



Notice of Public Meeting

The Board of Retirement

of the San Mateo County Employees' Retirement Association will meet on
Tuesday, March 28, 2017, at 10:00 A.M.

PUBLIC SESSION – The Board will meet in Public Session at 10:00 a.m.

- 1. Call to Order, Roll Call and Miscellaneous Business**
 - 1.1 Administration of Oath of Office to Newly Elected Trustee
- 2. Oral Communications**
 - 2.1 Oral Communications from the Board
 - 2.2 Oral Communications from the Public
- 3. Approval of the Minutes**
 - 3.1 Approval of Regular Board Meeting Minutes from February 28, 2017
- 4. Approval of the Consent Agenda***
 - 4.1 Disability Retirements (6)
 - Mary Burns
 - Florinda De Leon
 - Teresa Magana
 - Stephen Mroz
 - Teresa Thomas
 - Myra Yapching
 - 4.2 Survivor Death Benefits
 - 4.3 Service Retirements
 - 4.4 Continuances
 - 4.5 Deferred Retirements
 - 4.6 Member Account Refunds
 - 4.7 Member Account Rollovers
 - 4.8 Member Account Redeposits
 - 4.9 Report of Trustee Education Received
 - 4.10 Approval of Resolution Amending SamCERA's Placement Agent Policy
- 5. Benefit & Actuarial Services**
 - 5.1 Consideration of Agenda Items, if any, Removed from the Consent Agenda
- 6. Investment Services**
 - 6.1 Preliminary Monthly Portfolio Performance Report for the Period Ended February 28, 2017
 - 6.2 Report on Global Custodian (Northern Trust) Annual Review
 - 6.3 Report on Cash Overlay (Parametric Minneapolis) Annual Review
 - 6.4 Report on Update of Verus Capital Market Assumptions
 - 6.5 Report on Real Estate Debt Short-List Managers
 - 6.6 Approval of Proposed Alternative Investment (*to be heard in Closed Session, Confidential Under Gov. Code §54956.81 and §6254.26, see item C2*)
- 7. Board & Management Support**
 - 7.1 Report on April 25 and 26, 2017 Board-Staff Retreat Planning
 - 7.2 Report on Progress of SamCERA's IT Projects
 - 7.3 Approval of SamCERA Voting Delegate and Alternates for SACRS Spring 2017 Business Meeting
- 8. Management Reports**
 - 8.1 Chief Executive Officer's Report
 - 8.2 Assistant Executive Officer's Report
 - 8.3 Chief Investment Officer's Report
 - 8.4 Chief Legal Counsel's Report

Notice of Public Meeting

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CLOSED SESSION – The Board may meet in closed session prior to adjournment

- C1 Consideration of Disability Items, if any, removed from the Consent Agenda
- C2 Approval of Proposed Alternative Investment (*Confidential Under Gov. Code §54956.81 and §6254.26 – see also item 6.6*)

10. Adjournment in Memory of the Following Deceased Members:

Peregoy, Michele	January 16, 2017	Sheriff's
Maes, Anna	February 4, 2017	Superior Court
Ruble, Richard	February 6, 2017	General Services
Payton, Deborah	February 7, 2017	Probation
Brown, Esther	February 20, 2017	Library
Mitvalsky, Derek	February 21, 2017	Parks & Recreation
Whitehead, James	February 21, 2017	District Attorney's Office
Lauron, Antonio	February 24, 2017	Public Works
Gardner, Betty	March 3, 2017	County Library
Patane, Carmen	March 3, 2017	Superior Court
Hypes, Margaret	March 12, 2017	Social Services



Scott Hood, Chief Executive Officer

Posted: March 22, 2017

(* ALL ITEMS ON THE CONSENT AGENDA ARE APPROVED BY ONE ROLL CALL MOTION UNLESS A REQUEST IS MADE BY A BOARD MEMBER THAT AN ITEM BE WITHDRAWN OR TRANSFERRED TO THE REGULAR AGENDA. ANY ITEM ON THE REGULAR AGENDA MAY BE TRANSFERRED TO THE CONSENT AGENDA. ANY 4.1 ITEMS REMOVED FROM THE CONSENT AGENDA WILL BE TAKEN UP UNDER CLOSED SESSION; ALL OTHER ITEMS REMOVED FROM THE CONSENT AGENDA WILL BE TAKEN UP UNDER ITEM 5.1.)

THE BOARD MEETS AT 100 MARINE PARKWAY, SUITE 160, WHICH IS LOCATED ON THE SE CORNER OF TWIN DOLPHIN & MARINE PARKWAY IN REDWOOD CITY. Detailed directions are available on the "Contact Us" page of the website www.samcera.org. Free Parking is available in all lots in the vicinity of the building. A copy of the Board of Retirement's open session agenda packet is available for review at the SamCERA offices and on our website unless the writings are privileged or otherwise exempt from disclosure under the provisions of the California Public Records Act. Office hours are Monday through Thursday 7 a.m. – 6 p.m.

IN COMPLIANCE WITH THE CALIFORNIA GOVERNMENT CODE AND THE AMERICANS WITH DISABILITIES ACT: SamCERA's facilities and board and committee meetings are accessible to individuals with disabilities. Contact SamCERA at (650) 599-1234 at least three business days prior to the meeting if (1) you need special assistance or a disability-related modification or accommodation, including auxiliary aids or services, in order to participate in this meeting; or (2) you have a disability and wish to receive the agenda, meeting notice, agenda packet or other writings that may be distributed at the meeting in an alternative format. Notification in advance of the meeting will enable SamCERA to make reasonable arrangements to ensure full accessibility to this meeting and the materials related to it.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 28, 2017

Agenda Item 1.1

TO: Board of Retirement

FROM: Scott Hood, Chief Executive Officer



SUBJECT: Administration of the Oath of Office to Newly Elected Trustees

In this agenda item, the Trustee Oath of Office will be given to **Al David**, elected to fill the remaining term of the Third Member Seat.



Mark Church

Chief Elections Officer & Assessor-County Clerk-Recorder

555 County Center
Redwood City, CA 94063
phone 650.363.4988 fax 650.363.1903
email mchurch@smcare.org
web www.smcare.org

March 17, 2017

Scott Hood
Chief Executive Officer
San Mateo County Board of Retirement
100 Marine Parkway, Suite 125
Redwood Shores, CA 94065

Subject: Certificate of the Chief Elections Officer for the San Mateo County Board of Retirement Regular Election held on Monday, March 13, 2017

Dear Mr. Hood:

Attached hereto is the Chief Elections Officer's Certification of the March 13, 2017 San Mateo County Board of Retirement Regular Election.

It has been a pleasure to work with you in conducting this election and I look forward to serving you again in future elections.

Sincerely,

A handwritten signature in blue ink that reads "Mark Church".

Mark Church

Enclosures

cc. Jim Irizarry, Assistant Chief Elections Officer & Assessor-County Clerk-Recorder

CERTIFICATE OF THE CHIEF ELECTIONS OFFICER

In the Matter of the CANVASS OF VOTES CAST)
at the SAN MATEO COUNTY BOARD OF)
RETIREMENT REGULAR ELECTION held on March 13, 2017)

I, **MARK CHURCH**, Chief Elections Officer of the County of San Mateo, State of California hereby certify:

THAT a regular election was held on Monday, March 13, 2017 for the purpose of electing one (1) GENERAL MEMBER to the THIRD position on the SAN MATEO COUNTY BOARD OF RETIREMENT; I caused to have processed and recorded the votes from the canvass of all ballots cast at said election.

I **HEREBY FURTHER CERTIFY** that the record of votes cast at said election are set forth in Exhibit "A" attached hereto and incorporated herein by reference as though fully set forth at length.

NOW, THEREFORE, pursuant to Regulation 4.17, the following qualified person is declared the winner and is required to be seated on the Board of Retirement as the Third General Member:

Al David, Third Member

IN WITNESS WHEREOF, I hereunto affix my hand and seal this 17th day of March 2017 and filed this date with the Chief Executive Officer of the SAN MATEO COUNTY BOARD OF RETIREMENT.



Mark Church
Chief Elections Officer &
Assessor-County Clerk-Recorder

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
FEBRUARY 28, 2017 – REGULAR BOARD MEETING MINUTES

1702.1 **Call to Order, Roll Call and Miscellaneous Business**

Call to Order: Mr. Paul Hackleman, Chair, called the Regular Meeting of the Board of Retirement to order at 10:00 a.m.

Roll Call:

Present: Sandie Arnott, Mark Battey, Ben Bowler, Paul Hackleman, Susan Lee (for the vacant Third Seat), David Spinello, Eric Tashman and Shirley Tourel.

Excused: Kurt Hoefer.

Alternates present: Alma Salas, Susan Lee.

Staff: Scott Hood, Michael Coultrip, Brenda Carlson, Gladys Smith, Elizabeth LeNguyen, Barbara Edwards, Lili Dames, Doris Ng, and Kristina Perez.

Consultants: Margaret Jadallah, Stephen Quirk and Joe Abdou (*Verus*).

1702.2.1 **Oral Communications from the Board:** None.

1702.2.2 **Oral Communications from the Public:** None.

1702.3.1 **Approval of Board Meeting Minutes from January 24, 2017:** Mr. Hackleman asked if there were any changes or corrections to the minutes from January 24, 2017. None were noted.

Action: Ms. Arnott moved to approve the minutes from January 24, 2017; the motion was seconded by Mr. Battey and the motion carried with a vote of 8-0, with trustees Arnott, Battey, Bowler, Hackleman, Lee (for vacant Third Seat), Spinello, Tashman, and Tourel in favor; none opposed.

1702.4.0 **Approval of the Consent Agenda:** Mr. Hackleman asked if there were any items to be removed from the Consent Agenda, and the disability application of Maria Vallero was removed (see Item 5.1).

Action: Mr. Bowler moved to approve the remaining items on the Consent Agenda, and the motion was seconded by Ms. Tourel. The motion carried with a vote of 8-0, with trustees Arnott, Battey, Bowler, Hackleman, Lee (for vacant Third Seat), Spinello, Tashman, and Tourel in favor; none opposed.

1702.4.1 **Disability Retirements:**

- a) The Board found that Sandra Peralta is (1) permanently incapacitated for the performance of her usual and customary duties as a Medical Office Assistant, (2) found that her disability was the result of an injury arising out of and in the course of her employment and (3) granted her application for a service-connected disability retirement.
- b) The Board found that Dawn Spray is (1) permanently incapacitated for the performance of her usual and customary duties as a Communications Dispatcher II, (2) found that her disability was the result of an injury arising out of and in the course of her employment and (3) granted her application for a service-connected disability retirement.
- c) The Board found that Susendra Singh is (1) permanently incapacitated for the performance of his usual and customary duties as a Food Service Worker, (2) found that his disability was the result of an injury arising out of and in the course of his employment and (3) granted his application for a service-connected disability retirement.

1702.4.2 **Survivor Death Benefits:** None.

1702.4.3 **Service Retirements:**

The Board ratified the actions as listed below for the following members regarding service retirements:

Member Name	Effective Retirement Date	Department
Alvarez, Miriam M	December 30, 2016	Superior Court
Benitez, Lucy A	December 31, 2016	Medical Center
Finepolo, Sulieti	December 31, 2016	Superior Court
Flavetta, Elaine A	December 31, 2016	Deferred Public Works
Grossman, Aaron	December 31, 2016	Deferred from Sheriff's
Munoz, Esther M	December 9, 2016	Human Services Agency
Newkirk, Ruth D	January 2, 2017	Deferred from Information Services
Smith, Robin	December 15, 2016	Sheriff's
Theisen, Linda Ruth	January 1, 2017	Deferred from Medical Center
Vite, Emie Fernandez	December 12, 2016	Deferred from Medical Center
Williams, Nihcole C	December 20, 2016	Deferred from VRS
Zigabarra, Mary P	December 31, 2016	Child Support Services

1702.4.4 **Continuances:**

The Board ratified the actions as listed below for the following members regarding continuances:

Survivor's Name	Beneficiary of:
Lewis, Robert	Lewis, Sylvia

1702.4.5 **Deferred Retirements:**

The Board ratified the actions as listed below for the following members regarding deferred retirements:

Member Name	Retirement Plan Type
Gonzalez, Amada	S4, Vested
Guerrero, Gesel	G4, Vested
Jackson, Louvenia C.	G4, Vested
Lewis, Vernon	G4, Vested
Perez, Emma L.	G4, Vested – Reciprocity
Yen, Stephen	G5, Non-vested – Reciprocity

1702.4.6 **Member Account Refunds:**

The Board ratified the actions as listed below for the following members regarding refunds:

Member Name	Retirement Plan Type
Cross, Christina	G7, Non-vested
Hicks, Schynell	P5, Non-vested
Lau, Brandon	G4, Vested
Poyatos, Marguerite	G7, Non-vested

1702.4.7 **Member Account Rollovers:**

The Board ratified the actions as listed below for the following members regarding rollovers:

Member Name	Retirement Plan Type
Manning, Amani	G7, Non-vested
Seder, Derek	G7, Non-vested

1702.4.8 **Member Account Redeposit:** None.

1702.4.9 **Acceptance of Semi-Annual Compliance Certification Statements for the Period Ended December 31, 2016:** The Board accepted the semi-annual Compliance Certification Statements for SamCERA's non-alternative investment managers, as of December 31, 2016.

1702.4.10 **Reaffirm SamCERA's Existing Mission and Goals:** The Board reaffirmed SamCERA's Mission and Goals as presented.

- 1702.4.11 **Approval of Resolution Amending SamCERA's Portable Electronic Device Policy:** The Board adopted a resolution amending SamCERA's Portable Electronic Device Policy.
- 1702.4.12 **Reaffirm SamCERA's Securities Litigation Policy:** The Board reaffirmed SamCERA's Securities Litigation Policy as presented.
- 1702.5.1 **Consideration of Agenda Items, if any, removed from the Consent Agenda:** The disability application for Maria Vallero was removed from the Consent Agenda and voted upon separately, as Ms. Tourel was recused.

Action: Mr. Battey made a motion to approve Staff's recommendation which found Maria Vallero was permanently incapacitated for the performance of her usual and customary duties as a Lead Fiscal Office Assistant; and found her disability is the result of an injury arising out of and in the course of her employment; and granted her application for a service-connected disability retirement. The motion was seconded by Ms. Arnott and carried with a vote of 7-0-1, with trustees Arnott, Battey, Bowler, Hackleman, Lee (for vacant Third Seat), Spinello, and Tashman, all in favor; none opposed; Ms. Tourel was recused.

- 1702.6.1 **Preliminary Monthly Portfolio Performance Report for the Period Ended January 31, 2017:** Mr. Coultrip discussed the preliminary monthly performance report with the Board. He reported that SamCERA's net preliminary return for January 2017 was 1.7%, while the preliminary trailing twelve-month return ending January 2017 was 13.4% net. This item was informational and for discussion only, no action was taken.
- 1702.6.2 **Quarterly Investment Performance Report for the Period Ended December 31, 2016:** Mr. Coultrip, Mr. Quirk and Ms. Jadallah reviewed the quarterly report with the Board. They reviewed manager performance, and discussed market trends and other information from within the report. The 4th quarter net total return for the SamCERA portfolio was 0.9%, which was 20 bps lower than the 1.1% policy benchmark return. This item was informational and for discussion only, no action was taken.

The Board adjourned into closed session at 10:25 a.m. to hear Item 6.3, Approval of Proposed Alternative Investments, and Item C3 Conference with Legal Counsel-Existing Litigation (out of order).

The meeting was reconvened into open session at 10:59 a.m. and Ms. Carlson reported the following actions were taken by the Board while in Closed Session.

- 1702.6.3 **Approval of Proposed Alternative Investments** (*heard in Closed Session, Confidential Under Gov. Code §54956.81 and §6254.26*): Ms. Carlson reported that it was moved and seconded, to approve a transfer in the amount of \$132 million currently invested in DE Shaw's Core Alpha Extension Fund, to be transferred from Series A to Series B. The motion was carried by a vote of 8-0, with trustees Arnott, Battey, Bowler, Hackleman, Lee (for vacant Third Seat), Spinello, Tashman, and Tourel in favor; none opposed.
- 1702 C3 **Conference with Legal Counsel-Existing Litigation** (*heard in Closed Session Confidential Under Gov. Code §54956.9*) CalPERS v. ANZ Securities, Inc., U.S. Supreme Court case: No. 16-373: Ms. Carlson reported that there was a motion and second, to approve SamCERA's joining on the amicus brief in the matter of CalPERS v. ANZ Securities, Inc. The motion was carried by a vote of 8-0, with trustees Arnott, Battey, Bowler, Hackleman, Lee (for vacant Third Seat), Spinello, Tashman, and Tourel in favor; none opposed.

- 1702.6.4 **Report on Proxy Voting Summary Ended December 31, 2016:** Ms. Ng presented the report on proxy voting. She stated going forward the proxy voting report would be submitted to the Board on the Consent Agenda, on an annual basis. This item was informational and for discussion only, no action was taken.
- 1702.7.1 **Acceptance of Preliminary Semi-Annual Financial Report for Period Ended December 31, 2016:** Ms. Chow reported that SamCERA's Fiduciary net position as of December 31, 2016 was \$3.7 billion; reflecting an increase of \$169 million, or 5%. This item was informational and for discussion only, no action was taken.
- 1702.7.2 **Acceptance of Preliminary Semi-Annual Budget Report for Period Ended December 31, 2016:** Ms. Chow reviewed the FY 2016-17 budget report with the Board. This item was informational and for discussion only, no action was taken.
- 1702.7.3 **Report on April 25 and 26, 2017 Board-Staff Retreat Planning:** Mr. Hood updated the Board on the schedule and plans for the Board-Staff retreat. This item was informational and for discussion only, no action was taken.

The meeting was adjourned for lunch at 11:25 a.m., and was reconvened at 11:54 a.m.

- 1702.8.1 **Chief Executive Officer's Report:** Mr. Hood alerted the Board to items found in their Day of Meeting folder, including information about the upcoming SACRS election. He remarked on the new CALAPRS website, leadership development with Joanne Bond and the 360 evaluations for the Chief Legal Counsel and Chief Investment Officer. Mr. Hood commented on items that would appear on next month's meeting agenda including an update on SamCERA's IT projects and a final look at the retreat agenda and plans.
- 1702.8.2 **Assistant Executive Officer's Report:** Ms. Smith reported that the RFP for a financial education provider was distributed and she anticipates that the Board will be able to approve the contract at the June Board meeting. She reported that MySamCERA, the member self-service portal, is up and ready and log-in instructions will be sent to active, retired and deferred members. Ms. Perez reminded Board members of upcoming educational events, and annual Form 700 filings.
- 1702.8.3 **Chief Investment Officer's Report:** Mr. Coultrip reported that staff is reviewing RFP submissions received from seven investment consultant services firms and he expects to have a recommendation for the Ad-Hoc committee in late March. He stated that annual reviews of Parametric and Northern Trust would be held on March 2nd. Mr. Coultrip updated the Board on the search for a private credit manager and for a strategic credit manager. He commented on items that would appear on next month's meeting agenda including an update of Verus' capital market assumptions, and a report on the "short-list" candidates from the real estate debt manager search.
- 1702.8.4 **Chief Legal Counsel's Report:** Ms. Carlson updated the Board on the Court of Appeal decision in *O'Neal v. Stanislaus Employees' Retirement Assn* which addresses the fiduciary duty of retirement board trustees in the use of non-valuation funds in determination of the amortization rate for unfunded liabilities. She also addressed AB 1661 which requires certain officials of cities, counties and special districts to receive sexual harassment prevention training.
- C1 **Consideration of Disability Items, if any, removed from the Consent Agenda:** See report on Item 5.1 above.
- C2 **Approval of Proposed Alternative Investments (Confidential Under Gov. Code §54956.81 and §6254.26):** See report on Item 6.3.

1702.9 **Report on Actions Taken in Closed Session:** See items C3 and 6.3.

1702.10 **Adjournment:** Mr. Hackleman adjourned the meeting at 12:34 p.m. in memory of the deceased members listed below.

Hollins, Carolyn	January 1, 2017	Courts
Hutchin, Maxine	January 8, 2017	Coroner's Office
Lowe, Edith	January 8, 2017	Sheriff's
Abaya, Teresita	January 12, 2017	Controller's Office
Perry, Robert	January 14, 2017	Information Systems Dept
Kendrick, George	January 18, 2017	Housekeeping
Montes, Rosa	January 19, 2017	Health Dept
Dutrieuille, William	January 20, 2017	Health & Welfare
Haslinger, Brian	January 23, 2017	Sheriff's
Rhein, Thomas	January 23, 2017	Hospital
Pestanta, Dorothy	January 24, 2017	Public Health
Jensen, Anne	January 28, 2017	Environmental Health
Calderon, Cesar	February 1, 2017	Medical Center
Ward, Margaret	February 2, 2017	Chope Hospital
Bullert, Marilyn	February 10, 2017	Health Dept

Scott Hood
Chief Executive Officer

Kristina Perez
Retirement Executive Secretary

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 28, 2017

Agenda Items 4.1- 4.9

TO: Board of Retirement

FROM: Elizabeth LeNguyen, Retirement Benefits Manager



SUBJECT: Approval of Consent Agenda Items 4.1 – 4.9

4.1 Disability Retirements

- a) The Board (1) accept the proposed findings and recommendations of the Hearing Officer, John Simonson, (2) find that **Mary Burns** is able to perform her duties as a Corrections Officer and (3) deny her application for a service-connected disability retirement.
- b) The Board find that **Florinda De Leon** is (1) not permanently incapacitated for the performance of her usual and customary duties as a Fiscal Office Specialist, and (2) deny her application for a service-connected disability retirement.
- c) The Board (1) accept the proposed findings and recommendations of the Hearing Officer, George Camerlengo, (2) find that **Teresa Magana** is able to perform her duties as a Medical Assistant II and (3) deny her application for a service-connected disability retirement.
- d) The Board find that **Stephen Mroz** is (1) permanently incapacitated for the performance of his usual and customary duties as a Deputy Sheriff, (2) find that his disability was the result of an injury arising out of and in the course of his employment and (3) grant his application for a service-connected disability retirement.
- e) The Board find that **Teresa Thomas** is (1) permanently incapacitated for the performance of her usual and customary duties as a Court Reporter, (2) find that her disability was the result of an injury arising out of and in the course of her employment and (3) grant her application for a service-connected disability retirement.
- f) The Board find that **Myra Yapching** is (1) permanently incapacitated for the performance of her usual and customary duties as a Human Resources Manager I, (2) find that her disability was not a result of an injury arising out of and in the course of her employment, (3) deny her application for a service-connected disability retirement, and (4) grant her a non-service-connected disability retirement.

4.2 Survivor Death Benefits

None

4.3 Service Retirements

The Board ratifies the actions as listed below for the following members regarding service retirements:

Member Name	Effective Retirement Date	Department
Avila Summerville, Cristina	January 8, 2017	District Attorney
Bates, Robert	January 25, 2017	Deferred from Sheriff's
Cisneros, Maria E	January 28, 2017	Medical Center
De La Rocha, Dana	January 17, 2017	Deferred from Sheriff's
Federico, Judith	February 1, 2017	Aging & Adult Services
Freitas, Sheralynn	January 31, 2017	Deferred from Probation
Gorham, Danamaya	January 13, 2017	Medical Center
Griffin, Marie	January 4, 2017	Superior Court
Guier, Holly	December 27, 2016	Deferred from Environmental Health
Holman, Richard	February 1, 2017	Human Services Agency
Isaacs, Jean	January 12, 2017	Deferred from Social Services
Magana, Octavio	January 27, 2017	Deferred from Probation
Mason-Cook, Patricia	January 28, 2017	Human Services Agency
McFarren-Nave, Ellen	January 27, 2017	(Plan 3 Service Retirement Activated)
Moran, Bruce	December 31, 2016	Deferred from Sheriff's
Pedemonte, Eduardo	January 15, 2017	Probation
Reddy, Harish	January 28, 2017	Human Services Agency
Schumaker, Larry	January 29, 2017	Sheriff's
Shirk, Peter	January 26, 2017	Deferred from ARC
Simmons, Lorraine	January 28, 2017	Sheriff's
Tissier, Adrienne	January 3, 2017	Board of Supervisors
Tse, Conny	January 28, 2017	Human Services Agency
Wales, Roxane	January 7, 2017	Superior Court
Young, Keith	January 6, 2017	Human Services Agency

4.4 Continuances

The Board ratifies the actions as listed below for the following members regarding continuances:

Survivor's Name	Beneficiary of:
Theiss, Margie	Theiss, Leonard

4.5 Deferred Retirements

The Board ratifies the actions as listed below for the following members regarding deferred retirements:

Member Name	Retirement Plan Type
Ernst, Heidemarie	G4, Vested
Quinn, Patrick B	G5, Non-vested - Reciprocity
Valdez, Anthony	G7, Non-vested - Reciprocity
Margarita, Venecia	G4, Vested - Reciprocity
Campos, Robert	G5, Non-vested - Reciprocity
Kumar, Kritika	G5, Non-vested - Reciprocity
Perez, Alexander	G4, Vested - Reciprocity
Byrne, Michael	G7, Non-vested - Reciprocity
Sanchez-Ortiz, Irene	G5, Non-vested - Reciprocity
Myszka, Emmy	G4, Vested - Reciprocity
Tercero, Ursula	G4, Vested
Wang, Betty	G4, Vested - Reciprocity

4.6 Member Account Refunds

The Board ratifies the actions as listed below for the following members regarding refunds:

Member Name	Retirement Plan Type
Alvarado, Maria	G7, Non-vested
De Leon, Ruth	G4, Vested
Sanchez, Medelyn	G4, Vested
Solaiza, Ernesto	G7, Non-vested
Villa Landron, Julio	G7, Non-vested

4.7 Member Account Rollovers

The Board ratifies the actions as listed below for the following members regarding rollovers:

Member Name	Retirement Plan Type
Brooks, Amy	G7, Non-vested
Bundy, Jessica	G7, Non-vested
Espenida, Jason	G7, Non-vested
Manchia, Beverly (QDRO)	G2, Vested
Winston, Erin	G7, Non-vested
Wu, Serine	G4, Non-vested

4.8 Member Account Redeposits


None

4.9 Report of Trustee Education Received

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 28, 2017

Agenda Item 4.9

TO: Board of Retirement
FROM: Kristina Perez, Executive Secretary 
SUBJECT: Trustees' Reports of Educational Activities

Staff Recommendation

Accept the following reports from Board of Retirement trustees who recently attended educational events.

Background

SamCERA's Education Policy was amended in December 2016. Section 1D states "Prior to the next regularly scheduled meeting of the Board following the Board member's participation in an educational activity, the Board member shall submit for inclusion on the Consent Agenda, a summary written report on the content of educational activities. The report shall substantially reflect the information contained in the attached sample report."

The "reporting out" requirement was changed from an oral report given by individual Trustees under agenda item 2.2, Oral Communications from the Board, to a written report submitted on the Consent Agenda.

Discussion

This is the first report submitted related to the change in policy. SamCERA Trustees attended the following educational events, and their reports are attached:

CALAPRS Trustee Round Table, February 3, 2017, San Jose, CA
David Spinello
Eric Tashman

CALAPRS General Assembly, March 5-7, 2017, Monterey, CA
Mark Battey
Susan Lee
David Spinello

IFEBP Investments Institute, March 13-15, Phoenix, AZ
Paul Hackleman
Shirley Tourel

Attachments

Trustee Education Proof of Participation Certificates and Summary

SamCERA Board of Retirement Trustee Education
Proof of Participation Certificate and Summary



Trustee Name DAVID SPINELLO		Date(s) of Event FEB 3, 2017
Education Event Name CALAPRS TRUSTEE ROUND TABLE (SAN JOSE)		
Event Provider CALAPRS		
Type of Participation: Attended Event <input checked="" type="checkbox"/> Listened to Audio/Watched Video <input type="checkbox"/>	Eligible Credit: <input checked="" type="checkbox"/> Total hours for sessions you participated in: <u>6</u> (Staff may adjust hours if the provider issues an education certificate that reflects different hours.)	

This event satisfies the following requirements of the Board of Retirement's Education Policy and Government Code section 31522.8:

Topic: (Check all that apply)

- | | |
|---|--|
| <input type="checkbox"/> Fiduciary responsibilities | <input type="checkbox"/> Disability evaluation |
| <input type="checkbox"/> Ethics | <input type="checkbox"/> Fair hearings |
| <input type="checkbox"/> Benefits administration | <input type="checkbox"/> Pension fund governance |
| <input checked="" type="checkbox"/> Actuarial matters | <input type="checkbox"/> New board member orientation |
| <input checked="" type="checkbox"/> Pension funding | <input checked="" type="checkbox"/> Other: <u>LAWS</u> |
| <input type="checkbox"/> Pension fund investments and investment program management | |

Summary Report

What concepts or information did you learn about?

CHANGING DEMOGRAPHICS, LAW UPDATE

Would you recommend this event to other trustees?

- Yes No Maybe

You may provide additional comments to SamCERA's CEO.

By signing below, I certify that I participated in the activities described above and am entitled to claim the indicated amount of education credit hour(s).

Trustee Signature (print this form and sign) <u>D. SPINELLO #766</u>	Date <u>2/28/17</u>
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NOTE: Please return this completed form to SamCERA's Executive Secretary prior to the mailing of the Board packet, so it can be included in that month's Consent Agenda.

SamCERA Board of Retirement Trustee Education
 Proof of Participation Certificate and Summary



Trustee Name ERIC TASHMAN		Date(s) of Event FEB 3, 2017
Education Event Name CALAPRS TRUSTEE ROUND TABLE (SAN JOSE)		
Event Provider CALAPRS		
Type of Participation: Attended Event <input checked="" type="checkbox"/> Listened to Audio/Watched Video <input type="checkbox"/>		Eligible Credit: Total hours for sessions you participated in: <u>5 hrs</u> (Staff may adjust hours if the provider issues an education certificate that reflects different hours.)

This event satisfies the following requirements of the Board of Retirement's Education Policy and Government Code section 31522.8:

Topic: (Check all that apply)

- | | |
|---|---|
| <input type="checkbox"/> Fiduciary responsibilities | <input type="checkbox"/> Disability evaluation |
| <input type="checkbox"/> Ethics | <input type="checkbox"/> Fair hearings |
| <input type="checkbox"/> Benefits administration | <input type="checkbox"/> Pension fund governance |
| <input checked="" type="checkbox"/> Actuarial matters | <input type="checkbox"/> New board member orientation |
| <input type="checkbox"/> Pension funding | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Pension fund investments and investment program management | |

Summary Report

What concepts or information did you learn about?

IN DEPTH DISCUSSION OF ACTUARIAL ASSUMPTIONS -
COMPARATIVE ANALYSIS
REVIEW OF INVESTMENT OPPORTUNITIES USING FUTURES
AND OPTIONS

Would you recommend this event to other trustees?

- Yes No Maybe

You may provide additional comments to SamCERA's CEO.

By signing below, I certify that I participated in the activities described above and am entitled to claim the indicated amount of education credit hour(s).

Trustee Signature (print this form and sign) 	Date 2/28/17
---	------------------------

NOTE: Please return this completed form to SamCERA's Executive Secretary prior to the mailing of the Board packet, so it can be included in that month's Consent Agenda.

SamCERA Board of Retirement Trustee Education
Proof of Participation Certificate and Summary



Trustee Name Mark Battey		Date(s) of Event Mar 5-6 2017
Education Event Name Calaprs General Assembly		
Event Provider Calaprs		
Type of Participation: Attended Event <input checked="" type="checkbox"/> Listened to Audio/Watched Video <input type="checkbox"/>	Eligible Credit: Total hours for sessions you participated in: <u>12</u> <i>(Staff may adjust hours if the provider issues an education certificate that reflects different hours.)</i>	

This event satisfies the following requirements of the Board of Retirement's Education Policy and Government Code section 31522.8:

Topic: (Check all that apply)

- | | |
|---|---|
| <input checked="" type="checkbox"/> Fiduciary responsibilities | <input type="checkbox"/> Disability evaluation |
| <input type="checkbox"/> Ethics | <input type="checkbox"/> Fair hearings |
| <input type="checkbox"/> Benefits administration | <input checked="" type="checkbox"/> Pension fund governance |
| <input checked="" type="checkbox"/> Actuarial matters | <input type="checkbox"/> New board member orientation |
| <input checked="" type="checkbox"/> Pension funding | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Pension fund investments and investment program management | |

Summary Report

What concepts or information did you learn about?

Good overview of key funding and actuarial issues facing public pension plans. Update on CalPERS and Hawaii approaches to "glide path" / derisking the portfolio. Remarks on how pension funds can access a California Innovation Portfolio

Would you recommend this event to other trustees?

- Yes No Maybe

You may provide additional comments to SamCERA's CEO.

By signing below, I certify that I participated in the activities described above and am entitled to claim the indicated amount of education credit hour(s).

Trustee Signature (print this form and sign) 	Date 3/9/2017
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NOTE: Please return this completed form to SamCERA's Executive Secretary prior to the mailing of the Board packet, so it can be included in that month's Consent Agenda.

SamCERA Board of Retirement Trustee Education
Proof of Participation Certificate and Summary



Trustee Name <i>Susan Lee</i>		Date(s) of Event <i>3/5-3/7/2017</i>
Education Event Name <i>Navigating Deeper Waters Ahead</i>		
Event Provider <i>Calaprs</i>		
Type of Participation: Attended Event <input checked="" type="checkbox"/> Listened to Audio/Watched Video <input type="checkbox"/>	Eligible Credit: Total hours for sessions you participated in: <u><i>13</i></u> <i>(Staff may adjust hours if the provider issues an education certificate that reflects different hours.)</i>	

This event satisfies the following requirements of the Board of Retirement's Education Policy and Government Code section 31522.8:

Topic: (Check all that apply)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Fiduciary responsibilities | <input checked="" type="checkbox"/> Disability evaluation |
| <input type="checkbox"/> Ethics | <input type="checkbox"/> Fair hearings |
| <input type="checkbox"/> Benefits administration | <input checked="" type="checkbox"/> Pension fund governance |
| <input checked="" type="checkbox"/> Actuarial matters | <input type="checkbox"/> New board member orientation |
| <input checked="" type="checkbox"/> Pension funding | <input type="checkbox"/> Other: _____ |
| <input checked="" type="checkbox"/> Pension fund investments and investment program management | |

Summary Report

What concepts or information did you learn about?

*- Certain asset allocation could be put into crisis risk offset including fixed income and/or other investment as defined by the Investment Consultant or CIO.
- Factors driving family risk = life expectancy, plans, market conditions*

Would you recommend this event to other trustees?

- Yes No Maybe

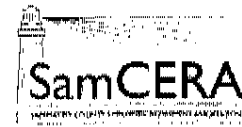
You may provide additional comments to SamCERA's CEO.

By signing below, I certify that I participated in the activities described above and am entitled to claim the indicated amount of education credit hour(s).

Trustee Signature (print this form and sign) <i>[Signature]</i>	Date <i>3-22-17</i>
--	------------------------

NOTE: Please return this completed form to SamCERA's Executive Secretary prior to the mailing of the Board packet, so it can be included in that month's Consent Agenda.

SamCERA Board of Retirement Trustee Education Proof of Participation Certificate and Summary



Trustee Name David Spinello		Date(s) of Event March 5th-7th, 2017
Education Event Name CALAPRS GENERAL ASSEMBLY		
Event Provider CALAPRS		
Type of Participation: Attended Event <input type="checkbox"/> Listened to Audio/Watched Video <input type="checkbox"/>		Eligible Credit: Total hours for sessions you participated in: <u>15</u> (Staff may adjust hours if the provider issues an education certificate that reflects different hours.)

This event satisfies the following requirements of the Board of Retirement's Education Policy and Government Code section 31522.8:

Topic: (Check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Fiduciary responsibilities | <input type="checkbox"/> Disability evaluation |
| <input type="checkbox"/> Ethics | <input type="checkbox"/> Fair hearings |
| <input type="checkbox"/> Benefits administration | <input type="checkbox"/> Pension fund governance |
| <input checked="" type="checkbox"/> Actuarial matters | <input type="checkbox"/> New board member orientation |
| <input checked="" type="checkbox"/> Pension funding | <input type="checkbox"/> Other: _____ |
| <input checked="" type="checkbox"/> Pension fund investments and investment program management | |

Summary Report

What concepts or information did you learn about?

Would you recommend this event to other trustees?

- Yes No Maybe

You may provide additional comments to SamCERA's CEO.

By signing below, I certify that I participated in the activities described above and am entitled to claim the indicated amount of education credit hour(s).

Trustee Signature (print this form and sign) DAVID SPINELLO	Date 3/21/17
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NOTE: Please return this completed form to SamCERA's Executive Secretary prior to the mailing of the Board packet, so it can be included in that month's Consent Agenda.

SamCERA Board of Retirement Trustee Education
Proof of Participation Certificate and Summary



Trustee Name PAUL HACKLEMAN		Date(s) of Event March 13-15, 2017
Education Event Name IFEBP Investments Institute		
Event Provider IFEBP		
Type of Participation: Attended Event <input checked="" type="checkbox"/> Listened to Audio/Watched Video <input type="checkbox"/>	Eligible Credit: Total hours for sessions you participated in: <u>12.5</u> (Staff may adjust hours if the provider issues an education certificate that reflects different hours.)	

This event satisfies the following requirements of the Board of Retirement's Education Policy and Government Code section 31522.8:

Topic: (Check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Fiduciary responsibilities | <input type="checkbox"/> Disability evaluation |
| <input type="checkbox"/> Ethics | <input type="checkbox"/> Fair hearings |
| <input type="checkbox"/> Benefits administration | <input type="checkbox"/> Pension fund governance |
| <input type="checkbox"/> Actuarial matters | <input type="checkbox"/> New board member orientation |
| <input type="checkbox"/> Pension funding | <input type="checkbox"/> Other: _____ |
| <input checked="" type="checkbox"/> Pension fund investments and investment program management | |

Summary Report

What concepts or information did you learn about?

CURRENT AND FUTURE TRENDS IN DOMESTIC AND INTERNATIONAL REGIONS, DELEGATING INVESTMENT DECISIONS, PASSIVE VS ACTIVE STRATEGIES, SOCIAL SECURITY OPTIONS, APPROPRIATE RESOURCES FOR ASSET ALLOCATION STRATEGIES, USE OF "TAIL RISK" AND "CRISIS RISK" STRATEGIES TO LESSEN LOSSES, ALTERNATIVE INVESTING AND PRIVATE MARKET AND REAL ESTATE STRATEGIES

Would you recommend this event to other trustees?

- Yes No Maybe

You may provide additional comments to SamCERA's CEO.

By signing below, I certify that I participated in the activities described above and am entitled to claim the indicated amount of education credit hour(s).

Trustee Signature (print this form and sign) Paul Hackleman	Date 3-22-17
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NOTE: Please return this completed form to SamCERA's Executive Secretary prior to the mailing of the Board packet, so it can be included in that month's Consent Agenda.

SamCERA Board of Retirement Trustee Education
 Proof of Participation Certificate and Summary



Trustee Name Shirley Tourel		Date(s) of Event March 13-15, 2017
Education Event Name IFEBP Investments Institute		
Event Provider IFEBP		
Type of Participation: Attended Event <input checked="" type="checkbox"/> Listened to Audio/Watched Video <input type="checkbox"/>		Eligible Credit: Total hours for sessions you participated in: <u>10</u> (Staff may adjust hours if the provider issues an education certificate that reflects different hours.)

This event satisfies the following requirements of the Board of Retirement's Education Policy and Government Code section 31522.8:

Topic: (Check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Fiduciary responsibilities | <input type="checkbox"/> Disability evaluation |
| <input type="checkbox"/> Ethics | <input type="checkbox"/> Fair hearings |
| <input type="checkbox"/> Benefits administration | <input type="checkbox"/> Pension fund governance |
| <input type="checkbox"/> Actuarial matters | <input type="checkbox"/> New board member orientation |
| <input type="checkbox"/> Pension funding | <input type="checkbox"/> Other: _____ |
| <input checked="" type="checkbox"/> Pension fund investments and investment program management | |

Summary Report

What concepts or information did you learn about?

Current and future economy; Various Investment types e.g. - Fixed income, equities, alternative investments, and real estate; Asset Allocation strategies; Assessing how the current portfolio would perform when the economy is not doing well (e.g. stress test).

Would you recommend this event to other trustees?

- Yes No Maybe

You may provide additional comments to SamCERA's CEO.

By signing below, I certify that I participated in the activities described above and am entitled to claim the indicated amount of education credit hour(s).


