ARIZONA STATE RETIREMENT SYSTEM

3300 NORTH CENTRAL AVENUE • PO BOX 33910 • PHOENIX, AZ 85067-3910 • PHONE (602) 240-2000
7660 EAST BROADWAY BOULEVARD • SUITE 108 • TUCSON, AZ 85710-3776 • PHONE (520) 239-3100
TOLL FREE OUTSIDE METRO PHOENIX AND TUCSON 1 (800) 621-3778
EMAIL ADDRESS: ASKMAC@AZASRS.GOV • WEB ADDRESS: WWW. AZASRS.GOV

Paul Matson
Director

AGENDA

NOTICE OF PUBLIC MEETING OF THE ARIZONA STATE RETIREMENT SYSTEM BOARD

3300 North Central Avenue, 10th Floor Board Room
Phoenix, AZ 85012

September 21, 2012

8:30 a.m. Arizona Time

Pursuant to A.R.S. § 38-431.02 (F), notice is hereby given to the Trustees of the Arizona State Retirement System (ASRS) Board and to the general public that the ASRS Board will hold a meeting open to the public on Friday, September 21, 2012, beginning at 8:30 a.m., in the 10th Floor Board Room of the ASRS offices at 3300 N. Central Avenue, Phoenix, Arizona 85012. Trustees of the Board may attend either in person or by telephone conference call.

The Chair may take public comment during any agenda item. If any member of the public wishes to speak to a particular agenda item, they should complete a "Request To Speak" form indicating the item and provide it to the Board Secretary.

This meeting will be teleconferenced to the ASRS Tucson office at 7660 East Broadway Boulevard, Suite 108, Tucson, Arizona 85710.

The Agenda for the meeting is as follows:

1. Call to Order; Roll Call; Opening Remarks ..... Mr. Tom Manos
   Board Chair

2. Presentation Regarding PRIDE Award for Diversity (estimated time 5 minutes to 8:35 a.m.) ... . Mr. Paul Matson
   Director

3. Approval of the Minutes of the August 17, 2012 Public Meeting and Executive Sessions and August 28 Public Meeting and Executive Session of the ASRS Board (estimated time 1 minute to 8:36 a.m.) ..... Mr. Tom Manos

4. Approval, Modification, or Rejection of Recommended Administrative Law Judge's Decision Regarding Ms. Bonnie Pendergast's Appeal regarding Her Service Purchase Request (estimated time 20 minutes to 8:56 a.m.) ..... Ms. Jothi Beljan
   Assistant Attorney General
   ..... Mr. Chris Munns
   Attorney General, Solicitor General Section

Regarding the following agenda item, pursuant to A.R.S. § 38-431.03 and A.R.S. § 38-797.03(B), notice is hereby given to Trustees of the ASRS Board and the general public that the ASRS Board may vote to go into executive session, which will not be open to the public

5. Approval, Modification, or Rejection of Administrative Law Judge's Recommended Decision Regarding Ms. Susan Naparstek's Appeal Disputing an Overpayment of ASRS Long Term Disability Benefits (estimated time 20 minutes to 9:16 a.m.).....Ms. Jothi Beljan

6. Presentation, Discussion and Appropriate Action Regarding the Total Fund Investment Performance Review for quarter ending 6/30/12 (estimated time 20 minutes to 9:36 a.m.) .....
.....Mr. Gary Dokes
Chief Investment Officer
.....Mr. Dave Underwood
Assistant Chief Investment Officer
.....Mr. Allan Martin
Partner, NEPC

7. Presentation, Discussion and Appropriate Action Regarding the Global Tactical Asset Allocation (GTAA) Program Review (estimated time 15 minutes to 9:51 a.m.).....Mr. Gary Dokes
.....Mr. Dave Underwood
.....Mr. Allan Martin

8. Presentation, Discussion, and Appropriate Action Regarding Modifications to the ASRS Long Term Disability (LTD) Investment Program (estimated time 15 minutes to 10:06 a.m.).....
.....Mr. Paul Matson
.....Mr. Gary Dokes
.....Mr. Eric Glass
Portfolio Manager of Commodities

9. Presentation, Discussion and Appropriate Action Regarding Agency Governance (estimated time 90 minutes to 11:36 a.m.) .....Mr. Paul Matson
.....Mr. Anthony Guarino
.....Mr. Gary Dokes
.....Mr. Bernard Glick
Chief Internal Auditor
.....Mr. Tom Iannucci
President, Cortex Applied Research
    a. Annual Board Governance Policy Handbook Review
    b. Background: The Cortex 2010 Benchmarking Report and ASRS Management Response
    c. Internal Audit Agency Governance Review and Operations Committee Response
    d. Cortex Investment Governance Review and Investments Committee Response

10. Presentation, Discussion and Appropriate Action Regarding the Director's Report as well as Current Events (estimated time 5 minutes to 11:41 a.m.) ..... Mr. Paul Matson
..... Mr. Anthony Guarino
    a. 2012 Compliance Report
    b. 2012 Investments Report
    c. 2012 Operations Report
    d. 2012 Budget and Staffing Reports
    e. 2012 Cash Flow Statement
    f. 2012 Appeals Report
    g. 2012 Employers Reporting
    h. City of Scottsdale Litigation

11. Presentation and Discussion with Respect to Informational Updates from Prior and Upcoming Operations Committee Meetings (estimated time 5 minutes to 11:46 a.m.) ..... Mr. Jeff Tyne
Chair, Operations Committee
..... Mr. Anthony Guarino

The next Operations Committee Meeting will be held on September 27, 2012

12. Presentation and Discussion with Respect to Informational Updates from Prior and Upcoming External Affairs Committee Meetings (estimated time 5 minutes to 11:51 a.m.) .....
..... Mr. Kevin McCarthy
Chair, External Affairs Committee
..... Mr. Patrick Klein
Assistant Director, External Affairs

The next External Affairs Committee Meeting will be held on November 2, 2012

13. Presentation and Discussion with Respect to Informational Updates from Prior and Upcoming Investment Committee Meetings (estimated time 5 minutes to 11:56 a.m.) .. Mr. Tom Connelly
Chair, Investment Committee
..... Mr. Gary Dokes

The next Investment Committee Meeting will be held on October 15, 2012

14. Board Requests for Agenda Items (estimated time 1 minute to 11:57 a.m.)
..... Mr. Tom Manos

15. Call to the Public ..... Mr. Tom Manos

    Those wishing to address the ASRS Board are required to complete a Request to Speak form before the meeting indicating their desire to speak. Request to Speak forms are available at the sign-in desk and should be given to the Board Secretary. Trustees of the Board are prohibited by A.R.S. § 38-431.01(G) from discussing or taking legal action on matters raised during an open call to the public unless the matters are properly noticed for

discussion and legal action. As a result of public comment, the Board may direct staff to study and/or reschedule the matter for discussion and decision at a later date.

16. The next public ASRS Board meeting is scheduled for Friday, October 19, 2012, at 8:30 a.m., at 3300 N. Central Avenue, 10th Floor Board room, Phoenix, Arizona.

17. Adjournment of the ASRS Board.

A copy of the agenda background material provided to Board Trustees (with the exception of material relating to possible executive sessions) is available for public inspection at the ASRS offices located at 3300 North Central Avenue, 14th Floor, Phoenix, Arizona and 7660 East Broadway Boulevard, Suite 108, Tucson, Arizona. The agenda is subject to revision up to 24 hours prior to meeting. These materials are also available on the ASRS website (https://www.azasrs.gov/web/BoardCommittees.do) approximately 48 hours prior to the meeting.

Persons with a disability may request a reasonable accommodation such as a sign language interpreter or alternate formats of this document by contacting Tracy Darmer, ADA Coordinator at (602) 240-5378 in Phoenix, at (520) 239-3100, ext. 5378 in Tucson, or 1-800-621-3778, ext. 5378 outside metro Phoenix or Tucson. Requests should be made as early as possible to allow time to arrange the accommodations.

Dated September 13, 2012

ARIZONA STATE RETIREMENT SYSTEM

Lisa Maddox	Date	Paul Matson	Date
Board Secretary		Director	

Agenda Item #2

ARIZONA STATE RETIREMENT SYSTEM

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Paul Matson
Director

MEMORANDUM

TO: Mr. Tom Manos, Chair, Arizona State Retirement System (ASRS) Board

FROM: Mr. Paul Matson, Director

DATE: September 10, 2012

RE: **Agenda Item #2**: Presentation Regarding the PRIDE Diversity Award

The ASRS employee recognition program recognizes employees who exemplify various PRIDE characteristics (Professionalism, Results, Improvement, Diversity, Excellence) throughout the year. The third award for 2012 is the PRIDE Diversity award.

The nominees were nominated by their peers because they exemplify the following PRIDE qualities of diversity:

We appreciate individuals, teams or divisions who drive the agency forward with new and innovative ideas and solutions:

- ☐ Encourage the free flow of ideas and opinions
- ☐ Work effectively with dissimilar individuals
- ☐ Recognize and promote new skills in others
- ☐ Treat all people with dignity and respect

The nominees for the 2012 PRIDE Diversity Award are:

- Jean Langston
- Kim Beck
- Nicie Montanez

Chosen from the nominees as winner of the 2012 ASRS PRIDE Diversity award is Nicie Montanez. We invite the Board to join ASRS staff in recognizing Nicie Montanez as the award recipient of this year's award.

Nominees for the 2012 PRIDE Diversity Award

The Diversity Award is the fourth of our 2012 bimonthly awards. The following employees and teams were nominated by staff who feel they exemplify the diversity qualities listed below:

DIVERSITY

We recognize that different talents, strengths and points of view strengthen the ASRS and help propel outcomes greater than the sum of individual contributors:

- ☐ An attitude of openness to encourage a free flow of ideas and opinions
- ☐ Working effectively to accomplish goals with teams comprised of dissimilar individuals or groups
- ☐ Recognizing and promoting new skills in others attained on and off the job to achieve desirable results
- ☐ Treating others different from you with dignity and respect

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Nicie Montenaz

Nicie is constantly looking for ways to improve processes and processing tools. She will seek input from fellow staff, bounce ideas off of others, and come up with the most efficient solution. Others continue to ask Nicie's opinion or come to her for answers and she is patient and thorough in her explanations. She also recognizes diversity in others and takes that into consideration. Nicie works with a variety of ASRS staff including TSD, MSD and FSD. She has participated in a number of projects and committees to address legislative changes and implementation including Spousal Consent and Survivor Benefits. For Benefits Accounting, she has proactively helped to develop and update needed workbooks and procedures to streamline our manual processes and accommodate more complicated calculations including advance checks, forfeitures with previously forfeited service purchase, DRO splits, etc. When staff have an idea or need something to help them achieve a goal or handle a difficult situation, Nicie is at the top of the list as a go-to-person. She is always willing and open and demonstrates DIVERSITY in every sense of the word.

Kim Beck

I want to nominate Kim Beck because Kim is always looking to help the team. If she doesn't know the answer to a question asked by a member or by a co-worker, she will find the answer. I believe that this is an important skill because, if you take the time to ask a question because it was important to you, then you should have an Advisor care enough to find that answer for you, and Kim is that Advisor. Any information Kim finds which she feels would be beneficial to the Team, she shares with us. She is not the type to say, "I know something you don't know" and then keep information to herself. Kim is very knowledgeable in what she does, and I feel that she really cares about the members she helps. This is the reason why I am nominating Kim for this.

Jean Langston

As a member of the Training team, Jean Langston interacts with every person within the ASRS. She greets everyone with a genuine smile and treats each individual with true respect. Her role in the agency is as diverse as the agency itself. As the key person for completion of Standard Operating Procedures, Jean collaborates with most of the units in the agency. She is open and encouraging as she gathers and clarifies information and works to understand their jobs and functions, all the time being respectful of their time limitations. She displays great flexibility in scheduling her work to ensure other teams' goals are accomplished.

Each year Jean works with the Security Officers and Committee to create a new Security training for the agency. She researches and collaborates with the Physical Security Officer, Information Security Officer, Privacy Security Officer, HR and others to ensure the training meets the ASRS' most current needs. She listens and respects each perspective as she creates an effective and engaging training that can be accomplished in one hour!

Within the team, she has been in the role of manager and trainer. Her attitude of openness and encouragement has been instrumental in the development of a team that works well together and respects each other's ideas. Jean is supportive of each member of the team and willingly assumes each project with enthusiasm. She freely shares her knowledge to help others develop their skills. Most recently she partnered with the MSD special project team when they began the development of webcasts.

Jean exemplifies diversity!

Agenda Item #3

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Paul Matson
Director

MINUTES
PUBLIC MEETING
ARIZONA STATE RETIREMENT SYSTEM BOARD

Friday, August 17, 2012
8:30 A.M., MST

The Arizona State Retirement System (ASRS) Board met in the 10th Floor Board Room, 3300 N. Central Avenue, Phoenix, Arizona. Mr. Tom Manos, Chair of the ASRS Board, called the meeting to order at 8:36 A.M., MST.

The meeting was teleconferenced to the ASRS office at 7660 E. Broadway, Tucson, Arizona.

1. Call to Order; Roll Call; Opening Remarks

Present: Mr. Tom Manos, Chair
Mr. Tom Connelly
Professor Dennis Hoffman
Mr. Kevin McCarthy
Mr. Brian McNeil
Mr. Jeff Tyne

Absent: Mr. Mike Smarik

Two vacant positions.

A quorum was present for the purpose of conducting business.

2. Presentation Regarding Government Finance Officers Association (GFOA) Financial Reporting Awards

Mr. Anthony Guarino, Deputy Director and Chief Operations Officer, stated the ASRS received the Government Finance Officers Association (GFOA) Award for excellence in financial reporting for the June 30, 2011, Comprehensive Annual Financial Report (CAFR). Mr. Guarino noted this is the twenty-third year in a row the ASRS has received the award. A Certificate of Achievement is presented by the GFOA to those government units whose annual financial reports are judged to adhere to program standards and represents the highest award in government financial reporting. Mr. Guarino thanked Ms. Nancy Bennett, Chief Financial Officer, for her efforts in completing the CAFR, as well as the following staff who had a substantial part in the ASRS receiving the award: Rochelle Witharana, Lupita Breland, Eric Glass, John Maczko, Julie Walker, Tonia Nemecek, Lorin Rhue, Liz Rozzell, Nikki Caprara, Debbie Motta, Kristin Berry, Lisa Dailey, Lesli Sorensen, and Brian Crockett.

In addition, the ASRS published its first Popular Annual Financial Report (PAFR) for the fiscal year end June 30, 2011, and has received the GFOA Award for Outstanding Achievement for the 2011 PAFR. Mr. Guarino recognized the following staff who had a substantial part in the ASRS receiving the award: Paul Matson, Nancy Bennett, Rochelle Witharana, John Maczko, Julie Walker, and Nikki Caprara.

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3. Approval of the Minutes of the June 15, 2012 Public Meeting of the ASRS Board

Motion: Professor Dennis Hoffman moved to approve the minutes of the June 15, 2012 Public Meeting of the ASRS Board. Mr. Jeff Tyne seconded the motion.

By a vote of 6 in favor, 0 opposed, 0 abstentions, 1 excused, and 2 vacancies, the motion was approved.

4. Approval, Modification, or Rejection of Recommended Administrative Law Judge's Decision Regarding Mr. Charles Gersten's Appeal Regarding Annuity Options for Alternate Payees

Ms. Jothi Beljan, Assistant Attorney General, presented the facts of Mr. Charles Gersten's case to the Board. Mr. Gersten was not present. A representative of Mr. Gersten was not present.

Motion: Professor Dennis Hoffman moved to accept the ruling of the Administrative Law Judge to uphold the Director's determination that Alternate Payee Charles Gersten is not entitled to choose his own retirement annuity election. Mr. Jeff Tyne seconded the motion.

By a vote of 6 in favor, 0 opposed, 0 abstentions, 1 excused, and 2 vacancies, the motion was approved.

5. Approval, Modification, or Rejection of Administrative Law Judge's Recommended Decision Regarding Ms. Alison Yancy's Appeal Disputing a Workers' Compensation Benefit Offset to Her ASRS Long Term Disability Benefit

Ms. Beljan presented the facts of ASRS member Ms. Alison Yancy's case to the Board. Ms. Yancy was not present. A representative of Ms. Yancy was not present.

Motion: Professor Dennis Hoffman moved to accept the ruling of the Administrative Law Judge to uphold the Director's determination that ASRS member Ms. Alison Yancy's LTD benefit was properly offset by workers' compensation benefits pursuant to A.R.S. § 38-797.07. Mr. Jeff Tyne seconded the motion.

By a vote of 6 in favor, 0 opposed, 0 abstentions, 1 excused, and 2 vacancies, the motion was approved.

6. Approval, Modification, or Rejection of Administrative Law Judge's Recommended Decision Regarding Mr. Devin Millington's Appeal Disputing a Salary Offset to His ASRS Long Term Disability Benefit

Ms. Beljan presented the facts of ASRS member Mr. Devin Millington's case to the Board. Mr. Millington was not present. A representative of Mr. Millington was not present.

Motion: Mr. Kevin McCarthy moved to accept the ruling of the Administrative Law Judge to uphold the Director's determination that ASRS member Devin Millington's LTD benefit was properly offset by wages or employment related pay pursuant to A.R.S. § 38-797.07. Professor Dennis Hoffman seconded the motion.

By a vote of 6 in favor, 0 opposed, 0 abstentions, 1 excused, and 2 vacancies, the motion was approved.

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7. Presentation, Discussion and Appropriate Action Regarding Legal Advice Regarding Notice of Claim filed August 2, 2012

Mr. Tom Manos, Board Chair introduced the topic.

Motion: Mr. Tom Connelly moved to go into executive session. Mr. Kevin McCarthy seconded the motion.

By a vote of 6 in favor, 0 opposed, 0 abstentions, 1 excused, and 2 vacancies, the motion was approved.

The Board adjourned from this executive session at 9:05 a.m. and announced they would go into executive session to discuss the next topic, upon the appellant's request.

8. Approval, Modification, or Rejection of Administrative Law Judge's Recommended Decision Regarding Mr. John Barelli's Appeal Requesting ASRS Long Term Disability Benefits

The Board discussed the topic in executive session. Mr. John Barelli was present via teleconference and his attorney, Mr. Charles Wallace, was present in person. Mr. Brian McNeil recused himself and did not actively participate. The Board reconvened to regular session at 9:49 a.m.

Motion: Mr. Kevin McCarthy moved to accept the ruling of the Administrative Law Judge to uphold the Director's determination that John Barelli is ineligible for ASRS LTD benefits. Professor Dennis Hoffman seconded the motion.

By a vote of 5 in favor, 0 opposed, 1 abstention, 1 excused, and 2 vacancies, the motion was approved. Mr. Brian McNeil recused himself from the discussion and did not vote.

9. Presentation, Discussion and Appropriate Action Regarding the ASRS Proposed Budget Request for Fiscal Years 2014 and 2015

Mr. Guarino addressed the Board regarding the ASRS Proposed Budget Request for Fiscal Years 2014 and 2015. Ms. Martha Rozen, Chief of Administrative Services, presented the proposed budget, explaining the three main categories represented a purposeful technology investment. She noted staff and the Operations Committee are recommending a request which includes the first two years of a five-year technology project with total associated funding requirements of $10,214,500. The budget request includes:

- Base Operating Budget
- Oracle Forms and Reports Modernization project – modernizing to Java, re-engineering processes to increase productivity, reduce costs, mitigate risk, improve member satisfaction and turnaround time, extend life cycle of business applications through 2025.
- Technology Risk Management strategies –software licensing, maintenance, support agreements, technology enhancements, automation of processes, and security assessment and training.
- Technology Resources Conversion to Full Time Equivalents (FTE) – convert twelve external technology resource positions to FTEs to support technology core business functions and ongoing software development.
- Long Term Disability Program Administration

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Motion: Mr. Jeff Tyne moved to approve the budget request for Fiscal Year 2014 in the amount of $26,681,500 and the budget request for Fiscal Year 2015 in the amount of $27,218,500. The total amounts requested for the operating budget in each fiscal year may change due to rate adjustments determined by the Arizona Department of Administration. This request includes the first two years of a five-year technology project with total associated funding requirements of $10,214,500. Professor Dennis Hoffman seconded the motion.

By a vote of 6 in favor, 0 opposed, 0 abstentions, 1 excused, and 2 vacancies, the motion was approved.

10. Presentation, Discussion and Appropriate Action Regarding the ASRS Total Fund Performance Review for the Period Ending March 31, 2012

Mr. Gary Dokes, Chief Investment Officer; Mr. David Underwood, Assistant Chief Investment Officer; and Mr. Dan LeBeau, Senior Analyst, NEPC, addressed the Board regarding the Total Fund Performance Overview for the period ending March 31, 2012, highlighting specific areas of interest and concern.

The Total Fund Performance for the period ending March 31, 2012 is:

	Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception (6/30/75)
Total Fund	8.5%	4.5%	18.4%	3.1%	5.8%	9.9%
Interim SAA Policy	8.5%	4.0%	18.0%	3.0%	5.5%	9.7%
Excess Return	0.0%	0.5%	0.4%	0.1%	0.3%	0.2%

*Interim SAA Policy: 31% S&P 500/6% S&P 400/6% S&P 600/13% MSCI EAFE/2% MSCI EAFE Small Cap/3% MSCI Emerging Markets/4% Russell 2000 (lagged one quarter)/24% Barclays Capital Aggregate/2% Barclays Capital High Yield/6% NCREIF ODCE (lagged one quarter)/3% Dow Jones/UBS Commodities Index.

Note: Interim SAA Policy includes a proration of 3% Private Equity, which is unfunded. Private Equity was prorated to domestic equity.

11. Presentation, Discussion and Appropriate Action Regarding the Fixed Income Program Review

Mr. Dokes, Mr. Al Alaimo, Fixed Income Portfolio Manager, and Mr. LeBeau, addressed the Board regarding the fixed income program review. As of March 31, 2012, the market value of the ASRS Fixed Income program was approximately $5.0 billion or 18% of total assets. The ASRS fixed income asset class has historically achieved net investment results greater than those of its benchmark. Fixed income assets are managed in core, high yield bond, and intermediate government/credit strategies, approximately 75% of which is managed passively.

As of March 31, 2012, the market value of the ASRS public opportunistic manager(s) assets was approximately $0.8 billion or 2.8% of total assets. Public opportunistic investments are managed in closed end funds and separately managed portfolios consisting primarily of fixed income strategies, and are viewed in that context.

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12. Presentation, Discussion and Appropriate Action Regarding the Director's Report as well as Current Events

Mr. Matson presented the Director's Report. He highlighted the Securities Lending Report, providing a high-level overview of the securities lending industry and processes.

13. Presentation and Discussion with Respect to Informational Updates from Prior and Upcoming Operations Committee Meetings

Mr. Jeff Tyne, Operations Committee (OC) Chair, provided an update on the July 8, 2012 OC meeting, noting the following topics were discussed:

a. Budget Request for FY 2014/2015
b. External Security Audit Update
c. Internal/Employer Audits

Mr. Tyne noted the health insurance contract renewal, web development, and internal audit would be discussed at the upcoming September 27, 2012 OC meeting.

14. Presentation and Discussion with Respect to Informational Updates Prior and Upcoming External Affairs Committee Meetings

Mr. Kevin McCarthy, External Affairs Committee (EAC) Chair, said the EAC will meet on September 7 and September 18, 2012 to discuss recommendations for the upcoming Legislative Session. He noted the October 5, 2012 meeting was rescheduled to September 18, 2012.

15. Presentation and Discussion with Respect to Informational Updates from Prior and Upcoming Investment Committee Meetings

Mr. Tom Connelly, Chair, Investment Committee (IC), and Mr. Dokes provided an update on the prior and upcoming IC meetings. Mr. Dokes noted the next IC meeting will take place August 27, 2012, and the Cortex Governance Study and LTD program will be discussed.

16. New Agenda Items

Mr. Connelly asked if GASB could be discussed soon. Mr. Matson noted GASB will be a topic at the September 21, 2012 Board meeting, at which Strategic Planning will be a main focus, along with governance.

17. Call to the Public

No members of the public requested to speak.

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18. The next ASRS Board meeting is scheduled for Friday, September 21, 2012, at 8:30 A.M., at 3300 N. Central Avenue, 10th Floor Board room, Phoenix, Arizona.

19. Adjournment of the ASRS Board

Mr. Manos adjourned the Board meeting at 11:43 A.M.

ARIZONA STATE RETIREMENT SYSTEM

Lisa Maddox Board Secretary	Date
Paul Matson Director	Date

DRAFT

ARIZONA STATE RETIREMENT SYSTEM

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Paul Matson
Director

MINUTES
PUBLIC MEETING
ARIZONA STATE RETIREMENT SYSTEM BOARD

Tuesday, August 28, 2012
9:00 A.M., MST

The Arizona State Retirement System (ASRS) Board met in the 14th Floor Conference Room, 3300 N. Central Avenue, Phoenix, Arizona. Mr. Tom Manos, Chair of the ASRS Board, called the meeting to order at 9:02 A.M., MST.

The meeting was teleconferenced to the ASRS office at 7660 E. Broadway, Tucson, Arizona.

1. Call to Order; Roll Call; Opening Remarks

Present: Mr. Tom Manos, Chair (via teleconference)
Mr. Mike Smarik, Vice-chair (via teleconference)
Mr. Tom Connelly (via teleconference)
Professor Dennis Hoffman (via teleconference)
Mr. Brian McNeil (via teleconference)
Mr. Jeff Tyne (via teleconference)

Absent: Mr. Kevin McCarthy

Two vacant positions.

A quorum was present for the purpose of conducting business.

2. Presentation, Discussion and Appropriate Action Regarding Potential Securities Litigation Relating to Pfizer, Inc.

Mr. Tom Manos, Board Chair introduced the topic. Mr. Paul Matson, Director, discussed the Private Securities Litigation Reform Act of 1995 (PSLRA) and the process in securities class action lawsuits. Mr. Matson noted, in 2004, the ASRS began to develop a securities litigation process or policy. In 2008, the Board approved the Securities Litigation Policy which established the Securities Litigation Oversight Committee (SLOC), the ASRS committee with the responsibility and authority to oversee and recommend securities litigation actions. Mr. Matson explained the SLOC is chaired by the Executive Director and consists of the Director, the Chief Investment Officer, the Chairman of the Investment Committee, or his/her designee, as voting members, and an Arizona Assistant Attorney General as an advisory member. The ASRS has established and maintained a relationship with qualified law firms with demonstrated experience in securities litigation, in accordance with the Policy. These law firms monitor ASRS investment holdings via files from the custodian bank and evaluate cases in which the ASRS is a possible class member and quantify the estimated impact (losses) sustained.

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Motion: Professor Dennis Hoffman moved to go into executive session. Mr. Brian McNeil seconded the motion.

By a vote of 6 in favor, 0 opposed, 0 abstentions, 1 excused, and 2 vacancies, the motion was approved.

The Board reconvened to regular session at 9:35 a.m.

Motion: Mr. Tom Connelly moved to authorize the Director to:

1. Opt-out of the class action litigation against Pfizer, and
2. Pursue a direct action including but not limited to selecting and recommending legal representation and determining strategy, and
3. Utilize the SLOC (Securities Litigation Oversight Committee) for continuous advice and input, and
4. Periodically inform the Board of significant events or non-events, and
5. Accept a settlement or judgment.

Professor Dennis Hoffman seconded the motion.

By a vote of 6 in favor, 0 opposed, 0 abstentions, 1 excused, and 2 vacancies, the motion was approved.

3. The next ASRS Board meeting is scheduled for Friday, September 21, 2012, at 8:30 A.M., at 3300 N. Central Avenue, 10th Floor Board room, Phoenix, Arizona.

4. Adjournment of the ASRS Board

Mr. Manos adjourned the Board meeting at 9:36 A.M.

ARIZONA STATE RETIREMENT SYSTEM

Lisa Maddox Board Secretary	Date	Paul Matson Director	Date

DRAFT

Confidential meeting materials were in this packet

Agenda Items #4-5

Appeal materials were included in Agenda Items #4 – 5

Agenda Item #6

ARIZONA STATE RETIREMENT SYSTEM

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Paul Matson
Director

MEMORANDUM

TO: Mr. Tom Manos, Chair, Arizona State Retirement System (ASRS) Board

FROM: Mr. Paul Matson, Director
Mr. Gary R. Dokes, Chief Investment Officer
Mr. Dave Underwood, Assistant Chief Investment Officer

DATE: September 10, 2012

RE: **Agenda Item #6**: Presentation, Discussion and Appropriate Action Regarding the ASRS Total Fund Performance Review for the Period Ending 6/30/12

Purpose
To present and discuss the Total Fund's Investment Program Report for the quarter ending June 30, 2012.

Recommendation
Informational only; no action required.

Background
As of June 30, 2012, the Total Fund's market value was approximately $27.4 billion.

For the period ending June 30, 2012, Total Fund (net of fees) performance for one year of 1.3% and three years of 13.2% exceeded the three year policy performance by 0.6%. The ASRS Total Fund (net of fees) performance was 6.3% for the 10-year annualized period and 9.8% on an inception-to-date basis.

The Chief Investment Officer will discuss performance attribution as well as the Investment Management Division's Investment House Views and update the Board on recent investment activities and initiatives.

Arizona State Retirement System

Investment Program Report

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Gary R. Dokes, Chief Investment Officer, ASRS
David Underwood, Assistant Chief Investment Officer, ASRS
Allan Martin, Partner, NEPC

NEPC, LLC

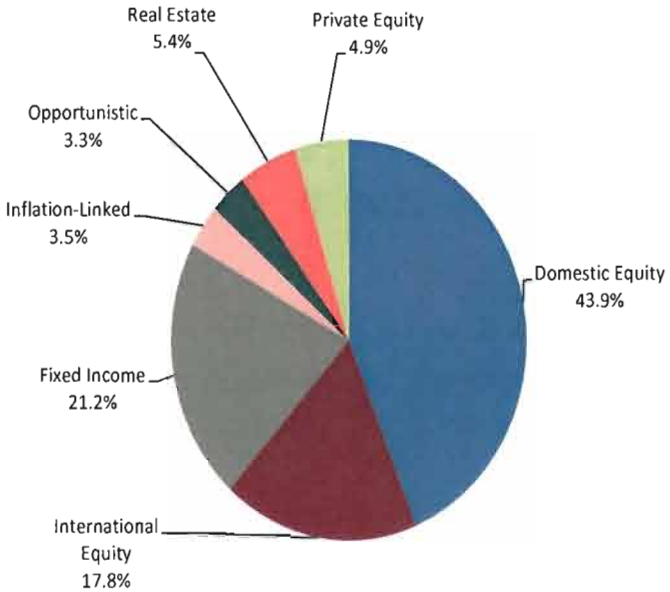
Contents

- Total Fund Asset Allocation*
- ASRS Investment Goals/Performance*
- Economic and Market Environment (NEPC)
- IMD's Investment House Views
- IMD's Activities and Initiatives

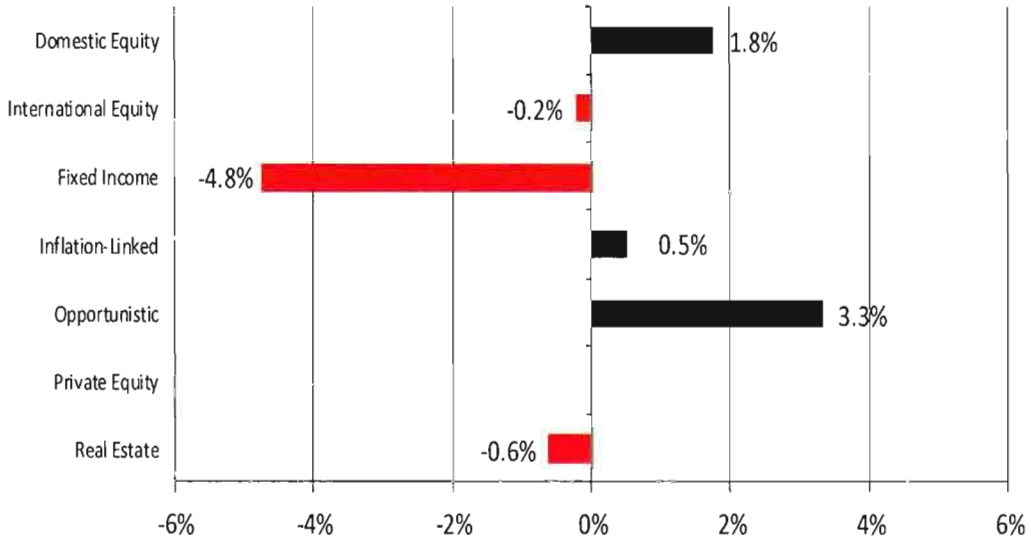
*Evaluation period ending June 30, 2012

Total Fund Asset Allocation

Actual Portfolio – Assumed GTAA Allocation



Actual Portfolio – Assumed GTAA Allocation vs. Adjusted SAA Policy*



*Private Equity actual weight is equal to policy weight during the implementation of the asset class.

*Over/Underweights include both GTAA positions as well as IMD tactical considerations.

Note: Opportunistic TAA, Opportunistic PI, Real Estate and Private Equity market values are reported on a quarter-lag and adjusted to include the current quarter's cash flows. Within the Assumed GTAA Allocation vs. Adjusted SAA Policy chart, Private Equity was prorated to domestic equity.

ASRS Investment Goals

Macro

- Goal #1: Achieve a total fund rate of return equal to or greater than the actuarial assumed interest rate.
- Goal #2: Achieve a total fund rate of return equal to or greater than the strategic asset allocation policy.
- Goal #3: Achieve a total fund rate of return equal to or greater than the amount projected in the most recent asset allocation study.
- Goal #4: Achieve asset class net rates of return equal to or greater than their respective broad asset class benchmarks.
- Goal #5: Achieve portfolio-level net rates of return equal to or greater than their respective portfolio benchmarks.
- Goal #6: Ensure sufficient monies are available to meet cash flow requirements.

Micro

ASRS Strategic Plan, May 2009

Total Fund Performance

- Goal #1: Achieve a total fund rate of return equal to or greater than the actuarial assumed interest rate.

	20 Year Annualized Return
Total Fund	8.4%
Constant 8%	8.0%
Excess Return	0.4%

Goal Met: Yes

Total Fund Performance

- Goal #2: Achieve annual and three-year rolling annual rates of return equal to or greater than the return of the Strategic Asset Allocation Policy (SAA Policy)

	Quarter	**1 Year**	**3 Years**	5 Years	10 Years	Since Inception (6/30/75)
Total Fund	-2.1%	**1.3%**	**13.2%**	1.8%	6.3%	9.8%
Interim SAA Policy[1]	-1.6%	**1.4%**	**12.6%**	1.7%	6.0%	9.5%
Excess Return	-0.5%	**-0.1%**	**0.6%**	0.1%	0.3%	0.3%

1 Year Goal Met: No

3 Year Goal Met: Yes

[1]SAA Policy can be found on the last page of this presentation.

Total Fund Attribution Analysis

Total Plan	1 Year	3 Years	5 Years
Allocation Effect[1]	-0.14	-0.03	-0.08
Manager Selection Effect[2]	0.06	0.56	0.25
Residual[3]	0.03	0.08	-0.08
Excess Return	**-0.05**	**0.61**	**0.09**

Source: State Street Investment Analytics

[1]Contribution due to over/underweights relative to Interim* Strategic Asset Allocation Policy.

[2]Contribution due to manager selection (net) and interaction effect.

[3]Contribution due to activities not captured in Allocation and Manager Selection Effects.

*Pro-rates unfunded Private Equity allocation.

Total Fund Attribution Detail

1 Year Excess Return: -0.1%

- Allocation Effect: -0.14%
  - Fixed Income tactical underweight (-0.65%)
  - Commodities tactical underweight (+0.26%)
  - International Equity tactical underweight (+0.13%)
  - GTAA tactical overweight (+0.13%)
- Manager Effect: +0.06%
  - Private Equity outperformed due to various managers (+0.31%)
  - Large Cap Equity underperformed due to INTECH, Jacobs Levy, and LSV (-0.18%)
  - Real Estate underperformed due to various managers (-0.09%)
- Residual: +0.03%

3 Years Excess Return: +0.6%

- Allocation Effect: -0.03%
  - Large Cap Equity tactical underweight (-0.21%)
  - Fixed Income tactical underweight (+0.16%)
- Manager Effect: +0.56%
  - GTAA outperformed due to Bridgewater (+0.34%)
  - Fixed Income outperformed due to F2 and BlackRock portfolios (+0.24%)
- Residual: +0.08%

5 Years Excess Return: +0.1%

- Allocation Effect: -0.08%
  - Fixed Income tactical underweight (-0.15%)
  - Real Estate tactical underweight (+0.11%)
- Manager Effect: +0.25%
  - GTAA outperformed due to Bridgewater (+0.28%)
  - Fixed Income outperformed due to F2 and BlackRock (+0.13%)
  - International Equity underperformed due to Brandes, Hansberger, and terminated managers (-0.13%)
- Residual Effect: -0.08%

Source: State Street Investment Analytics

Note: Explanatory details of each effect represent the most notable contributions and may not sum to the total effect.

Total Fund Performance

- Goal #3: Achieve a five-year rolling annual rate of return equal to or greater than the projected return expectation in the ASRS Asset Allocation Study.

	5 Year Annualized Return
Total Fund	1.8%
AA Expected Return	8.9%
Excess Return	-7.1%

Goal Met: No

Asset Class Performance vs. Benchmark

- Goal #4: Achieve annual and three-year rolling annual investment asset class net rates of return equal to or greater than their respective broad asset class

	1 Year Return	3 Year Return
ASRS Domestic Equity	2.8%	17.5%
ASRS Custom Domestic Equity Index[1]	3.7%	17.2%
Excess Return	-0.9%	0.3%
ASRS Int'l Equity	-13.1%	7.3%
ASRS Custom Int'l Equity Index[2]	-13.9%	7.7%
Excess Return	0.8%	-0.4%
ASRS Fixed Income	8.1%	8.0%
ASRS Custom Fixed Income Index[3]	7.5%	7.2%
Excess Return	0.6%	0.8%
ASRS GTAA	2.4%	15.8%
ASRS Custom GTAA Index[4]	2.1%	12.0%
Excess Return	0.3%	3.8%
ASRS Inflation-Linked	-13.7%	n/a
ASRS Custom Inflation-Linked Index[5]	-14.3%	2.3%
Excess Return	0.6%	n/a
ASRS Real Estate	12.3%	9.8%
NFI - ODCE Index	14.7%	4.1%
Excess Return	-2.4%	5.7%
ASRS Private Equity	15.4%	16.8%
Russell 2000	-0.2%	26.9%
Excess Return	15.6%	-10.1%
ASRS Opportunistic TAA[6]	2.9%	19.3%

Goal Met: Partially

[1]ASRS Custom Domestic Equity Index was S&P 500 through 12/31/2006; 74% S&P 500, 13% S&P 400, 13% S&P 600 through 12/31/2010; 70% S&P 500, 15% S&P 400 and 15% S&P 600 thereafter.

[2]ASRS Custom Int'l Equity Index was MSCI EAFE through 9/30/2005; MSCI ACWI ex-U.S. through 12/31/2010; 72% MSCI EAFE, 11% MSCI EAFE Small Cap and 17% MSCI Emerging Markets thereafter.

[3]ASRS Custom Fixed Income Index was Barclays Capital U.S. Aggregate Index through 12/31/2010; 93% Barclays Capital U.S. Aggregate Index, 7% Barclays Capital U.S. High Yield Bond Index thereafter.

[4]ASRS Custom GTAA Index was 56% S&P 500, 16% MSCI EAFE, 28% Barclays Capital Aggregate through 9/30/2011; 50% S&P 500, 19% MSCI EAFE, 28% Barclays Capital Aggregate, and 3% DJ UBS Commodities Index thereafter.

[5]ASRS Custom Inflation-Linked Index was 100% Barclays Capital U.S. TIPS through 7/31/2010; 50% Barclays Capital U.S. TIPS, 50% DJ UBS Commodities Index through 8/31/2010; 30% Barclays Capital U.S. TIPS, 70% DJ UBS Commodities Index through 5/31/2011; 100% DJ UBS Commodities Index thereafter.

[6]Net absolute rate of return expectations range from 10-14% per annum.

Manager Performance vs. Benchmark

- Goal #5: Achieve annual and three-year rolling annual portfolio level net rates of return equal to or greater than their respective policy benchmarks.

PUBLIC MARKET	1 Year	3 Years
Outperformers #	19	14
Underperformers #	16	8
Outperformers%	54%	64%

PRIVATE MARKET	1 Year	3 Years
Outperformers #	53	23
Underperformers #	32	40
Outperformers%	62%	37%

1 Year Goal Met: Yes

3 Year Goal Met: Partially

Cash Management

- Goal #6: Ensure all pension benefits, health insurance, member refunds, administrative payments and other requirements are made from available cash balances and without utilizing alternative liquidity options.

Month	Cash In	Cash Out	Balance as of 1st Business Day
Jul-11	$178,103,513	($162,908,155)	$14,144,175
Aug-11	$216,906,967	($165,616,891)	$46,712,381
Sep-11	$80,352,410	($168,208,098)	$104,897,890
Oct-11	$256,461,009	($169,518,891)	$73,648,238
Nov-11	$222,323,321	($170,109,936)	$57,153,006
Dec-11	$243,931,683	($170,499,953)	$99,650,526
Jan-12	$209,964,661	($170,410,561)	$62,160,027
Feb-12	$222,323,321	($170,775,472)	$57,153,006
Mar-12	$162,058,749	($171,573,237)	$18,187,174
Apr-12	$222,928,550	($173,038,703)	$51,683,087
May-12	$225,140,635	($172,714,614)	$56,981,936
Jun-12	$223,786,668	($172,973,155)	$38,646,157

All Pension Obligations, Capital Calls and Other Requirements Met with Available Cash

Goal Met: Yes

Total Fund Performance Comparisons*

Independent Consultants Cooperative	1 Year	3 Years	5 Years	10 Years	Since Inception 6/30/75
Master Trust - Total Funds	51	12	58	48	n/a
Total Funds - Public Funds	48	10	59	55	n/a
Total Funds over $1B - Public	32	8	42	66	n/a
Total Funds - Corporate	56	25	61	58	n/a

Callan Associates Inc.	1 Year	3 Years	5 Years	10 Years	Since Inception 6/30/75
Master Trust - Total Funds	46	13	42	46	44
Total Funds - Public Funds	35	6	38	37	33
Total Funds over $1B - Public	25	7	30	52	33
Total Funds - Corporate	n/a	n/a	n/a	n/a	n/a

*The information contained herein is for comparison purposes only and is not a Total Fund performance benchmark. Peer universe comparisons are subject to several limitations, including: peer groups are not comprehensive, several funds are included in multiple peer groups, peer groups are constructed using gross of fee returns and survivorship bias in that poorly performing funds may no longer continue to report results.

Note:

•Universes are constructed using gross of fee returns; therefore, the ASRS rank is based on gross of fee returns.

•Independent Consultants Cooperative's ranking not available going back to 1975 as database was created in 1992.

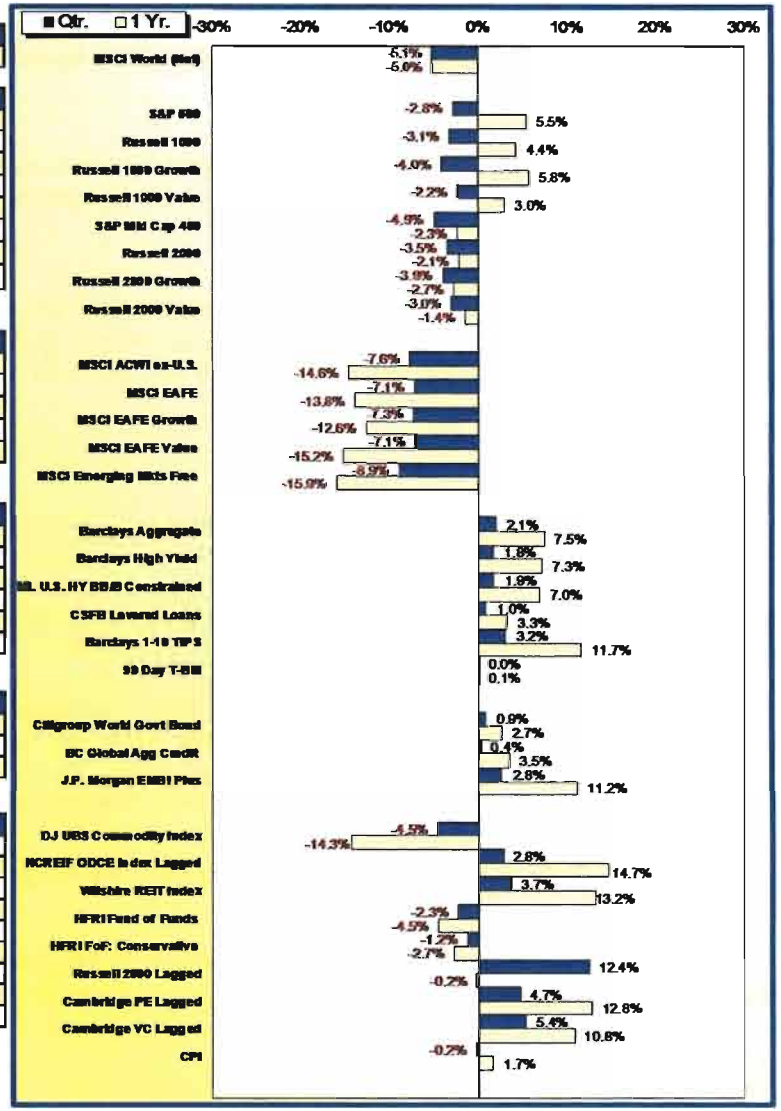
•Callan Associates' ranking for Total Funds - Corporate were not available at the time this report was completed.

Economic Environment

- **Annualized GDP growth came in at a moderately weak 1.7% in the second quarter, down from 2.0% in the first quarter.**
  - Retail sales decreased to a 3.0% year-over-year growth rate in June 2012.
  - The inventory-to-sales ratio has remained relatively flat since the fourth quarter of 2010. Demand must contribute to further growth.
  - Corporate profits as a percent of GDP decreased slightly but are still near secular highs at 12% at quarter end.
  - The U.S. Trade Deficit decreased in June.
- **The unemployment rate rose slightly to 8.3% in June; U-6, a broader measure of unemployment, increased to 15.0%.**
  - JP Morgan states that sustained GDP growth of 1.5% is needed for positive job creation, and closer to 3% growth is needed to decrease the unemployment rate.
- **Consumer confidence decreased during the quarter; the Case-Schiller Home Price Index remains more than 35% off its high levels.**
- **The 12-month change in the Consumer Price Index was 1.7% in June, down from 2.7% year-over-year in March.**
- **Fed Funds rate remains at 0.25% while the 10-year Treasury Yield finished June at 1.7%.**
- **The Fed's assets remained flat in the quarter as its efforts to provide liquidity to central banks leveled off.**
- **Both U.S. equities and investment grade corporates appear cheap relative to long-term averages, with credit more attractively priced.**

Market Environment – Overview

Global Equity Benchmarks		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
MSCI World (Net)	World	-5.1%	5.9%	-5.0%	11.0%	-3.0%	5.2%
Domestic Equity Benchmarks							
S&P 500	Large Core	-2.8%	9.5%	5.5%	16.4%	0.2%	5.3%
Russell 1000	Large Core	-3.1%	9.4%	4.4%	16.6%	0.4%	5.7%
Russell 1000 Growth	Large Growth	-4.0%	10.1%	5.8%	17.5%	2.9%	6.0%
Russell 1000 Value	Large Value	-2.2%	8.7%	3.0%	15.8%	-2.2%	5.3%
S&P Mid Cap 400	Mid Core	-4.9%	7.9%	-2.3%	19.4%	2.6%	8.2%
Russell 2000	Small Core	-3.5%	8.5%	-2.1%	17.8%	0.5%	7.0%
Russell 2000 Growth	Small Growth	-3.9%	8.8%	-2.7%	18.1%	2.0%	7.4%
Russell 2000 Value	Small Value	-3.0%	8.2%	-1.4%	17.4%	-1.0%	6.5%
International Equity Benchmarks		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
MSCI ACWI ex-U.S.	International	-7.6%	2.8%	-14.6%	7.0%	-4.6%	6.7%
MSCI EAFE	Int'l Developed	-7.1%	3.0%	-13.8%	6.0%	-6.1%	5.1%
MSCI EAFE Growth	Int'l Developed	-7.3%	3.9%	-12.6%	7.6%	-4.6%	4.9%
MSCI EAFE Value	Int'l Developed	-7.1%	2.0%	-15.2%	4.2%	-7.7%	5.3%
MSCI Emerging Mkts Free	Int'l Emerging	-8.9%	3.9%	-15.9%	9.8%	-0.1%	14.1%
Domestic Fixed Income Benchmarks		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
Barclays Aggregate	Core Bonds	2.1%	2.4%	7.5%	6.9%	6.8%	5.6%
Barclays High Yield	High Yield	1.8%	7.3%	7.3%	16.3%	8.5%	10.2%
ML U.S. HY BB/B Constrained	High Yield	1.9%	6.4%	7.0%	14.2%	7.6%	8.9%
CSFB Levered Loans	Bank Loans	1.0%	4.5%	3.3%	10.1%	3.5%	5.1%
Barclays 1-10 TIPS	Inflation-Linked	3.2%	4.0%	11.7%	9.6%	8.4%	7.2%
90 Day T-Bill	Cash	0.0%	0.0%	0.1%	0.1%	1.0%	1.9%
Global Fixed Income Benchmarks		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
Citigroup World Govt Bond	Global Bonds	0.9%	0.4%	2.7%	5.4%	7.3%	6.6%
BC Global Agg Credit	Global Bonds	0.4%	0.0%	3.5%	7.8%	5.8%	6.8%
J.P. Morgan EMBI Plus	Em. Mkt. Bonds	2.8%	6.9%	11.2%	13.4%	9.5%	12.3%
Alternative Benchmarks		Qtr.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.
DJ UBS Commodity Index	Commodities	-4.5%	-3.7%	-14.3%	3.5%	-3.7%	5.0%
NCREIF ODCE Index Lagged	Real Estate	2.8%	5.9%	14.7%	4.1%	-0.4%	6.4%
Wilshire REIT Index	REIT	3.7%	14.9%	13.2%	33.6%	2.1%	10.3%
HFRI Fund of Funds	Hedge Funds	-2.3%	1.0%	-4.5%	2.2%	-2.0%	3.2%
HFRI FoF: Conservative	Hedge Funds	-1.2%	1.2%	-2.7%	2.5%	-1.8%	2.7%
Russell 2000 Lagged	Private Equity	12.4%	29.8%	-0.2%	26.9%	2.1%	6.5%
Cambridge PE Lagged	Private Equity	4.7%	6.2%	12.8%	12.6%	5.6%	3.0%
Cambridge VC Lagged	Venture Capital	5.4%	11.0%	10.8%	18.2%	7.0%	13.3%
CPI	Inflation	-0.2%	0.7%	1.7%	2.1%	2.0%	2.4%



Note: Alternative Benchmarks NCREIF ODCE, Russell 2000, Cambridge Private Equity and Cambridge Venture Capital are lagged by one quarter. Performance shown as of March 31,2012.

Market Environment

Equities

- **After experiencing strong first quarter "risk on" returns, global equity markets reversed course in the second quarter as global economic fears mounted and ended the quarter in negative territory.**

- **Domestic Equity (S&P 500) outperformed International Equity (MSCI ACWI ex-U.S.) in the second quarter (+4.8%).**
  - Contributing to poor performance in the U.S. was a rotation into higher-yielding, lower-beta, and quality growth stocks in a "risk off" market as investors favored more defensive sectors.
  - Telecommunications, utilities, consumer staples and healthcare led the way, while market segments linked to global economic activity, such as financials and technology, declined the most. From a style perspective, value outperformed growth across the market cap spectrum; large caps slightly outperformed small caps, and mid-caps declined the most during the quarter.
  - Globally, growth equity indices struggled during the second quarter as greater political concerns and slowing GDP in China triggered a sell-off. Nevertheless, the quarter ended on a positive note as the European Union announced its willingness to start a process to unify bank oversight in order to shore up confidence in the financial system.
  - Emerging markets declined 8.9% in dollar terms, but dropped 5.3% in local terms – signifying that currency relative to the dollar had a negative impact. Within the emerging markets, Latin America – and Brazil in particular – was hit hardest as a region (-13.2%). The Far East was the best performing region (-7.1%).

Fixed Income

- **Long-term U.S. Treasuries led fixed income returns during the quarter as yields touched all-time lows in response to slowing growth in both the U.S. and China. The Treasury yield curve shifted lower, with rates declining the most at the long end of the curve. At quarter-end, two-year Treasuries were yielding 0.3%, 10-year Treasuries were yielding 1.7%, and 30-year Treasuries were yielding 2.8%.**

- **U.S. high-grade credit led investment grade sectors during the quarter (+2.5%). Financials, which are the best-performing sector to date in 2012 returned 1.9% for the quarter, while industrials and utilities posted positive returns of 2.7% and 3.7%, respectively.**

- **Emerging market debt was comparatively weaker during the period, particularly issues denominated in local currency. The JP Morgan GBI-EM GD Index, which tracks the performance of local currency emerging markets sovereign bonds, returned -1.2%. Emerging market debt denominated in USD performed better during the quarter, returning 2.8%.**

Market Environment

Private Equity

- **Based on return data from The Burgiss Group, global private equity posted a return of 3.3% during the first quarter (the most recent period available).**
  - Over the 10-year period through the first quarter, global private equity returned 11.2% per annum.

- **More than $65 billion of new private equity commitments were made globally during the quarter, bringing the 2012 total raised to $129.8 billion. This amount is nearly 60% of the total private equity capital that was raised in 2011, putting 2012 on pace to be the largest year for new private equity commitments since 2008.**

Real Estate

- **Despite a sluggish and uncertain economic environment, property fundamentals continue to improve.**
  - Occupancies and new rental rates are generally increasing, while new development remains extremely limited.
  - Core property fundamentals continued to rebound, with cap rates and property values for some core assets reaching peak levels.
  - Spreads between core real estate income yields and the five-year U.S. Treasury are ~350 bps and above long-term average spreads.
  - Transaction volumes are back to pre-bubble levels. Significant capital flows, both equity and debt, continue into the core market.
  - Non-core real estate valuations continue to lag and are 30% - 40% off peak market pricing.

Commodities

- **Commodity returns during the quarter were driven by worries stemming from the European debt crisis as well as weather concerns. Fears of a global slow-down led to uncertainty and selling pressure in industrial commodities, petroleum, and base metals.**
  - Crude oil prices fell as U.S. inventories rose and slowing global growth affected prices.

Looking Forward – What To Do in a Low Return, "Risk On/Risk Off" World?

- **Diversify broadly – many global risks remain**
  - Risk balanced -> risk parity
  - Hedge known liabilities and uncompensated risks
- **Allocate to attractive segments of risky assets**
  - Emerging markets, particularly small cap stocks and local currency debt
  - Credit, particularly less liquid and more complex segments
  - European and other distressed markets
- **Be prepared to be dynamic**
- **Use active strategies to enhance returns**

NEPC

Key Risk: Euro-Zone Debt Crisis – Potential Outcomes

- **Extension of current approach: "Kick the can down the road"**
  - ECB offers third LTRO and renews buying of Periphery sovereign debt
  - Allow ESFS/ESM support structures to lend directly to Eurozone banks
- **Progression to a Fiscal Union**
  - Creation of a pan-Eurozone FDIC
  - Some form of Eurozone debt sharing; "Eurobonds"
  - Pan-Eurozone stimulus plan
- **Total Chaos**
  - Complete dissolution of Eurozone, depression spreading globally, social upheaval, etc.

The situation is very fluid and changes on a day-to-day basis:

- Risk of one or two countries leaving the Euro within the next twelve months has increased meaningfully. Risk can be contained with proper policy response from ECB and remaining Eurozone members
- Requires a political solution and ultimately some form of loss sharing agreement between Periphery and Core Eurozone members
- Rational outcome is some form of fiscal consolidation to protect Spain and Italy
- Lack of political will could lead to destabilizing fracturing of Eurozone

IMD Investment House Views

- **U.S. Equities**
  - Despite a fairly sanguine longer range outlook, the near term risks to confidence have risen now that domestic equity indices have recently regained the March-April 2012 price levels.
  - Consequently, IMD Equities took advantage of this opportunity to lessen risk exposure somewhat, as well as to move toward revised SAA policy targets by reducing the Domestic Equities asset class by ≈1.5% of Total Fund.
  - **IMD maintains a tactical overweight in U.S. Equities relative to its policy benchmark and has bias to to U.S. Equities relative to Non-U.S. Developed-Markets (EAFE) Equities.**

- **International Equities**
  - The near term suggests some caution is also still warranted toward the non-U.S. markets notwithstanding generally resilient fundamental underpinnings.
  - Although trailing the U.S. indices year-to-date, there hasn't been wholesale movement into riskier international assets. The tactical risk/reward quotient has lessened presently for increasing allocation toward revised SAA policy targets for EAFE and Emerging Markets (EM) equities.
  - Should more optimistic expectations be unmet by tangible ECB and EMU movement on Southern Europe's fiscal difficulties, the markets are susceptible through 3Q to retracing some recent gains. Also, economic fundamentals of several EM countries are equilibrating to their own new policies as well as to developed-world forces.
  - The ASRS plans to initiate additional allocation to EAFE and EM sub-classes following a market correction or upon greater clarity that the Eurozone problems are at least moving towards resolution
  - **IMD maintains a underweight in Non-U.S. Equities vs. it policy and favors emerging markets (EM) over EAFE. Consistent with that viewpoint, IMD maintains it overweight in EM and underweight in EAFE vs. their respective strategic policy allocations.**

IMD Investment House Views

- **Fixed Income**
  - Given the current low yields of U.S. treasuries, IMD does not see meaningful return potential at the present time for core fixed income (investment-grade bonds). However, we do see attractive yield and return opportunities in a variety of credit markets including high yield bonds, emerging market debt, private debt and opportunistic fixed income (primarily distressed debt and structured, asset-backed securities).
  - The sovereign debt crisis in Europe will continue to pose significant uncertainty for the outlook for risky assets. In addition, the global economy appears to be meaningfully slowing, which could lead to a sell-off in the credit markets.
  - **IMD views a meaningful sell-off as a potential buying opportunity for riskier asset classes such as high yield bonds and emerging market debt.**

- **Real Estate**
  - Real estate is benefitting from a gradually improving economy.
  - Apartments and hotels are seeing demand return to pre-crash levels. Office and Industrial properties have a positive trend in occupancy, but vacancy rates in many markets are still too high for landlords to have pricing power. Retail is still at record vacancy levels even in an environment where consumer spending is improving, reflecting structural changes in the retail market. For sale housing remains challenged, although public market activity may reflect optimism of a recovery.
  - **IMD believes continuing dislocations in the debt market present both challenges and opportunities as debtors and creditors continue to work through the necessary process of resolution.**

- **Private Equity**
  - IMD favors managers focused on mid-market and smaller target companies where multiples continue to be attractive and there is less competition from public debt and equity alternatives; as well as on managers with strong operational skill sets to help target companies grow EBITDA; and has tactically focused on managers with distressed and turnaround skill sets that enable them to capitalize on a deleveraging environment.
  - **IMD believes in the long term prospects of the natural resources sector and will continue to make investments in this area, as well as considering a tactical increase in focus on secondary funds and potential new initiatives in infrastructure and farmland investments.**

IMD Investment House Views

- **Commodities**
  - The European debt crisis continues to loom with implications for the USD, and signs of improved navigation or stimulus could provide buoyancy to commodities.
  - Ags have endured one of the worst droughts in the U.S. in decades, sending grain prices much higher although, recent data indicates the economy has softened domestically.
  - **IMD holds a modest underweight as it transitions to the new SAAP (from 3% to 4%) as CPI measured inflation has remained tame and fallen in most developed and emerging countries. Should the Fed provide meaningful stimulus and/or the European crisis move toward a tangible resolution, IMD would move back to policy weight due to signs of improved growth or rising inflation.**

- **Opportunistic**
  - ASRS has select structured credit and distressed investments made primarily through ASRS opportunistic public fixed income investment managers (separate accounts and GP/LP structures). Opportunistic Private Investments have a policy allocation of 0-3% which resides within ASRS 0-10% SAA aggregate opportunistic investment policy.
  - **IMD continues to explore relationships with regional real estate operators for additional private opportunistic investments and co-investments with existing partners.**

IMD's Activities & Initiatives

- Retained two new high yield (HY) managers; however, funding will occur in the context HY spread valuations.

- Continue to tactically reduce ASRS U.S. equity allocation to bring assets closer to policy target weights.

- Implementation of real estate strategic manager program
  - Manager selected for the Apartment and Industrial in the strategic manager initiative.
  - Final due diligence has commenced for medical office and senior housing partners has commenced.

Strategic Asset Allocation Policy (SAAP) History

- 7/1/75 – 12/31/79 – 40% S&P 500/60% Barclays Capital Aggregate
- 1/1/80 – 12/31/83 – 50% S&P 500/50% Barclays Capital Aggregate
- 1/1/84 – 12/31/91 – 60% S&P 500/40% Barclays Capital Aggregate
- 1/1/92 – 12/31/94 – 50% S&P 500/10% MSCI EAFE/40% Barclays Capital Aggregate
- 1/1/95 – 6/30/97 – 45% S&P 500/15% MSCI EAFE/40% Barclays Capital Aggregate
- 7/1/97 – 12/31/99 – 50% S&P 500/15% MSCI EAFE/35% Barclays Capital Aggregate
- 1/1/00 – 9/30/03 – 53% S&P 500/17% MSCI EAFE/30% Barclays Capital Aggregate
- 10/1/03 – 12/31/06 – 53% S&P 500/15% MSCI EAFE/ACWI ex-U.S.[1]/26% Barclays Capital Aggregate/6% NCREIF ODCE (lagged one quarter)
- 1/1/07 – 10/31/2009 – 31% S&P 500/7% S&P 400/7% S&P 600/18% MSCI ACWI ex-U.S./5% Russell 2000 (lagged one quarter)/26% Barclays Capital Aggregate/6% NCREIF ODCE (lagged one quarter)
- 11/1/2009 – 6/30/2012 – 28% S&P 500/6% S&P 400/6% S&P 600/13% MSCI EAFE/2% MSCI EAFE Small Cap/3% MSCI Emerging Markets/7% Russell 2000 (lagged one quarter)/24% Barclays Capital Aggregate/2% Barclays Capital High Yield/6% NCREIF ODCE (lagged one quarter)/3% Dow Jones/UBS Commodities Index
- **7/1/2012 – Present – 23% S&P 500/5% S&P 400/5% S&P 600/14% MSCI EAFE/3% MSCI EAFE Small Cap/6% MSCI Emerging Markets/7% Russell 2000 (lagged one quarter)/13% Barclays Capital Aggregate/5% Barclays Capital High Yield/4% Emerging Markets Debt/3% Private Debt/8% NCREIF ODCE (lagged one quarter)/4% Dow Jones/UBS Commodities Index**

- *Interim SAA Policy: 31% S&P 500/6% S&P 400/6% S&P 600/13% MSCI EAFE/2% MSCI EAFE Small Cap/3% MSCI Emerging Markets/4% Russell 2000 (lagged one quarter)/24% Barclays Capital Aggregate/2% Barclays Capital High Yield/6% NCREIF ODCE (lagged one quarter)/3% Dow Jones/UBS Commodities Index

Note: Interim SAA Policy includes a proration of 3% Private Equity, which is unfunded. Private Equity was prorated to domestic equity.

Recently approved Strategic Asset Allocation Policy effective July 1, 2012.

[1]MSCI EAFE/ACWI ex-U.S. Benchmark is the MSCI EAFE Index prior to 10/1/2005 and the MSCI ACWI ex-U.S. thereafter

Agenda Item #7

ARIZONA STATE RETIREMENT SYSTEM

3300 NORTH CENTRAL AVENUE • PO BOX 33910 • PHOENIX, AZ 85067-3910 • PHONE (602) 240-2000
7660 EAST BROADWAY BOULEVARD • SUITE 108 • TUCSON, AZ 85710-3776 • PHONE (520) 239-3100
TOLL FREE OUTSIDE METRO PHOENIX AND TUCSON 1 (800) 621-3778
EMAIL ADDRESS: ASKMAC@AZASRS.GOV • WEB ADDRESS: WWW.AZASRS.GOV

Paul Matson
Director

MEMORANDUM

TO: Mr. Tom Manos, Chair, Arizona State Retirement System (ASRS) Board

FROM: Mr. Paul Matson, Director
Mr. Gary R. Dokes, Chief Investment Officer
Mr. Dave Underwood, Assistant Chief Investment Officer

DATE: September 10, 2012

RE: **Agenda Item #7**: Presentation, Discussion and Appropriate Action Regarding the ASRS Global Tactical Asset Allocation (GTAA) Program Review

Purpose
To present and discuss material regarding the ASRS GTAA program.

Recommendation
Information only; no action required.

Background
The ASRS GTAA program began in 2003, and is designed to provide a systematic framework for making macro-economic tactical investments in the broad economic, or "beta" asset classes in which the ASRS invests. GTAA is viewed, as an "alpha generator" program whose returns, in aggregate, should provide long-term returns in excess of ASRS Strategic Asset Allocation Policy returns.

As of June 30, 2012, the total market value of the ASRS GTAA program is approximately $2.8 billion or 10.1% of total assets. The GTAA program policy target/range is 10% ± 5%.

Arizona State Retirement System

Global Tactical Asset Allocation (GTAA)
Asset Class Review

September 21, 2012

Gary R. Dokes, Chief Investment Officer, ASRS
Dave Underwood, Equity Portfolio Manager, ASRS
Allan Martin, Partner, NEPC

NEPC, LLC

Contents

- **Evolution of ASRS Tactical Asset Allocation Program**
- **ASRS Perspectives of GTAA**
- **ASRS GTAA Program Review**
  - Windham Capital Management
  - Bridgewater Associates, LP

Evolution of ASRS Tactical Asset Allocation Program

- **The ASRS Tactical Asset Allocation (TAA) program was initiated in 1984, migrating to a Global TAA strategy in 2003 with the hiring of Goldman Sachs and Bridgewater Associates.**

- **In 2007, Goldman Sachs' $1.4 billion mandate was terminated due to organizational, investment process and volatility of return concerns. Deutsche Bank Advisors (DB) was subsequently hired as a replacement manager.**

- **In 2010, the DB GTAA team left to start an independent investment management boutique, QS Investors (QSI), and the mandate migrated to QSI. The ASRS subsequently terminated QSI in 2011 as a result of the following concerns:**
  - QSI's separation from Deutsche Bank breaks an implicit commitment with analyst teams used as resources for qualitative inputs.
  - QSI's strategy appeared to be delivering a higher component of equity beta compared to other GTAA manager alpha strategies.
  - QSI's performance lead to concerns of increased business risk in the future.

Evolution of ASRS Tactical Asset Allocation Program

- **Windham Capital Management was hired in 2011 to replace QSI, with a mandate size of up to $500 million.**

- **The ASRS also modified the existing Bridgewater GTAA mandate in 2011.**
  - The account structure migrated from a separately managed portfolio to Bridgewater's Pure Alpha Strategy commingled investment vehicle.
  - Bridgewater's Pure Alpha Strategy provides ASRS with greater diversification benefits than the existing ASRS mandate, i.e., an increased opportunity set to include trading in emerging market debt and emerging market FX, and a smaller risk allocation for each trade is made within the fund.

ASRS Perspectives of GTAA

- **ASRS favors a more traditional GTAA approach based on the following beliefs and expectations:**
  - GTAA should provide the ASRS with a systematic framework for making macro-level tactical asset class investment decisions.
  - GTAA is viewed as an "alpha-generator" whose returns should primarily result from portfolio positioning in the economic beta asset classes in which the ASRS invests.
  - GTAA should require a demonstrated skill set in predicting the dispersion of longer-term asset class returns.

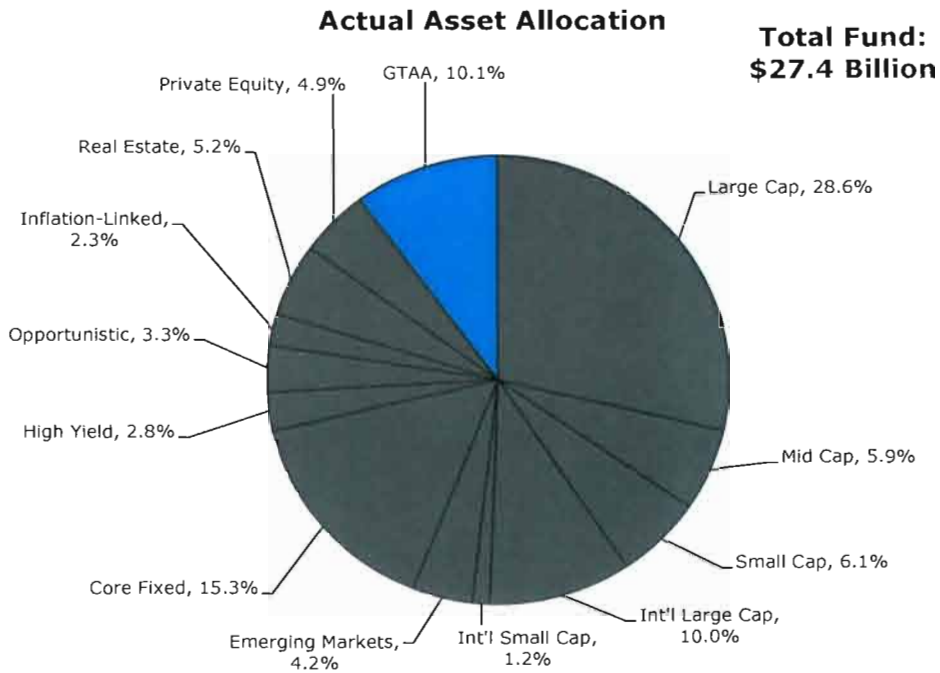
- **ASRS disfavors GTAA products in hedge fund structures due in part to high fee structure and portfolio transparency issues.**

- **The purpose of the ASRS GTAA program is:**
  - To allocate 10% +/- 5% of ASRS assets to alpha-generating strategies that provide diversification benefits relative to the ASRS SAA Policy by making global tactical asset class investments.
  - The GTAA mandate has a passively managed Custom Benchmark, or "beta" portion, which is made up of asset classes that are primarily part of the ASRS SAA Policy, and an alpha portion, which is expected to add value in both rising and falling markets through portfolio positioning relative to the beta portion.

