



Notice of Public Meeting

The Board of Retirement of the San Mateo County Employees' Retirement Association will meet on **Tuesday, March 22, 2016, 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**
- 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 23, 2016
- 4. Approval of the Consent Agenda***

4.1 Disability Retirements	4.5 Member Account Refunds
• JoAnn Demattei	4.6 Member Account Rollovers
• Arlette Hess	4.7 Approval of 2015 Actuarial Valuation Addendum and
4.2 Service Retirements	Resolution Accepting Contribution Rates to
4.3 Continuances	Recommend to the Board of Supervisors for the
4.4 Deferred Retirements	2016-2017 Fiscal Year
- 5. Benefit & Actuarial Services**
 - 5.1 Consideration of Agenda Items, if any, Removed from the Consent Agenda
 - 5.2 Approval of Resolutions Defining (1) Compensation Earnable pursuant to Government Code §31461 and (2) Pensionable Compensation pursuant to Government Code §7522.34.
- 6. Investment Services**
 - 6.1 Preliminary Monthly Portfolio Performance Report for the Period Ended February 29, 2016
 - 6.2 Report on the Global Custodian (Northern Trust) Annual Review
 - 6.3 Report on Cash Overlay (Parametric Minneapolis) Annual Review
 - 6.4 Report on Proxy Voting Summary for Quarter Ended December 31, 2015
 - 6.5 Update on U.S. Core Small-Capitalization Equity Manager Search
 - 6.6 Approval to Establish a Dedicated Inflation Protection Pool
 - 6.7 Discussion of Proposed Alternative Investments (*to be heard in Closed Session, Confidential Under Gov. Code §54956.81 and §6254.26, see item C2*)
- 7. Board & Management Support**
 - 7.1 Approval of Resolution Authorizing the Chief Executive Officer to Execute a Third Amendment to the Agreement with Brown Armstrong Accountancy Corporation for Audit Services
 - 7.2 Report on Status of April 26 and 27, 2016 Board-Staff Retreat Planning
 - 7.3 Report on Progress of SamCERA's Information Technology Projects
- 8. Management Reports**
 - 8.1 Chief Executive Officer's Report
 - 8.2 Assistant Executive Officers' Reports
 - 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 Discussion of Proposed Alternative Investments *(to be heard in Closed Session, Confidential Under Gov. Code §54956.81 and §6254.26, see item 6.7)*

9. Report on Actions Taken in Closed Session

10. Adjournment in Memory of the Following Deceased Members:

Williams, Deartis	January 20, 2016	Crystal Springs Rehab Center
De Angelis, Gennaro	February 8, 2016	Parks and Recreation
Schultz, Dolores	February 15, 2016	County Clerk
Woodworth, Virginia	February 15, 2016	County Clerk
Carr-Glass, Iola	February 19, 2016	Mental Health
Molina, Dora	February 19, 2016	Hospital
Ferree, David	February 21, 2016	Sheriff's
Nicholson, Carolee	February 23, 2016	Public Health
Handley, Chantal	February 25, 2016	Public Health
Misculin, Guido	February 26, 2016	Public Works
Bodey, Charles	February 29, 2016	Public Works



Scott Hood, Chief Executive Officer

Posted: March 16, 2016

(* 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
FEBRUARY 23, 2016 – REGULAR BOARD MEETING MINUTES

1602.1 **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: Mark Battey, Paul Hackleman, Natalie Kwan Lloyd (arrived at 10:10 a.m.), Michal Settles, David Spinello, Eric Tashman (arrived at 10:34 a.m.) and Shirley Tourel.

Excused: Sandie Arnott, Ben Bowler.

Alternates present: Susan Lee, Alma Salas.

Staff: Scott Hood, Michael Coultrip, Brenda Carlson, Gladys Smith, Tat-Ling Chow, Lilibeth Dames, Doris Ng and Kristina Perez.

Consultants: Margaret Jadallah and Faraz Shooshani (*Verus*).

Ms. Lee was seated at the dais, and served as the alternate for Ms. Kwan Lloyd until 10:10 a.m.

1602.2.1 **Oral Communications from the Board:** Ms. Settles updated the Board on her activity with the SACRS ad-hoc committee related to the UCLA education program.

1602.2.2 **Oral Communications from the Public:** None.

1602.3.1 **Approval of Regular Board Meeting Minutes from January 26, 2016:** Mr. Hackleman asked if there were any changes or corrections to the Regular Board Meeting minutes from January 26, 2016, and none were noted.

Action: Mr. Spinello moved to approve the minutes from the Regular Meeting of January 26, 2016, and the motion was seconded by Ms. Settles. The motion carried with a vote of 6-0; with trustees Battey, Hackleman, Lee (for Kwan Lloyd), Settles, Spinello and Tourel all in favor; none opposed.

1602.4.0 **Approval of the Consent Agenda:** Mr. Hackleman asked if there were any items to be removed from the Consent Agenda, and no items were requested to be removed.

Action: Mr. Spinello moved to approve the Consent Agenda, and the motion was seconded by Mr. Battey. The motion carried with a vote of 6-0; with trustees Battey, Hackleman, Lee (for Kwan Lloyd), Settles, Spinello and Tourel all in favor; none opposed.

1602.4.1 **Disability Retirements:** None.

1602.4.2 **Service Retirements:**

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

Member Name	Effective Retirement Date	Department
Ahanotu, Angus	January 1, 2016	Planning & Building
Baker, James	December 18, 2015	Deferred from Sheriff's
Bonifacio, William	December 31, 2015	Sheriff's
Burrell, Barbara	December 31, 2015	Deferred from Medical Center
Carpio, Jocelyn	December 17, 2015	Deferred from Medical Center
Ferrer, Irene	December 2, 2015	Probation
Gonzales, Lida	December 19, 2015	Public Works
Hill, Matthew	December 19, 2015	Public Works
Lesesne, David	December 30, 2015	Sheriff's
Merson, Thomas	December 5, 2015	Deferred from Sheriff's
Novak, Lisa	December 9, 2015	Deferred from District Attorney
Rose, Benjamin	December 28, 2015	Deferred from Sheriff's
Sankolewicz, Patricia	January 1, 2016	Library
Semenenko, Nina	December 26, 2015	Deferred from Medical Center

Shanks, Marie
Woloshin, Diane

December 22, 2015
December 1, 2015

Deferred from Aging and Adult Svcs
Deferred from HAS

1602.4.3 **Continuances:**

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

Survivor's Name	Beneficiary of:
Fagetti, Margaret	Fagetti, Richard
Henry, Douglas O'Brien	Henry, Margaret

1602.4.4 **Deferred Retirements:**

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

Member Name	Retirement Plan Type
Alarcon, Cecilia	G4, Vested - Reciprocity
Askew, Anthony	G4, Vested
Bunton, Porsche C.	G7, Non-Vested - Reciprocity
Clayton, Ana M.	G4, Vested
Dague, Stacey	P4, Vested
Foster, Carole A.	G4, Vested - Reciprocity
Figueroa-Zepeda, Bertha	G4, Vested
Henderson, Jasmine T.	G4, Vested
Kaiser, Amy S.	G4, Vested
Kuryllo, Jamie L.	G7, Non-Vested - Reciprocity
Miyashiro, Rand A.	G4, Vested - Reciprocity
Morrison, Sonya M.	G4, Non-Vested - Reciprocity
Osorio, Emilio	G4, Vested - Reciprocity
Peters, Gregory K.	G7, Non-Vested - Reciprocity
Slede, Lisa B.	G4, Vested
Snook, Kelly A.	G7, Non-Vested - Reciprocity
West, Gary J.	G7, Non - Vested - Reciprocity
Wood, Tracy A.	G4, Vested

1602.4.5 **Member Account Refunds:**

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

Member Name	Retirement Plan Type
Brady, Sonya	G4, Non-vested
Esteves, Maria	G2, Vested
Fisher, Marilyn	G7, Non-vested
Francis, Albert	G4, Vested
Gao, Jianmei	G7, Non-vested
Ismail, Abdul	G7, Non-vested
Macasa, Karen	G4, Vested
Martinez, Jason	G7, Non-vested
Nunez Taleno, Maria	G7, Non-vested
Roccuzzo, Matthew	G4, Non-vested
Small, Elesia	G7, Non-vested
Stefaniuk, Sharon	G4, Non-vested

1602.4.6 **Member Account Rollovers:**

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

Member Name	Retirement Plan Type
Carneiro, Charlotte	G5, Non-vested
Chang, Tina	G7, Non-vested

1602.4.7 **Acceptance of Semi-Annual Compliance Certification Statements for Period Ended December 31, 2015:** The Board accepted the semi-annual compliance certification statements received for SamCERA's non-alternative investment managers, as of December 31, 2015, that were not available for the packet in time for the January meeting.

1602.4.8 **Approval of SamCERA's Existing Mission and Goals:** The Board approved SamCERA's existing mission and goals statements, without any changes.

1602.5.1 **Consideration of Agenda Items, if any, Removed from the Consent Agenda:** None.

1602.6.1 **Preliminary Monthly Portfolio Performance Report for the Period Ending January 31, 2016:** Mr. Coultrip discussed the preliminary monthly performance report with the Board. He reported that SamCERA's net preliminary return for January was -2.8%, while the preliminary trailing twelve-month return ending January 2016 was -2.1% net. This item was informational and for discussion only, no action was taken.

Ms. Kwan Lloyd arrived and took her seat at the dais at 10:10 a.m. and Ms. Lee returned to her seat in the audience.

1602.6.2 **Quarterly Investment Performance Report for the Period Ended December 31, 2015:** Ms. Jadallah reviewed the quarterly performance report with the Board and reported that the 4th quarter net total return for the SamCERA portfolio was 2.7%. This item was informational and for discussion only, no action was taken.

Mr. Tashman arrived at 10:34 a.m., and was seated during item 6.2.

1602.6.3 **Report on Proposed Domestic Equity Manager Structures:** Mr. Coultrip discussed a change to the domestic equity structure, and proposed creating a short list of small-cap core products for future consideration of the Board. This item was for discussion only and no action was taken.

1602.6.4 **Consideration of Approval to Sell Alternative Investment (to be heard in Closed Session, Confidential Under Gov. Code §54956.81 and §6254.26, see item C2):** The Board adjourned into closed session at 11:00 a.m. to discuss item 6.4, and the meeting was reconvened at 11:47 a.m. Ms. Carlson reported that no reportable action on item 6.4 was taken by the Board in the closed session.

The Board meeting was adjourned for a lunch break at 11:48 a.m., and was reconvened at 12:22 p.m. Item 7.2 was heard out of order, followed by the remainder of the agenda.

- 1602.7.2 **Approval of SamCERA Staffing Change to Add a Retirement Accountant Position and Delete Retirement Accounting Technician Position:** Mr. Hood and Ms. Smith presented the staff report. They explained the need for the proposed changes in staffing within the Finance Division, in order to provide more coverage and support within the division.
Action: Mr. Spinello moved to authorize staff to work with the County Human Resources Department to delete the current Retirement Accounting Technician position and to establish and fill one Retirement Accountant position at SamCERA. The motion was seconded by Ms. Settles and carried with a vote of 7-0; with trustees Battey, Hackleman, Kwan Lloyd, Settles, Spinello, Tashman and Tourel all in favor; none opposed.
- 1602.7.1 **Acceptance of Preliminary Financial Report for the Period Ended December 31, 2015:** Ms. Chow presented the financial report to the Board and answered questions. This item was informational and for discussion only, no action was taken.
- 1602.7.3 **Consideration of Trustee Request for Additional Educational Activity:** Mr. Hood explained that Board approval is needed for trustees wishing to attend conferences by providers not included in SamCERA's Education Policy. Ms. Settles' request is such a request.
Action: Mr. Battey moved to approve Trustee Michal Settles' request to attend the 2016 Sky Bridge Alternatives Conference (SALT) in Las Vegas. The motion was seconded by Mr. Spinello and carried with a vote of 7-0; with trustees Battey, Hackleman, Kwan Lloyd, Settles, Spinello, Tashman and Tourel all in favor; none opposed.
- 1602.7.4 **Report on April 26 and 27, 2016 Board-Staff Retreat Planning:** Mr. Hood reviewed the proposed schedule for the 2016 Board- Staff Retreat with the Board. Discussion followed and input was given to Mr. Hood regarding speakers, topics, and schedule.
- 1602.8.1 **Chief Executive Officer's Report:** Mr. Hood updated the Board on construction at 100 Marine Parkway. He noted that a preview of the Employee Engagement survey report was included in the "Day of Meeting" folder, and the whole survey report could be found in DropBox. He also reported on SamCERA's staff retreat that was held on February 10th, and updated the Board on items that would be on the agenda next month.
- 1602.8.2 **Assistant Executive Officer's Report:** Ms. Smith reported that staff was preparing the Spring Newsletter. She stated the renewal for fiduciary insurance was coming up and payment from trustees for non-recourse insurance would be due in May, with more details forthcoming. Ms. Smith noted that the calendar for the upcoming trustee elections was in the "Day of Meeting" folder. Ms. Perez spoke to the Board about upcoming conferences.
- 1602.8.3 **Chief Investment Officer's Report:** Mr. Coultrip reported that the due diligence questionnaires given to the short-listed candidates for the direct lending opportunity are due February 26. He let the Board know about upcoming items expected on the March agenda.
- 1602.8.4 **Chief Legal Counsel's Report:** Ms. Carlson had no report.

CLOSED SESSION

- C1 **Consideration of Disability Items, if any, Removed from the Consent Agenda:** None.
- C2 **Consideration of Approval to Sell Alternative Investment (to be heard in Closed Session, Confidential Under Gov. Code §54956.81 and §6254.26):** (Confidential Under Gov. Code §54956.81 and §6254.2) – No reportable action was taken, see item 6.4.

1602.9 **Report on Actions Taken in Closed Session:** See item 6.4.

1602.10 **Adjournment:** Mr. Hackleman adjourned the meeting at 12:51 p.m. in memory of the deceased members listed below.

Stamper, William	November 23, 2015	Chope Hospital
Manning, Delores	January 6, 2016	Medical Center
Askew, Clarice	January 8, 2016	Public Works
Vickers, David	January 9, 2016	General Services
Browning, James	January 12, 2016	Superior Court
Sims, Lorraine	January 15, 2016	Chope Hospital
Ramezane, Phyllis	January 16, 2016	Public Health
Anderson, Larz	January 17, 2016	Planning
Harris, Huey	January 25, 2016	Chope Hospital
Dickinson, Dora	February 1, 2016	Clerk-Recorder
Fristrup, Carroll	February 2, 2016	Building Inspection
O'Rourke, Thomas	February 2, 2016	Sheriff's
Roach, Arnold	February 4, 2016	Agriculture
Springer, Gerda	February 4, 2016	Mental Health

Scott Hood
Chief Executive Officer

Kristina Perez
Retirement Executive Secretary

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 22, 2016

Agenda Items 4.1- 4.6

TO: Board of Retirement

FROM: Elizabeth LeNguyen, Retirement Benefits Manager



SUBJECT: Approval of Consent Agenda Items 4.1 – 4.6

4.1 Disability Retirements

- a) The Board find that **Arlette Hess** is (1) permanently incapacitated from the performance of her usual and customary duties as an Information Technology Analyst, (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.

- b) The Board find that **JoAnn Demattei** is (1) not permanently incapacitated for the performance of her usual and customary duties as a Legal Office Specialist and (2) deny her application for a service-connected disability retirement.

4.2 Service Retirements

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

Member Name	Effective Retirement Date	Department
Baca-Jenkins, Betty	January 11, 2016	Courts
Balestin, Gary	January 30, 2016	Behavioral Health
Bonar, Michael	January 12, 2016	Deferred from Child Welfare
Cabotaje, Rosenda	January 26, 2016	Deferred from Medical Center
Carlson, Gregory	January 9, 2016	Behavioral Health
Galang, Anita	January 11, 2016	Courts
Gettle, Amy	December 31, 2015	Deferred from Library
Helms, Gordon	January 2, 2016	Information Services Department
Holmlund, Christine	January 26, 2016	Deferred from Assessor
Houston, Ruby	January 30, 2016	Probation
Johnson, Ann	January 29, 2016	Human Services Agency
Moresco, Gail	January 16, 2016	Courts
Murphy, Ann-Marie	January 23, 2016	Behavioral Health
Nassarre, Rebecca	January 13, 2016	Human Services Agency

Nath, Nalini	January 21, 2016	Human Services Agency
Smith, Elizabeth	January 30, 2016	Deferred from District Attorney
Vidal-Noriega, Betty	January 16, 2015	Medical Center
Whitmer, Irene	January 16, 2016	Sheriff's
Wilson, Anna	January 11, 2016	Medical Center
Wright, Cherlene	January 25, 2016	Probation
Yan, Jimmy	February 1, 2016	Public Health/Family Health

4.3 Continuances

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

Survivor's Name	Beneficiary of:
Ayon, Celia	Ayon, Alexander
Collins, Portia	Jackson, Beatrice
Jackson, Teri	Jackson, Beatrice
O'Brien, Victoria	Verber, Steven
Reid, Constance	Reid, Michael
Stamper, Dorothy	Stamper, William
Valera-Gomez, Bernardita	Gomez, Oscar

4.4 Deferred Retirements

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

Member Name	Retirement Plan Type
Bilodeau, Michelle N.	G4, Vested - Reciprocity
Bradshaw, Charlotte L.	G2 & 3, Vested
Cardenas, Edith	G4, Vested
Cavazos, Angie	G4, Vested - Reciprocity
Fantozzi, Peter J.	G4, Vested
O'Keefe, Carmen	G4, Vested
Pawlowsky, Eric	G4, Vested - Reciprocity
Swillinger, Timothy R.	G4, Non-Vested - Reciprocity

Thachet, Lisu M.	G7, Non-Vested - Reciprocity
Velazquez, Tania A.	G4, Vested
Wade, Felix A.	G7, Non-Vested - Reciprocity
Wong, Mamie	G7, Non-Vested - Reciprocity

4.5 Member Account Refunds

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

Member Name	Retirement Plan Type
Anthony, Reymundo	G4, Non-vested
Cheung, May	G7, Non-vested
De Leon, Victoria	G7, Non-vested
Debord, Barbara	G4, Non-vested
Sedreddin, Babak	G7, Non-vested
Stevenson, Monique	G7, Non-vested

4.6 Member Account Rollovers

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

Member Name	Retirement Plan Type
Yoo, Steven	G7, Non-vested

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 22, 2016

Agenda Item 4.7

TO: Board of Retirement

FROM: Gladys Smith, Assistant Executive Officer



SUBJECT: Approval of 2015 Actuarial Valuation Addendum and Resolution Accepting Contribution Rates to be Recommended to the Board of Supervisors for the 2016-2017 Fiscal Year

Recommendation

Approve the June 30, 2015 Actuarial Valuation Addendum dated March 13, 2016, and approve the Resolution Accepting Contribution Rates to be Recommended to the County of San Mateo Board of Supervisors for the fiscal year 2016-17.

Background

At the September 29, 2015 meeting, the Board accepted the 2015 Actuarial Valuation and approved the 2016-2017 employer and employee contribution rates. Subsequently, the Superior Court members covered under AFSCME and SEIU agreed to pay 50% of the retirement Cost of Living Adjustment (COLA) cost for General Plans 1, 2 and 4. Additionally, the attached addendum includes rates that would be applicable should certain Probation and Detention members in plans P1, P2 and P4 agree to pay 50% of the cost of the COLA.

Discussion

The shifting of a portion of the COLA cost will not change the total amount of contributions expected to be paid to SamCERA for the fiscal year 2016-17. It only changes the contribution amounts between two employers and some of their members, as negotiated. The average employer Statutory Contribution Rate will remain at 32.35%. The attached addendum to the valuation from Milliman reflects the adjusted employer and employee rates for any negotiated shifting of a portion of the COLA costs from the employer to its employees.

Attachment

Milliman, Inc.'s June 30, 2015 Actuarial Valuation Addendum – Revised Employer Contribution Rates

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

Board of Retirement

RESOLUTION 15-16-___

***RESOLUTION ACCEPTING CONTRIBUTION RATES TO RECOMMEND
TO THE BOARD OF SUPERVISORS FOR THE 2016-2017 FISCAL YEAR.***

WHEREAS, Government Code §31453 mandates the periodic actuarial valuation of the Retirement Fund and requires that the Board...*"shall, at least 45 days prior to the beginning of the succeeding fiscal year, recommend to the Board of Supervisors such changes in the rates of interest, in the rates of contributions of members, and in the county and district appropriations as are necessary..."* and

WHEREAS, the Board has received and accepted the June 30, 2015, valuation report from its actuarial firm, Milliman, Inc., and

WHEREAS, the Board has received and accepted the February 12, 2016 Actuarial Valuation Addendum from its actuarial firm, Milliman, Inc., and

WHEREAS, the Chief Executive Officer has recommended, in agreement with Milliman, Inc., the contribution rates necessary to assure the actuarial soundness of the Retirement Fund,
Therefore, be it

RESOLVED that the Board hereby accepts the employer and member contribution rates as recommended by Milliman, Inc. in its June 30, 2015, Actuarial Valuation of the San Mateo County Employees' Retirement Association and its February 12, 2016 Actuarial Valuation Addendum effective for the fiscal year 2016-2017.

Be it further

RESOLVED that the Board recommends that the Board of Supervisors adopt the recommended **employer contribution rates** for the County of San Mateo, the San Mateo Superior Court and the San Mateo County Mosquito & Vector Control District in accordance with the schedules provided by Milliman, Inc. in its June 30, 2015, Actuarial Valuation and its February 12, 2016 Actuarial Valuation Addendum, effective the first pay period in fiscal year 2016-2017.

Be it further

RESOLVED that the Board of Retirement hereby recommends that the Board of Supervisors adopt the recommended **member contribution rates** for SamCERA active members of the County of San Mateo, the San Mateo County Superior Court and the San Mateo County Mosquito & Vector Control District in accordance with the schedules provided by Milliman, Inc. in its June 30, 2015, Actuarial Valuation, and its February 12, 2016 Actuarial Valuation Addendum, effective effective the first pay period in fiscal year 2016-2017.

Be it further

RESOLVED that the Chief Executive Officer is hereby authorized to transmit these rates and recommendations to the Board of Supervisors and to take all actions necessary to provide for their implementation effective effective the first pay period in fiscal year 2016-2017.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

PASSED AND ADOPTED by the Board of Retirement on March 22, 2016.

Paul Hackleman, Chair, Board of Retirement

I, Natalie Kwan Lloyd, Secretary of the Board of Retirement, of the San Mateo County Employees' Retirement Association, DO HEREBY CERTIFY that the foregoing resolution was duly introduced, approved and adopted by the Board of Retirement at a regular meeting of the Board of Retirement held on the March 22, 2016, by the following vote:

AYES:

NOES:

ABSENT:

ATTEST: _____

Natalie Kwan Lloyd
Secretary, Board of Retirement



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milliman.com

February 12, 2016

VIA EMAIL ONLY

Board of Retirement
San Mateo County Employees' Retirement Association
100 Marine Parkway, Suite 125
Redwood Shores, CA 94065-5208

Re: June 30, 2015 Actuarial Valuation Addendum – Revised Employer Contribution Rates

Dear Members of the Board:

We have previously provided you an actuarial valuation report as of June 30, 2015 for the San Mateo County Employees' Retirement Association (SamCERA). The contribution rates shown in Exhibit 10 (including 10a-10d) of that report are scheduled to be effective for the fiscal year beginning July 1, 2016. It is our understanding that since that report was prepared, negotiations with various bargaining units have resulted in certain General members paying for 50% of the cost of COLA benefits. Additionally, it is possible that Probation members may also pay 50% of the COLA costs. The purpose of this addendum to the valuation is to provide revised employer contribution rates for the fiscal year beginning July 1, 2016 that reflect these changes.

Changes in Member Contribution Rates

Effective July 1, 2016, all current Court employees under General Plans 1, 2, and 4 with retirement benefits negotiated under AFSCME and SEIU contracts will pay 50% of the retirement COLA cost. In our valuation, we assumed these members made no contributions toward the COLA cost.

Additionally, it is our understanding that there may also be a change to Probation members. The proposed change is that all current Probation employees under Probation Plans 1, 2, and 4 with retirement benefits negotiated under PDA contracts will pay 50% of the retirement COLA cost effective July 1, 2016. In our valuation, we assumed these members made contributions toward the COLA cost at the 25% level. We have provided revised employer contribution rates if this change (50% COLA) is adopted.

Impact on employer contribution rates

The attached Exhibit 10a provides employer statutory contribution rates for all General members. Only rates for plans 1, 2, and 4 for Court employees have changed. Court employer rates are shown with 0% COLA share and 50% COLA share. The applicable rate may be applied based upon bargaining unit.

The attached Exhibit 10d provides employer statutory contribution rates for all Probation members if the 50% COLA share is agreed to. Only rates for plans 1, 2, and 4 for PDA employees are changed. Employer rates for PDA members are shown with 50% COLA share

This work product was prepared solely for SamCERA for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

only and are marked as “provisional.” Unless the 50% COLA sharing is agreed to, Exhibit 10d from the valuation should be used.

Member contribution rates

The member contribution rates provided in the June 30, 2015 actuarial valuation Appendix D can be used to calculate the necessary member rates under these COLA share revisions.

Estimation Techniques Used

For purposes of this analysis, we have used a simplified technique to determine the effect of the change in COLA sharing on the employer contribution rates. Specifically, we have increased the expected member contributions to reflect the 50% COLA share based on the average entry age of the group (rounded down one year). The higher expected member contribution rates results in reduced employer contribution rates for the affected groups. We believe this approach provides a reasonable estimate of the impact on the employer contribution rates; however, a more detailed calculation should be performed in future valuations.

Certification

This addendum is based on our valuation report dated September 22, 2015, and all caveats disclosed in that valuation continue to apply. All plan provisions, assumptions, and methods are the same as that valuation, except for the changes due to addition of the 50% COLA sharing for certain General and Probation members as specified in this letter.

Milliman’s work is prepared solely for the internal business use of SamCERA. To the extent that Milliman’s work is not subject to disclosure under applicable public records laws, Milliman’s work may not be provided to third parties without Milliman’s prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman’s consent to release its work product to any third party may be conditioned on the third party signing a Release.

No third party recipient of Milliman’s work product should rely upon Milliman’s work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

On the basis of the foregoing, I hereby certify that, to the best of my knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. I am a member of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

A handwritten signature in black ink that reads "Nick Collier".

Nick Collier, ASA, EA, MAAA
Consulting Actuary

NJC/nlo

Enclosures

San Mateo County Employees' Retirement Association

Exhibit 10a: Employer Statutory Contribution Rates – General

General Members								
Employer Rates								
	Gross Normal Cost	Member Contributions	Basic Normal Cost	COLA Normal Cost	Total Normal Cost	UAAL Contribution Rate ⁽¹⁾	Total Contribution Rate	Prior Year Total Contribution Rate ⁽²⁾
Plan 1								
County (0%) ⁽³⁾	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
County (50%) ⁽³⁾	22.38%	(12.92)%	6.13%	3.33%	9.46%	18.37%	27.83%	29.02%
Courts (0%) ⁽³⁾	22.38%	(9.97)%	5.21%	7.20%	12.41%	19.54%	31.95%	32.73%
Courts (50%) ⁽³⁾	22.38%	(12.64)%	5.21%	4.53%	9.74%	19.54%	29.28%	N/A
Plan 2								
County (0%) ⁽³⁾	21.42%	(10.19)%	5.56%	5.67%	11.23%	18.37%	29.60%	31.14%
County (50%) ⁽³⁾	21.42%	(12.73)%	5.84%	2.85%	8.69%	18.37%	27.06%	28.61%
Courts (0%) ⁽³⁾	21.42%	(10.16)%	5.59%	5.67%	11.26%	19.54%	30.80%	32.29%
Courts (50%) ⁽³⁾	21.42%	(12.41)%	5.59%	3.42%	9.01%	19.54%	28.55%	N/A
Plan 3								
County	7.41%	0.00%	7.41%	0.00%	7.41%	18.37%	25.78%	28.29%
Courts	7.41%	0.00%	7.41%	0.00%	7.41%	19.54%	26.95%	29.24%
Plan 4								
County (0%) ⁽³⁾	21.00%	(10.11)%	6.05%	4.84%	10.89%	18.37%	29.26%	30.51%
County (50%) ⁽³⁾	21.00%	(12.25)%	6.72%	2.03%	8.75%	18.37%	27.12%	28.74%
Courts (0%) ⁽³⁾	21.00%	(10.69)%	6.99%	3.32%	10.31%	19.54%	29.85%	31.32%
Courts (50%) ⁽³⁾	21.00%	(12.40)%	6.99%	1.61%	8.60%	19.54%	28.14%	N/A
Plan 5								
County	18.20%	(8.30)%	8.11%	1.76%	9.90%	18.37%	28.27%	30.01%
Courts	18.20%	(9.74)%	8.11%	1.76%	8.46%	19.54%	28.00%	29.92%
Plan 7								
County	15.82%	(7.91)%	6.32%	1.59%	7.91%	18.37%	26.28%	28.12%
Courts	15.82%	(7.91)%	6.32%	1.59%	7.91%	19.54%	27.45%	29.07%

¹ UAAL Contribution Rate includes an offset of 1.17% of payroll to reflect the County Supplementary Contribution Account, except for Courts.

² The Prior Year Total Contribution Rate reflects the valuation addendums that were issued subsequent to the valuation report.

³ Bargaining units that have negotiated for members (other than Plan 3 members) to pay a specific share of the cost of COLA are grouped together for purposes of this exhibit. The percentage of total COLA cost paid by member is shown in parenthesis.

This work product was prepared solely for SamCERA for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

San Mateo County Employees' Retirement Association

Exhibit 10d: Employer Statutory Contribution Rates – Probation

Probation Members								
	Employer Rates							Prior Year Total Contribution Rate ⁽²⁾
	Gross Normal Cost	Member Contributions	Basic Normal Cost	COLA Normal Cost	Total Normal Cost	UAAL Contribution Rate ⁽¹⁾	Total Contribution Rate	
<u>Plan 1</u>								
PDA Members (50%)	34.55%	(6.05)%	15.00%	13.50%	28.50%	26.77%	55.27%	N/A
Managers	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<u>Plan 2</u>								
PDA Members (50%)	33.41%	(15.46)%	13.80%	4.15%	17.95%	26.77%	44.72%	N/A
Managers	33.41%	(14.28)%	13.58%	5.55%	19.13%	26.77%	45.90%	50.03%
<u>Plan 4</u>								
PDA Members (50%)	30.75%	(13.67)%	13.77%	3.31%	17.08%	26.77%	43.85%	N/A
Managers	30.75%	(14.18)%	14.42%	2.15%	16.57%	26.77%	43.34%	45.90%
<u>Plan 5</u>								
PDA Members	29.51%	(13.86)%	12.72%	2.93%	15.65%	26.77%	42.42%	43.75%
Managers	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<u>Plan 6</u>								
PDA Members	25.24%	(9.77)%	12.89%	2.58%	15.47%	26.77%	42.24%	43.57%
Managers	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<u>Plan 7</u>								
PDA Members	25.82%	(12.91)%	10.20%	2.71%	12.91%	26.77%	39.68%	41.51%
Managers	25.82%	(12.91)%	10.20%	2.71%	12.91%	26.77%	39.68%	41.51%

¹ UAAL Contribution Rate includes an offset of 1.60% of payroll to reflect the County Supplementary Contribution Account.

² The Prior Year Total Contribution Rate reflects the valuation addendums that were issued subsequent to the valuation report.


This work product was prepared solely for SamCERA for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 22, 2016

Agenda Item 5.2

TO: Board of Retirement

FROM: Scott Hood, Chief Executive Officer 

SUBJECT: Approval of Resolutions Defining (1) Compensation Earnable pursuant to Government Code §31461 and (2) Pensionable Compensation pursuant to Government Code §7522.34.

Staff Recommendation

Approve two resolutions to be effective March 27, 2016: (1) Resolution defining Compensation Earnable, pursuant to Government Code §31461 for members who are not subject to Government Code §7522.34 and (2) Resolution defining Pensionable Compensation pursuant to Government Code §7522.34 for members who are not subject to Government Code §31461.

Background

Depending upon a member's date of hire and other factors, a member is either subject to County Employees Retirement Law ("CERL") or the Public Employees' Pension Reform Act (PEPRA). Under CERL, compensation earnable is used: (1) to calculate final compensation in order to determine a member's pension benefit and (2) to calculate the ongoing contributions to be paid by the member and the employer. For the PEPRA members, "Pensionable Compensation" is used for the same purposes. The Board determines which elements of compensation are to be included and which elements are not for both compensation earnable and pensionable compensation.

Discussion

Staff was recently notified that during the County's transition to its new payroll program "Workday," in March of 2015, the County had created several new pay codes. These codes are either subcategories of existing pay codes (e.g. "bilingual pay level 1" and "bilingual level 2") or additional pay code for the same category (e.g. "night shift differential") in order to reflect different bargained for earning rates for the same item. All of these new pay codes are similar to existing pay codes that the Board has already determined to be either included or excluded in Compensation Earnable and Pensionable Compensation. The proposed resolutions reflect each of the changes. Staff will address any specific questions that the Board may have.

