STANISLAUS COUNTY
EMPLOYEES' RETIREMENT ASSOCIATION
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# AGENDA

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

**October 10, 2012**
**2:00 p.m.**

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

**CONSENT ITEMS**: These matters include routine administrative actions and are identified under the Consent Items heading.

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

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

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

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

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

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

1. Meeting Called to Order

2. Roll Call

3. Announcements

4. Public Comment

5. Consent Items

   a. Approval of the September 25, 2012, Investment Meeting Minutes **View**

   b. Receipt of the Executive Director's 2012 3rd Quarter Update of Goals and 2010-2012 Strategic Action Plan **View**

5. Consent Items (Cont.)

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

      1. Debra Archibald, BHRS, Effective 10-02-12
      2. Frank De Mattos, Animal Services, Effective 07-03-12
      3. Kenneth Fisher, SBT, Effective 10-20-2012
      4. Carolyn List, HSA, Effective 09-17-12
      5. Elaine Mc Dermott, Public Defender, Effective 10-17-12
      6. Saysong Phongsa, CSA, Effective 10-05-12
      7. Mark Puthuff, Sheriff, Effective 10-10-12
      8. David Rhea, Sheriff, 10-23-12

   d. Approval of Deferred Retirement(s) – **Section 31700**

      1. Pedro Rodriguez, CSA, Effective 08-25-12
      2. Sharen Smithcamp, CSA, Effective 09-08-12
      3. Amanda Stepp, BHRS, Effective 07-21-12

6. <u>Executive Director</u>

   a. Public Employees' Pension Reform Act of 2012 – AB 340 and AB 197

   b. New Legislation Update

   c. Discussion and Action on Alternative Investment Class Educational Study Session **View**

7. <u>Members' Forum (Information and Future Agenda Requests Only)</u>

8. <u>Closed Session</u>

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

b. Conference with Legal Counsel – Pending Litigation – One Case:
Nasrawi et al v. Buck Consultants, LLC, et.al, Santa Clara County
Superior Court Case No. 1-11-CV202224
Government Code Section 54956.9(b)

9. <u>Adjournment</u>

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# PLEASE POST FOR EMPLOYEE VIEWING

**BOARD OF RETIREMENT MINUTES** **September 25, 2012**

**Members Present**: Gordon Ford, Maria De Anda, Donna Riley, Ron Martin
Mike Lynch, Jim DeMartini, Darin Gharat, Michael O'Neal, and

***Members Absent***: *Jeff Grover*

**Alternate Member Present:** Joan Clendenin, Alternate Retiree Representative

**Staff Present:** Rick Santos, Executive Director
Luiana Irizarry, Interim Executive Assistant
Kelly Cerny, Executive Board Secretary
Dawn Lea, Benefits Manager
Kathy Herman, Operations Manager
Kathy Johnson, Accountant

**Others Present:** Fred Silva, General Legal Counsel
Paul Pharte & Nathan Pratt, Strategic Investment Solutions (SIS), Inc.
Doris Foster, County Chief Executive Office

1. Meeting called to order at 2:02 p.m. by Jim DeMartini, Chair.

2. **Roll Call**

3. **Announcements**

   Ms. Irizarry announced the Opal Financial Group is taking place on January 8-10, 2013 at the Phoenician in Scottsdale, AZ.

4. **Public Comment**

   None.

5. **Consent Items**

   Motion was made by Maria De Anda and seconded by Darin Gharat to approve the following items as listed.

   Motion carried.

   a. Approval of the September 12, 2012 Administrative Meeting Minutes

5. **<u>Consent Items (Cont.)</u>**

   b. Approval of StanCERA Holiday Office Closure on December 24, 2012 and December 31, 2012

6. **<u>Semi-Annual Performance Report by Delaware Investments</u>**

   Kim Aspenleider, Vice President, Client Services, and Kevin Brown, Vice President Senior Investment Specialist gave the semi-annual presentation on StanCERA's large cap growth portfolio.

   As of June 30 2012, the six months, one year, and inception date net returns are -5.21%, 10.43%, 5.29%, respectively.

   As of August 31, 2012, the six months, one year, and inception date net returns are 14.14%, 18.27%, 5.77%, respectively.

7. **<u>Strategic Investment Solutions (SIS), Inc.</u>**

   a. Monthly Performance Review for the Month Ending August 31, 2012

      Mr. Harte presented the monthly performance review for the period ending August 31, 2012. As of August 31, 2012, StanCERA's portfolio is $1.42 billion. The fiscal year to date return is 3.21% , above StanCERA's policy index of 2.66% and the actuarial assumption of 1.34% year to date.

   b. Report on "Top 10 Holdings" by StanCERA Investment Managers as of August 31, 2012

8. **<u>Executive Director</u>**

   a. Overview of Asset/Liability Education Study Session

   b. Asset Allocation Study – Board of Retirement Risk Survey

   c. Public Employees' Pension Reform Act of 2012 – AB 340 and AB 197

**Heard Out of Order**

10. **<u>Members' Forum (Information and Future Agenda Requests Only)</u>**

    Mr. Santos reported plans to have an investment item on the October Administrative calendar due to heavy concentration of investment items lately.

    Mr. Santos reported plans for an item concerning investment fees and active vs. passive investing at its October investment meeting.

    Mr. Santos reminded the Board of Retirement that Paul Harte of SIS, Inc. will be giving an update on the recent due diligence trip at either the October Administrative or Investment meeting.

**Heard Out of Order (Cont.)**

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

Ms. Lea informed the Board, StanCERA has begun a Pension Reform Focus Group with plan sponsors.

Ms. Herman announced the new Pension Reform Act requires changes to StanCERA's electronic pension system, as well as the plan sponsors.

9. **Closed Session**

J. Clendenin and M. O'Neal recused themselves at 3:50 p.m.

Motion was made by Darin Gharat and seconded by Mike Lynch to commence to Closed Session at 3:50 p.m.

Motion carried.

Motion was made by Darin Gharat and seconded by Ron Martin to return to Open Session at 4:02 p.m.

Motion carried.

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

No Report

b. Conference with Legal Counsel – Pending Litigation – One Case:
Nasrawi et al v. Buck Consultants, LLC, et.al, Santa Clara County
Superior Court Case No. 1-11-CV202224
Government Code Section 54956.9(b)

No Report

11. **Adjournment**

Meeting adjourned at 4:03 p.m.

Respectfully submitted,

Rick Santos, Executive Director

APPROVED AS TO FORM:
FRED A. SILVA, GENERAL LEGAL COUNSEL

By: ________________________________
Fred A. Silva, General Legal Counsel

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**For the Retirement Board Meeting**

**Held on October 10, 2012**

10-10-12
Item #5b

TO: StanCERA Board of Retirement

FROM: Rick Santos, Executive Director

I. SUBJECT: Quarter 3 2012 Update on Executive Director Goals and Strategic Action Plan

II. RECOMMENDATION: Approve progress on Director Goals and Strategic Action Plan

III. ANALYSIS: This is the third quarter update on the Executive Director Goals for 2012 and an update on the progress for the Organizational Strategic Action Plan for 2010-2012. As in the previous two quarters, this information is being presented as one item since Director Goals are explicitly linked to the Strategic Action Plan and as such, the documents share similar information. The link between the Director's goals and the Strategic Action Plan is noted in Attachment 2.

Both documents use color coding to quickly discriminate between tasks that have either been completed or have had progress made (green), and those that have seen no recent progress or have not yet been completed (red).

Strategic Action Plan (Attachment 1)

This document is divided into three sections; tasks that are on going in nature, those that have a specific resolution and incomplete ad hoc Board requests. Only tasks that are on going or have not been completed are part of this document. Many of the tasks in the original Strategic Action Plan have been completed and as such, are not a part of this document. Tasks that are ongoing will simply list the action taken during the quarter being reported out. This information will then be updated each subsequent quarter and the prior quarter's action removed. Those tasks that have a specific resolution will list whether the item has been completed and if so, it will be removed in subsequent quarters.

Executive Director Goals (Attachment 2)

This document lists the goals set forth by the Executive Director in January of this year. As with the Strategic Action Plan document, it lists current progress made in the quarter being reported out. However, unlike the Strategic Action Plan document, since most of the goals have specific resolutions, those items will show the current quarter's progress and will be shown as "complete" when that specific task has reached its resolution.

Rick Santos, Executive Director

# Attachment 1 - 2012 Strategic Action Plan (SAP) Quarter 3 Progress Update

SAP Tasks on going in nature

1) Periodically review and revise the investment policy as needed
   - ✓ Currently working with SIS in devising candidate portfolios for Asset Liability Study in November
   - ✓ Currently working with SIS in developing optimal alternative strategies for consideration

2) Periodically review and revise assumptions as needed
   - ✓ Currently working with EFI on developing demographic assumptions
   - ✓ Currently working with EFI on determining discount rate and inflation assumptions

3) Conduct regular discussions with Strategic Investment Solutions (SIS)
   - ✓ Monthly Investment Meetings
   - ✓ Staff consults with SIS on a regular basis
     - Investment fees
     - Return calculations
     - Asset allocation
     - Capital market expectations
     - Cash flow management
     - Custodial bank issues

4) Periodically discuss key investment decisions with experts as needed
   - ✓ Monthly SIS reports
   - ✓ Monthly Investment Manager reports
   - ✓ Ad hoc meetings with custodian on how to improve cash flow management techniques
   - ✓ Ad hoc meetings with fixed income manager to prepare for cash flow management if necessary

5) Maintain current information on website
   - ✓ Current quarter information
     - Board Agenda information
     - Board minutes
     - Board audio
     - Financial Reports
     - Pension reform information updates

6) Maintain educational sessions for interested stakeholders
   - ✓ Board study sessions
     - Direct Lending
     - Cash flow management
     - Preliminary asset/liability study session
   - ✓ Staff educational sessions
     - Interest rate theory
   - ✓ Stakeholder visits
     - Onsite meetings with County Executive Staff on pension funding and pension reform
     - Onsite meeting with City of Ceres and Special District's staff regarding pension reform

# Attachment 1 - 2012 Strategic Action Plan (SAP) Quarter 3 Progress Update

7) Explore other sources of communication with Plan Sponsors and Members
   - Nothing new to report out

8) Gather and report benchmarking data against other Systems
   - Nothing new to report out

SAP Tasks on going in nature – cont.