ASRS GTAA Asset Class Overview

- **Market Value: $2.8 B**
  - Policy Target: 10% +/- 5%

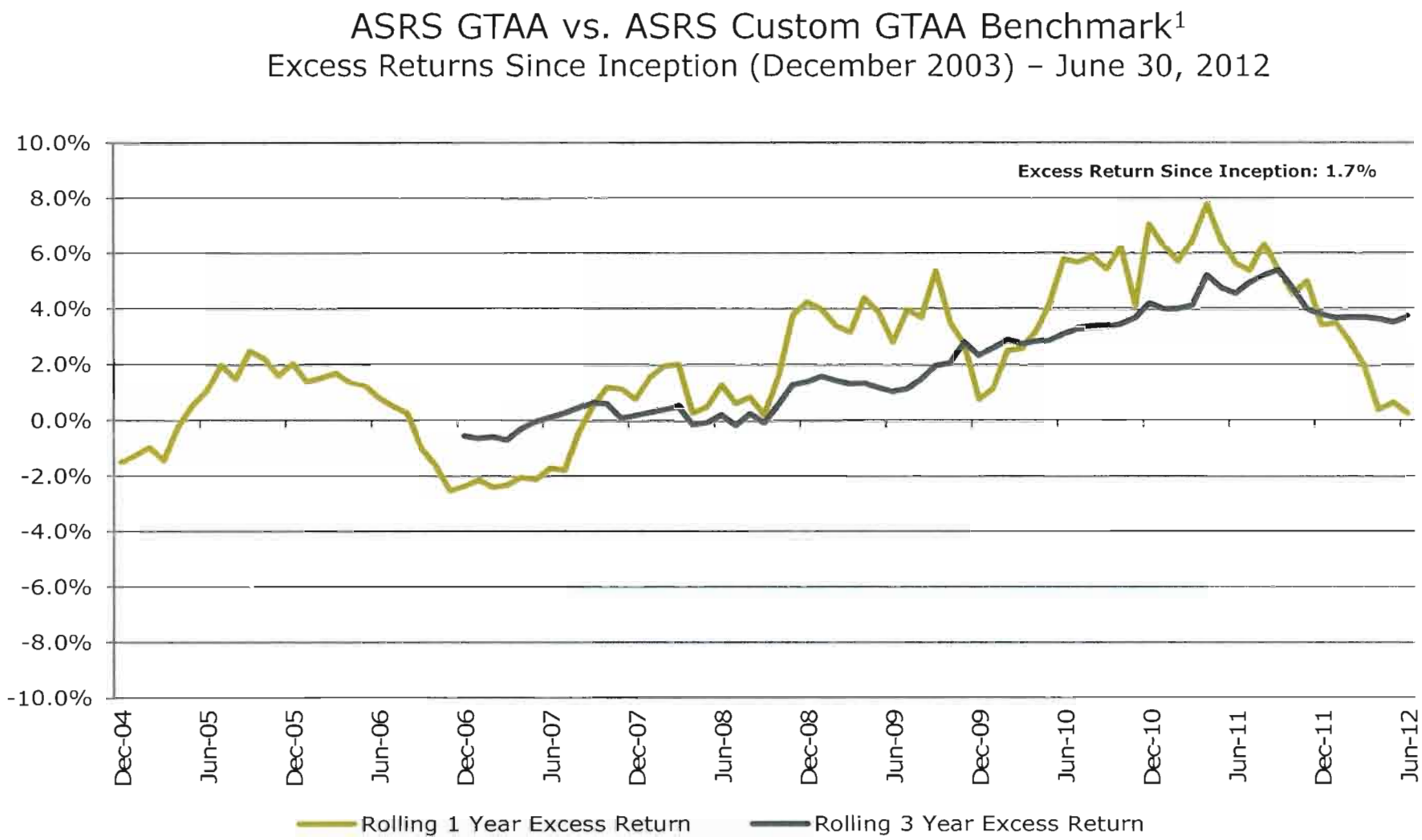
- **Investment Managers**
  - Bridgewater Associates
    - Inception: 12/31/2003
    - Portfolio: $2.3 B
  - Windham Capital
    - Inception: 9/30/2011
    - Portfolio: $0.5 B



- **ASRS Custom GTAA Benchmark:**
  - 43% S&P 500; 25% MSCI EAFE; 28% Barclays Capital U.S. Aggregate; 4% Dow Jones/UBS Commodities Index

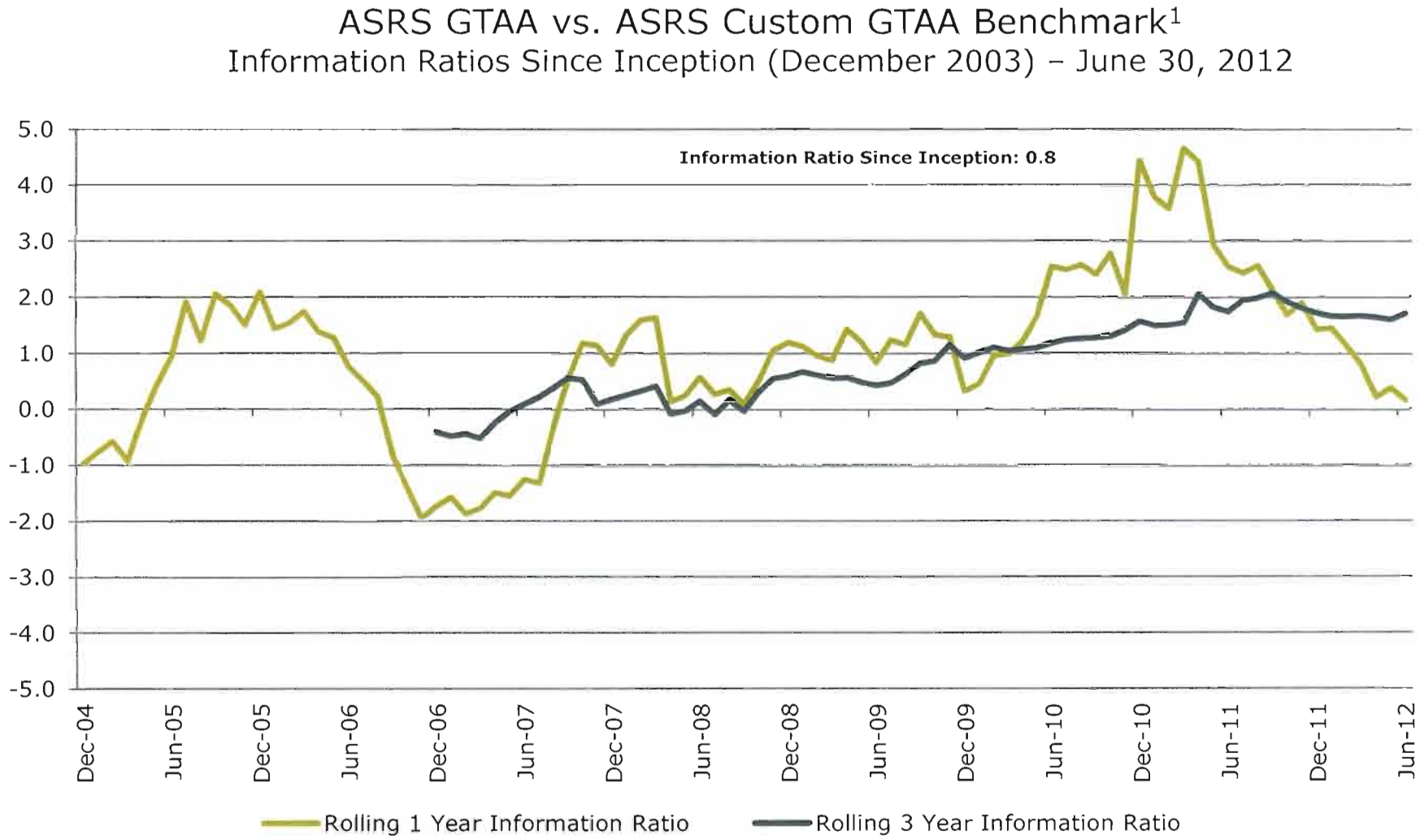
Note: Domestic Equity, International Equity, Fixed Income, Real Estate and Commodities allocations exclude GTAA portfolios.

ASRS GTAA Rolling Excess Returns



[1]ASRS Custom GTAA Benchmark comprised of 56% S&P 500, 16% MSCI EAFE, 28% Barclays Capital U.S. Aggregate through 9/30/2011; 50% S&P 500, 19% MSCI EAFE, 28% Barclays Capital U.S. Aggregate, 3% Dow Jones/UBS Commodities Index thereafter.
Note: Based on monthly, net of fee performance data, since inception.

ASRS GTAA Rolling Information Ratios



[1]ASRS Custom GTAA Benchmark comprised of 56% S&P 500, 16% MSCI EAFE, 28% Barclays Capital U.S. Aggregate through 9/30/2011; 50% S&P 500, 19% MSCI EAFE, 28% Barclays Capital U.S. Aggregate, 3% Dow Jones/UBS Commodities Index thereafter.
Note: Based on monthly, net of fee performance data, since inception.

ASRS GTAA Performance as of June 30, 2012

	Market Value ($)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
Total GTAA	**2,771,350,632**	**10.1**	**-2.9**	**70**	**4.6**	**43**	**2.4**	**33**	**15.8**	**3**	**4.3**	**20**	**--**	**--**	**6.7**	**Jan-04**
ASRS Custom GTAA Benchmark [1]			-2.2	59	6.1	13	2.1	35	12.0	19	1.3	60	5.7	99	5.0	*Jan-04*
Over/Under			-0.7		-1.5		0.3		3.8		3.0				1.7	
eA Global TAA Net Median			-1.6		4.4		0.4		9.0		2.1		8.4		4.8	*Jan-04*
Bridgewater	2,300,497,672	8.4	-2.8	68	4.9	33	4.6	19	17.6	1	5.7	11	--	--	7.8	Jan-04
ASRS Custom GTAA Benchmark [1]			-2.2	59	6.1	13	2.1	35	12.0	19	1.3	60	5.7	99	5.0	*Jan-04*
Over/Under			-0.6		-1.2		2.5		5.6		4.4				2.8	
eA Global TAA Net Median			-1.6		4.4		0.4		9.0		2.1		8.4		4.8	*Jan-04*
Windham	470,852,960	1.7	-3.7	87	3.0	72	--	--	--	--	--	--	--	--	8.8	Oct-11
Windham Custom GTAA Benchmark [2]			-1.8	55	6.6	11	2.6	32	13.0	10	1.4	57	6.0	99	14.5	*Oct-11*
Over/Under			-1.9		-3.6										-5.7	
eA Global TAA Net Median			-1.6		4.4		0.4		9.0		2.1		8.4		8.9	*Oct-11*

[1]ASRS Custom GTAA Benchmark comprised of 56% S&P 500, 16% MSCI EAFE, 28% Barclays Capital U.S. Aggregate through 9/30/2011; 50% S&P 500, 19% MSCI EAFE, 28% Barclays Capital U.S. Aggregate, 3% Dow Jones/UBS Commodities Index thereafter.
[2]Windham Custom GTAA Benchmark comprised of 47% S&P 500, 18% MSCI EAFE, 26% Barclays Capital U.S. Aggregate, 6% Dow Jones REIT Index, 3% Dow Jones/UBS Commodities Index. Effective date is 10/1/2011.
Note: Performance, ranks and medians are reported net of fees.

Windham Capital Management

Firm and Strategy Profile

- **Founded by Mark Kritzman in 1988.**
- **Windham actively manages a portfolio of exchange-traded funds (ETFs) to exploit return opportunities across asset classes while seeking to protect against downside risk using proprietary (quantitative) risk indicators to detect and anticipate when markets are calm, fragile or turbulent.**
- **Primary Risk measures – financial turbulence and systemic risk.**
  - Financial Turbulence measures the statistical unusualness of a set of returns given their historical pattern behavior.
  - Systemic Risk is measured through a statistic called the absorption ratio, which equals the fraction of market variability that is explained by a subset of the most important factors.

Windham Capital Management

Firm and Strategy Profile (continued)

- **Investment merits and other rationale for selecting Windham Capital Management include:**
  - Strategy is innovative, logical and employs a scientific, unbiased approach to decision making processes.
  - Use of ETFs to access beta exposure provides greater portfolio transparency/liquidity, and is scalable.
  - The Windham investment process is consistent with ASRS Investment Beliefs.
  - Experienced management team with direct relationships with academia, Bridgewater, Cargill, NEPC, Sankaty, OPI Investors, and Blackrock.
  - Favorable management fee structure compared to other GTAA strategies.
  - Strategy and investment process differs, provides diversification and complements Bridgewater's.

Windham Capital Management

Portfolio Change – September 6, 2012

9/6/2012

Trade #5		Domestic Equities	Foreign Equities	Real Estate	Comm-odities	Fixed Income
Tactical Trade	Portfolio	32.03%	32.53%	8.50%	6.46%	20.48%
	ASRS BM	40.00%	23.00%	8.00%	4.00%	25.00%
	Difference	-7.97%	+12.53%	+0.50%	+2.46%	-4.52%
Turbulence		High	High	Moderate	Low	Moderate	Low
Systemic Risk		High	Low	High	High	Low	Low

Low Portfolio Risk Profile ← → High Portfolio Risk Profile

- **On September 6, 2012, the Windham Portfolio increased its allocation to risky assets due to a decline in the firm's measure of Financial Turbulence.**
  - The portfolio's risk exposure is currently slightly above the benchmark.

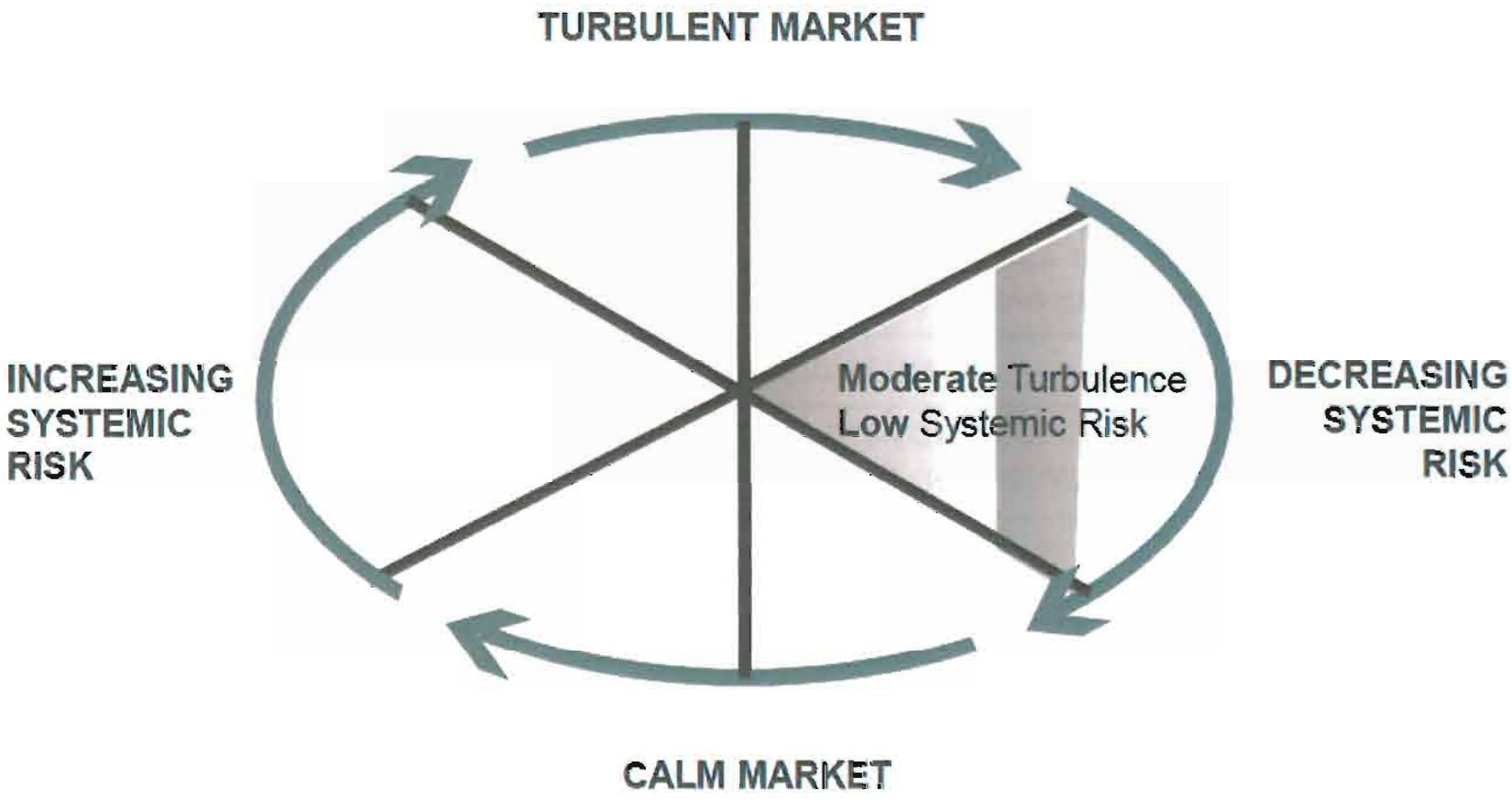
- **Financial Turbulence captures the unusualness of asset class returns, measuring the significance of price movements and the interaction between asset classes.**
  - Current signals indicate the behavior of asset classes is "less unusual", i.e. a more favorable environment for risk taking.
  - Should the Financial Turbulence figure continue to decline, Windham will continue to increase its exposure to risky assets.

- **Systematic Risk Index, which measures the likelihood of a global sell-off due to unforeseen shocks, remains low.**
  - Should the Systematic Risk Index rise, Windham would decrease its exposure to risky assets.

Source: Windham Capital Management

Windham Capital Management

Windham Investment Risk Cycle – Current Regime



Source: Windham Capital Management

Bridgewater Associates, LP

Portfolio Profile

Portfolio Size	$2.3 Billion
Expected Excess Return	3.75%
Expected Tracking Error (Active Risk)	3.75%
Expected Information Ratio	1.00
Fees	55 bps
Portfolio Structure	3.75% Alpha Return Overlay on ASRS GTAA Custom Benchmark
Investment Process	Fundamental
Bridgewater's Pure Alpha Strategy is a global active investment strategy with the goal of generating high risk-adjusted returns without any bias to the performance of markets or other active managers. The strategy is structured around Bridgewater's fixed income, equity, currency, commodity, and credit trading strategies, which are the products of over 35 years of accumulated research into the fundamental drivers of global asset returns. Bridgewater implements their understanding of these drivers of markets systematically across 100+ markets, and then builds a diversified portfolio of positions such that no source of value added will have a disproportionate impact on total portfolio's return and risk.	

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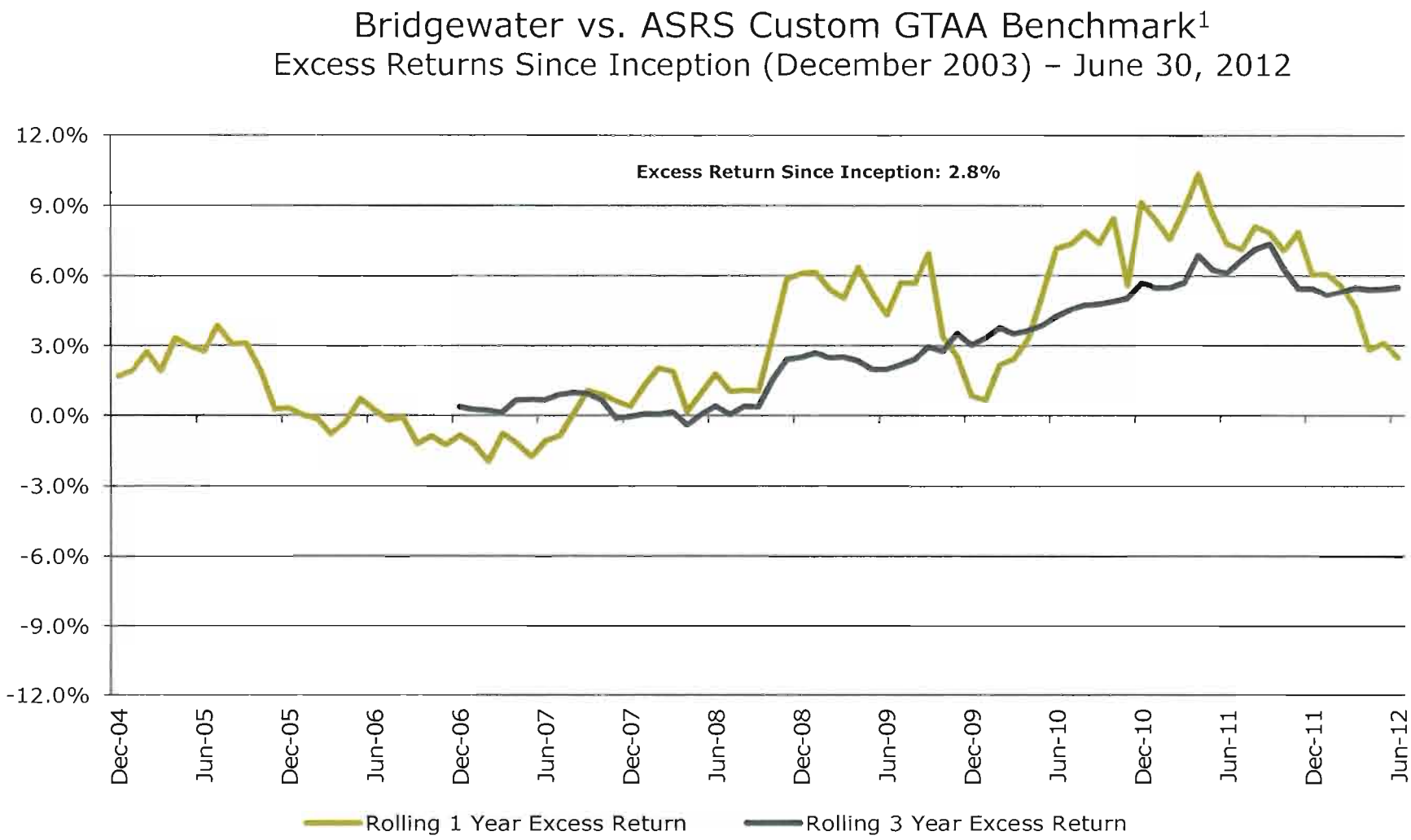
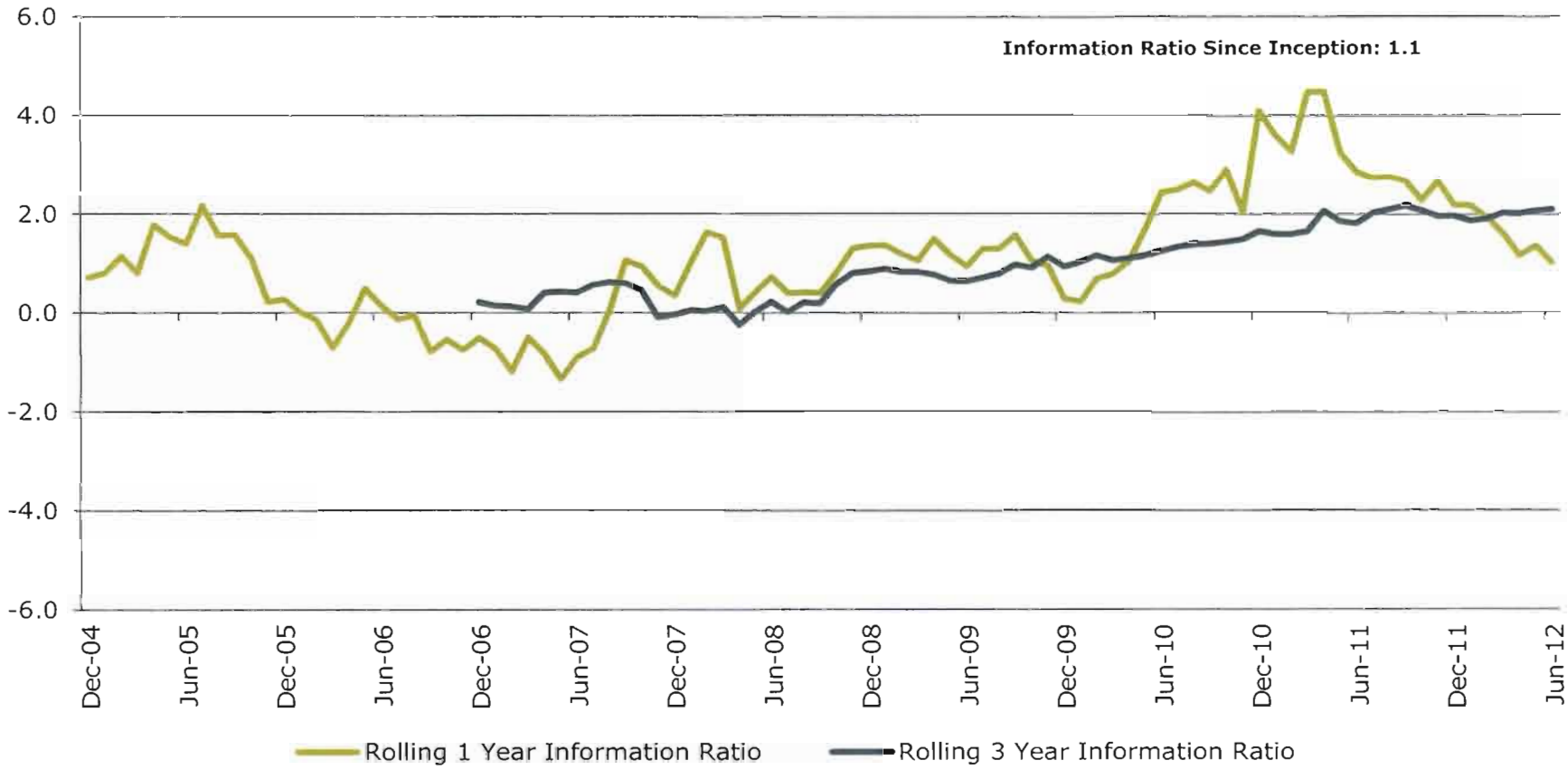
Bridgewater Associates, LP



[1]ASRS Custom GTAA Benchmark comprised of 56% S&P 500, 16% MSCI EAFE, 28% Barclays Capital U.S. Aggregate through 9/30/2011; 50% S&P 500, 19% MSCI EAFE, 28% Barclays Capital U.S. Aggregate, 3% Dow Jones/UBS Commodities Index thereafter.
Note: Based on monthly, net of fee performance data, since inception.

Bridgewater vs. ASRS Custom GTAA Benchmark[1]

Information Ratios Since Inception (December 2003) – June 30, 2012



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Note: Based on monthly, net of fee performance data, since inception.

Bridgewater Associates, LP
Portfolio Performance

Arizona State Retirement System
Gross of Fees Performance Summary Table

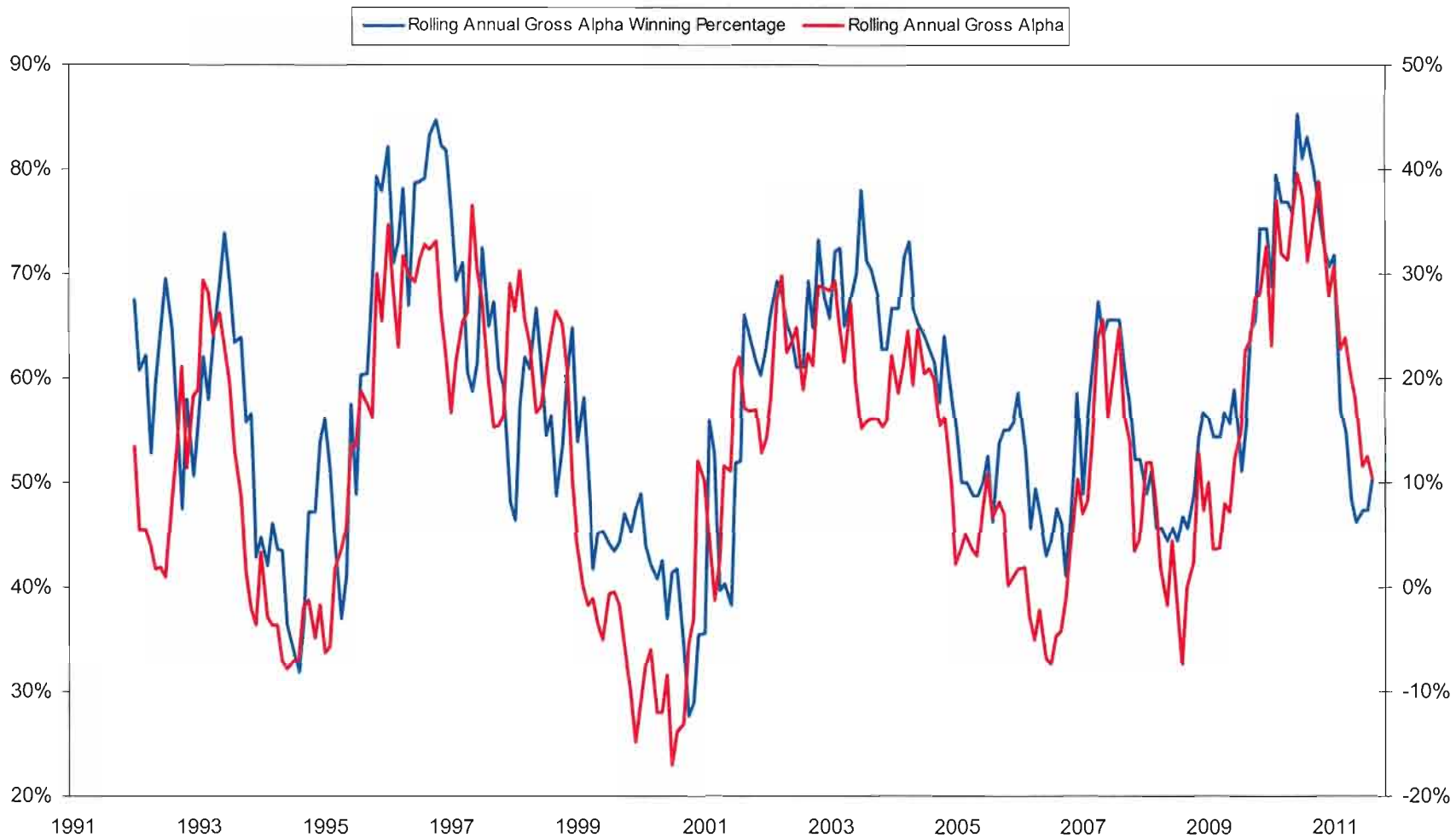
	Total Return	-	Official Benchmark Return	=	Alpha
2004	12.26 %		10.59 %		1.67 %
2005	6.09 %		5.73 %		0.37 %
2006	13.20 %		14.20 %	-	1.00 %
2007	7.89 %		7.00 %		0.88 %
2008	- 21.37 %		- 27.87 %		6.50 %
2009	23.07 %		21.82 %		1.24 %
2010	21.73 %		12.05 %		9.68 %
2011	7.65 %		1.06 %		6.59 %
2012 YTD	5.21 %		6.08 %	-	0.87 %
Inception	94.08 %		50.81 %		43.27 %
Annual Return	8.11 %		4.95 %		3.16 %

Arizona State Retirement System
Net of Fees Performance Summary Table

	Total Return	-	Official Benchmark Return	=	Alpha
2004	11.87 %		10.59 %		1.28 %
2005	5.73 %		5.73 %	-	0.00 %
2006	12.81 %		14.20 %	-	1.39 %
2007	7.41 %		7.00 %		0.40 %
2008	- 21.74 %		- 27.87 %		6.13 %
2009	22.59 %		21.82 %		0.77 %
2010	21.16 %		12.05 %		9.11 %
2011	7.08 %		1.06 %		6.02 %
2012 YTD	4.93 %		6.08 %	-	1.15 %
Inception	87.17 %		50.81 %		36.35 %
Annual Return	7.65 %		4.95 %		2.70 %

Note: Inception of the mandate was January 2004.
Effective March 2007, concurrent with the expansion of the account's leeway, the target tracking error of the mandate was decreased from 4.00% to 3.75%.
PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS. Performance shown for Arizona's Pure Alpha mandate (4% tracking error before March 2007, 3.75% tracking error thereafter).
Source: Bridgewater Associates, LP

Bridgewater Associates, LP
Portfolio Winning Percentage

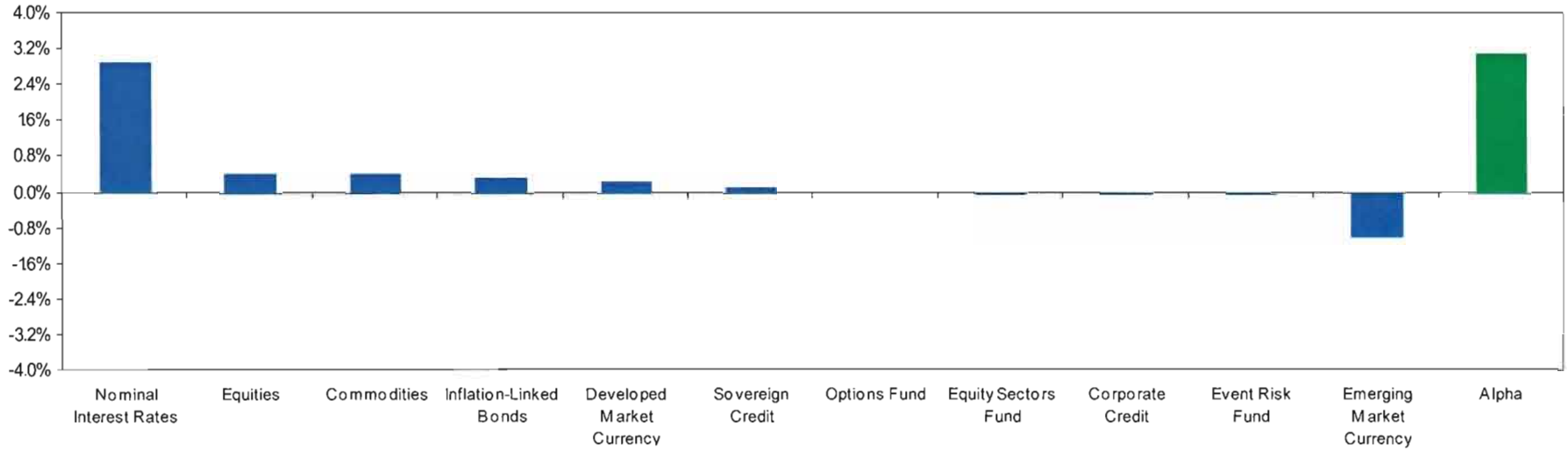


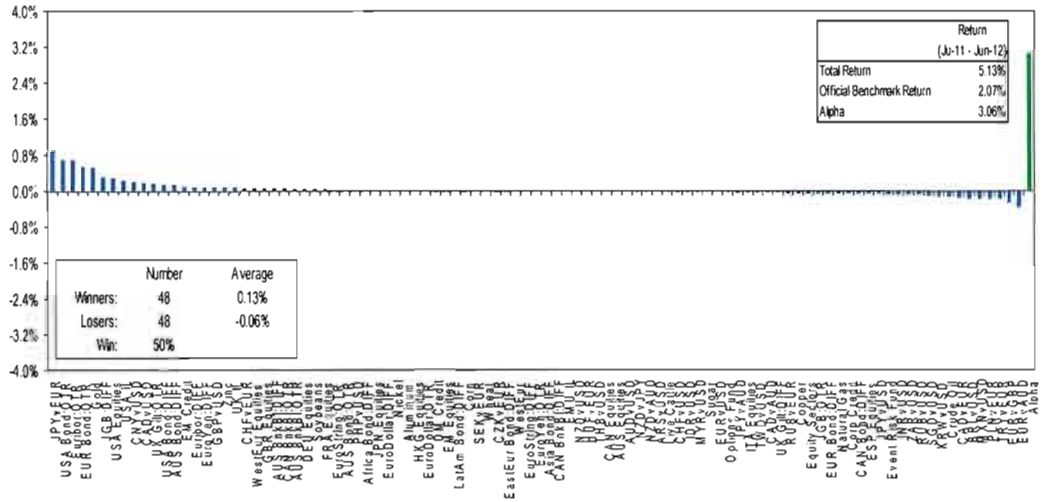
Note: Performance is shown for the Pure Alpha Strategy 12% Volatility. Attribution is based on Bridgewater analysis. PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS. HYPOTHETICAL OR SIMULATED PERFORMANCE RESULTS HAVE CERTAIN INHERENT LIMITATIONS. UNLIKE AN ACTUAL PERFORMANCE RECORD, SIMULATED RESULTS DO NOT REPRESENT ACTUAL TRADING OR THE COSTS OF MANAGING THE PORTFOLIO. ALSO, SINCE THE TRADES HAVE NOT ACTUALLY BEEN EXECUTED, THE RESULTS MAY HAVE UNDER OR OVER COMPENSATED FOR THE IMPACT, IF ANY, OF CERTAIN MARKET FACTORS, SUCH AS LACK OF LIQUIDITY. SIMULATED TRADING PROGRAMS IN GENERAL ARE ALSO SUBJECT TO THE FACT THAT THEY ARE DESIGNED WITH THE BENEFIT OF HINDSIGHT. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN.
Source: Bridgewater Associates, LP

Bridgewater Associates, LP

Performance Attribution/Alpha

1 Year Ending June 30, 2012



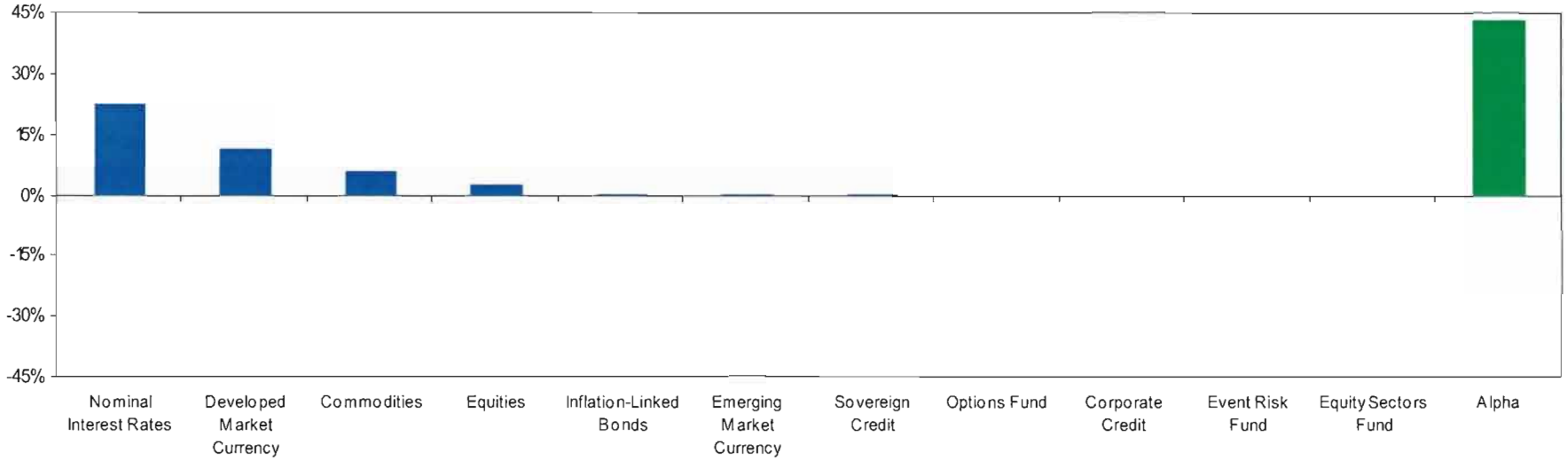


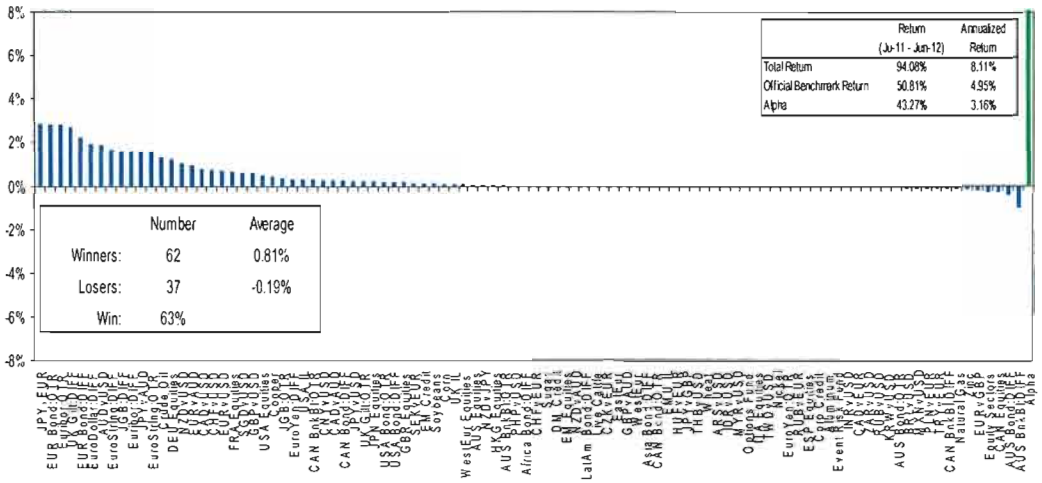
Source: Bridgewater Associates, LP

Note: The attribution charts shown are based upon the gross of fees returns of the above-referenced account, as managed by Bridgewater. Performance is estimated for the periods referenced. Where shown, gross of fees returns will be reduced by the investment advisory fees and any other expenses that may be incurred in the management of the account or investment. Attribution is based on Bridgewater analysis. PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS. No part of this material may be (i) copied, photocopied or duplicated in any form by any means or (ii) redistributed without the prior written consent of Bridgewater Associates, LP.

Bridgewater Associates, LP
Performance Attribution/Alpha

Inception Through June 30, 2012





Source: Bridgewater Associates, LP

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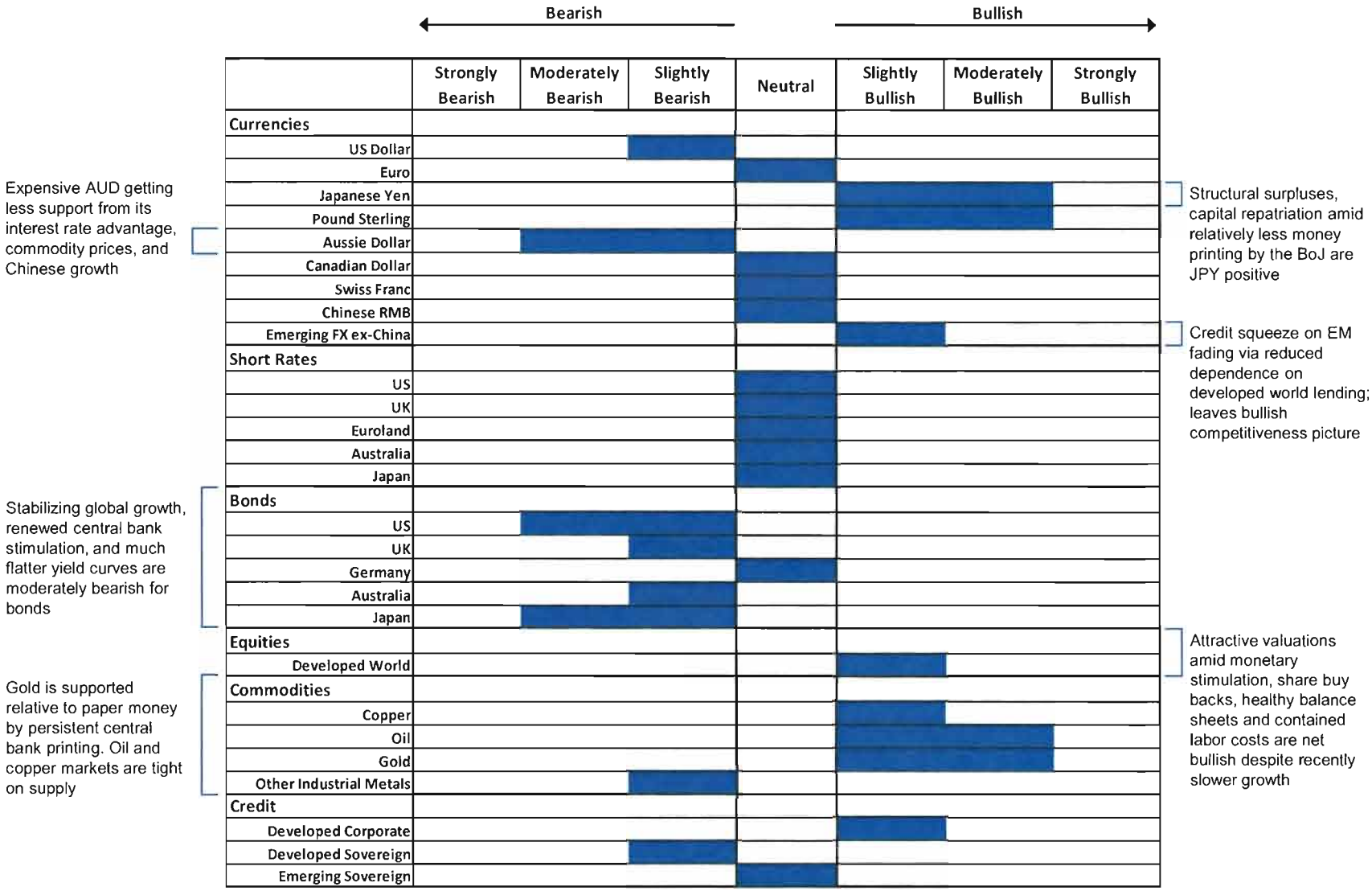
Bridgewater Associates, LP

Current Portfolio Positions – As of August 31, 2012



Source: Bridgewater Associates, LP

Agenda Item #8

ARIZONA STATE RETIREMENT SYSTEM

3300 NORTH CENTRAL AVENUE • PO BOX 33910 • PHOENIX, AZ 85067-3910 • PHONE (602) 240-2000
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TOLL FREE OUTSIDE METRO PHOENIX AND TUCSON 1 (800) 621-3778
EMAIL ADDRESS: ASKMAC@AZASRS.GOV • WEB ADDRESS: WWW. AZASRS.GOV

Paul Matson
Director

MEMORANDUM

TO: Mr. Tom Manos, Chair, Arizona State Retirement System (ASRS) Board

FROM: Mr. Paul Matson, Director
Mr. Gary R. Dokes, Chief Investment Officer (CIO)
Mr. Eric Glass, Portfolio Manager of Commodities

DATE: September 10, 2012

RE: **Agenda Item #8**: Presentation, Discussion, and Appropriate Action Regarding Proposed Modifications to the ASRS Long Term Disability (LTD) Investment Program

Purpose
To present and discuss proposed modifications to the ASRS LTD Investment Program.

Recommendations
The Investment Committee and staff recommend the Board approve Exhibit 3: ASRS LTD Fund Rebalancing Policy and Exhibit 4: ASRS LTD Strategic Asset Allocation Policy.

Background
The ASRS LTD program investment assets of approximately $250 million are invested in passive asset class modules held at and managed by BlackRock. Over the past year, the ASRS assumed responsibility and discretion for LTD fund rebalancing between passive asset class modules to better manage LTD program cash flow needs and to maintain asset allocation policy weights. The proposed modifications to the ASRS LTD Fund Rebalancing Policy are technical in nature and more clearly reflect the activities being performed by the ASRS and BlackRock. As a result, an associated BlackRock contract will be modified to reflect these changes.

Consistent with the June 15, 2012 Board approval of the new ASRS Strategic Asset Allocation Policy (SAAP), modifications to LTD Strategic Asset Allocation Policy are being recommended for approval. As reference, the LTD program's Asset Allocation Strategic Investment Policy (Exhibit 5) is provided.

The CIO and the Investment Management Division's LTD Program Portfolio Manager will provide additional context on the management of the LTD program, including cash flows, performance, and operational items.

Attachments:
- Exhibit 1: LTD Fund Rebalancing (redlined)
- Exhibit 2: LTD SAAP (redlined)
- Exhibit 3: LTD Fund Rebalancing (recommendation)
- Exhibit 4: LTD SAAP (recommendation)
- Exhibit 5: LTD SAA Policy Guidelines

Policy: *IMD_SIP004*
New: *04/18/2008*
Revised: *11/19/2010*
Exhibit 1: LTD Fund Rebalancing (Redlined)

ARIZONA STATE RETIREMENT SYSTEM
STRATEGIC INVESTMENT POLICIES

Fund Rebalancing (LTD)

Purpose:
To codify the policy and guidelines for the rebalancing of the asset classes consistent with the strategic asset allocation policy for the Arizona State Retirement System (ASRS) Long Term Disability Program.

Policy:
The ASRS will establish and maintain an asset class rebalancing policy which will assist in the investment management of LTD assets. This policy will reflect the process for identifying and determining potential courses of action associated with the LTD's asset class over-/under-weight deviations relative to its broad strategic asset allocation policy. Though the LTD's actual fund allocation may differ from the policy and temporarily exceed the maximum and minimum asset allocation policy percentage target bands, in general, such deviations will remain within asset allocation policy percentage target bands.

The Chief Investment Officer (CIO) will review the market values of the various asset classes on a quarterly or more frequent basis, and ensure the LTD program is rebalanced as necessary by an ASRS Portfolio Analyst/Manager. LTD program assets are invested in portfolios which are managed by an ASRS external investment manager (administrator) to provide asset class exposures consistent with the LTD asset allocation policy (IMD SIP #003). who has been awarded a mandate to maintain and rebalance the portfolios consistent with the prescribed LTD asset allocation policy. The frequency and magnitude of these rebalancings will be also be governed by adherence to the LTD asset allocation policy, costs associated with rebalancing and management of program cash flows.

An ASRS Portfolio Analyst/Manager will monitor and report the the LTD program's market value, position report andcash flows, and compliance with the LTD Asset Allocation Policy (IMD SIP #003). , aAs appropriate, the ASRS Portfolio Analyst/Manager will initiate a meeting with the CIO and applicable ASRS investment staff to determine appropriate rebalancing action. In addition, a Portfolio Analyst will monitor the LTD program administrative cash-flows account which resides in the ASRS custodian bank and determine if/when accumulated cash may be transferred to/from the administrator. The Portfolio Analyst/Manager will initiate investment/redemption trades with consideration for LTD policy targets, policy bands, portfolio trade execution date/availability, and transaction size, and costs. In addition, a Portfolio Analyst/Manager will monitor the LTD program administrative cash-flows account which resides in the ASRS custodian bank and determine if/when accumulated cash may be transferred to/from the administrator for trade settlement and benefit payments. The administrator will initiate and execute the rebalancing activities, i.e., move back into policy bands if the magnitude of the difference is outside the policy target band at month end

Exhibit 2 - ASRS Long-Term Disability (LTD) Strategic Asset Allocation (SAA) Policy

Current SAA Policy	$ Market Value	Policy Weights	±% policy range	Fee Rate	Est. Fees ($)	Liquidity
Barclays Aggregate Index Fund	$59,407,716	24%	24% ±4%	0.06%	$35,645	daily (T-2, T+3)
HY Bond Index Fund	$4,950,643	2%	2% ±1%	0.20%	$9,901	daily (T-2, T+3)
Fixed Income		26%				
Russell 1000 Index Fund	$98,889,093	40%	40% ±4%	0.05%	$49,445	daily (T-1, T+3)
Russell 2000 Index Fund	$17,451,016	7%	7% ±1%	0.07%	$12,216	daily (T-1, T+3)
U.S. Equity (w/ PE allocation)		47%				
EAFE Index Fund	$32,179,179	13%	13% ±3%	0.10%	$32,179	weekly (T-3, T+3)
EAFE Small Cap Index Fund	$4,950,643	2%	2% ±1%	0.12%	$5,941	weekly (T-3, T+3)
Emerging Markets Index Fund	$7,425,964	3%	3% ±1%	0.20%	$14,852	weekly (T-3, T+5)
Non-U.S. Equity		18%				
Real Estate Securities Index Fund	$14,851,929	6%	6% ±2%	0.15%	$22,278	daily (T-1, T+3)
Dow Jones UBS Commodities Index Fun	$7,425,964	3%	3% ±3%	0.35%	$25,991	weekly (T-2, T+1)
Total	**$247,532,148**	**100%**		**0.08%**	**$208,447**	

Proposed SAA Policy	$ Market Value	Policy Weights	Target (Range)	Fee Rate	Est. Fees ($)	Liquidity
Barclays Aggregate Index Fund	$32,179,179	13%		0.06%	$19,308	daily (T-2, T+3)
HY Bond Index Fund	$19,802,572	8%		0.20%	$39,605	daily (T-2, T+3)
US Fixed Income	$51,981,751	21%	11% - 31%			
Emerging Market Debt Index Fund	$9,901,286	4%		0.28%	$27,724	daily (T-3, T+5)
Total Fixed Income	$61,883,037	25%	15% - 35%			
Russell 1000 Index Fund	$84,160,930	34%		0.05%	$42,080	daily (T-1, T+3)
Russell 2000 Index Fund	$14,851,929	6%		0.07%	$10,396	daily (T-1, T+3)
U.S. Equity (w/ PE allocation)	$99,012,859	40%	33% - 45%			
EAFE Index Fund	$34,654,501	14%		0.10%	$34,655	weekly (T-3, T+3)
EAFE Small Cap Index Fund	$7,425,964	3%		0.12%	$8,911	weekly (T-3, T+3)
Emerging Markets Index Fund	$14,851,929	6%		0.20%	$29,704	weekly (T-3, T+5)
Non-U.S. Equity	$56,932,394	23%	16% - 28%			
Total Equity	$155,945,253	63%	53% - 70%			
Dow Jones UBS Commodities Index Fun	$9,901,286	4%	1% - 7%	0.35%	$34,655	weekly (T-2, T+1)
Real Estate Securities Index Fund	$19,802,572	8%	6% - 10%	0.15%	$29,704	daily (T-1, T+3)
Total Inflation Linked	$29,703,858	12%	8% - 16%			
Total	**$247,532,148**	**100%**		**0.10%**	**$247,037**	

Note: Mimicking Private Equity exposure is attained through Russell Index exposure (Russell 1000 and Russell 2000) as the Russell 3000 is already the underlying benchmark for the Total Fund's Private Equity asset class. Russell Indices are used because BlackRock does not offer an S&P 600 product. The pro-ration between the Russell 1000 and the Russell 2000 (85%/15% respective mix) is proportionate with the exposure that would be attained from the Total Fund SAAP's S&P 500, S&P 400, and S&P 600 mix. Private Debt exposure is allocated to High Yield as the closest public market equivalent.

Policy: IMD_SIP004
New: 04/18/2008
Revised: 11/19/2010
Exhibit 3: LTD Fund Rebalancing Recommendation

ARIZONA STATE RETIREMENT SYSTEM
STRATEGIC INVESTMENT POLICIES

Fund Rebalancing (LTD)

Purpose:
To codify the policy and guidelines for the rebalancing of the asset classes consistent with the strategic asset allocation policy for the Arizona State Retirement System (ASRS) Long Term Disability Program.

Policy:
The ASRS will establish and maintain an asset class rebalancing policy which will assist in the investment management of LTD assets. This policy will reflect the process for identifying and determining potential courses of action associated with the LTD's asset class over-/under-weight deviations relative to its broad strategic asset allocation policy. Though the LTD's actual fund allocation may differ from the policy and temporarily exceed the maximum and minimum asset allocation policy percentage target bands, in general, such deviations will remain within asset allocation policy percentage target bands.

The Chief Investment Officer (CIO) will review the market values of the various asset classes on a quarterly or more frequent basis, and ensure the LTD program is rebalanced as necessary by an ASRS Portfolio Analyst/Manager. LTD program assets are invested in portfolios which are managed by an ASRS external investment manager (administrator) to provide asset class exposures consistent with the LTD asset allocation policy (IMD SIP #003).

An ASRS Portfolio Analyst/Manager will monitor the LTD program's market value, cash flows, and compliance with the LTD Asset Allocation Policy (IMD SIP #003). As appropriate, the ASRS Portfolio Analyst/Manager will initiate a meeting with the CIO and applicable ASRS investment staff to determine appropriate rebalancing action. The Portfolio Analyst/Manager will initiate investment/redemption trades with consideration for LTD policy targets, policy bands, portfolio trade execution date/availability, transaction size, and costs. In addition, a Portfolio Analyst/Manager will monitor the LTD program administrative cash-flows account which resides in the ASRS custodian bank and determine if/when accumulated cash may be transferred to/from the administrator for trade settlement and benefit payments.

Exhibit 4 - ASRS Long-Term Disability (LTD) Strategic Asset Allocation (SAA) Policy

Proposed SAA Policy	$ Market Value	Policy Weights	Target (Range)
Barclays Aggregate Index Fund	$32,179,179	13%	
HY Bond Index Fund	$19,802,572	8%	
US Fixed Income	$51,981,751	21%	11% - 31%
Emerging Market Debt Index Fund	$9,901,286	4%	
Total Fixed Income	$61,883,037	25%	15% - 35%
Russell 1000 Index Fund	$84,160,930	34%	
Russell 2000 Index Fund	$14,851,929	6%	
U.S. Equity (w/ PE allocation)	$99,012,859	40%	33% - 45%
EAFE Index Fund	$34,654,501	14%	
EAFE Small Cap Index Fund	$7,425,964	3%	
Emerging Markets Index Fund	$14,851,929	6%	
Non-U.S. Equity	$56,932,394	23%	16% - 28%
Total Equity	$155,945,253	63%	53% - 70%
Dow Jones UBS Commodities Index Fund	$9,901,286	4%	1% - 7%
Real Estate Securities Index Fund	$19,802,572	8%	6% - 10%
Total Inflation Linked	$29,703,858	12%	8% - 16%
Total	**$247,532,148**	**100%**	

Note: Mimicking Private Equity exposure is attained through Russell Index exposure (Russell 1000 and Russell 2000) as the Russell 3000 is already the underlying benchmark for the Total Fund's Private Equity asset class. Russell Indices are used because BlackRock does not offer an S&P 600 product. The pro-ration between the Russell 1000 and the Russell 2000 (85%/15% respective mix) is proportionate with the exposure that would be attained from the Total Fund SAAP's S&P 500, S&P 400, and S&P 600 mix. Private Debt exposure is allocated to High Yield as the closest public market equivalent.

Policy: *IMD_SIP003*
New: *04/18/2008*
Revised:
Exhibit 5: LTD SAA Policy Guidelines

ARIZONA STATE RETIREMENT SYSTEM
STRATEGIC INVESTMENT POLICY

Asset Allocation (LTD)

Purpose:
To codify the policy and guidelines for establishing and modifying the asset allocation policy for the Arizona State Retirement System (ASRS) Long-term Disability (LTD) Program.

Policy:
The ASRS will establish and maintain an asset allocation policy which will govern the investment management of LTD assets. This policy will reflect an allocation to asset classes similar to those of the Plan asset allocation policy; however, may use different investment managers and vehicles which possess a risk/return profile consistent with the attributes of the LTD program.

The strategic asset allocation is used to determine the long-term policy asset weights in the LTD program. Investment opportunities and asset classes are constantly evolving and developing, such that they may become attractive and suitable for institutional investment portfolios before the next scheduled policy review. Therefore, an asset allocation study will be conducted as warranted or triennially, whichever is shorter.

The study will primarily utilize an asset-only framework given it allows the ASRS to focus on the long-term funded status of LTD, maximize portfolio return, and minimize costs.

The Chief Investment Officer (CIO), with the concurrence of the Director and the Chair of the Investment Committee (IC), will initiate a strategic asset allocation study. Furthermore, the CIO will be responsible for the management of the process and the implementation of Board approved asset allocation policies.

The CIO will determine the services needed to develop, conduct and implement the asset allocation study. These services will include those of the ASRS Investment staff and may include those of the Plan's general investment consultant and/or other consultants.

Agenda Item #9

ARIZONA STATE RETIREMENT SYSTEM

3300 NORTH CENTRAL AVENUE • PO BOX 33910 • PHOENIX, AZ 85067-3910 • PHONE (602) 240-2000
7660 EAST BROADWAY BOULEVARD • SUITE 108 • TUCSON, AZ 85710-3776 • PHONE (520) 239-3100
TOLL FREE OUTSIDE METRO PHOENIX AND TUCSON 1 (800) 621-3778
EMAIL ADDRESS: ASKMAC@AZASRS.GOV • WEB ADDRESS: WWW. AZASRS.GOV

Paul Matson
Director

MEMORANDUM

TO: Mr. Tom Manos, Chair, Arizona State Retirement System (ASRS) Board

FROM: Mr. Paul Matson, Director

DATE: September 10, 2012

RE: **Agenda Item #9**: Presentation, Discussion and Appropriate Action Regarding Agency Governance

Purpose

To present and discuss the following documents:

- The agency's current *Board Governance Policy Handbook*,
- The *Cortex 2010 Benchmarking Study for U.S. Public Retirement Systems*, and the *ASRS Management Response*,
- The *ASRS Internal Audit Agency Governance Audit,* and management response, and,
- The *Cortex Investment Governance Report* and management response.

Recommendation

For discussion purposes; no action required at this time.

Background

In 2004, the ASRS adopted its first Governance Handbook. Each subsequent year, the ASRS (Board and staff) have reviewed the document for potential modifications consistent with better governance.

In 2010, the ASRS participated in a Cortex benchmarking study of U.S. public retirement systems. The purpose of the study was to assist retirement systems in enhancing their pension governance practices. The final report was provided to the ASRS in January 2011, identifying nine issues for the agency to consider. The *Cortex Benchmarking Study* as well as the Board requested *ASRS Management Response* are attached.

In addition, the Internal Audit Division conducted an Agency Governance Audit and presented their findings and recommendations to the Operations Committee in April 2012 and received input. The findings, recommendations and management response are attached.

Finally, the ASRS hired Cortex to conduct an independent review and evaluation specific to the governance of the ASRS investment management program. Cortex presented their findings and recommendations to the Investment Committee in September 2012.

The presentation and discussion of the management response to the initial Cortex report and the presentation of the Internal Audit review were deferred as a result of new Board appointments, and also to allow for the completion of the separate review of the investment management program. With completion of Board appointments and presentation to the Investment Committee, the Governance is being discussed.

The attached documents outline the issues for consideration and the ASRS responses:

1. ASRS Board Governance Policy Handbook
2. Cortex 2010 Fiduciary Benchmarking Study for U.S. Public Retirement Systems and ASRS Management Response
3. ASRS Internal Audit Agency Governance Review
4. Cortex Investment Management Program Governance Review and Consultant Utilization Review (PowerPoint Presentation) and the NAPPA Report
5. Investment Management Program Governance Review and Consultant Utilization Review (Report) and Management Response

Attachment 1

Board Governance Policy Handbook

ARIZONA STATE RETIREMENT SYSTEM

Approved:	January 16, 2004
Revised:	December 17, 2004
	February 18, 2005
	December 16, 2005
	December 15, 2006
	April 18, 2008
	May 14, 2009
	July 31, 2009
	April 16, 2010
	April 15, 2011
	July 15, 2011

ARIZONA STATE RETIREMENT SYSTEM (ASRS)
Board Governance Policy Handbook

TABLE OF CONTENTS

A. VISION STATEMENT AND CORE VALUES 1

B. ASRS BOARD CHARTER 2

THE BOARD'S ROLE 2
BOARD COMPOSITION (A.R.S. § 38-713) 2
TRUSTEE TERMS, RESIGNATIONS, AND VACANCIES (A.R.S. § 38-713) 2
DUTIES AND RESPONSIBILITIES 3

C. TRUSTEE POSITION DESCRIPTION 5

PRIMARY RESPONSIBILITY 5
COMMITMENTS 5
TRUSTEE ACCESS TO ASRS RESOURCES 5

D. DIRECTOR POSITION DESCRIPTION 7

GENERAL 7
DELEGATION OF RESPONSIBILITIES 7
SPECIFIC DUTIES AND RESPONSIBILITIES 7

E. ELECTION OF BOARD OFFICERS 10

BOARD OFFICERS 10
ELECTION PROCEDURE 10
TERM 10
RESIGNATIONS AND VACANCIES 10
REMOVAL 10

F. BOARD CHAIR POSITION DESCRIPTION 11

RESPONSIBILITIES AND COMMITMENTS 11
DUTIES OF VICE-CHAIR 11

G. BOARD AND COMMITTEE MEETING PROTOCOL 12

RULES OF ORDER AND QUORUM 12
SCHEDULING OF REGULAR, SPECIAL, AND EMERGENCY MEETINGS 12
MEETING NOTICES 12
TRUSTEE ATTENDANCE BY ELECTRONIC MEDIA 12
MEETING AGENDAS 12
MEETING MATERIALS 13
PUBLIC ACCESS AND TESTIMONY AT BOARD MEETINGS 13
EXECUTIVE SESSIONS 13
MEETING MINUTES AND BOARD RECORDS 14

H. BOARD COMMITTEES AND CHARTERS 15

GENERAL 15
STANDING COMMITTEES 15

SPECIAL COMMITTEES 15
COMMITTEE MEMBERS 15
COMMITTEE OPERATING RULES 15
STANDING COMMITTEE CHARTERS 16
Operations Committee Charter *16*
External Affairs Committee Charter *18*
Investment Committee Charter *19*
INTERNAL AUDIT CHARTER 20

I. ASSET CLASS COMMITTEES 23

ORGANIZATIONAL STRUCTURE/COMPOSITION 23
VOTING PROTOCOLS 24
ASSET CLASS COMMITTEE CONSULTANTS 24

J. TRUSTEE ORIENTATION AND EDUCATION PROGRAM 25

GENERAL 25
NEW TRUSTEE ORIENTATION PROGRAM 25
TRUSTEE EDUCATION POLICY 26
REIMBURSEMENT OF EDUCATION EXPENSES 26

K. STRATEGIC PLANNING POLICY 27

GENERAL 27
STRATEGIC PLANNING ROLES AND RESPONSIBILITIES 27

L. BOARD CODE OF ETHICS 28

GENERAL 28
STATE LAW 28
CODE OF ETHICS 29

M. BOARD PERFORMANCE EVALUATION 31

GENERAL 31
BOARD EVALUATION POLICY 31
BOARD PERFORMANCE EVALUATION PROCESS AND FORMS 31
PART A: TRUSTEE SELF-EVALUATION 31
PART B: OVERALL BOARD EVALUATION 31

N. DIRECTOR EVALUATION PROCESS 32

GENERAL 32
OBJECTIVES 32
EVALUATION PROCEDURE AND CRITERIA 32

APPENDIX A. TRUSTEE EVALUATION 33

APPENDIX B. DIRECTOR EVALUATION 36

APPENDIX C. GENERAL INVESTMENT CONSULTANTS 41

APPENDIX D. TRUSTEE FIDUCIARY LIABILITY AND COVERAGE 42

A. VISION STATEMENT AND CORE VALUES

DELIVERING SERVICE WITH...

PRIDE

OUR VISION

For the benefit of our members... the Arizona State Retirement System will be a leading state benefit plan administrator in the areas of:

- Core Member Services
- Investment Performance
- Funded Status
- Operational Effectiveness

This will be accomplished while keeping program benefits and associated costs relatively aligned and maintaining actuarial and fiscal integrity.

OUR VALUES

Professionalism.
A highly capable workforce will promote a professional and respectful environment and *lead* the organization.

Results.
A results-oriented approach to operations will *energize* the organization.

Improvement.
A climate of continuous quality improvement and enhanced efficiencies will *drive* the organization.

Diversity.
Engagement of diversity by the appreciation, recognition and support for all people will propel the organization to ever greater achievement.

Excellence.
A commitment to service excellence will *permeate* the organization.

ARIZONA STATE
RETIREMENT SYSTEM

B. ASRS BOARD CHARTER

Consistent with recognition of the fiduciary duties imposed upon each individual member of the Board, they are referred to in this Governance Handbook as "Trustees."

The Board recognizes that a sound governance structure is essential to fulfilling its duties and responsibilities. The Board prepared and adopted this Governance Handbook to establish the framework within which the Board intends to set governance and oversight policy.

The purpose of the Handbook is twofold. First, it is to provide orientation material for new Trustees as to the roles, responsibilities, structure, procedures, policies, and activities in the governance and oversight of the ASRS. Second, it is to serve as an ongoing reference manual for the current Trustees and ASRS staff.

This Handbook will be reviewed by the Board at least annually, or more often if necessary. It will be updated at the Board's direction.

The Board's Role

The ASRS Board was established under state law to govern and administer the ASRS. The Board has only those powers and duties that have been delegated to it by the Legislature. Within this role, the Trustees have a duty as fiduciaries under the law to act solely for the benefit of members and beneficiaries. (A.R.S. § 38-714, Arizona Constitution, Article 29, Section 1)

The Board views itself as being primarily a policy-making and governance body. The Board has delegated the administrative functions to the ASRS Director and staff subject to ongoing monitoring and oversight. The Board has also delegated the hiring and termination of investment managers to the (Director's) Asset Class Committees. The Board does not engage in regular day-to-day management functions of the ASRS.

Board Composition (A.R.S. § 38-713)

The Board is composed of nine Trustees who are appointed by the Governor pursuant to the following statutory requirements:

1. Five Trustees must be members of the ASRS as follows:
    a. An educator
    b. An employee of a political subdivision
    c. A retired member
    d. An employee of the state
    e. An at-large member representing any ASRS member group
2. Four Trustees are not members of the ASRS and represent the public.

Trustee Terms, Resignations, and Vacancies (A.R.S. § 38-713)

1. Each Trustee is appointed for a term of three years. The terms of office are staggered with three positions beginning and expiring on the third Monday in January of each year.
2. Trustees continue to serve in their positions after the expiration of their terms of appointment in accordance with law.

3. Individual Trustees may resign from their position on the Board by providing appropriate notice to the Governor. In such case, the resignation is not effective until accepted by the Governor. (A.R.S. § 38-291)
4. Trustee position vacancies that otherwise occur before the expiration of a term will be filled by the Governor. (A.R.S. §§ 38-211, 38-713)
5. A position shall be deemed vacant if a trustee ceases to discharge their duties for a period of three consecutive months. (A.R.S. § 38-291)

Duties and Responsibilities (A.R.S. § 38-714)

The Board proactively oversees the delivery of ASRS benefits and investment of trust assets. Consistent with fiduciary standards the ASRS Board will:

1. Oversee and participate in the long-term strategic planning process for the ASRS.
2. Appoint, annually evaluate, and, if necessary, remove the Director in accordance with state law.
3. Delegate the administrative responsibilities of the ASRS to the Director through the Director Position Description, and delegate the hiring and termination of investment managers to the Director through the asset class committee structure. (A.R.S. § 38-715)
4. Approve the creation or dissolution of standing and special committees of the Board.
5. Approve the selection, and termination, and oversee the performance of the following external service providers:
   a. Consulting actuaries and actuarial auditors
   b. External financial auditor
   c. General investment consultants
   d. Third-party administration providers for health and long-term disability
6. Review and approve macro-level strategic investment policies which guide the strategic vision for ASRS investments.
7. Establish actuarial funding methods and assumptions, benefit option factors, and an asset valuation method consistent with state law. (A.R.S. § 38-711)
8. Conduct an annual actuarial valuation of the ASRS liabilities and submit the results to the Governor and the state legislature as required by state law. (A.R.S. § 38-714)
9. Conduct an actuarial experience investigation study every five years.
10. Conduct an independent third-party audit of the actuarial funding of the ASRS benefits every five years.
11. Review, approve, and monitor the budget and budget change proposals.
12. Ensure the integrity of the financial control and reporting system.
13. Make recommendations on legislative proposals affecting the ASRS, without advocating for or against pension benefits modifications. (A.R.S. § 38-714)
14. Hear appeals in accordance with policy established by the Board.
15. Develop and approve other governance policies, directives, and rules for the administration of the ASRS as may be adopted from time to time.
16. Obtain periodic updates from Board Committees regarding oversight activities.
17. Review and approve the agency biennial risk assessment and internal audit plan.

18. Review and approve recommendations of the director to appoint or remove the agency's internal auditor.
19. Review annually the administration of the third-party administrator for the Supplemental Retirement Savings Plan (SRSP) as presented by the Investment Committee.
20. Review annually the administration of the third-party administrator for the Supplemental Salary Deferral Plan (SSDP) as presented by the Investment Committee.

C. TRUSTEE POSITION DESCRIPTION

Primary Responsibility

Each Trustee is individually a fiduciary for the governance and oversight of the ASRS and is obligated to act solely for the exclusive benefit of the ASRS members and beneficiaries. (Arizona Constitution, Article 29, Section 1, and A.R.S. § 38-714)

Commitments

Trustees must be willing and able to devote the necessary time to fulfill their duties on the Board. This commitment includes the responsibility to:

1. Act as a member of a nine-member board of trustees to provide leadership and set the strategic direction for the ASRS.
2. Prepare for and attend scheduled Board and Committee meetings.
3. Be an informed and active member of the Board, fully participating in the decisions and actions of the Board and their committees by making independent assessments and reasonable judgments.
4. Acquire and maintain the knowledge necessary to perform the duties of a Trustee.
5. Follow policies and procedures established by the Board.
6. Be accurate when communicating with other Trustees, members, beneficiaries, other interested parties, the public and ASRS staff, and always be clear on whether the statements being made are the position of the Board or just the position of the individual Trustee.
7. Act collegially with the other Trustees and staff in the conduct of ASRS business.
8. Bring to the attention of the Board matters of concern that affect the conduct of the business of the Board or the ASRS.
9. Comply with the Board's Code of Ethics.
10. Adhere to state law regarding confidentiality and privacy of member records and benefits.
11. Adhere to Open Meeting Law. (A.R.S. §§ 38-431 et seq.)
12. Assume responsibility for evaluating the Trustee's own performance, the overall performance of the entire Board, and the performance of the Director.
13. Seek the advice of the Director and other Trustees when necessary to fulfill their fiduciary duties.
14. Delegate administrative and management responsibilities to the ASRS Director and where appropriate to outside service providers.

