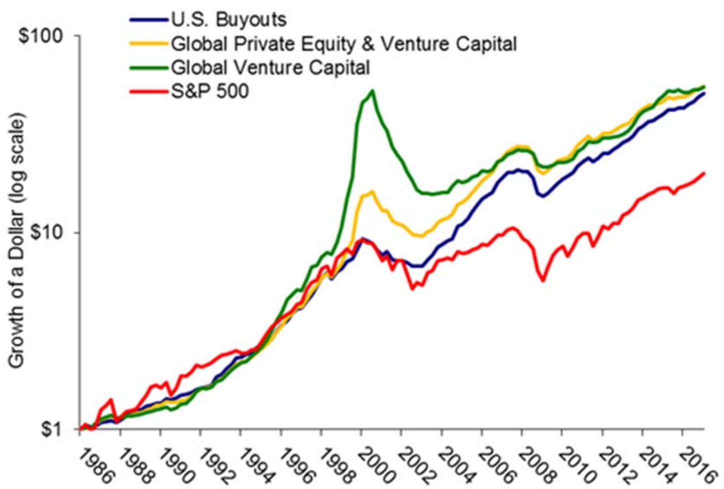
Private equity benchmarks (both buyout and venture) have exceeded the return of the public stock market since inception

– Cliffwater uses a 3% premium above the stock market forecast

Annualized Performance as of March 31, 2017[1]

	Global Private Equity & Venture Capital*	Subsector: U.S. Buyouts*	Subsector: Global Venture Capital*	S&P 500
Return				
Last 10 years	8.83%	10.42%	8.93%	7.51%
Last 31 years	13.84%	13.51%	13.79%	10.16%
Risk				
Last 31 years	12.04%	9.08%	21.27%	15.85%
Adjusted Risk				
Last 31 years	21.23%	15.34%	41.38%	16.42%

* Cambridge Associates Indices (linked quarterly returns)
Source: Cambridge Associates, S&P Dow Jones, Cliffwater calculations



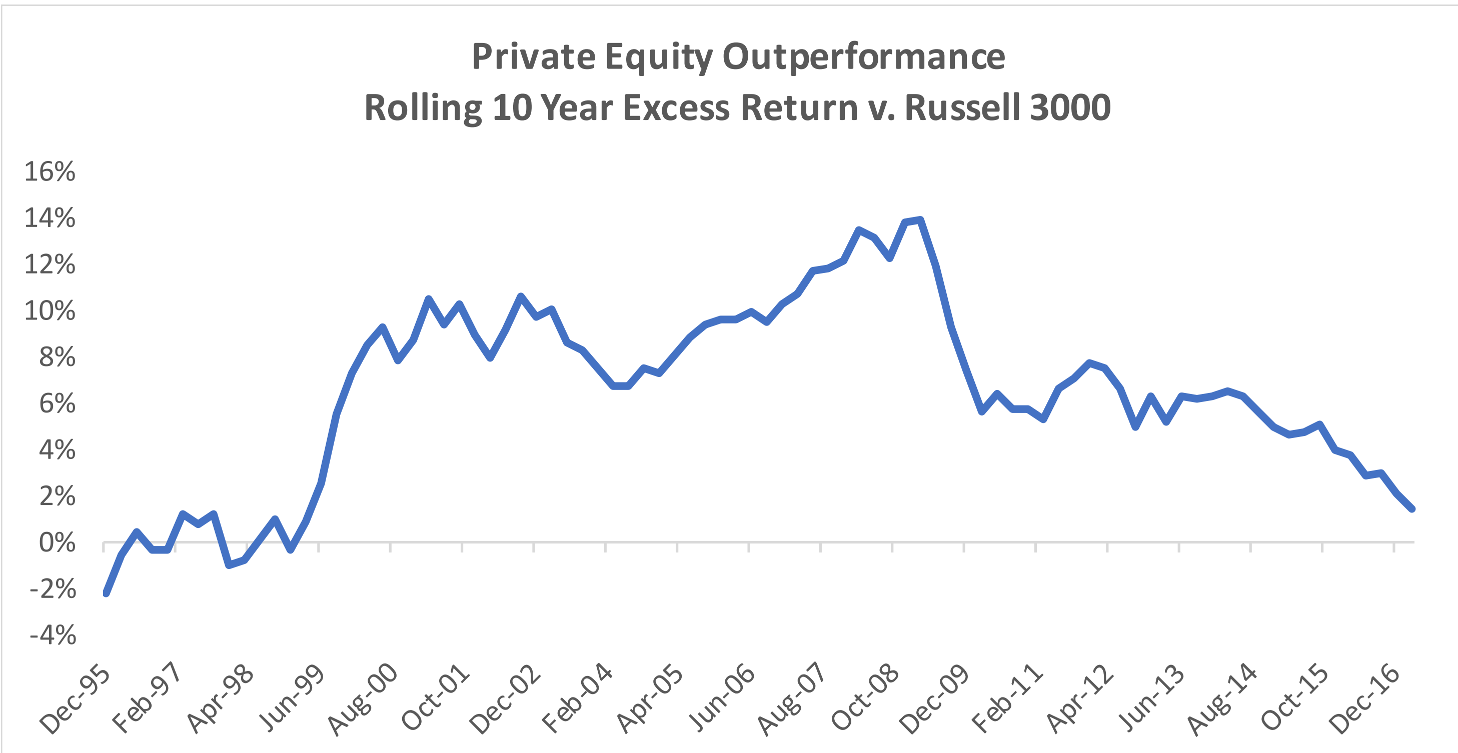
Source: Cambridge Associates, S&P Dow Jones

1 Risk (standard deviation) calculations for private equity are based upon quarterly appraisals that likely understate the true risk of these investments because they likely do not incorporate fully market changes. This "stickiness" in valuation from quarter to quarter can be measured by the correlation between returns for one quarter with those of prior quarters. To correct for this, Cliffwater adjusts the measured standard deviation for the correlations between quarterly periods to arrive at an "adjusted risk" measure that approximates what risk would be if valuations were based on market prices rather than appraised values.

Private Equity Performance Persistence?

Over rolling 10 year periods, an aggregate universe of private equity managers has outperformed the US stock market

- Average amount of 10 year excess return has been 6.5%
- Volatility in the public markets has affected the difference, but it has ranged between 3-8% post crisis on a rolling 10 year basis

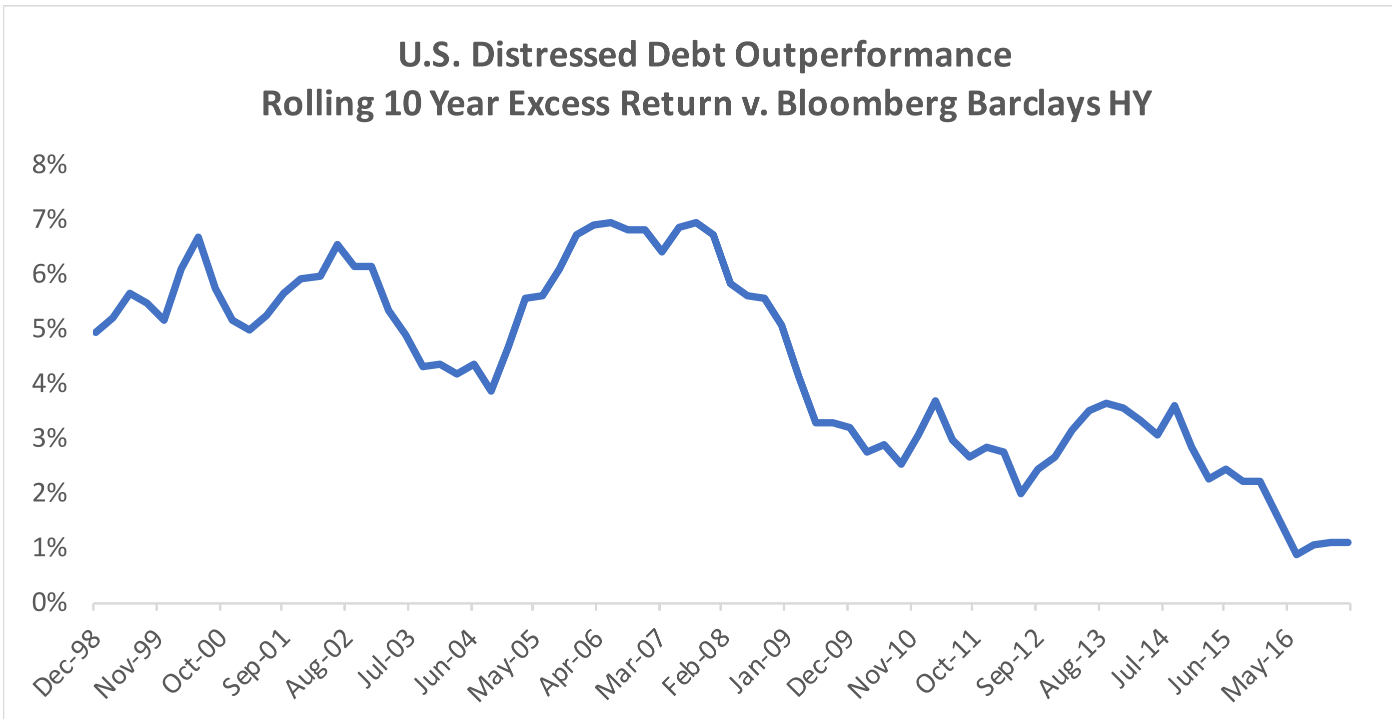


The chart above plots the excess return of the pooled IRR of the Cambridge Associates Global Private Equity and Venture Capital Index over the Russell 3000 Index for rolling 10-year periods from January 1, 1986 through March 31, 2017.

Distressed Debt Performance Persistence?

Over rolling 10 year periods, an aggregate universe of distressed debt has outperformed the high yield bond market

- Average amount of 10 year excess return has been 4.3%
- Excess return has dropped off to 1-3% since 2014



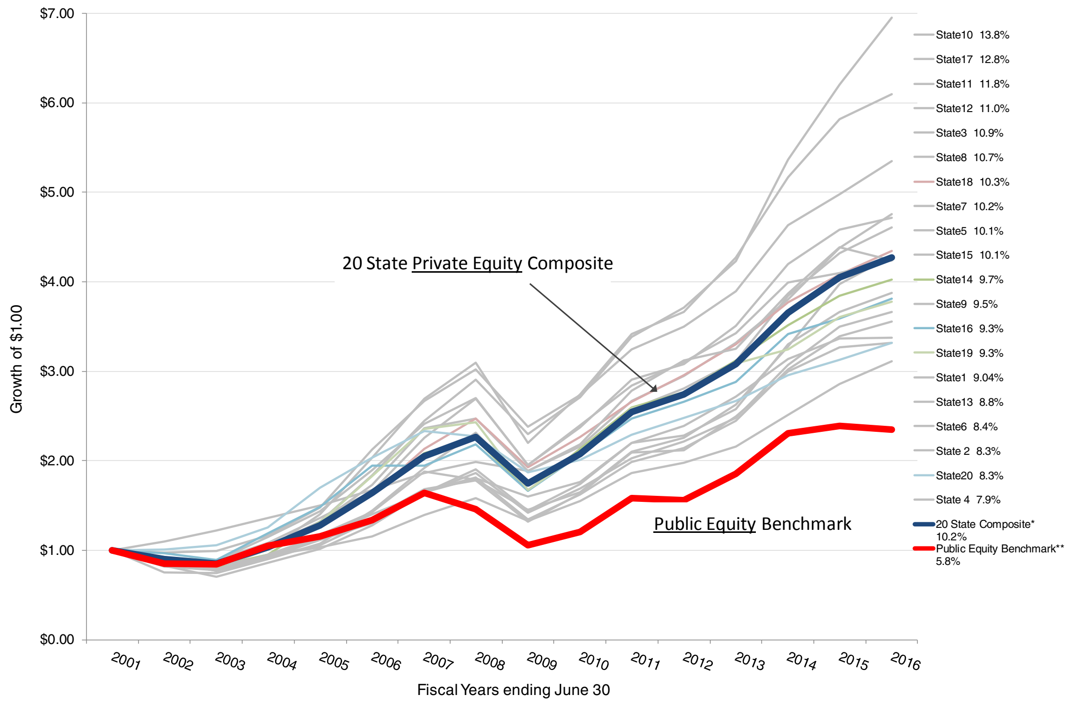
The chart above plots the excess return of the pooled IRR of the Cambridge Associates U.S. Distressed Debt Index over the Bloomberg Barclays High Yield Index for rolling 10-year periods from January 1, 1998 through March 31, 2017.

Private Equity Performance Among State Pensions Shows Similar Persistence

Over 15 fiscal years ended June 30, 2016, the 20 state pensions systems that had private equity portfolios for the entire period had an excess return of 4.4% vs. a public equity benchmark

– 10.2% annualized return vs. 5.8% for a 70% Russell 3000/30% MSCI ACWI ex US index

Private Equity Performance Among State Pensions
15 Years ending June 30, 2016 (Growth of $)



* A composite comprised of the private equity portfolios of 20 state pensions for June 30 fiscal years 2002-2016.
** A public equity benchmark weighted 70% to the Russell 3000 Index (6.1% annualized return) and 30% to the MSCI ACWI ex US Index (5.0% annualized return), with assigned weights reflecting Cliffwater's judgment of the U.S. and non-U.S. content of a diversified private equity portfolio.

Source: Cliffwater Research Report, "An Examination of Private Equity Performance among State Pensions: Evidence for a Systemic Asset Allocation Underweight." Annualized returns for the entire 15-year period are reported in the legend.

Performance Persistence in Bull & Bear Markets

Public pension private equity outperformed the public equity benchmark in both bull & bear markets

- The states that had been in private equity longer performed better; could be indicative of "j-curve" effect in newer entrants or benefit of legacy relationships in older portfolios
- A recent survey of 35 investment advisors report an average long term return for private equity of 9.2%, an excess of 2.3% above an average public equity return of 6.9%[1]

Private Equity vs. Public Equity Performance
15 Years ending June 30, 2016

	Annualized Return			
	Fiscal Years 2002 - 2016	Bull Markets*	Bear Markets*	Standard Deviation
20 State Composite	10.2%	17.3%	-7.6%	14.3%
Public Equity Benchmark	5.8%	14.2%	-14.1%	16.8%
Excess Return	4.4%	3.1%	6.5%	
Private Equity Composite	9.7%	16.9%	-7.8%	13.7%
Public Equity Benchmark	5.8%	14.2%	-14.1%	16.8%
Excess Return	4.0%	2.7%	6.3%	

* Bull Markets is defined as fiscal years 2004-07 and 2010-16. Bear Markets is defined as fiscal years 2002-03 and 2008-09

Source: Cliffwater Research Report, "An Examination of Private Equity Performance among State Pensions: Evidence for a Systemic Asset Allocation Underweight." The "20 State Composite" is a composite of 20 state systems managing private equity portfolios over the entire 15 fiscal year study period, the "Private Equity Composite" is a composite of 46 state systems managing private equity portfolios over all or part of the study period, and the "Public Equity Benchmark" is a benchmark weighted 70% to the Russell 3000 Index and 30% to the MSCI ACWI ex U.S. Index.

1 Source: Horizon Actuarial Services LLC, Survey of Capital Market Assumptions, 2016 Edition. All expected returns are geometric. The 6.9% expected return for public stocks is a Cliffwater composite calculation of four surveyed returns: US Equity Large Cap (6.64%), US Equity Small/Mid Cap (7%), Non-US Equity developed (7.12%) and Emerging Markets (8.48%) with weights of 56%, 14% 24% and 6%, respectively, to approximately mirror index weights in our Public Equity Benchmark return series.