9) Analyze benchmarking data
   - ✓ Submitted return data for the RV Kuhns annual survey

10) Communicate with peers in other pension Systems
   - ✓ Staff attendance at CALAPRS seminars
   - ✓ Staff attendance at SACRS Pension reform
   - ✓ Director attendance at SACRS Pension reform
   - ✓ Director attendance at Administrator's roundtable
   - ✓ Director ongoing email and telephone communication with other System Leaders

11) Continue to contract with established knowledgeable attorneys
   - ✓ Current contracts
     - Hanson and Bridgett
     - Damrell, Nelson, Schrimp, Pallios, Pacher & Silva
     - Fletcher Alford
     - Reed Smith

12) Explore opportunities to offer educational sessions at StanCERA
   - ✓ Upcoming asset allocation study
   - ✓ Upcoming experience study
   - ✓ Staff education on the actuarial process

13) Identify high quality educational opportunities and inform Board Members
   - ✓ Continuous/regular offerings of seminars and conferences

14) Ensure that StanCERA processes are completed on time and to standards
   - ✓ Staff replacement/hiring complete
   - ✓ All major processes completed on time
     - Board agenda and minute production
     - 3rd quarter retiree payrolls
     - 3rd quarter member refunds
     - Disability retirement applications (13 outstanding; Increase of 2 from 2nd quarter)

15) Staff and Board to attend approved educational opportunities
   - ✓ Staff
     - CALAPRS Administrative Assistant Roundtable
     - CALAPRS Communications Roundtable
     - CALAPRS Attorney Roundtable
     - CFA events
     - Director attendance of SOA conference in October

- ✓ Board
    - SACRS Fall/Winter Conference

16) Search out other Systems' websites for best practices and ideas for the future
    - ➢ Nothing new to report out

17) Enhance website based on research of other Systems' websites
    - ➢ Nothing new to report out

18) Track and resolve post-implementation Tyler issues as needed
    - ➢ Nothing new to report out

## SAP Tasks with a specific resolution

1) Conduct due diligence
    - ✓ Completed September 2012

2) Explore and make recommendations regarding document imaging
    - ➢ Incomplete; This task most likely will take a back seat until next fiscal year due to pension reform

### Ad Hoc Board Requests

1) Feasibility study regarding a change of custodial bank
    - ✓ Staff to report out in November
2) Continuous investment opportunity education
    - ✓ Alternative asset class education sessions dependent on Board's pleasure

# Attachment 2 – 2012 Executive Director Goals Quarter 3 Progress Update

1. Continued communication, outreach and transparency with major stakeholders such as County, County BOS, Local Governments, Special Districts, employee groups and RESCO (SAP Goal 2, Strategy A)
   - ✓ Relayed information about Board Study sessions to stakeholders
   - ✓ Ongoing meetings with County Executive Staff regarding pension costs
   - ✓ Presentation on cash flow management
   - ✓ Presentation on asset/liability study
   - ✓ Pension reform conferences with County and all other employers/special districts
   - ✓ Numerous responses to requests from media
   - ✓ Meetings with RESCO representatives regarding excess earnings policy

2. Complete internal staffing and reorganization (SAP Goal 3, Strategy B)
   - ✓ Completed quarter 2

3. Complete policy and procedural requirements recommended by Operational Auditor (SAP Goal 3, Strategy C)
   - ✓ Completed quarter 1

4. Complete Organizational understanding of pension risk and the potential development and implementation of new funding strategies and philosophies (SAP Goal 1, Strategies A, B & C; Goal 2, Strategy B; Goal 3, Strategy A)
   - ✓ Board: Cash flow management
   - ✓ Staff: Interest rate theory

5. Complete ongoing educational opportunities for Staff (SAP Goal 3, Strategy B)
   - ✓ Staff Events: CALAPARS Administrative Assistant, Communications and Attorney's Roundtable, Disability mock hearing
   - ✓ Staff attendance at several pension reform seminars

6. Continue ongoing development and understanding of Organizational processes and procedures (SAP Goal 3, Strategy B)
   - ✓ Work closely with General and Special Counsel
   - ✓ Network with other 1937 Act Administrators
   - ✓ Pension reform; 1937 Act historical perspective review
   - ✓ Extensive contact with individual Board members outside of regular meetings
   - ✓ Excess earnings policy: Historical perspective review
   - ✓ Annual Audit process
   - ✓ Due diligence trip

7. Complete Cost/Benefit analysis on document imaging system (SAP Goal 4, Strategy B)
   - ➢ No progress to report

# Attachment 2 – 2012 Executive Director Goals Quarter 3 Progress Update

8. Explore and potentially execute "paperless" Board meetings (SAP Goal 4, Strategy C)
   - ✓ Completed quarter 1

9. Director Professional Development (SAP Goal 3, Strategy B)
   - ✓ CFA Capital Market Expectations (July)
   - ✓ Administrator's Roundtable
   - ✓ Several off-site pension reform sessions

10. Oversee administrative functions
    - ✓ All Board agenda and minute production complete for 3rd quarter
    - ✓ All Committee agenda production complete for 3rd quarter
    - ✓ Board and Staff travel arrangements complete
    - ✓ Complete 3rd quarter retiree payrolls on time
    - ✓ 3rd quarter member refunds current
    - ✓ 13 outstanding disability retirement applications as of October 10 (increase of 2 from prior quarter)

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**October 10, 2012, Board of Retirement Meeting**



TO: The Board of Retirement

FROM: Rick Santos, Executive Director

**SUBJECT: DISCUSSION & ACTION ON THE STUDY OF AN ALTERNATIVE INVESTMENT ASSET CLASS**

I. RECOMMENDATION: None

II. ANALYSIS:

*Background*

On November 7, 2012, StanCERA will be undertaking an asset allocation study which seeks to set the Organization's strategic asset allocation for the next several years. At this meeting, it is staff's intent to present several portfolios, each with different risk/reward characteristics. To achieve some of the risk profiles that could produce optimal results in today's economic environment may require a move into the alternative space.

Today's agenda item is intended to solicit input from Trustees that will, 1) allow staff to form these optimal candidate portfolios and; 2) eliminate any alternative investment strategies that the Board does not find desirable.

It is extremely important to realize that even with the information gathered today, in no way does this bind the Board to a commitment to the alternative investment space. In fact, there will be additional candidate portfolios presented on November 7, 2012, which include no alternative investments. Our intent today is simply to answer the following question: "*Should the Board wish to enter the alternative space, which investment(s) would they feel comfortable with*?"

*Today's Discussion*

Paul Harte will briefly discuss 7 different alternative strategies and address a pre-defined set of questions meant to give Trustees comfort (or not) with the strategies. The following alternative investment strategies will be discussed:

1. Direct Lending
2. Distressed Lending
3. Direct Real Estate
4. High Yield Bonds
5. Private Equity
6. Infrastructure
7. Commodities

Some of the issues Mr. Harte will be discussing are meant to determine whether the strategy:

- Fits in with our long-term commitments
- Achieves enhanced diversification
- Exploits a strategy that may ultimately disappear
- Will require additional capital contributions at inopportune times
- Has shown a tendency for superior returns over long periods of time
- Is expected to perform well (or not) in certain economic environments
- Is sensitive to certain economic events that would produce large losses
- Is associated with high management fees

With input from the Board, staff will then put together an optimal mix of only the most favored alternative strategies, and on November 7, 2012, Trustees can decide how much of the overall allocation, if any, to dedicate to this asset class.

As the item is presented, please consider the desirability or non-desirability of each strategy. Attached to this agenda item is a summary list of the alternative strategies.

III. RISK: None

IV. STRATEGIC PLAN: Goal 1, Strategy C: Review investment decisions regularly and ensure that the Board has a full range of information to make informed decisions regarding investment policy

V. BUDGET IMPACT: None

Rick Santos, Executive Director

Attachment

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**For the Retirement Board meeting**
**Held on October 10, 2012**

Alternative Investment Asset Classes

Y / N **High Yield Bonds**
____ Bond (corporate) that has rating of BB or lower and pays a higher yield to compensate for greater risk.

Y / N **Real Estate**
____ Real Estate Investment Trust (REIT) company, usually traded publicly, that manages a Portfolio of real estate to earn profits for shareholders.

Y / N **Private Equity**
____ Invest in start-up or established companies that are not listed on a public exchange, or in public companies with the intent to take them private (i.e. leveraged buyouts of established profitable and cash generative companies with solid customer bases, proven products, and high quality management).