Trustee Access to ASRS Resources

1. A Trustee shall not give instructions or assign tasks to individual ASRS staff.
2. A Trustee shall refrain from making any comments on staff performance other than to the Director or acting Director.
3. A Trustee should make every effort to access ASRS resources through action of the full Board.
4. A Trustee may request from the Director, or the Director's designee, information or assistance necessary to meet the Trustee's responsibilities.
5. The Director may seek the advice of the Chair and Legal Counsel or refer the matter to the full Board before complying with individual Trustee requests that, in the Director's opinion, would

require a significant amount of ASRS resources or cause disruption to the regular administration of the ASRS.

6. The Director shall share any vital or useful information resulting from a Trustee request with other Trustees.
7. The Director may refuse requests of individual Trustees that are in conflict with this policy.

D. DIRECTOR POSITION DESCRIPTION

General

1. The Board will appoint the Director for a term of one year beginning each July 1 and ending the following June 30. Upon expiration of the director's term, the Board may re-appoint the director for another term. The Board may remove the Director at any time for cause. (A.R.S. § 38-715)
2. The Director reports to the full Board.

Delegation of Responsibilities

1. Subject to the areas reserved to the Board by state law or the ASRS Board Charter, the Director is responsible for managing the regular operations of the ASRS in accordance with Board policies and directives.
2. The Director may make prudent delegation of the Director's responsibilities to other ASRS staff or outside service providers unless specifically prohibited by law or the Board.

Specific Duties and Responsibilities

The Director will:

1. Provide leadership to the ASRS in fulfilling its statutory purpose and achieving the vision, values, investment principles, and goals outlined in the strategic plan.
2. Maintain effective and credible relationships with the members and beneficiaries of the ASRS, participating employers, executive officers of state government, the legislature, employee and retiree organizations, the media, and the public at large.
3. Project a positive image as Director of the ASRS.
4. Act as official spokesperson for the Board and the ASRS.

   With respect to legislation, if draft legislation is proposed affecting the ASRS that the ASRS Board has not already taken a position on, the Director will discuss such draft legislation at his discretion with legal representation, and the Board Chair or acting Board Chair, to formulate an agency response.

   If the draft legislation does not pertain to a benefit modification, the Director may provide relevant information and also support or oppose the draft legislation.

   If the draft legislation pertains to a benefit modification, the Director may provide relevant information but will not support or oppose the raft legislation.

   If a single piece of draft legislation covers both a benefit modification item as well as a non-benefit modification item, the Director may support or oppose the legislation, but will communicate that the support or opposition relates to the non-benefit modification item and not the benefit modification item.
5. Act as liaison between the Board and other ASRS staff and service providers.
6. Safeguard the assets of the ASRS by appointing a custodian and developing and implementing proper internal controls.
7. Account for and be responsible for ASRS data, the collection of income from all sources, maintenance of accounts, and distribution of benefits.
8. Monitor the operational and funded status of the benefit plans under the ASRS.

9. Identify strategic issues involving the design or ongoing administration of the defined benefit plan, defined contribution system, health insurance program, long term disability program, the supplemental retirement savings plan, and the supplemental salary deferral plan. Initiate analysis or action as appropriate.
10. Provide necessary staffing, support and resources to the Board and its committees.
11. Proactively assist and advise the Board and its committees with regard to issues requiring Board policy or action.
12. Appoint or remove the Deputy Director, Chief Investment Officer, and Assistant Director(s) positions or other staff as required.
13. Recommend the appointment or removal of the internal auditor.
14. Perform annual performance evaluations of those who have a direct reporting relationship to the Director.
15. Select and manage all other ASRS staff consistent with applicable state personnel laws.
16. Ensure the accurate and timely distribution of pension benefits, survivor benefits, and refunds.
17. Review and approve transfers between the ASRS and other retirement plans. (A.R.S. §§ 38-730 and 38-921)
18. Review and approve domestic relations orders. (A.R.S. § 38-773)
19. Review and approve employer applications for ASRS membership. (A.R.S. § 38-729)
20. Adjust the maximum compensation limits (A.R.S. § 38-746), contribution limits (A.R.S. § 38-747) and maximum retirement benefit amounts (A.R.S. § 38-769) when the limits and amounts are adjusted by the United States Secretary of the Treasury pursuant to the Internal Revenue Code.
21. Maintain a process for handling member and participating employer appeals of staff decisions and statutory interpretations.
22. Assist the Board in reviewing and adopting actuarial assumptions, funding methods, benefit option factors and actuarial valuation methods for the ASRS.
23. Initiate the annual actuarial valuations, periodic actuarial experience studies and independent actuarial audits as required by state law or Board policy and work with the actuary in determining and/or recommending appropriate assumptions.
24. Oversee and assist the Chief Investment Officer in developing macro-level strategic investment polices.
25. Review and approve standard operating procedures for the Investment Management Division.
26. Execute and manage investments in accordance with Board directives.
27. Assist the Board in soliciting and selecting of the following service providers:
    a. Consulting actuaries and actuarial auditors
    b. External financial auditor
    c. General investment consultants
    d. Third-party administration providers for health and long-term disability benefits
28. Approve all contract extensions, including the following external service providers:
    a. Consulting actuaries and actuarial auditors
    b. External financial auditor
    c. General investment consultants and Asset Class consults

d. Investment managers

e. Third-party administration providers for health and long-term disability benefits

29. Approve the selection, extension and termination of the supplemental retirement savings plan (SRSP) and the supplemental savings deferral plan (SSDP) investment options, and third-party administrators.

30. Review and approve, with the concensus of the CIO, recommendations from ASRS Asset Class committees, to hire and terminate investment managers/partners.

31. Review and approve recommendations from ASRS Asset Class committees to hire and terminate Asset Class consultants. The Investment Committee must consent to the Director's recommendation before a primary consultant for an Asset Class committee is hired or terminated.

32. Except as otherwise noted, select and oversee all other service providers to the ASRS.

33. Develop and recommend to the Board, an appropriated operating budget. Manage and monitor expenditures within the budget and provide reports to the Operations Committee or Board as necessary or directed.

34. Manage and monitor continuously appropriated expenditures as prescribed in A.R.S. §38-721.

35. Oversee the preparation of the ASRS Comprehensive Annual Financial Report.

36. Develop and deliver all operational and actuarial reports to the Governor and state legislature as required by state law after approval by the Board.

37. Perform other duties delegated by the Board.

38. Administer the Supplemental Retirement Savings Plan (SRSP) and report to the Investment Committee annually.

39. Administer the Supplemental Salary Deferral Plan (SSDP) and report to the Investment Committee annually.

E. ELECTION OF BOARD OFFICERS

Board Officers

The Board will elect the following Board officers:

1. Board Chair
2. Vice-chair

Election Procedure

1. Any Trustee may serve as a Board officer.
2. Any Trustee may make nomination(s) for Board officer positions, including him or herself.
3. Nominations will be made at the regular meetings of the Board in approximately May of each year.
4. Board officers will be elected by majority vote at a regular meeting of the Board prior to the start of a fiscal year. The Board Chair position shall be elected first, followed by the Board Vice-chair position.

Term

Board officers will serve for the fiscal year following their election. A Board officer typically may not serve more than two consecutive terms in one of the Board officer positions, but may serve an unlimited number of non-consecutive terms.

Resignations and Vacancies

1. A Board officer may resign from their position by providing written notice to the Board and also informing the Director by copying him on the notice.
2. Board officer vacancies that otherwise occur before the expiration of a term will be filled by the Board for the balance of the term in a manner agreed upon by the Board.

Removal

The Board may remove an officer before the end of the officer's term at any time by majority vote. The vacant officer position must be filled at the next meeting of the Board.

F. BOARD CHAIR POSITION DESCRIPTION

Responsibilities and Commitments

The Chair holds a position of leadership for the Board and the ASRS and must be willing and able to devote the time necessary to fulfill these special responsibilities as the leader of the Board. This commitment includes the responsibility to:

1. Convene and conduct Board meetings in a collegial, fair, and efficient manner following Board policies, procedures, and applicable state law.
2. Review and approve the agenda for regular and special Board meetings and include any issues requested by the Trustees or the ASRS Director in accordance with Section G. *Board and Committee Meeting Protocol* of this Handbook.
3. Ensure proper and timely flow of adequate information to the Board.
4. Solicit input from Trustees regarding matters before the Board.
5. Ensure adequate time is provided for effective study and discussion of business being considered by the Board.
6. Schedule executive session meetings as necessary and in compliance with state law.
7. Make committee assignments, including chair and vice-chair positions, to committees, taking into account the desires of the Trustees.
8. Execute such documents and other legal instruments on behalf of the ASRS as required by state law or authorized by the Board.
9. Discuss performance and behavior issues with Trustees who are having a negative impact on the ASRS.
10. Perform all other duties specifically identified by the Board.

Duties of Vice-chair

The Vice-chair will act as temporary Chair in the absence of the Chair.

G. BOARD AND COMMITTEE MEETING PROTOCOL

Rules of Order and Quorum

1. The Board and its committees shall operate under the general guidance of Robert's Rules of Order.
2. A quorum must be present for the Board or its committees to conduct business. A majority of the Board or committee will constitute a quorum.
3. Board or committee members may not attend meetings through delegates or authorize voting by proxy.

Scheduling of Regular, Special, and Emergency Meetings

1. The Board will adopt an annual schedule identifying the time and location of regular meetings. The Board may schedule some meetings outside of the City of Phoenix metropolitan area. The Board or Board Chair may modify this schedule at its discretion.
2. The Board Chair, or any four Trustees, may call for special or emergency meetings of the Board.
3. The Director, at his discretion or as requested by the Board Chair, may post any Board Committee meeting as a dual Board and Committee meeting in order to permit interested Board members not on the particular committee to attend and participate in discussions. The committee meeting will be conducted under the committee's charter and the non-committee Trustees will not make or vote on committee motions.

Meeting Notices

1. At least twenty-four hour notice of all Board and committee meetings, including executive sessions, will be provided to the public in accordance with Arizona Open Meeting Law. (A.R.S. § 38-431.02)
2. If permitted Arizona Open Meeting Law, in the case of an emergency meeting requiring immediate action to avoid some serious consequence, shorter notice may be provided.
3. The Board Chair or Committee Chair shall normally provide the Trustees with seven calendar days notice of all Board and committee meetings.

Trustee Attendance by Electronic Media

A Trustee may participate in any meeting of the Board by telephone or video conference in a manner consistent with Arizona Open Meeting Law and applicable Arizona Attorney General Opinions. (A.R.S. § 38-431)

Meeting Agendas

1. The Board Chair in consultation with the Director will prepare an agenda for each Board meeting containing the specific matters to be discussed, considered or decided at the meeting.
2. The Board may discuss, consider, or make decisions only on matters on the agenda.
3. Items can be placed on a Board meeting agenda by:
   a. A Trustee
   b. A Board Committee

c. The Board Chair

d. The Director

The Board Chair will add requested items to the Board meeting agenda within three months of the request. A longer period may be agreed upon by the Chair and the requestor.

4. The agenda for an executive session must contain a general description of the matter to be considered or decided at the meeting. (A.R.S. § 38-431.02)

Meeting Materials

1. The Director will make every reasonable effort to distribute related Board meeting materials to the Trustees at least five calendar days before each meeting.
2. The Director shall prepare a summary of the issues to be discussed, a staff or committee recommendation, if applicable, and a proposed motion or motions for the Board to consider.

Public Access and Testimony at Board Meetings

1. All meetings of the Board or committees are public and all persons who wish to attend may do so in accordance with Arizona Open Meeting Law. (A.R.S. §§ 38-431 et. Seq.)
2. Every agenda for regular Board or committee meetings will provide the public an opportunity to be heard. The Board Chair or Committee Chair may prescribe the time and manner of such public comment.
3. With regard to matters raised by a member of the public for which proper public notice has not been provided, no action may be taken at that meeting. The Board or committee may request the Director to investigate the issue further and report back to the Board or committee at a later meeting.
4. The Director, in consultation with the Chair, will convene meetings in facilities and locations that provide the public with reasonable access.
5. An individual who intends to speak at a meeting may be required by the Board to sign a register to permit compliance with minute taking required under state law.

Executive Sessions

1. The Board and its committees may conduct business in executive session as permitted by state law. (A.R.S. § 38-431) Executive sessions shall be presided over by the Chair of the Board or committee
2. Executive sessions shall be closed to the public and subject to the following conditions:

   a. The executive session must be held during a regular, special, or emergency meeting of the Board or committee.

   b. The executive session must address only those subject matters permitted under Arizona Open Meeting Law (A.R.S. § 38-431, § 38-797.03):

      - Discussion or consideration of employment, assignment, appointment, promotion, demotion, dismissal, salaries, disciplining or resignation of a public officer, appointee or employee of any public body.
      - Discussion or consideration of records exempt by law from public inspection, including the receipt and discussion of information or testimony that is specifically required to be maintained as confidential by state or federal law.
      - Discussion or consultation for legal advice with the attorney or attorneys of the public body.

- Discussion or consultation with the attorneys of the public body in order to consider its position and instruct its attorneys regarding the public body's position regarding contracts that are the subject of negotiations, in pending or contemplated litigation or in settlement discussions conducted in order to avoid or resolve litigation.
- Discussions or consultations with designated representatives of the public body in order to consider its position and instruct its representatives regarding negotiations with employee organizations regarding the salaries, salary schedules or compensation paid in the form of fringe benefits of employees of the public body.
- Discussion, consultation or consideration for international and interstate negotiations or for negotiations by a city or town, or its designated representatives, with members of a tribal council, or its designated representatives, of an Indian reservation located within or adjacent to the city or town.
- Discussions or consultations with designated representatives of the public body in order to consider its position and instruct its representatives regarding negotiations for the purchase, sale or lease of real property.
- Per § 38-797.03, discussions resulting from an member appeal of an adminstrative law judge determination regarding their Long Term Disability rights, benefits or obligations if such person requests a review of the determination in an executive session.

c. The executive session must satisfy all of the state's notice requirements under Arizona Opening Meeting Law.

3. The Board will take no action with regard to a matter considered in executive session. Any such action must be taken during that portion of a meeting that is open to the public.
4. Trustees are prohibited under state law from publicly disclosing the discussions held in executive session. The Chair shall remind the Board or committee of this prohibition at the beginning of each executive session.

Meeting Minutes and Board Records

1. The Director will ensure that minutes of all meetings of the Board and committees are taken and made available to the public as required by state law.
2. The Director will prepare a written copy of the Board minutes taken at prior meetings of the Board and present it to the Board for approval at a subsequent meeting.
3. The Director will maintain records of the Board activities and actions in accordance with state law and such other documents necessary to establish a due diligence record of the Board's activities.

H. BOARD COMMITTEES and CHARTERS

General

The Board may establish standing or special committees to conduct the business of the full Board subject to the following conditions and limitations:

1. Board committees are responsible for overseeing various aspects of the ASRS administration and only have the authority to make recommendations to the Board.
2. Board committees may not act or speak for the Board.

Standing Committees

1. Standing committees are permanent committees established by the Board.
2. The standing committees of the Board are as follows:
   a. Operations Committee (OC)
   b. External Affairs Committee (EAC)
   c. Investment Committee (IC)

Special Committees

1. Special committees may be established from time to time by the Board Chair to address limited purposes and for limited times.
2. Special committees cease to exist automatically upon the completion of their stated purpose as determined by the committee chair.

Committee Members

1. The Board Chair shall appoint members of each committee for one-year terms.
2. The Board Chair shall appoint a chair and vice-chair for each committee. These committee officer position appointments will be for one-year terms.
3. The Board Chair may remove or replace members of a committee and committee officers before the end of the terms if the Chair determines such action is in the best interest of the ASRS.

Committee Operating Rules

1. The committee Chair shall call committee meetings.
2. Committee meetings shall be subject to all of the public notification and meeting requirements established for the full Board in Section G of this Handbook.
3. Committee meetings are open to all Trustees; however, only committee members may participate in the dialog or vote. However, if the meeting is posted as a dual meeting of the committee and Board, all participating Trustees may participate in the dialog but only committee members may vote.
4. The committees shall report to the Board, summarizing activities and recommendations on matters that have been referred to them.
5. The Director shall provide staffing, consulting, or other resources and support to Board committees as may be necessary and within budget to meet the responsibilities assigned by the Board.

Standing Committee Charters

Operations Committee Charter

General

The Operations Committee (OC) is a standing committee of the Board responsible for overseeing the general operations and administration of the ASRS, and for recommending Board action when required.

Composition

The Operations Committee is composed of a minimum of four members of the ASRS Board appointed by the Board Chair.

Responsibilities

1. Oversight

   The OC will meet regularly to evaluate ASRS performance in meeting strategic goals and objectives and managing administrative risks. Areas of responsibility are as follows:

   a. Member services, including all outreach education, walk-in counseling, member correspondence, and call center services and programs.

   b. Technology services, including development, maintenance, security, performance, and compliance with state or industry standards.

   c. General accounting and financial reporting, including compliance with industry standards, investment accounting, payroll, accounts receivable and payable, pension payroll, contribution reporting, and the annual financial report.

   d. Collection and maintenance of member/employer accounts, including contributions, salaries and service, demographic data, and security.

   e. Benefit administration, including calculations and disbursements for all benefit types.

   f. Review and follow-up on internal and external audit plans, conclusions and recommendations; other risk management commitments; compliance with industry audit standards. (See also Internal Audit Charter on page 20.)

   g. Strategic, agency-wide staffing issues.

   h. Administration and plan design of the ASRS health insurance program.

   i. Administration and plan design of the ASRS long term disability program.

   j. Plan design of the ASRS 401 (a) defined benefit plan.

   k. Governance policies and practices.

   l. Review appropriated budget request proposals; ongoing administration of the ASRS appropriated budget and continuously appropriated budget.

   m. General contract management and procurement.

   n. Strategic initiatives approved by the Board affecting operations or administration.

2. Actions requiring independent Board review

   The OC will use its discretion in reporting or making recommendations to the Board except in cases when Board action is required by governance policy. Specifically, the OC will forward its recommendations to the Board on the following matters:

   a. Selection or removal of a vendor or vendors to administer the ASRS health insurance programs

b. Selection or removal of a vendor to administer the ASRS long-term disability program.

c. Selection or removal of the ASRS external or internal auditor.

d. Approval and modification (if necessary) to the internal audit plan or other risk management activities.

e. Appropriated budget request proposals.

External Affairs Committee Charter

General

The External Affairs Committee is a standing committee of the Board responsible for assisting the Board with legislative matters, the development of administrative rules, and reviewing the Agency communications program.

Composition

The Committee is composed of a minimum of four members of the ASRS Board appointed by the Board Chair.

Responsibilities

The External Affairs Committee will have the following responsibilities:

1. Legislation:
   a. Work with the Director to identify legislative proposals to facilitate the efficient administration of ASRS operations and report Committee recommendations to the Board.
   b. Review new legislation proposed by other sources and report Committee findings and recommendations to the Board for action.
   c. Review and monitor Board and ASRS activity regarding state legislative matters to help ensure compliance with the Legislative Review Policy and state law prohibitions on Board advocacy for or against legislation for benefit modifications. (A.R.S. § 38-714)
   d. Oversee communicating the actuarial contribution requirements and administrative costs to the legislature and other relevant parties.
2. Administrative Rulemaking:
   a. Review practices and procedures for inclusion in administrative rules for the ASRS as required and consistent with state law.
   b. Recommend to the Board the addition, deletion, or modification of administrative rules and substantive Board policies.
3. Annual Communications Program:
   a. Review the agency's annual communications program to ensure that members, employers, legislature, Governor's Office, and other constituents and interested parties are appropriately notified and/or informed about ASRS' activities, meetings, and information.
4. The Committee is also responsible for other issues or topics that reasonably pertain to external affairs.

Investment Committee Charter

General

The Investment Committee (IC) is a standing committee of the Board responsible for assisting the Board in overseeing the ASRS investment program.

Composition

The Investment Committee is composed of a minimum of four members of the ASRS Board appointed by the Board Chair.

Duties and Responsibilities

The Investment Committee will, when appropriate:

1. Oversee the investment management structure for the ASRS.
2. Recommend to the Board the investment goals for the ASRS investment program.
3. Recommend to the Board a strategic asset allocation to achieve the ASRS investment program objectives.
4. Review and oversee the reporting of the ASRS investment program to the Board.
5. Recommend to the Board the selection, and termination of the ASRS general investment consultant(s) and oversee their performance.
6. Recommend to the Board the ASRS strategic investment policies.
7. Monitor the ASRS asset allocation, investment portfolio structure, and strategic investment policies.
8. Review annually the administration of the third-party administrator for the Supplemental Retirement Savings Plan (SRSP) and annually report to the Board.
9. Review annually the administration of the third-party administrator for the supplemental salary deferral plan (SSDP) and annually report to the board.
10. Review annually the ASRS Investment Policy Statement (IPS).

Internal Audit Charter

Introduction

The Internal Audit Division (IAD) is a vital part of the ASRS, providing independent, objective assurance and consulting services designed to add value and improve the organization's operations. The IAD is responsible for helping the ASRS leadership accomplish its objectives by performing independent assessments of the systems of risk management, internal controls and operating efficiency, guided by professional standards and in bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.

Organizational Status

The organizational status and support accorded to the IAD by the ASRS Board of Trustees (Board), the Operations Committee (OC), and senior management are major determinants of the scope and value of the internal audit function to the agency.

The Chief of Internal Audit reports functionally to the Board through the OC and administratively to the Director of the ASRS. The Director in consultation with the OC evaluates the performance of the Chief of Internal Audit. The OC in consultation with the Director will recommend to the Board the appointment and removal of the Chief of Internal Audit.

Internal Audit personnel are independent of the ASRS activities they audit and will have no authority or responsibility for any of the procedures or activities of the ASRS. The Chief Auditor and internal audit staff are not authorized to perform operational duties for the organization. Additionally they are not authorized to initiate or approve accounting transactions external to the IAD. Internal audit staff is not authorized to direct the activities of any organization employee not employed by the internal audit division. This independence promotes essential impartial and unbiased judgments, and assures appropriate consideration and effective action on audit findings and recommendations.

The Chief Auditor shall have free unrestricted access to the Chair of the OC and the Chair and members of the Board, subject to applicable state and federal laws.

To accomplish audit objectives, Internal Audit staff are authorized to have full, free, and unrestricted access to any of the ASRS records, property, personnel, employer members, contractors, vendors, members and retirees relevant to any subject under review. Where the need is indicated, special arrangements will be made for the examination of confidential information. Internal auditors will exercise due diligence in the safeguarding and use of these resources. The Chief Auditor shall ensure that internal audit staff are instructed in the handling and safeguarding of confidential information.

Internal Audit Standards

Internal Audit activities comply with the following:

- ASRS objectives and policies;
- International Standards for the Professional Practice of Internal Auditing and the Code of Ethics of the Institute of Internal Auditors, Inc.;
- Generally accepted government auditing standards; and
- All other applicable professional standards.

Scope Of Activities

The scope of internal audit work includes (1) the examination and evaluation of the adequacy and effectiveness of the agency's internal control systems, and (2) the quality of performance in carrying out assigned responsibilities.

The scope of the above work includes:

- Developing a biennial audit plan using risk analysis, and obtaining approval from the Board.
- Ensuring that risks within and outside the organization are appropriately identified and managed.
- Reviewing the reliability and integrity of financial and operating information and the means used to identify, measure, classify, and report information.
- Evaluating compliance with current policies, plans, procedures, laws, and regulations.
- Appraising the safeguarding, and economical and efficient use of the organizations resources.
- Reviewing operations or programs to ascertain whether results are consistent with established objectives, goals, and are in synchrony with industry best practices and whether the operations or programs are being carried out as planned.
- Evaluating in system design related to internal controls.
- Performing special reviews and investigations as requested by the Director, the Board, and the OC.
- Investigating reported occurrences of fraud, embezzlement, theft, waste, etc., and recommending controls to prevent or detect such occurrences.
- Performing investigations to ensure that employers appropriately enroll employees, accurately report member earnings, follow appropriate statutes related to retirees returning to work and appropriately report other employee data.
- When audited, ensuring that contractors, including third-party administrators are meeting the objectives of the contracts, while in conformance with applicable laws, regulations, policies, procedures and best practices.

Reporting

The results of internal audits are reported to the OC, the Director, appropriate managers, and oversight bodies. On a quarterly basis, or more frequently at the request of the OC Chair, the Chief of Internal Audit will meet with the OC to discuss the status of the audit plan and other significant issues involving the IAD.

The IAD will establish and maintain a system for tracking corrective action for significant audit findings reported by internal and external auditors.

Management will provide the corrective action accomplished to the IAD on a timely basis for tracking, consolidation and reporting purposes.

An external peer review of the IAD will be performed every five years and the results reported to the OC.

Authority

The IAD was established by the Board of the ASRS. The Charter is incorporated into the ASRS Board Governance Handbook and is approved by and all future amendments are approved by the Board through a majority vote. This Charter shall be reviewed at least annually and updated as required by the OC.

I. ASSET CLASS COMMITTEES

Purpose

Asset class committees are designed to:

1. Ensure decision-making and oversight are not commingled, yet allow complete and direct information flow and application of Trustee expertise.
2. Better align and clarify the roles of Trustees, Director, CIO, IMD staff, and consultants.
3. Improve the efficiency and effectiveness of the ASRS investment decision-making process.
4. Provide consistency and uniformity in investment decision-making frameworks.

Asset class committees are not deemed to constitute a sub-committee of the Investment Committe (IC) or full Board.

Duties and Responsibilities

The Director has been delegated responsibility for the day-to-day management of the asset class committees.

Trustees will be represented on each asset class committee to provide oversight and expertise.

Investment Management Division staff will be assigned to asset class committees as appropriate to provide subject matter expertise.

Consultants will serve on asset class committees to provide additional subject matter expertise and an independent perspective.

Trustees retain the right to request that an investment decision be placed on an IC agenda or subsequently a Board agenda for further discussion.

Organizational Structure/Composition

The ASRS has two asset class committees:

1. Public Markets Committee (PUBMC) – This committee will manage ASRS investments in public markets and investments with public market-like characteristics. This includes traditional public U.S. and international equity and fixed income markets, bank loans, opportunistic public investments, global tactical asset allocation (GTAA), commodities, currencies, non-traditional assets and absolute rate of return strategies.
2. Private Markets Committtee (PRIVMC) – This committee will manage ASRS investments in private markets and investments with private market-like characteristics. This includes private equity, real estate*, private fixed income and opportunistic private investments.

   *Includes public real estate/REIT investments.

If a determination needs to be made regarding the appropriate asset class committee, the Director and/or CIO will confer with the IC Chair. As appropriate, discussion may transcend asset class committees and/or their constituent members.

Each asset class committee will contain the following members:

a. The Director and/or CIO (or their designee) who will chair the committee
b. ASRS staff(s) responsible for portfolio management
c. Non-voting Trustees as appointed by the IC Chair
d. Designated consultant(s)

To ensure the timely flow of information, the CIO will communicate to the IC, information regarding activities of the Asset Class Committees.

Voting Protocols

The Director/CIO and ASRS asset class portfolio manager(s) are voting members.

Trustees are non-voting members to preserve the separation of oversight and decision-making responsibilities. If a Trustee determines an Asset Class Committee agenda item should be discussed at the IC, the item will be placed on a subsequent IC agenda.

Consultants are non-voting members to ensure the presence of an independent perspective.

Decisions require the consensus of the Director and CIO.

Asset Class Committee Consultants

Rather than a lead consultant for either the PUBMC or the PRIVMC, different consultants may be utilized for each committee meeting since neither committee will be limited to a single asset class but will span multiple asset classes and investment strategies. Selection of a particular consultant for each investment or investment strategy will be based on the consultants available from the approved pool of consultants and their particular strengths and ability to add value to the ASRS.

Asset Class Committee consultants will be evaluated, interviewed, hired, assigned, terminated and report to their respective asset class committees.

When hiring or terminating Asset Class consultants, the Director or CIO will notify the IC and the Board Chair of their intention and solicit comments from both prior to effectuating the proposed course of action. Should any change in the Asset Class Committee consultants occur, the Director or CIO will subsequently inform the Board.

The IC Chair will approve the use of the ASRS general consultant for any asset class committee manager searches.

J. TRUSTEE ORIENTATION AND EDUCATION PROGRAM

General

The Board finds that it is critical for the sound governance of the ASRS for Trustees to be fully informed with regard to the nature, purpose, structure, operational systems and processes of the ASRS. The Board further finds that it is important that Trustees are provided with education and training in areas that will facilitate the performance of their governance and oversight responsibilities as trustees and fiduciaries for the ASRS.

New Trustee Orientation Program

1. The Director will develop and present with the Board Chair to the new Trustees an in-depth New Trustee Orientation session designed to fully inform new Trustees of the key functions of the ASRS and their responsibilities.
2. Newly appointed Trustees are expected as part of their fiduciary responsibilities for the ASRS to participate in the New Trustee Orientation Session within approximately two months of their appointment.
3. The Board believes the following orientation and education topics will increase Trustee understanding:
   a. History and background of the ASRS.
   b. Introduction to the executive management team and other staff as determined by the Director.
   c. The governance role of the Board and the management role of the executive staff of the ASRS.
   d. The state laws establishing the ASRS and the application of other state and federal laws.
   e. A briefing on the fiduciary duties and liabilities of Trustees and other fiduciaries of the ASRS.
   f. A briefing on conflicts of interest and ethics laws and policies and the state mandated courses on conflicts of interest laws.
   g. A review of the Board Governance Handbook and other information and documentation deemed relevant by the Director or Board Chair.
   h. A review of general retirement pension, health benefits design, LTD, and other specific benefits provided by the ASRS.
   i. A review of general actuarial funding terminology and principles and the most recent actuarial reports.
   j. A review of general institutional investment principles and the various investment policies in place.
   k. A review of the reporting and disclosure requirements of the ASRS to state entities.
   l. A review of the legal (state and federal) and political environment in which the ASRS operates.
   m. A review of the current strategic plan for the ASRS and new issues, trends and developments affecting the ASRS.
   n. The structure and model for the management and operation of the ASRS.
   o. The legal and legislative environment.
   p. A description and tour of ASRS offices as may be practicable.

Trustee Education Policy

1. Each Trustee is responsible for evaluating their own educational needs and obtaining knowledge in specific subject matters. The Director will assist them in obtaining information on conferences or seminars to meet their education needs.
2. Trustees are to attend ongoing educational sessions to stay current on fiduciary responsibilities and are encouraged to attend conferences and seminars relating to:
   a. Investment issues and trends
   b. Pension, healthcare, LTD, and benefits design
   c. Fiduciary management of employee benefit trusts
   d. Other subjects related to the oversight of the ASRS
   e. Training required by the state of Arizona
3. The Director will periodically provide to the Board information on available conferences and seminars.
4. The Director shall arrange for an annual fiduciary education session for the Board.

Reimbursement of Education Expenses

Reimbursement of travel-related expenses for Trustee orientation and education will be in accordance with the state Travel Policy.

K. STRATEGIC PLANNING POLICY

General

A strategic planning and implementation process is necessary for the sound governance, oversight and management of the ASRS.

The objectives of the Board through this policy are to:

1. Ensure the ASRS actively and systematically plans for the future needs of the ASRS.
2. Facilitate discussion and agreement among and between the Board and the Executive Staff on the direction for the ASRS.
3. Facilitate the communication of the ASRS strategic plan throughout the organization.

Strategic Planning Roles and Responsibilities

1. The Board will be responsible for:
   a. Regular examination, adherence, and updates to agency governance documentation.
   b. Adopting the vision, values, investment principles, and strategic goals of the ASRS.
   c. Identifying and prioritizing strategic initiatives.
   d. Measuring the success and progress of the Strategic Plan.
2. The Board and Director, working together, will be responsible for approving the Strategic Plan and ensuring adequate resources are in place to support it.
3. The Director will be responsible for:
   a. Developing the vision, values, investment principles, and strategic goals of the ASRS.
   b. Implementing the Plan by assigning staff, tasks and resources.
   c. Communicating the Plan to all staff.
   d. Identifying and prioritizing strategic initiatives.
   e. Managing and reviewing performance against Strategic Plan goals and objectives.

L. BOARD CODE OF ETHICS

General

The Board has established the following Code of Ethics for the individual Trustees in order to comply with applicable state law and its duties of loyalty as fiduciaries for the ASRS.

The Board recognizes that compliance with these requirements is often complex and confusing. Trustees are strongly encouraged to seek the advice of the ASRS legal counsel whenever there is uncertainty regarding the required level of compliance from the Trustee.

State Law

Trustees will adhere, without limitation, to the following state laws as such apply to the conduct of their affairs and to carrying out their duties as trustees and fiduciaries for the ASRS:

1. Conflict of Interest Laws (A.R.S. § 38-503)

   Under the conflict of interest laws, Trustees who have a conflict of interest must disclose the interest and refrain from participating in the matter.

   Section 38-503, A.R.S., provides in pertinent part:

   > A. Any public officer or employee of a public agency who has, or whose relative has, a substantial interest in any contract, sale, purchase or service to such public agency shall make known that interest in the official records of such public agency and shall refrain from voting upon or otherwise participating in any manner as an officer or employee in such contract, sale or purchase.
   >
   > B. Any public officer or employee who has, or whose relative has, a substantial interest in any decision of a public agency shall make known such interest in the official records of such public agency and shall refrain from participating in any manner as an officer or employee in such decision.

   The conflict of interest laws require a Trustee to examine proprietary and pecuniary interests of the Trustee and certain relatives of the Trustee. "Relative" is defined expansively and includes "the spouse, child, child's child, parent, grandparent, brother or sister of the whole or half blood and their spouses and the parent, brother, sister or child of a spouse." (A.R.S. § 38-502)

   A Trustee must recognize that even though the Trustee may not have a substantial interest in a decision or a contract, if one of the Trustee's relatives described in A.R.S. § 38-502 has a substantial interest in a decision or a contract, the Trustee must disclose the interest and refrain from participating in the matter. Trustees have an affirmative obligation to become aware of the interests of relatives in matters that may involve the Trustees.

   When a Trustee assesses whether the Trustee has a conflict of interest, the Trustee first must evaluate whether the Trustee or any of the Trustee's relatives has a "substantial interest" in the matter under consideration. An interest is "substantial" if it is not defined by statute as "remote" and if it is "any pecuniary or proprietary interest, either direct or indirect," of the Trustee or the Trustee's relatives. (A.R.S. § 38-502) The term "interest" is a pecuniary or proprietary interest, by which a person will gain or lose something, as contrasted with a general sympathy, feeling or bias.

   The Legislature has determined that certain interests do not influence a person's decisions or actions impermissibly. The Legislature has defined these interests as "remote interests" and has

listed them in A.R.S. § 38-502. Unless the pecuniary or proprietary interest at issue falls within one of the situations statutorily specified by the Legislature to be remote, the interest is substantial and creates a conflict of interest.

To determine whether a "substantial interest" exists, the Trustee should ask these questions:

1) Will the decision affect, either positively or negatively, an interest of the Trustee or the Trustee's relatives?
2) Is the interest a pecuniary or proprietary interest?
3) Is the interest other than one statutorily designated as a remote interest?

If the answer to each of these questions is "yes," then a substantial interest exists which requires disclosure and nonparticipation by the Trustee.

2. Gifts and Gratuities (A.R.S. §§ 38-444, 38-504 and 38-505)

   A Trustee will not ask for or accept anything (emolument, gratuity or reward, or any promise thereof) that is not authorized by law for performing the Trustee's duties.

   A Trustee will not use or attempt to use the Trustee's position to secure valuable things or benefits for the Trustee, unless the benefits are part of the Trustee's normal compensation.

   A Trustee may not receive or agree to receive directly or indirectly compensation other than as provided by law for any service rendered or to be rendered by the Trustee personally in any matter pending before the ASRS.

3. Contracts for supplies and services (A.R.S. § 38-503)

   A Trustee may supply equipment, material, supplies or services to the ASRS **only** pursuant to an award or contract let after public competitive bidding. (A.R.S. § 38-503) The requirement of public competitive bidding is in addition to the disclosure and non-participation requirements of the Conflict of Interest Laws.

4. Disclosure of interests (A.R.S. § 38-509, IMD SOP034)

   When a Trustee determines that the Trustee has a substantial interest in a matter, the Trustee must disclose the interest and withdraw from all participation in the decision or contract.

   The Trustees must "maintain for public inspection in a special file all documents necessary to memorialize all disclosures of substantial interest made known pursuant to this article." (A.R.S. §§ 38-501 to -511)

   A Trustee who has a conflict of interest in any ASRS decision or in the award of a contract *must* provide written disclosure of that interest in the ASRS' special conflict of interest file. (A.R.S. § 38-503). A Trustee may either file a signed written disclosure statement fully disclosing the interest or file a copy of the official minutes of the ASRS which fully discloses the interest. (A.R.S. §§ 38-502, -509)

   Having disclosed the conflict of interest and withdrawn from participation in the matter, the Trustee must not communicate about the matter with anyone involved in the decision-making process. (A.R.S. § 38-503)

Code of Ethics

1. The Trustees shall maintain the highest ethical conduct at all times consistent with their fiduciary duty to act only for the exclusive benefit of the ASRS members and beneficiaries under state law.

2. The Trustees shall conduct themselves with integrity and exercise care, prudence and diligence in handling the affairs of the ASRS.
3. The Trustees must disclose conflicts of interest and appearance of conflicts of interest as defined under state law with respect to their fiduciary responsibility. Where a conflict of interest does exist, the Trustee must refrain from voting or otherwise participating in any manner with regard to the subject matter of the conflict.
4. The Trustees shall not:
    a. Deal with assets of the ASRS for their own interest.
    b. Accept gifts or gratuities prohibited by state law or the Board's Gift and Gratuities Policy.
    c. Act in any transaction involving the ASRS on behalf of any party whose interests are adverse to the interests of the ASRS or the members and beneficiaries.
    d. Receive any monetary or other valuable consideration for their personal account from any party conducting business with the ASRS.

M. BOARD PERFORMANCE EVALUATION

General

The Board will conduct an annual self-evaluation of its effectiveness and that of its committees as the governing fiduciary body for the ASRS. This will serve as a means of helping ensure that the Board continues to effectively meet its responsibilities and duties.

Board Evaluation Policy

1. The Board Chair, working with the Director, will be responsible for coordinating and conducting the Board performance evaluation process.
2. The evaluation will focus on the operations and decision-making processes of the Board.
3. The Board Chair will provide to each Trustee the Board Performance Evaluation Form approved by the Board. The Trustees are to conduct their self-evaluation in the first quarter of each calendar year, preceding the Director's evaluation.
4. The Board will seek input from the Director with respect to the staff's perception regarding the Board's and Board Committees performance.
5. The Board may seek input from the Assistant Attorney General regarding an annual evaluation of the Board's compliance with statutory and governance responsibilities.

Board Performance Evaluation Process and Forms

A way for the Board to maintain excellence in governance is to develop a policy of reviewing its own performance on an annual basis. A two-step evaluation process has been adopted:

Part A: Trustee Self-Evaluation

The purpose of having each individual Trustee evaluate him or herself is to encourage introspection and heighten awareness of the important areas of fiduciary responsibility. Trusteeship carries with it both a personal and collective duty to the members and beneficiaries. The "Trustee Self-evaluation" form is an abbreviated outline and periodic reminder of what constitutes "good trusteeship."

It is highly recommended that this self-evaluation be performed annually, before the overall board evaluation is performed. Each year, the Board can choose how to handle the results of the evaluations.

The Trustee Self-evaluation form is for the personal use of each Trustee to facilitate the full and frank examination of each Trustee's own performance. The completed form does not need to be submitted to the full Board. The objective is for this annual exercise to be helpful to the ASRS and not embarrassing to any individual.

Part B: Overall Board Evaluation

By discussing and developing an overall board evaluation, the Board demonstrates its intention to establish a process for Trustees to evaluate Board performance with candor, objectivity, and a broad perspective. Such an evaluation process presents special challenges, and it may be difficult for Trustees to speak frankly about the performance of the Board as a whole, especially in situations where there is room for improvement. Notwithstanding this difficulty, the benefits of an annual evaluation will enhance the Board's effectiveness in carrying out the mission of the ASRS.

The "Overall Board Evaluation" form contains elements of "best practices" of public retirement systems and is for the personal use of each Trustee to facilitate the full and frank discussion among the Trustees. The completed form does not need to be submitted to the full Board.

N. DIRECTOR EVALUATION PROCESS

General

The Board has delegated the responsibility of administering the ASRS to the Director and, therefore, understands that an evaluation of the performance of the Director's performance is important. The Board may conduct more frequent performance evaluations of the Director as it deems necessary.

Objectives

The evaluation of the performance of the Director is intended to:

1. Assist the Board in establishing and communicating clear, meaningful goals and performance targets for the Director.
2. Enable the Board to hold the Director accountable for performance.
3. Allow the Director to receive objective and timely feedback to help the Director perform at expected levels.

Evaluation Procedure and Criteria

1. In the first quarter of each calendar year, the Board, working with the Director, will adopt a set of performance goals and evaluation criteria to be used in evaluating the performance of the Director for the upcoming calendar year.
2. The evaluation of the performance of the Director will take place in the first quarter of each calendar year after the Board's self evaluation is completed and will cover the preceding calendar year.
3. The subject matter addressed in the performance evaluation will include:
   a. Leadership
   b. Management/Administration/Budgeting
   c. Communication
   d. Policy matters
   e. Staff development
   f. Progress toward achieving performance business objectives previously established by the Board for the year
   g. Other matters identified by the Board
4. The Director will prepare a written summary report of accomplishments and performance for the Board to use in their discussions of his/her performance.
5. The Board will reach consensus and provide a report of the Director's performance, and identify areas for improvement, if necessary.
6. The Board will meet with the Director to present and discuss the Board's evaluation of the Director's performance.

APPENDIX A. TRUSTEE EVALUATION

NAME (OPTIONAL)_____ DATE:_____

PART A – ASRS TRUSTEE SELF-EVALUATION

Rate the following statements in relation to your involvement as a Trustee of the ASRS. Rank answers using the following scale: ***5 - always, 4 - almost always, 3 - sometimes, 2 - almost never, 1 - never***

	5	4	3	2	1
1. I attend the Board and Committee meetings I am expected to attend.					
2. I contribute to the discussion in a meaningful and helpful way.					
3. I fully understand my fiduciary duties and act for the benefit of all members, not merely for a particular constituency.					
4. I make an effort to be educated on the aspects of the ASRS that I do not understand.					
5. I comply with state laws and Board policies regarding conflicts of interest.					
6. I read the materials distributed before the Board meeting so I can constructively participate and make timely decisions.					
7. I work with the other Trustees and the staff in a collegial way.					
8. I understand that work requests to staff and outside consultants need to be agreed to by the Board or the Director and I act accordingly.					
9. I work with the Director in a way that creates an atmosphere of trust and cooperation.					
10. I understand the Director works for the entire Board and not for individual trustees and I act accordingly.					
11. I communicate Board governance problems to the Board Chair.					

I am most concerned about the following issues:

_____

_____

_____

PART B – OVERALL BOARD EVALUATION

Rate the following statements in relation to the overall operation of the Board. Rank answers using the following scale: ***5 - always, 4 - almost always, 3 - sometimes, 2 - almost never, 1 - never***

	5	4	3	2	1
1. The Board maintains an effective oversight role with regard to benefits and investments issues.					
2. The Board knows and understands the ASRS Strategic Plan, and reflects this understanding when addressing key issues throughout the year.					
3. The Board engages in long-range strategic thinking and planning.					
4. The Board has achieved the business objectives it set out to accomplish this past year.					
5. The Board stays abreast of issues and trends affecting the ASRS, using this information to assess and guide the ASRS over the long term.					
6. The Board conducts a comprehensive evaluation of the Director annually.					
7. The Board ensures that new Trustees receive a prompt, thorough orientation.					
8. Board meetings are conducted in a manner that ensures open communication, meaningful participation, and sound resolution of issues.					
9. The Board meeting agendas are well-balanced, allowing time for the most critical issues.					
10. The Board and Committee meetings are handled efficiently.					
11. The Committees are effective, focusing on pertinent topics and allocating reasonable time.					
12. The Board is well-educated on both benefit and investment issues.					
13. The Board recognizes its policy-making role and reconsiders and revises policies as necessary.					
14. The Board is consistently prepared for meetings.					
15. The Board as a whole, and Trustees as individuals, evaluate their performance on an annual basis.					

	5	4	3	2	1
16. The Board reviews and adopts a reasonable operating budget that is followed and monitored throughout the year.					
17. The Board periodically monitors investment performance and measures it against relevant benchmarks.					
18. The Board periodically monitors service to members.					
19. The Board comprehends and respects the difference between its policy-making role and the Director's management role.					
20. Board goals, expectations, and concerns are promptly, candidly and effectively communicated to the Director.					
21. The Board anticipates issues and does not often find itself reacting to "crisis" situations.					

Identify the three greatest achievements of the Agency with Board support during the past year.

1. _____

2. _____

3. _____

What critical issues need to be addressed by the Board in the future?

_____

_____

_____

What suggestions do you have for improvement of the conduct of Board and Committee meetings and for Board operation and communication?

_____

_____

_____

APPENDIX B. DIRECTOR EVALUATION

ASRS - DIRECTOR PERFORMANCE EVALUATION

Name: Paul Matson

Title: Director

This form is to help you evaluate the performance of the Director of the ASRS. In each of the following rating categories, bullet points have been provided to assist you with your evaluation. Please rate the Director using the following scale and place the number on the "Rating" line in each category.

5 - Outstanding, 4 - Above Average, 3 - Satisfactory, 2 - Needs Improvement, 1 - Unacceptable

Leadership: Rating _____

- Establishes and maintains effective and credible relationships affecting the ASRS.
- Projects a positive image as the Director of the ASRS.
- Recognizes the needs and desires of others; treats others with regard, courtesy and respect.
- Maintains a "big picture" outlook and is aware of industry issues.
- Forecasts trends, responds to change and invites innovation.
- Solicits and acts upon ideas of others when needed.
- Stresses the importance of high quality customer service.
- Maintains a well-functioning management team.
- Participates in relevant and worthwhile professional organizations.

General Comments or Examples: (You need not address each point separately.)

_____

_____

_____

_____

_____

_____

_____

5 - Outstanding, 4 - Above Average, 3 - Satisfactory, 2 - Needs Improvement, 1 - Unacceptable

Management/Administration/Budgeting: **Rating** _____

- Manages all ASRS business functions and activities in accordance with all relevant laws, Board policies and goals
- Develops reasonable budgets, communicates them to the Board, and operates within budgetary limits
- Ensures the efficient and effective functioning of the ASRS through delegation
- Follows up on Board directives to ensure proper implementation

General Comments or Examples: (You need not address each point separately.)

_____

_____

_____

_____

5 - Outstanding, 4 - Above Average, 3 - Satisfactory, 2 - Needs Improvement, 1 - Unacceptable

Communication: **Rating** _____

- Keeps the Board and staff informed and communicates effectively with them
- Organizes ideas and information logically
- Speaks clearly and concisely, using understandable terminology
- Effectively and politely communicates with the members
- Professionally communicates with entities affecting the ASRS

General Comments or Examples: (You need not address each point separately.)

_____

_____

_____

_____

5 - Outstanding, 4 - Above Average, 3 - Satisfactory, 2 - Needs Improvement, 1 - Unacceptable

Policy Matters: **Rating** _____

- Periodically reviews policies and makes recommendations for changes to the Board
- Accurately interprets Board policies and concerns, and develops a consistent direction for the staff to follow
- Initiates changes in day-to-day operations to conform to established Board policies
- Acts creatively to evaluate and recommend new initiatives or policies

General Comments or Examples: (You need not address each point separately.)

_____

_____

_____

_____

5 - Outstanding, 4 - Above Average, 3 - Satisfactory, 2 - Needs Improvement, 1 - Unacceptable

Staff Development: **Rating** _____

- Creates an atmosphere that fosters teamwork, creativity and participation
- Communicates clear standards of performance for the executive staff
- Keeps informed and follows state personnel policies and procedures
- Encourages professional development of staff
- Addresses succession planning for key positions within the ASRS

General Comments or Examples: (You need not address each point separately.)

_____

_____

_____

_____

_____

5 - Outstanding, 4 - Above Average, 3 - Satisfactory, 2 - Needs Improvement, 1 - Unacceptable

Progress Toward Achieving Business Objectives: **Rating** _____

[Previously and mutually identified goals and objectives listed here.]

1. _____

2. _____

3. _____

4. _____

5. _____

General Comments or Examples: (You need not address each point separately.)

_____

_____

_____

_____

Significant Overall Accomplishments:

_____

_____

_____

_____

_____

_____

_____

_____

_____

Areas Needing Improvement:

_____

_____

_____

_____

_____

_____

_____

_____

OVERALL RATING: _____

APPENDIX C. GENERAL INVESTMENT CONSULTANTS

The primarily role of the ASRS general consultant(s) is to provide independent ASRS fund(s) investment reporting and performance measurement, financial market commentary and macro strategic/tactical investment advice. The general consultant attends Board and IC meetings as available/applicable, and participates in asset class committee meetings. Though not a designated asset class committee consultant, the general consultant will ensure asset class compliance with the ASRS asset allocation policy, be informed of asset class committee investment decisions, and as applicable, provide broad perspectives on opportunistic and public markets-related topics.

The general consultant will be evaluated, and interviewed by the IC, Director and CIO; the IC will make the selection and recommendation to the Board for approval. The general consultant will be hired and terminated by the Board, report to the IC and Board and, through the direction of the IC Chair, Director or CIO, be engaged at the request of the Board, IC, Director or CIO. In the event a backup general consultant is needed, a selection will be made by the IC from the approved pool of project consultants and recommended to the Board for approval.

APPENDIX D. TRUSTEE FIDUCIARY LIABILITY AND COVERAGE

The liability of the Board of Trustees and its individual members in the conduct of their duties and responsibilities is established under state law as follows:

1. The Board as a whole and its individual members are not liable for any act or failure to act that is made in good faith within the scope of their responsibilities under state law. (A.R.S. § 38-791)
2. An individual member of the Board is immune from civil liability and is not subject to suit directly or by way of contribution for any act or omission resulting in any damage or injury if the member was acting in good faith and within the scope of the member's official capacity, unless the damage or injury was caused by willful and wanton or grossly negligent conduct of the member. "Official capacity" means any decision or act taken by a member of the Board to further the purpose for which the Board is established. (A.R.S. §§ 38-717 and 41-621)
3. The state and the ASRS are immune from liability for losses arising out of a judgment against the Trustees for willful and wanton conduct resulting in punitive or exemplary damages. (A.R.S. § 41-621) Liability for such damages would be the responsibility of the Trustees personally.
4. The Arizona Department of Administration is required by statute to provide coverage to the Board and to individual Trustees under the state's risk management program (A.R.S. §§ 41-621 to -625) "against all liability for acts or omissions of any nature by members of the board while acting in an authorized governmental or proprietary capacity and within the course and scope of their employment or authority." (A.R.S. § 38-717)

   Under the state's risk management program the Board and the Trustees receive the same coverage that the state itself receives. (A.R.S. § 41-621)

   Under the state's risk management program the Board and the Trustees have coverage for "liability for acts or omissions of any nature while acting in authorized governmental or proprietary capacities and in the course and scope of employment or authorization except as provided by this chapter." (A.R.S. § 41-621)

   Under the state's risk management program the Board and the Trustees also have coverage for "[o]ther exposure to loss where insurance may be required to protect this state and its departments, agencies, boards and commissions and all officers, agents and employees acting in the course and scope of employment or authorization except as prescribed by this chapter." (A.R.S. § 41-621)

   According to A.R.S. § 41-621 acts or omissions of a Trustee would be "within the course and scope of employment or authorization" if they:

   a. Occur while performing duties or functions that the Trustees are authorized to perform.

b. Occur "substantially within" the authorized time and space limits of a Trustee's authorization.

c. Are done (or not done) at least in part to serve the Arizona State Retirement System.

Under the state's risk management program, the Attorney General's Office will defend the Board and the Trustees. The Attorney General may retain outside counsel to defend the Board and the Trustees. (A.R.S. § 41-621)

Under the state's risk management program all attorneys' fees, court costs and litigation expenses will be paid from the permanent liability loss revolving fund of the Department of Administration. (A.R.S. § 41-622) A settlement or judgment, except for punitive damages, also will be paid from this fund. (Id. and A.R.S. § 41-621)

If a Trustee is sued based on conduct outside the course and scope of a Trustee's authorization, the state is not obligated to provide coverage for that conduct. (A.R.S. § 41-621) If the conduct is clearly outside the course and scope, the state will deny coverage. (A.R.S. § 41-621) If there is a question whether the Trustees' acts were within their official capacity, the state may reserve the right to refuse to pay any judgment and will then hire outside counsel to represent the Trustees.

Losses arising from contractual breaches are not covered under the state's risk management program. (A.R.S. § 41-621)

Attachment 2

CORTEX
Applied Research Inc.

2010 Fiduciary Benchmarking Study for U.S. Public Retirement Systems

Final Report

Prepared for
Arizona State Retirement System

Prepared by Cortex Applied Research Inc.
January 2011

This report has been prepared for the exclusive use of the **Arizona State Retirement System** and its trustees, officers and staff.

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INTRODUCTION

As part of our efforts to help retirement systems continually enhance their pension governance practices, we are pleased to present the results of the *2010 Fiduciary Benchmarking Study for U.S. Public Retirement Systems* (the "Study").

The Study has been designed to be a cost-effective means of providing participants with detailed information about the pension governance practices of their peers and about published best practice standards, both of which would be difficult to obtain independently.

This report contains:

1. A comparison of Arizona SRS's governance structures and practices relative to those of the peer group.
2. For each key governance topic, a summary of relevant published best practice standards, a summary of the peer group's practices, and detailed tables showing both peer group data and Arizona SRS's data.
3. An assessment of Arizona SRS's governance practices relative to published best practice standards and the peer group;
4. Issues for Arizona SRS's consideration.

We trust the Study will serve as a valuable resource for each of the participating retirement systems and we welcome any suggestions for improving it. It is our goal to repeat the Study in the future, adding more detailed information and analysis.

On behalf of the Cortex team, I would like to thank you for your support and cooperation throughout the research process to date.

Tom Iannucci
President
Cortex Applied Research Inc.

Table of Contents

EXECUTIVE SUMMARY **1**

Issues for Consideration 3

PART 1: THE PEER GROUP **6**

PART 2: BASIC GOVERNANCE STRUCTURES **11**

1. Board Size and Composition 12
2. Board Officers 15
3. Board Member Compensation 16
4. Board Committees 17
5. Board Meetings 19
6. Use of Investment Consultants 21

PART 3: GOVERNANCE PRACTICES AND POLICIES **23**

1. Governing Authority & Constraints 24
2. Board Size 27
3. Documentation of Roles 29
4. Delineation of Authority 31
5. Policy Framework 39
6. Ethics Policies 45
7. Board Education 51
8. Planning 56
9. Risk Management Practices 59
10. Evaluation of the Executive Director 65
11. Service Provider Performance Evaluation 68
12. Member Communications and Service Quality Measurement 72
13. Public Disclosure 77
14. Internal Reporting Practices 81
15. Governance Reviews 85

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EXECUTIVE SUMMARY

This report contains an evaluation of Arizona SRS's governance practices relative to the practices of a peer group and relative to published best practice standards. The peer group consists of 25 U.S. public retirement systems.

For purposes of our analysis, published governance standards were drawn from the works of a number of bodies around the world including:

- *The Committee on Fund Governance Best Practice Principles,* issued by the Stanford Institutional Investor's Forum, and also known as the Clapman Report (hereinafter the "Clapman Report").
- *Governance of Public Employee Post-Retirement Benefits Systems,* issued by the Government Finance Officers Association (hereinafter the "GFOA Governance Guidelines").
- *OECD Guidelines for Pension Fund Governance,* issued by the OECD Working Party on Private Pensions (hereinafter the "OECD Governance Guidelines").
- The Canadian Association of Pension Supervisory Authorities' *Pension Governance Guidelines* (hereinafter the "CAPSA Governance Guidelines").

On issues not addressed in the above works, Cortex has provided where possible its own view as to what constitutes best practice, based on its experience working with over 100 pension systems over the last 20 years.

Cortex found that Arizona SRS's governance practices are consistent with many of the published standards we considered in our review, and are largely consistent with the practices of the peer group. In several respects its practices exceed those of the peer group. Table 1 on the following page contains a summary of our findings. The right hand column indicates whether Cortex identified any issues for Arizona SRS's consideration. A brief description of these issues can be found following Table 1.

TABLE 1: SUMMARY BENCHMARKING ANALYSIS OF ARIZONA SRS			
Issue	Arizona SRS Practices Relative to...		Issues for Consideration
	Published Standards	Peer Group Practices	
1. Governing Authority & Constraints	Inconsisent	Inconsistent	Yes
2. Board Size	Consistent	Consistent	
3. Documentation of Roles	Consistent	Consistent	Yes
4. Delineation of Authority	Consistent	Consistent	Yes
5. Policy Framework	Consistent	Consistent	Yes
6. Ethics Policies	Inconsistent	Inconsistent	Yes
7. Board Education	Consistent	Consistent	Yes
8. Planning	Consistent	Consistent	
9. Risk Management Practices			
a) Enterprise-wide Risk Mgmt.	Consistent	**Exceeds**	
b) Asset Allocation & A/L Studies	Consistent	Consistent	
c) Actuarial Audit	Consistent	**Exceeds**	
d) Internal Audit	Consistent	Consistent	
10. Executive Director Evaluation	Consistent	**Exceeds**	
11. Service Provider Evaluation	Consistent	Consistent	Yes
12. Member Communications	Consistent	**Exceeds**	
13. Public Disclosure			
a) General Disclosure	Consistent	Consistent	Yes
b) Clapman guidelines	Inconsistent	Consistent	Yes
14. Internal Reporting Practices			
a) Investments	Consistent	Inconsistent	Yes
b) Benefit Aministration	Consistent	Consistent	
c) Compliance	Consistent	Inconsistent	Yes
d) Other	Consistent	Consistent	
15. Governance Reviews	Consistent	Consistent	

Note 1: The fact that Cortex may identify an issue for consideration does not necessarily imply that the System's practices are inconsistent with published standards or peer group practices.

ISSUES FOR CONSIDERATION

The following is a summary of various issues identified for Arizona SRS's consideration. Cortex recognizes that Arizona SRS may have already considered the issues identified below, and established valid reasons to support current practices. Nevertheless, we felt it would be useful to bring these issues to Arizona SRS's attention so that they might be discussed and evaluated.

1. ***Governing Authority and Autonomy***: Arizona SRS is subject to a number of legislative constraints imposed upon it by the plan sponsor. These pertain to budget approval, procurement, investment constraints, and the appointment of legal counsel. Overall, Arizona SRS appears to face somewhat greater constraints than other systems in the peer group. Such constraints are also inconsistent with published standards.

   Arizona SRS should monitor the issues of autonomy and independence relative to its plan sponsor to ensure that it is positioned at all times to effectively carry out its fiduciary duties.

2. ***Documentation of Roles***: Arizona SRS has documented the roles of most parties covered in our study. It may wish, however, to consider also formally documenting the roles of the Chief Investment Officer and the Chief Legal Counsel.

3. ***Delineation of Responsibilities***: The delineation of responsibilities within Arizona SRS is generally consistent with standards and with that found among the peer group. Published standards, however, are very general. Accordingly, we also assessed Arizona SRS relative to Cortex's own best practice criteria. Based on our assessment, Arizona SRS may wish to consider opportunities for greater delegation to staff in connection with the selection of investment managers and general partners, so that the board may better focus on policy matters.

4. ***Policy Frameworks***: Arizona SRS has a relatively comprehensive policy framework. It may, however, wish to consider the need for developing additional policies and procedures that were common among the peer group, including those on:
   - Use of derivatives
   - Currency hedging
   - Whistle blower policy
   - Staff training and development
   - Actuarial processes

5. ***Ethics Policies***: Arizona SRS's ethics policies are relatively comprehensive. It may, however, wish to consider including in its current ethics policies provisions regarding:
   - A requirement for board member conflicts to be recorded in the meeting minutes;
   - A requirement for board and staff members to periodically submit personal financial statements of economic interests;
   - Rules concerning the solicitation of campaign or charitable contributions;

- Trading rules for board members and staff involved in the investment process, e.g. disclosure of trades or no-trade lists; and
- Restrictions or rules concerning employment and/or contracts involving former trustees and staff.

6. **Board Education:** Arizona SRS's education practices are generally consistent with published standards and the peer group. However, Arizona SRS may wish to:
   - Consider increasing its trustee education budget, in light of peer group practice.
   - Consider instituting an educational needs assessment for its trustees.

7. **Service Provider Performance Evaluation:** In light of peer group practices, Arizona SRS may wish to reconsider the frequency with which it evaluates its key service providers and greater use of objective criteria where possible.

8. **Public Disclosure:** Arizona SRS should consider making board and committee mandates and the system's ethics policies available on its website. It may also wish to review the feasibility and practicality of disclosing compliance with various external standards or internal policies as proposed by the Clapman Report (see Table 56 for details.)

9. ***Internal Reporting***: Arizona SRS may wish to consider providing additional reporting to the board in the following areas, consistent with the practices of a majority of the peer group:
   - Trading and execution costs; and
   - Compliance with governing legislation.

Please see full report for further details.

REPORT OUTLINE

The main body of this report is comprised of three parts:

- Part 1 identifies the retirement systems that participated in the study (the "peer group") and describes basic characteristics of each system (e.g. asset size, staff size).
- Part 2 presents various data describing the basic governance structures of the peer group (e.g. board composition, committee structures).
- Part 3 contains an analysis of 15 broad governance topics, including a summary of published best practice standards, a summary of the peer group's practices, and detailed tables showing both peer group data and Arizona SRS's data.

USE OF THIS REPORT

Our benchmarking analysis is based on *self-reported* information; i.e. it is based on survey data submitted by the peer group, and accordingly Cortex cannot guarantee the accuracy of the information so provided. All study participants, however, were given an opportunity to review a draft version of this report and confirm their data.

We believe the information and findings contained in this report will allow study participants to draw useful insights and engage in valuable internal discussions. The report does not, however, provide the same depth of analysis found in Cortex's traditional governance reviews, which involve detailed documentation review, in-depth interviews, and considerable follow-up and verification of findings and recommendations.

Arizona SRS may use and reproduce the Report for its internal purposes, and for the purposes of modifying, improving or otherwise enhancing its pension governance activities, structures, practices, or processes. Arizona SRS may not provide the Report, or any part of the Report, to any party other than its board members and employees, unless compelled to do so under law.

PART 1: THE PEER GROUP

The Peer Group consists of 25 public retirement systems in the United States, including 15 state-wide systems, 6 county systems, and 4 municipal systems.[1] Please see table 2 below.

TABLE 2: PEER GROUP MEMBERS	
Retirement System	**Short Name Used in this Report**
Alameda County Employees' Retirement Association	Alameda CERA
Arizona State Retirement System	Arizona SRS
Fire & Police Pension Association of Colorado	Colorado FPPA
Colorado Public Employees' Retirement Association	Colorado PERA
Fresno County Employees' Retirement Association	Fresno CERA
Illinois Teachers' Retirement System	Illinois TRS
Indiana Public Employees' Retirement Fund	Indiana PERF
Indiana State Teachers' Retirement Fund	Indiana STRF
Kansas Public Employees Retirement System	Kansas PERS
Kern County Employees' Retirement Association	Kern CERA
Los Angeles County Employees Retirement Association*	Los Angeles CERA
Los Angeles Fire and Police Pensions	Los Angeles FPP
Public Employees' Retirement System of Mississippi	Mississippi PERS
Missouri Local Government Employees Retirement System	Missouri LAGERS
Missouri DOT & Patrol Employees' Retirement System	MPERS
Public School and Education Retirement System of Missouri	Missouri PSRS/PEERS
Public Employees' Retirement System of Nevada	Nevada PERS
San Francisco Employees' Retirement System	San Francisco ERS
San José Federated Employees Retirement System	San José FERS
San José Police and Fire Department Retirement Plan	San José P&F
Sonoma County Employees' Retirement Association	Sonoma CERA
Teacher Retirement System of Texas	Texas TRS
Ventura County Employees' Retirement Association	Ventura CERA
Wyoming Retirement System	Wyoming RS

* Los Angeles CERA is administered by two separate boards; an Investment Board and a Retirement Board. Where appropriate, data is shown separately for each of the two boards.

[1] One system has made its data available, but is not formally participating in the Study. At its request, it is not listed above. Its data, however, has been incorporated into the report in an anonymous manner.

The tables on the following three pages contain additional information on the assets, staffing, and investment programs of the peer group.

TABLE 3: PEER GROUP ASSETS
(Asset figures as of Dec. 31, 2009)

System	Asset Size ($M)	DB Assets ($M)	DC Assets ($M)	Other Assets ($M)
Texas TRS	$94,500	$94,500	-	-
Illinois TRS	$38,000	$38,000	-	-
Colorado PERA	$35,037	$32,689	$2,106	$241
Los Angeles CERA	$34,565	$34,565	-	-
Missouri PSRS/PEERS	$26,484	$26,484	-	-
Arizona SRS	$24,112	$24,112	-	-
Nevada PERS	$21,503	$21,503	-	-
Mississippi PERS	$19,204	$17,796	$307	$1,101
San Francisco ERS	$15,100	$13,400	$1,700	-
Indiana PERF	$14,025	$13,564	-	$461
Los Angeles FPP	$12,904	$12,904	-	-
Kansas PERS	$12,355	$11,719	$636	-
Indiana STRF	$8,163	$4,839	-	$3,324
Wyoming RS	$5,983	$5,670	$313	-
Alameda CERA	$4,700	$4,700	-	-
Missouri LAGERS	$3,700	$3,700	-	-
Colorado FPPA	$3,069	$2,852	$217	-
Ventura CERA	$2,716	$2,716	-	-
Fresno CERA	$2,610	$2,610	-	-
Kern CERA	$2,400	$2,400	-	-
San José P&F	$2,300	$2,300	-	-
San José FERS	$1,700	$1,700	-	-
MPERS	$1,339	$1,339	-	-
Sonoma CERA	$1,333	$1,333	-	-
Peer Group Average	**$18,739**	**$18,323**	**$880**	**$1,282**
Peer Group Median	**$12,355**	**$11,719**		

TABLE 4: STAFF SIZE AND INVESTMENT PROGRAM
(Sorted by Staff Size)

System	Asset Size ($M) (As of Dec. 31/09)	Staff Size	# of Non-Investment Staff	# of Investment Staff	Internally managed assets
Texas TRS	$94,500	530	410	120	>50%
Los Angeles CERA	$34,565	344	321	23	<2%
Colorado PERA	$35,037	275	219	56	>50%
Arizona SRS	$24,112	209	198	11	39%
Illinois TRS	$38,000	187	165	22	<2%
Indiana PERF	$14,025	177	165	11	<2%
Mississippi PERS	$19,204	161	156	5	<2%
Missouri PSRS/PEERS	$26,484	123	111	12	<2%
Los Angeles FPP	$12,904	104	94	10	<2%
Alameda CERA	$4,700	101	93	8	<2%
San Francisco ERS	$15,100	92	80	12	3%-15%
Kansas PERS	$12,355	87	80	7	<2%
Nevada PERS	$21,503	65	63	2	<2%
Indiana STRF	$8,163	58	53	5	<2%
Colorado FPPA	$3,069	42	37	5	<2%
Wyoming RS	$5,983	36	33	3	<2%
San José FERS San José P&F (Note 1)	$4,000	31	24	7	<2%
Fresno CERA	$2,610	26	26	0	<2%
Missouri LAGERS	$3,700	22	20	2	<2%
Kern CERA	$2,400	21	21	0	<2%
Ventura CERA	$2,716	16	16	0	<2%
Sonoma CERA	$1,333	15	14	1	<2%
MPERS	$1,339	14	12	2	<2%
Average	**$19,520**	**131**	**115**	**16**	
Median	**$12,630**	**90**	**80**	**7**	

Note 1: San José FERS and San José P&F use the same staff. For purposes of this table, the assets of the two systems have been aggregated.

TABLE 4 (CONT'D): STAFF SIZE AND INVESTMENT PROGRAM
(Sorted by Staff Size)

System	Investment in non-traditional assets				
	Real Estate	Private Equity	Infrastructure	Commodities	Hedge Funds
Texas TRS	✓	✓	✓	✓	✓
Los Angeles CERA	✓	✓		✓	
Colorado PERA	✓	✓		✓	
Arizona SRS	✓	✓		✓	
Illinois TRS	✓	✓		✓	✓
Indiana PERF	✓	✓		✓	✓
Mississippi PERS	✓	✓			
Missouri PSRS/PEERS	✓	✓	✓		✓
Los Angeles FPP	✓	✓			✓
Alameda CERA	✓	✓		✓	
San Francisco ERS	✓	✓			
Kansas PERS	✓	✓	✓		
Nevada PERS	✓	✓			
Indiana STRF	✓	✓			✓
Colorado FPPA	✓	✓			✓
Wyoming RS	✓		✓		
San José FERS	✓	✓		✓	✓
San José P&F	✓	✓		✓	✓
Fresno CERA	✓	✓		✓	✓
Missouri LAGERS	✓	✓	✓	✓	✓
Kern CERA	✓	✓			✓
Ventura CERA	✓	✓			
Sonoma CERA	✓				
MPERS	✓	✓	✓	✓	✓

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PART 2: BASIC GOVERNANCE STRUCTURES

This section of the Report describes basic features of the governance structures found within the peer group including:

1. Board size and composition
2. Board officers
3. Board member compensation
4. Board committee structures
5. Board meeting practices (e.g., frequency, duration, etc.)
6. Use of investment consultants

1. Board Size and Composition

TABLE 5: BOARD SIZE & COMPOSITION

System	Board Size	Board Composition					Percentage of Elected Members
		Appointed by Sponsor/ Employer	Elected by Active Plan Members	Elected by Retired Plan Members	Ex-officio	Other	
Alameda CERA	9	4	3	1	1	-	44%
Arizona SRS	9	9	-	-	-	-	0%
Colorado FPPA	9	9	-	-	-	-	0%
Colorado PERA	16	3	9	2	1	1	69%
Fresno CERA	9	4	3	1	1	-	44%
Illinois TRS	13	6	4	2	1	-	46%
Indiana PERF	6	5	-	-	1	-	0%
Indiana STRF	6	5	-	-	1	-	0%
Kansas PERS	9	6	-	-	1	2 (Note 1)	22%
Kern CERA	9	4	3	1	1	-	44%
Los Angeles CERA (Retirement Board)	9	4	3	1	1	-	44%
Los Angeles CERA (Investment Board)	9	4	3	1	1	-	44%
Los Angeles FPP	9	5	2	2	-	-	44%
Mississippi PERS	10	1	6	2	1	-	80%
Missouri LAGERS	7	1	3	-	-	3	86%
MPERS	11	5	2	2	2	-	36%
Missouri PSRS/PEERS	7	3	4	(Note 2)	-	-	57%
Nevada PERS	7	7	-	-	-	-	0%
San Francisco ERS	7	4	3	-	-	-	43%
San José FERS	7	1	2	1	3	-	43%
San José P&F	7	1	2	1	3	-	43%
Sonoma CERA	10	4	3	2	1	-	50%
Texas TRS	9	9	-	-	-	-	0%
Ventura CERA	11	4	4	2	1	-	55%
Wyoming RS	11	10	-	-	1	-	0%
Peer Group Average:	**9.1**						
Largest Board	**16**						
Smallest Board	**6**						

Note 1: One board member is elected by all school plan members (active and retired) and one board member is elected by all non-school plan members (active and retired).