Attachments

Resolution Defining Compensation Earnable pursuant to Government Code §31461
Resolution Defining Pensionable Compensation pursuant to Government Code §7522.34

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

RESOLUTION 15-16-

***RESOLUTION DEFINING COMPENSATION EARNABLE
PURSUANT TO GOVERNMENT CODE §31461 FOR MEMBERS
WHO ARE NOT SUBJECT TO GOVERNMENT CODE §7522.34.***

WHEREAS, for those current members who became active members prior to January 1, 2013, and those members who became active members on or after January 1, 2013, but who are not subject to Government Code §7522.34 of the California Public Employees' Pension Reform Act, the determination of compensation earnable for remuneration earned by those members is governed by Government Code §31461; and

WHEREAS, Government Code §31461 provides that compensation earnable by a member means the average compensation as determined by the Board, for the period under consideration upon the basis of the average number of days ordinarily worked by persons in the same grade or class of positions during the period, and at the same rate of pay; and

WHEREAS, Government Code §31461 provides that this Board determine which items of remuneration earned by members shall constitute "compensation earnable"; and

WHEREAS, the Board has reviewed the current pay items and has determined which of those items are to be included in "compensation earnable" and which items are not to be included; and

WHEREAS, it is necessary for this Board from time to time to amend its determinations of compensation earnable due to changes in the compensation schedules of SamCERA employers or changes in the law and the County of San Mateo just notified this Board that when it upgraded its payroll system to Workday, some of the pay codes designations were changed; Therefore, be it

RESOLVED, that effective March 27, 2016, Resolution number 12-13-07 is rescinded, and pursuant to Government Code §31461 as interpreted by the courts, the Board hereby makes the following determinations to be effective March 27, 2016, as to what is included in "compensation earnable" and items of remuneration that are not included:

1. Compensation earnable shall include:

Pay Code	Description
(001)	Regular hours worked
(00680)	84/12 Plan (Sheriff)
(010)	Release time with pay
(011)	Night shift differential-com dispatch
(013)	Night shift differential
(014)	Special night shift differential
(015)	Special duty hours
(019)	Charge nurse shift differential
(020)	Split shift
(021)	Bilingual pay
(021-L1)	Bilingual pay

<u>(021-L2)</u>	<u>Bilingual pay</u>
(022)	Staffing differential
(023)	Weekend pay
(027)	On-call hours
(033)	Bomb squad [flight/observer/pilot]
(035)	Sick leave with pay
(041)	Vacation hours with pay
(043)	Holiday hours regular pay
(044)	Holiday worked at 1.5
(045)	Holiday hours worked at straight time
<u>(045O)</u>	<u>Holiday hours worked at straight time-overflow</u>
(048)	Accumulated holiday hours taken
(052)	Comp time hours used
(054)	Administrative leave
(055)	Jury duty with pay
(056)	Military-leave with pay
(057)	Education leave with pay
(058)	Other leave with pay
(059)	Disability leave with pay
(064)	Management overtime used
(080)	Uniform/tool allowance
<u>(080A)</u>	<u>Uniform/tool allowance annual</u>
(081)	Transportation allowance
(087)	Bi-weekly special pay
(088)	Miscellaneous special pay
(090)	Voluntary time off used
(093)	Furlough w/o pay used with payment of contributions
(100)	Sergeant differential
(102)	Annual in-service management administrative leave cash-outs
(104)	LTC wage pass through <u>shift differential</u>
<u>(104B)</u>	<u>LTC shift differential adjustment</u>
(110)	Compulsory time off
(112)	Bereavement leave
(306)	LC4850 WC 84/12 plan SHF
(313)	LC4850 night shift differential
(315)	LC4850 special duty
(359)	LC4850 disability with pay
<u>(502)</u>	<u>Admin leave cash out w/1-time deferred comp</u>
<u>(557)</u>	<u>Educational lv with pay</u>
<u>(827)</u>	<u>Special on call</u>
<u>(30680)</u>	<u>LC4850WC 84/12 plan shf</u>

2. Compensation earnable, at a minimum, shall not include, in any case, the following pay items.

A. The following pay codes are not included:

Pay Code	Description
(007)	EH. relief nurse shift differential
(009)	E.H. relief nurse shift differential
(025)	Call back pay
<u>(025S)</u>	<u>Call back pay SART nurses</u>
(026)	Part-time double shift differential
(028)	On call EH. relief nurse
(029)	Part-time double shift differential
(037)	Layoff sick leave
(040)	Terminal vacation
(046)	Holiday hours accrued
(047)	Holiday hours accrued at 1.5
(049)	Terminal holiday pay
(050)	Terminal compensatory pay
(051)	Comp Time Earned at 1.5
(053)	Comp time earned at straight time
(060)	Absent without leave
(061)	Leave without pay
(062)	Disability leave without pay
(063)	Terminal MOT Pay
(065)	Overtime training hours
(066)	Overtime at time and one-half
(069)	Overtime special duty desk officer
(070)	Overtime special duty
(073)	Overtime special duty night shift
(075)	Overtime night shift premium hours
(076)	Rest period differential
(079)	Overtime special shift differential
(083)	Worker's compensation payment
(084)	Employee incentives
(085)	Disability payment
(086)	Taxable benefits-DP
(091)	Terminal VTO pay
(096)	County Deferred Comp Contribution
(097)	Miscellaneous terminal pay
(098)	Miscellaneous benefit refund
(101)	LTD payments
(103)	FMLA earnings
(105)	Miscellaneous subsidies
(106)	FSLA adjustments

<u>(106 80)</u>	<u>FSLA adjustment for 84/12</u>
<u>(106 980-P1)</u>	<u>FSLA adjustment 9/80 period 1</u>
<u>(106 980-P2)</u>	<u>FSLA adjustment 9/80 period 2</u>
(107)	Overtime at straight time
(108)	Comp hours earned at straight time (OT)
(111)	Terminal compulsory time off
<u>(125)</u>	<u>Call back pay st.</u>
<u>(225)</u>	<u>Call back pay flat rate</u>
(383)	LC4850 worker's compensation payment
<u>(803)</u>	<u>SART nurses meeting/service</u>
<u>(804)</u>	<u>SART nurses training and education</u>

B. Payments associated with the provision of insurance benefits, or other third party payments such as professional membership dues, that are not received in cash by a member.

C. Payments by a SamCERA employer of member-required contributions to the retirement system under Government Code sections 31581.1, 31630, 31639.85 or under a memorandum of understanding (MOU) between members (or their representatives) and the SamCERA employer.

3. Pursuant to Government Code §31461(b) compensation earnable, shall not include in any case the following:

A. Any compensation determined by the Board to have been paid to enhance a member's retirement benefit under that system. That compensation may include:

(1) Compensation that had previously been provided in kind to the member by the employer or paid directly by the employer to a third party other than the retirement system for the benefit of the member, and which was converted to and received by the member in the form of a cash payment in the final average salary period.

(2) Any one-time or ad hoc payment made to a member, but not to all similarly situated members in the member's grade or class.

(3) Any payment that is made solely due to the termination of the member's employment, but is received by the member while employed, except those payments that do not exceed what is earned and payable in each 12-month period during the final average salary period regardless of when reported or paid.

B. Payments for unused vacation, annual leave, personal leave, sick leave, or compensatory time off, however denominated, whether paid in a lump sum or otherwise, in an amount that exceeds that which may be earned and payable in each 12-month period during the final average salary period, regardless of when reported or paid.

C. Payments for additional services rendered outside of normal working hours, whether paid in a lump sum or otherwise.

D. Payments made at the termination of employment, except those payments that do not exceed what is earned and payable in each 12-month period during the final average salary period, regardless of when reported or paid.

4. Pursuant to Government Code §31641(c), the terms listed above in paragraph 3 are intended to be consistent with and not in conflict with the holdings in *Salus v. San Diego County Employees Retirement Association* (2004) 117 Cal.App.4th 734 and *In re Retirement Cases* (2003)110 Cal.App.4th 426.

BE IT FURTHER RESOLVED, that the above listed determinations by the Board of what is included or not included in compensation earnable, shall be in effect until such time as action taken by the Board or action by the Legislature or the Courts as a matter of law requires a different determination.

* * * * *

Regularly passed and adopted, by the San Mateo County Employees' Retirement Association, Board of Retirement, on March 22,2016.

Ayes, Trustees:

Noes, Trustees:

Absent, Trustees:

Abstain, Trustees:

*Natalie Kwan-Lloyd, Board Secretary
SamCERA*

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

RESOLUTION 15-16-__

**RESOLUTION DEFINING PENSIONABLE COMPENSATION
PURSUANT TO GOVERNMENT CODE §7522.34 FOR MEMBERS
WHO ARE NOT SUBJECT TO GOVERNMENT CODE §31461**

WHEREAS, for those members who became active members on or after January 1, 2013, and who are subject to the California Public Employees' Pension Reform Act contained in Government Code §7522 et seq., the determination of their pensionable compensation is governed by Government Code §7522.34; and

WHEREAS, the pensionable compensation for those employee members who are subject to Government Code §7522.34 shall be the normal monthly rate of pay or base pay of the member paid in cash to similarly situated members of the same group or class of employment for services rendered on a full-time basis during normal working hours, pursuant to publicly available pay schedules; and

WHEREAS, the Board has reviewed the current pay items and has determined which of those items are to be included in "pensionable compensation" and which items are not to be included; and

WHEREAS, it will be necessary for this Board, from time to time, to amend its determinations of pensionable compensation due to changes made by SamCERA employers in their compensation schedules as well as changes in the law and the County of San Mateo notified this Board that when it upgraded its payroll system to Workday, some of the pay codes designations were changed; Therefore, be it;

RESOLVED, that effective March 27, 2016, Resolution number 15-13-08 is rescinded, and pursuant to Government Code §7522.34 as interpreted by the courts, the Board hereby makes the following determinations to be effective March 27, 2016, as to what is included in "pensionable compensation" and items of remuneration that are not included:

1. Pensionable compensation shall include:

Pay Code	Description
(001)	Regular hours worked
(00680)	84/12 Plan (Sheriff)
<u>(010)</u>	<u>Release time with pay</u>
<u>(011)</u>	<u>Night shift differential-com dispatch</u>
(013)	Night shift differential
(014)	Special night shift differential
(015)	Special duty hours

(019)	Charge nurse shift differential
(020)	Split shift
(021)	Bilingual pay
<u>(021-L1)</u>	<u>Bilingual pay</u>
<u>(021-L2)</u>	<u>Bilingual pay</u>
(022)	Staffing differential
(023)	Weekend pay
(033)	Bomb squad [flight/observer/pilot]
(035)	Sick leave with pay
(041)	Vacation hours with pay
(043)	Holiday hours regular pay
(044)	Holiday worked at 1.5
(045)	Holiday hours worked at straight time
(048)	Accumulated holiday hours taken
(052)	Comp time hours used
(054)	Administrative leave
(055)	Jury duty with pay
(056)	Military leave with pay
(057)	Educational leave with pay
(058)	Other leave with pay
(059)	Disability leave with pay
(064)	Management overtime used
(087)	Bi-weekly special pay
(090)	Voluntary time off used
(093)	Furlough w/o pay used with payment of contributions
(100)	Sergeant differential
(104)	LTC wage pass through <u>shift differential</u>
<u>(104B)</u>	<u>LTC shift differential adjustment</u>
(110)	Compulsory time off
(112)	Bereavement leave
(306)	LC4850-WC 84/12 plan-SHF
(313)	LC4850 night shift differential
(315)	LC4850 special duty
(359)	LC4850 disability with pay
<u>(557)</u>	<u>Educational lv with pay</u>
<u>(30680)</u>	<u>LC4850WC 84/12 plan shf</u>

2. Pensionable compensation, at a minimum, shall not include, in any case, the following pay items.

A. The following pay codes are not included:

Pay Code	Description
(007)	E.H. relief nurse shift differential
(009)	E.H. relief nurse shift differential
(025)	Call back pay
<u>(025S)</u>	<u>Call back pay SART nurses</u>
(026)	Part-time double shift differential
(027)	On-call hours
(028)	On call E.H. relief nurse
(029)	Part-time double shift differential
(037)	Layoff sick leave
(040)	Terminal vacation
<u>(045O)</u>	<u>Holiday hours worked at straight time-overflow</u>
(046)	Holiday Hours accrued
(047)	Holiday hours accrued at 1.5
(049)	Terminal holiday pay
(050)	Terminal compensatory pay
(051)	Comp Time Earned at 1.5
(053)	Comp time earned at straight time
(060)	Absent without leave
(061)	Leave without pay
(062)	Disability leave without pay
(063)	Terminal MOT Pay
(065)	Overtime training hours
(066)	Overtime at time and one-half
(069)	Overtime special duty desk officer
(070)	Overtime special duty
(073)	Overtime special duty night shift
(075)	Overtime night shift premium hours
(076)	Rest period differential
(079)	Overtime special shift differential
(080)	Uniform/tool allowance
<u>(080A)</u>	<u>Uniform/tool allowance annual</u>
(081)	Transportation allowance
(083)	Worker's compensation payment
(084)	Employee incentives
(085)	Disability payment
(086)	Taxable benefits-DP
(088)	Miscellaneous special pay
(091)	Terminal VTO pay
(096)	County Deferred Comp Contribution
(097)	Miscellaneous terminal pay

(098)	Misc benefit refund
(101)	LTD payments
(102)	Annual in-service mangmt administrative leave cash-outs
(103)	FMLA earnings
(105)	Miscellaneous subsidies
(106)	FSLA adjustments
<u>(106 80)</u>	<u>FSLA adjustment for 84/12</u>
<u>(106 980-P1)</u>	<u>FSLA adjustment 9/80 period 1</u>
<u>(106 980-P2)</u>	<u>FSLA adjustment 9/80 period 2</u>
(107)	Overtime at straight time
(108)	Comp hours earned at straight time (OT)
(111)	Terminal compulsory time off
<u>(125)</u>	<u>Call back pay st.</u>
<u>(225)</u>	<u>Call back pay flat rate</u>
(383)	LC4850 worker's compensation payment
<u>(502)</u>	<u>Admin leave cash out w/1-time deferred comp</u>
<u>(803)</u>	<u>SART nurses meeting/service</u>
<u>(804)</u>	<u>SART nurses training and education</u>
<u>(827)</u>	<u>Special on call</u>

B. Pursuant to Government Code §7522.34, pensionable compensation does not include the following:

- 1) Any compensation determined by the Board to have been paid to increase a member's retirement benefit.
- 2) Compensation that had previously been provided in kind to the member by the employer or paid directly by the employer to a third party other than the retirement system for the benefit of the member and which was converted to and received by the member in the form of a cash payment.
- 3) Any one-time or ad hoc payments made to a member.
- 4) Severance or any other payment that is granted or awarded to a member in connection with or in anticipation of a separation from employment, but is received by the member while employed.
- 5) Payments for unused vacation, annual leave, personal leave, sick leave, or compensatory time off, however denominated, whether paid in a lump sum or otherwise, regardless of when reported or paid.
- 6) Payments for additional services rendered outside of normal working hours, whether paid in a lump sum or otherwise.

- 7) Any employer-provided allowance, reimbursement, or payment, including, but not limited to, one made for housing, vehicle, or uniforms.
 - 8) Compensation for overtime work, other than as defined in Section 207(k) of Title 29 of the United States Code.
 - 9) Employer contributions to deferred compensation or defined contribution plans.
 - 10) Any bonus paid in addition to the compensation described in subdivision (a) of Government Code §7522.34 .
 - 11) Any other form of compensation the Board determines is inconsistent with the requirements of subdivision §7522.34 (a).
 - 12) Any other form of compensation that this Board determines should not be pensionable compensation.
3. Pursuant to Government Code §7522.10, whenever pensionable compensation, as defined in §7522.34, is used in the calculation of a benefit, the pensionable compensation shall be subject to the monetary limitations set forth in subdivision §7522.10.

BE IT FURTHER RESOLVED, that the above listed determinations by the Board of what is included or not included in pensionable compensation, shall be in effect until such time as this Board, the Legislature, or the Courts take action that as a matter of law requires a different determination.

* * * * *

Regularly passed and adopted, by the San Mateo County Employees' Retirement Association, Board of Retirement, on March 22, 2016.

Ayes, Trustees:

Noes, Trustees:

Absent, Trustees:

Abstain, Trustees:

*Natalie Kwan-Lloyd, Board Secretary
SamCERA*

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 22, 2016

Agenda Item 6.1

TO: Board of Retirement

FROM: Michael Coultrip, Chief Investment Officer 

SUBJECT: Preliminary Monthly Portfolio Performance Report for the Period Ended February 29, 2016

Staff Recommendation

Accept the preliminary performance report dated February 29, 2016.

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 -0.05%, while the preliminary trailing twelve-month return ending February 2016 was -5.3% net. The twelve-month net return is higher than SamCERA's Total Plan Policy Benchmark return of -6.2%, but below the Actuarial Assumed Earnings Rate of 7.25%. As a reminder, SamCERA should expect performance to vary substantially from that of the Total Plan Policy Benchmark in the initial stages of its implementation of private equity and private real assets.

Volatility continued during the month, although the extreme negative investor sentiment that dominated global markets seemed to wane during the month, better economic data in the U.S. seemed to calm the markets. Fourth quarter real GDP growth was revised up 0.3% to 1%, while personal income, consumer spending, and unemployment numbers all showed relative strength. The broad U.S. equity market was essentially flat during the month, with the S&P 500 Index down slightly by -0.1%.

International equity indices were down on the month, with developed markets (as measured by MSCI EAFE) down 1.8% and emerging markets down 0.2%.

The U.S. Treasury yield curve flattened during the month, with short-term rates (out to one year) increasing and longer-term rates decreasing. The 10-year Treasury rate decreased 15 basis points. The general U.S. fixed income market return was higher by 0.7%. The high yield market returned 0.6%, while emerging debt returned -0.2%.

Attachments

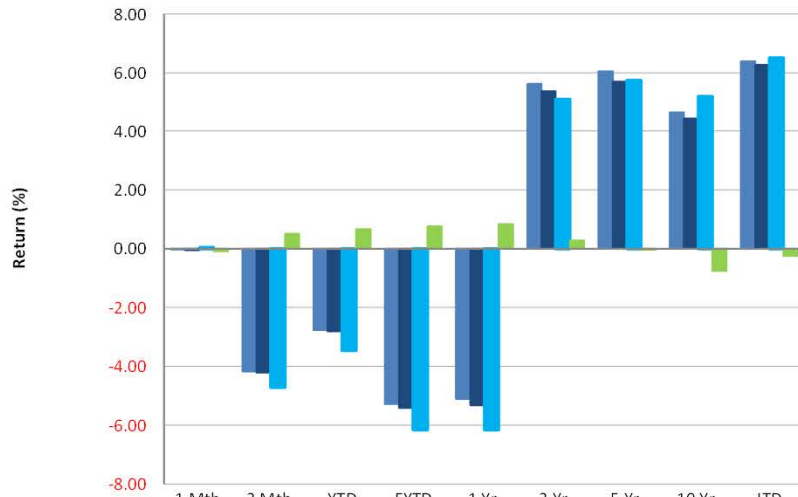
- A. Verus February 2016 Capital Market Update
- B. Northern Trust Performance Report

San Mateo County Total Fund Characteristics



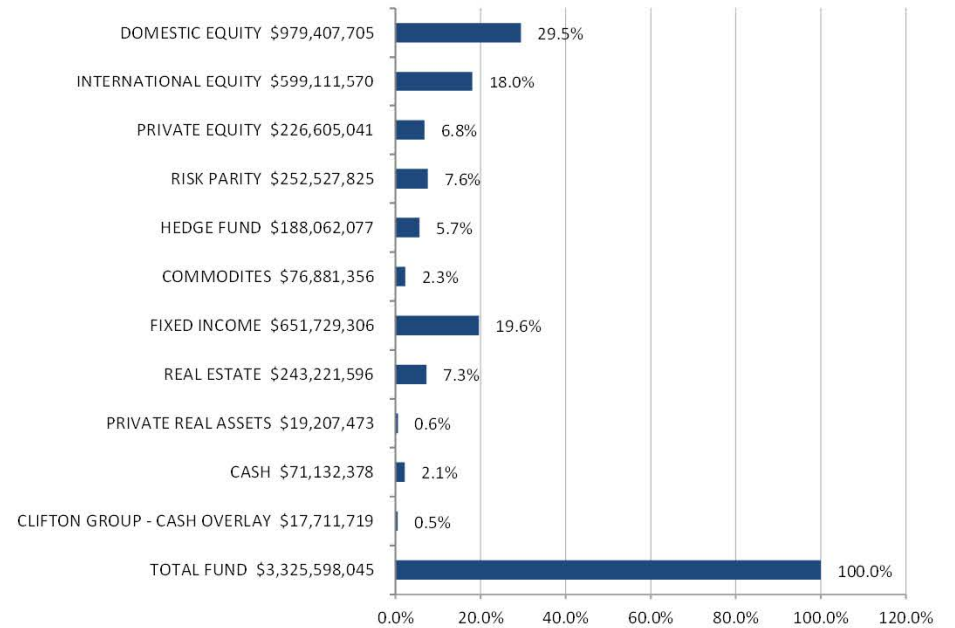
February 29, 2016

Total Fund Performance

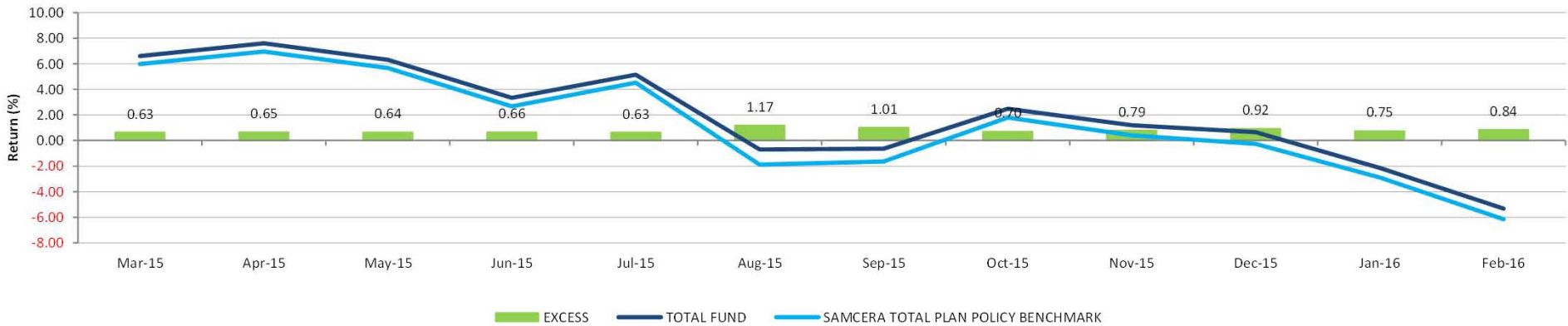


	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.	ITD
TOTAL FUND - Gross	-0.03	-4.17	-2.77	-5.28	-5.11	5.63	6.05	4.63	6.39
TOTAL FUND - Net	-0.05	-4.21	-2.81	-5.41	-5.33	5.35	5.71	4.42	6.27
SAMCERA PLAN BENCHMARK	0.04	-4.71	-3.47	-6.17	-6.16	5.07	5.75	5.17	6.52
Excess (Net)	-0.09	0.50	0.66	0.76	0.84	0.27	-0.04	-0.75	-0.24

Asset Allocation



Rolling Month End Annual Returns

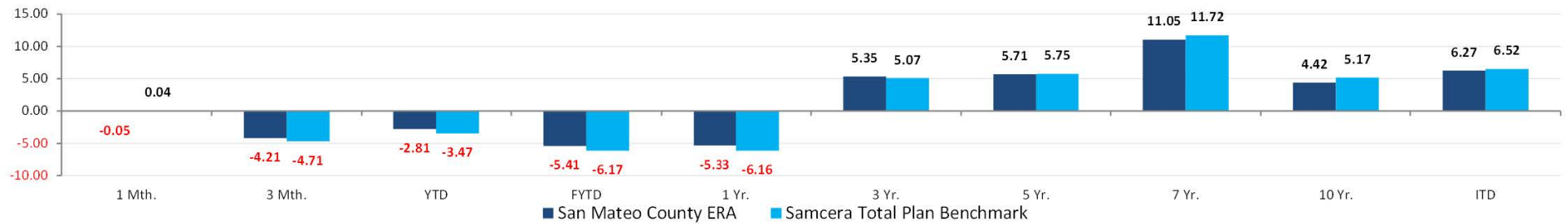


San Mateo County Composite Return Summary



February 29, 2016

Return Comparison



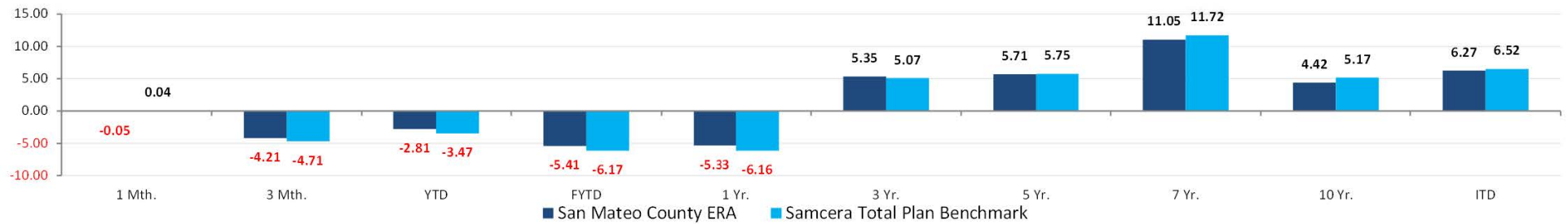
Composite Returns (Net of Manager Fees)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
San Mateo County ERA	3,325,598,045	-0.05	-4.21	-2.81	-5.41	-5.33	5.35	5.71	11.05	4.42	6.27
Samcera Total Plan Benchmark		0.04	-4.71	-3.47	-6.17	-6.16	5.07	5.75	11.72	5.17	6.52
Excess		-0.09	0.50	0.66	0.76	0.84	0.27	-0.04	-0.67	-0.75	-0.24
San Mateo Ex-Clifton Overlay	3,307,886,326	-0.03	-4.35	-2.93	-5.51	-5.46	5.28	5.67	10.97	4.28	6.20
Samcera Total Plan Benchmark		0.04	-4.71	-3.47	-6.17	-6.16	5.07	5.75	11.72	5.17	6.52
Excess		-0.07	0.36	0.53	0.66	0.70	0.21	-0.08	-0.75	-0.89	-0.32
Total Equity	1,578,519,274	-0.40	-8.09	-6.30	-9.94	-10.26	6.04	5.68	13.82	3.65	6.92
Samcera Total Equity Benchmark		-0.23	-8.43	-6.36	-9.64	-10.16	6.75	6.40	15.22	5.03	7.44
Excess		-0.17	0.34	0.06	-0.30	-0.10	-0.70	-0.72	-1.40	-1.38	-0.52
Total Fixed Income	651,729,306	-0.27	-1.94	-0.71	-2.53	-3.06	0.94	3.77	7.13	4.74	5.46
Samcera Fixed Income Benchmark		1.12	1.21	1.87	1.21	-0.05	1.18	3.28	4.42	4.58	5.15
Excess		-1.39	-3.15	-2.57	-3.74	-3.01	-0.24	0.50	2.71	0.16	0.31
Total Risk Parity	252,527,825	1.53	-0.30	2.25	-4.74	-8.50	1.01	4.67	--	--	4.67
Samcera Risk Parity Benchmark		0.26	-3.90	-2.58	-3.04	-4.02	7.02	7.39	--	--	7.39
Excess		1.26	3.61	4.83	-1.71	-4.48	-6.01	-2.72	--	--	-2.72

San Mateo County Composite Return Summary



February 29, 2016

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	188,062,077	-0.57	-0.22	-0.77	9.47	8.05	8.12	--	--	--	5.83
Samcera LIBOR + 4%		0.36	1.07	0.73	2.81	4.23	4.20	--	--	--	4.21
Excess		-0.93	-1.29	-1.49	6.66	3.82	3.92	--	--	--	1.62
Total Private Equity	226,605,041	1.16	-0.39	0.59	4.14	12.53	14.82	-19.71	--	--	-30.82
Samcera PE Benchmark		0.21	-6.91	-5.19	-5.16	-5.06	13.24	12.82	--	--	14.92
Excess		0.95	6.51	5.78	9.30	17.59	1.58	-32.53	--	--	-45.74
Total Commodities	76,881,356	0.46	-3.16	-2.10	-23.77	-25.58	-15.01	--	--	--	-10.42
Bloomberg Commodity Index		-1.63	-6.26	-3.28	-25.97	-26.50	-17.71	--	--	--	-15.27
Excess		2.09	3.10	1.18	2.20	0.93	2.71	--	--	--	4.85
Private Real Assets	19,207,473	1.29	1.08	1.17	76.01	10.42	--	--	--	--	6.80
Samcera CPI + 5%		0.00	0.65	0.57	2.18	5.54	--	--	--	--	4.36
Excess		1.29	0.43	0.60	73.83	4.88	--	--	--	--	2.44
Total Real Estate	243,221,596	0.46	2.68	2.82	5.64	14.64	13.72	13.17	5.45	6.34	8.37
Samcera Real Estate Benchmark		0.00	3.43	0.00	7.18	15.17	13.63	13.56	6.17	6.28	8.84
Excess		0.46	-0.75	2.82	-1.55	-0.54	0.09	-0.39	-0.72	0.07	-0.46
Total Cash	71,132,378	0.03	0.06	0.05	0.21	0.27	0.47	0.55	0.71	1.13	2.11
Samcera Cash Benchmark		0.02	0.06	0.03	0.07	0.08	0.06	0.08	0.10	1.18	1.97
Excess		0.00	0.00	0.02	0.14	0.19	0.40	0.47	0.61	-0.05	0.15

San Mateo County Manager Return Summary



February 29, 2016

Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Total Equity	1,578,519,274	-0.40	-8.09	-6.30	-9.94	-10.26	6.04	5.68	13.82	3.65	6.92
Samcera Total Equity Benchmark		-0.23	-8.43	-6.36	-9.64	-10.16	6.75	6.40	15.22	5.03	7.44
Excess		-0.17	0.34	0.06	-0.30	-0.10	-0.70	-0.72	-1.40	-1.38	-0.52
Total Domestic Equity	979,407,705	-0.21	-8.15	-6.11	-7.69	-7.86	9.40	8.53	16.68	4.97	7.68
Samcera Dom. Equity Benchmark		-0.03	-8.20	-5.90	-8.15	-8.57	9.61	9.24	17.35	6.25	8.04
Excess		-0.18	0.05	-0.21	0.46	0.72	-0.21	-0.71	-0.67	-1.28	-0.36
Total Large Cap Equity	835,121,637	-0.16	-7.39	-5.71	-5.83	-6.18	10.53	9.20	16.51	5.46	8.49
Russell 1000		-0.03	-7.12	-5.41	-6.15	-7.21	10.43	9.92	17.43	6.49	8.86
Excess		-0.13	-0.27	-0.29	0.32	1.03	0.09	-0.72	-0.91	-1.03	-0.38
Barrow Hanley	98,650,968	-1.11	-9.00	-7.24	-10.73	-9.30	9.33	8.78	--	--	12.19
Russell 1000 Value		-0.03	-7.23	-5.19	-8.26	-9.41	8.27	8.81	--	--	12.15
Excess		-1.08	-1.77	-2.05	-2.47	0.10	1.06	-0.03	--	--	0.04
Blackrock S&P 500 Index Fund	526,204,602	-0.13	-6.59	-5.08	-4.88	-6.08	10.81	--	--	--	10.99
S&P 500		-0.13	-6.59	-5.09	-4.95	-6.19	10.75	--	--	--	10.93
Excess		0.01	-0.00	0.01	0.07	0.11	0.06	--	--	--	0.06
Brown Advisory	102,845,291	-0.69	-9.30	-7.66	-5.64	-5.45	--	--	--	--	8.37
Russell 1000 Growth		-0.04	-7.01	-5.62	-4.08	-5.05	--	--	--	--	11.03
Excess		-0.65	-2.30	-2.03	-1.57	-0.40	--	--	--	--	-2.66
DE Shaw Commingled Fund	107,420,776	1.08	-7.90	-5.41	-5.89	-6.41	--	--	--	--	-2.43
Russell 1000		-0.03	-7.12	-5.41	-6.15	-7.21	--	--	--	--	-3.91
Excess		1.11	-0.78	0.01	0.26	0.80	--	--	--	--	1.48
Total Small Cap Equity	144,286,068	-0.48	-12.30	-8.40	-16.30	-15.76	4.42	5.90	17.53	2.90	5.29
Russell 2000		-0.00	-13.38	-8.80	-16.78	-14.97	5.72	6.11	16.57	4.95	6.40
Excess		-0.48	1.08	0.40	0.48	-0.79	-1.30	-0.21	0.96	-2.05	-1.11