Y / N **Commodities:** Physical commodity products such as grains, metals, and crude oil, either
____ through owning cash instruments, utilizing derivative products, or investing in businesses engaged in the production of physical commodities.

Y / N **Infrastructure:** A nation's basic system of transportation, communication, and other aspects
____ of its physical plant/ building and maintaining road, bridge, sewage, and electrical systems. For developing countries, infrastructure advances are important to boarder economic development.

Y / N **Direct Lending:** A sub-segment of the fixed income asset class that supports the financing
____ of middle market companies with non-traditional sources of capital, such as pension funds, insurance companies and other institutional investors.

Y / N **Distressed Lending:** Securities of companies or government entities that are either already
____ in default, under bankruptcy protection, or in distress and heading toward such a condition.

*Note: Y / N = Reserved for a vote, if needed*
*____ = Reserved for Ranking, if needed*

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

# ASSET/LIABILITY EDUCATION STUDY SESSION

## ALTERNATIVE ASSET CLASSES FOR INVESTMENT CONSIDERATION

October 10, 2012

STRATEGIC INVESTMENT SOLUTIONS, INC.

333 Bush Street, Suite 2000
San Francisco, CA 94104
(415) 362-3484

Paul S. Harte
*Vice President*

# SIS Capital Markets Expectation Methodology

| | |
|---|---|
| Fixed Income | Yield to Worst on Aggregate Index (compare to historic bond risk premium); |
| Inflation | Consensus of economists' forecasts, TIPS |
| US Large Cap | CAPM, 3% to 6% equity premium, macroeconomic DDM |
| Cash | Inflation + 1% to 2% premium |
| US Small Cap | CAPM, (beta of ~1.2) |
| Private Equity | CAPM, (beta of ~1.6); |
| International Equity | Weighted sum of local market premium + local risk free rate; composition is World ex-US |
| Emerging Mkt Equity | Weighted sum of local market premium + local risk free rate; composition is Emerging Markets |
| Real Estate | Historical behavior of equity REITs; current appraisal cap rates; CAPM |
| Absolute Return | Expected net premium to LIBOR (2-4%); 0.30 Sharpe Ratio |
| High Yield FI | Historical ratio: spread of High Yield over US Fixed Income divided by spread of Large Cap over US Fixed Income |
| TIPs* | Current real yield on Barclay's US TIPs Index plus SIS inflation expectation |

** See Appendix for Glossary of Terms*

# StanCERA Target Portfolio Expectations

Projected StanCERA Results
Inflation expectations = 2.4%
Summer 2012

| Asset | Expected Return | Expected Std Dev | Current Yield | Current Mix |
|---|---|---|---|---|
| US Lrg Cap | 8.00% | 18.00% | 2.20% | 33.10% |
| US Sml Cap | 8.30% | 21.00% | 1.20% | 8.30% |
| US Fixed | 2.80% | 4.50% | 2.80% | 37.10% |
| Intl Stock | 8.00% | 18.50% | 3.50% | 15.00% |
| EM Stock | 8.50% | 27.50% | 2.70% | 5.00% |
| Real Est | 6.60% | 18.50% | 2.50% | 1.50% |
| -------------- | | | | --------- |
| Totals | | | | 100.00% |
| Median Return | | | | 6.61% |
| **Gm. Mean Return** | | | | **6.63%** |
| Ar. Mean Return | | | | 7.21% |
| **Std Dev** | | | | **11.30%** |

Real Return = 4.2%
(6.6% - 2.4% Inflation)

# New Asset Classes for Consideration – High Yield Bonds

- Definition – Bond (corporate) that has rating of BB or lower and pays a higher yield to compensate for greater risk.
- High-yield bonds are broadly held by investors worldwide. The yield spread between investment grade and high-yield will fluctuate depending on the state of the economy, company and sector-specific events.
- Investors in high-yield can generally expect a 150 to 300 basis point advantage compared to investment-grade at any given time.
- The Bank of America Merrill Lynch High Yield Index has returned +12.6% for 3-years; +9.1% for 5-years; and, +10.8% for 10-years to 9/30/12.
- Pension Funds can access High Yield Bonds from a separate assignment or part of a Core Plus assignment (Investment Grade + Non-Investment Grade).

# New Asset Classes for Consideration – High Yield Bonds

- Expected Return = 5.3%
- Expected Risk = 10.0%
- Sharpe Ratio = 0.330

| Correlations | U.S. High Yield Bonds |
|---|---|
| US Lg. Cap Equities | 0.70 |
| U.S. Sm. Cap Equities | 0.73 |
| U.S. Fixed Income | 0.35 |
| Int'l Stocks | 0.62 |
| EM Stocks | 0.62 |
| Real Estate | 0.65 |
| Private Equity | 0.51 |
| Absolute Ret. HF | 0.37 |
| U.S. TIPS | 0.32 |
| Commodities | 0.13 |
| Infrastructure | 0.62 |

# New Asset Classes for Consideration – High Yield Bonds

- Strategy attempts to capture market inefficiency when spreads widen on a historical basis vs. corresponding Treasury bonds
- No liquidity premium as HY Bonds are public market instruments
- No capital calls
- Higher correlation to equities than fixed income
- Performs well in stable and/or declining interest rate environments
- Performs well in steady and/or above-average economic growth environments
- Data for high yield bonds is not as long as other traditional asset classes, which makes modeling relative behavior more difficult.
- Over the last 28 years, High Yield realized return is similar to what one would expect going forward:  higher than U.S. Fixed Income and lower than U.S. Equity.
    - The expected return to high yield is a premium over U.S. fixed income but less than U.S. large cap stocks.

# eA US High Yield Fixed Income

**Q2 2012**

## Universe Performance Evaluation

**Benchmark**
ML US High Yield Master II Index

**Median Fees**
44 bps @ $100 million

### Trailing Period Excess Return

| | MRQ | 1 Yr | 2 Yrs | 3 Yrs | 5 Yrs | 7 Yrs | 10 Yrs |
|---|---|---|---|---|---|---|---|
| Benchmark (Total Return) | 1.83 | 6.51 | 10.87 | 16.16 | 8.16 | 8.16 | 9.94 |
| *Universe Size* | *165* | *165* | *160* | *158* | *146* | *142* | *118* |
| Top Quartile | 0.10 | 1.54 | 0.99 | 0.56 | 0.54 | 0.62 | 0.48 |
| **Median** | **-0.28** | **0.62** | **0.36** | **-0.82** | **-0.31** | **-0.09** | **-0.37** |
| Bottom Quartile | -0.61 | -0.60 | -0.57 | -2.31 | -1.28 | -0.84 | -1.38 |
| Interquartile Ratio | 1.15 | 0.75 | 0.68 | 0.93 | 0.88 | 0.95 | 0.84 |

### Calendar Year Excess Return

| | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 | 2005 |
|---|---|---|---|---|---|---|---|---|
| Benchmark (Total Return) | 7.08 | 4.38 | 15.19 | 57.51 | -26.39 | 2.19 | 11.77 | 2.74 |
| *Universe Size* | *165* | *167* | *166* | *171* | *176* | *178* | *182* | *182* |
| Top Quartile | 0.50 | 1.94 | 1.39 | -4.64 | 7.87 | 1.95 | 0.50 | 1.85 |
| **Median** | **-0.09** | **0.69** | **-0.26** | **-12.60** | **4.98** | **1.26** | **-1.01** | **0.97** |
| Bottom Quartile | -0.82 | -0.83 | -1.60 | -19.93 | 0.20 | 0.29 | -2.44 | 0.10 |
| Interquartile Ratio | 0.81 | 0.82 | 1.23 | 1.09 | 0.60 | 0.71 | 1.06 | 1.01 |

* An Interquartile Ratio greater than one indicates that manager selection is rewarded on a risk-adjusted basis. Excess Returns are gross of fees.

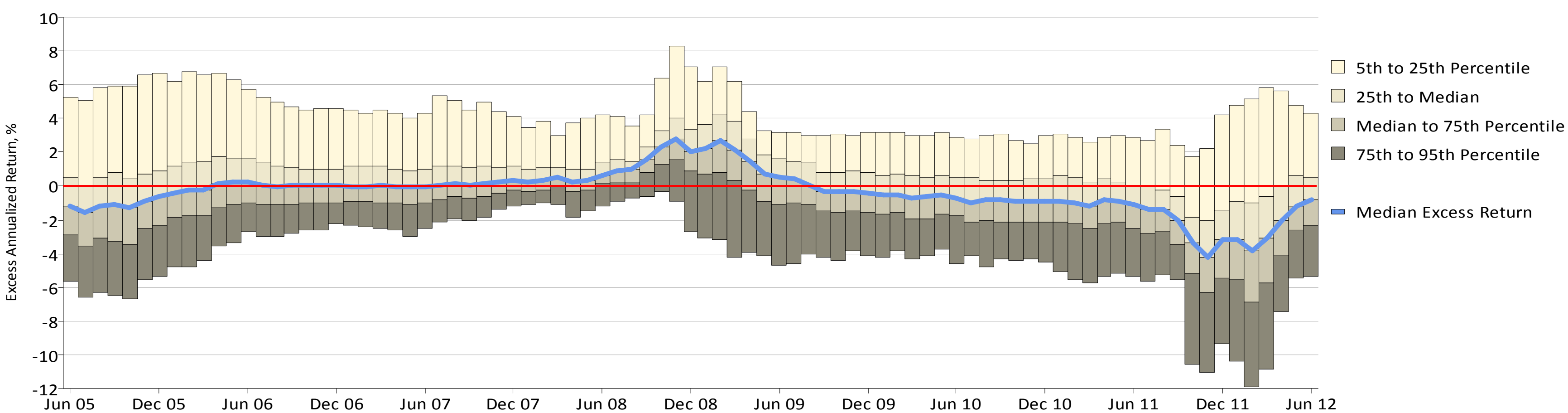
### Commentary

~ High Yield managers outperform - recent period performance skewed by 2009 returns
~ Good manager selection is well rewarded but not selecting well can be detrimental