Note 2: Four board members are elected by active and retired plan members jointly.

TABLE 5 (CONT'D): BOARD SIZE & COMPOSITION						
System	Voting Board Members	Non-Voting Board Members	Board Alternates (Note 1)	% of board members that are:		
				active plan members	retired plan members	not plan members
Alameda CERA	9	-	2	33%	11%	56%
Arizona SRS	9	-	-	44%	11%	44%
Colorado FPPA	9	-	-	22%	11%	67%
Colorado PERA	15	1	1	56%	13%	31%
Fresno CERA	9	-	1	44%	22%	33%
Illinois TRS	13	-	-	38%	15%	46%
Indiana PERF	6	-	-	17%	33%	50%
Indiana STRF	6	-	-	33%	17%	50%
Kansas PERS	9	-	-	11%	11%	78%
Kern CERA	9	-	2	33%	11%	56%
Los Angeles CERA (Retirement Board)	9	-	2	33%	11%	56%
Los Angeles CERA (Investment Board)	9	-	-	33%	11%	56%
Los Angeles FPP	9	-	-	22%	22%	56%
Mississippi PERS	10	-	1	80%	20%	0%
Missouri LAGERS	7	-	-	43%	0%	57%
MPERS	11	-	-	18%	18%	64%
Missouri PSRS/PEERS	7	-	-	57%	14%	29%
Nevada PERS	7	-	-	86%	14%	0%
San Francisco ERS	7	-	-	43%	14%	43%
San José FERS	7	-	-	29%	14%	57%
San José P&F	7	-	-	29%	14%	57%
Sonoma CERA	9	-	2	50%	20%	30%
Texas TRS	9	-	-	33%	11%	56%
Ventura CERA	9	-	2	45%	18%	36%
Wyoming RS	11	-	-	36%	9%	55%

Note 1 Board alternates are individuals who only serve and vote as board members in certain prescribed circumstances (e.g., if a board member is unable to attend a meeting).

TABLE 6: REQUIREMENTS FOR BOARD EXPERTISE & INDEPENDENT COMMITTEE MEMBERS

System	Prescribed Professional or Other Qualifications for Board Members	Independent Committee Members
Alameda CERA	County Treasurer is ex-officio member	
Arizona SRS	Four members must have investment/financial experience of at least 10 years. Five members are required by state statute to have at least five years administrative management experience.	
Colorado FPPA	One member must have investment expertise, one member must have corporate administration expertise, and one member must have expertise in disability benefits.	The Investment Risk Committee is composed of two board members and two staff members, the CEO and the General Counsel, but the staff members have a vote on the committee.
Colorado PERA	Some board members must have significant experience/competence in investments management, finance, banking, economics, accounting, pension administration, or actuarial experience.	Two independent outsiders are part of the audit committee with significant experience in audit matters, but are allowed to vote on audit committee matters.
Fresno CERA	County Treasurer is ex-officio member	
Illinois TRS	Each such appointee shall reside in and be a taxpayer in the territory covered by this system, shall be interested in public school welfare, and experienced and competent in financial and business management.	
Indiana PERF		
Indiana STRF		
Kansas PERS	Six appointed members must have demonstrated experience in the financial affairs of a public or private organization or entity which employs 100 or more employees or had at least five years' experience in the field of investment management or analysis, actuarial analysis or administration of an employee benefit plan.	
Kern CERA	County Treasurer is ex-officio member	
Los Angeles CERA	Board of Investments members should have experience in finance	The Audit Committee Consultant
Los Angeles FPP		
Mississippi PERS		
Missouri LAGERS		
MPERS		None presently, but Audit Committee may appoint one or more advisory members.
Missouri PSRS/PEERS	No appointed members can be elected state officials or state employees.	
Nevada PERS	Type of position held as an active member of the system, for example, at least equivalent to the manager of a department or division	
San Francisco ERS	Charter requires trustees to have experience with benefits, investments, fiduciary, insurance, benefits-systems	
San José FERS	One"public member" required to have experience in finance or banking	
San José P&F	One "public member" required to have experience in finance or banking	
Sonoma CERA	County Treasurer is an ex-officio member	
Texas TRS	Five members must have demonstrated financial expertise, worked in private business or industry and have broad investment expertise, preferably in pension funds.	
Ventura CERA	County Treasurer is ex-officio member	
Wyoming RS	One member is required to have professional expertise in investments and finance. Four members are to be selected by the merits of public spirit, or professional ability.	

2. Board Officers

TABLE 7: USE OF BOARD OFFICERS		
	Peer Group Officers	**Arizona SRS Officers**
Type of Board Officers used:		
Chair/President	25	✓
Vice-Chair/Vice-President	24	✓
Secretary	5	
Other (Note 1)	1	
Approaches to Chair Appointment:		
Elected by the Board	24	✓
Appointed by the Plan Sponsor	1	
Designated in the Plan's governing legislation	-	

Note 1: Board has a "Second Vice-Chair".

3. Board Member Compensation

TABLE 8: BOARD MEMBER COMPENSATION (Note 1)			
System	Elected Members (per idem)	Appointed Members (per diem)	Additional Notes
Alameda CERA	$100 for retiree reps.	$100	Appointed, retired and alternate retired trustees are eligible for per diem of $100 per meeting to a maximum of $500 per month
Arizona SRS	N/A	$50	$50 a day for meetings, not to exceed $1,000 in any fiscal year.
Colorado FPPA	N/A	-	-
Colorado PERA	-	$100	Per diem amount for each day up to 20 days of meeting attendance and if attend at least 75 percent of meetings.
Fresno CERA	$100 for retiree reps.	$100	Appointed, retired and alternate retired trustees are eligible for per diem of $100 per meeting to a maximum of $500 per month
Illinois TRS	-	-	-
Indiana PERF	N/A	-	-
Indiana STRF	N/A	$134	-
Kansas PERS	$88	$88	-
Kern CERA	-	$100	Appointed, retired and alternate retired trustees are eligible for per diem of $100 per meeting to a maximum of $500 per month
Los Angeles CERA	-	$100	Board of Retirement pays up to 32 hours for reading disability cases at $12.75 per hour -- not to exceed 32 hours. The Board of Investments does not review disability cases.
Los Angeles FPP	$50	-	Appointed members are required to waive the $50 per diem.
Mississippi PERS	$300 per month	$300 per month	Each Board member receives $300 per month regardless of the number of meetings attended.
Missouri LAGERS	-	-	-
MPERS	-	-	-
Missouri PSRS/PEERS	-	-	-
Nevada PERS	N/A	$80	-
San Francisco ERS	-	-	-
San José FERS	-	$150	-
San José P&F	-	$150	-
Sonoma CERA	$100 for retiree reps.	$100	Appointed, retired and alternate retired trustees are eligible for per diem of $100 per meeting to a maximum of $500 per month
Texas TRS	N/A	-	-
Ventura CERA	$100 for retiree reps.	$100	Appointed, retired and alternate retired trustees are eligible for per diem of $100 per meeting to a maximum of $500 per month
Wyoming RS	N/A	$50	The five board members who are not members of the plan recieve $50/day for time actually and necessarily devoted to the duties of the board.

Note 1: The table does not provide details concerning reimbursement of travel expenses, as we have presumed that all boards provide this to their trustees. None of the peer group boards reported paying additional fees for serving as board or committee chair.

4. Board Committees

The prevalence of various board committees within the peer group is shown in Table 9 below:

TABLE 9: USE OF STANDING BOARD COMMITTEES			
Board Committee (Note 1)	Peer Group Practice		Arizona SRS Practice
	#	%	
Investment Committee	17	68%	✓
Audit and/or Finance Committee	16	64%	
Personnel/Human Resources Committee	7	28%	
Legislative Committee	7	28%	✓
Budget/Administrative Committee	7	28%	
Governance Committee	7	28%	
Disability Committee	6	24%	
Benefits Committee	5	20%	
Deferred Comp / Defined Contribution Committee	4	16%	
Operations Committee	3	12%	✓
Executive Committee	2	8%	
Claims Committee	2	8%	
Compensation Committee	2	8%	
Ethics Committee	2	8%	
Policy Committee	3	12%	
Proxy / Shareholder Responsibility Committee	2	8%	
Retiree Committee	2	8%	
Other (Note 2)	7	28%	

Note 1: For purposes of the above table, committees with similar mandates have been combined.

Note 2: The following standing committees were unique committees; i.e., only one participant in the peer group reported having such committees:

- Board Consultant Evaluation Committee
- Chief Executive Officer Evaluation
- Retiree Insurance Benefits Committee (OPEB)
- Communications Committee
- Election Committee
- Enhancing Stakeholder Relations Committee
- Information Technology Committee
- Risk Management Committee
- Rules and Regulations Committee
- Travel/Education Policy Committee

TABLE 10: OTHER STANDING COMMITTEE STATISTICS	
Average number of standing committees per board	4.2
Highest number of standing committees at a single board	12
Number of boards **with no** standing committees	3

Other Types of Committees:

Committees of the Whole

Some committees are structured as ***committees of the whole***; i.e., they are comprised of all the members of the board. Table 11 describes the prevalence of committees of the whole within the peer group.

TABLE 11: COMMITTEES OF THE WHOLE

Committee Name:	Peer Group
Investment Committee	7
Proxy committee	1
Ethics Committee	1
Committee on Retirement Sustainability (ad hoc committee)	1

Ad hoc committees

A number of peer group members also reported currently having one or more ad hoc committees. A list of ad hoc committees in use by peer group members is set out below:

- Actuarial Committee
- Audit Committee
- By-Laws Committee
- Committee to Review Staff Structure
- Evaluation Committee
- Executive Director Search Committee
- Governance Committee
- Governance Committee (deals mainly with senior management compensation issues)
- Investment Advisor Search Committee
- Retirement Sustainability Committee
- Space Planning Committee

Advisory committees

Some systems reporting having "advisory committees", consisting of external parties; i.e., members who are neither on the governing board nor employees of the system. A list of the advisory committees in use by peer group members is set out below:

- Fund Advisory Committee
- Hardship Committee for Deferred Compensation
- Investment Advisory Committee
- Medical Advisory Committee
- Optional Retirement Program Advisory Committee
- Police and Firefighters' Retirement Fund Advisor Committee
- Real Estate Advisory Committee
- Retiree Insurance Advisory Committee

5. Board Meetings

The following table shows various statistics concerning the number and duration of board and standing committee meetings. The list is sorted by total meeting hours. Average figures for the peer group are shown at the bottom of the table. Additional analysis found that there was no relationship between asset size and total board meeting hours.

TABLE 12: ESTIMATED MEETING FREQUENCY & DURATION

	Board Meetings			Committee Meetings			Total meeting hours 2009
	# of meetings 2009	Average meeting duration (in hours)	Total meeting hours 2009	# of meetings 2009	Average meeting duration (in hours)	Total meeting hours 2009	
Board 1	30.0	4.7	140.0	56.0	2.3	129.0	269.0
Board 2	23.0	5.4	124.0	34.0	1.5	52.0	176.0
Board 3	14.0	3.2	45.0	45.0	2.2	100.0	145.0
Board 4	15.0	4.0	60.0	32.0	2.5	80.0	140.0
Board 5	7.0	2.0	14.0	25.0	4.2	106.0	120.0
Board 6	25.0	4.2	104.0	15.0	1.0	15.0	119.0
Board 7	21.0	4.8	100.0	9.0	2.0	18.0	118.0
Board 8	14.0	5.0	70.0	9.0	2.3	21.0	91.0
Board 9	12.0	6.7	80.0	-	-	-	80.0
Arizona SRS	12.0	2.7	32.0	25.0	1.8	46.0	78.0
Board 11	11.0	2.7	30.0	24.0	2.0	48.0	78.0
Board 12	11.0	2.7	30.0	24.0	2.0	48.0	78.0
Board 13	5.0	6.0	30.0	25.0	1.8	45.0	75.0
Board 14	6.0	4.3	26.0	24.0	2.0	48.0	74.0
Board 15	13.0	2.8	36.5	12.0	2.5	30.0	66.5
Board 16	12.0	5.3	63.0	-	-	-	63.0
Board 17	7.0	1.0	7.0	38.0	1.4	54.0	61.0
Board 18	21.0	2.0	41.0	20.0	.9	18.0	59.0
Board 19	7.0	4.0	28.0	21.0	1.4	30.0	58.0
Board 20	5.0	5.0	25.0	16.0	2.0	32.0	57.0
Board 21	7.0	4.0	28.0	20.0	1.4	28.0	56.0
Board 22	23.0	2.2	50.0	1.0	2.0	2.0	52.0
Board 23	11.0	2.7	30.0	6.0	1.5	9.0	39.0
Board 24	7.0	3.6	25.0	-	-	-	25.0
Board 25	4.0	1.5	6.0	18.0	.9	17.0	23.0
Board 26	6.0	3.7	22.0	-	-	-	22.0
Average	**12.7**	**3.7**	**47.9**	**22.7**	**1.9**	**44.4**	**85.5**

The following table summarizes the authorized methods for conducting meetings of boards and standing committees.

TABLE 13: AUTHORIZED METHODS FOR HOLDING MEETINGS			
	Peer Group Practice		Arizona SRS Practice
	#	%	
Board Meetings			
In-person	25	100%	✓
Conference Call	16	64%	✓
Video Conferencing	1	4%	
Board Committee Meetings			
In-person*	22	100%	✓
Conference Call*	15	68%	✓
Video Conferencing*	1	5%	

* Figures exclude the three peer group members that do not have standing committees.

Staff Preparation Time for Board Meetings

We asked peer group members to estimate the number of staff hours spent to prepare for a typical board meeting, a typical investment committee meeting, and finally, for other committee meetings. In general, staff preparation time was correlated to system asset size. Therefore, we have provided three different peer group averages, each relating to a different asset range: under $5 billion, $5 to 20 billion, and over $20 billion. Arizona SRS's figures are shown in the top row.

TABLE 14: ESTIMATED STAFF HOURS FOR MEETING PREPARATION			
	Typical Board Meeting (hours)	Typical Investment Committee Meeting (hours)	Typical Committee Meeting (Non-Investment) (hours)
Arizona SRS (Assets >$20 billion)	300	145	100
Peer Group:			
Large Systems (Assets >$20 billion)	299.0	78.7	67.0
Medium Systems (Assets $5 - $20 billion)	100.0	54.0	26.3
Small Systems (Assets <$5 billion)	69.8	24.5	14.7

6. Use of Investment Consultants

Published governance standards all agree that trust fund fiduciaries may enlist the assistance of external consultants and advisors to assist with the job of setting investment policy, selecting investment managers, and monitoring the pension fund. Our study investigated the use of both general and specialty investment consultants and investment-related service providers. Our findings are shown in the table below. The table indicates the number of systems that retain separate consulting firms to advise on each of the topics listed. Some systems, however, may retain a single consulting firm to advise them on multiple topics.

TABLE 15: USE OF INVESTMENT CONSULTANTS

Types of Consultants Employed:	Peer Group Practice	Arizona SRS Practice
General investment consultant	24	✓
Alternative asset consultant	11	✓
Hedge funds consultant	6	
Performance measurement consultant	9	✓
Private equity consultant	13	✓
Proxy voting advisor	14	✓
Real estate consultant	14	✓
Risk consultant	2	
Specialty due diligence consultant	5	✓
Transition manager	12	

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PART 3: GOVERNANCE PRACTICES AND POLICIES

In this part of the Report, we present comparative data and analysis concerning a range of important governance issues including:

1. Governing Authority & Constraints
2. Board Size
3. Documentation of Roles
4. Delineation of Authority
5. Policy Framework
6. Ethics Policies
7. Fiduciary Education
8. Planning
9. Risk Management Practices
10. Evaluation of the Executive Director
11. Service Provider Performance Evaluation
12. Member Communications & Service Quality Measurement
13. Public Disclosure
14. Internal Reporting Practices
15. Governance Reviews

For each of the above issues, we provide:

i) A summary of published standards relating to the issue;
ii) A summary of the practices of the peer group, supported by detailed tables and charts; and
iii) An assessment of how Arizona SRS's practices compare to both the published standards and the peer group.

In assessing practices relative to published standards, Cortex considered the work of recognized bodies around the world including the following:

- *The Committee on Fund Governance Best Practice Principles,* issued by the Stanford Institutional Investor's Forum (the "Clapman Report").
- *Governance of Public Employee Post-Retirement Benefits Systems,* issued by the Government Finance Officers Association. (the "GFOA Governance Guidelines")
- *OECD Guidelines for Pension Fund Governance,* issued by the OECD Working Party on Private Pensions (the "OECD Governance Guidelines").
- Canadian Association of Pension Supervisory Authorities' *Pension Governance Guidelines.* (the CAPSA Guidelines").
- Model laws established by the National Conference of Commissioners on Uniform Laws, including *The Uniform Prudent Investor Act* (UPIA), 1994 and *The Uniform Management of Public Employees Retirement Systems Act* (UMPERSA), 1997.

On issues not addressed in the above works, Cortex has provided where possible its own view as to what constitutes best practice, based on its experience working with over 100 pension systems over the last 20 years.

1. Governing Authority & Constraints

Published Standards

A fundamental aspect of a public retirement system's governance structure is the autonomy and authority the system has relative to the plan sponsor (e.g. a state or local government). Though most published governance standards are silent on this issue, model laws developed in the United States provide some guidance on the matter.[2] They recommend that a governing board of a public retirement system should be highly independent of the plan sponsor and should have exclusive authority to:

1. Manage the assets of the system;
2. Establish the operating budget of the system;
3. Approve human resource and compensation matters, including the hiring of personnel and setting of compensation;
4. Make procurement decisions; and
5. Retain advisory and other services.

In setting out the rationale for granting governing boards a high degree of independence, the model laws state that:

> *"Independence is required because it permits trustees to perform their duties in the face of pressure from others who may not be subject to such obligations. In the absence of independence, trustees may be forced to decide between fulfilling their fiduciary obligations to participants and beneficiaries or complying with the directions of others who are responding to a more wide-ranging (and possibly conflicting) set of interests."*[3]

Peer Group Practices

On balance, plan sponsors in the peer group maintain a relatively high degree of control over their respective retirement systems:

- Only one system reported having complete autonomy on all of the issues we investigated.
- Fourteen systems are required to operate within the civil service system and compensation structure of the plan sponsor with respect to all or most of its staff.
- Ten systems are subject to investment restrictions established by the plan sponsor.
- In the case of nine systems, the plan sponsor approves the system's operating budget, or heavily influences budget decisions.

Areas where retirement systems have high levels of autonomy are limited to:

- Hiring the Executive Director, system staff, and most service providers; and
- Determining actuarial assumptions and determining contributions.

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[2] *The Uniform Prudent Investor Act* (UPIA), 1994 and *The Uniform Management of Public Employees Retirement Systems Act* (UMPERSA), 1997.

[3] *The Uniform Management of Public Employees Retirement Systems Act* (UMPERSA), Section 5: Power of Trustees, Comments section.

Accordingly, the peer group as a whole falls somewhat short of published standards. See Table 16 for further detail.

TABLE 16: GOVERNING AUTHORITY AND CONSTRAINTS		
	Peer Group Practice	**Arizona SRS Practice**
With respect to investments:		
The System has complete authority to set investment policy and invest the assets of the System as it deems appropriate	15	
The System must comply with certain investment restrictions established in law by the Plan Sponsor	10	✓
With respect to budget authority:		
The System has the authority to approve its own operating budget without the approval of the Plan Sponsor (i.e. Legislature, Board of Supervisors, etc.)	16	
The System's operating budget requires the approval of the Sponsor (i.e. Legislature, Board of Supervisors, etc.)	7	✓
The System has budget authority but is heavily influenced by the Plan Sponsor	2	
With respect to human resources:		
The System has the authority to establish the human resource and compensation policies of the System	6	✓
The System is required to operate within the civil service system and compensation structures of the Plan Sponsor for **all or most** of its staff	14	
The System has the authority to establish its own human resource and compensation policies but has chosen to be consistent with civil service system rules	5	
With respect to funding matters:		
The System has the authority to set actuarial assumptions and determine contributions	19	✓
The System sets actuarial assumptions, while the Plan Sponsor determines contributions	2	
Other (Note 1)	3	
With respect to the procurement:		
The System has the authority to set its own procurement rules	13	
The System is required to operate in accordance with the procurement rules of the Plan Sponsor	6	✓
The System is authorized to set its own procurement rules but has chosen to be consistent with the rules of the Plan Sponsor	6	
With respect to key appointments		
The System has the authority to select the executive director	23	✓
The System has the authority to select other staff	24	✓
The System has the authority to select all service providers & advisors	18	

Note 1: One system indicated that while it has the authority to set contribution rates, the Legislature has the power to change the contribution rate, but very rarely does so.

CORTEX ASSESSMENT: ARIZONA SRS
GOVERNING AUTHORITY & CONSTRAINTS

Arizona SRS' plan sponsor maintains significant control over the System; specifically:

- *The System's operating budget requires the approval of the sponsor.*
- *The System must operate in accordance with procurement rules of the plan sponsor.*
- *The System is subject to certain investment restrictions.*
- *The plan sponsor appoints the System's legal counsel.*

In summary, Arizona SRS falls short of published standards and has somewhat less autonomy than the typical peer group member.

Issue(s) to Consider

Arizona SRS should monitor the issues of autonomy and independence relative to its plan sponsor to ensure that it is positioned at all times to effectively carry out its fiduciary duties.

2. Board Size

Published Standards

The GFOA Governance Guidelines state that:

> *"The governing board of a public retirement system should be neither so large as to be unwieldy nor so small that it runs the risk of not being able to get a quorum to make decisions. Optimal board size is between seven and 13 members, depending on the size and complexity of the system."*[4]

Peer Group Practices

Board size within the peer group varies considerably, though boards of seven or nine members are most common. Table 5 on page 12 of this Report lists the size of each board in the peer group. A summary of that table is set out below.

TABLE 17: BOARD SIZE	
Arizona SRS	9
Peer Group:	
Average	9.1
Largest Board	16
Smallest Board	6

[4] *GFOA Governance Guidelines,* page 2.

CORTEX ASSESSMENT: ARIZONA SRS
BOARD SIZE

1) *With nine board members, the size of the Arizona SRS board is consistent with published standards.*

2) *The size of the Arizona SRS board is also consistent with the average of the peer group boards. Nine board members was also the most common board size.*

Issue(s) to Consider

None.

3. Documentation of Roles

Published Standards

Published standards are unanimous in recommending that the roles and responsibilities of all significant parties involved in governing and managing a public retirement system be clearly defined, documented, and accessible. At a minimum, the board should approve documentation setting out the roles of the following parties:

- The board
- Officers of the board
- Standing committees of the board
- Executive director or comparable position

Peer Group Practices

The following table describes the extent to which the peer group members reported having internal documentation in place describing the roles of specified internal parties.[5] The data indicate that most of the peer group (at least 86%) have documented the roles of the board, board chair, standing committees, and executive director. A majority of the peer group has also documented the roles of the other parties addressed in our survey (e.g., chief investment officers, chief legal counsel, internal auditor, etc.).

TABLE 18: DOCUMENTION OF ROLES AND RESPONSIBILITIES

	Peer Group Practice*	Arizona SRS Practice
Internal documentation exists for the roles of the following:		
The Board	92%	Yes
Board Chair	92%	Yes
Each standing board committee	86%	Yes
Executive Director	92%	Yes
Chief Investment Officer	62%	No
Chief Legal Counsel	56%	No
Internal Auditor (internal position)	88%	Yes

* Percentages are adjusted to reflect peer group participants who have the positions listed above.

[5] Our analysis did not consider job descriptions as a substitute for formal mandates or terms of reference, since we view job descriptions as primarily a tool to facilitate recruitment and alignment of job classifications to salary grades.

CORTEX ASSESSMENT: ARIZONA SRS
DOCUMENTATION OF ROLES

1) *Arizona SRS is generally consistent with published standards in that it has documented the roles of most of the key parties addressed in our research.*

2) *Arizona SRS's practices are generally consistent with the peer group.*

Issue(s) to Consider

Arizona SRS may wish to consider documenting the roles and responsibilities of the chief investment officer and the chief legal counsel in a formal document, such as a mandate or terms of reference.[6] The documents should also establish their reporting relationship to the executive director and to the board, if applicable. A majority of the peer group reported having documented the roles of these positions.

[6] As noted on the previous page, our analysis did not consider job descriptions as a substitute for formal mandates or terms of reference, since we view job descriptions as primarily a tool to facilitate recruitment and alignment of job classifications to salary grades.

4. Delineation of Authority

Published Standards

The previous section considered the extent to which the peer group has documented the roles and responsibilities of internal parties. In this section, we look more closely at how systems have allocated specific duties among these parties. Published standards seldom provide specific guidance as to the optimal delineation of responsibilities within a public retirement system. Some general principles or guidelines, however, have been identified and are noted below.

> *The [board] is expected to oversee and assume responsibility for the pension plan but is not expected to manage the plan on a day-to-day basis*[7].
>
> *The plan should allocate authority in inverse proportion to the importance of the task … thus minor tasks may be completely delegated to staff but extremely important tasks may be restricted to decisions by trustees or require trustee participation.*[8]

Consistent with the above, Cortex believes that the board's focus should be on policy and oversight. This would include, but is not limited to:

- Approving and reviewing policies pertaining to governance, investments, benefit administration, operations, and human resources, (and delegating to staff the authority to approve procedures that are consistent with, and support, the board's policies);
- Approving organizational goals and objectives in the areas of funding, investments, and member services;
- Approving strategic plans; and
- Approving parameters for measuring and reporting on organizational performance.

The board should also make certain operational decisions, such as:

- Selecting the executive director;
- Approving the annual operating budget; and
- Selecting and evaluating certain advisors (e.g. those that directly serve the board such as the auditor and actuary).

Best practices also suggest that boards should not select investment managers, as such decisions are operational in nature and divert the board's attention from more important policy and oversight matters.

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[7] *CAPSA Governance Guidelines,* Principle #3, page 7.
[8] *Clapman Report,* Principle E. Delegation of Duties & Allocation of Responsibilities among Relevant Authorities, Principle 3, page 17.

Peer Group Practices

Tables 19 to 22 contain peer group data on the delineation of duties at each of the peer group systems. The wide variety of approaches to delineating responsibilities makes it difficult to generalize about the practices of the peer group. Nevertheless, we did note the following:

- All of the boards retain the responsibility for approving key policies such as long-term asset allocation, re-balancing, and actuarial assumptions. This is consistent with best practices.

- Executive directors generally have the responsibility for hiring senior staff, including the internal auditor. This is consistent with best practices.

- In the great majority of cases, the board hires the primary external advisors of the system. (In a handful of cases, the plan sponsor selects the financial auditor or legal counsel, and in handful of other cases, staff selects the performance measurement service provider and certain legal counsel).

- Boards tend to retain considerable authority over many investment decisions that we believe are in fact operational in nature and perhaps ought to reside with senior management. Examples include selecting investment managers for public and private market investments, and determining the size of mandates and commitments to investment managers and investment partners. A small number of boards even retain the responsibility for executing portfolio re-balancing policies, which we would suggest is certainly an operational function.

- Some boards have delegated certain responsibilities to senior staff for which we believe the board should have some level of involvement, e.g., agreeing upon what constitutes an appropriate measure of member service quality, and appointing third-party performance measurement firms.

TABLE 19: VALUATIONS & BENEFITS

	Peer Group Practice						Arizona SRS Practice
	Plan Sponsor / Legislation	Board	Board Committee	Staff (Note 4)	Other	Not Applicable	
Approve actuarial assumptions for valuation purposes	-	25	-	-	-	-	Board
Approve or accept actuarial valuation reports	-	23	-	2	-	-	Board
Approve contributions	5	20	-	-	-	-	Board
Approve retirements	-	15	-	8	-	1	Staff
Approve cost of living adjustments	9	12	-	-	2 (Note 1)	2	Plan sponsor / Legislation
Determine disability appeals	-	21	-	3	-	1	Board
Approve member service performance benchmarks (Note 2)	-	7	1	10	1 (Note 3)	6	Board

Note 1: With respect to the approval of cost of living adjustments (COLA), some respondents selected "Other", and provided the following comments:

- Board only approves COLA for employees hired after January 1, 2007. Employees hired previously to that date are subject to a COLA formula set out in legislation.
- The COLA requires the approval of both the Retirement Board and the County Board of Supervisors.

Note 2: Systems may establish many different types of member service performance benchmarks. Possible examples include the number of member seminars delivered, telephone response times, and benefit processing times.

Note 3: In the case of one board, member service performance benchmarks are approved jointly by the executive director and the state's Legislative Budget Board.

Note 4: For purposes of this table, "Staff" typically refers to the executive director, although it may have been further delegated to others within the organization.

TABLE 20: INVESTMENT POLICY AND IMPLEMENTATION

	Peer Group Practice						Arizona SRS Practice
	Board	Board Committee	Staff (Note 1)	Staff & Consultant	Other (Note 2)	Not Applicable	
Approving long-term asset allocation policy	25	-	-	-	-	-	Board
Approving strategic/tactical asset allocation policy	23	-	-	1	-	1	Board
Approving investment performance benchmarks (e.g. S&P500 benchmark for the U.S. equity portfolio)	24	-	1	-	-	-	Board
Approving portfolio rebalancing policy	25	-	-	-	-	-	Board
Amount of active and passive management to be used	21	-	4	-	-	-	Board
Amount of internal vs. external investment management	22	-	1	-	-	2	Board
Selecting investment managers - public markets	16	-	6	2	1	-	Other
The size of mandates to be given to investment managers - public markets	14	1	6	2	1	-	Other
Selecting investment partners/funds - private markets	13	1	6	3	2	-	Other
The size of commitments to be made to investment partners/funds - private markets	14	1	5	2	2	-	Other
Implementing/executing portfolio rebalancing policy	2	-	23	-	-	-	Staff
Terminate Public Market Investment Managers	16	1	8	1	2	-	Other

Note 1: For purposes of this table, "Staff" typically refers to the executive director, the chief investment officer, or both. In many cases where decision-making power was delegated to staff, the delegation was subject to certain limits prescribed by the board in policy.

Note 2: With respect to certain investment decisions, some respondents selected "Other" and provided the following comments:

- Manager selection and commitments are determined by a special committee comprised of two board members, staff and the general investment consultant.
- Private equity manager selection and commitments are determined by a private equity manager-of-managers.
- Board approves private equity mandates over a certain dollar amount, and has delegated to staff the approval of mandates under that limit.
- Decisions to terminate public market investment managers are made by board and staff.

TABLE 21: APPOINTMENT OF SERVICE PROVIDERS						
	Peer Group Practice					Arizona SRS Practice
	Plan Sponsor / Legislation	Board	Staff (Note 1)	Other	Not Applicable	
Actuary	-	21	2	1 (Note 2)	1	Board
Auditor	8	15	1	1 (Note 2)	-	Board
Custodian	1	21	2	1 (Note 2)	-	Staff
Investment Consultants	-	21	2	2 (Note 2 & 3)	-	Other
Performance Measurement Service	-	17	3	1 (Note 2)	4	Board
External Legal Counsel	4	12	4	5 (Note 4)	-	Other

Note 1: For purposes of this table, "Staff" refers primarily to the executive director. In one case, the chief investment officer appointed the performance measurement service provider.

Note 2: Board's choice is subject to approval of various state agencies.

Note 3: General investment consultant is chosen by the board; other investment consultants are selected by a special committee comprised of board members, staff, and the general investment consultant.

Note 4: Three systems indicated that their boards hire certain legal counsel and staff hires others. One system indicated that hiring external legal counsel is a joint decision of the board and plan sponsor, while one other system indicated that the decision is jointly made by staff and the plan sponsor.

TABLE 22: HIRING SENIOR MANAGEMENT							
	Peer Group Practice						Arizona SRS Practice
	Plan Sponsor	Board	Board Committee	Executive Director	Other	Position does not exist	
Executive Director	2	23	-	-	-	-	Board
Chief Investment Officer	-	3	-	18	-	4	Executive Director
Chief Operating Officer	-	-	-	19	-	6	Executive Director
Chief Financial Officer	-	-	-	20	1	4	Executive Director
Chief Legal Counsel (Internal Staff Position)	2	2	-	12	-	9	Plan sponsor
Internal Auditor (Internal Staff Position)	-	4	-	9	3 (Note 1)	9	Other

Note 1: In two cases, policy requires the board to be consulted on the appointment or termination of the internal auditor. In one other case, both the board and the executive director jointly select the internal auditor.

CORTEX ASSESSMENT: ARIZONA SRS
DELINEATION OF AUTHORITY

1) *With respect to allocation of responsibilities, Arizona SRS is generally consistent with published standards. The Board appears to be focused on policy matters and delegates operational matters to senior management.*

2) *Arizona SRS is also generally consistent with the practices of the peer group. We noted the System's unique approach to selecting investment consultants and managers:*
   - *Manager selection and commitment decisions are made by a special committee compose of board members, management, and the investment consultant.*
   - *The board and management each may appoint their own investment consultants.*

Issue(s) to Consider

Arizona SRS may wish to consider opportunities for greater delegation to staff in connection with the selection of investment managers and general partners. This authority currently resides with a special committee comprised of board members, staff, and the general investment consultant.

Delineation of Authority - Other Issues

Published standards do not specifically address the issues of purchase authority or travel authority. However, we thought this information might nevertheless be of interest to the peer group and have included it below.

Purchase Authority

The following table illustrates the purchase authority afforded to executive directors for goods and services. In the majority of cases, executive directors did not have a dollar limit on their authority to procure goods and services, provided the required funds were contained in the system's budget.

TABLE 23: EXECUTIVE DIRECTOR PURCHASE AUTHORITY

	Peer Group Practice	Arizona SRS Practice
Executive Director has no independent purchase authority	3	
Up to $25,000	2	
Up to $50,000	3	
Up to $75,000	1	
Up to $100,000	-	
Greater than $100,000	-	
There are no limits, provided the item has been budgeted for	12	✓
Other (Note 1)	4	

Note 1: "Other" responses included:

- The Executive Director generally has authority with no dollar limits. However, board approval is required on certain contracts such as investment advisors and health care vendors.
- Board approval is not required for purchases of regular goods and services. Generally, for goods and services in excess of $100,000, approval by other appropriate government agencies is required.
- Purchase authority limits vary by type of service, as follows: $25,000 for personal services contracts, $50,000 for equipment and capital improvements, and $100,000 for consulting, professional, and management contracts.
- No limits provided staff stay within approved budget. Every purchase is retroactively approved by the board.

Board and Staff Travel

Board and staff travel has been the subject of considerable scrutiny in recent years. Accordingly, we have collected data on the allocation of authority for approving board and staff travel. Table 24 shows the distribution of authority for approval of travel for the board chair, other board members, the executive director, the chief investment officer, and other staff. The parties seeking authorization are listed in the left column, while the parties providing the authorization are listed across the top row. Several systems also reported having other controls and procedures in place concerning travel. These are summarized in Note 1 below the table.

TABLE 24: TRAVEL AUTHORIZATION

	Authorizing Party					Arizona SRS Practice
Travelling party:	Board	Board Chair	Executive Director	CIO	Other (Note 1)	
Board Chair	11	1	5	-	4	Executive Director
Other Board Members	12	-	5	-	5	Executive Director
Executive Director	8	2	8	-	5	Executive Director
Chief Investment Officer	1	-	19	-	1	Executive Director
Other Staff	1	-	18	-	6	Executive Director

Note 1: Other controls and procedures used by some peer group members are as follows:

- Some boards maintain a list of "pre-approved" educational events (conferences, seminars) that board members are automatically authorized to attend.
- The executive director's travel is approved by a subordinate, e.g. chief operating officer, chief financial officer.
- In-state travel for board and staff does not require approval.
- Domestic travel for senior staff does not require approval.
- Senior staff approves travel for their direct reports.

5. POLICY FRAMEWORK

Published Standards

A sound, comprehensive policy framework is a central component of a retirement system's risk management system. Published standards are consistent in recommending that policy frameworks be established. For example, the CAPSA Governance Guidelines recommend that:

> *"While the [policy] framework may vary depending on the plan type, it should include policies on documentation, record keeping, costing, funding, fund investment, expense control, benefits administration, outsourcing, compliance, and communication."*[9]

Other guidelines identify other policies, such as funding policy, investment policy, conflicts of interest, trading policies, personal investments transactions, acceptance of gifts, compensation policy, to name a few.[10]

Peer Group Practices – Policy Coverage

The list of potential policies a public retirement system may establish is almost limitless. As part of our research, we considered the existence of 35 policies in the areas of board governance, investments, benefit administration, operations, and human resources. We also examined the extent to which systems have operating procedures in place.

Table 25 contains our findings with respect to policy frameworks in the areas noted above, the highlights of which are as follows:

a) On average, peer group members have 24 of the 35 policies that were covered in our survey. Some of the more common policies included: ethics policies (conflict of interest, code of conduct), board communications, proxy voting, manager selection, portfolio rebalancing, member appeal/dispute resolution, and travel and expense reimbursement.
b) A majority of peer group members have reviewed their governance policies within the last three years.
c) A significant majority of peer group members have established operational procedures in the areas of investments, benefit administration, accounting and operations. A smaller percentage has established operating procedures covering human resources and the actuarial function. Management typically has the authority to establish operating procedures without the need for board approval (there was one exception).
d) A majority of peer group members indicated there were gaps in their operating procedures, and that they were in the process of addressing them.

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[9] *CAPSA Governance Guideline*, page 8.
[10] See *The Clapman Report*, the *OECD Guidelines for Pension Fund Governance*, and the *GFOA Governance Guidelines*.

Note: Policy framework includes policies approved by the board or the executive director, or contained in applicable legislation.

TABLE 25: POLICY FRAMEWORK		
	Peer Group Policies	**Arizona SRS Policies**
Governance Policies		
Board Travel & Expense Reimbursement	25	✓
Conflict of Interest	24	✓
Code of Conduct/Ethics	23	✓
Board Education	22	✓
Board Communications	21	✓
Strategic / Business Planning	20	✓
Monitoring and Reporting	18	✓
Board Self-Evaluation or Assessment	14	✓
Conducting Governance Reviews/Fiduciary Audits	12	✓
Whistleblower Policy	10	
Investment Policies		
Proxy Voting	25	✓
Portfolio Re-balancing	24	✓
Investment Manager Selection/Review Criteria	24	✓
Due diligence practices	23	✓
Securities Lending	22	✓
Use of derivatives	22	
Currency Hedging	15	
Social Ethical Investing	11	
Economically Targeted Investing	6	

TABLE 25 (CONT'D): POLICY FRAMEWORK		
	Peer Group Policies	Arizona SRS Policies
Member Service/Administration Policies		
Staff Travel & Expense Reimbursement	23	✓
Member appeals or dispute resolution	22	✓
Signing authority	22	✓
Service provider selection (professional services)	21	✓
Record retention/management	18	✓
Procurement process (goods and administrative services)	17	✓
Service provider evaluation (professional services)	17	✓
Member communications	15	✓
Member service and/or quality benchmarks	13	✓
Human Resources Policies		
Executive Director performance evaluation (criteria, process, etc.)	20	✓
General staff performance evaluation (criteria, process, etc.)	18	✓
Compensation guidelines	15	✓
Staff training and development	11	
Selection process for senior executives	9	
Investment staff incentive compensation program	3	
General staff incentive compensation program	1	

Review of Governance Policies

We asked peer group members about the frequency with which they review their policies relating specifically to board governance. The results are shown in the following table.

TABLE 26: FREQUENCY OF REVIEW OF GOVERNANCE POLICIES		
	Peer Group Practice	**Arizona SRS Practice**
Policies are reviewed annually	2	✓
We have reviewed all or most of them within the past three years	17	
We have reviewed all or most of them within the past five years	1	
It has been more than five years since we performed a comprehensive review of our governance policies	3	
We have only recently established our governance policies and therefore have not needed to review them	2	

Operating Procedures

All or most peer group members have established operating procedures in the areas of investments, accounting/operations, and benefit administration, and to a somewhat lesser extent for the human resources and actuarial functions. Details are provided in the following table.

TABLE 27: OPERATING PROCEDURES		
	Peer Group Practice	Arizona SRS Practice
Operating procedures cover the following:		
Accounting and operations	23	✓
Benefits administration	23	✓
Investments	23	✓
Human resources	18	✓
Actuarial	15	

We asked peer group members about the state of their operating procedures, i.e., the extent to which the systems perceived them to be comprehensive and up-to-date. The findings are shown below:

TABLE 28: STATUS OF OPERATIONAL PROCEDURES		
	Peer Group Practice	Arizona SRS Practice
Operational procedures are comprehensive and up-to-date	8	
Some gaps in our operational procedures and we are working to address them	14	✓
Only recently begun developing or updating our operational procedures - there is considerable work to do on them	3	
Have not turned our attention to developing or updating our operating procedures but intend to	-	

CORTEX ASSESSMENT: ARIZONA SRS
POLICY FRAMEWORK

1) *Arizona SRS's policy framework is generally consistent with published standards and those of the peer group. Its framework is relatively comprehensive, especially with respect to governance and member service/administration. It has 26 of the 35 policies that were covered in our survey, and has procedures in four of the five areas covered in our survey. Some gaps, however, include the following policies and procedures, which a majority of the peer group has in place:*
    - *Use of derivatives*
    - *Currency hedging*
    - *Actuarial procedures*

    Arizona SRS does not have a whistle blower protection policy, which we view as a best practice, despite the fact that less than half of the peer group reported having such a policy in place.

2) *Arizona SRS exceeds the peer group and best practice in that it reviews its governance policies annually.*

Issue(s) to Consider

Arizona SRS may wish to consider the need for developing the following additional policies or procedures:
- *Use of derivatives;*
- *Currency hedging;*
- *Whistle blower policy; and*
- *Actuarial procedures.*

6. Ethics Policies[11]

Published Standards

A core tenet of fiduciary practice is that fiduciaries owe a strict duty of loyalty to their beneficiaries and must at all times act in the best interests of the beneficiaries when administering a retirement system. Fiduciaries must also act with utmost honesty and integrity in carrying out their duties. To help fiduciaries successfully meet these duties, published standards suggest that every system establish an ethics policy. Published standards have also addressed in some detail the elements of such policies. Cortex investigated the extent to which the peer group's ethics policies are consistent with the literature.

Peer Group Practices

All of the systems reported that their ethics policies specifically covered board members, while 88% reported that their policy also covered system staff; approximately 60% of the ethics policies covered consultants and investment managers.

We also attempted to determine the extent to which ethics policies include various provisions or requirements recommended by published standards (primarily the *Clapman Report*). Our findings are as follows:

- On average, peer group members had approximately 15 of the 21 ethics policy provisions covered by our survey.
- Some of the less commonly found ethics-related requirements addressed:
    - Conflicts of interest training for board and staff members
    - Disclosure of conflicts of interest in board minutes
    - Disclosure of campaign or charitable contributions
    - Rules regarding serving on other boards

Other findings include:

- Most ethics policies allow staff and trustees to accept gifts of nominal value, or that are within a specified dollar amount (e.g., $100).
- Just over half the peer group requires trustees and staff to formally acknowledge their ethics policies upon appointment; while approximately nine systems require their board and staff members to annually declare that they have complied with the policy over the previous year.
- 72% of the peer group require board members to disclose certain financial information upon being appointed or elected; a slightly higher percentage of the peer group (80%) requires certain staff members to make similar disclosures.

Further details are provided in the following tables.

[11] Such a policy may also be referred to as a conflicts of interest policy or a code of conduct; some funds have established both. For purposes of this report, we have used the term "ethics policy" to refer to all such policies.

TABLE 29: ETHICS POLICIES		
	Prevalence within Peer Group (# of Funds)	**Arizona SRS Policy**
The Board's ethics policies cover the following parties:		
Board Members	25	✓
Staff	23	✓
Consultants	15	
Investment Managers	14	
Other Parties (Note 1)	7	
Topics covered in the ethics policies or applicable legislation:		
Clear identification of the types of persons covered by conflict of interest rules (e.g. board members, staff, consultants)	25	✓
A requirement for covered parties to report and disclose conflicts to specified party(ies)	24	✓
A definition of "conflict of interest"	23	✓
Recusal of all covered persons from matters in which they have a conflict	19	✓
Enforcement authority and procedures for dealing with violations of policy (e.g., potential disciplinary actions)	16	✓
Training of covered persons as to the identification and reporting of conflicts	14	✓
Requirement to record board member conflicts in board minutes	11	

Note 1: "Other parties" covered by some systems' ethics policies include:

- Vendors such as the actuary and third-party administrators
- Brokers, agents and certain other vendors
- Staff is covered by ethics provisions in the employee handbook and state ethics laws
- External advisors who sit on a board committee, but are not board members.

One participant also noted that while 'other vendors' are not covered by its ethics policy, they are subject to standard contract provisions addressing ethics issues.

TABLE 30: ETHICS POLICIES (CONT'D)		
	Prevalence within Peer Group (# of Funds)	**Arizona SRS Policy**
Topics covered in ethics policies or applicable legislation:		
Protection of confidential information	25	✓
Receipt of gifts by trustees and staff	25	✓
Fiduciary duties and standard of care relevant to your System	24	✓
Prohibition of staff and trustees from soliciting business from the Board and System	24	✓
Requirement for professionalism, integrity, and honesty	23	✓
Proper use (or prohibited use) of System resources	23	✓
Restrictions concerning employment of trustees and staff(e.g., hiring board members as staff, former staff members as consultants, etc.)	21	
Black-out period provisions (prohibitions on board member contact with vendors during a search process or vendor review process)	19	✓
Prohibition on soliciting campaign or charitable contributions	16	
Restrictions and rules regarding payment of finder fees or incentives to third parties (e.g. placement agents)	16	✓
Trading rules, e.g., disclosure of trades or no-trade lists	14	
Prohibition against nepotism	14	✓
Disclosure of campaign contributions received by board members	11	
Rules regarding serving on other boards	6	

Gift Policies

Our study also investigated the peer group's policies regarding the acceptance of gifts by both board members and staff. Various approaches are followed, as summarized in the following table and the accompanying notes.

TABLE 31: ACCEPTANCE OF GIFTS POLICY

	Peer Group Practice		Arizona SRS Practice	
	Board Members	Staff	Board Members	Staff
Zero tolerance - no gifts may be accepted	3	4	✓	✓
Nominal or token gifts may be accepted (but no dollar amount is specified)	7	8		
Gifts up to a specified dollar amount may be accepted (e.g., up to $100) (Note 1)	11	9		
Gifts may be accepted provided they are not intended to influence the trustee regarding any matter pertaining to the Board's business	4	4		
Other rules or standards (Note 2)	2	1		
There is no policy regarding gifts	-	1		
Additional notes (Note 3)	7			

Note 1: At two systems, the acceptance of gifts is limited to meals. Board and staff members may accept meals from each service provider up to an amount of $50 per year.

Note 2: Some systems noted that their gifts policy s based on rules set out in state law.

Note 3: In addition to the above, some peer group members also noted the following details:

- It is policy for the board chair and the CEO to disclose gifts they receive.
- Staff is encouraged to reject even nominal gifts, even though they may accept them under the law.
- Absolute requirement to disclose all gifts.
- Board and staff members are also subject to the California Fair Political Practices Act, which has various disclosure requirements, and which limits receipt of gifts up to $420 per year.
- Board and staff are generally subject to the city's zero tolerance gifts policy. A special exception, however, was made for investment staff, which allows them to receive token gifts of no more than $25 on four occasions each year.
- Meals for business purposes are not subject to limits. Other standards apply in specific situations.

Ethics Policies – Acknowledgement and Disclosure Requirements

Our study also investigated the extent to which the peer group's ethics policies require board and staff members to formally acknowledge their ethics policies and make various disclosures. Our findings are shown in the following tables.

TABLE 32: ETHICS POLICY: ACKNOWLEDGEMENT AND DISCLOSURE PROVISIONS

	Peer Group Practice		Arizona SRS Practice	
Fiduciaries are required to:	**Board**	**Staff**	**Board**	**Staff (Note 1)**
Upon being appointed a fiduciary, sign a declaration acknowledging receipt of the Ethics Policies	13	13		✓
Annually review the Ethics Policies	15	10	✓	
Annually sign a declaration confirming compliance with the Ethics Policies over the previous 12-month period	10	9		
Submit a personal financial interest statement annually	18	20		
None of the above	2	2		
Other requirements (Note 2)	6	2		

Note 1: In a number of cases, only certain staff members are required to submit personal financial interest statements.

Note 2: 'Other requirements' noted include:

- Board and staff members must submit an annual conflict of interest disclosure form.
- Board members are required to review and confirm compliance with the ethics policy every two years.
- Board and staff are required by law to take state-sponsored ethics training bi-annually.
- Board members are required to provide a semi-annual update of financial interests.

CORTEX ASSESSMENT: ARIZONA SRS
ETHICS POLICIES

1) *With some exceptions, Arizona SRS's ethics policy meets published standards. Arizona SRS's ethics policies, however, do not explicitly address:*
   - *The requirement to record board member conflicts in meeting minutes;*
   - *Rules regarding the solicitation of campaign or charitable donations;*
   - *Restrictions or rules concerning employment or contracting with former trustees and staff; and*
   - *Trading rules covering board and staff members involved in the investment function, e.g. disclosure of trades, no-trade lists, etc.*

2) *Arizona SRS's ethics policies were generally consistent with the peer group, as it had 15 of the 21 ethics policy requirements covered in the survey (the peer group average was also 15). However, it was lacking some of the more common policy provisions noted in item (1) above.*

3) *Arizona SRS requires staff to formally acknowledge acceptance of the ethics policy, but does not require board members to do so (though board members are required to annually review the policy).*

4) *Arizona SRS also differs from the peer group in the following respects:*
   - *It is one of only a few systems that has a "zero tolerance" gifts policy.*
   - *Neither board policy nor legislation requires board members or staff to submit personal financial statements (approximately 80% of the peer group are required to make such disclosures).*

Issue(s) to Consider

Arizona SRS may wish to consider the need for expanding its ethics policies to address some or all of the gaps identified above.

7. Board Education

Published Standards

Published standards are unanimous in recommending that public retirement systems provide education for their board members.[12] The standards, however, typically provide only general guidance in this regard. For example, the Clapman Report recommends that *"trustees, on a regular basis, should obtain education that provides and improves core competencies, and that assists them in remaining current with regard to their evolving obligations as fiduciaries."* The *CAPSA Governance Guidelines* state, *"The plan administrator should be provided with appropriate training and ongoing education, as required"*.

Cortex recognizes that boards differ significantly in terms of board composition and skill sets, board and staff time availability, and financial resources. Nevertheless, we believe best practices require retirement systems to develop board education programs that incorporate most, if not all, of the elements listed below, tailoring them to their particular circumstances:

a) A board education policy that sets out what is expected of board members with respect to education;
b) A new board member orientation program;
c) Continuing in-house education delivered by staff, advisors, or other third parties;
d) Opportunities to attend conferences, seminars, or courses;
e) A board member reference manual or handbook;
f) Periodicals, books, and other literature that board members may use for self-study purposes;
g) An education needs assessment process.

Peer Group Practices

The tables on the following pages provide an overview of the board education practices of the peer group. In general, we found the peer group to be highly consistent with published standards and Cortex's view of best practices. In summary:

- Most systems have established a board education policy.
- Most systems provide on-going in house education to its members (a majority provides at least one day of in-house education annually).
- Most systems offer board members a wide range of educational tools and resources (e.g. orientation, reference manuals, access to external education, articles and books).
- On average, board members in the peer group devoted approximately five days to attending conferences in 2009.
- The average education budget for a board member was approximately $3600 per year.

[12] For example, see *CAPSA Governance Guidelines*, the *Clapman Report*, the *GFOA Governance Guidelines*, and the *OECD Guidelines for Pension Fund Governance*.

TABLE 33: EDUCATION AND TRAINING		
	Peer Group Practice	**Arizona SRS Practice**
The following education and training practices are in place:		
In-house education	24	Yes
Documented Board Education Policy	23	Yes
Trustee orientation	23	Yes
A board member handbook or manual is provided	23	Yes
External education events (e.g. conferences, seminars, courses, workshops)	22	Yes
Educational articles or materials are regularly provided	21	Yes
A dedicated annual educational session (on or off-site)	20	No
There is a formal process to assess the education needs of board members	6	No
New trustees are provided with a board mentor	3	No

CHART 1: AMOUNT OF ORIENTATION PROVIDED TO NEW BOARD MEMBERS

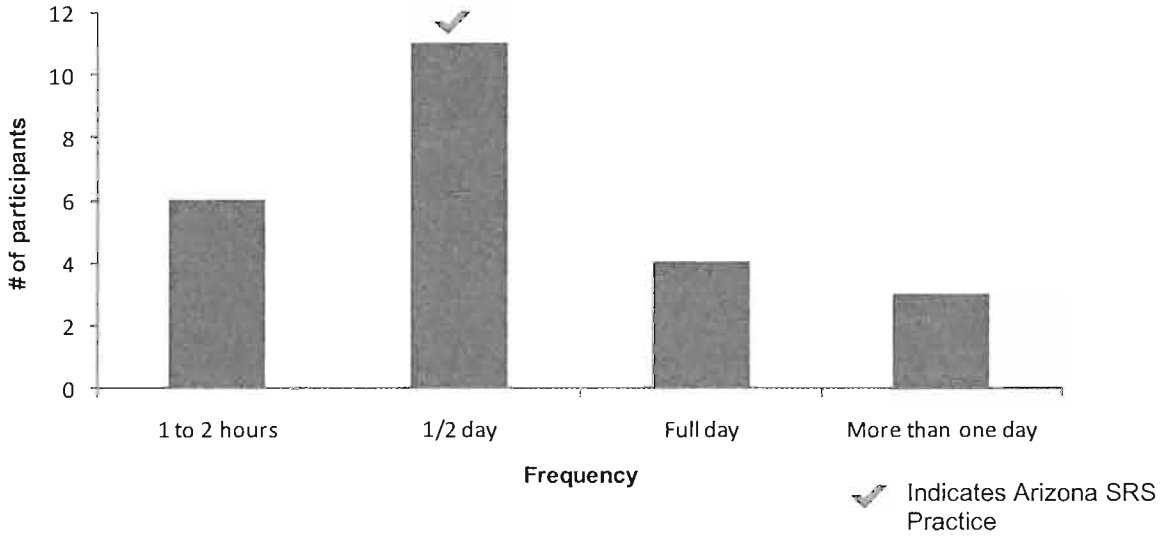


CHART 2: AMOUNT OF IN-HOUSE EDUCATION PROVIDED TO THE FULL BOARD IN 2009

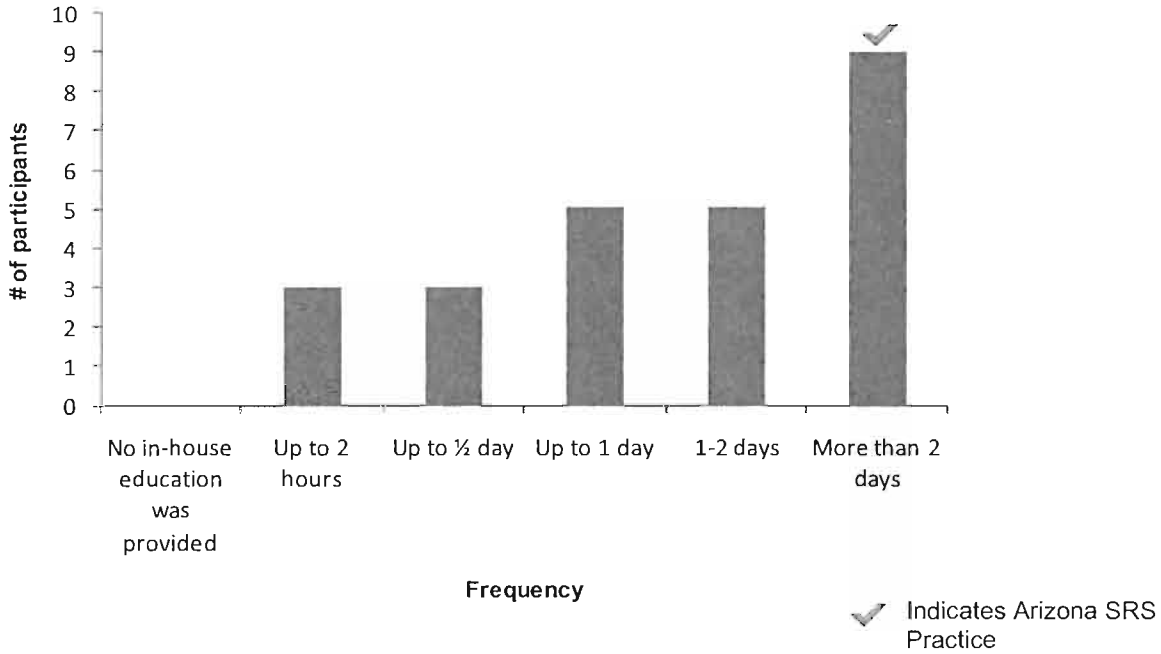


TABLE 34: BOARD PARTICIPATION IN EXTERNAL CONFERENCES		
	Peer Group Practice	**Arizona SRS Practice**
One or more board members participated in external education in 2009	22	Yes
Average number of days spent at educational conferences in 2009 **per board member**	4.9	2.6

TABLE 35: BOARD EDUCATION BUDGET		
	Peer Group Average	**Arizona SRS Practice**
Annual education budget per board member	$3,623	$1,000
Annual education budget for the entire board	$47,056	$9,000

Note 1: One board provides new board members with 50% additional education budget.

CORTEX ASSESSMENT: ARIZONA SRS
BOARD EDUCATION

1) *Arizona SRS's board education practices are generally consistent with best practice.*

2) *Arizona SRS's practices are also generally consistent with those of the peer group, with the following exceptions:*
   - *The board does not hold a dedicated annual educational session; (it did, however, provide more than two days of in-house training throughout the year).*
   - *The average education budget for each trustee is significantly less than the peer group average ($1,000 v. $3,268)*

Issue(s) to Consider

Arizona SRS may wish to reconsider its trustee education budget, in light of peer group practice. Arizona SRS may also wish to consider instituting an educational needs assessment for its trustees; this is an emerging practice we noted among the peer group.

8. PLANNING

Published Standards

Published standards are generally silent on the need for organizational planning, with the exception of the *GFOA Guidelines* and the *OECD Governance Guidelines*, which recommend that public systems have appropriate succession planning processes or policies. In addition to succession planning, Cortex believes that it is best practice for public retirement systems to engage in some form of strategic or business planning, though specific frequencies and approaches to such planning may vary according to a system's needs and circumstances.

Peer Group Practices

Most peer group members' planning practices are consistent with published standards and Cortex's view of best practice:

- Almost all peer group members engage in strategic or business planning (there was one exception); the planning cycle varies among the peer group, but for a majority of systems it is an annual exercise.
- 68% of the peer group holds a dedicated planning session with the board.
- A majority of the systems engages in succession planning, although the nature and frequency of succession planning activities vary.
- In most cases, succession planning covers only the executive director.

Additional information is set out in the following two tables.

TABLE 36: STRATEGIC OR BUSINESS PLANNING PRACTICES

	Peer Group Practice	Arizona SRS Practice
The Board or staff periodically undertakes strategic or business planning	24	Yes
The strategic planning process involves a dedicated planning session with the Board and staff	17	Yes
Frequency of Strategic or Business Planning:		
At least annually	17	✓
At least every two years	1	
At least every three years	2	
Less frequently than every three years	2	
No specified frequency	2	

TABLE 37: SUCCESSION PLANNING PRACTICES		
	Peer Group Practice	**Arizona SRS Practice**
The System **does** engage in succession planning	18	✓
The System **does not** engage in succession planning	7	
Nature of succession planning:		
Board or board committee discusses succession planning at least annually, but no documentation in place	8	
Board or board committee discusses succession planning less frequently then annually; no documentation in place	4	
A documented succession planning policy or plan has been established	7	✓
Other	4	✓
Succession planning covers:		
Executive Director	16	✓
Other senior executives	7	✓
Investment staff	3	
Operational and systems staff	3	
Benefit staff	3	
Other	2	

CORTEX ASSESSMENT: ARIZONA SRS
PLANNING

1) *Arizona SRS is consistent with best practices and the peer group in that it undertakes strategic planning and involves the board in the process.*

2) *Arizona SRS is consistent with best practices and the majority of the peer group in that it undertakes succession planning for the Executive Director and other senior staff. It has also established a policy which provides for the temporary reassignment of staff to address the short-term absence of a senior staff member.*

Issue(s) to Consider

None.

9. Risk Management Practices

Published Standards

Best practices suggest that public retirement systems should:

- Implement enterprise risk management systems (ERM)[13];
- Regularly undertake various risk management analyses, including, at a minimum, asset allocation or asset/liability studies;
- Provide for a periodic actuarial audit[14]; and
- Provide for an internal audit function (i.e., a review of administrative and financial controls), either conducted internally or through an external third party.

We also examined the prevalence of fiduciary audits and independent risk reviews, which have been used by some systems as a means of identifying and managing risk.

Given the complex nature of each of the above risk management tools, our survey necessarily addressed them at a high level, focusing on their prevalence and frequency of use.

Peer Group Practices

The tables and charts on the following pages contain information about the peer group's risk management activities. In summary, we found that:

- Half of the peer group has established an ERM which covers either all or part of the organization. A smaller segment of the peer group was in the process of developing an ERM.
- All systems undertake asset liability studies and asset allocation studies. The most common frequency for both types of studies is every 2 to 3 years.
- Most of the peer group members undertake periodic actuarial audits. A majority of the systems are required to do so by either board policy or legislation.
- Most retirement systems have some form of internal audit function. A majority has established an internal audit staff person or department, while at other systems this function is performed by external parties (e.g., financial auditor, consulting firm, etc.).
- Very few peer group members have undertaken a fiduciary audit or independent risk assessment.

[13] Enterprise risk management (ERM), also known as enterprise-wide risk management, is a planning tool used by organizations to manage risks and identify opportunities related to the achievement of their objectives. ERM provides a framework for risk management, which typically involves identifying particular events or circumstances relevant to the organization's objectives (risk and opportunities), assessing them in terms of likelihood and magnitude of impact, determining a response strategy, and monitoring progress.

[14] An actuarial audit is a formal review of the work of a plan's actuary, and is performed by a second, independent actuarial firm.

Enterprise Risk Management (ERM)

Among the peer group, we found that half the systems have established an ERM that covers either all or part of the organization. A smaller segment of the peer group is in the process of developing an ERM, while six retirement systems have not established an ERM.

TABLE 38: PREVALENCE OF ENTERPRISE RISK MANAGEMENT (ERM) FRAMEWORKS		
State of ERM framework:	**Peer Group Practice**	**Arizona SRS Practice**
ERM framework is in place, and encompasses all aspects of the organization.	10	✓
ERM only encompasses investments	3	
ERM only encompasses operations and benefit administration	-	
ERM is in development	7	
System does not have an ERM	5	

Asset Allocation/Liability Studies

Asset allocation and asset liability studies were common among the peer group, though their frequencies varied. We found that all systems conducted both types of studies, although asset allocation studies were done somewhat more often than asset/liability studies.

TABLE 39: PREVALENCE OF INVESTMENT STUDIES						
	Peer Group Practice					**Arizona SRS Practice**
	No Specified Frequency	**Annually**	**Every 2-3 Years**	**Every 4-5 Years**	**Never**	
Asset Allocation Studies	2	8	11	4	-	Every 2-3 Years
Asset Liability Studies	3	3	12	6	-	Every 2-3 Years

Actuarial Audits

An "actuarial audit" is a formal review, performed by an independent actuarial firm, of the work of a system's incumbent actuary. We investigated whether peer group members are required by policy or law to conduct actuarial audits, and the frequency with which they are conducted.

TABLE 40: USE OF INDEPENDENT ACTUARIAL AUDIT

	Peer Group Practice	Arizona SRS Practice
Board policy requires periodic actuarial audits be performed	10	✓
Governing legislation of the Plan Sponsor requires periodic actuarial audits be performed	8	✓
We periodically conduct actuarial audits, but are under no requirement to do so	7	
The system has not undergone a formal actuarial audit	3	

The frequency of actuarial audits varied within the peer group, with the most common frequency being every 3 to 5 years.

TABLE 41: FREQUENCY OF ACTUARIAL AUDITS

Frequency:	Peer Group Practice	Arizona SRS Practice
Every 3-5 Years	11	✓
Every 6-10 Years	6	
No specified frequency	5	
Not applicable	3	

Internal Audit Function

A common risk management tool is an internal audit function. We investigated the prevalence of such functions within the peer group. Table 42 details the existence of internal audit functions, and whether internal or external parties perform this function. Table 43 provides details about **in-house** internal audit programs, and describes the organizational reporting structure as it relates to internal audit personnel.

TABLE 42: INTERNAL AUDIT FUNCTION		
	Peer Group Practice	**Arizona SRS Practice**
There is no internal audit function, nor do we outsource the function	3	
Our financial auditor performs some internal audit activities in the course of the financial audit	5	
Internal audits are conducted by our internal auditor or internal audit department	16	✓
Internal audits are outsourced to a private accounting or consulting firm	8	
Our System is subject to special audits, examinations or reviews by the sponsor or a government body (e.g., state auditor)	10	✓

TABLE 43: INTERNAL AUDIT DEPARTMENT / PERSONNEL		
	Peer Group Practice	**Arizona SRS Practice**
Number of internal audit personnel (avg.)*	3.8	5
Internal auditor is directed by/reports to:		
The Board/Board Committee	3	
The Executive Director	1	
Both of the above, but primarily the Board	5	
Both of the above, but primarily the Executive Director	7	✓

* Figures based on those systems that have internal audit personnel.

Fiduciary Audits and External Risk Reviews

Fiduciary audits and external risk reviews are tools designed to assess and manage a wide range of risks in a public retirement system. Our study found that they are much less common than other risk management tools such as asset allocation studies and actuarial audits. Details are provided in the following table.

TABLE 44: FIDUCIARY AUDITS & EXTERNAL RISK REVIEWS

	Peer Group Practice	Arizona SRS Practice
Does the Plan Sponsor require that the System undergo fiduciary audits on a periodic basis?		
Yes	2	
No	23	✓
Has the System ever undergone a fiduciary audit?		
Yes	5	
No	19	✓
Not Sure.	1	
Use of External Risk Reviews		
Yes; covering the investment program only	2	
Yes; covering the benefit administration program only	1	✓
Yes; covering both of the above	4	
No	18	

CORTEX ASSESSMENT: ARIZONA SRS
RISK MANAGEMENT PRACTICES

1) *Arizona SRS's practices are consistent with published standards in that it:*
   - *Has established a enterprise risk management system;*
   - *Conducts asset allocation studies and asset liability studies every 2-3 years;*
   - *Undertakes actuarial audits every 3-5 years; and*
   - *Has an internal audit function, carried out by both internal staff and external parties.*

2) *Arizona SRS's practices are consistent with the peer group. In some respects they exceed the peer group; i.e., it conducts actuarial audits on a relatively more frequent basis, and it has undergone external risk assessments.*

Issue(s) to Consider

None.

10. Evaluation of the Executive Director

Published Standards

Published standards recommend that governing boards evaluate the performance of key decision makers and staff, but do not provide details.[15] Cortex has nevertheless identified the following best practices in this area:

- Boards should establish written human resource policies for evaluating the executive director and other staff members. While these may be consistent with civil service rules, they should first and foremost be designed to meet the needs of the retirement system.
- The board should be responsible for evaluating the executive director. Furthermore, all board members should have an opportunity to have input into the executive director's evaluation
- Performance evaluation criteria should not consist solely of subjective criteria, but should also include objective criteria.
- Properly designed and administered, a 360° evaluation can be a useful tool for management development and evaluation.

Peer Group Practices

Our study found the following:

- 80% of the peer group have established a policy addressing the evaluation of their executive director; while 72% of the peer group have established similar policies applicable to all staff.
- Most peer group boards evaluate their executive director annually, but only a minority obtain input from parties other than board members. Most evaluations are based on a combination of objective and subjective factors.
- Very few systems reported having policies concerning incentive compensation programs.

Further details are provided in the following tables.

TABLE 45: STAFF EVALUATION & INCENTIVE POLICIES

	Peer Group Policies	Arizona SRS Policies
Human Resources Policies:		
Executive Director performance evaluation (criteria, process, etc.)	20	✓
General staff performance evaluation (criteria, process, etc.)	18	✓
General staff incentive compensation program	1	
Investment staff incentive compensation program	3	

[15] *CAPSA Governance Guidelines*, Principle #4: Performance Measures, page 7; and the *Clapman Report*, Principle B: A Fund's Leadership: the Governing Body and Executive Staff, page 7.

TABLE 46: EXECUTIVE DIRECTOR PERFORMANCE EVALUATION PRACTICES		
	Peer Group Practice	**Arizona SRS Practice**
Frequency of performance evaluation:		
Annually	22	✓
Every three years	1	
Never	2	
Evaluation input is provided by:		
The board only	15	
The board and other parties (e.g. subordinates, the sponsor, other stakeholders)	8	✓

TABLE 47: EXECUTIVE DIRECTOR PERFORMANCE EVALUATION CRITERIA		
Performance evaluations are based on:	**Peer Group Practice**	**Arizona SRS Practice**
Objective criteria only (e.g. investment performance or service quality measures)	-	
Subjective criteria only (e.g. leadership, communications)	4	
Objective and **subjective** criteria, but **mainly subjective** criteria	14	
Objective and **subjective** criteria, but **mainly objective** criteria	4	✓
Objective and **subjective** criteria have equal weighting	1	

CORTEX ASSESSMENT: ARIZONA SRS
EVALUATION OF THE EXECUTIVE DIRECTOR

1) Arizona SRS's practices are consistent with published standards in that it:
- *Evaluates the performance of the executive director on an annual basis, utilizing both objective and subject criteria; and*
- *Has documented the evaluation process in a board policy.*

2) Arizona SRS's practices are consistent with the practices of the peer group, and in some respects exceeds the peer group; i.e., the system uses a 360° performance evaluation process, which incorporates feedback from staff members as well as the board, and which relies primarily on objective evaluation criteria.

Issue(s) to Consider

None.

11. Service Provider Performance Evaluation

Published Standards

Monitoring the performance of service providers is a key requirement for demonstrating effective oversight of a public retirement system. Published standards, such as the *CAPSA Governance Guidelines*, and the *OECD Governance Guidelines*, recommend that the governing body establish mechanisms to monitor the performance of external service providers (e.g. those providing consultancy, actuarial analysis, asset management, and other services).

The frequency and rigor with which key service providers are evaluated should reflect prudent cost-benefit analysis. Accordingly, absolute standards are difficult and impractical to establish. Some helpful guidelines however include the following:

1. Public retirement systems should establish policies or clear practices with respect to service provider performance evaluations.

2. At a minimum, the following service providers should be evaluated regularly:
   a) Investment managers
   b) General investment consultants
   c) Other retainer investment consultants
   d) Financial auditor
   e) Actuary
   f) Custodian
   g) Record keepers

3. Evaluation processes should not be based solely on subjective criteria, but rather should incorporate objective performance criteria wherever practical.

4. Periodically issuing a request for proposals (RFP) for certain retainer contracts may be beneficial. However, issuing RFPs routinely may represent an imprudent use of resources, if in fact there is little likelihood that the system would replace the service provider in question.

Peer Group Practices

Most peer group members' practices are consistent with published standards. It is common practice to evaluate the performance of the various service providers we studied, though the approaches to such evaluations vary, as does the frequency. Specifically, we noted the following:

- Of the service providers studied, external legal counsel is least likely to be evaluated, or evaluated with a set frequency.
- Typical approaches to evaluating service providers include holding informal discussions with the service providers and using subjective satisfaction surveys.
- To the extent service providers are evaluated using objective criteria, it is most likely to occur in the cases of the custodian and the investment consultant.
- In over half of the cases, it was common practice to periodically issue RFPs for key service providers, even if no concerns exist.

The following tables provide additional detail.

