## AESOO EARS <br> HISTORY. STILL IN THE MAKING.



A Component Unit of the State of Arizona - Delivering Service With Pride

## DELIVERING SERVICE WITH... <br> P

## 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.

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 

A Component Unit of the State of Arizona


Mr. David Byers, Chair Mr. Thomas Connelly, Vice Chair

Report Prepared by the Staff of the Arizona State Retirement System

Paul Matson, Director


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## Certificate of Achievement for

## Excellence in Financial Reporting

## Certificate of <br> Achievement for Excellence in Financial Reporting

Presented to

# The Arizona State Retirement System 

For its Comprehensive Annual<br>Financial Report<br>for the Fiscal Year Ended

June 30, 2011
A Certificate of Achievement for Excellence in Financial Reporting is presented by the Government Finance Officers Association of the United States and Canada to government units and public employee retirement systems whose comprehensive annual financial reports (CAFRs) achieve the highest standards in government accounting and financial reporting.


The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Arizona State Retirement System for its comprehensive annual financial report for the fiscal year ended June 30, 2011. This was the $23^{\text {rd }}$ consecutive year that the Arizona State Retirement System has achieved this prestigious award.


Public Pension Coordinating Council
Public Pension Standards Award For Funding and Administration 2012

Presented to

## Arizona State Retirement System

In recognition of meeting professional standards for plan funding and administration as set forth in the Public Pension Standards.

Presented by the Public Pension Coordinating Council, a confederation of
National Association of State Retirement Administrators (NASRA) National Conference on Public Employee Retirement Systems (NCPERS) National Council on Teacher Retirement (NCTR)

The National Association of State Retirement Administrators (NASRA), National Conference on Public Employee Retirement Systems (NCPERS) and the National Council on Teacher Retirement (NCTR) awarded a Public Pension Standards Award to the Arizona State Retirement System for plan design and administration as set forth in the Public Pension Standards for 2012. The Public Pension Standards are intended to reflect minimum expectations for public retirement system management and administration, as well as serve as a benchmark by which all defined benefit public plans should be measured. This is the 8th consecutive year that the Arizona State Retirement System has received this prestigious award.

## Letter Of Transmittal from the Director

## Arizona State Retirement System

3300 NORTH CENTRAL AVENUE $\bullet$ PO BOX $33910 \bullet$ PHOENIX, AZ $85067-3910 \bullet$ PHONE (602) 240-2000
7660 EAST BROADWAY BOULEVARD • SUITE $108 \bullet$ TUCSON, AZ 85710-3776 • PHONE (520) 239-3100 $\quad$ Paul Matson

October 30, 2012

## To: The Arizona State Retirement System Board of Trustees

As we celebrate the $100^{\text {th }}$ anniversary of the State of Arizona, I am pleased to present, on behalf of the ASRS staff, the fifty-ninth Comprehensive Annual Financial Report of the Arizona State Retirements System (ASRS), a component unit of the State of Arizona, for the fiscal year ended June 30, 2012.

Title 38 of the Arizona Revised Statutes requires the ASRS Board of Trustees (ASRS Board) to submit an annual report to the Governor and the Legislature within eight months of the close of each fiscal year. This report complies with the legal requirements governing the preparation and content of annual reports.

Responsibility for both the accuracy of the data, and the completeness and fairness of the presentation, rests with the ASRS management. Management relies on a comprehensive framework of internal controls to provide reasonable, rather than absolute, assurance that the financial statements are free of any material misstatements.

Heinfeld, Meech \& Co., P.C. has issued an unqualified ("clean") opinion on the ASRS financial statements for the year ended June 30, 2012. The Independent Auditors' Report is located at the front of the financial section of this report.

Management's discussion and analysis (MD\&A) immediately follows the Independent Auditors' Report and provides a narrative introduction, overview, and analysis of the basic financial statements. MD\&A complements this letter of transmittal and should be read in conjunction with it.

## History and Overview

The ASRS was created in 1953 to provide defined contribution retirement benefits to employees of the state of Arizona, Arizona universities, and political subdivisions. During calendar year 1954, Arizona teachers voted to join the ASRS effective January 1, 1955. In 1970, the state legislature authorized the creation of a defined benefit plan, contingent upon the election to transfer a minimum 70 percent of the ASRS membership. More than 80 percent voted to transfer to the defined benefit plan, which became effective July 1, 1971.

At June 30, 2012, total ASRS membership, including active, inactive, disabled and retired members is 535,501. There are 707 employer units participating in the ASRS, including school districts, charter schools, state colleges and universities, and local, county and state government.

Active non-state employees are also eligible to participate in an ASRS sponsored Supplemental Salary Deferral Plan (SSDP) and/or Supplemental Retirement Savings Plan (SRSP). The SSDP is a supplemental defined contribution plan qualified under 403 (b) and 457 (b) of the Internal Revenue Code. The SRSP is a supplemental defined contribution plan qualified under 401 (a) of the Internal Revenue Code.

In addition to pension benefits, the ASRS provides a health insurance premium benefit and sponsors medical and dental coverage for retired and disabled members and their eligible dependents and children. Active members also receive long-term disability insurance coverage equal to two-thirds of pay at the time of disablement.

During FY 2011-12, more than 112,306 retired annuitants, their survivors, and disabled members received in excess of $\$ 2.45$ billion in benefits. As of June 30,2012 , there were 45,766 retired members and their families enrolled in the ASRS-sponsored medical program and 40,899 retired members and their families enrolled in dental plans through the ASRS.

ASRS Board Trustees are appointed to three-year terms by the governor and confirmed by the Arizona State Senate. Four trustees of the ASRS Board must have a minimum of 10 years investment experience and each trustee who represents an ASRS member group shall have no less than five years of administrative management experience. There is no limit on the number of terms an ASRS Board Trustee may serve.

## Major Initiatives for Fiscal Year 2011-12

## Investments

- Strategic Asset Allocation study: Approved new Strategic Asset Allocation Policy (SAAP) which increases diversification, provides for increased returns in a low return environment, maintains liquidity and cost consciousness, and increases allocations to passive strategies.
- Modernization of Investment Statutes: Successfully sought to have statutes modified to more accurately reflect current prudent management and oversight of ASRS investments.
- Modification of Committee Governance Structure: Changed asset class committee structure from four to two committees to improve decision making efficiency and oversight functions.
- Implementation of Trade Order Management System: Transitioned to an electronic trade order management system for improved internal portfolio execution and management.


## Benefits Processing

- Implemented an online employer data system: Employers can now submit employee data electronically. This new system eliminates ASRS staff time devoted to verifying employer data and reduces processing time for refunds, pension, and survivor benefits.
- Early Retiree Reinsurance Program: Applied for and received Early Retiree Reinsurance Program (ERRP) funds from the U.S. Department of Health and Human Services. The money received may be used to:
- Reduce contribution levels (premiums) for plan participants, to the extent possible, to 2009 levels.
- Mitigate ASRS health benefit cost increases while keeping minimum funding to at least 2009 levels.
- Hold in escrow to maintain member contributions and mitigate health benefit cost increases in future years.


## Services

This past year the ASRS worked very hard to shift the service paradigm for members to more self-service online in order to lower the costs of doing business at higher demand levels:

- Remote online counseling: Introduced remote online one-on-one counseling sessions via the internet for our members who live outside Maricopa and Pima counties. Members can participate in a personalized counseling session with a benefit advisor from the comfort of their home or office.
- Appointment Scheduler: Introduced "Appointment Scheduler" for walk-in visits. This change allows the ASRS to anticipate demand, decrease wait times, and prepare in advance for individual counseling sessions of up to 30 minutes. It also saves up to 10,000 calls per year into the Call Center.
- Online Scheduler: Implemented an online scheduler so members can enroll in all outreach meetings when it is convenient for them.
- Webinars: Implemented a new webinar, "Planning for Retirement", which is a web-based version of the on-site group meeting.
- Webcast Tutorials: Implemented a series of webcast tutorials on how to fill out the retirement application.
- E-newsletter: The ASRS implemented an electronic newsletter in FY12 that will allow the agency to communicate with members more frequently and more cost effectively. The first e-newsletter was sent to almost half of the ASRS' total membership.


## Administration

- Service Objectives: The ASRS continued to meet or exceed most of its established service objectives, with 85 percent of its measured operational and administrative objectives marked as achieved in FY12. Members continue to express high levels of overall satisfaction with the service provided by ASRS staff.
- Employee Survey: The ASRS conducted an employee survey in 2012, with employees indicating high levels of satisfaction in various aspects of the ASRS work environment.


## Investment Policies

An integral part of the overall investment policy is the Strategic Asset Allocation Policy, which is designed to optimize returns while minimizing risk. The ASRS maintains its investment assets in accordance with Board approved SAAP. Investment assets are managed in 144 externally managed and 6 internally managed portfolios, which are diversified in U.S. equities, U.S. fixed income, international equities, real estate, private equity, opportunistic and commodity investments.

After deducting investment expenses, the ASRS obtained the following one, three, five, ten year and inception net rates of return for periods ended June 30, 2012:

## Annualized Rates of Return (Net of Fees)

(Retirement \& Health Benefit Supplement)

|  | $\mathbf{1}$ <br> Year | $\mathbf{3}$ <br> Year | $\mathbf{5}$ <br> Year | $\mathbf{1 0}$ <br> Year | Inception <br> (June 30,1975) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ASRS Total Fund | $1.3 \%$ | $13.2 \%$ | $1.8 \%$ | $6.3 \%$ | $9.8 \%$ |

The ASRS has investment guidelines for its internal and external investment managers and a complete set of policies, procedures, compliance requirements, and oversight of internal investment management to ensure that investment assets are prudently managed. Both internal and external compliance procedures are in place. Details of investments are contained in the Investment Section of this report.

## Funding

Any excess of additions, which include contributions and investment earnings, over deductions, which include benefits and administrative expenses, is accumulated by the ASRS in order to meet future benefit obligations due to retirees and beneficiaries. State statutes require the ASRS to conduct an annual actuarial valuation of its plan assets and liabilities.

The funding objective of the ASRS is to maintain reasonably stable contribution rates and to achieve an ultimate funded status of 100 percent. According to the ASRS' most recently available actuarial valuation, dated June 30, 2011, the actuarial value of total plan assets (pension and health benefit supplement) was $\$ 29.2^{1}$ billion and the actuarial accrued liability was $\$ 38.6^{1}$ billion. The unfunded actuarial accrued liability of $\$ 9.3$ billion results in an actuarial funding ratio of $75.8^{1}$ percent for the total plan. The decrease in actuarial funding percentage from last year's $76.7^{1}$ percent is primarily due to recognition of investment losses in fiscal years 2002 and 2003 and the investment loss of fiscal years 2008 and 2009.
${ }^{1} 2011$ results include System liabilities and assets for members who retired or will retire on or after July $1,1981$.

The June 30, 2011 market value of total plan assets (pension and health benefit supplement) was $\$ 28.0^{1}$ billion and the market value accrued liability was $\$ 38.6^{1}$ billion. The unfunded market value of assets accrued liability of $\$ 10.6$ billion results in a market value of assets funding ratio of $72.7^{1}$ percent for the total plan. The increase in market value of assets funding percentage from last year's $61.6^{1}$ percent is primarily due to the rate of return on market assets of $24.8 \%$ during fiscal year 2011 versus expected earnings of $8 \%$.

A detailed discussion of funding is provided in the Actuarial Section of this report. Funding status and progress for the ASRS based on the most currently available valuation is presented in the Notes to the Financial Statements.

## Funded Status and Contribution Rate Projections

Although the ASRS funds are a well-diversified and professionally managed portfolio of investments, they incurred significant losses in the years ended June 30, 2008 and June 30, 2009. These losses have the effect of reducing the actuarial value and market value of assets funded status of the funds. As a result, the combined pension and health benefit supplement contribution rate is expected to increase for approximately the next seven years.

## ASRS Cost Saving Initiatives

In order to increase the funded status of the plans, mitigate future increases in contribution rates, and ensure plan sustainability, the ASRS, over the last 9 years, has been engaged in significant program and policy review. While this is an on-going process, the program policy and legislative initiatives that have been implemented are estimated to reduce total contributions to the ASRS (including non-ASRS initiated legislation) by approximately $\$ 305$ million per year, which is equivalent to $\$ 3.6$ to $\$ 5.4$ billion in liability savings for the group of all current employees, or approximately $\$ 8.5$ to $\$ 8.6$ billion in liability savings for the group of all current and future employees. Over the long term, these very significant savings will reduce future increases in contribution rates to both employee and employers by an average of approximately 3.23 percent in total each year.

Please see chart on next page.
${ }^{1} 2011$ results include System liabilities and assets for members who retired or will retire on or after July 1, 1981.

## Estimated Impact of ASRS Cost Reduction Initiatives

As of June 30, 2011 Valuation Date (Amount in Millions of Dollars)

| Action | 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 |  |  |  |  |  |  |  |
| Change basis for service purchases from normal cost to actuarial present value (APV) | 0.60\% | \$ | 54.36 | \$ | 971.89 | \$ | 1,748.55 |
| Correction of Permanent Benefit Increase (PBI) reserve | 0.04\% |  | 3.63 |  | 64.63 |  | 64.63 |
| Decrease interest credited on withdrawn contributions from $8 \%$ to 4\% | 0.27\% |  | 24.46 |  | 437.42 |  | 786.86 |
| Sub-Total, Savings in Current Valuation | $0.91 \%$ | \$ | 82.45 | \$ | 1,473.94 | \$ | 2,600.04 |
| COST SAVINGS INITIATIVES CONTAINED IN FUTURE EXPERIENCE |  |  |  |  |  |  |  |
| Long Term Disability (LTD) program design changes | 0.02\% | \$ | 1.81 | \$ | 32.89 | \$ | 58.72 |
| Reimbursements for early retirement incentives | 0.18\% |  | 16.31 |  | 291.48 |  | 524.53 |
| Increase interest rate on payroll deduction agreements (PDAs) from 0\% to 8\% | 0.16\% |  | 14.50 |  | 259.42 |  | 466.50 |
| Pop-up restrictions | 0.41\% |  | 38.83 |  | 574.49 |  | 1,129.22 |
| Rescinding modified Deferred Retirement Option Plan (mDROP) | 0.50\% |  | 45.26 |  | 682.66 |  | 1,329.33 |
| LTD changes to offsets and pre-existing condition period | 0.15\% |  | 13.59 |  | 186.11 |  | 380.28 |
| Recapture of unclaimed monies | 0.01\% |  | 0.58 |  | 8.03 |  | 16.28 |
| Eliminate 80\% cap on retirement benefits | 0.04\% |  | 3.63 |  | 35.91 |  | 87.71 |
| Require 20/20 Rule for dual employment situations | 0.04\% |  | 3.36 |  | 33.23 |  | 81.19 |
| Eliminate enhanced refunds | 0.16\% |  | 14.57 |  | 0-316.74 ${ }^{1}$ |  | 316.74 |
| Replace Rule of 80 with Rule of 85 | 0.30\% |  | 27.31 |  | 0-593.70 ${ }^{1}$ |  | 593.70 |
| Replace 36-month average salary with 60-month average | 0.25\% |  | 22.76 |  | 0-494.78 ${ }^{1}$ |  | 494.78 |
| Apply Alternative Contribution Rate (ACR) to return-to-work | 0.25\% |  | 22.76 |  | 0-454.36 ${ }^{1}$ |  | 454.36 |
| Sub-Total, Savings Emerging in Experience | 2.47\% | \$ | 225.27 |  | $\begin{array}{r} \$ 2,104.22- \\ \$ 3,963.80 \\ \hline \end{array}$ | \$ | 5,933.34 |
| NON-ASRS INITIATIVES |  |  |  |  |  |  |  |
| Replace Rule of 85 with 55 \& 30 or 60 \& 25 | 0.00\% | \$ | - | \$ | 0-13.04 ${ }^{1}$ | \$ | 13.04 |
| Change contribution split (member/employer) to 53/47 ${ }^{2}$ | -0.06\% |  | (5.44) |  | (40.54) |  | 4) - (118.26) ${ }^{1}$ |
| Change pre-retirement death benefit to sum of employee and employer balances (ASRS Initiative) | 0.04\% |  | 3.33 |  | 24.82 |  | 72.39 |
| Adopt 6-month delay in contributions from state members | -0.13\% |  | - |  | - |  | - |
| Prospective cost-shift of 6-month delay (not included in totals) | N/A |  | (11.78) |  | 0-(87.79) ${ }^{1}$ |  | (87.79) |
| Sub-Total, Saving Emerging in Experience from NonASRS Initiatives | -0.15\% | \$ | (2.11) |  | $\begin{gathered} \$(15.72)-1 \\ \$(2.68)^{1} \end{gathered}$ |  | $\begin{aligned} & \$ 44.89)^{1} \\ & \$(32.83)^{1} \end{aligned}$ |
| GRAND TOTAL | 3.23\% | \$ | 305.61 |  | $\begin{gathered} \$ 3,562.44-1 \\ \$ 5,435.06 \end{gathered}$ |  | $\begin{gathered} \$ 8,500.55-1 \\ \$ 8,578.27 \end{gathered}$ |

${ }^{1}$ The ranges indicate that the change is one that applies to only members hired after a certain date. Thus on a closed group basis, there is no initial effect on cost, and no present value of future savings, because there are no members in the valuation (hired before $7 / 1 / 2011$ ) to whom the change applies. As time goes by, however, there will be savings on a closed group basis, as each new cohort of members moves into the active member group. Eventually the savings on a closed group basis will equal the savings on the open group basis since the open group numbers include future members.
${ }^{2}$ Subsequent to the completion of the 2011 Actuarial Valuation, the $50^{\text {th }}$ Arizona State Legislature enacted legislation which retroactively reverted the contribution rate back to $50 \%$ for employees and $50 \%$ for employers as of July 1, 2011.

## Budget Savings

The ASRS planned and implemented strategies to reduce our agency expenditures. As a result, the ASRS realized reductions to the operating budget totaling $\$ 500,000$ for FY 2012 and $\$ 3.7$ million over the past five years.

## Awards

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the ASRS for its CAFR for the fiscal year ended June 30, 2011. The ASRS has received this prestigious award in each of the last 23 years.

To be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized CAFR that satisfies both accounting principles generally accepted in the United States of America and applicable legal requirements. A Certificate of Achievement is valid only for one year. We believe this report continues to conform to the Certificate of Achievement Program requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

The GFOA also awarded the ASRS the Award for Outstanding Achievement for its June 30, 2011 Popular Annual Financial Report (PAFR). PAFR's must be readily accessible and easily understandable to the general public and other interested parties without a background in public finance. This was the first time the ASRS published a PAFR. To be awarded the Award for Outstanding Achievement, a government must have received the Certificate of Achievement for Excellence for its CAFR for the previous year or for the current year.

In addition, the Public Pension Coordinating Council awarded a Pension Standards Award for 2012 to the ASRS for meeting professional standards and plan design and administration. To be awarded the Pension Standards Award, a public employee retirement system must certify that it meets requirements in six areas of assessment. Those areas are comprehensive benefits program, funding adequacy, actuarial, audit, investments and communications. The Pension Standards Award is valid for one year. This is the eigth year the ASRS has received this award.

## Letter of Transmittal from the Director (CONTINUED)

## Acknowledgements

This report represents the culmination of hours of hard work by the ASRS General Accounting and Investment Management Division staff. It is intended to provide complete and reliable information for decision making, to ensure compliance with legal requirements, and is a means of measuring the responsible stewardship of the assets of the ASRS.

I would like to express my gratitude to the ASRS Board for its support for and leadership in planning and conducting the financial affairs of the ASRS in a responsible and progressive manner. The ASRS Board, along with the ASRS Executive and Senior Management and the entire staff of the ASRS has been instrumental in maintaining the high quality of service and performance, which has become the standard for the ASRS.