### Trailing Period Information Ratio

| | 3 Yrs | 5 Yrs | 7 Yrs | 10 Yrs |
|---|---|---|---|---|
| Top Quartile | 0.26 | 0.15 | 0.18 | 0.16 |
| **Median** | **-0.53** | **-0.06** | **-0.02** | **-0.14** |
| Bottom Quartile | -1.06 | -0.27 | -0.20 | -0.33 |

### Rolling Excess Return



# New Asset Classes for Consideration – High Yield Bonds

Projected StanCERA Results
Fall 2012

| Asset | Expected Return | Expected St. Dev. | Current StanCERA Mix | add HY @5.0% | add HY @7.5% |
|---|---|---|---|---|---|
| US Large Cap | 8.00% | 18.00% | 33.10% | 33.10% | 33.10% |
| US Small Cap | 8.30% | 21.00% | 8.30% | 8.30% | 8.30% |
| US Fixed Income | 2.80% | 4.50% | 37.10% | 32.10% | 29.60% |
| Int'l Stock | 8.00% | 18.50% | 15.00% | 15.00% | 15.00% |
| EM Stock | 8.50% | 27.50% | 5.00% | 5.00% | 5.00% |
| Real Estate | 6.60% | 18.50% | 1.50% | 1.50% | 1.50% |
| HY Fixed Income | 5.30% | 10.00% | 0.00% | 5.00% | 7.50% |
| Totals | | | 100.00% | 100.00% | 100.00% |
| **Gm. Mean Return** | | | **6.63%** | **6.72%** | **6.78%** |
| **Standard Deviation** | | | **11.30%** | **11.61%** | **11.74%** |

# New Asset Classes for Consideration – Real Estate

- Real Estate Investment Trust (REIT) company, usually traded publicly, that manages a portfolio of real estate to earn profits for shareholders. REITs make investments in a diverse array of real estate. To avoid taxation at the corporate level, 75% or more of the REIT's income must be from real property and 95% in net earnings must be distributed to shareholders annually. REITs tend to pay yields of 5% to 10%.
- Real Estate Limited Partnership (Private RE) buys properties and passes rental income to limited partners. If the properties appreciate in value over time, they can be sold and the profit passed to limited partners.
- Private RE tends to have a higher fee structure
  - Up to 2% management fee and 20% carry; illiquid in nature.
- Private RE can be divided into Core, Value-added and Opportunistic.

# New Asset Classes for Consideration – Real Estate

- Expected Return = 6.6% (REITs)
- Expected Risk = 18.5%
- Sharpe Ratio = 0.249

| Correlations | Real Estate |
|---|---|
| US Lg. Cap Equities | 0.63 |
| U.S. Sm. Cap Equities | 0.61 |
| U.S. Fixed Income | 0.17 |
| Int'l Stocks | 0.58 |
| EM Stocks | 0.52 |
| High Yield FI | 0.65 |
| Private Equity | 0.46 |
| Absolute Ret. HF | 0.65 |
| U.S. TIPS | 0.28 |
| Commodities | 0.65 |
| Infrastructure | 0.55 |

# New Asset Classes for Consideration – Real Estate

- No liquidity premium as REITs are public market instruments.  A liquidity premium should exist for Private Real Estate although it is hard to quantify
- Private RE Core attempts to gain exposure and replicate the NCREIF Index or ODCE Core.
  - Private RE Value Added should conservatively add 150-200 bps above Core
  - Private Opportunistic RE should add 300-400 bps above Core
- There are capital calls for Private Real Estate investments, however none for REITs
- Real Estate returns, as measured by equity REITs, have consistently provided returns above U.S. Fixed Income and below U.S. Equity.  The forecast inputs:
  - Current capitalization rates used for appraisals adjusted for fees and give-ups
  - Equity REITs beta relative to the S&P 500 (currently 0.55) multiplied by the U.S. equity expected return
- Real Estate performs well in stable and/or rising interest rate environments
- Real Estate performs well in steady and/or above-average economic growth environments

# eA REIT/Real Estate

**Q2 2012**

## Universe Performance Evaluation

**Benchmark**
DJW US REIT (FC) Index

**Median Fees**
62 bps $100 million

### Trailing Period Excess Return

| | MRQ | 1 Yr | 2 Yrs | 3 Yrs | 5 Yrs | 7 Yrs | 10 Yrs |
|---|---|---|---|---|---|---|---|
| Benchmark (Total Return) | 3.75 | 13.29 | 23.65 | 33.52 | 1.97 | 5.98 | 10.27 |
| *Universe Size* | *48* | *48* | *48* | *48* | *48* | *47* | *43* |
| Top Quartile | 0.11 | 0.87 | 1.20 | 0.62 | 2.89 | 1.89 | 2.11 |
| **Median** | **-0.31** | **-0.01** | **0.14** | **-0.24** | **1.89** | **1.27** | **1.30** |
| Bottom Quartile | -0.65 | -1.25 | -0.96 | -0.91 | 0.76 | 0.41 | 0.34 |
| Interquartile Ratio | 1.24 | 0.71 | 0.96 | 1.28 | 0.88 | 0.72 | 0.84 |

### Calendar Year Excess Return

| | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 | 2005 |
|---|---|---|---|---|---|---|---|---|
| Benchmark (Total Return) | 14.91 | 9.37 | 28.07 | 28.46 | -39.20 | -17.55 | 35.76 | 14.00 |
| *Universe Size* | *48* | *51* | *54* | *59* | *69* | *74* | *74* | *75* |
| Top Quartile | 0.42 | 1.76 | 2.17 | 7.44 | 5.02 | 3.52 | 2.00 | 1.80 |
| **Median** | **-0.04** | **0.08** | **0.82** | **2.53** | **2.05** | **1.83** | **-0.02** | **-0.12** |
| Bottom Quartile | -0.49 | -1.26 | -1.56 | -1.44 | -0.94 | -0.15 | -4.04 | -2.10 |
| Interquartile Ratio | 1.02 | 1.25 | 0.57 | 1.24 | 0.99 | 0.85 | 0.50 | 0.97 |

* An Interquartile Ratio greater than one indicates that manager selection is rewarded on a risk-adjusted basis. Excess Returns are gross of fees.

### Commentary

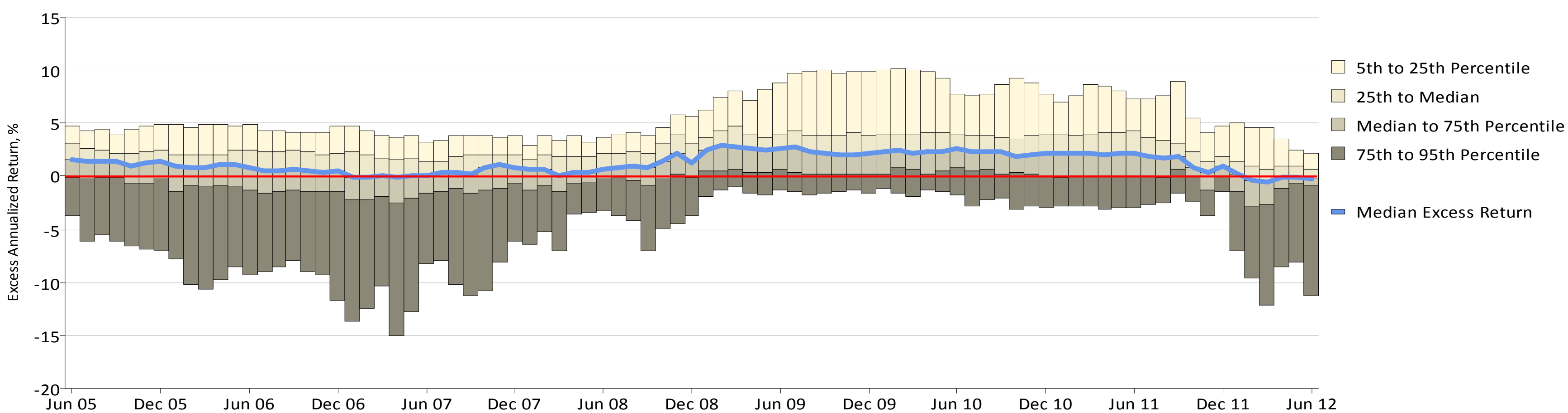
~ REIT Managers (Active) have performed in-line with benchmark over the past 3 years

~ Good manager selection over the last 3 years has not been rewarded

### Trailing Period Information Ratio

| | 3 Yrs | 5 Yrs | 7 Yrs | 10 Yrs |
|---|---|---|---|---|
| Top Quartile | 0.21 | 0.74 | 0.59 | 0.71 |
| **Median** | **-0.12** | **0.49** | **0.41** | **0.42** |
| Bottom Quartile | -0.62 | 0.21 | 0.15 | 0.11 |