TABLE 48 - FREQUENCY OF SERVICE PROVIDER EVALUATIONS

	Peer Group Practice						Arizona SRS Practice
	We Do Not Evaluate	At Least Annually	Every 2-3 Years	Every 4 Years or More	No Set Frequency	Not Applicable	
Actuary	3	5	5	5	6	1	Every 4 Years or More
Auditor	4	5	5	3	3	5	Every 4 Years or More
Custodian	2	6	7	4	6	-	Every 4 Years or More
Investment Consultant	2	8	5	4	5	1	Every 4 Years or More
Specialty Asset Class Consultant (e.g.private equity, real estate)	1	4	4	3	7	6	Every 4 Years or More
External Legal Counsel	6	3	-	2	12	2	Every 4 Years or More

TABLE 49: SERVICE PROVIDER EVALUATION METHODS

Evaluation methods include:	Peer Group Practice				Arizona SRS Practice
	Actuary	Auditor	Custodian	Investment Consultant	
Evaluation of the vendor through an informal discussion with the service provider	13	13	17	15	All
Board/staff evaluation of the service provider subjectively using satisfaction surveys or similar tools	6	7	10	8	
Board/staff evaluation of the service provider against objective benchmarks/criteria	1	2	4	5	
Retaining a third party to evaluate the service provider on behalf of the System and provide a report	9	1	1	3	Actuary

TABLE 50: POLICY ON USE OF RFP's

System's policy:	Peer Group Policy				Arizona SRS Policy
	Actuary	Auditor	Custodian	Investment Consultant	
Required to issue an RFP with a set frequency regardless of satisfaction with service provider	14	12	17	14	All
Issue an RFP when deemed necessary	14	9	13	14	

CORTEX ASSESSMENT: ARIZONA SRS
SERVICE PROVIDER PERFORMANCE EVALUATION

1) *Arizona SRS is consistent with published standards in that it formally evaluates key service providers, such as the actuary, auditor, custodian, and investment consultant.*

2) *Arizona SRS is generally consistent with the peer group in that its methods for evaluating performance include informal discussions with service providers and periodically issuing an RFP for key services (e.g., actuary, auditor, custodian, etc.). One minor difference, however, was that a majority of peer group members reported evaluating key service providers at least every 2-3 years, whereas Arizona SRS indicated it does so every 4 years or more.*

Issue(s) to Consider

In light of peer group practices, Arizona SRS may wish to reconsider the frequency with which it evaluates its key service providers, and greater use of objective criteria where possible.

12. Member Communications and Service Quality Measurement

Published Standards

Published standards recommend that systems establish written policies for communicating with plan members, beneficiaries, and other stakeholders; as well as processes to allow plan members to raise any concerns and have them addressed.[16] Best practices also suggest that retirement systems establish mechanisms for regularly evaluating the quality of the services they provide to plan members.

Peer Group Practices

A majority of peer group members are consistent with the published standards and best practices as described above:

- A majority of the peer group reported having established a member communications policy or written communications plan, or both.
- Most peer group members have established a process to enable plan members to raise concerns and have them addressed. In most cases, such processes are communicated to members in a member handbook or on the system's web-site.
- All peer group members reported evaluating member service quality; the most common evaluation methods include the use of satisfaction surveys and tracking members' complaints and compliments. The approaches taken to conducting member satisfaction surveys vary widely.

The tables on the following pages provide additional detail.

[16] *CAPSA Governance Guidelines*, Principle #9, page 8.

TABLE 51: USE OF COMMUNICATION POLICIES AND PLANS		
	Peer Group Practice	**Arizona SRS Practice**
The system has established a written **communications policy** addressing communications with plan members and other stakeholdes	15	Yes
The system periodically prepares a written **communications plan**, which is:		
A stand-alone plan	8	✓
Incorporated into the business or strategic plan	9	
The system **does not** periodically prepare a written **communications plan**.	8	

TABLE 52: IDENTIFICATION OF PLAN MEMBER CONCERNS		
	Peer Group Practice	**Arizona SRS Practice**
A process has been established to enable Plan members to raise concerns and have concerns addressed quickly	22	Yes
This process is set out:		
In the System's plan member handbook	10	✓
On the System's website	15	✓
The process has been communicated in a different manner	10	✓
The System does not communicate this process in writing	6	

TABLE 53: EVALUATION OF MEMBER SERVICE QUALITY		
	Peer Group Practice	**Arizona SRS Practice**
Approach to evaluating service quality:		
We compare service level statistics (e.g. telephone response times or the time to complete an estimate) to internally developed targets or benchmarks	13	✓
We compare our service level statistics to those of a peer group	10	✓
We track service level statistics, but do not compare them to pre-determined standards or benchmarks	6	
We evaluate our service quality by monitoring the number of complaints/compliments received from members	18	✓
We administer member satisfaction surveys	18	✓
We do not evaluate member service quality	-	
Other (Note 1)	2	

Note 1: Other methods for assessing member service quality include:

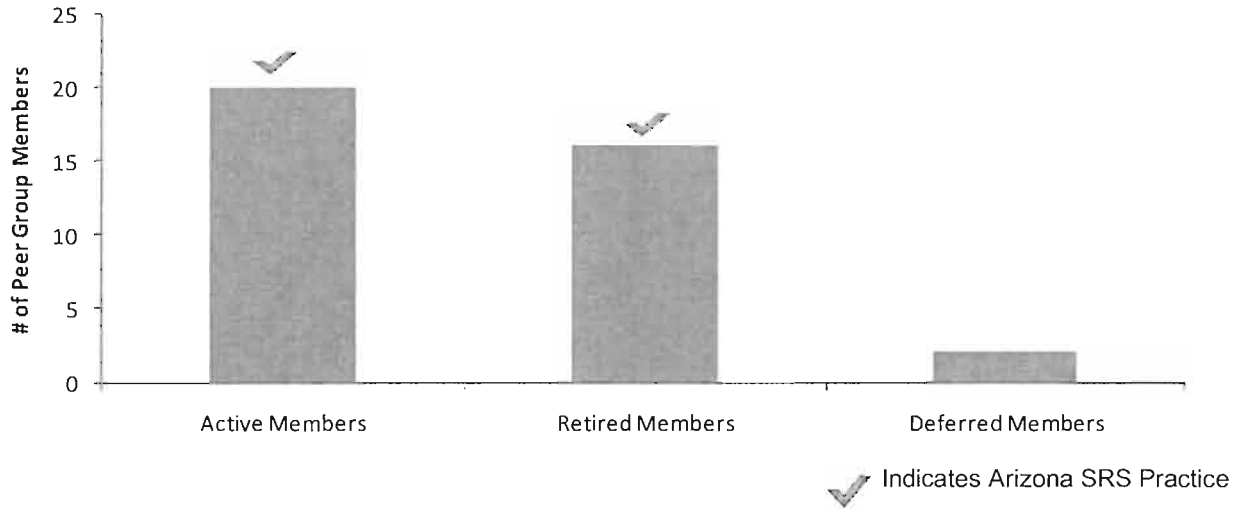
- We have a communications team that has a goal of meeting with all of our members at their places of work at least once every two years. We get personal feedback from this process.
- We are using the Cost Effectiveness Measurement (CEM) study for the first time this year.

TABLE 54: MEMBER SATISFACTION SURVEYS		
	Peer Group Practice	**Arizona SRS Practice**
Member satisfaction survey practices:		
We survey some or all members soon after we provide them with one-on-one counselling	17	✓
We survey some or all members who visit our website	10	✓
We survey some or all members who attend our retirement seminars	17	✓
We hire a third party to survey some or all of our members by telephone or by mail	7	
We conduct telephone or mail surveys of our members using internal resources	13	✓
We are currently developing a member service quality survey process	1	
Other (Note 1)	4	
Not applicable; we do not conduct member satisfaction surveys	4	

Note 1: Other practices identified with regards to member satisfaction surveys:

- All members (active, retired, inactive) are surveyed after completing a service transaction.
- We have a communications team that has a goal of meetings with all of our members at their places of work at least once every two years. We get personal feedback from this process.
- We survey after the retirement claim is processed and first check issued.
- Surveys are not routine.

CHART 3: GROUPS TARGETED BY MEMBER SATISFACTION SURVEYS



CORTEX ASSESSMENT: ARIZONA SRS
MEMBER COMMUNICATIONS AND SERVICE QUALITY MEASUREMENT

1) *Arizona SRS meets the published standards set out above, as it has:*
   - *Established a member communication policy and it prepares written communication plans on a regular basis.*
   - *Established a process for plan members to raise concerns, which it communicates to members via its website, member newsletters, and other methods.*

2) *Arizona SRS's practices meet those of the peer group for the same reasons indicated above. In one respect it exceeds the peer group, as it uses multiple approaches to evaluating member service quality.*

Issue(s) to Consider

None.

13. Public Disclosure

Published Standards

Published standards universally promote full and clear disclosure of relevant information to all stakeholders of a public retirement system. The *Clapman Report*, in particular, contains a detailed listing of plan information it recommends ought to be made publicly available, ideally on the system's website.

Cortex investigated the extent to which various information is in fact disclosed by the peer group, including much of the information proposed by the *Clapman Report*.

Peer Group Practices

In assessing the disclosure practices of the peer group, we considered a number of information items and determined whether or not the peer group members routinely disclose the information in question (typically on their web sites), disclose the information only on request, or do not disclose the information at all. We found a variety of practices among the peer group, which can be summarized as follows:

1. Overall, the peer group was very transparent in that virtually all information items we considered in the survey are either routinely disclosed or made available upon request.

2. 50% or more of the peer group routinely disclose the following information:
   a) Annual financial statements of the system
   b) Actuarial valuation results
   c) Investment policy statement
   d) Investment performance results
   e) Board and board committee meeting minutes
   f) Names of trustees and senior staff
   g) Background of trustees
   h) Names of key consultants and advisors
   i) Breakdown of consultant and advisor fees

3. A majority of the systems **do not** routinely disclose its ethics policies (conflicts of interest, code of conduct, etc.) or other governance policies (e.g., board and committee mandates, board education policy, board self-evaluation policy).

The following table contains additional details.

TABLE 55: PUBLIC DISCLOSURE OF INFORMATION					
	Peer Group Practice				Arizona SRS Practice
	Routinely Disseminated (i.e., website or annual report)	Available Upon Request	Not Made Available	Not Applicable	
Annual financial statements of the Plan/Fund	25	-	-	-	Routinely Provided
Actuarial valuation results	22	3	-	-	Routinely Provided
Investment policy	16	9	-	-	Routinely Provided
Investment performance results	22	3	-	-	Routinely Provided
Board meeting minutes	22	3	-	-	Routinely Provided
Board committee meeting minutes	18	4	-	3	Routinely Provided
Names of trustees and senior staff	25	-	-	-	Routinely Provided
Background of trustees (professional and educational qualifications)	19	5	-	1	Routinely Provided
Board and committee mandates	12	11	1	1	Available Upon Request
Board education policy	8	14	-	3	Available Upon Request
Board self-evaluation policy	3	11	1	10	Available Upon Request
Conflict of interest policy and/or code of conduct	11	14	-	-	Available Upon Request
Names of key advisors (e.g., actuary, auditor, investment consultant)	22	3	-	-	Routinely Provided
Breakdown of consultant/advisor fees	20	4	1	-	Routinely Provided

Note 1: Although not covered in our study, two peer group members indicated that they broadcast board meetings live via their website.

Additional Disclosure practices recommended by the Clapman Report

The Clapman Report also recommends that systems **verify and publicly disclose compliance** with certain external standards and internal policies. The table below shows the extent to which peer group members are consistent with the Clapman Report recommendations. Only a minority of peer group members reported verifying and publicly disclosing all the information recommended by the Clapman Report.

TABLE 56: COMPLIANCE REPORTING AND DISCLOSURES RECOMMENDED BY THE CLAPMAN REPORT

Compliance with:	Peer Group Practice	Arizona SRS Practice
Regulatory requirements (SEC, CFTC, state agencies, etc.)	10	
The fund's own governance standards, policies and procedures	10	✓
The fund's Code of Conduct and Conflict of Interest policies	7	
Standards governing the reporting of performance and, where applicable, funded status of defined benefit plans	21	✓
Rules governing gathering and retaining appropriate records and documents	5	
Rules governing personal investment transactions	7	
The suitability of all investments made by the fund in the current or previous year given the fund's fiduciary standard, investment objectives, and investment policies	12	

CORTEX ASSESSMENT: ARIZONA SRS
PUBLIC DISCLOSURE

1) *Arizona SRS clearly has a policy of transparency and disclosure, as evidenced by the information in Table 55. It also meets some of the verification and disclosure requirements set out by the Clapman Report (see Table 56). The two following exceptions, however, were noted:*
   - *It does not routinely disclose board and committee mandates or the system's ethics policies, as recommended by the Clapman Report.*
   - *It does not publicly disclose all the items recommended by the Clapman Report and noted in table 56 above (although neither does a majority of the peer group).*

2) *Arizona SRS's practices are generally consistent with the peer group.*

Issue(s) to Consider

Arizona SRS should consider making board and committee mandates and the system's ethics policies available on its website. It may also wish to review the feasibility and practicality of disclosing compliance with other external standards and internal policies as proposed by the Clapman Report (see Table 56 for details.)

14. Internal Reporting Practices

Published Standards

Published standards are unanimous in recommending that boards and staff be provided ongoing reporting on the performance of the system and on compliance with policies, rules, and legislation. They do not, however, specify details of such reporting; e.g. frequency.

Cortex asked the peer group members to identify the various reports that are provided to the board, board committees, and staff in the areas of investments, benefit administration, and compliance, along with the frequency of each.

Peer Group Practices

The reporting practices of the peer group vary considerably. Some general findings are as follows:

- For almost all reports, staff typically receives more frequent reporting than do the boards. This is to be expected and reflects good practice.
- Most boards receive reports on all the topics we identified (at least annually); a number of boards, however, do not receive reporting on the following:
    - member service quality as measured against benchmarks
    - member satisfaction levels (e.g., satisfaction survey results)
    - compliance with governing legislation and tax legislation
    - compliance with administrative policies
    - compliance with board and staff travel policies.
    - trading and execution costs
    - proxy voting
    - benefit administration cost effectiveness

The tables on the following two pages show the frequency of reporting to boards (or board committees) and to staff for each report covered by our survey. The shaded areas represent the practices of Arizona SRS.

TABLE 57: FREQUENCY OF REPORTING TO BOARD & STAFF

	Peer Group Practice									
	Board & Board Committees					Staff				
Report Topics:	At Least Monthly	Quarterly	Semi-annually	Annually	Not Provided	At Least Monthly	Quarterly	Semi-annually	Annually	Not Provided
Investments										
Investment performance - total fund	11	**14**	-	-	-	22	**3**	-	-	-
Investment manager performance	**11**	14	-	-	-	**25**	-	-	-	-
Investment management and advisory fees	**6**	7	1	10	1	**14**	11	-	-	-
Trading and execution costs	3	3	-	10	**9**	6	10	-	**4**	5
Proxy voting	1	3	-	**13**	8	5	**9**	-	8	3
Benefit Administration										
Member service statistics (e.g. number of retirements processed)	**11**	8	1	3	2	**20**	3	-	2	-
Member service quality relative to benchmarks	**4**	4	-	6	11	**15**	1	-	-	9
Benefit administration cost effectiveness	1	2	-	**13**	9	4	3	-	**10**	8
Member communication activities	9	8	3	**3**	2	**20**	2	1	-	2
Member satisfaction levels	1	**3**	2	7	12	7	**3**	4	1	10

Please note: The shaded areas in the table above represent Arizona SRS practice.

TABLE 57 (CONT'D): FREQUENCY OF REPORTING TO BOARD & STAFF

	Peer Group Practice									
	Board & Board Committees					Staff				
Report Topics:	At Least Monthly	Quarterly	Semi-annually	Annually	Not Provided	At Least Monthly	Quarterly	Semi-annually	Annually	Not Provided
Compliance										
Compliance with investment policies	4	10	-	6	5	16	4	-	1	4
Compliance with pension administration policies	1	2	-	11	11	13	-	-	5	7
Compliance with governing legislation	2	4	-	8	11	12	1	-	4	8
Compliance with tax legislation	1	-	1	8	15	10	-	1	5	9
Compliance with operating budget (budget compliance report)	9	6	4	5	1	18	1	2	3	1
Compliance with board travel policy	5	2	3	6	9	8	1	1	5	10
Compliance with staff travel	3	2	1	4	15	10	1	1	4	9
Other										
Strategic/business plan status reports	-	5	3	15	2	-	5	4	12	4
Internal audit (or operational audit) reports (Note 1)	3	7	1	8	6	5	6	2	5	7

Note 1: Reports prepared by internal audit personnel or external auditors.

Please note: The shaded areas in the table above represent Arizona SRS practice.

CORTEX ASSESSMENT: ARIZONA SRS
INTERNAL REPORTING PRACTICES

1) *Arizona SRS's reporting practices are generally consistent with published standards as the board receives reporting in all key areas (i.e., investments, benefit administration, compliance etc.).*

2) *Arizona SRS exceeds the peer group in some respects, in that the board receives relatively more frequent reporting on the following:*
   - *Investment manager performance*
   - *Investment management and advisory fees*
   - *Member service quality and satisfaction levels*
   - *Investment policy compliance*
   - *Internal audit activities*

3) *Arizona SRS falls short of the peer group, however, in that the* ***board*** *does not receive reporting on the following topics (whereas a majority of peer group does):*
   - *Trading and execution costs*
   - *Compliance with governing legislation*

Issue(s) to Consider

Arizona SRS may wish to consider providing annual reporting to the Board on trading and execution costs and compliance with governing legislation.

15. Governance Reviews

Published Standards

Both the *CAPSA Governance Guidelines* and the *OECD Governance Guidelines* recommend that governing boards should evaluate their governance practices and their own performance, though they do not provide details concerning suggested approaches.

Cortex believes that boards should take multiple approaches to reviewing their governance programs. Elements of such an approach may include:

- Periodically reviewing internal documentation describing the roles and responsibilities of key parties in the governance process.
- Periodically reviewing compliance with, and the continued appropriateness of, any governance policies the board has established to guide how the board conducts its affairs and makes decisions.
- Periodically conducting a self-assessment of the board's own performance
- Periodically reviewing the board's governance practices (e.g. education, planning, decision-making, travel, monitoring practices).
- Periodically reviewing the board's committee structure.
- Use of a third party to conduct or facilitate the review, as appropriate.

Peer Group Practices

Most peer group members undertake some form of governance review or evaluation.[17] The most common elements of a governance review include:

- Reviewing the appropriateness of governance policies;
- Reviewing the board's committee structure; and
- Reviewing the clarity and appropriateness of roles and responsibilities.

Most governance reviews are conducted internally, although 12 systems retained third-parties to conduct governance reviews, and three systems had their governance structures reviewed by the plan sponsor.

Just over half of the peer group boards evaluated their own performance (i.e. self-evaluate), a practice recommended by published standards.

[17] Three systems reported not undertaking any form of governance review (the Cortex Fiduciary Benchmarking Study notwithstanding). In the case of two of these systems, however, the plan sponsor instead commissions such reviews.

TABLE 58: APPROACHES TO EVALUATING GOVERNANCE		
	Peer Group Practice	**Arizona SRS Practice**
The System annually receives:		
A report or summary of board member attendance	7	
A summary of key governance-related activities undertaken by staff and the board during the year	9	✓
A report on compliance with board, board committee and/or staff mandates or terms of reference	10	✓
The Board periodically:		
Reviews the continued appropriateness of its governance policies	20	✓
Reviews its committee structure	16	✓
Reviews the clarity and appropriateness of roles and responsibilities of the key decision making bodies	16	✓
Retains an independent party to review some or all of the above	12	
Board does not formally review its board governance program, structure, or practices	3	
The Plan sponsor periodically reviews some or all of the above	3	

TABLE 59: BOARD SELF-EVALUATIONS		
	Peer Group Practice	**Arizona SRS Practice**
The board evaluates its own performance:		
At least annually	11	✓
At least every three years	1	
No set frequency/as necessary	1	
The Board does not formally evaluate its own performance	12	
The board evaluates trustee skills and interests to gauge the board's ability to execute its fiduciary obligations (recommended by the Clapman Report):		
Yes	-	
No	25	✓

CORTEX ASSESSMENT: ARIZONA SRS
GOVERNANCE REVIEWS

1) *Arizona SRS's practices are consistent with published standards in that the board regularly evaluates:*
   - *The continued appropriateness of its governance policies.*
   - *The clarity and appropriateness of roles and responsibilities.*
   - *The appropriateness of its committee structure.*
   - *Its own performance annually.*

2) *Arizona SRS is consistent with the practices of the peer group. In some respects it exceeds peer group practice in that it receives the following governance reports annually:*
   - *A summary of key governance-related activities undertaken by staff and the board during the year; and*
   - *A report on compliance with board, board committee and staff mandates or terms of reference.*

Issue(s) to Consider

None.

This concludes the Fiduciary Benchmarking Study Report.

For any questions or comments in connection with this Report, please contact Cortex Applied Research Inc. Our contact information is provided below.

Tom Iannucci, President	Tel: (416) 967-0252 ext. 223 tiannucci@cortexconsulting.com
Michael Long, Vice President Study Coordinator	Tel: (416) 967-0252 ext. 233 mlong@cortexconsulting.com
Ryan Lee, Analyst Research and administrative support	Tel: (416) 967-0252 ext. 227 rlee@cortexconsulting.com

ARIZONA STATE RETIREMENT SYSTEM

MANAGEMENT RESPONSE

TO ISSUES FOR CONSIDERATION

IDENTIFIED IN THE CORTEX

2010 FIDUCIARY BENCHMARKING STUDY FOR U.S. PUBLIC RETIREMENT SYSTEMS

ARIZONA STATE RETIREMENT SYSTEM
MANAGEMENT RESPONSE TO ISSUES FOR CONSIDERATION

1ST ISSUE FOR CONSIDERATION:

Governing Authority and Autonomy:

Arizona SRS' plan sponsor maintains significant control over the System; specifically:

- The System's operating budget requires the approval of the sponsor.
- The System must operate in accordance with procurement rules of the plan sponsor.
- The System is subject to certain investment restrictions.
- The plan sponsor appoints the System's legal counsel.

In summary, Arizona SRS falls short of published standards and has somewhat less autonomy than the typical peer group member.

(Overall, Arizona SRS appears to face somewhat greater constraints than other systems in the peer group. Such constraints are also inconsistent with published standards.)

Issue(s) to Consider

Arizona SRS should monitor the issues of autonomy and independence relative to its plan sponsor to ensure that it is positioned at all times to effectively carry out its fiduciary duties.

ASRS Management Response:

The External Affairs Committee (EAC) has discussed whether the ASRS should request that the Legislature grant the Board the authority to approve the agency's operating budget.

The EAC has also discussed whether the ASRS should seek a full statutory exemption from state procurement rules, particularly in the area of investments.

Neither of these discussions has ever been formally proposed as legislation due to the possible political perceptions associated with such a request.

The ASRS has in the past recommended and received some changes to statutes related to investment management that have improved the governance of the investment program, although not a full exemption from the procurement rules. Some of the recommended modifications were substantially implemented in 2012.

With respect to legal counsel, prior discussions have occurred at the Board and staff level where Trust Fund priorities may not be fully aligned with State priorities.

2ND ISSUE FOR CONSIDERATION:

Documentation of Roles:

1) Arizona SRS is generally consistent with published standards in that it has documented the roles of most of the key parties addressed in our research.
2) Arizona SRS' practices are generally consistent with the peer group.

Issue(s) to Consider

Arizona SRS may wish to consider documenting the roles and responsibilities of the chief investment officer and the chief legal counsel in a formal document, such as a mandate or terms of reference. The documents should also establish their reporting

relationship to the executive director and to the board, if applicable. A majority of the peer group reported having documented the roles of these positions.

ASRS Management Response:

The Chief Investment Officer's (CIO) roles and responsibilities are formally documented in the CIO's position description questionnaire. In addition, the CIO meets with the Director regularly to discuss current strategic priorities and responsibilities. The CIO reports to the Director, and therefore does not have roles and responsibilities outlined in the ASRS Governance Handbook.

The chief legal counsel (Assistant Attorney General) for the ASRS reports to the Attorney General's Office and therefore does not have roles and responsibilities outlined on the ASRS Governance Handbook. Although the Assistant Attorney General does not report to the Director, they do work with the Director to set objectives and discuss strategic priorities.

3RD ISSUE FOR CONSIDERATION:

Delineation of Responsibilities:

1) With respect to allocation of responsibilities, Arizona SRS is generally consistent with published standards. The Board appears to be focused on policy matters and delegates operational matters to senior management.
2) Arizona SRS is also generally consistent with the practices of the peer group. We noted the System's unique approach to selecting investment consultants and managers:
   - Manager selection and commitment decisions are made by a special committee composed of board members, management, and the investment consultant.
   - The board and management each may appoint their own investment consultants.

Issue(s) to Consider

Arizona SRS may wish to consider opportunities for greater delegation to staff in connection with the selection of investment managers and general partners. This authority currently resides with a special committee comprised of board members, staff, and the general investment consultant.

ASRS Management Response:

Staff concurs. Further discussion of this issue is contained in the Cortex report (attachment #4) of the ASRS investment management program, which was presented to the Investment Committee in September 2012.

4TH ISSUE FOR CONSIDERATION:

Policy Frameworks:

1) Arizona SRS' policy framework is generally consistent with published standards and those of the peer group. Its framework is relatively comprehensive, especially with respect to governance and member service/administration. It has 26 of the 35 policies that were covered in our survey, and has procedures in four of the five areas covered in our survey. Some gaps, however, include the following policies and procedures, which a majority of the peer group has in place:
   - Use of derivatives
   - Currency hedging
   - Actuarial procedures

Arizona SRS does not have a whistle blower protection policy, which we view as a best practice, despite the fact that less than half of the peer group reported having such a policy in place.

2) Arizona SRS exceeds the peer group and best practice in that it reviews its governance policies annually.

Issue(s) to Consider

Arizona SRS may wish to consider the need for developing the following additional policies or procedures:

1. Use of derivatives;
2. Currency hedging;
3. Whistle blower policy; and
4. Actuarial procedures.

ASRS Management Response:

The ASRS has internal policies and procedures related to derivatives and currency hedging which are contained in the Investment Policy Statement, and Letters of Direction and Clarification, and other related investment manager documents.

The ASRS has an internal Fraud Policy that covers the topic of whistle blowers. This Fraud Policy notes the Director or the Board may receive reports of fraud, but the ASRS Internal Auditor is the responsible position. The Board may wish to discuss whether it is appropriate to add the Fraud Policy to the ASRS Board Governance Policy Handbook, possibly in the Operations Committee Charter. In addition, consideration should be given to adding a subtitle, "whistle blower."

The ASRS Board Governance Policy Handbook notes new Trustees are to be provided a review of general actuarial funding terminology and principles and the most recent actuarial reports. It also notes the Board has the following responsibilities:

- *Approve the selection, and termination, and oversee the performance of the consulting actuaries and actuarial auditors.*
- *Establish actuarial funding methods and assumptions, benefit option factors, and an asset valuation method consistent with state law.*
- *Conduct an annual actuarial valuation of the ASRS liabilities and submit the results to the Governor and the state legislature as required by state law.*
- *Conduct an actuarial experience investigation study every five years.*
- *Conduct an independent third-party audit of the actuarial funding of the ASRS benefits every five years.*

The ASRS Board Governance Policy Handbook notes the Director has the following responsibilities:

- *Assist the Board in soliciting and selecting the consulting actuaries and actuarial auditors*
- *Approve all contract extensions, including the consulting actuaries and actuarial auditors*
- *Assist the Board in reviewing and adopting actuarial assumptions, funding methods, benefit option factors and actuarial valuation methods for the ASRS.*
- *Initiate the annual actuarial valuations, periodic actuarial experience studies and independent actuarial audits as required by state law or Board*
- *Develop and deliver all operational and actuarial reports to the Governor and state legislature as required by state law after approval by the Board.*

This is sufficient, and there is no need to add actuarial procedures to the ASRS Board Governance Policy Handbook since the consulting actuaries are expected to follow best practices and are audited every five years.

5TH ISSUE FOR CONSIDERATION:

Ethics Policies:

1) With some exceptions, Arizona SRS' ethics policy meets published standards. Arizona SRS' ethics policies, however, do not explicitly address:
   - The requirement to record board member conflicts in meeting minutes;
   - Rules regarding the solicitation of campaign or charitable donations;
   - Trading rules covering board and staff members involved in the investment function, e.g. disclosure of trades, no-trade lists, etc.
2) Arizona SRS' ethics policies were generally consistent with the peer group, as it had 15 of the 21 ethics policy requirements covered in the survey (the peer group average was also 15). However, it was lacking some of the more common policy provisions noted in item (1) above.
3) Arizona SRS requires staff to formally acknowledge acceptance of the ethics policy, but does not require board members to do so (though board members are required to annually review the policy).
4) Arizona SRS also differs from the peer group in the following respects:
   - It is one of only a few systems that has a "zero tolerance" gifts policy.
   - Neither board policy nor legislation requires board members or staff to submit personal financial statements (approximately 80% of the peer group are required to make such disclosures).

The report notes additional items for board members to consider:

- Upon being appointed a fiduciary, sign a declaration acknowledging receipt of the Ethics Policies
- Annually sign a declaration confirming compliance with the Ethics Policies over the previous 12-month period

Also, the report notes additional items for staff to consider:

- Restrictions or rules concerning employment or contracting with former trustees and staff; (e.g., hiring board members as staff, former staff members as consultants, etc.)

Issue(s) to Consider

- Arizona SRS may wish to consider the need for expanding its ethics policies to address some or all of the gaps identified above.

ASRS Management Response:

Recording of Conflicts in Board minutes: Arizona statutes do not require conflicts to be recorded in the minutes. Trustees recuse themselves from voting on an issue if they believe there is a conflict.

Solicitation of campaign or charitable donations: The Board may wish to consider whether it is appropriate to add the following language to the ASRS Board Governance Policy Handbook:

- *Though Staff are free to make contributions to a political campaign of a trustee or to any charitable organization associated with or supported by a trustee, trustees shall refrain from soliciting campaign or charitable contributions from ASRS staff.*
- *Trustees understand and acknowledge that in accordance with the Securities and Exchange Commission's Rule 206(4)-5, investment advisors that make campaign contributions, above specified de minimis amounts, to certain government officials shall be prohibited from providing compensated services to the ASRS for a period of two years, and that such investment advisors are required to disclose such contributions to the Securities and Exchange Commission.*
- *Trustees shall disclose if they have knowingly requested or accepted any Gift, charitable donation, or campaign contribution from any ASRS service provider. Such disclosure shall be made annually in the Conflict of Interest and Compliance Questionnaire, or sooner, to the Board if circumstances warrant it.*

Trading Rules: Personal Securities Trading and Investment Management Division Ethics, Code of Ethics and Conduct Policies are signed by ASRS investment staff.

Trustee Ethics Policies
The agency currently has a Governance Program in place that adequately promotes appropriate ethics and values.

As outlined in A.R.S. § 38-231, trustees are required to sign a loyalty office of office when they are appointed to a board or commission, and trustees are also asked to sign the Loyalty Oath that State Employees are required to sign when they begin employment with the ASRS as a trustee (A.R.S. § 38-231), but are not required to annually reaffirm their understanding of their fiduciary responsibilities in writing.

Trustees could discuss as part of the annual governance review or as part of their annual self-evaluation whether to expand its ethics policies to include:

- *Whether Trustees should be required to sign a declaration acknowledging receipt of the Ethics Policies when they are appointed as a fiduciary*
- *Whether Trustees should annually reaffirm their understanding of their fiduciary responsibilities*
- *Whether Trustees should adopt a "zero tolerance" gifts and gratuities policy similar to the one outlined by staff*
- *Whether Trustees be required to submit of personal financial statements*
- *Whether rules should be adopted by trustees concerning employment or contracting with former trustees and staff.*

6TH ISSUE FOR CONSIDERATION:

Board Education:

1) Arizona SRS' board education practices are generally consistent with best practice.
2) Arizona SRS' practices are also generally consistent with those of the peer group, with the following exceptions:
   - The board does not hold a dedicated annual educational session; (it did, however, provide more than two days of in-house training throughout the year).

- The average education budget for each trustee is significantly less than the peer group average ($1,000 v. $3,268)

Issue(s) to Consider

Arizona SRS may wish to reconsider its trustee education budget, in light of peer group practice. Arizona SRS may also wish to consider instituting an educational needs assessment for its trustees; this is an emerging practice we noted among the peer group.

ASRS Management Response:

Currently, staff provides new trustees with an orientation on the ASRS. Additionally, trustees may request at any time that staff provide, or arrange, for them to receive more information regarding a topic of interest. These requests, depending on the preference of the trustee, could, and do result in staff providing a trustee with written materials on a topic, arranging for staff to provide a one-on-one presentation or make a presentation at a future board meeting, or arranging for a third-party (consultant, subject matter expert, etc.) to make a presentation.

Staff provides in-house educational presentations to trustees each year. In addition, staff provides trustees with information about conferences related to public pensions and leaves it to the trustee's discretion whether they would like to attend.

7TH ISSUE FOR CONSIDERATION:

Service Provider Performance Evaluation:

1) Arizona SRS is consistent with published standards in that it formally evaluates key service providers, such as the actuary, auditor, custodian, and investment consultant.
2) Arizona SRS is generally consistent with the peer group in that its methods for evaluating performance include informal discussions with service providers and periodically issuing an RFP for key services (e.g., actuary, auditor, custodian, etc.). One minor difference, however, was that a majority of peer group members reported evaluating key service providers at least every 2-3 years, whereas Arizona SRS indicated it does so every 4 years or more.

Issue(s) to Consider

In light of peer group practices, Arizona SRS may wish to reconsider the frequency with which it evaluates its key service providers, and greater use of objective criteria where possible.

ASRS Management Response:

The Board Governance Handbook assigns responsibility for the selection, termination and oversight of the following external service providers to the Board:

A. *Consulting actuaries and actuarial auditors*
B. *External financial auditor*
C. *General investment consultants*
D. *Third-party administration providers for health and long-term disability*

The actuary, auditor, and investment consultant are formally reviewed during the contract selection process. Informal discussions occur regarding performance as part of the annual

renewal process. The current evaluation tool utilized for third-party administration providers of health insurance and long-term disability is for staff to meet with the vendor each quarter to discuss performance against performance guarantees outlined in the contract.

Staff agrees that developing an evaluation tool and schedule for each of the key service providers that the board is responsible for may be beneficial and recommends that the Board consider whether the Board or Board Committees should conduct periodic performance reviews as part of their general oversight responsibilities.

Staff currently utilizes a scorecard approach to regularly assess the services provided by the custodial bank, which is used by the Financial Services and Investment Management Divisions. The contracts and procurement program is striving towards the use of a scorecard for more of the contracts in place and is hopeful that they can work with users to more uniformly implement this additional level of review and assessment of vendors.

8TH ISSUE FOR CONSIDERATION:

Public Disclosure:

Arizona SRS should consider making board and committee mandates and the system's ethics policies available on its website. It may also wish to review the feasibility and practicality of disclosing compliance with various external standards or internal policies as proposed by the Clapman Report (see Table 56 for details.)

1) Arizona SRS clearly has a policy of transparency and disclosure, as evidenced by the information in Table 55. It also meets some of the verification and disclosure requirements set out by the Clapman Report (see Table 56). The two following exceptions, however, were noted:
   - It does not routinely disclose board and committee mandates or the system's ethics policies, as recommended by the Clapman Report.
   - It does not publicly disclose all the items recommended by the Clapman Report and noted in table 56 above (although neither does a majority of the peer group).
2) Arizona SRS' practices are generally consistent with the peer group.

Issue(s) to Consider

Arizona SRS should consider making board and committee mandates and the system's ethics policies available on its website. It may also wish to review the feasibility and practicality of disclosing compliance with other external standards and internal policies as proposed by the Clapman Report (see Table 56 for details.)

ASRS Management Response:

The ASRS has several policies regarding how we handle information, including the Privacy Policy and Data Classification Policy. Although policies are not currently posted on the ASRS website, all policies are available to the public upon request pursuant to Arizona public records law. The Board Governance Policy Handbook will be posted on the ASRS website after it is approved by the Board.

Internal Reporting:

1) Arizona SRS' reporting practices are generally consistent with published standards as the board receives reporting in all key areas (i.e., investments, benefit administration, compliance etc.).
2) Arizona SRS exceeds the peer group in some respects, in that the board receives relatively more frequent reporting on the following:
   - Investment manager performance
   - Investment management and advisory fees
   - Member service quality and satisfaction levels
   - Investment policy compliance
   - Internal audit activities
3) Arizona SRS falls short of the peer group, however, in that the **board** does not receive reporting on the following topics (whereas a majority of peer group does):
   - Trading and execution costs
   - Compliance with governing legislation

Issue(s) to Consider

Arizona SRS may wish to consider providing annual reporting to the Board on trading and execution costs and compliance with governing legislation.

ASRS Management Response:

ASRS statutes do not require reporting to the Board on trading and execution costs. These costs are reviewed periodically as a non-Board level investment operational matter. These relate to the management of the internally-managed equity and fixed income portfolio and transition which are executed by ASRS Program Managers or external contracted third-party vendors. Trading and execution costs are periodically reviewed by the Chief Investment Officer and discussed with the Director and, as appropriate communicated to the Director's Public Market Committee and Investment Committee by the Chief Investment Officer.

Attachment 3

ARIZONA STATE RETIREMENT SYSTEM

INTERNAL AUDIT

AGENCY GOVERNANCE

APRIL 2012

Submitted to: Arizona State Retirement System Board

APRIZONA STATE RETIREMENT SYSTEM
AGENCY GOVERNANCE
APRIL 2012

The audit of Agency Governance was completed on February 3, 2012.

The audit objectives were to determine whether the ASRS has a current Governance program that:

1. Promotes appropriate ethics and values.
2. Ensures effective organizational performance, management and accountability.
3. Communicates risk and control information.
4. Coordinates the activities of and communicates information among the Board, management and external and internal auditors.

Our review was conducted in accordance with the *International Standards of the Institute of Internal Auditors*. The scope of our audit encompassed the examination and evaluation of the Governance practices utilized by the ASRS Board of Trustees and Management as of December 2011. We performed tests of the processes and structures implemented by the ASRS Board to inform, direct, manage, and monitor the activities of the agency toward the achievement of its objectives. The tests were designed to obtain sufficient, competent, and relevant evidence in order to provide a reasonable basis for our conclusions.

SUMMARY OF FINDINGS:

Based on the results of work performed to meet the audit objectives, the following statements summarize the internal recommendations presented to the ASRS administration with the Internal Recommendations Supplement.

1. **The agency currently has a Governance Program in place that adequately promotes appropriate ethics and values, ensures effective organizational performance, management and accountability, communicates risk and control information and coordinates the activities of and communicates information among the Board, management, and external and internal auditors.**
2. **An Enterprise Risk Management Committee should act as the Agency Risk Officer (RO) in the development and administration of the Agency Risk Assessment document. The Internal Audit Division (IAD) would monitor and report to the Trustees on the completion of the Risk Assessment document.**
3. **The agency should consider having Board members annually sign a document they fully understand and will abide by a Code of Ethics.**
4. **Board members should receive information in a timely manner as to what transpires in committees in which they are not members.**
5. **There is currently no designation of an ASRS Audit (Risk) Committee in the Governance manual.**
6. **Require the Trustees to obtain a minimum amount of Continuing Professional Education in some outside conferences or seminars and to document their attendance at these conferences.**
7. **Within the Governance Handbook, include procedures or reference current state law on how to remove a Trustee who becomes a liability to the Agency.**

APRIZONA STATE RETIREMENT SYSTEM
AGENCY GOVERNANCE
APRIL 2012

BACKGROUND

The ASRS Board, recognizing that a sound governance structure is essential to fulfilling its duties and responsibilities, prepared and adopted a Governance Handbook to establish a framework within which the Board intended to set governance and oversight policy. The Handbook was adopted in January of 2004.

Since January, 2004, the Governance Handbook has gone through eight revisions to improve its processes. The Handbook is reviewed annually at a minimum.

The ASRS Board was established under state law to govern and administer the ASRS. The Board has only those powers and duties that have been delegated to it by the Arizona Legislature. The primary duty of the Board is to act solely for the benefit of members and beneficiaries.

The Board acts as a policy making and governance body that monitors and oversees the actions of the ASRS. The Board delegates the administrative functions to the Director and the ASRS staff, and does not engage in regular day-to-day management functions of the ASRS. It also delegates the hiring and termination of Asset Managers to the (Director's) asset class committees.

The Board has established three permanent committees for overseeing various aspects of the ASRS administration and making recommendations to the full Board. The permanent committees include the Operations Committee, External Affairs Committee and the Investment Committee. Each Committee is comprised of four Trustees who are appointed by the Chair for one-year terms.

DESCRIPTION OF AUDIT WORK PERFORMED

The audit work performed consisted of a review of the current governance structure in accordance with generally accepted standards promulgated by federal legislation (Sarbanes Oxley), federal sentencing guidelines, and the Government Finance Officers Association (GFOA). We obtained and reviewed documentation and interviewed personnel. We performed tests of the existing system to provide sufficient evidence that controls were in place and being monitored.

Some of the tests performed were:

- A review of current Governance Handbook with the last revision in April, 2010.
- A review of the 2012/13 ASRS Risk Assessment.
- A review of current policies and procedures applicable to the Governance processes.
- A review of the Board and Committee minutes for 2011.
- Interviews and discussions with ASRS management and staff.
- Interviews and discussions with investment personnel.

ARIZONA STATE RETIREMENT SYSTEM

INTERNAL AUDIT

AGENCY GOVERNANCE

FINDINGS AND RECOMMENDATIONS

APRIL 2012

Submitted to: Arizona State Retirement System (ASRS) Board

APRIZONA STATE RETIREMENT SYSTEM
AGENCY GOVERNANCE
RECOMMENDATIONS

FINDING 1:

The agency currently has a Governance program in place that adequately:

1. **Promotes appropriate ethics and values.**
2. **Ensures effective organizational performance, management and accountability.**
3. **Communicates risk and control information.**
4. **Coordinates the activities of and communicates information among the board, management and external and internal auditors.**

The Agency handbook contains the Vision statement, Core values, Charters and responsibilities for the board and its committees and oversight functions. It discusses ethics, continuing trustee education and the board and director evaluation process.

The Handbook is reviewed annually as to whether the responsibilities of the Board, its committees, and the director have been met for the past year.

The Agency, in an effort to recognize and mitigate risks, has established a Security Steering Committee (SCC), whose objective is to protect the agency from identity theft, physical threats, account manipulation and financial loss. The committee meets twice a month and discusses risks within the agency and adopts action plans to mitigate the risks identified.

The Agency has a satisfactory governance structure in place which documents the trustees and its designee's duties and responsibilities and establishes a framework in which to set governance and oversight policies.

Recommendation:

None

Management Response:

Management agrees with the conclusions reached in this finding.

FINDING 2:

A Risk Officer (RO), independent of all the divisions, should monitor the Enterprise Risk Management program. The RO would report to the director and the trustees.

The Agency currently has a SSC that seeks to protect the agency from identity theft, physical threats, account manipulation and financial loss. The Deputy Director (DD) also goes by the title of Administrative Head of the Risk Management Program. The core team of the SSC is made up of the direct reports to the DD. The Chief Financial Officer is the Chair of the SSC. The SSC also includes the following subject matter experts (SME):

- A Privacy Officer who reports to Chief Financial Officer of the Financial Services Division (FSD);

- A Financial Security Officer who reports to the Chief Financial Officer of the FSD;
- A Physical Security Officer who reports to the Assistant Director of the Administrative Services Division (ASD);
- An IT Security Officer who reports to the Assistant Director of the Technology Services Division (TSD);
- A Continuity of Operations (COOP) Officer who reports to the Assistant Director of the TSD;
- A Human Resources Manager who reports to the Assistant Director of ASD;
- A Security Coordinator who manages the Management Support Services team and reports to the DD;
- A Risk Management Coordinator (RMC) who works in Strategic Planning (SP) and reports to the SP Manager, who reports to the DD. (She began regularly attending the meetings in August, 2011. In regards to the ASRS Risk Assessment, she prepares the initial document and monitors its progress at its conclusion.)
- A member of the internal audit staff attends each meeting of the SSC but does not participate in voting of issues that affect agency policy decisions.

Additionally,

- The External Affairs Division (EAD) is not represented at these meetings. Risks appear in all of divisions of the agency and all divisions should take part in this exercise;
- The Agency does not currently have a dedicated independent risk manager position for the Investment Management Division. Risk is analyzed by portfolio managers and investment analysts, monitored by the Chief Investment Officer (CIO), and overseen by the director. The CIO and director receive a monthly report on risk elements from State Street, the ASRS custodial bank, based on data and analytics produced by State Street. The report is not included in Investment Committee materials for their meetings;

The SSC made one presentation to the OC in 2010/11. Additionally, the Risk Assessment was brought before the OC at the beginning of the year to discuss changes in the plan and at the end of the year to discuss results (closeout).

Good governance requires constant analysis of Agency and Investment risk; it should be a subject of conversation at committee and board meetings.

The GFOA in their Governance Best Practices state that the board "must develop a comprehensive set of policies and procedures for investing and safeguarding plan assets." These policies and procedures must allow the trustees to monitor whether the policies are fulfilled.

Management is responsible for designing, implementing and maintaining an effective risk management framework to support the business units in the performance of their responsibilities.

APRIZONA STATE RETIREMENT SYSTEM
AGENCY GOVERNANCE
RECOMMENDATIONS

Deloitte Touche, a worldwide provider of auditing and accounting services, in their publication on Risk Committees states that new rules initiated by government regulators are being proposed which require non-bank financial institutions with assets greater than $10 billion to have a Risk Officer who reports to the Audit Committee and the CEO. "The Risk officer (RO) should have appropriate expertise in developing and applying risk management practices and procedures, measuring and identifying risks and monitoring and testing risk controls commensurate with the size and complexity of the organization."

"The RO should ideally have sufficient stature, authority and seniority and be independent from individual business units within the organization"

An RO, independent of the Divisions, should be the risk monitor and an integral part of the risk identification process. The SSC's core team is currently reporting to the director and trustees on risks identified and corrected in the DD's areas of responsibility. The DD should not have authority over the reporting of agency risks. Additionally, the participants of the committee (SMEs) report to assistant directors, who could have the ability to prevent "sensitive control deficiencies" from within their divisions from being reported. Both of these issues are segregation of duty deficiencies.

Recommendation:

The agency should consider changing the name of the Security Steering Committee to the "Enterprise Risk Management Committee" (ERMC) because the participants are reviewing areas (risks) that are not confined to security issues alone. Additionally, the agency should consider;

- An RO, independent of all the divisions, as the monitor of the Enterprise Risk Management program. The RO would report to the director and the trustees;
- EAD should be a participant in this group;
- The RO should be monitoring risks throughout the year as to % of completion and recommending for inclusion into the assessment "new risks" as they occur. The Risk Assessment thus becomes a living document rather than stagnant;
- The results (minutes) of every ERMC meeting should be sent to the director and deputy director;
- Internal Audit will inform the director of anything they feel may have been left out of the results of the meeting; (mitigates segregation of duties issues listed above)
- The Chair of the ERMC team and/or the RO should make a presentation to the OC periodically on the results of the ERMC meetings, including the current status of the Risk Assessment;
- A copy of the State Street Investment Risk report should also be sent by the custodial bank to the RO and additionally should be included in the materials disseminated to the members of the Investment committee;

Management Response:

Management generally agrees with the recommendations contained in this finding. The Security Steering Committee will be renamed the Enterprise Risk Management Committee (EMRC) and the assistant director of the External Affairs Division will be added to the committee. The steering committee will be headed by the ASRS deputy director and the committee's responsibilities will be expanded to encompass all aspects of the agency's administrative risk assessment and risk management program. Risks, threats and control strategies will be reviewed continuously as indicated, and minutes of the meeting will be forwarded to the director. Likewise, the committee will continue the practice of periodically reporting assessments and control strategies to the OC.

Management agrees that an independent Risk Officer (RO) with direct access to the director and trustees should monitor the agency's risk management program and suggests the chief auditor or a designee from within the Internal Audit Division be given this role. The RO will be invited to attend meetings, monitor progress, and make periodic reports to the director, the OC, and the board, as appropriate.

Additionally, a copy of the State Street Investment Risk report will be disseminated as requested by IA.

FINDING 3:

The agency should consider having board members annually sign a document that they fully understand and will abide by a Code of Ethics.

At the current time, trustees are not required to sign a Code of Ethics annually to remind them of their fiduciary responsibilities. All agency personnel sign a code of ethics/conflict of interest statement annually.

The Stanford Institutional Investors Committee on Fund Governance (SIICFG) Best practices state that good governance requires that Board members be aware of a Code of Ethics that addresses;
-**Loyalty**- making decisions in the best interest of system participants and placing those interests above all others.
-**Decision making** in a fair, honest and open manner and shared with other fiduciaries and interested parties to enhance the quality of the systems decision making process.
-**Personal Conduct**-must take all reasonable steps to ensure a full and accurate understanding of the trust, conflicts of interest, financial disclosures, and other ethics related laws that apply to the system. They must conduct their official and personal affairs to ensure that they cannot be improperly influenced in the performance of their duties.
-**Relationships with others**- To foster trust and limit practices that create the appearance of conflicts of interest including restrictions on accepting gifts from business partners, their agents or representatives and payments of finders or incentive fees to third party marketers or consultants for new or increased business.
Conflicts of Interest- voting on issues that advance the trustees personal financial interests
Any action that would bring into question the independence of the board or staff or the propriety of the systems decision making is unacceptable.

The SIICFG also states that "Trustees should periodically affirm and verify compliance with conflict rules, regulatory requirements, and other policies intended to protect against the actuality or appearance of interested transactions and conflicts."

Recommendation:

Because business contacts change all the time, the agency should consider having board members annually sign a document that they fully understand and will abide by a Code of Ethics that includes the categories above.

Management Response:

As outlined in A.R.S. § 38-231, trustees are required to sign a loyalty office of office when they are appointed to a board or commission, and trustees are also asked to sign the Loyalty Oath that State Employees are required to sign when they begin employment with the ASRS as a trustee (A.R.S. § 38-231), but are not required to annually reaffirm their understanding of their fiduciary responsibilities in writing. Staff recommends that trustees discuss whether they wish to add this annual requirement as part of its annual governance review in May 2012.

FINDING 4:

Board members should receive information as to what transpires in committees in which they are not members in a timely manner.

Board members do not receive information as to what transpires in committees in which they are not members. In the Board Charter, page 3 "Duties and Responsibilities" (#16) states that board members obtain periodic updates from board committees. In "Board Committees and Charters," page 15 (#4) Committee Operating Rules "Committees shall report to the board, summarizing activities and recommendations on matters referred to them."

In a poll of other pension plans, all of them responded that the trustees were informed of committee activity at the subsequent board meeting. At ASRS board meetings, the ASRS committee chairs often only announce future dates of committee meetings.

Minutes of committees are available on the ASRS Website but they only appear after the committees have approved them which could occur several months later. A summary of the committee proceedings is not sent to non-committee members.

There is no mention in the charters for the External Affairs Committee or the Investment committee of the responsibilities for oversight and monitoring of the agency risks associated with legislation and investments.

Board members may be unaware of issues and risks identified outside of their committees, or receive the information untimely. Good governance requires that board members be aware of all issues and risks involving the Agency in a timely manner.

Recommendation:

The board should consider how the committees will keep one another and the board itself informed about risk and oversight practices. Board members should be made aware of all committee proceedings in a timely manner either during the subsequent board meeting or after the individual committees have met (mailing minutes of the meeting).

All of the committee charters should contain language that members are aware of and monitor risks associated with the areas that the committees are responsible for

Management Response:

Management agrees with this finding and has already implemented steps to enhance the level of communication of board committee activities to the board. Board committee updates are now scheduled as separate agenda items at each board meeting, with the board committee chair, or Executive Staff member, providing an update to the full board on activities that have occurred at the committee level since the prior board meeting and which topics are scheduled to be discussed at the next board committee meeting. In addition, committee minutes should be circulated to all trustees.

Management will continue to monitor the effectiveness of the communication on board committee activities and make adjustments as necessary or requested by trustees.

FINDING 5:

There is currently no designation of an ASRS Audit (risk) Committee in the Governance Handbook.

The current Operations Committee charter under responsibilities-oversight (f) discusses reviewing/follow-up on internal/external audit plans, conclusions and recommendations; other risk management commitments and compliance with industry audit standards. This bullet point in the charter represents the ASRS commitment to risk, accounting and audit oversight.

The GFOA recommends the establishment of an Audit Committee for the appointment, compensation, retention and oversight of the work of any independent accountants engaged in the preparation or issuing of audit reports or performing other independent audit review or attest services. The written documentation establishing the Audit Committee should prescribe the scope of their responsibilities, the structure and processes.

Deloitte Touche states that proposed legislation will require non-bank institutions which have >$10 billion in assets to have a Risk program that monitors and oversees risk.

The GFOA recommends that at least one member of the Audit Committee have sufficient knowledge of accounting principles and financial statements or experience in auditing financial statements and internal controls of comparable entities.

The GFOA believes that the Audit committee's duties should include:

- Independent review and oversight of the agencies financial reporting processes, internal controls and independent auditors;
- Access to reports of the internal auditors as well as access to annual internal audit work plans;
- An annual report to the governing body of how it has discharged its duties and met its responsibilities. In the committee's report to the governing body, the committee should state that it has discussed the financial statements with management and the independent auditors and believes that they are fairly presented to the extent such determination can be made solely on the basis of such conversations;
- Establishing procedures for the receipt retention and treatment of complaints regarding accounting, internal accounting controls, or auditing matters.

Deloitte Touche suggests the Audit Committee can also act as the Risk Committee and their responsibility could include;

- To oversee risk exposures and risk strategy for broadly defined risks, including market, operational, compliance, legal, property, security, IT and reputational risks.

Recommendation:

The board should consider amending the current OC Charter by removing bullet point (F) and replacing it with the following:
The Operations Committee will also operate as the Audit (Risk) Committee for the agency and will perform the necessary duties of an Audit (Risk) Committee which include.(see bullet points above).

Management Response:

Management agrees with this finding and will recommend that these changes be made when the Board Governance Policy Handbook is discussed at the May 2012, Board meeting.

FINDING 6:

Require the trustees to obtain a minimum amount of Continuing Professional Education (CPE) in some outside conferences or seminars and to document their attendance at these conferences.

There is no mandate to attend CPE conferences or classes for the trustees. They must go through an orientation session at the start of their tenure and they are encouraged to attend CPE, but not required. No records of their CPE are generated yearly.

Several of the trustees, in their daily job outside the ASRS attend conferences related to investments. There is no documentation showing their attendance at these conferences nor is it determined how their attendance at these conferences benefited the ASRS.

Per the Stanford Institutional Investors Forum Committee on fund governance, Best practices "Trustees on a regular basis should obtain education that provides and improves core competencies and that assists them in remaining current with regard to their evolving obligations as fiduciaries."

Trustees may only see what the ASRS is doing and not what the "industry" is doing in regards to Pension matters and oversight.

Additionally, trustees are voting at board meeting on issues outside of their expertise. Being knowledgeable in all aspects of a pension plan is essential in making wise decisions.

As a better evaluation tool in how the board is performing it would benefit the trustees to attend conferences that relate to a wide range of pension plan topics rather than concentrate on one specific topic.

Recommendation:

Require the trustees to obtain a minimum amount of CPE in some outside conferences or seminars and to document their attendance at these conferences. This could be used as an evaluation tool as to the annual performance of the trustees. The CPE should be across a range of pension related areas rather than being limited to specific areas. Conferences that network with other pension plans provide the trustees with a better understanding of how things are done by other pension plans.

Management Response:

Management recommends the board discuss whether the handbook should mandate Continuing Professional Education (CPE) in May 2012, when it is scheduled to discuss possible revisions to the Board Governance Policy Handbook.

Currently, staff provides new trustees with an orientation on the ASRS. Additionally, trustees may request at any time that staff provide, or arrange, for them to receive more information regarding a topic of interest. These requests, depending on the preference of the trustee, could result in staff providing a trustee with written materials on a topic, arranging for staff to provide a one-on-one presentation or make a presentation at a future board meeting, or arranging for a third-party (consultant, subject matter expert, etc.) to make a presentation.

In addition, staff provides trustees with information about conferences related to public pensions and leaves it to the trustee's discretion whether they would like to attend.

FINDING 7:

Within the Board Governance Policy Handbook, include procedures or reference current state law on how to remove a trustee who becomes a liability to the Agency.

There is very little discussion in the Board Governance Policy Handbook as to the possible procedures for removal of a trustee for violating his/her duties, poor behavior, etc. other than the chair discussing the issues with the offending member. No references to state laws regarding this subject appear in the handbook.

There are no procedures in place for removal of a trustee

Recommendation:

Within the Governance Policy Handbook, include procedures or reference current state law (38-291, 38-292, 38-311) on how to remove a trustee who becomes a liability to the Agency.

Management Response:

Trustees are appointed by the Governor and confirmed by the State Senate. Although A.R.S. § 38-291 outlines when an office is deemed to be vacant (death, resignation, failure to attend meetings, failure to discharge duties of the office, change in residency, conviction of a felony, etc.), there are no provisions in Arizona statutes for the ASRS Board to remove an individual trustee.

A trustee is considered a public officer, and can only be removed for the reasons outlined in the impeachment statutes at A.R.S. 38-311 et seq. Impeachment proceedings, were they warranted, would have to be initiated by and occur at the legislature; the ASRS Board has no authority to administer such a proceeding.

The board does not appear to have the authority to remove board members. Management recommends that the board discuss whether the handbook should contain more language on this topic in May 2012, when it is scheduled to discuss possible revisions to the Board Governance Policy Handbook.

Attachment 4

Investment Management Program:
Governance Review & Consultant Utilization Review

Presentation
September 21, 2012

By: Tom Iannucci
Cortex Applied Research Inc.

CORTEX
Applied Research Inc.

CORTEX

Agenda

- Project Objectives
- Good Governance: Background
- Best Practices
  - Procedural criteria
  - Best practices criteria
- Cortex Findings & Recommendations:
  - Positive Findings
  - Strategic Findings
  - Secondary Findings
  - Summary of Recommendations
- Questions & Discussion

Project Objectives

ASRS retained Cortex to:

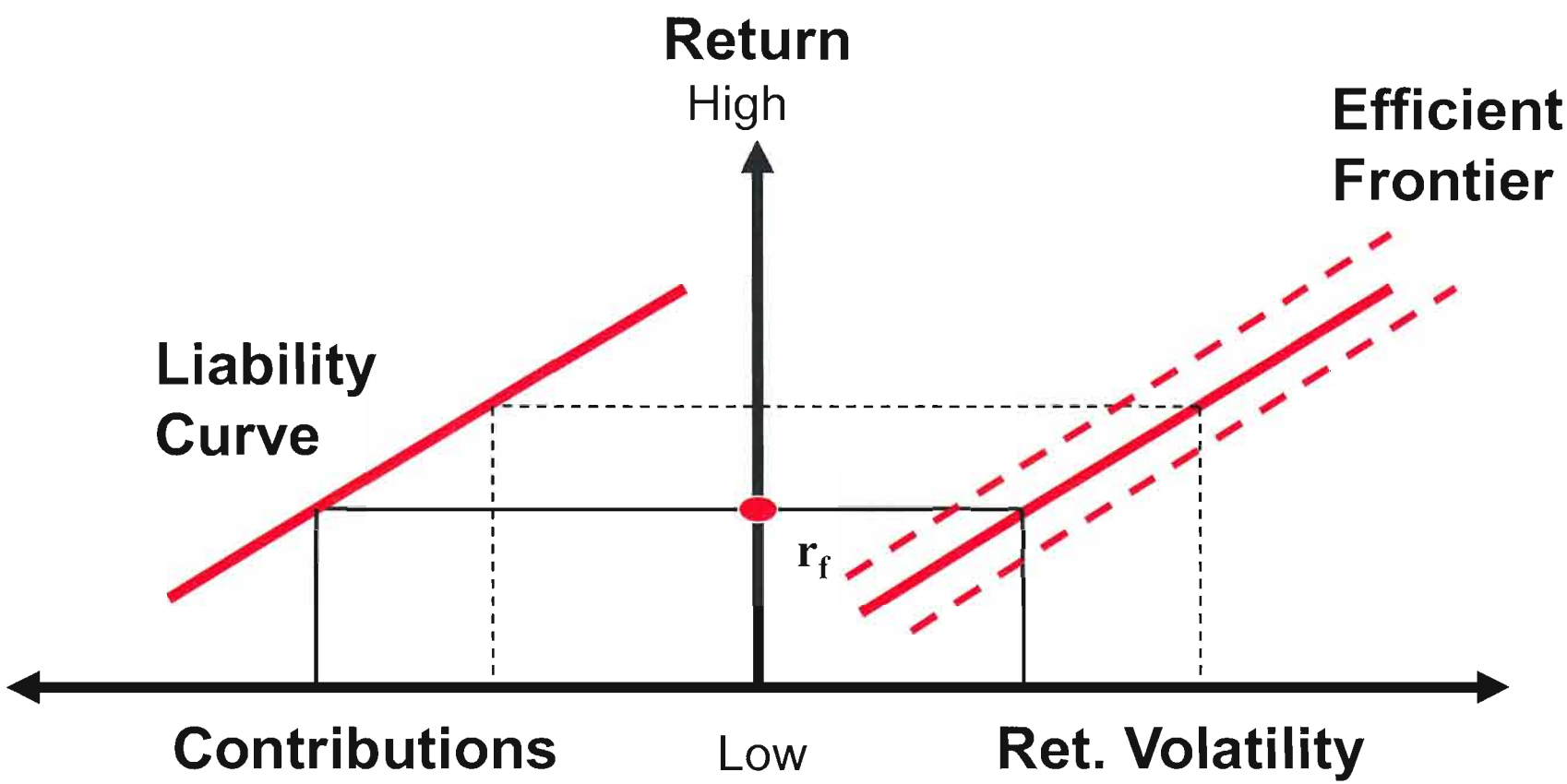
- Review the investment-related governance practices of the System relative to industry *best practices*.
- Identify strengths and weaknesses of ASRS's current governance model.
- Provide recommendations for further improvement.

About Cortex

- A management consulting firm founded in 1991 and specializing in helping public and private sector pension organizations develop and implement best practices concerning governance and decision-making.
- We have worked with almost 200 different pension systems across North America (public sector/ corporate/DB/DC).
- Highly independent with no commercial ties to financial institutions or investment consulting firms.

Good Governance: Background

The Pension Management Business: An Overview



Source: "Managing Risk, Return, and Pension Plan Profitability", John Ilkiw, Canadian Investment Review, Spring 1989

CORTEX Applied Research Inc.

Fiduciary Duties

Loyalty to the interests of the beneficiaries as a group; prudence in managing the beneficiaries' property.

Roles of Board & Staff: An Overview

- Role of the Board is risk management:
  - Define risks and risk tolerance
  - Set policies to manage material risks
  - Establish organizational infrastructure
  - Oversight
- Role of staff is performance maximization:
  - Support the Board through policy analysis
  - Implement policy
  - Maximize performance subject to Board constraints

Good Governance Practices

(A) Important & Not Urgent	(B) Important & Urgent
(C) Not Important & Urgent	(D) Not Important & Not Urgent

Source: Stephen Covey, 7 Habits of Highly Effective People

Linking Investments & Governance

- A successful investment program:
  - is based on a strong philosophy regarding the long-term goals of the program and the long-term behaviour of capital markets.
  - Requires a stable, supportive governing board:
    - Knowledgeable fiduciaries
    - Fortitude to withstand short-term bumps in the investment performance of the fund
    - Confidence to delegate operational matters to staff
    - Ability to design reporting systems for oversight
- Estimated value added by good governance is 100 - 300 bps.

Best Practice Criteria

Governance Review Criteria

Many criteria have evolved in recent years concerning effective pension governance practices

- Procedural/process criteria
- Peer practices
- Best practices criteria

Procedural Criteria – Published Standards

Various bodies around the world have published pension governance guidelines:

- Clapman Report (Stanford Institutional Investors' Forum)
- GFOA Governance Guidelines
- OECD Governance Guidelines
- Model US pension laws (UPIA and UMPERSA)
- CAPSA Guidelines

Published Standards

- Generally cover the following types of issues:
  - Autonomy
  - Roles should be documented
  - Need for written policies
  - Various guidelines concerning the nature of ethics policies
  - Need for board education
  - Need to evaluate the Executive Director
  - Disclosure practices
- With the exception of autonomy and disclosure practices, the guidelines are quite general in nature.
- The published standards are also not typically performance-focused.

Published Standards: Weaknesses

- Relatively more emphasis on the "form" of governance
  - Example: They specify the need to document roles but are silent on substance; i.e. what is the appropriate delineation of roles between the Board, staff, and advisors?
- Relatively more emphasis on ethics and disclosure as opposed to performance and organizational success.
- Susceptible to a "check-the-box" mindset

Best Practices Criteria

Best practice criteria are more performance focused:

- An autonomous & independent organization.
- A professional and knowledgeable board.
- A high-calibre staff that is expected to provide leadership for the investment program.
- Competitive staff compensation.
- A meaningful incentive compensation program.
- Robust organizational infrastructure capable of managing an effective/low-cost inv. program.
- A focus on strategic planning & risk management.
- A recognition of the importance of a sound investment philosophy or beliefs.

Best Practices: Underlying Assumptions

- Accountability for performance requires authority & resources
- Pension investments should be viewed as a business
- The quality of the board is crucial
- Top talent is scarce
- Incentive compensation impacts performance
- One should employ a "build vs. buy" analytical mindset

ASRS Governance Review: Findings & Recommendations

ASRS

- Cortex performed a fiduciary benchmarking analysis for ASRS in 2009 relative to published standards and US public system peers.
- ASRS scored well in our analysis:
  - ASRS was either consistent with or exceeded the published standards and peer practices on most issues.
- ASRS retained Cortex in 2012 to consider the investment governance practices of the System from a *best practices* perspective.

Best Practices Review of ASRS: Summary of Findings

Numerous positive findings including:

1. Comprehensive Board Governance Policy Handbook which is clearly a living document:
   - describes the roles of key parties.
   - Considerable effort to distinctly delineate the roles of the Board and staff
   - Transparency provided by board member representation on ACC
   - Safeguards include ability for board members to elevate an investment decision from an ACC to the Board or IC.
   - Strong reporting that ties investment performance to investment objectives and that includes clear performance attribution.

Positive Findings (cont'd)

2. Strong education program:
   - Sound education policy
   - Good new trustee orientation
   - In-house continuing education
   - Access to external education
   - Strong trustee satisfaction
3. Investment policy includes investment beliefs.
4. Strong commitment to strategic planning.
5. Robust Director performance evaluation process/policy
6. Commitment to regular review of governance policies and practices.

Strategic Findings & Recommendations

- Autonomy
- Delineation of Authority
- Strategic Planning
- Review of Governance Program

Autonomy

1. ASRS currently lacks autonomy over key aspects of its operations:
   - Procurement policy
   - Operating budget
   - Legal services
   - Personnel and compensation

Delineation of Authority

2. There continues to be a lack of clarity in the decision structure, concerning roles of the Board and staff in selecting investment managers.

Current Decision Structure: Key Elements

Board
- Approves Investment Policy
- Appoints General Investment Consultant

Investment Committee
- Recommends Investment Policy
- Recommends appointment of General Investment Consultant

Asset Class Committee
- Authority to select Investment Managers and Asset Class Consultants subject to joint approval of Director and CIO

ACC Composition

Voting Members
- Director, CIO & Investment Staff

Non-Voting Members
- Several Trustees
- Asset Class Consultant

Strengths of Current Structure

a) Recognizes need to distinguish between the roles of the Board and staff in manager selection.
   - Assigns responsibility for manager selection (an operational function) to staff
   - Board and Investment Committee are intended to focus on oversight

b) Designed to be transparent, as several board members serve on ACC in non-voting capacity

c) Designed to ensure multiple sources of expertise and independent perspectives.

Weaknesses of Current Structure

a) Appointment of trustees to the ACC significantly detracts from separation of board & staff roles:

- Rather than overseeing the staff decision process, trustees on the ACC will inevitably influence decisions regarding manager selection, thus diluting staff accountability for the operations of the System.
  - Interview findings were consistent with above.
- Diverts Board attention and focus from *oversight* of the selection process:
  - Understanding and enhancing the selection process and criteria.
  - Monitoring compliance.
  - Assessing performance.

Weaknesses (cont'd)

b) Role of the non-voting consultants on the ACC is also unclear:
   - Extension of staff?
   - Oversight mechanism for the Board?

c) Inclusion of trustees on ACC invariably affects ability to meet when needed, due to scheduling and related issues.

d) The lack of clear accountability and authority over manager selection may impede long-term staff recruitment and retention.

Strategic Planning

a) While ASRS has a well-developed strategic planning process, it does not address the investment program in a meaningful way.

- The Plan only restates the investment objectives contained in the IPS.
- The Plan does not address:
  - The Vision or type of investment organization ASRS wishes to build.
  - The challenges and risks that need to be overcome.
  - The steps or strategies necessary to achieve the Vision.

Governance Review

- We commend ASRS for its commitment to a formal board governance program.
- Our review indicated however that ASRS recently may be revisiting its governance practices more often than necessary, particularly roles in manager selection.

Secondary Findings – Policy Framework

a) Governance policies are contained in multiple documents, which may lead to conflicting policy revisions and formats.

b) Cortex identified gaps in policies:
   - Party responsible for portfolio structure:
     - Number of managers, internal versus internal management, strategic portfolio biases.
   - Party responsible for selecting and appointing third party experts to value real estate investments.

c) Board does not approve risk parameters for securities lending program.

d) Policy provisions concerning communications are set out in various policies.

e) ASRS's whistle-blower practices are not set out in a governance policy.

Secondary Findings – Policy Framework
(cont'd)

f) Investment Policy Statement coverage on use of leverage/derivatives or currency management could be expanded.

g) Current policy does not require staff to provide the Board with reporting on investment transaction costs.

h) Possible conflicting policy language regarding responsibility for selecting investment consultants.

i) Director Evaluation Policy does not reflect current practice of obtaining input into the evaluation from sources other than board members.

Summary of Recommendations

1. Expand strategic planning process to more directly address the investment program and set out a vision for the investment program:
   - Autonomy from plan sponsor
   - Investment personnel
   - Compensation
   - Use of consultants
2. Modify roles and responsibilities concerning manager selection to further clarify staff responsibility for selection decisions and a clearer Board focus on oversight:
   - Trustees no longer to serve on ACCs.
   - ACC investment consultants should be clearly designated as staff-extension consultants.
   - Implement additional safeguards noted in main Report to ensure prudent delegation of authority for manager selection to staff by the Board.