Private Equity – Plan Sponsor Performance

All of the 20 states that had private equity programs for the 15 year period outperformed the public equity benchmark but returns ranged from 7.9% to 13.8% versus the 5.8% benchmark

- Signals the importance in implementation

Top 5 Pension Private Equity Performance – 15 Yrs as of June 30, 2016

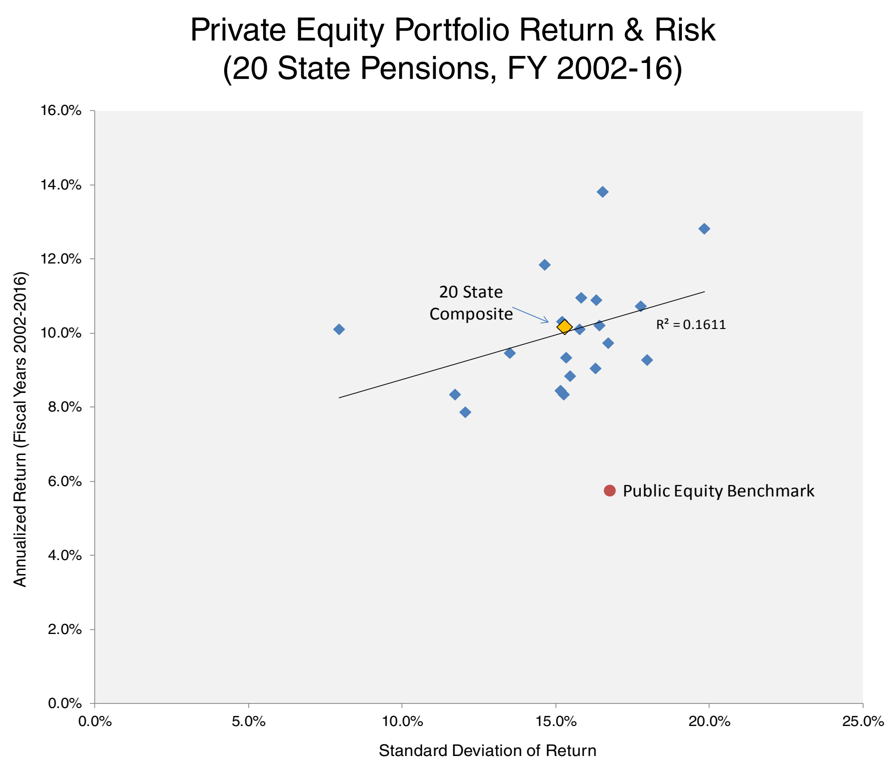
Mass PRIT/PRIM	13.8%
Texas TRS	12.8%
Minnesota	11.8%
NYSTRS	11.0%
CalStrs	10.9%

Source: Cliffwater Research Report, "An Examination of Private Equity Performance among State Pensions: Evidence for a Systemic Asset Allocation Underweight."

Public Pension Private Equity Risk & Correlation

The 20 state pension composite had an average return of 10.2% and risk of 15.3% for the 15 year period vs. 5.8% return & 16.8% risk for the public equity benchmark; correlation of 0.8 between the two

- Previously referenced survey of advisors had an average expected risk of 23.1% for private equity vs. 18.7% for public stocks[1]



Source: Cliffwater Research Report, "An Examination of Private Equity Performance among State Pensions: Evidence for a Systemic Asset Allocation Underweight." The 15.3% risk (standard deviation) represents the average of standard deviations for the individual 20 state system private equity portfolios. This is a different calculation than the 14.3% standard deviation reported on page 8, which is a single calculation based upon yearly composite returns of the 20 state system private equity portfolios.

1 See footnote 1 on page 8. As with the surveyed private equity expected return, we take a weighted average of expected risk for public equity components to derive an overall public equity expected risk consistent with the Public Equity Benchmark.

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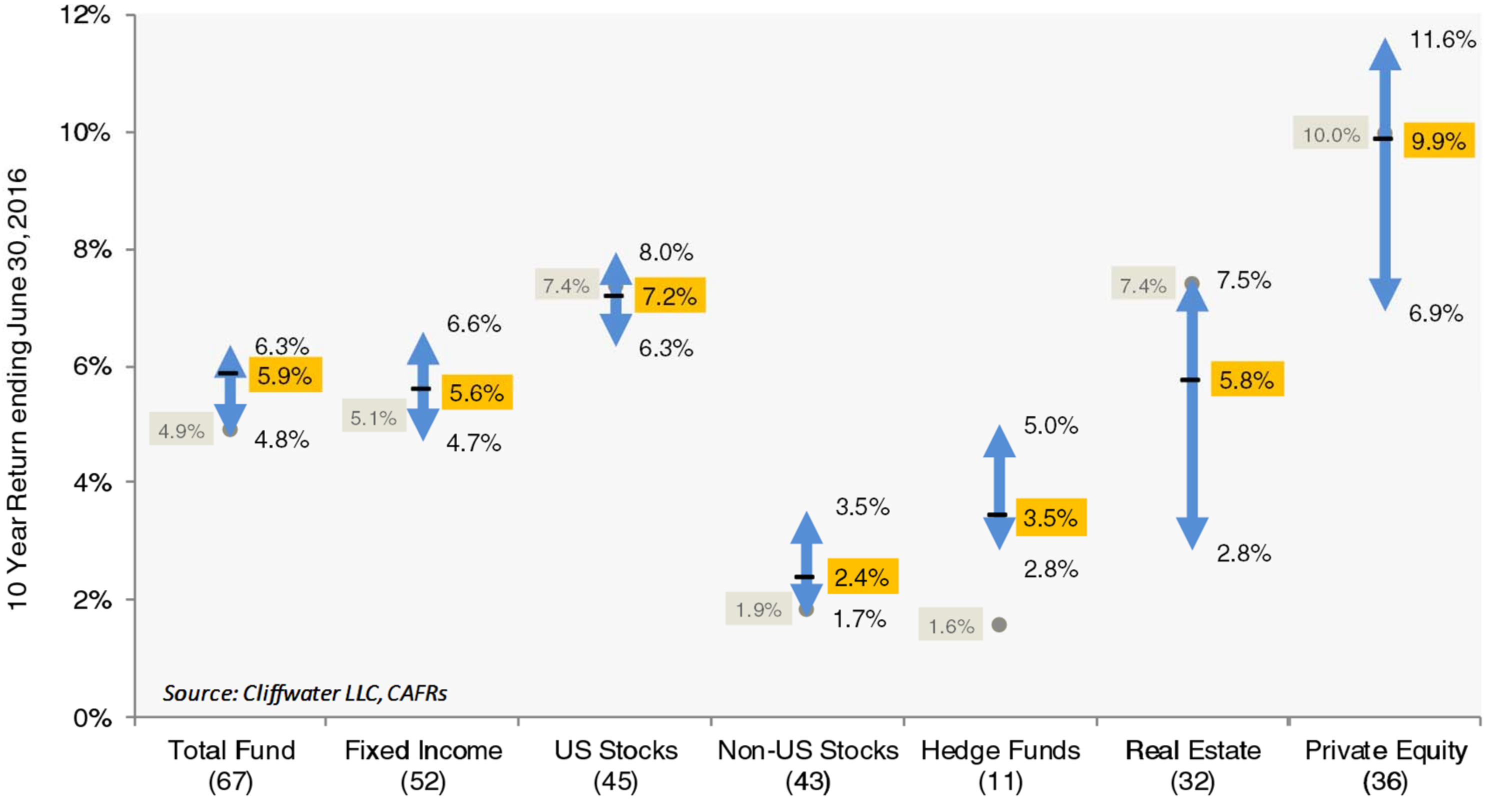
Dispersion of State Fund Returns – 10 Years Ended June 30, 2016

10 year returns for private equity, real estate and hedge funds are widely distributed

– Suggests that implementation matters



Note: The arrows display the range of individual state pension returns from low (the 90th percentile return) to high (the 10th percentile return) along with their values. Median returns are shown in gold on the right and commonly used benchmark returns are shown in gray to the left.

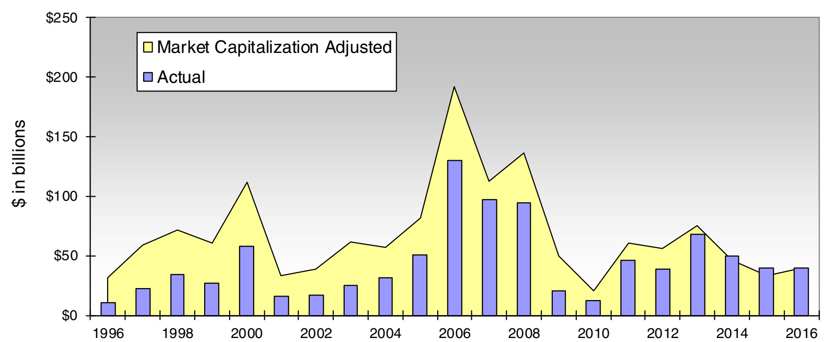
Source: Cliffwater 2017 Report on State Pension Asset Allocation and Performance. Not all 67 state pensions that reported 10-year total fund returns ended June 30, 2016 also reported all asset class returns. We display the number of state pensions represented in each asset class distribution below the asset class labels along the horizontal axis. The benchmarks used are as follows: Total Fund, 65%/35% mix of MSCI ACWI and Bloomberg Barclays Aggregate Bond; Fixed Income, Bloomberg Barclays Aggregate Bond; US Stocks, Russell 3000; Non-US Stocks, MSCI ACWI ex US; Hedge Funds, HFRI Fund-of-Funds; Real Estate, NCREIF Property; and Private Equity, Cambridge Private Equity.

Where are We in the Fundraising Cycle?

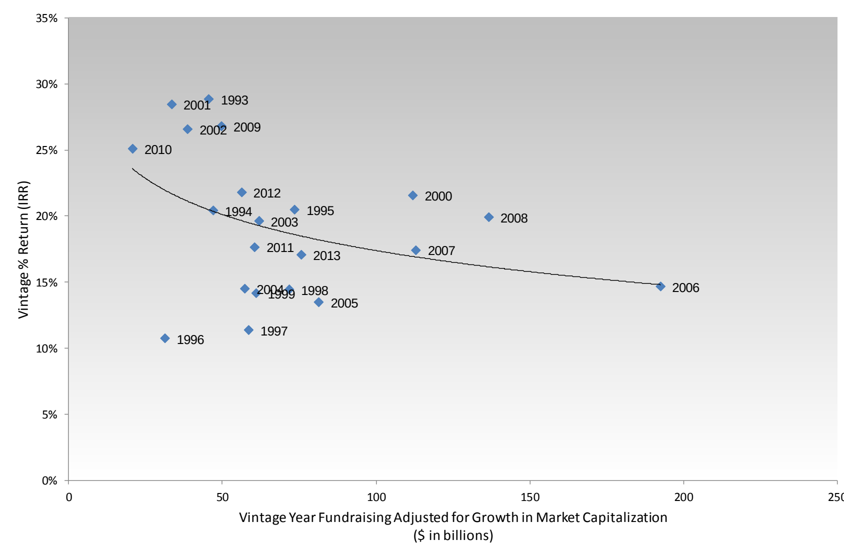
Buyout fundraising has been robust but it peaked in 2006

– There is a negative relationship between the amount of capital raised per vintage year and the subsequent vintage year return, but the cost/availability of debt and the public equity valuations, particularly during the harvest period, are also factors in resulting returns

US Buyout Fundraising by Vintage Year
January 1, 1996 through September 30, 2016[1]



Top Quartile Vintage Year Return vs. Adjusted Fundraising
by Vintage Year (1993-2013)
Performance as of September 30, 2016[2]



1 "Actual" represents Cambridge Associates fundraising for U.S. buyout funds. "Market Capitalization Adjusted" reflects actual fundraising adjusted by the growth in the market capitalization of the largest company in the Russell 2000 Index (the "Representative Company") by multiplying each year's actual fundraising level by the ratio of the Representative Company's market capitalization at 2016, the base year, divided by the market capitalization of such company at the earlier year.
2 Vintage Year Returns are first quartile IRRs for the Cambridge Associates U.S. buyout universe. Adjusted Fundraising totals reflect actual fundraising adjusted by the growth in the market capitalization of the largest company in the Russell 2000 Index.

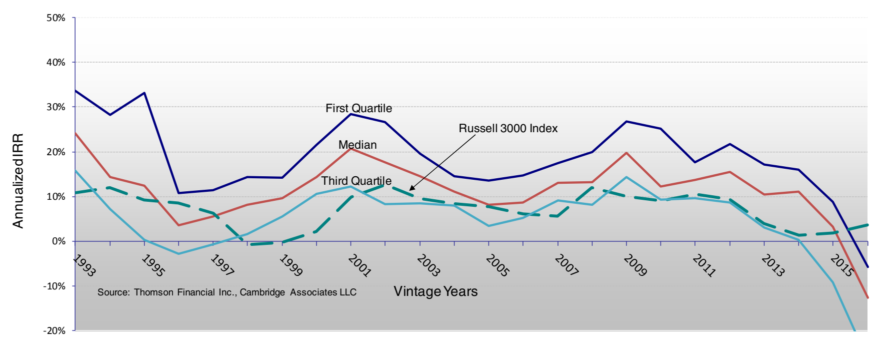
Buyout Fund Performance During Various Time Periods

- The median US buyout fund has outperformed the Russell 3000 during various time periods & the Russell 3000 performance has tracked near the third quartile US buyout performance
  - Indicative of the importance of manager selection
- In manager selection, Cliffwater believes LPs should emphasize:
  - Strong alignment between GP & LPs through governance & GP fund commitment amount
  - Flexible investment strategy that uses a mix of add-on acquisitions, corporate carve-outs, take-private transactions and turnarounds
  - Operational capability and a proven ability to build companies rather than reliance upon financial engineering
  - Demonstrated industry expertise and industry-based investment themes, whether the fund is diversified or focused on a single sector

Private Equity Median Buyout vs. Public Market Performance
January 1, 1996-September 30, 2016[1]

	PE Buyout Median Return	Russell 3000 Return	Return Spread
Tech Bubble Period (1996 - 1999)	7.7%	1.7%	6.0%
Post Recession #2 (2000 - 2004)	15.9%	10.1%	5.8%
Housing Mkt Bubble Period (2005 - 2007)	9.9%	6.5%	3.4%
Great Recession (2008 - 2009)	16.5%	11.0%	5.5%
Post-Recession (2010 - 2012)	13.8%	9.7%	4.1%
Recovery Market (2013 - 2015)	8.2%	2.4%	5.8%

Private Equity Quartile Returns vs. Public Market Performance
by Vintage Year (1993-2013)
Performance as of September 30, 2016[2]



1 The "PE Buyout Median Return" is the median net IRR for the Cambridge Associates U.S. Buyout benchmark for the respective vintage years. The returns represent the average of the median net IRRs for the noted vintage years through the life of the applicable fund or through September 30, 2016, if a fund is still active. The "Russell 3000 Return" represents the average of the annualized returns over the noted time periods for the subsequent 10 year period or through September 30, 2016 if less than 10 years.
2 Source: Cambridge Associates LLC for Private Equity Quartile Returns. The Public Market Performance represents the annualized returns for the Russell 3000 Index over the subsequent 10 year period or through September 30, 2016 if less than 10 years.