Respectfully submitted,

Paul Matson, Executive Director

## Organization Chart



## ASRS Board of Trustees



Fiscal Year 2011-2012 Board

## Executive Staff



# Chief Outside Professional Services 

ACTUARY<br>Buck Consultants, LLC<br>Phoenix, AZ<br>LONG TERM DISABILITY BENEFITS<br>Sedgwick CMS Company<br>Calabasas, CA<br>\section*{CUSTODIAL BANK}<br>State Street Bank and Trust Co.<br>Boston, MA<br>\section*{PENSION DISBURSEMENT SERVICES}<br>State Street Retiree Services<br>Boston, MA<br>INDEPENDENT AUDITORS<br>Heinfeld, Meech \& Co., P.C.<br>Tucson, AZ<br>\section*{GENERAL INVESTMENT CONSULTANT}<br>NEPC, LLC<br>Cambridge, MA<br>\section*{PRIVATE REAL ESTATE CONSULTANT}<br>Robert Charles Lessor and Co., LLC<br>Bethesda, MD<br>The Townsend Group<br>Cleveland, OH<br>\section*{PRIVATE EQUITY CONSULTANT}<br>Meketa Investment Group<br>Boston, MA<br>INVESTMENT MANAGERS<br>Investment Managers are listed in the Schedule of Investment Fees<br>See Page 87-91

## Summary of 2012 Retirement Legislation

The 51st Legislature, Second Regular Session adjourned May 3, 2012. Below is a brief summary of bills that have been passed into law that affect ASRS members and employers. To view legislation in its entirety, visit the Arizona Legislature's website at www.azleg.gov. All bills listed below are effective on the general effective date (August 2, 2012) unless otherwise noted.

## HB 2283 - state employee benefits; definition (Laws 2012, Chapter 40)

- Clarifies, for the purposes of the six-month benefit eligibility waiting period for new employees, the definition of "state employee" for judicial employees as an employee whose salary is paid through ADOA.


## SB 1194 - ASRS; nonparticipatory employer; liabilities

(Laws 2012, Chapter 79)

- Requires ASRS to allocate a liability to an employer that is no longer participating in ASRS if that nonparticipation is based on:
- The character of the employer changing from a public entity to a private entity.
- For the State, the character of a State Agency, Board or Commission changing from public to private.
- An employer, other than the State or a Charter School, filing for bankruptcy or otherwise dissolving.
- An employer no longer participating.
- Establishes the total liability as the sum of the following:
- The Plan Employer Actuarial Accrued Liability (AAL) multiplied by the Plan Total Deficit Percentage.
- The LTD Program Employer AAL multiplied by the LTD Program Total Deficit Percentage.
- States that the law does not permit an employer to alter the irrevocable adoption agreement approved by the ASRS board.
- Permits ASRS to determine the schedule and method of payment.


## SB 1117 - ASRS; administration

## (Laws 2012, Chapter 87)

## Administration

- Permits the ASRS Director to determine the method of making disbursements and collecting receipts.
- Clarifies that ASRS shall provide an account to each member (instead of an annual account statement), which may be furnished electronically.


## Accounts Receivables

- States that a debtor who fails to pay monies owed to ASRS is liable for the costs and expenses of collecting the debt.
- Permits ASRS, after two attempts to collect and at least 30 days from the date the debt was determined, to levy cash and cash equivalent property at financial institutions or salary or wages of the debtor, and requires the financial institution or employer to notify the debtor of the levy within 5 business days.
- Permits ASRS to seize cash property and seize and convert cash equivalent property to cash.
- Permits ASRS to enter into agreements with financial institutions to develop a data match system to assist with debt collection.


## SB 1119 - ASRS; spousal consent

(Laws 2012, Chapter 88)

- Requires a member who is married to:
- Name and maintain the member's current spouse as a beneficiary to receive at least $50 \%$ of the member's account.
- At the time of retirement, elect a monthly benefit in the form of a joint and survivor annuity, and requires the member's current spouse to be the contingent annuitant (CA).
- Before naming a new CA or rescinding an election of a CA, to obtain the consent of the current CA if that person is a current spouse.
- Allows a member's current spouse, by submitting an acknowledgement to ASRS, to consent to any of the following:
- A change of beneficiary that provides the member's current spouse with less than $50 \%$ of the member's account balance.
- A member's retirement application that does not name the member's current spouse as a CA of a joint and survivor annuity.
- A change or rescission of the member's current spouse's CA status.
- Applies the new spousal consent statutes to ASRS members who retire or name or change their beneficiary or CA on or after July 1, 2013.


## HB 2662 - ASRS; employees; election; enrollment

(Laws 2012, Chapter 273)

- Permits an employee to, until July 1, 2015, elect not to participate in ASRS if:
- The person becomes employed after the person has reached age 65 .
- The person is not an active, inactive, retired or disabled member.
- The person does not have any credited or prior service in ASRS.
- Requires the election to be:
- In writing and filed with ASRS within 30 days of employment.
- Irrevocable for the remainder of the employee's employment with that employer, and the time cannot later be purchased in ASRS.
- Requires ASRS to, by December 31, 2014, provide a report to the Legislature that includes:
- Number of employees who have elected not to participate.
- Actuarial impact to ASRS.
- Administrative impact to ASRS.
- Recommendations from ASRS and employers about the feasibility of continuing the opt-out beyond July 1, 2015.


## SB 1523 - general appropriations; 2012-2013

(Laws 2012, Chapter 294)

- States that employees, employers and retirees enrolled in ADOA's Health Insurance Program will not make health insurance premium payments for a short time during FY2013. ADOA will determine when the premium "holiday" will occur, but retirees will generally not be eligible for a HBS when not making premium payments.


## HB 2264 - ASRS; employer; employer contributions; rate (Laws 2012, Chapter 304)

- Reverts the ASRS employee and employer contribution rates for the Defined Benefit (DB) plan and Long-Term Disability (LTD) program from $53 \% / 47 \%$ to $50 \% / 50 \%$, retroactive to July 1, 2011.
- Requires employers to return excess employee contributions by September 30, 2012, except that a return is not required to an employee who has forfeited their right to ASRS benefits or otherwise received the value of the excess contributions as a distribution from ASRS.
- Requires employers to adjust the contribution transactions reported to ASRS in a manner instructed by ASRS by June 30, 2012.
- States that the return of excess employee contributions:
- For the DB plan shall be treated as taxable wages in calendar year 2012.
- For the LTD program shall be treated as a payment by the employer of previously taxed wages.
- Shall not be treated as salary, wages or compensation for purposes of determining ASRS benefits.
- States that ASRS is not under any duty to monitor, arbitrate, manage or otherwise control the return of any excess employee contributions.
- Allows ASRS to adjust a member's account due to the retroactive change to the contribution rate.
- Makes appropriations to State Agencies and the Dept. of Education (for school districts and charter schools) to cover the cost of the refunds.


## HB 2745 - NOW: PSPRS; employer contributions

(Laws 2012, Chapter 362)

## Distributions

- Eliminates the Level Income Alternative retirement option for new retirements after July 1, 2013.
- Requires the Partial Lump Sum retirement distribution to be based upon the straight life annuity calculation, rather than the actual annuity option selected by the member.
- Prohibits ASRS from paying the employer portion of a Contributions Not Withheld (CNW) payment as a refund or non-retired survivor benefit if the employee has not paid their portion of the CNW.


## Service Purchase

- Reduces the credited service requirement for service purchases from 10 to 5 years for Other Public Service, Leave of Absence (LOA), and Military Service.
- Requires a member to be an active member, inactive member who was unable to resume employment, or disabled member at the time the member requests LOA service purchase.
- Conforms Military Service purchase statute to Federal law for reserve service time.


## Investments

- Repeals existing investment statutes and replaces with a single statute containing the following provisions:
- A financial institution serving as an investment manager does not have a conflict of interest because it is also a depository in which ASRS monies are deposited.
- The board shall appoint and may remove multiple investment managers.
- The board may authorize the director to retain and manage staff to make investments as an investment manager.
- Investment managers shall be qualified to make the investments for which they are appointed.
- The board shall prescribe investment goals and policies, allocate assets and utilize investment strategies, adopt directives for the guidance of investment managers, review the performance of investment managers at least annually, and prescribe investment diversification programs and assign investment manager responsibilities as appropriate.
- Investment managers shall be held to the "prudent expert" standard.
- Investment managers may hold, purchase, sell, assign, loan, borrow, transfer and dispose of any of the securities and investments it is charged with managing.
- The director may engage in securities lending.
- No more than $80 \%$ of ASRS assets may be invested at any given time in equities, measured at market value.
- No more than $40 \%$ of ASRS assets may be invested in non-United States public investments, measured at market value.
- No more than $60 \%$ of ASRS assets may be invested internally, measured at market value.
- No more than 5\% of ASRS assets may be invested in securities issued by one institution, agency, or corporation, except for investments guaranteed by the U.S. or federal agencies, measured at market value.
- No more than $10 \%$ of ASRS assets may be invested in bonds or other debt of multinational development banks, measured at market value.
- If a limit is reached an investment manager is not required to sell assets, but shall not make any further investments of that type until the limit is no longer exceeded.
- An investment manager is not required to invest in economic development projects, public works or social programs, but may consider such economically targeted investments pursuant to its fiduciary responsibility.
- The board may enter into contracts to receive market data and other market information from securities, commodities, options and monetary exchanges that may be interpreted and enforced under the laws of a jurisdiction other than this state and are not subject to section 35-214 [inspection and audit of contract provisions] or 38-511 [cancellation of political subdivision and state contracts; definition] or title 41, chapter 23 [Arizona procurement code], but are subject to Title 35, Chapter 2, Articles 7,8, and 9 [divestment].
- Proprietary commercial information received by ASRS that relates to investment is confidential and not a public record if the information is information that customarily would not be released to the public by the person or entity from whom the information was obtained.


## Health Benefit Supplement

- Ceases, for new retirees on or after August 2, 2012, payment of the Health Benefit Supplement (HBS) to retirees and disabled members who are covered under an ASRS employer's "active employee" insurance plan, either as the insured or as a dependent, if the premium paid by the retiree or disabled member is subsidized by the ASRS employer.
- Defines "subsidized" as a situation in which a portion of the total premium is paid by the employer, but does not necessarily mean a plan in which the employer uses blended rates to determine the total premium.


## Long-Term Disability Program

- Caps disability earnings from the LTD program benefit and other statutory sources at $100 \%$ of the member's pre-disability salary (the salary ASRS used in determining benefits) for new disabilities on or after August 2, 2012. ASRS offsets the member's LTD benefit if the cap is exceeded.
- Requires claims to be supported by "Objective Medical Evidence," and defines "Objective Medical Evidence" as evidence that establishes facts and conditions, as perceived without distortion by personal feelings, prejudices or interpretations, and shall include x-rays, quantitative tests, laboratory findings, data, records, reports from the attending physician, and reports from a consulting physician, when appropriate.


## Miscellaneous

- Waives the payment of the Alternate Contribution Rate for a PSPRS employer if the retired member is required to participate in another state retirement system and the retired member returned to work before July 20, 2011.
- Repeals existing investment statutes and replaces with modernized language.


## II. Financial Section

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HEINFELD, MEECH \& CO., P.C. CPAs and Business Consultants

The Honorable Janice K. Brewer, Governor<br>State of Arizona<br>Board of Trustees<br>Arizona State Retirement System

We have audited the accompanying Statement of Plan Net Assets of the funds of the Arizona State Retirement System (ASRS), a component unit of the State of Arizona, as of and for the year ended June 30, 2012, and the related Statement of Changes in Plan Net Assets of the funds for the year then ended. These basic financial statements are the responsibility of ASRS's management. Our responsibility is to express an opinion on these financial statements based on our audit. The comparative totals as of and for the year ended June 30, 2011, presented in the basic financial statements are included for additional analysis only. Our audit report dated October 24, 2011, expressed an unqualified opinion on these statements; however, we have not performed any auditing procedures on this information since the date of our report.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the net assets of the funds of the Arizona State Retirement System, a component unit of the State of Arizona, as of June 30, 2012, and the changes in net assets of the funds for the year then ended in conformity with accounting principles generally accepted in the United States of America.

In accordance with Government Auditing Standards, we have also issued our report dated October 30, 2012, on our consideration of the Arizona State Retirement System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards and should be considered in assessing the results of our audit.

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 24 through 29 and the Schedule of Funding Progress and Schedule of Employer Contributions on pages 52 through 60 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the ASRS's financial statements as a whole. The accompanying supplementary information such as the Introductory Section, Additional Supplementary Information, Investment Section, Actuarial Section, and Statistical Section are presented for purposes of additional analysis and are not a required part of the financial statements. The Additional Supplementary Information, as listed in the table of contents under the Financial Section, is the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the financial statements. The Additional Supplementary Information has been subjected to the auditing procedures applied in the audit of the financial statements and centain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the Additional Supplementary Information is fairly stated in all material respects in relation to the financial statements as a whole. The Introductory Section, Investment Section, Actuarial Section, and Statistical Section have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

Heinferd, meets \& Co., pec.

HEINFELD, MECH \& CO., P.C.
UPAs and Business Consultants

October 30, 2012

## Management's Discussion and Analysis

This section presents Management's Discussion and Analysis (MD\&A) of the Arizona State Retirement System's (ASRS) plan net assets and changes in plan net assets for the fiscal year ended June 30, 2012. It is presented as a narrative overview and analysis. The discussion and analysis should be read in conjunction with the Letter of Transmittal included in the Introductory Section of the ASRS' Comprehensive Annual Financial Report (CAFR), and the basic financial statements and notes to the basic financial statements presented in the Financial Section of the CAFR.

## Financial Highlights

During FY 2012, ASRS assets decreased primarily as the result of weak market conditions in the domestic and international equity markets combined with a net decrease in cash flow from operations. As a result, over this period the ASRS' investments under-performed the assumed 8 percent actuarial investment rate of return.

- The ASRS rate of return on investments for FY 2012 was 1.3 percent compared to 24.6 percent for FY 2011. The decrease in the rate of return reflects the weak conditions in the global securities markets during the fiscal year 2012.
- The ASRS combined total net assets held in trust for pension benefits decreased by 1.6 percent at FYE June 30, 2012 compared to FYE 2011. The decrease in the combined total net assets is primarily due to weak conditions in the global securities markets during the fiscal year, which yielded a 1.3 percent return, while net cash flows from operations decreased from FY 2011 to FY 2012.
- The ASRS paid $\$ 2.49$ billion in pension, disability, health insurance and survivor benefits during FY 2012 compared to $\$ 2.35$ billion in FY 2011. The 6 percent increase is due to a 4.5 percent increase in the total number of retirees and 14 percent increase in forfeitures.
- As of June 30, 2011, the most recent actuarial valuation, the Retirement and Health Benefit Supplement Funds combined were 75.8 percent funded.

This compares to a combined funding ratio of 76.7 percent as of June 30, 2010. The change in funding percentage is primarily due to continued recognition of investment losses for fiscal years 2002 and 2003, as well as to the investment losses in fiscal years 2008 and 2009.

## Overview of the Financial Statements

The MD\&A is intended to serve as an introduction and overview of the ASRS financial section of the CAFR which is comprised of the following components: 1) basic financial statements, 2) notes to the basic financial statements, 3 ) required supplementary information and 4) additional supplementary schedules. Collectively, this information presents the combined net assets held in trust for pension benefits which includes health benefit supplements and long term disability for each of the funds administered by the ASRS as of June 30, 2012. This financial information also summarizes the combined changes in net assets held in trust for pension benefits for the year then ended. The information available in each of these sections is briefly summarized as follows:

1) Fund financial statements. For the fiscal year ended June 30, 2012, financial statements are presented for the funds administered by the ASRS. These fiduciary funds are held for the benefit of the ASRS members.

- The Combined Statement of Plan Net Assets is presented as of June 30, 2012 with combined total comparative information as of June 30, 2011. This financial statement reflects the resources available to pay benefits to members, including retirees and beneficiaries, at the end of the fiscal year.
- The Combined Statement of Changes in Plan Net Assets is presented for the year ended June 30, 2012 with comparative information for the year ended June 30, 2011. This statement reflects the changes in resources available to pay benefits to retirees and other beneficiaries for the year.

2) Notes to the Basic Financial Statements. The notes to the Basic Financial Statements provide additional information that is essential to a full understanding of the data provided in the basic financial statements. The notes to the basic financial statements can be found on pages $32-51$ of this report.
3) Required Supplementary Information. The required supplementary information consists of two schedules and related notes concerning actuarial information, funded progress and required contributions of the defined benefit pension systems administered by the ASRS.
4) Additional Supplementary Schedules. These schedules include a Combining Schedule of Net Assets and Changes in Net Assets for the ASRS Plan and System retirement programs, detailed information about additions and deductions, administrative expenses incurred by the ASRS administered funds and investment expenses by manager. The ASRS Plan, a defined benefit plan, and the System, a defined contribution plan with guaranteed benefits, are separate components administered within the same pension plan.

## Financial Analysis of the ASRS Funds

The ASRS administers retirement, health and long term disability benefits for teachers, state, county and other public municipal employees. ASRS benefits are funded by member and employer contributions and by earnings on investments. The ASRS has three funds, Retirement, Health Benefit Supplement (HBS) and Long Term Disability (LTD), to which the contributions are distributed according to actuarially determined contribution rates.

Plan Net Assets. The total ASRS net assets held in trust for benefits at June 30, 2012 were $\$ 27.9$ billion, a 1.6 percent decrease from $\$ 28.3$ billion at June 30, 2011. The decrease in net assets is primarily due to a decrease in net cash flow from operations, while investment returns re-
mained relatively flat at 1.3 percent. The retirement fund net assets were $\$ 26.4$ billion compared to $\$ 26.8$ billion last year, a 1.5 percent decrease. The HBS fund net assets were $\$ 1.2$ billion at year end compared to the same $\$ 1.2$ billion at FYE 2011. The LTD fund net assets were $\$ 257$ million at year end compared to $\$ 281$ million last year, an 8.5 percent decrease.

Cash, receivables and prepaids of $\$ 1.10$ billion in FY 2012 represents an insignificant change compared to 1.12 billion in FY 2011. Liabilities of $\$ 907$ million represents a decrease of 60 percent compared to $\$ 2.2$ billion last year. This is primarily due to a decrease in payable for securities lending collateral resulting from a reduction in lending activity due to concerns regarding the European banking sector.

Changes in Net Assets. For the 2012 fiscal year, contributions totaled $\$ 1.9$ billion, compared to the 2011 fiscal year contributions of $\$ 1.7$ billion. The increase is due to a 6 percent increase in contribution rates and receipt of funds from the Federal government for reimbursements related to the Early Retiree Reinsurance Program totaling $\$ 20$ million and a retrospective health insurance rate adjustment reimbursement totaling $\$ 15$ million.

For FY 2012, the ASRS recognized net investment income of $\$ 339$ million which compares to net investment income of $\$ 5.7$ billion in the previous year. This 94 percent decrease is due to weak conditions in the global equity markets and a reduction in securities lending income during the fiscal year.

Deductions from the ASRS net assets held in trust for benefits consist primarily of pension, disability, health insurance and survivor benefits, member refunds and administrative expenses. For the 2012 fiscal year, pension, disability, health insurance and survivor benefits totaled $\$ 2.49$ billion, an increase of 6 percent over the $\$ 2.35$ billion paid during FY 2011. The 6 percent increase is explained by an increase in total retirees. Refunds and transfers to other plans totaled $\$ 212$ million dollars in 2012, a 14 percent increase from the $\$ 187$ million paid out in 2011. The increase is due primarily to a 15 percent

Management's Discussion and Analysis (continued)
increase in refunds due to the current economic environment, offset by a 20 percent decrease in transfers to other plans. In FY 2012, the cost of administering the ASRS benefits totaled $\$ 35$ million, an increase of 13 percent from the $\$ 31$ million paid in FY 2011. This increase is primarily due to an increase in custodial banking fees related to the reduction of the securities lending program
and an increase in consultant payroll due to implementation of legislative changes.