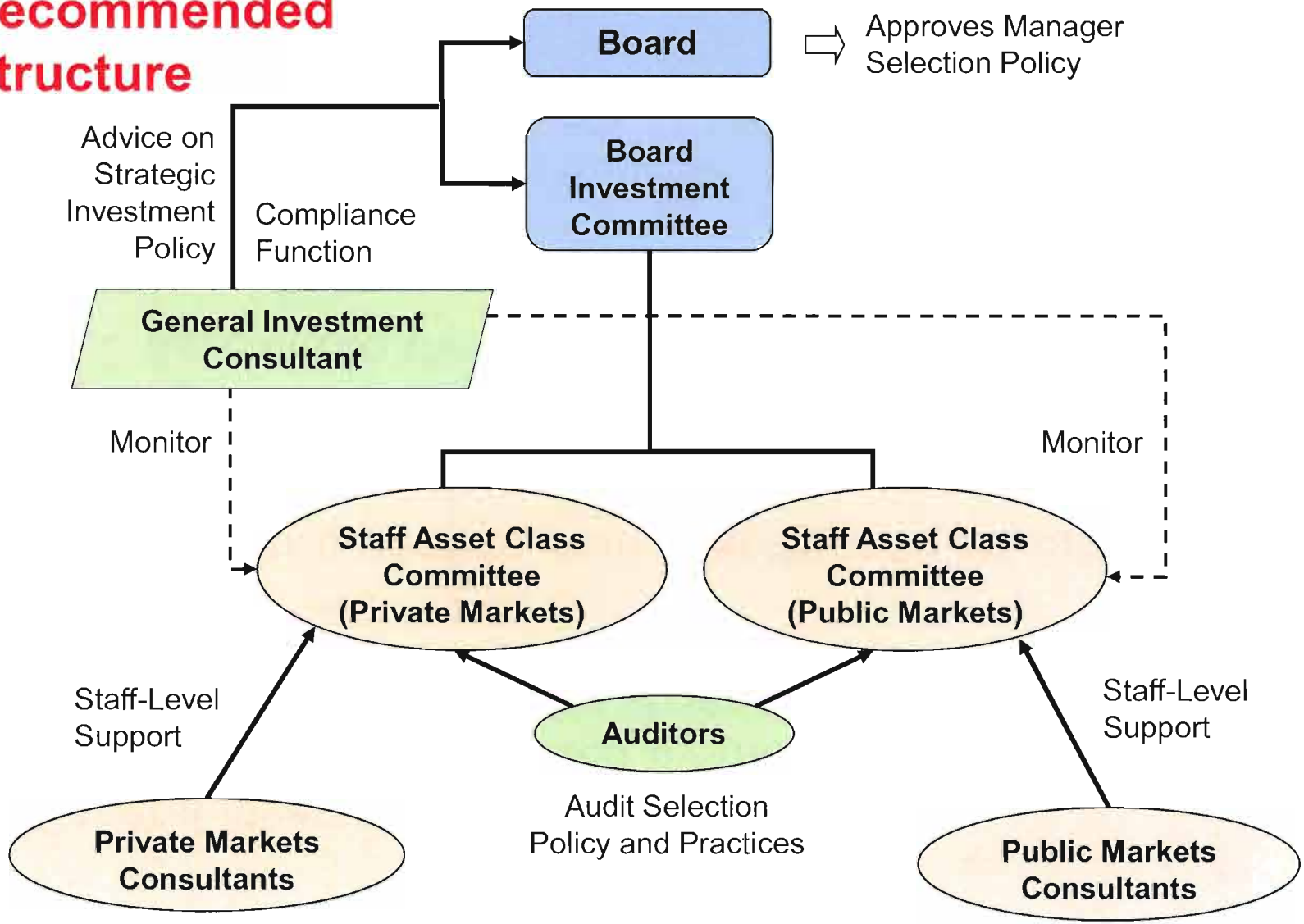
Key Safeguards

- ACC must prepare manager selection and termination policies.
- Board must approve above policies, periodically review them.
- Above policies would be subject to periodic audits by expert third-party(ies).
- IC and the Board to confirm compliance with the policies via independent confirmation by Internal Auditor and external financial auditor.
- Selection decisions of investment managers by ACC would be subject to General Investment Consultant reviewing the process followed by ACC, and providing independent opinion of the prudence of the process.

Key Safeguards (cont'd)

- General Investment Consultant to:
  - Continue to be selected by the Board.
  - Continue to review the strategic direction and management of the Fund and advise the Board on its reasonableness.
- All manager contracts would continue to be subject to legal review.
- Board and IC would continue to be provided the agendas of ACC meetings and have ability to elevate an ACC decision to the Board or IC.
- Board and IC to receive quarterly reports on activities and decisions of ACCs.
- Board may also establish upper dollar limits to ACCs' authority to hire managers or make investments.

Recommended Structure



Summary of Recommendations (cont'd)

3. Change requirement to review governance policies annually to every three years.
4. Consolidate all governance-related policies into a single volume.
5. Address policy gaps noted in our findings.
6. Establish an investment cost reporting policy defining the costs to be reported to the Board.

Summary of Recommendations (cont'd)

7. Continue to expand the investment risk management framework by:
   - Articulating ASRS philosophy on risk management.
   - Further defining the risks to be measured/ managed
   - Defining the Board's risk appetite & associated parameters.
8. Consider expanding the Board education program:
   - Address the service provider selection process and criteria
   - Address decision-making theory
   - Continue to emphasize the topic of fiduciary duty
   - Develop a multi-year education plan
9. Amend Director Evaluation Policy to reflect current practice of gaining input from non-board members.

Questions & Discussions

New Governance Models Pay Off For Pensioners:
The American vs. Canadian Pension Fund Experience

By
Luis Navas
Vice Chair and Global Head, Global Governance Advisors
Brad Kelly
Director, Global Governance Advisors

The Fall of 2008 marked the beginning of some tough times for North American pension funds. Global and domestic markets crashed, assets depreciated, and funds were left with nowhere to hide. The result is that many funds reported significant losses in their overall portfolio in 2008 and 2009. Since then, many pension funds are currently underfunded and are struggling to regain their footing in today's shaky investment environment.

Robert Novy-Marx and Joshua D. Rauh's 2010 Journal of Finance paper, *Public Pension Promises: How Big Are They and What Are They Worth?*, reported that the 50 U.S. states collectively faced $3.2 trillion in pension obligations in 2009, but they only had $1.94 trillion set aside in state pension funds. The following year, the PEW Center released, *The Widening Gap,* a study that reported that 48 public sector state pension funds were underfunded in 2009. By 2011, the Organization for Economic Co-operation and Development (OECD) study, *Pension Markets in Focus*, reported that as of last year, U.S. funds were still cumulatively 3% below 2007 asset levels.

Compounding this problem even more is the fact that American demographers anticipate that there will be vast number of baby boomers on the cusp of retirement, within the very near future which could result in a significant demand for pension payouts. According to the U.S. Census Bureau, as of 2010, 13% of the U.S. population was age 65 and older, equating to 40.3 million Americans. It is estimated that this number will more than double to 89 million by 2050.

Overall, it is easy to see why so many pension funds are currently concerned about future sustainability.

Outsourced History

Pension funds have always been committed to meeting their pension promise, but historically played the role of an administrator rather than the role of an investor. The vast majority of today's American funds primarily manage the administrative functions related to member relations, contribution collection, and pension payouts and then outsource the majority of their investment responsibilities.

Investment management expertise in pension funds is rare due to the historical practice of outsourcing majority of this work to external, third-party, money managers. The end result of this practice is that funds have historically had an arm's length control over investment activities and pay out tremendous amounts in management fees related to the size of assets allocated to third party managers.

The common trend in the asset management industry is for funds to pay a 2% fee on the total amount of assets outsourced as well as a 20% performance fee on any returns that are above a preferred rate of return. For example, a large fund that regularly contract out management of $20 billion of assets to third-party investment managers will normally pay a minimum of $400 million in annual management fees regardless of whether the outside investment activities result in positive returns for pension members.

In 2011, Alexander Dyck and Lukasz Pomorski at the University of Toronto's Rotman School of Management, released a study entitled, *Is Bigger Better? Size and Performance in Pension Plan Management.* One of their conclusions is that funds that depend on external or passive management tend to spend more to realize similar returns to those who manage in-house. Their findings concluded that organizations that do not possess internal expertise tend to spend three times more for the external management of active assets and five times more for the external management of alternatives.

The Transformation Experience

Most public pension funds in the U.S. are managed within government and are often just an extension of the state treasurer or comptroller office. Boards of Directors of these funds are also commonly comprised of government bureaucrat appointees and elected politicians. In Canada, public pension funds are moving away from this historic management style and are taking a more progressive approach to money management.

Canada's earliest example began in the early 1990's where Ontario Teachers' Pension Plan (Teachers) made a conscientious decision to break from tradition and run its operation more like a business rather than a government agency. One of the first steps in its transformation was to alter its governance philosophy and aggressively recruit top ranked professionals from Canada's financial, government, and business sectors. The former President and CEO of Teachers, Claude Lamoureux, notes in his paper *Effective Pension Governance: The Ontario Teacher's Story* that he originally declined the CEO position but later accepted under the condition that he be allowed to run Teachers like a business. When asked by the Chairman, Gerry Bouey, what he meant by this, he responded with a list of items that included his intention that Teachers "would have a compensation plan that would be reasonably competitive and include incentives." Upon accepting the position, Lamoureax had board support for a new management philosophy which enabled him to immediately hire a Chief Investment Officer and then build up an internal investment team.

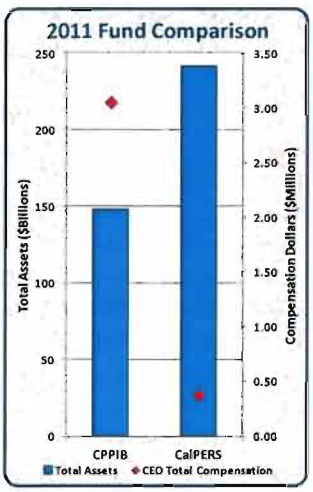
It is hard for stakeholders and Boards of Directors to embrace the understanding that higher compensation levels are required to attract and retain top talent. However, once Teachers' broke the barriers and began realizing the benefits, it did not take long for other Canadian pension funds such as the Canada Pension Plan Investment Board (CPPIB), Ontario Municipal Employees Retirement System (OMERS), Caisse de dépôt et placement du Québec (Caisse), and most recently Alberta Investment Management Co. (AIMCo) to follow.

During their transformations, each pension fund altered its governance philosophy, adopted market competitive compensation levels and incentive designs, recruited top talent, and internalized most, if not all, of their investment activity and expertise. As well, most of the transformed Canadian pension funds established strong teams of top investment professionals in strategic locations throughout the world and are now significant players in the world's M&A market. Over the last few years, these Canadian funds have successfully recruited professionals from London and New York and from organizations such as Goldman Sachs and Morgan Stanley which is most often unheard of within our U.S. pension market.

Competition for Talent

Establishing market competitive compensation was a key factor in the recruitment of talent. The gap for talent is clear when comparing the compensation within the two countries' (Canada and U.S.) largest pension funds – the California Public Employees' Retirement System (CalPERS) and CPPIB. In 2011 CalPERS had approximately $242 billion in total assets while CPPIB had $148 billion. Marc Lifsher, of the Los Angeles Times states in his article, *CalPERS awards $4.5 million in bonuses to managers*, that CalPERS' CEO, Anne Stausboll, received a base pay of $283,500 along with a bonus of $96,638 in 2011 which represents a total of $380,138 in received compensation. Comparatively, during that same year, CPPIB's annual report states that its President and CEO, David Denison, received a total of $3.05 million in salary and bonuses – approximately eight times larger than CalPERS.

As of the beginning of 2010 there were 11,677 private, state, local, and federal government pension funds throughout the country according to U.S. Census Bureau. If the Canadian transformation experience inspires U.S. pension funds to change their management approach, it is easy to see how demand for global investment talent could escalate as a result.



Realized Returns

Even with today's volatile investment environment, these Canadian pension funds are significantly benefitting from their new approach. The 2011 OECD study, *Pension Markets in Focus*, reported that their analysis showed that by the end of 2010, pension funds in most OECD countries had recovered from 2008 losses - Canadian pension funds are part of this group. Out of 29 select countries, Canadian pension funds were ranked 5th in overall returns while U.S. pensions fall well behind in 20th position. Part of this success should be attributed to the performance realized by Canada's transformed pension funds. In 2010 the average total pension return was 13.02% for the five transformed Canadian funds and by 2011 all five not only recovered from their 2008 and 2009 losses, but had surpassed their 2007 pre-crash asset levels.

By recruiting the expertise that they now have, transformed pension funds are not only saving significantly on management fees but are also repurposing their savings into additional investment opportunities. Janet McFarland's Globe and Mail article, *Canada's pension funds perform, at a cost*, notes that pension specialist Keith Ambachtsheer, director of the International Centre for Pension Management, supports this practice and claims that despite the higher salary costs in Canada, internal management has been a bigger advantage than it has been a cost. "OMERS, Teachers, CPPIB – they have all developed internal teams that are as good as anybody around the world in terms of assessing a project, pricing it, [and] doing risk analysis."

Savings aside, the new internal skill set has also enabled these funds to become major players in the global investment community at a time when governments around the world are looking for outside investors to help with asset and infrastructure costs. As stated in Pav Jordan and Andrea Hopkins' Financial Post article, *Canada's pension funds showing growing dominance*, "large, aggressive and patient, [transformed Canadian pension funds] are pushing into a financing vacuum that neither cash-strapped governments nor private equity alone can fill. Their power is a challenge to the world's biggest sovereign wealth funds and it is enabling the Canadians to take on the occasional role of activist investor."

Compensation and Incenting Performance

Considering the gap between public and private compensation practices, CalPERS lists a number of external equity managers that it currently uses. Of the list of six domestic companies, three are publicly listed. Their 2011 proxies note that in the previous year Richard Penza, CEO of Penza Investment Management made $1,392,737; James Kennedy, CEO and President of T. Rowe Price Group Inc. made $7,136,137; and James Dimon, Chairman and CEO of JP Morgan Chase & Co., made a cumulative total of $20,816,289. All three are a far cry from what CalPERS paid its CEO that same year. However, one could argue that CPPIB's CEO is at least at the table when it comes to competing with private sector compensation.

Furthering this gap, it is a general belief in the compensation advisory world that 10% of a person's base salary is the absolute bare minimum that can be used as an incentive. Our firm's observation is that anything below 10% is not substantial enough to

incent positive changes in behaviour. Given that this is the bare minimum, it is not surprising to see that most public pension funds still espouse to follow public sector practices and offer incentives that are still relatively low in comparison to overall compensation levels and in some cases fall close to the 10% bare minimum.

Contrary to this, transformed Canadian pension funds have adopted stronger performance-based incentive plans that are much more in line with private sector practices. Claude Lamoureux, recounts the evolution and adoption of a new incentive design in his previously mentioned paper. He states that:

"The compensation program saw a number of changes over the years, but the basic principles were the same. The higher you were in the organization, the more your compensation depended on total results. People had to add value to be rewarded and this had to be sustained over time. Also, unlike many financial institutions, both our short-term and long-term incentives take into account several years of results. It is very important for the organization to get the right types of incentives."

The result is that all five of the transformed funds now have compensation plans that place far greater emphasis on incentive pay over base compensation. Similar to private sector practice, incentive levels in these organizations now make up 50 to 80% of executive total annual pay which acts as a significant motivator and further links pay with performance. Likewise, these pension funds not only instituted stronger annual incentive plans that better align with short-term objectives, they have also adopted long-term incentive plans that help to protect and strengthen the long-term sustainability demands for their pension members.

Will to Follow

Overall, the transformation of Canadian public pension funds has paid off and benefited Canadian pension members in a substantial way. Adopting private sector governance practices have enabled them to attract, retain and incent high performance talent within their respective organizations. Operating costs are lower and these funds are now regarded as highly esteemed players in the global investment community. Unfortunately, in many respects, most U.S. pension funds have lagged behind in their governance practices and as a result are falling behind in sustaining their pension promise. Fortunately, as the Canadian experience has shown, even in today's volatile investment environment, changes in organizational governance can definitely lead to strong rewards, higher returns and strengthened sustainability for today's' struggling pension funds. If U.S. pension funds wish to meet their members' future pension demands, they need to become competitive players in the world's financial community. If smaller Canadian pension funds have successfully accomplished this, certainly our U.S. public pension funds should have the capacity and the will to follow.

Attachment 5

CORTEX
Applied Research Inc.

INVESTMENT MANAGEMENT PROGRAM GOVERNANCE REVIEW AND CONSULTANT UTILIZATION REVIEW

DRAFT REPORT

PREPARED FOR THE
ARIZONA STATE RETIREMENT SYSTEM

SEPTEMBER 2012
PREPARED BY CORTEX APPLIED RESEARCH INC.

TABLE OF CONTENTS

EXECUTIVE SUMMARY 1

REPORT OF FINDINGS 4

Methodology 4

OVERVIEW OF FINDINGS 5

PART I – STRATEGIC FINDINGS & RECOMMENDATIONS 5

A) Independence & Autonomy 5

B) Delineation of Authority 8

C) Strategic Planning 19

D) Governance Reviews 21

PART II – SECONDARY FINDINGS 23

A) Policy Framework 23

B) Board Education 27

C) Evaluation of the Director 29

APPENDIX A 31

EXECUTIVE SUMMARY

The Arizona State Retirement System (ASRS or the Agency) retained Cortex Applied Research Inc. (Cortex) to conduct an independent review and evaluation of various aspects of its investment management program including delegation of authority, decision-making, policies and oversight, and investment consultant utilization. As a result of the review, Cortex identified a number of strategic findings and recommendations, as well as secondary findings and recommendations.

Overall, Cortex identified numerous positive findings concerning the investment-related governance practices of ASRS, including:

1) ASRS has developed a comprehensive Board Governance Policy Handbook, which describes the roles of the Board, trustees, the Director, the Board officers, the Board's standing committees, the internal auditor, and the management-level asset class committees. Consistent with best practices, ASRS has devoted considerable effort to maintaining a clear distinction between the role of the Board and the role of staff with respect to investment decisions. For example, the Board has devoted particular attention to delineating duties concerning investment managers and consultants, such that staff is responsible for selecting and terminating investment managers and asset class consultants, and the Board is responsible for appointing the general investment consultant, setting investment policy, and providing oversight.

2) ASRS has designed the current investment decision-making structure to be highly transparent. For example, the Board assigns several board members to serve on asset class committees in a non-voting capacity. This structure is intended to help the Board maintain an awareness of staff's investment decision process, although as we suggest later in this report, there may be more effective ways of providing such transparency.

3) ASRS has designed various safeguards designed to promote staff accountability and support effective Board oversight. For example, any trustee may request that a decision coming before a staff asset class committee be instead elevated to the Investment Committee or the Board for review.

4) ASRS has developed investment performance reporting that directly relates to the Board's six investment program investment goals. Furthermore, and consistent with best practice, the Board is provided with attribution analysis that enables the Board to clearly understand which investment decisions have added or detracted value from the Fund.

5) ASRS has developed a strong board education program as evidenced by the following:
   a) The ASRS has established a sound board education policy, which contains key provisions that are consistent with best practices. These include provisions dealing with, among other things, the educational topics to be addressed, new trustee orientation, and a requirement that staff arrange at least one annual fiduciary education session.
   b) Our discussions with board members found a strong level of satisfaction with the orientation process, ongoing in-house education, and access to external education.

6) ASRS has developed a strategic planning process that is consistent with common industry practices The strategic planning process occurs over a three-year time frame, which we believe is appropriate, and incorporates input from trustees, management, staff, and plan members. The resulting strategic

plan contains a useful mix of inspirational statements and concrete goals and objectives. Equally important, the Plan recognizes that the core mission of ASRS is largely contained in statute and that ASRS therefore has limited direct control over it.

7) Consistent with best practices, the Board annually evaluates the performance of the Director in accordance with a process that is set out in a Board policy. The evaluation process uses both objective and subjective evaluation criteria and also includes input from sources beyond only the Board. ASRS's approach exceeds that of many other public retirement systems.

8) ASRS clearly recognizes the need to maintain effective governance practices over time and has demonstrated a strong commitment to regularly reviewing, benchmarking, and updating its governance policies and structures.

In addition to the above findings, Cortex identified a number of strategic findings and recommendations, which we believe may have a significant impact on the long-term success of the ASRS investment program. They include the following:

1) *Independence and Autonomy*: ASRS currently lacks independence and autonomy over key aspects of its operations such as the authority to approve procurement policy, approve the Agency's operating budget, and obtain independent legal services. The Agency has also historically been constrained with respect to personnel and compensation matters. These constraints could become more pronounced, as legislation was passed that will shift partial control of personnel and compensation matters to the Department of Administration. Cortex believes such a shift could represent a significant setback for the Agency and possibly impede its long-term success.

2) *Delineation of Authority*. ASRS has attempted to establish a governance structure in which the Board is responsible for macro-level investment policy and oversight and staff is accountable for managing the investment operations including the selection of investment managers. ASRS has also attempted to ensure that investment consultants are available within the governance structure to provide additional expertise and independence. Our review found that the above goals have not been fully met due to the fact that the governance structure requires trustees and consultants to serve with investment staff on the Asset Class Committees responsible for selecting investment managers. Furthermore, we found that the governance structure could more clearly distinguish between those consultants who serve as extensions of staff and those who serve to monitor compliance with investment policy and procedure.

3) *Strategic Planning*. While ASRS has developed a strong strategic planning process, it does not address the investment program apart from re-stating the investment objectives contained in the Agency's statement of investment policy. The Strategic Plan does not describe a vision of the type of investment organization ASRS intends to build over time to meet its investment objectives, nor the challenges and risks that must be overcome. The Strategic Plan could also serve as an effective vehicle for identifying and addressing any challenges involving board autonomy and independence (see 1 above).

4) *Review of Governance Program*. Cortex found that ASRS may be revisiting its governance practices more often than necessary, particularly the manager selection process and the roles of investment

consultants. Excessive discussion of one's governance policies and practices diverts time and attention from other important investment issues, may lead to fatigue among board and staff members, and may create a sense uncertainty among board and staff members as to whether there is widespread support for the current roles and responsibilities.

Cortex's strategic recommendations are summarized below:

a) ASRS should expand its strategic planning process to more directly address the investment program. The Strategic Plan could potentially address issues involving investment personnel and compensation practices, the use of investment consultants, and the need to address issues of independence and autonomy.

b) ASRS should no longer require trustees and consultants to serve on Asset Class Committees, thus further clarifying that staff are responsible and accountable for the selection of investment managers. We recommend various other safeguards be put in place to provide the Board with assurances that investment manager selection decisions are being made in accordance with board policy and established procedures. Such safeguards include, among other things, establishing a manager selection policy and requiring the General Investment Consultant to monitor that the policy is being implemented.

c) The ASRS Governance Policy Manual requires that governance policies be reviewed annually. We recommend that the frequency be changed to at least every three years. Furthermore, we recommend that the Board minimize the extent to which it revisits the governance structure between formal reviews. This will allow the Board and staff to better determine how effective the structure is operating, and would allow the Board and staff to focus on other important matters.

Cortex also identified a number of secondary findings and recommendations, which are contained in the main body of our report.

REPORT OF FINDINGS

The Arizona State Retirement System (ASRS or the Agency) retained Cortex Applied Research Inc. ("Cortex") to review the investment-related governance practices of ASRS and to provide findings and recommendations for further improvement. More specifically, the ASRS sought an independent review and evaluation of various aspects of its investment management program including delegation of authority, decision-making, policies and oversight, and investment consultant utilization.

METHODOLOGY

In completing the assignment Cortex:

- Invited all current board members and one former board member to participate in a telephone interview to discuss their views concerning ASRS's governance practices. Seven individuals responded and participated in such interviews.
- Cortex interviewed the Director, the Chief Investment Officer (CIO), and three senior portfolio managers of ASRS.
- Cortex interviewed the General Investment Consultant, Private Equity Consultant, and two Real Estate Consultants to the Agency.
- Cortex reviewed ASRS's governance policies, investment policies, strategic investment plans, and other related documentation.
- Cortex contacted a number of other public retirement systems in the United States and Canada to obtain information about their governance practices.

Please see Appendix A for the names of the individuals interviewed.

In addition, Cortex consulted data on the practices of other public retirement systems as well as governance guidelines issued by recognized bodies around the world including:

- The Committee on Fund Governance Best Practice Principles, issued by the Stanford Institutional Investor's Forum (the "Clapman Report").
- Governance of Public Employee Post-Retirement Benefits Systems, issued by the Government Finance Officers Association. (the "GFOA Governance Guidelines")
- OECD Guidelines for Pension Fund Governance, issued by the OECD Working Party on Private Pensions (the "OECD Governance Guidelines").
- Canadian Association of Pension Supervisory Authorities' (CAPSA) Pension Governance Guidelines.
- Model laws established by the National Conference of Commissioners on Uniform Laws, including The Uniform Prudent Investor Act (UPIA), 1994 and The Uniform Management of Public Employees Retirement Systems Act (UMPERSA), 1997.

This review does not constitute an audit of the investment practices or operations of ASRS.

OVERVIEW OF FINDINGS

Part I of our report contains strategic findings we consider to be most important to ASRS's ability to carry out its mission and investment objectives. We believe these findings are interrelated and include:

1. The independence and autonomy of ASRS.
2. The delineation of authority within ASRS.
3. The strategic planning process as it relates to the investment program.
4. The Board's approach to reviewing its governance policies and practices.

Part II of our report contains secondary findings and recommendations.

PART I – STRATEGIC FINDINGS & RECOMMENDATIONS

A) INDEPENDENCE & AUTONOMY

A fundamental aspect of a public retirement system's governance structure is the autonomy and authority the system has relative to the plan sponsor (in the case of ASRS the sponsor is the State of Arizona). Though most published governance standards are silent on this issue, model laws developed in the United States provide some guidance on the matter.[1] They recommend that a governing board of a public retirement system should be highly independent of the plan sponsor and should have exclusive authority to:

1. Manage the assets of the system;
2. Establish the operating budget of the system;
3. Approve human resource and compensation matters, including the hiring of personnel and setting of compensation;
4. Make procurement decisions; and
5. Retain advisory and other services.

In setting out the rationale for granting governing boards a high degree of independence, the model laws state that:

> "Independence is required because it permits trustees to perform their duties in the face of pressure from others who may not be subject to such obligations. In the absence of independence, trustees may be forced to decide between fulfilling their fiduciary obligations to participants and beneficiaries or complying with the directions of others who are responding to a more wide-ranging (and possibly conflicting) set of interests."[2]

Unfortunately, U.S. public retirement systems tend not to have complete independence and autonomy. Most systems generally have the authority to hire their own chief executive officer and staff, set actuarial assumptions, determine required contributions, and hire certain advisors (typically actuaries, investment

[1] *The Uniform Prudent Investor Act* (UPIA), 1994 and *The Uniform Management of Public Employees Retirement Systems Act* (UMPERSA), 1997.
[2] *The Uniform Management of Public Employees Retirement Systems Act* (UMPERSA), Section 5: Power of Trustees, Comments section.

consultants, and investment managers). On the other hand, U.S. pubic retirement systems commonly lack full authority in the following areas:

- Hiring of financial auditors or legal counsel
- Hiring staff and determining compensation and incentive payments and programs
- Approval of the operating budget

Table 1 summarizes research findings concerning the independence and autonomy of 25 U.S. public retirement systems (including state, county, and municipal systems).

TABLE 16: GOVERNING AUTHORITY AND CONSTRAINTS	
With respect to investments:	**Peer Group**
The System has complete authority to set investment policy and invest the assets of the System as it deems appropriate	15
The System must comply with certain investment restrictions established in law by the Plan Sponsor	10
With respect to budget authority:	
The System has authority to approve its own operating budget without the approval of the Plan Sponsor (i.e. Legislature, Board of Supervisors, etc.)	16
The System's operating budget requires the approval of the Sponsor (i.e. Legislature, Board of Supervisors, etc.)	7
The System has budget authority but is heavily influenced by Plan Sponsor	2
With respect to human resources:	
The System has the authority to establish the human resource and compensation policies of the System	6
The System is required to operate within the civil service system and compensation structures of the Plan Sponsor for **all or most** of its staff	14
System has authority to establish its own human resource & compensation policies but has chosen to be consistent with civil service rules	5
With respect to procurement:	
The System has the authority to set its own procurement rules	13
The System is required to operate in accordance with the procurement rules of the Plan Sponsor	6
The System is authorized to set its own procurement rules but has chosen to be consistent with the rules of the Plan Sponsor	6
With respect to key appointments	
The System has the authority to select the executive director	23
The System has the authority to select other staff	24
The System has the authority to select all service providers & advisors	18

Assessment of ASRS

ASRS lacks autonomy and independence in a number of areas that are important for the effective governance and administration of the Agency. These areas include:

Operating Budget: ASRS's operating budget requires the approval of the State Legislature. We believe this is problematic, but is nevertheless typical of many U.S. state, county, and municipal retirement systems (see Table 1).

Investments: ASRS is subject to various investment restrictions that limit the percentage of system assets that can be allocated to various asset classes, strategies, and securities. While the imposition of such constraints is inconsistent with best practices, we were informed by ASRS staff that in recent years the constraints have not materially affected the Agency's ability to prudently invest the assets of the fund. Furthermore, staff indicated their intent to propose legislative changes that would help to mitigate the impact of these constraints.

Procurement: ASRS must operate in accordance with State procurement rules. Again, we would suggest that as fiduciaries of a trust fund, the Board should have the ability to establish procurement procedures that reflect the unique needs and circumstances of ASRS. Nevertheless, it is not unusual for public retirement systems to be subject to the procurement procedures of the plan sponsor (see Table 1).

Legal Counsel: Currently, ASRS cannot independently appoint its own external legal counsel, but rather requires the approval of the State Attorney General's Office. We believe this adds an unnecessary step to the appointment process which likely detracts from the efficiency of ASRS. It also gives rise to potential conflicts of interest in situations where ASRS requires legal advice on matters where the needs of ASRS and those of the State are at odds. Unfortunately, however, this is not an unusual arrangement among U.S. public retirement systems.

Personnel & Compensation: We understand that legislation was recently passed that will shift partial control of compensation and personnel matters for all state agencies to the Department of Administration. We believe such a shift may represent a risk to the Agency and possibly impede its long-term success.

Recommendations

Cortex recommends that ASRS consider addressing at least some of the above limits on its autonomy through its strategic planning process, given their potential impact on the long-term success of the Agency. We appreciate, however, the difficulties involved in addressing issues of autonomy and independence. See findings and recommendations concerning ASRS's strategic planning process for further details (pg. 18).

B) Delineation of Authority

It is generally agreed that public retirement boards should focus on high level policy, strategy, and oversight; and should delegate the implementation of policy and strategy to staff. Published governance standards support this view, but seldom provide *specific* direction as to how responsibilities should be delineated. Instead, they typically provide general principles or guidelines, such as those noted below.

> The [board] is expected to oversee and assume responsibility for the pension plan but is not expected to manage the plan on a day-to-day basis[3].
>
> The plan should allocate authority in inverse proportion to the importance of the task ... thus minor tasks may be completely delegated to staff but extremely important tasks may be restricted to decisions by trustees or require trustee participation.[4]

ASRS Current Practices

ASRS has established a thoughtful and carefully designed investment decision-making structure, the major features of which are summarized below:

The Board is responsible for:

1. Overseeing and participating in the long-term strategic planning process.
2. Approving the selection and termination of the external financial auditor and general investment consultant(s), and overseeing their performance.
3. Appointing, annually evaluating, and if necessary removing the Director.
4. Reviewing and approving macro-level strategic investment policies which guide the strategic vision for ASRS investments.
5. Reviewing and approving the agency biennial risk assessment and internal audit plan.
6. Reviewing and approving recommendations of the Director to appoint or remove the agency's internal auditor.

The Investment Committee is responsible for:

1. Recommending to the Board the investment goals for the ASRS investment program.
2. Recommending to the Board a strategic asset allocation to achieve the ASRS investment program objectives.
3. Reviewing and overseeing the reporting of the ASRS investment program to the Board.
4. Recommending to the Board the selection and termination of the ASRS general investment consultant(s) and overseeing consultants' performance.
5. Recommending the ASRS strategic investment policies to the Board.
6. Monitoring the ASRS asset allocation, investment portfolio structure, and strategic investment policies.
7. Reviewing annually the ASRS Investment Policy Statement.

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[3] *CAPSA Governance Guidelines,* Principle #3, page 7.
[4] *Clapman Report,* Principle E. Delegation of Duties & Allocation of Responsibilities among Relevant Authorities, Principle 3, page 17.

The Director is responsible for:

1. Safeguarding the assets of the ASRS by appointing a custodian and developing and implementing proper internal controls.
2. Appointing or removing the CIO or other staff as required.
3. Recommending the appointment or removal of the internal auditor.
4. Performing annual performance evaluations of those who have a direct reporting relationship to the Director.
5. Overseeing and assisting the CIO in developing macro-level strategic investment policies.
6. Reviewing and approving standard operating procedures for the Investment Management Division.
7. Assisting the Board in selecting general investment consultants.
8. Approving all contract extensions, including those for the general investment consultant and Asset Class Consultants, and investment managers.
9. Reviewing and approving, with the consensus of the CIO, recommendations from the Asset Class Committees to hire and terminate asset class consultants

In conducting our review, we devoted particular attention to the manner in which the selection of investment managers and consultants is addressed within the decision-making structure. The Agency's approach is summarized below:

1) On the recommendation of the Investment Committee, the Board selects and appoints the General Investment Consultant, which is responsible for advising the Board on asset allocation policy and other macro-level policies.
2) The selection and termination of investment managers and asset class consultants has been delegated to staff-level Asset Class Committees (ACC) that are comprised as follows:
   a) The Director and/or CIO are voting members of the ACC.
   b) ASRS staff, responsible for portfolio management, serve on the ACC to provide subject matter expertise. Such staff members are voting members of the ACC.
   c) Non-voting trustees appointed by the Investment Committee Chair serve on the ACC to provide oversight and expertise. Such trustees are non-voting members in order to preserve the separation of oversight and decision-making responsibilities.
   d) Asset class consultants selected by an ACC serve on such committees to provide additional subject matter expertise and an independent perspective. Consultants are also non-voting members of the ACC.

The ASRS governance structure contains the following safeguards to allow the Board to oversee the consultant and manager selection processes:

1. Both the Director and CIO must agree to the appointment or termination of an investment manager and asset class consultants.
2. Before hiring or terminating an asset class consultant, the Director or the CIO will notify the Investment Committee and the Board of their intention, and solicit comments from both prior to effectuating the proposed course of action.
3. The Investment Committee Chair must approve the use of the General Investment Consultant for any ACC manager search.
4. Any trustee may request that an investment decision be placed on an Investment Committee agenda or subsequently a Board agenda for further discussion.

Industry Practices

Based on our experience and research, we have found that most U.S. public retirement systems do not follow what would generally be considered best practices in the area of investment manager selection. That is, rather than focusing solely on high level policy and strategy and oversight, most boards of public retirement systems play a significant and direct role in investment manager selection, which we regard as operational in nature. Playing such a role diffuses accountability for manager selection decisions and diverts the board's attention from higher level policy and oversight matters.

When selecting investment managers, most public retirement systems use the following approach, or a variation thereof:

- Staff and consultants identify candidates and perform preliminary research and due diligence.
- Staff, consultants, and often some board members participate in on-site due diligence concerning investment managers.
- Staff and a consultant recommend a candidate (or two or three finalist candidates) to the Board or investment committee.
- The Board or investment committee interviews the final candidate(s) and selects a winning firm.

Best practices suggest that, in cases where boards have a qualified investment staff, they should delegate to them the authority to select investment managers. This approach leads to clearer responsibilities, more efficient decision-making, and allows the Board to elevate its attention away from operational matters to higher level policy and strategy issues. We have in fact observed a slow shift in this direction and we expect this shift to continue as investment programs become increasingly complex.

Below we describe preferable approaches, in which boards largely delegate manager selection responsibilities to staff:

Approach A: Staff-Only Authority

Under this approach, staff has the authority to hire and terminate investment managers and select investment funds without any board involvement, but subject to various guidelines and constraints set out in investment policies and procedures (there also may be a maximum limit on the size of investment mandates staff may approve). Staff may use the services of investment consultants to assist in the research and due diligence process, but manager selection decisions are solely at the discretion of staff.

Two well known examples of retirement systems that use this approach include the Ontario Teachers' Pension Plan (OTPP) and the Colorado Public Employees' Retirement Association (CoPERA). In the case of OTPP, staff approve whether a mandate is to be managed internally or externally and also approve all investments and managers with a value of up to $800m. For mandates or investments above that amount, board approval is required. In the case of CoPERA, the board approves each manager mandate and whether the mandate is to be managed internally or externally. The Executive Director and CIO have authority to approve the selection of all investment managers in public markets. In private markets, the Executive Director or CIO have the authority to approve

investments of up to $100m in value; investments greater than this amount require board or investment committee approval.

In both of the above examples, the board approves the general process for selecting managers, and relies on audits of the process by both internal and external auditors to obtain assurances that the process is being followed.

Approach B: Joint Staff/Consultant Authority

Under this approach, only the Executive Director, the CIO, and an investment consultant participate in the manager selection process and all three must agree in order for an investment manager to be hired or terminated. The investment consultant is hired by the Board.

Two well known public retirement systems that employ this approach are the Missouri State Employees' Retirement System (MOSERS) and the Public School and Education Employee Retirement Systems of Missouri.

While we understand that the above approach has worked successfully at both the above funds, we would point out that the approach diffuses responsibility and accountability for manager selection among both staff and the investment consultant. We also believe the approach strongly hinges on the ability of the staff and the particular consultant to work together effectively.

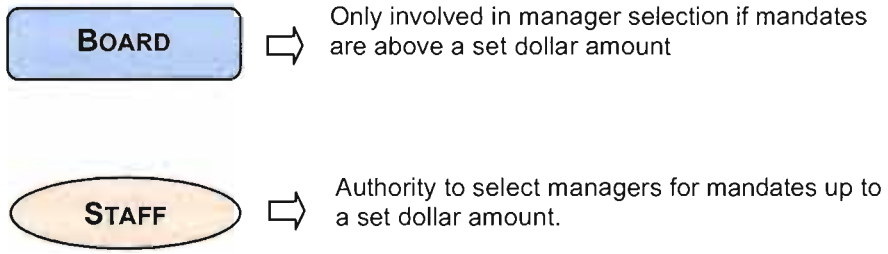
Approach C: Staff-Only Authority with Direct Consultant/Board Oversight

Under this approach, staff is responsible for selecting and terminating investment managers, subject to direct oversight by an investment consultant and the Board. A well known public retirement system that follows this approach is the Texas Teachers' Retirement System (TRS). TRS's approach is summarized below:

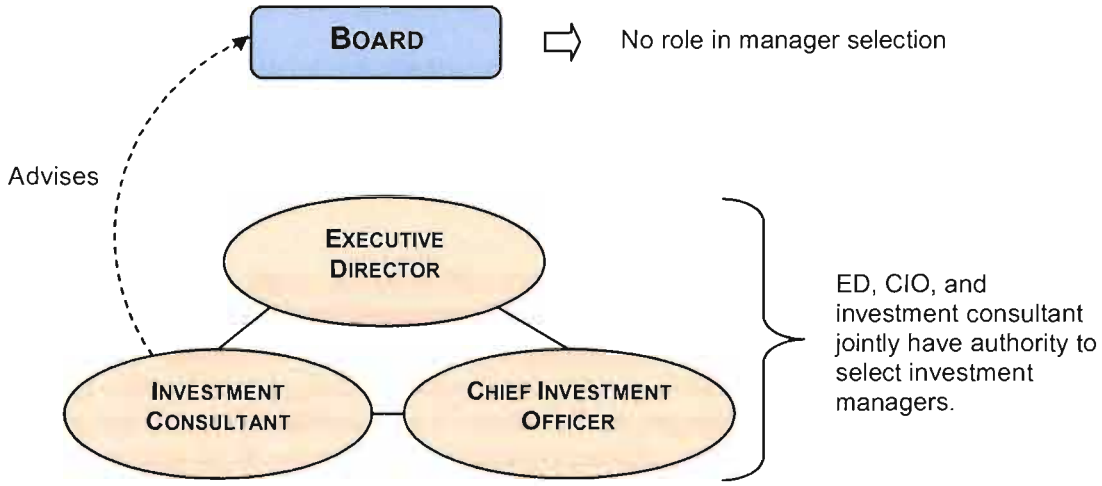
1) TRS uses a staff-level investment committee comparable to ASRS's Asset Class Committees. The TRS staff-level investment committee however consists solely of investment staff.
2) A TRS investment consultant is required to prepare a Prudence Letter indicating that the consultant believes an investment manager selected by the staff-level investment committee is prudent, before any selection decision can be made.
3) Board members are provided regular transparency reports on all activities of the staff-level investment committee.
4) Board members are provided, in advance, the agenda of each staff-level investment committee meeting and have the ability to request that any manager selection decision on the agenda be elevated to the Board or Investment Committee level for review. Staff may also decide to elevate a decision to the Investment Committee of the Board or to the full Board.

Examples of Governance Approaches in Place at Public Retirement Systems

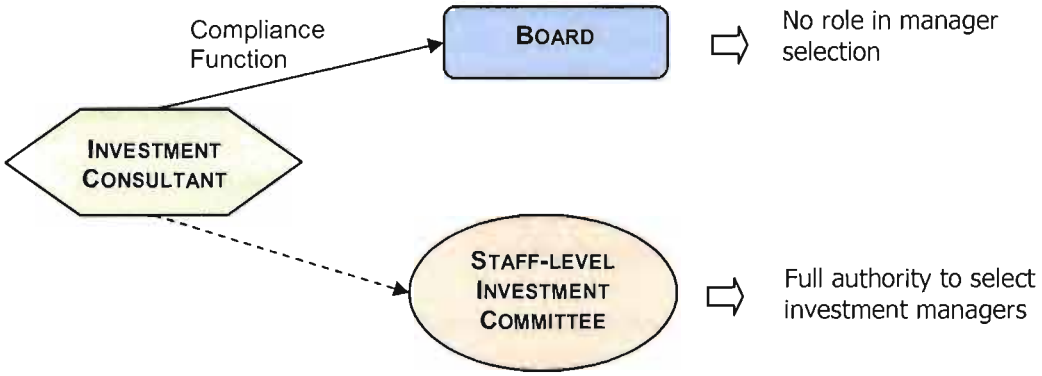
Approach A



Approach B



Approach C



Analysis of the ASRS Approach

The ASRS approach for manager selection is most consistent with Approach C (staff-only approach with direct consultant/board oversight). Below is a discussion of the strengths and weaknesses of the ASRS approach:

Strengths

- Consistent with best practice, the ASRS approach attempts to maintain a distinction between the role of the Board and the role of staff with respect to manager and consultant selection. Staff is responsible for selecting and terminating investment managers and asset class consultants, while the Board is responsible for approving policy and overseeing management's activities.
- By assigning responsibility and authority for manager selection to staff, the ASRS approach is clearly intended to ensure that staff can be held accountable for investment manager performance.
- The current ASRS approach is highly transparent to the Board, as several board members serve on the asset class committees. Accordingly, the Board is privy to the details of the investment decision-making process.
- The approach has a number of safeguards; most importantly, any trustee may request that a decision coming before an ACC be elevated instead to the Investment Committee or to the Board for review.

Weaknesses

- *Role of Trustees*. By design, trustees serve on the ACC to provide additional expertise and oversight while investment staff is to be responsible and accountable for selecting investment managers. Discussions with board members and consultants, however, indicated that in practice the ACC decision-making process does not function exactly as designed, as Trustees appear to do more than simply provide oversight, but rather have a strong influence on ACC decisions. In fact, both trustees and consultants indicated that if the trustees serving on the ACC do not concur with a staff decision to select or terminate an investment manager, it is less likely that the decision will be made. We believe this is contrary to the intent of the structure.

  Given the existence of trustees on the ACC, we believe it would be difficult for trustees to limit their role to oversight and maintain true separation between the roles of trustees and staff on the ACC. Instead, trustees will inevitably have a strong influence on the investment decision-making process of the ACC. Over time, such influence weakens staff authority for manager selection and erodes the Board's ability to hold staff accountable for investment manager selection decisions.

- *Role of Consultants*. Though ASRS has devoted more attention to clarifying the role of its consultants than most pubic retirement systems we have worked with, we nevertheless find that the roles of its consultants could be clarified further.

  Investment consultants are non-voting members of the ACC and are expected to provide additional subject matter expertise and an independent perspective. The Governance Policy Manual does not however specify the issues upon which the consultants are to provide an

independent perspective and to whom. For example, are the consultants expected to provide an independent perspective on the relative qualifications of prospective investment managers? If so, the consultant is effectively functioning as a senior investment officer, and may strongly influence the decision process, thus potentially diluting staff accountability. Alternatively, if consultants are expected to provide an independent perspective on whether a manager selection decision of the ACC was reasonable and consistent with generally accepted standards of prudence, then the consultant is serving an independent audit role for the benefit of the Board. We believe a consultant should play only one of these roles at a time.

- *Timeliness of Decision-making.* By having trustees serve on the ACC, the ACC is constrained in terms of the frequency and timing of its meetings. That is, meetings must be scheduled to accommodate the schedules of not only the investment staff but also trustee members, who would typically have full time occupations outside ASRS. We were informed that current trustee members of the ACC have made themselves readily available to the ACC, but by definition trustees cannot be as accessible and available as the investment staff.

- *Staff Retention.* In our experience working with many senior executives of public retirement systems, high-quality staff expects to have clear authority and accountability for managing the operations of the retirement system and are uncomfortable with unclear or ambiguous governance arrangements where their personal authority and accountability are unclear. In such situations, retirement systems will have difficulty attracting and retaining high-quality staff over the long-run.

Recommendations

To address the above concerns, we provide the following recommendations:

1) The composition of the ACC should be changed to consist solely of the Director, the CIO, the investment staff involved in portfolio management, and any other investment staff to be determined by the Director and CIO.
2) ACC consultants should not be required to serve on the ACC. Instead, the role of ACC consultants should be re-defined to be an extension of staff and should be responsible for performing staff-level work such as research and due diligence for the benefit of the ACC. ACC consultants may participate in ACC meetings at the discretion of the Director and CIO.
3) The ACC should be subject to the following controls (some of which are already in place):
   a) The ACC would be responsible for preparing investment manager selection and termination policies for public and private market managers, which would, to the extent practical, describe the processes and criteria to be used by staff and the ACC when performing due diligence and when selecting investment managers or investments.
   b) The Board would approve the above policies and would periodically review and amend them (e.g. every three years). As an additional safeguard, the policies could be subject to an independent periodic audit or review by a third-party with expertise in due diligence.

c) The ACC would be responsible for complying with the above selection policies each time it selects or terminates an investment manager. The Investment Committee and the Board would receive confirmation of such compliance as follows:

   i) Periodic independent confirmation by the Internal Auditor; and/or

   ii) Independent annual confirmation by a third party, possibly the external financial auditor, and possibly on a sample basis.

d) The General Investment Consultant would review the selection/termination process being followed by the ACC, and should it have a concern with the ACC's decision, provide a written opinion as to its reasons why the decision is not reasonable and/or not consistent with generally accepted standards of prudence. In such a situation, the ACC would not be able to hire an investment manager, unless new information came to light and the General Investment Consultant subsequently was satisfied with the process. As an alternative, the General Investment Consultant could provide an opinion on each manager selection decision, rather than just on an exception basis. It is important to note, under either approach, that the General Investment Consultant is simply asked to confirm that a particular selection is reasonable, rather than recommend which investment manager is the optimal choice.

e) The General Investment Consultant must be independent of both staff and the ACC, and should continue to be selected and appointed by the Board.

f) The General Investment Consultant would also periodically review the strategic direction and management of the Fund and each asset class within the Fund and confirm for the Board whether the direction is reasonable and prudent. We understand the General Investment Consultant already performs this function for the Board through its annual review of the public and private market asset classes.

g) All contracts with investment managers would continue to be subject to legal review. Legal counsel must be satisfied that any contractual concerns have been satisfactorily addressed prior to a manager being appointed, and would inform the Board of any concerns that were not resolved.

h) Various disclosure and transparency mechanisms would continue to serve as control mechanisms for the manager selection process. For example:

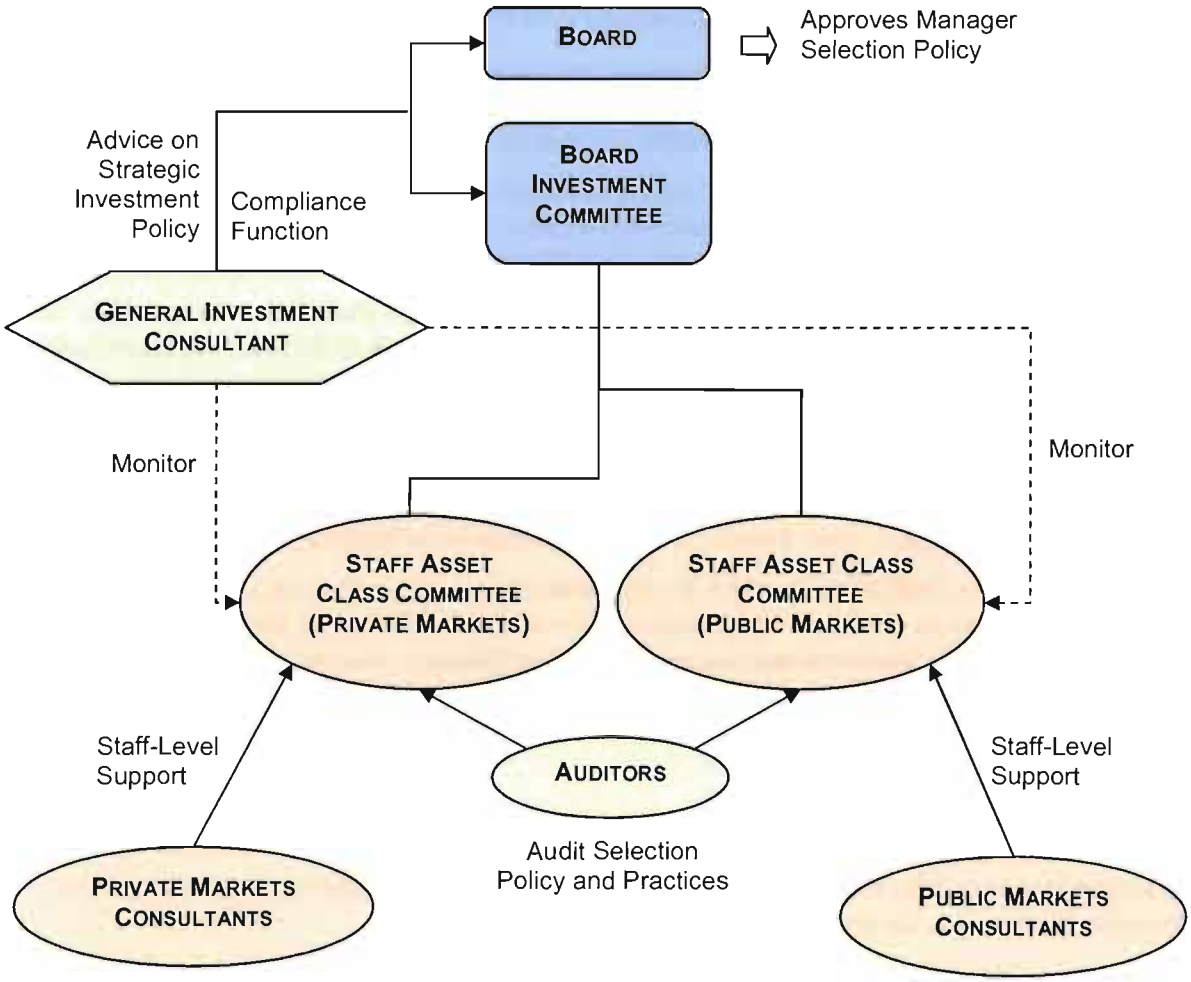
   i) The Board and Investment Committee should be provided the agendas of any ACC meeting at which a manager selection, termination, or other investment decision is to be considered, and any board member would continue to have the ability to request that a decision be elevated to the Board or the Investment Committee for review. We would stress however that, in to order to preserve staff accountability, such authority should be exercised infrequently and only when the prudence of a particular decision is truly in doubt.

   ii) The Board and Investment Committee should be provided with a quarterly report designed to inform board members of all significant activities and issues addressed at the ACC level. (Such a report could be incorporated into the current quarterly performance report.) Interim reports would also be provided if a significant development arises between quarterly reports

i) Finally, if deemed necessary, the Board may establish an upper limit to staff's authority to select investment managers, above which the Investment Committee or the Board would be provided special notification and provided sufficient time (e.g. five business days) to raise any concerns.

Such a limit would need to be carefully arrived at to balance the need to ensure efficient decision-making and maximize staff accountability (i.e. to minimize the number of decisions that would require Investment Committee approval) with the need to manage perceived risks associated with large mandates or other types of investment decisions.

Recommended Structure



Implementing the above recommendations will provide the following benefits:

1) The recommended structure will make it clearer that the investment staff is responsible and accountable for investment manager selection and related decisions.
2) The Board and Investment Committee will be better positioned to focus on macro-level investment policy and risk management decisions, which in the aggregate have the largest impact on the long-term risk and return of the fund. The primary macro-level investment policy decisions include the Statement of Investment Policy with a focus on long-term asset allocation.
3) The investment decision-making process is likely to be more efficient and timely.
4) Through the various oversight mechanisms and checks and balances contained in our recommendations, the Board will be better able to demonstrate to interested parties that the manager selection decisions were prudent and carried out in a systematic, disciplined manner.
5) ASRS will benefit from clarification of the roles of investment consultants in the investment decision-making process. In the manager selection process, each investment consultant will serve either the Board or the staff, and will be assigned one of the following roles:
   a) **Extension of staff**. Consultants may serve as a staff resource accountable to the Director and CIO for providing value-added research, analysis, and insight to inform staff's decision-making process. The nature of this role requires that such consultants be selected, hired, directed, and when necessary terminated by management.
   b) **Advisor to the Board**. Consultants may serve as a direct advisor to the Board on issues that fall within the Board's mandate; i.e. macro-level investment policy and oversight. Such consultants should be selected, hired, directed, and when necessary terminated by the Board.
   c) **Investment Audit Role**. Consultants, internal auditors, or external auditors may, on behalf of the Board, serve as an audit or reasonableness check on management by providing opinions as to the prudence of manager selection and termination decisions. Providing the Board with periodic reviews of the direction and strategies of the Fund would also fall within this role.

Potential Objections or Concerns

Some public fund trustees may be uncomfortable with the approach we have recommended for ASRS. Possible concerns and our responses are set out below:

1. *Concern: Public fund trustees have a fiduciary duty to select investment managers.*

Response: We would suggest that trustees have a fiduciary duty to ensure that a prudent process is in place to ensure that appropriate investment managers are selected to serve in the best interests of the members and beneficiaries of the Plan. We believe that the process and structure we have recommended are more rigorous and disciplined, and therefore more prudent, than a process in which trustees are directly or indirectly involved in manager selection decisions. As noted above, a number of other leading public funds have delegated manager selection fully to staff..

2. *Concern: If a trustee has specialized knowledge and expertise regarding manager selection, they should be required to utilize that expertise in the manager selection process?*

Response: Cortex agrees. However, trustees' specialized knowledge and expertise should be utilized in a manner that preserves the separation of board and staff roles as follows:

- If a trustee has specialized expertise in the area of due diligence and manager selection, such knowledge should be shared with management and staff in a board policy context; i.e. if a trustee believes that certain questions, analyses, or activities should form part of the due diligence process, these should be incorporated into the manager selection policy, which staff would subsequently be required to follow when performing due diligence, and which would be subject to periodic audits by independent experts.

- If a trustee has special knowledge about a particular investment manager or opportunity, which the trustee believes is unlikely to be uncovered in the normal course of a due diligence exercise (for example, a trustee may have private knowledge of a particular private equity general partner) then the trustee would likely have a fiduciary duty to disclose that information. The process we have recommended, however, ensures that board members will be fully informed of what is going on at the ACC level and would receive the agenda of any ACC meeting at which a particular investment manager is being considered. Consistent with current practice, any trustee with private knowledge of a particular manager is able to engage the Director or the CIO directly to share such information.

3. *Concern: The investment consultant should approve every investment manager selection decision in order to protect the board and the system from potential liability.*

Response: The recommended structure requires that an independent consultant will provide an objective opinion on the reasonableness and prudence of manager selection decisions, either on an exception basis or prior to selection decisions being made. We believe this approach provides a high level of rigor for the decision process while also maintaining clear accountability for staff.

4. *Concern: Some systems may lack sufficient investment staff necessary for the board to feel comfortable fully delegating manager selection decisions. In such circumstances, it is useful for board members with relevant expertise to serve on staff committees involved in manager selection.*

Response: U.S. public funds admittedly face considerable challenges attracting and retaining investment staff due to constraints on budgets, staffing levels, and compensation. The recommended approach, however, is able to compensate for any lack of staff resources by allowing staff to use external consultants when necessary to help perform the due diligence and related work that under different circumstance would be performed by staff. We would not suggest that a board should compensate for a lack of staff resources by assuming the role of staff.

If a board cannot satisfy itself that it has sufficient staff or staff-level consulting resources, then it may need to consider other strategies such as outsourcing or simplifying the investment program. Getting directly involved in the manager selection process, however, is not a strong, long-term solution.

5. *Concern: If the Board is not represented on the ACC, the Board cannot be assured that staff or consultants are not engaging in unethical behaviour with respect to the selection of investment managers.*

Response: This is a legitimate concern, but we do not believe that having board members serve on ACC resolves the issue. Instead, we would suggest the Board should remain at arms-length from the selection process so as to be able to more effectively monitor compliance with conflict of interest laws, policies, and disclosure requirements governing staff, consultants, and investment managers; and compliance with agreed-upon manager selection and due diligence processes. Furthermore, the recommended approach requires full disclosure of ACC activities via reporting to the Board and Investment Committee.

C) Strategic Planning

The purpose of a strategic plan is to:

- Articulate a vision of the type of organization one is striving to create.
- Confirm the mission of the organization (in the case of ASRS, the mission is essentially contained in statute).
- Set out the organizational objectives one is aiming to achieve.
- Identify threats or risks to achieving the mission or vision.

Ultimately, a strategic plan should reflect a clear consensus within an organization as to the direction the organization wishes to pursue, and what must be done in order to follow it.

Current Practice

ASRS has a formal strategic planning process that can be summarized as follows:

1) ASRS uses a three-year time period for its strategic planning process.
2) At the conclusion of each three-year period, ASRS reviews its performance against the goals and objectives in place and develops its direction and desired outcomes for the following three years.
3) The strategic plan is developed by:
   a) Gathering input from trustees, executive staff, and management on the future direction of ASRS.
   b) Reviewing current performance data and discussing future trends.
   c) Analyzing industry best practices.
   d) Obtaining and reviewing member feedback.
4) ASRS prepares a formal strategic planning document containing the system's mission, vision, values, investment principles, strategic goals for the coming three years, and details concerning its operational, investment, and administration goals.

ASRS also develops strategic plans for its alternative asset classes including real estate, private equity, and the opportunistic private investment program. These strategic plans however are not strategic documents that guide the organization as a whole. Instead, they are designed to provide greater detail on how each of the alternative asset classes will be managed, and to describe the investment philosophy, investment objectives, investment policies, and governance of such asset classes.

Assessment of ASRS

Below are strengths and weaknesses of ASRS's strategic plan and process.

Strengths
Strengths of the ASRS strategic planning process include the following:

1) The ASRS strategic planning process is consistent with the approaches we have seen at other similar sized public retirement systems. It also appears to be developed using a similar process involving input from a number of parties, both internal and external to the System.
2) ASRS correctly notes that its mission is essentially contained in its governing statute, and unlike private sector corporations, it has virtually no control over its mission.
3) The strategic plan contains a useful mix of inspirational statements and concrete goals and objectives.

Weaknesses
We considered the ASRS strategic plan from an investment program perspective and identified the following concerns or weaknesses.

1) With respect to investments, the Strategic Plan simply reiterates the investment objectives already contained in the statement of investment policy. Accordingly, it does not add value to the investment program beyond what is already provided by the statement of investment policy.
2) The strategic plan does not present a vision or plan concerning how the organizational structure and human resources will evolve over the coming years to effectively manage an increasingly complex and sophisticated investment program.
3) The strategic plan does not address major strategic issues or risks of ASRS (as identified by a number of board members). These include:
   a) Threats to the independence and autonomy of ASRS, particularly the risk that ASRS may lose autonomy over its personnel and compensation policies and practices.
   b) Succession risk pertaining to the executive leadership of ASRS.
   c) The risk of significant turnover among board members, given that a number of board members currently may be replaced at any time. (We recognize this issue may be somewhat academic as the Board has little or no ability to influence it.)
   d) The challenge of attracting and retaining the requisite investment staff.

Recommendations

From our interviews with ASRS board and staff, it is clear that ASRS is well aware of the strategic issues and risks noted above, and that these issues are discussed internally on a regular basis. Nevertheless, we would suggest that in order for ASRS to gain maximum advantage from its strategic planning efforts,

the strategic plan should, where feasible, address at least some of these same issues and, where practical, contain concrete objectives and implementation plans to deal with them.

In particular, we recommend that the strategic plan should describe the type of investment organization ASRS aims to be within the next 3-5 years, addressing issues such as:

- The level of autonomy the Agency needs to have.
- The type of organizational structure the Agency needs to have (i.e. staff and consultants).
- The human resource goals of the Agency (i.e. related to staff complement, compensation, attraction and retention efforts.)

D) Governance Reviews

Published governance guidelines recommend that boards regularly evaluate their governance practices and their own performance, though they do not provide details concerning the approaches to be used. Cortex believes boards should follow multiple approaches to reviewing their governance programs. Elements may include:

- Periodically reviewing internal documentation describing the roles and responsibilities of key parties in the governance process.
- Monitoring compliance with the Board's governance policies.
- Periodically conducting a self-assessment of the board's own performance.
- Periodically reviewing the board's governance practices (e.g. education, planning, decision-making practices).
- Use of a third-party to conduct or facilitate the review, as appropriate.

Assessment of ASRS

Strengths

ASRS's practices are consistent with or exceed best practices, in that:

- The Board regularly evaluates the continued appropriateness of its governance policies and the clarity and appropriateness of roles and responsibilities.
- The Board and individual trustees evaluate their own performance annually.
- ASRS has benchmarked its governance practices and structures to standards and industry peers.

The current governance review being undertaken by Cortex is another example of how ASRS has devoted organizational resources to reviewing the governance practices of the Agency.

Weaknesses

While we commend ASRS on its commitment to reviewing and maintaining its governance program, we would suggest that the Board may be revisiting its governance policies too frequently. Currently the Board Governance Policy Manual is required to be reviewed annually and we were informed that the Board frequently discusses the allocation of investment-related responsibilities, particularly with respect to the role of the Board, staff, and consultants in the selection of investment managers and consultants.

Cortex recommends that clients review their governance policies every three years and we have found this to be an appropriate frequency. Our research into industry practice is also consistent with this approach. Reviewing one's governance policies more frequently may be problematic for a number of reasons:

- Every organization faces limited time, energy, and resources. Excessive review and discussion of one's governance policies reduces the time and energy that can be devoted to investment policy, strategy, and investment operations.
- Frequent review and discussion of one's governance policies may lead to policy or governance fatigue at both the board and staff levels.
- Frequent review and discussion of one's governance structure may indicate a lack of commitment to, or acceptance of, the current structure, which may raise doubts in the minds of trustees and particularly staff as to whether the Board truly supports the documented responsibilities and authority of staff.

Once the Board adopts a governance structure, it is important that it be disciplined enough to refrain from revisiting the structure for at least a few years, unless events or circumstances truly demand that it be reviewed sooner.

PART II - SECONDARY FINDINGS

This section of our report addresses secondary findings and recommendations identified in our review.

A) POLICY FRAMEWORK

A sound, comprehensive policy framework is a central component of a retirement system's risk management system. In our review, we considered ASRS's governance policies contained in the Governance Policy Manual, the statement of investment policy, and the strategic plans for private equity, real estate, and private market opportunities.

Published standards are unanimous in recommending that the roles and responsibilities of all significant parties involved in governing and managing a public retirement system be clearly documented and accessible. At a minimum, the board should approve documentation setting out the roles of the following parties:

- The board
- Officers of the board
- Standing committees of the board
- Executive director or comparable position

Findings

ASRS has developed a comprehensive Board Governance Policy Handbook containing policies describing the roles of the Board, trustees, the Director, Board Chair and Vice-Chair, the three standing committees of the Board, the internal auditor, and the two management-level asset class committees.

We believe ASRS has devoted more effort than most funds to defining clear roles for the various parties involved in the governance of the Agency, as evidenced by the numerous and detailed role-related policies in place. In addition, the ASRS Governance Manual contains most of the governance policies we would consider as representing best practices. Furthermore, we found that ASRS's policies are thoughtfully written and clearly reflect a concerted effort to clarify the distinction between the roles of the Board and management, as well as the rationale behind ASRS's allocation of responsibilities.

Recommendations

1. *Consolidate Governance Policies*. ASRS's governance policies concerning investment-related responsibilities are currently found in a number of documents including:

   a) The Board Governance Policy Handbook (specifically the position descriptions for the Board, IC, Director, and asset class committees.
   b) The Opportunistic Private Investment Program Strategic Plan
   c) The Real Estate Investment Program Strategic Plan
   d) The Private Equity Investment Program Strategic Plan

e) The Statement of Investment Policy (this document essentially refers the reader to the Board Governance Policy Handbook for details concerning roles and responsibilities)

We recognize it is common practice for investment policy statements to specify roles and responsibilities, for investments. For public retirement systems, however, this practice tends to result in roles and responsibilities being set out in multiple documents, having different formats, and sometimes having conflicting provisions.

2. *Gaps in investment responsibilities*: While we found the governance policies to be very comprehensive, we did identify a small number of concerns or gaps that should be clarified or addressed as follows:

a. The Governance Policy Manual does not clearly indicate who is responsible for decisions of portfolio structure such as:

   i. The number of investment managers to be used for a given strategy and how much to be allocated to each manager.
   ii. Whether a mandate is to be managed internally or externally.
   iii. Whether certain portfolios are to have strategic biases (e.g. a value or growth tilt)

   Based on our discussions with staff, we understand that the ACC has the authority to determine the number of managers to be hired for a particular mandate and assets to be assigned to each manager when hired. We further understand that staff has the authority outside of the ACC to make tactical asset class decisions. For further clarity, however, we would suggest these authorities be clearly documented in the Governance Policy Manual.

b. The Real Estate Strategic Plan states that all investments in a managed account structure and directly owned investments will be independently valued at least every three years by a qualified expert. Neither the Strategic Plan nor any of the other governance policies indicates which party is responsible for selecting and appointing such experts. We would suggest this is an important function from a governance perspective, and that the Governance Manual should specify that the Board will retain this responsibility.

c. The Investment Policy Statement authorizes ASRS to engage in securities lending. It also however delegates authority to staff to determine the securities lending program parameters (risk profile, aggregate lending balance, types of securities on loan, collateral requirements, etc.). Such broad delegation to management may be problematic from a governance perspective and is contrary to published standards. Guidelines issued by the CFA Institute suggest that securities lending programs create some degree of collateral investment and counterparty risk and that an investment policy should be established to govern participation in the plan. The CFA Institute's guidelines go on to provide examples of constraints that might be contained in such a policy including:

   - Loaned securities shall be collateralized at no less that 103 percent of the market value and be marked to market daily.
   - In no instance will collateral repurchase agreements aggregate more than 15 percent exposure to any single counterparty.

We recommend that any major policy parameters governing the securities lending program be approved by the Board rather than staff.

d. Various guidelines concerning communications can presently be found in various ASRS governance polices including the Director Position Description, the Trustee Position Description and the SIP. There may be value in preparing a stand-alone Board Communications Policy that contains all board-related communication guidelines in a single document, and addressing communications with:

- Investment managers, consultants, and other vendors
- Staff
- Plan members
- Media and other stakeholders

e. ASRS investment policy is well written. We particularly appreciated the inclusion of sections devoted to investment principles and beliefs. ASRS may wish to consider expanding the coverage of the following additional policies in the investment policy:

- *Use of leverage and derivatives.* The current investment policy does not address derivatives use apart from indicating that authorization to permit or not permit leverage and derivatives may be found in separate agreements with investment managers or partner agreements. The CFA Institute guidelines however recommend that leverage and derivatives should be addressed by the SIP.
- *Currency management.* Though ASRS invests in foreign markets, the current investment policy does not address currency management. Once again, the CFA Institute's guidelines suggest the investment policy should address currency management, if relevant.

f. Investment Reporting: Cortex reviewed the Investment Program Report provided to the Investment Committee and the Board by staff and the General Investment Consultant. We found the report to be very well designed and very thoughtful. In particular, we found that the Report did an excellent job of relating the performance of the Fund to the six Investment Program Investment Goals, thus allowing the Board and the Investment Committee to quickly and effectively assess whether the goals are being met. We find that performance reports provided to Boards often do not facilitate such an assessment. Furthermore, the Report contained clear performance attribution analyses to enable the Investment Committee and the Board to determine which investment decisions have added or lost value.

To further enhance the above Report, ASRS may wish to consider expanding the attribution analysis to address whether the Fund's decision to mismatch assets and liabilities has added or lost value over various time frames; i.e. the decision to invest in a portfolio containing equities rather than a minimum risk or immunized portfolio. We admit that such analysis is uncommon among public funds and that many may believe such analysis is academic. We nevertheless believe that, at a minimum, there is educational value in such analysis.

Cortex also recommends that the above Report include performance metrics or attribution analysis relating to the internally managed portfolios to enable the Board to assess the value added or lost from the decision to invest assets internally versus externally.

g. Risk Management: There is a growing recognition that risk management is a central function of the boards and senior executives of large institutional funds and should be addressed in the policies of such funds. The nature of risk management policies is, and will likely always be, evolving. One might expect a risk management policy to address some or all of the following:
    iv. A framework for considering risk including identification and definition of key risks;
    v. General principles and philosophy of the fund with respect to investment risk management;
    vi. A general statement describing the risk appetite(s) of the Board or a requirement that such a statement be developed; and
    vii. Specific policy limitations regarding certain risks identified in the framework.

In our review, we found that the ASRS Investment Policy Statement does indeed contain a section entitled, Risk Management, Monitoring, and Reporting. This section of the Investment Policy Statement briefly describes the ASRS risk management framework, including operational risk and investment risk. It also contains very general provisions concerning responsibilities for risk management and reporting.

We understand that ASRS has recently developed a risk reporting system, which includes a Total Fund Risk Report and a Security Lending Dashboard Report, and that such reports are provided to the Board on a quarterly basis. The Total Fund Risk Report provides an overview of total plan exposure to various sectors, geographic regions, market capitalization sectors, and individual issuers or industry groups, and the Security Lending Dashboard Report provides an overview of the risks in the credit-related security lending markets.

We would suggest that investment risk management should become an increasingly important focus for the Board of ASRS, and that ASRS should continue building upon its risk management policy by considering the following:

- Expanding upon the risk management framework by further defining the various risks to be managed.
- Articulating ASRS's philosophy on risk management (this is particularly important, as beliefs may vary widely and the Board and staff need to share a common view, or at least understand each other's views).
- Attempt where possible to articulate the Board's risk appetite (it would appear that the statistical data currently being reported to the Board would support the definition of a risk appetite).
- Where possible, define limits or parameters for specific risks of the Fund; e.g. credit risk, liquidity risk, leverage.

In general, ASRS's risk management policy should create the framework to guide ASRS's risk reporting practices. We realize this is a complex task and likely cannot be accomplished

immediately. We would suggest instead that the risk management policy be viewed as a work-in-progress.

h. Investment Management Fees. The current investment policy indicates that "ASRS strives to maintain an efficient and relatively low aggregate investment management fee structure." It also specifies that investment staff will evaluate securities-level transaction costs for external public equity managers, and pre- and post-transaction costs for public manager transitions. While it may be implied, the policy does not require that staff provide the Board or Investment Committee with reporting on such costs. Furthermore, the policy excludes other asset classes, such as public fixed income, and excludes the internally managed portfolios. We believe there is value in evaluating securities-level transaction costs where possible across all portfolios, subject to cost-benefit considerations.

   It should also be noted that staff informed us they are currently only evaluating pre- and post-transaction costs for public manager transitions on an ad hoc basis.

i. *Format and Consistency.* We identified minor inconsistencies in some of the governance provisions, which we recommend be addressed. For example:
   i. The strategic plans for private equity and real estate continue to make references to a Private Equity Committee and a Real Estate Committee, though these committees have been disbanded.
   ii. There is conflicting language in the Director Position Description and the section of the Governance Policy Manual describing the role of Asset Class Committees with respect to the selection of asset class consultants. Specifically, the Director Position Description indicates the Investment Committee must consent to the Director's recommendation to hire or terminate an asset class consultant, while the role of the Asset Class Committee indicates that, "When hiring or terminating asset class consultants, the Director or CIO will notify the Investment Committee and the Board Chair of their intention and solicit comments from both prior to effectuating the proposed course of action.

B) Board Education

Published standards are unanimous in recommending that public retirement systems provide education for their board members.[5] The standards, however, typically provide only general guidance in this regard. For example, the Clapman Report recommends that "trustees, on a regular basis, should obtain education that provides and improves core competencies, and that assists them in remaining current with regard to their evolving obligations as fiduciaries." The CAPSA Governance Guidelines state, "The plan administrator should be provided with appropriate training and ongoing education, as required".