Trustee Signature (print this form and sign) 	Date 3/22/2017
---	--------------------------

NOTE: Please return this completed form to SamCERA's Executive Secretary prior to the mailing of the Board packet, so it can be included in that month's Consent Agenda.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 28, 2017

Agenda Item 4.10

TO: Board of Retirement
FROM: Scott Hood, Chief Executive Officer 
SUBJECT: Amendment of SamCERA's Placement Agent Policy

Staff Recommendation

Adopt a resolution amending SamCERA's Placement Agent Policy.

Background

A placement agent is, generally speaking, a person directly or indirectly retained by an external investment manager or an investment fund, who acts as a finder, solicitor, marketer, consultant, broker, or other intermediary in connection with the offer or sale of the investment to the Board.

In 2010, Government Code Section 7513.85 became effective and it requires all public pension systems to adopt a policy requiring the disclosure of fees paid to placement agents, and requires the disclosure of campaign contributions and gifts made by placement agents to retirement board members. It also prohibits a public pension system from entering into any agreement with an external investment manager that does not provide written consent to comply with the policy. An external investment manager or placement agent that violates the policy is prohibited from soliciting new investments from the system for five (5) years from the time of violation, unless the Board reduces this time period.

In 2010, SamCERA adopted a "Disclosure of Placement Agent Fees, Gifts and Campaign" policy which was amended in 2011 to reflect a statutory change to the definitions "External Manager", "Placement Agent" and other related terms.

Discussion

Since the Board's adoption of the Policy, staff has ensured that every investment contract (e.g. public equities, private equity or alternatives) requires compliance with the Placement Agent Policy and that a completed Placement Agent Disclosure Form is timely submitted. Although not required by statute, the original policy directed staff to provide quarterly reports summarizing the disclosure of placement agents. Those reports, for a variety of reasons, were not ultimately submitted to the Board. One of the reasons is that only a couple public equity investments used placement agents, and those placement agents were internal marketing staff. The private equity investments tend to use placement agents, who interact with our investment consultant, not the Board or staff.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

Staff recommends that as part of the due diligence write-up given to the Board at the time the investment decision is brought to the Board, staff will include information on whether a placement agent was used, the name of the placement agent, and the compensation methodology used by the external manager for the placement agent's services. Receiving this information at the time of the decision is better than a summary report at a later date. The proposed amended policy reflects this change and makes the following other content changes:

- The Policy currently provides that staff must confirm that the disclosure form is received within 45 days of the time investment discussions are initiated, but in any event, prior to the completion of due diligence and any recommendation to proceed with the contract or amendment. The proposed change provides that the form must be received within 45 days of the time of the execution of the investment contract or amendment. This change is needed because staff currently receives the completed form after the side letter and all documents have been executed.
- The Policy currently provides that the external manager must update the information on the disclosure form with 14 days, the proposed amendment extends it to 30 days. This reflects requests by external managers for more time.
- The Policy currently provides that in the event that there was an intentional material omission or inaccuracy in the form or any other violation of the Policy, SamCERA is entitled to the greater of the reimbursement of any management or advisory fees paid by SamCERA for the prior two years or an amount equal to the amounts paid or promised to be paid to the Placement Agent. Staff believes that it is more appropriate for it to read that "SamCERA reserves the right to reimbursement of any management or advisory fees paid by SamCERA from the date of violation to the date of the imposition of the fees."

The amended Policy would apply to all new investments or amendments to existing investments, as defined in the Policy.

Attachments

Proposed Amendments to the Placement Agent Policy (Redlined Version)
Resolution Amending the Placement Agent Policy
Proposed Amendments to the Placement Agent Policy (Clean Version)



SamCERA Policy



~~DISCLOSURE OF~~

PLACEMENT AGENT FEES, GIFTS, AND CAMPAIGN DISCLOSURE POLICY

~~This~~ **CONTRIBUTIONS**

~~Adopted by the Board of Retirement~~
~~December 14, 2010, last amended October 25, 2011~~

~~This~~ policy is effective immediately upon adoption. This policy is intended to supplement any applicable provisions of state or federal law, which shall govern in the event of any inconsistency.

I. PURPOSE

This Policy ~~sets~~ is adopted pursuant to the requirements set forth the circumstances under which in Government Code Section 7513.85 to help ensure that the San Mateo County Employees' Retirement Association (~~SAMCERA~~) shall require the disclosure of payments to ~~Placement Agents, SamCERA~~ investment decisions are made solely on the merits of the investment opportunity. This Policy requires broad, timely, and updated disclosure of all Placement Agents, as that term is defined by Government Code section 7513.8, their relationships, compensation and fees.

II. APPLICATION

~~This Policy in connection with SAMCERA investments in or through External Managers, as that term is defined by Government Code section 7513.8. This Policy is intended to apply~~ applies broadly to ~~all of the types~~ every type of

~~SamCERA investment partners with whom SAMCERA does business, managers~~ including ~~the~~ general partners, ~~managers, investment managers and~~ sponsors of hedge funds, private equity funds, real estate funds and infrastructure funds, as well as ~~investment managers retained pursuant to a contract. SAMCERA adopts this Policy to require broad, timely, and updated disclosure of all Placement Agent relationships, compensation and fees. The goal of this~~ public equity investment managers.

~~This Policy is to help ensure that SAMCERA investment decisions are made solely on the merits of the investment opportunity by individuals who owe a fiduciary duty to SAMCERA.~~

~~II. APPLICATION~~

~~as amended~~

~~This Policy~~ applies to all agreements with External Managers that are entered into after the date this Policy is adopted. ~~This Policy also applies to and all~~ existing agreements ~~with External Managers~~ if, after the date this amended Policy is adopted, the agreement is amended ~~in any way~~ to continue, terminate, or extend the term of the agreement or the investment period, increase the commitment of funds by ~~SAMCERA~~ SamCERA or increase or accelerate the fees or compensation payable to the External Manager (Referred to hereafter as “Amendment”.) In the case of an Amendment, the disclosure provisions of this Policy shall apply to the Amendment and not to the original agreement.

III. RESPONSIBILITIES

A. ~~The Board~~ is responsible for:

- ~~not~~ Not entering into any agreement with an External Manager that does not agree in writing to comply with this policy.
- ~~not~~ Not entering into any agreement with an External Manager who has violated this policy within the previous five years. However, this prohibition may be reduced by a majority vote of the ~~board~~ Board at a public session upon a showing of good cause.

B. ~~Each External Manager~~ is responsible for:

- ~~Providing a statement in writing~~ Executing an agreement that provides the External Manager will comply with this policy.
- Providing the following information to ~~the SAMCERA~~ SamCERA Investment Staff within 45 days of the time investment discussions are initiated

by the External Manager, but in any event, prior to the completion of due diligence. In the case of Amendments, the Placement Agent Information Disclosure is required prior to execution of the Amendment.

a. Disclosure of payments or compensation by the External Manager or any of its principals, employees, agents or affiliates, directly or indirectly, to any person or entity to act as a Placement Agent in connection with ~~SAMCERA~~SamCERA investments.

b. A resume for each officer, partner, principal of the Placement Agent detailing the person's education, professional designations, regulatory licenses and investment and work experience. If any such person is a current or former ~~SAMCERA~~SamCERA Board Member, employee or Consultant or a member of the immediate family of any such person, this fact shall be specifically noted.

c. A description of any and all compensation of any kind provided or agreed to be provided to a Placement Agent, including the nature, timing and value thereof. Compensation to Placement Agents shall include, but not be limited to, compensation to third parties as well as employees of the External Manager who solicit or market investments to ~~SAMCERA~~SamCERA or who are paid based upon investment commitments secured by such employees.

d. A description of the services to be performed by the Placement Agent and a statement as to whether the Placement Agent is -utilized by the External Manager with all prospective clients or only with a subset of the External Manager's prospective clients.

e. A written copy of any and all agreements between the External Manager and the Placement Agent.

f. A statement whether the placement agent, or any of its affiliates, are registered with the Securities and Exchange Commission or the Financial Industry Regulatory Association, or any similar regulatory agent in a country other than the United States, and the details of that registration or explanation as to why no registration is required.

g. A statement whether the placement agent, or any of its affiliates, is registered as a lobbyist with any state or national government.

h. The names of any current or former ~~SAMCERA~~SamCERA Board Members, employees, or Consultants who suggested the retention of the

Placement Agent.

3. Providing an update of any changes to any of the information provided pursuant to section B.2 above within ~~14~~30 calendar days of the date that the External Manager knew or should have known of the change in information.
4. Representing and warranting the accuracy of the information described in section B.2 above.
5. Causing its engaged Placement Agent to disclose, prior to acting as a Placement Agent to ~~SAMCERA,~~SamCERA:

~~all~~

- a. All campaign contributions made by the Placement Agent to any publicly elected ~~SAMCERA~~SamCERA Board Member during the prior 24-month period. Additionally, any subsequent campaign contribution made by the Placement Agent to any publicly elected ~~SAMCERA~~SamCERA Board Member during the time the Placement Agent is receiving compensation in connection with a ~~SAMCERA~~SamCERA investment shall also be disclosed.
 - b. ~~all~~All gifts, as defined in Government Code Section 82028, given by the Placement Agent to any ~~SAMCERA~~SamCERA Board Member during the prior 24-month period. Additionally, any subsequent gift made by the Placement Agent to any ~~SAMCERA~~SamCERA Board Member during the time the Placement Agent is receiving compensation in connection with a ~~SAMCERA~~SamCERA investment shall also be disclosed.
6. ~~SAMCERA~~SamCERA reserves the right to deem the failure to disclose the information required by 5(a) and 5(b) as a material breach of the agreement with the External Manager.

C. —~~SAMCERA~~ SamCERA Investment Staff (“Staff”) are responsible for:

1. Providing External Managers with a copy of this Policy at the time that discussions are initiated with respect to a prospective investment or engagement.
2. Confirming that the information in section B above has been received within 45 days of the time ~~investment discussions are initiated, but in any event, prior to the completion of due diligence and any recommendation to proceed with the~~the execution of the investment

contract or Amendment.

3. For new contracts and amendments to contracts existing as of the date of the initial adoption of this Policy, securing the agreement of the External Manager in the final written agreement between ~~SAMCERA~~SamCERA and the External Manager to provide in the event that there was or is an intentional material omission or inaccuracy in the Placement Agent Information Disclosure or any other violation of this Policy, ~~SAMCERA is entitled to~~SamCERA reserves the greater of the right to reimbursement of any management or advisory fees paid by ~~SAMCERA for the prior two years or an amount equal~~SamCERA from the date of violation to the ~~amounts paid or promised to be paid to the Placement Agent as a result~~date of the ~~SAMCERA investment; and~~imposition of the fees.
4. Prohibiting any External Manager or Placement Agent from soliciting new investments from ~~SAMCERA~~SamCERA for five years after they have committed a material violation of this Policy; provided, however, that ~~SAMCERA's~~SamCERA's Board, by majority vote at a noticed, public meeting, may reduce this prohibition upon a showing of good cause.
5. Providing ~~a quarterly report to~~ the Board ~~containing (a) the names and amount of compensation agreed to be provided to each with~~ Placement Agent ~~by each External Manager as reported~~ ~~in~~information relating to each investment at the time the investment is brought to the Board for its decision.
6. Maintaining Placement Agent Information Disclosures, ~~and (b) as a public record and reporting to the Board~~ any a material ~~violations~~violation of this Policy; ~~and maintaining the report as a public record.~~

Adopted IV. DEFINITIONS:

~~The following definitions are current as of October 9, 2011. Should the legislature subsequently amend the definitions below, the definition of these terms as amended shall supersede the definitions contained in this policy.~~

~~As defined in California Government Code section 7513.8 "External Manager" means either of the following: (1) a Person who is seeking to be, or is, retained by a board or an Investment Vehicle to manage a portfolio of securities or other assets for compensation; (2) a Person who manages an Investment Fund and who offers or sells, or has offered or sold, an ownership interest in the Investment Fund to a board or an Investment Vehicle. (All code section references are to the Government Code, unless otherwise noted.)~~

~~As defined in section 7513.8, “**Person**” means an individual, corporation, partnership, limited partnership, limited liability company, or association, either domestic or foreign.~~

~~As defined in section 7513.8, “**Investment Vehicle**” means a corporation, partnership, limited partnership, limited liability company, association, or other entity, either domestic or foreign, managed by an External Manager in which a board is the majority investor and that is organized in order to invest with, or retain the investment management services of, other External Managers.~~

~~As defined in section 7513.8, “**Investment Fund**” means a private equity fund, public equity fund, venture capital fund, hedge fund, fixed income fund, real estate fund, infrastructure fund, or similar pooled investment entity that is, or holds itself out as being, engaged primarily, or proposes to engage primarily, in the business of investing, reinvesting, owning, holding, or trading securities or other assets. Notwithstanding the preceding sentence, an investment company that is registered with the Securities and Exchange Commission pursuant to the Investment Company Act of 1940 (15 U.S.C. Sec. 80a-1 et seq.) and that makes a public offering of its securities is not an Investment Fund.~~

~~As defined in section 7513.8, “**Placement Agent**” means any Person directly or indirectly hired, engaged, or retained by, or serving for the benefit of or on behalf of, an External Manager or an Investment Fund managed by an External Manager, and who acts or has acted for compensation as a finder, solicitor, marketer, consultant, broker or other intermediary in connection with the offer or sale to a board or an Investment Vehicle either of the following: in the case of an External Manager as defined in subpart (1) of the definition of an External Manager, the investment management services of the External Manager; in the case of an External Manager as defined in subpart (2) of the definition of an External Manager, an ownership interest in an Investment Fund managed by the External Manager. Notwithstanding the preceding sentence, an individual who is an employee, officer, director, equityholder, partner, member, or trustee of an External Manager and who spends one third or more of his or her time, during a calendar year, managing the securities or assets owned, controlled, invested, or held by the External Manager is not a Placement Agent.~~

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SAN MATEO COUNTY EMPLOYEES RETIREMENT ASSOCIATION
PLACEMENT AGENT DISCLOSURE AND SEC COMPLIANCE FORM

The Board of Retirement (“Board”) of the San Mateo County Employees Retirement Association (“SamCERA”) has adopted a Placement Agent Policy (“Policy”), a copy of which is attached as Attachment No.1. For the purposes of compliance with the Policy and the proper completion of this form, please refer to the definitions of “*External Manager*”, “*Person*”, “*Placement Agent*”, “*Investment Fund*”, “*Investment Vehicle*”, and “*Compensation*” as set forth in California Government Code section 7513.8 and reflected in the attached Policy. Under the Policy, each External Manager must complete and deliver this Disclosure Form to SamCERA prior to SamCERA investing any money with that manager.

For purposes of this disclosure, “you” means the External Manager identified below and its affiliates, including the External Manager’s and affiliates’ respective officers, directors, partners, members, employees, contractors, and agents.

Name of External Manager: _____

Contact information for External Manager:

_____ Address: _____

_____ Contact Person: _____

_____ Contact Information: _____
_____ (email/phone/fax) _____

PART ONE: USE OF PLACEMENT AGENTS

1. _____ Have you used a Placement Agent in connection with the Proposed Investment?

_____ Yes _____ No _____

2. _____ Will a Placement Agent receive compensation from you if SamCERA invests in the Proposed Investment?

Yes _____ No _____

If you answer “Yes” to either question, complete the remainder of the Disclosure Form. If you answer “No” to both questions, go to directly to PART TWO.

3. The name of the Placement Agent is:

_____.

4. Please describe the relationship between you and the Placement Agent.

_____.

5. Please attach a resume for each officer, partner, or principal of the Placement Agent detailing the person’s education, professional designations, regulatory licenses, and investment and work experience. Please identify below all persons whose resumes are attached.

_____.

6. Please describe any and all compensation of any kind provided, or agreed to be provided, to the Placement Agent or to a third party at the behest of the Placement Agent, in connection with the Placement Agent’s work for the External Manager on the Proposed Investment or as a result of SamCERA investing in the Proposed Investment.

_____.

7. Please describe in detail the services to be performed by the Placement Agent in connection with the Proposed Investment.

_____.

8. a. Is the External Manager solely responsible for payment of the Placement Agent’s fee, or providing the compensation if not a monetary fee?

Yes _____ No _____

If “No”, explain:

~~b. Will any part of the fee or other compensation be paid or provided directly or indirectly by SamCERA, the Investment Vehicle, the Investment Fund, or any investor(s) in the Investment Vehicle or in the Investment Fund?~~

~~Yes _____ No _____~~

If “Yes”, explain:

~~9. Please list the name(s) of all current and former Board members, employees, and consultants and member(s) of the immediate family of any such person that are either employed or receiving compensation of any kind provided, or agreed to be provided, directly or indirectly from the Placement Agent in connection with the Proposed Investment or as a result of SamCERA investing in the Proposed Investment. If none, enter “none” below.~~

~~10. Please list the name(s) of any current or former Board members, employees, and consultants who suggested the retention of the Placement Agent in connection with the Proposed Investment. If none, enter “none” below.~~

~~11. Please confirm that the Placement Agent, and any affiliates, as applicable, is/are registered with the Securities and Exchange Commission or the Financial Industry Regulatory Association or any similar state regulatory agency, or any similar regulatory agency in a country other than the United States. Please describe the details of each registration. If the Placement Agent is not registered with any regulatory agency, please explain why no registration is required.~~

~~Any External Manager or Placement Agent that violates the Policy shall not solicit new investments from SamCERA for five years after the violation was committed. However, this prohibition may be reduced by a majority vote of the Board at a public session upon a showing of good cause.~~

~~Your attention is drawn to Sections 7513.87 and 7513.9 of the California Government Code relating to Placement Agents. Please note, there may be other laws relevant to Placement Agents, and you and any Placement Agent you engage with respect to managing or seeking to manage SamCERA assets are strongly encouraged to consult your own legal counsel. Please note that San Mateo County does not have a policy or ordinance regarding lobbyist registration.~~

~~Please further note that these statutes may be amended from time to time and the language below is law as it reads as of October 9, 2011.~~

~~California Government Code section 7513.87:~~

- ~~(a) A person acting as a placement agent in connection with any potential system investment made by a local public retirement system shall file any applicable reports with a local government agency that requires lobbyists to register and file reports and shall comply with any applicable requirements imposed by a local government agency pursuant to Section 81013.~~
- ~~—(b) This section does not apply to either of the following:~~
 - ~~—(1) An individual who is an employee, officer, director, equity holder, partner, member, or trustee of an external manager who spends one-third or more of his or her time, during a calendar year, managing the securities or assets owned, controlled, invested, or held by the external manager.~~
 - ~~—(2) An employee, officer, or director of an external manager, or of an affiliate of an external manager, if all of the following apply:~~
 - ~~—(A) The external manager is registered as an investment adviser or a broker-dealer with the Securities and Exchange Commission or, if exempt from or not subject to registration with the Securities and Exchange Commission, any appropriate state securities regulator.~~
 - ~~—(B) The external manager is participating in a competitive bidding process, such as a request for proposals, or has been selected through that process and is providing services pursuant to a contract executed as a result of that competitive bidding process.~~
 - ~~—(C) The external manager, if selected through a competitive bidding process described in subparagraph (B), has agreed to a fiduciary standard of care, as defined by the standards of conduct applicable to the retirement board of a public pension or retirement system and set forth in Section 17 of Article XVI of the~~

~~California Constitution, when managing a portfolio of assets of a public retirement system in California
California Government Code section 7513.89:~~

~~(a) Any placement agent, prior to acting as a placement agent in connection with any potential system investment, shall disclose to the board all campaign contributions made by the placement agent to any elected member of the board during the prior 24 month period. Additionally, any subsequent campaign contribution made by the placement agent to an elected member of the board during the time the placement agent is receiving compensation in connection with a system investment shall also be disclosed.~~

~~(b) Any placement agent, prior to acting as a placement agent in connection with any potential system investment, shall disclose to the board all gifts, as defined in Section 82028, given by the placement agent to any member of the board during the prior 24 month period. Additionally, any subsequent gift given by the placement agent to any member of the board during the time the placement agent is receiving compensation in connection with a system investment shall also be disclosed.~~

PART TWO: SEC COMPLIANCE

~~You are expected to comply with all applicable laws, ordinances, rules, and regulations pertaining to investment advisers and the use of placement agents.~~

~~The U.S. Securities and Exchange Commission (“SEC”) has adopted rules governing political contributions by certain investment advisers to certain officials”. “Official” is defined in 17 CFR 275.206(4)-5 as “any person (including any election committee for the person) who was, at the time of the contribution, an incumbent, candidate or successful candidate for elective office of a government entity, if the office: (i) is directly or indirectly responsible for, or can influence the outcome of, the hiring of an investment adviser by a government entity; or (ii) has authority to appoint any person who is directly or indirectly responsible for, or can influence the outcome of, the hiring of an investment adviser by a government entity.”⁺~~

~~Six members of SAMCERA’s Board are elected by various member constituencies (two by general members, one by safety members, one alternate for safety members, one by retired member and one retiree alternate).~~

~~The San Mateo County Board of Supervisors, who are elected by the electorate of the County of San Mateo, appoint four members of the Board. The County Treasurer Tax Collector is elected by the electorate of the County of San Mateo.~~

⁺~~17 CFR 275.206(4)-5(f)(6)~~

Generally, investment advisers are prohibited from providing investment advisory services for compensation within two years after making a political contribution to an official in violation of the SEC rule. SAMCERA could be adversely affected if you or a covered associate made a prohibited political contribution.

1. Have you or a “covered associate” made a political “contribution” to an “official”, as the quoted terms are defined in 17 CFR 205.206(4) 5 (the “Regulation”) that would make it unlawful under the Regulation for you to provide investment advisory services for compensation to SAMCERA?

Yes _____ No _____

If “Yes”, explain:

Please note, there are other relevant SEC compliance issues apart from political contributions. You are encouraged to consult your own legal counsel.

By signing below, you are certifying you are in compliance with all SEC rules and regulations relating to investment advisers and placement agents.

PART THREE: CERTIFICATION

This form, completed and signed by you, will be incorporated into and made a part of any contract or other agreement pursuant to which you manage assets for SAMCERA.

By signing below, you represent and warrant that the information set forth herein, and attached hereto, is true and correct. Furthermore, you understand that SAMCERA is relying upon your representations and warranties in determining whether to engage you to provide investment advisory services to SAMCERA. You agree to update this information in writing within ten days of any happenings that render your responses untrue or inaccurate.

The execution and delivery of this form has been duly authorized by all necessary action by the undersigned:

Name of External Manager: _____

By: _____

Name: _____

Title: _____

Date: _____ **December 14,**

2010

Amended October 25, 2011

Amended March 28, 2017

RESOLUTION 2017-06

RESOLUTION AMENDING SAMCERA'S PLACEMENT AGENT POLICY

WHEREAS, pursuant to Government Code §7513.85, in 2010, the Board adopted a policy requiring the disclosure of payments to placement agents in connection with SamCERA investments in or through external managers; and

WHEREAS, through its experience of implementing the Policy since 2010, staff recommends and this Board has determined that, in addition to formatting and editorial changes, the Policy should be modified to provide that: (a) as part of the due diligence write-up given to the Board at the time of the investment decision, staff will include information relating to placement agent disclosure; (b) if any information needs to be updated on the disclosure form, the external manager shall provide the update within 30 days; and (c) for certain violations of the Policy, SamCERA reserves the right to reimbursement of any management or advisory fees paid by SamCERA from the date of violation to the date of the imposition of the fees.

WHEREAS, the Board has reviewed the proposed amendments to the policy and also now desires to make such changes;

NOW, THEREFORE, BE IT RESOLVED, that the SamCERA Placement Agent Policy be revised to read as set forth in the attached document.

* * * * *

Regularly passed and adopted, by the San Mateo County Employees' Retirement Association, Board of Retirement, on March 28, 2017.

Ayes, Trustees:

Noes, Trustees:

Absent, Trustees:

Abstain, Trustees:

Shirley Tourel, Secretary
SamCERA



PLACEMENT AGENT DISCLOSURE POLICY

This amended policy is effective immediately upon adoption. This policy is intended to supplement any applicable provisions of state or federal law, which shall govern in the event of any inconsistency.

I. PURPOSE

This Policy is adopted pursuant to the requirements set forth in Government Code Section 7513.85 to help ensure that the San Mateo County Employees' Retirement Association (SamCERA) investment decisions are made solely on the merits of the investment opportunity. This Policy requires broad, timely, and updated disclosure of all Placement Agents, as that term is defined by Government Code section 7513.8, their relationships, compensation and fees.

II. APPLICATION

This Policy applies broadly to every type of SamCERA investment manager including general partners, sponsors of hedge funds, private equity funds, real estate funds and infrastructure funds, as well as public market investment managers.

This Policy, as amended, applies to all agreements with External Managers that are entered into after the date this Policy is adopted and all existing agreements if, after the date this amended Policy is adopted, the agreement is amended to continue, terminate, or extend the term of the agreement or the investment period, increase the commitment of funds by SamCERA or increase or accelerate the fees or compensation payable to the External Manager (Referred to hereafter as "Amendment".) In the case of an Amendment, the disclosure provisions of this Policy shall apply to the Amendment and not to the original agreement.

III. RESPONSIBILITIES

A. The Board is responsible for:

1. Not entering into any agreement with an External Manager that does not agree in writing to comply with this policy.
2. Not entering into any agreement with an External Manager who has violated this policy within the previous five years. However, this prohibition may be reduced by a majority vote of the Board at a public session upon a showing of good cause.

B. Each External Manager is responsible for:

1. Executing an agreement that provides the External Manager will comply with this policy.
2. Providing the following information to SamCERA Investment Staff within 45 days of the time investment discussions are initiated by the External Manager, but in any event, prior to the completion of due diligence. In the case of Amendments, the Placement Agent Information Disclosure is required prior to execution of the Amendment.
 - a. Disclosure of payments or compensation by the External Manager or any of its principals, employees, agents or affiliates, directly or indirectly, to any person or entity to act as a Placement Agent in connection with SamCERA investments.
 - b. A resume for each officer, partner, principal of the Placement Agent detailing the person's education, professional designations, regulatory licenses and investment and work experience. If any such person is a current or former SamCERA Board Member, employee or Consultant or a member of the immediate family of any such person, this fact shall be specifically noted.
 - c. A description of any and all compensation of any kind provided or agreed to be provided to a Placement Agent, including the nature, timing and value thereof. Compensation to Placement Agents shall include, but not be limited to, compensation to third parties as well as employees of the External Manager who solicit or market investments to SamCERA or who are paid based upon investment commitments secured by such employees.
 - d. A description of the services to be performed by the Placement Agent and a statement as to whether the Placement Agent is utilized by the External Manager with all prospective clients or only with a subset of the External Manager's prospective clients.

- e. A written copy of any and all agreements between the External Manager and the Placement Agent.
 - f. A statement whether the placement agent, or any of its affiliates, are registered with the Securities and Exchange Commission or the Financial Industry Regulatory Association, or any similar regulatory agent in a country other than the United States, and the details of that registration or explanation as to why no registration is required.
 - g. A statement whether the placement agent, or any of its affiliates, is registered as a lobbyist with any state or national government.
 - h. The names of any current or former SamCERA Board Members, employees, or Consultants who suggested the retention of the Placement Agent.
3. Providing an update of any changes to any of the information provided pursuant to section B.2 above within 30 calendar days of the date that the External Manager knew or should have known of the change in information.
 4. Representing and warranting the accuracy of the information described in section B.2 above.
 5. Causing its engaged Placement Agent to disclose, prior to acting as a Placement Agent to SamCERA:
 - a. All campaign contributions made by the Placement Agent to any publicly elected SamCERA Board Member during the prior 24-month period. Additionally, any subsequent campaign contribution made by the Placement Agent to any publicly elected SamCERA Board Member during the time the Placement Agent is receiving compensation in connection with a SamCERA investment shall also be disclosed.
 - b. All gifts, as defined in Government Code Section 82028, given by the Placement Agent to any SamCERA Board Member during the prior 24-month period. Additionally, any subsequent gift made by the Placement Agent to any SamCERA Board Member during the time the Placement Agent is receiving compensation in connection with a SamCERA investment shall also be disclosed.
 6. SamCERA reserves the right to deem the failure to disclose the information required by 5(a) and 5(b) as a material breach of the agreement with the External Manager.

C. SamCERA Investment Staff (“Staff”) are responsible for:

1. Providing External Managers with a copy of this Policy at the time that discussions are initiated with respect to a prospective investment or engagement.
2. Confirming that the information in section B above has been received within 45 days of the time the execution of the investment contract or Amendment.
3. For new contracts and amendments to contracts existing as of the date of the initial adoption of this Policy, securing the agreement of the External Manager in the final written agreement between SamCERA and the External Manager to provide in the event that there was or is an intentional material omission or inaccuracy in the Placement Agent Information Disclosure or any other violation of this Policy, SamCERA reserves the right to reimbursement of any management or advisory fees paid by SamCERA from the date of violation to the date of the imposition of the fees.
4. Prohibiting any External Manager or Placement Agent from soliciting new investments from SamCERA for five years after they have committed a material violation of this Policy; provided, however, that SamCERA’s Board, by majority vote at a noticed, public meeting, may reduce this prohibition upon a showing of good cause.
5. Providing the Board with Placement Agent information relating to each investment at the time the investment is brought to the Board for its decision.
6. Maintaining Placement Agent Information Disclosures as a public record and reporting to the Board any a material violation of this Policy.

Adopted December 14, 2010


Amended October 25, 2011

Amended March 28, 2017

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 28, 2017

Agenda Item 4.9

TO: Board of Retirement
FROM: Kristina Perez, Executive Secretary 
SUBJECT: Trustees' Reports of Educational Activities

Staff Recommendation

Accept the following reports from Board of Retirement trustees who recently attended educational events.

Background

SamCERA's Education Policy was amended in December 2016. Section 1D states "Prior to the next regularly scheduled meeting of the Board following the Board member's participation in an educational activity, the Board member shall submit for inclusion on the Consent Agenda, a summary written report on the content of educational activities. The report shall substantially reflect the information contained in the attached sample report."

The "reporting out" requirement was changed from an oral report given by individual Trustees under agenda item 2.2, Oral Communications from the Board, to a written report submitted on the Consent Agenda.

Discussion

This is the first report submitted related to the change in policy. SamCERA Trustees attended the following educational events, and their reports are attached:

CALAPRS Trustee Round Table, February 3, 2017, San Jose, CA
David Spinello
Eric Tashman

CALAPRS General Assembly, March 5-7, 2017, Monterey, CA
Mark Battey
Susan Lee
David Spinello

IFEBP Investments Institute, March 13-15, Phoenix, AZ
Paul Hackleman
Shirley Tourel

Attachments

Trustee Education Proof of Participation Certificates and Summary

SamCERA Board of Retirement Trustee Education
Proof of Participation Certificate and Summary



Trustee Name DAVID SPINELLO		Date(s) of Event FEB 3, 2017
Education Event Name CALAPRS TRUSTEE ROUND TABLE (SAN JOSE)		
Event Provider CALAPRS		
Type of Participation: Attended Event <input checked="" type="checkbox"/> Listened to Audio/Watched Video <input type="checkbox"/>	Eligible Credit: <input checked="" type="checkbox"/> Total hours for sessions you participated in: <u>6</u> (Staff may adjust hours if the provider issues an education certificate that reflects different hours.)	

This event satisfies the following requirements of the Board of Retirement's Education Policy and Government Code section 31522.8:

Topic: (Check all that apply)

- | | |
|---|--|
| <input type="checkbox"/> Fiduciary responsibilities | <input type="checkbox"/> Disability evaluation |
| <input type="checkbox"/> Ethics | <input type="checkbox"/> Fair hearings |
| <input type="checkbox"/> Benefits administration | <input type="checkbox"/> Pension fund governance |
| <input checked="" type="checkbox"/> Actuarial matters | <input type="checkbox"/> New board member orientation |
| <input checked="" type="checkbox"/> Pension funding | <input checked="" type="checkbox"/> Other: <u>LAWS</u> |
| <input type="checkbox"/> Pension fund investments and investment program management | |

Summary Report

What concepts or information did you learn about?

CHANGING DEMOGRAPHICS, LAW UPDATE

Would you recommend this event to other trustees?

- Yes No Maybe

You may provide additional comments to SamCERA's CEO.

By signing below, I certify that I participated in the activities described above and am entitled to claim the indicated amount of education credit hour(s).

Trustee Signature (print this form and sign) <u>D. SPINELLO #766</u>	Date <u>2/28/17</u>
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NOTE: Please return this completed form to SamCERA's Executive Secretary prior to the mailing of the Board packet, so it can be included in that month's Consent Agenda.

SamCERA Board of Retirement Trustee Education
 Proof of Participation Certificate and Summary



Trustee Name ERIC TASHMAN		Date(s) of Event FEB 3, 2017
Education Event Name CALAPRS TRUSTEE ROUND TABLE (SAN JOSE)		
Event Provider CALAPRS		
Type of Participation: Attended Event <input checked="" type="checkbox"/> Listened to Audio/Watched Video <input type="checkbox"/>		Eligible Credit: Total hours for sessions you participated in: <u>5 hrs</u> (Staff may adjust hours if the provider issues an education certificate that reflects different hours.)

This event satisfies the following requirements of the Board of Retirement's Education Policy and Government Code section 31522.8:

Topic: (Check all that apply)

- | | |
|---|---|
| <input type="checkbox"/> Fiduciary responsibilities | <input type="checkbox"/> Disability evaluation |
| <input type="checkbox"/> Ethics | <input type="checkbox"/> Fair hearings |
| <input type="checkbox"/> Benefits administration | <input type="checkbox"/> Pension fund governance |
| <input checked="" type="checkbox"/> Actuarial matters | <input type="checkbox"/> New board member orientation |
| <input type="checkbox"/> Pension funding | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Pension fund investments and investment program management | |

Summary Report

What concepts or information did you learn about?

IN DEPTH DISCUSSION OF ACTUARIAL ASSUMPTIONS -
COMPARATIVE ANALYSIS
REVIEW OF INVESTMENT OPPORTUNITIES USING FUTURES
AND OPTIONS

Would you recommend this event to other trustees?

- Yes No Maybe

You may provide additional comments to SamCERA's CEO.

By signing below, I certify that I participated in the activities described above and am entitled to claim the indicated amount of education credit hour(s).

Trustee Signature (print this form and sign) 	Date 2/28/17
---	------------------------

NOTE: Please return this completed form to SamCERA's Executive Secretary prior to the mailing of the Board packet, so it can be included in that month's Consent Agenda.

SamCERA Board of Retirement Trustee Education
Proof of Participation Certificate and Summary



Trustee Name Mark Battey		Date(s) of Event Mar 5-6 2017
Education Event Name Calaprs General Assembly		
Event Provider Calaprs		
Type of Participation: Attended Event <input checked="" type="checkbox"/> Listened to Audio/Watched Video <input type="checkbox"/>	Eligible Credit: Total hours for sessions you participated in: <u>12</u> <i>(Staff may adjust hours if the provider issues an education certificate that reflects different hours.)</i>	

This event satisfies the following requirements of the Board of Retirement's Education Policy and Government Code section 31522.8:

Topic: (Check all that apply)

- | | |
|---|---|
| <input checked="" type="checkbox"/> Fiduciary responsibilities | <input type="checkbox"/> Disability evaluation |
| <input type="checkbox"/> Ethics | <input type="checkbox"/> Fair hearings |
| <input type="checkbox"/> Benefits administration | <input checked="" type="checkbox"/> Pension fund governance |
| <input checked="" type="checkbox"/> Actuarial matters | <input type="checkbox"/> New board member orientation |
| <input checked="" type="checkbox"/> Pension funding | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Pension fund investments and investment program management | |

Summary Report

What concepts or information did you learn about?
Good overview of key funding and actuarial issues facing public pension plans. Update on CalPERS and Hawaii approaches to "glide path" / derisking the portfolio. Remarks on how pension funds can access a California Innovation Portfolio

Would you recommend this event to other trustees?

- Yes No Maybe

You may provide additional comments to SamCERA's CEO.

By signing below, I certify that I participated in the activities described above and am entitled to claim the indicated amount of education credit hour(s).

Trustee Signature (print this form and sign) 	Date 3/9/2017
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NOTE: Please return this completed form to SamCERA's Executive Secretary prior to the mailing of the Board packet, so it can be included in that month's Consent Agenda.

SamCERA Board of Retirement Trustee Education
Proof of Participation Certificate and Summary



Trustee Name <i>Susan Lee</i>		Date(s) of Event <i>3/5-3/7/2017</i>
Education Event Name <i>Navigating Deeper Waters Ahead</i>		
Event Provider <i>Calaprs</i>		
Type of Participation: Attended Event <input checked="" type="checkbox"/> Listened to Audio/Watched Video <input type="checkbox"/>		Eligible Credit: Total hours for sessions you participated in: <u><i>13</i></u> <i>(Staff may adjust hours if the provider issues an education certificate that reflects different hours.)</i>

This event satisfies the following requirements of the Board of Retirement's Education Policy and Government Code section 31522.8:

Topic: (Check all that apply)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Fiduciary responsibilities | <input checked="" type="checkbox"/> Disability evaluation |
| <input type="checkbox"/> Ethics | <input type="checkbox"/> Fair hearings |
| <input type="checkbox"/> Benefits administration | <input checked="" type="checkbox"/> Pension fund governance |
| <input checked="" type="checkbox"/> Actuarial matters | <input type="checkbox"/> New board member orientation |
| <input checked="" type="checkbox"/> Pension funding | <input type="checkbox"/> Other: _____ |
| <input checked="" type="checkbox"/> Pension fund investments and investment program management | |

Summary Report

What concepts or information did you learn about?

*- Certain asset allocation could be put into crisis risk offset including fixed income and/or other investment as defined by the Investment Consultant or CIO.
- Factors driving family risk = life expectancy, plans, market conditions*

Would you recommend this event to other trustees?

- Yes No Maybe

You may provide additional comments to SamCERA's CEO.

By signing below, I certify that I participated in the activities described above and am entitled to claim the indicated amount of education credit hour(s).

Trustee Signature (print this form and sign) <i>[Signature]</i>	Date <i>3-22-17</i>
--	------------------------

NOTE: Please return this completed form to SamCERA's Executive Secretary prior to the mailing of the Board packet, so it can be included in that month's Consent Agenda.

SamCERA Board of Retirement Trustee Education Proof of Participation Certificate and Summary



Trustee Name David Spinello		Date(s) of Event March 5th-7th, 2017
Education Event Name CALAPRS GENERAL ASSEMBLY		
Event Provider CALAPRS		
Type of Participation: Attended Event <input type="checkbox"/> Listened to Audio/Watched Video <input type="checkbox"/>		Eligible Credit: Total hours for sessions you participated in: <u>15</u> (Staff may adjust hours if the provider issues an education certificate that reflects different hours.)

This event satisfies the following requirements of the Board of Retirement's Education Policy and Government Code section 31522.8:

Topic: (Check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Fiduciary responsibilities | <input type="checkbox"/> Disability evaluation |
| <input type="checkbox"/> Ethics | <input type="checkbox"/> Fair hearings |
| <input type="checkbox"/> Benefits administration | <input type="checkbox"/> Pension fund governance |
| <input checked="" type="checkbox"/> Actuarial matters | <input type="checkbox"/> New board member orientation |
| <input checked="" type="checkbox"/> Pension funding | <input type="checkbox"/> Other: _____ |
| <input checked="" type="checkbox"/> Pension fund investments and investment program management | |

Summary Report

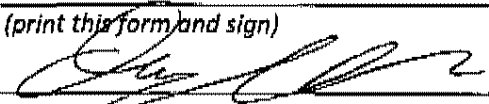
What concepts or information did you learn about?

Would you recommend this event to other trustees?

- Yes No Maybe

You may provide additional comments to SamCERA's CEO.

By signing below, I certify that I participated in the activities described above and am entitled to claim the indicated amount of education credit hour(s).

Trustee Signature (print this form and sign) DAVID SPINELLO 	Date 3/21/17
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NOTE: Please return this completed form to SamCERA's Executive Secretary prior to the mailing of the Board packet, so it can be included in that month's Consent Agenda.

SamCERA Board of Retirement Trustee Education
Proof of Participation Certificate and Summary



Trustee Name PAUL HACKLEMAN		Date(s) of Event March 13-15, 2017
Education Event Name IFEBP Investments Institute		
Event Provider IFEBP		
Type of Participation: Attended Event <input checked="" type="checkbox"/> Listened to Audio/Watched Video <input type="checkbox"/>	Eligible Credit: Total hours for sessions you participated in: <u>12.5</u> <i>(Staff may adjust hours if the provider issues an education certificate that reflects different hours.)</i>	

This event satisfies the following requirements of the Board of Retirement's Education Policy and Government Code section 31522.8:

Topic: (Check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Fiduciary responsibilities | <input type="checkbox"/> Disability evaluation |
| <input type="checkbox"/> Ethics | <input type="checkbox"/> Fair hearings |
| <input type="checkbox"/> Benefits administration | <input type="checkbox"/> Pension fund governance |
| <input type="checkbox"/> Actuarial matters | <input type="checkbox"/> New board member orientation |
| <input type="checkbox"/> Pension funding | <input type="checkbox"/> Other: _____ |
| <input checked="" type="checkbox"/> Pension fund investments and investment program management | |

Summary Report

What concepts or information did you learn about?