### Rolling Excess Return



# New Asset Classes for Consideration – Real Estate

Projected StanCERA Results
Fall 2012

| Asset | Expected Return | Expected St. Dev. | Current StanCERA Mix | increase RE to 5.0% | increase RE to 7.5% |
|---|---|---|---|---|---|
| US Large Cap | 8.00% | 18.00% | 33.10% | 33.10% | 33.10% |
| US Small Cap | 8.30% | 21.00% | 8.30% | 8.30% | 8.30% |
| US Fixed Income | 2.80% | 4.50% | 37.10% | 33.60% | 31.10% |
| Int'l Stock | 8.00% | 18.50% | 15.00% | 15.00% | 15.00% |
| EM Stock | 8.50% | 27.50% | 5.00% | 5.00% | 5.00% |
| Real Estate | 6.60% | 18.50% | 1.50% | 5.00% | 7.50% |
| Totals | | | 100.00% | 100.00% | 100.00% |
| **Gm. Mean Return** | | | **6.63%** | **6.75%** | **6.85%** |
| **Standard Deviation** | | | **11.30%** | **11.75%** | **12.06%** |

# New Asset Classes for Consideration – Private Equity

- Definition: Equity capital that is not quoted on a public exchange. Private equity consists of investors and funds that make investments directly into private companies or conduct buyouts of public companies that result in a delisting of public equity. Capital for private equity is raised from retail and institutional investors, and can be used to fund new technologies, expand working capital within an owned company, make acquisitions, or to strengthen a balance sheet.
- Private equity comprised primarily of Buyouts, Venture Capital and Debt Related.
- Private equity tends to have a higher fee structure and is illiquid in nature.
  - Partnership structures have a material impact on net investment returns.
- An illiquidity premium over Public Market equities is typically modeled at + 300 bps .
- J-Curve effect is generally present due to fees and start-up costs of a PE program.
- Vintage year diversification is critical.
- Selection of top quartile funds is paramount.
  - These funds can be restricted to new investors making it challenging.

# New Asset Classes for Consideration – Private Equity

- Expected Return = 10.5%
- Expected Risk = 33.0%
- Sharpe Ratio = 0.258

| **Correlations** | **Private Equity** |
|---|---|
| US Lg. Cap Equities | 0.63 |
| U.S. Sm. Cap Equities | 0.60 |
| U.S. Fixed Income | -0.07 |
| Int'l Stocks | 0.58 |
| EM Stocks | 0.57 |
| High Yield FI | 0.51 |
| Real Estate | 0.31 |
| Absolute Ret. HF | 0.46 |
| U.S. TIPS | 0.18 |
| Commodities | 0.18 |
| Infrastructure | 0.30 |

# New Asset Classes for Consideration – Private Equity

- Strategy attempts to capture market inefficiency given “private nature” of investments
- Private Equity is modeled with an illiquidity premium of 300 bps.
- Supply and demand balances key to entry pricing and expected returns.
  - Fund raising is driven by LP demand (not necessarily supply of deals)
- Capital calls will be made and vintage year diversification is necessary
- Direct strategies or fund-of-funds with an additional layer of fees
- Like small cap stocks, Private Markets do not show a consistent premium over U.S. large cap stocks. We cannot use the historical returns directly for our projection of Private Markets returns due to this lack of consistency. The forecast inputs:
  - Private Equity proxy beta relative to the S&P 500 (currently 1.6) multiplied by the U.S. large cap stock cash premium added to expected cash return
- Performs well in steady and/or above-average economic growth environments
- Base case is 60% buyouts; 30% venture; and, 10% debt-related

# New Asset Classes for Consideration – Private Equity

Projected StanCERA Results
Fall 2012

| Asset | Expected Return | Expected St. Dev. | Current StanCERA Mix | add PE to 5.0% |
|---|---|---|---|---|
| US Large Cap | 8.00% | 18.00% | 33.10% | 33.10% |
| US Small Cap | 8.30% | 21.00% | 8.30% | 8.30% |
| US Fixed Income | 2.80% | 4.50% | 37.10% | 32.10% |
| Int'l Stock | 8.00% | 18.50% | 15.00% | 15.00% |
| EM Stock | 8.50% | 27.50% | 5.00% | 5.00% |
| Real Estate | 6.60% | 18.50% | 1.50% | 1.50% |
| Private Equity | 10.50% | 33.00% | 0.00% | 5.00% |
| Totals | | | 100.00% | 100.00% |
| **Gm. Mean Return** | | | **6.63%** | **7.11%** |
| **Standard Deviation** | | | **11.30%** | **12.42%** |

# New Asset Classes for Consideration – Commodities

- Definition: bulk goods such as grains, metals, foods and energy (oil, natural gas) traded on exchanges or spot market.
- Commodities are thought to be inflation-hedging instruments. Should perform well in rising inflation/growth type of environments.
  - Note: recent years commodities have performed more in line with equities (part of the "risk-on" trade)
- Return from commodities generally is comprised of three parts: the underlying spot price of the commodity, the rolling of futures associated with the underlying commodity, and the underlying cash spot price
- Commodities can be invested in four primary ways: passive index return (beta), active management (beta 0-100% long); long-short strategy; and, rolling management of futures.
  - Active management can include: fundamental analysis, quantitative analysis, technical analysis, sentiment analysis and market forecasts

# New Asset Classes for Consideration – Commodities

- Expected Return = 4.3%
- Expected Risk = 30.0%
- Sharpe Ratio = 0.077

| Correlations | Commodities |
|---|---|
| US Lg. Cap Equities | 0.27 |
| U.S. Sm. Cap Equities | 0.28 |
| U.S. Fixed Income | -0.07 |
| Int'l Stocks | 0.29 |
| EM Stocks | 0.37 |
| High Yield FI | 0.13 |
| Real Estate | 0.28 |
| Absolute Ret. HF | 0.49 |
| U.S. TIPS | 0.45 |
| Private Equity | 0.18 |
| Infrastructure | 0.22 |

# New Asset Classes for Consideration – Commodities

- No illiquidity premium – investments are generally made in the futures market
- No capital calls
- Exposures include: Passive index replication, active management, hedge fund long/short strategy, and/or futures rolling
- The expected return to a commodities futures investment is a function of three elements: the expected cash return on the underlying collateral, the expected change in price of the commodities, and the return (positive or negative) associated with the shape of the price curve of future delivery of a commodity. The current expectation for commodities assumes that commodity prices will generally mirror overall inflation and that the structure of futures prices will not provide any additional return. The forecast inputs:
  - Cash expectation
  - Added to inflation expectation
- Performs well in steady and/or above-average economic growth environments

# eA Commodities

**Q2 2012**

## Universe Performance Evaluation

**Benchmark**
DJ-UBS US Commodity Index TR

**Median Fees**

### Trailing Period Excess Return

| | MRQ | 1 Yr | 2 Yrs | 3 Yrs | 5 Yrs | 7 Yrs | 10 Yrs |
|---|---|---|---|---|---|---|---|
| Benchmark (Total Return) | -4.55 | -14.32 | 3.86 | 3.49 | -3.65 | 0.13 | 4.96 |
| *Universe Size* | *33* | *33* | *33* | *32* | *23* | *18* | *5* |
| Top Quartile | -0.15 | 4.18 | 4.58 | 3.88 | 4.71 | 5.43 | 0.95 |
| **Median** | **-2.37** | **1.73** | **2.98** | **2.72** | **1.44** | **1.75** | **0.11** |
| Bottom Quartile | -5.88 | 0.03 | 1.36 | 0.46 | -0.36 | -0.72 | -0.76 |
| Interquartile Ratio | 0.63 | 1.44 | 0.99 | 0.51 | 1.82 | 1.49 | 0.97 |

### Calendar Year Excess Return

| | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 | 2005 |
|---|---|---|---|---|---|---|---|---|
| Benchmark (Total Return) | -3.70 | -13.32 | 16.83 | 18.91 | -35.65 | 16.23 | 2.07 | 21.36 |
| *Universe Size* | *33* | *39* | *38* | *40* | *35* | *25* | *23* | *19* |
| Top Quartile | 1.43 | 8.18 | 4.27 | 11.64 | 6.29 | 17.17 | 9.63 | 15.80 |
| **Median** | **0.00** | **4.40** | **0.98** | **2.54** | **-2.47** | **11.72** | **0.55** | **6.62** |
| Bottom Quartile | -2.49 | 0.46 | -4.99 | -2.31 | -9.32 | 2.26 | -3.46 | 2.66 |
| Interquartile Ratio | 0.57 | 0.96 | 0.55 | 1.88 | 1.28 | 0.58 | 2.26 | 2.32 |

* An Interquartile Ratio greater than one indicates that manager selection is rewarded on a risk-adjusted basis. Excess Returns are gross of fees.