San Mateo County Manager Return Summary



February 29, 2016

Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Boston Company	74,171,522	0.57	-7.91	-4.05	-11.72	-10.26	5.33	6.95	--	--	11.14
Russell 2000 Value		0.68	-11.03	-6.08	-13.75	-13.35	4.37	5.27	--	--	10.49
Excess		-0.11	3.12	2.03	2.03	3.08	0.97	1.68	--	--	0.65
Chartwell Investment Mgmt	70,114,546	-1.58	-16.50	-12.58	-20.66	-20.90	3.48	5.90	16.64	4.50	6.07
Russell 2000 Growth		-0.71	-15.69	-11.47	-19.70	-16.65	7.05	6.90	17.44	5.72	6.60
Excess		-0.87	-0.81	-1.12	-0.96	-4.25	-3.57	-1.00	-0.79	-1.22	-0.53
Total International Equity	599,111,570	-0.71	-8.00	-6.60	-13.57	-14.12	-0.20	0.02	7.99	1.11	4.62
MSCI ACW ex US-IMI		-0.94	-9.29	-7.80	-15.90	-16.37	-1.74	-1.01	9.72	1.69	4.03
Excess		0.23	1.29	1.20	2.33	2.25	1.54	1.03	-1.73	-0.58	0.59
Total Developed Markets Equity	540,060,898	-0.87	-8.19	-6.92	-12.95	-13.35	0.77	0.67	8.57	1.67	3.29
MSCI ACW ex US-IMI		-0.94	-9.29	-7.80	-15.90	-16.37	-1.74	-1.01	9.72	1.69	3.65
Excess		0.07	1.10	0.88	2.94	3.02	2.51	1.68	-1.15	-0.01	-0.35
Baillie Gifford	183,737,516	-0.08	-8.73	-7.19	-11.89	-11.67	1.92	--	--	--	4.61
MSCI ACWI ex US Growth		-1.23	-8.49	-7.32	-13.09	-13.31	0.07	--	--	--	2.37
Excess		1.15	-0.24	0.13	1.20	1.64	1.85	--	--	--	2.23
Blackrock EAFE Index Fund	118,157,742	-1.82	-10.14	-8.91	-14.37	-14.99	--	--	--	--	-6.57
MSCI EAFE ND		-1.83	-10.16	-8.93	-14.40	-15.18	--	--	--	--	-6.77
Excess		0.01	0.01	0.02	0.03	0.20	--	--	--	--	0.20
Mondrian Investment Partners	179,185,574	-1.11	-6.68	-5.16	-13.51	-15.23	0.02	0.70	8.68	2.14	4.19
MSCI ACWI ex US Value		-0.99	-10.60	-8.35	-19.53	-20.68	-3.67	-2.30	9.01	0.93	3.30
Excess		-0.12	3.91	3.19	6.02	5.46	3.69	2.99	-0.33	1.21	0.89
FIAM Intl Small Cap	58,980,066	-0.69	-6.98	-7.21	-11.55	-9.15	1.45	--	--	--	3.21
MSCI ACWI Small Cap ex US Net		0.34	-7.26	-7.35	-12.24	-9.53	1.36	--	--	--	3.23
Excess		-1.03	0.28	0.15	0.69	0.38	0.09	--	--	--	-0.02

San Mateo County Manager Return Summary



February 29, 2016

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	59,050,672	0.80	-6.20	-3.58	-19.12	-20.92	-7.94	--	--	--	-5.07
MSCI EM ND		-0.16	-8.72	-6.64	-22.84	-23.41	-8.90	--	--	--	-6.02
Excess		0.97	2.53	3.06	3.72	2.49	0.96	--	--	--	0.95
EV Parametric EM	59,050,672	0.80	-6.20	-3.58	--	--	--	--	--	--	-13.94
MSCI Emerging Markets GD		-0.15	-8.65	-6.62	--	--	--	--	--	--	-16.96
Excess		0.95	2.46	3.05	--	--	--	--	--	--	3.02
Total Fixed Income	651,729,306	-0.27	-1.94	-0.71	-2.53	-3.06	0.94	3.77	7.13	4.74	5.46
Samcera Fixed Income Benchmark		1.12	1.21	1.87	1.21	-0.05	1.18	3.28	4.42	4.58	5.15
Excess		-1.39	-3.15	-2.57	-3.74	-3.01	-0.24	0.50	2.71	0.16	0.31
Total Domestic Fixed Income	556,655,178	0.13	-1.15	-0.17	-1.52	-2.00	1.43	3.88	7.23	4.87	5.58
Samcera US Fixed Inc Benchmark		0.95	0.78	1.66	0.87	-0.24	1.31	3.62	4.66	4.74	5.34
Excess		-0.82	-1.93	-1.82	-2.39	-1.75	0.12	0.27	2.58	0.13	0.23
Total Core Fixed Income	334,105,264	0.00	-0.84	-0.20	-0.12	-1.46	1.83	3.89	6.92	4.66	5.45
BC U.S. Aggregate		0.71	1.77	2.10	2.76	1.50	2.22	3.60	4.59	4.70	5.32
Excess		-0.71	-2.60	-2.29	-2.88	-2.96	-0.39	0.29	2.33	-0.03	0.13
FIAM Core Bond	236,391,664	0.57	0.69	1.45	1.49	0.27	2.09	3.88	6.40	4.95	4.94
BC U.S. Aggregate		0.71	1.77	2.10	2.76	1.50	2.22	3.60	4.59	4.70	4.69
Excess		-0.13	-1.07	-0.64	-1.27	-1.23	-0.12	0.28	1.81	0.25	0.25
Western Total Return	97,713,600	-1.35	-4.35	-3.97	--	--	--	--	--	--	-4.68
BC U.S. Aggregate		0.71	1.77	2.10	--	--	--	--	--	--	2.05
Excess		-2.06	-6.11	-6.07	--	--	--	--	--	--	-6.74
Brown Brothers Harriman	68,283,679	0.85	0.96	1.66	-0.50	-1.13	-2.55	2.27	--	--	2.47
BC US Tips		1.11	1.80	2.61	0.79	-0.75	-1.21	2.86	--	--	3.06
Excess		-0.26	-0.84	-0.95	-1.29	-0.37	-1.34	-0.60	--	--	-0.59

San Mateo County Manager Return Summary



February 29, 2016

Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Total Opportunistic Credit	154,266,235	0.09	-2.66	-0.88	-4.74	-3.46	3.64	5.62	--	--	8.75
BC BA Intermediate HY Index		1.32	-1.38	0.47	-2.52	-3.21	2.67	5.27	--	--	7.15
Excess		-1.23	-1.28	-1.35	-2.22	-0.25	0.97	0.36	--	--	1.60
AG Opportunistic Whole Loan	24,283,705	0.00	1.02	1.02	2.53	3.80	--	--	--	--	0.17
BC BA Intermediate HY Index		1.32	-1.38	0.47	-2.52	-3.21	--	--	--	--	0.38
Excess		-1.32	2.40	0.55	5.05	7.01	--	--	--	--	-0.21
Angelo Gordon	36,133,348	0.00	0.00	0.00	3.42	6.21	10.63	--	--	--	9.99
BC BA Intermediate HY Index		1.32	-1.38	0.47	-2.52	-3.21	2.67	--	--	--	3.19
Excess		-1.32	1.38	-0.47	5.94	9.42	7.96	--	--	--	6.80
Beach Point Select Fund	38,278,665	1.11	-2.49	-0.83	-2.69	0.91	--	--	--	--	2.56
BC BA Intermediate HY Index		1.32	-1.38	0.47	-2.52	-3.21	--	--	--	--	-1.28
Excess		-0.22	-1.11	-1.30	-0.18	4.13	--	--	--	--	3.85
Brigade Cap Mngmt	55,570,517	-0.49	-6.12	-2.35	-13.87	-14.48	-2.28	2.34	--	--	3.65
BC BA Intermediate HY Index		1.32	-1.38	0.47	-2.52	-3.21	2.67	5.27	--	--	6.13
Excess		-1.82	-4.74	-2.82	-11.35	-11.26	-4.95	-2.93	--	--	-2.48
Total Global Fixed Income	95,074,128	-2.58	-6.33	-3.75	-8.16	-9.01	-1.49	2.84	--	--	3.08
Samcera Global Fixed Benchmark		2.15	3.33	2.91	2.49	0.39	-0.16	1.42	--	--	1.54
Excess		-4.72	-9.66	-6.66	-10.65	-9.40	-1.33	1.42	--	--	1.53
Franklin Templeton	95,074,128	-2.58	-6.33	-3.75	-8.16	-9.01	-1.93	2.57	--	--	2.81
BC Multiverse Index		2.15	3.33	2.91	2.49	0.39	-0.16	1.42	--	--	1.54
Excess		-4.72	-9.66	-6.66	-10.65	-9.40	-1.77	1.15	--	--	1.26
Total Risk Parity	252,527,825	1.53	-0.30	2.25	-4.74	-8.50	1.01	4.67	--	--	4.67
Samcera Risk Parity Benchmark		0.26	-3.90	-2.58	-3.04	-4.02	7.02	7.39	--	--	7.39
Excess		1.26	3.61	4.83	-1.71	-4.48	-6.01	-2.72	--	--	-2.72

San Mateo County Manager Return Summary



February 29, 2016

Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
AQR Global Risk III	117,628,378	0.90	-2.30	0.40	-9.19	-12.06	-1.72	2.96	--	--	2.96
Samcera Risk Parity Benchmark		0.26	-3.90	-2.58	-3.04	-4.02	7.02	7.39	--	--	7.39
Excess		0.64	1.61	2.98	-6.16	-8.04	-8.74	-4.43	--	--	-4.43
Panagora	134,899,447	2.08	1.52	3.92	-0.49	-5.15	--	--	--	--	2.19
Samcera Risk Parity Benchmark		0.26	-3.90	-2.58	-3.04	-4.02	--	--	--	--	1.20
Excess		1.81	5.42	6.49	2.55	-1.14	--	--	--	--	0.99
Total Real Estate	243,221,596	0.46	2.68	2.82	5.64	14.64	13.72	13.17	5.45	6.34	8.37
Samcera Real Estate Benchmark		0.00	3.43	0.00	7.18	15.17	13.63	13.56	6.17	6.28	8.84
Excess		0.46	-0.75	2.82	-1.55	-0.54	0.09	-0.39	-0.72	0.07	-0.46
Invesco Core Real Estate	228,498,598	0.00	2.42	2.42	5.37	14.34	13.67	13.09	5.42	6.32	7.72
Samcera NCREIF ODCE EW (gross)		0.00	3.43	0.00	7.18	15.17	13.63	13.56	6.17	6.28	7.54
Excess		0.00	-1.01	2.42	-1.81	-0.83	0.04	-0.47	-0.75	0.04	0.17
Invesco US Val IV	14,722,998	16.27	11.06	16.27	--	--	--	--	--	--	11.06
Samcera NCREIF ODCE EW (gross)		0.00	3.43	0.00	--	--	--	--	--	--	3.43
Excess		16.27	7.63	16.27	--	--	--	--	--	--	7.63
Total Alternatives	510,755,947	0.42	-0.70	-0.30	0.17	2.13	3.43	4.65	-12.54	-6.74	-4.14
Samcera Alternatives Benchmark		-0.07	-3.06	-1.81	-5.64	-4.96	5.05	5.62	11.88	5.82	6.60
Excess		0.49	2.36	1.50	5.80	7.09	-1.61	-0.97	-24.42	-12.56	-10.74
Total Private Equity	226,605,041	1.16	-0.39	0.59	4.14	12.53	14.82	-19.71	--	--	-30.82
Samcera PE Benchmark		0.21	-6.91	-5.19	-5.16	-5.06	13.24	12.82	--	--	14.92
Excess		0.95	6.51	5.78	9.30	17.59	1.58	-32.53	--	--	-45.74
Private Real Assets	19,207,473	1.29	1.08	1.17	76.01	10.42	--	--	--	--	6.80
Samcera CPI + 5%		0.00	0.65	0.57	2.18	5.54	--	--	--	--	4.36
Excess		1.29	0.43	0.60	73.83	4.88	--	--	--	--	2.44

San Mateo County Manager Return Summary



February 29, 2016

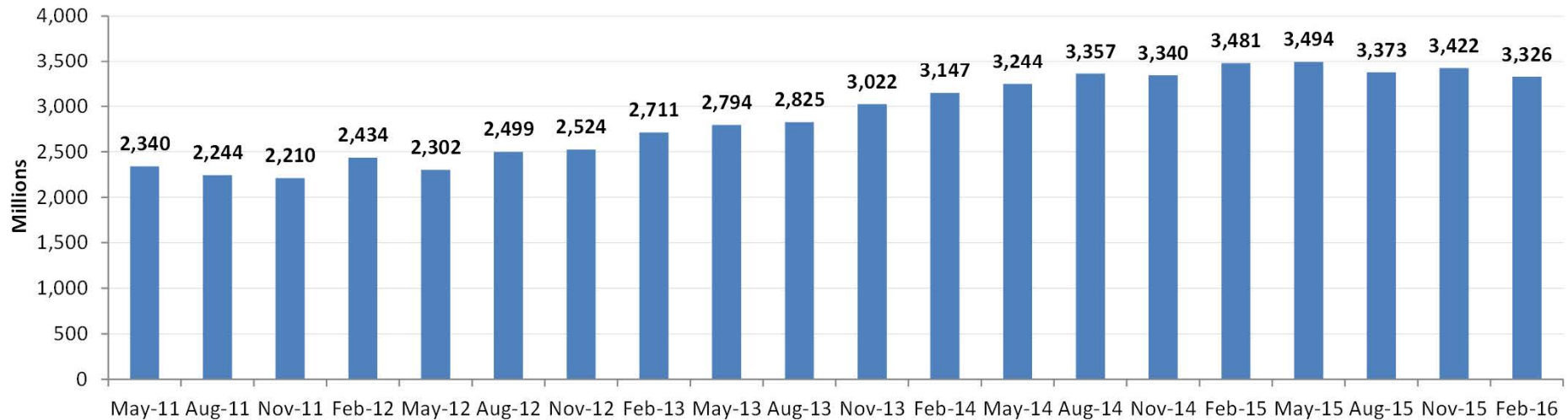
Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Total Hedge Fund Composite	188,062,077	-0.57	-0.22	-0.77	9.47	8.05	8.12	--	--	--	5.83
Samcera LIBOR + 4%		0.36	1.07	0.73	2.81	4.23	4.20	--	--	--	4.21
Excess		-0.93	-1.29	-1.49	6.66	3.82	3.92	--	--	--	1.62
AQR Delta XN	154,164,349	-0.50	0.49	-0.32	10.37	8.94	8.42	--	--	--	6.01
Samcera LIBOR + 4%		0.36	1.07	0.73	2.81	4.23	4.20	--	--	--	4.21
Excess		-0.86	-0.59	-1.05	7.56	4.71	4.22	--	--	--	1.80
Standard Life GARS	33,897,728	-0.90	-3.32	-2.74	--	--	--	--	--	--	-3.15
Samcera LIBOR + 4%		0.36	1.07	0.73	--	--	--	--	--	--	1.76
Excess		-1.26	-4.39	-3.46	--	--	--	--	--	--	-4.91
Total Commodities	76,881,356	0.46	-3.16	-2.10	-23.77	-25.58	-15.01	--	--	--	-10.42
Bloomberg Commodity Index		-1.63	-6.26	-3.28	-25.97	-26.50	-17.71	--	--	--	-15.27
Excess		2.09	3.10	1.18	2.20	0.93	2.71	--	--	--	4.85
Total Cash	71,132,378	0.03	0.06	0.05	0.21	0.27	0.47	0.55	0.71	1.13	2.11
Samcera Cash Benchmark		0.02	0.06	0.03	0.07	0.08	0.06	0.08	0.10	1.18	1.97
Excess		0.00	0.00	0.02	0.14	0.19	0.40	0.47	0.61	-0.05	0.15
SamCera General Account	63,243,112	0.04	0.09	0.07	0.25	0.33	0.19	0.23	0.24	1.40	2.11
County Treasury Pool	7,889,266	0.00	0.00	0.00	0.00	0.00	0.35	0.56	0.75	0.99	2.84
San Mateo County ERA	3,325,598,045	-0.05	-4.21	-2.81	-5.41	-5.33	5.35	5.71	11.05	4.42	6.27
Samcera Total Plan Benchmark		0.04	-4.71	-3.47	-6.17	-6.16	5.07	5.75	11.72	5.17	6.52
Excess		-0.09	0.50	0.66	0.76	0.84	0.27	-0.04	-0.67	-0.75	-0.24

February 29, 2016

Record of Asset Growth

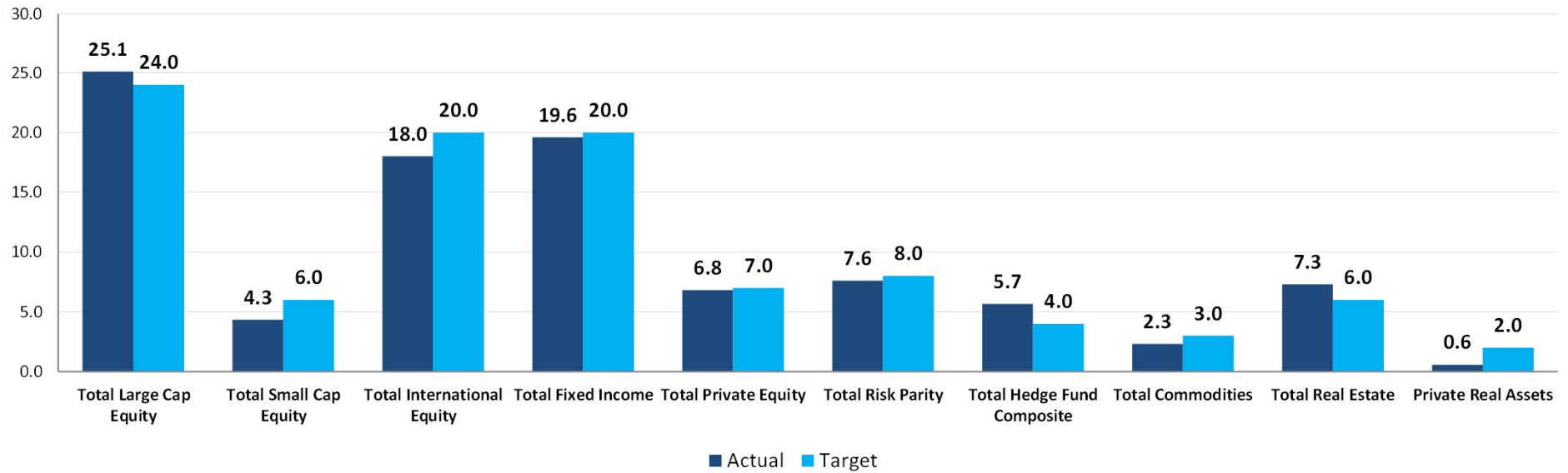
	Three Months	One Year
TOTAL FUND		
Beginning Market Value	3,421,617,195	3,481,283,300
Contributions	95,818,294	406,647,908
Withdrawals	-47,669,643	-384,607,281
Income Received	9,516,458	39,133,907
Gain/Loss	-153,598,121	-218,045,150
Ending Market Value	3,325,598,045	3,325,598,045

Net Asset Values Over Time (\$000)



February 29, 2016

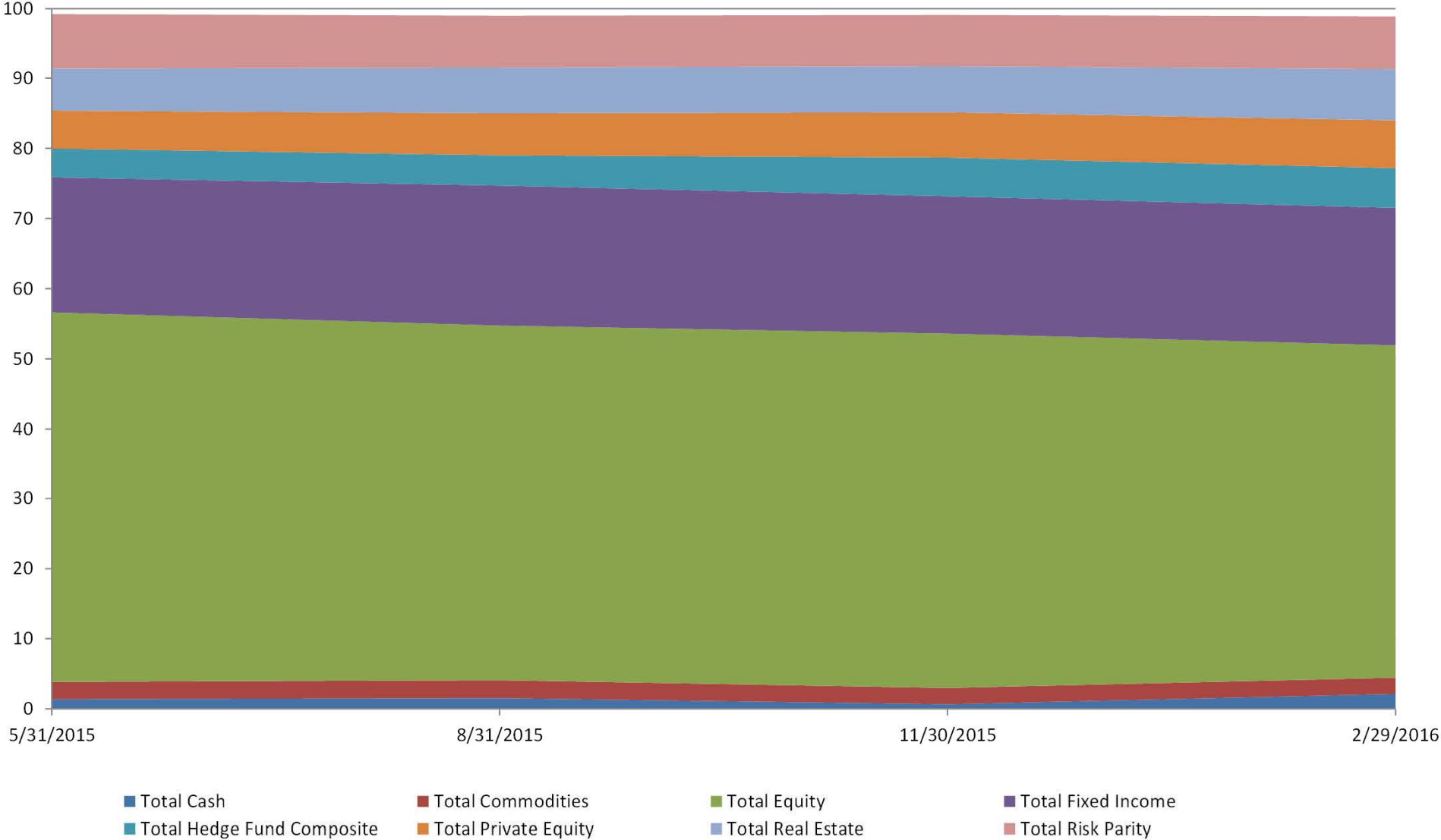
Actual vs Target Weights



	Min	Actual	Target	Deviation	Max
Total Large Cap Equity	22.0	25.1	24.0	1.1	26.0
Total Small Cap Equity	4.0	4.3	6.0	-1.7	8.0
Total International Equity	18.0	18.0	20.0	-2.0	22.0
Total Fixed Income	18.0	19.6	20.0	-0.4	22.0
Total Private Equity	5.0	6.8	7.0	-0.2	9.0
Total Risk Parity	6.0	7.6	8.0	-0.4	10.0
Total Hedge Fund Composite	2.0	5.7	4.0	1.7	6.0
Total Commodities	1.0	2.3	3.0	-0.7	5.0
Total Real Estate	4.0	7.3	6.0	1.3	8.0
Private Real Assets	0.0	0.6	2.0	-1.4	4.0

February 29, 2016

Asset Allocation over Time

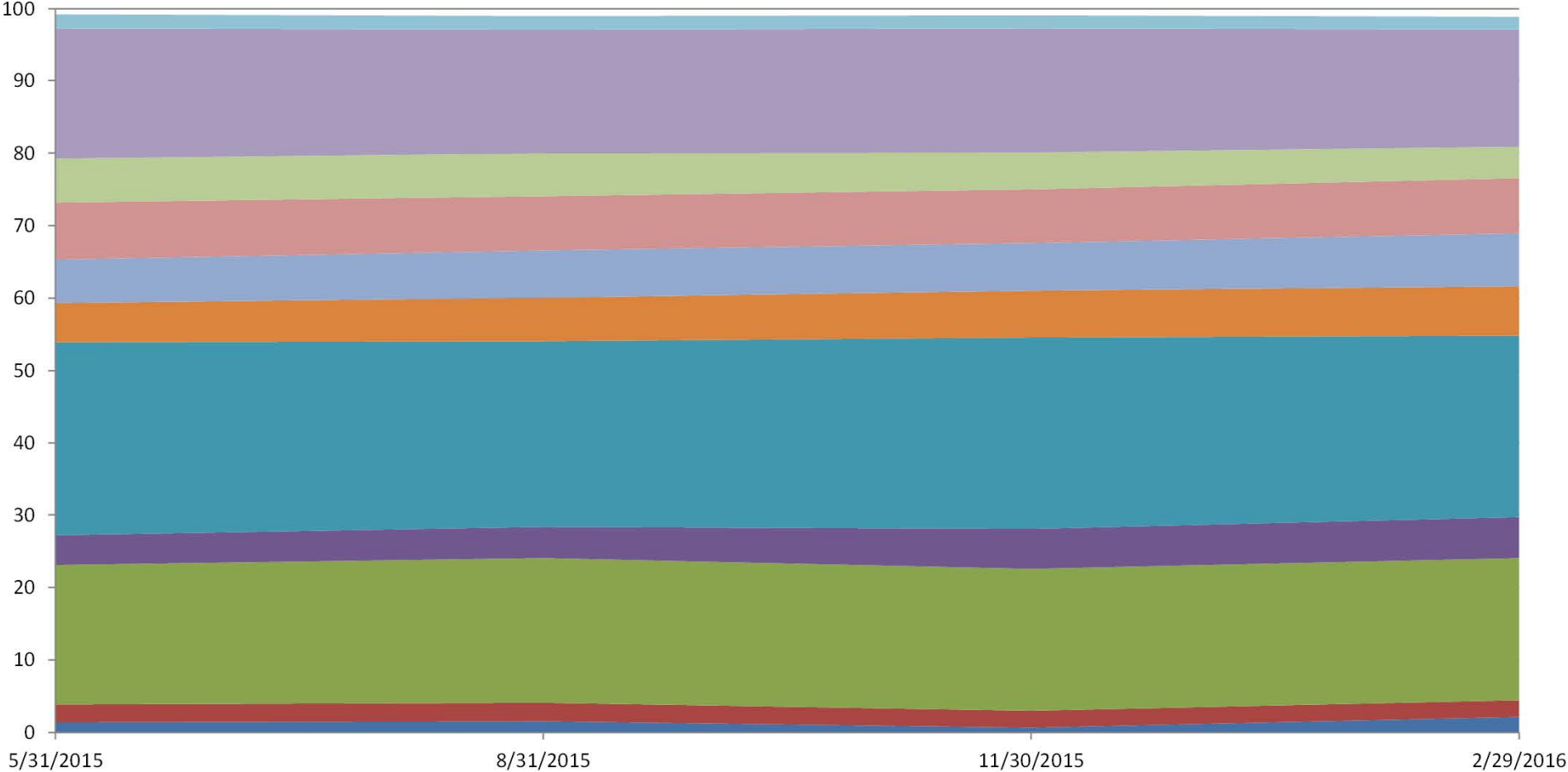


**San Mateo County
Sub-Asset Class Allocation Over Time**



February 29, 2016

Sub-Asset Class Allocation Over Time



- Total Cash
- Total Commodities
- Total Fixed Income
- Total Hedge Fund Composite
- Total Large Cap Equity
- Total Private Equity
- Total Real Estate
- Total Risk Parity
- Total Small Cap Equity
- Total Developed Markets Equity
- Total Emerging Markets Equity



PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS

FEBRUARY 2016
Capital Markets Update

Market commentary

ECONOMIC CLIMATE

- Fourth quarter real GDP was revised up 0.3% to 1.0%, mainly due to an upward revision to inventory growth.
- The consumer was one of the stronger points in the U.S. economy. Both personal income and consumer spending both jumped by 0.5% in the month of January. Consumer spending was bolstered by a 1.2% increase in durable goods, which was positively influenced by strong vehicle sales.
- The economy added 242,000 jobs to nonfarm payrolls in February, beating the consensus expectation of 190,000. Unemployment remained at 4.9%, while the labor participation rate ticked up to 62.9% from 62.7%. Average hourly earnings declined, however, falling 0.1% from January.

DOMESTIC EQUITIES

- Large cap domestic equities continued to slide before paring losses to end the month mostly flat. The S&P 500 Index closed at 1852 on February 10th, its lowest level since March 2014, but rallied to close the month at 1932.
- Better economic data, including higher than expected industrial and manufacturing output in January, in addition to strong consumer readings, may have contributed to the late month rally.
- With 96% of companies in the S&P 500 reporting earnings as of February 26th, the blended earnings decline for the fourth quarter was -3.3%. This marks the first time the index has experienced three consecutive quarters of earnings decline since Q1 through Q3 2009.

DOMESTIC FIXED INCOME

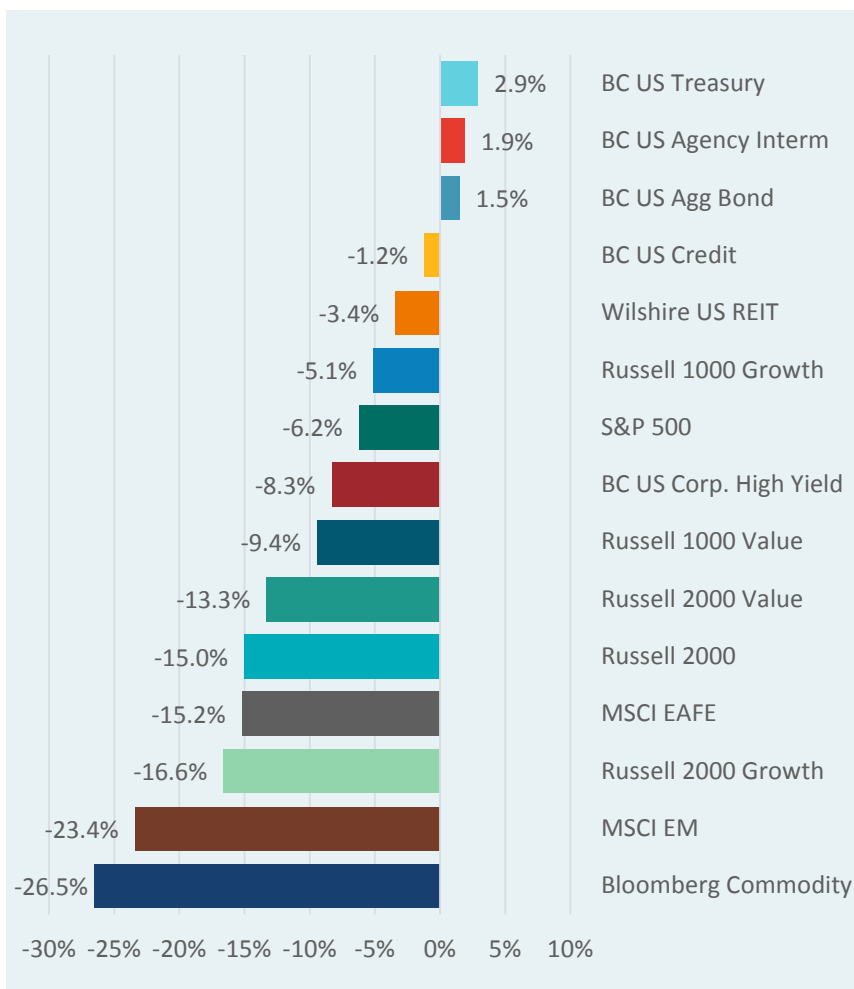
- The U.S. Treasury yield curve continued to flatten in February. Short-term rates increased slightly while longer term rates fell. The 10-year yield dropped 20 bps to finish the month at 1.74%.
- According to the CME Group, the futures market is not pricing in a material probability that the Fed will increase the benchmark interest rate during its March 16th meeting, even with a strong labor market report. The global financial outlook may be weighing on the Fed's decision as the labor market and inflation continues to improve.

INTERNATIONAL EQUITIES

- Japanese equities plummeted at the beginning of the month as investors digested the surprise move by the Bank of Japan (BoJ) to introduce negative interest rates on certain deposits, but recovered slightly and ended with a monthly return of -2.7% (MSCI Japan). The BoJ may add further monetary stimulus in light of weak GDP and inflation data.
- The MSCI Europe Index fell 1.8% during the month. Despite quantitative easing and negative interest rates inflation remains low and prices fell 0.2% in February. Most of the price drop can be attributed to the fall in oil price.
- At the end of the month, the People's Bank of China (PBOC) cut the reserve requirement ratio to 17% in an effort to boost lending and, in turn, growth. This policy signals the PBOC's priority of growth over the stabilization of the yuan because it may lead to further depreciation of the currency. The MSCI China A Shares Index returned -1.6% in February.