CURRENT AND FUTURE TRENDS IN DOMESTIC AND INTERNATIONAL REGIONS, DELEGATING INVESTMENT DECISIONS, PASSIVE VS ACTIVE STRATEGIES, SOCIAL SECURITY OPTIONS, APPROPRIATE RESOURCES FOR ASSET ALLOCATION STRATEGIES, USE OF "TAIL RISK" AND "CRISIS RISK" STRATEGIES TO LESSEN LOSSES, ALTERNATIVE INVESTING AND PRIVATE MARKET AND REAL ESTATE STRATEGIES

Would you recommend this event to other trustees?

- Yes No Maybe

You may provide additional comments to SamCERA's CEO.

By signing below, I certify that I participated in the activities described above and am entitled to claim the indicated amount of education credit hour(s).

Trustee Signature (print this form and sign) Paul Hackleman	Date 3-22-17
---	------------------------

NOTE: Please return this completed form to SamCERA's Executive Secretary prior to the mailing of the Board packet, so it can be included in that month's Consent Agenda.

SamCERA Board of Retirement Trustee Education
 Proof of Participation Certificate and Summary



Trustee Name Shirley Tourel		Date(s) of Event March 13-15, 2017
Education Event Name IFEBP Investments Institute		
Event Provider IFEBP		
Type of Participation: Attended Event <input checked="" type="checkbox"/> Listened to Audio/Watched Video <input type="checkbox"/>		Eligible Credit: Total hours for sessions you participated in: <u>10</u> (Staff may adjust hours if the provider issues an education certificate that reflects different hours.)

This event satisfies the following requirements of the Board of Retirement's Education Policy and Government Code section 31522.8:

Topic: (Check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Fiduciary responsibilities | <input type="checkbox"/> Disability evaluation |
| <input type="checkbox"/> Ethics | <input type="checkbox"/> Fair hearings |
| <input type="checkbox"/> Benefits administration | <input type="checkbox"/> Pension fund governance |
| <input type="checkbox"/> Actuarial matters | <input type="checkbox"/> New board member orientation |
| <input type="checkbox"/> Pension funding | <input type="checkbox"/> Other: _____ |
| <input checked="" type="checkbox"/> Pension fund investments and investment program management | |

Summary Report

What concepts or information did you learn about?

Current and future economy; Various Investment types e.g. - Fixed income, equities, alternative investments, and real estate; Asset Allocation strategies; Assessing how the current portfolio would perform when the economy is not doing well (e.g. stress test).

Would you recommend this event to other trustees?

- Yes No Maybe

You may provide additional comments to SamCERA's CEO.

By signing below, I certify that I participated in the activities described above and am entitled to claim the indicated amount of education credit hour(s).

Trustee Signature (print this form and sign) 	Date 3/22/2017
---	--------------------------

NOTE: Please return this completed form to SamCERA's Executive Secretary prior to the mailing of the Board packet, so it can be included in that month's Consent Agenda.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 28, 2017

Agenda Item 6.1

TO: Board of Retirement

FROM: Michael Coultrip, Chief Investment Officer



SUBJECT: Report on Preliminary Monthly Portfolio Performance Report for the Period Ended February 28, 2017

Staff Recommendation

Accept the preliminary performance report dated February 28, 2017.

Background

This preliminary report is intended to provide a high-level view of the portfolio and its trends. It is not intended to provide short-term performance upon which the Board would act. As discussed previously, preliminary performance estimates are now included for AQR Risk Parity, AQR Delta, PanAgora Risk Parity, and Beach Point Select. The quarterly performance metrics are not yet available for our private equity, private real asset, and real estate portfolios. The performance for these portfolios will be reflected in the quarterly performance report generated by Verus.

The attached performance report shows both net and gross of fee returns for the total plan on page one, with net composite returns (pages 2-3) and net manager returns (pages 4-9) also shown.

Discussion

The fund's net preliminary return for February was 1.8%, while the preliminary trailing twelve-month return ending February 2017 was 15.5% net. The twelve-month return trails SamCERA's Total Plan Policy Benchmark return of 16.6% but is higher than the Actuarial Assumed Earnings Rate of 7.0%.

Most broad-based equity indices were positive on the month. The broad U.S. equity market (as measured by the S&P 500 Index) was up 4% on the month (and hit another record high in February), while developed international equity (as measured by MSCI EAFE) was up 1.4%. Emerging markets were also higher and returned 3.1%.

Economic data were strong in February. Manufacturing continued to show strength, advancing for the sixth straight month and reaching the highest level in two years. The labor market also remained healthy as the unemployment rate remains near a ten-year low. Lastly, consumer confidence also increased in February to a 15-year high.

The general U.S. fixed income market was up 0.7% during the month, as interest rates modestly decreased during the month. The 10-year U.S. Treasury yield decreased by 9 basis points during

the month with the yield ending at 2.36% by month-end. Credit spreads tightened again during the month, leading the high yield market higher by 1.5%, while emerging debt returned 2.0%.

Attachments

Verus February 2017 Capital Markets Update

Northern Trust Performance Report



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**

FEBRUARY 2017
Capital Markets Update

Market commentary

ECONOMIC CLIMATE

- Headline CPI increased by 2.5% year-over-year in January, up 45 bps from the prior month, mainly driven by rising energy prices. Core CPI increased 2.3% over the previous year, up 4 bps from the prior month.
- Consumer spending increased in January by 0.4% month-over-month, above the consensus estimate of 0.1%. Furthermore, December's retail sales growth rate was revised upwards from 0.6% to 1.0%.
- The Conference Board Consumer Confidence Index rose 3.2 points to a 15-year high of 114.8 in February. The increase was attributed to optimistic expectations of employment and wage growth.
- The ISM manufacturing index increased 1.7% in February to a 2-year high of 57.7, above the consensus estimate of 56.4. Readings above 50 indicate a general expansion in manufacturing activity.

DOMESTIC EQUITIES

- Domestic equities provided a positive return for the fourth consecutive month, as the S&P 500 returned 4.0% in February.
- The Dow Jones Industrial Average tied its longest streak of consecutive record high closes at 12 sessions, and briefly topped 21,000 points before ending the month at 20,812.
- With 98% of companies in the index reporting results for the fourth quarter thus far, the blended earnings growth rate for the S&P 500 was 4.9% as of March 2nd.

DOMESTIC FIXED INCOME

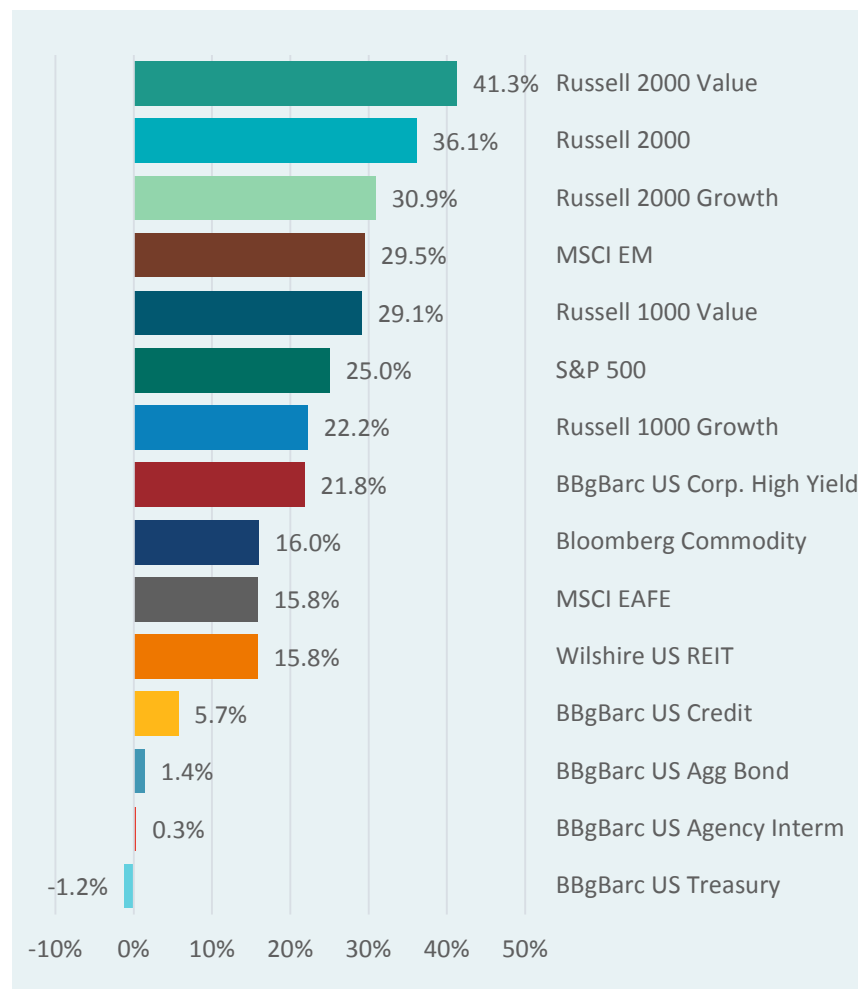
- Domestic fixed income returns were positive in February, as the Bloomberg Barclays U.S. Aggregate returned 0.7%.
- U.S. interest rates fell modestly as the 10-year Treasury yield dropped 9 bps and ended the month at 2.36%.
- The U.S. Treasury curve flattened slightly in February, with the 10-year minus 2-year Treasury yield spread contracting from 1.26% to 1.14%.

INTERNATIONAL MARKETS

- International equities underperformed domestic equities (S&P 500 4.0%) as the unhedged MSCI ACWI ex US returned 1.6% (1.9% hedged).
- Inflation in the U.K. approached the Bank of England's annual target of 2.0% for the first time since 2013, as CPI grew at 1.8% year-over-year in January, influenced by increased energy and food prices.
- Japanese headline inflation was 0.4% year-over-year in January, well below the Bank of Japan's annual target of 2.0%. Core inflation increased 0.1% year-over-year, the first positive change since December of 2015.
- According to Bloomberg, emerging market debt and equity ETFs have received inflows of more than \$7 billion year-to-date. Russia, Brazil and Turkey were the largest beneficiaries of the investment flows.

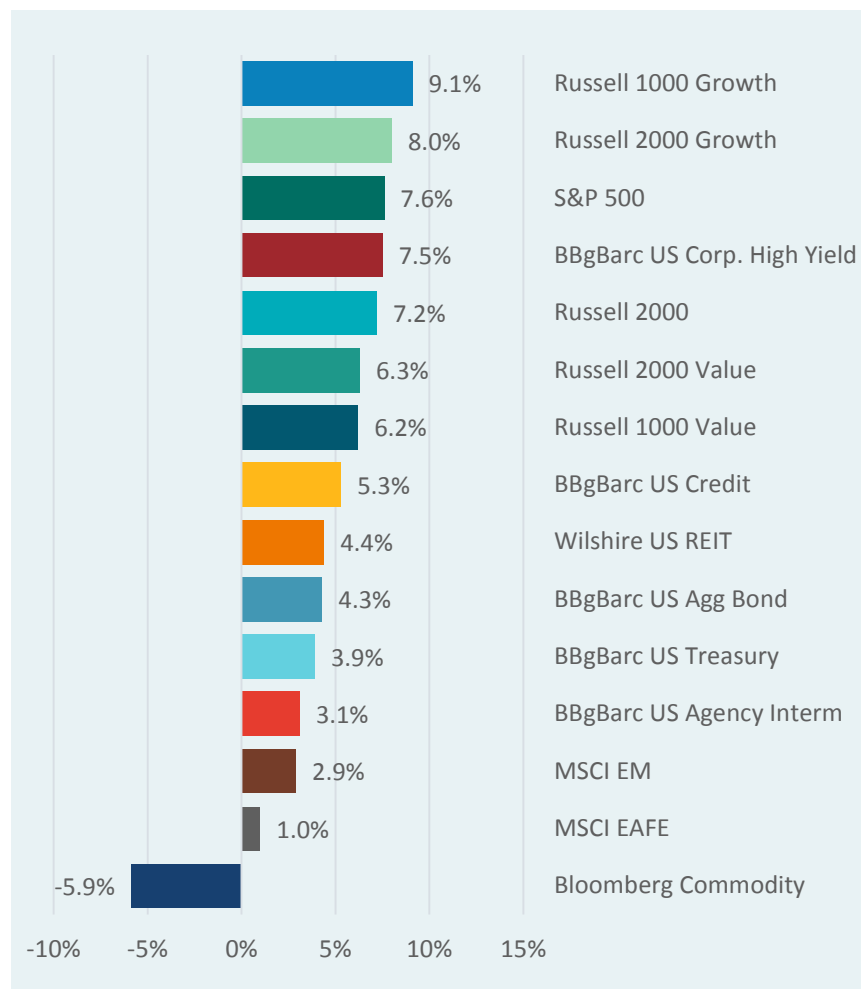
Major asset class returns

ONE YEAR ENDING FEBRUARY



Source: Morningstar, as of 2/28/17

TEN YEARS ENDING FEBRUARY

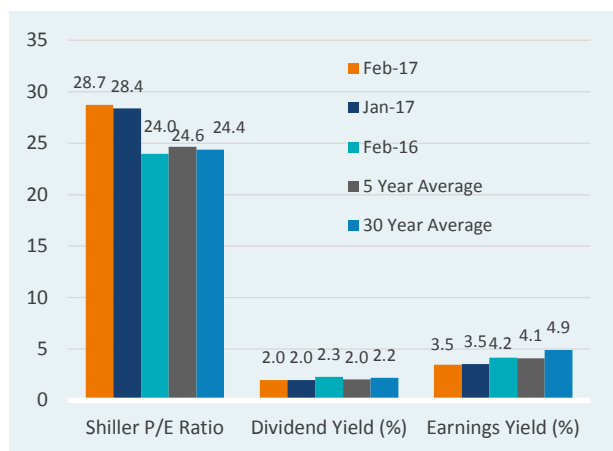


Source: Morningstar, as of 2/28/17

U.S. large cap equities

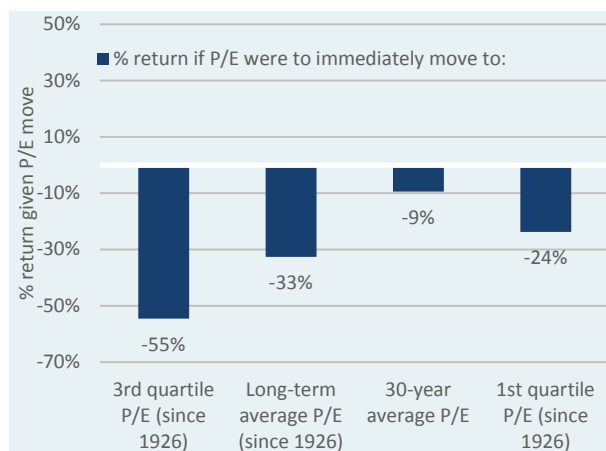
- The S&P 500 returned 4.0% in February and reached a new intraday high on February 27th of 2,372.
- Minutes from the FOMC meeting in January revealed members were monitoring the low levels of implied volatility given the uncertainty of potential changes in fiscal, regulatory, and other government policies. The VIX, a measure of 30-day implied volatility for the S&P 500, ended February at 12.92, below the 3-year average of 15.39.
- The 1-year trailing P/E ratio of the S&P 500 increased to 21.9 in February, as Q4 earnings were revised down and the index rose.
- Health Care outperformed the S&P 500 index (4.0%) in February, as the sub-index returned 6.4%. The two worst performing sectors were Energy and Telecom Services, returning -2.2% and -0.4%, respectively.

US LARGE CAP (S&P 500) VALUATION SNAPSHOT



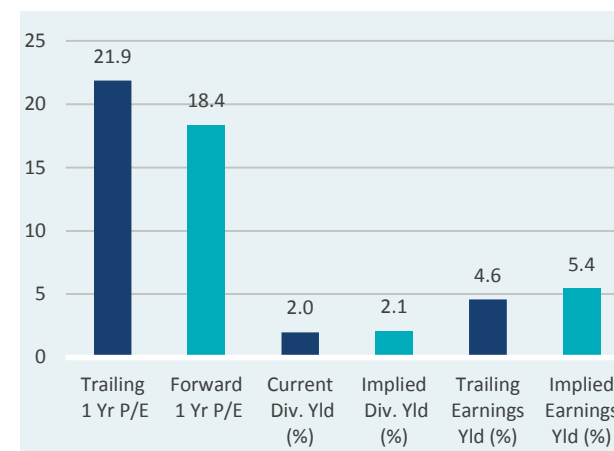
Source: Yale/Shiller, as of 2/28/17

RETURNS IF P/E MOVED TO HISTORIC LEVEL



Source: Yale/Shiller, Verus, as of 2/28/17

S&P 500 VALUATION SNAPSHOT

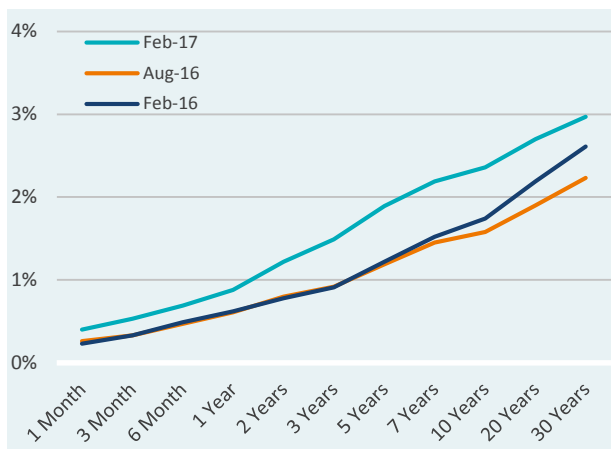


Source: Bloomberg, as of 2/28/17

Fixed income

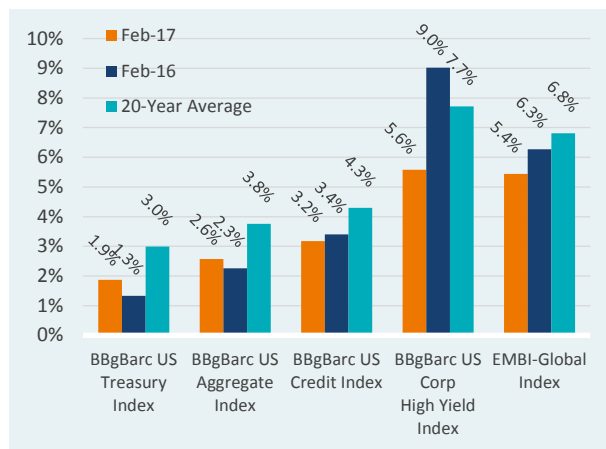
- The U.S. Treasury curve flattened slightly in February, as yields with shorter maturities between 3-months and 3-years increased, and longer maturities decreased. The 10-year minus 2-year Treasury yield spread contracted from 1.26% to 1.14%.
- The yield of the Bloomberg Barclays U.S. Aggregate ended the month at 2.6% (annualized), above 2.3% from 1-year prior, but well below the 20-year average of 3.8%.
- U.S. high yield option-adjusted spreads continued their downward trend to the lowest point since June of 2014, as they fell 26 bps and ended the month at 3.7%.
- U.S. outstanding student loan debt reached \$1.4 trillion in Q4 2016. According to the New York Fed, 11.2% of outstanding debt was delinquent by 90+ days or in default, above the average delinquency rate of 8.7% since 2003.

U.S. TREASURY YIELD CURVE



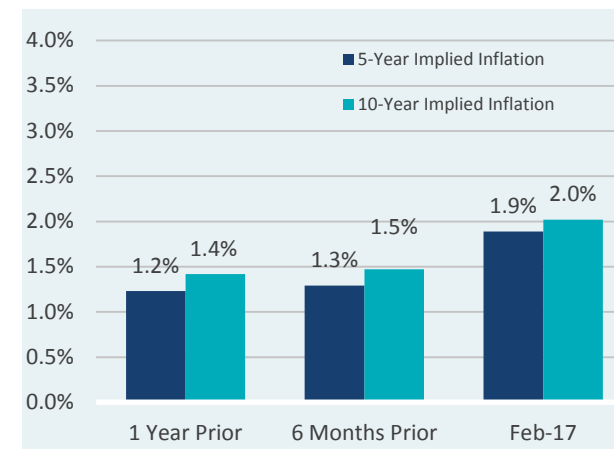
Source: Federal Reserve, as of 2/28/17

NOMINAL FIXED INCOME YIELDS



Source: Morningstar, as of 2/28/17

IMPLIED INFLATION (TIPS BREAKEVEN)

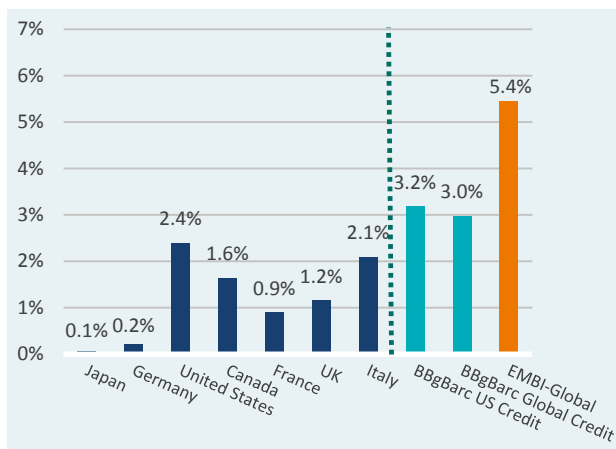


Source: Federal Reserve, as of 2/28/17

Global markets

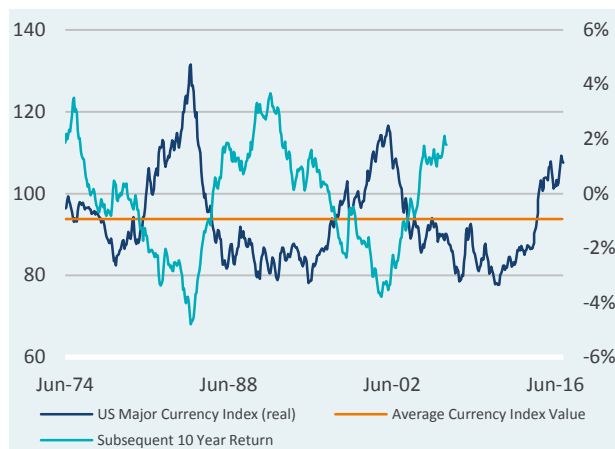
- Global sovereign bond yields decreased in February. U.K. and German 10-year yields experienced the largest change, falling by 27 and 23 bps, respectively.
- The U.S. major currency index decreased -0.5% to 107.6 in February against a trade weighted basket of currencies. The index remained well above the long-term average of 93.8.
- Real GDP in Greece decreased at a -4.7% annualized rate in the fourth quarter of 2016 (-1.1% year-over-year), further complicating bailout discussions with the country's international creditors.

GLOBAL SOVEREIGN 10 YEAR INDEX YIELDS



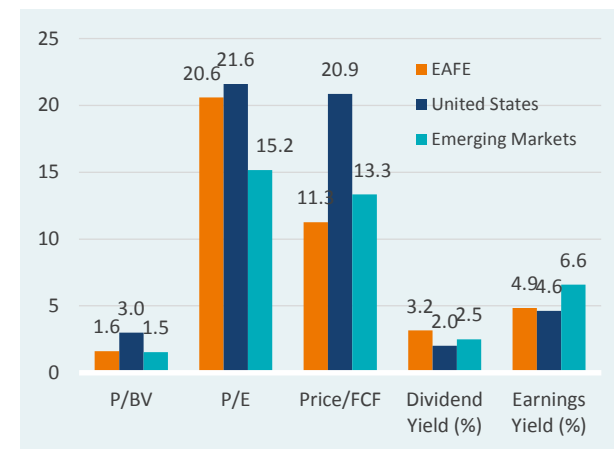
Source: Morningstar, as of 2/28/17

U.S. DOLLAR MAJOR CURRENCY INDEX



Source: Federal Reserve, as of 2/28/17

MSCI VALUATION METRICS (3 MONTH AVERAGE)

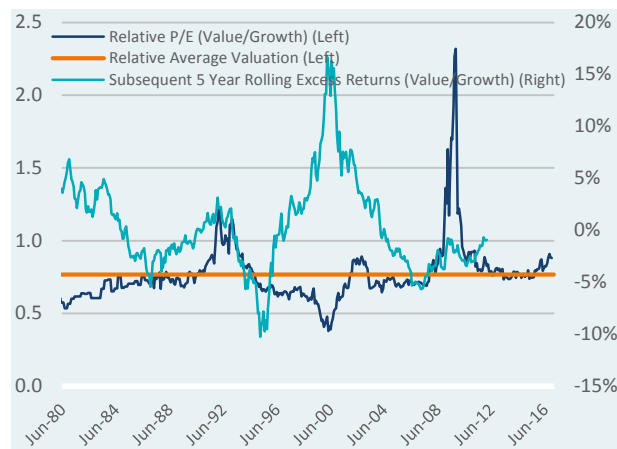


Source: Bloomberg, as of 2/28/17

Style tilts: U.S. large value vs. growth

- Growth equities narrowly outperformed value equities in February, as the Russell 1000 Growth Index and Russell 1000 Value Index returned 4.2% and 3.6%, respectively.
- The underperformance of value equities in February was partially attributable to a higher concentration of Energy companies in the Russell 1000 Value relative to the Russell 1000 Growth. The Russell 1000 Energy sub-index returned -2.3% in February.
- The P/E ratio of both growth and value equities increased in February but the relative P/E ratio remained materially unchanged at 0.88. This metric remains slightly above its long-term average of 0.77.

RELATIVE PE RATIO OF U.S. VALUE VS. GROWTH



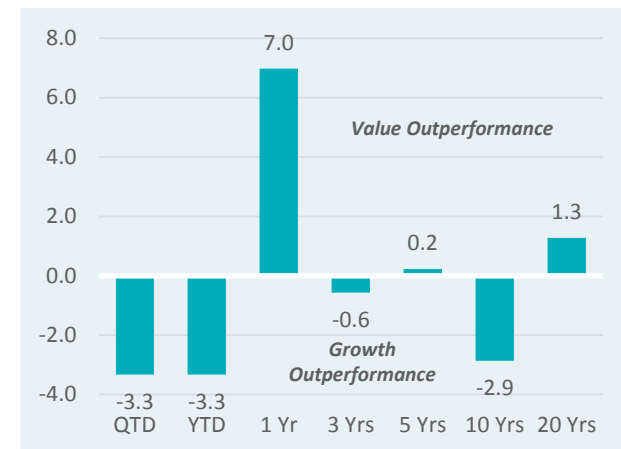
Source: Russell, Bloomberg, as of 2/28/17

U.S. VALUE VS. GROWTH ABSOLUTE PERFORMANCE

	RUSSELL 1000 GROWTH ANNUALIZED RETURN TO DATE %	RUSSELL 1000 VALUE ANNUALIZED RETURN TO DATE %
QTD	7.7	4.3
YTD	7.7	4.3
1 YEAR	22.2	29.1
3 YEARS	10.5	9.9
5 YEARS	13.8	14.0
10 YEARS	9.1	6.2
20 YEARS	6.9	8.2
	SHARPE RATIO	SHARPE RATIO
3 YEARS	0.94	0.94
5 YEARS	1.26	1.29
10 YEARS	0.60	0.42
20 YEARS	0.35	0.46

Source: Morningstar, as of 2/28/17

U.S. VALUE VS. GROWTH RELATIVE PERFORMANCE



Source: Morningstar, as of 2/28/17

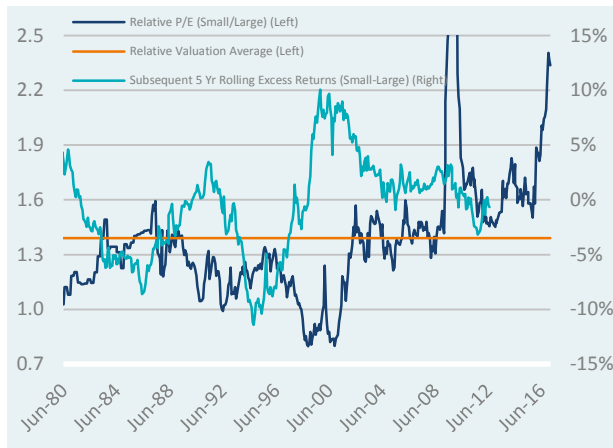
Style tilts: U.S. large vs. small

— U.S. large cap equities outperformed small cap equities in February, as the Russell 1000 index and Russell 2000 index returned 3.9% and 1.9%, respectively.

— Quarter-to-date, large cap equities have outperformed small cap equities by 3.6%, a short-term reversal from the trend in 2016, when small caps equities outperformed large by 9.3% over a 1-year period.

— The relative P/E ratio of small to large equities remained elevated at 2.34, well above the long-term average of 1.39, mainly due to recent increases in small cap valuations.

RELATIVE PE RATIO OF U.S. SMALL VS. LARGE



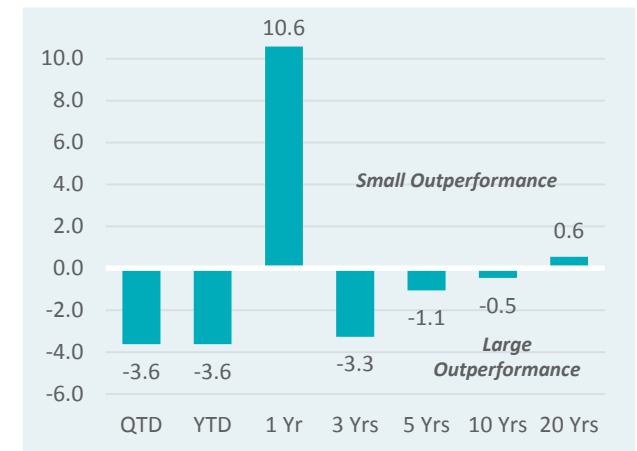
Source: Russell, Bloomberg, as of 2/28/17

U.S. LARGE VS. SMALL ABSOLUTE PERFORMANCE

	RUSSELL 1000 INDEX	RUSSELL 2000 INDEX
	ANNUALIZED RETURN TO DATE %	ANNUALIZED RETURN TO DATE %
QTD	6.0	2.3
YTD	6.0	2.3
1 YEAR	25.5	36.1
3 YEARS	10.2	6.9
5 YEARS	13.9	12.9
10 YEARS	7.7	7.2
20 YEARS	7.8	8.4
	SHARPE RATIO	SHARPE RATIO
3 YEARS	0.96	0.49
5 YEARS	1.31	0.91
10 YEARS	0.51	0.42
20 YEARS	0.43	0.40

Source: Morningstar, as of 2/28/17

U.S. SMALL VS. LARGE RELATIVE PERFORMANCE



Source: Morningstar, as of 2/28/17

Commodities

- The Bloomberg Precious Metals sub-index outperformed the overall Bloomberg Commodity Index (0.2%) in February and returned 3.9%. Gold increased 2.3% and ended the month at \$1,252 per ounce. Silver rose 5.3% and finished the month at \$18.47 per ounce.
- The Bloomberg Industrial Metals sub-index also outperformed as it returned 2.2% in the month. Aluminum and Nickel were positive contributors as

they increased by 5.8% and 10.2%, respectively.

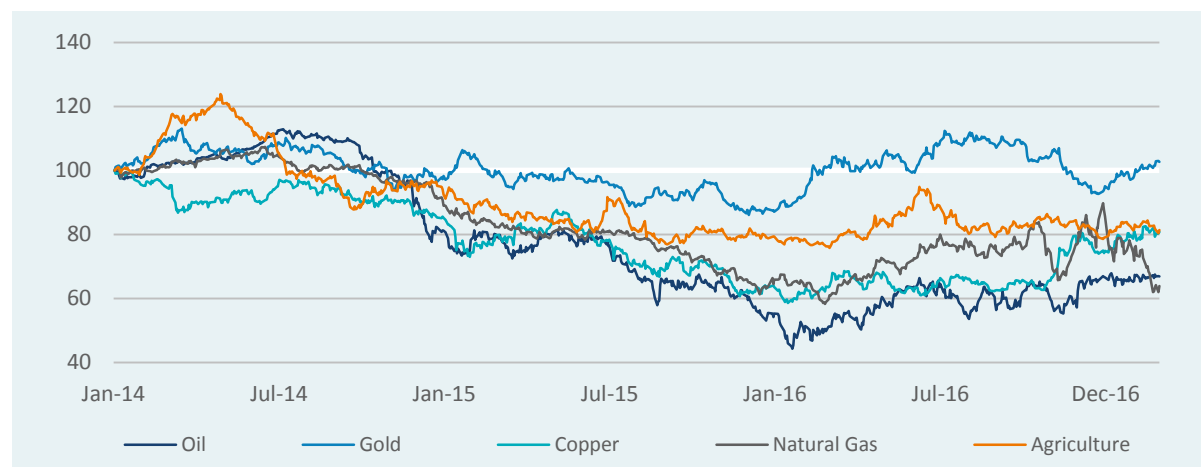
- WTI Crude Oil ended the month up 2.3% at \$54.01 per barrel and continued to trade within a narrow \$3 range. U.S. Crude Oil inventory rose by 34 million barrels in February to a record high of 528 million barrels. OPEC is set to review its current production cut plan at their next official meeting in June.

INDEX AND SECTOR PERFORMANCE

	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg Commodity	0.3	0.3	16.0	(13.0)	(9.8)	(5.9)
Bloomberg Agriculture	3.0	3.0	9.1	(10.1)	(6.9)	(1.1)
Bloomberg Energy	(10.1)	(10.1)	24.3	(28.5)	(18.3)	(16.8)
Bloomberg Grains	4.0	4.0	0.0	(12.6)	(7.6)	(2.7)
Bloomberg Industrial Metals	9.9	9.9	29.3	(2.6)	(6.9)	(5.5)
Bloomberg Livestock	(0.1)	(0.1)	(7.8)	(8.5)	(5.1)	(7.8)
Bloomberg Petroleum	(4.1)	(4.1)	28.3	(27.5)	(18.1)	(9.8)
Bloomberg Precious Metals	10.5	10.5	5.9	(3.1)	(8.1)	4.9
Bloomberg Softs	1.5	1.5	24.6	(8.2)	(9.8)	(1.2)

Source: Morningstar, as of 2/28/17

COMMODITY PERFORMANCE



Source: Bloomberg, as of 2/28/17

Appendix

Periodic table of returns

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	YTD	5-Year	10-Year
Emerging Markets Equity	16.6	38.4	23.2	35.2	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	8.7	14.0	9.1
Large Cap Growth	8.1	37.8	23.1	32.9	27.0	43.1	22.8	8.4	10.3	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	7.7	13.9	8.0
Large Cap Equity	6.4	37.2	22.4	31.8	20.3	33.2	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	17.3	6.0	13.8	7.7
International Equity	4.4	31.0	21.6	30.5	19.3	27.3	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	12.1	4.4	13.4	7.2
Large Cap Value	3.2	28.5	21.4	22.4	16.2	26.5	7.0	2.8	1.0	39.2	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	11.8	4.3	12.9	6.9
Small Cap Growth	2.6	25.7	16.5	16.2	15.6	24.3	6.0	2.5	-5.9	30.0	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	11.3	4.1	12.3	6.3
60/40 Global Portfolio	0.4	19.6	14.4	13.9	8.7	21.3	4.1	-2.4	-6.0	29.9	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	11.2	4.0	10.9	6.2
Small Cap Equity	-1.5	18.5	11.3	12.9	4.9	20.9	-3.0	-5.6	-11.4	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	8.0	2.3	5.2	4.3
Hedge Funds of Funds	-1.8	15.2	10.3	10.6	1.2	13.2	-7.3	-9.1	-15.5	25.2	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	7.1	1.9	5.1	4.1
US Bonds	-2.0	11.6	9.9	9.7	-2.5	11.4	-7.8	-9.2	-15.7	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	0.9	3.1	2.9
Small Cap Value	-2.4	11.1	6.4	5.2	-5.1	7.3	-14.0	-12.4	-20.5	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.6	0.7	2.2	1.3
Commodities	-2.9	7.5	6.0	2.1	-6.5	4.8	-22.4	-19.5	-21.7	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	1.0	0.3	0.1	1.0
Cash	-3.5	5.7	5.1	-3.4	-25.3	-0.8	-22.4	-20.4	-27.9	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	0.5	0.1	-0.4	0.6
Real Estate	-7.3	-5.2	3.6	-11.6	-27.0	-1.5	-30.6	-21.2	-30.3	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	0.3	N/A	-9.8	-5.9

WORST

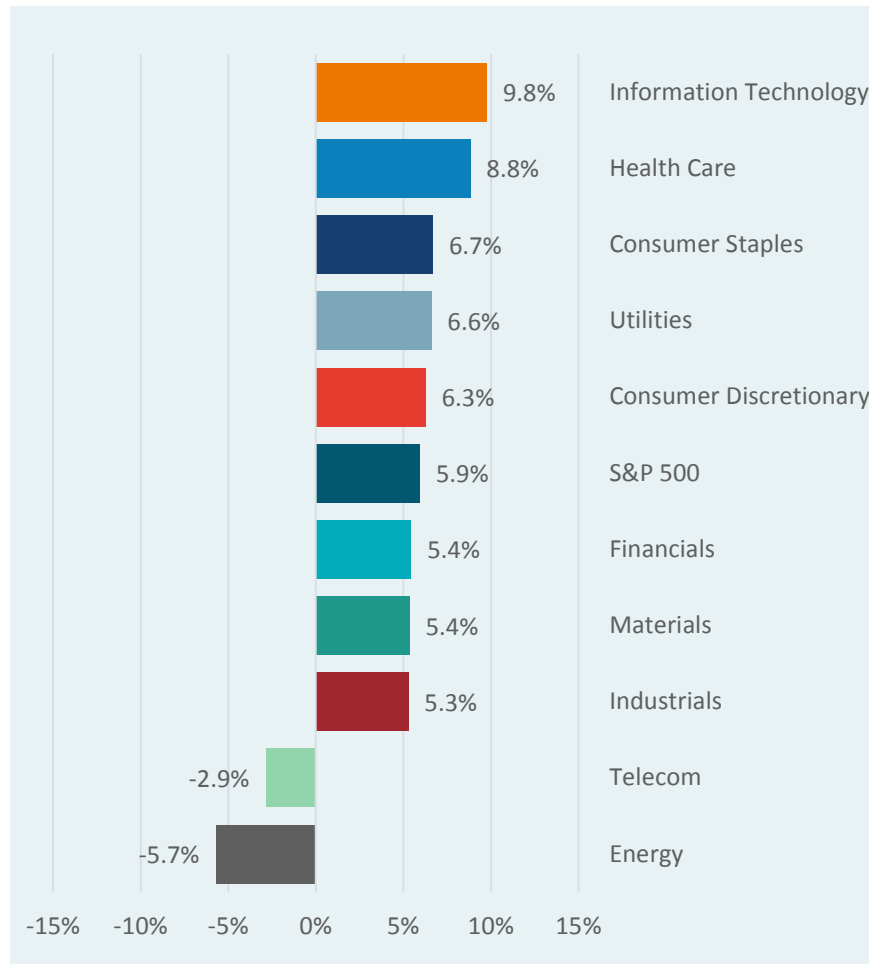
BEST

- Large Cap Equity
- Small Cap Growth
- Commodities
- Large Cap Value
- International Equity
- Real Estate
- Small Cap Equity
- Emerging Markets Equity
- Hedge Funds of Funds
- US Bonds
- 60% MSCI ACWI/40% BBgBarc Global Bond
- Cash

Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBgBarc Global Bond. NCREIF Property Index performance data as of 12/31/16.