### Commentary

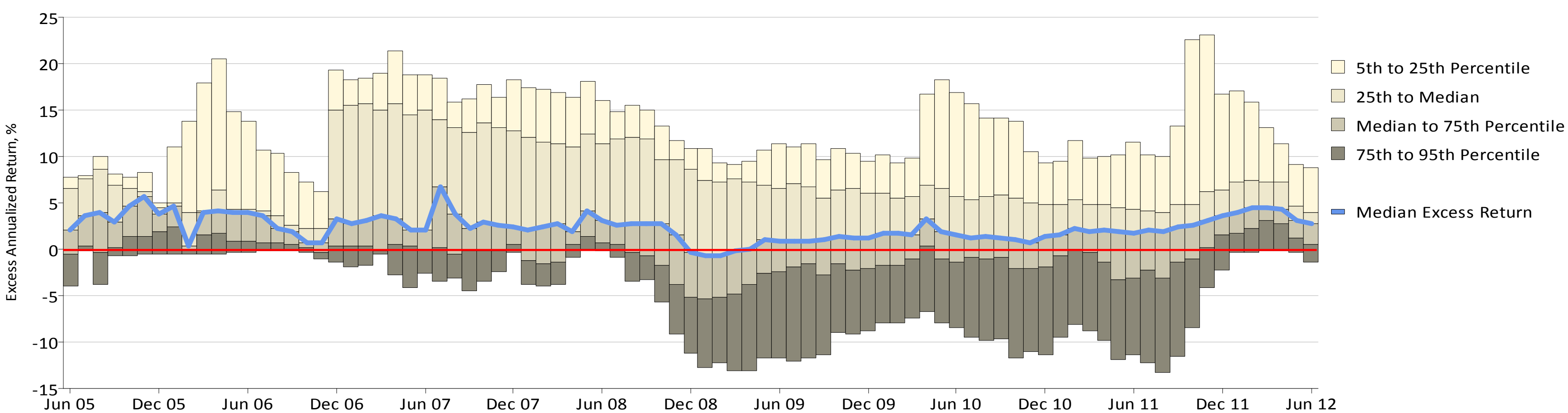
~ Strong support for Active management in Commodities

~ Top-quartile active managers deliver strong alpha

### Trailing Period Information Ratio

| | 3 Yrs | 5 Yrs | 7 Yrs | 10 Yrs |
|---|---|---|---|---|
| Top Quartile | 1.45 | 0.80 | 0.99 | 0.44 |
| **Median** | **0.57** | **0.44** | **0.35** | **0.05** |
| Bottom Quartile | 0.05 | -0.03 | -0.08 | -0.07 |

### Rolling Excess Return



# New Asset Classes for Consideration – Commodities

Projected StanCERA Results
Fall 2012

| Asset | Expected Return | Expected St. Dev. | Current StanCERA Mix | add Commodities to 5.0% |
|---|---|---|---|---|
| US Large Cap | 8.00% | 18.00% | 33.10% | 33.10% |
| US Small Cap | 8.30% | 21.00% | 8.30% | 8.30% |
| US Fixed Income | 2.80% | 4.50% | 37.10% | 32.10% |
| Int'l Stock | 8.00% | 18.50% | 15.00% | 15.00% |
| EM Stock | 8.50% | 27.50% | 5.00% | 5.00% |
| Real Estate | 6.60% | 18.50% | 1.50% | 1.50% |
| Commodities | 4.50% | 30.00% | 0.00% | 5.00% |
| Totals | | | 100.00% | 100.00% |
| **Gm. Mean Return** | | | **6.63%** | **6.82%** |
| **Standard Deviation** | | | **11.30%** | **11.83%** |

# New Asset Classes for Consideration – Infrastructure

- Definition:  a nation's basic system of transportation, communication, and other aspects of its physical plant.  Building and maintaining road, bridge, sewage, and electrical systems.  For developing countries, infrastructure advances are important to boarder economic development.
- Sub-categories of Infrastructure include:  transportation (bridges, toll roads, airports, railroads and ports); energy, utilities, communication, and social (schools, hospitals, prisons and other public buildings).
- Infrastructure are long-lived assets that are costly and time consuming to replace.
  - Generate relatively stable cash flows that usually increase with inflation
- Infrastructure does have publicly-traded entities (much like REITs in Real Estate) and private investment vehicles.
- Private investments are illiquid in nature with 60-80% of returns generated from income streams that are often linked to movements in inflation indexes.

# New Asset Classes for Consideration – Infrastructure

- Expected Return = 7.1%
- Expected Risk = 25.0%
- Sharpe Ratio = 0.204

| Correlations | Infrastructure |
|---|---|
| US Lg. Cap Equities | 0.51 |
| U.S. Sm. Cap Equities | 0.51 |
| U.S. Fixed Income | 0.42 |
| Int'l Stocks | 0.50 |
| EM Stocks | 0.45 |
| High Yield FI | 0.62 |
| Real Estate | 0.64 |
| Absolute Ret. HF | 0.55 |
| U.S. TIPS | 0.38 |
| Private Equity | 0.30 |
| Commodities | 0.22 |

# New Asset Classes for Consideration – Infrastructure

- No liquidity premium for public market instruments. A liquidity premium should exist for Private Infrastructure although it is hard to quantify.
  - The majority of the return is made up of the cash flows of the underlying assets
- Capital calls exist for Private Infrastructure investments
  - No capital calls for public market Infrastructure stocks
- The history and experience of infrastructure investments is quite limited. However, there are indexes that track performance of publicly traded securities that own, operate, and develop infrastructure assets. The forecast implies:
  - Multiple regression of Infrastructure proxy relative to the major asset classes to develop multiple betas of infrastructure relative to these asset classes
  - Betas are multiplied by the expected asset class premiums and added to cash expectation
- Performs well in steady and/or above-average economic growth environments and rising inflation environments

# New Asset Classes for Consideration – Infrastructure

Projected StanCERA Results
Fall 2012

| Asset | Expected Return | Expected St. Dev. | Current StanCERA Mix | add Infrastructure to 5.0% |
|---|---|---|---|---|
| US Large Cap | 8.00% | 18.00% | 33.10% | 33.10% |
| US Small Cap | 8.30% | 21.00% | 8.30% | 8.30% |
| US Fixed Income | 2.80% | 4.50% | 37.10% | 32.10% |
| Int'l Stock | 8.00% | 18.50% | 15.00% | 15.00% |
| EM Stock | 8.50% | 27.50% | 5.00% | 5.00% |
| Real Estate | 6.60% | 18.50% | 1.50% | 1.50% |
| Infrastructure | 7.10% | 25.00% | 0.00% | 5.00% |
| Totals | | | 100.00% | 100.00% |
| **Gm. Mean Return** | | | **6.63%** | **6.87%** |
| **Standard Deviation** | | | **11.30%** | **12.11%** |

# New Asset Classes for Consideration – Direct Lending

- Definition: a sub-segment of the fixed income asset class that supports the financing of middle-market companies with non-traditional sources of capital, such as pension funds, insurance companies and other institutional investors.
- Private credit has traditionally been supplied by banks, but a variety of factors has left this market segment underserved by the traditional capital providers.
- Private credit strategies provide opportunities for yield enhancement. The illiquidity premium is considerable. Life of funds are generally ten years.
- The return in private credit instruments may be generated from a combination of sources, including: up-front points, current cash yield or coupon, payment-in-kind interest, equity upside or warrants, and other types of servicing fees.
- The risk in corporate lending is typically measured as a percentage of default.

# New Asset Classes for Consideration – Direct Lending

- Expected Return = 9.0% (based upon White Oak and Medley)
- Expected Risk = 7.0%
- Sharpe Ratio = 1.00

| Correlations | Direct Lending |
|---|---|
| US Lg. Cap Equities | 0.63 |
| U.S. Sm. Cap Equities | 0.62 |
| U.S. Fixed Income | 0.15 |
| Int'l Stocks | 0.60 |
| EM Stocks | 0.57 |
| High Yield FI | 0.76 |
| Real Estate | 0.65 |
| Absolute Ret. HF | 0.49 |
| U.S. TIPS | 0.26 |
| Private Equity | 0.41 |
| Commodities | 0.25 |

# New Asset Classes for Consideration – Direct Lending

- An illiquidity premium exists although it is hard to quantify. Equity like returns with risk profile of secured debt
- Direct Lending set-up in a private equity or hedge fund format. High fees and a slight J-Curve effect are mitigated by interest rate or coupon payments from underlying loans.
- The history and experience of direct lending investments is limited. There are no indexes that track the performance of the direct lending space. The forecast implies:
  - Returns are estimated based upon the current underlying loan portfolio of the investment managers minus the implied default rate present in the high yield market.
- Performs well in steady and/or above-average economic growth environments
- Typically, the underwriting process will protect the investor from a rising rate environment and also places a floor on how low rates can go

# New Asset Classes for Consideration – Direct Lending

Projected StanCERA Results
Fall 2012

| Asset | Expected Return | Expected St. Dev. | Current StanCERA Mix | add Direct Lending to 5.0% |
|---|---|---|---|---|
| US Large Cap | 8.00% | 18.00% | 33.10% | 33.10% |
| US Small Cap | 8.30% | 21.00% | 8.30% | 8.30% |
| US Fixed Income | 2.80% | 4.50% | 37.10% | 32.10% |
| Int'l Stock | 8.00% | 18.50% | 15.00% | 15.00% |
| EM Stock | 8.50% | 27.50% | 5.00% | 5.00% |
| Real Estate | 6.60% | 18.50% | 1.50% | 1.50% |
| Direct Lending | 7.00% | 9.00% | 0.00% | 5.00% |
| Totals | | | 100.00% | 100.00% |
| | | | | |
| **Gm. Mean Return** | | | **6.63%** | **6.91%** |
| **Standard Deviation** | | | **11.30%** | **11.50%** |

# New Asset Classes for Consideration – Distressed Debt

- Definition: securities of companies or government entities that are either already in default, under bankruptcy protection, or in distress and heading toward such a condition. The most common distressed securities are bonds and bank debt.
- Fixed income instruments with a yield to maturity in excess of 1000 basis points over the risk-free rate of return are commonly thought of as being distressed.
- Investors in distressed securities often try to influence the process by which the issuer restructures its debt, narrows it focus, or implements a plan to turn around its operations.
- The U.S. has the most developed market for distressed securities. The international market (developed and emerging markets countries) has become more active in recent years, especially in Europe.
- Global distressed debt and restructuring opportunities can be a result of: mortgage credit meltdown; systematic bank failures; home price depreciation; sustained high unemployment, soaring corporate default rates; consumer deleveraging; over-leveraged LBOs, etc.