Private Equity Implementation Options

Fund of funds

- Commingled or separate account
- Broad private equity exposure or narrow focus (e.g., Asia, venture, secondaries)

Direct with use of a consultant

- Generalist vs. specialty consultant

Staff directed

Some combination of the above

Key Considerations

Internal staffing levels

Governance structure

Desired amount of control

- Portfolio structure (e.g., strategy exposures, number of GP relationships)
- Vintage year timing
- Legal/side letter negotiations

Transparency

Fees

Private Equity Performance: Takeaways

Allocations to alternatives by public pension plans has increased over the past 10 years and private equity is the largest component of the alternatives exposure

Private equity indices have outperformed public market indices

- Spread has ranged between 3-8% annualized over rolling 10 year periods, post crisis

Public pension plan private equity portfolios have likewise outperformed public markets, and standard deviation has been lower

- Excess over the 15 year period (FY 2002-16) was 4.4%
- Outperformance during both bull and bear markets
- Wide variation in individual state returns and risk levels; indicative of importance of implementation
- Excess return has historically been higher and actual risk historically lower than that used by a survey of investment advisors

US buyout performance is affected by the amount of capital raised per vintage year and is also affected by the cost/availability of debt and public market valuations at time of exit

- Implies the importance of vintage year diversification

The median US buyout fund has outperformed the Russell 3000 consistently over various time periods but the third quartile manager performs similarly to the index

- Indicative of the importance of manager selection

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December 19, 2017
Retirement Board Agenda Item

TO: Retirement Board

FROM: Rick Santos, Executive Director

I. SUBJECT: Tax Reform Bill and UBIT (Unintended Business Income Tax)

II. ITEM NUMBER: 6.c

III. ITEM TYPE: Information/Discussion

IV. STAFF RECOMMENDATION: None

V. ANALYSIS:

The recent tax bill passed in congress contains a section that most feel could have an impact on our tax exempt status as it relates to gains on certain investments. While it is still too early to be definitive in our assessment of the impacts to StanCERA, staff feels it necessary to put this issue on the Board's radar at this time. Based on research from limited sources, the following are answers to questions that we feel may be naturally asked at this early stage. Staff will continue to monitor the issue and report out to the Board anything of significance as it transpires.

a. *What does UBIT mean?*

According to the IRS, UBIT (unrelated business income tax) is a tax on unrelated business income which comes from an activity engaged in by a "tax exempt organization" (defined in IRS Section 501 (a)) that is not related to the tax exempt function of the organization

b. *How can UBIT be generated?*

In general, a business generates unrelated business income tax if it is a trade or business, it is regularly carried on and it is not substantially related to the exempt purpose of the organization

c. *How have pension plans avoided UBIT in the past?*

To maintain qualifying tax status, pension plans like StanCERA claim compliance under IRS Code Section 401 (a). While 401 (a) generally involves the tax status of contributions to the plan, it doesn't appear to address the tax status of investment gains for plans defined by 501 (a).

For the disposition of investment gains, plans like StanCERA make the assumption that they also fall under Code Section 115 which states that gross income subject to tax does not include *"income derived from any public utility or the exercise of any essential governmental function and accruing to a State or any political subdivision thereof"*

d. *Currently, can a public pension plan like StanCERA be considered to generate UBIT?*

Given the plan's assumption that they also fall under Section 115 (see language in c. above), the answer is no. However, the IRS has never officially confirmed this assumption and has never challenged it.

e. What specifically does the new tax code say?

> *"….an organization or trust shall not fail to be treated as exempt from taxation under this subtitle by reason of section 501(a) solely because such organization is also so exempt, or excludes amounts from gross income, by reason of any other provision of this title.''*

f. What specifically does the impact of the new tax code language mean to StanCERA?

At this stage, no one can say for sure. It will ultimately depend on how the IRS interprets and implements the new language. In the past, issues like this have taken quite some time to be ironed out and implemented. There are generally comment periods where Systems can make comments to the IRS on how they interpret the new language and how it should be implemented. Whether this issue will play out similarly is unknown.

g. If so interpreted, would StanCERA be required to pay UBIT on all its investments?

It doesn't appear so. One opinion claims that there may be exemptions to the UBIT requirement on real estate investments, particularly when it is debt financed property. It also does not appear to apply to our traditional holdings like our separately managed accounts (a majority of our current allocation). However, for those investments where investors or partners can move into and out of commingled funds (private credit and private equity) the UBIT exemption could disappear.

h. Are there legal ways that the UBIT may be avoided in the commingled funds?

The consensus is that there may be ways to avoid the UBIT based on the structure of the investment. As we move along and prepare ourselves to allocate more money to these the types of investments that could potentially generate UBIT, staff will use our legal resources to assist us in dealing with these issues. Most likely if UBIT does become an issue, they can be addressed in the side letter with the prospective General Partner.

VI. RISK: None

VII. STRATEGIC PLAN: Strategic Objective IV: Refine StanCERA's business and policy practices in ways that enhance stakeholder awareness, the delivery of member services and the ability of the Organization to administer the System effectively and efficiently.

VIII. ADMINISTRATIVE BUDGET IMPACT:

Rick Santos, Executive Director

Natalie Elliott, Interim Fiscal Services Manager

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December 19, 2017
Retirement Board Agenda Item

TO: Retirement Board

FROM: Rick Santos, Executive Director

I. SUBJECT: Quarter 3 2017 Auxiliary Investment Report

II. ITEM NUMBER: 6.d

III. ITEM TYPE: Information/Discussion

IV. STAFF RECOMMENDATION: None

V. ANALYSIS: Attachment 1 contains the Quarter 3 2017 Auxiliary Investment Report.

Value Added (page 1)

In quarter 3, StanCERA's non-alternative portfolio added approximately $2.5 million in value after fees, relative to a passive benchmark. Domestic equity added the most value at $7.8 million, while international equity and fixed income failed to add value losing $4.1 million and $1.3 million, respectively. Interestingly, large cap domestic managers were the big winners this quarter. Generally, this market is assumed to be quite efficient and the most difficult area to pick up excess return.

Investment Fee Summary (pages 2 – 4)

In total, StanCERA paid approximately $1.2 million in fees (24.8 bps, annualized) to manage its entire portfolio. The amount is skewed this quarter, since a large incentive fee allocation made earlier, was clawed back to StanCERA. The White Oak Pinnacle Fund gave back nearly $1 million in incentive fees that were allocated to the General Partner at an earlier point in the life of the fund. At this stage, the Raven I fund continues to have large expense outlays which is creating a huge drag on performance, and one that may be very difficult to eventually overcome. After researching this issue further, the large expense outlays are mainly attributable to legal fees associated with litigation against two counterparties.

Alternative Auxiliary Reports (pages 5 – 12)

The alternative auxiliary reports display information on the direct lending, infrastructure, core real estate and value added real estate asset classes. Much of this information is a disclosure requirement of AB2833. All real estate investments show net internal rates of return in the 8.5% to 12% range, with investment multiples right around 1.2.

Regarding the direct lending asset class, Raven I, Medley and White Oak show net internal rates of returns as of September 30, 2017 of 0.87%, 5.04% and 9.11% with investment multiples of 1.02, 1.18 and 1.20, respectively. While the funds are throwing off cash, asset values are decreasing in response to the sales and income that are generating the cash and gains or losses on the investment's market value are flat. Consequently, there's been little movement in the return figures over the last few reporting periods.

Cash Flow Report (page 13)

This report is self-explanatory.

Functionally Focused Portfolio (FFP) Shortfall Report (page 14)

This is staff's first report out on the FFP shortfall process. Over the first 3 months of the period, StanCERA's actual benefit shortfalls (benefits plus expenses less contributions) turned out to be $5.69 million. StanCERA had budgeted and invested capital to supply us with exactly $5.62 million to fund those shortfalls at just the point they were needed. Thus our projection over this period turned out to be short by only $76,000.

This is a very encouraging result from the first 3 months of the program. Capital needed to cover our expected shortfalls over this period was fully invested for as long as possible with no over allocation and just a very small use of the excess cash reserve to fund the needed $76,000.

VI. RISK: None

VII. STRATEGIC PLAN: Strategic Objective IV: Refine StanCERA's business and policy practices in ways that enhance stakeholder awareness, the delivery of member services and the ability of the Organization to administer the System effectively and efficiently.

VIII. ADMINISTRATIVE BUDGET IMPACT: None

Rick Santos, Executive Director

12/19/17
ITEM 6.d.
Attachment 1

Value Added Analysis Fiscal Year to Date

7/1/2017 thru 9/30/2017

StanCERA Value Added Analysis - Equities

Active Domestic Equity

			Portfolio Averages			Dollar Returns				
Mngr_ID	Manager	Benchmark Index	Assets Managed	Uninvested Assets *	Invested Assets	Manager	Benchmark	Excess	Fees	Value Added
1	Dodge Cox Equity	Russell 1000 Value	$210,512,658	$6,337,849	$204,174,809	$9,549,597	$6,622,579	$2,927,018	$101,670	$2,825,348
7	Jackson Square	Russell 1000 Growth	$149,634,528	$1,915,524	$147,719,004	$12,888,764	$8,625,573	$4,263,191	$154,670	$4,108,521
4	Bernzott	Russell 2000 Value	$14,353,680	$806,083	$13,547,598	$1,377,238	$788,010	$589,228	$27,760	$561,468
25	Channing	Russell 2000 Value	$23,326,988	$648,492	$22,678,496	$1,279,616	$1,246,747	$32,868	$44,893	-$12,025
26	Inview	Russell 2000 Value	$22,938,777	$1,019,278	$21,919,499	$1,385,531	$1,230,307	$155,224	$43,044	$112,180
27	Keeley	Russell 2000 Value	$12,564,731	$203,534	$12,361,197	$612,911	$668,702	-$55,791	$24,255	-$80,046
28	Pacific Ridge	Russell Micro Cap Value	$18,897,658	$528,745	$18,368,913	$1,489,265	$1,306,929	$182,336	$43,192	$139,144
29	Walthausen	Russell 2000 Value	$14,300,487	$819,955	$13,480,532	$1,022,693	$770,624	$252,069	$27,895	$224,174

Passive Domestic Equity

Mngr_ID	Manager	Benchmark Index	Assets Managed	Uninvested Assets	Invested Assets	Manager	Benchmark	Excess	Fees	Value Added
11	Blackrock Value	Russell 1000 Value	$118,812,345	$593	$118,811,752	$3,751,447	$3,729,075	$22,372	$7,326	$15,046
12	Blackrock Growth	Russell 1000 Growth	$106,046,716	$0	$106,046,716	$6,122,291	$6,120,436	$1,855	$6,583	-$4,728

Active International Equity

Mngr_ID	Manager	Benchmark Index	Assets Managed	Uninvested Assets	Invested Assets	Manager	Benchmark	Excess	Fees	Value Added
8	LSV	MSCI ACWI ex USA GD	$218,156,076	$4,526,401	$213,629,675	$11,883,562	$13,371,541	-$1,487,979	$167,715	-$1,655,694
10	Fidelity	MSCI ACWI ex USA GD	$212,058,140	$2,425,918	$209,632,222	$10,739,894	$12,999,712	-$2,259,818	$186,772	-$2,446,590

StanCERA Value Added Analysis - Fixed Income

Active Domestic Fixed Income

Mngr_ID	Manager	Benchmark Index	Assets Managed	Uninvested Assets	Invested Assets	Manager	Benchmark	Excess	Fees	Value Added
34	Insight Investment	US Govt. Credit Blend	$97,153,097	$20,902,960	$76,250,138	$401,119	$525,151	-$124,032	$33,082	-$157,114
35	Dimensional Fund Advisors	BB Barclays US Credit 1-3 Yeai	$273,045,116	$2,884,847	$270,160,269	$384,010	$1,417,683	-$1,033,673	$62,217	-$1,095,890

Asset Class Totals

	Portfolio Averages			Dollar Returns				
Asset Class	Assets Managed	Uninvested Assets	Invested Assets	Manager	Benchmark	Excess	Fees	Value Added
Active Domestic Equity	$466,529,507	$12,279,460	$454,250,047	$29,605,615	$21,259,472	$8,346,143	$467,378	$7,878,765
Passive Domestic Equity	$224,859,060	$593	$224,858,468	$9,873,738	$9,849,511	$24,227	$13,909	$10,318
Active International Equity	$430,214,216	$6,952,319	$423,261,897	$22,623,456	$26,371,253	-$3,747,797	$354,487	-$4,102,284
Active Domestic Fixed Income	$370,198,213	$23,787,806	$346,410,407	$785,129	$1,942,834	-$1,157,705	$95,299	-$1,253,003
Total StanCERA Value Added	$1,491,800,997	$43,020,178	$1,448,780,819	$62,887,938	$59,423,070	$3,464,868	$931,073	$2,533,795

* Negative Uninvested Assets represent fund receivables that are assumed to be invested as soon as possible

StanCERA Investment Fee Summary - Total Portfolio Level

Fiscal Year to Date

7/1/2017 thru 9/30/2017

	Fees In Dollars						Annualized Fees in Basis Points				
	Average AUM	Managerial	Performance*	Other	Custodial	Total	Managerial	Performance	Other	Custodial	Total
Total StanCERA Portfolio	$1,963,173,492	$1,766,621	-$955,971	$314,732	$88,770	$1,214,152	36.1	-19.5	6.4	1.8	24.8

Fees By Asset Class

	Average AUM	Managerial	Performance	Other	Custodial	Total	Managerial	Performance	Other	Custodial	Total
Domestic Equity	$814,139,755	$558,448	$0	$0	$25,882	$584,329	27.5	0.0	0.0	1.3	28.8
Domestic Fixed Income	$471,487,398	$130,063	$0	$0	$11,923	$141,986	11.1	0.0	0.0	1.0	12.1
International Equity	$430,214,216	$271,682	$38,420	$0	$44,385	$354,487	25.3	3.6	0.0	4.1	33.1
Alternatives	$96,026,629	$484,756	-$988,510	$246,477	$2,746	-$254,531	202.6	-413.2	103.0	1.1	-106.4
Real Assets	$151,305,494	$321,673	-$5,881	$68,255	$3,834	$387,881	85.3	-1.6	18.1	1.0	102.9

Fees By Investment Discretion

	Average AUM	Managerial	Performance	Other	Custodial	Total	Managerial	Performance	Other	Custodial	Total
Active	$1,588,873,883	$1,734,353	-$955,971	$314,732	$84,644	$1,177,758	43.8	-24.1	8.0	2.1	29.8
Passive	$374,299,608	$32,268	$0	$0	$4,126	$36,394	3.5	0.0	0.0	0.4	3.9