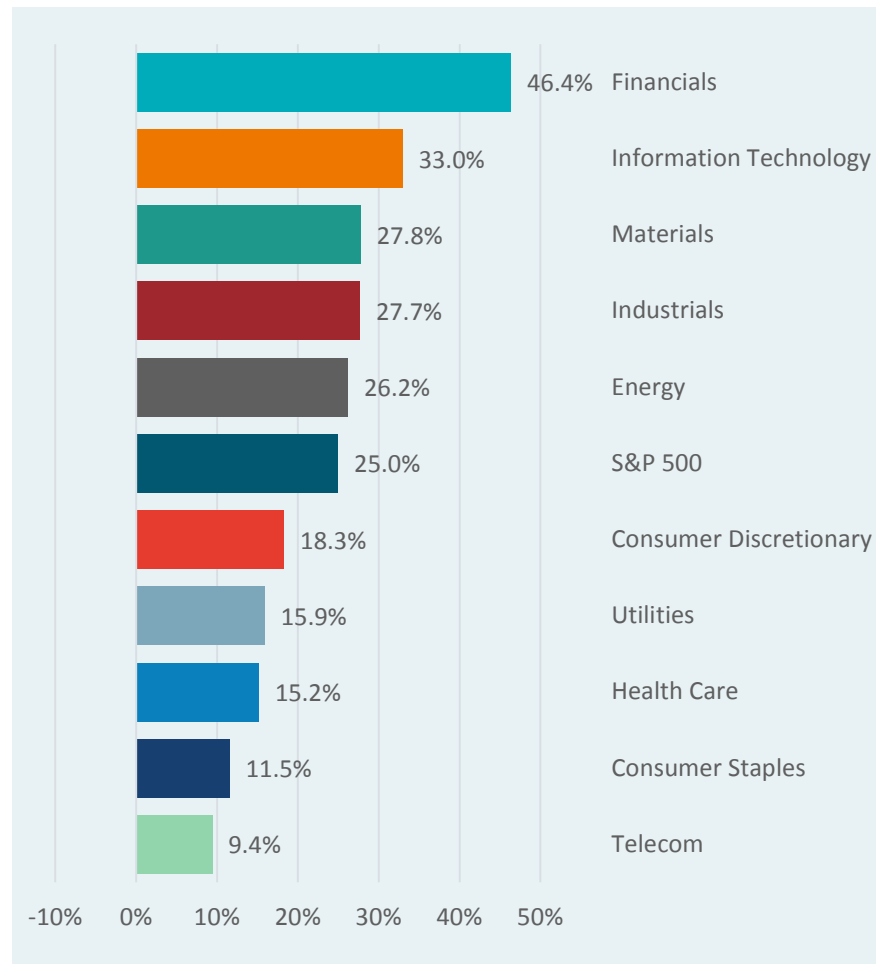
S&P 500 and S&P 500 sector returns

QTD



Source: Morningstar, as of 2/28/17

ONE YEAR ENDING FEBRUARY



Source: Morningstar, as of 2/28/17

Detailed index returns

DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index							
S&P 500	4.0	5.9	5.9	25.0	10.6	14.0	7.6
S&P 500 Equal Weighted	3.2	5.4	5.4	26.7	9.8	14.6	8.8
DJ Industrial Average	5.2	5.8	5.8	29.3	11.2	12.8	8.3
Russell Top 200	4.3	6.2	6.2	25.0	11.0	14.1	7.6
Russell 1000	3.9	6.0	6.0	25.5	10.2	13.9	7.7
Russell 2000	1.9	2.3	2.3	36.1	6.9	12.9	7.2
Russell 3000	3.7	5.7	5.7	26.3	9.9	13.9	7.6
Russell Mid Cap	2.8	5.3	5.3	26.8	8.4	13.6	8.0
Style Index							
Russell 1000 Growth	4.2	7.7	7.7	22.2	10.5	13.8	9.1
Russell 1000 Value	3.6	4.3	4.3	29.1	9.9	14.0	6.2
Russell 2000 Growth	2.5	4.1	4.1	30.9	5.4	12.3	8.0
Russell 2000 Value	1.4	0.7	0.7	41.3	8.4	13.4	6.3

INTERNATIONAL EQUITY

Broad Index							
MSCI ACWI	2.8	5.6	5.6	22.1	4.8	8.3	4.1
MSCI ACWI ex US	1.6	5.2	5.2	19.3	(0.2)	3.5	1.4
MSCI EAFE	1.4	4.4	4.4	15.8	(0.6)	5.2	1.0
MSCI EM	3.1	8.7	8.7	29.5	1.4	(0.4)	2.9
MSCI EAFE Small Cap	2.2	5.9	5.9	17.5	2.7	8.8	3.1
Style Index							
MSCI EAFE Growth	2.2	5.7	5.7	11.3	0.4	5.5	2.0
MSCI EAFE Value	0.7	3.2	3.2	20.3	(1.7)	4.7	(0.1)
Regional Index							
MSCI UK	2.0	3.3	3.3	10.8	(4.1)	2.9	0.7
MSCI Japan	1.1	4.9	4.9	20.3	5.7	7.2	0.5
MSCI Euro	0.9	2.1	2.1	14.1	(3.3)	5.0	(0.5)
MSCI EM Asia	3.6	9.7	9.7	27.3	3.9	3.0	4.6
MSCI EM Latin American	3.6	11.4	11.4	47.5	(1.4)	(6.8)	1.5

FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
BBgBarc US Treasury US TIPS	0.5	1.3	1.3	3.4	1.9	0.8	4.3
BBgBarc US Treasury Bills	0.0	0.1	0.1	0.4	0.2	0.2	0.8
BBgBarc US Agg Bond	0.7	0.9	0.9	1.4	2.6	2.2	4.3
Duration							
BBgBarc US Treasury 1-3 Yr	0.1	0.2	0.2	0.4	0.7	0.6	2.0
BBgBarc US Treasury Long	1.6	2.0	2.0	(4.5)	6.3	3.4	6.7
BBgBarc US Treasury	0.5	0.7	0.7	(1.2)	2.0	1.4	3.9
Issuer							
BBgBarc US MBS	0.5	0.4	0.4	0.4	2.6	2.0	4.2
BBgBarc US Corp. High Yield	1.5	2.9	2.9	21.8	4.7	6.8	7.5
BBgBarc US Agency Interm	0.2	0.5	0.5	0.3	1.3	1.1	3.1
BBgBarc US Credit	1.1	1.5	1.5	5.7	3.6	3.6	5.3

OTHER

Index							
Bloomberg Commodity	0.2	0.3	0.3	16.0	(13.0)	(9.8)	(5.9)
Wilshire US REIT	3.6	2.9	2.9	15.8	11.6	11.5	4.4
CS Leveraged Loans	0.6	1.1	1.1	12.6	3.8	5.0	4.3
Regional Index							
JPM EMBI Global Div	2.0	3.5	3.5	12.1	6.6	5.8	7.1
JPM GBI-EM Global Div	1.8	4.1	4.1	12.4	(2.5)	(2.5)	4.2
Hedge Funds							
HFRI Composite	1.0	2.2	2.2	10.7	2.7	4.0	3.4
HFRI FOF Composite	0.9	1.9	1.9	6.5	1.4	3.1	1.3
Currency (Spot)							
Euro	(1.7)	0.7	0.7	(2.2)	(8.4)	(4.5)	(2.2)
Pound	(1.1)	0.7	0.7	(10.7)	(9.4)	(4.9)	(4.4)
Yen	0.6	4.2	4.2	0.9	(3.0)	(6.3)	0.6

Source: Morningstar, as of 2/28/17

Definitions

Conference Board Consumer Confidence Index – a barometer of the health of the U.S. economy from the perspective of the consumer. The index is based on consumers' perceptions of current business and employment conditions, as well as their expectations for six months hence regarding business conditions, employment, and income. (www.conference-board.org)

ISM Manufacturing Index – based on data compiled from purchasing and supply executives nationwide. Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured (New Orders, Backlog of Orders, New Export Orders, Imports, Production, Supplier Deliveries, Inventories, Customers' Inventories, Employment and Prices), this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction and the negative economic direction, and the diffusion index. (www.instituteforsupplymanagement.org)

Notices & disclosures

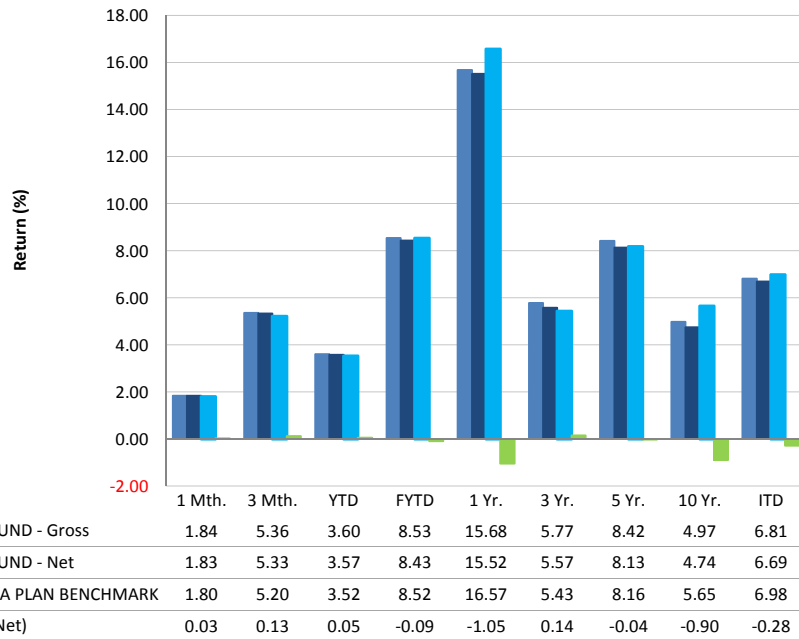
***Past performance is no guarantee of future results.** This document is provided for informational purposes only and is directed to institutional clients and eligible institutional counterparties only and is not intended for retail investors. Nothing herein constitutes investment, legal, accounting or tax advice, or a recommendation to buy, sell or hold a security or pursue a particular investment vehicle or any trading strategy. This document may include or imply estimates, outlooks, projections and other “forward-looking statements.” No assurance can be given that future results described or implied by any forward looking information will be achieved. Investing entails risks, including possible loss of principal. Verus Advisory Inc. and Verus Investors, LLC (“Verus”) file a single form ADV under the United States Investment Advisors Act of 1940, as amended. Additional information about Verus Advisory, Inc. and Verus Investors, LLC is available on the SEC’s website at www.adviserinfo.sec.gov.*

San Mateo County Total Fund Characteristics

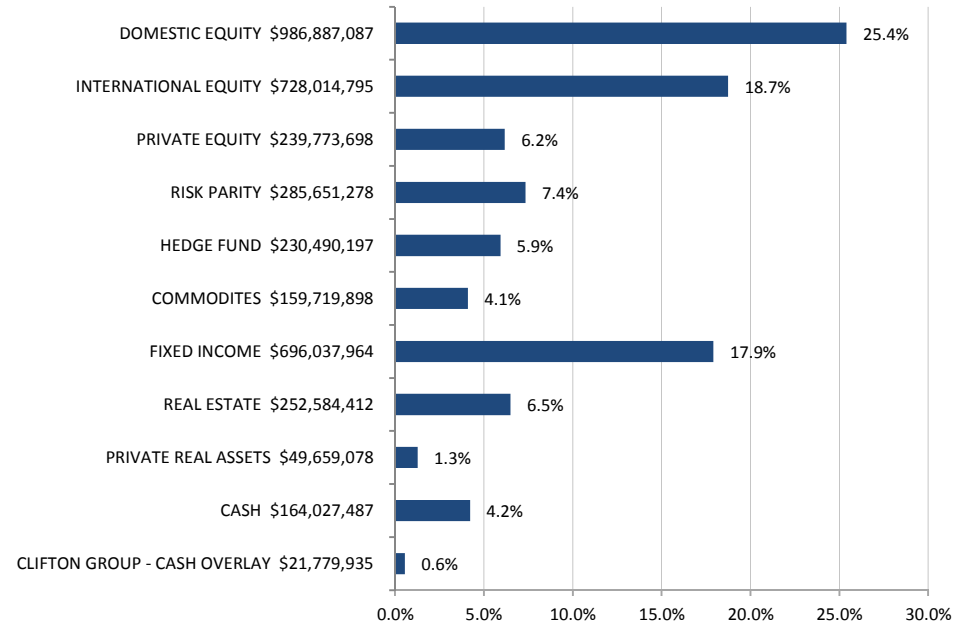


February 28, 2017

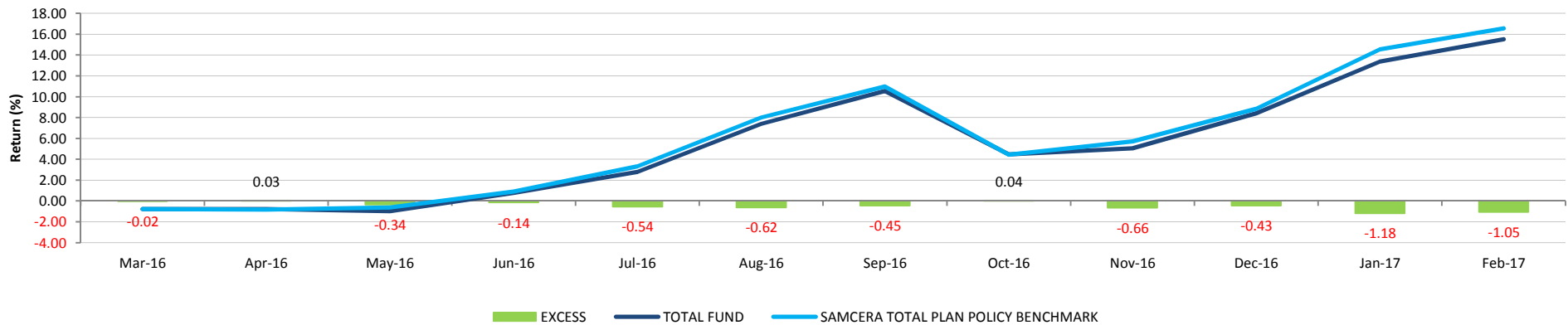
Total Fund Performance



Asset Allocation



Rolling Month End Annual Returns

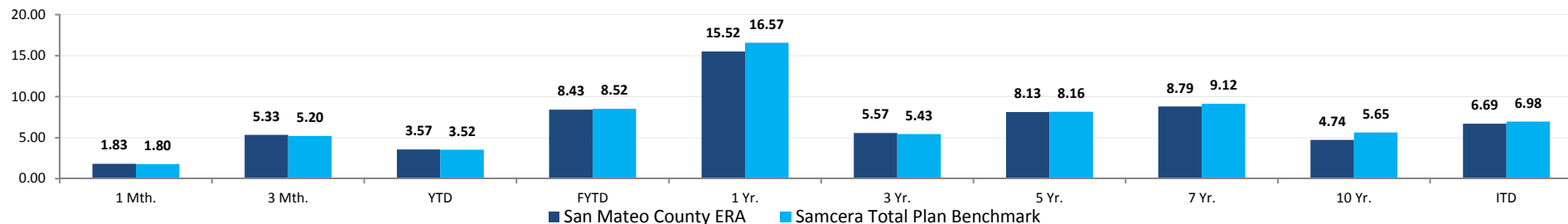


San Mateo County Composite Return Summary



February 28, 2017

Return Comparison



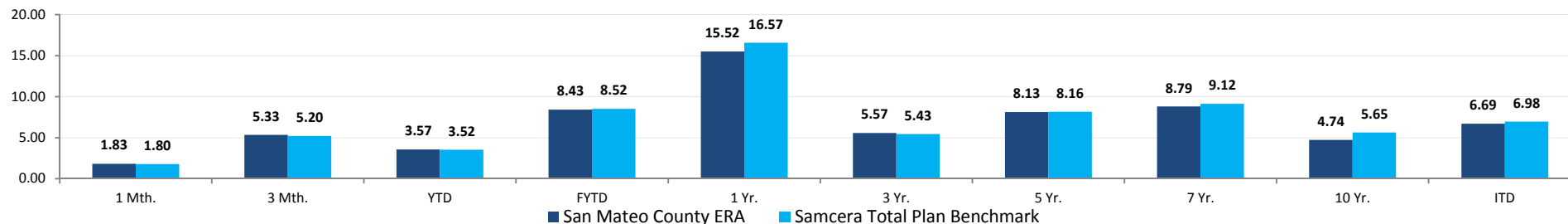
Composite Returns (Net of Manager Fees)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
San Mateo County ERA	3,885,972,570	1.83	5.33	3.57	8.43	15.52	5.57	8.13	8.79	4.74	6.69
Samcera Total Plan Benchmark		1.80	5.20	3.52	8.52	16.57	5.43	8.16	9.12	5.65	6.98
Excess		0.03	0.13	0.05	-0.09	-1.05	0.14	-0.04	-0.33	-0.90	-0.28
San Mateo Ex-Clifton Overlay	3,864,192,636	1.82	5.28	3.54	8.60	15.47	5.51	8.10	8.75	4.63	6.62
Samcera Total Plan Benchmark		1.80	5.20	3.52	8.52	16.57	5.43	8.16	9.12	5.65	6.98
Excess		0.02	0.08	0.02	0.08	-1.09	0.09	-0.07	-0.37	-1.02	-0.36
Total Equity	1,714,901,882	2.71	8.52	6.17	12.62	22.34	5.80	9.99	10.19	4.41	7.58
Samcera Total Equity Benchmark		3.28	7.83	5.61	14.96	25.97	7.77	11.31	11.43	6.10	8.22
Excess		-0.57	0.69	0.55	-2.34	-3.63	-1.97	-1.33	-1.23	-1.69	-0.64
Total Fixed Income	696,037,964	0.49	2.64	1.57	4.44	9.95	3.84	4.23	5.56	5.13	5.66
Samcera Fixed Income Benchmark		0.74	1.64	1.28	0.16	4.68	2.82	2.35	3.77	4.49	5.13
Excess		-0.25	1.00	0.29	4.28	5.27	1.01	1.88	1.79	0.64	0.54
Total Risk Parity	285,651,278	2.88	5.40	3.74	1.98	13.12	5.06	5.20	--	--	6.03
Samcera Risk Parity Benchmark		1.93	4.76	3.49	7.83	15.56	7.03	9.18	--	--	8.71
Excess		0.94	0.64	0.25	-5.84	-2.45	-1.97	-3.97	--	--	-2.68

San Mateo County Composite Return Summary



February 28, 2017

Return Comparison



Composite Returns (Net of Manager Fees)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Total Hedge Fund Composite	230,490,197	1.82	3.22	2.00	5.96	3.60	8.20	6.39	--	--	5.44
Samcera LIBOR + 4%		0.39	1.16	0.78	3.03	4.53	4.31	4.27	--	--	4.27
Excess		1.44	2.06	1.22	2.93	-0.93	3.89	2.12	--	--	1.17
Total Private Real Assets	49,659,078	1.43	5.50	1.82	28.53	--	--	--	--	--	47.51
SamCera Custom Real Asset Inde		0.42	5.28	2.85	--	--	--	--	--	--	--
Excess		1.01	0.22	-1.04	--	--	--	--	--	--	--
Total Real Estate	252,584,412	0.00	2.02	0.05	3.77	--	--	--	--	--	8.73
Samcera NCREIF ODCE EW (gross)		0.00	2.16	0.00	4.39	--	--	--	--	--	6.66
Excess		0.00	-0.14	0.05	-0.62	--	--	--	--	--	2.07
Total Cash	164,027,487	0.07	-0.11	-0.18	0.60	0.73	0.48	0.54	0.64	0.77	2.03
Samcera Cash Benchmark		0.04	0.13	0.09	0.27	0.39	0.16	0.14	0.13	0.73	1.88
Excess		0.02	-0.24	-0.26	0.33	0.34	0.32	0.40	0.51	0.04	0.16

San Mateo County Manager Return Summary



February 28, 2017

Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Total Equity	1,714,901,882	2.71	8.52	6.17	12.62	22.34	5.80	9.99	10.19	4.41	7.58
Samcera Total Equity Benchmark		3.28	7.83	5.61	14.96	25.97	7.77	11.31	11.43	6.10	8.22
Excess		-0.57	0.69	0.55	-2.34	-3.63	-1.97	-1.33	-1.23	-1.69	-0.64
Total Domestic Equity	986,887,087	3.53	9.13	6.75	15.82	26.36	9.13	13.01	13.17	6.33	8.48
Samcera Dom. Equity Benchmark		3.72	7.73	5.67	15.26	26.80	9.44	13.68	13.81	7.60	8.84
Excess		-0.19	1.40	1.08	0.56	-0.45	-0.31	-0.67	-0.63	-1.27	-0.36
Total Large Cap Equity	860,617,297	3.90	9.88	7.64	15.85	26.33	10.54	13.77	13.36	6.74	9.24
Russell 1000		3.87	7.95	5.96	14.45	25.53	10.19	13.94	13.91	7.69	9.57
Excess		0.03	1.93	1.68	1.39	0.81	0.34	-0.17	-0.55	-0.95	-0.33
Barrow Hanley	145,601	0.06	6.66	4.58	19.83	29.38	9.22	14.06	13.39	--	14.32
Russell 1000 Value		3.59	6.94	4.33	15.17	29.13	9.90	14.02	13.36	--	14.26
Excess		-3.53	-0.28	0.25	4.66	0.26	-0.68	0.03	0.03	--	0.06
Blackrock S&P 500 Index Fund	0	0.00	3.77	1.76	9.73	20.05	9.21	--	--	--	13.14
S&P 500		3.97	8.04	5.94	14.23	24.98	10.63	--	--	--	14.22
Excess		-3.97	-4.27	-4.18	-4.51	-4.93	-1.42	--	--	--	-1.08
Brown Advisory	27,212	0.07	10.44	11.24	9.94	17.23	6.86	--	--	--	10.62
Russell 1000 Growth		4.15	9.00	7.66	13.73	22.15	10.47	--	--	--	13.83
Excess		-4.09	1.44	3.58	-3.79	-4.92	-3.61	--	--	--	-3.22
Blackrock Russell 1000	722,631,596	3.87	--	--	--	--	--	--	--	--	--
Russell 1000		3.87	--	--	--	--	--	--	--	--	--
Excess		0.00	--	--	--	--	--	--	--	--	--
DE Shaw Commingled Fund	137,812,888	4.07	12.05	6.51	15.96	28.29	--	--	--	--	10.71
Russell 1000		3.87	7.95	5.96	14.45	25.53	--	--	--	--	8.70
Excess		0.20	4.10	0.55	1.50	2.76	--	--	--	--	2.01
Total Small Cap Equity	126,269,790	1.09	5.05	1.56	16.11	26.96	3.12	10.12	12.46	4.57	6.41
Russell 2000		1.93	5.20	2.33	21.45	36.11	6.93	12.89	13.51	7.22	7.90
Excess		-0.84	-0.15	-0.77	-5.34	-9.15	-3.80	-2.77	-1.05	-2.65	-1.49

San Mateo County Manager Return Summary



February 28, 2017

Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
QMA US Small Cap	126,269,790	1.09	5.05	1.56	--	--	--	--	--	--	14.79
Russell 2000		1.93	5.20	2.33	--	--	--	--	--	--	12.94
Excess		-0.84	-0.15	-0.77	--	--	--	--	--	--	1.85
Total International Equity	728,014,795	1.61	7.65	5.34	7.93	16.45	0.41	4.47	4.48	0.67	5.17
MSCI ACW ex US-IMI		1.74	8.02	5.38	11.04	19.33	0.08	3.86	4.76	1.63	4.73
Excess		-0.13	-0.36	-0.05	-3.11	-2.88	0.33	0.61	-0.27	-0.96	0.44
Total Developed Markets Equity	647,749,394	1.56	7.44	5.08	7.66	15.43	0.49	4.97	4.87	1.10	3.95
MSCI ACW ex US-IMI		1.74	8.02	5.38	11.04	19.33	0.08	3.86	4.76	1.63	4.48
Excess		-0.18	-0.58	-0.30	-3.38	-3.90	0.41	1.11	0.11	-0.53	-0.53
Baillie Gifford	218,252,349	0.97	6.46	6.29	7.00	15.28	1.27	--	--	--	6.73
MSCI ACWI ex US Growth		2.02	7.72	6.14	6.24	15.09	0.99	--	--	--	4.88
Excess		-1.06	-1.26	0.15	0.76	0.20	0.28	--	--	--	1.85
Blackrock EAFE Index Fund	137,360,096	1.43	7.95	4.37	10.39	16.19	-0.35	--	--	--	0.09
MSCI EAFE ND		1.43	7.94	4.37	10.30	15.75	-0.62	--	--	--	-0.18
Excess		0.00	0.01	0.00	0.10	0.44	0.27	--	--	--	0.27
Mondrian Investment Partners	218,356,464	2.42	8.28	4.31	7.19	15.31	0.05	3.98	4.80	1.53	5.05
MSCI ACWI ex US Value		1.22	8.16	4.36	16.41	24.80	-0.56	3.51	4.27	1.25	4.91
Excess		1.20	0.12	-0.05	-9.22	-9.49	0.61	0.47	0.53	0.28	0.15
FIAM Intl Small Cap	73,780,485	0.99	6.96	5.19	6.05	14.88	1.27	--	--	--	5.48
MSCI ACWI Small Cap ex US Net		2.63	8.83	6.57	10.95	19.52	1.80	--	--	--	6.35
Excess		-1.65	-1.87	-1.37	-4.90	-4.64	-0.53	--	--	--	-0.87

San Mateo County Manager Return Summary



February 28, 2017

Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Total Emerging Markets Equity	80,265,401	2.08	9.39	7.44	10.15	25.52	-0.34	--	--	--	0.48
MSCI Emerging Markets ND		3.06	8.94	8.70	13.58	29.46	1.35	--	--	--	0.31
Excess		-0.98	0.45	-1.26	-3.43	-3.94	-1.70	--	--	--	0.17
EV Parametric EM	80,265,401	2.08	9.39	7.44	10.15	25.52	--	--	--	--	4.99
MSCI Emerging Markets GD		3.07	9.03	8.71	13.82	29.94	--	--	--	--	4.92
Excess		-0.98	0.36	-1.27	-3.67	-4.42	--	--	--	--	0.07
Total Fixed Income	696,037,964	0.49	2.64	1.57	4.44	9.95	3.84	4.23	5.56	5.13	5.66
Samcera Fixed Income Benchmark		0.74	1.64	1.28	0.16	4.68	2.82	2.35	3.77	4.49	5.13
Excess		-0.25	1.00	0.29	4.28	5.27	1.01	1.88	1.79	0.64	0.54
Total Domestic Fixed Income	589,534,881	0.58	2.52	1.85	4.00	9.55	4.09	4.26	5.59	5.20	5.80
Samcera US Fixed Inc Benchmark		0.74	1.69	1.24	1.06	5.29	3.35	2.66	4.10	4.72	5.34
Excess		-0.16	0.84	0.61	2.95	4.25	0.74	1.60	1.49	0.48	0.46
Total Core Fixed Income	426,364,075	0.64	1.78	1.22	1.30	6.39	3.65	3.48	4.86	4.68	5.50
Bloomberg Barclays US Aggregate		0.67	1.01	0.87	-1.68	1.42	2.64	2.24	3.47	4.28	5.09
Excess		-0.03	0.77	0.35	2.98	4.98	1.01	1.25	1.38	0.40	0.41
FIAM Core Bond	246,624,117	0.71	1.53	1.16	-0.34	4.19	3.20	3.07	4.39	4.79	4.87
Bloomberg Barclays US Aggregate		0.67	1.01	0.87	-1.68	1.42	2.64	2.24	3.47	4.28	4.39
Excess		0.04	0.52	0.29	1.34	2.78	0.56	0.84	0.92	0.51	0.48
Western Total Return	109,533,060	0.69	2.71	1.71	5.57	12.10	--	--	--	--	4.27
Bloomberg Barclays US Aggregate		0.67	1.01	0.87	-1.68	1.42	--	--	--	--	2.19
Excess		0.02	1.70	0.84	7.25	10.68	--	--	--	--	2.08
Blackrock Inter Gov	70,206,897	0.32	--	--	--	--	--	--	--	--	--
Bloomberg Barclays US Aggregate		0.67	--	--	--	--	--	--	--	--	--
Excess		-0.36	--	--	--	--	--	--	--	--	--
Total Opportunistic Credit	163,170,806	0.43	4.24	3.34	10.38	17.26	5.88	8.96	9.74	--	9.89
BB Barc BA Intermediate HY Ind		0.98	3.09	1.88	6.66	13.41	4.79	6.21	7.70	--	8.00
Excess		-0.55	1.15	1.45	3.72	3.85	1.09	2.75	2.04	--	1.89

San Mateo County Manager Return Summary



February 28, 2017

Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
AG Opportunistic Whole Loan	16,663,195	0.00	0.00	0.00	6.57	5.52	--	--	--	--	2.03
BB Barc BA Intermediate HY Ind		0.98	3.09	1.88	6.66	13.41	--	--	--	--	4.80
Excess		-0.98	-3.09	-1.88	-0.09	-7.89	--	--	--	--	-2.77
Angelo Gordon	20,733,118	2.27	7.82	2.27	10.20	6.61	7.96	--	--	--	9.18
BB Barc BA Intermediate HY Ind		0.98	3.09	1.88	6.66	13.41	4.79	--	--	--	5.51
Excess		1.29	4.73	0.39	3.54	-6.80	3.17	--	--	--	3.67
Beach Point Select Fund	45,448,200	0.14	4.46	4.01	11.01	18.73	--	--	--	--	10.03
BB Barc BA Intermediate HY Ind		0.98	3.09	1.88	6.66	13.41	--	--	--	--	5.52
Excess		-0.84	1.37	2.12	4.35	5.32	--	--	--	--	4.51
Brigade Cap Mngmt	71,489,584	-0.01	4.25	4.25	12.06	28.65	3.88	6.32	--	--	7.11
BB Barc BA Intermediate HY Ind		0.98	3.09	1.88	6.66	13.41	4.79	6.21	--	--	7.21
Excess		-0.99	1.16	2.37	5.40	15.23	-0.90	0.11	--	--	-0.09
TCP Direct Lending VIII	8,836,709	2.05	2.05	2.05	--	--	--	--	--	--	--
BB Barc BA Intermediate HY Ind		0.98	3.09	1.88	--	--	--	--	--	--	--
Excess		1.07	-1.04	0.17	--	--	--	--	--	--	--
Total Global Fixed Income	106,503,083	0.01	3.14	0.13	6.50	12.02	2.29	3.71	--	--	4.48
Samcera Global Fixed Benchmark		0.52	1.42	1.73	-4.07	1.67	-0.26	0.48	--	--	1.56
Excess		-0.51	1.72	-1.60	10.57	10.35	2.55	3.23	--	--	2.91
Franklin Templeton	106,503,083	0.01	3.14	0.13	6.50	12.02	1.83	3.43	--	--	4.25
BB Barclays Multiverse Index		0.52	1.42	1.73	-4.07	1.67	-0.26	0.48	--	--	1.56
Excess		-0.51	1.72	-1.60	10.57	10.35	2.09	2.95	--	--	2.68
Total Risk Parity	285,651,278	2.88	5.40	3.74	1.98	13.12	5.06	5.20	--	--	6.03
Samcera Risk Parity Benchmark		1.93	4.76	3.49	7.83	15.56	7.03	9.18	--	--	8.71
Excess		0.94	0.64	0.25	-5.84	-2.45	-1.97	-3.97	--	--	-2.68
AQR Global Risk III	133,436,141	3.06	4.94	3.94	3.92	13.44	2.31	3.55	--	--	4.64
Samcera Risk Parity Benchmark		1.93	4.76	3.49	7.83	15.56	7.03	9.18	--	--	8.71
Excess		1.13	0.18	0.45	-3.91	-2.12	-4.72	-5.63	--	--	-4.07

San Mateo County Manager Return Summary



February 28, 2017

Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Panagora	152,215,137	2.72	5.81	3.56	0.34	12.84	--	--	--	--	6.06
Samcera Risk Parity Benchmark		1.93	4.76	3.49	7.83	15.56	--	--	--	--	6.36
Excess		0.78	1.05	0.07	-7.48	-2.73	--	--	--	--	-0.30
Total Alternatives	470,263,895	2.43	3.65	3.12	11.19	9.11	5.95	5.19	-6.29	-7.48	-3.13
Samcera Alternatives Benchmark		2.04	4.74	3.26	10.45	16.59	5.04	8.08	9.18	6.26	7.39
Excess		0.39	-1.09	-0.14	0.74	-7.48	0.91	-2.89	-15.47	-13.74	-10.52
Total Private Equity	239,773,698	3.02	4.12	4.14	15.90	14.07	14.33	12.65	--	--	-25.14
Samcera PE Benchmark		3.97	8.51	6.18	17.21	30.01	13.11	17.18	--	--	17.18
Excess		-0.94	-4.40	-2.04	-1.31	-15.94	1.22	-4.53	--	--	-42.31
Total Hedge Fund Composite	230,490,197	1.82	3.22	2.00	5.96	3.60	8.20	6.39	--	--	5.44
Samcera LIBOR + 4%		0.39	1.16	0.78	3.03	4.53	4.31	4.27	--	--	4.27
Excess		1.44	2.06	1.22	2.93	-0.93	3.89	2.12	--	--	1.17
AQR Delta XN	160,915,697	2.27	3.71	2.60	6.96	4.38	8.77	6.73	--	--	5.73
Samcera LIBOR + 4%		0.39	1.16	0.78	3.03	4.53	4.31	4.27	--	--	4.27
Excess		1.89	2.55	1.82	3.93	-0.16	4.46	2.45	--	--	1.46
Standard Life GARS	69,574,500	0.80	2.10	0.38	2.62	1.22	--	--	--	--	-1.39
Samcera LIBOR + 4%		0.39	1.16	0.78	3.03	4.53	--	--	--	--	4.46
Excess		0.41	0.94	-0.40	-0.41	-3.31	--	--	--	--	-5.85
Total Inflation Hedge	533,310,129	0.29	2.84	0.90	6.64	--	--	--	--	--	12.46
SamCERA Inflation Hedge Index		0.24	3.35	1.41	3.62	--	--	--	--	--	8.17
Excess		0.04	-0.51	-0.51	3.02	--	--	--	--	--	4.29
Total TIPS	71,346,741	0.28	1.11	1.16	1.77	--	--	--	--	--	2.64
BBG Barclays US TIPS		0.47	1.22	1.32	-0.17	--	--	--	--	--	1.53
Excess		-0.19	-0.10	-0.16	1.94	--	--	--	--	--	1.11

San Mateo County Manager Return Summary



February 28, 2017

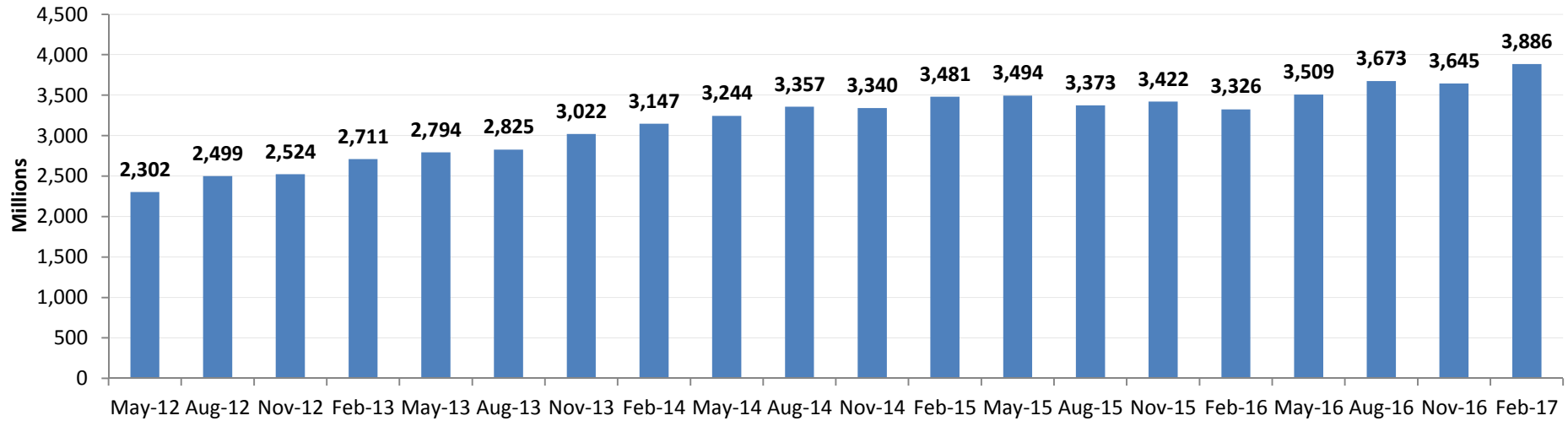
Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Brown Brothers Harriman	71,346,741	0.28	1.11	1.16	1.77	4.37	1.11	0.29	--	--	2.76
BBG Barclays US TIPS		0.47	1.22	1.32	-0.17	3.36	1.89	0.77	--	--	3.11
Excess		-0.19	-0.10	-0.16	1.94	1.01	-0.78	-0.48	--	--	-0.35
Total Real Estate	252,584,412	0.00	2.02	0.05	3.77	--	--	--	--	--	8.73
Samcera NCREIF ODCE EW (gross)		0.00	2.16	0.00	4.39	--	--	--	--	--	6.66
Excess		0.00	-0.14	0.05	-0.62	--	--	--	--	--	2.07
Invesco Core Real Estate	241,432,991	0.00	2.08	0.00	3.71	8.86	11.99	11.59	12.90	5.41	7.81
Samcera NCREIF ODCE EW (gross)		0.00	2.16	0.00	4.39	9.27	12.25	12.22	13.30	5.63	7.68
Excess		0.00	-0.08	0.00	-0.67	-0.40	-0.26	-0.63	-0.41	-0.22	0.13
Invesco US Val IV	11,151,420	0.00	1.05	1.05	5.81	5.50	--	--	--	--	13.51
Samcera NCREIF ODCE EW (gross)		0.00	2.16	0.00	4.39	9.27	--	--	--	--	10.28
Excess		0.00	-1.11	1.05	1.43	-3.77	--	--	--	--	3.23
Liquid Real Assets	159,719,898	0.40	4.57	2.24	--	--	--	--	--	--	--
SamCera Custom Real Asset Index		0.42	5.28	2.85	--	--	--	--	--	--	--
Excess		-0.02	-0.71	-0.62	--	--	--	--	--	--	--
SSGA CST REAL ASSET NL	159,719,898	0.40	4.57	2.24	--	--	--	--	--	--	--
SamCera Custom Real Asset Index		0.42	5.28	2.85	--	--	--	--	--	--	--
Excess		-0.02	-0.71	-0.62	--	--	--	--	--	--	--
Total Private Real Assets	49,659,078	1.43	5.50	1.82	28.53	--	--	--	--	--	47.51
SamCera Custom Real Asset Inde		0.42	5.28	2.85	--	--	--	--	--	--	--
Excess		1.01	0.22	-1.04	--	--	--	--	--	--	--
Total Cash	164,027,487	0.07	-0.11	-0.18	0.60	0.73	0.48	0.54	0.64	0.77	2.03
Samcera Cash Benchmark		0.04	0.13	0.09	0.27	0.39	0.16	0.14	0.13	0.73	1.88
Excess		0.02	-0.24	-0.26	0.33	0.34	0.32	0.40	0.51	0.04	0.16
SamCera General Account	153,052,495	0.07	0.20	0.14	0.45	0.61	0.37	0.27	0.28	0.94	2.02
County Treasury Pool	10,842,193	0.00	0.00	0.00	0.00	0.00	0.07	0.36	0.56	0.64	2.71
San Mateo County ERA	3,885,972,570	1.83	5.33	3.57	8.43	15.52	5.57	8.13	8.79	4.74	6.69
Samcera Total Plan Benchmark		1.80	5.20	3.52	8.52	16.57	5.43	8.16	9.12	5.65	6.98
Excess		0.03	0.13	0.05	-0.09	-1.05	0.14	-0.04	-0.33	-0.90	-0.28

February 28, 2017

Record of Asset Growth

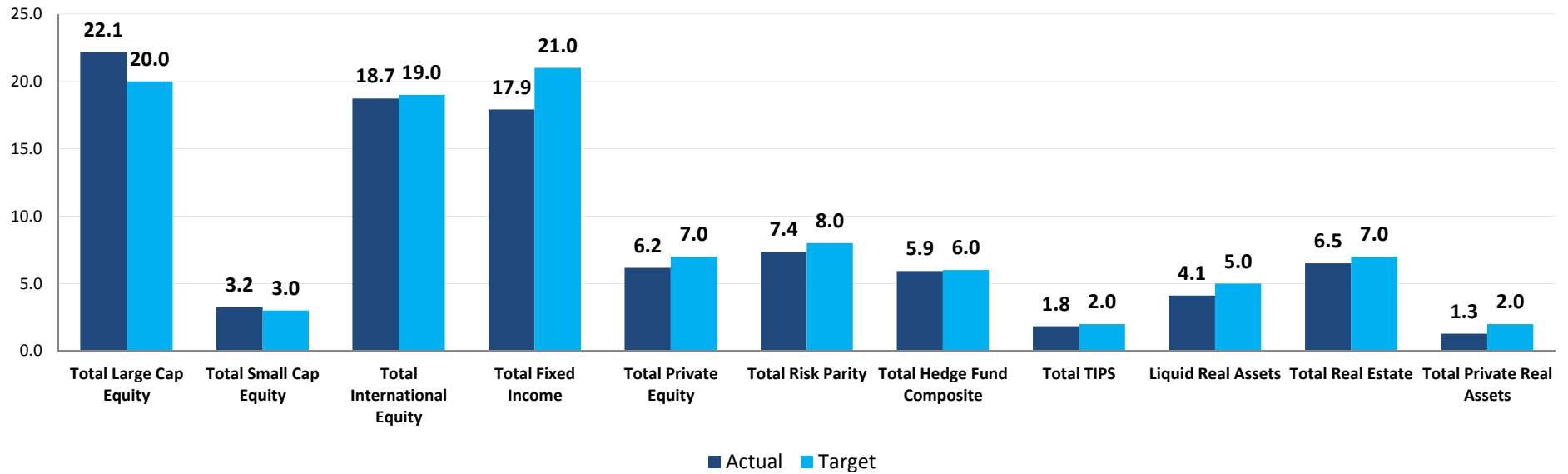
	Three Months	One Year
TOTAL FUND		
Beginning Market Value	3,644,666,077	3,325,598,045
Contributions	1,406,827,279	1,654,949,125
Withdrawals	-1,363,709,946	-1,620,800,665
Income Received	7,150,044	37,621,848
Gain/Loss	190,843,848	487,003,293
Ending Market Value	3,885,972,570	3,885,972,570