# New Asset Classes for Consideration – Distressed Debt

- SIS generally considers Distressed Debt as part of the Private Equity Asset Class
- Please refer to the section on Private Equity for Expected Returns, Risk, Correlations, etc.

# APPENDIX

# Glossary of Terms

- **Asset Allocation** – (1) The way investments are distributed and weighted among different asset classes. (2) The distribution of investments among categories of assets, such as equities, fixed income, cash equivalents, and real estate.
- **CAPM** – Capital Asset Pricing Model. A system of equations that describes the way prices of individual assets are determined in efficient markets, that is, in markets where information is freely available and reflected instantaneously in asset prices. According to this model, prices are determined in such a way that risk premiums are proportional to systematic risk, measured by the beta coefficient, which cannot be eliminated by diversification. CAPM provides an explicit expression of the expected returns for all assets. Basically, the model holds that if investors are risk averse, high-risk stocks must have higher expected returns than low-risk stocks. CAPM maintains that the expected return of a security or a portfolio is equal to the rate on a risk-free investment plus a risk premium.
- **Correlation** – A relationship between two quantities, such that when one changes, the other does. A measure (ranging in value from 1.00 to -1.00) of the association between a dependent variable (fund, portfolio) and one or more independent variables (index). Correlation is a measure, not necessarily of causality, but rather of the strength of a relationship. A correlation coefficient of 1.00 implies that the variables move perfectly in lockstep; a correlation coefficient of -1.00 implies that they move inversely in lockstep; and a coefficient of 0.00 implies that the variables as calibrated are uncorrelated. A correlation half-life is the amount of time it takes for the amount of the measured time period to diminish by half exponentially.
- **Efficient Frontier** – A set of optimal portfolios, one for each level of expected return, with minimum risk.
- **Expected Return** -- Estimate of the return of an investment or portfolio from a probability distribution curve of all possible rates of return; statistically, it is the mean (ether geometric mean or arithmetic mean) of the distribution or the "most likely" outcome.
- **Factor Model** – Regression-based mathematical calculation used to determine the extent to which macroeconomic factors or other explanatory variables affect the value or price movement of a specific security or portfolio.

# Glossary of Terms

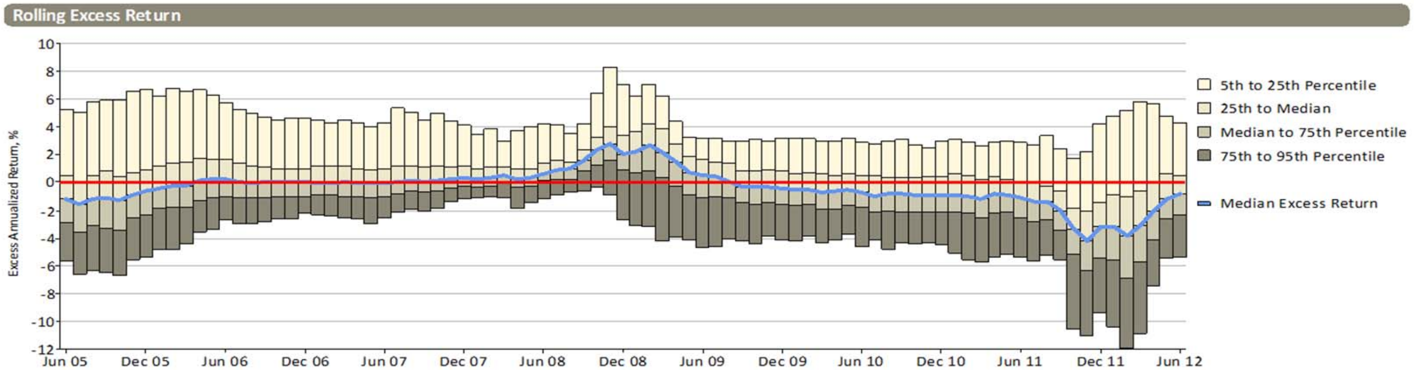
- **Geometric Return** – Similar to the arithmetic mean, which is what most people think of with the word "average", except that instead of adding the set of returns and then dividing the sum by the number of return observations (N), the numbers are multiplied and then the Nth root of the resulting product is taken. Also known as compound return.
- **Mean Reversion** – Statistical phenomenon stating that the greater the deviation of a given observation (e.g. a quarterly or annual return) from its mean, the greater the probability that the next measured observation will deviate less far. In other words, an extreme event is likely to be followed by a less extreme event.
- **Optimization** – Process of determining the portfolio composition such that expected return is maximized for a given risk level, or risk is minimized for a given expected return level. Other optimizations could target risk of shortfall, maximization of Sharpe ratio, or minimization of tracking error.
- **Sharpe Ratio** – A ratio of return to volatility, useful in comparing two portfolios or stocks in terms of risk-adjusted return. The higher the Sharpe Ratio, the more sufficient are returns for each unit of risk. It is calculated by first subtracting the risk free rate from the return of the portfolio, then dividing by the standard deviation of the portfolio.
- **Stochastic Simulation** – Uses random processes to simulate the various sources of uncertainty that affect the value of the instrument, portfolio or investment in question, and calculates a representative value or distribution of possible outcomes given the simulated values of the underlying inputs.
- **Treasury Inflation-Protected Securities (TIPS) – I**nflation-indexed bonds issued by the U.S. Treasury. The principal is adjusted to the Consumer Price Index (CPI), the commonly used measure of inflation. The coupon rate is constant, but generates a different amount of interest when multiplied by the inflation-adjusted principal, thus protecting the holder against inflation. TIPS are currently offered in 5-year, 10-year and 20-year maturities. Beginning in February 2010, the U.S. Treasury will once again offer 30-year TIPS bonds.

# Strategy Considerations - Overview

| | Strategy | Opportunity | Liquidity Premium | Capital Calls | Return Expectations | Standard Deviation | Sharpe Ratio | Correlations (60/40) | Risks | Fees |
|---|---|---|---|---|---|---|---|---|---|---|
| **High Yield Bonds** | Corporate debt with rating of BB or below | Ongoing | None | None | 5.30% | 10.00% | 0.33 | 0.79 | Interest rate sensitivity + spread risk + default risk | 40 - 60 bps |
| **Real Estate** | Public/Private investments which generate returns from property income and asset apprication | Ongoing | Public: No; Private: Yes | Public: No; Private: Yes | 6.60% | 18.50% | 0.25 | 0.23 | Interest rates; high Core valuations + cap rate expansion | **REITS** 60 - 80 bps **Private** Mgmt: 1-2% Carry: 10-20% |
| **Private Equity** | Buyouts, Venture, Debt (Distressed) | Ongoing | Yes | Yes | 10.50% | 33.00% | 0.26 | 0.44 | Manager specific risks; Supply/Demand imbalances; Vintage year exposures | **Mgmt** 1-2% **Carry** 10-20% |
| **Commodities** | Grains, Metals, Foods, & Energy | Ongoing | Public: No; Private: Yes | Public: No; Private: Yes | 4.50% | 30.00% | 0.08 | 0.44 | Weather; U.S. dollar, political regulations, supply/demand imbalances | ~100 bps |
| **Infrastructure** | Systems of Transportation, Communication, and other physical plants | Ongoing | Public: No; Private: Yes | Public: No; Private: Yes | 7.10% | 25.00% | 0.20 | 0.88 | Decrease in public infrastructure spending + flows into assets | **REITS** 70 - 100 bps **Private** Mgmt: 1-2% Carry: 10-20% |
| **Direct Lending** | Debt Financing of Middle-Market Companies | Timely | Yes | Yes | 7.00% | 9.00% | 1.00 | 0.45 | Re-entry of traditional lenders into Middle Market + economic slowdown + default risk | **Mgmt** 1-2% **Carry** 10-20% |
| **Distressed Debt** | Distressed Bonds and bank debt | Timely | Yes | Yes | 10.50% | 33.00% | 0.26 | 0.68 | Manager specific risks; Supply/Demand imbalances; Vintage year exposures + default risk | **Mgmt** 1-2% **Carry** 10-20% |