The following tables show the principal ASRS net assets and changes in net assets for fiscal years 2012 and 2011, in thousands of dollars:

| Net Assets | $\mathbf{2 0 1 2}$ | $\mathbf{2 0 1 1}$ | Change | \% Change |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| ASSETS |  |  |  |  |  |
| Cash, receivables and prepaids | $\$ 1,092,738$ | $\$ 1,114,771$ | $\$$ | $(22,033)$ | $-2.0 \%$ |
| Investments at fair value | $27,626,426$ | $28,541,753$ | $(915,327)$ | $-3.2 \%$ |  |
| Securities lending | 50,070 | 880,893 | $(830,823)$ | $-94.3 \%$ |  |
| Total assets | $\mathbf{2 8 , 7 6 9 , 2 3 4}$ | $\mathbf{3 0 , 5 3 7 , 4 1 7}$ | $\mathbf{( 1 , 7 6 8 , 1 8 3 )}$ | $\mathbf{- 5 . 8 \%}$ |  |
| LIABILITIES |  |  |  |  |  |
| Payables and other liabilities | 856,928 | $1,341,717$ | $(484,789)$ | $-36.1 \%$ |  |
| Securities lending | 50,070 | 880,893 | $(830,823)$ | $-94.3 \%$ |  |
| Total Liabilities | $\mathbf{9 0 6 , 9 9 8}$ | $\mathbf{2 , 2 2 2 , 6 1 0}$ | $\mathbf{( 1 , 3 1 5 , 6 1 2 )}$ | $\mathbf{- 5 9 . 2 \%}$ |  |
| TOTAL NET ASSETS | $\mathbf{\$ 2 7 , 8 6 2 , 2 3 6}$ | $\mathbf{\$ 2 8 , 3 1 4 , 8 0 7}$ | $\mathbf{\$}$ | $\mathbf{( 4 5 2 , 5 7 1 )}$ | $\mathbf{- 1 . 6 \%}$ |


| Change in Net Assets | $\mathbf{2 0 1 2}$ | $\mathbf{2 0 1 1}$ | Change | \% Change |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| ADDITIONS |  |  |  |  |  |
| Member contributions | $\$$ | 926,966 | $\$$ | 854,976 | $\$$ |
| Employer contributions | 927,628 | 859,399 | 71,990 | $8.4 \%$ |  |
| Federal government reimbursement | 19,978 | - | 68,229 | $7.9 \%$ |  |
| Retrospective rate adjustment reimbursement | 15,495 | - | 19,978 | $100.0 \%$ |  |
| Service credit purchase and transfers in | 53,659 | 70,812 | $(17,153)$ | $-24.2 \%$ |  |
| Investment and security lending income | 475,030 | $5,833,161$ | $(5,358,131)$ | $-91.9 \%$ |  |
| Investment and security lending expense | $(136,302)$ | $(128,709)$ | $(7,593)$ | $-5.9 \%$ |  |
| Total additions | $\mathbf{2 , 2 8 2 , 4 5 4}$ | $\mathbf{7 , 4 8 9 , 6 3 9}$ | $\mathbf{( 5 , 2 0 7 , 1 8 5 )}$ | $\mathbf{- 6 9 . 5 \%}$ |  |
| DEDUCTIONS |  |  |  | $100.0 \%$ |  |
| Retirement and disability benefits | $2,457,052$ | $2,324,602$ | 132,450 | $5.7 \%$ |  |
| Survivor benefits | 29,731 | 23,949 | 5,782 | $\mathbf{2 4 . 1 \%}$ |  |
| Refunds and transfers | $\mathbf{2 1 2 , 3 1 3}$ | 186,975 | 25,338 | $13.6 \%$ |  |
| Administration and other | 35,929 | 32,240 | 3,689 | $11.4 \%$ |  |
| Total deductions | $\mathbf{2 , 7 3 5 , 0 2 5}$ | $\mathbf{2 , 5 6 7 , 7 6 6}$ | $\mathbf{1 6 7 , 2 5 9}$ | $\mathbf{6 . 5 \%}$ |  |
| NET CHANGE | $(452,571)$ | $4,921,873$ | $(5,374,444)$ | $-109.2 \%$ |  |
| Net assets beginning of year | $28,314,807$ | $23,392,934$ | $4,921,873$ | $\mathbf{2 1 . 0 \%}$ |  |
| Net assets end of year | $\mathbf{\$ 2 7 , 8 6 2 , 2 3 6}$ | $\mathbf{\$ 2 8 , 3 1 4 , 8 0 7}$ | $\mathbf{\$}$ | $\mathbf{( 4 5 2 , 5 7 1 )}$ | $\mathbf{- 1 . 6 \%}$ |



Funded Status. Actuarial valuations of the ASRS assets and benefit obligations for the retirement and health benefit supplement funds combined are performed annually. The most recent actuarial valuation available is as of June 30, 2011.

- At June 30, 2011 the total funded status of the ASRS retirement and health benefit supplement funds decreased to 75.8 percent from 76.7 percent at FYE 2010. At FYE 2011 ASRS actuarial liabilities exceeded actuarial assets for the retirement and health benefit supplement funds by $\$ 9.3$ billion. This compares to an excess of actuarial liabilities over actuarial assets of $\$ 8.8$ billion at FYE 2010. This decrease in funded status is due primarily to the recognition of investment losses in fiscal years 2002 and 2003 and the investment losses in fiscal years 2008 and 2009.

Investments. During the FY 2012, the ASRS investments were broadly diversified in domestic and international equities, domestic fixed income, real estate, private equity, opportunistic, commodities and cash equivalent instruments. According to statutory restrictions, no more than 80 percent of ASRS assets may be invested at any given time in corporate stocks or equity equivalents, and no more than 30 percent of ASRS assets may be invested in foreign securities. These investments remained within statutory guidelines.

The Retirement and HBS funds are combined in commingled investment pools. Investments for each fund are allocated daily via a fluctuating dollar unitization methodology. Realized and unrealized gains are allocated daily using the same methodology. The LTD investments are held and managed in a separate fund.

At June 30, 2012, the ASRS held net investments of \$27.8 billion, a decrease of $\$ 452.6$ million from FY 2011. The combined investment portfolio experienced a return of 1.3 percent compared to the Interim Total Fund Benchmark return of 1.4 percent. The decrease in net investments from FY11 to FY12 is primarily due to marginally positive U.S. equities, weak international equities and singledigit fixed income returns coupled with net cash outflows for benefit payments.

The ASRS held $\$ 12.6$ billion in domestic equities and $\$ 4.7$ billion in international equities on June 30, 2012, a decrease of 3 percent in domestic equities and a 4 percent decrease in international equities from FY 2011. Market performance and the reallocation of assets account for the change in value. The FY 2012 rate of return for ASRS domestic equities was 2.8 percent compared to 33.8 percent in FY 2011. By comparison, the ASRS domestic equities benchmark, comprised of a combination of S\&P 400 , S\&P 500 and the S\&P 600 indices, had a return of 3.7 percent for FY 2012. The FY 2012 rate of return for ASRS international equities was -13.1 percent compared to 29.8 percent in FY 2011. Comparatively, the ASRS international equities benchmark, comprised of the MSCI EAFE, MCSI EAFE Small Cap and the MSCI EM indices, had a rate of return of -13.9 percent for FY 2012. The underperformance of the Fund's international equities class was largely a result of the stock selections made by external portfolio managers, and growing risks throughout Europe and the European banking sector.

Domestic fixed income securities held by the Fund were $\$ 5.4$ billion at June 30, 2012, a decrease of $\$ 579.7$ million from FY 2011. The rate of return was 8.1 percent compared to 5.0 percent in the previous year, as the result of lower long-term interest rates and the narrowing of credit spreads during FY 2012. The ASRS domestic fixed income benchmark, the Barclay-Aggregate Index, returned 7.5 percent for FY 2012.

At June 30, 2012, the ASRS held $\$ 317.8$ million in commodities securities managed by two commodity managers. The managers experienced a return of 15.1 percent and 12.2 percent, respectively, compared to the DJUBS Com-
modity Index, which returned 14.3 percent a during FY 2012.

At June 30, 2012, the ASRS held $\$ 1.4$ billion in real estate assets, an increase of $\$ 262.8$ million from FY 2011. The one year and three year time weighted returns for the real estate program are 12.3 percent and 9.8 percent, respectively. This compares to the NFI-ODCE Index 14.7 percent and 4.1 percent for the one and three year periods. The NFI-ODCE Index is comprised of core institutional quality real estate with moderate leverage and reported net of fees. Approximately 70 percent of the real estate program assets are invested in opportunity fund style investments which can differ substantially from core style investments. The recent performance of the real estate investments reflects an improving economy and property markets. The difference in performance compared to the benchmark reflects primarily a divergence in the type of assets owned.

At June 30, 2012, the ASRS held $\$ 1.3$ billion in private equity investments, an increase of $\$ 511.3$ million from FY 2011. On a relative basis over the long-term (10 years or longer), the ASRS Strategic Investment Policy benchmarks the private equity program against and expects the program's performance to generate a minimum internal rate of return equal to the Russell 2000 Index, net of all investment management fees and expenses. For the year ending June 30, 2012, the one year and three year net-offees rate of return was 15.4 percent and 16.8 percent, respectively. For the same periods, the Russell 2000 Index returned -0.2 percent and 26.9 percent, respectively. Midteen returns for the private equity portfolio since 2009 reflect improvements in the economy since the low point of the recent recession and have been accretive to total fund returns. The comparison to the Russell 2000 reflects composition differences between the public market benchmark and the private market holdings, as well as volatility in the public market compared to private market appraisal valuations. The inception return of 0.2 percent of the private equity portfolio is a time weighted return, which needs to be interpreted considering the portfolio is in a build out phase where the scale of investments in recent periods is far greater than early periods, but every

## Management's Discussion and Analysis (CONTinued)

time period is given an equal weight in the return calculation. By comparison, the IRR for the private equity program from inception is 10.2 percent, a full 10 percent higher than the time weighted return.

At June 30, 2012, the ASRS held $\$ 653.5$ million in opportunistic funds, an increase of $\$ 273.9$ million from FY 2011. The performance of ASRS opportunistic investments are evaluated primarily on a net-of-fees absolute rate of return basis; in aggregate, these investments, incep-tion-to-date, have returned 8.1 percent primarily as the result continued tightening of Securitized Credit (Commercial Mortgage Backed Securities, non-agency RMBS, Asset Backed Securities) and other credit spreads relative to the timing of the purchase price of securities made within these strategies. Opportunistic Investments do not have a specific benchmark as it is measured on an absolute return investment strategy specific to the individual manager mandates and not the asset class itself.

The ASRS earns additional investment income by lending investment securities. State Street Bank \& Trust, which is the ASRS' custodial bank acts as agent on behalf of the ASRS for securities lending transactions related to the securities held in custody at State Street. Borrowers provide collateral, either securities or cash, in excess of the value of loaned securities and generally use the borrowed securities to initiate short sales or cover failed trades. The net income from security lending program for FY 2012 was $\$ 4.4$ million compared to $\$ 13.8$ million for FY 2011. During the late summer and early fall of 2011 , ongoing monitoring of ASRS exposures showed growing risks throughout Europe and in the European banking sector. In an effort to reduce the securities lending investment pools' exposure to the European banking sector, the ASRS substantially withdrew from securities lending in September 2011. As a result, the market value of the securities on loan decreased markedly with a concurrent reduction in lending revenues.

## Current Market Conditions

The backdrop of slowing global growth in combination with sizeable fiscal deficits present challenges for fiscal and monetary policymakers. U.S. equity markets stalled during FY 2012 due to concerns over slowing growth while the protracted sovereign debt problems in the Eurozone were a drag on non-U.S. equities. Projections are for slow, but not stellar growth over the next year that will be closely aligned with Federal and stimulus monetary policies.

The ASRS continues to implement the Strategic Asset Allocation policy and will allocate assets tactically within guidelines as market opportunities present themselves.

Additional information is available upon request. Please direct your request to the:

ASRS Financial Services Division
3300 North Central Avenue
Phoenix, AZ 85012

## Combined Statement of Plan Net Assets

For the Year Ended June 30, 2012 with Comparative Totals for 2011
(Dollars in Thousands)

|  | Retirement Fund | Health Benefit Supplement Fund (Note 8) |  | Long Term Disability Fund (Note 8) |  | Combined |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 2012 |  | 2011 |
| ASSETS |  |  |  |  |  |  |  |  |  |
| Cash (Note 3) | \$ 25,000 | \$ | 748 |  |  | \$ | - | \$ | 25,748 | \$ | 5,705 |
| Prepaid benefits | 184,805 |  | 5,927 |  | - |  | 190,732 |  | - |
| Total cash and prepaids | 209,805 |  | 6,675 |  | - |  | 216,480 |  | 5,705 |
| RECEIVABLES |  |  |  |  |  |  |  |  |  |
| Accrued interest \& dividends | 64,685 |  | 2,849 |  | - |  | 67,534 |  | 64,476 |
| Securities sold (Note 3) | 421,021 |  | 18,542 |  | - |  | 439,563 |  | 136,979 |
| Forward contracts (Note 5) | 270,531 |  | 11,914 |  | - |  | 282,445 |  | 846,038 |
| Contributions (Note 7) | 34,305 |  | 1,066 |  | 808 |  | 36,179 |  | 43,420 |
| Due from other funds (Note11) | - |  | 22,572 |  | 2,781 |  | 25,353 |  | 8,212 |
| Other | 6,002 |  | 15,599 |  | 3,583 |  | 25,184 |  | 9,941 |
| Total receivables | 796,544 |  | 72,542 |  | 7,172 |  | 876,258 |  | 1,109,066 |
| INVESTMENTS AT FAIR VALUE (Note 3) |  |  |  |  |  |  |  |  |  |
| Temporary investments | 1,415,279 |  | 83,299 |  | 1,776 |  | 1,500,354 |  | 2,329,115 |
| Securities lending collateral (Note 4) | 47,958 |  | 2,112 |  | - |  | 50,070 |  | 880,893 |
| Equity securities | 16,432,595 |  | 720,889 |  | 183,941 |  | 17,337,425 |  | 17,892,251 |
| Fixed income securities | 5,084,640 |  | 226,271 |  | 64,877 |  | 5,375,788 |  | 5,955,506 |
| Real Estate | 1,365,978 |  | 59,963 |  | - |  | 1,425,941 |  | 1,163,155 |
| Private Equity | 1,275,974 |  | 57,401 |  | - |  | 1,333,375 |  | 822,102 |
| Opportunistic Investments | 625,572 |  | 27,971 |  | - |  | 653,543 |  | 379,624 |
| Total investments | 26,247,996 |  | 1,177,906 |  | 250,594 |  | 27,676,496 |  | 29,422,646 |
| TOTAL ASSETS | 27,254,345 |  | 1,257,123 |  | 257,766 |  | 28,769,234 |  | 30,537,417 |
| LIABILITIES |  |  |  |  |  |  |  |  |  |
| Payable for securities purchased (Note 3) | 508,281 |  | 22,385 |  | - |  | 530,666 |  | 469,940 |
| Payable for securities lending collateral (Note 4) | 47,958 |  | 2,112 |  | - |  | 50,070 |  | 880,893 |
| Forward contracts payable (Note 5) | 238,976 |  | 10,525 |  | - |  | 249,501 |  | 828,207 |
| Due to other funds (Note 11) | 25,183 |  | - |  | 170 |  | 25,353 |  | 8,212 |
| Other | 31,853 |  | 19,282 |  | 273 |  | 51,408 |  | 35,358 |
| TOTAL LIABILITIES | 852,251 |  | 54,304 |  | 443 |  | 906,998 |  | 2,222,610 |
| NET ASSETS HELD IN TRUST FOR PENSION/OPEB BENEFITS | \$ 26,402,094 | \$ | 1,202,819 | \$ | 257,323 |  | 27,862,236 |  | 28,314,807 |

The accompanying notes are an integral part of these statements.

## Combined Statement of Changes in Plan Net Assets

For the Year Ended June 30, 2012 with Comparative Totals for 2011
(Dollars in Thousands)

| Additions | Retirement Fund | Health Benefit Supplement Fund (Note 8) |  | Long Term Disability Fund (Note 8) |  | Combined |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 2012 |  | 2011 |
| CONTRIBUTIONS |  |  |  |  |  |  |  |  |  |
| Member contributions (Note 7) | \$ 905,968 | \$ | - |  |  | \$ | 20,998 | \$ | 926,966 | \$ | 854,976 |
| Employer contributions (Note 7) | 852,167 |  | 54,463 |  | 20,998 |  | 927,628 |  | 859,399 |
| Federal government reimbursement (Note 15) |  |  | 19,978 |  | - |  | 19,978 |  |  |
| Retrospective rate adjustment reimbursement (Note 16) | - ${ }^{-}$ |  | 15,495 |  | - |  | 15,495 |  | - |
| Transfers from other plans | 2,236 |  | - |  | - |  | 2,236 |  | 6,427 |
| Purchased Service | 51,423 |  | - |  | - |  | 51,423 |  | 64,385 |
| Total Contributions | 1,811,794 |  | 89,936 |  | 41,996 |  | 1,943,726 |  | 1,785,187 |
| INCOME FROM INVESTMENT ACTIVITIES |  |  |  |  |  |  |  |  |  |
| Net appreciation (depreciation) in fair value (public) | $(402,858)$ |  | $(18,771)$ |  | 2,619 |  | $(419,010)$ |  | 4,893,382 |
| Interest | 192,117 |  | 8,534 |  | 1 |  | 200,652 |  | 216,535 |
| Dividends | 282,677 |  | 12,509 |  | - |  | 295,186 |  | 277,762 |
| Real Estate | 162,964 |  | 7,183 |  | - |  | 170,147 |  | 189,398 |
| Private Equity | 184,452 |  | 8,268 |  | - |  | 192,720 |  | 129,054 |
| Opportunistic Investments | 18,948 |  | 840 |  | - |  | 19,788 |  | 70,177 |
| Other | 12,177 |  | 536 |  | 4 |  | 12,717 |  | 42,652 |
| Total income from investment activities | 450,477 |  | 19,099 |  | 2,624 |  | 472,200 |  | 5,818,960 |
| LESS INVESTMENT ACTIVITY EXPENSES |  |  |  |  |  |  |  |  |  |
| Management fees and monitoring services (public) | $(54,849)$ |  | $(2,415)$ |  | (205) |  | $(57,469)$ |  | $(62,290)$ |
| Real Estate expense | $(29,273)$ |  | $(1,288)$ |  | - |  | $(30,561)$ |  | $(25,250)$ |
| Private Equity expense | $(43,966)$ |  | $(1,977)$ |  | - |  | $(45,943)$ |  | $(29,266)$ |
| Opportunistic investments expense | $(3,765)$ |  | (167) |  | - |  | $(3,932)$ |  | $(11,475)$ |
| Total investment activity expenses | $(131,853)$ |  | $(5,847)$ |  | (205) |  | $(137,905)$ |  | $(128,281)$ |
| Net income from investment activities | 318,624 |  | 13,252 |  | 2,419 |  | 334,295 |  | 5,690,679 |
| FROM SECURITIES LENDING ACTIVITIES (NOTE 4) |  |  |  |  |  |  |  |  |  |
| Security lending income | 2,711 |  | 119 |  | - |  | 2,830 |  | 14,201 |
| Security lending expenses |  |  |  |  |  |  |  |  |  |
| Interest (expense) / rebate | 2,161 |  | 96 |  | - |  | 2,257 |  | 1,375 |
| Management fees | (626) |  | (28) |  | - |  | (654) |  | $(1,803)$ |
| Total securities lending activities expense | 1,535 |  | 68 |  | - |  | 1,603 |  | (428) |
| Net income from securities lending activities | 4,246 |  | 187 |  | - |  | 4,433 |  | 13,773 |
| Total net investment income | 322,870 |  | 13,439 |  | 2,419 |  | 338,728 |  | 5,704,452 |
| TOTAL ADDITIONS | 2,134,664 |  | 103,375 |  | 44,415 |  | 2,282,454 |  | 7,489,639 |
| Deductions |  |  |  |  |  |  |  |  |  |
| Retirement and disability benefits | 2,297,947 |  | 93,915 |  | 65,190 |  | 2,457,052 |  | 2,324,602 |
| Survivor benefits | 29,731 |  | - |  | - |  | 29,731 |  | 23,949 |
| Refunds to withdrawing members, including interest | 207,289 |  | - |  | - |  | 207,289 |  | 180,719 |
| Administrative expenses | 31,052 |  | 1,370 |  | 2,740 |  | 35,162 |  | 31,171 |
| Transfers to other plans | 5,024 |  | - |  | - |  | 5,024 |  | 6,256 |
| Other | 750 |  | - |  | 17 |  | 767 |  | 1,069 |
| TOTAL DEDUCTIONS | 2,571,793 |  | 95,285 |  | 67,947 |  | 2,735,025 |  | 2,567,766 |
| NET INCREASE (DECREASE) | \$ $(437,129)$ | \$ | 8,090 |  | $(23,532)$ | \$ | $(452,571)$ | \$ | 4,921,873 |
| NET ASSETS HELD IN TRUST FOR PENSION/OPEB BENEFITS |  |  |  |  |  |  |  |  |  |
| Beginning of year | 26,839,223 |  | 1,194,729 |  | 280,855 |  | 28,314,807 |  | 23,392,934 |
| End of year | \$ 26,402,094 | \$ | 1,202,819 |  | 257,323 |  | 27,862,236 |  | 28,314,807 |

The accompanying notes are an integral part of these statements.