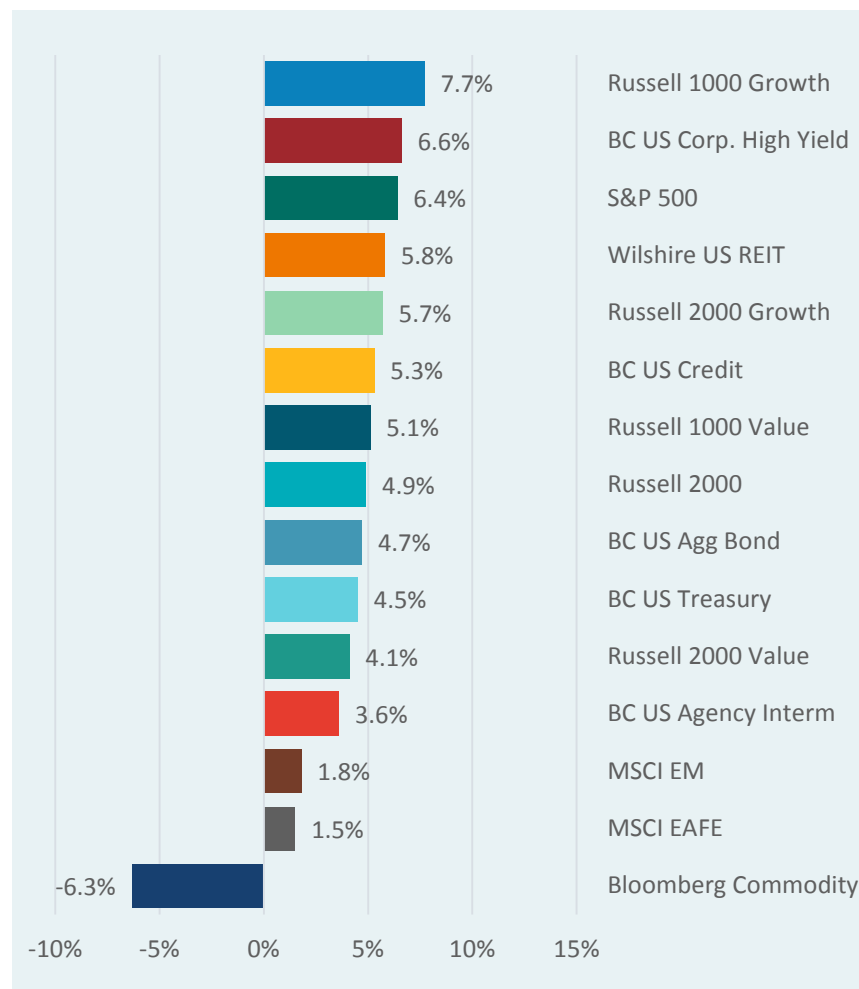
Major asset class returns

ONE YEAR ENDING FEBRUARY



Source: Morningstar, as of 2/29/16

TEN YEARS ENDING FEBRUARY

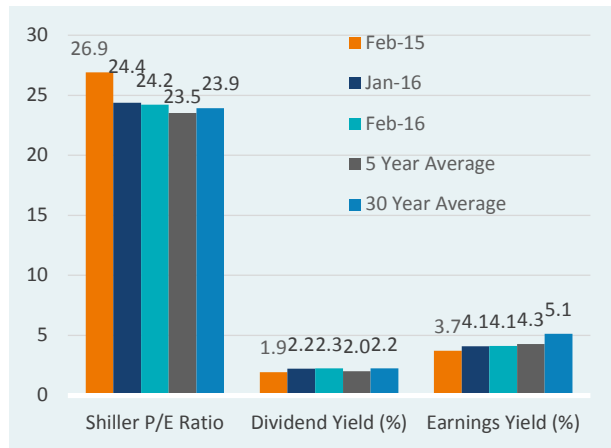


Source: Morningstar, as of 2/29/16

U.S. large cap equities

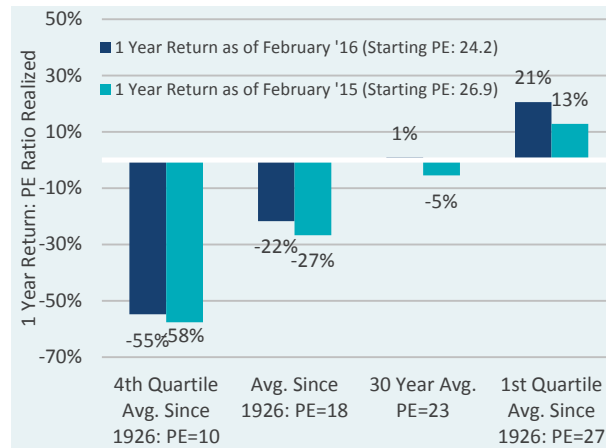
- The S&P 500 fell sharply before rallying to finish the month flat, returning -0.1%. Investors' worries over a global growth slowdown may have been subdued by positive domestic economic data.
- The materials (7.6%) and industrials (4.0%) sectors of the S&P 500 led the rally, while financials (-2.9%) continued underperformance due to a slower expected increase in interest rates.
- The S&P 500 Shiller P/E ratio fell to 24.2, declining for the third straight month. The Shiller has fallen over the past year from 26.9 to 24.2, and is now only slightly above its long-term average of 23.9.
- The forward 1-year P/E ratio fell to 16.2 from 16.9 in February in response to an increase in earnings estimates.

US LARGE CAP (S&P 500) VALUATION SNAPSHOT



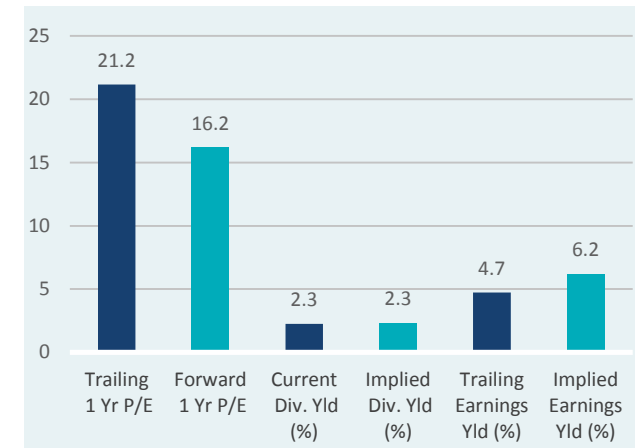
Source: Yale/Shiller, as of 2/29/16

EFFECTS OF CHANGES IN SHILLER PE RATIO



Source: Yale/Shiller, Verus

S&P 500 VALUATION SNAPSHOT



Source: Standard & Poor's, as of 2/29/16

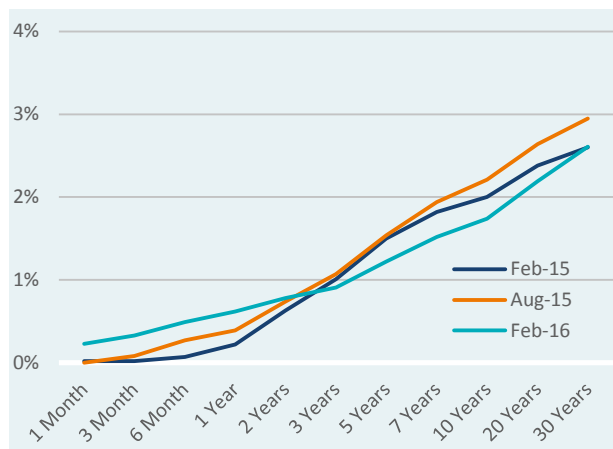
Fixed income

- The U.S. Treasury yield curve continued to flatten in February. Short-term rates rose slightly while long-term rates fell in response to an increased demand for safe assets, especially early in the month. The 10-year yield finished the month at 1.7%, down from 1.9% in January.
- The credit cycle may be turning as Moody's expects global default rates to increase to 4.2% by early

2017, more than double the figure predicted in January 2015.

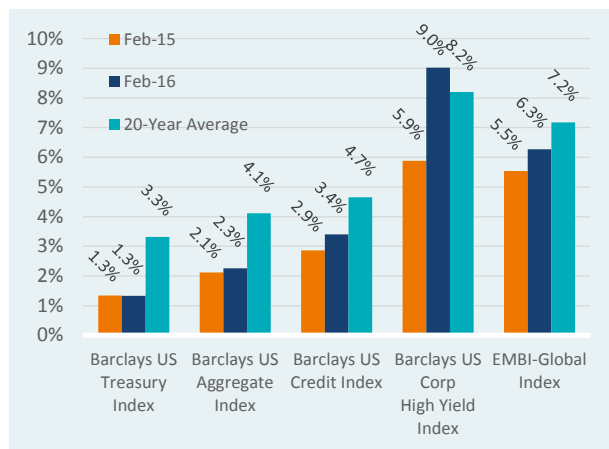
- Inflation expectations in the U.S. remained unchanged during the month of February based on the 5 and 10-year TIPS breakeven rates. The 10-year TIPS breakeven rate has fallen by 41 bps from its level one year ago.

U.S. TREASURY YIELD CURVE



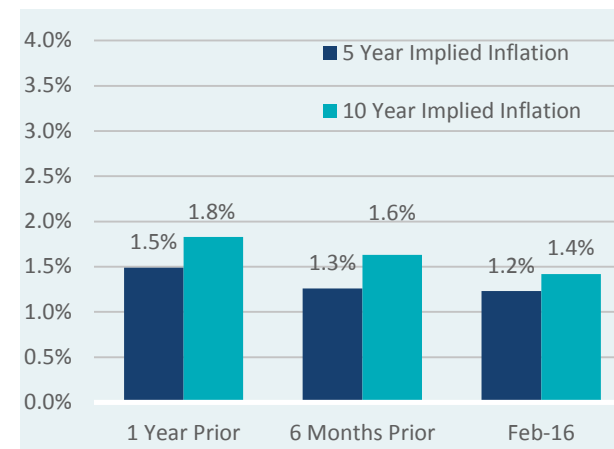
Source: Federal Reserve

NOMINAL FIXED INCOME YIELDS



Source: Ibbotson, JP Morgan

IMPLIED INFLATION (TIPS BREAKEVEN)

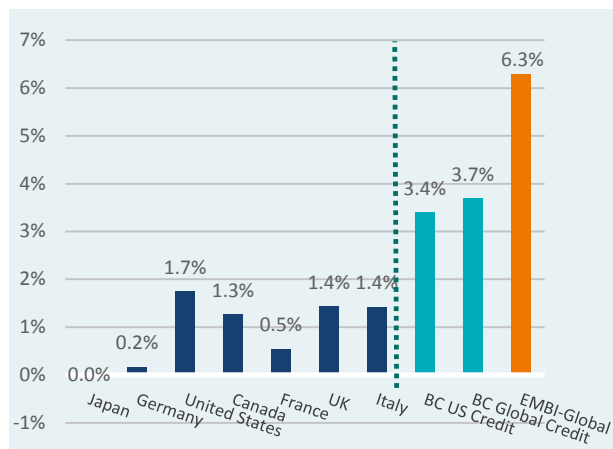


Source: Federal Reserve, as of 2/29/16

Global markets

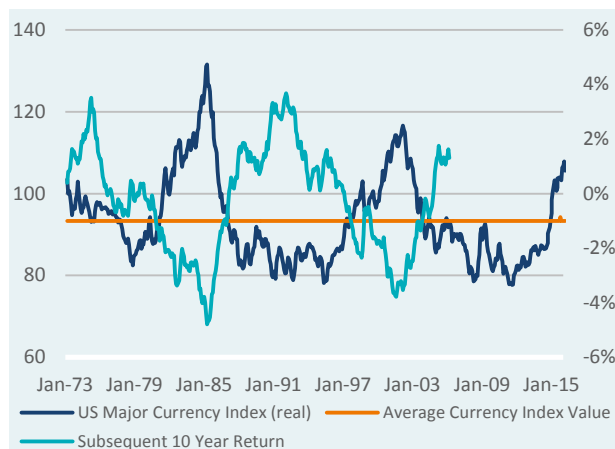
- International developed markets (MSCI EAFE) underperformed both domestic and emerging markets as the MSCI EAFE and MSCI EM returned -1.8% and -0.2%, respectively.
- Global 10-year sovereign yields continued to fall during the month in light of equity market volatility and central bank stimulus measures. As Japan enters a negative deposit rate environment, the 10-year Japanese Government Bond yield fell below zero for the first time ever.
- In the U.K., the pound slumped to a seven-year low on the increased possibility of a UK exit from the European Union. The country will determine its fate in the EU with a referendum on June 23rd.
- The U.S. Dollar Major Currency Index fell during the month, down 2.1% against a basket of major currencies.

GLOBAL SOVEREIGN 10 YEAR INDEX YIELDS



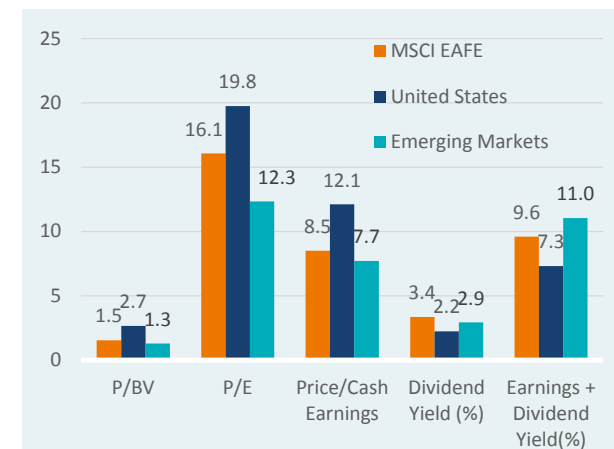
Source: Bloomberg, JP Morgan, as of 2/29/16

U.S. DOLLAR MAJOR CURRENCY INDEX



Source: Federal Reserve, as of 2/29/16

MSCI VALUATION METRICS (3 MONTH AVERAGE)

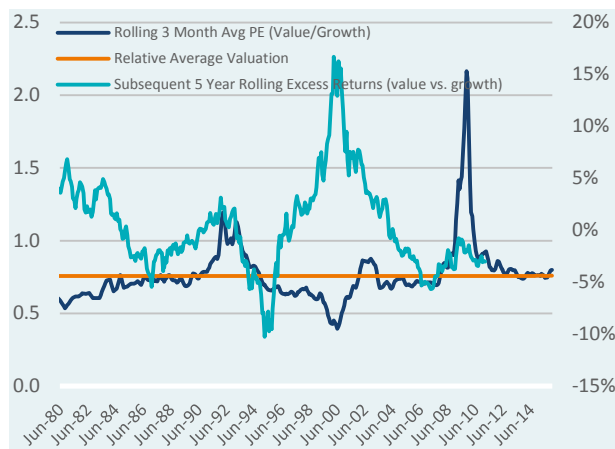


Source: MSCI, as of 2/29/16

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

- Value and growth stocks were flat during the month with both the Russell 1000 Growth Index and Russell 1000 Value Index returning 0.0%.
- The relative PE ratio of value to growth stocks (0.80) continued to track the long-term average (0.76). This metric suggests that although growth stocks have recently outperformed, they appear to be fairly valued relative to value stocks.
- While value stocks have slightly outperformed this year, growth stocks have provided a better risk-adjusted return over nearly all time periods examined relative to value stocks, except over the very long term (20 years).

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



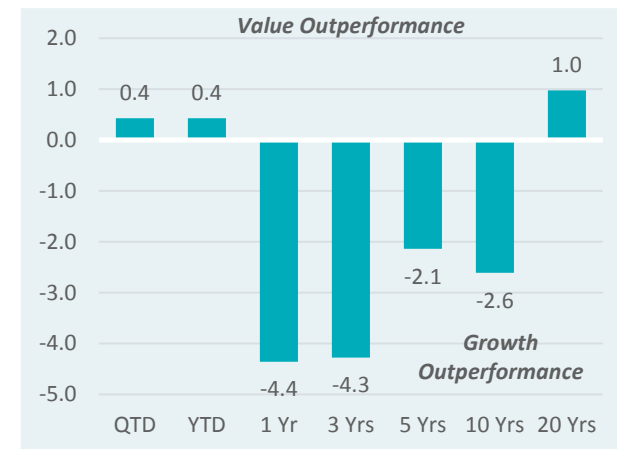
Source: Russell, Bloomberg, as of 2/29/16

U.S. VALUE VS. GROWTH ABSOLUTE PERFORMANCE

	RUSSELL 1000 GROWTH ANNUALIZED RETURN TO DATE %	RUSSELL 1000 VALUE ANNUALIZED RETURN TO DATE %
QTD	(5.6)	(5.2)
YTD	(5.6)	(5.2)
1 YEAR	(5.1)	(9.4)
3 YEARS	12.5	8.3
5 YEARS	10.9	8.8
7 YEARS	17.0	14.2
10 YEARS	7.7	5.1
20 YEARS	7.0	8.0
	SHARPE RATIO	SHARPE RATIO
3 YEARS	1.09	0.75
5 YEARS	0.88	0.71
7 YEARS	1.30	1.16
10 YEARS	0.43	0.25
20 YEARS	0.27	0.37

Source: Morningstar, as of 2/29/16

U.S. VALUE VS GROWTH RELATIVE PERFORMANCE

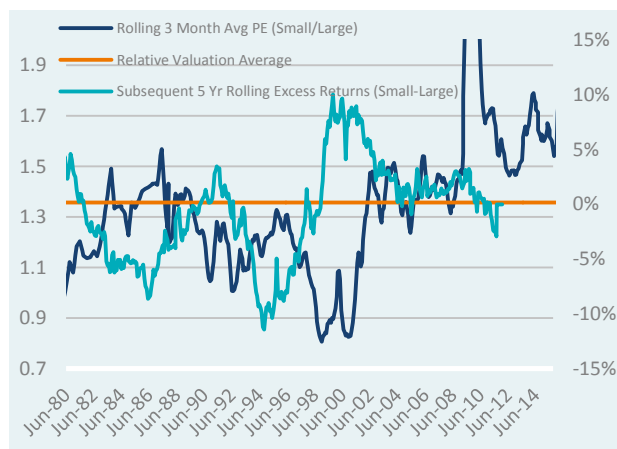


Source: Morningstar, as of 2/29/16

Style tilts: U.S. large vs. small

- Large and small cap equities finished the month close to where they started. The Russell 1000 Index and Russell 2000 Index both returned 0.0% in February.
- The relative P/E ratio of small to large cap stocks at the end of February was 1.86, well above its long-term average.
- The gap in performance between large and small cap equities has continued to increase over all time periods examined, with the Russell 1000 outperforming the Russell 2000 in every time period shown below over the past 20 years.

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



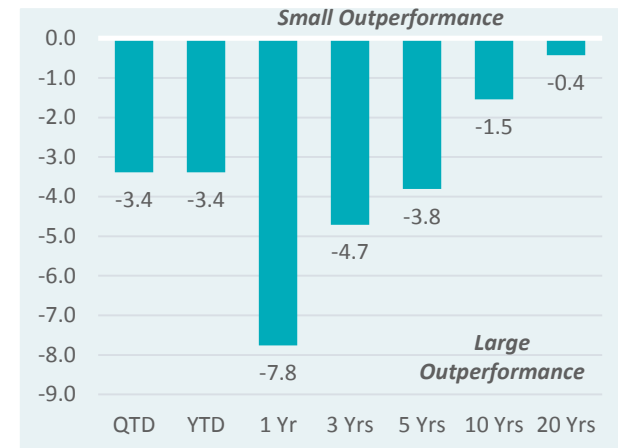
Source: Russell, Bloomberg, as of 2/29/16

U.S. LARGE VS. SMALL ABSOLUTE PERFORMANCE

	RUSSELL 1000 INDEX ANNUALIZED RETURN TO DATE %	RUSSELL 2000 INDEX ANNUALIZED RETURN TO DATE %
QTD	(5.4)	(8.8)
YTD	(5.4)	(8.8)
1 YEAR	(7.2)	(15.0)
3 YEARS	10.4	5.7
5 YEARS	9.9	6.1
7 YEARS	15.6	14.4
10 YEARS	6.5	4.9
20 YEARS	7.8	7.4
	SHARPE RATIO	SHARPE RATIO
3 YEARS	0.94	0.38
5 YEARS	0.81	0.37
7 YEARS	1.25	0.89
10 YEARS	0.35	0.19
20 YEARS	0.35	0.25

Source: Morningstar, as of 2/29/16

U.S. SMALL VS. LARGE RELATIVE PERFORMANCE



Source: Morningstar, as of 2/29/16

Commodities

- The Bloomberg Commodity Index declined for the eighth consecutive month, returning -1.6% in February.
- Several OPEC members and Russia have agreed to freeze oil production at January levels in an effort to stabilize prices. The effectiveness of this plan is questionable as production was at record highs in January and several countries, including Iran, are not on board.

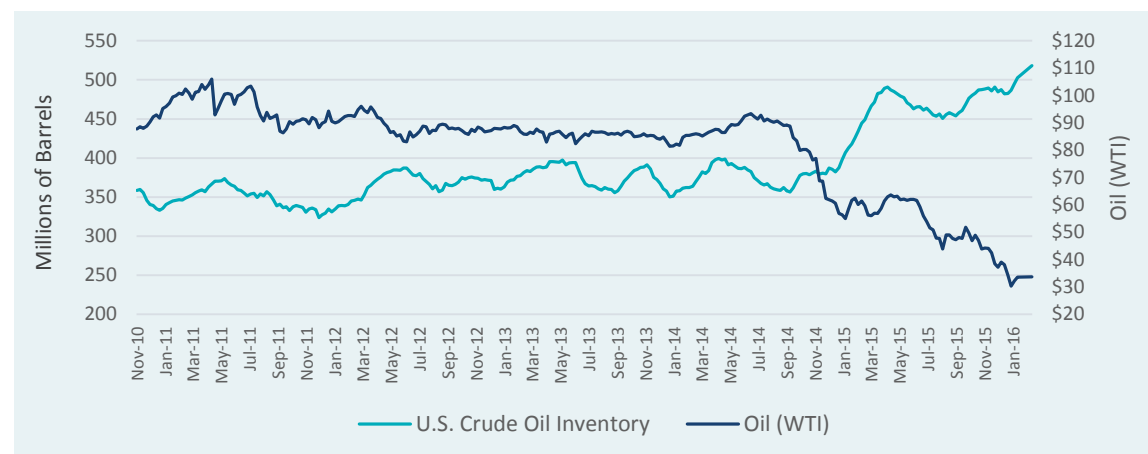
- The oil market is expected to remain oversupplied for the foreseeable future.
- Gold provided another solid month of performance in February as demand for safe haven assets remained strong. The precious metals sub-sector of the Bloomberg Commodity Index was the best performer, returning 9.0% during the month.

INDEX AND SECTOR PERFORMANCE

	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg Commodity	(3.3)	(3.3)	(26.5)	(17.7)	(14.4)	(6.3)
Bloomberg Agriculture	(3.6)	(3.6)	(15.5)	(13.9)	(11.7)	(0.9)
Bloomberg Energy	(15.9)	(15.9)	(49.2)	(31.2)	(24.2)	(20.6)
Bloomberg Grains	(2.2)	(2.2)	(17.2)	(15.6)	(10.3)	(0.3)
Bloomberg Industrial Metals	1.9	1.9	(22.1)	(14.7)	(15.2)	(3.5)
Bloomberg Livestock	2.3	2.3	(6.8)	(1.6)	(3.7)	(6.4)
Bloomberg Petroleum	(12.4)	(12.4)	(48.2)	(32.1)	(20.9)	(13.0)
Bloomberg Precious Metals	14.2	14.2	(2.0)	(11.4)	(6.5)	6.6
Bloomberg Softs	(7.8)	(7.8)	(12.4)	(14.4)	(17.9)	(5.9)

Source: Morningstar, as of 2/29/16

WTI CRUDE OIL VS. U.S. TOTAL CRUDE OIL INVENTORY



Source: Bloomberg, as of 2/29/16

Appendix

Periodic table of returns

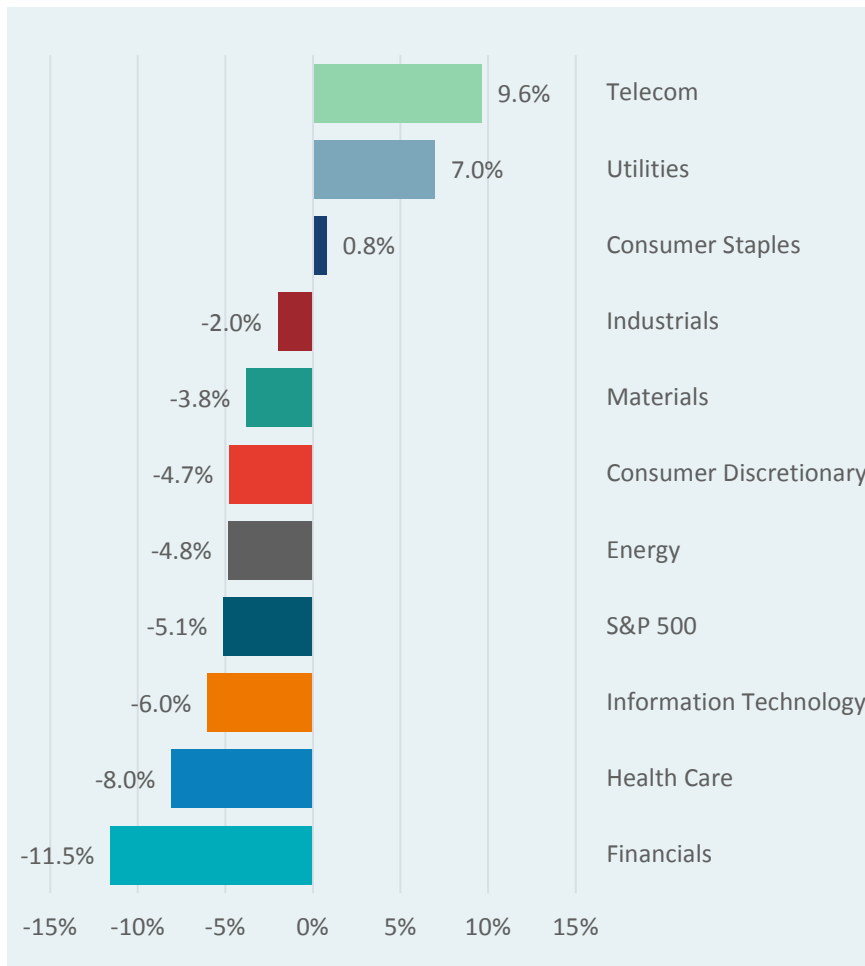
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	YTD	5-Year	10-Year
US Bonds	74.8	16.6	38.4	23.2	35.2	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	10.1	2.1	12.2	7.8
60/40 Global Portfolio	32.9	8.1	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	0.5	10.9	7.7
Cash	26.3	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	0.0	9.9	6.5
Commodities	23.8	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	-3.3	8.8	5.7
Hedge Funds of Funds	19.3	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	-3.8	6.9	5.1
Large Cap Value	18.9	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	-5.2	6.1	4.9
Large Cap Equity	18.1	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	-5.4	5.3	4.7
Large Cap Growth	13.4	-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	-5.6	3.6	4.1
Small Cap Value	10.2	-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	-6.1	3.0	4.0
Emerging Markets Equity	9.7	-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	-6.6	1.1	1.8
Small Cap Equity	3.1	-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	-8.8	0.6	1.6
International Equity	2.9	-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	-8.9	0.0	1.5
Small Cap Growth	1.4	-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	-11.5	-5.4	1.0
Real Estate	-1.1	-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	N/A	-14.4	-6.3

- Large Cap Equity
- Small Cap Growth
- Commodities
- Large Cap Value
- International Equity
- Real Estate
- Large Cap Growth
- Emerging Markets Equity
- Hedge Funds of Funds
- US Bonds
- 60% MSCI ACWI/40% BC 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, BC Agg, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BC Global Bond. NCREIF Property performance data as of 12/31/15.

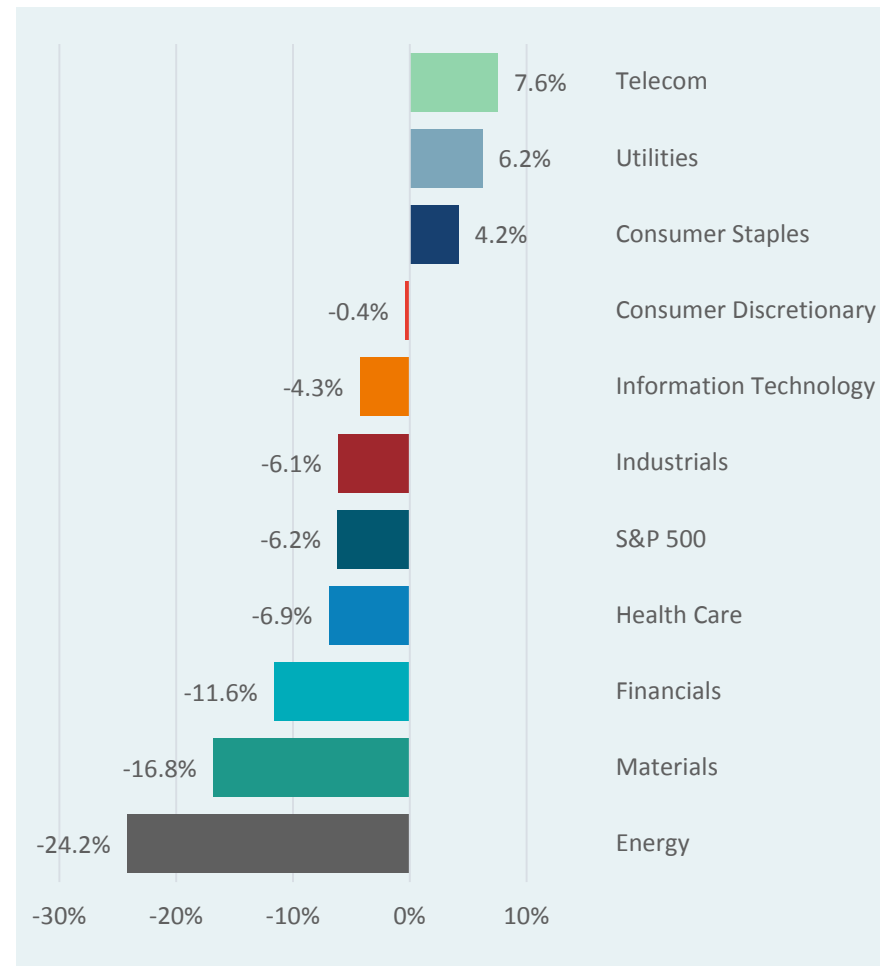
S&P 500 and S&P 500 sector returns

QTD



Source: Morningstar, as of 2/29/16

ONE YEAR ENDING FEBRUARY



Source: Morningstar, as of 2/29/16

Detailed index returns

DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index							
S&P 500	(0.1)	(5.1)	(5.1)	(6.2)	10.8	10.1	6.4
S&P 500 Equal Weighted	1.1	(4.5)	(4.5)	(9.1)	10.5	10.0	7.6
DJ Industrial Average	0.7	(4.7)	(4.7)	(6.5)	8.1	8.9	6.9
Russell Top 200	(0.5)	(5.4)	(5.4)	(5.4)	11.0	10.3	6.4
Russell 1000	(0.0)	(5.4)	(5.4)	(7.2)	10.4	9.9	6.5
Russell 2000	(0.0)	(8.8)	(8.8)	(15.0)	5.7	6.1	4.9
Russell 3000	(0.0)	(5.7)	(5.7)	(7.8)	10.1	9.6	6.4
Russell Mid Cap	1.1	(5.5)	(5.5)	(11.3)	9.1	8.9	6.9
Style Index							
Russell 1000 Growth	(0.0)	(5.6)	(5.6)	(5.1)	12.5	10.9	7.7
Russell 1000 Value	(0.0)	(5.2)	(5.2)	(9.4)	8.3	8.8	5.1
Russell 2000 Growth	(0.7)	(11.5)	(11.5)	(16.6)	7.0	6.9	5.7
Russell 2000 Value	0.7	(6.1)	(6.1)	(13.3)	4.4	5.3	4.1

INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
MSCI EAFE	(1.8)	(8.9)	(8.9)	(15.2)	0.4	0.6	1.5
MSCI AC World ex US	(1.1)	(7.9)	(7.9)	(17.4)	(2.2)	(1.3)	1.4
MSCI EM	(0.2)	(6.6)	(6.6)	(23.4)	(8.9)	(5.4)	1.8
MSCI EAFE Small Cap	(0.1)	(8.0)	(8.0)	(5.4)	5.2	3.9	3.1
Style Index							
MSCI EAFE Growth	(1.7)	(8.0)	(8.0)	(10.5)	2.2	2.2	2.7
MSCI EAFE Value	(1.9)	(9.9)	(9.9)	(19.8)	(1.5)	(1.1)	0.2
Regional Index							
MSCI UK	(0.9)	(6.8)	(6.8)	(18.1)	(1.0)	0.7	1.8
MSCI Japan	(2.7)	(10.7)	(10.7)	(9.9)	3.9	1.1	(0.6)
MSCI Euro	(2.8)	(9.2)	(9.2)	(17.3)	1.0	(0.9)	0.5
MSCI EM Asia	(1.3)	(8.5)	(8.5)	(21.3)	(4.4)	(1.5)	4.1
MSCI EM Latin American	3.8	(1.0)	(1.0)	(30.2)	(19.9)	(14.1)	(0.6)

FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
BC US Treasury US TIPS	1.1	2.6	2.6	(0.8)	(1.2)	2.9	4.2
BC US Treasury Bills	0.0	0.1	0.1	0.1	0.1	0.1	1.3
BC US Agg Bond	0.7	2.1	2.1	1.5	2.2	3.6	4.7
Duration							
BC US Treasury 1-3 Yr	0.1	0.7	0.7	1.0	0.7	0.8	2.5
BC US Treasury Long	3.0	8.2	8.2	4.0	6.1	9.7	7.6
BC US Treasury	0.9	3.0	3.0	2.9	2.1	3.5	4.5
Issuer							
BC US MBS	0.4	1.7	1.7	2.5	2.6	3.2	4.7
BC US Corp. High Yield	0.6	(1.0)	(1.0)	(8.3)	0.7	4.1	6.6
BC US Agency Interm	0.2	1.3	1.3	1.9	1.3	1.9	3.6
BC US Credit	0.8	1.4	1.4	(1.2)	2.0	4.5	5.3

OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Index							
Bloomberg Commodity	(1.6)	(3.3)	(3.3)	(26.5)	(17.7)	(14.4)	(6.3)
Wilshire US REIT	(0.8)	(4.7)	(4.7)	(3.4)	8.4	9.6	5.8
Regional Index							
JPM EMBI Global Div	(0.2)	(0.2)	(0.2)	0.1	1.4	5.4	6.7
JPM GBI-EM Global Div	1.4	1.8	1.8	(12.5)	(9.5)	(3.1)	3.9

Source: Morningstar, as of 2/29/16

Notices & disclosures

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SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 22, 2016

Agenda Item 6.2

TO: Board of Retirement

FROM: Doris Ng, 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 and the transition from the prior custodian, State Street, was completed by September 2014.