Fees By Investment Style

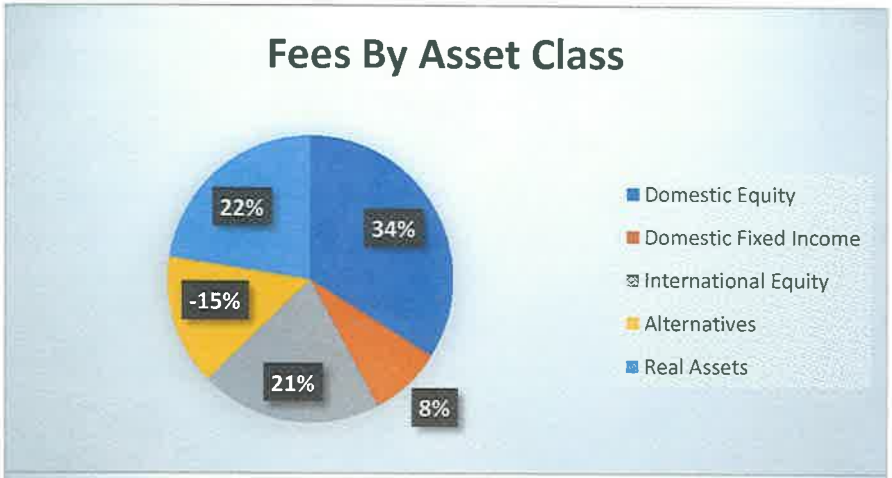
	Average AUM	Managerial	Performance	Other	Custodial	Total	Managerial	Performance	Other	Custodial	Total
Large Cap Value	$329,325,003	$104,324	$0	$0	$4,673	$108,996	12.7	0.0	0.0	0.6	13.3
Small Cap Value	$106,382,321	$200,514	$0	$0	$10,524	$211,038	75.7	0.0	0.0	4.0	79.6
Large Cap Growth	$255,681,244	$157,332	$0	$0	$3,920	$161,253	24.7	0.0	0.0	0.6	25.3
Small Cap Growth	$51,635,303	$96,278	$0	$0	$6,478	$102,756	74.8	0.0	0.0	5.0	79.9
International Core Equity	$430,214,216	$271,682	$38,420	$0	$44,385	$354,487	25.3	3.6	0.0	4.1	33.1
Short-Term Govt Credit	$273,045,116	$57,780	$0	$0	$4,436	$62,217	8.5	0.0	0.0	0.7	9.1
Immunization	$97,153,097	$30,000	$0	$0	$3,082	$33,082	12.4	0.0	0.0	1.3	13.7
Core Fixed Income	$101,289,185	$42,283	$0	$0	$4,404	$46,687	16.8	0.0	0.0	1.7	18.5
Value Added Real Estate	$35,696,385	$126,196	$0	$0	$1,280	$127,476	141.9	0.0	0.0	1.4	143.3
Core Real Estate	$95,924,388	$57,906	-$5,881	$0	$1,896	$53,921	24.2	-2.5	0.0	0.8	22.6
Private Credit	$96,026,629	$484,756	-$988,510	$246,477	$2,746	-$254,531	202.6	-413.2	103.0	1.1	-106.4
Infrastructure	$19,684,720	$137,571	$0	$68,255	$658	$206,484	280.5	0.0	139.2	1.3	421.0
Domestic Core Equity	$71,115,884	$0	$0	$0	$286	$286	0.0	0.0	0.0	0.2	0.2

* Performance fees can be negative due to the clawback of incentive fees

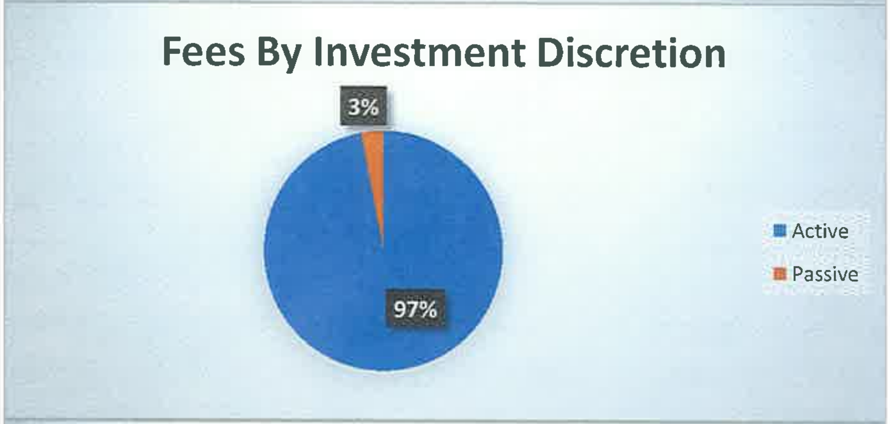
Investment Fees By Type

7/1/2017 thru 9/30/2017

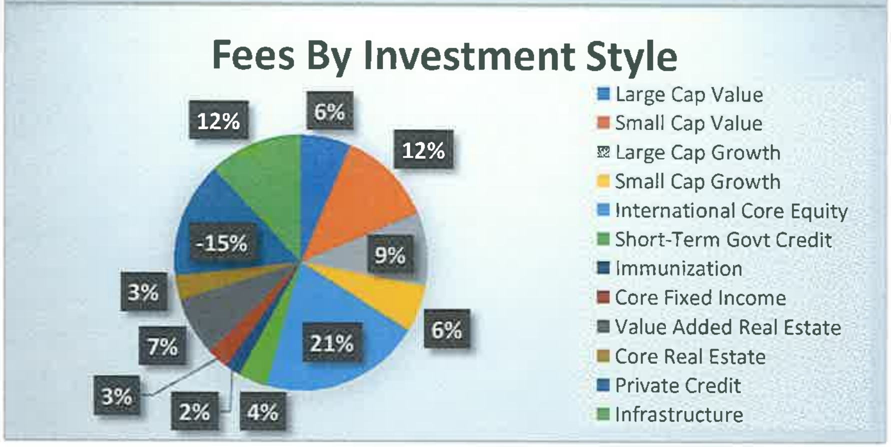
By Asset Class	Fees
Domestic Equity	$584,329
Domestic Fixed Income	$141,986
International Equity	$354,487
Alternatives	-$254,531
Real Assets	$387,881
Total	$1,214,152



By Investment Discretion	Fees
Active	$1,177,758
Passive	$36,394
Total	$1,214,152



By Investment Style	Fees
Large Cap Value	$108,996
Small Cap Value	$211,038
Large Cap Growth	$161,253
Small Cap Growth	$102,756
International Core Equity	$354,487
Short-Term Govt Credit	$62,217
Immunization	$33,082
Core Fixed Income	$46,687
Value Added Real Estate	$127,476
Core Real Estate	$53,921
Private Credit	-$254,531
Infrastructure	$206,484
Domestic Core Equity	$286
Total	$1,214,152



StanCERA Investment Fee Summary - Manager Level

7/1/2017 thru 9/30/2017

Mngr_ID	Manager Name	Average AUM	Fees in Dollars: Management	Performance	Other	Custodial	Total	Fees in Annualized Basis Points: Management	Performance	Other	Custodial	Total
35	Dimensional Fund Advisors	$273,045,116	$57,780	$0	$0	$4,436	$62,217	8.5	0.0	0.0	0.7	9.1
8	LSV	$218,156,076	$138,036	$0	$0	$29,679	$167,715	25.4	0.0	0.0	5.5	30.9
10	Fidelity	$212,058,140	$133,646	$38,420	$0	$14,706	$186,772	25.3	7.3	0.0	2.8	35.4
2	PIMCO	$31,165,941	$25,521	$0	$0	$3,003	$28,525	32.9	0.0	0.0	3.9	36.7
34	Insight Investment	$97,153,097	$30,000	$0	$0	$3,082	$33,082	12.4	0.0	0.0	1.3	13.7
14	BNYM S&P	$71,115,884	$0	$0	$0	$286	$286	0.0	0.0	0.0	0.2	0.2
7	Jackson Square	$149,634,528	$151,974	$0	$0	$2,696	$154,670	40.8	0.0	0.0	0.7	41.5
1	Dodge Cox Equity	$210,512,658	$98,361	$0	$0	$3,310	$101,670	18.8	0.0	0.0	0.6	19.4
11	Blackrock Value	$118,812,345	$5,963	$0	$0	$1,363	$7,326	2.0	0.0	0.0	0.5	2.5
12	Blackrock Growth	$106,046,716	$5,358	$0	$0	$1,224	$6,583	2.0	0.0	0.0	0.5	2.5
4	Bernzott	$14,353,680	$26,352	$0	$0	$1,408	$27,760	73.7	0.0	0.0	3.9	77.6
27	Keeley	$12,564,731	$22,830	$0	$0	$1,425	$24,255	72.9	0.0	0.0	4.6	77.5
25	Channing	$23,326,988	$42,458	$0	$0	$2,435	$44,893	73.1	0.0	0.0	4.2	77.2
29	Walthausen	$14,300,487	$26,007	$0	$0	$1,887	$27,895	73.0	0.0	0.0	5.3	78.3
26	Inview	$22,938,777	$41,722	$0	$0	$1,322	$43,044	73.0	0.0	0.0	2.3	75.3
28	Pacific Ridge	$18,897,658	$41,145	$0	$0	$2,047	$43,192	87.4	0.0	0.0	4.3	91.7
21	Lee Munder	$6,585	$0	$0	$0	$480	$480	0.0	0.0	0.0	2928.7	2928.7
20	CastleArk	$4,462	$0	$0	$0	$485	$485	0.0	0.0	0.0	4360.2	4360.2
9	Dodge Cox Fixed Income	$70,123,244	$16,762	$0	$0	$1,401	$18,163	9.6	0.0	0.0	0.8	10.4
16	Medley Opportunity Fund II L.P.	$23,317,558	$64,337	-$375	$627	$681	$65,270	110.7	-0.6	1.1	1.2	112.4
13	Raven Asset-Based Opportunity Fund I L.P.	$15,634,293	$68,053	$0	$106,668	$631	$175,352	174.7	0.0	273.8	1.6	450.2
15	White Oak Pinnacle Fund L.P.	$35,871,767	$131,818	-$988,135	$19,622	$753	-$835,942	147.5	-1105.6	22.0	0.8	-935.3
17	Blackrock US Real Estate	$78,324,663	$20,947	$0	$0	$1,252	$22,199	10.7	0.0	0.0	0.6	11.4
18	Greenfield GAP VII Management Fund, L.L.C	$13,531,754	$56,250	$0	$0	$613	$56,863	166.8	0.0	0.0	1.8	168.7
31	American Realty Advisors Fund	$22,164,632	$69,946	$0	$0	$667	$70,613	126.7	0.0	0.0	1.2	127.9
19	AMI	$13,440,985	$24,355	$0	$0	$807	$25,162	72.7	0.0	0.0	2.4	75.1
22	Rice Hall	$22,233,825	$40,781	$0	$0	$1,597	$42,378	73.6	0.0	0.0	2.9	76.5
30	Morgan Stanley Prime Property Fund, L.L.C	$17,599,725	$36,959	-$5,881	$0	$643	$31,722	84.3	-13.4	0.0	1.5	72.3
33	Raven Asset-Based Opportunity Fund III L.P.	$21,203,011	$220,548	$0	$119,560	$681	$340,789	417.5	0.0	226.3	1.3	645.1
32	North Haven Infrastructure II GP LP	$19,684,720	$137,571	$0	$68,255	$658	$206,484	280.5	0.0	139.2	1.3	421.0
37	Redwood	$15,949,445	$31,142	$0	$0	$3,108	$34,250	78.4	0.0	0.0	7.8	86.2
Total		$1,963,173,492	$1,766,621	-$955,971	$314,732	$88,770	$1,214,152	36.1	-19.5	6.4	1.8	24.8

American Realty Advisors Fund Auxiliary Reporting as of 9/30/2017

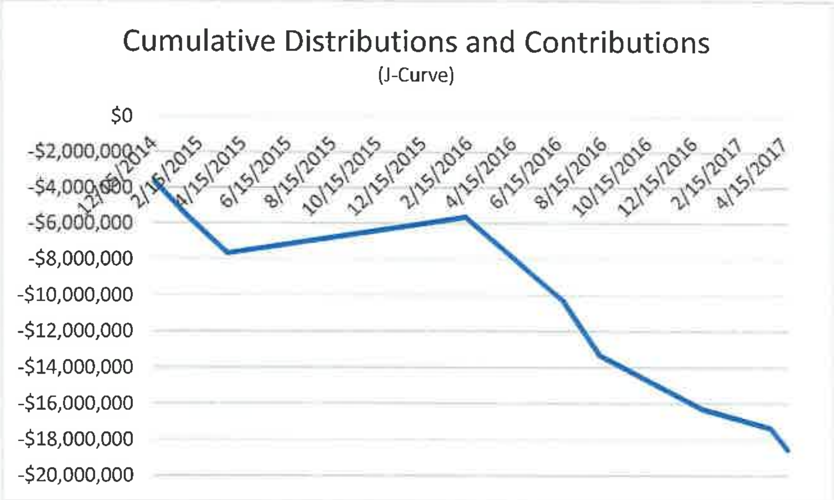
Original Commitment:	$30,000,000
Investment Start Date:	12/15/2014
Commitment Period End Date:	Open End
Total Paid In Capital:	$20,571,700
Total Distributed Capital:	$2,029,728
Current Capital Balance:	$22,164,030
Management Fee:	1.20%
Carried Interest:	20.0%
Hurdle Rate:	10.0%
Target Net Returns:	11% - 13%
Max. Potential Fees Paid on Uncommitted Capital:	Only on Invested Capital
Vintage Year:	2009

Performance Measurements Since Inception

Net IRR Since Investment Start Date:	11.34%
Investment Multiple (TVPI):	$1.18
Realization Multiple (DPI):	$0.10
Residual Value Paid In Multiple (RVPI):	$1.08
Paid In Capital Multiple (PIC):	68.6%

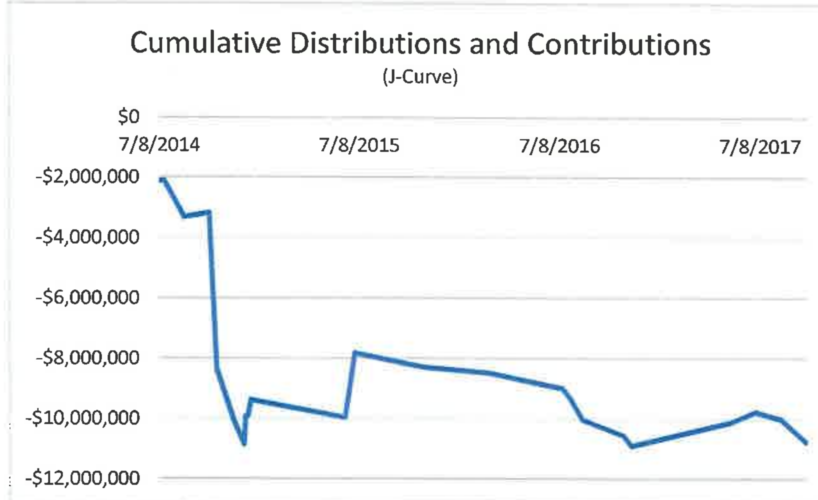
Fee Analysis Since Inception

Fee Type	Fee
Offering Costs	$54
Management Fee	$452,630
Total Fees	$452,685



Greenfield GAP VII Management Fund, L.L.C Auxiliary Reporting as of 9/30/2017

Original Commitment:	$15,000,000
Investment Start Date:	7/8/2014
Commitment Period End Date:	12/1/2017
Total Paid In Capital:	$15,691,800
Total Distributed Capital:	$4,926,871
Current Capital Balance:	$13,770,086
Management Fee:	1.50%
Carried Interest:	20.0%
Hurdle Rate:	8.0%
Target Net Returns:	13.0%
Max. Potential Fees Paid on Uncommitted Capital:	$0
Vintage Year:	2011



Performance Measurements Since Inception

Net IRR Since Investment Start Date:	9.67%
Investment Multiple (TVPI):	$1.19
Realization Multiple (DPI):	$0.31
Residual Value Paid In Multiple (RVPI):	$0.88
Paid In Capital Multiple (PIC):	104.6%