Net Asset Values Over Time (\$000)



February 28, 2017

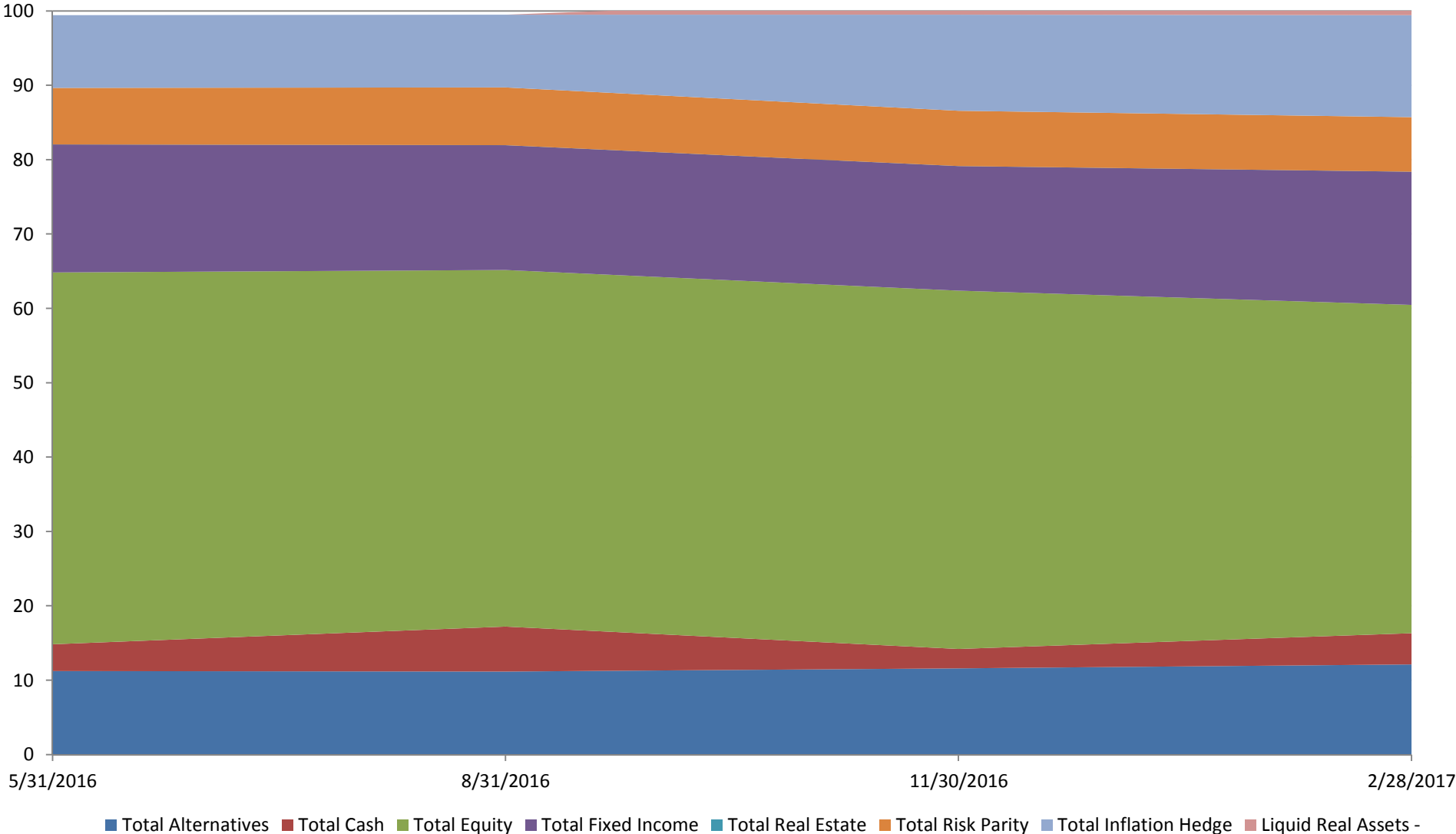
Actual vs Target Weights



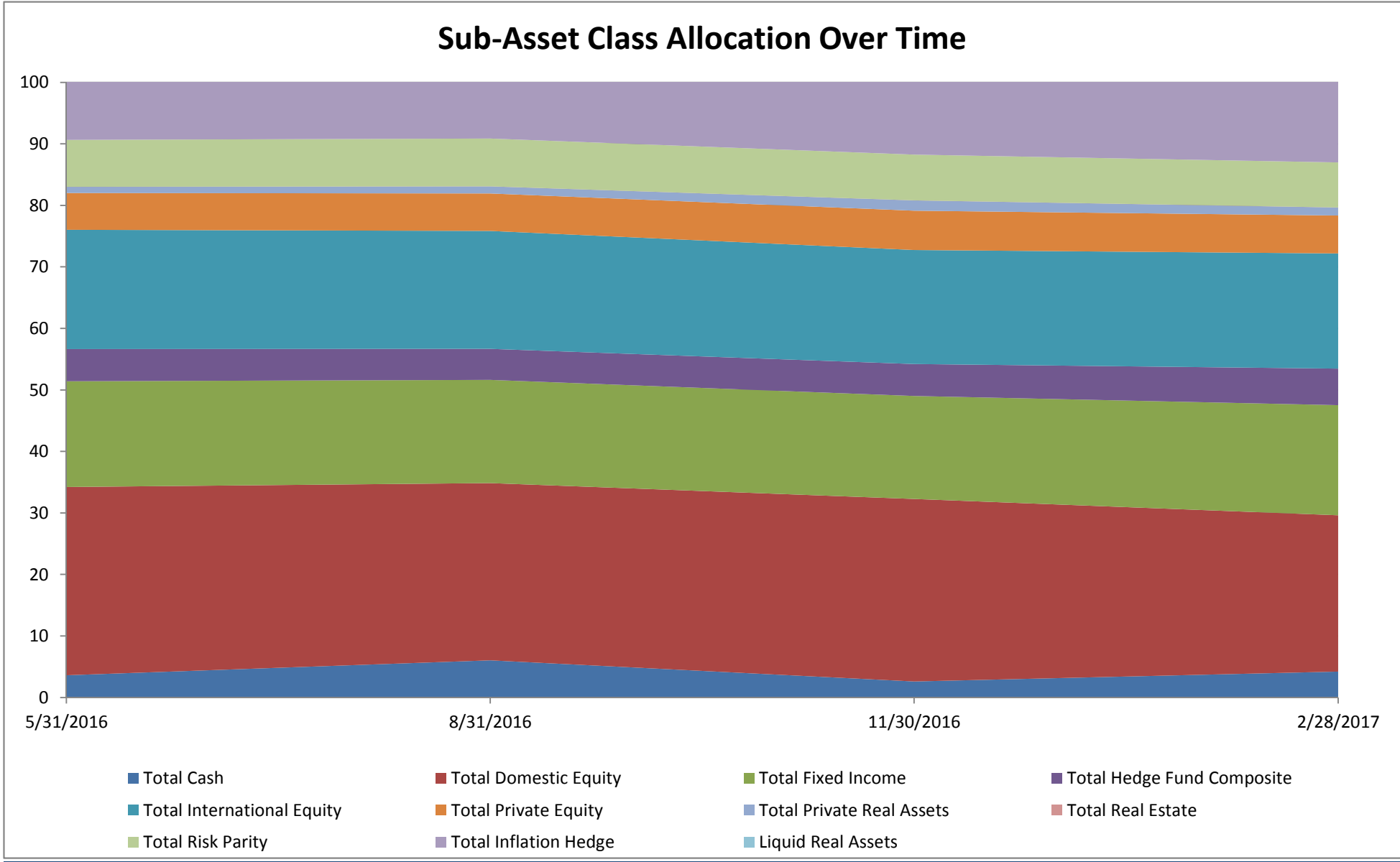
	Min	Actual	Target	Deviation	Max
Total Large Cap Equity	18.0	22.1	20.0	2.1	22.0
Total Small Cap Equity	1.0	3.2	3.0	0.2	5.0
Total International Equity	17.0	18.7	19.0	-0.3	21.0
Total Fixed Income	19.0	17.9	21.0	-3.1	23.0
Total Private Equity	5.0	6.2	7.0	-0.8	9.0
Total Risk Parity	6.0	7.4	8.0	-0.6	10.0
Total Hedge Fund Composite	4.0	5.9	6.0	-0.1	8.0
Total TIPS	0.0	1.8	2.0	-0.2	4.0
Liquid Real Assets	3.0	4.1	5.0	-0.9	7.0
Total Real Estate	5.0	6.5	7.0	-0.5	9.0
Total Private Real Assets	0.0	1.3	2.0	-0.7	4.0

February 28, 2017

Asset Allocation over Time



February 28, 2017



SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 28, 2017

Agenda Item 6.2

TO: Board of Retirement

FROM: Lilibeth Dames, Investment Analyst

SUBJECT: Report on Global Custodian (Northern Trust) Annual Review

Staff Recommendation

Accept the report on the annual review of SamCERA's custodian bank.

Background

Northern Trust became SamCERA's custodian effective July 1, 2014. Northern Trust provides SamCERA with global custody and securities lending services.

Discussion

On March 2nd, SamCERA staff held the annual review meeting in SamCERA's office for Northern Trust. Gary Guibert, Patrick Mauloff, Maria Frommelt and Nivia Gilkey attended from Northern Trust.

The meeting lasted approximately 1.5 hours, and consisted of a firm/organizational update, global custody overview and a service performance review. In addition, Northern Trust reviewed some of the latest enhancements rolled out in their Risk Analytics area and its new partnership with CEM for cost benchmarking services.

Northern Trust continues to provide excellent levels of service to staff in accordance with expectations. There were no major concerns identified during the review.

Attachment

Northern Trust Custodial Annual Review Questionnaire 2017



Response to the Annual Review Questionnaire for:

SAN MATEO COUNTY
EMPLOYEES' RETIREMENT
ASSOCIATION – SAMCERA

February 23, 2017

CONFIDENTIALITY STATEMENT

Confidentiality Notice: All materials contained in this Request For Proposal (RFP) response or later provided or referred to as part of the tendering process, including the description of Northern Trust, its systems, processes and pricing methodology, are proprietary information of Northern Trust. In consideration of acceptance of this RFP response, the recipient agrees that it will keep all such materials strictly confidential and that it will not, without the prior written consent of Northern Trust, distribute such materials or any part thereof to any person outside the recipient's organization or to any individual within the recipient's organization who is not directly involved in reviewing this RFP response, unless required to do so by applicable law.

If the recipient is a consultant acting on behalf of a third party client, the recipient may share such materials with its client if it includes a copy of these restrictions with such materials. In such event, the client agrees to comply with these restrictions in consideration of its accepting such materials.

Confidentiality Notice: This communication is confidential, may be privileged, and is meant only for the intended recipient. If you are not the intended recipient, please notify the sender as soon as possible.

Corporate Social Responsibility

As part of our Corporate Social Responsibility initiatives, Northern Trust has implemented several "green" processes into our RFP production. As such, our proposal response is printed double-sided on paper which is both FSC and Green Seal Certified, and contains 50% Post Consumer and 50% Recycled Content. If your organization would prefer a single-sided printed copy, please contact the Salesperson listed on the inside of the Title Page and we would be pleased to arrange delivery.

CONTACT DETAILS

Gary Guibert

Client Executive

Tel 312.444.5913

Email Gig1@ntrs.com

The Northern Trust Company

50 South LaSalle Street

Chicago, IL 60603

www.northerntrust.com

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EXHIBITS

Exhibit 01	SOC 1
Exhibit 02	Insurance Certificate
Exhibit 03	Code of Conduct and Ethics
Exhibit 04	Business Continuity and Disaster Recovery Plan Brochure
Exhibit 05	Subcustodian Network List

NORTHERN TRUST'S RESPONSE TO THE ANNUAL REVIEW QUESTIONNAIRE FOR SAMCERA

ORGANIZATIONAL UPDATE

- 1) Provide an update on The Northern Trust's organization, with particular emphasis on (a) changes to your management structure over the past eighteen months and (b) additions/deletions in clients and (c) change in assets that you custody. All significant changes should be accompanied by an explanation.

CHANGES TO MANAGEMENT STRUCTURE

As our clients' needs continue to grow in both the domestic and international marketplace, we will continue to proactively realign our services to incorporate one global arena. We have detailed below any significant changes to our management staff, but confirm these did not disrupt client servicing in any manner.

2017

- On January 17, 2017, Northern Trust announced several leadership changes designed to enhance opportunities for strategic growth, effective February 1, 2017, with the exception of Teresa Parker's position which is subject to regulatory approval.
 - ◆ Pete Cherecwich, former President, C&IS-Americas and President of Global Fund Services (GFS), was appointed President of C&IS. Pete will remain on Management Group and report to Mike O'Grady, President, Northern Trust.
 - ◆ Jeff Cohodes, former Chief Risk Officer, was appointed President of C&IS-Americas. He will also serve as Chief Advisor for Global Counterparty Strategy. Jeff will remain on Management Group and report to Pete Cherecwich.
 - ◆ Wilson Leech, former President, Northern Trust-Europe, Middle East & Africa (EMEA), was appointed Chief Risk Officer. Wilson will remain on Management Group and report to CEO Rick Waddell. He will be based in Chicago.
 - ◆ Teresa Parker, former Chief Operating Officer for C&IS, was appointed President, Northern Trust-EMEA. Teresa will join the Management Group and report to Pete Cherecwich.

2016

- On July 19, 2016, Northern Trust announced that President William L. Morrison was appointed to a new role as Vice Chairman, effective October 1, 2016.
- On October 26, 2016, Northern Trust announced that Caroline Higgins was appointed as head of Global Fund Services business in Asia.
- On November 15, 2016, President of C&IS, Mike O'Grady, was appointed President of Northern Trust and a director of the Corporation and Bank, effective January 1, 2017. He will maintain his responsibilities as President of C&IS until his replacement is determined.

CLIENTS GAINED/LOST

The following table represents the number of clients gained and lost and their market value over the past 18 months.

CLIENTS GAINED			CLIENTS LOST		
Year	Number of Clients	Market Value (\$ billions)	Year	Number of Clients	Market Value (\$ billions)
2016	117	\$243.67	2016	47	\$19.25

CHANGE IN ASSETS

As of December 31, 2016, Northern Trust had 2,279 institutional trust and custody clients with approximately \$6.2 trillion in assets.

As of December 31, 2015, Northern Trust had 2,181 institutional trust and custody clients with approximately \$5.6 trillion in assets.

2) What is Northern's philosophy and current policy regarding new business?

We review our staffing needs, both on a corporate-wide and division-specific basis, throughout every year to determine the appropriate staffing levels to meet our annual growth expectations. Based on the results of these reviews, we increase staff if appropriate to continue to provide our clients the highest level of service.

3) Provide a list of services available through your firm, including the number of staff supporting those services.

Northern Trust delivers comprehensive global custody capabilities, customized to help meet our client's specific requirements, including:

- **Safekeeping:** Hold and protect assets
- **Trade Settlement:** Transmit precise, timely trade information and execute settlements
- **Tax Reclamation:** Recover taxes in markets that have tax treaties and exemptions
- **Income Collection:** Collect income on portfolio holdings promptly
- **Corporate Actions:** Monitor events thoroughly and settles entitlements
- **Proxy Voting:** Submit votes per client instructions
- **Accounting:** We offer multicurrency trade date accounting with full accruals
- **Daily Unitized Valuation:** Provide NAV services to commingled fund and segregated mandates.

To help derive maximum value from the client's portfolio, we also offer:

- **Benefit Payments:** Comprehensive benefit disbursement capabilities which offer you a full array of tax, payment and mailing options.
- **Risk and Analytics:** Monitor and evaluate performance with our suite of analytical tools
- **Securities Lending:** Enhance overall performance with this fully collateralized investment activity
- **Foreign Exchange:** Conduct transactions accurately and at competitive exchange rates
- **Commission Management:** Reduce commission exposure and enhance performance through effective transaction cost control
- **Transition Management:** Minimize the cost and risk of asset reallocation
- **Fund Administration:** Accounting and administration for onshore and offshore collective investment programs, including services for alternative investments
- **Trade Services:** Selectively outsource components of the post-execution trade process
- **Trade Execution Analysis:** Evaluate the client's execution and post-trade processing charges including commissions, trade execution and local fees
- **Investment Operations Outsourcing:** Outsourcing components or fully outsourcing the client's investment management operation to Northern Trust.

MASTER TRUST/MASTER CUSTODY – STAFF FIGURES

As of December 31, 2016, Northern Trust had 17,414 total active employees worldwide. Of this figure, 12,145 individuals are dedicated to supporting our worldwide institutional asset servicing business.

We have broken this figure down by functional category below.

Department	Total
Accounting	554
Alternative Assets	784
Asset Coding & Pricing	119
Asset Servicing	1,402
Banking	219
Client Servicing	451
Executive	81
Finance	495
Foreign Exchange and Cash	411
Human Resources & Training	318
Investment Manager Servicing (GFS)	4,519
Investment Risk & Analytical Services (IRAS)	368
Legal	105
Marketing/Business Development	141
NTS/Brokerage	99
Product Management & Support	129
Risk Management	666
Securities Lending	215
Technology & Other Operations Support	1,069
Total	12,145

4) Has your firm or any of its employees been involved in regulatory or litigation actions related to your business in the past eighteen months? If yes, please provide details.

As one of the world's leading providers of asset servicing, Northern Trust and its subsidiaries are occasionally named as a defendant in custody related litigation. However, in the past 18 months, Northern Trust has not been subject to any litigation that has had a material effect on its ability to perform services for its clients.

Further, Northern Trust and its subsidiaries occasionally receive requests for information from government and regulatory agencies. Northern Trust frequently does not know if such requests are related to a formal government or regulatory investigations or, assuming an investigation is underway, whether Northern Trust is a target of such investigation or simply thought to be in possession of information pertinent to such investigation. Northern Trust is not currently involved in any government or regulatory investigation or proceeding that would have a material impact on its ability to provide custody services to its clients.

-
- 5) **Provide an assessment of the most recently conducted internal and external audits of your firm as they relate to the areas of custody, accounting, performance and/or security lending. Please note any material findings or recommendations if applicable.**

INTERNAL AUDIT

Northern Trust maintains an internal audit staff (known as Audit Services) who are financial, operational, risk, compliance, and information technology (IT) specialists located globally.

Audit Services reports directly to the Audit Committee chairman, a member of the Board of Directors. All worldwide auditors ultimately report to the Executive Vice President/General Auditor, who reports directly to the Audit Committee and administratively reports to the Chairman & CEO.

PROCESS AND METHODOLOGY

Audit Services is organized to parallel the corporation's business unit structure, producing benefits such as increased contact with, and access to, business unit managers.

Audit Services uses a risk-based methodology to arrive at a rolling 12 month plan based on assessment of inherent risk and an evaluation of controls in order to arrive at residual risk. In addition, this risk-based plan is overlaid with coverage of the key operating risks and controls as part of the SOC 1 Report.

Audits and SOC 1 testing are executed on a global basis to ensure adequacy of coverage and to promote consistency in policies and control procedures. The annual Audit Plan is assessed based on the Audit Services continuous monitoring and risk assessment effort which includes:

- Regular meetings with regulators, external auditors, and risk management/compliance
- Participation as a non-voting member in risk committees, councils, and task forces, as well as in product risk and service provider reviews
- Quarterly call programs and discussions with Executive and Senior Management
- Audit Watch Lists developed and Audit Plan adjusted quarterly based on ongoing assessments of risks and issues

A rated report is issued for all audits performed, and the results are shared with senior management and relevant internal governance committee(s), as well as with the Audit Committee. Audit Services monitors the closure of issues reported and performs follow-up work using a risk-based approach.

EXTERNAL AUDIT

Northern Trust's consolidated financial statements are audited annually by KPMG. As part of its annual review, KPMG provides an opinion of our accounting methodology as being in conformity with U.S. Generally Accepted Accounting Principles (GAAP).

In addition, Northern Trust prepares an in-depth report (SOC 1 Report) on the internal controls applicable to processing client transactions. We engage KPMG to perform an examination of our SOC 1 Report in accordance with The American Institute of Certified Public Accountants' (AICPA) Statement on Standards for Attestation Engagements (SSAE) No. 16 "Reporting on Controls at a Service Organization" and give us an opinion as to the operating effectiveness of the controls identified.

Northern Trust's SOC 1 Report, inclusive of the opinion provided by KPMG, is intended to relieve a client's auditor of the necessity of a similar study of its procedures during the audit of a particular plan. The Custody and Fund Services SOC 1 Report is produced on a semi-annual basis and accompanies our clients' annual reporting package.

Please refer to the attached Exhibits for our most recent SOC 1 Report.

MATERIAL FINDINGS

There have been no material issues noted by internal and external audits since the last audit.

6) **Describe the levels of insurance coverage maintained by your firm. E-mail a current certification of insurance to Investments@samcera.org.**

Northern Trust maintains the following corporate insurance coverage to protect Northern Trust against extraordinary events:

- **Bankers Blanket Bond.** USD 50 Million limit. Insured with Chubb, AIG, Houston Casualty, Great American, and CNA. The Bankers Blanket Bond covers criminal acts of officers and employees, loss of property (cash-securities) through burglary, robbery, false pretenses, mysterious disappearance, on premises, in-transit, forgery, alteration of securities, forgery with loan participation or trading. This policy conforms to Section 412 of the Employee Retirement Income Security Act of 1974 (ERISA). This policy is required for FDIC insured institutions. This policy expires on June 1, 2017. Lead Policy #81865905
- **Electronic Computer Crime Policy.** USD 250 Million limit. Insured with Chubb, AIG, Houston Casualty, Great American, CNA, QBE, Berkshire Hathaway, Syndicates of Lloyds of London and Everest National. Protects Northern from dishonest acts of loss resulting directly from the Insured having transferred, paid or delivered any money or property as the direct result of fraudulent input or modification of electronic data into the Insured's computer systems or computer programs; fraudulent voice initiated money transfers or electronic communications to or from the Insured; forged telefax, acts of hacker, virus, causing damage or destruction to data or media, including robbery, burglary, larceny, theft, extortion. This policy expires on June 1, 2017. Lead Policy #81944186
- **Excess Bond and Computer Crime Policy.** USD 100 Million limit. Insured with Chubb, Liberty, Zurich, Houston Casualty, Axis, CNA, Great American, Lloyds of London. Provides additional excess limits upon the exhaustion of limits under the Bankers Blanket Bond and the Electronic Computer Crime Policy. This policy expires on June 1, 2017. Lead Policy #81944189
- **All Risk Physical Loss of Securities.** USD 50 Million limit, insured with Lloyds of London syndicates. This insurance provides protection for loss of customer's securities while in our custody or held at any other assigned custodial location. This policy serves in conjunction with the exhaustion of the Bankers Blanket Bond to provide excess limits for securities held at other than the bank premises and while in transit. This annual policy expires on June 1, 2017. Policy #FS1690403

The Depository Trust & Clearing Corporation (DTCC) provides additional levels of protection for on-premises and transit coverage as well as numerous other policies designed to protect institutions that use DTCC services: Fidelity Bond/Electronic Computer Crime/Professional Liability coverage USD 100 Million insured through Lloyds of London Syndicates; All Risk Premise & Transit coverage USD 700 Million (excess to Bond/ECCP/PL limit) insured through Lloyds of London Syndicates; Mail Insurance coverage USD 20 Million limit insured through Travelers Casualty & Surety Co. of America. These policies expire October 31, 2017.

- **Bankers Professional Liability Errors & Omissions.** USD 100 Million limit, insured with CNA, Zurich, Chubb, Liberty, Houston Casualty, Axis, Arch, Freedom Specialty, QBE. This policy protects Northern against a legal liability incurred from an act, error or omission committed in our performance of professional services. This policy includes cover for Lender Liability and Fiduciary Liability. This annual policy expires on June 30, 2017. Lead Policy #267890702

- **Directors & Officers Liability.** USD 125 Million limit and Side A Liability USD 125 Million limit insured with, CNA, Travelers, Houston Casualty, Chubb, Arch, Liberty, Axis, Freedom Specialty, Zurich, AIG, Berkshire Hathaway, Zurich (Zeus). Protects directors and officers against judgments, settlements and expenses arising from litigation brought against them while acting in their capacity as a director or officer. Policy also reimburses the Corporation for indemnification expenses and securities litigation. This annual policy expires on June 30, 2017. Lead Policy #267890702
- **Comprehensive Domestic General Liability.** USD 2 Million Aggregate limit insured with Federal Insurance Company/Chubb. This policy has several lines of coverage protecting Northern from third party liability claims made against Northern. Per Occurrence Limit USD 1 Million; Aggregate Limit USD 2 Million; Personal & Advertising Injury USD 1 Million; Damage to premises of others USD 1 Million, Medical USD 10,000; products and completed operations included in cover. This annual policy expires on 31st December 2017. Policy #35762845
- **Comprehensive Foreign General Liability.** USD 2 Million Aggregate limit insured with Federal Insurance Company/Chubb. This policy has several lines of coverage protecting Northern from third party liability claims made against Northern. Per Occurrence Limit USD 1 Million; Aggregate Limit USD 2 Million; Personal & Advertising Injury USD 1 Million; Damage to premises of others USD 1 Million, Medical USD 10,000; products and completed operations included in cover. This annual policy expires on December 31, 2017. Policy #36028384
- **Auto Liability.** USD 1 Million insured with Federal Insurance Company/Chubb. This policy provides protection for bodily injury and property damage liability claims made against Northern for any owned, leased, borrowed or hired vehicle (any auto coverage) by Northern Trust Corporation, its affiliated and subsidiary companies. This annual policy expires on December 31, 2017. Policy #73508655
- **Workers Compensation/Employers Liability.** Statutory for Workers Compensation. USD 1 Million E.L. Each Accident/USD 1 Million E.L. Each Disease/each employee/USD 1 Million E.L. Disease Policy Limit insured with Zurich North America. This policy serves two purposes: provides medical and indemnity for employees who are injured on-the-job including coverage for occupational illness; and, provides liability coverage to the employer for alleged negligence for on-the-job injuries. This annual policy expires on December 31, 2017. Policy #WC9308127-14
- **Employers Liability for United Kingdom.** GBP 25 Million insured by Zurich Insurance plc. This policy provides liability coverage to the employer for alleged negligence for on-the-job injuries. Several countries are included in this policy. This annual policy expires on December 31, 2017. Policy #054/2C01/JJ352979/2
- **Umbrella Liability.** USD 75 Million Aggregate limit insured with Federal Insurance Co/Chubb; Continental Casualty Company/CNA. This policy serves in an excess limits capacity upon the exhaustion of liability policies so noted in the Schedule of Underlying on file with the insurance carriers. This annual policy expires December 31, 2017. Lead Policy #79219585

Recognizing significant and well-thought out controls, the limits of insurance in place protecting our Corporation have been determined to be adequate by the Business Risk Committee of the Board of Directors of Northern Trust Corporation as reviewed on an annual basis. All policies are for Named Insured: Northern Trust Corporation ET AL, which includes all subsidiary and affiliated companies. Insurance coverage is placed with well-respected insurance carriers, having an AM Best, Moody's and/or Standard & Poor rating of A- or better, financial sufficiency of "X" or better. Carrier's financial stability is reviewed annually by the Credit Risk Committee.

Insurance limits do not extend to third party clients, but rather act to reimburse Northern for its' insured loss. Client obligations and fiduciary responsibilities are not limited by insurance coverage terms, conditions, deductibles and limits, as insurance is never a guarantee that a claim may be covered by a policy of insurance. The Corporation remains responsible for legal liabilities imposed against it and to that end; the capital of the Corporation is available.

A current certification of insurance has been submitted to Investments@samcera.org, and is also attached as an Exhibit.

7) Do you have a written policy on ethics? If so, please e-mail the policy to Investments@samcera.org.

A current copy of Northern Trust's Ethics Policy has been submitted to Investments@samcera.org, and is also attached as an Exhibit.

8) Update all significant personnel changes to the "SamCERA Team".

From inception of the relationship, Maria Frommelt has been added as Client Service Manager. She succeeds Patrick Fitzgibbons who took on a new role within Northern Trust. Also Kim Cole has been added as Division Manager to Public Funds, replacing Jeff Porta, who has also taken on a new role with the Bank.

9) Provide an overview of your firm's business continuity plan.

Northern Trust's business continuity philosophy and ongoing review efforts emphasize disaster prevention, mitigation and recovery. Our work environment is regularly reviewed to identify, avoid and/or minimize potential sources of risk and the likelihood of significant service interruptions.

Because we view data security and business continuity as mission-critical, we have devoted significant planning, resources and staff to the development and implementation of our plans. The primary components of these plans are summarized below:

- 24/7 / 365 monitoring of critical support systems, using staff and electronic tools.
- Two peer Corporate Data Centers in separate geographic locations – each complete with total system redundancy, data back-up, and sufficient processing and bandwidth capacity to run the critical workloads of both centers.
 - ◆ In the event of a disaster at one of our Corporate Data Centers, the other data center can recover all critical processing within 12 hours or less. Individual applications, whether disrupted by an entire data center outage or other incident, may be recovered in 5 hours or less.
 - ◆ Data centers are connected to multiple Internet entry points to ensure connectivity, and supported by a network with a highly redundant, self-healing where possible, diverse and easily re-routable design.
 - ◆ Critical production data is continuously mirrored between both centers via a private, dedicated point-to-point fiber optic network. An electronic data vaulting program is in place between both centers to further protect client data and ensure continuity. Robotic tape backups are also created daily, and stored in both data centers.
- State-of-the-art security and fire protection systems for all data processing facilities.
- Alternate work locations for staff, including our own recovery space, contracted recovery space, and work-from-home programs.
- Regularly scheduled site hazard analyses to identify potential vulnerabilities and mitigate known risks.

All of our BC/DR plans are reviewed, tested and updated on a continual basis. Please refer to the attached Exhibits for a more detailed description of our BC/DR program.

CUSTODIAL/ACCOUNTING REVIEW

- 10) Provide a full review of the custodial process, including (a) who is responsible for various stages of the process, (b) your assessment of the value added by your policies and procedures, (c) what are the advantages/disadvantages of your international custodial relationships, (d) your assessment of the risks associated with SamCERA's use of your services and (e) which parts of your procedures are not functioning as well as you would expect.

REVIEW OF CUSTODIAL PROCESS

The following outlines the key areas of custodial process:

At its most basic level, Northern Trust's services are built on our ability to hold client assets in a safe, efficient, and secure environment without impeding the trading of those assets. Highlights of our custody and safekeeping services for SamCERA include:

- **Scale and Coverage:** Northern Trust maintains assets in physical and book entry form in 104 global markets, holding more than \$3.97 trillion in assets worldwide.
- **Automation and Efficiency:** We support direct connectivity with brokers and depositories to facilitate the automated transfer of your assets.
- **A strong network:** Our network of subcustodians is rigorously monitored, and agent banks are selected based on a combination of creditworthiness, service levels, and ability to support best practices. All of our subcustodians are SWIFT-capable, allowing for automation in trade communication and reconciliation.

All of our subcustodians are held to high standards of quality. Our network management team continuously reviews subcustodian performance, and our credit committee re-evaluates each subcustodian's creditworthiness on an ongoing basis. Finally, we have structured reviews for every subcustodian to ensure that your assets are held in the most secure environment possible.

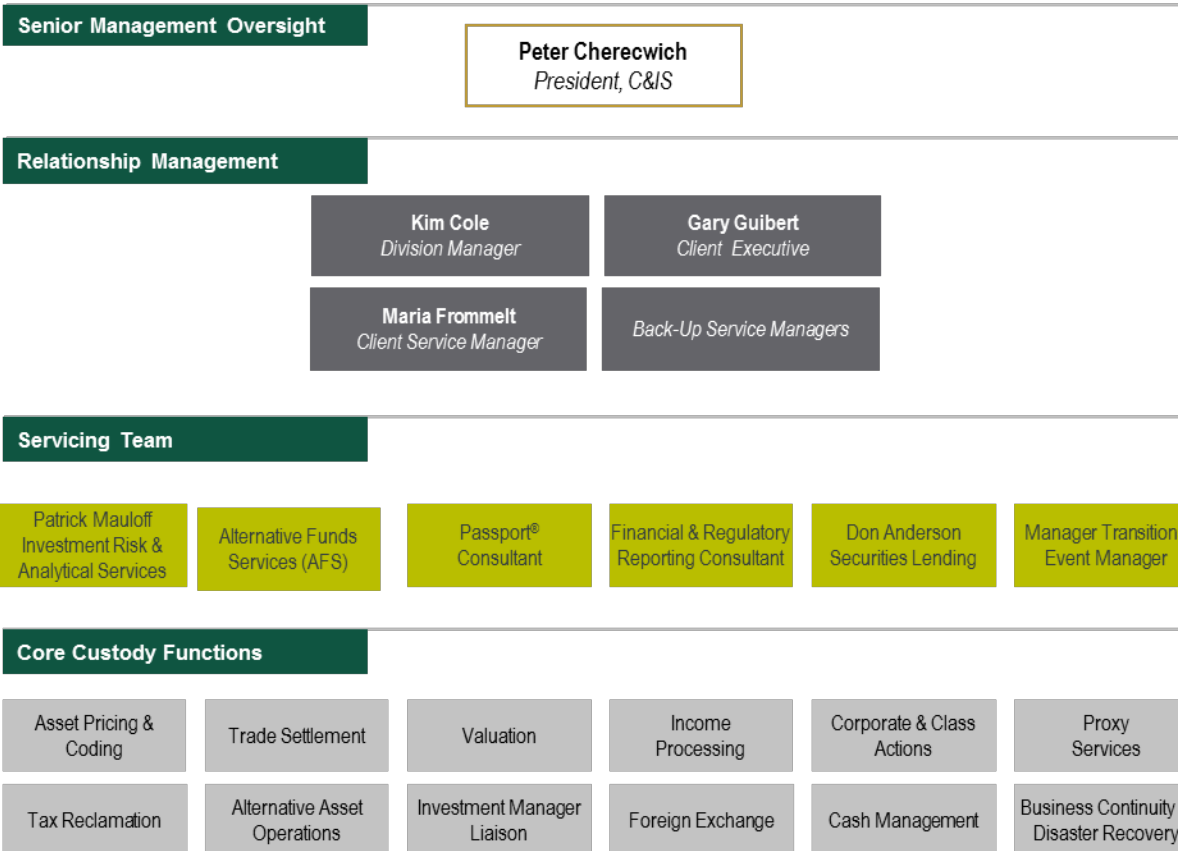
A broader review of our custody includes:

Northern Trust's **Straight-through Processing (STP)** solution offers an end-to-end trade settlement capability for depository-eligible assets, incorporating automation, accuracy, and transparency. Our clients benefit from higher settlement rates and are able to view up-to-date information on the status of their assets.

Trade Capture	<ul style="list-style-type: none"> • >99% auto capture rate on all trades • Automated capture via SWIFT or other e-formats • Automated validation of trade information • Exceptions routed to a repair queue and chased by IMLG experts
Asset Setup	<ul style="list-style-type: none"> • Automated comparison against our security master file • Instant setup of new assets with information required to facilitate processing -system can process hundreds of securities in seconds • Nightly feeds from data vendors with auto updates, ensuring accuracy
Communication	<ul style="list-style-type: none"> • Electronic connectivity via SWIFT, flatfile, and other methods • Auto - confirmation with brokers and investment managers • Pre - matching using CTM, OASYS, and MISYS • Exceptions automatically routed to a repair queue and chased daily
Settlement	<ul style="list-style-type: none"> • All exceptions are cleared by settlement date • Automatic settlement of positions/cash on settlement date • Exceptions automatically routed to a repair queue for resolution • Daily chasing and reporting of exceptions
Reconciliation	<ul style="list-style-type: none"> • Automated reconciliation with depositories and investment managers using SmartSteam[®] TLM • Daily reconciliation with depositories • Reconciliation with investment managers can be daily, weekly, monthly, or quarterly
Income Collection	<ul style="list-style-type: none"> • Income information automatically received from a stable of data sources prior to payable date and verified • Income Maps[™] created for each security as data is received • Income automatically posts to client accounts (contractual vs. actual income varies by market and asset type)
Reporting	<ul style="list-style-type: none"> • Daily and intra - day reporting on trade status • Extensive statistical reporting is available • Available on demand or via periodic reporting packages • Exportable to excel, word, .csv, or .pdf files

RESPONSIBILITY FOR VARIOUS STAGES OF THE PROCESS

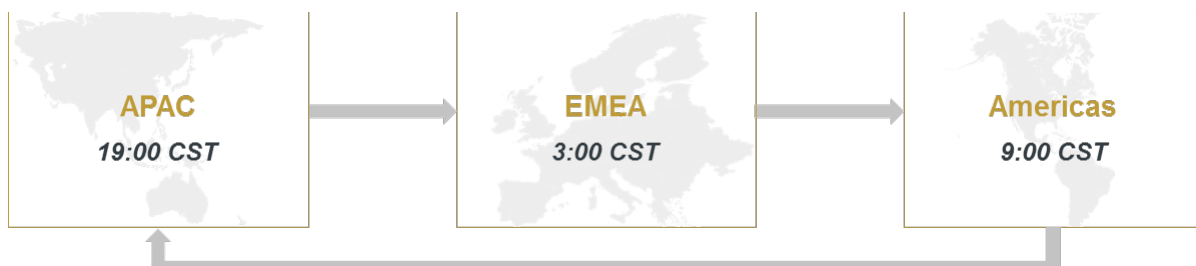
SamCERA



VALUE ADDED BY NORTHERN’S PROCESSING AND ADVANTAGES OF GLOBAL OPERATION
GLOBAL, ROUND-THE-CLOCK SUPPORT

As a leading global custodian, Northern Trust continually strives to provide the systems and support structure required to support global, round-the-clock trading. With regional client centers in North America, Europe and Asia, we employ a “follow the sun” model that serves our clients’ trading requirements in all time zones.

Northern Trust’s global operating model is designed to be efficient, flexible, and comprehensive. Because all of our clients are serviced using the same global operating platform in all markets, we are able “pass the book” from office to office and offer 24 hour-a-day, 7 -day-a-week processing of our clients’ global portfolios. Furthermore, this one-system approach allows for the seamless transfer of portfolio information among clients, their external investment managers, our appointed subcustodians, and Northern Trust personnel, thus increasing efficiency and reducing opportunities for error.



ASSESSMENT OF RISKS

Assessment of the risks associated with SamCERA's use custody can be grouped by the functions we believe support the primary role of a custodian bank, which is to hold in safekeeping the assets of SamCERA. The key functions of Northern Trust are to:

- Hold assets in custody. This occurs onshore, offshore with an affiliate, or offshore with a subcustodian. When needed, the main custodian is responsible for selecting the sub-custodian.
- Provide daily and/or monthly asset pricing. Pricing information is provided to custodians by third party vendors that are reviewed for accuracy and methodology.
- Monitor and settle depository transactions. Custodians are also critical in monitoring and settling trades. They are connected electronically to the depositories, providing operational efficiencies and economies of scale when initiating and settling trades.
- Monitor and post income payments. Custodians track and record interest on bonds and equity security dividends. The custody system monitors the scheduled payment date and ensures the correct payment is posted to the right account.
- Provide audited reporting. The custodian provides final market value, transactions, cash positions, and cash activity on a daily or monthly basis.

Also under contracted services to SamCERA is Northern's role in providing proxy voting, tax reclaim services, corporate actions, cash management, performance reporting, risk reporting, securities lending, and foreign exchange. Each carries its own set of risks. Examples include:

CONTRACT RISK DEFINITION

Contract risk is the risk that something material is missing from the custody contract or that key Operational topics have not been clearly or completely described. Lack of clarity in key areas presents significant risk.