Discussion

On March 3rd, SamCERA staff held the annual review meeting in SamCERA's office for Northern Trust. Gary Guibert, Patrick Mauloff, Patrick Fitzgibbons and Brian McNamura attended from Northern Trust.

The meeting lasted approximately 2 hours, and consisted of a firm/organizational update, global custody overview, a service performance review and a review of the upcoming GASB 72 requirements to be implemented for the upcoming June 2016 fiscal year. In addition, Northern Trust reviewed some of the latest enhancements rolled out in their Risk Analytics area.

Our current Account Manager at Northern Trust, Patrick Fitzgibbons, has transitioned to another position within the organization, but has remained to serve on our account until his replacement is announced, which is expected over the coming weeks. 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 2016

THE FREEDOM TO FOCUS ON WHAT REALLY MATTERS



NORTHERN TRUST'S RESPONSE
TO THE
ANNUAL REVIEW
QUESTIONNAIRE

FOR

**San Mateo County
Employees'
Retirement
Association -
SamCERA**

March 2016



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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.

2015

- On June 9, 2015, Northern Trust announced several leadership changes designed to enhance opportunities for strategic growth, effective June 15, 2015:
 - ◆ Dave Fox Jr., former Head of Americas Region, Corporate & Institutional Services (C&IS), was made Head of the Global Family & Private Investment Offices (GFO) business, replacing Jeff Kauffman.
 - ◆ Peter Cherecwich became Head of the Americas Region of C&IS, while retaining his role as Head of Global Fund Services (GFS).
- On June 22, Northern Trust announced a leadership change to establish a strong governance framework overseeing capital management initiatives, effective immediately:
 - ◆ Joyce St. Clair, former Enterprise Operations President, assumed the newly created role of Chief Capital Management Officer.

2014

- On August 4, 2014, Northern Trust announced several leadership changes designed to enhance opportunities for strategic growth, effective September 1, 2014:
 - ◆ Jana Schreuder, former President of Wealth Management, assumed the role of Chief Operating Officer. Bill Morrison continued to serve as President.
 - ◆ Steve Fradkin, former President of Corporate & Institutional Services, assumed the role as President of Wealth Management.
 - ◆ Mike O'Grady, former Chief Financial Officer, assumed the role as President of Corporate & Institutional Services (C&IS).
 - ◆ Biff Bowman, former Executive Vice President, Human Resources, assumed the role as Chief Financial Officer.



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)
2015	129	\$274.9	2015 YTD	72	\$46.0
2014	92	\$184.6	2014	24	\$54.7

CHANGE IN ASSETS

As of December 31, 2015, Northern Trust had 2,181 institutional trust and custody clients with approximately \$5.57 trillion in assets.

As of December 31, 2014, Northern Trust had 2,134 institutional trust and custody clients with approximately \$5.45 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.

LIST OF SERVICES AVAILABLE

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
- **Reporting**: Provide timely and comprehensive reports on portfolio holdings in base and local currencies
- **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.
- **Northern Trust Asset Management (NTAM):** NTAM is a global, multi-asset class investment manager serving institutions and individuals worldwide.
- **OCIO:** Achieve good governance practices with the use of an outsourced CIO (OCIO) mandate.

MASTER TRUST/MASTER CUSTODY – STAFF FIGURES

As of December 31, 2015, Northern Trust had 16,455 total active employees worldwide. Of this figure, 11,285 individuals are dedicated to supporting our worldwide institutional asset servicing business. We have broken this figure down by functional category below.

Department	Total
Accounting	610
Alternative Assets	689
Asset Coding & Pricing	103
Asset Servicing	1,252
Banking	342
Client Servicing	417
Executive	84
Finance	374
Foreign Exchange	397
Human Resources & Training	289
Investment Manager Servicing (GFS)	4,020
Investment Risk & Analytical Services (IRAS)	344
Legal	107
Marketing/Business Development	137
NTSI/Brokerage	67
Product Management & Support	124
Risk Management	633
Securities Lending	73
Technology & Other Operations Support	<u>1,223</u>
Total	11,285



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

External oversight and monitoring occurs in the form of regulatory examinations and reports, as well as tests and reports completed by the Corporation's independent external auditor, KPMG. The results of all external reviews are reported to Northern Trust's Board of Directors.

Highlights of these activities are described below:

- **Regulatory Examinations.** Northern Trust is examined on a regular basis by the Federal Reserve Bank of Chicago, Illinois Department of Financial and Professional Regulation; Federal Deposit Insurance Corporation, Securities and Exchange Commission, Prudential Regulation Authority (PRA), Financial Conduct Authority (FCA), and various other domestic and foreign regulatory agencies.

Regulatory examination findings are reviewed with our Internal Audit Committee and other appropriate Management to facilitate the prompt resolution of any findings.

- **Independent Audit Review.** 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 Exhibit 1 for a copy of 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, ACE, Great American, CNA. The Bankers Blanket Bond covers criminal acts of officers and employees, loss of property (cash-securities) through burglary, robbery, false pretenses, mysterious disappearance, in-transit, on premises, 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) for the Named Insured's Plans. This policy is required for FDIC insured institutions. This policy expires June 1, 2016. Lead Policy #81865905
- **Electronic Computer Crime Policy.** USD \$250 Million limit. Insured with Chubb, AIG, Houston Casualty, ACE, Great American, CNA, QBE, Berkshire Hathaway, Syndicates of Lloyds of London, 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 June 1, 2016. Lead Policy #81944186

- **Excess Bond and Computer Crime Policy.** USD \$100 Million limit. Insured with Chubb, Liberty, Zurich, Houston Casualty, Axis, ACE, CNA, Great American, Syndicates of 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 June 1, 2016. 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 June 1, 2016. Policy #FS1590403.

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 coverage USD \$50Million insured through Lloyds of London Syndicates; USD \$700Million for All Risk Premise & Transit coverage, insured through Lloyds of London Syndicates. Mail Insurance Policy, insured through Travelers Casualty & Surety Co. of America, USD\$20Million limit. These policies expire 10/31/16.

- **Bankers Professional Liability Errors & Omissions.** USD \$100 Million limit, insured with CNA, Zurich, Chubb, Liberty, Houston Casualty, Axis, Arch, Ace, 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 June 30, 2016. Lead Policy #267890702
- **Directors & Officers Liability.** USD \$125 Million limit and Side A Liability USD \$125 Million limit insured with, CNA, ACE, 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 June 30, 2016. Lead Policy #267890702

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 Exhibit 2.



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 Exhibit 3.

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

From inception of the relationship, the same team within Northern Trust has been servicing SamCERA. Patrick Fitzgibbons has accepted another role within Northern Trust, but continues to be the day-to-day contact for SamCERA. We will not make a change or introduce a new Relationship Manager until we are certain that the replacement is well trained and fully prepared to succeed Patrick.

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.
 - ◆ 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 see Exhibit 4 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 102 global markets with over 450,000 different asset types, holding more than \$4.1 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 Processing

- 98% 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

Auto-audit

- 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
- Feeds from data vendors with auto-updates, ensuring accuracy



Interfaces

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

Trade Settlement

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

Trade Capture

Automated reconciliation with depositories and investment managers using SmartSteam's TLM
Daily reconciliation with depositories
Reconciliation with investment managers can be daily, weekly, monthly, or quarterly

Asset Setup

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)

Communication

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, PDF, or RPT files



RESPONSIBILITY FOR VARIOUS STAGES OF THE PROCESS

Rick Waddell (fhw)
Chairman/CEO of Northern Trust Company

Peter Cherecwich (pbc1)
Head of North America

Jeffrey Porta (jmp6)
Manager, Public Funds Division
(312) 557-0474

Gary Guibert (gjj1)
Custody Client Executive
(312) 444-5913

Day-to-day Contacts

Patrick Fitzgibbons (pjf2)
Custody Account Administrator
(312) 557-1819

PFAdmin@ntrs.com
Back-up Account Manager
Muriel Gutierrez (mg4)
Account Administrator
Management
(312) 557-1272

Don Anderson (dsa3)
Sec. Lending Relationship
Manager
Patrick Mauloff (pm50)
Investment Performance Returns
(312) 557-0983

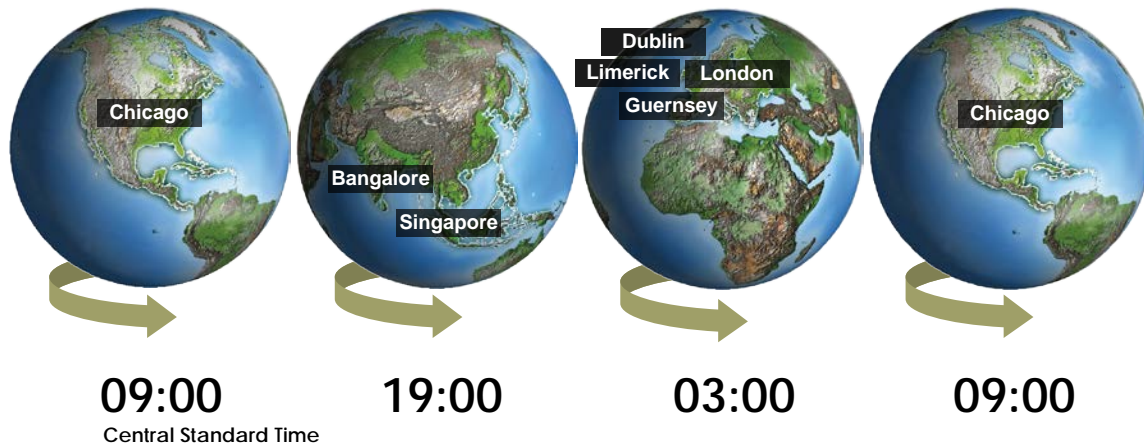
Custody Book of Record	Audited Accounting Record
Daily Core Custody Post Trade Compliance Cash Management Securities Lending Foreign Exchange Global Investments	Monthly Accounting Reporting Consolidated Reporting Annual Audit Reporting GASB Reporting and Consulting CAFR Support Automated Data Feed



VALUE ADDED BY NORTHERN'S PROCESSING AND ADVANTAGES OF GLOBAL OPERATION

GLOBAL, ROUND-THE-CLOCK SUPPORT

Northern Trust's use of a single, worldwide technology platform allows us to provide global, 24x7 trade and operations support to clients worldwide. As demonstrated by the following global chart, our processing centers are located in Chicago, London, Singapore, and Bangalore work within each respective time-zone to scrub data for 24-hour review.



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

Relationship managers average 19 years of service to Northern Trust, and are part of our 417 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 U.S. proxy and ISS for non-U.S. 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 Exhibit 5 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:

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.

UNIX/LINUX

There are several operating system alternatives for Unix/Linux applications - Red Hat Linux ES 5.0, IBM AIX 5.3, or Sun Solaris 10.

For the Red Hat Linux (x86) 64-bit operating system, we have standardized on the IBM xSeries hardware platform. This is our preferred platform for horizontally scaled applications and databases (i.e. spread across multiple smaller systems for high availability and where additional servers are added for growth).



For the IBM AIX operating system, we use IBM pSeries hardware on the POWER5 and Power 6 architectures. This is our preferred platform for vertical scaling of large applications or databases, which must run on a single server and grow by adding CPUs.

For the Sun Solaris operating system, we support Sun Microsystems servers and Fujitsu PRIMEPOWER servers based on the SPARC processor.

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.

Our strategic Unix/Linux database platforms are Oracle 11g on Red Hat Linux ES, Solaris and AIX and Oracle RAC on Solaris.

MICROSOFT

Northern Trust currently supports Windows 2008 64-bit for application servers, IIS version 7.0 for web servers and MS-SQL 2008 for database servers.

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 onto a single host using VMWare ESX 4.x

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. Data is kept in synch by Hitachi Mirroring.

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.

OS/400

Northern Trust's iSeries (AS/400) environment currently runs i5/OS Version 6 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.

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 (Sungard)	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 lawsuits 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

We also notify investment managers of class action settlements via its web-based system. As soon as funds from the claimed settlement are received, we 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 lawsuits upon request, we supply data to providers who track pending lawsuits 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, we notify 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 with 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 information utilize 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.

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.



We believe that all parts of our procedures are functioning well. "Alternative" assets continue to cause issues which, industry-wide, are part of a manual process that involves collecting manager statements and updating the accounting files accordingly. Timely receipt of each statement is critical, as is the need of Northern to update the files accurately.

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

All performance measurement and analysis is provided in-house through our **Investment Risk & Analytical Services (IRAS)** group. The unit is staffed with 344 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 average more than 15 years of experience. 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 | ▪ ISS |
| ▪ Bloomberg | ▪ Evestment |
| ▪ The Burgiss Group | ▪ Morningstar |
| ▪ Compustat (S&P) | ▪ MSCI Barra |
| ▪ Datastream International | ▪ Reuters |
| ▪ Frank Russell | ▪ RIMES Technologies |
| ▪ Frontier Analytics | ▪ StatPro |



- FTSE Group
- Informa
- Interactive Data Fixed Income Analytics
- 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 30 years of performance analysis experience and innovation with our robust 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 344 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 average more than 15 years of experience and typically have prior experience working at investment management firms, outside consulting firms, plan sponsor organizations, and other areas within Northern Trust.

Clients receive a dedicated IRAS Consultant who creates a performance analysis program tailored to the client’s specific needs. The IRAS Consultant also provides ongoing professional support to explore fully the power and utility of our performance product range, providing customized interpretation of the results and presenting findings to the client’s management and boards.

Recognizing need for specialists in a complex investment environment, we also have three specialist teams dedicated to alternative investment, manager compliance, and ex-ante risk analysis, allowing us bring additional resources to bear on the relationship, when appropriate.

- **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.

We make significant investments in our systems to continue to provide the most comprehensive suite of on-line tools and information available. Any new capability we develop for any client in any location worldwide is at once available to all clients.

Our performance module supports tremendous flexibility and customization to properly analyze any investment strategy regardless of mandate or the investment program structure. Our system provides numerous return options, more characteristics, market-orientated categories, flexible attribution, and a large library of indices, which means greater flexibility in analyzing the risk and performance of your investments.

- **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:

- ◆ 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 creating the standard universes listed above, our universe module can support requests for parameter-driven custom universes. Clients can also create custom universes on-the-fly on Passport®.
- ◆ 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%). Another useful feature we have added to our attribution reporting is the ability to replace the index with a portfolio (portfolio vs. portfolio attribution), which makes it easier to compare differing results of two fund managers with the same mandate.
- ◆ 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

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, **Corporate and Institutional Services (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. Supplemented by 18 additional worldwide offices, 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

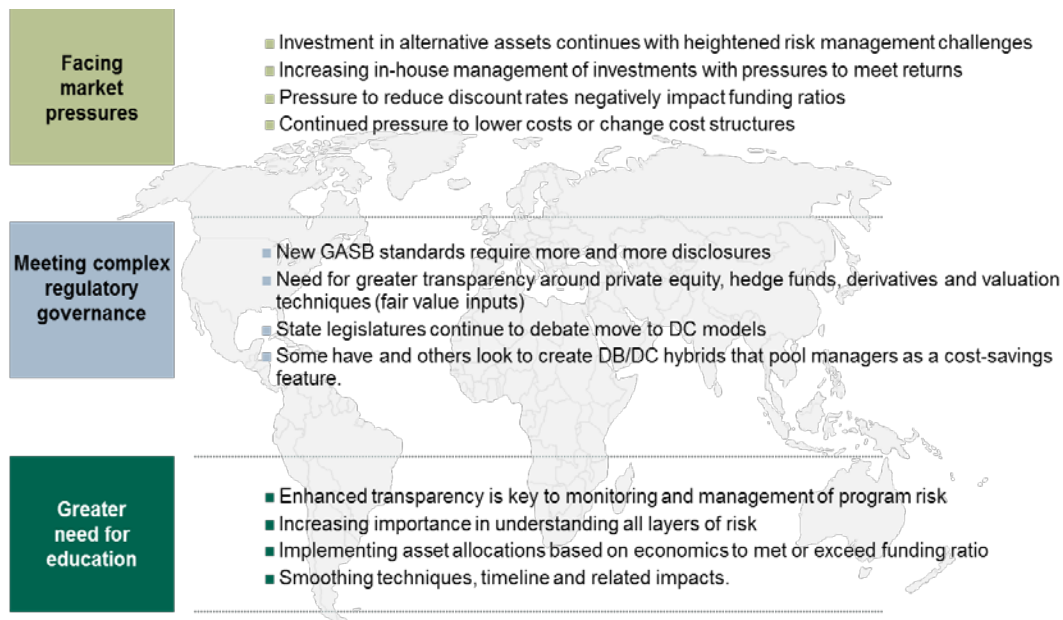
- Big Data - Cloudera Hadoop)
- Software Build Capabilities - GIT, Atlassian
- Fraud Behavioral Analytics - Guardian Analytics
- Private Cloud Compute - VCE Vblock
- Next Generation Virtual Desktop - Nutanix

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, although many such as those referencing 401(k)/457 defined contributions will not necessarily correlate with SamCERA’s profile.



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.t.	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 SamCERA. 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 for global markets and how Northern is positioned to support its US based clients.

Other periodic presentations to staff and/or the Board to share industry experience. Examples include economic trends, ESG and Hedge Funds.

General product updates – system enhancements.



Confidentiality Statement

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.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 22, 2016

Agenda Item 6.3

TO: Board of Retirement

Lilibeth Dames

FROM: Lilibeth Dames, 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 3rd, SamCERA staff held the annual review meeting in SamCERA's office for the Parametric Minneapolis Overlay strategy. Jack Hansen, CIO, 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.

There were three announced departures in the organization, however, they do not impact the investment strategy of the overlay program. Overall program results were positive for the year, and in-line with longer-term value-add projections. From inception through January 2016, the overlay activities added approximately \$11.8 million in gains, or 15 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 2016

Date of meeting: 3/3/16

Location: SamCERA Office

Manager Representative(s)

Jack Hansen, CFA (CIO)

Verus Representative(s)

Margaret Jadallah (Managing Director)

Client Representative(s)

Mike Coultrip (CIO), 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. SamCERA's overlay program has added 15 basis points to portfolio returns since inception, very much 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.

Parametric's firm-wide assets under management are currently \$152 billion with \$65 billion in overlay strategies managed out of Minneapolis. Over the past year, 17 accounts and \$832 million were gained, while 8 accounts and \$184 million were lost. Gains represent growth in basic overlay programs, akin to SamCERA's, and an increased interest in currency hedge programs. Losses have been relatively low with the exception of the post-2008 period where cash outperformed other asset classes and, thus, cash overlay strategies were challenged.

Aaron Singleton, Parametric's CFO, has announced his plan to leave Parametric in mid-2016 after ensuring a smooth transition. His duties will be integrated into Eaton Vance Corp. David Stein retired from Parametric on October 31, 2015 after 19 years as CIO. Leadership changes were made in November 2014 to plan for his retirement. These changes do not impact the management group of the Minneapolis investment center.

Investment Team

The Minneapolis investment center's team is deep with 35 investment professionals and 80 team members in total. Minneapolis CIO Jack Hansen has been with the firm for more than 30 years. Parametric uses a team approach whereby no one individual manages a client portfolio.

Over the past year, Brad Berggren, Director and CIO of Parametric's Westport investment center announced his retirement from the firm as of October 2016 to pursue activities outside the industry. Kip Chaffee, Managing Principal in Minneapolis and Tom Lee, Managing Director, Investment Strategy and Research for Minneapolis, now co-lead Westport's options-based strategies which are geared towards the retail market. The Westport team remains intact. These personnel changes will result in the Westport office becoming more integrated with Minneapolis. This warrants monitoring to ensure that the integration process does not become too much of a distraction from day-to-day investment activities in Minneapolis.

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.

The firm continues to enhance its systems and infrastructure. Their proprietary risk management system incorporates accounting, trading and portfolio management functions. A major upgrade to risk management was last made after 2008.

Currently, SamCERA has its futures account at Goldman Sachs. Due to new regulations stemming from the Dodd-Frank Act, the fund may need to set up a new futures account elsewhere to be categorized so that margin is cheaper to finance. This has to do ensuring that the account is attributed to a public fund (SamCERA) vs. being attributed to Goldman Sachs.

Performance & Positioning

As stated above, SamCERA's overlay program has produced a since inception return of 15 bps at the portfolio level using its synthetic index overlay approach. 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 rebalancing events in 2015 given above average volatility in the market. There were also two large inflows in January and July.

Asset classes included in the synthetic overlay are US large cap (Russell 1000), US small cap (Russell 2000), international equity (MSCI ACWI ex-US), and Fixed Income (Barclays Aggregate). Russell 2000 futures contracts have been unusually cheap and have added more alpha than normal.

As SamCERA reduces small cap exposure to market weight (90% large cap and 10% small cap), Parametric will help to facilitate the change as part of its overlay service.

Conclusion

Verus-SF continues to have full confidence in Parametric's overlay capabilities and the Minneapolis team implementing SamCERA's program. Minneapolis CIO Jack Hansen remains actively involved in the firm and with SamCERA's portfolio; however, we should start to be more cognizant of succession planning given that he has been with Parametric for over 30 years. 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 22, 2016

Agenda Item 6.4

TO: Board of Retirement

FROM: Doris Ng, Investment Analyst 

SUBJECT: Report on Proxy Voting Summary For Quarter Ended December 31, 2015

Staff Recommendation

Accept the Proxy Voting Summary Report for the quarter ended December 31, 2015.

Background

Consistent with SamCERA's Investment Policy, investment managers are delegated authority for the voting of proxies. Managers have been providing staff with quarterly reports on all proxies cast.

The summary report is a more streamlined and robust aggregation of the various reports and shows an overview of the proxy voting conducted by SamCERA's domestic and international equity managers on SamCERA's behalf for the period. On the first page, we show summary statistics of the proposals voted and those cast in favor of or against management's recommendation or against the proxy advisor's recommendation.

As the majority of the proxy proposals are typically cast in favor of management's recommendation, we drill into the proposals cast against management's or proxy advisor's recommendation at the bottom of the first page and categorize by proposal type. The following pages are a compilation of the voting rationale provided by the respective managers for these proposals.

Discussion

Staff will introduce the new report at the Board meeting and also seek feedback on the presentation and format of the data or other aspects of the report. Staff propose providing the report to the Board quarterly as part of the Consent Agenda on a go-forward basis.

Attachment

Proxy Voting Summary Qtr Ended 12-31-2015

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 22, 2016

Agenda Item 6.5

TO: Board of Retirement



FROM: Michael Coultrip, Chief Investment Officer

SUBJECT: Update on U.S. Core Small-Capitalization Equity Manager Search

Staff Recommendation

Provide direction to staff regarding sending due-diligence questionnaires to the recommended five small-capitalization core equity short-listed products for further consideration.

Background

During the strategic discussion of investments issues that took place during the December 2015 Board meeting, staff discussed various ways to simplify the domestic equity structure. One of the first steps that was discussed was to combine the assets from our two existing style-specific small-capitalization equity managers into a new, to-be-identified core small-capitalization equity strategy. This would reduce the number of managers in our domestic equity program by one, reducing the total number from 6 to 5 products.

Discussion

During its February meeting, the Board instructed staff and consultant to develop a short-list of U.S. core small-capitalization managers for further review, with a primary focus on products that have exhibited consistent excess return objectives, low tracking error levels, and low management fees.

The attached memo from Verus details the criteria and process used to narrow the small-capitalization core manager universe to the recommended five short-listed products for further evaluation. Also included is a comparison summary of portfolio characteristics and various performance criteria for the short-listed managers.

Next steps will be to send due diligence questionnaires to these five short-list managers and run excess return correlation analysis to ensure a complementary fit with SamCERA's existing managers.

Attachments

- A. *Verus Small-Cap Core Short-List Manager Screening Steps Memo*
- B. *Verus Small-Cap Core Short-List Manager Comparison*

Memorandum

To: SamCERA
From: Margaret Jadallah, Verus
Date: March 11, 2016
RE: Small Cap Core manager search

Executive Summary

Last month, SamCERA's Board approved a Small Cap Core search after reviewing its current US equity small cap structure and deciding to reduce the small cap manager roster from two managers, one growth and one value focused, to one manager with a small cap core style.

The Small Cap Core search has specific parameters and attributes sought which are:

- 1) Lower tracking error compared to active, fundamental managers;*
- 2) History of consistently outperforming the Russell 2000 Index;*
- 3) Style consistency compared to the Russell 2000 Index, including similar market capitalization; and*
- 4) Competitive fees in line with the strategy's risk profile.*

Screening of eVestment Alliance database

Using these criteria, Verus screened the entire universe of Small Cap Core managers in the eVestment Alliance universe. The Small Cap Core starting universe consisted of 151 firms with 179 products. We included active, fundamental small cap core managers in the starting universe but culled out those that didn't meet tracking error criteria, which were a large majority.

- The specific quantitative screens run were:
 - Tracking error less than or equal to 3.0 over available annualized time periods;
 - Positive excess returns compared to the Russell 2000 Index over 66% (2/3) of available rolling three-year periods;
 - Holdings-based style plotted neatly in small cap core territory as of 12/31/15 (eliminated managers with smid drift);
 - Stated fees at or below the median small cap core manager fee for a 100MM account size (≤ 78 bps).

Approximately ten small cap core managers met all of these criteria.

Additional analysis and considerations

Initial qualitative Verus due diligence and SamCERA Staff due diligence

Verus-SF, in conjunction with Verus' research staff discussed the remaining small cap core managers and made a handful of cuts for qualitative reasons (ex., impending organizational change, multi-manager approach, small product AUM within very large firm). We added back a few small cap core managers who manage money for SamCERA in different strategies that met all criteria with the exception of the fee criterion (with the assumption that they would likely offer fee concessions to SamCERA).

SamCERA Staff reviewed the list of managers submitted by Verus and made a few cuts based on additional consistency, risk, and risk-adjusted return analysis and further qualitative considerations.

This additional analysis by Verus and SamCERA Staff reduced the list of remaining small cap core candidates to five.

Remaining managers in the Small Cap Core search

Remaining candidates


The remaining small cap core managers in the search are:

- Chicago Equity Partners – Small Cap Core
- Delaware Investments – Small Cap Core
- DFA – US Small Cap Equity
- Northern Trust – NT Quality Small Cap Core
- QMA – US Small Cap Core Equity

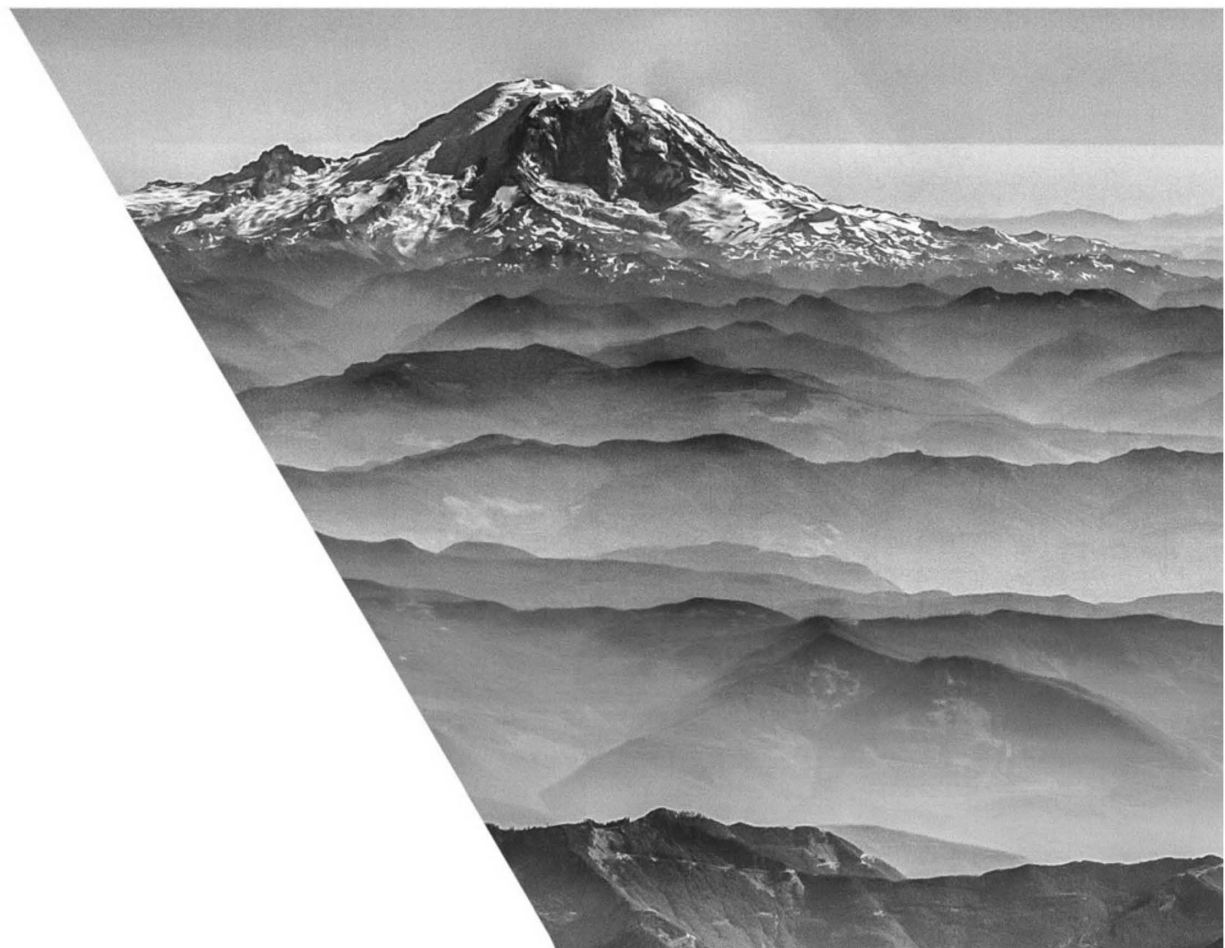
Attached are quantitative analytics and summary portfolio characteristics for these small cap core managers.

Next Steps

We propose that we send an RFI to the five remaining small cap core managers and run excess correlation analysis on the most compelling respondents to ensure a complementary fit with SamCERA's existing managers should the manager be chosen.