Fee Analysis Since Inception

Fee Type	Fee
Management Fee	$852,997
Total Fees	$852,997

Medley Opportunity Fund II L.P. Auxiliary Reporting as of 9/30/2017

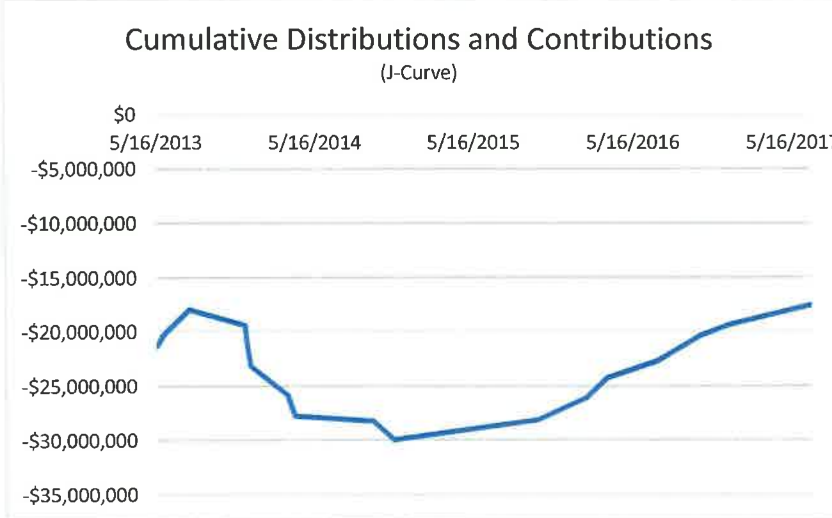
Original Commitment:	$30,000,000
Investment Start Date:	5/16/2013
Commitment Period End Date:	Period Over
Total Paid In Capital:	$33,346,007
Total Distributed Capital:	$15,774,893
Current Capital Balance:	$23,424,669
Management Fee:	1.50%
Carried Interest:	20.0%
Hurdle Rate:	8.0%
Target Net Returns:	13.6% - 16%
Vintage Year:	2011

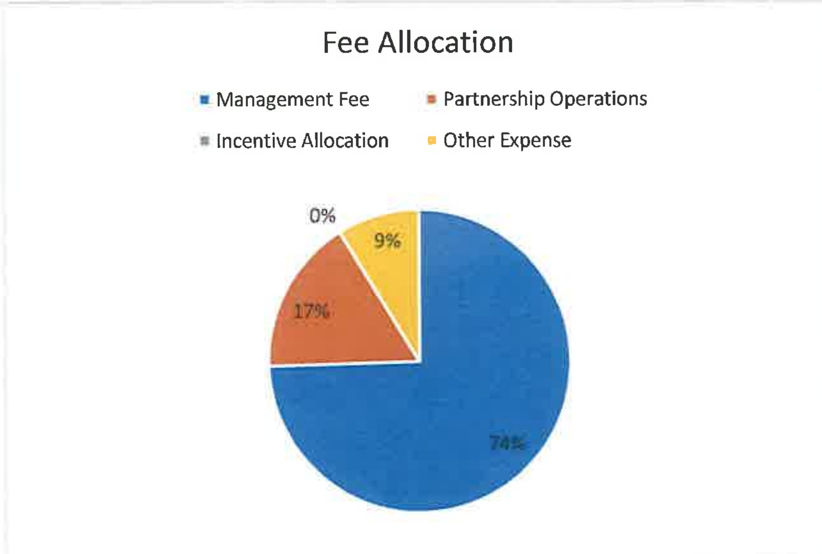
Performance Measurements Since Inception

Net IRR Since Investment Start Date:	5.04%
Investment Multiple (TVPI):	$1.18
Realization Multiple (DPI):	$0.47
Residual Value Paid In Multiple (RVPI):	$0.70
Paid In Capital Multiple (PIC):	1.11

Fee Analysis Since Inception

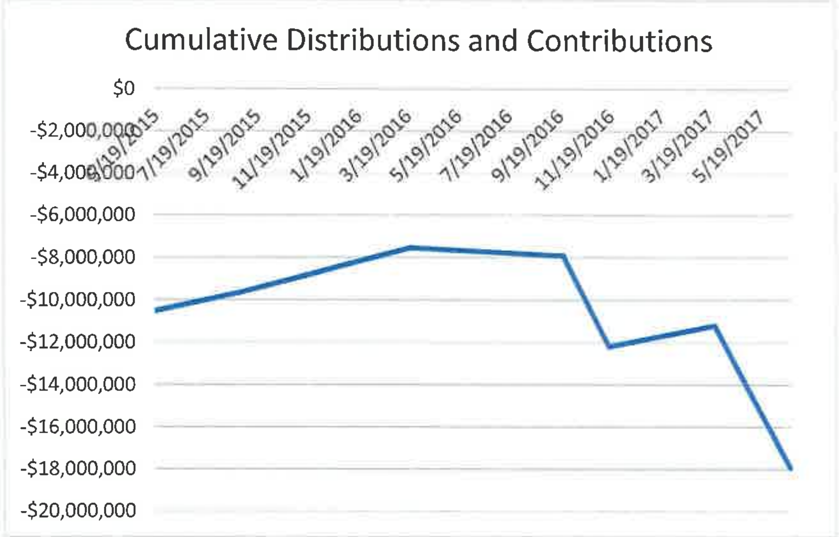
Fee Type	Fee
Management Fee	$2,144,208
Partnership Operations	$480,982
Incentive Allocation	-$102
Other Expense	$252,518
Total Fees	$2,877,606





North Haven Infrastructure II GP LP Auxiliary Reporting as of 9/30/2017

Original Commitment:	$50,000,000
Investment Start Date:	5/19/2015
Commitment Period End Date:	9/1/2019
Total Paid In Capital:	$21,934,339
Total Distributed Capital:	$3,998,333
Current Capital Balance:	$19,931,798
Management Fee:	1.35%
Incentive Allocation:	20.0%
Hurdle Rate:	8.0%
Target Net Returns:	10.5% - 13.5%
Max. Potential Fees Paid on Uncommitted Capital:	$727,171
Vintage Year:	2015

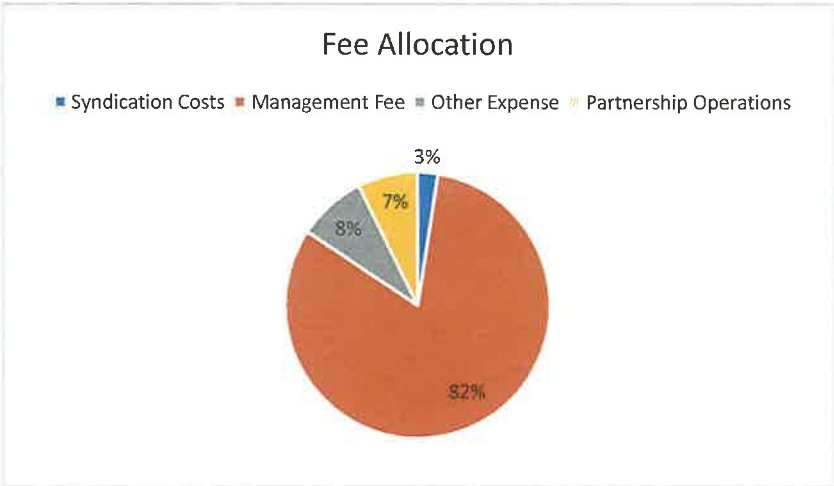


Performance Measurements Since Inception

Net IRR Since Investment Start Date:	7.55%
Investment Multiple (TVPI):	$1.09
Realization Multiple (DPI):	$0.18
Residual Value Paid In Multiple (RVPI):	$0.91
Paid In Capital Multiple (PIC):	43.9%

Fee Analysis Since Inception

Fee Type	Fee
Syndication Costs	$65,425
Management Fee	$2,153,145
Other Expense	$218,614
Partnership Operations	$191,754
Total Fees	$2,628,938



Morgan Stanley Prime Property Fund, L.L.C Auxiliary Reporting as of 9/30/2017

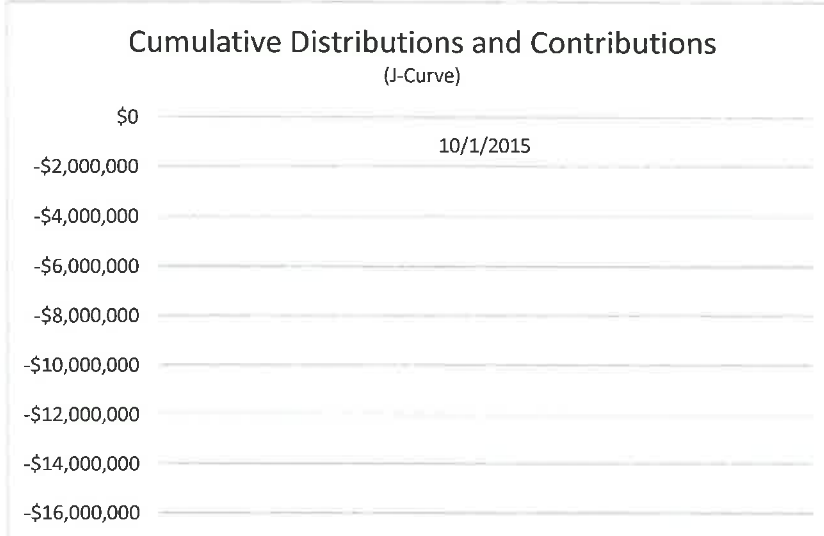
Original Commitment:	$15,000,000
Investment Start Date:	10/1/2015
Commitment Period End Date:	Open End
Total Paid In Capital:	$15,000,000
Total Distributed Capital:	$0
Current Capital Balance:	$17,599,725
Management Fee:	0.84%
Incentive Allocation:	Max 0.35%
Hurdle Rate:	Formula Based
Target Net Returns:	7.8%
Max. Potential Fees Paid on Uncommitted Capital:	N/A
Vintage Year:	1973

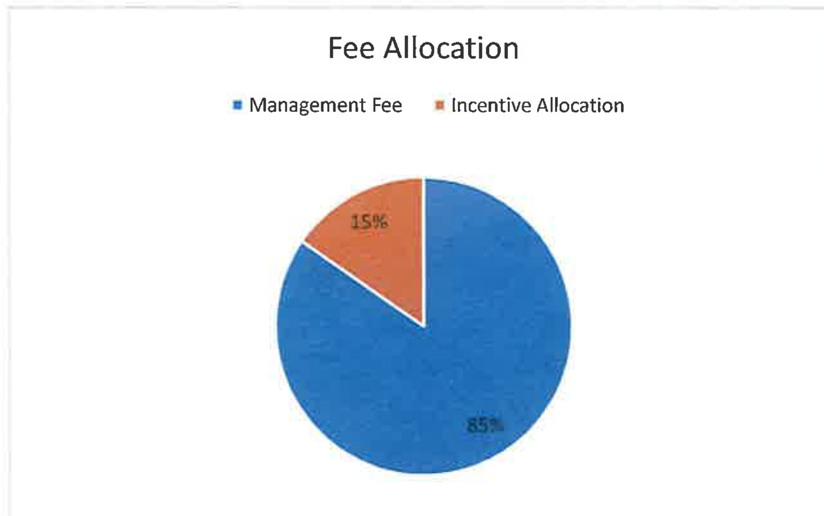
Performance Measurements Since Inception

Net IRR Since Investment Start Date:	8.32%
Investment Multiple (TVPI):	$1.17
Realization Multiple (DPI):	$0.00
Residual Value Paid In Multiple (RVPI):	$1.17
Paid In Capital Multiple (PIC):	100.0%

Fee Analysis Since Inception

Fee Type	Fee
Management Fee	$274,148
Incentive Allocation	$49,745
Total Fees	$323,893





Raven Asset-Based Opportunity Fund I L.P. Auxiliary Reporting as of 9/30/2017

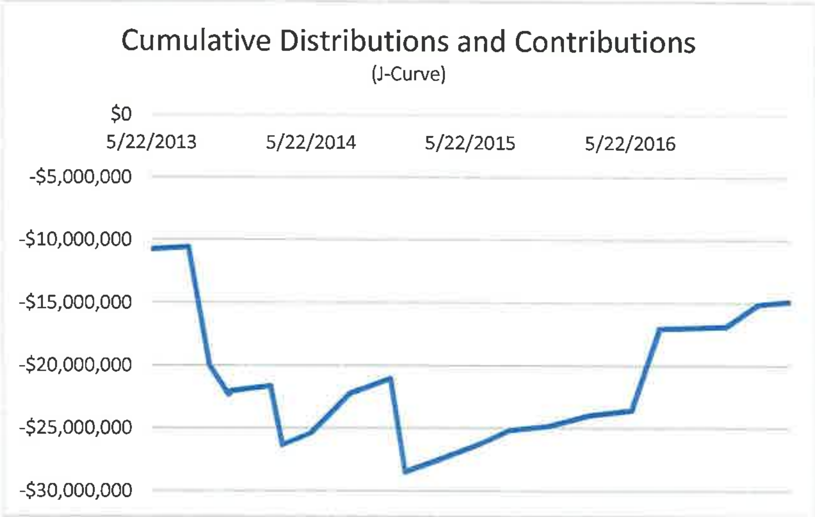
Original Commitment:	$40,000,000
Investment Start Date:	5/22/2013
Commitment Period End Date:	Period Over
Total Paid In Capital:	$34,668,305
Total Distributed Capital:	$19,789,319
Current Capital Balance:	$15,694,634
Management Fee:	1.75%
Carried Interest:	12.5%
Hurdle Rate:	8.0%
Target Net Returns:	13% - 17%
Vintage Year:	2012

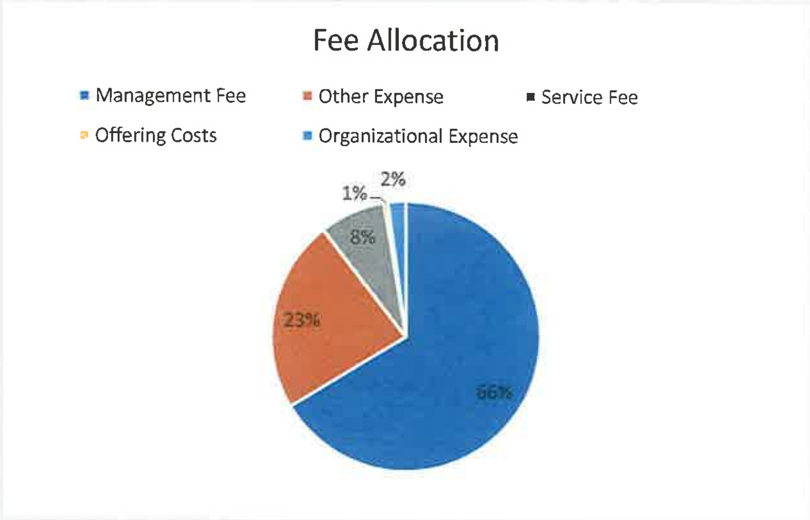
Performance Measurements Since Inception

Net IRR Since Investment Start Date:	0.87%
Investment Multiple (TVPI):	$1.02
Realization Multiple (DPI):	$0.57
Residual Value Paid In Multiple (RVPI):	$0.45
Paid In Capital Multiple (PIC):	0.87

Fee Analysis Since Inception

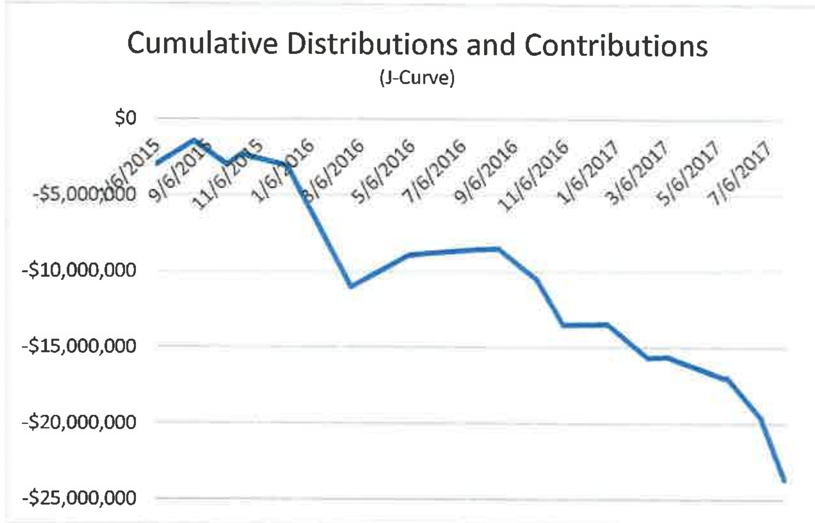
Fee Type	Fee
Management Fee	$2,869,035
Other Expense	$999,577
Service Fee	$339,601
Offering Costs	$22,211
Organizational Expense	$92,275
Total Fees	$4,322,699