EVALUATION CRITERIA

Investors should conduct a comprehensive evaluation of the custody contract on a periodic basis. There are a number of key operational factors to evaluate within the custodial agreement to ensure they have been clearly defined, including the roles and responsibilities of the custodian and client; the description of services provided by the custodian to ensure that the contract and related service descriptions suitably protects the client from losses due to negligence, fraud and willful misconduct.

PROCEDURES NOT FUNCTIONING WELL

We believe the above were well addressed by SamCERA and Northern Trust. Also supported by our SOC 1 Report and independent audits, we believe that our procedures are functioning well.

- 11) **Describe the relative strength and longevity of your staff. Are any of your operations outsourced? If the answer is yes, provide details regarding the firm(s) with which your firm has contracted.**

STRENGTH AND LONGEVITY OF STAFF

Client Executives average 19 years of service to Northern Trust, and are part of our 451 client servicing staff members worldwide.

OUTSOURCING OPERATIONS

As is standard in the industry, Northern Trust contracts with various subcustodians to allow our clients to invest in foreign markets. Additionally, Northern Trust receives daily price feeds from various vendors. Finally, Northern Trust partners with Broadridge Financial Solutions for proxy processing. Northern Trust does not consider such partners (pricing and proxy vendors) to be its subcontractors or agents.

All other services are provided in-house by Northern Trust. Please refer to the attached Exhibits for our Subcustodian Network list.

- 12) **What are your mission critical systems? Has your firm experienced any problems with these systems in the past eighteen months? When were these systems implemented and when were they last upgraded? Do you anticipate any changes to these systems in the next eighteen months?**

MISSION CRITICAL SYSTEMS

Northern Trust's in-house computer facilities include the following systems:

UNIX/LINUX

There are several operating system alternatives for Unix/Linux applications - Red Hat Linux ES 6 and 7 IBM AIX 6 and 7, or Oracle Solaris 10 and 11.

For the Red Hat Linux (x86) 64-bit operating system, we have standardized on HP ProLiant hardware for standalone, physical servers. We have also virtualized over 90% of our Red Hat Linux environment, employing a mix of consolidated infrastructure solutions including vBlock, and Nutanix hardware.

We also employ Oracle Exalogic and Exadata engineered (consolidated infrastructure) systems running Oracle Enterprise Linux.

Our IBM AIX operating systems run on Logical Partitions within several models of IBM hardware, including the E880, the Power 795, Power 750, and Power 740 systems.

For the Oracle Solaris operating system, we support Oracle servers based on the SPARC processor. Much of our Solaris environment has recently been virtualized on Oracle T4 and T5 systems.

All production systems are built with either a warm standby host available in a second data center or a live/live or master/slave configuration, with the hosts split between data centers. Data is kept in synch by various forms of hardware or software based DASD mirroring.

For applications that can withstand only very short unplanned outages, high availability is provided by creating a "cluster", utilizing Veritas Cluster Server (VCS) in the Solaris environment. High availability in the Linux environment is implemented via horizontal scaling on clustered servers sharing Global File Systems (GFS2) AIX high availability is achieved using Live Partition Mobility.

Our strategic Unix/Linux database platforms are Oracle 11g on Red Hat Linux ES, Solaris and AIX and Oracle 12c within Containerized Databases on Exadata systems.

MICROSOFT

Northern Trust currently supports 64-bit Windows 2008, 2012 and 2016 for application servers, IIS versions 7.0, 8.0, 8.5 and 10 for web servers and MS-SQL 2008, 2012, and 2014 for database servers.

Physical applications deployed in the Microsoft environment are built on HP Blade and ProLiant DL machines with 2 or 4 processors, depending on the application and size of its user base. When feasible multiple applications are consolidated into our VMware Virtualization environment using VMware ESXi 5.5 or 6.x. The systems are built on HP Blades, VCE Vblock and Nutanix hardware.

All critical production systems are built with either a warm standby host available in a second data center or a live/live or master/slave configuration, with the hosts split between data centers

For applications less critical that can withstand unplanned outages are recovered from daily back-ups to a designated test system or spare server from Northern's Commvault Galaxy Backup Environment.

Z/OS (FORMERLY OS/390) AND Z/LINUX

Northern Trust's production mainframe environment consists of two z10 Series processors running z/OS version 1.9 in a Parallel SYSplex environment. Additionally, each mainframe footprint is configured with two integrated facility for Linux (IFL) running RedHat Linux, which is providing a distributed gateway into the mainframe DB2 environment. Northern Trust's mainframe database environment consists of DB/2 Universal Database for z/OS version 8 and IMS version 9.

For business continuity purposes, another Z-series mainframe and an asynchronously maintained copy of the production DASD environment is housed at our second datacenter. Both mainframe complexes are maintained in-house by Northern Trust at current, industry-standard levels of software and hardware. Additional capacity is added as business demands warrant.

OS/400

Northern Trust's iSeries (AS/400) environment currently runs i5/OS Version 7 Release 1. DB2 UDB is the relational database and it is integrated into the operating system.

We can advise that there is no reliance on third parties for development and customization to our systems. Northern Trust's mainframes are updated in-house at least once a year. Further, our technology platforms are constantly monitored for performance and capacity.

SYSTEM OUTAGES

Northern Trust Technology set goals of scalability, flexibility and availability for its global platform over a decade ago, and set about ensuring that applications and infrastructure are in place to meet those goals. As a result, all major challenges have already been addressed with the outcome of an ongoing robust, reliable and functionally rich environment for clients. This is demonstrated by the fact that Northern Trust's systems have minimal downtime. Due to the careful selection and design of hardware, software and systems personnel, Northern averages 99.9% system availability across our processing and client delivery systems over the last three years.

The average length of time systems take to recover can range from minutes to several hours, depending on the situation. Problem complexity, time of day when the outage occurs, and potential need for external vendor involvement are all factors, which can affect the recovery time. Northern Trust has sophisticated system monitoring, firecall, and escalation procedures to ensure that all appropriate resources are assigned to resolve outages as quickly as possible. In addition, we have sophisticated business continuity and disaster recovery capabilities

As a result of these capabilities, any computer downtime is usually transparent to our clients.

SYSTEM IMPLEMENTATION AND UPGRADES

Northern Trust maintains robust and mature platforms, and continues to invest significant capital in each to ensure we have the capabilities and scalability that our clients require. Northern Trust allocates a percentage of capital each year to upgrade or replace applications that it deems at risk or nearing end of life.

System/Function	Year Installed	Life Expectancy	In-house or Vended	Real-Time vs. Batch
Asset Servicing System	1990	Indefinite	In-house	Real-Time
Fund Accounting (Global Invest One)	1983	Indefinite	Vended (FIS)	Real-Time
Transfer Agency (Multifonds ¹)	2004	Indefinite	Vended (Multifonds)	Real-Time
Performance Analytics Calculation Engine (Analytical/Performance)	2001	Indefinite	In-house	Batch
Northern Trust Passport [®] (Client/investment manager reporting and information delivery system)	1994	Indefinite	In-house	Real-Time

ANTICIPATED CHANGES TO THE SYSTEMS

We do not anticipate any major system changes or conversions in the next eighteen months. Slightly more than 50% of our annual technology budget is invested in systems development and enhancement and slightly less than 50% is spent on operational maintenance. Approximately half of our technology budget is dedicated to our core system developments and upgrades, and the other half supports our front-end online system for clients, Passport[®].

Unlike many of our competitors (whose technology dollars cover many businesses), our clients can be assured that our investment is targeted at enhancing the asset servicing and asset management services we provide.

13) Discuss the Global Custodian marketplace and Northern Trust's relative success or failure in the current market.

NORTHERN TRUST DIFFERENTIATORS IN GLOBAL CUSTODIAN MARKETPLACE

Northern Trust's core differentiators include our well-earned reputation for exceptional client service, technological infrastructure, and our sterling financial strength and stability. As it relates specifically to our capabilities as a global custodian, these are some of the features that separate us from our competitors:

A strong network. Our subcustodians' ability to provide us with quality information on all types of market events ensures the overall quality of our services. We dedicate considerable resources to selecting the highest quality providers and holding them to high standards. Over years of building relationships with subcustodians, we are able to leverage their local market expertise and identify service solutions that go beyond the industry-accepted service levels. Finally, we make this "on-the-ground" market intelligence available to clients, a key added value in our service model.

Best-in-class reconciliation process. We perform daily, position-level reconciliations of both stock and cash through what we believe is the most automated reconciliation practice in the market. The ability to ensure the accuracy of our books and records gives clients peace of mind, and positively impacts the accuracy of our event processing for items such as income, corporate action events, taxation issues, and proxy voting.

Customized support for client requirements. Our Subcustodian Network Management Team supports our clients with all specialized requirements in emerging or exotic countries. We go to great lengths to assist our clients with market entry, paperwork, and registration requirements.

¹ Formerly IGEFI

14) **What “standards” of measure do other clients employ when evaluating Northern Trust’s Global Custodial capabilities? What standards does your firm utilize when performing a self-evaluation?**

Trust/global custody is our flagship franchise. We cannot expect to grow if we are unsuccessful in serving our clients. We are advised that clients use these GENERAL standards when evaluating Northern Trust’s custody capabilities:

- **Superior Service:** Sustain best-in-class service to clients, as evidenced by exceptional (90%) approval ratings in our annual client satisfaction survey.
- **Organic Growth:** Expand our capabilities and global reach, while focusing on core business lines and client satisfaction.
- **Technological Leadership:** Retain industry leadership with enhancements that enable our clients to efficiently serve their constituents.
- **Risk Management:** Maintain good stewardship of our organization from the perspective of operational, credit, interest rate and reputational risk.
- Performing a self-evaluation is aligned with our internal and external audit reviews combined with customer satisfaction ratings.

15) **Discuss the environment, outlook or any trends in both domestic and international class actions.**

In the US, Northern Trust monitors the impact that settled class action law suits may have on SAMCERA’s portfolios. In order to locate the existence of class actions, we subscribe to several class action notification services, including Securities Class Action Services (SCAS) from ISS, a leading provider of risk management and corporate governance services to the global financial community. More detailed sources for notification of settlement are:

- Security Class Action Services LLC (SCAS) alerts from RiskMetrics (www.riskmetrics.com/scas)
- Legal, Consultancy, and Accounting Newsletter from Mondaq.com
- Stanford Law School Securities Class Action Clearinghouse (www.securities.stanford.edu)

The notices include:

- Name of class action and description of settlement
- Court-appointed claims administrator
- Website with all court documents and claim forms
- Class period and eligible assets (security identifiers)
- Filing and objection deadlines

The custodian also notifies investment managers of class action settlements via its web-based system. As soon as funds from the claimed settlement are received, the custodian automatically posts them to SamCERA’s accounts.

In terms of managing SamCERA’s participation in such settled actions, we have a team of market specialists that oversee the filing of class action settlement claims. The team is responsible for the process, from beginning to end, providing consistency across the filing and tracking of class action claims for audit purposes. It performs three primary functions for securities litigation that have settled through the U.S. courts (where claim administration is being handled by U.S. claim administrators):

- Tracking of settled law suits upon request, we supply data to providers who track pending law suits and client notification
- Filing of claims
- Posting of subsequent disbursements to client portfolios

The United States continues to be the primary venue for class action activity worldwide (approximately 97% of class actions take place in the U.S.). For class actions settled through the U.S. courts where a U.S. claims administrator is appointed, our custodian notifies SamCERA via web-based reporting, files the claims in accordance with SamCERA's entitlement, and posts the collected proceeds to SamCERA's accounts.

FOREIGN CLASS ACTION:

(Global Class action activity is still low, although growing in non-U.S. jurisdictions.) For class actions outside the U.S. courts, we pass along notifications SamCERA. The Class Action module on Passport allows for Class Action reporting that also specifies the class actions where we are not allowed to autonomously proceed with the action. Conversely, since 2011, we file claims in Canada and the Netherlands, whenever the claim filing occurs after a court settlement and the custodian is allowed.

In summary, for global Class Action, SamCERA must choose to opt-in to a global class action detailed as follows:

- Custodian provides information – on a best effort basis – of active actions in the global markets that currently allow for class litigations.
- SamCERA must choose to opt-in.
- Currently, there are only a few foreign markets that allow for class action lawsuits, including Canada, and European countries like Austria, Belgium, Denmark, France, Germany, Italy, Netherlands, Portugal, Russia, Switzerland and UK. All are opt-in except Netherlands which is questionably opt-in and opt-out.
- In opt-in cases, SamCERA must work directly with law firms to secure settlement proceeds.
- Northern posts the proceeds to SamCERA's account, once received.

We are also working with external vendors to offer clients with an added solution to Global Class Action. An official release of the information will soon be provided.

16) Detail Northern Trust's perspective of SamCERA's performance expectations for Northern's accounting group, as spelled out in the contract and how Northern Trust is doing relative to those expectations.

We are still operating under a 6 business day deadline for issuing audited accounting statements. Page 8 of Schedule A of the custody agreement calls for receipt of "holdings and transaction information" by the 4th business-day from all managers including Alternative investments- LBOs, venture capital, real estate, [hedge funds], etc.

For each of SamCERA's alternative investment funds, Annette Bryan, a Northern Trust technician with industry experience is assigned to handle all aspects of data collection, reconciliation, and problem resolution. She and her team, with the support of Patrick Fitzgibbons actively chase the managers and track receipt of statements. One issue has been that some of the managers have not met deadlines for preliminaries or finals. In those instances, Annette is to contact, and has been contacting, the manager to ensure delivery of the statement.

We have instituted an "official" preliminary performance report which enables us to be better positioned to meet the agreed upon deadlines.

SECURITIES LENDING REVIEW

17) Security lending – Any issues in how we utilize your services? What are the current trends in revenue sharing? How does our revenue split compare with your other security lending clients?

There are no issues with how SamCERA utilizes Northern Trust's securities lending program as the program is customized based upon SamCERA's risk tolerances. SamCERA's earnings could potentially be increased through acceptance of additional borrowers. Revenue sharing in Securities Lending continues to be driven by the fee split sharing model. Fee splits have remained fairly stable with a slight increase to the client side over the more recent time frames. SamCERA's current fee split is very favorable to SamCERA relative to other public funds of similar lendable asset size and similar earnings potential. This is likely due to SamCERA being a recent entrant to Northern Trust's securities lending program.

PERFORMANCE & ANALYTICAL REVIEW

18) Provide a full review of the performance process, including (a) who is responsible for various stages of the process, (b) your assessment of adequacy of communication between performance and accounting, (c) which parts of your procedures are not functioning as well as you would expect.

OVERVIEW OF PERFORMANCE SYSTEM

Our internally developed performance system is a single, flexible, worldwide, multi-currency engine, which supports all asset classes and all clients regardless of geographical location. Our performance module offers tremendous flexibility and customization to properly analyze any investment strategy regardless of mandate or the investment program structure.

Performance data (positions, valuations, and transactions) is sourced directly from our accounting database. An extract from the accounting database to our performance module is triggered after each day's transaction activity and updated valuations have been processed.

Rates of return and other measures are calculated in accordance with CFA Institute, GIPS, and BAI standards.

Prior to producing any periodic performance reporting for the client, we reconcile return calculations using a series of automated on-line tools and exception-based reports to flag items falling outside of defined tolerance levels.

All of the following analytical information is available:

CALCULATION FREQUENCY

- Accounts, aggregations, and indexes: daily, monthly, and cumulative
- Universe composites and populations: quarterly and cumulative

FLEXIBLE CATEGORIZATION

- Total fund gross and net of fees
- Asset class returns
- Regional returns
- Variety of sector returns (GICS, FTSE, Russell, Style and Size, Fixed Income Sectors, and maturity bands, etc.)
- Custom categorization

SECURITY LEVEL RETURNS

- Security level returns sorted by market value or greatest asset impact
- Long-term, dollar-weighted rates for alternative assets

ATTRIBUTION

- Total plan fund
- Arithmetic and geometric equity models (for single currency)
- Arithmetic and geometric equity models (for multiple currencies)
- Stock level
- Arithmetic and geometric fixed income models (for single currency)
- Arithmetic and geometric fixed income models (for multiple currencies)
- Risk decomposition

CHARACTERISTICS

- Worldwide equity and fixed income security characteristics
- Portfolio vs. benchmark comparisons

COMPOSITES AND POPULATIONS

- Trust composites & populations: Corporate ERISA, Public Funds, and Not-for-Profits
- Multiple trust composites and populations based on fund size
- Multiple program universes for comparison to your aggregations
- Multiple asset class and style manager universes
- 3rd party universes from TUCS, Venture Economics, etc.

INDEXES

- Thousands of indexes from all index vendors
- Custom benchmarking support

MISCELLANEOUS

- Statistical calculations such as standard deviations, tracking error, Sharpe Ratios, etc.
- Correlation analysis for managers and asset classes
- Specialized support and analytics for private investment, including private equity, real estate, and hedge funds
- Ex-post Value at Risk
- “Peek-through” on commingled fund accounts

PRIVATE MONITOR™

Private Monitor™ is a comprehensive custom report for private equity and real estate investments that includes internal rates of return and funding and distribution ratios grouped by vintage year and type, portfolio asset allocation by partnership type, and opportunity costs analysis. Benchmarking reports depicting the private equity portfolio's value added over the public market, your program versus the returns of other private equity and real estate programs, and universe comparisons by vintage year are included.

ADEQUACY OF COMMUNICATION

Our performance and accounting inputs are sourced from the same database. Using one database promotes accuracy of data across all reporting, so there is no need for a special reconciliation process. The benefit of a single database source is that the accounting audit provides the foundation for the performance audit.

Prior to preparing any periodic performance reporting for the client, we reconcile return calculations using a series of automated online tools and exception-based reports to flag items falling outside of client-defined tolerance levels. All potential discrepancies are researched and resolved before results are considered final.

Additionally, we can undertake a monthly performance sign-off with your investment managers. As an initial step, mutually agreed upon tolerances are determined for each fund manager. We then compare rates of return with investment managers and analyze discrepancies that fall outside of the tolerance levels. In the unlikely event that the source of a discrepancy cannot be identified, Northern Trust will stand behind its return calculation as an independent third party.

Our dedicated index staff collects and verifies index results daily. We maintain relationships with the larger providers of index information (Barclays, Russell, Wilshire, MSCI, JPM, etc.) which provides us with additional support regarding source data. Most index data is loaded electronically into our database. Automated audit checks have been implemented to assure that index files have been received and to verify their accuracy.

19) Describe the relative strength and longevity of your staff. Are any of your operations outsourced? If the answer is yes, provide details regarding the firm(s) with which your firm has contracted.

IRAS STAFF OVERVIEW

Our clients are supported by our **Investment Risk & Analytical Services (IRAS)** group. The unit is staffed with more than 368 investment professionals, with service teams and support personnel located in all three major regions offering 24-hour processing and coverage.

Clients are assigned a dedicated Senior Consultant and Analyst. The Consultant is responsible for tailoring a performance analysis program that is aligned with a client's specific needs. They also provide ongoing professional support and training to ensure that clients are able to fully utilize the power and utility of our performance product range and introduce new capabilities and enhancements. The Analyst works in support of the Consultant and with our Operations Group to ensure data quality.

Our Senior Consultants have more than 15 years of experience and possess either a graduate degree and/or a CFA designation. These professionals typically have prior experience working at investment management firms, outside consulting firms, plan sponsor organizations, and other areas within Northern Trust.

Recognizing need for specialists in a complex investment environment, we also have three specialist teams dedicated to alternative investments, manager compliance, and ex-ante risk analysis, allowing us to bring additional resources to the relationship, when appropriate. Our IRAS professionals are supported by:

- A dedicated Product Development Team
- Comprehensive Economic Research, Investment Research, and Accounting Teams
- Powerful systems architecture that provides the flexibility to meet clients' evolving needs, and
- A dedicated staff of over 50 Information Technology professionals.

EXTERNAL VENDORS

Northern Trust has developed long-standing, solid working relationships with all of its vendors. The strength of our relationships has resulted in customized changes, excellent support, sufficient testing, and upgrades for our clients.

In order to provide the best capabilities available, we partner with external vendors who can enhance the information and expertise that we bring to our clients. In addition to reviewing vendors regularly, we develop customized solutions with them to meet our clients' unique performance needs. The vendors we work with to provide the client with performance evaluation include:

- BlackRock Solutions
- Bloomberg
- The Burgiss Group
- Compustat (S&P)
- Datastream International
- Frank Russell
- FTSE Group
- Interactive Data Fixed Income Analytics
- Evestment
- Morningstar
- MSCI Barra
- RIMES Technologies
- StatPro
- TUCS (Trust Universe Comparison Service)
- Thompson Reuters

20) Discuss the Performance & Analytical marketplace and Northern Trust's relative success or failure in the current market.

We combine over 35 years of performance analysis experience and innovation with our powerful and integrated technology platform to deliver timely, accurate, and customized decision support information to our clients. As a leading global custodian, Northern Trust stands in a class of its own when it comes to our performance analysis capabilities, due to our:

- **Experienced professionals** – All performance measurement and analysis is provided in-house through our Investment Risk & Analytical Services (IRAS) unit. The unit is staffed with more than 350 investment professionals with service teams and support personnel located in three major regions offering 24-hour processing and coverage. Client service teams are comprised of senior consultants who have more than 15 years of experience and usually possess either a graduate degree and/or a CFA designation. These professionals typically have prior experience working at investment management firms, outside consulting firms, plan sponsor organizations, and other areas within Northern Trust.
- **Powerful technology** – Our proprietary, single, multi-currency platform is tightly integrated within our single global operating platform, and provides daily and monthly performance measurement and related analytics to our clients worldwide, regardless of their geographical location. Integration with our custody accounting records ensures consistent processing, data integrity, a full audit trail, and fast turnaround times.
- **Sophisticated reporting** – Northern Trust provides analysis on a daily, monthly, and quarterly basis. All performance returns and analytics are integrated and available on-line in one module using Passport[®], which provides clients with daily, easy to use, interactive access. In other words, when analyzing a single manager or asset class, it is not necessary to move from module to module to retrieve a complete set of analysis (i.e. from attribution module to universe module to characteristics module, etc.). Our reporting has the flexibility to customize content, display, and formatting of data that populates our standard template-based reporting with the particular strategy employed by an investment manager. Other reporting features include:
 - ◆ Fully customizable dashboards to easily monitor critical fund and manager metrics
 - ◆ Support for client written commentary in monthly performance reports
 - ◆ A custom benchmark builder that allows us to create virtually any blended benchmark requested. It features flexible rebalancing intervals and component weighting schemes.
 - ◆ Support of custom categorization requests. For example, a client may wish to create a non-standard region for both an account and its benchmark.
 - ◆ In addition to maintaining standard fund, program and manager universes, our universe module can support requests for parameter-driven custom universes.
 - ◆ We offer a full set of attribution capabilities including total fund, equity, and fixed income. Our attribution reporting has a “carve out” feature that is used for investment accounts that employ multiple strategies. This feature allows clients to view results for a specific segment of the portfolio in isolation (in other words, the “carve out” is prorated to 100%).

- ◆ As an extension of our attribution capabilities and using standard deviation, tracking error and information ratios, we also offer risk adjusted attribution.
- ◆ Leg level returns and exposures for derivatives
- ◆ Optional “Cost of Carry” return calculation for options and futures.
- ◆ Lagged and non-lagged performance results for alternative investments
- ◆ Direct access to returns and analytics through Excel
- ◆ Access to performance reporting and dashboards through Northern Trust’s iPad app.

Coupled with our 24-hour servicing and support infrastructure, we believe we are able to provide our clients with superior quality decision support content on a daily basis.

21) Detail Northern Trust’s perspective of SamCERA’s performance expectations for Northern’s performance group, as spelled out in the contract and how Northern Trust is doing relative to those expectations.

Deliverables related to performance analytics in the contract lists the following:

ISSUE PRELIMINARY FUND VALUATION INFORMATION FOR MONTHLY REPORTS.

For those funds that have been identified, Northern generates fund values for monthly account statements using a specified process to estimate the NAV’s.

PROVIDE MONTHLY PERFORMANCE DATA ON A GROSS AND NET OF FEES BASIS.

For month end performance, preliminary results shall be available on the 1st day after month end and everyday thereafter until final numbers are available. Final “signed-off” monthly performance results shall be available approximately 2-4 business days after accounting has been finalized.

For monthly audited accounts, monthly rates of return are dollar-weighted, based on fully accrued, trade-dated transactions and asset positions. Northern Trust’s Investment Risk & Analytical Services (IRAS) uses an industry standard BAI iterative (Newton Raphson method) Internal Rate of Return (IRR) calculation method. The IRR calculation uses an iterative technique, which solves for the rate that would discount all flows to zero.

Transactions are incorporated on the day in which they are executed, at the prevailing conversion rate. In situations where cash flows exceed 10% of the beginning market value, the value of the portfolio (as of the day before the cash flow) is recalculated and the sub-period returns are created for the month and then linked to remove the possible distortion (due to the large cash flow).

Returns for periods longer than one month are time-weighted rates, calculated by linking the monthly dollar-weighted rates together. Non-annualized rates are used for time periods shorter than one year and annualized rates are used for periods longer than one year. For private equity, real estate, and other investments structured as partnerships, IRR returns are available for periods longer than one month.

PROVIDE CUSTOMIZED BOARD PERFORMANCE REPORT ON A MONTHLY BASIS.

We verified all the data elements currently on the report. SamCERA acknowledged that there may be some variation in format due to different report writing applications.

PROVIDE ACCESS TO BENCHMARK RETURNS AND BUILD CUSTOMIZED BENCHMARKS.

We believe we are meeting each expectation as we work very closely with SamCERA, when needed to secure each deliverable.

OUTLOOK/CONCLUSION

22) What is Northern Trust's outlook for the Global Custodial marketplace?

Over the next few years, C&IS has a straightforward plan to grow our asset servicing business:

- **Be where our clients need us, when they need us.** Northern Trust has global operating hubs in Chicago, London, Singapore and Bangalore. These hubs are supplemented by additional worldwide offices to give Northern Trust a total of 25 global locations. All locations are connected on a global technology platform that allows us to “pass the book” and provide 24/7 support around the world. We intend to expand our international presence, capabilities and client base to keep pace with globalization and client demand.
- **Leverage global expertise.** We maintain expert global staff and a top-tier subcustodian network which we expand in response to client demand. We aggregate local market expertise to strengthen our services, and share it with clients to support informed investment decisions.
- **Maintain our position of industry leadership.** Service excellence is a function of first rate people and peerless decision support technology. Sustained investment in such tools as risk management, compliance, performance measurement and online reporting is a central tenet of our plan. By investing in technology and services that alleviate the administrative burdens of our clients, we will continue to help them focus on their core strategies.
- **Execute plans for strategic growth.** We are deliberate in our growth strategy, balancing our expansion plans with a commitment to sustaining client service. Our clients appreciate this approach, as they derive benefits from added capability, while retaining attentive service.
- **Remember all of our stakeholders.** Supporting clients is our first priority. As part of that, we must also support shareholders by generating strong, stable returns, as well as provide employees with a positive work environment, competitive benefits and opportunities for professional growth.

COMMITMENT TO TECHNOLOGY

Twice a year, Northern Trust sends representatives to Silicon Valley to meet with technology leaders and to preview current innovations to determine potential business alignment. Investment professionals from our private equity group along with executives from our Technology Enterprise group interview Silicon Valley innovators and see first-hand product demos. The private equity research team reviews with an eye for investment (spending in excess of \$750 Million), and the technology executives with an eye for applicability to Northern Trust. This strategy has proven to be effective with Northern Trust deploying and using venture capital start-up technologies. Connections in Silicon Valley provide Northern Trust access to deploy capital start-up technologies leading to faster time to market and resource efficiency.

Additionally, Northern Trust's Chief Technology Officer, Scott Murray, serves on the CIO Advisory Board for a Silicon Valley Investment Fund. Below are examples of our progress:

DEPLOY VENTURE CAPITAL START-UP TECHNOLOGIES

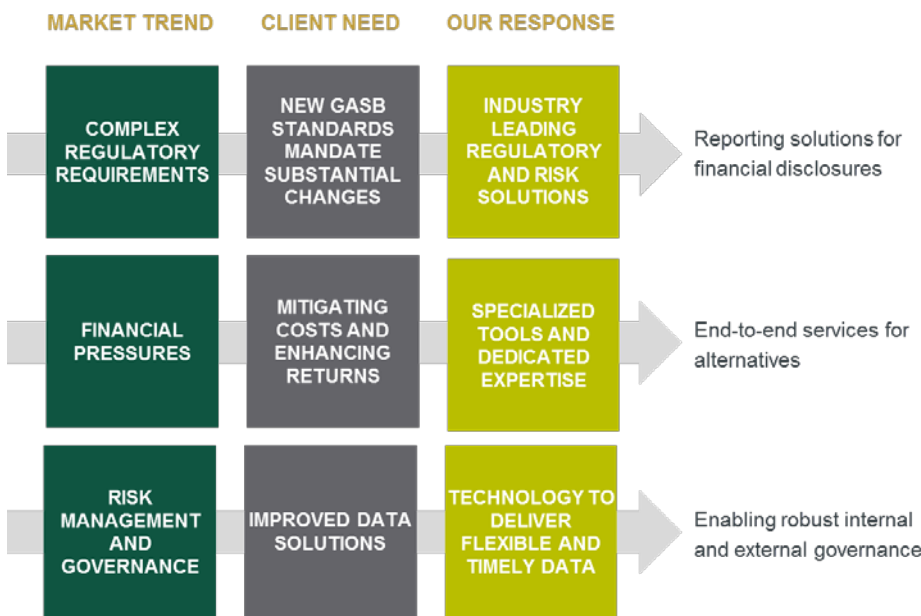
- Big Data - Cloudera Hadoop
- Software Build Capabilities - GIT, Atlassian
- Fraud Behavioral Analytics - Guardian Analytics
- Private Cloud Compute - VCE Vblock
- Next Generation Virtual Desktop - Nutanix

DEPLOY OPEN SOURCE COMMUNITY TECHNOLOGIES

- Internet Frameworks – Spring
- Network Monitoring – SmokePing
- Source Code Repository - GIT
- Static code Analysis – SONAR
- User Interface Library - jQuery, JavaScript

23) What issues are other clients concerned with in regards to products, markets, education and governance?

Please see the chart below for trend of client concerns:



24) Describe your outlook on strategic partnerships.

Our outlook to effective strategic partnership is to marry our strengths with the operations needs of the SamCERA staff. With focus on custody services, the four cells that follow serve as a synopsis of ways that we partner with clients as a way that allows operational tasks to be virtually outsourced to Northern Trust:

Accounting	NTAM Investment and Brokerage Reps	Passport® and Web-based data access	Support to Investment Managers appointed by SamCERA
A pivotal service that brings to the forefront the truest value of Northern Trust's relationship SamCERA. That includes GAAP practices, but also regulatory support.	Focal contacts for investment services, including daily sweep of idle cash and also for investment index as well as brokerage related products, like commission recapture – all under one institution.	Expert in the use of our online Web portal. Available to provide training to the staff of SamCERA and SIS., in the use of the system, aid in designing custom report packages, and working with technology staff to build out custom technology when and where required.	Primary contact for investment managers appointed by City of Atlanta. The IMLG team oversees Northern Trust's relationship with investment managers and serves as a point of escalation for resolving reconciliation or trade related issues.

25) **Describe your assessment of the relationship between The Northern Trust and SamCERA. How can we better take advantage of your firm's capabilities?**

We believe we have developed a productive way of working together; a way that provides you with a high quality and responsive relationship while looking to minimize burden on staff. Reflecting on our experiences with SamCERA, we believe the following are of importance to you as well:

A STRATEGIST WHO WORKS TO TRACK YOUR RETURN ON INVESTMENT

- Flexible tools for in-depth analysis of performance, risk and alternative assets
- Consultative support from industry experts who understand the public fund sector

A PARTNER WHO UNDERSTANDS SUPERIOR SERVICE

- Information and communication tools that are customized to help you focus on what's important
- Individualized service solutions built around your needs. One example includes the Preliminary Hedge Fund Reporting that is being done monthly.
- Access to expert professionals who understand your organization and who deliver real value

AN INDUSTRY LEADER WHO MEETS BOTH CURRENT AND FUTURE NEEDS

- Reporting that gives you control over what you see and when you see it
- An extensive suite of tools to help SamCERA fulfil regulatory reporting obligations accurately and with minimal disruption. SamCERA will continue to benefit from reporting packages and data analysis tools to facilitate reporting for GASB, and any other regulatory reporting required. As these requirements change, our product and accounting experts are looking ahead to your future needs, and are positioned to develop new solutions
- Better ways to take advantage of Northern Trust services include this operational and service oriented review. Other ways include product enhancement discussions of items like such as the performance Dashboards. We also recommend:

Board presentations on Class Actions, particularly on the class suit landscape in eth global markets and how Northern is positioned to support its US based clients.

Other periodic presentations to staff and/or the Board to discuss specific industry trends and direction that may clients are taking and product updates.



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SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 28, 2017

Agenda Item 6.3

TO: Board of Retirement

FROM: Doris Ng, Investment Analyst



SUBJECT: Report on Cash Overlay (Parametric Minneapolis) Annual Review

Staff Recommendation

Accept the report on the annual review of SamCERA's overlay manager.

Background

Parametric Minneapolis (formerly The Clifton Group) was hired in May 2013 to provide overlay management services to SamCERA. Parametric Minneapolis provided securitization of total fund cash, manager cash equitization, and overlay transition management services initially. Portfolio rebalancing was added in January 2014.

The Clifton Group was acquired by Parametric Associates on December 31, 2012. Parametric rebranded the Clifton Group operations as Parametric Minneapolis. All of the overlay activities are performed out of this office.

Discussion

On March 2nd, SamCERA staff held the annual review meeting in SamCERA's office for the Parametric Minneapolis Overlay strategy. Dan Wamre, Senior Portfolio Manager, attended from Parametric Minneapolis.

The meeting lasted approximately 1.5 hours, and consisted of a firm/organizational update, investment process review, and performance review and attribution.

Overall program results were positive for the year, and in-line with longer-term value-add projections. From inception through January 2017, the overlay activities added approximately \$14.5 million in gains, or 13 bps to the total plan return.

There were no major concerns identified during the review. Meeting notes summarizing the findings from the annual review are attached to this memo.

Attachment

Parametric Cash Overlay Annual Review Meeting Notes 2017

Date of meeting: 3/2/17

Location: SamCERA Office

Manager Representative(s)

Dan Wamre, CFA (Senior PM)

Verus Representative

Margaret Jadallah (Managing Director)

Client Representative(s)

Scott Hood (CEO), Lilibeth Dames (Analyst), Doris Ng (Analyst)

Product Description

Parametric's cash overlay program is an efficient way for SamCERA to maintain its target asset allocation in a systematic fashion through cash securitization at the fund and manager level, transition/reallocation support and asset class rebalancing back to target within defined bands. The cash overlay program is invested synthetically using liquid futures with cash balances reviewed daily. A combination of large and small cap futures implementation is the proxy for private equity. SamCERA's investment guidelines initially allowed only for cash overlay. Rebalancing was added to the SamCERA program in January 2014.

Parametric estimates that their overlay services should add 10-20 basis points to portfolio returns over time using their systematic approach. Since inception through 1/31/17, SamCERA's overlay program has added 13 basis points to portfolio returns since inception, in line with expectations.

Organization

Parametric Portfolio Associates is a majority-owned subsidiary of Eaton Vance Corp. Eaton Vance owns 93% of the firm with the remaining equity ownership at Parametric distributed among senior management and investment professionals. Parametric is comprised of three investment centers – Seattle, Minneapolis and Westport, CT. The firm's institutional overlay strategies reside within the Minneapolis investment center which was formerly The Clifton Group prior to Parametric's acquisition of the firm in 2012. Eaton Vance, Parametric's parent company, acquired the business assets of Calvert Investments effective January 1, 2017.

Parametric's firm-wide assets under management are currently \$178 billion in total assets with \$106 billion in total institutional assets as of 12/31/16. The firm manages over \$71 billion in overlay strategies representing 190 client relationships managed out of Minneapolis. Over the past year, 15 accounts and \$1.1 billion were gained, while 6 accounts and \$76 million were lost. Gains have generally offset losses with the exception of the post-2008 period where cash outperformed other asset classes and, thus, cash overlay strategies were challenged. The Minneapolis team also manages the firm's Volatility Risk Premium (VRP) strategies where there has been an increase in interest and asset inflows.

There have been no senior personnel changes since SamCERA's last review, and there are no upcoming senior departures anticipated in the near future.

Investment Team

The Minneapolis investment center's team has 88 team members in total. Minneapolis CIO Jack Hansen has been with the firm for more than 30 years. Dan Wamre, Senior Portfolio Manager, has worked at Parametric, and formerly The Clifton Group, since he was an intern in 1995. Parametric uses a team approach whereby no one individual manages a client portfolio.

Parametric's Westport investment center, focusing on options-based strategies for retail investors, was successfully integrated with Minneapolis' investment center over the past year.

Investment Strategy

Parametric's cash overlay services are known internally as Policy Implementation Overlay Services (PIOS). The objectives of PIOS are to: 1) increase day-to-day availability of cash and provide operational efficiency for cash flow management, 2) eliminate performance drag due to unintended cash, 3) enable staff to obtain a daily snapshot of total fund exposures, and 4) maintain asset class exposure during manager changes.

Parametric uses liquid futures in the implementation of PIOS. US equity exposures are maintained using large cap and small cap futures. Non-US equity exposures are replicated using developed and emerging markets futures. Dan Wamre pointed out the slight tracking error that occurs with non-US equity exposure because the futures trade in the US after international markets have already closed. Fixed income Treasury futures are used for bond replication so interest rate sensitivities are addressed. Credit exposure is not addressed so there is some tracking error within the fixed income asset class compared to SamCERA exposures.

Over the past year, SamCERA changed its futures account from Goldman Sachs to Morgan Stanley. As a result of regulatory changes stemming from the Dodd-Frank Act related to multi-party transactions (non-netting vs. capital), GS had reclassified SamCERA as a riskier client and was going to charge the fund more. Morgan Stanley did not make this distinction or reclassification so the switch to MS was cost effective.

Parametric has recently enhanced its reporting and can provide better attribution of alpha from components of the overlay process (fund cash securitization, manager cash securitization, rebalancing, transitions). Most of SamCERA's alpha has resulted from the overlay from fund cash securitization.

Performance & Positioning

Parametric has implemented its overlay strategy within SamCERA's guidelines, reducing cash and maintaining the portfolio target asset allocation within tight tracking error bands. SamCERA experienced three synthetic rebalancing events in 2016 in conjunction with above average volatility in the market. There were also two large inflows in January and July. The overlay program also facilitated the commodity transition during the middle of the year. Parametric is in the process of reallocating the portfolio to SamCERA's new asset allocation target. PIOS has added 18 bps to the portfolio over the past year.

Russell 2000 futures contracts have remained unusually cheap to fair value because of hedge fund shorts and have continued to add more alpha than normal.

Dan used Brexit as an example of where an overlay program is efficient. Post Brexit, Parametric was able to quickly react to the unexpected news and volatility, buying and selling efficiently as the markets recovered. As a reminder, Parametric takes no market views and simply rebalances to target in a disciplined manner.

Conclusion

Verus-SF continues to have confidence in Parametric's overlay capabilities and the Minneapolis team implementing SamCERA's program. Alpha and tracking to the fund's strategic asset allocation are in line with expectations.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 28, 2017

Agenda Item 6.4

TO: Board of Retirement

FROM: Michael Coultrip, Chief Investment Officer 

SUBJECT: Report on Update of Verus Capital Market Assumptions

Staff Recommendation

Review the attached report on Verus capital markets assumptions and total fund policy expectations.

Background

In 2016, SamCERA undertook an asset-liability analysis, which utilized the most recent Verus capital market assumptions at the time as inputs into the process. Subsequent to this analysis, in January 2017 Verus updated their capital market assumptions.

Discussion

The attached report from Verus summarizes their latest asset class capital market assumptions, and the resulting impact on the total fund policy expectations. Margaret Jadallah and Stephen Quirk from Verus will present this report to the Board.

Attachment

Verus Review and Discussion of Total Fund Policy Expectations using 2017 Capital Market Assumptions



PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS



MARCH 2017

Review and Discussion of Total Fund Policy Expectations using 2017 Capital Market Assumptions

SamCERA

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VERUSINVESTMENTS.COM

SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

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Appendix 14

2017 Capital Market Assumptions

Capital market assumption process

- Verus independently develops and publishes our Capital Market Assumptions each January.
- Assumptions are rooted in extensive research and vetted by the firm's Investment Committee following a comprehensive review process.
- Predicated on a widely accepted “building block” methodology.
- Utilize historical risk and correlation.
- CMAs take a long term outlook and are meant for strategic decision-making.
- While we employ a robust process, they represent “educated guesses” on what the future holds.