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**



March 2016

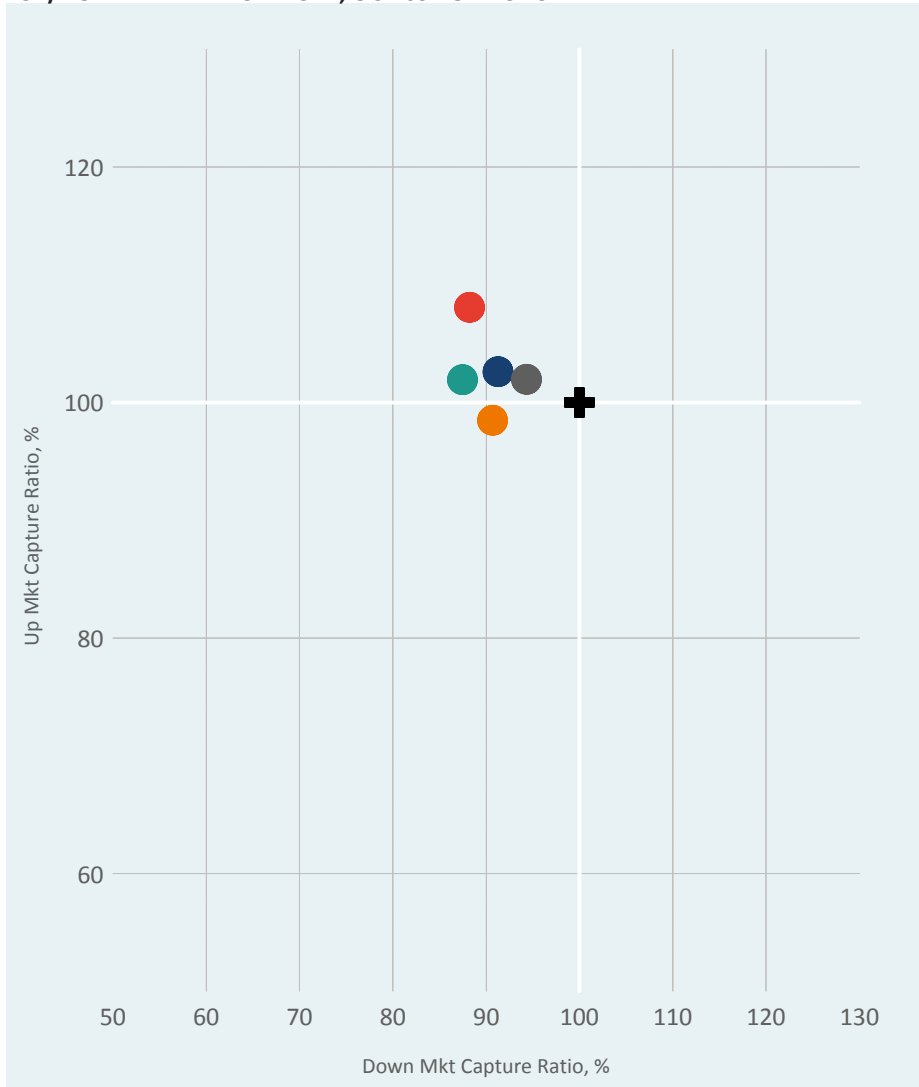
U.S. Small Cap Core Search

SamCERA

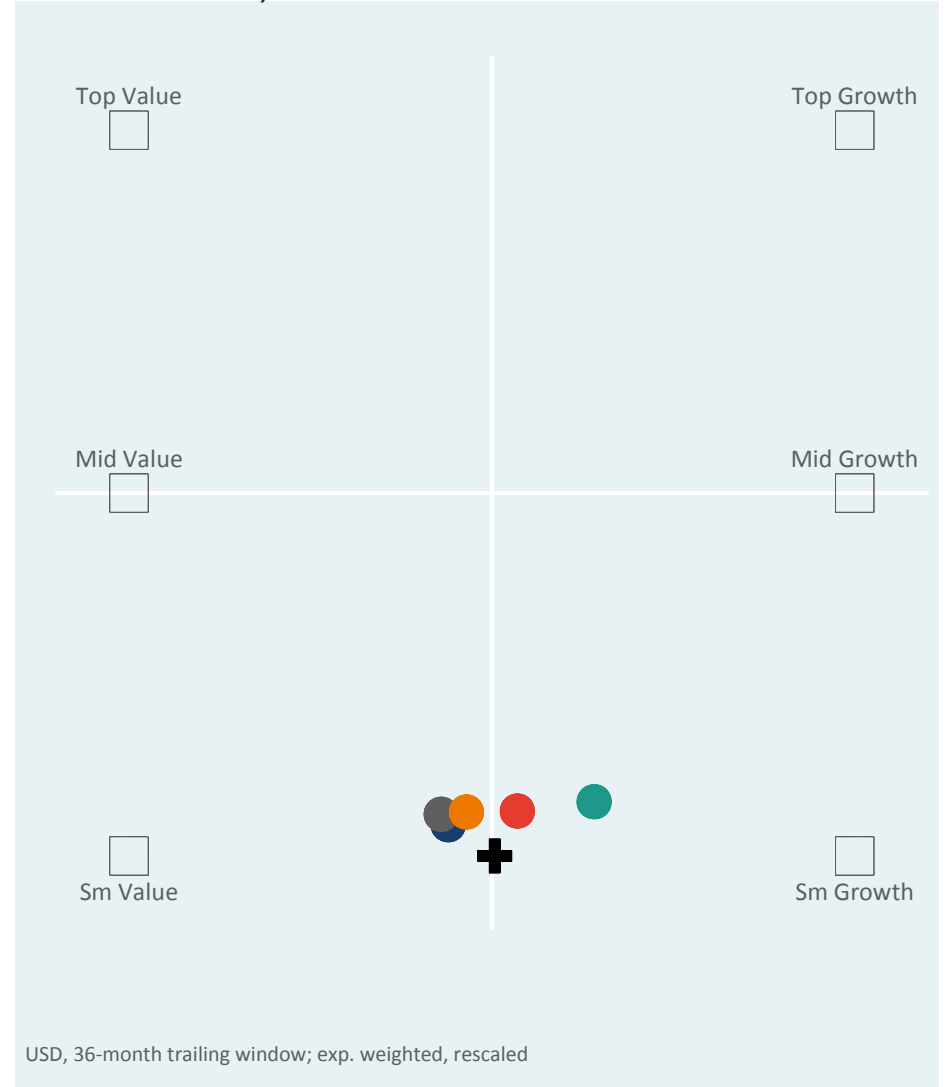
Style and portfolio comparison

● Chicago Equity Partners
 ● Delaware
 ● DFA
 ● Northern Trust
 ● QMA
 + Russell 2000 Index

UP/DOWN MARKET CAPTURE, OCT-09 TO DEC-15



RUSSELL 6 STYLE MAP, SEP-12 TO DEC-15



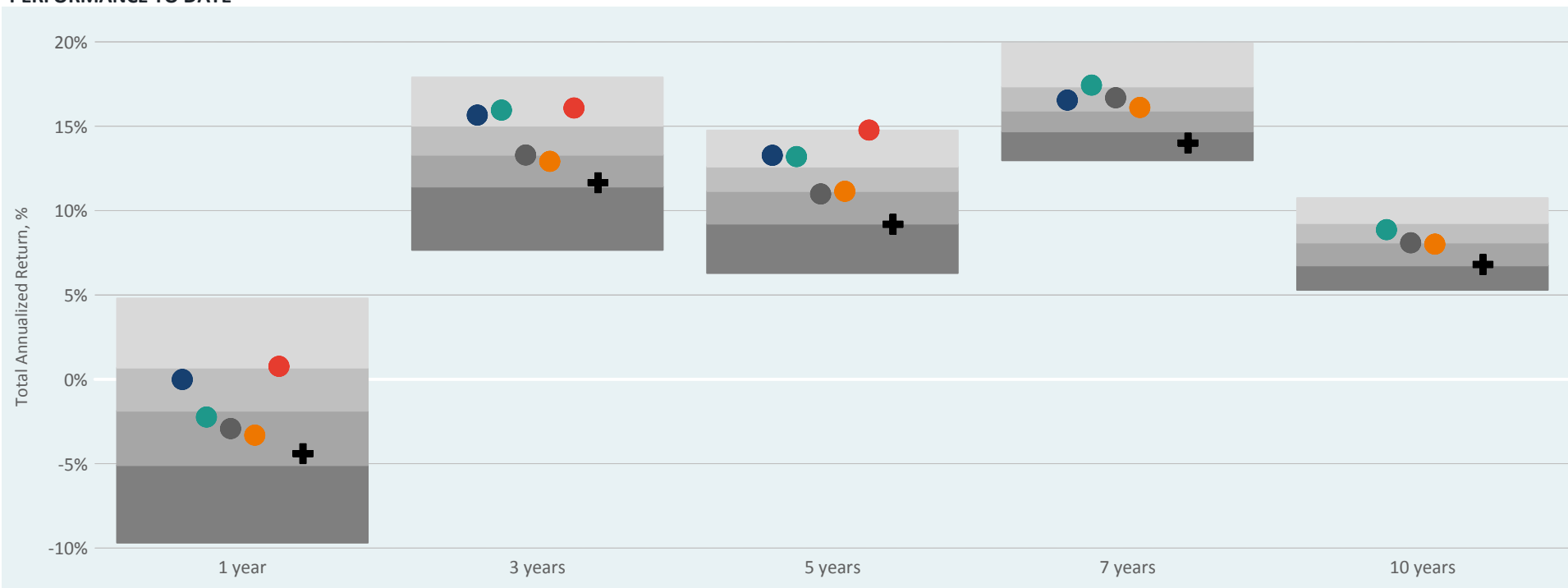
Style and portfolio comparison

	Chicago Equity Partners	Delaware	DFA	Northern Trust	QMA	Russell 2000 Index
% HOLDINGS IN 10 LARGEST STOCKS	14.1%	11.8%	3.1%	3.2%	8.3%	---
ANNUAL TURNOVER	135.6%	33.9%	8.1%	---	96.0%	---
CASH	0.6%	1.6%	1.0%	---	0.5%	---
CURRENT DIVIDEND YIELD	1.4%	1.2%	1.4%	1.6%	1.7%	1.5%
CURRENT P/E	14.8	31.2	18.0	19.0	16.7	18.5
CURRENT P/B	2.3	2.2	1.8	2.0	1.8	2.1
5 YEAR ROE	16.0%	8.8%	---	8.6%	13.1%	5.8%
PORTFOLIO HOLDINGS	212	135	2027	2145	339	1985
WGTD. AVG. MKT. CAP	\$1,902	\$1,992	\$1,974	\$1,891	\$1,744	\$1,853
MEDIAN MKT. CAP	\$1,321	\$1,630	\$519	\$552	\$1,037	\$687
MAX CASH POSITION	---	5.0	---	5.0	---	---
MAX POSITION SIZE	---	5.0	4.0	0.5	---	---

Performance comparison - as of December 2015

● Chicago Equity Partners ● Delaware ● DFA ● Northern Trust ● QMA + Russell 2000 Index

PERFORMANCE TO DATE

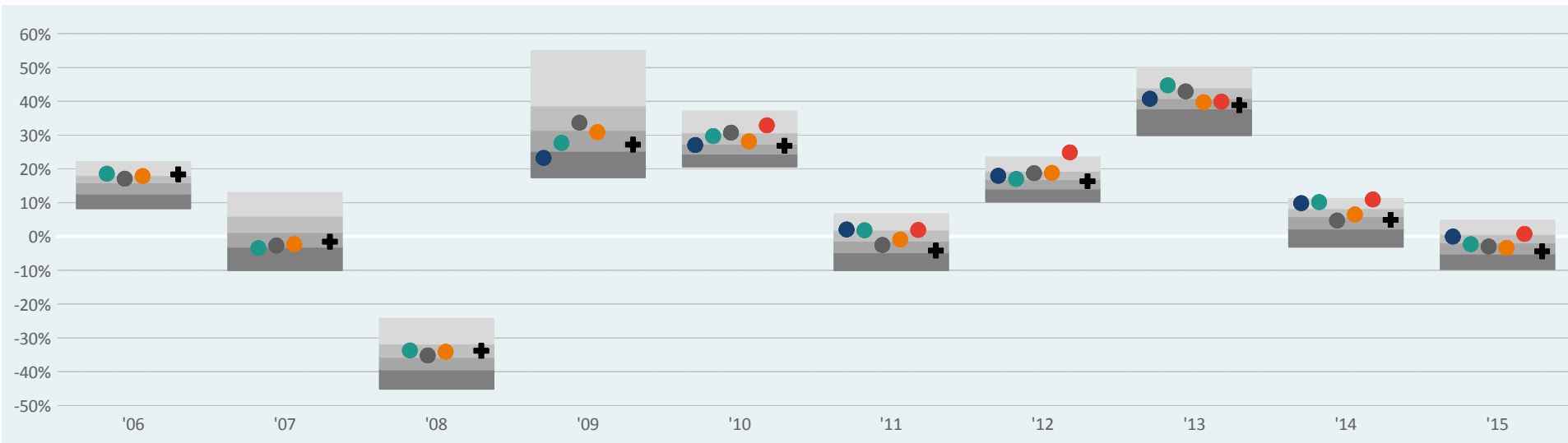


EXCESS ANNUALIZED RETURN TO DATE, %	1 year	3 year	5 year	7 year	10 year
Chicago Equity Partners	4.4	4.0	4.1	2.6	---
Delaware	2.2	4.3	4.0	3.4	2.1
DFA	1.5	1.7	1.8	2.7	1.3
Northern Trust	1.1	1.3	2.0	2.1	1.2
QMA	5.2	4.4	5.6	---	---

Calendar year performance

● Chicago Equity Partners ● Delaware ● DFA ● Northern Trust ● QMA + Russell 2000 Index

ANNUAL PERFORMANCE



ANNUAL PERFORMANCE AND RANKING	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Chicago Equity Partners				23.3	27.1	2.2	18.0	40.8	9.9	0.0
Rank				82	53	22	42	52	15	31
Delaware	18.6	-3.4	-33.7	27.7	29.8	1.9	17.0	44.8	10.2	-2.2
Rank	20	76	39	67	31	26	49	22	11	53
DFA	17.1	-2.6	-35.2	33.7	30.8	-2.4	18.7	43.0	4.8	-2.9
Rank	36	72	47	41	24	61	33	37	59	61
Northern Trust	17.9	-2.2	-34.1	30.9	28.2	-0.8	18.8	39.8	6.5	-3.3
Rank	28	71	40	50	42	44	32	59	45	64
QMA					32.9	1.9	24.9	39.9	11.0	0.8
Rank					14	25	3	58	6	23
Russell 2000 Index	18.4	-1.6	-33.8	27.2	26.9	-4.2	16.3	38.8	4.9	-4.4
Rank	24	68	40	69	56	72	58	66	58	69

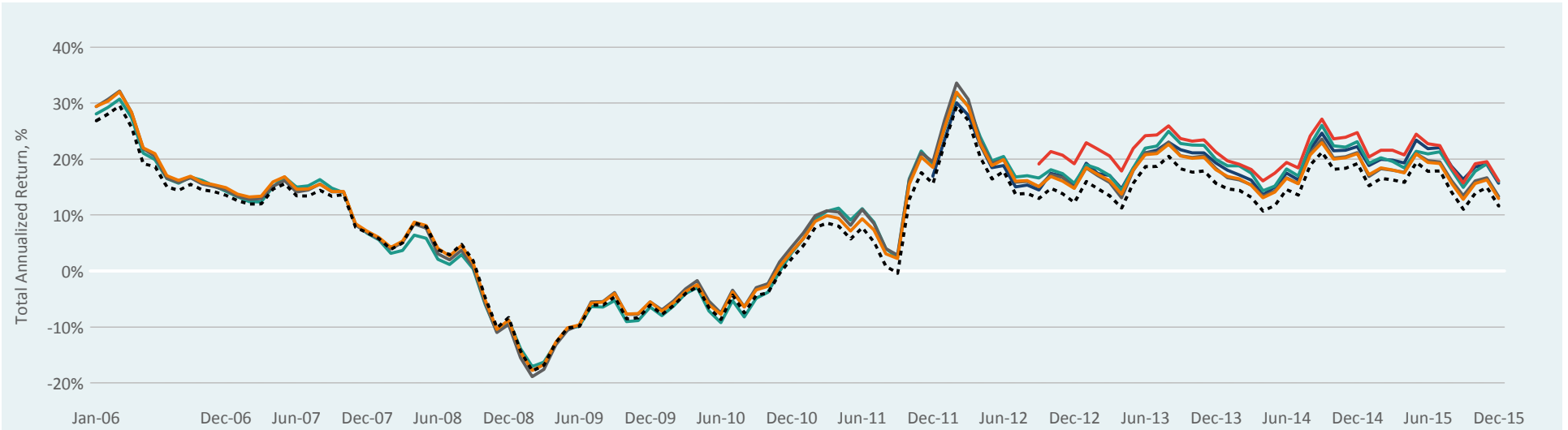
Performance summary - as of December 2015

	Chicago Equity Partners	Delaware	DFA	Northern Trust	QMA	Russell 2000 Index
PERFORMANCE ANALYSIS - (5 Years)						
Alpha %	3.8	3.9	1.9	2.2	5.0	0.0
Beta	1.0	1.0	1.0	0.9	1.0	1.0
R-squared %	96.7	96.8	98.6	99.7	97.5	100.0
Sharpe Ratio	0.8	0.8	0.7	0.7	0.9	0.6
Treynor Ratio	0.1	0.1	0.1	0.1	0.1	0.1
Tracking Error %	2.9	2.9	1.9	1.2	2.6	0.0
Annualized Std Dev %	16.1	15.6	15.7	15.2	16.4	15.9
Information Ratio	1.3	1.3	0.9	1.5	2.0	---
Max Drawdown %	-23.6	-23.6	-24.0	-23.0	-23.3	-25.1
Calmar Ratio	0.6	0.6	0.5	0.5	0.6	0.4
Excess Ann. Return %	4.1	4.0	1.8	2.0	5.6	0.0
PERFORMANCE TO DATE						
1 Year	0.0	-2.2	-2.9	-3.3	0.8	-4.4
3 Year	15.7	16.0	13.3	12.9	16.1	11.7
5 Year	13.3	13.2	11.0	11.2	14.8	9.2
7 Year	16.6	17.4	16.7	16.1	---	14.0
10 Year	---	8.9	8.1	8.0	---	6.8
Common Inception (Oct-09)	15.1	15.8	14.1	14.0	17.5	12.1
CALENDAR YEAR RETURNS						
2015	0.0	-2.2	-2.9	-3.3	0.8	-4.4
2014	9.9	10.2	4.8	6.5	11.0	4.9
2013	40.8	44.8	43.0	39.8	39.9	38.8
2012	18.0	17.0	18.7	18.8	24.9	16.3
2011	2.2	1.9	-2.4	-0.8	1.9	-4.2
2010	27.1	29.8	30.8	28.2	32.9	26.9
2009	23.3	27.7	33.7	30.9	---	27.2
2008	---	-33.7	-35.2	-34.1	---	-33.8
2007	---	-3.4	-2.6	-2.2	---	-1.6
2006	---	18.6	17.1	17.9	---	18.4

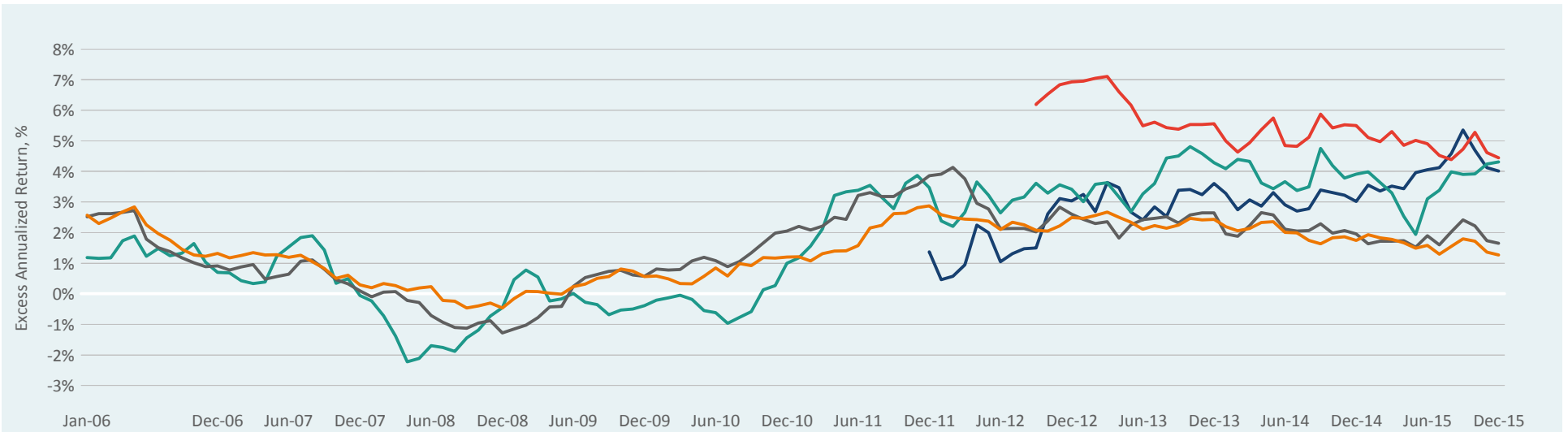
Rolling performance

● Chicago Equity Partners ● Delaware ● DFA ● Northern Trust ● QMA ● Russell 2000 Index

TOTAL 36 MONTH ROLLING PERFORMANCE



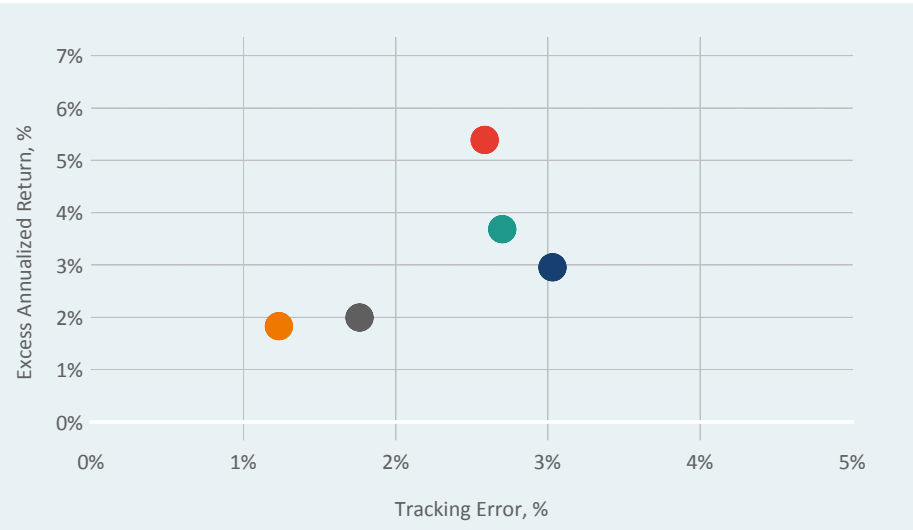
EXCESS 36 MONTH ROLLING PERFORMANCE



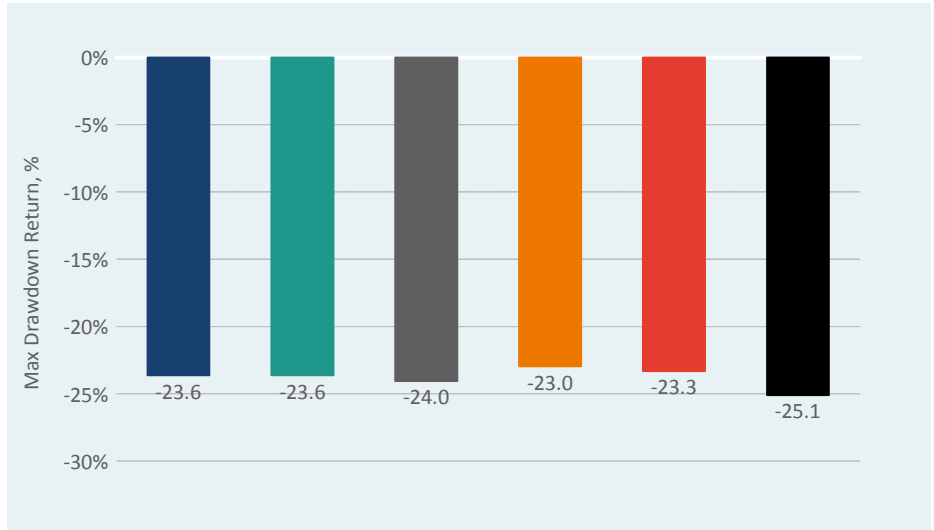
Performance statistics

● Chicago Equity Partners ● Delaware ● DFA ● Northern Trust ● QMA ● Russell 2000 Index

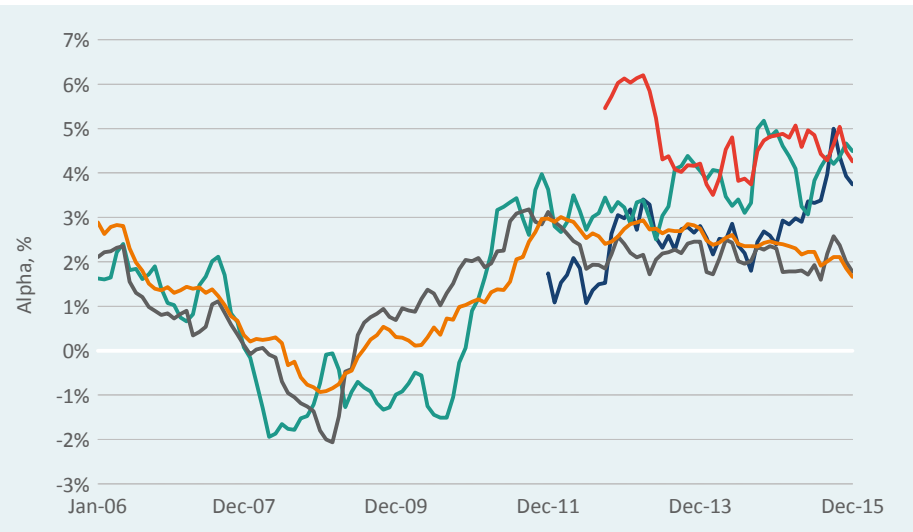
EXCESS PERFORMANCE VS. RISK, OCT-09 TO DEC-15



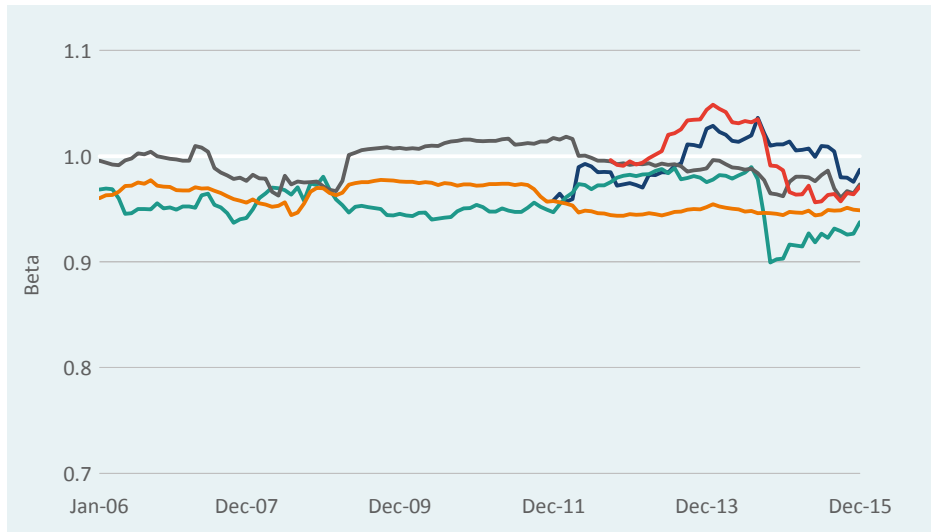
MAX DRAWDOWN RETURN, OCT-09 TO DEC-15



36 MONTH ROLLING ALPHA



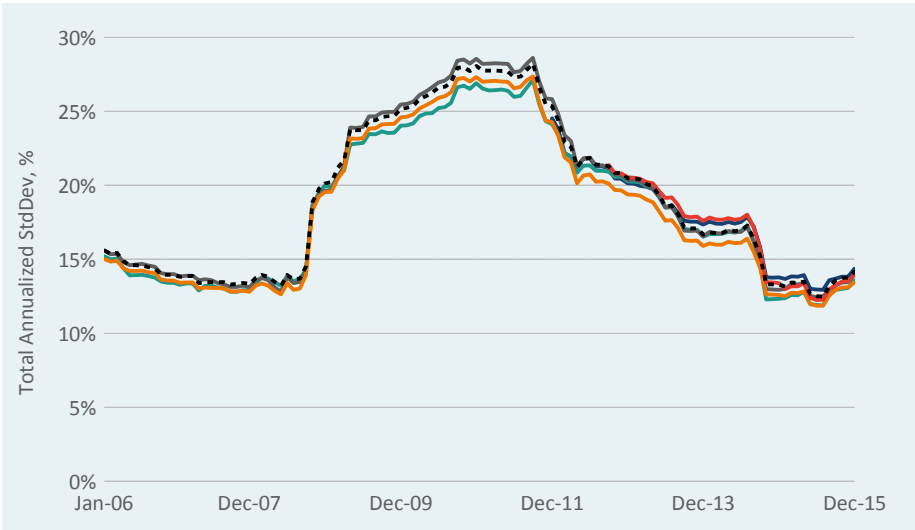
36 MONTH ROLLING BETA



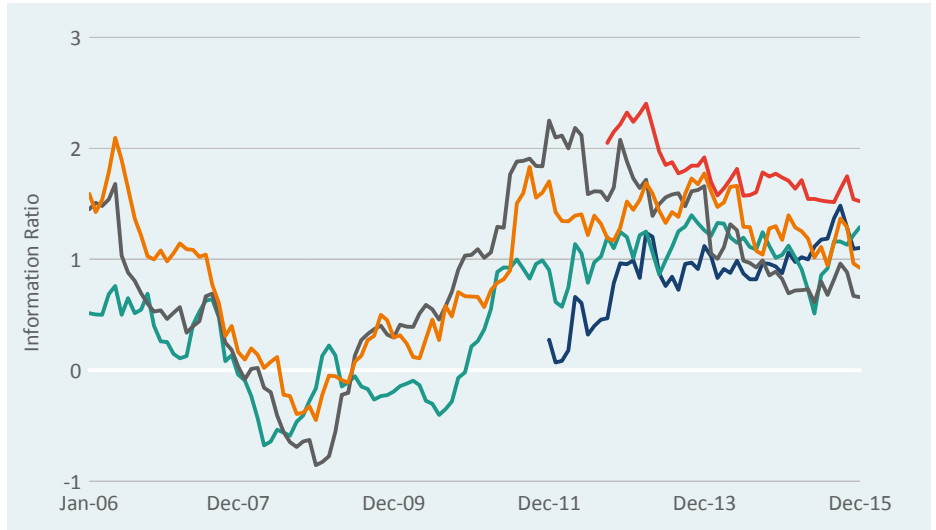
Performance statistics

● Chicago Equity Partners ● Delaware ● DFA ● Northern Trust ● QMA ● Russell 2000 Index