We believe best practices require retirement systems to develop board education programs that incorporate most, if not all, of the elements listed below, tailoring them to their particular circumstances:

a) A board education policy that sets out what is expected of board members with respect to education;

[5] For example, see *CAPSA Governance Guidelines*, the *Clapman Report*, the *GFOA Governance Guidelines*, and the *OECD Guidelines for Pension Fund Governance*.

b) A new board member orientation program;
c) Continuing in-house education delivered by staff, advisors, or other third parties;
d) Opportunities to attend conferences, seminars, or courses;
e) Periodicals, books, and other literature that board members may use for self-study purposes;
f) An education needs assessment process.

Findings

In our experience working with other public retirement boards, trustees tend to have concerns about the level and quality of board education available to them. We are pleased to report that no such concerns were raised during our interviews with ASRS board members. Board members indicated that the new trustee orientation program is very useful, as are the various in-house education sessions that are provided to board members. Furthermore, board members indicated that they believe they have the ability to attend various external education programs and conferences and that staff are always available to provide them with information or to assist them in identifying additional education resources. The only obstacle that was identified to obtaining further education was lack of time. This however is a common issue identified by public fund trustees across the industry.

Consistent with best practices, ASRS has developed a board education policy entitled *Trustee Orientation and Education Program*. Our review of the policy found it to be consistent with best practices in that it addressed the key issues one would expect to find in such a policy including:

- Provisions pertaining to new trustee orientation
- A description of the general scope of educational topics with which trustees should be familiar. We found the range to topics to be appropriate for trustees of a public retirement system such as ASRS.
- A provision confirming that trustees are encouraged to attend relevant external conferences and seminars.
- A requirement that the Director periodically provide the Board with information on available conferences and seminars.
- A requirement that the Director arrange for an annual fiduciary education session for the Board.

Recommendations

We have a number of recommendations concerning education for the Board's consideration:

1) We recommend that the Board periodically be provided an education session on the service provider selection process and criteria for public and private markets. This recommendation would be particularly important if the Board accepts our recommendation to remove trustees from the asset class committees responsible for manager selection. Such education sessions would serve two purposes:

    a) The education sessions would help to ensure the Board understands the manager selection and due diligence process and is able to monitor whether the agreed upon processes are in fact being followed.

b) The education sessions would allow board members with special expertise relevant to manager selection to share their suggestions for improving the selection and due diligence process and ensuring those suggestions are incorporated into board policy.

2) We recommend that the topic of decision-making theory be included in the board's education curriculum. There has been considerable work done in recent decades on this topic, including human biases in decision-making and how to manage them; this topic is also closely related to behavioural finance and there are a number of experts in the field that would be available to provide education to the Board. We believe such training would also be valuable for ASRS staff.

   Admittedly, decision-making is not typically included in most fiduciary education programs and we are aware of only one of our clients that has targeted this area for board training. Nevertheless, we believe it is an important concept and potentially a source of competitive advantage for public retirement systems.

3) We recommend that the Board continue to devote educational resources to the topic of fiduciary duty. This will be particularly important with expected turnover among board members and in light of the Agency's move to allow investments outside of commingled accounts.

4) The Board may wish to consider developing a multi-year education plan that would set out the education efforts and topics to be addressed over the coming years. Such a plan, however, should be flexible, allowing for topics to be added or removed to reflect changing needs and circumstances.

C) Evaluation of the Director

Published standards recommend that governing boards evaluate the performance of key decision makers and staff, but do not provide details.[6] Cortex has nevertheless identified the following best practices in this area:

- Boards should establish written policies for evaluating the executive director.
- The board should be responsible for evaluating the executive director. Furthermore, all board members should have an opportunity to have input into the executive director's evaluation
- Performance evaluation criteria should not consist solely of subjective criteria, but also objective criteria.
- When properly designed and administered, 360 degree evaluations can be valuable elements of the executive director evaluation process.

Findings

1) ASRS's practices concerning the Director's performance evaluation are consistent with published standards in that it:
   - Evaluates the performance of the Director on an annual basis, utilizing both objective and subject criteria; and

[6] *CAPSA Governance Guidelines*, Principle #4: Performance Measures, page 7; and the *Clapman Report*, Principle B: A Fund's Leadership: the Governing Body and Executive Staff, page 7.

- Has documented the evaluation process in a board policy.
- Includes 360 degree evaluations.

Recommendations

We were informed that the Director is evaluated by parties other than the Board, and that the Human Resource Manager provides anonymous comments from such parties to the trustees to assist them in conducting their performance appraisal of the Director. We understand, however, that the current Director Evaluation Policy does not presently capture this practice. Though not necessarily widespread among public funds, we believe expanded performance evaluations of this nature are valuable, and would suggest ASRS amend its Director Evaluation Policy to require them.

APPENDIX A
INTERVIEW PARTICIPANTS

Board Members

- Mr. Dave Byers
- Mr. Thomas Connelly
- Mr. Chris Harris
- Professor Dennis Hoffman
- Mr. Tom Manos
- Mr. Michael Townsend
- Mr. Lawrence Trachtenberg (former board member)
- Mr. Steven Zeman

ARSRS Staff

- Mr. Paul Matson
- Mr. Gary Dokes
- Mr. Karl Polen
- Mr. David Underwood
- Mr. Al Alaimo

ASRS Consultants

- Allan Martin, NEPC (General Investment Consultant)
- Stephen McCourt, Meketa Investment Consulting (Private Equity Consultant)
- Gadi Kaufman, Robert Charles Lesser and Co. (Real Estate Consultant)

Others

Cortex also contacted representatives of the following public retirement systems:

- Ontario Teachers' Pension Plan
- Texas Teachers' Retirement System
- Public Sector Pension Investment Board
- Colorado PERA
- Massachusetts PRIM

ARIZONA STATE RETIREMENT SYSTEM

MANAGEMENT RESPONSE

TO ISSUES FOR CONSIDERATION

IDENTIFIED IN THE CORTEX

AUGUST 2012 INVESTMENT MANAGEMENT PROGRAM GOVERNANCE REVIEW AND CONSULTANT UTILIZATION REVIEW

DRAFT

Cortex identified a number of strategic findings and recommendations which they believe may have a significant impact on the long-term success of the ASRS investment program. They include the following:

1ST ISSUE FOR CONSIDERATION:

Independence and Autonomy:

ASRS currently lacks independence and autonomy over key aspects of its operations such as the authority to approve procurement policy, approve the Agency's operating budget, and obtain independent legal services. The Agency has also historically been constrained with respect to personnel and compensation matters. These constraints could become more pronounced, as legislation was passed that will shift partial control of personnel and compensation matters to the Department of Administration. Cortex believes such a shift could represent a significant setback for the Agency and possibly impede its long-term success.

Cortex's Strategic Recommendation:

ASRS should expand its strategic planning process to more directly address the investment program. The Strategic Plan could potentially address issues involving investment personnel and compensation practices, the use of investment consultants, and the need to address issues of independence and autonomy.

ASRS Management Response:

The Director and CIO generally concur with the recommendations of Cortex.

2ND ISSUE FOR CONSIDERATION:

Delineation of Authority:

ASRS has attempted to establish a governance structure in which the Board is responsible for macro-level investment policy and oversight and staff is accountable for managing the investment operations including the selection of investment managers. ASRS has also attempted to ensure that investment consultants are available within the governance structure to provide additional expertise and independence. Our review found that the above goals have not been fully met due to the fact that the governance structure requires trustees and consultants to serve with investment staff on the Asset Class Committees responsible for selecting investment managers. Furthermore, we found that the governance structure could more clearly distinguish between those consultants who serve as extensions of staff and those who serve to monitor compliance with investment policy and procedure.

Cortex's Strategic Recommendation:

ASRS should no longer require trustees and consultants to serve on Asset Class Committees, thus further clarifying that staff are responsible and accountable for the selection of investment managers. We recommend various other safeguards be put in place to provide the Board with assurances that investment manager selection decisions are being made in accordance with board policy and established procedures. Such safeguards include, among other things, establishing a manager selection policy and requiring the General Investment Consultant to monitor that the policy is being implemented.

ASRS Management Response:

The Director and CIO concur with the recommendations of Cortex.

3RD ISSUE FOR CONSIDERATION:

Strategic Planning:

While ASRS has developed a strong strategic planning process, it does not address the investment program apart from re-stating the investment objectives contained in the Agency's statement of investment policy. The Strategic Plan does not describe a vision of the type of investment organization ASRS intends to build over time to meet its investment objectives, nor the challenges and risks that must be overcome. The Strategic Plan could also serve as an effective vehicle for identifying and addressing any challenges involving board autonomy and independence (see 1 above).

Cortex's Strategic Recommendation:

ASRS should expand its strategic planning process to more directly address the investment program. The Strategic Plan could potentially address issues involving investment personnel and compensation practices, the use of investment consultants, and the need to address issues of independence and autonomy.

ASRS Management Response:

The Director and CIO concur with the recommendations of Cortex.

4TH ISSUE FOR CONSIDERATION:

Governance Reviews:

Cortex found that ASRS may be revisiting its governance practices more often than necessary, particularly the manager selection process and the roles of investment consultants. Excessive discussion of one's governance policies and practices diverts time and attention from other important investment issues, may lead to fatigue among board and staff members, and may create a sense uncertainty among board and staff members as to whether there is widespread support for the current roles and responsibilities.

Cortex's Strategic Recommendation:

The ASRS Governance Policy Manual requires that governance policies be reviewed annually. We recommend that the frequency be changed to at least every three years. Furthermore, we recommend that the Board minimize the extent to which it revisits the governance structure between formal reviews. This will allow the Board and staff to better determine how effective the structure is operating, and would allow the Board and staff to focus on other important matters.

ASRS Management Response:

The Director and CIO concur with the recommendations of Cortex.

DRAFT

Agenda Item #10
Director's Report

10a - Compliance
10b - Investments
10c - Operations
10d - Budget & Staffing
10e - Cash Flow Statement
10f - Appeals
10g - Employers Reporting

Agenda Item #10a

Director's Report Compliance

ARIZONA STATE RETIREMENT SYSTEM

3300 NORTH CENTRAL AVENUE • PO BOX 33910 • PHOENIX, AZ 85067-3910 • PHONE (602) 240-2000
7660 EAST BROADWAY BOULEVARD • SUITE 108 • TUCSON, AZ 85710-3776 • PHONE (520) 239-3100
TOLL FREE OUTSIDE METRO PHOENIX AND TUCSON 1 (800) 621-3778
EMAIL ADDRESS: ASKMAC@AZASRS.GOV • WEB ADDRESS: WWW. AZASRS.GOV

Paul Matson
Director

MEMORANDUM

TO: Mr. Tom Manos, Chair, Arizona State Retirement System (ASRS) Board

FROM: Mr. Paul Matson, Director
Mr. Bernard Glick, Chief Internal Auditor

DATE: September 10, 2012

RE: Internal Audit Review of Internal Investment Validation for the month ending August 31, 2012

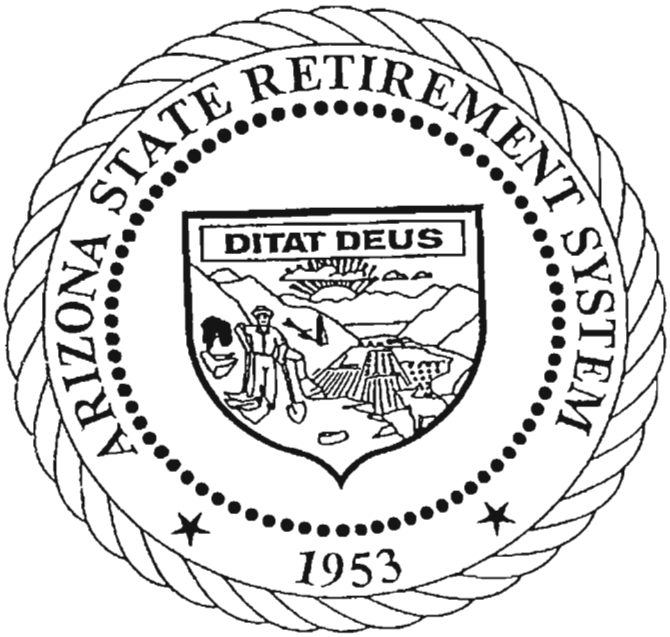
The Internal Audit Division reviewed 1,965 trade transactions in the month of August on all the activity in the E2, E3, E4, E6, E7, E8 and F2 accounts. Our review included:

- Determining that the transaction was properly approved
- Reviewing the transaction for mathematical accuracy
- Ensuring that the description and ticker symbol matched the CUSIP number
- Reconciliation of transaction from trade ticket to custody bank transaction download
- Other tests that we deemed appropriate

No infractions were noted during our review. Based on this review, we believe the procedures for executing and reporting internal investment transactions have been followed for this time reportable period.

Agenda Item #10b

Director's Report Investments



Market Value Report
Asset Allocation
Pension & HBS Assets Public Securities Markets Investment Managers Performance Summary
Long Term Disability Assets Investment Managers Performance Summary
LTD Market Value Report
3300 Tower - Summary Report of Operations
Broadway Proper - Summary Report of Operations

Pension (Plan, System, HBS Assets)	**ASRS Market Value Report**	**As of:**	**Friday, August 31, 2012**

Account Manager	Account Manager Style	Fixed Income Active	Fixed Income Enh/Passive	Equity Active	Equity Enh/Passive	Inflation Linked Active	Inflation Linked Enh/Passive	Total	Pct of Fund
State Street B&T Boston	Master Cash & Pension Acct		658,642,461					658,642,461	2.36%
	Cash Total							**$658,642,461**	2.36%
PIMCO Newport Beach	Active (Core)	729,395,215						729,395,215	2.62%
GTAA Managers (2)	Active GTAA	944,451,504						944,451,504	3.39%
Blackrock San Francisco	Passive (Intermediate Gov Credit)		23,362,232					23,362,232	0.08%
ASRS Phoenix	Enhanced Passive F2		3,023,121,548					3,023,121,548	10.85%
	Core Fixed Income Total							**$4,720,330,501**	16.95%
								Core Fixed Income Policy	**13.00%**
Columbia Minneapolis	Active	633,620,329						633,620,329	2.27%
Shenkman Connecticut	Active	152,380,224						152,380,224	0.55%
	High Yield Fixed Income Total							**$786,000,553**	2.82%
								High Yield Fixed Income Policy	**5.00%**
	US Fixed Income Total							**$5,506,331,053**	19.77%
								US Fixed Income Policy Range: 8% - 28%	**18.00%**
	EM Debt Total							**$0**	0.00%
								EM Debt Policy	**4.00%**
	Opportunistic Debt							**$736,685,474**	2.64%
								Opportunistic Debt Policy Range: 0% - 10%	**0.00%**
	Private Debt Total							**$144,773,764**	0.52%
								Private Debt Policy	**3.00%**
	Fixed Income Total							**$6,387,790,291**	22.93%
								Total Fixed Income Policy Range: 15% - 35%	**25.00%**
Intech FL	Active (Growth)			743,830,483				743,830,483	2.67%
LSV Chicago	Active (Value)			624,200,852				624,200,852	2.24%
Jacobs Levy New Jersey	Active (L/S 120/20)			220,207,597				220,207,597	0.79%
GTAA Managers (2)	Active GTAA			871,542,581				871,542,581	3.13%
ASRS Phoenix	Passive E2				4,419,207,037			4,419,207,037	15.87%
ASRS Phoenix	Enhanced Passive E7				856,780,597			856,780,597	3.08%
ASRS Phoenix	Enhanced Passive E8				564,043,091			564,043,091	2.03%
Blackrock San Francisco	Passive				322,667,915			322,667,915	1.16%
	Large Cap Equity Total							**$8,622,480,153**	30.96%
								Large Cap Policy	**23.00%**
Wellington Boston	Active (Core)			399,233,487				399,233,487	1.43%
CRM New York	Active (Value)			144,371,063				144,371,063	0.52%
ASRS Phoenix	Passive E3 (Growth)				513,937,261			513,937,261	1.85%
ASRS Phoenix	Passive E4 (Value)				509,023,895			509,023,895	1.83%
	Mid Cap Equity Total							**$1,566,565,706**	5.62%
								Mid Cap Policy	**5.00%**
TimesSquare New York	Active SMID (Growth)			528,686,689				528,686,689	1.90%
DFA Santa Monica	Active (Value)			455,940,809				455,940,809	1.64%
Champlain Vermont	Active (Core)			137,829,149				137,829,149	0.49%
ASRS Phoenix	Passive E6				497,707,698			497,707,698	1.79%
	Small Cap Equity Total							**$1,620,164,345**	5.82%
								Small Cap Policy	**5.00%**
	U.S. Equity Total							**$11,809,210,205**	42.40%
								US Equity Policy Range: 26% - 38%	**33.00%**
Brandes San Diego	Active (Value)			373,437,502				373,437,502	1.34%
Aberdeen Edinburgh	Active (Value)			408,089,222				408,089,222	1.47%
Hansberger Ft Lauderdale	Active (Growth)			255,044,571				255,044,571	0.92%
Walter Scott Edinburgh	Active (Growth)			188,842,716				188,842,716	0.68%
GTAA Managers (2)	Active GTAA			649,270,119				649,270,119	2.33%
Blackrock San Francisco	Passive (EAFE)				1,599,108,922			1,599,108,922	5.74%
	Large Cap Developed Non-US Equity Total							**$3,474,447,862**	12.47%
								Large Cap Developed Policy	**14.00%**
DFA Santa Monica	Active (Small Cap)			104,250,438				104,250,438	0.37%
Franklin Templeton San Mateo	Active (Small Cap)			184,805,997				184,805,997	0.66%
Blackrock San Francisco	Passive (EAFE SC)				56,519,214			56,519,214	0.20%
	Small Cap Developed Non-US Equity Total							**$345,598,824**	1.24%
								Small Cap Developed Policy	**3.00%**
William Blair Chicago	Active (EM)			299,733,076				299,733,076	1.08%
Eaton Vance Boston	Active (EM)			336,216,022				336,216,022	1.21%
LSV Chicago	Active (EM)			151,965,698				151,965,698	0.55%
Blackrock San Francisco	Passive (EM)				378,259,151			378,259,151	1.36%
	Emerging Markets Equity Total							**$1,168,174,146**	4.19%
								Emerging Markets Policy	**6.00%**
	Non-US Equity Total							**$4,988,220,833**	17.91%
								Non-US Equity Policy Range: 16% - 28%	**23.00%**
	Private Equity Total							**$1,399,813,557**	5.03%
								Private Equity Policy Range: 5% - 9%	**7.00%**
	Opportunistic Equity							**$76,172,239**	0.27%
								Opportunistic Equity Policy Range: 0% - 3%	**0.00%**
	Equity Total							**$18,273,416,833**	63.00%
								Total Equity Policy Range: 53% - 73%	**63.00%**
Gresham New York						545,479,962		545,479,962	1.96%
Cargill Minneapolis						141,682,337		141,682,337	0.51%
GTAA Managers (2)	Active GTAA					377,209,277		377,209,277	1.35%
	Commodities Total							**$1,064,371,577**	3.82%
								Commodities Policy Range: 1% - 7%	**4.00%**
	Real Estate Total							**$1,468,170,658**	5.27%
								Real Estate Policy Range: 6% - 10%	**8.00%**
	Infrastructure Total							**$0**	0.00%
								Infrastructure Policy Range: 0% - 3%	**0.00%**
	Farmland & Timber Total							**$0**	0.00%
								Farmland & Timber Policy Range: 0% - 3%	**0.00%**
	Opportunistic Inflation Linked Total							**$0**	0.00%
								Opportunistic I/L Policy Range: 0% - 3%	**0.00%**
	Inflation Linked Total							**$2,532,542,235**	9.09%
								Inflation Linked Policy Range: 7%-15%	**12.00%**
	TOTAL Amounts	$2,459,847,272	$4,586,585,479	$8,555,579,268	$9,717,837,565	$2,532,542,235	$0	**$27,852,391,819**	**Total Fund**
	TOTAL Percent	8.83%	16.47%	30.72%	34.89%	9.09%	0.00%		

Asset Class	Actual Portfolio	SAA Policy: Target (Range)	Rebalancing Assumed Port	Rebalancing Adj Policy	Assumed - Adjusted % diff	Assumed - Adjusted $ diff	Policy Band check Actual - Adj	Passive Min	Passive Actual
Core	16.95%	13%							
High Yield	2.82%	5%							
US Fixed Income	22.13%	18% (8-28%)	21.63%	18.76% (9-29%)	2.87%	$799,548,348	OK	50%	57%
EM Debt	0.00%	4%		4.00%					
Opportunistic Debt	2.64%	0% (0-10%)	2.64%	0% (0-10%)	2.64%	$736,685,474	OK		
Private Debt	0.52%	3%		3.00%					
Total Fixed Income	**25.30%**	**25% (15-35%)**	**24.80%**	**25.76% (16-36%)**	**-0.96%**	**-$268,659,842**	OK		
Large Cap	30.96%	23%							
Mid Cap	5.62%	5%							
Small Cap	5.82%	5%							
US Equity	**42.40%**	**33% (26-38%)**	**43.71%**	**36.15% (29-41%)**	**7.56%**	**$2,106,368,926**	Transition	50%	58%
Developed Large Cap	12.47%	14%							
Developed Small Cap	1.24%	3%							
Emerging Markets	4.19%	6%							
Non-US Equity	17.91%	23% (16-28%)	18.16%	23.68% (17-29%)	-5.52%	-$1,536,120,061	Transition	30%	40%
Private Equity	5.03%	7% (5-9%)	5.03%	5.03% (3-7%)	0.00%	$0	OK		
Opportunistic Equity	0.27%	0% (0-3%)	0.27%	0% (0-3%)	0.27%	$76,172,239	OK		
Total Equity	**65.61%**	**63% (53-70%)**	**67.17%**	**64.86% (55-72%)**	2.31%	**$644,421,103**	OK		
Commodities	3.82%	4% (1-7%)	2.88%	4.11% (1-7%)	-1.23%	-$342,296,678	OK		
Real Estate	5.27%	8% (6-10%)	5.15%	5.27% (3-7%)	-0.12%	-$33,464,583	OK		
Infrastructure	0.00%	0% (0-3%)	0.00%	0% (0-3%)	0.00%	$0	OK		
Farmland & Timber	0.00%	0% (0-3%)	0.00%	0% (0-3%)	0.00%	$0	OK		
Opportunistic I/L	0.00%	0% (0-3%)	0.00%	0% (0-3%)	0.00%	$0	OK		
Total Inflation Linked	**9.09%**	**12% (8-16%)**	**8.03%**	**9.38% (5-13%)**	**-1.35%**	**-$375,761,261**	OK		
Total	**100.00%**	**100%**	**100.00%**	**100.00%**	**0.00%**	**$0**		32%	43%

Total GTAA		
Bridgewater	$2,390,944,107	8.6%
Windham	$484,993,958	1.7%
Total	**$2,875,938,065**	**10.3%**
Policy	**10% ±5%**	**OK**

Internally Managed Portfolios:
$8,962,997,439 32%

Opportunistic definitions:
1) Tactical in nature: Function of market dislocation AND
2a) Outside SAA benchmark OR
2b) Within SAA benchmark but absolute return oriented

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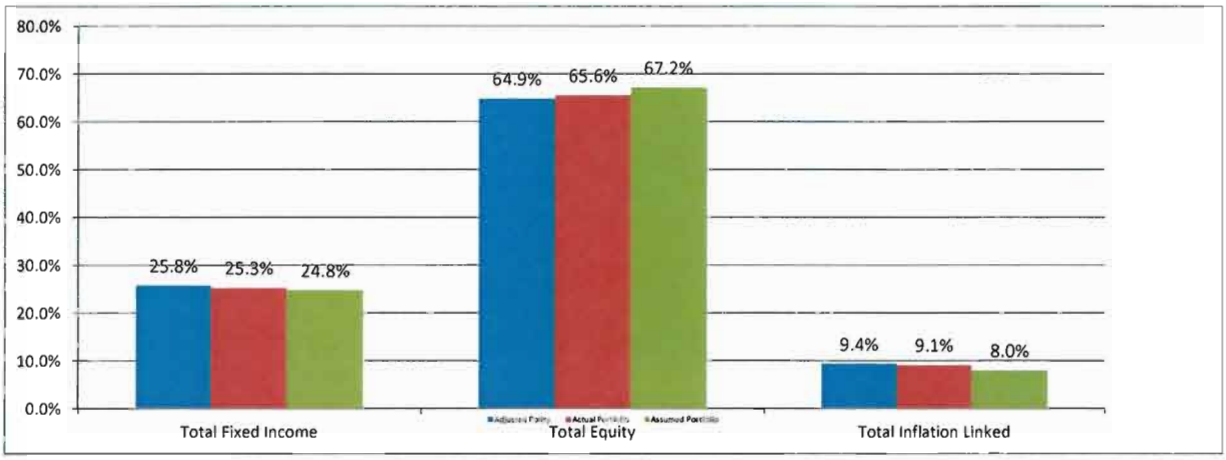
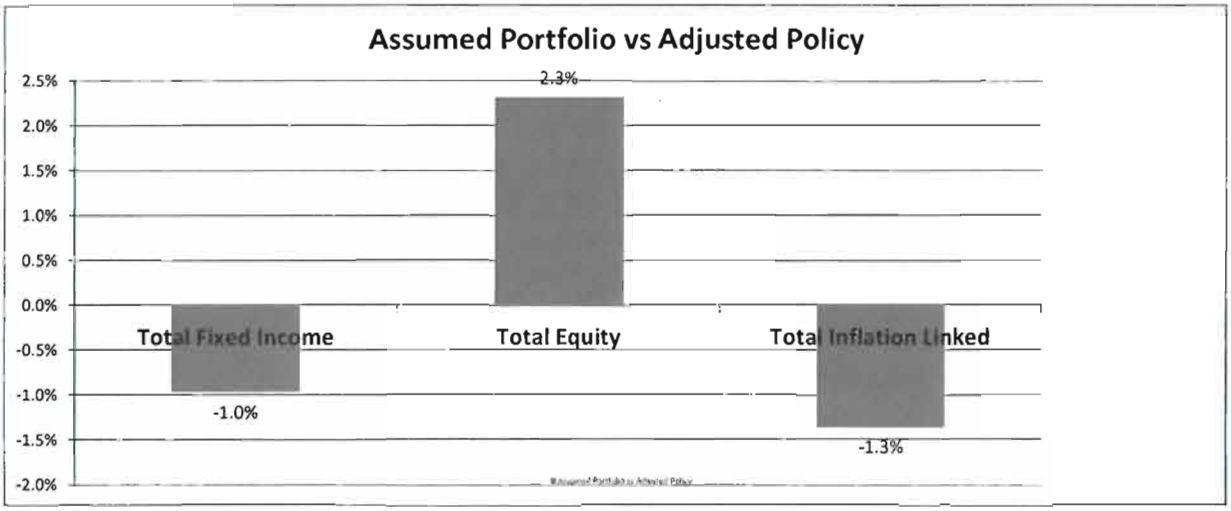
Arizona State Retirement System
Asset Allocation
August 31, 2012





Note: Real Estate prorated to asset classes according to GTAA policy weights and Private Equity allocated to Domestic Equity.

"Adjusted Policy": reflects ASRS Interim SAA which prorates Real Estate & Private Equity underweights
"Actual Portfolio": reflects ASRS actual market values
"Assumed Portfolio": reflects ASRS actual market values, except GTAA which is reflected at its policy weights

"Assumed Portfolio vs Adjusted Policy" bar chart: reflects ASRS actual market values with assumed GTAA allocation versus the Adjusted Policy

ARIZONA STATE RETIREMENT SYSTEM
Investment Management Division

ASRS Pension and HBS Assets
Public Securities Markets
Investment Managers Performance Summary

Period Ending Jul 31, 2012
FINAL

				Net Returns (%)								Excess Returns (basis points)							
								Annualized								Annualized			
	Style	Inception	Amount ($mil.)	Month	3 Months	YTD	1 Year	3 Years	5 Years	10 Years	ITD	Month	3 Months	YTD	1 Year	3 Years	5 Years	10 years	ITD
US EQUITY LARGE CAP																			
BGI-DOM CORE EQUITY	INDEXED	08/01/1989	325	1.39	-0.78	11.00	9.14	14.22	1.25	6.42	8.55	0	0	-1	1	9	12	8	3
E2 MODEL	INDEXED	04/01/1997	4,478	1.39	-0.80	10.98	9.12	14.14	1.17	6.40	5.95	0	-2	-3	-1	1	4	7	9
JACOBS LEVY EQUITY MANAGEMENT	QUANTITATIVE	11/01/2006	223	0.17	-3.15	8.19	5.53	16.85	0.53	—	1.36	-122	-237	-281	-360	273	-60	—	-83
S&P 500 INDEX				1.39	-0.78	11.01	9.13	14.13	1.13	6.34	—								
INTECH LARGE CAP	QUANTITATIVE	01/01/2003	756	1.56	-1.21	13.40	8.11	15.26	4.05	—	8.04	-26	-99	142	-227	-34	16	—	88
S&P/CITIGROUP 500 GROWTH				1.83	-0.22	11.97	10.38	15.59	3.88	—	—								
LSV ASSET MANAGEMENT	QUANTITATIVE	01/01/2003	624	0.79	-2.74	7.55	3.62	12.72	-0.93	—	8.36	-7	-130	-231	-411	15	80	—	176
LSV CUSTOM INDEX				0.86	-1.44	9.86	7.73	12.57	-1.73	—	—								
TOTAL US EQUITY LARGE CAP			$ 6,406																
US EQUITY MID CAP																			
WELLINGTON MANAGEMENT COMPANY LLP	FUNDAMENTAL	07/01/2002	409	1.09	-2.91	11.95	2.26	13.14	2.66	10.37	9.08	113	185	410	106	-292	-79	105	95
S&P 400 MID CAP INDEX				-0.04	-4.76	7.85	1.20	16.06	3.45	9.31	—								
E3 MODEL	INDEXED	12/01/2000	516	0.13	-5.32	7.95	-0.13	18.05	5.93	10.00	6.54	-1	15	19	36	74	98	56	64
S&P/CITIGROUP 400 GROWTH				0.14	-5.46	7.76	-0.49	17.31	4.95	9.44	—								
CRM MID CAP VALUE	FUNDAMENTAL	01/01/2004	148	0.85	-2.82	9.02	-1.24	10.82	0.86	—	7.37	109	117	105	-425	-402	-110	—	57
E4 MODEL	INDEXED	07/01/2002	518	-0.20	-4.00	8.06	2.62	14.82	2.44	9.36	8.10	4	-2	9	-38	-2	49	26	26
S&P/CITIGROUP 400 VALUE				-0.23	-3.98	7.97	3.01	14.84	1.95	9.10	—								
TOTAL US EQUITY MID CAP			$ 1,590																
US EQUITY SMALL CAP																			
DIMENSIONAL FUND ADVISORS EQFD	QUANTITATIVE	09/01/1998	457	-0.73	-4.89	5.31	-2.59	14.98	1.06	9.92	10.28	-27	-129	-149	-685	104	-35	74	88
DFA BLENDED BENCHMARK				-0.46	-3.60	6.81	4.26	13.95	1.41	9.18	—								
TIMESSQUARE CAPITAL MANAGEMENT	FUNDAMENTAL	04/01/2005	531	-0.53	-4.21	10.01	8.27	17.89	7.20	—	9.59	46	130	264	855	184	417	—	323
RUSSELL 2500 GROWTH				-0.99	-5.51	7.36	-0.28	16.05	3.03	9.69	—								
CHAMPLAIN INVESTMENT PARTNERS LLC	FUNDAMENTAL	01/01/2008	139	-3.64	-5.41	3.11	1.97	14.33	—	—	5.32	-287	-231	-403	-201	-129	—	—	158
E6	INDEXED	02/01/2007	501	-0.76	-3.09	7.21	3.98	15.41	3.27	—	3.18	1	1	7	-1	-21	54	—	51
S&P 600 SMALL CAP				-0.77	-3.10	7.15	3.99	15.62	2.74	9.49	—								
TOTAL US EQUITY SMALL CAP			$ 1,627																
TOTAL US EQUITY			$ 9,624																
INTERNATIONAL DEVELOPED LARGE CAP																			
BRANDES INVESTMENT PARTNERS INT EQ	FUNDAMENTAL	10/01/1998	361	-0.46	-3.94	0.47	-11.33	0.99	-6.07	7.23	8.07	-161	8	-409	-34	-356	-217	-63	303
BRANDES CUSTOM INDEX				1.15	-4.02	4.56	-10.99	4.55	-3.90	7.86	—								
ABERDEEN ASSET MANAGEMENT	FUNDAMENTAL	03/01/2011	402	2.29	-1.77	6.02	-3.48	—	—	—	-0.49	114	225	146	751	—	—	—	867
BGI EAFE INDEX	INDEXED	07/01/2009	1,557	1.13	-4.10	4.42	-11.18	3.65	—	—	6.53	-2	-9	-14	-18	-13	—	—	-13
WALTER SCOTT & PARTNERS	FUNDAMENTAL	04/01/2011	185	2.41	-2.63	9.16	-6.65	—	—	—	-3.64	126	139	460	434	—	—	—	456
MSCI EAFE GROSS				1.15	-4.02	4.56	-10.99	3.79	-5.14	6.84	—								

ARIZONA STATE RETIREMENT SYSTEM
Investment Management Division

ASRS Pension and HBS Assets
Public Securities Markets
Investment Managers Performance Summary

Period Ending Jul 31, 2012
FINAL

				Net Returns (%)								Excess Returns (basis points)							
								Annualized								Annualized			
	Style	Inception	Amount ($mil.)	Month	3 Months	YTD	1 Year	3 Years	5 Years	10 Years	ITD	Month	3 Months	YTD	1 Year	3 Years	5 Years	10 years	ITD
HANSBERGER GLOBAL INVESTORS LC	FUNDAMENTAL	08/01/2005	252	0.97	-7.88	6.47	-13.05	2.81	-5.01	—	3.01	-18	-386	191	-206	-174	-112	—	-101
HANSBERGER CUSTOM INDEX				1.15	-4.02	4.56	-10.99	4.55	-3.89	—	—								
TOTAL INTERNATIONAL DEVELOPED LARGE CAP			$ 2,757																
INTERNATIONAL DEVELOPED SMALL CAP																			
BLACKROCK EAFE SMALL CAP	INDEXED	06/01/2010	55	0.22	-7.92	5.17	-13.94	—	—	—	7.11	-17	-20	-44	-41	—	—	—	-25
DIMENSIONAL FUND ADVISORS INTL SC	QUANTITATIVE	09/01/2005	101	0.35	-8.28	3.39	-17.06	2.14	-6.84	—	1.72	-4	-56	-222	-353	-486	-201	—	-57
FRANKLIN TEMPLETON INVESTMENTS	FUNDAMENTAL	04/01/2011	178	1.73	-5.89	5.49	-7.15	—	—	—	-7.42	135	183	-12	638	—	—	—	292
MSCI EAFE SMALL CAP GROSS				0.39	-7.72	5.61	-13.53	7.00	-4.83	9.81	—								
TOTAL INTERNATIONAL DEVELOPED SMALL CAP			$ 334																
INTERNATIONAL EMERGING MARKETS																			
BLACKROCK EMERGING MARKETS	INDEXED	10/01/2010	380	1.91	-6.04	5.70	-14.20	—	—	—	-4.22	-11	-22	-52	-55	—	—	—	-51
EATON VANCE EMERGING MARKET EQUITY	QUANTITATIVE	12/01/2010	336	0.29	-6.04	6.58	-13.45	—	—	—	-4.95	-173	-21	36	19	—	—	—	-77
LSV EMERGING MARKET EQUITY	QUANTITATIVE	12/01/2010	152	0.94	-7.04	7.03	-15.80	—	—	—	-4.41	-109	-122	80	-216	—	—	—	-22
WILLIAM BLAIR & COMPANY	FUNDAMENTAL	11/01/2010	298	1.92	-5.41	9.79	-7.82	—	—	—	-3.78	-10	42	357	582	—	—	—	167
MSCI EMF GROSS				2.02	-5.83	6.22	-13.64	6.94	-0.43	15.56	—								
TOTAL INTERNATIONAL EMERGING MARKETS			$ 1,165																
TOTAL INTERNATIONAL EQUITY			$ 4,256																
TOTAL FIXED INCOME																			
BGI US DEBT FD	INDEXED	10/01/2004	328	0.69	1.44	2.86	6.46	7.29	8.27	—	6.48	-69	-90	-92	-79	44	136	—	87
F2 MODEL	INDEXED	10/01/2000	3,060	1.33	2.29	3.94	7.85	6.99	7.23	5.83	6.43	-5	-5	16	60	14	33	18	14
PACIFIC INV MGMT CO (PIMCO)	CORE	02/01/2010	726	1.38	2.43	4.96	6.90	—	—	—	7.30	0	10	117	-35	—	—	—	64
Barclays Aggregate				1.38	2.34	3.78	7.25	6.85	6.91	5.65	—								
BGI GOVT/CRDTBD INDEX	INDEXED	11/01/2008	23	0.98	1.56	3.15	5.07	5.74	—	—	7.16	1	3	7	13	7	—	—	8
Barclays Gov/Credit Int				0.97	1.53	3.09	4.94	5.67	6.02	5.05	—								
COLUMBIA MANAGEMENT INV. ADVISORS, LLC	HIGH YIELD	10/01/2009	627	2.25	2.85	9.12	8.35	—	—	—	11.96	35	15	-19	29	—	—	—	-74
SHENKMAN CAPITAL MANAGEMENT	HIGH YIELD	10/01/2009	151	1.57	1.81	6.89	6.70	—	—	—	10.62	-34	-88	-242	-136	—	—	—	-207
Barclays Corp High Yield				1.90	2.70	9.31	8.06	14.74	9.64	10.87	—								
TOTAL FIXED INCOME			$ 4,916																
GTAA																			
BRIDGEWATER ASSOCIATES GLBL TAA	FUNDAMENTAL	01/01/2004	2,343	1.85	-0.72	6.87	6.81	15.83	6.52	—	7.85	32	-43	-83	218	543	457	—	276
GTAA CUSTOM BENCHMARK				1.53	-0.29	7.70	4.62	10.40	1.95	—	—								
WINDHAM	QUANTITATIVE	10/01/2011	477	1.23	-1.82	4.27	—	—	—	—	10.16	-19	-159	-384	—	—	—	—	-593
WINDHAM CUSTOM INDEX				1.42	-0.23	8.11	—	—	—	—	—								
TOTAL GTAA			$ 2,820																
GLOBAL INFLATION LINKED																			
CARGILL	ACTIVE	10/01/2010	137	10.57	6.25	6.38	-7.93	—	—	—	4.77	410	419	385	347	—	—	—	319

STATE STREET

ARIZONA STATE RETIREMENT SYSTEM
Investment Management Division

ASRS Pension and HBS Assets
Public Securities Markets
Investment Managers Performance Summary

Period Ending Jul 31, 2012
FINAL

				Net Returns (%)								Excess Returns (basis points)							
								Annualized								Annualized			
	Style	Inception	Amount ($mil.)	Month	3 Months	YTD	1 Year	3 Years	5 Years	10 Years	ITD	Month	3 Months	YTD	1 Year	3 Years	5 Years	10 years	ITD
GRESHAM	ACTIVE	09/01/2010	529	5.05	-1.22	0.46	-10.73	—	—	—	8.18	-142	-328	-207	68	—	—	—	288
DJ-UBS Commodity Index TR				6.47	2.06	2.53	-11.40	4.56	-2.84	5.68	—								
TOTAL GLOBAL INFLATION LINKED			$ 667																
TOTAL PUBLIC MARKET			$ 23,946																

Long Term Disability (LTD) — Friday, August 31, 2012

Account Manager	Account Manager Style	Fixed Income	Equity	Inflation Linked	Total	Pct of Fund	Target (Range)
StateStreet B&T: Boston	Cash	$1,384,482			$1,384,482	0.55%	
BlackRock: San Francisco	Fixed Core (Passive)	$56,413,988			$56,413,988	22.44%	13%
BlackRock: San Francisco	Fixed High Yield (Passive)	$6,211,611			$6,211,611	2.47%	8%
BlackRock: San Francisco	Emerging Market Debt (Passive)				$0	0.00%	4%
BlackRock: San Francisco	Russell 1000 (Passive)		$104,135,150		$104,135,150	41.42%	34%
BlackRock: San Francisco	Russell 2000 (Passive)		$17,610,138		$17,610,138	7.01%	6%
BlackRock: San Francisco	EAFE (Passive)		$32,983,596		$32,983,596	13.12%	14%
BlackRock: San Francisco	EAFE SC (Passive)		$5,003,643		$5,003,643	1.99%	3%
BlackRock: San Francisco	Emerging Markets (Passive)		$7,103,522		$7,103,522	2.83%	6%
BlackRock: San Francisco	Dow Jones UBS Commodities (Passive)			$4,752,694	$4,752,694	1.89%	4% (1-7%)
BlackRock: San Francisco	US Real Estate (Passive)			$15,794,960	$15,794,960	6.28%	8% (6-10%)
	TOTAL Amounts	$64,010,082	$166,836,049	$20,547,654	**$251,393,784**		
	TOTAL Percent	25.46%	66.36%	8.17%			

	Fixed Income	Equity	Inflation Linked
Actual Portfolio	**25.46%**	**66.36%**	**8.17%**
Policy	**25% (15-35%)**	**63% (53-70%)**	**12% (8-16%)**

ARIZONA STATE RETIREMENT SYSTEM
Investment Management Division

ASRS Long Term Disability Assets
Investment Managers Performance Summary

Period Ending Jul 31, 2012
FINAL

			Net Returns (%)								Excess Returns (basis points)							
							Annualized								Annualized			
	Inception	Amount ($mil.)	Month	3 Months	YTD	1 Year	3 Years	5 Years	10 Years	ITD	Month	3 Months	YTD	1 Year	3 Years	5 Years	10 years	ITD
BLACKROCK - US DEBT FUND B	01/01/2011	59.7	1.39	2.35	3.79	7.25	---	---	---	7.38	2	1	0	-1	---	---	---	-1
Barclays Aggregate			1.38	2.34	3.78	7.25	6.85	6.91	5.65	---								
BLACKROCK - US HIGH YIELD FUND B	01/01/2011	6.1	2.02	2.66	8.91	7.89	---	---	---	8.91	12	-3	-40	-17	---	---	---	-19
Barclays Corp High Yield			1.90	2.70	9.31	8.06	14.74	9.64	10.87	---								
BLACKROCK - RUSSELL 1000 FUND B	01/01/2011	101.7	1.20	-1.38	10.69	8.00	---	---	---	7.71	1	2	1	4	---	---	---	6
RUSSELL 1000			1.19	-1.40	10.68	7.96	14.26	1.26	6.66	---								
BLACKROCK - RUSSELL 2000 FUND B	01/01/2011	17.0	-1.34	-3.23	7.12	0.37	---	---	---	1.78	4	8	9	18	---	---	---	17
RUSSELL 2000			-1.38	-3.31	7.03	0.19	13.71	1.69	8.62	---								
BLACKROCK - EAFE INDEX FUND B	01/01/2011	32.1	1.14	-4.12	4.21	-11.37	---	---	---	-5.33	-1	-11	-35	-38	---	---	---	-38
MSCI EAFE GROSS			1.15	-4.02	4.56	-10.99	3.79	-5.14	6.84	---								
BLACKROCK EAFE SMALL CAP FUND B	01/01/2011	4.9	0.24	-7.91	5.19	-13.94	---	---	---	-7.43	-14	-19	-42	-41	---	---	---	-36
MSCI EAFE SMALL CAP DAILY			0.39	-7.72	5.61	-13.53	7.00	-4.83	9.81	---								
BLACKROCK MSCI EMERGING MARKETS FUND B	01/01/2011	7.1	1.93	-6.07	5.74	-14.17	---	---	---	-9.02	-9	-24	-49	-53	---	---	---	-53
MSCI EMF GROSS			2.02	-5.83	6.22	-13.64	6.94	-0.43	15.56	---								
BGI-LTD- R ESTATE FD	01/01/2005	15.8	1.84	2.44	16.93	12.72	29.76	3.79	---	6.43	3	3	-1	-5	-23	-10	---	-14
WILSHIRE RESI			1.81	2.41	16.94	12.77	29.99	3.90	11.22	---								
BLACKROCK DJ UBS COMM FUND B	01/01/2011	4.7	6.49	2.04	2.37	-12.10	---	---	---	-7.64	3	-2	-16	-70	---	---	---	-44
DJ-UBS Commodity Index TR			6.47	2.06	2.53	-11.40	4.56	-2.84	5.68	---								
LONG TERM DISABILITY - CASH	07/01/1995	1.2	0.00	0.01	0.01	0.03	0.15	1.02	1.98	3.11	-1	-2	-4	-4	3	12	13	-4
91 DAY TREASURY BILL			0.01	0.03	0.05	0.07	0.12	0.90	1.85	---								
TOTAL LTD		$ 250.4																

3300 Tower - Summary Report of Operations
for Month Ending July 2012
Prepared By CBRE, Inc. for Arizona State Retirement System

Building Facts

Rentable Square Feet:	383,855
Number of Floors:	26
Building Type:	Multi-Tenant Office - High-rise
Location:	Phoenix, Arizona
Total # of tenants:	36
Year Completed:	1980

Lease Expirations

Year	Square Feet	% of building	# of tenants	Tenants
month-to-month	-	0.00%	0	
2012	21,803	6.02%	4	Morris Hall 500(1/20), 800, Verizon 1540
2013	19,482	5.36%	4	Allstate, Time Warner, Shapiro Van Ess & Sherman 2200, Shapiro Van Ess & Sherman 2270.
2014	23,124	8.36%	3	Mann Berens 2400, Allen & Erwin 2500, AZ Neuro 2550
2015	8,027	2.21%	3	Business Development, Israel Gerty, MCI 1101
2016	24,830	6.83%	3	EEOC 690, EEOC 700, EEOC 2220
2017+	93,342	25.67%	9	Comsys, Jardine Baker, Virgo 300, Virgo 400, DePasquale, EPX 850, Verizon 1510, CompuGroup Medical (Noteworthy/Mars) 2100, Mediastar, Highwinds 200
owner occupied	90,363	24.85%	3	ASRS, Building Management, Fitness Center
total	281,061	77.29%	29	Total Tenants
Roof/Dell/Cable			7	Sparkplug, Norris Beggs Simpson, Mario's deli, DEA, Telink, Telesphere, Western WiMax
			36	Total Units

Occupancy	Actual		Budget		Variance		Submarket/Comps	
Current Actual Leases in Place	281,061	77.29%	283,502	77.96%	(2,441)	-0.87%	76.1[illegible]%	2nd Quarter CBD occupancy overall Office Market

Leases Pending (Signed not yet Commenced)	SF	% of Bldg.	Effective Annual Rental Rate/sf	Term	Tenant Improvement Allowance
8th Fl - Highwinds 8/1/12	3,172	0.87%	$ 21.31	127 mo	$ 30.00
8th Fl - EPX 8/1/2012	3,707	1.02%	$ 18.28	117 mo	$ 6.51
Total Occupied + Pending Leases	281,061	77.29%	These spaces are currently leased and occupied; will not add to Leased RSF.		

Profit & Loss

	Year to Date				Annual			
Category	Actual	Budget	Variance	Explanation	Forecast	Budget	Variance	Explanation
Income	$3,367,225	$3,618,806	($251,581)	Variance due mainly to YTD free rent variance (-$201,994) due to EPX and Virgo conversion of TI dollars to free rent, unbudgeted Highwinds FRE due to renewal. Lower than budgeted fitness center income (-$7,290), minor rent variance due to EEOC 2220 (-$13,832), and Misc rent variance (-$17,911) EEOC TIR coded to 1525 instead of 4190 and lost ANT income due to Highwinds renewal. Slight CAM recovery variance (-$1,677) and non-rental income variance (-$5,306) slightly higher utility reimbursement income offset by slightly lower parking income.	$6,170,476	$6,018,108	$152,370	Forecasted to be under budget mainly due to unbudgeted free rent given in deal by conversion of unused TI dollars.
Operating Expenses	$1,687,295	$1,873,916	$186,621	Variance due to under budget janitorial $13,998 (windows not being cleaned until caulk project complete and re-bid savings on cleaning), HVAC repairs $38,127 timing of repairs and unused contingency amounts, repair & maintenance $116,508 (lower wages to temp worker and staff changes) and several categories unused contingency. Management $15,035 (mainly less payroll cost), property taxes $53,645 (using new depreciation calculation resulting in lower amount due.); offset mainly by Utilities -$27,987 (due to heat and increased utility cost) and Legal Fees -$21,813 due to Chiller Project.	$3,066,294	$3,066,294	$0	Forecasted to be on budget at this time.
Net Income	$1,679,930	$1,744,890	($64,960)		$3,104,182	$2,951,812	$152,370	
Capital Expenses	($311,980)	($937,317)	$625,357	Variance due to (2) BI projects deferred until fall and 2013: 1st floor heating and cooling tower fill. Also, Lighting Retrofits in hallways and storage areas to take place this year (-$304,098). Highwinds, CompuGroup/Mars, Virgo, and ASRS TI not usad to date; offset by EEOC and Comsys costs (-$679,854). TI Reimbursements ($139,721) added for Amort amounts for Comsys and EEOC. Lease Commissions variance ($218,874) due to Antenna Lease renewals, and unbudgeted commissions paid for EEOC expansion & Highwinds.	($945,301)	($1,092,301)	$147,000	Currently reforecasting to defer 1st floor heat boxes until 2013 budget.
Adjustments to reconcile accrual to cash	$134,116	$0	$134,116		($23,597)	$0	($23,597)	
Cash Flow	$1,502,086	$807,573	$694,513		$2,135,284	$1,859,511	$275,773	

Broadway Proper - Summary Report of Operations
for Month Ending July 2012
Prepared By CBRE, Inc. for Arizona State Retirement System

Building Facts

Rentable Square Feet:	53,450
Number of Floors:	(3) 3-story buildings
Building Type:	Multi-Tenant Office - Garden
Location:	Tucson, Arizona
Total # of tenants:	30
Year Completed:	1985

Lease Expirations

Year	Square Feet	% of building	# of tenants	Tenants
month-to-month	3,312	6.20%	3	Son Inst (NPS sublease) B303 & 308, and Son Inst (NPS sublease) B203
leased but unoccupied	697	1.30%	3	Vidrine Law Firm, Gordon Purvis, Empire/Hubberd Financial
2012	3,991	7.47%	3	TaxSavers, Allera Acctg, Maze Mgmt
2013	7,059	13.21%	7	HalSi, Go Web, Stevens Lloyd, Well Lifestyle, Pioneers Inc., Cons Ser Group, Eng Office
2014	7,429	13.90%	8	CC Services, Jan-Pro, TruePoint Solutions, Magistral, Edit Dept, Cutright, Arambulo, BPMG
2015	1,710	3.20%	2	Tom Bouman, Best Finishing
2016	1,604	0.00%	1	Cornerstone Christian Counseling
owner occupied	4,976	9.31%	3	ASRS B101,103,108
total	30,778	57.58%	30	

Occupancy

	Actual		Budget		Variance		Submarket/Comps	
Current Actual Leases in Place	30,778	57.58%	26,522	49.62%	4,256	7.96%	85.50%	2nd Qtr 2012

Leases Pending (Signed not yet Commenced)	SF	% of Bldg.	Effective Annual Rental Rate/sf	Term	Tenant Improvement Allowance	Comments
						(3) Suites are Leased but unoccupied nor paying rent; seeking ASRS approval t terminate tenants from rent roll. (2,810 RSF or 5.25% of building)
Total Occupied + Pending Leases	30,778	57.58%				

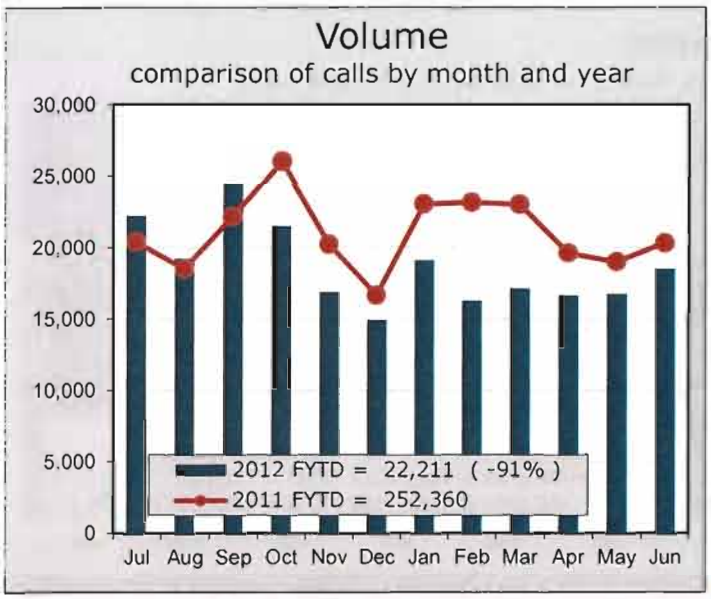
Profit & Loss

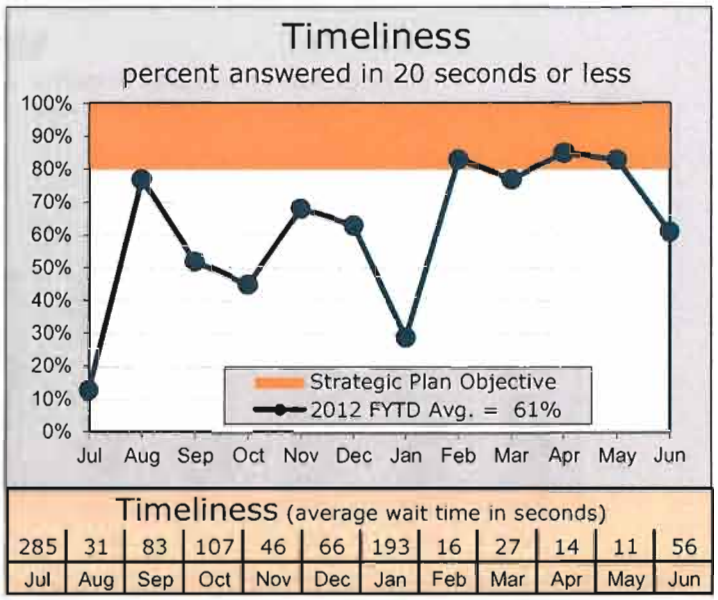
	Year to Date				Annual			
Category	Actual	Budget	Variance	Explanation	Forecast	Budget	Variance	Explanation
Income	$263,821	$229,579	$34,242	Rent variance (+$36,536) mainly due to 7650-106 (Gordon Purvis) still being billed but unbudgeted (tenant vacated), Son Institute (NPS sublease) bumping out 3 months and then holding over 2 periods, variance for Go Web due to prior months rent correction, rent adjustment for Vidrine for 2 months, and Best Finishing holding over for 3 months. Budgeted FRE for Best Finishing and BPMG unused, unbudgeted Arambulo used last period, and minor Cornerstone variance $911. Late fee income (+$727). Offset by Total Recovery Income variance (-$4,289) due to savings in 2011 Prior Year OpEx resulting in credit to Tenants.	$384,049	$384,049	$0	Forecasted to be on budget at this time.
Operating Expenses	$168,349	$152,912	($15,437)	Variance due mainly to utility category over budget YTD -$3,640 (slightly higher than budgeted water and electric expense), other non-escalatable maintenance overbudget - $12,637 (due mostly to mold related issues) and legal fees (-$ 2,767) due to mold legal matter offset by property tax expense lower than budgeted $ 3,980; minor variances in other categories offsetting each other.	$241,167	$241,167	$0	Forecasted to be on budget at this time.
Net Income	$95,472	$76,667	$18,805		$142,882	$142,882	$0	
Capital Expenses	($9,352)	($17,423)	($8,071)	Variance due to unused TI amounts budgeted for Arambulo renewal (50-207) April period and Cornerstone (60-207) this period. Cornerstone TI to be paid at a later period. Also, smaller variance due to unused amount for Cornerstone Leasing Commission to be paid next period.	($26,270)	($26,270)	$0	Forecasted to be on budget at this time.
Adjustments to reconcile accrual to cash	($15,624)	$0	($15,624)		$0	$0	$0	
Cash Flow	$70,496	$59,244	$11,252		$116,612	$116,612	$0	

Agenda Item #10c

Director's Report
Operations

Member Advisory Center: Phone





Timeliness (average wait time in seconds)

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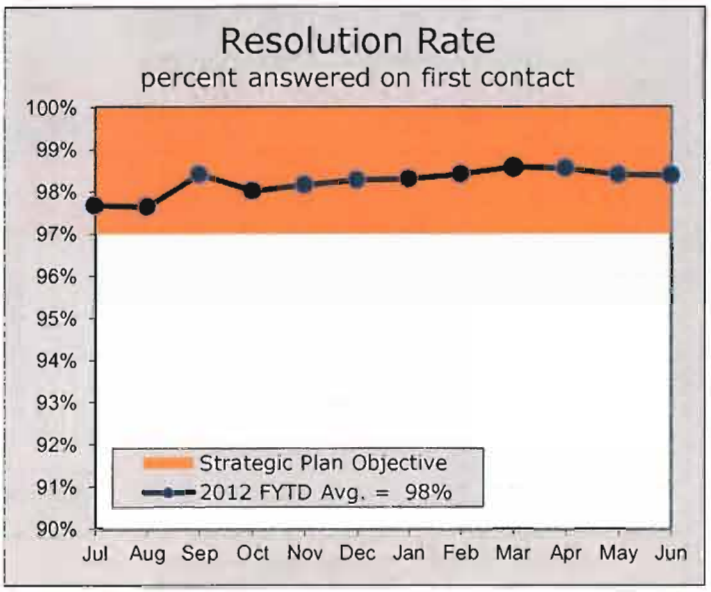
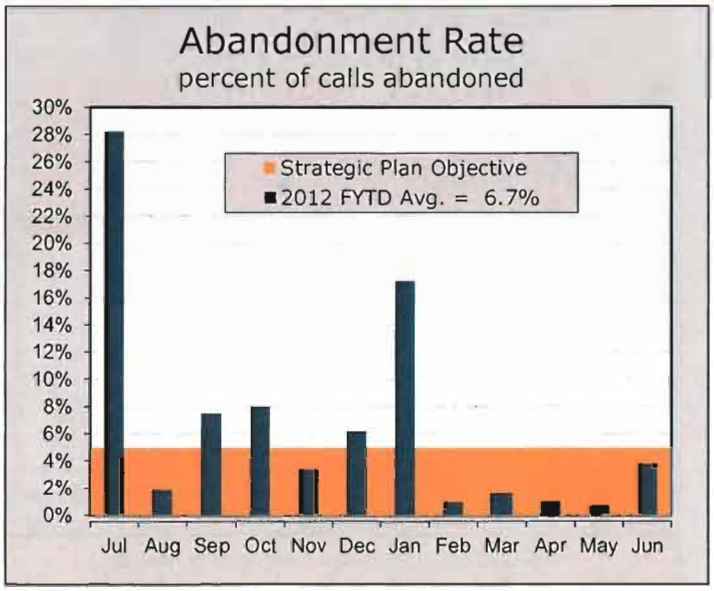
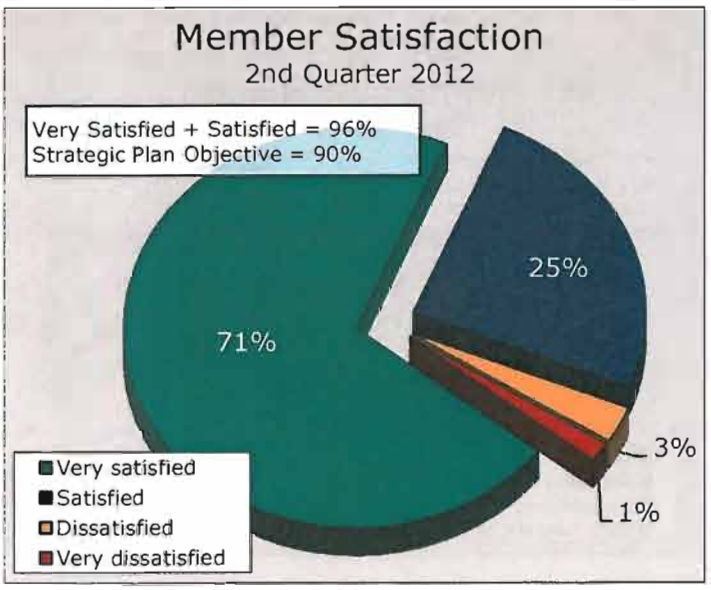
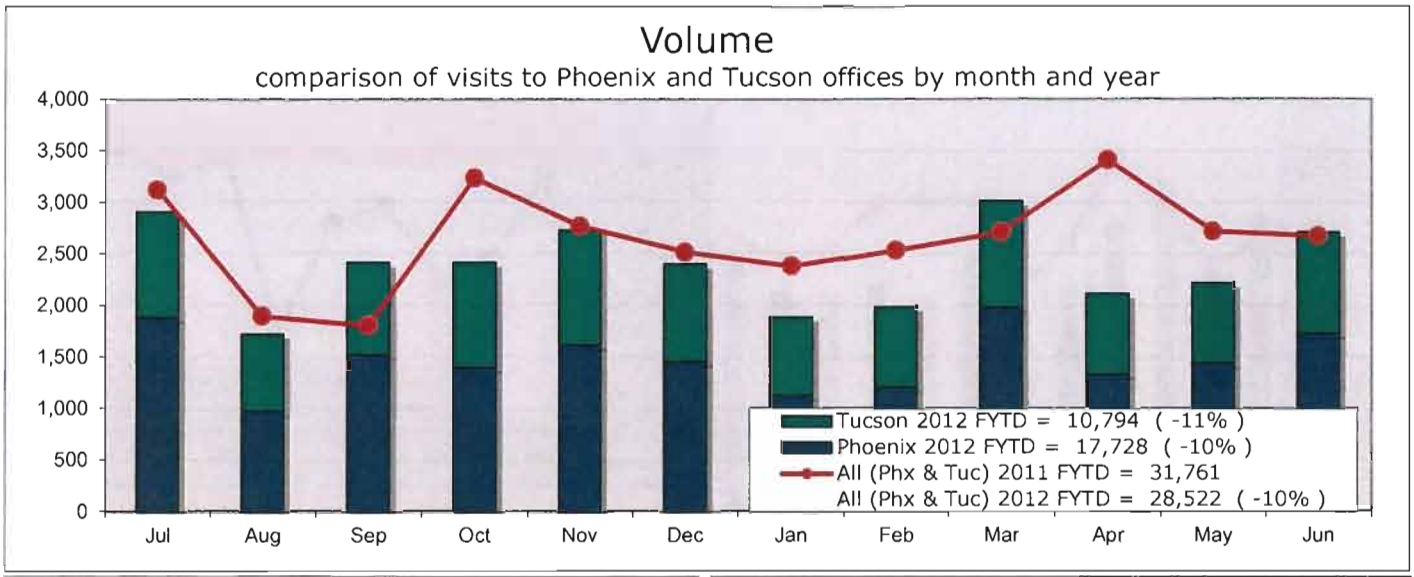
285	31	83	107	46	66	193	16	27	14	11	56

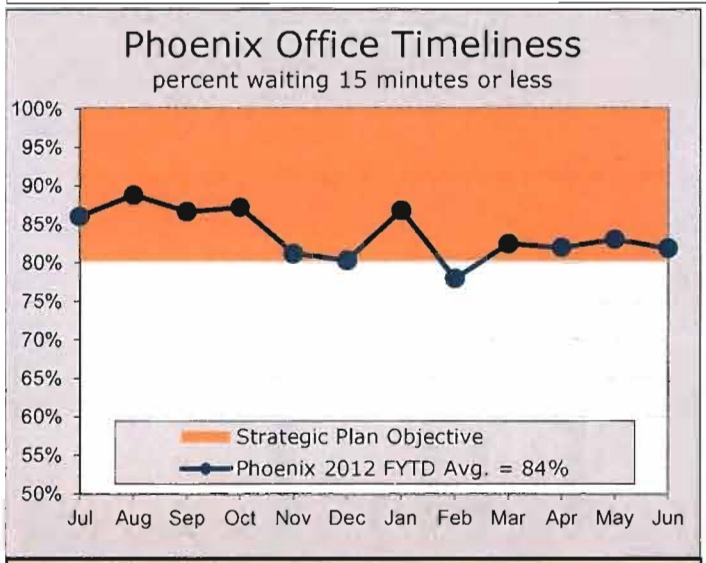


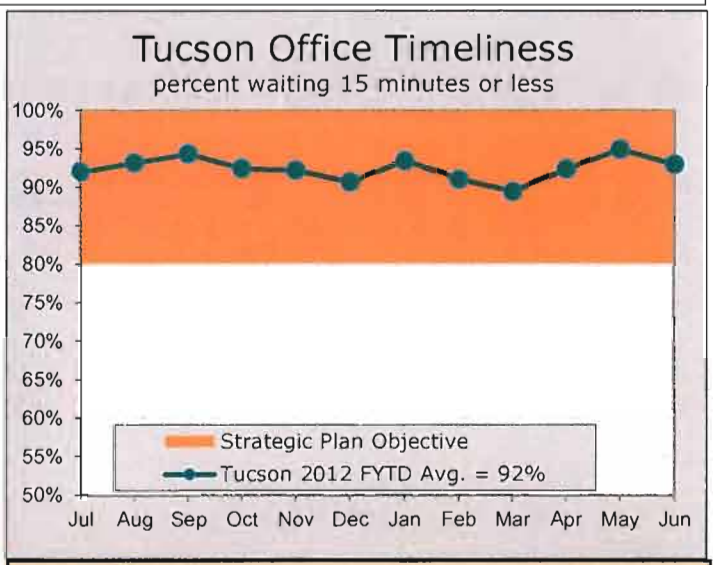




Member Advisory Center: Walk-ins





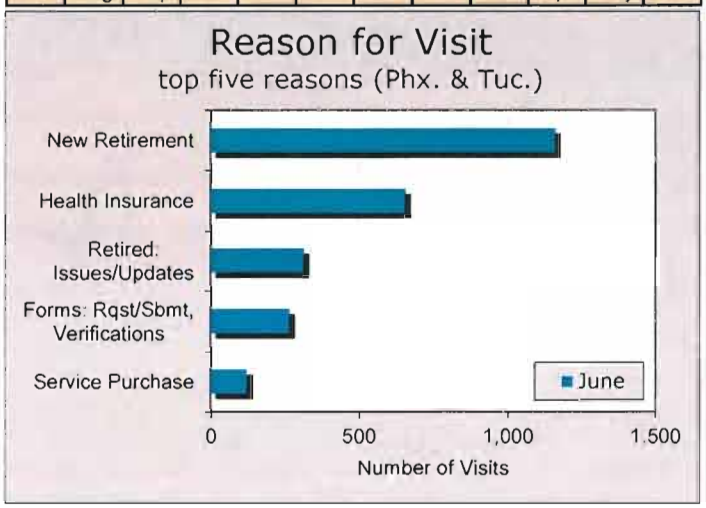


Timeliness (average wait time in minutes)

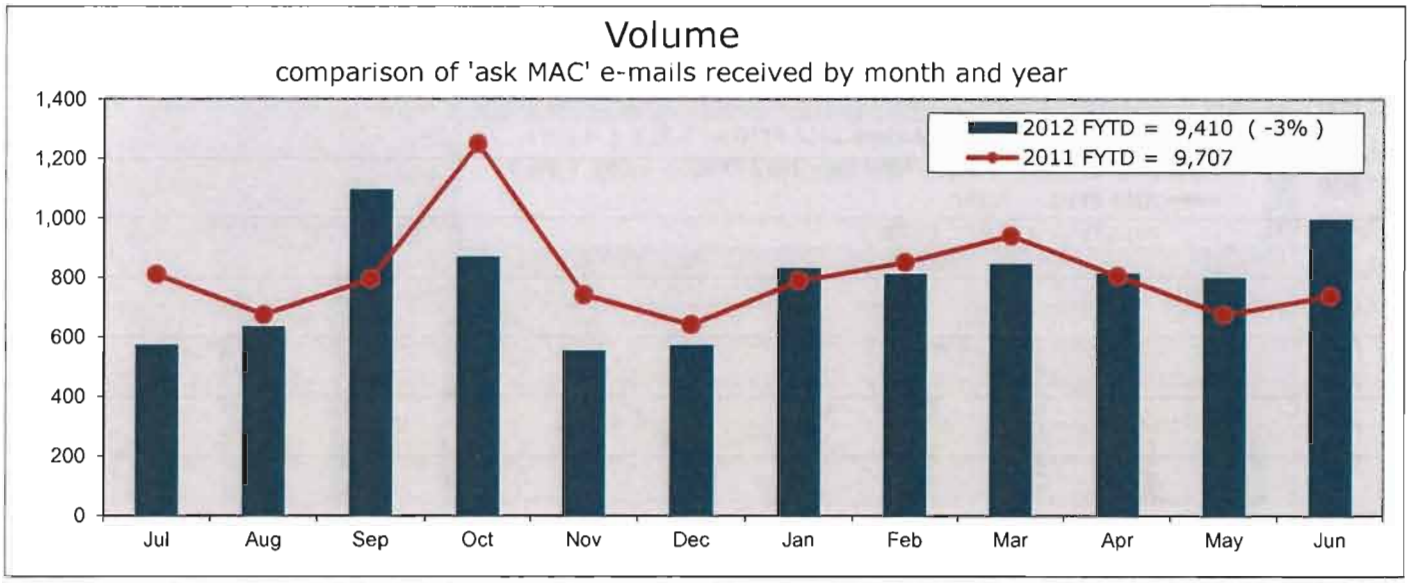
Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
9	7	7	9	8	9	8	11	9	10	10	9

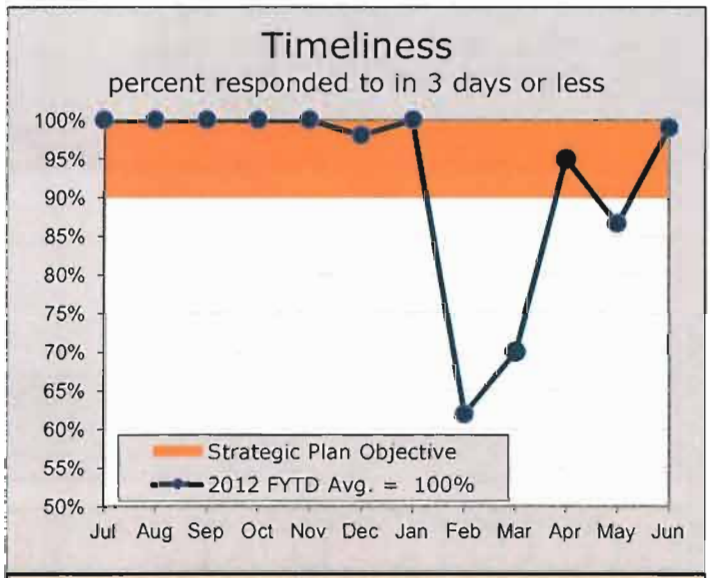
Timeliness (average wait time in minutes)

Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
5	6	6	5	5	4	3	5	6	6	5	5



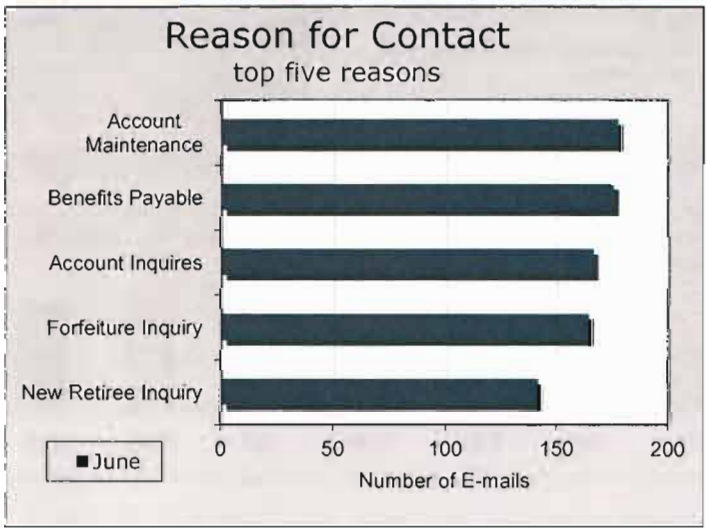
Member Advisory Center: E-Mail



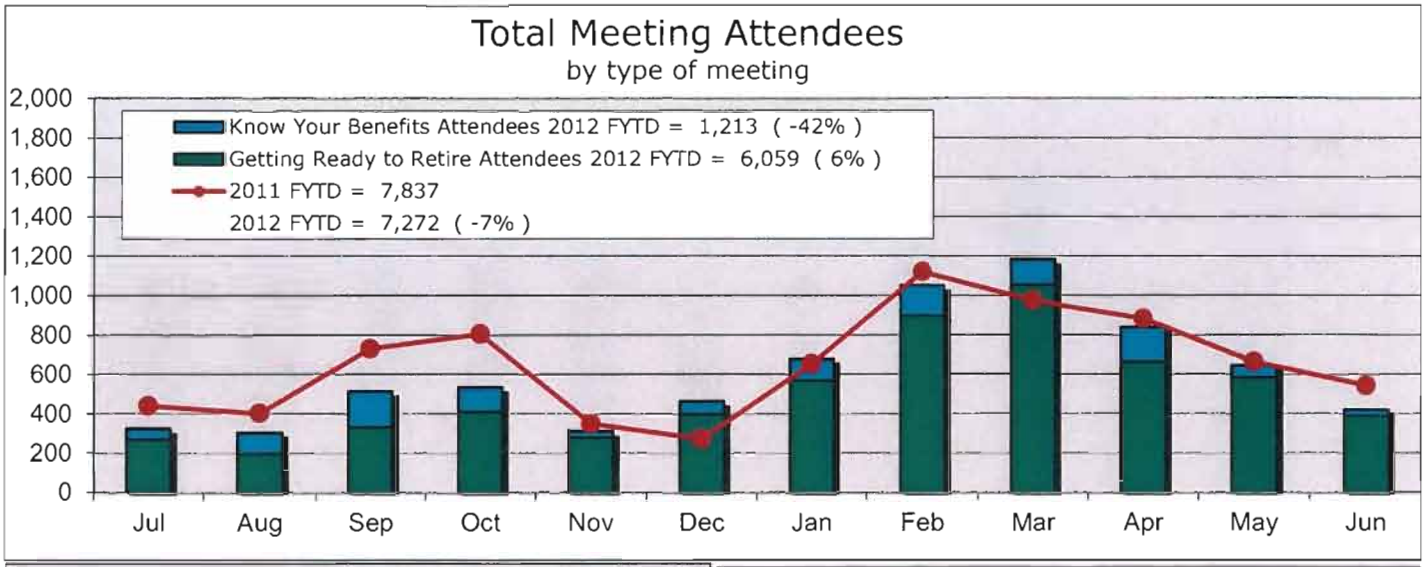


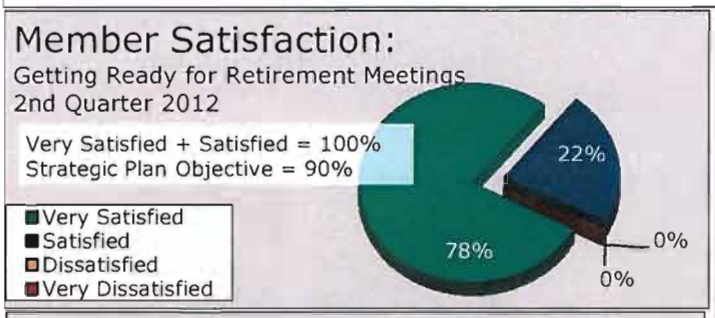
Timeliness (average response in business days)

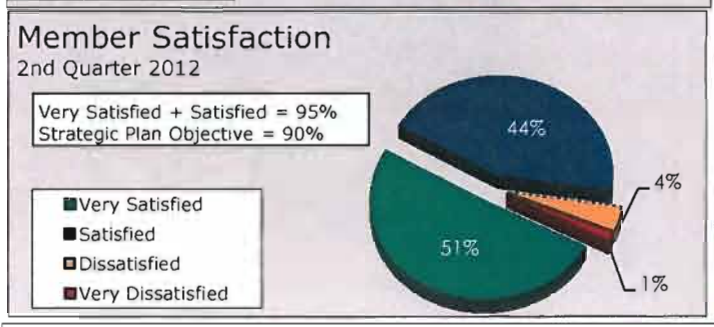
Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1	1	2	1	1	1	2	3	3	3	1	2



Outreach Education and Benefit Estimates

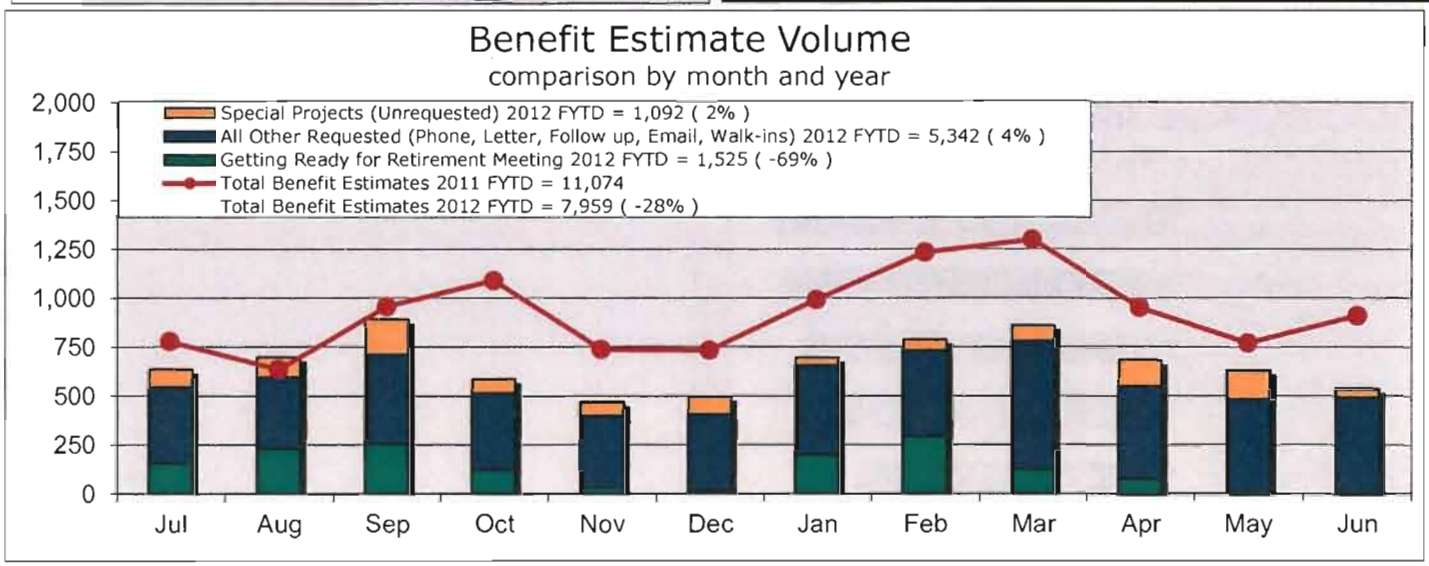




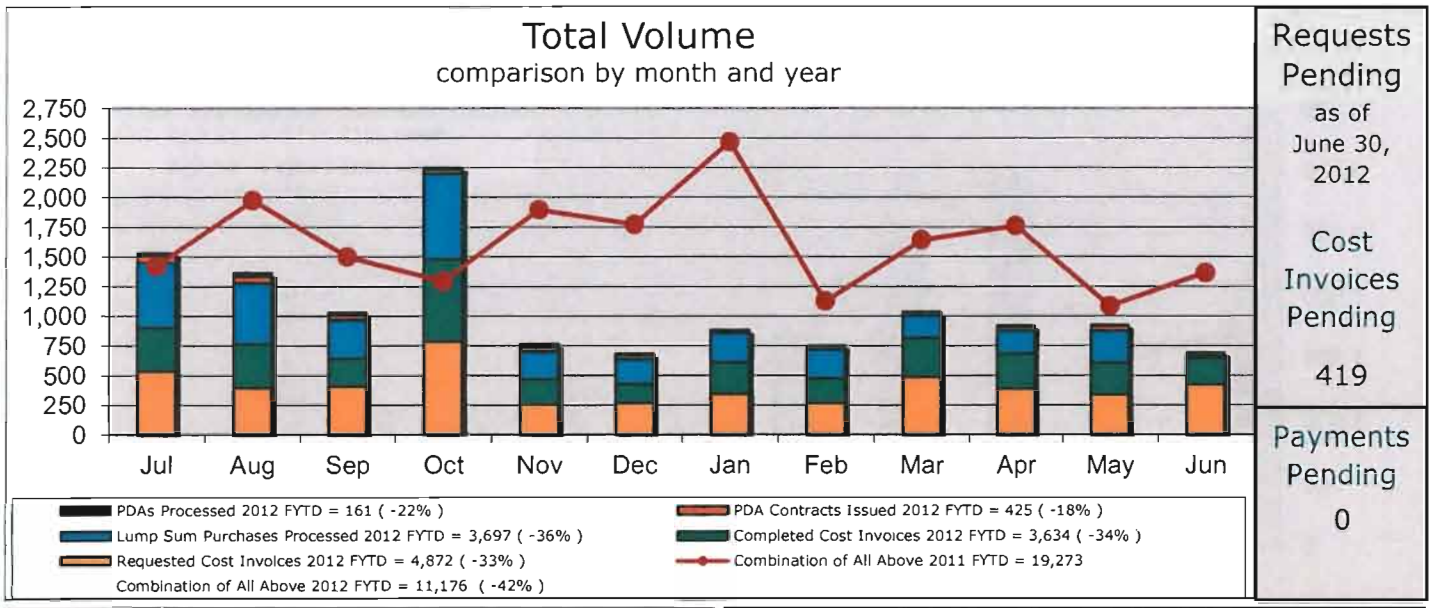


Benefit Estimate Timeliness (average TAT in days)

1	1	1	1	1	1	1	1	1	1	1	1
Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun



Service Purchase



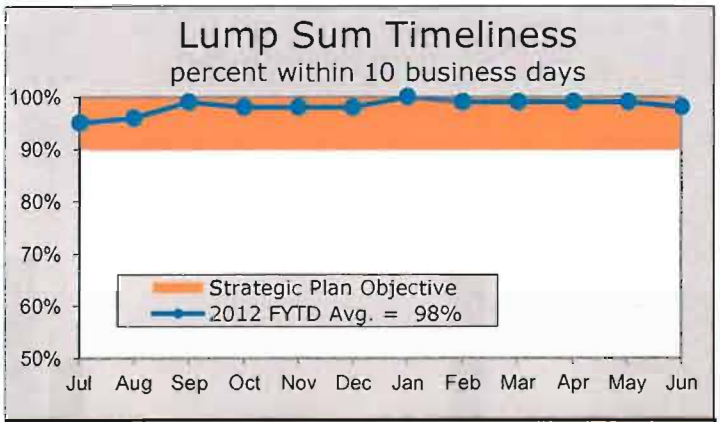
Requests Pending as of June 30, 2012

Cost Invoices Pending

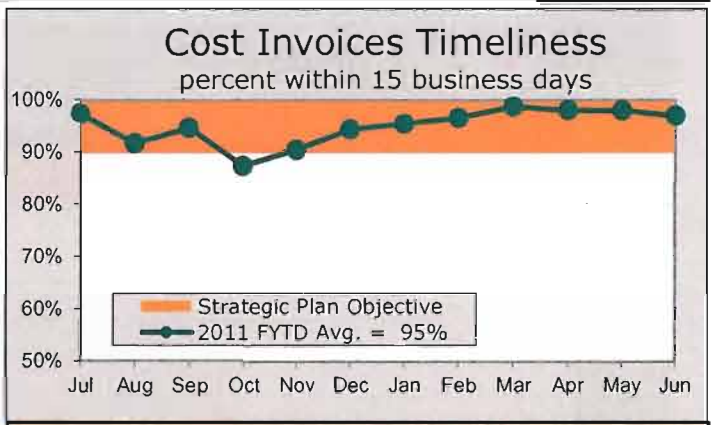
419

Payments Pending

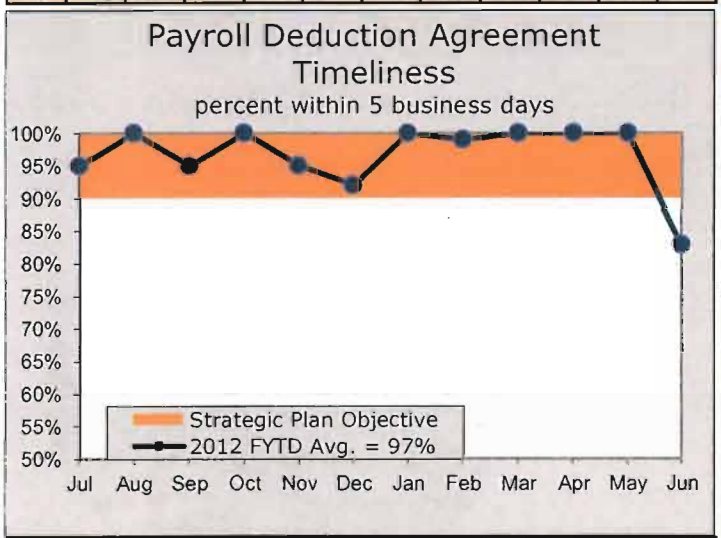
0



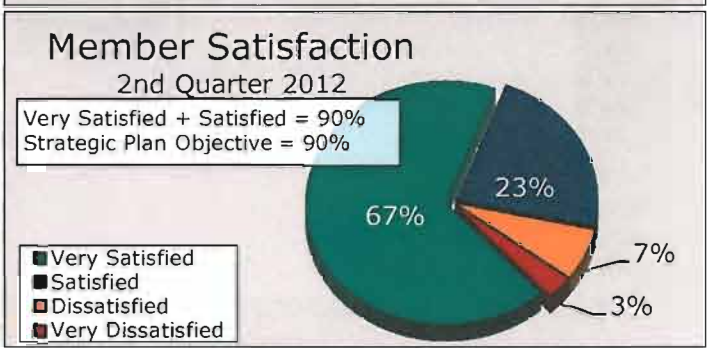
Timeliness (average turnaround time in business days)											
5	6	3	2	3	2	2	2	1	1	2	2
Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun



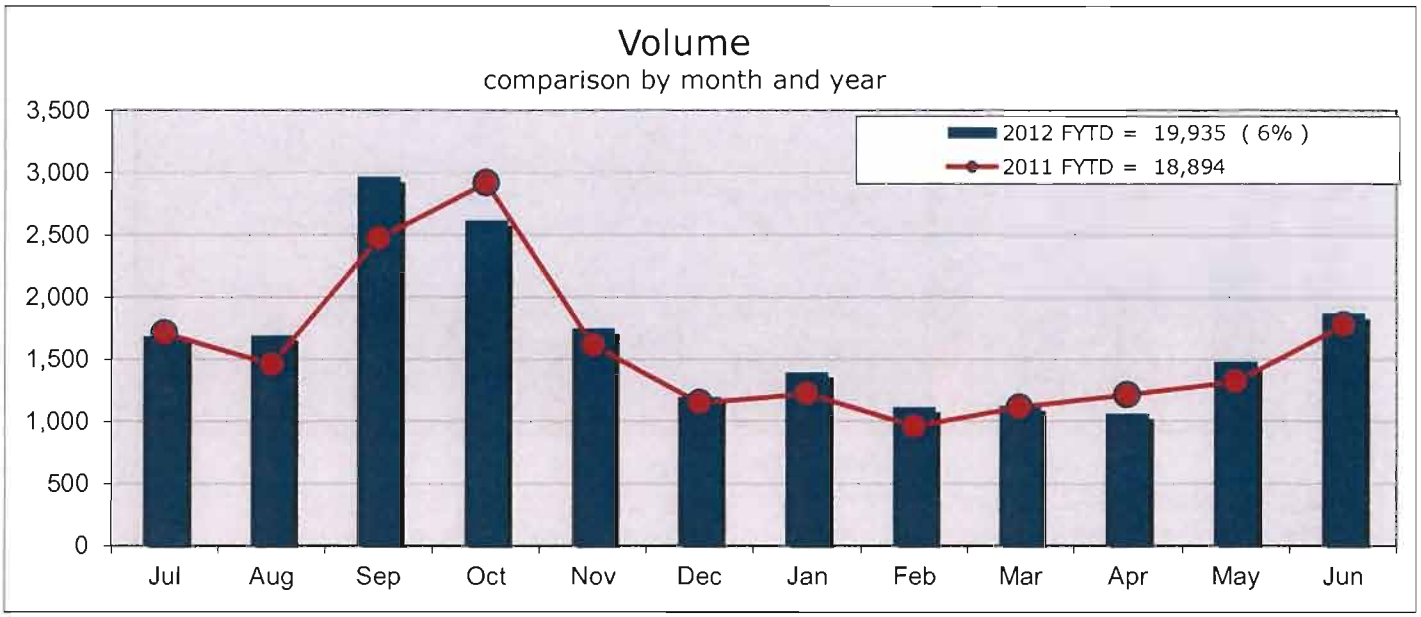
Timeliness (average turnaround time in business days)											
6	8	7	7	8	5	5	4	3	4	4	5
Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun

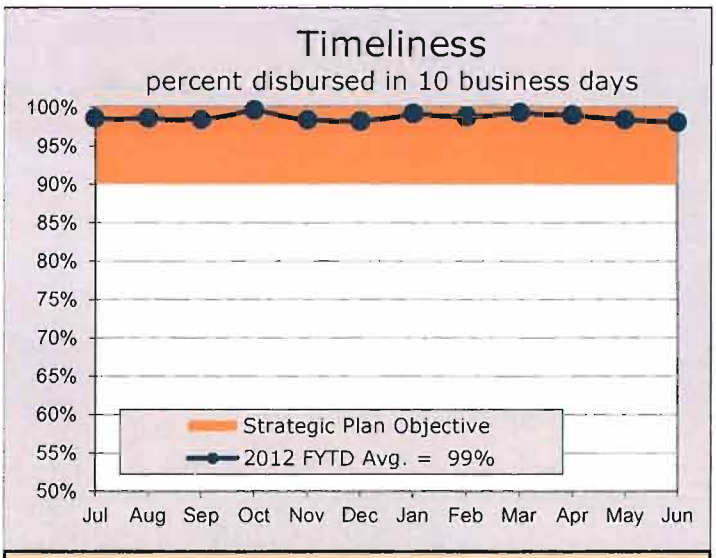


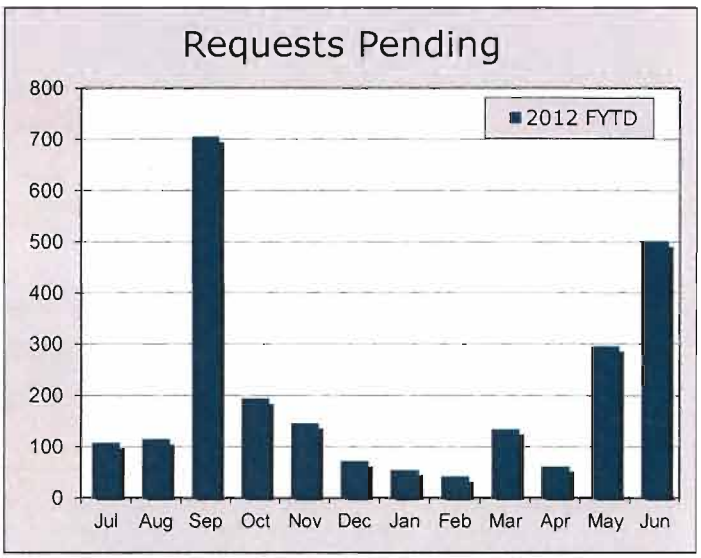
Timeliness (average turnaround time in business days)											
3	3	2	1	2	2	1	3	1	1	1	3
Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun



Refunds

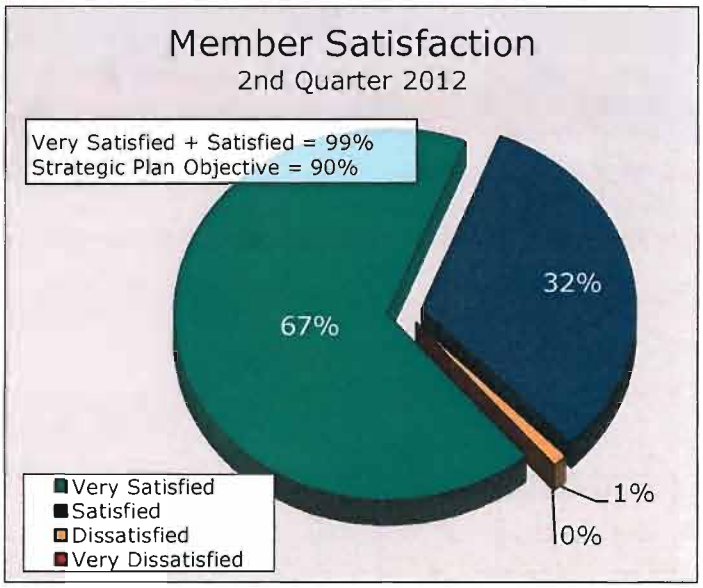




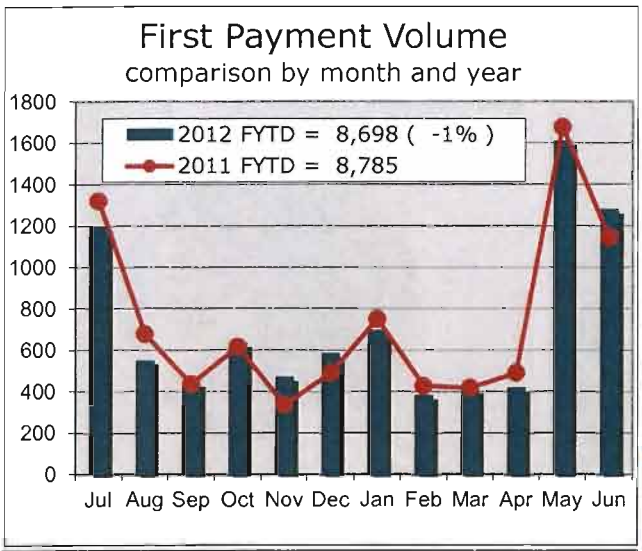


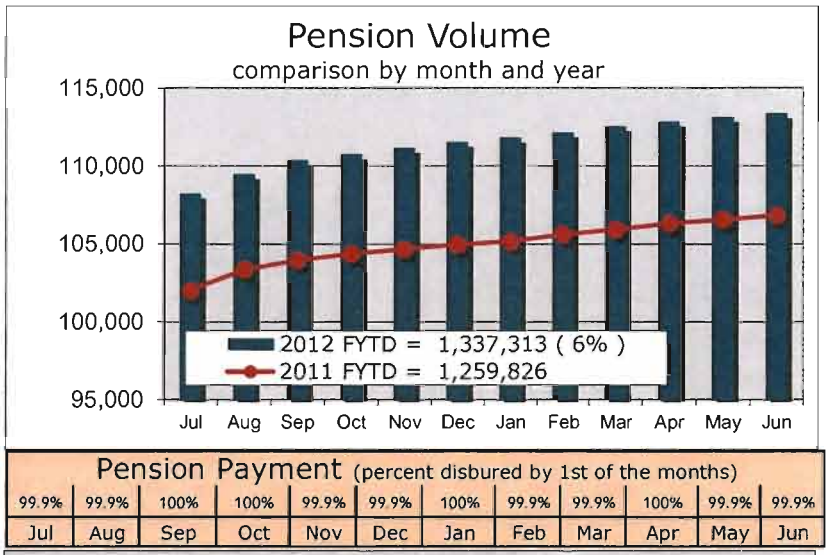
Timeliness (average turnaround time in business days)

Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
2	1	2	2	2	2	1	2	2	2	2	3



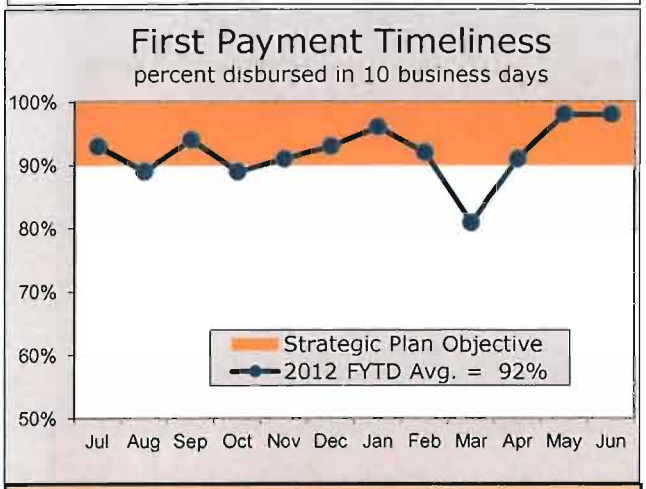
New Retiree and Pension Payroll





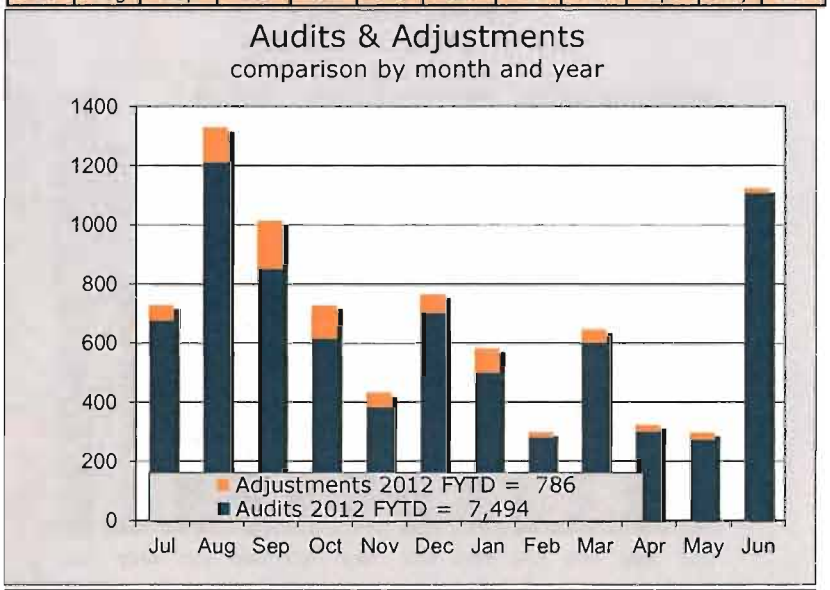
Pension Payment (percent disbured by 1st of the months)

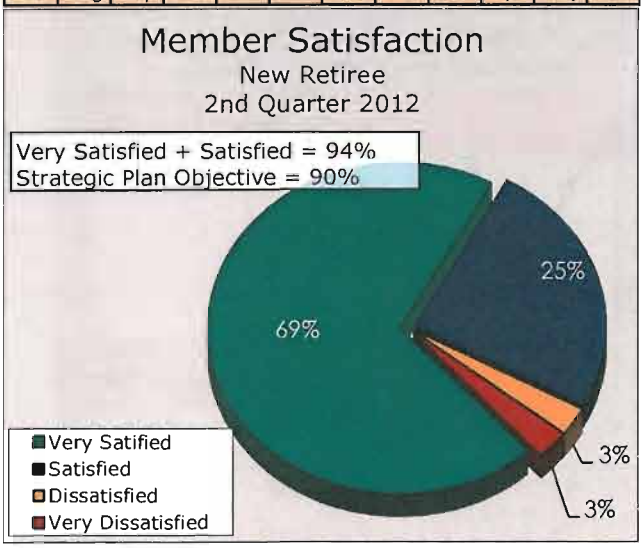
Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
99.9%	99.9%	100%	100%	99.9%	99.9%	100%	99.9%	99.9%	100%	99.9%	99.9%

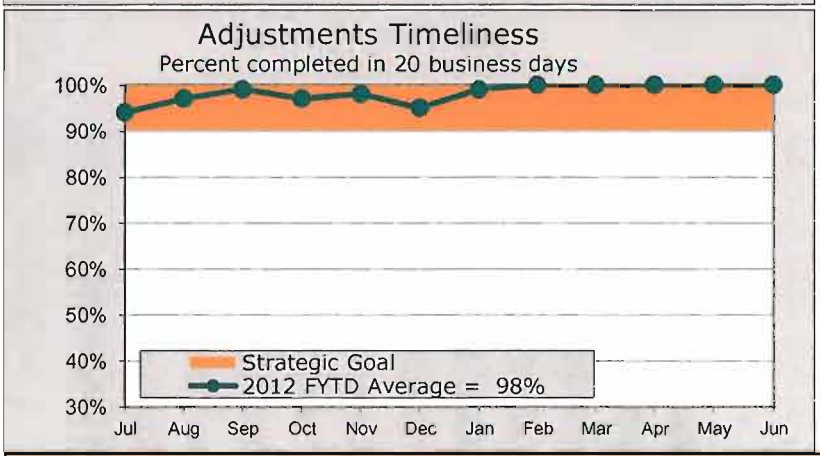


First Payment Timeliness (average turnaround time in days)

Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
4	6	4	6	5	4	3	4	8	5	2	2







Adjusments Timeliness (average turnaround time in days)

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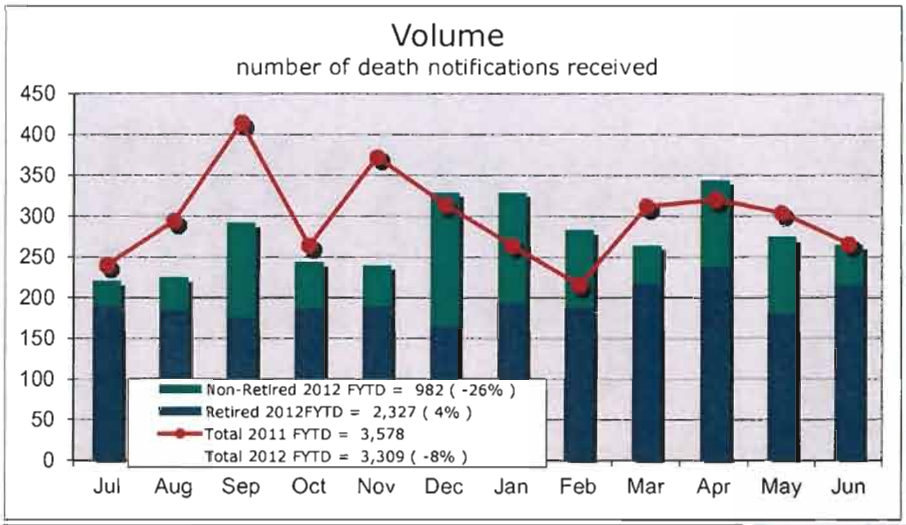
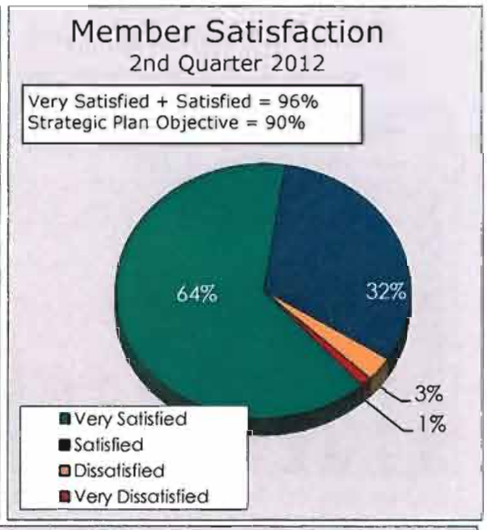
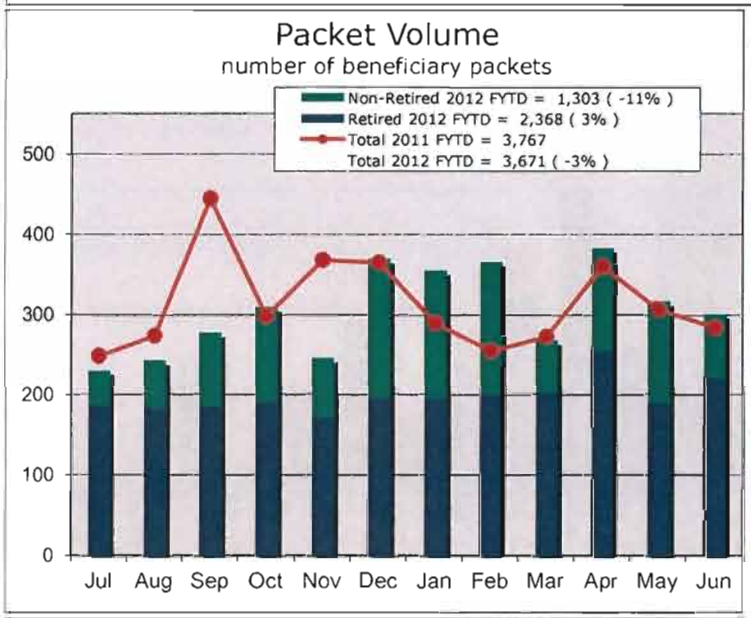
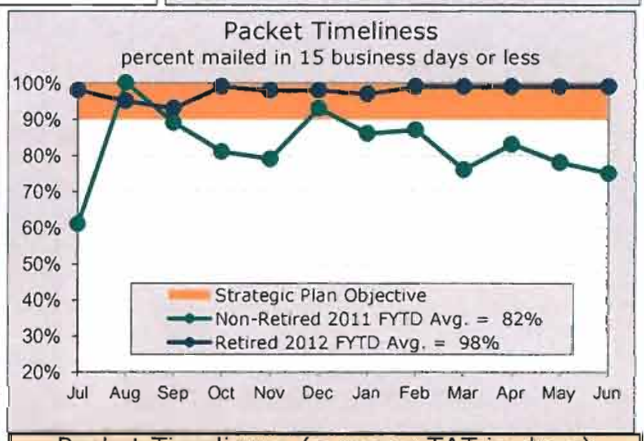
34	15	6	8	14	14	10	2	5	2	2	4

Survivor Benefits



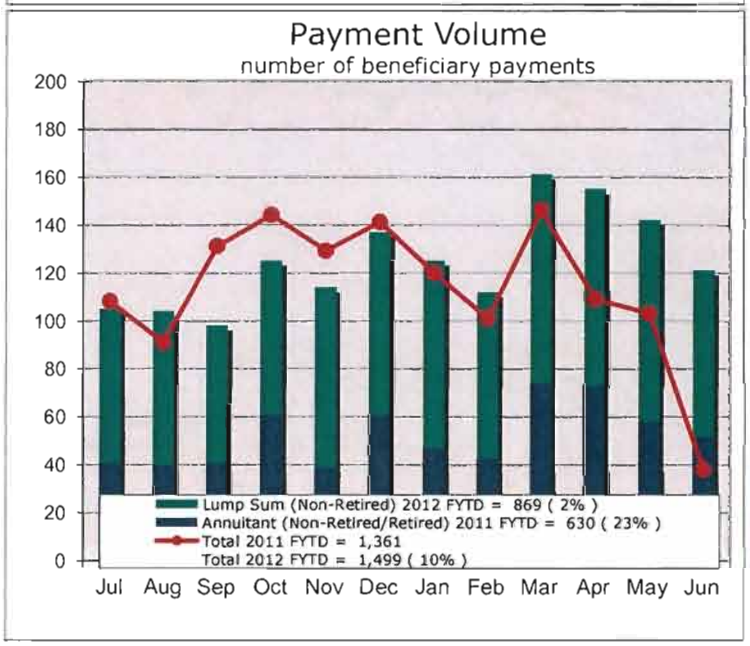






Packet Timeliness (average TAT in days)

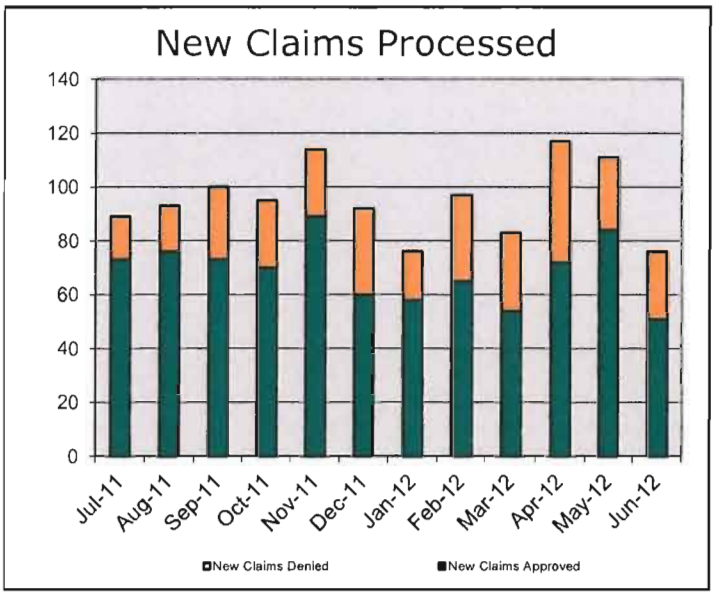
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Non Retired	12	5	7	9	10	5	3	9	32	4	10	17
Retired	3	3	5	3	4	3	3	2	3	2	2	3

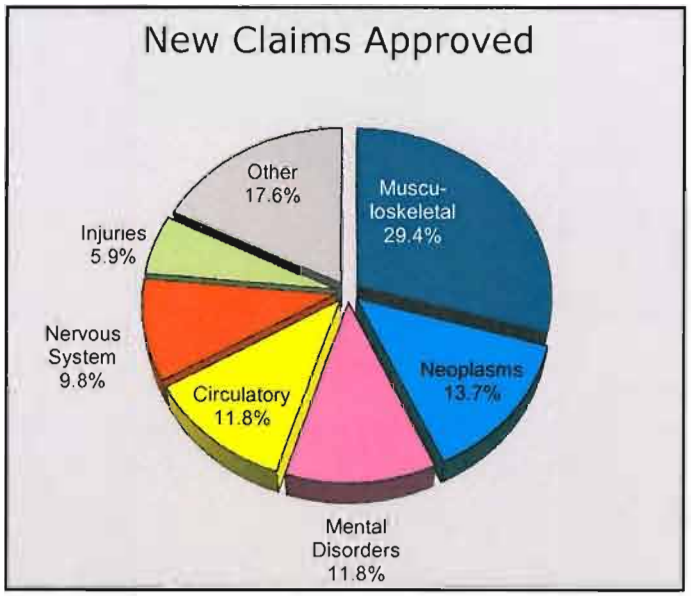


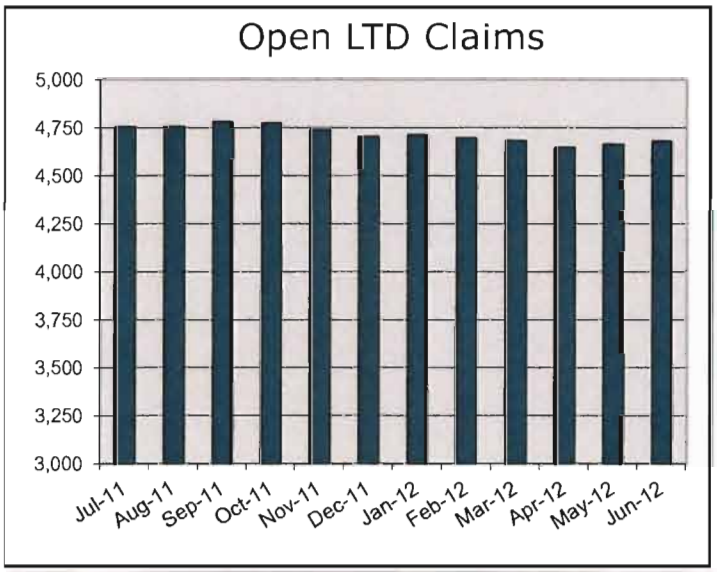
Payment Timeliness (average TAT in days)

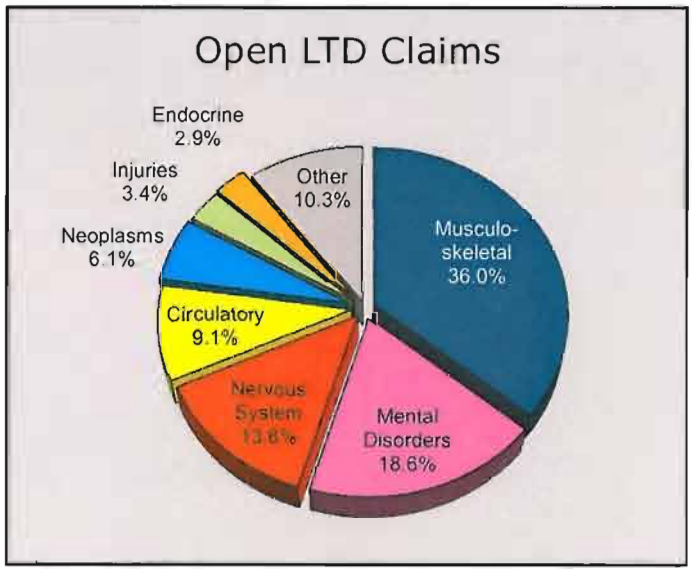
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Lump Sum (Non-Retired)	5	7	8	7	8	8	6	5	6	5	4	5
Annuity (Retired and Non-Retired)	4	5	4	7	5	2	4	5	3	2	2	2

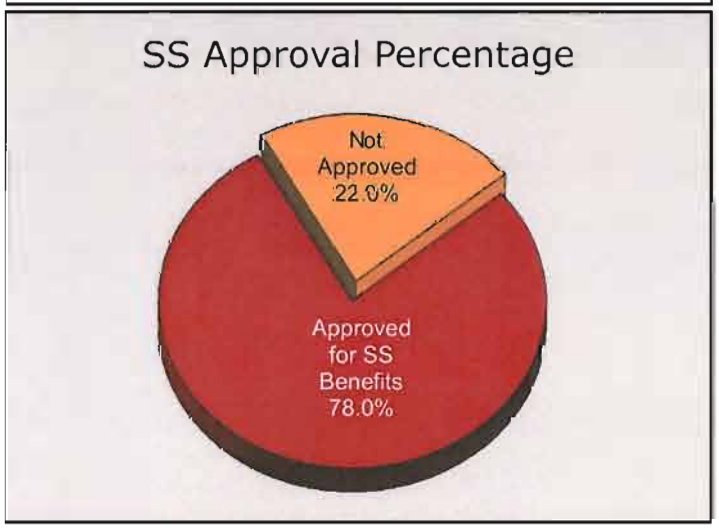
ASRS Disability Plans - Monthly Highlights
June 2012

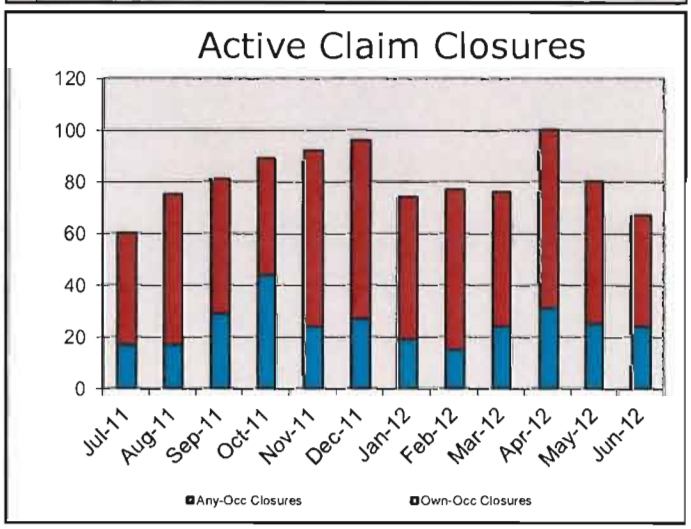












Prepared by Sedgwick

Agenda Item #10d

Director's Report
Budget & Staffing

FY13 Budget Summary and FY13 Continuously Appropriated Expenses Report
Cost Savings Report
Staffing Report

Arizona State Retirement System
FY 2013 Budget
(as of August 31, 2012)

	*APPROPRIATIONS FISCAL YEAR 2013	EXPENDED YTD	% EXPENDED
OPERATING BUDGET			
Personal Services	12,560,500	1,881,900	14.98%
Employee Related Expenses	4,855,600	507,000	10.44%
Professional & Outside Services	1,081,800	110,000	10.17%
Travel	78,600	4,800	6.11%
Other Operating Expenses	2,535,500	249,200	9.83%
Equipment	389,500	12,500	3.21%
Operating Subtotal	$ 21,501,500	$ 2,765,400	12.86%
OTHER APPROPRIATIONS			
Long Term Disability Administration	$ 2,800,000	$ 228,000	8.14%
LEGISLATIVE APPROPRIATIONS (NON-LAPSING)			
HB 2745 - Distribution Modifications	$ 47,000	$ 1,700	3.62%
SB 1119 - Spousal Consent Modifications	$ 200,000	$ -	0.00%
TOTAL FY 2013 Appropriated Funds	$ 24,548,500	$ 2,995,100	12.20%

*Includes $532,000 estimated appropriation for legislative critical retention payments.

	APPROPRIATIONS PRIOR YEAR	EXPENDED TO DATE	% EXPENDED
PRIOR YEAR LEGISLATIVE APPROPRIATIONS (NON-LAPSING)			
FY 2012 - SB 1609 - ACR Plan Design Changes	$ 250,000	$ 40,000	16.00%
FY 2012 - SB 1614 - ASRS Contribution Rate	$ 600,000	$ 356,700	59.45%
FY 2011 - HB 2389 - ASRS Plan Design Changes	$ 1,341,700	$ 557,600	41.56%

	APPROPRIATIONS REMAIINING	EXPENDED YTD	% EXPENDED
PRIOR YEAR OPERATING APPROPRIATIONS (NON-LAPSING)			
FY 2011, ASRS Operating Budget & LTD Admin	$ 796,800	$ -	0.00%
Total Prior Year Appropriated Funds	$ 2,988,500	$ 954,300	31.93%

Budget Summary for Fiscal Year 2013
As of August 31, 2012

Operating Budget
The operating budget information on the previous page is based on funding approved by the Board and the Legislature for the fiscal year July 1, 2012 through June 30, 2013. These ASRS operating expenses are distinguished from other areas of ASRS spending authority: such as expenditures for investment management and benefits payments. Salaries and employee benefits, supplies, equipment and ongoing operational costs associated with information and financial systems for the ASRS Board and ASRS employees are funded from the operating budget. Expenditures to date include four pay periods (15.4% of the annual payrolls) of fiscal year 2013. An estimated appropriation of $532,000 is included for costs for the legislative critical retention payments to ASRS employees.

Other Appropriations
Other appropriations, which are considered part of the annual budget, represent other appropriations for specific programs or services authorized by the Board and the Legislature.

- **Long Term Disability Administration Fund**
  The amount appropriated for the administration costs of the LTD program. Expended year-to-date amounts reflect payments for services through 7/31/2012.

Appropriations for Legislative Initiatives

The amount appropriated by the Legislature for the implementation of:

- FY 2013 - HB 2745 - Distribution Modifications
- FY 2013 - SB 1119 - Spousal Consent Modifications
- FY 2012 - SB 1609 – Alternate Contribution Rate Plan Design Changes
- FY 2012 - SB 1614 – ASRS Contribution Rate
- FY 2011 - HB 2389 – ASRS Plan Design Changes
- FY 2011 – ASRS Operating Budget and LTD Admin
  - HB 2024, Section 93 modified the FY 2011 ASRS appropriations to be non-lapsing appropriations. The ASRS has the ability to utilize the unspent portion of these appropriations in ensuing fiscal years.

<u>Explanation of Columns</u>

1) The Appropriated column represents funds that have been approved by the Legislature and the ASRS Board for FY 2013, and includes prior year legislative appropriations.

2) The Expended column represents the expenditures to date.

3) The % Expended column identifies the portion of each line item that has been expended year-to-date. This column is intended to be a guide to the rate of spending during the fiscal year.

ASRS FISCAL YEAR 2013, CONTINUOUSLY APPROPRIATED REPORT

(with summarized Appropriated Expenses)

DESCRIPTION	EXPENDED YTD as of 8/31/12	ESTIMATED ANNUAL EXPENSES (Projections updated quarterly)	EST. ANNUAL EXPENSES AS % OF AUM	EST. ANNUAL EXPENSES PER MEMBER
External Management Fees (Public)	-	59,814,000		
Private Equity Management Fees	-	46,155,000		
Real Estate Management Fees	-	30,733,000		
Opportunistic Management Fees	-	10,570,000		
Security Lending and Master Cash STIF Fees	161,000	1,475,000		
Investment Management Fees	**$ 161,000**	**$ 148,747,000**	**0.539%**	**$ 279.60**
Investment Consulting Services	35,000	3,927,000		
General Investment Consultant Services, Manager Searches, Asset Allocation Studies and Proxy Voting Services	-	537,000		
Real Estate, Private Equity and Opportunistic Consulting Services	35,000	3,390,000		
Investment Related Legal Services	-	860,000		
Investment Electronic Information Services	168,000	900,000		
Investment Related Consulting and Information Services	**$ 203,000**	**$ 5,687,000**	**0.021%**	**$ 10.69**
Custodial Banking Services	-	600,000		
Other Consulting Services	34,000	89,000		
External Auditing Services	31,000	89,000		
Custodial Banking and Other Consulting Services	**$ 34,000**	**$ 689,000**	**0.002%**	**$ 1.30**
Rent	**$ 177,000**	**$ 2,222,000**	**0.008%**	**$ 4.18**
Actuarial Consulting Fees	**$ -**	**$ 875,000**	**0.003%**	**$ 1.64**
Retiree Payroll (Disbursement Administration)	**$ 74,000**	**$ 2,428,000**	**0.009%**	**$ 4.56**
Total Continuously Appropriated Expenses	**$ 649,000**	**$ 160,648,000**	**0.582%**	**$ 301.97**
***Total Current Year Appropriated Expenses**	**$ 2,995,100**	**$ 24,548,500**	**0.089%**	**$ 46.14**
*Full appropriation reflected; planned expenditures are lower				
Total Expenses (Continuously Appropriated and Appropriated)	**$ 3,644,100**	**$ 185,196,500**	**0.671%**	**$ 348.11**

ASRS Estimated Total Market Value of Assets Under Management (AUM) as of June 30, 2012 $ 27,600,000,000

ASRS Total Membership as of June 30, 2011 (last available actuarial count) 532,000

Continuously Appropriated Expenses for FY 2013
Estimated Expenditures

The Arizona State Retirement System (ASRS) investment and administrative costs are expended in accordance with Arizona Revised Statutes (A.R.S.), Title 38, Chapter 5, Article 2, Section §38-721. A.R.S. Section §38-721, Subsection C, lists specific expenditures that are continuously appropriated and are allowable in the amount deemed necessary by the Board.

These specific expenditures are described below:

1. **Investment management fees and related consulting fees necessary to meet the Board's investment objectives**

    - Includes external investment management fees, investment related consulting and legal fees, electronic information services and subscriptions, custodial banking administrative fees, external auditing service fees.

2. **Rent**

    - Costs associated with rent as tenants for occupancy in the 3300 Tower in Phoenix and in the satellite office in Tucson. Payments have been made for rent through July 31, 2012.

3. **Actuarial consulting fees**

    - Costs associated with actuarial services related to plan design, administration and valuations.

4. **Retiree Payroll**

    - Costs associated with administering retiree pension benefits and disbursements, including third-party payroll administration fees, postage and benefit related consulting fees.

The report includes projected expenditures for the current fiscal year. Actual expenditures are reported monthly and estimated annual expenses will be reviewed and adjusted quarterly.

Arizona State Retirement System
Staffing Report
(August 31, 2012)

ASRS by Division	234 Full Time Equivalents (FTEs)	New Hires	New Exits	Vacancies	Vacancy Rate
Administrative Services Division (ASD)	15	0	0	2.00	13.33%
Director's Office (DIR)	10	0	0	0	0.00%
External Affairs (EAD)	9	0	0	0	0.00%
Financial Services (FSD)	62	0	0	9.00	14.52%
Technology Services (TSD)	36	0	1.00	2.75	7.64%
Internal Audit (IAD)	5	0	0	0	0.00%
Investment Management (IMD)	11	0	0	1	9.09%
Member Services (MSD)	86	0	2.00	4.25	4.94%
	234	**0**	**3.0**	**19.00**	**8.12%**

Turnover	August 2012 New Hires	August 2012 Exits	Total Exits (Last 12 Months)	Annualized Turnover %
	0.00	3.00	37.25	17.32%

Pending Activity

ASD – Training Officer II: Recruitment complete, start date 09/04/2012
FSD – Accounting Analyst: Recruitment complete, start date 09/01/2012
FSD – Document Imaging Technician: Recruitment for two positions complete, start date 09/04/2012
FSD – Accountant I: Recruitment for two positions complete, start date 09/13/2012
FSD – Accountant II: Recruitment for two positions complete, start dates 09/01/2012 and 09/14/2012
FSD – Fiscal Services Specialist III: Recruitment complete, start date 09/10/2012
FSD – Assistant Controller: Currently recruiting
MSD – Member Education Specialist: Recruitment for two positions complete, start date 09/01/2012
TSD – Technical Lead Software Engineers: Currently recruiting for two positions

Impact of Staffing (Vacancies, Recruitments, Internal Transfers) on ASRS Operational Performance

Agency Divisions	Services and Functions	Staffing Impact	Comments
Impact of Staffing on ASRS Operations:	Green = Normal risk	Yellow = Greater than normal risk	Red = Negative impact
MSD	MSAC (Call Center)	●○○	
MSD	Walk-ins	●○○	
MSD	E-mail and Written Correspondence	●○○	
MSD	Outreach Education	●○○	
MSD	Tucson: Walk-ins/Outreach	●○○	
MSD	Benefit Estimates	●○○	
FSD	Monthly Pension Payroll Processing	○●○	One position is vacant. This position plays a critical role in processing member pension changes and impacts the approval process in New Retiree Processing. Recruitment for this position has been completed and will start September 2012.
FSD	New Retiree Processing	○●○	Recruitment for two positions has been completed and will start September 2012.
MSD	New Retiree Processing	●○○	
FSD	Survivor Benefit Processing	●○○	
MSD	Survivor Benefit Processing	●○○	

Impact of Staffing (Vacancies, Recruitments, Internal Transfers) on ASRS Operational Performance

Agency Divisions	Services and Functions	Staffing Impact	Comments
Impact of Staffing on ASRS Operations:	**Green = Normal risk**	**Yellow = Greater than normal risk**	**Red = Negative impact**
MSD	Refund Processing	●○○	
MSD/FSD	Service Purchase Processing	●○○	
FSD	Records Management (data processing/imaging)	○●○	Recruitment for two positions has been completed and will start September 2012.
IA	Internal Audit	●○○	
EA	Employer Relations	●○○	
EA	Rule Writing	●○○	Limited rule writing functions have been carried out by ASRS staff and through the procurement of outside professional services.
EA	Legislative Relations	●○○	
EA	Communications/Media Relations	●○○	
EA	Web Services	●○○	
EA	Health Insurance/LTD Benefits Administration and Communication	●○○	
MSD	LTD Member Contacts, Benefit Processing	●○○	

Impact of Staffing (Vacancies, Recruitments, Internal Transfers) on ASRS Operational Performance

Agency Divisions	Services and Functions	Staffing Impact	Comments
Impact of Staffing on ASRS Operations:	**Green = Normal risk**	**Yellow = Greater than normal risk**	**Red = Negative impact**
FSD	Health Insurance Member Contacts, Benefit Processing Transfer Processing	●○○	
MSD	Health Insurance	●○○	
FSD	Transfer Processing	●○○	
FSD	General Accounting	○●○	CAFR preparation, year-end processes, and an audit are in progress. Two critical positions became vacant; however, recruitment for one position has been completed and will start September 2012, and external temporary resources will be utilized during this peak work load and until vacant positions are filled. The work load due to the vacancies is being distributed among current employees and temporary staff to meet critical deadlines.
FSD	Contribution Collections and Posting	●○○	
TSD	Network Support	●○○	
TSD	Business Applications Development and Support	○●○	Three vacancies currently exist. Although recruitment for two full-time Technical Leads is underway, resource needs/demands assume and require a full complement of FTEs and external consultants. Due to the three vacancies, some core business functions may not be performed and some work may need to be deferred until FY 2014.
IMD	Investment Management	●○○	

Impact of Staffing (Vacancies, Recruitments, Internal Transfers) on ASRS Operational Performance

Agency Divisions	Services and Functions	Staffing Impact	Comments
Impact of Staffing on ASRS Operations:	**Green = Normal risk**	**Yellow = Greater than normal risk**	**Red = Negative impact**
DIR	Board/Executive Staff Support	●○○	
DIR	Strategic Planning/Analysis	●○○	
ASD	Human Resources	●○○	
ASD	Training and Development	○●○	Recruitment for one position has been completed and will start September 2012. Critical business needs are being met; however not all training functions are being completed at this time.
ASD	Contracts and Procurement	●○○	
ASD	Facilities Management	●○○	
ASD	Budget Administration	●○○	

ASRS Cost Savings Initiatives
Estimated as of June 30, 2011, in Millions of Dollars

Action	Calendar Year Proposed	Calendar Year Adopted	Reduction in Total Contribution Rate*	Annual Reduction in Total Contribution Amount	Present Value of Savings on Closed Group Basis		Present Value of Savings on Open Group (No Growth**) Basis	
Cost Savings Initiatives Contained in Current Valuation & Reflected in Lower Current Contribution Rate[1]					Past	Future	Past	Future
Change basis for service purchases from normal cost to actuarial present value (APV)	2003	2004	0.60%	$54.36	$566.72	$405.17	$566.72	$1,181.83
Correction of Permanent Benefit Increase (PBI) reserve	2003	2004	0.04%	$3.63	$37.60	$27.03	$37.60	$27.03
Decrease interest credited on withdrawn contributions from 8% to 4%	2004	2004	0.27%	$24.46	$255.12	$182.30	$255.12	$531.74
sub-total, past and future			**0.91%**	**$82.45**	**$859.44**	**$614.50**	**$859.44**	**$1,740.60**
sub-total, savings in current valuation			**0.91%**	**$82.45**	**$1,473.94**		**$2,600.04**	
Cost Savings Initiatives Contained in Future Experience[2]					Past	Future	Past	Future
Long Term Disability (LTD) program design changes	2003	2004	0.02%	$1.81	$19.41	$13.48	$19.41	$39.31
Reimbursements for early retirement incentives	2003	2004	0.18%	$16.31	$169.90	$121.58	$169.90	$354.63
Increase interest rate on payroll deduction agreements (PDAs) from 0% to 8%	2004	2004	0.16%	$14.50	$151.39	$108.03	$151.39	$315.11
Pop-up restrictions	2005	2006	0.41%	$38.83	$285.09	$289.40	$285.09	$844.13
Rescinding modified Deferred Retirement Option Plan (mDROP)	2005	2006	0.50%	$45.26	$345.31	$337.35	$345.31	$984.02
LTD changes to offsets and pre-existing condition period	2005	2007	0.15%	$13.59	$84.82	$101.29	$84.82	$295.46
Recapture of unclaimed monies	2007	2008	0.01%	$0.58	$3.73	$4.30	$3.73	$12.55
Eliminate 80% cap on retirement benefits	2008	2009	0.04%	$3.63	$8.88	$27.03	$8.88	$78.83
Require 20/20 Rule for dual employment situations	2009	2009	0.04%	$3.36	$8.21	$25.02	$8.21	$72.98
Eliminate enhanced refunds***	2005	2010	0.16%	$14.57		$0-$316.74		$316.74
Replace Rule of 80 with Rule of 85***	2006	2010	0.30%	$27.31		$0-$593.70		$593.70
Replace 36-month average salary with 60-month average***	2006	2010	0.25%	$22.76		$0-$494.78		$494.78
Apply Alternative Contribution Rate (ACR) to return-to-work***	2011	2011	0.25%	$22.76		$0-$454.36		$454.36
Non-ASRS Initiatives					Past	Future	Past	Future
Replace Rule of 85 with 55&30 or 60&25***	2011	2011	0.00%	$0.00		$0-$13.04		$13.04
Change contribution split (member/employer) to 53/47	2011	2011	-0.06%	($5.44)		($40.54)		($40.54) - ($118.26)
Change pre-retirement death benefit to sum of employee and employer balances (ASRS Initiative)	2011	2011	0.04%	$3.33		$24.82		$72.39
Adopt 6-month delay in contributions from state members****	2011	2011	-0.13%	$0.00		$0.00		$0.00
Prospective cost-shift of 6-month delay (not included in totals)****	2011	2011	N/A	($11.78)		$0-($87.79)		($87.79)
sub-total, past and future			2.32%	$223.16	$1,076.74	$1,011.76 - $2,884.38	$1,076.74	$4,823.77 - $4,901.49
sub-total, savings emerging in experience			**2.32%**	**$223.16**	**$2,088.50 - $3,961.12**		**$5,900.51 - $5,978.23**	
GRAND TOTAL			**3.23%**	**$305.61**	**$3,562.44 - $5,435.06**		**$8,500.55 - $8,578.27**	

*These changes to the total contribution rate are multiplied by current payroll to give annual savings amounts in the next column. The annual savings amounts are then converted to the present values shown in the last two columns. These values include both accumulated past savings and estimated future savings. The savings from basing service purchases on actuarial present value is a reduction in future service liabilities. For the reduction in the interest crediting rate and the changes to LTD offsets and pre-existing condition period, the savings arise from reductions in future service and past service liabilities. Other Actuarial Valuation Basis savings are reductions to past service liabilities, i.e., capitalizations of the annual savings amounts over 30 years. Recapture of unclaimed monies will occur every year, but the numbers above are converted to a level annual savings amount.

** No growth scenario means that the projection maintains the size and age distribution characteristics of the current active population.

*** Savings will increase each year, from zero to the open-group amount, as new hires become subject to the new provisions.

****6-month delay will eliminate contributions for members with less than 6 months of service at the valuation date, but will transfer costs to other members and employers.
Cost will increase each year, from zero to the open-group amount as new hires are subject to the new rules.
Costs above give the combined effect of each bill -- if a bill changes three plan provisions, the cost of each reflects the adoption of the other two provisions.

Some of these changes will not be reflected in their entirety in the current valuation report, but will be captured in future reports as actuarial gains. For example, the Plan valuation contains no assumption on Payroll Deduction Agreements (PDAs), so the absence of interest charges in the past has been reflected as an actuarial loss. The change to 8% interest charges will end the losses and eventually reduce the total contribution rate by 0.16%.

Explanation of Cost Reduction Initiatives

[1]ASRS changed the basis for service purchases from the average normal cost rate to the actuarial present value rate. In this way, members who buy service pay the entire cost of their service purchases, and the purchases have no effect on contribution rates.
[1]ASRS reduced the rate of interest credited on members' account balances from 8% to 4% as of July 1, 2005.
[1]The 2001 addition to the Permanent Benefit Increase reserve was overstated in that year. ASRS corrected the reserve and thereby reduced the reserve committed to future Permanent Benefit Increase awards.

[2]Members can enter into Payroll Deduction Agreements to purchase service over time through payroll deduction. ASRS revised the method of calculating payments under these agreements to include 8% annual interest.
[2]ASRS members have been able to change the form of benefit they elect (e.g., joint & survivor to straight life) after they have begun to receive payments, and to do so as many times as they want whenever they want. By legislative action, this ability will be limited to a one-time election to change to a single life pension.
[2]Some ASRS employers have offered their employees incentives to retire early. These incentives can increase ASRS liabilities. By legislative action, future incentives will be funded by the employers who offer them.
[2]By legislative action, the modified Deferred Retirement Option Plan, which would have allowed members to earn as much as six years of service for three years of work, was rescinded.
[2]The legislature closed certain loopholes in the Long Term Disability program that allowed members to receive benefits for a longer period than intended.
[2]Legislation increased the offsets for Social Security income to 85% and extended the pre-existing condition period to six months.
[2]2008 Legislation exempts ASRS from unclaimed property procedures and allows ASRS to recapture assets abandoned after participant's age 73.5.
[2]2009 Legislation eliminated the 80% cap on benefits that had been in place since 2001.
[2]2009 Legislation requires a member to meet membership (20/20 Rule) in ASRS before contributing to a second employer, subject to a grandfathering clause.
[2]Upon withdrawal, members receive 25-100% of employer contributions depending on years of service. 2010 Legislation eliminates the return of employer contributions for members hired on or after July 1, 2011. Since 2010 changes are for prospective members only, we show open-group present values.
[2]Normal retirement can be achieved when a member's age + years of service equals 80 (points). 2010 Legislation requires members hired on or after July 1, 2011 to reach 85 points for normal retirement.
[2]Retirement benefits are calculated based on an average of the member's highest 36 months of salary in the 10 years prior to retirement. 2010 Legislation substitutes a 60 month average for members hired on or after July 1, 2011.

These rows represent legislative initiatives from non-ASRS sources.
2011 legislation replaced rule of 85 for members hired after 6/30/2011 with age 55 and 30 years of service or age 60 with 25 years of service.
2011 legislation changed the split of member/employer contributions from 50%/50% to 53%/47%, effective 7/1/2011
2011 legislation instituted a 6-month delay in contributions from or on behalf of members with less than 6 months of service, effective 7/1/2011.

Agenda Item #10e

Director's Report
Cash Flow Statement

ARIZONA STATE RETIREMENT SYSTEM
COMBINED STATEMENT OF CHANGES IN TOTAL FUND CASH
FOR THE MONTH ENDED AUGUST 31, 2012

	Retirement Plan Fund	Retirement System Fund	Health Benefit Supplement Fund	Long-Term Disability Fund	Current Period August	Fiscal 2013 YTD August	Fiscal 2012 YTD August
ADDITIONS							
Contributions:							
Member contributions	$ 77,008,849	$ 11,472	$ -	$ 1,667,665	$ 78,687,986	$ 131,153,826	$ 129,797,034
Employer contributions	72,805,726	11,472	4,614,977	1,716,500	79,148,675	134,549,629	119,219,925
Alternative contributions (ACR)	923,819	-	25,818	20,205	969,842	1,221,763	-
ERRP reimbursement*	-	-	-	-	-	-	-
Transfers from other plans	-	-	-	-	-	234,617	237,796
Purchased service	5,792,967	-	-	-	5,792,967	9,342,460	16,143,877
TOTAL CONTRIBUTIONS	156,531,361	22,945	4,640,794	3,404,370	164,599,470	276,502,295	265,398,632
DEDUCTIONS							
Investment management fees and monitoring services	12,051,908	-	-	50,324	12,102,231	13,629,746	16,399,629
Retirement and disability benefits	212,596,275	4,410,894	8,407,045	5,584,271	230,998,486	443,068,484	425,345,830
Survivor benefits	4,741,527	-	-	-	4,741,527	6,477,161	4,918,576
Refunds to withdrawing members, including interest	25,430,447	1,621	-	-	25,432,068	45,729,451	43,025,290
Administrative expenses	1,936,778	-	-	229,161	2,165,939	5,141,015	4,439,519
Transfers to other plans	145,171	-	-	-	145,171	158,090	3,921,818
Other	-	-	-	-	-	27	54
TOTAL DEDUCTIONS	256,902,106	4,412,515	8,407,045	5,863,756	275,585,423	514,203,974	498,050,715
INCREASE (DECREASE)	(100,370,746)	(4,389,571)	(3,766,251)	(2,459,386)	(110,985,953)	(237,701,679)	(232,652,084)
From securities lending activities:							
Security loan program	218,356	-	-	-	218,356	400,861	2,169,596
Security loan interest expense / (Rebate)	28,382	-	-	-	28,382	52,105	164,800
Net income from securities lending activities	189,974	-	-	-	189,974	348,756	2,004,796
Capital Calls / (Distributions)							
Real Estate	4,187,059	38,956	197,880	-	4,423,895	8,423,776	47,437,507
Private Equity	13,808,823	-	627,396	-	14,436,220	65,804,116	72,980,846
Opportunistic Investments	15,434,690	217,066	697,141	-	16,348,897	33,078,826	47,596,668
TOTAL Capital Calls	33,430,572	256,022	1,522,417	-	35,209,012	107,306,718	168,015,021
NET INCREASE (DECREASE)	$ (133,611,343)	$ (4,645,593)	$ (5,288,668)	$ (2,459,386)	$ (146,004,991)	$ (344,659,641)	$ (398,662,308)

* Represents Early Retirement Reinsurance Program reimbursements from Federal Government.
Funds can only be used to offset retiree health insurance costs per federal guidelines.

Agenda Item #10f

Director's Report Appeals

Outstanding Appeals

Date Received	Appeals	Issues/Questions Regarding	Status/Comments
05/06/11	William McGonigle	Appellant is seeking to participate in ASRS as Fire Battalion Chief.	OAH decision affirming ASRS staff decision; affirmed by ASRS Board 10/21/11; MCSC appeal Case No. CV2010-034090; also MCSC appeal of Count One in Case No. LC2011-00741; oral argument set for 8/15/12
05/19/11	Dan Davis	Appellant is seeking to participate in ASRS as Fire Battalion Chief.	
05/19/11	Susan J. Naparstek	Appellant is disputing an LTD overpayment.	09/21/12 Board Agenda; OAH decision affirms Staff decision
01/23/12	Arizona State University	Appellant is disputing an ASRS employer termination incentive program invoice.	OAH hearing 6/19/12; OAH order reopening record to extend decision deadline
04/16/12	Bonnie Pendergast	Appellant is seeking to purchase more than five years of service.	09/21/12 Board Agenda; OAH decision affirms Staff decision
08/10/12	David Dial	Appellant is seeking a contributions not withheld/service credit	OAH hearing set for 10/03/12
08/23/12	Amy Grace	Appellant is seeking long-term disability benefits	OAH hearing set for 10/11/12

As of 9/12/2012

Agenda Item #10g

Director's Report
Employers Reporting

ARIZONA STATE RETIREMENT SYSTEM

3300 NORTH CENTRAL AVENUE • PO BOX 33910 • PHOENIX, AZ 85067-3910 • PHONE (602) 240-2000
7660 EAST BROADWAY BOULEVARD • SUITE 108 • TUCSON, AZ 85710-3776 • PHONE (520) 239-3100
TOLL FREE OUTSIDE METRO PHOENIX AND TUCSON 1 (800) 621-3778
EMAIL ADDRESS: ASKMAC@AZASRS.GOV • WEB ADDRESS: WWW. AZASRS.GOV

Paul Matson
Director

MEMORANDUM

TO: Mr. Tom Manos, Chair, Arizona State Retirement System (ASRS) Board

FROM: Mr. Paul Matson, Director

DATE: September 10, 2012

RE: Delinquent Employers

As of September 10, 2012, the following employers have failed to remit contributions by a date certain. These employers have received a letter advising them that the ASRS will initiate collection procedures unless they contact us within five days:

Destiny School	$ 10,000*
La Paloma Academy	$ 39,000
Town of Miami	$ 5,800*
Adalberto Guerrero Middle School	$ 11,140*
Luz Academy	$ 18,000*
Great Expectation Academy	$ 20,000*
Humanities & Science Institute Charter	$ 25,800*
International Commerce Institute Charter	$ 10,500*
Ash Fork Schools	$ 52,000*
Town of Hayden	$ 28,000*
Three Points Fire District	$ 250*
Intelli-School Charter	$ 12,000*
Clifton Schools	$ 4,000*
Harquahala Valley Irrigation District	$ 8,290
Total	$244,780*

* Estimated amount

Additionally, the following employers have filed for Chapter 11 Bankruptcy Protection and are delinquent in their ASRS contributions:

Cesar Chavez Middle School	$ 17,780
Total	$262,560*

Agenda Items #11 - 13

There are no materials for the Informational Updates from the Operations Committee, External Affairs Committee, or Investment Committee Meetings