## Notes to the Basic Financial Statements

## 1. Description of the System

Organization - The Arizona State Retirement System (ASRS) is a component unit of the state of Arizona. The ASRS is a cost-sharing, multiple-employer, pension plan established by the state of Arizona to provide pension benefits for employees of the State and employees of participating political subdivisions and school districts. The ASRS is administered in accordance with Title 38, Chapter 5, Article 2 of the Arizona Revised Statutes (A.R.S.). The Long Term Disability Program is administered in accordance with Title 38, Chapter 5, Article 2.1.

The ASRS is a qualified governmental pension plan pursuant to I.R.C. §414. The ASRS plan has two components, the Plan and the System. The Arizona State Retirement System's accumulated plan assets are used to pay benefits of either component of members. The System is a defined contribution plan with guaranteed benefits and the Plan is a defined benefit plan. The System was established by the Arizona Legislature in 1953 to provide retirement and other benefits for state employees, teachers, and employees of political subdivisions that elected coverage. In 1943, the Legislature had established the Arizona Teachers' Retirement System (the Teachers' System) to provide benefits for teachers. After the establishment of the ASRS, teachers who were, or later became, eligible through employment covered by the ASRS were transferred to the System. The Teachers' System then became inactive, except for continuation of retirement benefits already being paid and obligations to teacher members who did not become eligible for the ASRS.

The Plan, enacted by the Legislature in 1970, became effective July 1, 1971. Effective July 1, 1981, all nonretired members of the System became members of the Plan as prescribed by Laws of 1980, Chapter 238.
A.R.S. §38-783 and A.R.S. §38-797 require separate accounts be established for health insurance premium benefits and long term disability benefits, respectively. Effective July 1, 1995, the ASRS has established an account for each benefit program and has reported those funds in the basic financial statements. Both the Health Benefit Supplement Fund (HBS) and the Long Term Disability Fund (LTD) are cost-sharing, multipleemployer post-employment benefit plans. Although the investments of the HBS Fund are commingled with investments of the Retirement Fund, the HBS Fund's assets may be used for the payment of HBS benefits only to eligible members.

Reporting Entity - The financial statements of the ASRS include the financial activities of all the above funds. The ASRS Retirement Board of Trustees (the Board), appointed by the governor and confirmed by the Arizona State Senate, oversees the ASRS.

Contributions - Participating employers and their employees contribute percentages of employees' salaries for retirement annuities, survivor annuities, health insurance supplements and long term disability in accordance with A.R.S. Employee contributions toward retirement benefits are excluded from gross income for Federal and State income tax purposes. However, employee contributions for long term disability are fully taxable. Employers collect contributions from the employees, add their matching share and remit the total amounts to the ASRS.

State statutes allow the purchase of eligible service credit for which no benefit can be paid by another qualified plan. Purchasable services include leave of absence, military service, other public service employment and previously forfeited service under the ASRS. Statutes also allow purchase of military service regardless of whether a benefit can be paid.

Costs of administering the funds are appropriated by the State legislature and financed through contributions and investment earnings.

At June 30, 2012 and June 30, 2011, the number of participating employers and employees totaled:

| Employer Units | $\mathbf{2 0 1 2}$ | $\mathbf{2 0 1 1}$ |
| :--- | ---: | ---: |
| School Districts | 243 | 243 |
| Charter Schools | 148 | 151 |
| Cities and Towns | 80 | 78 |
| Counties | 15 | 15 |
| Special Districts | 93 | 94 |
| Community College Districts | 10 | 10 |
| Universities | 3 | 3 |
| State Government | 1 | 1 |
| $\quad$ Total | $\mathbf{5 9 3}$ | $\mathbf{1}$ |
| Employee Members |  |  |
| Retirees (including Beneficiaries) | 112,306 | 107,172 |
| Non Active Fully Vested | $\mathbf{2 0 4 , 2 0 3}$ | 210,601 |
| Long Term Disability recipients | 4,646 | 4,785 |
| Current Employees - Active | $\mathbf{2 1 4 , 3 4 6}$ | 216,216 |
| Total | $\mathbf{5 3 5 , 5 0 1}$ | $\mathbf{5 3 8 , 7 7 4}$ |

${ }^{1}$ The 593 Employer Reporting Units represent 707 total employers. Of the retirees noted above, 68,358 are receiving health insurance premium benefits.

Benefits - The ASRS provides benefits under formulas and provisions described in Arizona state law. Benefits and administrative expenses are paid from funds contributed by members and employers and from earnings on the invested funds. The ASRS provides for retirement, disability, health insurance premium supplemental benefits and survivor benefits. Retirement benefits are calculated on the basis of age, average monthly compensation, and service credit, which is established on a fiscal year basis (July 1 to June 30).

Members with an initial membership date before July 1, 2011 are eligible for full retirement benefits on (a) their 65th birthday, (b) their 62nd birthday and completion of at least 10 years of credited service, (c) when the sum of their age plus total credited service equals 80 . Members with initial membership dates on or after July 1, 2011 are eligible for full retirement benefits on (a) and (b) above, (c) their $60^{\text {th }}$ birthday and completion of at least 25 years of credited service, or (d) their $55^{\text {th }}$ birthday and completion of at least 30 years of service. The benefit is based on a percentage of average monthly compensation multiplied by the years of service credit. The percentage of
average monthly compensation varies with years of service credit according to the following schedule:

| Years of Service |  |  |
| :--- | :--- | :--- |
| $0.00-19.99$ years | - | $2.10 \%$ |
| $20.00-24.99$ years | - | $2.15 \%$ |
| $25.00-29.99$ years | - | $2.20 \%$ |
| 30.00 or more years | - | $2.30 \%$ |

Prior to July 1, 2011, average compensation is defined as the period of 36 consecutive months during which a participant receives the highest compensation within the last 120 months of service during which the employee made retirement contributions as required by law. For participants with an initial membership date on or after July 1, 2011, the average monthly compensation is defined as the average of the highest consecutive 60 months in the last 120 months.

The compensation does not include lump sum payments on termination of employment for accumulated vacation or annual leave, sick leave, compensatory time or any other form of termination pay.

Members who began participation in the Plan prior to January 1,1984 , may choose to have average monthly compensation determined based upon the period of 60 consecutive months during which the member receives the highest compensation within the last 120 months of service, including lump sum payments as described above. Persons who attain age 50 with at least five years of total credited service may take an early retirement, but the amount of their retirement benefit is actuarially reduced.

Effective July 1, 1988, members of the ASRS are eligible for a Long Term Disability (LTD) benefit in the event they become unable to perform their work. The monthly benefit is equal to two-thirds of their monthly earnings. Participants continue to earn service credit up to their normal retirement dates. Members with LTD commencement dates after June 30, 1999 are limited to 30 years of service or the service on record as of the effective disability date if their service is higher than 30 years.

The Retiree Group Insurance Program offers health insurance coverage for retired and disabled members who are no longer covered by insurance administered by their former member employers. Commencing January 1, 1989, retired and disabled members of ASRS became eligible for the Health Insurance Premium Supplement Benefit Program (HBS). Effective July 29, 2010, members must have insurance provided by either their former employer or ASRS in order to be eligible for HBS. A detailed explanation of both the LTD and HBS programs is presented in the Additional Benefits section (Note 8).

Termination - Upon termination of employment, members can elect to receive all of their contributions made to the Plan, plus accrued interest at 4 percent.

Members with an initial membership date before July 1, 2011 can receive a percentage of employer contributions to the plan based on years of service as follows:

| Years of Service | \% of Employer <br> Contributions |
| :---: | :---: |
| 5 to 5.9 | $25 \%$ |
| 6 to 6.9 | $40 \%$ |
| 7 to 7.9 | $55 \%$ |
| 8 to 8.9 | $70 \%$ |
| 9 to 9.9 | $85 \%$ |
| 10 or more | $100 \%$ |

Members with an initial membership date on or after July 1, 2011 will not receive any portion of the employer contributions if they withdraw their account balance prior to retirement. This does not apply to terminations due to an employer reduction in force or position elimination, in which case the above ASRS vesting schedule will apply.

Withdrawal of accumulated contributions results in forfeiture of the member's accrued benefits in the Plan; however, state law provides for reinstatement of a member's forfeited service upon repayment of the accumulated contributions plus interest if a former member returns to covered service.

## 2. Summary of Significant Accounting Policies

Basis of Accounting - The financial statements are prepared using the accrual basis of accounting under which expenses are recorded when the liability is incurred and revenues are recorded in the accounting period in which they are earned and become measurable. Contributions from employees and employers for service through June 30 are accrued. These contributions are considered to be fully collectible and, accordingly, no allowance for uncollectible receivables is reflected in the financial statements.

Benefit and refund payments are recognized when due and payable in accordance with the terms of the retirement health benefit supplement and long term disability plan.

Investment income derived from publically traded investments is recognized when earned and investment and other expenditures are recorded when incurred. Investment income and expenses derived from private investments are recognized on a quarterly lag.

Investments - Investments include domestic and international equities, domestic fixed income, real estate, private equity, opportunistic, commodities and cash equivalent instruments.

Publically traded investments are reported at fair values determined by the custodial agent. The agents' determination of fair values includes, among other things, utilization of pricing services or prices quoted by independent brokers at current exchange rates.

ASRS' derivative instruments which consist of futures, forward contracts, options, swaps, rights and warrants, are measured at fair value and reported on the Statement of Plan Net Assets. Changes in fair values of derivative instruments are reported as net appreciation of fair value on the Statement of Changes in Plan Net Assets.

Private real estate, private equity and opportunistic investments are valued based upon the partnerships' March 2012 financial statements adjusted for cash flows through June 30, 2012.

Short-term investments are reported at cost plus accrued interest, which approximates fair value. For investments where no readily ascertainable fair value exists, management, in consultation with their investment advisors, has determined the fair values for the individual investments based on anticipated maturity dates and current interest rates commensurate with the investment's degree of risk.

Security transactions and any resulting gains or losses are accounted for on a trade date basis.

Net investment income from investment activities includes net appreciation in the fair value of investments, interest income, dividend income, real estate, private equity and opportunistic investment income and total investment expense. This includes investment management, real estate, private equity and opportunistic investment expenses and all other significant investment related costs.

There are certain market risks, credit risks, liquidity risks, foreign currency exchange risks, and event risks which may subject ASRS to economic changes occurring in certain industries, sectors, or geographies. See Note 3 for a more in-depth discussion of risk.

HBS and Retirement investments are pooled. However, investments for each fund are allocated daily via a fluctuating dollar unitization methodology. Realized and unrealized gains are allocated daily using the same methodology.

Capital Assets - Capitalization thresholds have been established as follows:

| Furniture and fixtures | $\$ 1,000,000$ |
| :--- | :--- |
| Computers and other equipment | $\$ 1,000,000$ |
| Internally developed computer software | $\$ 10,000,000$ |
| Externally purchased software | $\$ 1,000,000$ |
| Websites | $\$ 1,000,000$ |

As of the year ended June 30, 2012, the ASRS did not have any capitalizable expenditures at or above the above stated thresholds.

Federal Income Tax Status - During the year ended June 30, 2012, the ASRS qualified under Section 401(a) of the Internal Revenue Code (IRC) and was exempt from federal income taxes under Section 501(a) of the IRC.

Actuarial Valuation - The information included in the required supplemental schedules is based on the actuarial valuations performed as of June 30, 2011, which is the latest available information. Significant actuarial assumptions used in the valuations are included in the notes to the required supplemental schedules.

Use of Estimates - The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and changes therein, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Comparative Data - The accompanying financial statements include certain prior-year summarized comparative information in total but not by fund. Such information should be read in conjunction with the ASRS' financial statements for the year ended June 30, 2011, from which the summarized information was derived. Certain 2011 amounts have been reclassified to conform to the 2012 presentation.

New Accounting Pronouncements - GASB Statement No. 64 was issued and is effective for periods beginning after June 15, 2011. It amends GASB Statements No. 53, Accounting and Financial Reporting for Derivative Instruments. As the ASRS had already incorporated applicable provisions of GASB Statement No. 64, there is no effect on our financial statements.

## 3. Cash and Investments

Cash - Cash deposits are subject to custodial risk. Custodial risk is the risk that in the event of a bank failure, ASRS' deposits may not be returned to it. Arizona state statutes do not require ASRS deposits to be collateralized. The board has not adopted a more restrictive policy. In addition, the FDIC insures ASRS cash deposits up to $\$ 250,000$ per member based on the ratio of the member's account balance to the ASRS net assets.

Investments - Investments are subject to a number of risks including custodial credit risk, concentration of credit risk, credit quality risk, interest rate risk and foreign currency risk.

Statutes enacted by the Arizona State Legislature (the Statutes) authorize the ASRS to make investments in accordance with the "Prudent Person" rule. Section 38-719 (B) of the Arizona Revised Statutes interprets the rule to be that investment management shall discharge the duties of their position with the care, skill, prudence and diligence, under the circumstances then prevailing, that a prudent person acting in enterprise of a like character and with like aims as that of the system, subject to certain statutory limitations and restrictions. Within this broad framework, the ASRS has chosen to invest in short-term securities, obligations of the U.S. government or agencies of the U.S. government, corporate bonds, common and preferred stocks (domestic and foreign), mortgages, derivatives, commodities, real estate, private equity and opportunistic investments.

The Statutes place the following restrictions on the ASRS' investment fund portfolio:

1. No more than 80 percent of the ASRS' total assets may be invested at any given time in corporate stocks or equity equivalents, based on cost value of the stocks or equity equivalents irrespective of capital appreciation.
2. No more than 5 percent of the ASRS' assets may be invested in securities issued by any one institution, agency or corporation, other than securities issued as direct obligations of or fully guaranteed by the U.S. government or mortgage backed securities and agency debentures issued by federal agencies.
3. No more than 5 percent of the voting stock of any one corporation may be owned.
4. No more than 30 percent of the ASRS' assets may be invested in foreign securities, and those investments shall be made only by investment managers with demonstrated expertise in such investments.
5. No more than 10 percent of the ASRS' assets may be invested in bonds or other evidences of indebtedness of those multinational development banks in which the United States is a member nation, including the International Bank for Reconstruction and Development, the African Development Bank, the Asian Development Bank, and the Inter-American

Development Bank.
6. No more than 1 percent of ASRS assets may be invested in economic development projects authorized as eligible for such investment by the Arizona State Department of Commerce.
7. No investments in companies that do business in Sudan, Iran, or other State Sponsors of Terrorism countries under certain conditions.

Subject to the limitations noted above, the Board may authorize the Director to make investments that are designated by the Board and that do not exceed 50 percent of the assets of the investment account measured at cost.

The Board has not formally adopted more restrictive policies than required by State Statute for the various types of risks. The management of ASRS believes it has complied with the above guidelines. Management does expect the money managers to abide by contract requirements, which are considerably more restrictive than the statute. Due to the flow of securities to and from transfer agents and the security lending program, securities occasionally cannot be delivered for a sale or received for a purchase, resulting in a "failed" transaction. Securities with trade dates in June and settlement dates in July result in "outstanding" transactions. Since these securities have contractually changed ownership, receivables and payables result from these transactions. Such transactions resulted in a receivable for securities sold of $\$ 439.6$ million and a payable for securities purchased of \$530.7 million at June 30, 2012.

Custodial Credit Risk - For an investment, custodial credit risk is the risk that, in the event of a failure of a counter party, the ASRS will not be able to recover the value of its investment or the collateral securities that are in the possession of an outside party. All securities are registered in the name of the ASRS including loaned securities.

Concentration of Credit Risk - Concentration of credit risk is the risk of substantial loss if investments are concentrated in one issuer. Arizona state statute requires that no more than 5 percent of the assets can be invested in one issuer, except for the U.S. government and its agencies. The Board has not adopted a more restrictive policy. No investments, other than short term mutual funds, account for 5 percent or more of the ASRS assets.

Notes to the Basic Financial Statements (continued)

## Investments by Investment Type

At June 30, 2012
(Dollars in Thousands)


Credit Quality Risk - Credit quality risk is the risk that the issuer will not fulfill its obligations to the purchaser of its debt instruments. Arizona state statutes are not specific as to the credit ratings of the investments of the ASRS. The statutes require the Prudent Person

Rule. The Board has not adopted a formal policy on credit ratings. The present management policy is to set standards for each portfolio manager based on an assessment of their expertise.

The following table presents the fixed income investments at June 30, 2012 categorized to give an indication of the level of risk assumed by ASRS:

## Debt Securities

## Credit Quality Risk (Fixed Income Securities)

At June 30, 2012
(Dollars in Thousands)

|  |  |  |
| :--- | ---: | ---: |
| Moody's <br> Credit Rating | Fair Value | Fair Value as <br> Percent of Total <br> Debt Securities <br> Investments |
| Aaa | $\$$ | 363,533 |
| Aa1-Aa3 | $2,716,373$ | $6.76 \%$ |
| A1-A3 | 391,396 | $50.53 \%$ |
| Baa1-Baa3 | 401,501 | $7.28 \%$ |
| Ba1-Ba3 | 271,468 | $7.47 \%$ |
| B1-B3 | 392,229 | $5.04 \%$ |
| Caa1-Caa3 |  | 151,346 |
| Ca-C | 6,284 | $7.30 \%$ |
| NR $^{1}$ |  | 29,942 |
| NA $^{\mathbf{2}}$ |  | 651,716 |

${ }^{1}$ NR total of $\$ 29,942$ represents those securities that are not rated.
${ }^{2}$ NA represents those securities that are not applicable to the rating disclosure requirement. The fair value of $\$ 651,716$ is classified as Corporate Bonds totaling \$217,344 and Government Bonds totaling \$434,372.
${ }^{3}$ Total of $\$ 5,375,788$ represents the total corporate bonds of $\$ 2,228,419$ and total government bonds of \$3,147,369.

Interest Rate Risk - Interest rate risk is the risk that debt securities will lose value due to rising interest rates. Arizona state statutes are silent regarding interest rate risk. The Board has not adopted a specific formal policy for interest rate risk. It does set more restrictive requirements in its contracts with money managers. The ASRS uses effective duration to identify and man-
age its interest rate risk. Effective duration measures the expected change in value of a fixed income security for a given change in interest rate. The method takes into account the likely timing and amounts of variable cash flows for bonds with call options and prepayment provisions.

The following table shows the effective duration by investment type:

## Interest Rate Risk

At June 30, 2012
(Dollars in Thousands)

| Investment | Fair Value | Effective Duration <br> (in years) |
| :--- | ---: | ---: |
| DOMESTIC FIXED INCOME INVESTMENTS |  |  |
| Asset Backed Securities | $\$$ | 204,094 |
| Commercial Mortgage Backed | 232,768 | 2.3 |
| Corporate Bonds | $1,758,232$ | 2.9 |
| Non-Government Backed CMO's | 33,325 | 4.9 |
| Total Corporate Bonds | $\mathbf{2 , 2 2 8 , 4 1 9}$ | 7.2 |
| GOVERNMENT BONDS |  |  |
| Government Related | 509,250 | 7.2 |
| Government Agencies CMO's | 46,306 | 2.4 |
| Government Bonds | $1,246,563$ | 8.1 |
| Government Mortgage Backed | $1,345,250$ | 2.0 |
| Total Government Bonds | $\mathbf{3 , 1 4 7 , 3 6 9}$ |  |
| TOTAL DEBT SECURITIES | $\mathbf{\$ ~}$ | $\mathbf{5 , 3 7 5 , 7 8 8}$ |

Foreign Currency Risk - Foreign currency risk is the risk that changes in the foreign exchange rate will adversely impact the fair value of an investment. The ASRS is allowed to invest part of its assets in foreign investments. According to Arizona State statutes, no more than 30 percent of ASRS assets may be invested
in foreign securities and the investments must be made by investment managers with expertise in those investments. The Board has not adopted a formal policy that is more restrictive. Management does have certain policies in the contracts with the money managers permitted to invest in foreign denominated securities.