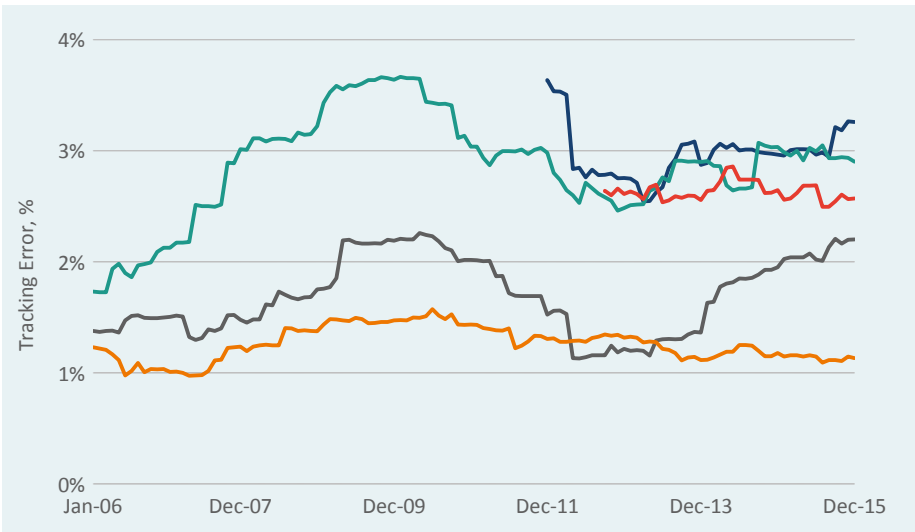
36 MONTH ROLLING RISK



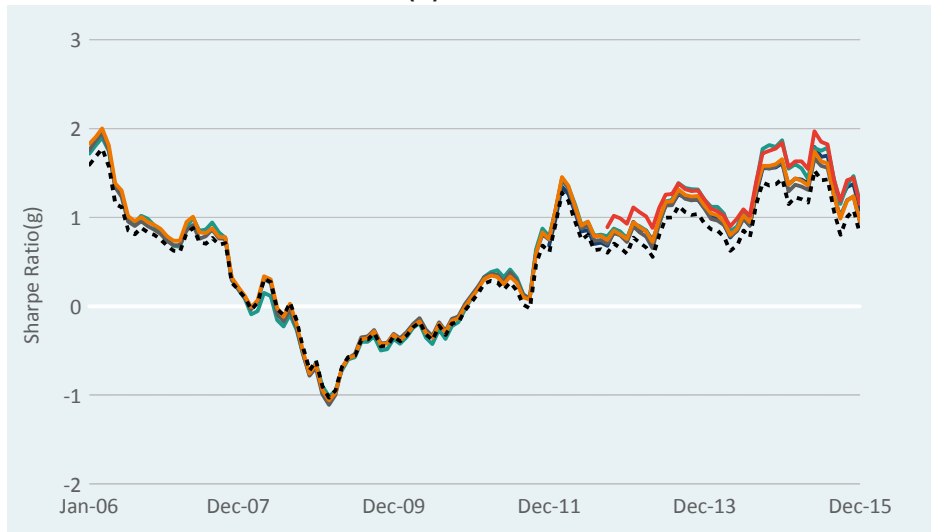
36 MONTH ROLLING INFORMATION RATIO



36 MONTH ROLLING TRACKING ERROR



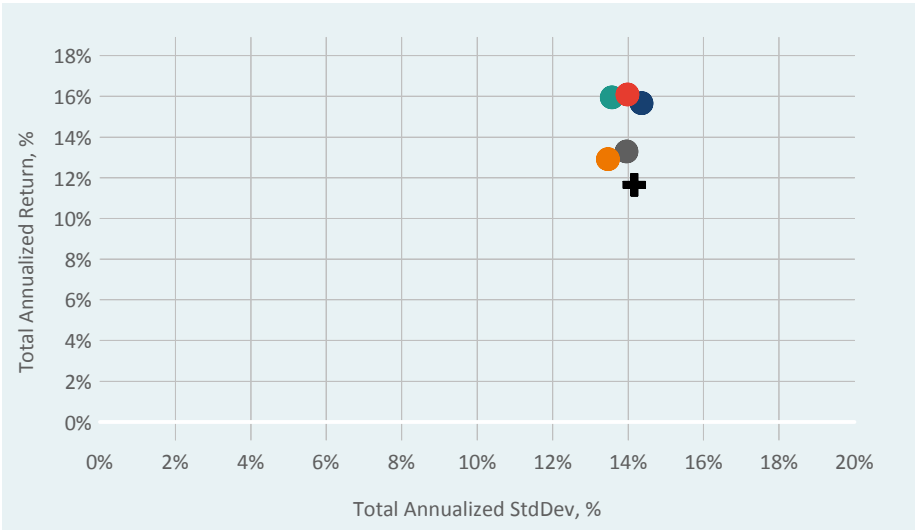
36 MONTH ROLLING SHARPE RATIO(G)



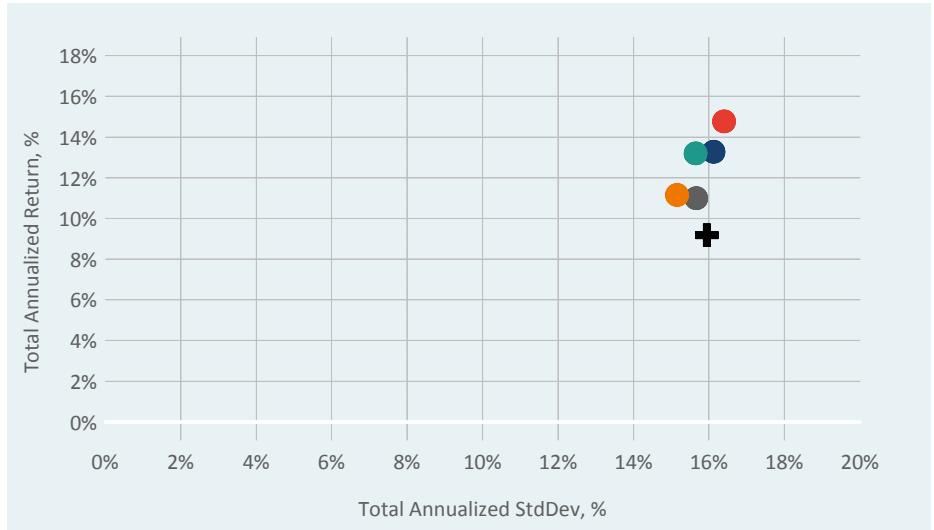
Risk vs. return

● Chicago Equity Partners
 ● Delaware
 ● DFA
 ● Northern Trust
 ● QMA
 + Russell 2000 Index

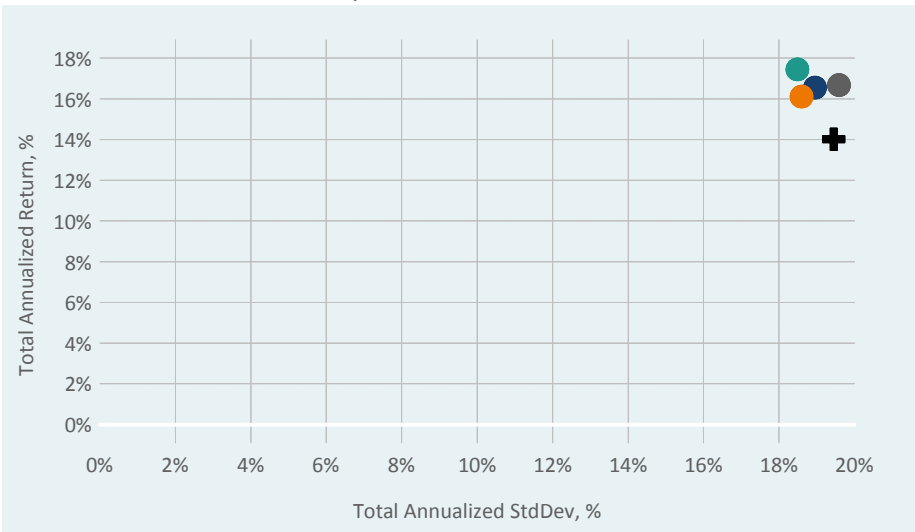
TOTAL PERFORMANCE VS. RISK, JAN-13 TO DEC-15



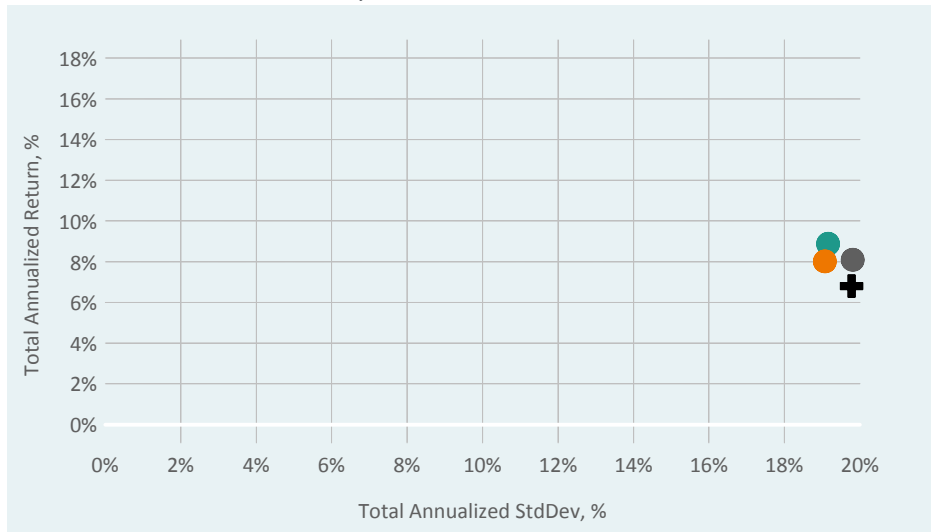
TOTAL PERFORMANCE VS. RISK, JAN-11 TO DEC-15



TOTAL PERFORMANCE VS. RISK, JAN-09 TO DEC-15



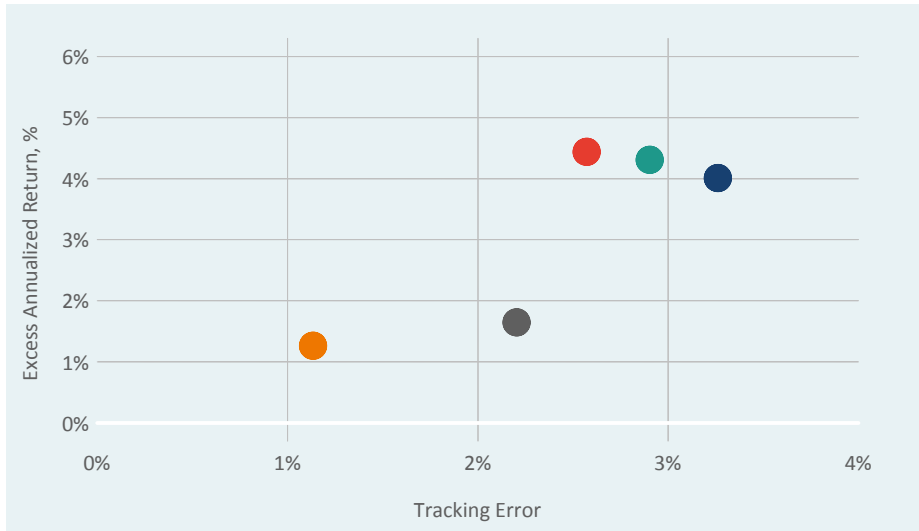
TOTAL PERFORMANCE VS. RISK, JAN-06 TO DEC-15



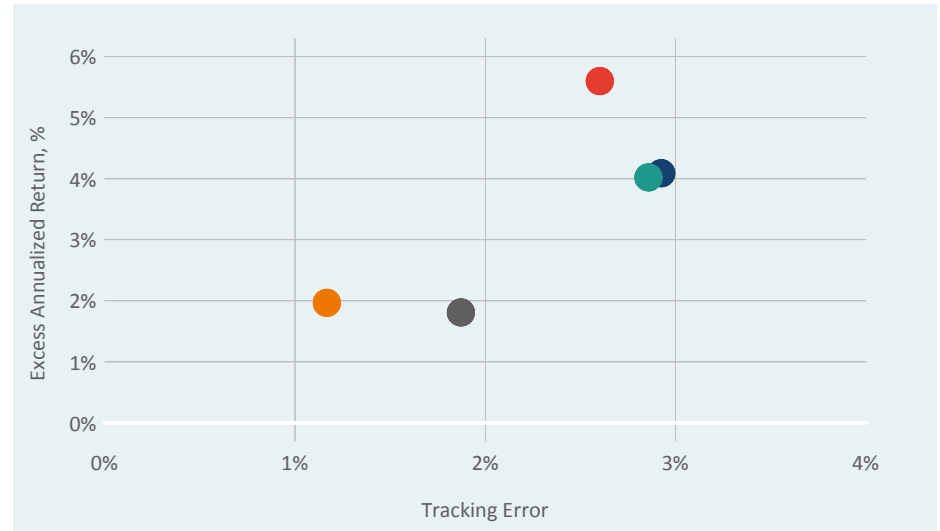
Performance efficiency

● Chicago Equity Partners ● Delaware ● DFA ● Northern Trust ● QMA ● Russell 2000 Index

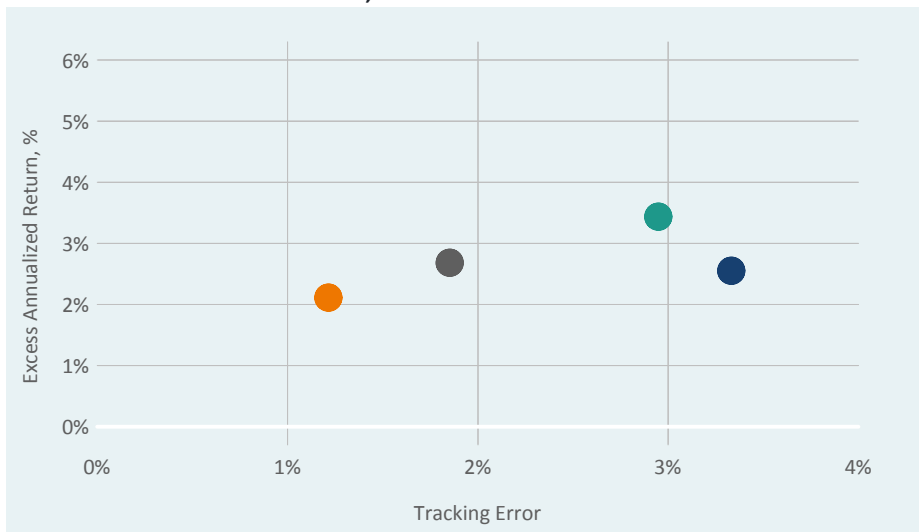
EXCESS PERFORMANCE VS. RISK, JAN-13 TO DEC-15



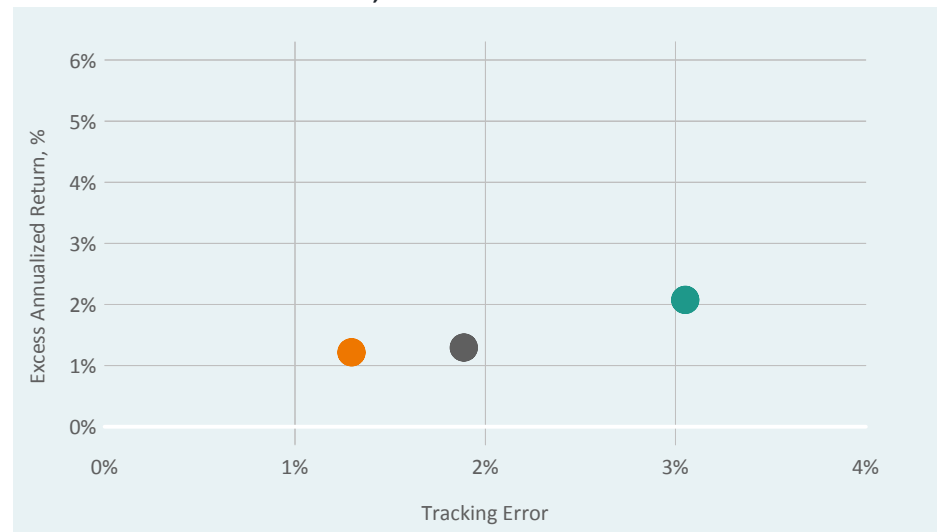
EXCESS PERFORMANCE VS. RISK, JAN-11 TO DEC-15



EXCESS PERFORMANCE VS. RISK, JAN-09 TO DEC-15



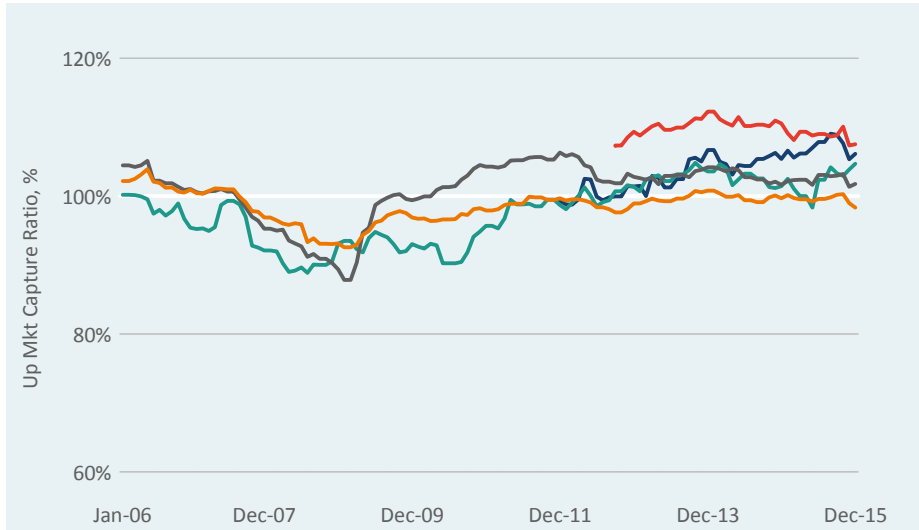
EXCESS PERFORMANCE VS. RISK, JAN-06 TO DEC-15



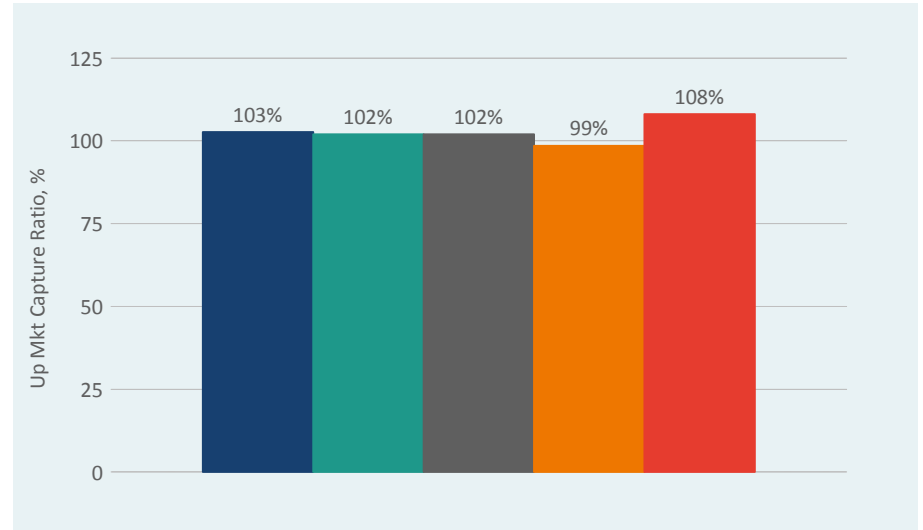
Up & down market analysis

● Chicago Equity Partners ● Delaware ● DFA ● Northern Trust ● QMA ● Russell 2000 Index

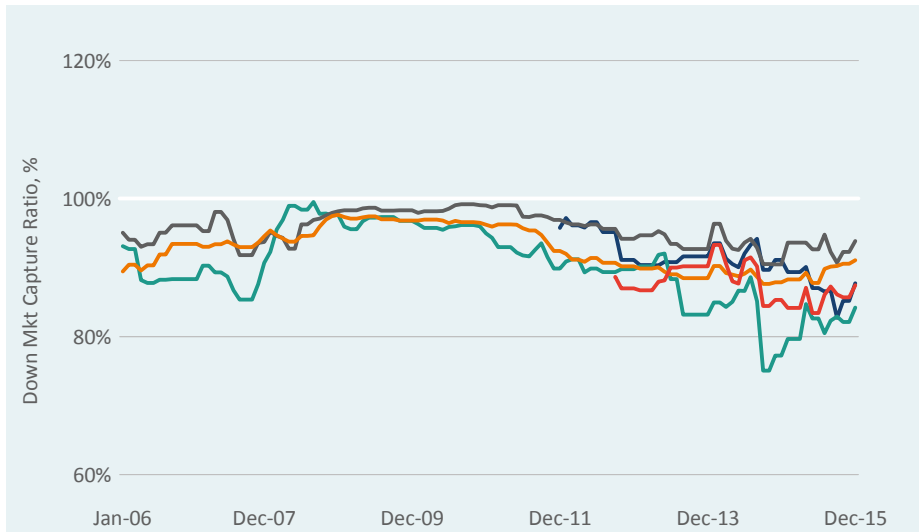
36 MONTH ROLLING UP MKT CAPTURE RATIO



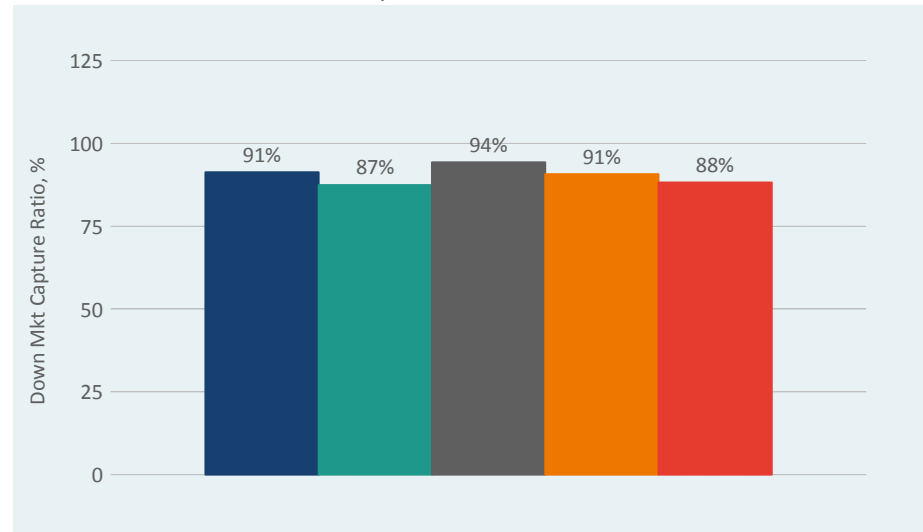
UP MARKET CAPTURE RATIO, OCT-09 TO DEC-15



36 MONTH ROLLING DOWN MKT CAPTURE RATIO



DOWN MARKET CAPTURE RATIO, OCT-09 TO DEC-15



Glossary

Alpha (a): The excess return of a portfolio after adjusting for market risk, usually attributable to the selection skill of the portfolio manager. $\text{Alpha} = \text{Excess Return} - (\text{Beta} \times \text{Excess Market Return})$.

Annualized Return: Converts the Total Return to an annual basis for comparison purposes. Periods shorter than one year are not annualized.

Benchmark: Investment index used as a standard by which to measure the relative performance of an overall portfolio or an individual money manager. Appropriate benchmarks are selected based on their similarity to a portfolio or to the style of the individual money manager being measured.

Benchmark R-squared: Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R-squared, the more appropriate the benchmark is for the manager.

Beta (b): A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

Book-to-Market: The ratio of book value per share to market price per share. Growth managers typically have low book-to-market ratios while value managers typically have high book-to-market ratios.

Calmar Ratio - The Calmar Ratio is a risk/return ratio that calculates return on a downside risk adjusted basis. Similar to other efficiency ratios it balances return in the numerator per unit risk in the denominator. In this case risk is characterized by the Maximum Drawdown.

Capture Ratio: A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen/fallen. The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

Correlation Coefficient (r): A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of -1 means the returns of two securities move in the exact opposite direction over time. Correlation is used as a measure to help maximize the benefits of diversification when constructing an investment portfolio.

Hurst Exponent: quantifies the relative tendency of a time series either to regress the mean. A value H in the range $0.5 < H < 1$ indicates a time series with long-term positive autocorrelation, meaning a high value in the series will probably be followed by another high value. A value in the range $0 < H < 0.5$ indicates a time series with long-term switching between high and low values in adjacent pairs, meaning that a single high value will probably be followed by a low value. A value of $H=0.5$ can indicate a completely uncorrelated series.

Excess Correlation: Correlation of the excess returns (above the benchmark).

GARP: Growth-At-A-Reasonable-Price. Equity strategy that combines tenets of both growth and value investing, looking for companies with above average earnings growth but excluding those with high valuations.

Information Ratio: A measure of a manager's ability to earn excess return without incurring additional risk. Information ratio is calculated as: alpha divided by tracking error.

Glossary

Kurtosis (excess returns)- Kurtosis describes whether the series distribution is peaked or flat and how thick the tails are as compared to a normal distribution. Positive kurtosis indicates a relatively peaked distribution near the mean and tends to decline rapidly and have fat tails. Negative kurtosis indicates a relatively flat distribution near the mean.

Long Term Reversal Factor: Risk premium associated with buying past losers and selling past winners (five year time horizon).

Low Volatility: Risk premium generated by picking low volatility stocks, measured by the MSCI USA Minimum Volatility Index.

Momentum Factor: Risk premium associated with buying past winners and selling past losers.

Portfolio Turnover: The percentage of a portfolio that is sold and replaced (turned over) during a given time period. Low portfolio turnover is indicative of a buy and hold strategy while high portfolio turnover implies a more active form of management.

Predicted Style R-squared: Measures how well the manager's predicted style fits the manager's return series. Adding many unnecessary indices will not improve the Predicted Style R-Squared. The methodology essentially predicts the manager's style at each point in time without the data at that point with the rationale being that if the style estimates obtained so far are good, then they can be used to predict the style at the estimation point.

Price-to-Earnings Ratio: Also called the earnings multiplier, it is calculated by dividing the price of a company's stock into earnings per share. Growth managers typically hold stocks with high price-to-earnings ratios whereas value managers hold stocks with low price-to-earnings ratios.

Quality: The quality factors measured the manager's exposure to high quality stocks versus low quality stocks as defined by S&P. The factor is constructed by combining a long position in the S&P 500 High Quality index and short position S&P 500 Low Quality index.

Regression Based Asset Loadings: Represents the exposure period of an investment product (called a Manager, Fund, or Index in Stylus) to various explanatory variables. It is also referred to as Style Indices or Asset Classes. These Indices can be interpreted as the Manager Betas or risk factors at a given point in time.

Risk Premium: An expected return in excess of the risk-free rate. The premium provides compensation for the assumption of risk.

Risk-Free Rate: The rate of interest that one can earn on an investment with no default risk. It is generally assumed to be the interest rate on a 91 day T-Bill.

R-Squared: Also called the coefficient of determination, it measures the amount of variation in one variable explained by variations in another. In the case of investments, the term is used to explain the amount of variation in a security or portfolio explained by movements in the market or the portfolio's benchmark.

Selection return: The difference between the Manager and the Manager's Style Return.

Sharpe Ratio: A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as: $\text{Portfolio Excess Return} / \text{Portfolio Standard Deviation}$.

Short Term Reversal Factor: Risk premium associated with buying past losers and selling past winners (two month time horizon).

Significance Level (Excess Returns) - The Significance Level of a test is the probability that the test statistic will reject the null hypothesis when the hypothesis is true. Significance is a property of the distribution of a test statistic, not of any particular draw of the statistic.

Glossary

Size Factor: Risk premium associated with buying small companies.

Skewness (Excess Returns)- Skewness describes the degree of asymmetry of a distribution around its mean. A distribution is said to be symmetric if it has the same shape to both the left and right of the mean. A perfectly symmetrical distribution has a Skewness of 0. A positively skewed distribution has larger gains than losses, while a negatively skewed distribution has a longer tail of losses.

Standard Deviation (s): A measure of volatility, or risk, inherent in a security or portfolio. The standard deviation of a series is a measure of the extent to which observations in the series differ from the arithmetic mean of the series. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two-thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

Style Analysis: A return based analysis designed to identify combinations of passive investments to closely replicate the performance of funds.

Style Map: A specialized form or scatter plot chart typically used to show where a Manager lies in relation to a set of style indices on a two-dimensional plane. This is simply a way of viewing the asset loadings in a different context. The coordinates are calculated by rescaling the asset loadings to range from -1 to 1 on each axis and are dependent on the Style Indices comprising the Map.

Style Returns: The sum of the Return of each Style Asset multiplied by its weight for the time period.

Style R-squared: Measures how well the estimated Manager's style return series fits the manager's return series. The higher the Style R-squared, the better the fit between the manager's style and return series.

Total Return: Total Return geometrically compounds the Returns in the series from one period to the next.

Tracking Error/Excess Standard Deviation: The standard deviation of the difference between the rate of return of a portfolio and its benchmark.

Treynor Ratio - The Treynor Ratio is defined as the ratio of the manager's excess geometrically annualized return over the portfolio Beta. Excess returns are computed versus the cash index.

Universe: Also called a peer group, a universe is a large number of portfolios of a similar style. These portfolios can be divided into deciles or quartiles and then used for performance measurement and comparative purposes. Portfolios are ranked within the universe, which tells the investor how well a manager has done relative to his or her peers.

Value: Refers to the style of an equity manager. A value manager seeks to create returns by purchasing stocks selling at a discount to their true or intrinsic value. Typical portfolio characteristics of this strategy include a low price-to-earnings ratio, high book-to-market ratio, and high dividend yield.

Valuation Factor: Risk premium associated with buying companies trading at a low price/book multiple.

VIX : VIX is a trademark ticker symbol for the Chicago Board Options Exchange Market Volatility Index, a popular measure of the implied volatility of S&P 500 index options. Often referred to as the fear index or the fear gauge, it represents one measure of the market's expectation of stock market volatility over the next 30 day period.

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SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 22, 2016

Agenda Item 6.6

TO: Board of Retirement



FROM: Michael Coultrip, Chief Investment Officer

SUBJECT: Approval to Establish a Dedicated Inflation Protection Pool

Staff Recommendation

Approve staff and consultant recommendation to form a dedicated inflation protection pool.

Background

SamCERA has inflation-sensitive assets across a number of various asset classes, including fixed income (TIPS), real estate, and alternatives (private real assets and commodities). In addition, SamCERA currently has two dedicated energy-related private equity investments that reside in the private equity asset class.

Discussion

Staff and consultant recommend combining these inflation-sensitive exposures under a single asset class to better monitor the plan. This would also simplify the asset allocation, improve performance monitoring, and provide greater financial flexibility.

Part I of the attached presentation details this recommendation, including the necessary changes to the asset allocation structure and policy benchmark.

Part II of the presentation introduces potential next steps. As part of the upcoming asset liability study, which is scheduled to begin in April, the optimal sizing of the dedicated inflation pool, along with the composition of the target inflation pool, will be determined.

Attachment

Verus Target Inflation Pool Plan



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**



2016 Target Inflation Pool Plan

MARCH 22, 2016

Presentation to

San Mateo County Employees' Retirement Association

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Section II: Next Steps: Optimizing the Size and Composition of the Target Inflation Pool Portfolio 9

Appendix 15

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I. Proposal to Form a Dedicated Inflation Pool

Current Inflation-Sensitive Asset Class Exposure

Current Asset Allocation Structure

Asset Class	Target Allocation
Total US Equity	28%
<i>Large Cap Equity</i>	24%
<i>Small Cap Equity</i>	4%
Total International Equity	20%
<i>International Equity</i>	16%
<i>International Small Cap Equity</i>	2%
<i>Emerging Market Equity</i>	2%
Total Fixed Income	20%
<i>Core</i>	10%
<i>Opportunistic Credit</i>	5%
TIPS	2%
<i>Global Fixed Income</i>	3%
Risk Parity	8%
Real Estate	7%
Total Alternatives	17%
<i>Private Equity</i>	7%
Private Real Assets	2%
Commodities	3%
<i>Absolute Return/Hedge Funds</i>	5%
Total	100%

SamCERA has inflation-sensitive assets across a number of various asset classes, including fixed income (TIPS), real estate, and alternatives (Private Real Assets & Commodities).

Real Asset Exposure Report (Direct and Indirect)

SamCERA Real Asset Exposure

Asset Class	% of Total Plan (Target Allocation w/Inflation Pool)	% in Real Assets	% of Total Plan Exposed to Real Assets	
Public Equity ¹	48.0%	13.5%	6.5%	} Approx. 10% Indirect
Fixed Income ²	18.0%	3.0%	0.5%	
Risk Parity ³	8.0%	20.0%	1.6%	
Private Equity ⁴	7.0%	14.0%	1.0%	
Hedge Funds ⁵	5.0%	10.0%	0.5%	
TIPS	2.0%	100.0%	2.0%	} 14% Direct
Private Real Assets	2.0%	100.0%	2.0%	
Real Estate	7.0%	100.0%	7.0%	
Commodities	3.0%	100.0%	3.0%	
Total	100.0%		24.1%	

1 Public Equity assumes Energy and Materials are exposed to commodity prices through the underlying businesses

2 Includes exposure to TIPS (tactical) and credit exposure to energy/material companies

3 Risk Parity assumes that AQR and PanAgora maintain around 10% in TIPS and 10% in commodities on a risk weighted basis

4 Private Equity assumes Energy sector is exposed to commodity prices through the underlying businesses

5 Assumes 10% exposure to inflation-sensitive assets, variable over time.

In addition to the direct 14% real asset exposure at the asset class level, the Plan has exposure to inflation-related assets indirectly in other asset classes. These additional exposures (approximately 10% of plan assets) will be accounted for when the appropriate amount of inflation protection is determined as part of the upcoming ALM study.

Building a Dedicated Inflation Pool

- The first step is to form a new asset class group called “Inflation Pool”, and transfer the current \$MV from each of the following into this new asset class: Brown Brothers Harriman TIPS (from fixed income), SSARIS Commodities and Private Real Assets (from Alternatives), and Real Estate.
- Next, move our two Private Equity energy investments (Encap and Sheridan) to the Private Real Asset portfolio from Private Equity.
- Lastly, update the target policy benchmark to reflect these changes. The proposed changes to the benchmark are displayed on page 8.