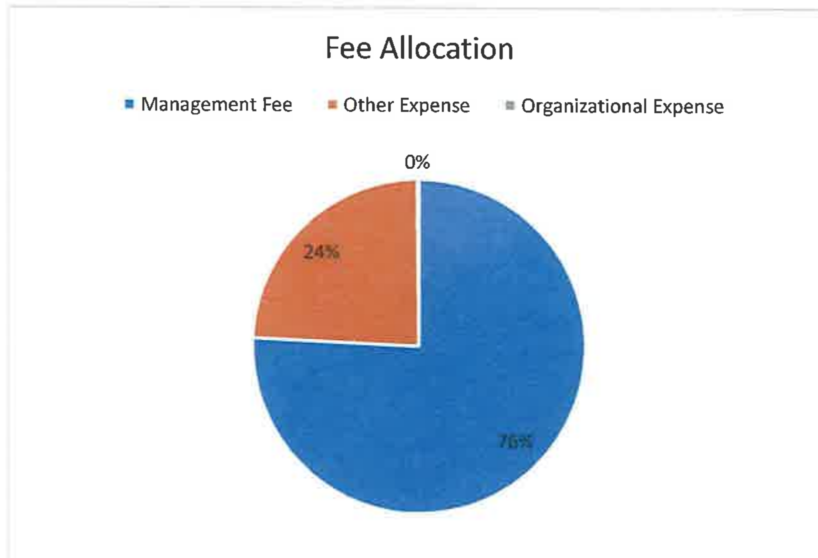
Raven Asset-Based Opportunity Fund III L.P. Auxiliary Reporting as of 9/30/2017

Original Commitment:	$50,000,000
Investment Start Date:	7/6/2015
Commitment Period End Date:	9/1/2019
Total Paid In Capital:	$28,517,612
Total Distributed Capital:	$4,836,320
Current Capital Balance:	$22,230,127
Management Fee:	1.75%
Carried Interest:	15.0%
Hurdle Rate:	8.0%
Target Net Returns:	15.0%
Max. Potential Fees Paid on Uncommitted Capital:	$1,679,329
Vintage Year:	2015



Performance Measurements Since Inception

Net IRR Since Investment Start Date:	-6.19%
Investment Multiple (TVPI):	$0.95
Realization Multiple (DPI):	$0.17
Residual Value Paid In Multiple (RVPI):	$0.78
Paid In Capital Multiple (PIC):	0.57

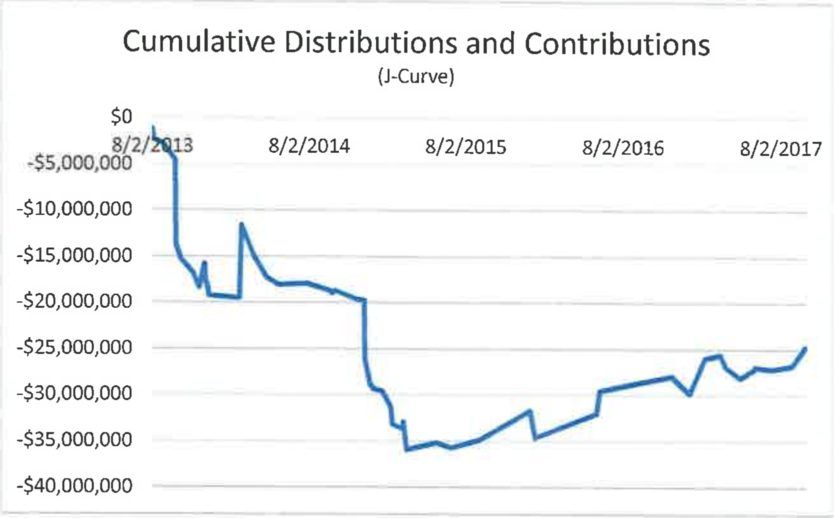


Fee Analysis Since Inception

Fee Type	Fee
Management Fee	$1,975,342
Other Expense	$628,106
Organizational Expense	$4,341
Total Fees	$2,607,789

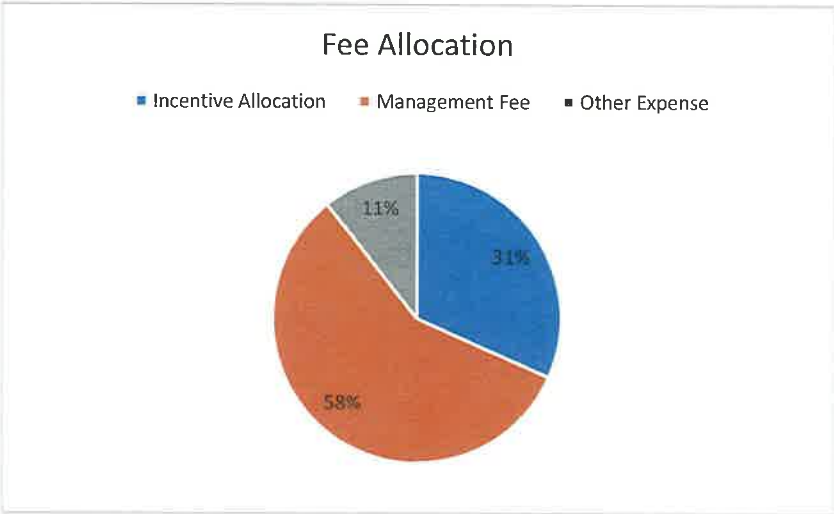
White Oak Pinnacle Fund L.P. Auxiliary Reporting as of 9/30/2017

Original Commitment:	$40,000,000
Investment Start Date:	8/2/2013
Commitment Period End Date:	Period Over
Total Paid In Capital:	$55,537,388
Total Distributed Capital:	$30,818,929
Current Capital Balance:	$35,915,029
Management Fee:	1.50%
Carried Interest:	20.0%
Hurdle Rate:	7.5%
Target Net Returns:	12.0%
Vintage Year:	2012



Performance Measurements Since Inception

Net IRR Since Investment Start Date:	9.11%
Investment Multiple (TVPI):	$1.20
Realization Multiple (DPI):	$0.55
Residual Value Paid In Multiple (RVPI):	$0.65
Paid In Capital Multiple (PIC):	1.39



Fee Analysis Since Inception

Fee Type	Fee
Incentive Allocation	$1,212,428
Management Fee	$2,209,963
Other Expense	$410,715
Total Fees	$3,833,106

Cash Flow Report

July 2017 through Sept 2017

Beginning Cash Balance*	$12,066,587
Cash Flow In	
Sales of Investments	$5,616,859
Plan Sponsor Contributions	$19,416,014
Employee Contributions	$6,874,778
Employee Buybacks	$53,397
Interest Income	$0
Rental Income	$24,898
Commission Recapture	$1,456
Litigation Recovery	$18,527
Total Cash Flow In	$32,005,929
Cash Flow Out	
Retirement Benefits	$29,576,375
StanCERA Payroll	$398,629
Operations Expense	$255,188
Pension Software	$12,440
Fixed Asset Purchases	$297,211
Member Refunds	$683,207
Post Retirement Death Benefits	$13,973
Burial Allowances	$85,000
Retiree Death - Return of Contributions	$24,257
Investment Consultant Fees	$47,916
Actuarial Fees	$3,481
Custodial Fees	$85,596
Audit Fees	$4,557
Legal Fees	$112,869
Other Fees	$0
Total Cash Flow Out	$31,600,699
Ending Cash Balance	$12,471,817
Change in Cash Balance	$405,230

** Prior end balances may not always equal current beginning balance due to subsequent refinement of data*

Functionally Focused Portfolio Shortfall Report

August 2017 Through October 2017

	Actual Cash Flows				Shortfall Over/(Under)	
Month	Benefits	Admin Expenses	Contributions	Actual Shortfall	Expected Shortfall	Cash Over/(Under)
Aug-17	$9,836,101	$1,019,603	$6,838,954	$4,016,750	$3,523,124	-$493,626
Sep-17	$9,881,179	$515,373	$11,620,109	-$1,223,557	$0	$1,223,557
Oct-17	$9,909,257	$875,428	$7,885,126	$2,899,559	$2,093,735	-$805,824
Totals	$29,626,537	$2,410,404	$26,344,189	$5,692,752	$5,616,859	-$75,893
Error Percentage						-1.35%

Verus

StanCERA Investment Program 12-Month Workplan

changes from prior month highlighted in yellow

	Time	
December, 2017	**0:35**	
Flash report and 12-month workplan	0:05	
Private markets 2nd session	0:30	
January, 2018	**0:05**	
Flash report and 12-month workplan	0:05	
February, 2018	**0:55**	
Flash report and 12-month workplan	0:05	
Quarterly investment performance report	0:30	
Real estate rebalacing recommendation	0:10	From December 2017 meeting
Private markets search launch	0:10	From March 2018 meeting
March, 2018	**0:35**	
Flash report and 12-month workplan	0:05	
Annual review of IPS and updated asset allocation table	0:30	From April 2018 meeting
April, 2018	**1:25**	
Flash report and 12-month workplan	0:05	
Annual review of FFP with updated capital market assumptions	0:20	From February 2018 meeting
Private markets finalist	1:00	
May, 2018	**1:05**	
Flash report and 12-month workplan	0:05	
Quarterly investment performance report	0:30	
Cash overlay education and search authorization	0:30	
June, 2018	**0:35**	
Flash report and 12-month workplan	0:05	
Transition management education and search authorization	0:30	
July, 2018	**0:35**	
Flash report and 12-month workplan	0:05	
Cash overlay search presentation & selection	0:30	
August, 2018	**1:05**	
Flash report and 12-month workplan	0:05	
Quarterly investment performance report	0:30	
Transition management search presentation & selection	0:30	
September, 2018	**0:05**	
Flash report and 12-month workplan	0:05	

StanCERA Investment Program 12-Month Workplan

changes from prior month highlighted in yellow

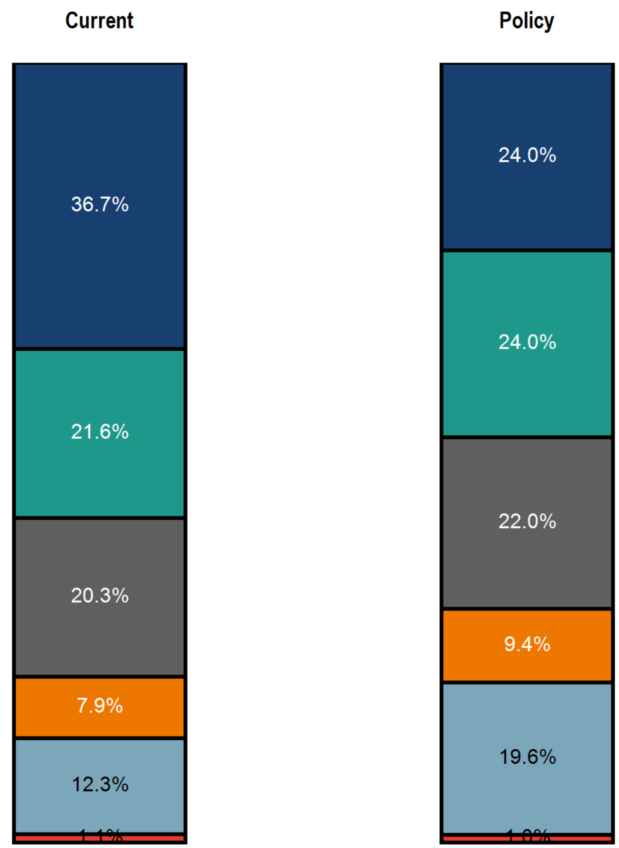
	Time
October, 2018	**0:05**
Flash report and 12-month workplan	0:05
November, 2018	**0:05**
Flash report and 12-month workplan	0:05

Total Fund
Flash Report (Net of Fees) - Preliminary

Period Ending: November 30, 2017

	Market Value	% of Portfolio	1 Mo	YTD	Fiscal YTD
Total Fund	**2,090,540,983**	**100.0**	**1.3**	**14.2**	**6.1**
Policy Index			*1.1*	*13.0*	*5.8*
US Equity	**766,718,180**	**36.7**	**2.3**	**18.3**	**8.8**
US Equity Blended			*3.0*	*19.3*	*10.1*
Russell 3000			*3.0*	*19.9*	*10.1*
Northern Trust Russell 1000	168,363,717	8.1	3.1	--	--
Russell 1000			*3.0*	*--*	*--*
BlackRock Russell 1000 Growth	116,362,938	5.6	3.0	29.2	13.3
Russell 1000 Growth			*3.0*	*29.2*	*13.3*
Jackson Square	159,474,900	7.6	1.3	27.8	11.7
Russell 1000 Growth			*3.0*	*29.2*	*13.3*
BlackRock Russell 1000 Value	94,933,990	4.5	3.1	12.2	7.1
Russell 1000 Value			*3.1*	*12.0*	*7.0*
Dodge & Cox-Equity	110,921,258	5.3	1.5	14.2	7.1
Russell 1000 Value			*3.1*	*12.0*	*7.0*
Capital Prospects	116,661,375	5.6	2.3	15.2	11.3
Russell 2000 Value			*2.9*	*8.9*	*8.3*
International Equity	**452,487,860**	**21.6**	**1.2**	**24.6**	**8.3**
MSCI ACWI ex USA Gross			*0.8*	*24.9*	*9.2*
LSV Asset Mgt	229,140,887	11.0	1.2	24.3	8.6
MSCI ACWI ex USA Gross			*0.8*	*24.9*	*9.2*
Fidelity	223,346,973	10.7	1.1	24.5	8.1
MSCI ACWI ex USA Gross			*0.8*	*24.9*	*9.2*
US Fixed Income	**425,383,547**	**20.3**	**-0.3**	**3.6**	**0.7**
BBgBarc US Aggregate TR			*-0.1*	*3.1*	*0.8*
Insight	90,302,415	4.3	-0.3	--	0.4
BBgBarc US Govt/Credit 1-5 Yr. TR			*-0.3*	*--*	*0.1*
DFA	276,534,130	13.2	-0.3	--	--
BofA Merrill Lynch US Corp & Gov 1-5 Yrs			*-0.3*	*--*	*--*
Northern Trust Intermediate Gov't Bond	43,583,010	2.1	-0.3	--	--
BBgBarc US Govt Int TR			*-0.3*	*--*	*--*
Northern Trust Long Term Gov't Bond	14,919,375	0.7	0.7	--	--
BBgBarc US Govt Long TR			*0.7*	*--*	*--*

	Current	%	Policy	%
Domestic Equity	$766,718,179	36.7%	$501,729,836	24.0%
International Equity	$452,487,860	21.6%	$501,729,836	24.0%
Domestic Fixed Income	$425,383,547	20.3%	$459,919,016	22.0%
Real Estate	$165,473,983	7.9%	$196,510,852	9.4%
Alternatives	$256,799,262	12.3%	$409,746,033	19.6%
Cash and Equivalents	$23,678,151	1.1%	$20,905,410	1.0%
Total	**$2,090,540,982**	**100.0%**	**$2,090,540,982**	**100.0%**



Policy Index (7/1/2017): 18.5% Russell 1000, 5.5% Russell 2000, 24% MSCI ACWI ex-USA, 19% BBgBarc US Gov't/Credit 1-3 Yr, 3% BBgBarc US Treasury 7-10 Yr, 7.7% NCREIF Property, 1.7% NCREIF Property +2%, 0.6% CPI +5%, 5% BBgBarc US High Yield +2%, 14% 60% MSCI ACWI / 40% BBgBarc Global Aggregate, 1% Citi 1 Month T-Bills. PIMCO, and Dodge and Cox-Fixed are in liquidation and residual cash balances are included in total fund market value. All data is preliminary.