The following table shows exposure to foreign currency risk (U.S. dollars):

## Foreign Currency Risk

At June 30, 2012
(Dollars in Thousands)

| Currency Type | Temporary Investments |  | Fixed Income |  | Equity Securities |  | Real Estate |  | Private Equity |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Australian Dollar | \$ | 266 | \$ | - | \$ | 50,278 | \$ | - | \$ | \$ | 50,544 |
| Brazilian Real |  | - |  | - |  | 3,064 |  | - | - |  | 3,064 |
| Canadian Dollar |  | (150) |  | 4,809 |  | 38,724 |  | - | - |  | 43,383 |
| Danish Krone |  | 61 |  | - |  | 15,003 |  | - | - |  | 15,064 |
| Euro Currency |  | 14,080 |  | 11,202 |  | 323,503 |  | 35,540 | 153,391 |  | 537,716 |
| Hong Kong Dollar |  | 250 |  | - |  | 44,920 |  | - | - |  | 45,170 |
| Israeli Shekel |  | 1 |  | - |  | 702 |  | - | - |  | 703 |
| Japanese Yen |  | 2,525 |  | - |  | 252,698 |  | - | - |  | 255,223 |
| New Taiwan Dollar |  | 1 |  | - |  | 14,832 |  | - | - |  | 14,833 |
| New Zealand Dollar |  | 22 |  | - |  | 622 |  | - | - |  | 644 |
| Norwegian Krone |  | 2 |  | - |  | 6,130 |  | - | - |  | 6,132 |
| Pound Sterling |  | 1,069 |  | 5,109 |  | 321,133 |  | - | - |  | 327,311 |
| Singapore Dollar |  | 8 |  | - |  | 39,923 |  | - | - |  | 39,931 |
| South Korean WON |  | - |  | - |  | 21,772 |  | - | - |  | 21,772 |
| Swedish Krona |  | 7 |  | - |  | 36,213 |  | - | - |  | 36,220 |
| Swiss Franc |  | 1,072 |  | - |  | 155,624 |  | - | - |  | 156,696 |
| Total | \$ | 19,214 | \$ | 21,120 | \$ | 1,325,141 | \$ | 35,540 | \$ 153,391 | \$ | 1,554,406 |

## 4. Securities Lending Program

Arizona Revised Statutes Section 38-715(D)(3) allows the ASRS to participate in a securities lending program. The ASRS' custodial bank enters into agreements with borrowers to loan securities and have the same securities redelivered at a later date. All securities are eligible for loan (U.S. fixed income securities, U.S. and international equities) with a higher percentage of U.S. equities on loan than most other security types.

The ASRS currently receives as collateral at least 102 percent of the market value of the loaned securities and maintains collateral at no less than 100 percent for the duration of the loan. At year-end, the ASRS had no counter party risk to borrowers because the amount the ASRS owes the borrowers exceeds the amount the borrowers owe the ASRS. Securities loaned are initially fully collateralized by cash (USD and Euro), irrevocable letters of credit, U.S. Government or Agency securities, sovereign debt, corporate bonds and equities. Cash collateral may be reinvested (under certain constraints) in:
a) Instruments issued or fully guaranteed by the U.S. Government, Federal agencies, or sponsored agencies or sponsored corporations,
b) Instruments issued by domestic corporations including corporate notes and floating rate notes,
c) Obligations of approved domestic and foreign banks,
d) U.S. dollar-denominated instruments issued by sovereigns, sovereign supported credits, and instruments of foreign banks and corporations,
e) Repurchase agreements,
f) Insurance company funding agreements, guaranteed investment contracts and bank investment contracts,
g) Money market mutual funds.

The ASRS records the cash collateral received and the same amount as an obligation for securities on loan. The maturities of the investments are closely matched to those of the security loans to avoid interest rate exposure. The ASRS receives a spread for its lending activi-
ties. Investments made with cash collateral are classified as an asset on the Statement of Plan Net Assets. A corresponding liability is recorded as the ASRS must return the cash collateral to the borrower upon expiration of the loan. At June 30, 2012, the fair value of securities on loan was $\$ 49.4$ million; all of which were cash collateralized loans. Cash of $\$ 50.1$ million received as collateral for securities loaned was reinvested and had a net asset value of $\$ 49.7$ million as of June 30, 2012. The securities lending payable at June 30, 2012, was $\$ 50.1$ million. The ASRS does not have the ability to pledge or sell the collateral unless there is a borrower default. There are no restrictions on the dollar amount of security loans that may be made by the ASRS. The ASRS is indemnified against gross negligence and borrower default by the lending agents but is not indemnified against cash collateral reinvestment risk.

During the late summer and early fall of 2011, ongoing monitoring of ASRS securities lending exposure showed growing risks throughout Europe and in the European banking sector. In an effort to reduce the securities lending investment pools' exposure to the European banking sector, the ASRS substantially withdrew from securities lending in 2011. As a result, the market value of securities on loan decreased from $\$ 3.45$ billion as of June 30, 2011 to $\$ 49.4$ million at June 30, 2012.

## 5. Derivatives

A derivative instrument is a financial instrument or other contract with all three of the following characteristics:
a) Settlement Factors: It has one or more reference rates and one or more notional amounts or payment provisions or both. Those terms determine the amount of the settlement or settlements, and, in some cases whether or not a settlement is required,
b) Leverage: It requires no initial net investment or an initial net investment that is smaller than would be required for other types of contracts
that would be expected to have a similar response to changes in market factors,
c) Net Settlement: Its terms require or permit net settlement, it can readily be settled net by means outside the contract, or it provides for delivery of an asset that puts the recipient in a position not substantially different from net settlement.

ASRS' derivatives are considered "Investment Derivative Instruments" as defined in GASB 53 "Accounting and Financial Reporting for Derivative Instruments". All funds are considered fiduciary funds.

ASRS' derivative instruments which consist of futures contracts, forward contracts, options, swaps, rights and warrants are measured at fair value and reported on the Statement of Plan Net Assets. Changes in fair values of derivative instruments are reported as net appreciation of fair value on the Statement of Changes in Plan Net Assets.

The fair value balances and notional amounts of derivative instruments outstanding at June 30, 2012, classified by type, and the changes in fair value of derivative instruments for the year then ended as reported in the June 30, 2012 financial statements are as follows:

## Investment Derivatives by Type

## (Dollars in Thousands)

| Investment Derivatives | Changes in Fair Value (1) |  |  | Fair Value at June 30, 2012 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Classification |  | ount (2) | Classification | Amount (3) |  | ional (4) |
| Commodity Futures Long | Net Appreciation in Fair Value | \$ | $(67,680)$ | Not Applicable | \$ |  | 212,032 |
| Commodity Futures Short | Net Appreciation in Fair Value |  | 3,925 | Not Applicable | - |  | (24) |
| Credit Default Swaps Bought | Net Appreciation in Fair Value |  | 473 | Equity Securities | 1,534 | \$ | 47,716 |
| Credit Default Swaps Written | Net Appreciation in Fair Value |  | 54 | Equity Securities | 161 | \$ | 29,025 |
| Fixed Income Futures Long | Net Appreciation in Fair Value |  | 88,416 | Not Applicable | - |  | 213 |
| Fixed Income Futures Short | Net Appreciation in Fair Value |  | $(21,366)$ | Not Applicable | - |  | - |
| Fixed Income Options Bought | Net Appreciation in Fair Value |  | 97 | Equity Securities | 472 |  | 19,400 |
| Fixed Income Options Written | Net Appreciation in Fair Value |  | 1,095 | Equity Securities | $(1,581)$ |  | $(182,000)$ |
| Foreign Currency Futures Long | Net Appreciation in Fair Value |  | $(6,595)$ | Not Applicable | - |  | 255,730 |
| Foreign Currency Futures Short | Net Appreciation in Fair Value |  | 14,973 | Not Applicable | - |  | - |
| Foreign Currency Options Bought | Net Appreciation in Fair Value |  | (71) | Equity Securities | 321 |  | 23,858 |
| Foreign Currency Options Written | Net Appreciation in Fair Value |  | (20) | Not Applicable | - |  | - |
| Futures Options Written | Net Appreciation in Fair Value |  | 74 | Not Applicable | - |  | - |
| Foreign Currency Forwards | Net Appreciation in Fair Value |  | $(6,328)$ | Forward Contracts Receivable | 542 | \$ | 244,457 |
| Index Futures Long | Net Appreciation in Fair Value |  | $(90,881)$ | Not Applicable | - |  | 13,506 |
| Index Futures Short | Net Appreciation in Fair Value |  | 1,606 | Not Applicable | - |  | - |
| Pay Fixed Interest Rate Swaps | Net Appreciation in Fair Value |  | $(7,265)$ | Equity Securities | $(1,827)$ | \$ | 40,500 |
| Receive Fixed Interest Rate Swaps | Net Appreciation in Fair Value |  | 1,906 | Equity Securities | 1,654 | \$ | 73,144 |
| Rights | Net Appreciation in Fair Value |  | 99 | Equity Securities | 192 | \$ | 727 |
| Warrants | Net Appreciation in Fair Value |  | 118 | Equity Securities | 27 | \$ | 275 |
| Total |  |  | $(87,370)$ |  | \$ 1,495 |  |  |

(1) Excludes futures margin payments.
(2) Negative values (in brackets) refer to losses.
(3) Negative values refer to liabilities.
(4) Notional may be a dollar amount or size of underlying futures and options; negative values refer to short positions.

The fair value of derivative instruments reported by ASRS is based on quoted market prices off national exchanges. The fair value of foreign currency forward contracts are based on mathematical models and are valued using a pricing service, which uses published Reuter's foreign currency rates as the primary source for the calculation.

Credit Risk - The credit quality ratings of counterparties as described by nationally recognized statistical rating organizations and the counterparties related risk concentration as of the end of the reporting period are as follows:

## Counterparty Risk and Ratings

## (Dollars in Thousands)

| Counterparty Name | Total Net Exposure |  | Risk <br> Concentration | S\&P | RATINGS Fitch | Moody's |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Australia And New Zealand Banking Group | \$ | 25 | 0.50\% | AA- | AA- | Aa2 |
| Barclay's Bank, PLC Wholesale |  | 722 | 14.36\% | A+ | A | A2 |
| Barclay's Capital |  | 17 | 0.34\% | A+ | A | A2 |
| BNP Paribas, S.A. |  | 12 | 0.24\% | AA- | A+ | A2 |
| Citibank N.A. |  | 409 | 8.13\% | A | A | A3 |
| Citigroup Global Markets, CME |  | 138 | 2.74\% | A- | A | Baa2 |
| Credit Suisse FOB CME |  | 124 | 2.47\% | A+ | A | A1 |
| Credit Suisse London Branch |  | 1 | 0.02\% | A+ | A | A1 |
| Deutsche Bank London |  | 854 | 16.98\% | A+ | A+ | A2 |
| Goldman Sachs Capital Markets, L.P. |  | 4 | 0.08\% | A- | A | A3 |
| HSBC Bank USA |  | 1,399 | 27.82\% | AA- | AA | A1 |
| JP Morgan Chase Bank N.A. |  | 522 | 10.38\% | A+ | AA- | Aa3 |
| Royal Bank of Canada |  | 7 | 0.14\% | AA- | AA | Aa3 |
| Royal Bank of Scotland, PLC |  | 20 | 0.40\% | A | A | A3 |
| Standard Chartered Bank |  | 210 | 4.18\% | AA- | AA- | A1 |
| State Street Bank and Trust Co. |  | 77 | 1.53\% | AA- | A+ | Aa2 |
| USB AG |  | 475 | 9.45\% | A | A | A2 |
| Westpac Banking Corporation |  | 12 | 0.24\% | AA- | AA- | Aa2 |
| Total | \$ | 5,028 | 100.00\% |  |  |  |

The maximum amount of loss due to credit risk that the ASRS would incur if the counterparties to the derivative instrument failed to perform according to the terms of the contract, without respect to any collateral or other security or netting arrangement, is the total unrealized gain of derivatives at the end of the reporting period.

ASRS has no general investment policy requiring collateral or other security to support derivative instruments. Each investment manager hired has discretion with respect to derivative investments and risk control. Each invest-
ment manager is governed by its Investment Manager Agreement.

ASRS has no general investment policy with respect to netting arrangements. ASRS' investment managers have master netting arrangements to allow net settlement with the same counterparty in the event the counterparty defaults on its obligations.

ASRS' derivatives do not have contingent features.

The aggregate fair value of investment derivative instruments in asset positions at June 30, 2012 was $\$ 5.0$ million. This represents the maximum amount of loss in case of default of all counterparties for the aggregated (positive) fair value of over-the-counter positions as of June 30, 2012. There was no collateral received or netting arrangements in place at June 30, 2012 with counterparties that would reduce this exposure.

Interest Rate Risk - The ASRS has exposure to interest rate risk due to the investment in an interest rate swap agreement. The required risk disclosures are included in the Interest Rate Risk schedule in Note 3.

The fair value balance and notional amount of the interest rate swap outstanding at June 30, 2012, for the year then ended as reported in the June 30, 2012 financial statements are as follows:

## Interest Rate Risk for Interest Rate Swap

(In Thousands)

| Asset ID | Asset Description | Interest Rate | Fair Value |  | Notional |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PAY FIXED INTEREST RATE SWAPS |  |  |  |  |  |  |
| $\begin{aligned} & \text { 99S0BNJ83/ } \\ & \text { 99S0BNJ91 } \end{aligned}$ | BWU0830U7 IRS USD R V 03MLIBOR / BWU0830U7 IRS USD P F 2.75000 | 2.75\% | \$ | (367) | \$ | 7,200 |
| $\begin{aligned} & \text { 99S0BXJZ1/ } \\ & 99 \mathrm{SOBXK06} \end{aligned}$ | BWU0640U7 IRS USD R V 03MLIBOR / BWU0640U7 IRS USD P F 2.25000 | 2.25\% |  | $(1,460)$ |  | 33,300 |
| Total Pa | Fixed Interest Rate Swaps |  | \$ | $(1,827)$ | \$ | 40,500 |
| RECEIVE FIXED INTEREST RATE SWAPS |  |  |  |  |  |  |
| $\begin{aligned} & \text { 99S0AQS53/ } \\ & \text { 99S0AQS61 } \end{aligned}$ | SWU026R29 IRS BRL R F 10.53000 / SWU026R29 IRS BRLP V 00MBZDIO | 10.53\% | \$ | 1,392 | \$ | 40,774 |
| $\begin{aligned} & \text { 99SOCHEZO/ } \\ & \text { 99S0CHFO6 } \end{aligned}$ | SWU0083W7 IRS CAD R F 2.0000 / <br> SWU0083W7 IRS CAD P V 03MCDOR | 2.00\% | \$ | 124 | \$ | 17,657 |
| 99S0CKO58/ 99S0CK066 | SWU000609 IRS CAD R F 2.25000 / SWU000609 IRS CAD P V 03MCDOR | 2.25\% |  | 138 |  | 14,714 |
| Total Receive Fixed Interest Rate Swaps |  |  | \$ | 1,654 | \$ | 73,145 |

Foreign Currency Risk - ASRS is exposed to foreign currency risk on its foreign currency forward contracts and future contracts. The required risk disclosures are included in the Foreign Currency Risk schedule in Note 3.

## 6. Funding Status and Progress

Significant actuarial assumptions used in the June 30, 2011 Actuarial Valuation for the Retirement and the Health Insurance Premium Benefit Plans, the most recent actuarial valuation available, include: a rate of return on investment of present and future assets of 8 percent, compounded annually, projected salary increases ranging from 4 percent to 9 percent per year, inflation rate assumption of 3.25 percent, rates of disability, rates of withdrawal, rates of retirement, mortality rates, mortality rates after
disability, valuation of assets using fair value less ten year phase-in, investment income, and the Projected Unit Credit (PUC) funding method. The unfunded accrued liability is amortized over a thirty year rolling period.

Significant actuarial assumptions used in the June 30, 2011 Actuarial Valuation for the Long Term Disability Plan, the most recent actuarial valuation available, are the same as those used in the valuation of the Retirement Plan and the Health Insurance Premium Benefit Plan. The Long Term Disability Plan valuation uses the Projected Unit Credit (PUC) method of funding. Assets are valued at market, plus (or minus) an adjustment to reflect investment gains (or losses) over a ten year period. The unfunded actuarial accrued liability is amortized over a rolling fifteen years in level dollar payments.

All assumptions used in the actuarial valuations are based on five year experience studies. The ASRS Board approves all substantive actuarial assumptions and methods.

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment and mortality. Actuarially determined amounts are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future.

The schedules of funding progress, presented as required supplementary information following the notes to the financial statements, present multi-year trend information about whether the actuarial values of plan assets are increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

Schedules of employer contributions, also presented as required supplementary information following the notes to the financial statements, present trend information about the amounts contributed to the plan by employers in comparison to the annual required contribution (ARC).

The funded status of each plan as of the most recent actuarial valuation date is as follows (dollar amounts in millions):

| Actuarial Valuation June 30 | Actuarial Value of Assets a | Actuarial Accrued Liability Projected Unit-Credit b |  | unded <br> tuarial <br> crued <br> bility $b-a)$ | Funded Ratio (a/b) | Covered Payroll c | UAAL as a Percentage of Covered Payroll $[(b-a) / c]$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| RETIREMENT PLAN |  |  |  |  |  |  |  |
| 2011 | \$ 27,984 | \$ 37,051 | \$ | 9,067 | 75.5\% | \$ 9,061 | 100.1\% |
| HEALTH INSURANCE PREMIUM BENEFIT |  |  |  |  |  |  |  |
| 2011 | \$ 1,247 | \$ 1,504 | \$ | 257 | 82.9\% | \$ 9,061 | 2.8\% |
| LONG TERM DISABILITY PROGRAM |  |  |  |  |  |  |  |
| 2011 | \$ 308 | \$ 456 | \$ | 148 | 67.5\% | \$ 9,061 | 1.6\% |

The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost for each year and amortize any unfunded actuarial liabilities (or funding excess) over a thirty year rolling period for the Retirement and HBS plans and over fifteen years in level dollar payments for the LTD plan.

The funding progress and the ARC have been actuarially determined in accordance with the parameters of GASB Statement 25 for the Retirement Plan and GASB Statement 43 for the Health Benefit Supplement and LTD Plans.

Projections of benefits for financial reporting purposes are based on the substantive plan and include the types of benefit costs between the employer and plan members to
that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

## 7. Contributions Required and Contributions Made

The Arizona State Statutes provide statutory authority for determining the employees' and employers' contribution amounts as a percentage of covered payrolls. Employers are required to contribute at the same total rate as employees. Employees' contributions are applied towards the Retirement Plan and LTD. Employers' contributions are applied towards the Retirement Plan, Health Insurance,

Premium Supplement Plan, and the LTD Plan. There is no legal or contractual maximum contribution rate for employees or employers.

Legislation, which became law as of July 1, 2005, requires annual contribution rate calculations for all fiscal years beginning after fiscal year end 2007. The actuarial assumptions used in this measure are those adopted by the ASRS' Board in November 2009 and November 2011. The contribution rates for the retirement, the health insurance premium supplement and the long term disability
plans were actuarially determined using the projected unit credit (PUC) funding method.

Each employer and each member contribute at a rate of one-half the total percent of pay needed to pay the normal cost of the Plan and to amortize the unfunded actuarial accrued liability over a rolling thirty-year period for the retirement plan and the health insurance supplement plan. The long term disability plan uses a rolling fifteen-year period to reflect the shorter duration of LTD benefits.

The contribution rates for the years ended June 30, 2012 and 2011 were as follows:

|  | (2010 Valuation) <br> For the contribution period ending June 30, 2012 |  | (2009 Valuation) ${ }^{1}$ <br> For the contribution period ending June 30, 2011 |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  | Amount | Percent of Covered Payroll | Amount | Percent of Covered Payroll |
| RETIREMENT |  |  |  |  |
| Normal cost | \$ 1,215,140,371 | 12.90\% | \$ 1,234,664,757 | 12.55\% |
| Amortization of under-funded past service liability | 699,150,795 | 7.47\% | 591,883,524 | 6.06\% |
| Retirement Total | 1,914,291,166 | 20.37\% | 1,826,548,281 | 18.61\% |
| HEALTH PREMIUM BENEFIT TOTAL |  |  |  |  |
| Normal cost | 40,276,497 | 0.43\% | 41,883,708 | 0.43\% |
| Amortization of under-funded past service liability | 19,262,240 | 0.20\% | 15,302,394 | 0.16\% |
| Health Premium Benefit Total | 59,538,737 | 0.63\% | 57,186,102 | 0.59\% |
| LONG TERM DISABILITY |  |  |  |  |
| Normal cost | 30,456,285 | 0.32\% | 33,519,857 | 0.34\% |
| Amortization of under-funded past service liability | 17,087,235 | 0.18\% | 17,853,806 | 0.16\% |
| Long Term Disability Total | 47,543,520 | 0.50\% | 51,373,663 | 0.50\% |
| ACTUARIAL TOTAL | 2,021,373,423 | $21.50 \%{ }^{2}$ | 1,935,108,046 | 19.70\% |
| CONTRIBUTIONS MADE AS A PERCENTAGE OF THE CURRENT YEAR COVERED PAYROLL |  |  |  |  |
| Employers' Retirement | 850,456,018 | 9.87\% | 782,266,766 ${ }^{1}$ | 9.01\% |
| Employees' Retirement | 905,967,958 | 10.50\% | 833,205,706 ${ }^{1}$ | 9.60\% |
| Employers' Health Premium Benefit | 54,462,585 | 0.63\% | 51,047,543 | 0.59\% |
| Employers' Long Term Disability | 20,998,181 | 0.24\% | 21,689,214 | 0.25\% |
| Employees' Long Term Disability | 20,998,181 | 0.24\% | 21,689,310 | 0.25\% |
| Total | \$ 1,852,882,923 | $21.48 \%{ }^{2}$ | \$ 1,709,898,539 | 19.70\% |

${ }^{1}$ Values shown do not include System assets and liabilities, for valuation dates prior to June 30, 2010. Retirement contributions from the employer for the year ended June 30, 2012 reflect total employer contributions of $\$ 852,167,123$ less $\$ 1,711,105$ billed to employers for early termination incentive offers. Retirement contributions from the employer for the year ended June 30, 2011 reflect total employer contributions of $\$ 786,581,145$ less $\$ 4,314,379$ of unfunded employer liabilities.