Methodology

APPROPRIATE FRAME OF REFERENCE

- Over the short-term, capital markets may reflect irrational investor behavior as prices diverge from fair value.
- Mean reversion may occur over the long-run as prices converge to underlying fundamentals due to long-term investor rationality.
- In our opinion, a 10-year outlook is a reasonable time frame to expect fundamental valuation measures to mean-revert.

Asset	Return Methodology	Volatility Methodology
Inflation	25% weight to the University of Michigan Survey 5-10 year ahead inflation expectation and the Survey of Professional Forecasters (Fed Survey), and the remaining 50% to the market's expectation for inflation as observed through the TIPS breakeven rate	-
Cash	Real yield estimate + inflation forecast	Long-term volatility
Bonds	Nominal bonds: current annualized yield Real bonds: real yield + inflation forecast	Long-term volatility, adjusted for autocorrelation
International Bonds*	Current yield + implied currency effect	Long-term volatility, adjusted for autocorrelation
Credit	Current option-adjusted-spread + U.S. 10-year Treasury – default rate	Long-term volatility, adjusted for autocorrelation
International Credit*	Current option-adjusted-spread + foreign 10-year Treasury – default rate + implied currency effect	Long-term volatility, adjusted for autocorrelation
Private Credit	High yield forecast + 2% illiquidity premium	Long-term volatility, adjusted for autocorrelation
Equity	Dividends (current yield) + real earnings growth (historical average) + inflation on earnings (inflation forecast) + expected P/E change	Long-term volatility, adjusted for autocorrelation
International Developed Equity*	Dividends (current yield) + real earnings growth (historical average)** + inflation on earnings (international inflation forecast) + expected P/E change + implied currency effect	Long-term volatility, adjusted for autocorrelation
Private Equity	Small-cap domestic equity forecast + 3% illiquidity premium	1.2 * Long-term volatility of U.S. small cap, adjusted for autocorrelation
Commodities	Cash + inflation forecast	Long-term volatility, adjusted for autocorrelation
Hedge Funds	Return coming from traditional betas + 3% (alternative beta and alpha)	1.65 * Long-term volatility, adjusted for autocorrelation
Hedge Funds (FoF)	Return coming from traditional betas + 3% (alternative beta and alpha) – 1% expected fund of funds management fee	1.65 * Long-term volatility, adjusted for autocorrelation
Core Real Estate	Cap rate – capex + Inflation forecast	50% of REIT volatility
REITs	Core real estate	Long-term volatility, adjusted for autocorrelation
Value-Add Real Estate	Core real estate + 2%	Volatility to produce Sharpe Ratio (g) equal to core real estate
Opportunistic Real Estate	Core real estate + 4%	Volatility to produce Sharpe Ratio (g) equal to core real estate
Risk Parity	Expected Sharpe Ratio * target volatility + cash rate	Target volatility

*We use local inflation for international developed equity and fixed income markets. When using local inflation rates, expected returns are adjusted for the implied currency effect based on currency forward contract rates (See Appendix)

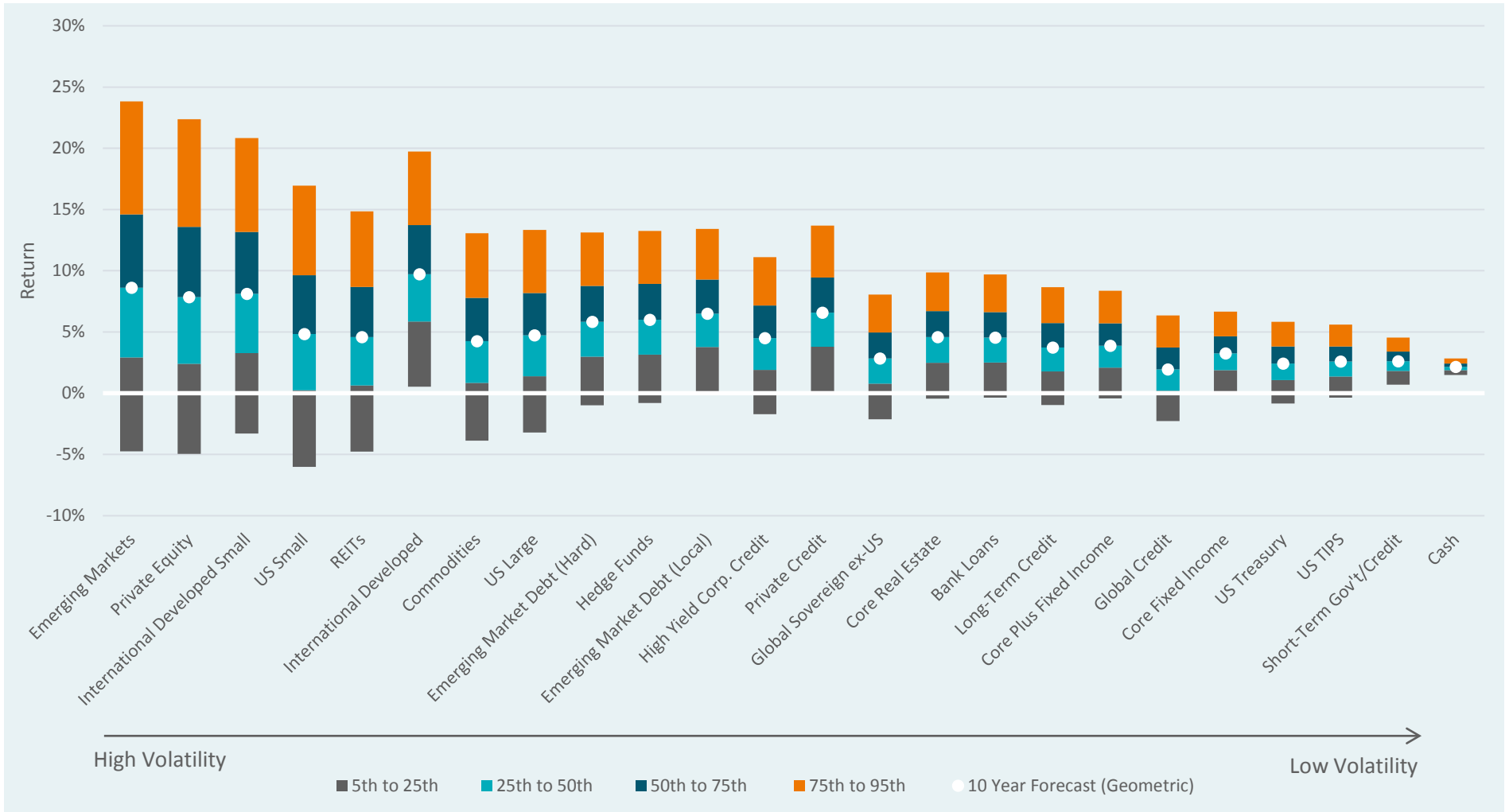
10 year return & risk assumptions

Asset Class	Index Proxy	Ten Year Return Forecast	Standard Deviation Forecast	Sharpe Ratio Forecast	Ten Year Historical Sharpe Ratio
Equities					
US Large	S&P 500	4.7%	15.8%	0.16	0.39
US Small	Russell 2000	4.8%	21.8%	0.12	0.30
International Developed	MSCI EAFE	9.7%	18.9%	0.40	-0.02
International Small	MSCI EAFE Small Cap	8.1%	23.3%	0.26	0.09
Emerging Markets	MSCI EM	8.6%	27.2%	0.24	0.04
Global Equity	MSCI ACWI	7.0%	17.9%	0.27	0.15
Private Equity	Cambridge Private Equity	7.8%	26.2%	0.22	0.88
Fixed Income					
Cash	30 Day T-Bills	2.2%	1.2%	-	-
US TIPS	Barclays US TIPS 5 - 10	2.6%	5.7%	0.08	0.57
US Treasury	Barclays Treasury 7 - 10 year	2.4%	6.9%	0.04	0.70
Global Sovereign ex US	Barclays Global Treasury ex US	2.8%	10.0%	0.07	0.23
Core Fixed Income	Barclays US Aggregate Bond	3.3%	6.5%	0.17	1.07
Core Plus Fixed Income	Barclays US Corporate IG	3.9%	8.5%	0.20	0.75
Short-Term Gov't/Credit	Barclays US Gov't/Credit 1 - 3 year	2.6%	3.7%	0.13	1.45
Short-Term Credit	Barclays Credit 1 - 3 year	2.8%	3.5%	0.17	1.08
Long-Term Credit	Barclays Long US Corporate	3.7%	9.6%	0.17	0.56
High Yield Corp. Credit	Barclays High Yield	4.5%	11.8%	0.20	0.60
Bank Loans	S&P/LSTA	4.5%	10.8%	0.22	0.45
Global Credit	Barclays Global Credit	2.0%	7.8%	-0.03	0.50
Emerging Markets Debt (Hard)	JPM EMBI Global Diversified	5.8%	13.0%	0.28	0.66
Emerging Markets Debt (Local)	JPM GBI EM Global Diversified	6.5%	13.4%	0.35	0.22
Private Credit	High Yield + 200 bps	6.5%	11.8%	0.37	-
Other					
Commodities	Bloomberg Commodity	4.3%	16.1%	0.13	-0.37
Hedge Funds	HFRI Fund of Funds	6.0%	13.2%	0.29	0.08
Hedge Funds (Fund of Funds)	HFRI Fund of Funds	5.0%	13.2%	0.22	-
Core Real Estate	NCREIF Property	4.6%	9.9%	0.25	1.03
Value-Add Real Estate	NCREIF Property + 200bps	6.6%	17.9%	0.25	-
Opportunistic Real Estate	NCREIF Property + 400bps	8.6%	26.0%	0.25	-
REITs	Wilshire REIT	4.6%	19.7%	0.10	0.15
Risk Parity		7.2%	10.0%	0.50	-
Inflation		2.1%	1.4%*	-	-

*Historical volatility of inflation. This is not a forecast.

Range of likely 10 year outcomes

10 YEAR RETURN 90% CONFIDENCE INTERVAL



Inflation

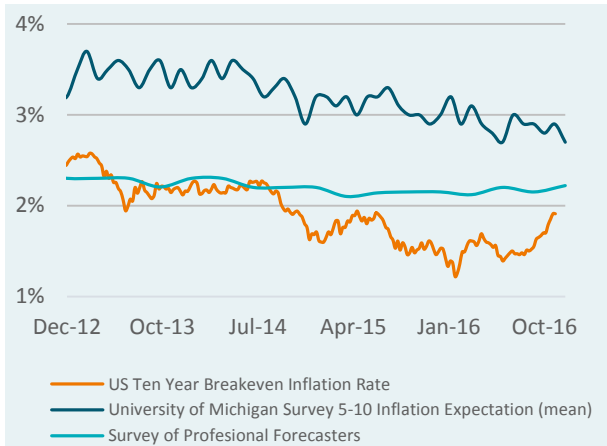
The market's expectations for 10-year inflation can be inferred by taking the difference between the U.S. 10-year Treasury yield and the U.S. 10-year Treasury Inflation-Protected (TIPS) yield (referred to as the breakeven inflation rate).

Breakevens reached very low levels during 2016 but rebounded in the fourth quarter following U.S. elections, which raised the probability of fiscal stimulus and buoyed consumer and business sentiment. Inflation expectations remain relatively low through the downward trend appears to have reversed.

The latest University of Michigan Survey 5-10 year forward inflation expectation, a survey of about 500 households around the nation, is 2.3%, slightly weaker than a year ago. Historically, this survey of inflation tends to be higher than actual future inflation.

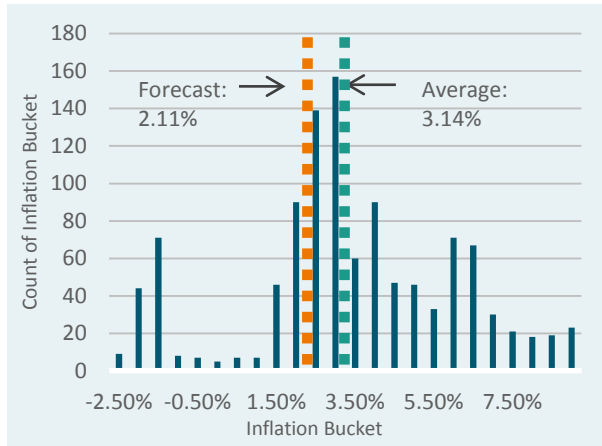
A more stable indicator over time has been the Survey of Professional Forecasters (conducted quarterly). The most recent expectation for long-term inflation is 2.11%.

INFLATION EXPECTATIONS



Source: U. of Michigan, Philly Fed, as of 12/31/16

US 10YR ROLLING AVERAGE INFLATION SINCE 1923



Source: Bloomberg, as of 10/31/16

FORECAST

	10-Year Forecast
University of Michigan Survey (25% weight)	2.30%
Survey of Professional Forecasters (25% weight)	2.22%
US 10-Year TIPS Breakeven Rate (50% weight)	1.95%
Inflation Forecast	2.11%

Source: Verus

Credit summary

	Core	Long-Term Credit	Global Credit	High Yield	Bank Loans	EM Debt (USD)	EM Debt (Local)	Private Credit
Index	BC US Aggregate	BC Long US Corporate	BC Global Credit	BC US High Yield	S&P LSTA	JPM EMBI	JPM GBI	BC US High Yield + 2%
Method	OAS + US 10-Year	OAS + US 10-Year	OAS + Global 10-Year Treasuries	OAS + US 10-Year	LIBOR + Spread	OAS + US 10-Year	Current Yield	High Yield + 2% illiquidity premium
Spread to	Intermediate US Treasury	Long-Term US Treasury	Global Long-Term Treasuries	Intermediate US Treasury	LIBOR	Intermediate US Treasury	-	-
Default Assumption	-0.5%	-4.5%	-3.0%	-3.8%	-3.5%	-0.5%	-0.5%	-
Recovery Assumption	80%	95%	40%	40%	90%	60%	40%	-
Spread	0.9%	1.5%	1.2%	4.4%	3.9%	3.6%	-	-
Yield	-	-	-	-	-	-	6.8%	-
Risk Free Yield	2.4%	2.4%	1.9%	2.4%	1.0%	2.4%	-	-
Effective Default	-0.1%	-0.2%	-1.8%	-2.3%	-0.4%	-0.2%	-0.3%	-
Expected Currency Effect	-	-	0.6%	-	-	-	-	-
Nominal Return	3.3%	3.7%	2.0%	4.5%	4.5%	5.8%	6.5%	6.5%
Inflation Forecast	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%
Real Return	1.2%	2.2%	-0.2%	2.4%	2.4%	3.7%	4.4%	4.4%

*We use local inflation for international developed equity and fixed income markets. When using local inflation rates, expected returns are adjusted for the implied currency effect based on currency forward contract rates (See Appendix)

Equity summary

	U.S. Large	U.S. Small	EAFE	EAFE Small	EM
Index	S&P 500	Russell 2000	MSCI EAFE Large	MSCI EAFE Small	MSCI EM
Method	Building Block Approach: current dividend yield + historical average real earnings growth + inflation on earnings + repricing + expected currency effect				
Current Shiller P/E Ratio	28.0	43.8	14.5	-	8.7
Regular P/E Ratio	20.9	48.7	22.9	34.8**	15.4
2016 Shiller P/E Expansion	14.8%	19.0%	2.1%	-	6.8%
2016 Regular P/E Expansion	14.2%	45.4%	20.5%	48.0%	26.0%
Current Shiller P/E Percentile Rank	85%	100%	17%	-	7%
Current Regular P/E Percentile Rank	81%	98%	68%	78%**	62%
Average of P/E Methods' Percentile Rank	83%	99%	43%	78%**	35%
2016 Total Return	12.0%	21.3%	1.0%	2.2%	11.2%
Shiller PE History	1982	1988	1982	Not Enough History	2005
Long-Term Average Shiller P/E	22.4	29.5	23.0	-	16.2
Current Dividend Yield	2.1%	1.5%	3.2%	2.4%	2.9%
Long-Term Average Real Earnings Growth	1.8%	2.8%	2.2%	2.4%	3.5%
Inflation on Earnings	2.1%	2.1%	1.5%*	1.5%*	2.1%
Repricing Effect (Estimate)	-1.3%	-1.5%	0.5%	-0.5%	0.5%
Implied Currency Effect*	-	-	2.2%*	2.2%*	-
Nominal Return	4.7%	4.8%	9.7%	8.1%	8.6%
Inflation Forecast	2.1%	2.1%	2.1%	2.1%	2.1%
Real Return	2.6%	2.7%	7.6%	6.0%	6.5%

*We use local inflation for international developed equity and fixed income markets. When using local inflation rates, expected returns are adjusted for the implied currency effect based on currency forward contract rates (See Appendix)

**Average trailing P/E from previous 12 months is used

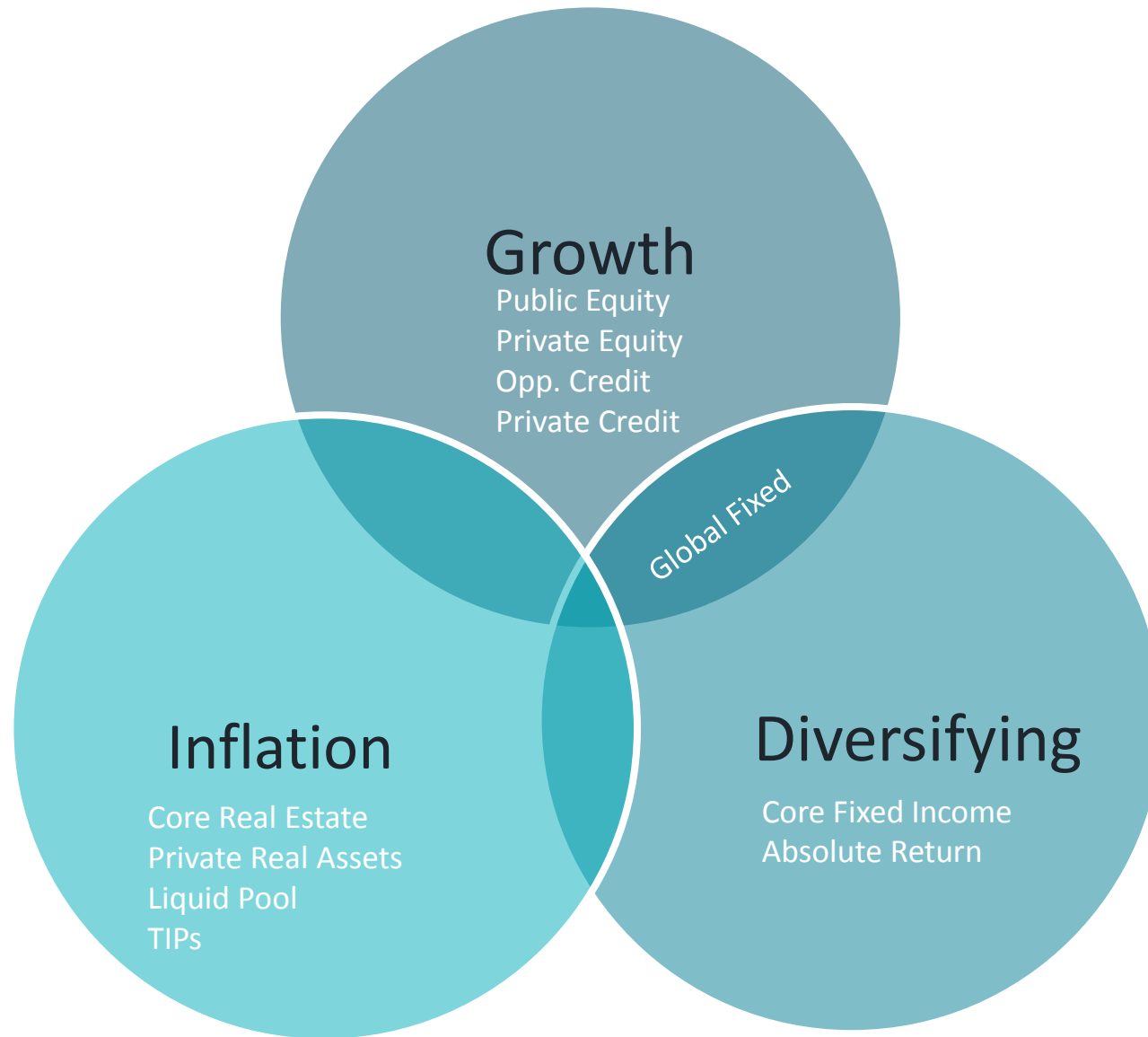
NOTE: For all equities, we exclude data prior to 1972, which allows for a more appropriate comparison between data sets.

Total fund policy expectations

Enterprise Risk Tolerance results

1. Meet Plan liabilities
2. Ensure the long-term sustainability of the Plan
3. Protect against significant downside events
 - Reduce growth assets
 - Increase income
4. Review allocation to inflation assets

Functional Labels



Asset class roles and AA implementation

— Growth assets

- Driver of returns – higher expected returns with higher equity risk
- MSCI ACWI global equity market exposure
 - International Equity more attractive relative to US Equity
- Add to Opportunistic Credit to diversify growth risk profile
 - Allocates more risk to credit and counterparty risk
 - Carved out Private Credit as new sub-asset class

— Diversifying assets

- Defensive assets that provide stability if equity markets fall
- Low expected correlation to equity assets
 - Hedge Fund/Absolute Return broadly has a higher correlation to equities than bonds, but SamCERA implementation through lower beta, diversifying strategies.
- Addition of Treasury manager

Asset class roles and AA implementation (cont.)

— Inflation assets

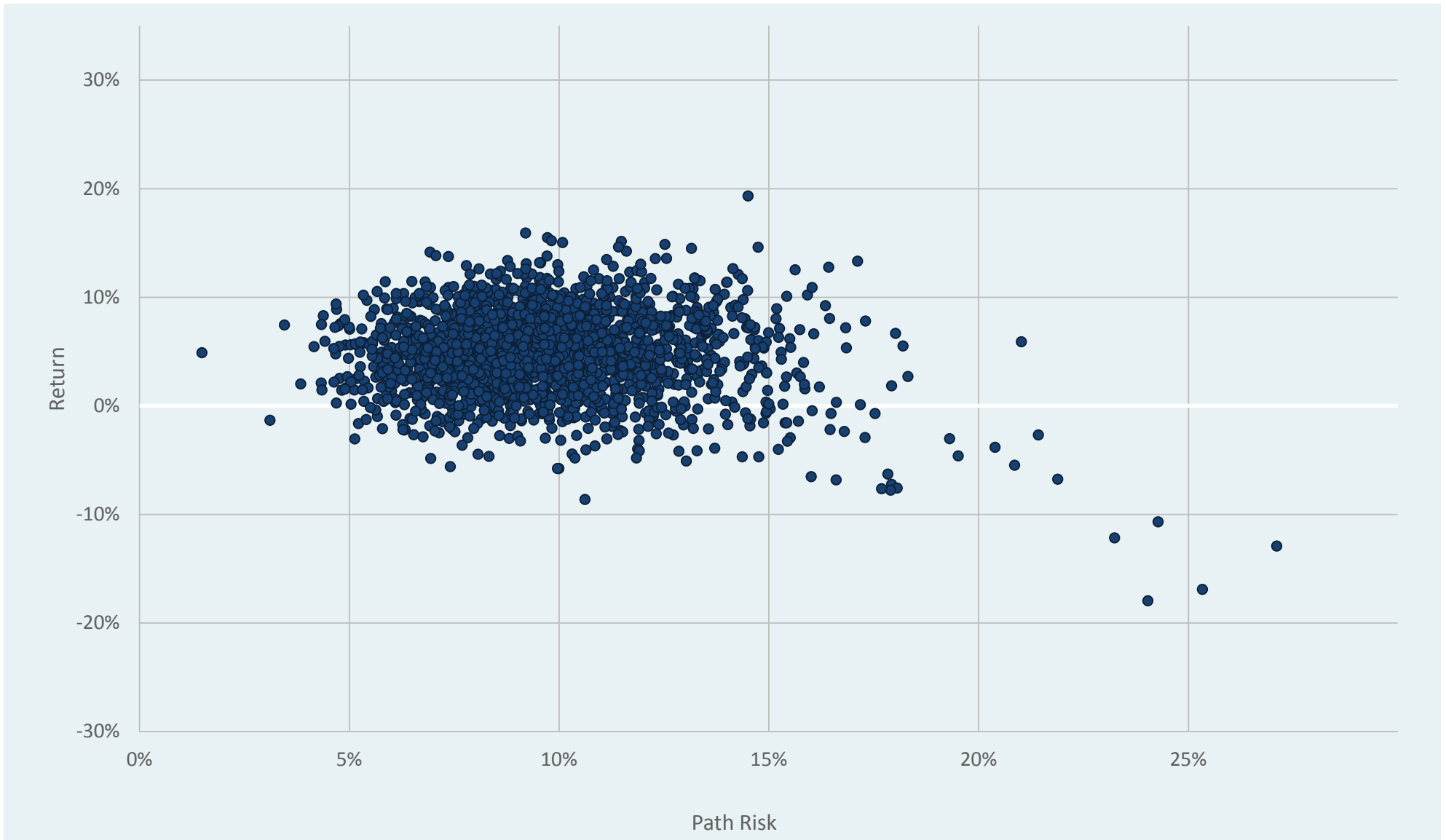
- Hedge against unexpected inflation and provide additional diversification from equity risk
- Slightly higher return forecasts than Fixed Income
- Add to and reorient allocation within Inflation assets

Policy allocations

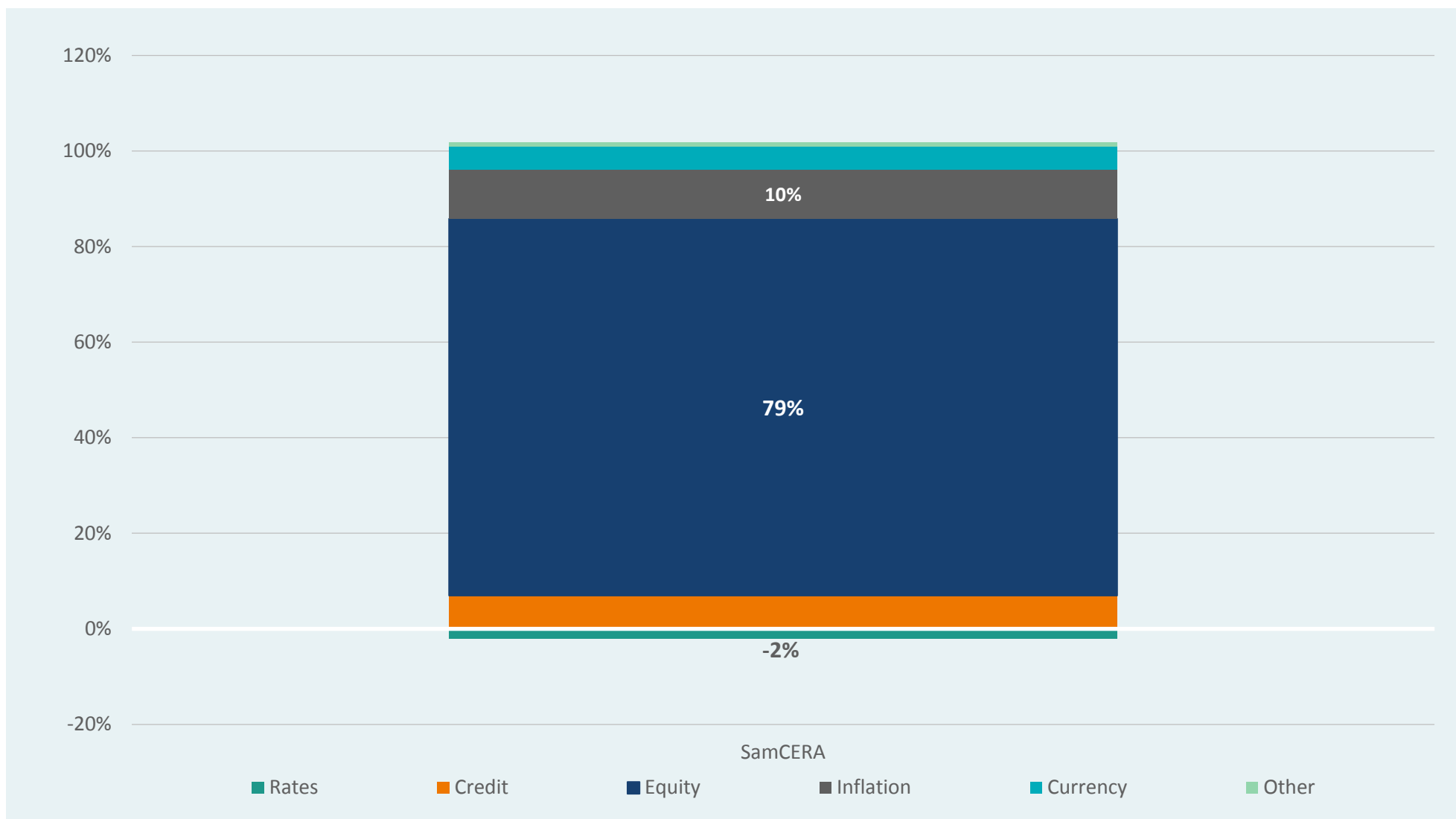
US Equity	18.0
International Developed	18.0
Private Credit	2.0
Opportunistic Credit	6.0
Private Equity	7.0
Global Fixed Income	3.0
Total Growth	54.0
Core Fixed Income	12.0
Hedge Fund	6.0
Total Diversifying	18.0
Liquid Pool	6.0
Core Real Estate	10.0
Private Real Assets	4.0
Total Inflation	20.0
Risk Parity	8.0
Total Allocation	100.0

	SamCERA
Mean Variance Analysis	
Forecast 10 Year Return	6.67
Standard Deviation	11.26
Return/Std. Deviation	0.59
1st percentile ret. 1 year	-20.45
Sharpe Ratio	0.44

Monte Carlo



Risk decomposition



Appendix

Correlation assumptions

	Cash	US Large	US Small	Developed Large	Developed Small	EM	Global Equity	PE	US TIPS	US Treasury	Global Sovereign ex US	US Core	US Core Plus	Short – Term Govt/Credit	Short-Term Credit	Long-Term Credit	US HY	Bank Loans	Global Credit	EMD USD	EMD Local	Commodities	Hedge Funds	Real Estate	REITs	Risk Parity	Inflation
Cash	1.0																										
US Large	-0.2	1.0																									
US Small	-0.2	0.9	1.0																								
Developed Large	-0.1	0.9	0.8	1.0																							
Developed Small	-0.2	0.8	0.8	1.0	1.0																						
EM	-0.1	0.8	0.7	0.9	0.9	1.0																					
Global Equity	-0.1	1.0	0.9	1.0	0.9	0.9	1.0																				
PE	-0.2	0.7	0.7	0.6	0.5	0.5	0.7	1.0																			
US TIPS	0.1	0.2	0.1	0.3	0.3	0.4	0.3	0.0	1.0																		
US Treasury	0.1	-0.3	-0.3	-0.2	-0.2	-0.2	-0.3	-0.2	0.6	1.0																	
Global Sovereign ex US	0.1	0.2	0.1	0.4	0.4	0.4	0.3	-0.1	0.6	0.5	1.0																
US Core	0.1	0.0	-0.1	0.1	0.1	0.2	0.1	-0.1	0.8	0.9	0.6	1.0															
US Core Plus	-0.1	0.3	0.3	0.5	0.5	0.5	0.5	0.0	0.7	0.5	0.5	0.8	1.0														
Short – Term Govt/Credit	0.4	-0.1	-0.1	0.1	0.1	0.1	0.0	-0.2	0.6	0.6	0.6	0.7	0.5	1.0													
Short-Term Credit	0.1	0.3	0.2	0.5	0.5	0.5	0.4	-0.2	0.5	0.2	0.5	0.5	0.8	0.6	1.0												
Long-Term Credit	-0.1	0.3	0.2	0.4	0.4	0.4	0.4	-0.1	0.6	0.5	0.5	0.8	1.0	0.4	0.6	1.0											
US HY	-0.2	0.7	0.7	0.8	0.8	0.8	0.8	0.4	0.4	-0.2	0.3	0.2	0.6	0.1	0.6	0.5	1.0										
Bank Loans	-0.2	0.6	0.6	0.6	0.6	0.6	0.6	0.2	0.2	-0.4	0.0	0.0	0.4	-0.2	0.5	0.3	0.8	1.0									
Global Credit	-0.1	0.6	0.5	0.8	0.8	0.8	0.7	0.2	0.6	0.2	0.7	0.6	0.8	0.5	0.7	0.8	0.8	0.5	1.0								
EMD USD	-0.1	0.6	0.5	0.7	0.7	0.7	0.7	0.3	0.7	0.3	0.5	0.6	0.8	0.4	0.6	0.7	0.8	0.5	0.9	1.0							
EMD Local	0.1	0.6	0.6	0.8	0.7	0.8	0.7	0.3	0.5	0.1	0.7	0.4	0.6	0.4	0.5	0.5	0.7	0.4	0.8	0.8	1.0						
Commodities	0.0	0.5	0.4	0.6	0.6	0.7	0.6	0.2	0.3	-0.2	0.4	0.1	0.3	0.2	0.4	0.2	0.5	0.4	0.6	0.5	0.6	1.0					
Hedge Funds	-0.1	0.7	0.6	0.8	0.8	0.8	0.8	0.6	0.2	-0.3	0.1	0.0	0.4	0.0	0.4	0.3	0.7	0.6	0.6	0.5	0.5	0.6	1.0				
Real Estate	-0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.2	0.0	0.2	0.2	0.2	0.0	0.2	1.0			
REITs	-0.1	0.7	0.8	0.7	0.6	0.6	0.7	0.5	0.3	0.0	0.3	0.3	0.5	0.1	0.3	0.4	0.7	0.5	0.6	0.6	0.6	0.3	0.4	0.4	1.0		
Risk Parity	0.1	0.5	0.4	0.6	0.6	0.6	0.6	0.0	0.7	0.4	0.6	0.6	0.7	0.5	0.6	0.6	0.5	0.3	0.8	0.7	0.7	0.6	0.5	-0.1	0.4	1.0	
Inflation	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	-0.2	0.0	-0.1	-0.1	0.0	-0.1	-0.2	0.2	0.3	0.1	0.1	0.1	0.3	0.3	0.1	0.1	0.0	1.0

Note: Correlation assumptions are based on the last ten years. Private Equity and Real Estate correlations are especially difficult to model – we have therefore used BarraOne correlation data to strengthen these correlation estimates.

Policy allocations- Model

			<u>CMA's (10 Yr)</u>		
			Return	Standard Deviation	Sharpe Ratio
US Large	16.0		4.7	15.8	
US Small	2.0		4.8	21.8	
	Total Domestic Equity	18.0			
International Developed	14.0		9.7	18.9	
Emerging Markets	4.0		8.6	27.2	
	Total Int'l Equity	18.0			
	Total Equity	36.0			
Core Fixed Income	12.0		3.3	6.5	
High Yield Corp. Credit	6.8		4.5	11.8	
Bank Loans	0.8		4.5	10.8	
Global Sovereign ex-US	0.8		2.8	10.0	
Emerging Market Debt (Hard)	0.8		5.8	13.0	
	Total Fixed Income	21.0			
Commodities	3.3		4.3	16.1	
Core Real Estate	10.0		4.6	9.9	
Value Add Real Estate	3.4		6.6	17.9	
	Total Real Assets	16.7			
Hedge Fund	6.0		6.0	13.2	
Risk Parity	8.0		7.2	10.0	
Private Equity	10.3		7.8	26.2	
Private Credit	2.0		6.5	11.8	
	Total Non-Public Investments	26.3			
Total Allocation	100.0				

Scenario analysis

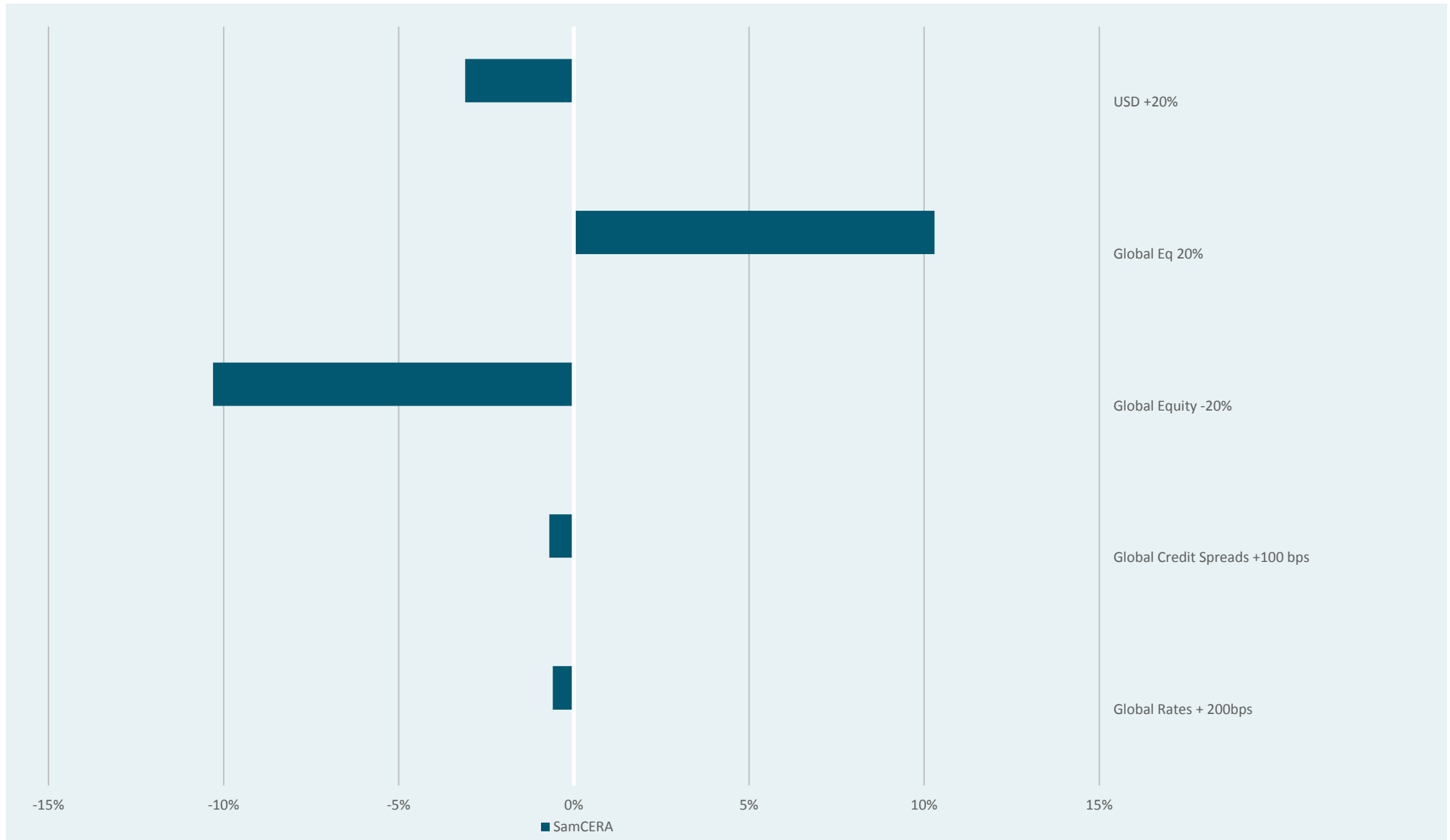
	SamCERA
Verus Scenario Analysis	
10 Year Return Forecast	
Stagflation	6.6
Weak	3.2
Base CMA	6.6
Strong	10.5
<i>Range of Scenario Forecast</i>	7.2
<i>Shock (1 year)</i>	-18.6
10 Year Real Return Forecast	
Stagflation	0.5
Weak	2.1
Base CMA	4.5
Strong	7.9
<i>Range of Scenario Forecast</i>	7.4

Strong - This scenarios involve a +1 standard deviation move across each asset class return driver / building block, based on that building block's historical movement over 10yr periods.