Total Fund
Flash Report (Net of Fees) - Preliminary

Period Ending: November 30, 2017

	Market Value	% of Portfolio	1 Mo	YTD	Fiscal YTD
Real Estate	**165,473,983**	**7.9**	**2.0**	**6.9**	**3.0**
DJ US Select RESI			*3.1*	*3.7*	*2.3*
Prime Property Fund	17,993,624	0.9	0.0	6.5	2.2
NCREIF-ODCE			*0.0*	*5.4*	*1.9*
American Strategic Value Realty	22,647,938	1.1	0.0	7.6	2.2
NCREIF Property Index			*0.0*	*5.1*	*1.7*
BlackRock US Real Estate	111,201,084	5.3	3.1	3.7	2.3
DJ US Select RESI TR USD			*3.1*	*3.7*	*2.3*
Greenfield Gap	13,631,337	0.7			
Direct Lending	**94,599,764**	**4.5**			
Medley Capital	21,396,441	1.0			
Raven Capital	15,360,875	0.7			
Raven Opportunity III	24,963,131	1.2			
White Oak Pinnacle	32,879,317	1.6			
Risk Parity	**140,000,000**	**6.7**	**--**	**--**	**--**
60% MSCI ACWI Net/40% BBgBarc Global Aggregate			--	--	--
PanAgora Risk Parity Multi Asset	140,000,000	6.7	--	--	--
60% MSCI ACWI Net/40% BBgBarc Global Aggregate			--	--	--
Infrastructure	**22,199,498**	**1.1**			
MS Infrastructure Partners II	22,199,498	1.1			
Cash Account	23,678,151	1.1	0.1	0.8	0.3

	Current	%	Policy	%
Domestic Equity	$766,718,179	36.7%	$501,729,836	24.0%
International Equity	$452,487,860	21.6%	$501,729,836	24.0%
Domestic Fixed Income	$425,383,547	20.3%	$459,919,016	22.0%
Real Estate	$165,473,983	7.9%	$196,510,852	9.4%
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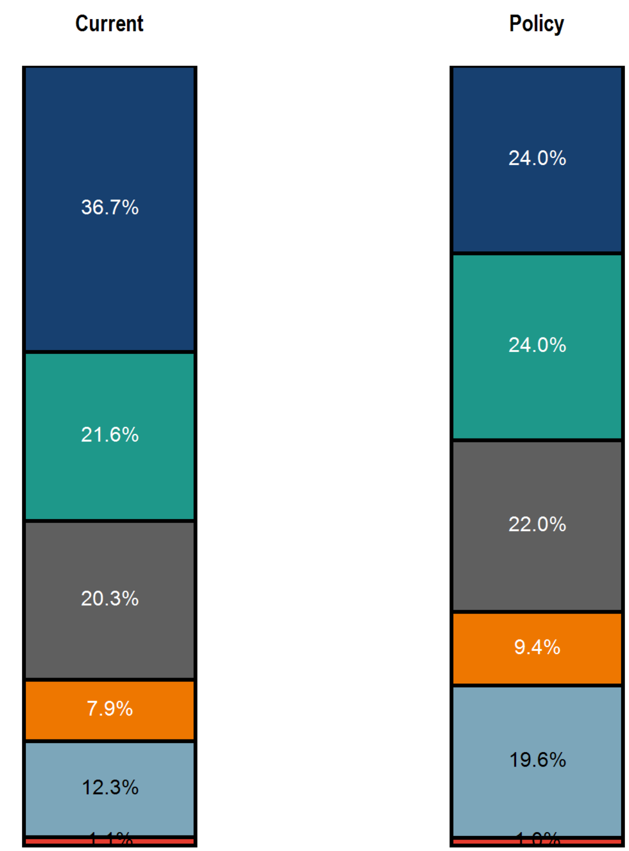
Total	**$2,090,540,982**	**100.0%**	**$2,090,540,982**	**100.0%**



Policy Index (7/1/2017): 18.5% Russell 1000, 5.5% Russell 2000, 24% MSCI ACWI ex-USA, 19% BBgBarc US Gov't/Credit 1-3 Yr, 3% BBgBarc US Treasury 7-10 Yr, 7.7% NCREIF Property, 1.7% NCREIF Property +2%, 0.6% CPI +5%, 5% BBgBarc US High Yield +2%, 14% 60% MSCI ACWI / 40% BBgBarc Global Aggregate, 1% Citi 1 Month T-Bills. PIMCO, and Dodge and Cox-Fixed are in liquidation and residual cash balances are included in total fund market value. All data is preliminary.

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The information presented may be deemed to contain forward-looking information. Examples of forward looking information include, but are not limited to, (a) projections of or statements regarding return on investment, future earnings, interest income, other income, growth prospects, capital structure and other financial terms, (b) statements of plans or objectives of management, (c) statements of future economic performance, and (d) statements of assumptions, such as economic conditions underlying other statements. Such forward-looking information can be identified by the use of forward looking terminology such as believes, expects, may, will, should, anticipates, or the negative of any of the foregoing or other variations thereon comparable terminology, or by discussion of strategy. No assurance can be given that the future results described by the forward-looking information will be achieved. Such statements are subject to risks, uncertainties, and other factors which could cause the actual results to differ materially from future results expressed or implied by such forward looking information. The findings, rankings, and opinions expressed herein are the intellectual property of Verus and are subject to change without notice. The information presented does not claim to be all-inclusive, nor does it contain all information that clients may desire for their purposes. The information presented should be read in conjunction with any other material provided by Verus, investment managers, and custodians.

Verus will make every reasonable effort to obtain and include accurate market values. However, if managers or custodians are unable to provide the reporting period's market values prior to the report issuance, Verus may use the last reported market value or make estimates based on the manager's stated or estimated returns and other information available at the time. These estimates may differ materially from the actual value. Hedge fund market values presented in this report are provided by the fund manager or custodian. Market values presented for private equity investments reflect the last reported NAV by the custodian or manager net of capital calls and distributions as of the end of the reporting period. These values are estimates and may differ materially from the investments actual value. Private equity managers report performance using an internal rate of return (IRR), which differs from the time-weighted rate of return (TWRR) calculation done by Verus. It is inappropriate to compare IRR and TWRR to each other. IRR figures reported in the illiquid alternative pages are provided by the respective managers, and Verus has not made any attempts to verify these returns. Until a partnership is liquidated (typically over 10-12 years), the IRR is only an interim estimated return. The actual IRR performance of any LP is not known until the final liquidation.

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Stanislaus County Employees' Retirement Association
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Back to Agenda

December 19, 2017
Retirement Board Agenda Item

TO: Retirement Board

FROM: Rick Santos, Executive Director

I. SUBJECT: 2017 Preliminary Actuarial Valuation

II. ITEM NUMBER: 8.a

III. ITEM TYPE: Discussion and Action

IV. STAFF RECOMMENDATION: Approve the 2017 Preliminary Actuarial Valuation (Attachment 1) and request the actuary finalize the results and bring back for final approval in early 2018

V. ANALYSIS:

Attachment 1 contains the actuary's preliminary 2017 Valuation Results. The preliminary actuarial valuation sets funded status as of June 30, 2017 and employer contribution rates for fiscal year 2018-2019. Today, the Board is simply being asked to concur with the preliminary results or if changes are deemed appropriate, to send the actuary back to make those changes and bring back a final valuation report for adoption at a later date.

The preliminary results show funded status on a market value basis as of June 30, 2017 at 74.3%. Despite a strong investment return, aggregate employer contribution rates are increasing by approximately 3% due mainly to the final year of the three-year rate phase-in implemented a couple years earlier after assumption changes associated with the discount rate and mortality tables. Additionally, only one-fifth of the asset gains were recognized in this valuation due to the asset smoothing methodology. However, roughly $5.6 million in asset gains are not currently being recognized in this valuation and are available when returns fall short of expectations in the future. From this point forward, the plan is now experiencing positive amortization of its unfunded liability.

VI. RISK: None

VII. STRATEGIC PLAN: Strategic Objective IV: Refine StanCERA's business and policy practices in ways that enhance stakeholder awareness, the delivery of member services and the ability of the Organization to administer the System effectively and efficiently.

VIII. ADMINISTRATIVE BUDGET IMPACT:

Rick Santos, Executive Director

Natalie Elliott, Interim Fiscal Services Manager

Stanislaus County Employees' Retirement System

12/19/17
ITEM 8.a.
ATTACHMENT I

2017 Preliminary Valuation Results

December 19, 2017

Graham A. Schmidt, ASA, EA, FCA

Topics for Discussion

- Preliminary 2017 Valuation Results
  - Executive Summary and Highlights
  - Changes Since Last Valuation
- Historical Review
- Next Steps
- Appendix

Stanislaus County Employees' Retirement Association
Summary of Key Valuation Results
(in millions)

Valuation Date	**June 30, 2016**		**June 30, 2017**	
Fiscal Year End	**2018**		**2019**	
Actuarial Liability	$	2,537.1	$	2,648.2
Actuarial Value of Assets*		1,845.8		1,968.2
Unfunded Actuarial Liability (Actuarial Value)	$	691.3	$	680.0
Funding Ratio (Actuarial Value)		72.8%		74.3%
Market Value of Assets		1,752.7		1,973.8
Unfunded Liability (Market Value)	$	784.4	$	674.4
Funding Ratio (Market Value)*		69.1%		74.5%
Net Employer Full Contribution Rate		31.95%		31.65%
Net Employer Contribution Rate with Phase-In		26.07%		31.65%

* Net of non-valuation reserves

Highlights

- The contribution rate increased by 2.94% of pay due to the final year of the three-year phase-in of the impact of assumption changes from the 2012-15 Experience Study
- Investment return on the market value of assets was 14.4%, net of investment expenses, compared to the 7.25% assumed rate of return
- The actuarial return on assets was 8.4%, which resulted in a $20.8 million gain and decreased the contribution rate by 0.57% of pay. There are approximately $5.6 million in deferred asset gains not yet recognized in the smoothed asset value.
- The FY16-17 actuarial cost exceeded the actual contribution by $19.4M (due to phase-in of assumption changes and one-year lag), increasing the contribution rate by 0.55% of pay

Highlights

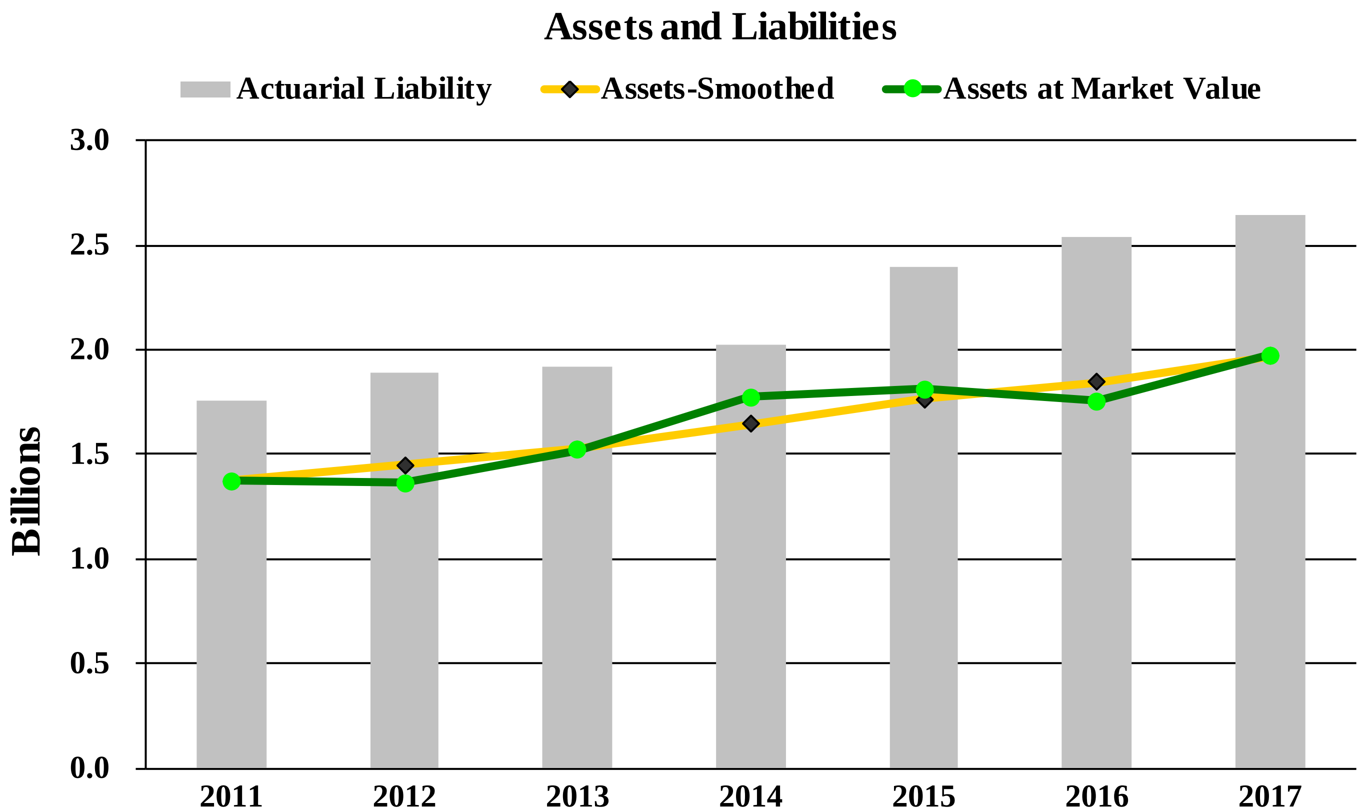
- The net impact of all other changes, including salary, demographic and minor programming changes, decreased the contribution rate by 0.28% of pay
  - Largest gains from salary increases lower than expected
  - Compounded by reduction in employer normal cost rate of ~0.2%, due to movement of new hires into PEPRA tiers
  - Because overall payroll grew by less than assumption (2.33% vs. 3.25% assumed) UAL rate increased by 0.19% of pay, but no impact on dollar amount
- The amortization period for the UAL has dropped to 19 years. The Plan no longer experiences “negative amortization” (i.e. the payment on the unfunded is more than the interest on the UAL). This means that the UAL is expected to decrease each year if all assumptions are realized.