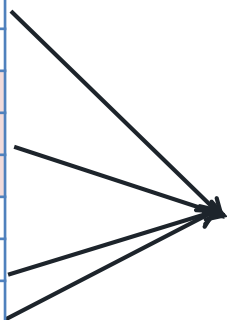
Proposal to Form Dedicated Inflation Pool

Current Asset Allocation Structure

Asset Class	Target Allocation
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<i>Opportunistic Credit</i>	5%
TIPS	2%
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Risk Parity	8%
Real Estate	7%
Total Alternatives	17%
<i>Private Equity</i>	7%
Private Real Assets	2%
Commodities	3%
<i>Absolute Return/Hedge Funds</i>	5%
Total	100%

Asset Allocation Structure w/ Inflation Pool

Asset Class	Target Allocation
Total US Equity	28%
<i>Large Cap Equity</i>	24%
<i>Small Cap Equity</i>	4%
Total International Equity	20%
<i>International Equity</i>	16%
<i>International Small Cap Equity</i>	2%
<i>Emerging Market Equity</i>	2%
Total Fixed Income	18%
<i>Core</i>	10%
<i>Opportunistic Credit</i>	5%
<i>Global Fixed Income</i>	3%
Risk Parity	8%
Total Alternatives	12%
<i>Private Equity</i>	7%
<i>Absolute Return/Hedge Funds</i>	5%
Inflation Pool	14%
TIPS	2%
Real Estate	7%
Private Real Assets	2%
Commodities	3%
Total	100%



Consolidating existing inflation-sensitive asset class exposures under a single asset class simplifies the asset allocation, improves performance monitoring, and provides greater investment flexibility.

Proposed Updated Policy Benchmark

The creation of an Inflation Pool will require the following changes to SamCERA's target policy benchmark.

SamCERA Plan Benchmark		
Asset Class	Current w/o Inflation Pool	Proposed w/ Inflation Pool
Public Equity	48%	48%
<i>Russell 1000 Index</i>	24%	24%
<i>Russell 2000 Index</i>	4%	4%
<i>MSCI ACWI x US IMI</i>	20%	20%
Fixed Income	20%	18%
<i>BC Aggregate Index</i>	10%	10%
<i>BC BA Inter. High Yield</i>	5%	5%
<i>BC US TIPS Index</i>	2%	0%
<i>BC Multiverse Index</i>	3%	3%
Risk Parity	8%	8%
<i>60% Russell 3000 / 40% BC Aggregate</i>	8%	8%
Alternatives	17%	12%
<i>Russell 3000 + 3%</i>	7%	7%
<i>LIBOR + 4%</i>	5%	5%
<i>Bloomberg Commodity Index</i>	3%	0%
<i>CPI + 5%</i>	2%	0%
Real Estate	7%	0%
<i>NCREIF ODCE</i>	7%	0%
Inflation Pool	0%	14%
<i>BC US TIPS Index</i>	0%	2%
<i>Bloomberg Commodity Index</i>	0%	3%
<i>CPI + 5%</i>	0%	2%
<i>NCREIF ODCE</i>	0%	7%

II. Next Steps:

Optimizing the Size and Composition of
the Target Inflation Pool Portfolio

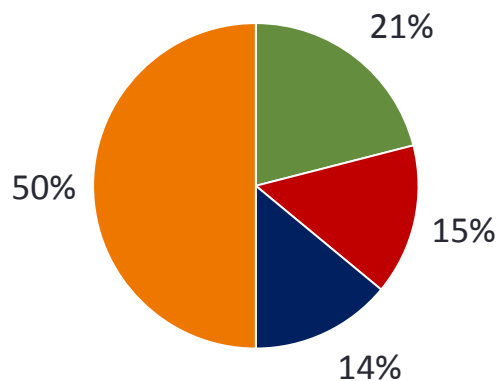
SamCERA – Role of Real Assets in the Portfolio

- The principal goal for adding real asset strategies to the portfolio was to provide a hedge to inflation risk while improving asset diversification
- An enhanced framework for building real asset portfolios seeks to maintain the goals of inflation protection and diversification, but also add a focus on attractive risk-adjusted returns:
 - 1. Create a portfolio of assets with a high degree of inflation beta**
 - 2. Provide attractive diversification benefits to the overall Plan**
 - 3. Have a focus on positive carry – allocation to real assets should provide an expected return at least as high as the source of capital that is funding the allocation (e.g. expected return \geq mix of stocks and bonds)**

Next Steps: Determine Size of Target Inflation Pool

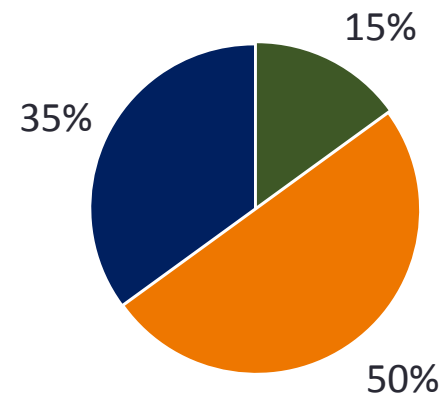
- Current direct real assets exposure is 14% of the Total Plan; roughly 50% of that exposure is in private real estate.
- Need to develop strategic Real Assets allocation (How much inflation protection should total portfolio have?)
- Sizing of the proposed dedicated Inflation Pool (current size is 14% at asset class level and approximately 24% on a look-through basis) will be determined as part of the upcoming ALM study.

Current “Inflation Pool”



■ Commodities ■ TIPS ■ Private Real Assets ■ Real Estate

Target Inflation Pool - Example

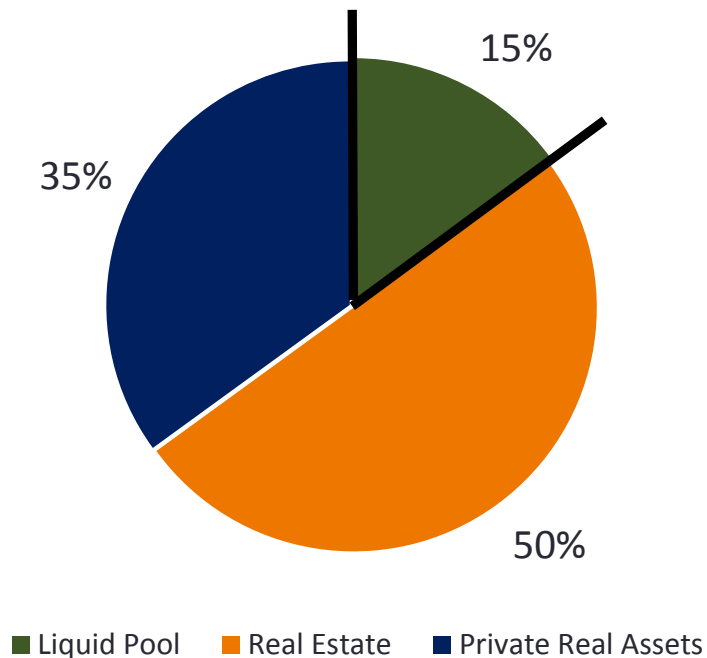


■ Liquid Pool ■ Real Estate ■ Private Real Assets

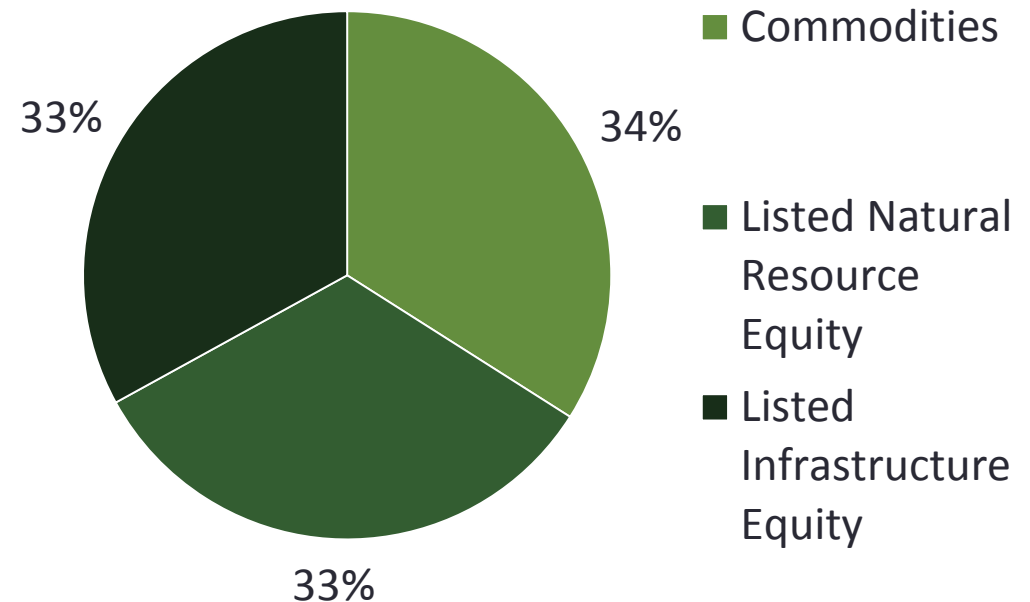
Next Steps: Determine Composition of Target Liquid Pool Portfolio - Example

- Liquid Pool is diversified across Commodities, Listed Global Natural Resource and Listed Global Infrastructure
- Utilize inexpensive, passive indices for Listed Natural Resource and Listed Infrastructure
- Increases public equity correlation in the Inflation Pool

Target Inflation Pool - Example



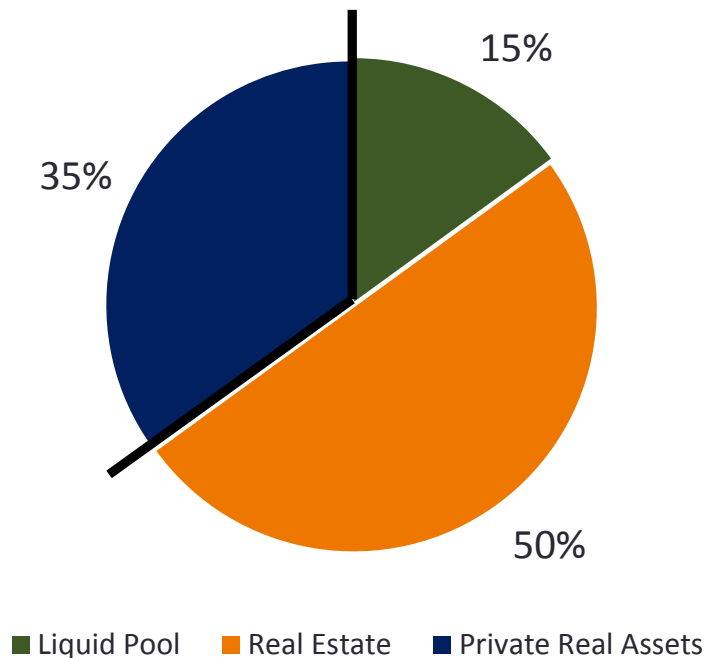
Target Liquid Pool - Example



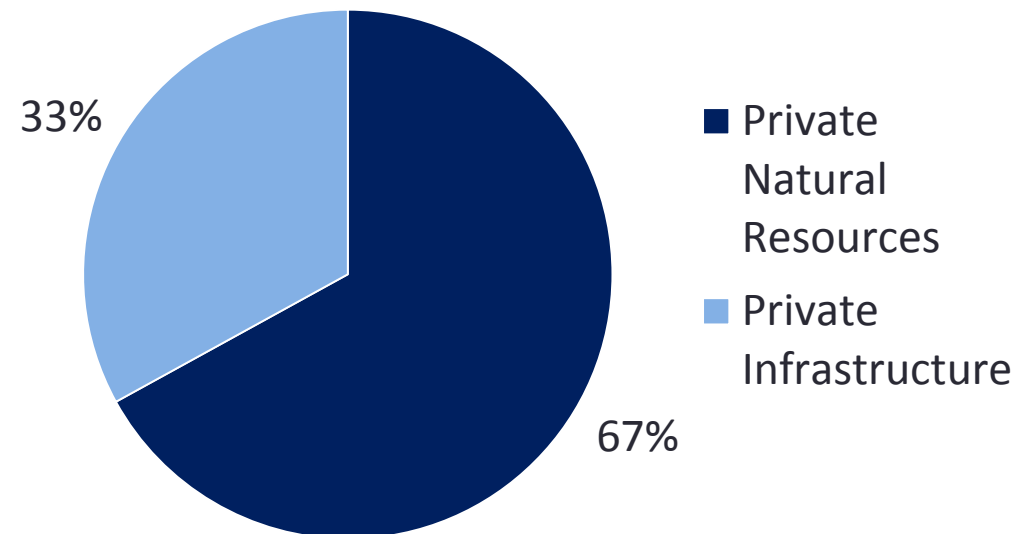
Next Steps: Determine Composition of Target Private Real Asset Portfolio - Example

- Current Private Real Assets has a target of 2% of the total Plan. Funding of new private RA strategies would come from the newly created liquid pool.
- Private Real Assets would consist of private market investments in natural resources (energy, mining, agriculture and timberland) and infrastructure.

Target Inflation Pool - Example



Target Private Real Assets - Example



Rationale for the Target Inflation Pool

- Current Inflation Pool has a large allocation to exchange-traded commodities and TIPS
- Commodities have a 4.0% expected return and risk of 18.2%; TIPS have a 2.7% expected return and risk of 6.3%
- Commodities provide an attractive inflation hedge but a less-desirable risk/return characteristic
- Commodity Producers provide similar exposure to the price movement of the underlying commodity but with a higher expected return
- Verus does not yet include projected returns in private infrastructure and private natural resources but based on recent SIS modeling, expected returns were 5.5% and 7.5%, respectively
- Expect the Target Inflation Pool portfolio to provide higher risk-adjusted expected return, but with potentially higher equity beta.

Appendix

10 year return & risk assumptions

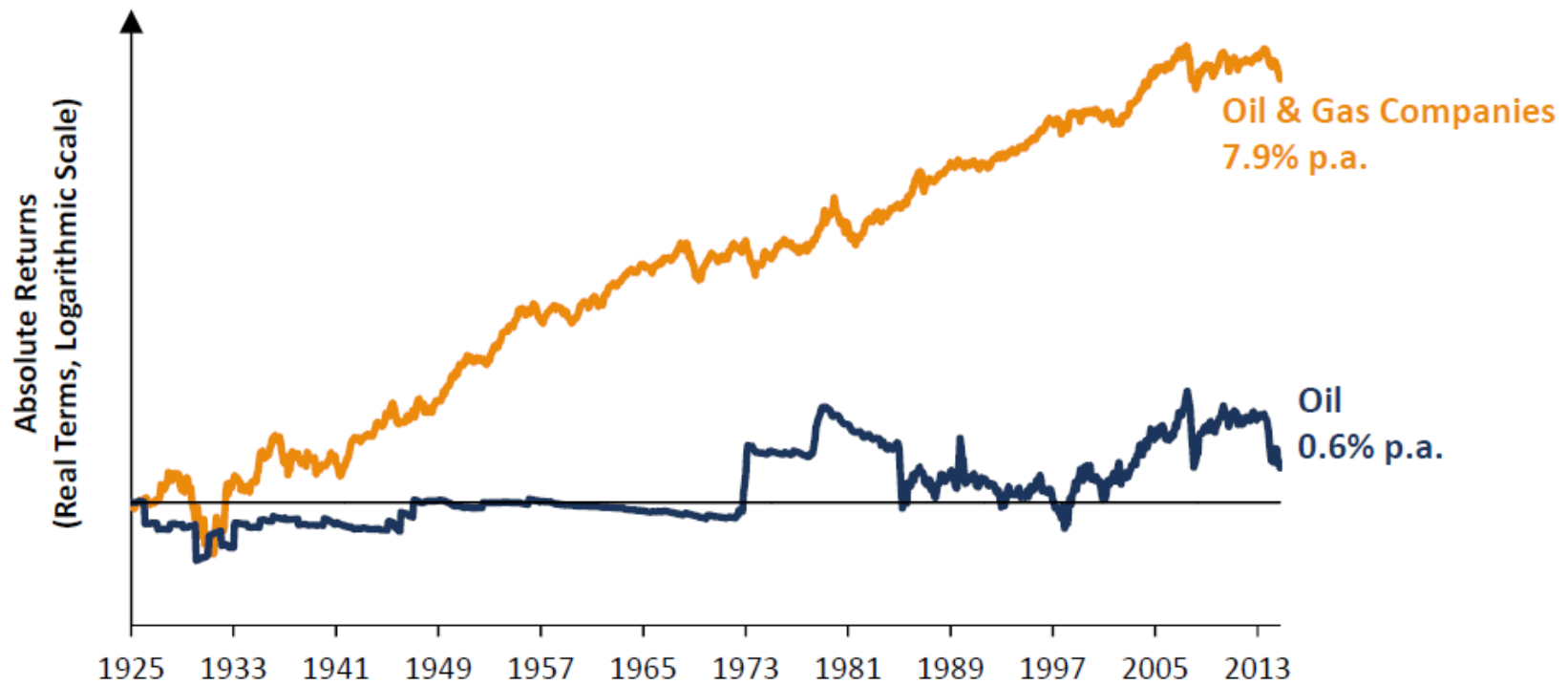
Asset Class	Index Proxy	Ten Year Return		Standard Deviation Forecast	Sharpe Ratio (g) Forecast	Ten Year Historical Sharpe Ratio (g)
		Forecast	Geometric			
Equities						
US Large	S&P 500	5.9%		15.1%	0.26	0.40
Fixed Income						
Cash	30 Day T-Bills	2.0%		0.6%	-	
US TIPS	Barclays US TIPS 5 - 10	2.7%		6.3%	0.11	0.43
US Treasury	Barclays Treasury 7 - 10 year	2.3%		6.5%	0.04	0.67
Core Fixed Income	Barclays US Aggregate Bond	3.2%		3.2%	0.37	1.02
Other						
Commodities	Bloomberg Commodity	4.0%		18.2%	0.11	-0.42
Hedge Funds	HFRI Fund of Funds	6.0%		9.0%	0.44	0.19
Core Real Estate	NCREIF Property	4.7%		13.2%	0.20	0.92
Value-Add Real Estate	NCREIF Property + 200bps	6.7%		23.3%	0.20	-
Risk Parity		7.0%		10.0%	0.50	-
Inflation		2.0%		1.5%*	-	-

Investors wishing to produce expected geometric return forecasts for their portfolios should use the arithmetic return forecasts provided here as inputs into that calculation, rather than the single-asset-class geometric return forecasts. This is the industry standard approach, but requires a complex explanation only a heavy quant could love, so we have chosen not to provide further details in this document – we will happily provide those details to any readers of this who are interested.

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

Equity Risk Premium vs Commodity Return

Investors should be compensated for providing capital to Energy Producers

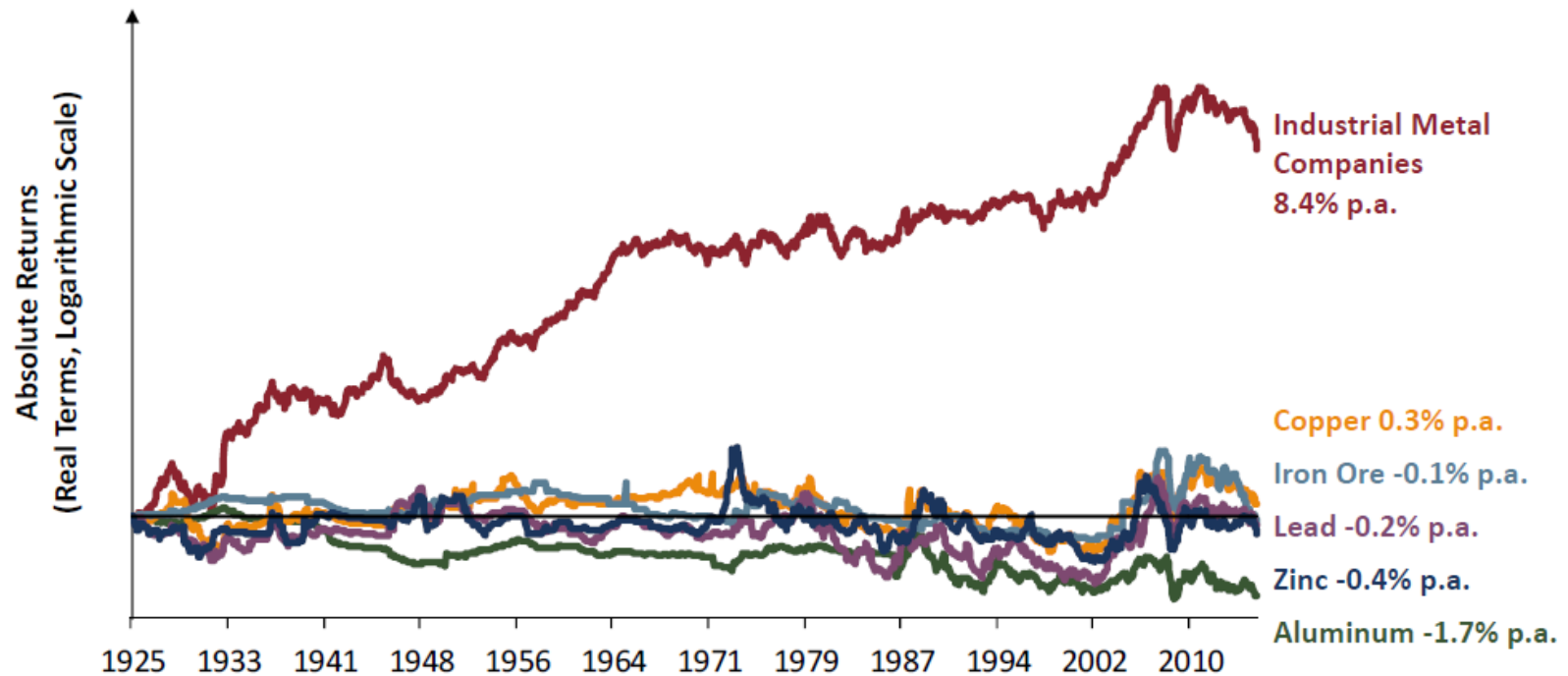


As of 9/30/15

Source: CRSP, Global Financial Data, GMO

Equity Risk Premium vs Commodity Return

Investor should be compensated for providing capital to Metal Producers



As of 9/30/15

Source: CRSP, Global Financial Data, GMO

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 22, 2016

Agenda Item 7.1

TO: Board of Retirement

FROM: Scott Hood, Chief Executive Officer
Tat-Ling Chow, Finance Officer

SUBJECT: Approval of a Resolution Authorizing the Chief Executive Officer to Execute a Third Amendment to the Agreement with Brown Armstrong Accountancy Corporation for Audit Services



Staff Recommendation

Approve a Resolution Authorizing the Chief Executive Officer to Execute a Third Amendment to the Agreement with Brown Armstrong Accountancy Corporation for Audit Services.

Background

After a request for proposal process, in 2010, the Board entered into an agreement with Brown Armstrong to provide audit services. Since that date, the agreement has been extended and services have been added to address requirements issued by Government Accounting Standards Board ("GASB"). The last audit report covered by the current agreement was the June 30, 2015 report.

Discussion

Due to the staff demands for the planned launch of the new Pension Administration Software System in 2017, it is not optimum timing to commence a request for proposal process for auditing services. The contract amendment extends the current term for three more fiscal years, to include the June 30, 2018 audit, and can be terminated earlier with or without cause upon 30 days' notice.

Since the original 2010 agreement, Brown Armstrong has not increased its fees. While the proposed amendment does not increase the hourly rate, it does increase the total service hours in order to elicit and provide information to participating employers as required by GASB 68. The additional hours increase the maximum cost of the annual audit by about 9% from \$45,500 to \$52,308.

To quickly address potential subsequent minor amendments that may arise during the three-year term, the resolution also authorizes the Chief Executive Officer to execute further amendments in an amount not to exceed \$15,000 in the aggregate.

Attachment

Resolution Authorizing Chief Executive Officer to Execute a Third Amendment to the Agreement with Brown Armstrong Accountancy Corporation for Audit Services

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
RESOLUTION 15-16-

**RESOLUTION AUTHORIZING THE CHIEF EXECUTIVE OFFICER TO EXECUTE A
THIRD AMENDMENT TO THE AGREEMENT WITH BROWN ARMSTRONG ACCOUNTANCY
CORPORATION FOR AUDIT SERVICES**

WHEREAS, April 30, 2010, the Board entered into an agreement (hereinafter referred to as the "Original Agreement") and Brown Armstrong Paulden McCown Starbuck & Keeter Accountancy Corporation, now known as Brown Armstrong Accountancy Corporation; and

WHEREAS, in January 2013, the authorized the First Amendment to the agreement to extend the term to include the annual financial audit for June 30, 2015; and

WHEREAS, in November of 2013, the Board authorized the Second Amendment to add additional services in order that SamCERA: (1) be in timely compliance with the new reporting standards required by GASB Statement 67 and, (2) be able to provide information to its participating employers as required by GASB Statement 68; and

WHEREAS, this Board desires to further amend the agreement to extend the term to include the annual financial audit for June 30, 2018 and to increase the annual fee for services by approximately 9%; thereby be it

RESOLVED, that the Chief Executive Officer is hereby authorized to execute an amendment to the agreement to increase the fiscal obligation to not exceed \$52,308 annually and to extend the term of the agreement to April 30, 2019.

BE IT FURTHER RESOLVED, that the Chief Executive Officer is hereby authorized and directed to execute subsequent amendments to the Third Amended Agreement with Brown Armstrong Accountancy Corporation in an amount not to exceed a total of \$15,000.

* * * * *

Regularly passed and adopted, by the San Mateo County Employees' Retirement Association, Board of Retirement, on _____, 2016.

Ayes, Trustees:

Noes, Trustees:

Absent, Trustees:

Abstain, Trustees:

Natalie Kwan Lloyd, Board Secretary

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 22, 2016

Agenda Item 7.2

TO: Board of Retirement

FROM: Scott Hood, Chief Executive Officer



SUBJECT: Report on Status of April 26 and 27, 2016 Board-Staff Retreat Planning

Staff Recommendation

Provide direction to staff regarding the topics and schedule for the April 26 and 27, 2016, Board-Staff Retreat.

Background

This item is the Board's final opportunity to discuss the proposed agenda for the April 26 and 27 Board retreat.

Discussion

After receiving input from the last meeting, staff has included a team building exercise on the first day. Also, we have now included on Day 2, weather permitting, an outdoor lunch at the Patio Café and a walk around the Oracle Pond.

If you have additional topics or retreat activities to suggest, please mention them during this agenda item.

The 2016 SamCERA Board-Staff Retreat is scheduled along the same lines as the 2015 retreat:

Days: Two consecutive days
Timing: Leaves time in between speakers for discussion
Location: SamCERA Boardroom
Speakers: 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
Scheduled For: **Tues April 26 and Wed April 27 both days commencing at 8:30 a.m.**

Attachment

Draft 2016 Board-Staff Retreat Agenda

Agenda & Presenters

Board / Staff Retreat

April 26 & 27, 2016



San Mateo County Employees'
Retirement Association

BOARD / STAFF RETREAT AGENDA
Day One—Tuesday, April 26, 2016

<u>TIME</u>	<u>TOPIC AND PRESENTER</u>
8:30 a.m.	Coffee and Refreshments
9:00 a.m.	Welcome Presenter: Scott Hood, SamCERA Chief Executive Officer
9:05 a.m.	Board Governance and Innovation Presenter: Governance and Innovation Expert
10:05 a.m.	Open Discussion
10:30 a.m.	Team Building Exercise Lead by: Gladys Smith
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
11:45 a.m.	Lunch
12:45 p.m.	Deep Dive- Continued Presenters: Michael Coultrip, SamCERA Chief Investment Officer and Margaret Jadallah, Verus
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 27, 2016

<u>TIME</u>	<u>TOPIC AND PRESENTER</u>
8:30 a.m.	Coffee and Refreshments
9:00 a.m.	Overview of the 2016 Asset/Liability Process Led by Mike Coultrip. Provide an overview of the asset/liability study process. Presenters: Michael Coultrip, SamCERA Chief Investment Officer and Margaret Jadallah, Verus
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 Café (Outdoors)
12:30 p.m.	Walk around Oracle (Bring your walking shoes) Lead by: Lili Dames and Doris Ng
12:45 p.m.	Long Term Effects of Lowering the Assumed Rate of Return Presenter: Nick Collier, Milliman, Inc.
1:45 p.m.	Open Discussion
2:15 p.m.	Break
2:30 p.m.	Private Equity Valuations/Fee Transparency Discussion of Private Equity Transparency and Fee Structures. Presenter: TBD
3:30 p.m.	Sneak Peak of SamCERA's Future PASS System Presenter: Elizabeth LeNguyen, SamCERA Benefits Manager
4:30 p.m.	Open Discussion
5:00 p.m.	End of Retreat

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

March 22, 20156

Agenda Item 7.3

TO: Board of Retirement

FROM: Tariq Ali, Chief Technology Officer



SUBJECT: Report on SamCERA's Information Technology Projects

Discussion

Staff will provide an update of SamCERA's technology projects, and Project Manager for the PASS implementation Will Morrow will deliver an update on the Pension Administration Software System implementation project.

IT Projects

- PensionGold Web Member Services (WMS) Updates
- Sharepoint Migration
- iPad Pro Demo
- Tripit Itinerary organizer overview

PASS Implementation

- Status
 - Phase 1 (Project Initiation) is 100% complete
 - Phase 2 (PASS Development) is 96% complete
 - Phase 3 (PASS Implementation) is 3% complete
 - Overall 70% complete
- Schedule
 - On schedule
 - Only minor modifications to sprint plan to date
 - No schedule variances from sprint plan
 - Phase 1 complete
 - Phase 2, Validations 1, 2, and 3 complete (of 4), Validation 4 in progress
 - Phase 3 (PASS Implementation) starting March 2016 and go-live January 2017
- Data Conversion
 - No significant conversion issues
 - Data conversions to support each of the four Validation testing periods are complete
 - Data reconciliation will begin in May 2016

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

- Budget
 - No budget variance
 - Vitech has invoiced \$3,822,120 (50%) of the \$7,697,560 project budget
 - Four contract amendments approved totaling \$644,688 (8.7% of original contract)
- Risks
 - We recently completed a project-wide risk review
 - We have identified and planned mitigation for several project risks including:
 - Infrastructure and application performance
 - SamCERA staff are not prepared for an effective transition to PASS
 - Payroll reports are incomplete or not accurate
 - CAFR reports are incomplete or not accurate
 - Loss of key Vitech project staff results in schedule delays and/or quality issues
- Other
 - Change management meetings are being conducted bi-monthly
 - SamCERA has started a project to create new procedures manuals
 - SamCERA is reviewing and integrating lessons learned from Orange County implementation
 - SamCERA will delay rollout of member self-service until February 2017 to reduce implementation workload and risk



Moving Retirement Systems Forward

SamCERA PASS Project Update

March 22, 2016

PASS Status Overview

Status as of March 1, 2016

ID	Task Name	Start	Finish	Duration	% Complete	2014				2015				2016			
						Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	PASS Project	4/14/2014	1/2/2017	142.2w	70.36%												
2	Phase 1: Initiate Project	4/14/2014	8/15/2014	18w	100%												
3	Phase 2: Develop PASS	7/7/2014	4/15/2016	93w	95.91%												
4	Validation 1: Demographics	7/7/2014	12/19/2014	24w	100%												
5	Validation 2: ECM, CRM, Employer, Pension	9/29/2014	6/19/2015	38w	100%												
6	Validation 3: Service Purchase, Benefit Calculation	3/2/2015	11/13/2015	37w	100%												
7	Validation 4: Payments, Finance, Self Service, Options	8/24/2015	4/15/2016	34w	84%												
8	Phase 3: Implement PASS	3/7/2016	1/2/2017	43.2w	3%												

Budget Summary

Item	Contract	Invoiced	Remaining
Phase 1	\$590,372	\$590,372	\$0
Phase 2	\$3,575,208	\$2,909,836	\$665,372
Phase 3	\$1,547,585	\$0	\$1,547,585
Holdback	\$477,023	\$0	\$477,023
Options	\$640,500	\$0	\$640,500
Hardware	\$178,483	\$35,172	\$143,311
Software	\$642,011	\$282,417	\$359,595
Other	\$46,378	\$4,323	\$42,055
TOTAL	\$7,697,560	\$3,822,120	\$3,875,440

50% of contract value has been invoiced

Risks

Risk (Value)	Actions
Loss of key Vitech project staff results in schedule delays and/or quality issues (42)	Steering team will monitor new pension lead; skillsets are not unique; documentation is always updated; Vitech bench is strong.
Member self-service retirement applications are not user friendly resulting in phone calls and low usage (32)	Work with Vitech to improve wizard. Pilot test with members. Delay or abandon implementation of MSS retirement application until acceptable.
Member self-service retirement estimates are not user friendly resulting in phone calls and low usage (30)	Work with Vitech to improve wizard. Pilot test with members.
Inadequate SamCERA testing during Validation 4 results in undiscovered defects (30)	SamCERA participates actively in the development of test scripts and aggressively pursues off script testing for edge cases
Loss of key SamCERA project staff results in schedule delays and/or quality issues (30)	Steering team will ensure that project has adequate redundancy of subject matter expertise so that no one person is a single point of failure.

Other Status and Information

- Change management activities continue
- Started development of new procedures manuals
- Reviewing and integrating lessons learned from Orange County implementation
- Beginning detailed data reconciliation activities in May
- SamCERA will delay rollout of member self-service until February 2017 to reduce implementation workload and risk