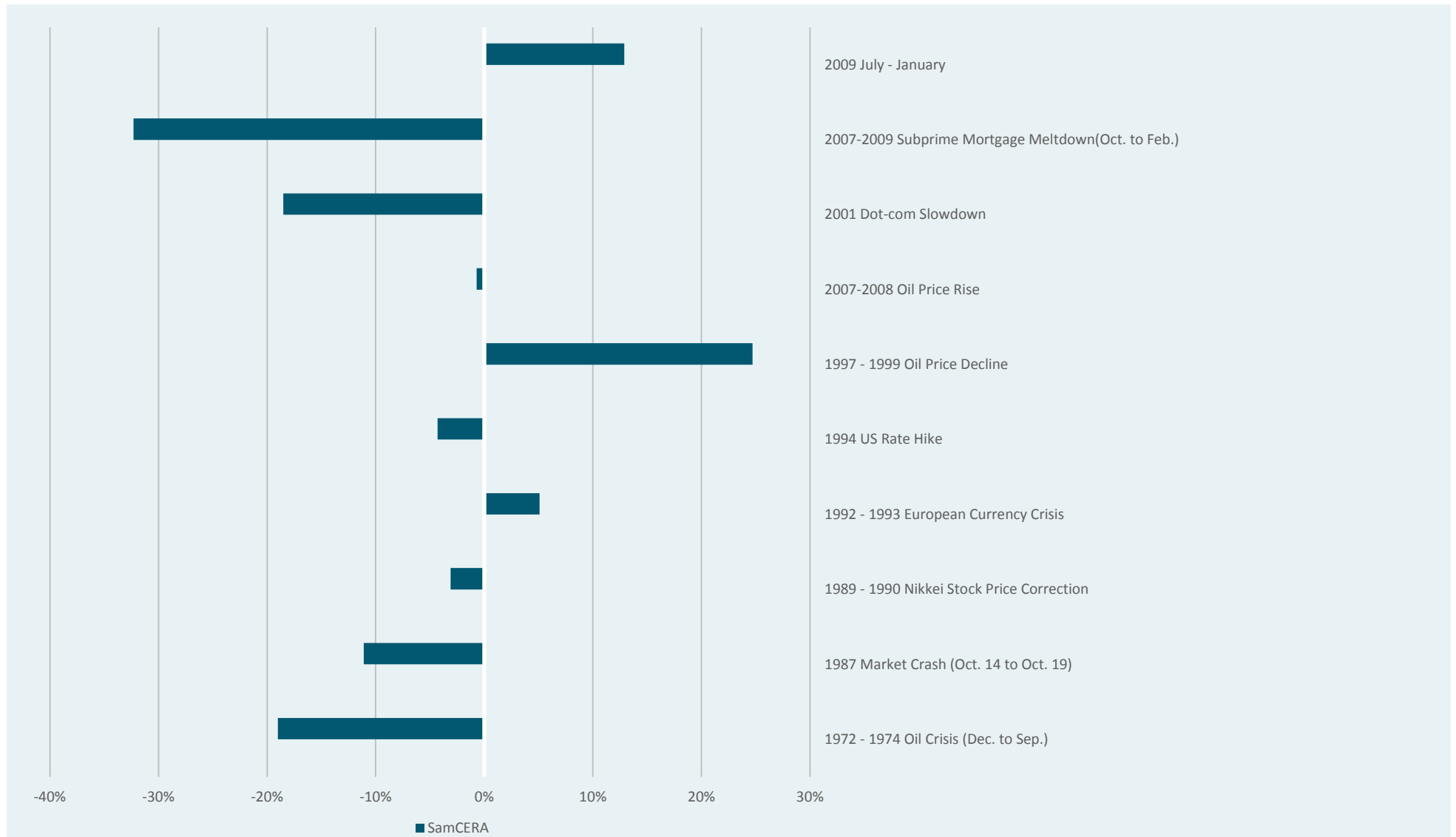
Weak - This scenarios involve a - 1 standard deviation move across each asset class return driver / building block, based on that building block's historical movement over 10yr periods.

Stagflation - this scenario assumes 4% inflation and a -1.5 standard deviation move in return drivers – consistent with a rise in inflation but broadly weaker growth.

Stress tests



Scenario analysis



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SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 28, 2017

Agenda Item 6.5

TO: Board of Retirement

FROM: Michael Coultrip, Chief Investment Officer 

SUBJECT: Report on Real Estate Debt Short List Managers

Staff Recommendation

Provide feedback on the proposed mandate and short-list of real estate debt managers for a new real asset strategy within the real estate sub-asset class.

Background

In October 2016, the Board approved a new asset allocation policy that increased the overall allocation to real estate from 7% to 10% of the total plan.


Discussion

Given the current valuations in private equity real estate, consultant and staff recommend utilizing a real estate debt strategy to implement part of the increase in the real estate allocation.

The attached memo from Verus outlines a short-list of potential real estate debt strategies currently in the market. Staff and consultant intend to perform further due diligence on these strategies over the next few months, and anticipate making a final investment recommendation to the Board at that time.

Attachment

Verus Memorandum Real Estate Debt Search



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**



March 2017

Real Estate Debt Search

San Mateo County Employees' Retirement System

I. Manager overview

Firm Background

	Angelo Gordon	Brookfield	CIM Group	Invesco Real Estate	PGIM	UBS
FIRM OWNERSHIP	Founders & Employees	Publicly traded	80% 3 Employees 20% Mitsui	Subsidiary of Invesco Ltd.	Subsidiary of Prudential Financial, Inc	Subsidiary of UBS AG
LOCATION	New York, NY	New York, NY	Los Angeles, CA	Dallas, TX	New York, NY	Hartford, CT
FIRM AUM (\$BB)	\$27.0	\$250	\$19.2	\$825.3	\$1,090	\$32
FIRM REAL ESTATE AUM (\$BB)	\$9.7	\$148	\$18.5	\$71.0	\$66.9	\$29.0
FIRM REAL ESTATE DEBT AUM (\$MM)	\$2,600	\$3,800	\$338	\$540	\$6,000	\$2,900

Fund Background

	Angelo Gordon	Brookfield	CIM Group	Invesco Real Estate	PGIM	UBS
FUND NAME	AG Real Estate Debt Investment Fund	Brookfield Senior Real Estate Finance Fund	CIM Mortgage Trust	Invesco Real Estate Strategy	PGIM Real Estate US Debt Fund	Trumbull Property Income Fund
FUND NAV (\$MM)	\$205	\$1,000 Target Raise	\$338 (1st close 4Q'16)	Target: \$150 by April 30, \$450 by June 30	Target \$500 by end of 2017 & \$1,000 by 2019	\$2,900
INCEPTION DATE	4/1/2011	2Q 2017	4Q 2016	4/30/2017	April 2017	3/3/1981
TARGET IRR (NET)	10-12%	6-7%	10%	8%	6.25-7.25%	CPI + 5%
NUMBER OF INVESTMENTS	n/a	Target: 20	Current: 5 Target: 20-25	Target: 20	Target:65 (at \$1bb fund size)	52

Firm Characteristics

	Angelo Gordon	Brookfield	CIM Group	Invesco Real Estate	PGIM	UBS
ESTIMATED TIME TO INVEST NEW CAPITAL	1 Quarter	1-2 Quarters	2-3 Quarters	4 Quarters	1 Quarter	3 Quarters
QUEUE (COMMITTED)	\$0	\$0 - early marketing	\$200	\$150 mm closed	\$100 mm parent seed	\$395 mm
TARGET LEVERAGE	50%	0%	66%	0%	60%	0%
MAX. LEVERAGE	50%	35%	75%	Mezz: 0%	60% (only on senior loans)	0%
AVERAGE LTV	66%	70% Max	75% Max	Current: 67% Target: 70% Max: 75%	Avg: 72% Max: 80%/Loan Max: 75%/Fund	69%
AVERAGE LOAN MATURITY	4.3 Years	3 Years	2-3 Years	3 Years	4-5 Years	7.3 Years

Target Allocations

	Angelo Gordon	Brookfield	CIM Group	Invesco Real Estate	PGIM	UBS
1st Mortgages		15-20%			70%	
Mezzanine & B-Piece		75%	100%	100%	30%	
Participating Mortgages						91%
Equity						9%
CMBS	100%	5-10%				

Investment vehicle information

	INVESTMENT VEHICLES	MINIMUM INVESTMENT	MANAGEMENT FEE	FEE SCHEDULE	INCENTIVE FEES	PREF. RETURN	CATCH UP	OTHER FEES
Angelo Gordon	Open-end fund	\$5 million	1.5%	All assets	20% subject to high water mark	n/a	No	
Brookfield	Open-end fund	n/a	1.0%	All assets	None	n/a	No	
CIM Group	Open-end fund	\$5 million	1.0%	All assets	15% subject to high water mark	6.25%	No	
Invesco Real Estate	Open-end fund	n/a	1.0% 0.9% 0.8%	\$0-50mm 50-100mm >100mm	None	n/a	No	0.75% origination fee paid to Invesco by borrowers 0.15% Founders Discount first 6 months.
PGIM	Open-end fund	n/a	0.95% 0.85% 0.75% 0.65%	\$0-50mm 50-100mm 100-150mm >150mm	None	n/a	No	Founders will receive a discount of 0.15% in perpetuity.
UBS	Open-end fund	\$1 million	0.97% 0.85% 0.815%	\$0-10mm 10-25mm 25-100mm	None	n/a	No	

II. Strategy detail

Strategy Overview - Angelo Gordon

INVESTMENT STRATEGY

- Targeting a 10-12% net return, with annual income of 4-6%, distributed semi-annually.
- Fund will purchase commercial real estate debt including legacy CMBS, CMBS 2.0, agency CMBS and single-asset, single borrower deals.
- They seek to take advantage of volatility and mispricings in the CRE debt market, leveraging their team's underwriting capabilities.
- They will underwrite substantially all loans in a loan pool, with priority given to the largest and riskiest loans. Loan analysis includes location, asset quality, rent rolls, borrower credit, leasing analysis and collateral valuation.
- Ability to hedge interest rates and credit risk
- Target leverage is 50%.

TEAM DESCRIPTION / EXPERIENCE

- Andrew Solomon joined Angelo Gordon in 2006 to establish the firm's commercial real estate debt business, which currently manages \$2.6 billion in real estate debt.
- There are six senior professionals within the real estate debt group with an average tenure of 6+ years.
- Able to leverage the firm's real estate equity platform and operating partner network for market and property specific information.

FUND LIQUIDITY

- Quarterly liquidity with 60 days notice. One year lock-up. Limited to 25% partial withdrawal quarterly, full withdrawal over four consecutive quarters.
- Eligible for semi-annual distributions of income.
- Contributions available monthly.

Strategy Overview - Brookfield

INVESTMENT STRATEGY

- Brookfield is targeting a \$1 billion open end fund to originate or acquire real estate mezzanine loans (75%), senior whole loans (15-20%) and a small amount of single borrower CMBS (~5%).
- Target returns of 6-7% net, the majority coming from current income.
- Mezzanine loans will typically be jointly originated with a senior lender providing a first mortgage. The mezzanine component will target 50-70% LTV.
- Targeting a maximum loan-to-value for the fund of 70%. Underlying assets will be diversified by property type and geography primarily within the U.S. Assets will be light value added, substantially leased, no construction loans expected.
- Loans will be floating rate, 5-year term with call protection from 18-24 months. Average maturity expected to be 3-years.
- Average loan size \$50 million.
- Targeting a first close in 3Q 2017. Final PPM available late March.

TEAM DESCRIPTION / EXPERIENCE

- Brookfield has 18 professionals located in New York that provide origination, underwriting, closing and reporting.
- The team is led by Managing Partners Andrea Balkan and Chris Reilly. Andrew has been with Brookfield since 2002 and has 30 years of financing & investing experience. Chris has been with Brookfield for five years and has 24 years of experience.
- Team has managed five prior closed end funds and one separate account totaling \$3.9 billion. The five closed end funds (BREF I-V) have had slightly higher return targets of 9-10% net, with higher loan-to-value limits (75-80%) and slightly more transitional assets.
- They have managed separate accounts with similar risk profile to the proposed fund.

FUND LIQUIDITY

- Quarterly with two year lock-up. Redemptions made on a pro rata basis, based on liquidity.
- Distributions made quarterly.

Strategy Overview - CIM Group

INVESTMENT STRATEGY

- CIM is raising their first open end debt fund. Historically, they have focused on equity transactions.
- CIM focuses on real estate and infrastructure investments within their “Qualified Communities.” These are thriving or transitional urban areas with high barriers to entry and improving demographics with proven public/regulatory support and proven institutional investment.
- The fund will seek to originate mezzanine loans, B-notes and senior loans ranging from \$15 million to \$150 million whole loan sizes, leveraging the relationships they have built on the equity side.
- Underlying assets will be a mix of construction projects and heavy transitional assets, pre-development and repositioning assets. Borrowers typically facing capital constraints from bank regulation, transaction size and/or complexity. CIM has internal operating and development experience in the case of default.
- Will be diversified by property type including apartment, retail, office, hotel, land (limited) and other (entertainment, parking, etc.)
- Maximum LTV of 75%
- Terms will typically be 1-3 years with (2) one-year extensions available.

TEAM DESCRIPTION / EXPERIENCE

- CIM has 615 total employees, including 16 principals and 330 investment professionals.
- CIM's 16 senior professionals average 23 years of experience and 14 years tenure with CIM. The same senior team will manage the debt strategy as their other funds.
- The firm is headquartered in Los Angeles, CA, with offices in San Francisco, CA, Washington DC, Dallas, TX and New York, NY.

FUND LIQUIDITY

- Annual with a two year lock-up. At the end of calendar year, each LP will take a percentage of each loan, then will be repaid as assets wind down. Average maturity on loans will be 2-3 years, maximum 5 years. No obligation to sell assets to meet redemption requests.
- Expect to call new capital in 2-3 quarters.

Strategy Overview - Invesco Real Estate

INVESTMENT STRATEGY

- Raising an open end fund, targeting origination of primarily mezzanine loans, with the ability to selectively include preferred equity, bridge loans, B-notes and participating loans.
- Asset types will be diversified by the four primary property types and selective hotels.
- Market selection will be driven by the firm's research driven "Qualified Markets".
- Focus on shorter term, floating rate loans.
- Focus on value added assets, no land or ground up development assets.
- Maximum LTV 80% at individual loan level, 75% at fund level.
- \$20-\$30 million average loan size.
- First close expect April 30, 2017. PPM still in draft form.

TEAM DESCRIPTION / EXPERIENCE

- 443 employees globally, managing \$71 billion in real estate assets.
- The North American team has 196 employees, managing asset across all investment sub-styles.
- Since 2013, Invesco has managed over \$500 million in mezzanine positions with \$2.9 billion in total financings, generating a 9.0% gross IRR.
- Invesco has long history with real estate debt strategies, including being selected as a PPIP manager during the financial crisis.

FUND LIQUIDITY

- Quarterly liquidity with 45 days notice.
- Distributions paid quarterly.

Strategy Overview - PGIM

INVESTMENT STRATEGY

- PGIM is starting a new open end fund focusing on a loan origination strategy with a mix of:
 - 20% senior loans, long duration, fixed rate loans on stable assets.
 - 60% senior loans, short to medium duration, floating rate on stable and transitional assets (core plus to value added). Fund level leverage used up to 60%.
 - 20% mezzanine debt, medium to long duration, fixed and floating rate on stable and transitional assets (core plus to value added).
 - Moderate leverage will be used to enhance yield. Leverage only applied to senior loans, to a maximum of 60%.
 - Targeting 7-8% gross returns (6.25%-7.25% net returns).
 - LTV limit 80% on individual assets, maximum 75% LTV at fund level.
 - Average size loans \$20 to \$40 million, diversified by property type.
 - 1st close expected in April 2017.

TEAM DESCRIPTION / EXPERIENCE

- Team of five senior investment professionals on the portfolio management team average 22+ years of experience.
- Team is led by Steve Bailey, who recently joined in 2015 from Heitman, has 30 years of investment experience.
- The PM team is supported by a debt origination team of 13 senior professionals and a support staff of 44 professionals. This team has generated approximately \$15 billion of loan originations per year for the firm's General Account, with a focus on core loans. The proposed fund will focus on core plus loans.

FUND LIQUIDITY

- Quarterly, based on available capital.
- Distributions available quarterly. 95% of total return expected in the form of income.

Strategy Overview - UBS

INVESTMENT STRATEGY

- The Trumbull Property Income Fund is an actively managed portfolio of income-oriented real estate investments having hybrid debt and equity characteristics.
- The fund targets real estate exposure with a lower risk profile, primarily through participating mortgages.
- This is an existing fund with a 35-year track record with a since inception return of 9.6% gross.
- Target return is CPI +5%.
- Currently the fund has \$2.9 billion in 52 investments.
- 91% of the fund is participating mortgages, 9% is in owned real estate.
- All are construction loans that convert to permanent loans.
- The fund receives a coupon payment, then 50% of property operating cash flow and 50% of property value at maturity.
- All sites fully entitled, developer takes the construction risks.
- Average loan maturity is 7.3 years
- Average loan-to-value is 69%.
- Focus on class A assets in major markets

TEAM DESCRIPTION / EXPERIENCE

- Gary Gowdy, Managing Director is the senior portfolio manager. He has been with the firm since 1972 and has 37 years of real estate experience.
- Christopher Clayton, Executive Director is also a portfolio manager. He has been with the firm for 30 years.
- The team leverages the broader real estate organization, which is comprised of 209 employees based in California, Connecticut and Texas.

FUND LIQUIDITY

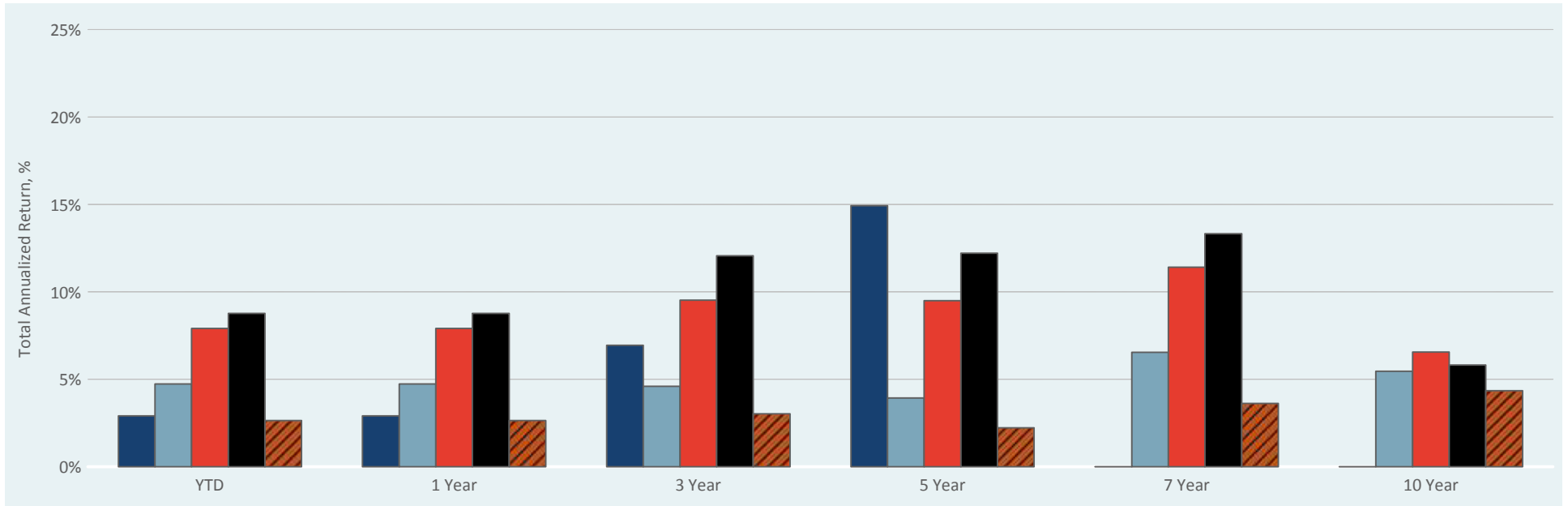
- Quarterly liquidity with 60 days notice.
- The fund will use 50% of available cash to pay any redemption requests, is not obligated to sell assets to pay redemption requests.

III. Performance

Performance comparison - as of December 2016

● Angelo Gordon ● PGIM ● UBS ● NCREIF ODCE ● BBgBarc US Agg Bond TR USD

PERFORMANCE TO DATE



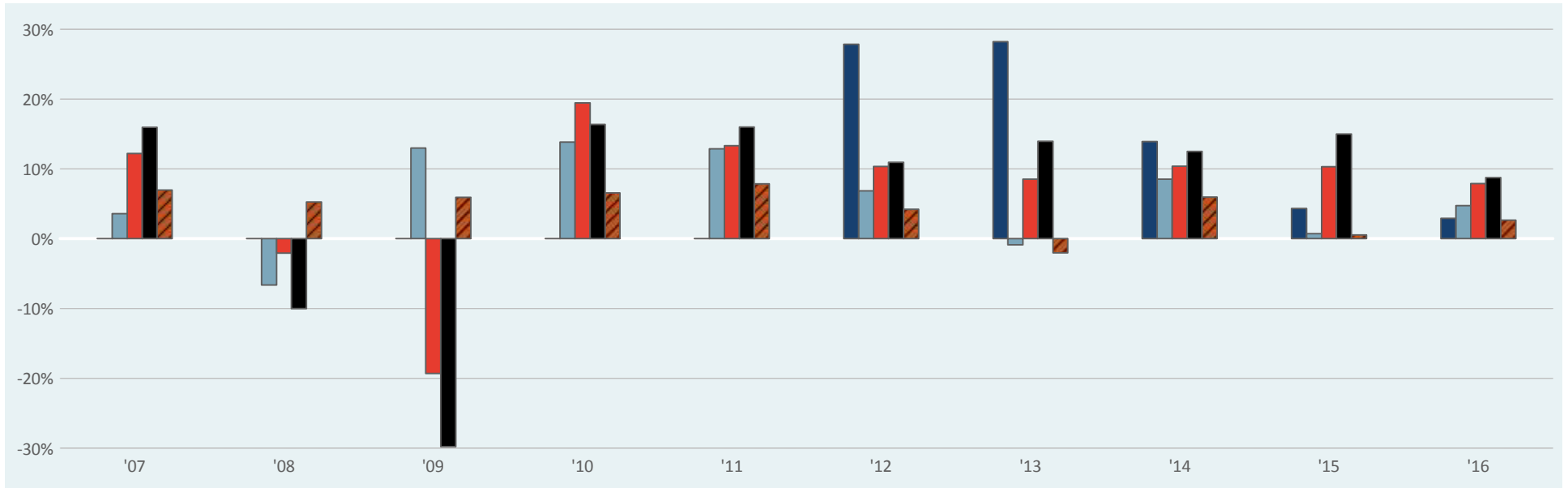
TOTAL ANNUALIZED RETURN TO DATE, %	YTD	1 Year	3 Years	5 Years	7 Years	10 Years
Angelo Gordon	2.9	2.9	6.9	14.9	---	---
PGIM	4.7	4.7	4.6	3.9	6.5	5.5
UBS	7.9	7.9	9.5	9.5	11.4	6.6
NCREIF ODCE	8.8	8.8	12.1	12.2	13.3	5.8
BBgBarc US Agg Bond TR USD	2.6	2.6	3.0	2.2	3.6	4.3

Performance shown for PGIM is their US Senior Mortgage Fund, which is slightly more conservative than the proposed fund. Loans included are core vs. core plus assets and have a slightly more conservative LTV.

Calendar year performance

● Angelo Gordon ● PGIM ● UBS + NCREIF ODCE + BBgBarc US Agg Bond TR USD

ANNUAL PERFORMANCE



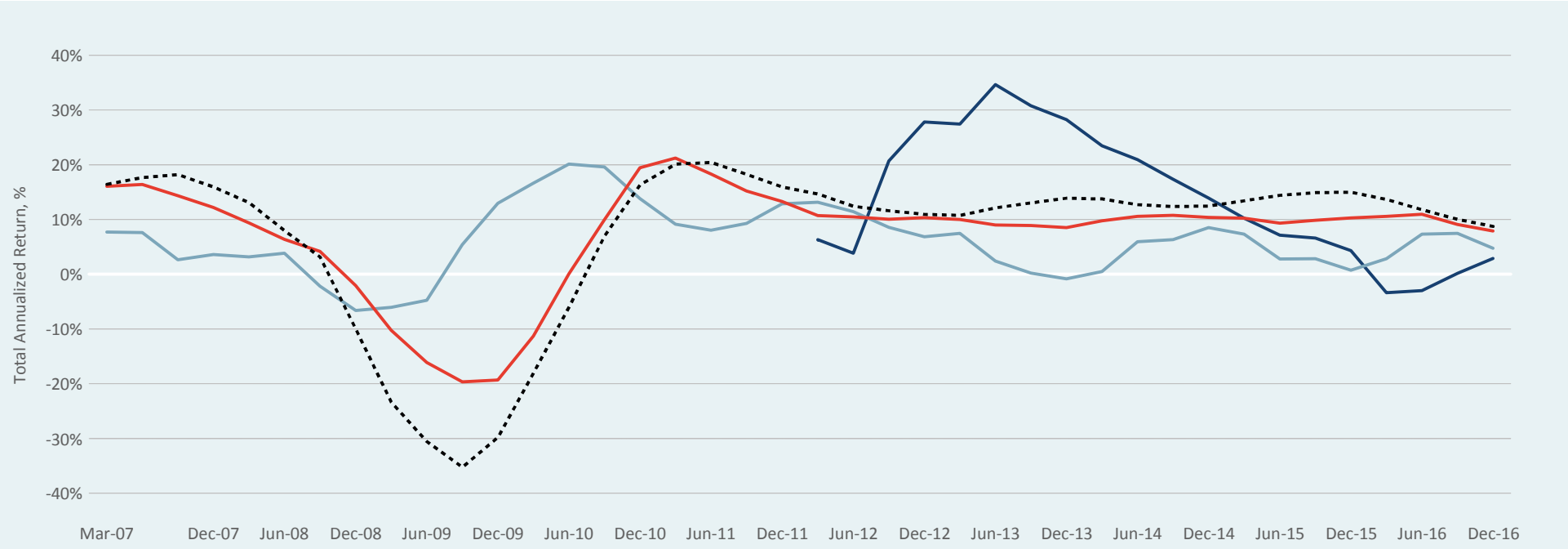
ANNUAL PERFORMANCE	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Angelo Gordon						27.8	28.2	13.9	4.3	2.9
PGIM	3.6	-6.6	13.0	13.8	12.9	6.9	-0.9	8.5	0.7	4.7
UBS	12.2	-2.1	-19.3	19.5	13.3	10.4	8.5	10.4	10.3	7.9
NCREIF ODCE	16.0	-10.0	-29.8	16.4	16.0	10.9	13.9	12.5	15.0	8.8
BBgBarc US Agg Bond TR USD	7.0	5.2	5.9	6.5	7.8	4.2	-2.0	6.0	0.6	2.6

Performance shown for PGIM is their US Senior Mortgage Fund, which is slightly more conservative than the proposed fund. Loans included are core vs. core plus assets and have a slightly more conservative LTV.

Rolling performance

● Angelo Gordon ● PGIM ● UBS + NCREIF ODCE

12 MONTH ROLLING PERFORMANCE

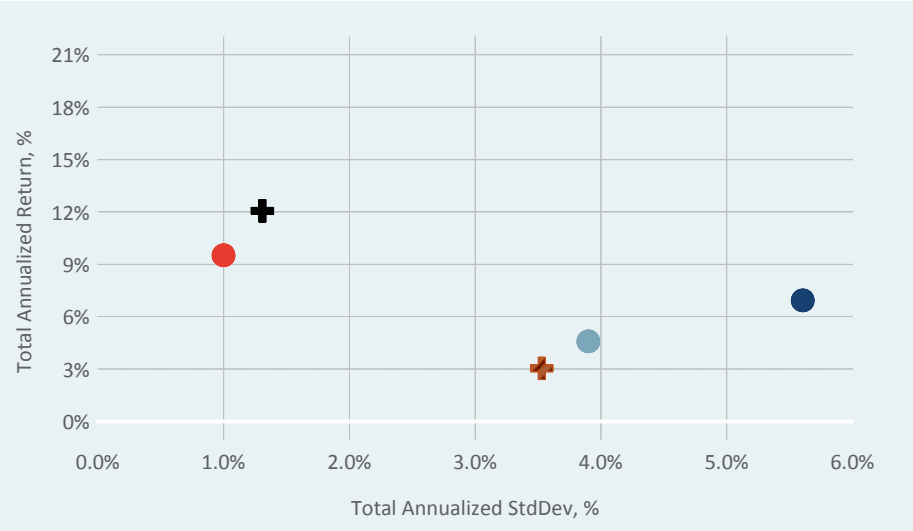


Performance shown for PGIM is their US Senior Mortgage Fund, which is slightly more conservative than the proposed fund. Loans included are core vs. core plus assets and have a slightly more conservative LTV.

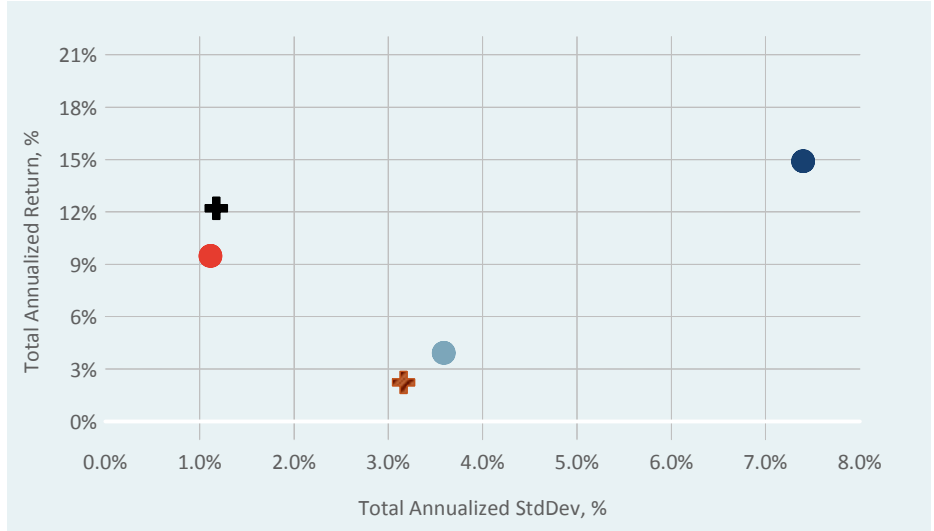
Risk vs. return

● Angelo Gordon ● PGIM ● UBS ● NCREIF ODCE ● BBgBarc US Agg Bond TR USD

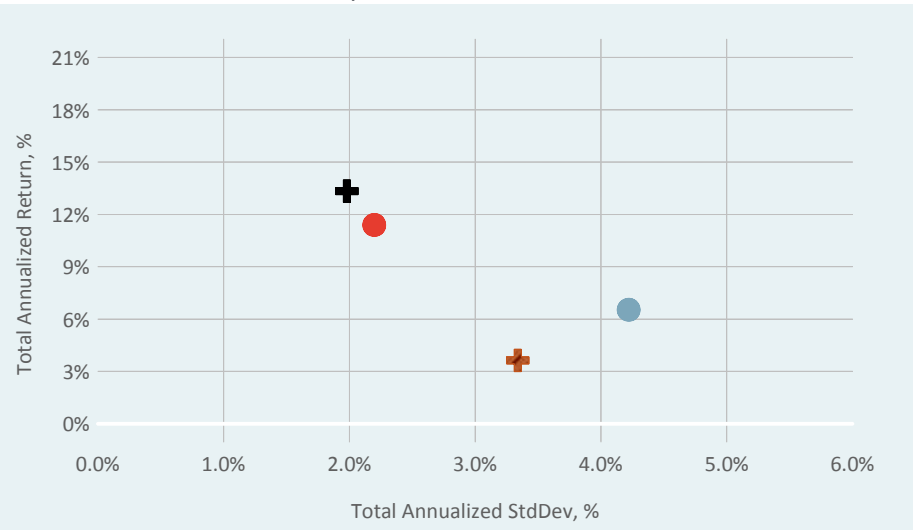
TOTAL PERFORMANCE VS. RISK, JAN-14 TO DEC-16



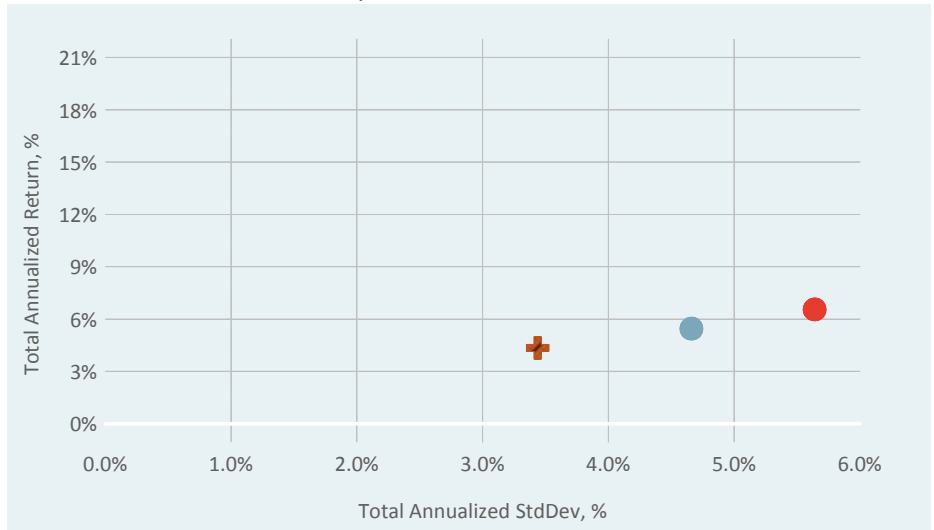
TOTAL PERFORMANCE VS. RISK, JAN-12 TO DEC-16



TOTAL PERFORMANCE VS. RISK, JAN-10 TO DEC-16



TOTAL PERFORMANCE VS. RISK, JAN-07 TO DEC-16



Performance shown for PGIM is their US Senior Mortgage Fund, which is slightly more conservative than the proposed fund. Loans included are core vs. core plus assets and have a slightly more conservative LTV.

IV. Disclosures

Notices & Disclosures

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SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 28, 2017

Agenda Item 7.1

TO: Board of Retirement
FROM: Scott Hood, Chief Executive Officer 
SUBJECT: Report on April 2016-17 Board-Staff Retreat Planning

Staff Recommendation

Provide direction to staff regarding the topics and schedule for the April 25 and 26, 2017, Board-Staff Retreat.

Background

This item is to give trustees one final opportunity to discuss retreat topics and the schedule. The annual Board retreat is scheduled for April 25 and 26, 2017. The Board assists on setting the topics to be addressed at the retreat and provides input regarding the proposed presenters. Following this meeting, staff and consultant will continue to finalize preparations for the retreat.

Discussion

Attached is a draft agenda that includes topics from input from the Board and topics that staff recommends. Staff believes this is a well-balanced list of topics that fits in with the amount of time planned for the retreat. If you have additional topics to suggest, please mention them during this agenda item.

The 2017 SamCERA Board-Staff Retreat is scheduled along the same lines as the 2016 retreat:

Days: Two consecutive days
Timing: Leaves time in between speakers for discussion
Location: In the SamCERA Boardroom on Tuesday and Wednesday
Speakers: Draw speakers from outside professionals as well as SamCERA's consultants and staff
Regular Business: Conduct the Board's regular monthly business during the afternoon on Tuesday of the retreat
Dates: **Tuesday, April 25, and Wednesday, April 26.**

Attachment

Draft 2017 Board-Staff Retreat Agenda

Agenda & Presenters

Board / Staff Retreat

April 25 & 26, 2017



San Mateo County Employees'
Retirement Association

BOARD / STAFF RETREAT AGENDA
Day One—Tuesday, April 25, 2017

<u>TIME</u>	<u>TOPIC AND PRESENTER</u>
9:00 a.m.	Welcome Presenter: Scott Hood, SamCERA Chief Executive Officer
9:05 a.m.	High Level Look at the Global Economy Presenter: Ian Toner, Managing Director, Verus Investments
10:05 a.m.	Open Discussion
10:30 a.m.	Team Building Exercise Lead by: Gladys Smith, SamCERA Assistant Executive Officer
10:45 a.m.	Deep Dive Led by Mike Coultrip. Assess longer-term drivers of fund returns and risks. Investigate longer-term manager performance and other characteristics vs indexes and peer groups. Review Risk Dashboard. Presenters: Michael Coultrip, SamCERA Chief Investment Officer and Margaret Jadallah, Verus
12:00 p.m.	Lunch
12:45 p.m.	Actuarial Topic of Interest: Assumed Rate of Return, Assumptions Presenters: Nick Collier, Milliman
1:45 p.m.	Open Discussion
2:15 p.m.	Break
2:30 p.m.	Beginning of Regular Board Meeting Agenda

BOARD / STAFF RETREAT AGENDA
Day Two—Wednesday, April 26, 2017


<u>TIME</u>	<u>TOPIC AND PRESENTER</u>
9:00 a.m.	Risk Parity Discussion of the role of Risk Parity in a Portfolio. Presenters: Brian Hurst, Principal, AQR
10:15 a.m.	Open Discussion
10:30 a.m.	Mandated Ethics Training Presenter: Brenda Carlson, SamCERA Chief Legal Counsel
11:30 a.m.	Lunch Location: Patio
12:15 p.m.	Walk (Bring your walking shoes) Lead by: Doris and Lili
1:00 p.m.	Trends of the Fund: Liabilities, Membership and Cash Flow Presenter: Scott Hood, SamCERA Chief Executive Officer
1:45 p.m.	Open Discussion
2:15 p.m.	Break
2:30 p.m.	Medical Education - Trends Presenter: Dr Henry Brodtkin
3:00 p.m.	Overview of V3 Member Self Service Presenter: Elizabeth LeNguyen and Colin Bishop
3:30 p.m.	Open Discussion
4:00 p.m.	End of Retreat

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 28, 2017

Agenda Item 7.2

TO: Board of Retirement

FROM: Tariq Ali, Chief Technology Officer 

SUBJECT: Report on Progress of SamCERA's IT Projects

Discussion

The Project Manager for the PASS implementation Will Morrow will deliver an update on the Pension Administration Software System implementation project.

PASS Implementation

- Status
 - Line of Business (LOB) launched December 29, 2017
 - Member Self-Service staggered launch (active and retired members) February 2017
 - Mobile application scheduled to launch early April
- Budget
 - Completed on budget - no variance with approved budget
 - Vitech has invoiced \$6,650,005 (82%) of the \$8,097,560 project budget
 - Five contract amendments approved totaling \$699,688 (9.2% of original contract)
- Implementation Summary
 - 123 open issues (71 were open at go-live)
 - Service packs issued monthly
- Implementation Activities
 - Disaster recovery test pending network reliability issue
 - Mobile app testing and rollout scheduled for April
 - COLA testing
 - Workflow optimization
 - Lessons learned
- Other
 - LRWL has started phasing out consulting services
 - Project office on second floor will be vacated March 31
- Mosquito and Vector Control District is now reporting using Web Employer Self-Service



SamCERA PASS Project Update

March 28, 2017

PASS Implementation Status

- Line of Business (LOB) launched December 29, 2017 as set forth in the contract
- Member Self-Service was launched in a staggered basis during February
- Mobile application scheduled to launch early April
- Vitech is providing monthly service packs to address highest priority issues
- Almost all of the issues opened prior to go-live will be resolved by the end of March
- Warranty period ends June 30, 2017
- Mosquito and Vector Control District has been transitioned to Web Employer Self-Service

Budget Summary

Item	Contract	Invoiced	Remaining
Phase 1	\$590,372	\$590,372	\$0
Phase 2	\$3,585,208	\$3,500,208	\$85,000
Phase 3	\$1,557,585	\$1,330,335	\$227,250
Holdback	\$477,023	\$238,511	\$238,512
Options	\$640,500	\$233,756	\$406,744
Hardware	\$183,158	\$178,244	\$4,914
Software	\$636,589	\$541,292	\$95,296
Other	\$427,126	\$37,287	\$389,839
TOTAL	\$8,097,560	\$6,650,005	\$1,447,555

82% of contract value has been invoiced

Remaining Activities

- COLA
- Disaster recovery test
- Launch mobile app
- Workflow optimization
- Develop lessons learned report
- Vacate project office on second floor

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 28, 2017

Agenda Item 7.3

TO: Board of Retirement



FROM: Scott Hood, Chief Executive Officer

SUBJECT: Approval of SACRS Voting Delegate and Alternates for the SACRS Spring 2017 Business Meeting

Staff Recommendation

Staff recommends the Board designate David Spinello as the Voting Delegate, Ben Bowler as the First Delegate Alternate and Scott Hood, CEO, as the Second Delegate Alternate to cast SamCERA's votes at the SACRS Spring 2017 Conference.

Background

Prior to each SACRS conference the retirement boards are asked to select the individuals from each county system who are authorized to serve as voting delegate and alternate voting delegates at the conference business meeting.

Discussion

SamCERA normally selects the highest-ranking board officer who will attend the conference as the voting delegate. Delegates can be either trustees or staff. We typically recommend the CEO be the final alternate.

At the April meeting, the Board will have the opportunity to discuss the recommended slates of candidates running for the SACRS offices and the business meeting topics.

The business meeting will occur on the last morning of the conference, at 10:00 a.m., Friday, May 19, 2017.