# Universe Comparison – Rolling 3 year Excess Return

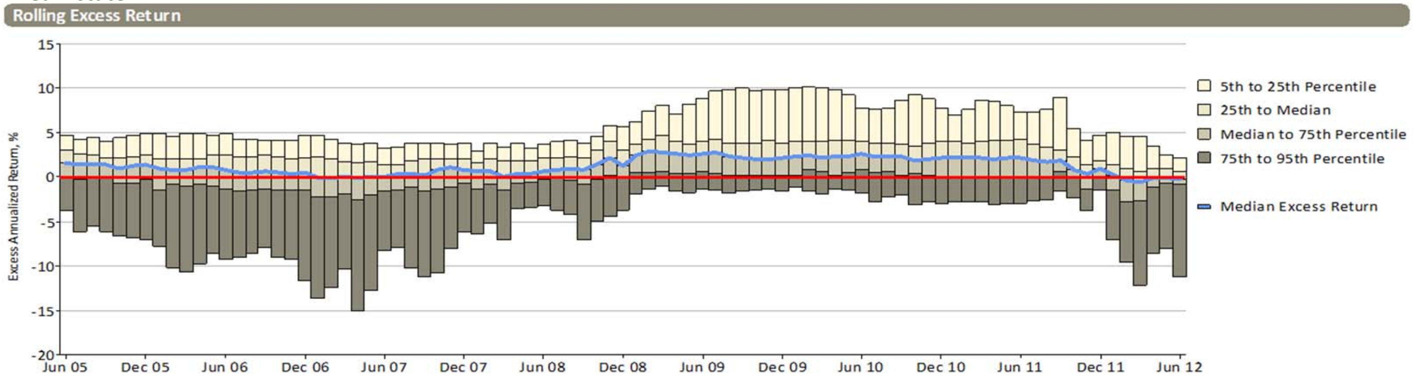
**High Yield**




**Comments**

~ Good manager selection is well rewarded but no selecting well can be detrimental

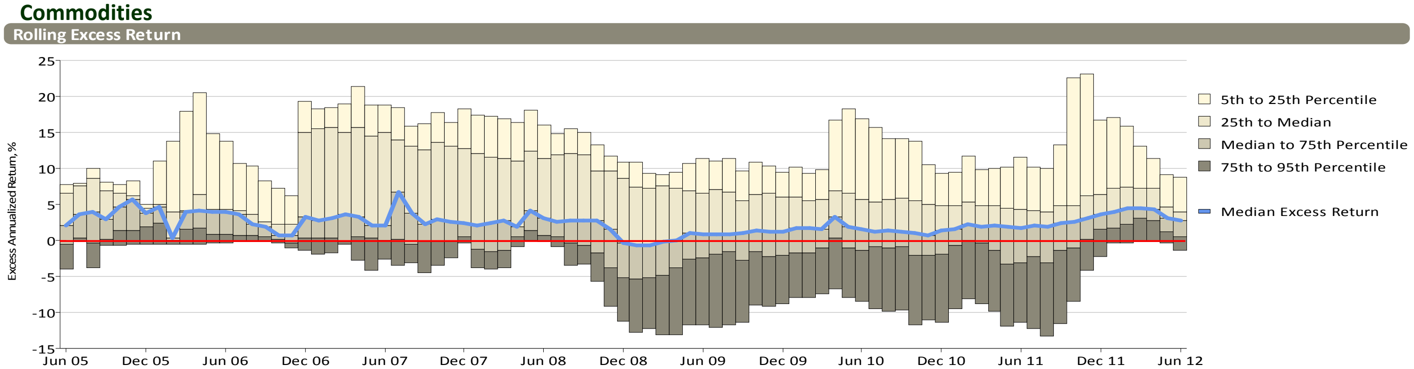
**Real Estate**




**Comments**

~ REIT Managers (Active) have performed in-line with benchmark over the past 3 years

**Commodities**




**Comments**

~ Strong support for Active management in Commodities

## Private Equity – Historical Perspective

### THE SIS PERIODIC TABLE OF PRIVATE EQUITY INVESTMENT RETURNS

Since Inception Internal Rate of Return for Broad Asset Classes (Vintage Years 1992 - 2011) Ranked in Order of Performance

Other Private Equity
Buyouts
Venture Capital

| 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Venture Capital 33.48% | Venture Capital 34.59% | Venture Capital 43.28% | Venture Capital 54.21% | Venture Capital 78.64% | Venture Capital 38.05% | Venture Capital 13.98% | Buyouts 9.30% | Buyouts 14.17% | Other PE 23.24% | Other PE 21.62% | Buyouts 19.87% | Buyouts 16.47% | Other PE 8.72% | Other PE 5.45% | Other PE 7.14% | Other PE 8.45% | Buyouts 21.01% | Venture Capital 26.10% | Other PE -21.48% |
| Buyouts 20.23% | Buyouts 18.12% | Other PE 13.19% | Other PE 12.30% | Buyouts 6.89% | Other PE 11.52% | Other PE 12.44% | Other PE 7.30% | Other PE 6.47% | Buyouts 21.18% | Buyouts 19.98% | Other PE 8.89% | Other PE 12.53% | Venture Capital 5.86% | Venture Capital 4.04% | Buyouts 6.02% | Buyouts 5.46% | Other PE 13.99% | Buyouts 8.16% | Venture Capital -24.58% |
| Other PE 10.44% | Other PE 10.64% | Buyouts 12.85% | Buyouts 12.13% | Other PE 3.33% | Buyouts 9.00% | Buyouts 3.66% | Venture Capital -3.49% | Venture Capital 0.30% | Venture Capital 4.46% | Venture Capital -2.10% | Venture Capital 1.14% | Venture Capital 4.95% | Buyouts 4.55% | Buyouts 0.65% | Venture Capital 2.80% | Venture Capital 2.92% | Venture Capital 12.26% | Other PE -3.86% | Buyouts -31.73% |

*Source: Pooled-average returns from Venture Economics for the year end December 31, 2011 are as of August 2012. A pooled-average return is a calculation based on the aggregation of cash flows and valuations of the underlying partnerships into a single pool.*

*Broad asset classes are composed of partnerships from all regions, including the United States and EMEA (Europe, the Middle East and Africa).*

*Past period returns are not reflective of future expectations.*

### THE SIS PERIODIC TABLE OF PRIVATE EQUITY INVESTMENT RETURNS

Since Inception Internal Rate of Return for Broad Region Classifications (Vintage Years 1992 - 2011) Ranked in Order of Performance

United States
EMEA
All Regions

| 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| United States 25.90% | United States 22.96% | EMEA 29.67% | EMEA 35.24% | United States 21.29% | EMEA 13.02% | EMEA 9.69% | EMEA 10.52% | EMEA 10.89% | EMEA 23.14% | EMEA 21.85% | United States 14.96% | EMEA 18.36% | United States 7.59% | United States 2.83% | United States 7.10% | United States 9.67% | EMEA 25.06% | United States 3.40% | EMEA -12.50% |
| All Regions 24.51% | All Regions 21.79% | All Regions 23.79% | All Regions 19.74% | All Regions 19.53% | All Regions 12.94% | All Regions 6.14% | All Regions 3.76% | All Regions 6.95% | All Regions 15.95% | All Regions 17.60% | All Regions 14.20% | All Regions 13.06% | All Regions 5.36% | All Regions 1.88% | All Regions 5.92% | All Regions 6.39% | All Regions 17.50% | All Regions 2.12% | All Regions -29.81% |
| EMEA 15.69% | EMEA 9.19% | United States 22.74% | United States 18.65% | EMEA 12.21% | United States 12.91% | United States 5.47% | United States 2.05% | United States 6.10% | United States 13.50% | United States 15.58% | EMEA 11.85% | United States 11.57% | EMEA 0.70% | EMEA -0.20% | EMEA 0.09% | EMEA -1.72% | United States 15.99% | EMEA -10.13% | United States -30.69% |

*Source: Pooled-average returns from Venture Economics for the year end December 31, 2011 are as of August 2012. A pooled-average return is a calculation based on the aggregation of cash flows and valuations of the underlying partnerships into a single pool.*

*All Regions includes United States and EMEA (Europe, the Middle East and Africa).*

*Past period returns are not reflective of future expectations.*

# Direct Lending – Market Characteristics

## Return Breakdown

| | |
|---|---|
| Current Pay Interest | 8%-10%+ |
| PIK Interest | 2%-4% |
| Origination/Other Fees * | 2%-3% |
| Warrant/ Equity Upside | 2%-5%+ |

| | |
|---|---|
| Total Gross Unlevered Return | 10%-12%+ |
| Total Gross Levered Return | 14%-16%+** |

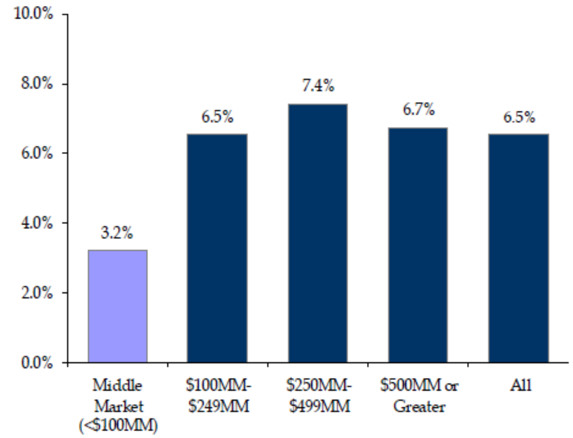
*Closing fees, amendment fees, prepayment fees, etc. where applicable.

**Effect of 1:1 leverage.

Note: (1) Cumulative institutional loan default rates for public filings by deal size from 1995 to 2011.
Source: S&P LCD

Note: (2) Reflects ultimate recovery rates for the period 1989 to 2009.
Source: S&P LSTA

## Default Rates by Loan Size[1]




## Recovery Rate by Loan Class[2]