[^0]The statutory contribution rate and actuarially determined contribution rate for the year ended June 30, 2011 was 9.85 percent for both the employees' and employers' portion. (Employees paid 9.60 percent retirement and .25 percent long term disability. Employers paid 9.01 percent retirement, .59 percent for the health insurance premium supplement and .25 percent for long term disability.) This rate was determined by the 2009 actuarial valuation. It is applied to the covered payroll to determine the employee and employer contributions. The statutory contribution rate and the actuarially determined contribution rate for the year ended June 30, 2012 was 10.74 percent for both the employees' and employers' portion. (Employees paid 10.50 percent retirement and .24 percent long term disability. Employers paid 9.87 percent for retirement, 63 percent for the health insurance premium supplement and .24 percent for long term disability.) This rate was determined by the 2010 actuarial valuation. It is applied to the covered payroll to determine the employee and employer contributions. GASB Statement No. 25 defines covered payroll as all elements included in compensation paid to active employees on which contributions to a pension plan are based.

Early termination incentive offers billed to employers of $\$ 1.7$ million are included in total employer contributions for the year ended June 30, 2012. Pursuant to A.R.S. §38-749, employers must pay any unfunded liability resulting from termination incentive programs that they offer if the incentive results in an actuarial unfunded liability to ASRS. The unfunded liabilities were calculated by ASRS' actuary. The following summarizes total employer contributions for the years ended June 30, 2012 and 2011:

|  | $\mathbf{2 0 1 2}$ |  | $\mathbf{2 0 1 1}^{1}$ |
| :--- | ---: | ---: | ---: |
| Employer contributions | $\$ 850,456,018$ |  | $\$ 782,266,766$ |
| Unfunded liabilities | $1,711,105$ | $4,314,379$ |  |
|  | $\$ 852,167,123$ | $\$ 786,581,145$ |  |
|  |  |  |  |

12011 does not included System.

## 8. Additional Benefits

In addition to the pension benefits described, the ASRS offers the Retiree Group Insurance Program and the Health Insurance Premium Benefit Program to eligible retired and disabled members. A retired member is defined as a member actively receiving an annuity benefit and a disabled member is defined as a member receiving an LTD benefit through the LTD program administered by the ASRS. The employees and member employers each contributed .24 percent of compensation to the LTD fund in FY 2012 and . 25 percent in FY 2011.

Pursuant to A.R.S. §38-782, the Retiree Group Insurance Program makes available group health insurance coverage to eligible retired and disabled members and their dependents. Retired and disabled members of the ASRS, University Optional Retirement Plans, the Public Safety Personnel Retirement System, the Elected Officials' Retirement Plan and the Corrections Officer Retirement Plan are eligible for health insurance benefits through the ASRS. As of June 30, 2012, more than 45,766 coverage agreements currently exist for retired and disabled members and their dependents.

Pursuant to A.R.S. §38-783, retired and disabled members with at least five years of credited service are eligible to participate in the Health Insurance Premium Benefit Program. This assistance is provided to those members who elect group coverage through either the ASRS Retiree Group Insurance Program or their former member employer.

In FY 2012 the employer's retirement contribution of 10.50 percent of compensation included .63 percent for the Health Premium Insurance Supplement.

Members who retire after December 31, 2003, can elect to receive a reduced premium benefit so that an eligible contingent annuitant may continue to receive a premium benefit after the member's death. The ASRS reim-
bursed approximately $\$ 94.0$ million and $\$ 92.0$ million towards the cost of group health insurance coverage for the years ended June 30, 2012 and 2011, respectively.

The following chart illustrates the maximum amount of the monthly available benefit for eligible members and their dependents:

| Years of Credited Service | Percent of Premium Benefit | WITHOUT MEDICARE |  |  |  | WITH MEDICARE A\&B |  |  |  | COMBINATIONS |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Retiree Only |  | Retiree \& Dependents |  | Retiree Only |  | Retiree \& Dependents |  |  <br> Dependent, One with Medicare, the other without |  | Retiree \& Dependent with Medicare, other dependent without |  |
| 5.0-5.9 | 50 percent | \$ | 75 | \$ | 130 | \$ | 50 | \$ | 85 | \$ | 107.50 | \$ | 107.50 |
| 6.0-6.9 | 60 percent |  | 90 |  | 156 |  | 60 |  | 102 |  | 129.00 |  | 129.00 |
| 7.0-7.9 | 70 percent |  | 105 |  | 182 |  | 70 |  | 119 |  | 150.50 |  | 150.50 |
| 8.0-8.9 | 80 percent |  | 120 |  | 208 |  | 80 |  | 136 |  | 172.00 |  | 172.00 |
| 9.0-9.9 | 90 percent |  | 135 |  | 234 |  | 90 |  | 153 |  | 193.50 |  | 193.50 |
| 10.0+ | 100 percent |  | 150 |  | 260 |  | 100 |  | 170 |  | 215.00 |  | 215.00 |

## 9. Contingent Liabilities

The ASRS is also a party in various litigation matters. While the final outcome cannot be determined at this time, management is of the opinion that the final obligation, if any, for these legal actions will not have a material adverse effect on the ASRS' financial position or results of operations.

## 10. Commitments

In connection with the purchase of various limited partnership interests in real estate, private equity and opportunistic investment portfolios, the ASRS has commitments totaling $\$ 5.8$ billion. Remaining unfunded commitments for real estate, private equity and opportunistic investments are $\$ 454.5$ million, $\$ 1.4$ billion and $\$ 482.4$ million, respectively, as of June 30, 2012.

## 11. Due To and From Other Funds

Due to/from other funds includes amounts that need to be transferred after the year end resulting from allocations of contribution revenue as well as allocations of pooled cash, and pre-paid benefits.

## 12. Required Supplementary Schedules

Historical trend information designed to provide information about the ASRS' progress in accumulating sufficient assets to pay benefits when due is required supplementary information. Required Supplementary Information prepared in accordance with the parameters of GASB Statement No. 25 and GASB Statement No. 43 is included immediately following the Notes to the Financial Statements.

## 13. Retirement Plans

All eligible ASRS employees participate in the Arizona State Retirement System. The ASRS is a cost-sharing, multiple-employer, defined benefit pension plan established by the State of Arizona to provide pension benefits for employees of the State and employees of participating political subdivisions and school districts. The ASRS is administered in accordance with Title 38, Chapter 5, Article 2 of the A.R.S. The Long Term Disability Program is administered in accordance with Title 38, Chapter 5, Article 2.1.

The ASRS Retirement Plan provides retirement, disability benefits and survivor benefits to members and their beneficiaries. A.R.S. §38-783 and A.R.S. §38-797 require separate accounts be established for health insurance premium benefits and long term disability (LTD) benefits, respectively.

Effective July 1, 1995, the ASRS has established a fund for each benefit program and has reported those funds in the combined financial statements. The financial statements of the ASRS include the financial activities of all the above funds. The Board, appointed by the governor and confirmed by the Arizona State Senate, manages the ASRS.

The contribution rate is established and may be amended by the Board. The contribution rates for the Retirement, the HBS and the LTD plans are actuarially determined using the PUC funding method. There is no legal or contractual maximum contribution rate for employees or employers. The statutory contribution rates for the years ended June 30, 2012 and June 30, 2011, were 10.74 percent ( 10.50 percent retirement and .24 percent LTD) and 9.85 ( 9.60 percent retirement and .25 percent LTD), respectively. All eligible ASRS employees were required to contribute 10.50 percent of their annual covered salary, and the ASRS, as the employer, was required to match these contributions. The contributions were equal to the required contributions.

The ASRS collects the contributions and remits them to the Plan. Employee contributions, except for LTD, are excluded from gross income for federal and state income tax purposes and earn interest at the rate of 8 percent per annum.

After June 30, 2005, contributions made to the Plan, plus accrued interest of 4 percent per annum, are refundable upon termination of employment.

The Plan provides benefits under formulas and provisions described in the law. Benefits and administrative expenses are paid from funds contributed by members and employers and from earnings on the invested funds.

Retirement benefits are calculated on the basis of age, average monthly compensation and service credit, which is established on a fiscal year basis (July 1 to June 30). The benefit is based on a percentage of average monthly compensation multiplied by the years of service credit.

Qualified ASRS employees are eligible for a LTD benefit in the event they become unable to perform their work. The Retiree Group Insurance Program offers health insurance coverage for both retired and disabled members.

Refer to Note 6 of these financial statements for current information regarding the funding status and progress of the retirement, health insurance premium benefit and the long term disability plans.

The ASRS, as the employer, made contributions for the past three years as follows:

| Fiscal <br> Year | Salary <br> Base $^{\mathbf{1}}$ | Retirement <br> Contributions | HBS <br> Contributions | LTD <br> Contributions | Total <br> Contributions | \% of Required <br> Contributions |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | :---: |
| 2010 | $\$ 10,894,788$ | $\$$ | 907,516 | $\$$ | 71,814 | $\$$ | 44,780 | $\$$ |
| 2011 | $10,170,633$ | 915,762 | 59,958 | 26,090 | $1,001,810$ | $100 \%$ |  |  |
| 2012 | $11,351,146$ | $1,090,891$ | 73,347 | 27,632 | $1,191,870$ | $100 \%$ |  |  |

${ }^{1}$ Represents salaries paid by ASRS as an employer on which contributions have been calculated.

## 14. Significant New Legislation

The $50^{\text {th }}$ Legislature of the State of Arizona adjourned May 3, 2012. The most significant bill that passed was HB 2264 which retroactively effective to July 2011, returns the ASRS employer's contribution rate to $50 \%$, rather than $47 \%$, and returns the employee's contribution rate to $50 \%$, rather than $53 \%$. See Introductory Section for a complete listing of new legislation.

## 15. Early Retiree Reinsurance Program

The ASRS participated in the Early Retiree Reinsurance Program (ERRP) beginning in FY 2012. ERRP is managed by the U.S. Department of Health and Human Services and reimburses employers for pre-Medicare health care costs. The ERRP was designed to provide financial assistance to health plan sponsors that make coverage available to early retirees (aged 55 and older) that are not yet eligible for Medicare. The program stipulates that the funds may only be used to:

- Reduce contribution levels (premiums) for all plan participants, to the extent possible, to 2009 levels,
- Mitigate ASRS health benefit cost increases while keeping minimum funding to at least 2009 levels,
- Hold in escrow to maintain member contributions and mitigate health benefit cost increases in future years.

The funds must be used by December 31, 2014. As of June 30, 2012 the ASRS has received \$19,978,334 in ERRP money.

## 16. Retrospective Rate Adjustment Refund

The ASRS and eligible retirees pay premiums on a monthly basis to a contracted health insurance provider as consideration for health insurance coverage provided. The ASRS contract with the insurance provider allows for a portion of the difference between the total revenues and total claims expenses incurred by the provider to be distributed back to the ASRS in the form of a retrospective rate adjustment refund. The amount is calculated based on targeted retention ratio as agreed upon per the contract and may fluctuate from year to year. During 2012 the ASRS received $\$ 15,494,699$ in a retrospective rate adjustment refund for revenue and claims expense activity during calendar year 2011.

## REQUIRED SUPPLEMENTARY INFORMATION

## Schedule of Funding Progress

For Year Ended June 30, 2012
(Dollars in Millions)


[^1]See Notes to Required Supplementary Information.

Schedule of Contributions from the Employer and Other Contributing Entities
For Year Ended June 30, 2012
(Dollars in Thousands)

|  | RETIREMENT BENEFIT <br> Required <br> Contribution | LONG TERM DISABILITY <br> BENEFIT |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Percentage | Annual <br> Required | Percentage <br> Contributed <br> Contributed |  |  |  |
| 2007 | $\$$ | 663,544 | $100 \%$ | $\$$ | 44,518 |
| 2008 | 759,482 | 100 | 47,171 | $100 \%$ |  |
| 2009 | 754,044 | 100 | 47,213 | 100 |  |
| $2010^{\mathbf{1}}$ | 749,636 | 100 | 35,939 | 100 |  |
| $2011^{\mathbf{2}}$ | 782,347 | 100 | 21,689 | 100 |  |
| $2012^{\mathbf{3}}$ | 850,456 | 100 | 20,998 | 100 |  |

${ }^{1}$ The 2010 required contributions from the employer for the retirement fund reflect total employer contributions of $\$ 763,099,507$ less $\$ 13,463,483$ of unfunded employer liabilities.
${ }^{2}$ The 2011 required contributions from the employer for the retirement fund reflect total employer contributions of $\$ 786,661,694$ less $\$ 4,314,379$ of unfunded employer liabilities.
${ }^{3}$ The 2012 required contributions from the employer for the retirement fund reflect total employer contributions of $\$ 852,167,123$ less $\$ 1,711,105$ of unfunded employer liabilities.

${ }^{4}$ Other contributions represent Federal government reimbursements from the Early Retiree Reinsurance Program, and rate adjustment reimbursements from the insurance carrier.

See Notes to Required Supplementary Information.

## Notes to Required Supplementary Information

## 1. Actuarial Methods and Assumptions for Valuations Performed (for most recent actuarial valuation)

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated.

The Projected Unit Credit (PUC) method is the actuarial cost method used in the valuations for the period ended June 30, 2011. The unfunded actuarial accrued liability is amortized over a 30 year rolling period for the Retirement Fund and the Health Insurance Premium Benefit. The Long Term Disability (LTD) Program's unfunded actuarial accrued liability is amortized over a rolling 15 year period to reflect the shorter duration of LTD benefits. The amortization method is the Level Dollar Method. The actuarial value of assets is the market value adjusted to phase in the recognition of investment gains and losses over a period of time. For 2002 and later years, the period is ten years. The investment return rate assumption is 8 percent per annum, compounded annually. The inflation rate assumption is 3.25 percent per annum. Members' salaries are assumed to increase at a rate of 4 percent to 9 percent per annum, depending on the length of service. The permanent benefit increase (PBI) reserve was zero as of June 30, 2011, as a result of the payment of the 2005 PBI.

## Significant Factors Affecting Identification of Trends

## 2000

The age restriction on eligibility for the PBI was removed

2001

## Return to Work

Permits retired members of the ASRS to return to work
and still be eligible to receive retirement benefits if they have been terminated from employment for a period of 12 months. The members who take this option will not be eligible for LTD benefits nor will they contribute to the ASRS or accrue additional benefits during the period of re-employment. This act was repealed June 30, 2003.

This is similar to the bill passed in 2000 allowing retired teachers to return to work, and it does not affect the requirements of that program.

## Transferring Credits

Permits an inactive member, who has not retired, to transfer credited service from one state plan to their current or former retirement plan, if the inactive member is not eligible for membership in the ASRS, and has not withdrawn contributions from the ASRS.

## Health Insurance Premium Benefit

Increases the health insurance premium benefit for members of the eligible state retirement systems by the following amounts:

- Medicare eligible member from $\$ 65$ to $\$ 100$
- Non-Medicare eligible member from $\$ 95$ to $\$ 150$
- Non-Medicare family coverage from $\$ 175$ to \$260
- Medicare eligible family coverage from $\$ 115$ to \$170
- Combination Medicare and non-Medicare eligible from \$145 to \$215


## Rural Health Insurance Premium Benefit

In addition to the premium benefit paid to ASRS retired and disabled members, provides for retired and disabled members who live in areas of the state not served by a managed care program (HMO) and who have 10 years of credited service in the following amounts:

- Medicare eligible member $\$ 170$ per month
- Non-Medicare eligible member $\$ 300$ per month
- Non-Medicare family coverage $\$ 600$ per month
- Medicare eligible family coverage $\$ 350$ per month
- Combination Medicare and non-Medicare eligible $\$ 470$ per month

Also provides that a retired or disabled member may elect to purchase individual coverage and receive a payment of the increased subsidy through the member's employer if the employer assumes the administrative function associated with the payment including verification that the payment is used for health insurance.

## Partial Lump Sum Option

Beginning July 1, 2002, a member may elect a Partial Lump Sum (PLS) payment at retirement equal to not more than 36 months of the member's calculated retirement benefit. The life annuity amount then would be adjusted actuarially to a reduced amount to offset the lump sum payment.

## Graded Multiplier

Provides a variable multiplier in the retirement benefit formula, increasing with years of service according to the following:

| 0.00 to 19.99 Years of Service | $2.10 \%$ |
| :--- | :--- | :--- |
| 20.00 to 24.99 Years of Service | $2.15 \%$ |
| 25.00 to 29.99 Years of Service | $2.20 \%$ |
| 30.00 or More Years of Service | $2.30 \%$ |

## Supplemental Defined Contribution (DC) Retirement Plan

Permits the four state retirement plans to establish a 401(a) defined contribution program as a supplement to the state defined benefit programs. Repeals the alternative DC programs for term-limited state elected officials and state employees exempted from state personnel rules.

Employees may make contributions to IRS limits with a match by the employer. Each employer member of the ASRS would be permitted to choose its own match rate.

## Permanent Benefit Increase (PBI) Enhancement

Provides that interest at a rate of 8 percent be paid on the funds held in reserve for the PBI. The interest accrued to the reserve is used to fund an enhanced PBI based on the number of years a member has been retired. A member who has at least 10 years of service would be eligible for an incremental increase for each five years of retirement.

## PSPRS Membership; Park Rangers

Transfers state and county park rangers from the ASRS to the PSPRS.

## Community Colleges; Optional Retirement; Contributions

Permits a community college that has an optional retirement program to increase employer and employee contributions to seven percent.

It provides a window for ASRS members to transfer to the optional programs from October 1, 2001 through December 31, 2001. The ASRS shall transfer their contributions plus interest to the optional program.

## Purchase of Military Service

Allows for ASRS members to purchase military service time for which they may already be receiving benefits.

## Pop-Up and Life Certain Option

Allows for retirees who choose the 5,10 , or 15 period certain options to rescind the election and thereafter, receive a straight life annuity, including post-retirement increases. The member may again elect a period certain and life annuity subject to the same provision previously elected by the member.

## 2002

No material changes.

## 2003

## Change to Phase-in Period

Prior to the 2002 valuation, actuarial assets were equal to market, less a five-year phase-in of the excess of expected investment return over actual investment return. For 2002 and future years, the Board changed the fiveyear phase-in period to a ten-year period. So, the 2002 valuation recognizes only 10 percent of the 2002 investment loss. The years prior to 2002 remain on their original five-year schedules.

## Extension of the Rural Health Insurance Premium Benefit

The Legislature passed legislation that extends the Rural Health Insurance Subsidy for a period of two additional years.

## 2004

## Service Purchase Program

The Legislature revised the method of calculating the cost of service purchases so that future purchases would be made at true actuarial present value. ASRS began to charge interest at 8 percent per annum for service purchases under payroll deduction agreements.

## Early Retirement Incentive Programs

The Legislature provided that employers that participate in ASRS and offer early retirement incentives to their employees must notify ASRS of the incentives. ASRS will determine the liability associated with the cost of the incentives and the employers will pay the cost.

## Long Term Disability Program

The Legislature revised and clarified LTD provisions so that disabled members will be required, when appropriate, to participate in rehabilitation programs and to pursue obtaining Social Security disability benefits. In addition, the legislation limited the receipt of disability benefits on the basis of a member's "own occupation" to 24 months, rather than to 24 consecutive months.

## 2005

## Refund of Contributions

The Board reduced the rate of interest accruals on forfeited balances from 8 percent to 4 percent effective July 1, 2005.