Changes Since Last Valuation

Stanislaus County Employees' Retirement Association
Employer Contribution Reconciliation
(in millions)

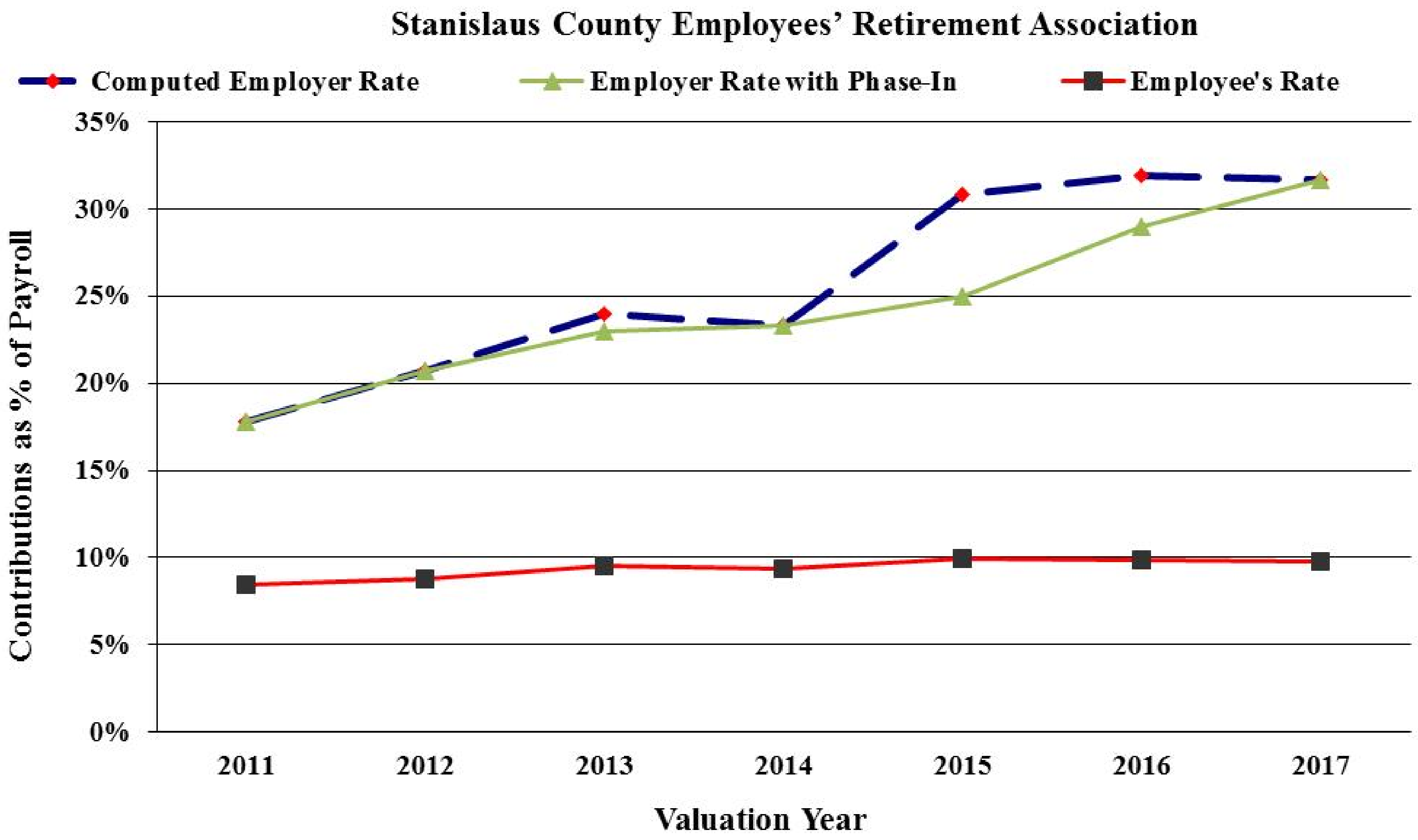
	Total	Normal Cost	Amortization	Admin Exp
FYE 2018 Net Employer Contribution Rate - with Phase-In	29.01%	11.54%	16.56%	0.91%
Impact of Phase-in	2.94%	0.43%	2.48%	0.03%
FYE 2018 Net Employer Contribution Rate - Full	31.95%	11.97%	19.04%	0.94%
Change Due to Asset Gain	-0.57%	0.00%	-0.57%	0.00%
Change Due to Contribution Shortfall	0.55%	0.00%	0.55%	0.00%
Change Due to Demographic Changes	-0.43%	-0.19%	-0.24%	0.00%
Change Due to Effect of Payroll on Amortization	0.19%	0.00%	0.19%	0.00%
Change Due to Programming Changes	-0.04%	-0.01%	-0.03%	0.00%
FYE 2019 Net Employer Contribution Rate - Full	31.65%	11.77%	18.94%	0.94%

Historical Review

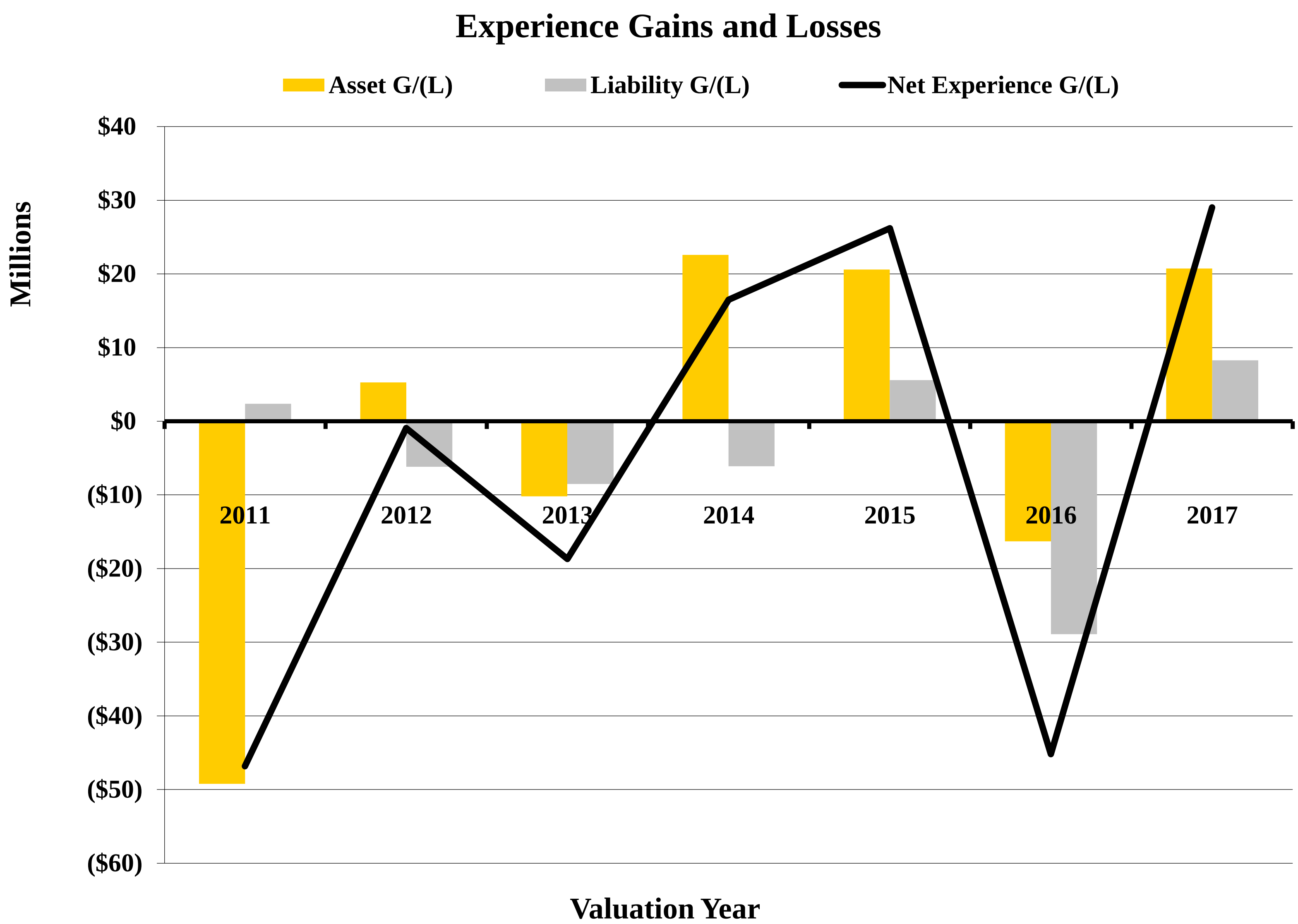


Valuation Year	2011	2012	2013	2014	2015	2016	2017
Funded Ratio	78.1%	76.9%	79.4%	81.1%	73.7%	72.8%	74.3%
UAL (Billions)	$ 0.39	$ 0.44	$ 0.40	$ 0.38	$ 0.63	$ 0.69	$ 0.68

Historical Review



Historical Review



Next Steps

- Finalize Actuarial Valuation results
  - Results shown are preliminary. Still proceeding with peer review.
- Adopt June 30, 2017 Actuarial Valuation and FY18-19 Contribution Rates

Appendix

Stanislaus County Employees' Retirement Association Membership Total			
	June 30, 2016	June 30, 2017	% Change
Actives	4,248	4,309	1.44%
Current Inactives	1,030	1,071	3.98%
In-Pay Members	3,651	3,746	2.60%
Total Members	8,929	9,126	2.21%
Active Member Payroll (FYE 2017/2018)	$ 263,395,718	$ 269,544,436	2.33%
Average Pay per Active	$ 62,005	$ 62,554	0.89%

Appendix

Stanislaus County Employees' Retirement Association Contributions	FYE 2018	FYE 2019	Change
Gross Normal Cost %	21.82%	21.52%	-0.30%
Employee Contributions	9.85%	9.75%	-0.10%
Employer Normal Cost %	11.97%	11.77%	-0.20%
Administrative Expense %	0.94%	0.94%	0.00%
Amortization of UAL %	19.04%	18.94%	-0.10%
Impact of Phase-in	-2.94%	0.00%	2.94%
Net Employer Phased Contribution Rate:	29.01%	31.65%	2.64%

Required Disclosures

The purpose of this presentation is to present the preliminary annual actuarial valuation results of the Stanislaus County Employees' Retirement Association. This presentation is for the use of the Stanislaus County Employees' Retirement Board in accordance with applicable law.

In preparing our presentation, we relied on information (some oral and some written) supplied by the Stanislaus County Employees' Association. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

We hereby certify that, to the best of our knowledge, this presentation and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices that are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this presentation. This presentation does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

This presentation was prepared exclusively for the Stanislaus County Employees' Retirement Board for the purpose described herein. This presentation is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

The actuarial assumptions, data and methods are those that will be used in the preparation of the actuarial valuation report as of June 30, 2017.

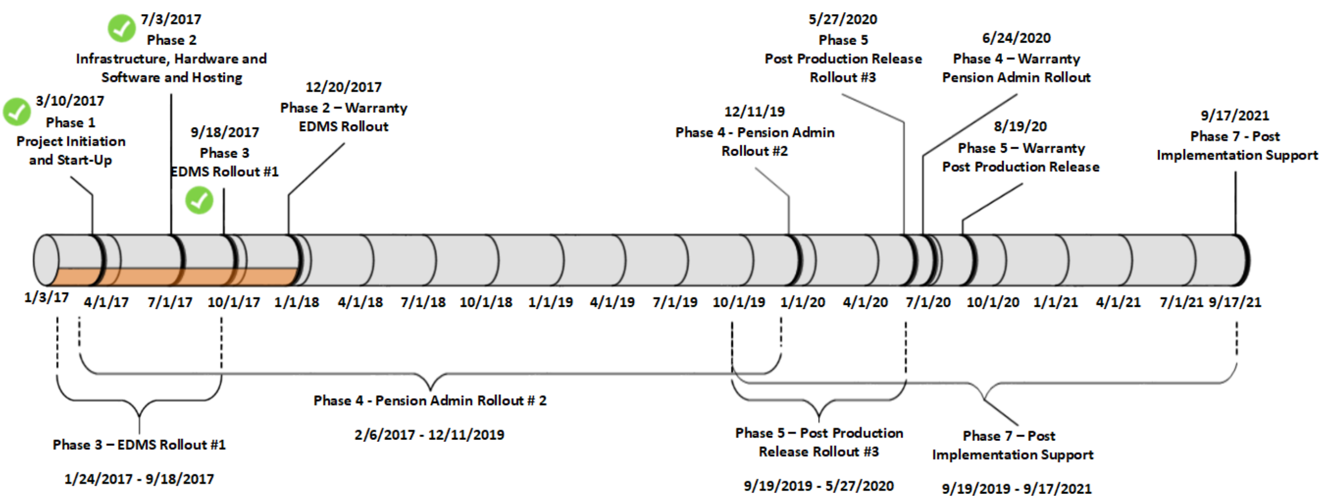
The assumptions reflect our understanding of the likely future experience of the Plans, and the assumptions as a whole represent our best estimate for the future experience of the Plans. The results of this presentation are dependent upon future experience conforming to these assumptions. To the extent that future experience deviates from the actuarial assumptions, the true cost of the plan could vary from our results.

Graham A. Schmidt ASA, FCA
Consulting Actuary

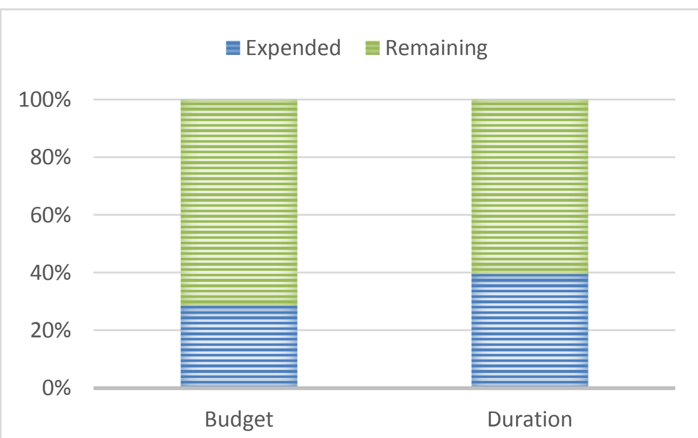
Jonathan Chipko, FSA, EA, FCA
Consulting Actuary

PAS Implementation
Linea Bi-weekly Status Update

Sponsor:	Rick Santos	**Report Date:**	12-15-2017



Baseline 12/01/2016 STATUS



Budget as of 09/30/17

Risks & Issues:

No high-level risks have been identified at this time.

Dawn Lea, StanCERA's Project Manager, has initiated an unexpected leave of absence. Rick Santos has stepped into Dawn's role with assistance from Natalie Elliott to compensate for Dawn's absence. Based on these immediate mitigation steps, project leadership has determined no anticipated impact to project delivery schedule. Impacts to project resources and staff workload will be considered and monitored continually.

Accomplishments:

- Worked with imaging design team in two work sessions to evaluate the need for new document types and improved scanning and indexing strategies.
- Continued to coordinate testing efforts of SMEs for Phase 4C UAT and group reviews of remaining Phase 4C BSRDs.
- Accomplished group reviews for remaining Phase 4C BSRDs.

Upcoming:

- Continue to develop and modify detailed business process documentation for document handling and imaging.
- Work with StanCERA SMEs to begin collecting and cataloging calculation examples.
- Continue to coordinate Phase 4C UAT progress.
- Continue to assist StanCERA with implementation of modifications to scanning and indexing procedures, including modifications to Arrivos imaging setup.

Ongoing Project Contributions

- Facilitate weekly Project Manager's meetings and create meeting minutes.
- Facilitate monthly Steering Committee Meetings and create meeting minutes.
- Participate in Tegrit work sessions, review meeting minutes, and compile resulting decision logs and action items.
- Regularly review action items for follow up and completion.
- Review and hold group review sessions for BSRD deliverables made by Tegrit.
- Track requirements, as discussed in work sessions and BSRDs, using the RTM and meet with StanCERA PM to update requirements confirmation.
- Manage and participate in system testing efforts, including review of test scripts, compiling of results, input of PIRs, and tracking of issue resolution.