## The Legislature:

- Changed contribution rate calculations from biennial to annual for all fiscal years beginning after FYE 2007. It also modified biennial rate requirements to allow the rate to be stepped in over a two year period for FYE 2006 and 2007.
- Pegged the contribution rates for fiscal year 2006 and fiscal year 2007 at 6.90 percent and 8.60 percent respectively. After fiscal year 2007, contribution rates are to be determined annually.
- Eliminated the Rural Health Insurance Premium Benefit for retirees in the ASRS health insurance program who are not eligible for Medicare.


## Temporary Rural Health Insurance Premium Benefit

The Legislature extended the temporary Rural Health Insurance Subsidy for a two year period, from July 1, 2005, to June 30, 2007. The benefit is provided to Medicareeligible retirees and disabled members who live in Arizona counties with no Health Maintenance Organization (HMO) service area and who have at least 10 years of credited service.

## 2006

The Legislature limited the ability of ASRS retirees to rescind their elections after retirement. Specifically, members who have chosen a form with a death benefit can "pop up" once to the single life form, but are then not allowed to "pop down" to a death benefit form.

## 2007

## Long Term Disability Program

The Legislature changed the Long Term Disability Program Social Security disability offsets and preexisting condition requirements. The Social Security disability offsets were changed from 64 to 85 percent and the Social Security retirement benefits were changed from 83 to 85 percent. The pre-existing condition requirement was changed from three months to six months.

## Extension of the Rural Health Insurance Premium Benefit

The Legislature extended the temporary Rural Health Insurance Premium Benefit for two years.

## Membership

The Legislature exempted post-doctoral scholars from ASRS membership.

## Service Credit

The Legislature expanded eligibility for Active Military Service Credit.

## 2008

## Service Purchase Program

The Legislature modified one of the salary calculations
used for service purchases and clarified the salary calculations used for leave of absence purchases.

## Membership

The Legislature clarified that a member who purchases previously forfeited service credit is subject to the benefit structure and duties in place when the person again becomes a member.

## Overpayment Recovery

The Legislature required the ASRS to recover overpaid money by reducing a benefit owed to any member, beneficiary, or alternate payee.

## Unclaimed Property

The Legislature exempted the ASRS from statutory unclaimed property procedures and instituted notice and people search requirements.

## Transfers Out

The Legislature modified procedures related to transfers out of the system, specifically with respect to existing Payroll Deduction Agreements for service purchases.

## Divestment

The Legislature enacted bills providing for mandatory engagement with and potential divestment from companies that have either invested, since August 5, 1996, \$20 million or more in any year in Iran's petroleum energy sector or meet specific Sudan-related business operations criteria. The Legislature also required the ASRS to create a policy regarding investments in countries designated as "State Sponsors of Terrorism" by the U.S. State Department.

## 2009

## Defined Benefit Plan Design

The Legislature eliminated the 80 percent cap on monthly benefits. The cap applied to members hired after August 9, 2001 and is now eliminated for all ASRS members. The legislation also clarified that nonretired survivor benefits are triggered by a member's death regardless of whether the member was employed at the time of death.

## Service Purchase

The Legislature, effective July 1, 2010, required members to have five years of service credit in ASRS before initiating a service purchase. The legislation also allowed a member to purchase time worked for a government of a U.S. commonwealth, insular area or overseas possession. The legislation also repealed an earlier law that provided for a sunset of the revised military call-up disability service purchase provisions, and instead extended the provisions indefinitely.

## Return to Work

The Legislature allowed retired members who Return To Work (RTW) with a suspension of benefits to choose a different annuity option when they again retire if the member resumed work for at least 60 consecutive months. The legislation also allowed retired members to immediately return to work without suspension if the member returned to a different position that does not require participation in the ASRS and the member participates in another state pension program.

## Early Termination Incentives

The Legislature limited exceptions to the Employer Termination Incentive Program (ERTIP) definition by eliminating reclassifications and merit or cost of living increases (leaving promotion as the only exception.) The legislation removed the requirement that in order to qualify as an ERTIP, an agreement to terminate must be in writing and instead broadens the meaning to include anything of value provided by an employer that is conditioned on the member's termination. In addition, enhanced payments of vacation, sick or compensatory leave will count as ERTIP incentive payments.

## Ineligible Persons

The Legislature required an employer that employs and makes contributions for a person who works for a thirdparty organization (and does not meet ASRS membership) - if the ASRS or a court determines that ASRS must pay a benefit to the person - to pay any unfunded liability resulting to ASRS after ASRS subtracts the person's account balance from the present value of the benefit.

## Dual Employment

The Legislature eliminated a member's ability to contribute via a second employer (ER), beginning January 1,2010 , unless the member meets the $20 / 20$ membership criteria with respect to the second ER. The Legislature established an exception if the employee had been employed by the second ER between January 1, 2005 and December 31, 2009, continues or resumes employment before January 1, 2012, and does not leave employment for more than 30 consecutive days during their service year.

## Long Term Disability Program

The Legislature cross-referenced the LTD Program definitions with the ASRS Defined Benefit Plan statutes to ensure conformity between the programs and also clarified the calculation of the LTD contribution rate.

## Rural Health Insurance Premium Benefit

The Legislature did not extend the temporary Rural Health Insurance Premium Benefit, allowing the program to expire June 30, 2009.

## 2010

## Benefit Formula

The Legislature changed the Normal Retirement Date definition from 80 to 85 points (age plus years of service) for a member whose membership commences on or after July 1, 2011. Early retirement decrements were also modified to conform to the 85 point normal retirement for a member whose membership commences on or after July 1, 2011.

The Average Monthly Compensation definition used in a retiring member's retirement benefit calculation was modified from the highest consecutive 36 months in the last 120 months to the average of the highest consecutive 60 months in the last 120 months for members whose membership commences on or after July 1, 2011.

## Withdrawal of Account

Employer contribution refunds are eliminated for a member whose membership begins on or after July 1, 2011 when the member terminates employment and chooses to withdraw their account balance. There is an exception for any member who was terminated due to an employer reduction in force or a position elimination, in which case the current refund vesting schedule will apply.

## Long Term Disability Program Appeals

Effective July 29, 2010, a change in the appeals process was made so that a person appealing an ASRS decision under the LTD Program (usually a decision of an Administrative Law Judge) is permitted to request that the ASRS Board hear the appeal in executive session, rather than in a Public Hearing. The request must be made at least 48 hours in advance. Further, minutes of and discussions held at an executive session are confidential except from the appellant for use in the appellant's further appeal to the Superior Court.

## Health Insurance Supplement (Premium Benefits)

Effective July 29, 2010, the Legislature removed the ability of a retiree to secure individual health insurance coverage and receive the health insurance supplement. After July 29, 2010 in order to receive the health insurance supplement, the retiree must be enrolled in either the ASRS' Retiree Health Insurance program or an Employer's Group Health Insurance.

## Miscellaneous

Effective July 29, 2010, the Legislature made miscellaneous changes to the plan to conform to federal law.

## 2011 (most recent actuarial valuation)

## Plan Opt Out

Until July 1, 2015, allows a person, who becomes employed after the person has reached age 65 , is not an active, inactive, retired or disabled member; and does not have any credited or prior service in ASRS to elect not to participate in ASRS. The election must be made is writing and filed with ASRS within 30 days of employment. This election is irrevocable for the remainder of the person's employment, and the time cannot be purchased at a later date.

## Distributions

ASRS will no longer pay employers portion of Contributions Not withheld (CNW) as a refund or a nonretired survivor benefit if the member has not paid their portion of the CNW.

The Level Income alternative retirement option was eliminated for new retires after July 1, 2013.

## Service Purchase

Reduced requirement to purchase Leave of Absence, Other Public Service or Military service from 10 years of service back to 5 years of service.

## Health Benefit Supplement

ASRS will no longer provide the premium benefit for retirees or disabled members who are covered under ASRS Employer's "active employee' insurance plan, either as the insured or as a dependent, if the premium paid by the retiree or disabled member is subsidized by the ASRS employer.

## Spousal Consent

A member who is married at the time of retirement must elect the current spouse as primary contingent annuitant and must elect a monthly benefit in the form of a joint and survivor annuity of at least $50 \%$ of the member's monthly benefit. To choose a different annuity option or to change the primary contingent annuitant, the member must get the written consent of the current spouse, excepting in cases of divorce or death.

## LTD

Caps disability earnings from the LTD program benefit and other statutory sources at $100 \%$ of the member's pre-disability salary (the salary ASRS used in determining benefits) for new disabilities on or after August 2, 2012. ASRS offsets the member's LTD benefit if the cap is exceeded.

## Additional Supplementary Information

## Combining Schedule of Retirement Net Assets

For the Year Ended June 30, 2012
(Dollars in Thousands)

|  | Retirement Plan |  | Retirement System |  | Combined 2012 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ASSETS |  |  |  |  |  |  |
| Cash | \$ | 24,999 | \$ | 1 | \$ | 25,000 |
| Prepaid benefits |  | 181,482 |  | 3,323 |  | 184,805 |
| Total cash and prepaids |  | 206,481 |  | 3,324 |  | 209,805 |
| RECEIVABLES |  |  |  |  |  |  |
| Accrued interest \& dividends |  | 63,778 |  | 907 |  | 64,685 |
| Securities sold |  | 415,117 |  | 5,904 |  | 421,021 |
| Forward contracts |  | 266,737 |  | 3,794 |  | 270,531 |
| Contributions |  | 34,305 |  | - |  | 34,305 |
| Due from other funds |  | - |  | - |  | - |
| Other |  | 5,962 |  | 40 |  | 6,002 |
| Total receivables |  | 785,899 |  | 10,645 |  | 796,544 |
| INVESTMENTS AT FAIR VALUE |  |  |  |  |  |  |
| Temporary investments |  | 1,395,563 |  | 19,716 |  | 1,415,279 |
| Securities lending collateral |  | 47,285 |  | 673 |  | 47,958 |
| Equity securities |  | 16,224,046 |  | 208,549 |  | 16,432,595 |
| Fixed income securities |  | 4,989,216 |  | 95,424 |  | 5,084,640 |
| Real Estate |  | 1,345,733 |  | 20,245 |  | 1,365,978 |
| Private Equity |  | 1,275,974 |  | - |  | 1,275,974 |
| Opportunistic Investments |  | 616,202 |  | 9,370 |  | 625,572 |
| Total investments |  | 25,894,019 |  | 353,977 |  | 26,247,996 |
| TOTAL ASSETS |  | 26,886,399 |  | 367,946 |  | 27,254,345 |
| LIABILITIES |  |  |  |  |  |  |
| Payable for securities purchased |  | 501,153 |  | 7,128 |  | 508,281 |
| Payable for securities lending collateral |  | 47,285 |  | 673 |  | 47,958 |
| Forward contracts payable |  | 235,625 |  | 3,351 |  | 238,976 |
| Due to other funds |  | 23,244 |  | 1,939 |  | 25,183 |
| Other |  | 31,378 |  | 475 |  | 31,853 |
| TOTAL LIABILITIES |  | 838,685 |  | 13,566 |  | 852,251 |
| NET ASSETS HELD IN TRUST FOR PENSION BENEFITS | \$ | 26,047,714 | \$ | 354,380 | \$ | 26,402,094 |

In accordance with GASB 25, for financial reporting purposes the Retirement Plan and the Retirement System are presented in one column, Retirement Fund, in the ASRS Basic Financial Statements because they are administered within a single pension plan. The Combining Schedule of Retirement Net Assets and Changes in Retirement Net Assets are presented here to provide members with more detailed information about the two plan components.

## Combining Schedule of Changes in Retirement Net Assets

For the Year Ended June 30, 2012
(Dollars in Thousands)

| Additions | Retirement Plan | Retirement System | $\begin{gathered} \text { Combined } \\ 2012 \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| CONTRIBUTIONS |  |  |  |
| Member contributions | \$ 905,909 | \$ 59 | \$ 905,968 |
| Employer contributions | 852,108 | 59 | 852,167 |
| Federal government reimbursement | 852,108 | - | 8521 |
| Retrospective rate adjustment reimbursement | - | - | - |
| Transfers from other plans | 2,236 | - | 2,236 |
| Purchased Service | 51,423 | - | 51,423 |
| Total Contributions | 1,811,676 | 118 | 1,811,794 |

## INCOME FROM INVESTMENT ACTIVITIES

Net appreciation (depreciation) in fair value (public)
Interest
Dividends
Real Estate
Private Equity

|  |  |  |
| ---: | ---: | ---: | ---: |
| $(400,158)$ | $(2,700)$ | $(402,858)$ |
| 189,749 | 2,368 | 192,117 |
| 279,176 | 3,501 | 282,677 |
| 161,122 | 1,842 | 162,964 |
| 184,452 | - | 184,452 |
| 18,844 | 104 | 18,948 |
| 12,020 | 157 | 12,177 |
| $\mathbf{4 4 5 , 2 0 5}$ | $\mathbf{5 , 2 7 2}$ | $\mathbf{4 5 0 , 4 7 7}$ |

Other
Total income from investment activities
445,205
450,477

| LESS INVESTMENT ACTIVITY EXPENSES |  |  |  |
| :---: | :---: | :---: | :---: |
| Management fees and monitoring services (public) | $(54,037)$ | (812) | $(54,849)$ |
| Real estate expense | $(28,920)$ | (353) | $(29,273)$ |
| Private equity expense | $(43,966)$ | - | $(43,966)$ |
| Opportunistic investments expense | $(3,735)$ | (30) | $(3,765)$ |
| Total investment activity expenses | $(130,658)$ | $(1,195)$ | $(131,853)$ |
| Net income from investment activities | 314,547 | 4,077 | 318,624 |

FROM SECURITIES LENDING ACTIVITIES (NOTE 4)
Security lending income

| 2,679 | 32 | 2,711 |
| ---: | ---: | ---: |
| 2,135 | 26 | 2,161 |
| $(619)$ | $(7)$ | $(626)$ |
| $\mathbf{4 , 5 1 6}$ | 19 | 1,535 |
| $\mathbf{3 1 8 , 7 4 2}$ | $\mathbf{5 1}$ | $\mathbf{4 , 2 4 6}$ |
| $\mathbf{2 , 1 3 0 , 4 1 8}$ | $\mathbf{4 , 2 4 6}$ | $\mathbf{2 , 1 3 4 , 6 6 4}$ |


| Deductions |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Retirement and disability benefits | 2,249,900 |  | 48,047 | 2,297,947 |
| Survivor benefits | 29,576 |  | 155 | 29,731 |
| Refunds to withdrawing members, including interest | 207,078 |  | 211 | 207,289 |
| Administrative expenses | 30,633 |  | 419 | 31,052 |
| Transfers to other plans | 5,024 |  | - | 5,024 |
| Other | 750 |  | - | 750 |
| TOTAL DEDUCTIONS | 2,522,961 |  | 48,832 | 2,571,793 |
| NET INCREASE (DECREASE) | \$ (392,543) | \$ | (44,586) | \$ $(437,129)$ |
| NET ASSETS HELD IN TRUST FOR PENSION BENEFITS |  |  |  |  |
| Beginning of year | 26,440,257 |  | 398,966 | 26,839,223 |
| End of year | \$ 26,047,714 | \$ | 354,380 | \$ 26,402,094 |

In accordance with GASB 25, for financial reporting purposes the Retirement Plan and The Retirement System are presented in one column, Retirement Fund, in the ASRS basic financial statements because they are administered within a single pension plan. The Combining Schedule of Retirement Net Assets and Changes in Retirement Net Assets are presented here to provide members with more detailed information about the two plan components.

## Schedule of Additions by Source

(Dollars in Thousands)

|  | Employee <br> Contributions <br> Made | Employer <br> Contributions <br> Made | Investment <br> Income <br> (Loss) | Net <br> Service and <br> Other | Total |  |  |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 2003 | $\$$ | 177,157 | $\$$ | 177,157 | $\$$ | 368,631 | $\$$ |
| 2004 | 413,462 | 413,458 | $3,228,785$ | 93,552 | $\$$ | 816,497 |  |
| 2005 | 442,643 | 442,643 | $1,803,392$ | 141,932 | $4,169,649$ |  |  |
| 2006 | 612,121 | 612,121 | $2,230,939$ | 125,751 | $3,580,610$ |  |  |
| 2007 | 811,480 | 811,535 | $4,310,518$ | 107,548 | $6,041,081$ |  |  |
| 2008 | 904,984 | 905,680 | $(2,072,441)$ | 95,226 | $(166,551)$ |  |  |
| 2009 | 891,753 | 891,747 | $(4,673,490)$ | 72,436 | $(2,817,554)$ |  |  |
| 2010 | 844,847 | 858,431 | $3,028,216$ | 73,973 | $4,805,467$ |  |  |
| 2011 | 854,976 | 859,399 | $5,704,452$ | 70,812 | $7,489,639$ |  |  |
| 2012 | 926,966 | 927,628 | 338,728 | 89,132 | $2,282,454$ |  |  |

## Schedule of Deductions by Type

(Dollars in Thousands)

|  |  |  | Administration <br> Transfers and |  |  |  |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Year | Benefits | Refunds | Total |  |  |  |
| 2003 | $\$$ | $1,222,564$ | $\$$ | 35,976 | $\$$ | 37,877 |
| 2004 | $1,396,481$ |  | 36,212 |  | $1,296,417$ |  |
| 2005 | $1,576,734$ | 44,164 | 35,745 | $1,468,438$ |  |  |
| 2006 | $1,703,215$ | 60,313 | 33,426 | $1,654,324$ |  |  |
| 2007 | $1,824,865$ | 77,910 | 39,395 | $1,802,923$ |  |  |
| 2008 | $1,944,283$ | 104,387 | 47,703 | $1,950,478$ |  |  |
| 2009 | $2,072,813$ | 120,689 | 210,432 | $2,259,102$ |  |  |
| 2010 | $2,214,722$ | 154,144 | 38,834 | $2,232,336$ |  |  |
| 2011 | $2,348,551$ | 180,719 | 44,121 | $2,412,987$ |  |  |
| 2012 | $2,486,783$ | 207,289 | 38,496 | $2,567,766$ |  |  |

## Schedule of Professional Consultant Fees

For Year Ended June 30, 2012
(Dollars in Thousands)

| Professional/Consultant | Nature Of Service | Expenses |  |
| :---: | :---: | :---: | :---: |
| Comsys Information Technology Services | IT And Other Consulting Services | \$ | 2,746 |
| Sedgwick Claims Management Services | LTD Administrative Services |  | 2,722 |
| State Street Bank And Trust Company | Pension Payment Services And Custodial Bank Services |  | 2,493 |
| Robert Charles Lesser and Co., LLC. | Investment Consulting Services |  | 975 |
| Buck Consultants, LLC | Actuarial Services |  | 852 |
| Meketa Investment Group | Investment Consulting Services |  | 643 |
| New England Pension Consultants | Investment Consulting Services |  | 588 |
| DLJ MB Advisors, Inc. | Investment Back Office Services |  | 540 |
| The Townsend Group | Investment Consulting Services |  | 239 |
| Arizona State Attorney General Office | Legal Services |  | 195 |
| Foley And Lardner, LLP | Investment Legal Services |  | 194 |
| Lumea Staffing, Inc. | Temporary Staffing Services |  | 139 |
| Heinfeld Meech And Co PC | Audit Services |  | 71 |
| Cortex Applied Research Inc. | Investment Consulting Services |  | 68 |
| Cox Castle And Nicholson | Investment Legal Services |  | 59 |
| Institutional Shareholder | Investment Consulting Services |  | 52 |
| Century Link | Security Assessment Services |  | 49 |
| CEM Benchmarking, Inc. | Plan Administration Consulting |  | 35 |
| Charles W Whetstine | Legal Services |  | 29 |
| Wilmer Cutler Pickering Hale and Dorr, LLP | Investment Legal Services |  | 22 |
| Lexis Nexis | Research Services |  | 18 |
| Other Consulting Fees (Less Than Fifteen Thousand Dollars) |  |  | 93 |
| TOTAL |  |  | 2,822 |

## Schedule of Administrative Expenses

For Year Ended June 30, 2012
(Dollars in Thousands)

|  | Retirement and Health Benefit Supplement |  | Long-Term Disability |  | 2012 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PERSONNEL SERVICES |  |  |  |  |  |  |
| Salaries | \$ | 11,483 | \$ | - | \$ | 11,483 |
| Retirement Contributions |  | 1,163 |  | - |  | 1,163 |
| Other Employee Related Expenses |  | 3,528 |  | - |  | 3,528 |
| Total Personnel Services |  | 16,174 |  | - |  | 16,174 |
| PROFESSIONAL SERVICES |  |  |  |  |  |  |
| Actuary \& Benefit Consulting |  | 855 |  | - |  | 855 |
| Audit, Consulting \& Legal Fees |  | 554 |  | - |  | 554 |
| Programming Costs |  | 2,686 |  | - |  | 2,686 |
| Other Outside Services |  | 5,987 |  | 2,740 |  | 8,727 |
| Total Professional Services |  | 10,082 |  | 2,740 |  | 12,822 |
| COMMUNICATIONS |  |  |  |  |  |  |
| Postage and Delivery |  | 470 |  | - |  | 470 |
| External Printing |  | 98 |  | - |  | 98 |
| Telephone |  | 308 |  | - |  | 308 |
| Advertising |  | 9 |  | - |  | 9 |
| Total Communications |  | 885 |  | - |  | 885 |
| MISCELLANEOUS |  |  |  |  |  |  |
| Office Rent |  | 2,235 |  | - |  | 2,235 |
| Furniture \& Equipment |  | 415 |  | - |  | 415 |
| Software \& Support |  | 1,268 |  | - |  | 1,268 |
| Repair \& Maintenance |  | 121 |  | - |  | 121 |
| Travel |  | 102 |  | - |  | 102 |
| Operating Supplies |  | 63 |  | - |  | 63 |
| Insurance |  | 200 |  | - |  | 200 |
| Dues \& Subscriptions |  | 792 |  | - |  | 792 |
| Education \& Training |  | 79 |  | - |  | 79 |
| Miscellaneous |  | 6 |  | - |  | 6 |
| Total Miscellaneous |  | 5,281 |  | - |  | 5,281 |
| TOTAL | \$ | 32,422 | \$ | 2,740 | \$ | 35,162 |

## Schedule of Total Investment Expense by Manager

## Equity and Fixed Income

For Year Ended June 30, 2012
(Dollars in Thousands)

|  | Management Fees |  | Other Fees |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Aberdeen Asset Management | \$ | 2,094 | \$ | 371 | \$ | 2,465 |
| ASRS Internal |  | - |  | 34 |  | 34 |
| Blackrock Custom US Debt Fund |  | 494 |  | 2 |  | 496 |
| Blackrock Dow Jones/UBS |  | 19 |  | - |  | 19 |
| Blackrock EAFE Country Fund U/A |  | 1,162 |  | - |  | 1,162 |
| Blackrock Index Fund A |  | 33 |  | 3 |  | 36 |
| Blackrock Intermediate Govt/Credit Bond Index Fund |  | 5 |  | - |  | 5 |
| Blackrock MSCI EAFE Small Cap |  | 101 |  | 14 |  | 115 |
| Blackrock MSCI Emerging Markets Free B |  | 452 |  | - |  | 452 |
| Blackrock US Real Estate Securities Fund B |  | 22 |  | - |  | 22 |
| Blackrock US High Yield Bond Index Fund B |  | 11 |  | - |  | 11 |
| Blackrock US Debt Index Fund B |  | 36 |  | - |  | 36 |
| Blackrock Russell 1000 Index Fund B |  | 51 |  | - |  | 51 |
| Blackrock Russell 2000 Index Fund B |  | 12 |  | - |  | 12 |
| Brandes Investment Partners International Equity |  | 1,509 |  | 1,065 |  | 2,574 |
| Bridgewater Associates Global Tactical Asset Allocation |  | 12,502 |  | - |  | 12,502 |
| Cargill, Inc. |  | 376 |  | - |  | 376 |
| Champlain Investment Partners |  | 1,110 |  | - |  | 1,110 |
| Columbia Management Investment Advisors, LLC |  | 1,093 |  | - |  | 1,093 |
| Credit Suisse Alternative Capital, Inc. |  | 1,609 |  | - |  | 1,609 |
| CRM Funds Mid Cap Value |  | 710 |  | 1 |  | 711 |
| Dimensional Fund Advisors Equity Fund |  | 877 |  | - |  | 877 |
| Dimensional Fund Advisors International Small Cap |  | 936 |  | 63 |  | 999 |
| Eaton Vance Investment Managers |  | 2,799 |  | - |  | 2,799 |
| European Investors, Inc. |  | 7 |  | 11 |  | 18 |
| Forum Securities, Ltd. |  | 7 |  | (7) |  | - |
| Franklin Templeton Investments |  | 1,312 |  | 236 |  | 1,548 |
| Gresham Investment Management |  | 1,380 |  | 152 |  | 1,532 |
| Guggenheim Partners Management |  | 1,781 |  | 1 |  | 1,782 |
| Hansberger Global Investors, LC |  | 1,155 |  | 252 |  | 1,407 |
| Intech Large Capital |  | 2,430 |  | - |  | 2,430 |
| Jacobs Levy Equity Management |  | 1,390 |  | 713 |  | 2,103 |
| LSV Asset Management - Emerging Markets Equity Fund LP |  | 1,476 |  | - |  | 1,476 |
| LSV Asset Management - US Large Cap Value Account |  | 1,641 |  | - |  | 1,641 |
| Pacific Investment Management Company |  | 1,669 |  | (59) |  | 1,610 |
| QS Investors - EAFE |  | 88 |  | 9 |  | 97 |
| QS Investors - FI |  | 155 |  | - |  | 155 |
| QS Investors - IGAP |  | 37 |  | 123 |  | 160 |
| QS Investors - S\&P 500 |  | 265 |  | 1 |  | 266 |
| Sankaty Advisors, LLC |  | 669 |  | - |  | 669 |
| Shenkman Capital Management |  | 599 |  | (1) |  | 598 |
| Timessquare Capital Management |  | 4,006 |  | (3) |  | 4,003 |
| Walter Scott \& Partners |  | 1,151 |  | 106 |  | 1,257 |
| Wellington Management Co. - Mid Cap Opportunities |  | 2,137 |  | - |  | 2,137 |
| William Blair \& Company |  | 1,599 |  | - |  | 1,599 |
| Windham Capital Management |  | 1,415 |  | - |  | 1,415 |
| Total | \$ | 54,382 | \$ | 3,087 | \$ | 57,469 |

## Schedule of Total Investment Expense by Manager

## Private Equity

For Year Ended June 30, 2012
(Dollars in Thousands)

|  | Management Fees |  | Other Fees |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Accel-KKR Capital Partners III, LP | \$ | 720 | \$ | 47 | \$ | 767 |
| Apollo Investment Fund VII, LP |  | 456 |  | 128 |  | 584 |
| Apollo Natural Resources Partners, LP |  | 204 |  | 328 |  | 532 |
| Arlington Capital Partners III, LP |  | 779 |  | 151 |  | 930 |
| Atlas Venture Fund VIII, LP |  | 338 |  | 167 |  | 505 |
| Baird Capital Partners V Limited Partnership |  | 2,266 |  | 568 |  | 2,834 |
| Blackrock Private Opportunities Fund, LP |  | 68 |  | 23 |  | 91 |
| Blackstone Capital Partners VI, LP |  | 548 |  | 350 |  | 898 |
| Bridgepoint Europe IV 'D', LP |  | 449 |  | 68 |  | 517 |
| Brookfield Special Situations Fund III (NR A), I |  | 324 |  | 186 |  | 510 |
| Catalyst Fund Limited Partnership III |  | 232 |  | 773 |  | 1,005 |
| Centerbridge Capital Partners, LP |  | 1,123 |  | 390 |  | 1,513 |
| CMEA Ventures VII, LP |  | 180 |  | 16 |  | 196 |
| Crown European Buyout Opportunities II, Plc |  | 203 |  | 441 |  | 644 |
| CVC European Equity Partners V ( C ), LP |  | 2,126 |  | 43 |  | 2,169 |
| Edgewater Growth Capital Partners III, LP |  | 742 |  | 892 |  | 1,634 |
| Energy Capital Partners II-A, LP |  | 439 |  | 949 |  | 1,388 |
| First Reserve Fund XII, LP |  | 886 |  | 143 |  | 1,029 |
| IDG Ventures SF, LP |  | 220 |  | 16 |  | 236 |
| JLL Partners Fund VI, LP |  | 645 |  | $(1,065)$ |  | (420) |
| Khosla Ventures IV, LP |  | 286 |  | 2 |  | 288 |
| Kinderhook Capital Fund III, LP |  | 286 |  | 1,077 |  | 1,363 |
| Levine Leichtman Capital Partners Deep Value |  | 435 |  | - |  | 435 |
| Levine Leichtman Capital Partners IV, LP |  | 837 |  | 36 |  | 873 |
| Linconshire Equity Fund IV-A, LP |  | 428 |  | 7 |  | 435 |
| Linden Capital Partners II, LP |  | 195 |  | 272 |  | 467 |
| Littlejohn Fund IV-A, LP |  | 292 |  | 10 |  | 302 |
| LLR Equity Partners III, LP |  | 600 |  | - |  | 600 |
| Maranon Mezzanine Fund, LP |  | 296 |  | 5 |  | 301 |
| Montreux Equity Partners IV, LP |  | 181 |  | 514 |  | 695 |
| Nautic Partners VI, LP |  | 374 |  | 15 |  | 389 |
| New Atlantic Ventures Fund III, LP |  | 214 |  | 9 |  | 223 |
| New Mountain Partners III, LP |  | 458 |  | 181 |  | 639 |
| Oakhill Capital Partners III, LP |  | 932 |  | 34 |  | 966 |
| Oaktree European Principal Fund III, LP |  | 318 |  | (68) |  | 250 |
| Onex Partners III, LP |  | 1,218 |  | 161 |  | 1,379 |
| Partners Group Secondary 2008, LP |  | 638 |  | 574 |  | 1,212 |
| Paul Capital Partners IX, LP |  | 458 |  | - |  | 458 |
| Peninsula Technology Ventures, LP |  | 197 |  | 23 |  | 220 |
| Pine Brook Capital Partners, LP |  | 755 |  | 1,742 |  | 2,497 |
| Platinum Equity Capital Partners II, LP |  | - |  | 63 |  | 63 |
| Quantum Energy Partners V, LP |  | 949 |  | 151 |  | 1,100 |
| Saybrook Corporate Opportunity Fund, LP |  | 400 |  | - |  | 400 |
| Seidler Equity Partners IV, LP |  | 800 |  | 81 |  | 881 |
| Silver Lake Partners III, LP |  | 365 |  | 825 |  | 1,190 |
| TCW/Crescent Mezzanine Partners V, LP |  | 836 |  | - |  | 836 |
| Tenex Capital Partners, LP |  | 926 |  | 891 |  | 1,817 |
| The Resolute Fund II, LP |  | 334 |  | 119 |  | 453 |
| The Veritas Capital Fund IV, LP |  | 187 |  | 62 |  | 249 |
| Thomas H Lee Equity Fund VI, LP |  | 384 |  | 50 |  | 434 |
| Warburg Pincus Private Equity X, LP |  | 594 |  | 214 |  | 808 |
| Waud Capital Partners QP III, LP |  | 168 |  | 663 |  | 831 |
| Wayzata Opportunities Fund II, LP |  | 376 |  | 664 |  | 1,040 |
| White Deer Energy, LP |  | 940 |  | 2,683 |  | 3,623 |
| Yucaipa American Alliance Fund II, LP |  | 506 |  | 158 |  | 664 |
| Total | \$ | 30,111 | \$ | 15,832 | \$ | 45,943 |

## Schedule of Total Investment Expense by Manager

Real Estate
For Year Ended June 30, 2012
(Dollars in Thousands)

|  | Management Fees |  | Other Fees |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AEW Core Property Trust (U.S.), Inc. | \$ | 928 | \$ | - | \$ | 928 |
| AEW Value Investors Fund II, LP |  | 372 |  | - |  | 372 |
| Alcion Real Estate Partners Tax-Exempt Parallel Fund II, LP |  | 750 |  | 409 |  | 1,159 |
| Almanac Realty Securities IV, LP |  | 474 |  | 31 |  | 505 |
| Almanac Realty Securities V, LP |  | 146 |  | 4 |  | 150 |
| ASRS Internal |  | - |  | 4,048 |  | 4,048 |
| Blackstone Real Estate Partners VI, LP |  | 639 |  | 1,571 |  | 2,210 |
| Carlyle Realty Partners V, LP |  | 590 |  | - |  | 590 |
| CB Richard Ellis Strategic Partners US Opportunity 5, LP |  | 440 |  | - |  | 440 |
| CB Richard Ellis Strategic Partners US Value 5, LP |  | 2,009 |  | - |  | 2,009 |
| CIM Fund III, LP |  | 554 |  | - |  | 554 |
| CIM Urban REIT, LLC |  | 842 |  | - |  | 842 |
| CIM VI (Urban REIT), LLC |  | 6 |  | - |  | 6 |
| Colony Investors VIII, LP |  | 470 |  | - |  | 470 |
| Dune Real Estate Fund II, LP |  | 1,289 |  | 266 |  | 1,555 |
| Dune Real Estate Fund, LP |  | 515 |  | 48 |  | 563 |
| Five Mile Capital II LOPO Co-Investment, LP |  | 564 |  | 4 |  | 568 |
| Five Mile Capital Partners II, LP |  | 750 |  | 102 |  | 852 |
| H/2 Special Opportunities II, LP |  | 210 |  | 639 |  | 849 |
| Harrison Street Real Estate Partners III, LP |  | 825 |  | - |  | 825 |
| Heitman Value Partners II, LP |  | 160 |  | - |  | 160 |
| Hines US Core Office Fund, LP |  | 60 |  | - |  | 60 |
| Hunt Commercial Realty Partners III, LP |  | 544 |  | - |  | 544 |
| Invesco Asian Real Estate Partners II (USD), LP |  | 95 |  | 148 |  | 243 |
| Lone Star Fund VI (US), LP |  | 2,003 |  | - |  | 2,003 |
| Lone Star Real Estate Fund (US), LP |  | 155 |  | - |  | 155 |
| M\&G Real Estate Debt Fund, LP |  | 1,154 |  | 356 |  | 1,510 |
| Oaktree Real Estate Opportunities Fund V, LP |  | 757 |  | - |  | 757 |
| PLA Residential III, LP |  | 721 |  | - |  | 721 |
| PLA Retail Fund I, LP |  | 876 |  | - |  | 876 |
| PRISA II |  | 583 |  | - |  | 583 |
| RREEF Global Opportunities Fund II, LLC |  | 471 |  | 128 |  | 599 |
| Tishman Speyer Real Estate Venture VI, LP |  | 26 |  | 112 |  | 138 |
| Tishman Speyer Real Estate Venture VII, LP |  | 566 |  | 125 |  | 691 |
| Waterton Residential Property Venture XI, LP |  | 707 |  | - |  | 707 |
| Westbrook Real Estate Fund VII, LP |  | 568 |  | - |  | 568 |
| Westbrook Real Estate Fund VIII, LP |  | 751 |  | - |  | 751 |
| Total | \$ | 22,570 | \$ | 7,991 | \$ | 0,561 |

## Additional Supplementary Information (CONTINUED)

## Schedule of Total Investment Expense by Manager

Opportunistic
For Year Ended June 30, 2012
(Dollars in Thousands)

|  | Management <br> Fees | Other Fees | Total |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Avenue Europe Special Situations Fund II (US), LP | $\$$ | 1,086 | $\$$ | 453 | $\$$ |
| Blackrock Credit Investors II, LP | 57 | 1,539 |  |  |  |
| Blackrock Mortgage Investors, LP | 518 | $(1,051)$ | $(994)$ |  |  |
| Blackstone/GSO Capital Solutions Fund, LP | - | 386 | 904 |  |  |
| Oaktree Opportunities Fund VIII, LP | 660 | 49 | 49 |  |  |
| Oaktree Opportunities Fund VIIIb, LP | 1,332 | $(1,500)$ | $(840)$ |  |  |
| OCM STR Co-Invest 1, LP | 120 | $(653)$ | 679 |  |  |
| TCW Capital Trust |  | 68 | 188 |  |  |
| TPG Specialty Lending, Inc. |  | 651 | - | 1,751 |  |
| $\quad$ Total |  | 656 |  | - | 656 |
|  | $\mathbf{\$}$ | $\mathbf{6 , 1 8 0}$ | $\mathbf{\$}$ | $\mathbf{( 2 , 2 4 8 )}$ | $\mathbf{\$}$ |
| $\mathbf{n y y y y}$ | $\mathbf{3 , 9 3 2}$ |  |  |  |  |

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# U.S. Economy and Capital Markets FY 2011-12 

By Thomas Connelly, Investment Committee Chair, and Gary R. Dokes, Chief Investment Officer

## 3rd Quarter 2011

The economy exhibited significant risks to the downside, as reflected in poor equity market returns and prompted the Federal Reserve to initiate "Operation Twist," during a quarter that also saw the U.S. Government's debt downgraded. Fears of a double-dip recession rose domestically, while the European debt crisis and dissipating growth in Asia caused additional uncertainty. GDP expanded by $1.6 \%$ for the quarter. The unemployment rate remained at $9.1 \%$ for the quarter. The CPI Index rose by $3.9 \%$ year-over-year. The Federal Funds rate remained unchanged during the quarter with a range of $0.00 \%$ to $0.25 \%$.

The domestic large cap and international equity markets fell sharply during the quarter. The S\&P 500 Index was down $13.9 \%$, with returns better than mid-cap and small-cap stocks. The S\&P MidCap Index was down $19.9 \%$ during the quarter and the S\&P SmallCap Index fell $19.8 \%$. Growth outperformed value across the capital spectrum. International equity markets were weaker than domestic markets. The MSCI EAFE Index declined $19.0 \%$ for the quarter. The MSCI ACWI ex U.S. Index fell by $19.9 \%$ for the quarter. Europe (ex-United Kingdom) dropped $26.0 \%$ in the developed markets while the emerging markets were brought down by Russia and China, although emerging markets still managed to outperform their developed market counterparts. The MSCI EM Index declined $22.6 \%$.

The Barclays Aggregate Index outperformed the domestic equity markets, by advancing $3.8 \%$ during the quarter. High Yield bonds fell, while Treasuries were the top performing sector in the Barclays Aggregate Index, as investors exhibited a flight to quality. Long duration bonds outperformed intermediate term issues. Lowerquality issues underperformed higher-quality issues in
the investment credit space. Mortgages returned $2.4 \%$ while Treasuries advanced $6.3 \%$.

REITs exhibited positive performance for the quarter; the FTSE NAREIT Index rose $2.9 \%$. Private real estate fared better; the NCREIF Property Index was up 3.9\% for the quarter. The State Street Private Equity Index was up $4.5 \%$ for the quarter.

The Dow Jones UBS commodities Index fell by 11.3\% for the quarter. The Energy sector was led lower by $16.3 \%$ as oil declined $17.0 \%$. Precious metals rose slightly by $2.3 \%$ on an increase in gold of $7.8 \%$. Industrial metals fell $22.7 \%$ in line with copper down by $26.2 \%$. The Agriculture sector was lower by $9.0 \%$ as corn and soybeans decreased $5.8 \%$ and $9.7 \%$ respectively.

## 4th Quarter 2011

Improved economic news in the U.S. and policy moves in Europe provided strength for global equities, albeit in more defensive sectors, as risk appetites were still lacking. GDP expanded $2.0 \%$ for the quarter. The unemployment rate fell from $9.1 \%$ to $8.7 \%$ in the fourth quarter. The CPI index rose by $3.0 \%$ year-over-year. The Federal Funds rate remained unchanged during the quarter, with a range of $0.00 \%$ to $0.25 \%$.

The developed domestic equity markets posted strong gains for the quarter, while international developed markets were modestly positive. The S\&P 500 increased $11.8 \%$ during the fourth quarter, underperforming small cap and mid cap stocks. The S\&P MidCap Index rose $13.0 \%$, while the S\&P SmallCap Index rose $17.2 \%$. Value outperformed growth across the capital spectrum. International equity markets were also in
positive territory. The MSCI EAFE Index increased $3.3 \%$ for the quarter. The MSCI ACWI excluding U.S. Index rose by $3.7 \%$. Stocks in the U.K. outpaced those in Europe and Japan in the developed markets, and Latin America paced the emerging markets. Emerging markets outperformed their developed market counterparts. The MSCI EM Index appreciated $4.4 \%$.

The Barclays Aggregate Index performed worse than the developed equity markets, but rose $1.1 \%$ during the quarter. Longer-term issues outperformed shorter-term issues. High yield again exhibited strong performance with CMBS and corporates being the strongest investment grade performers. Lower-quality issues outperformed higher-quality issues in the investment credit space. Mortgages returned $0.9 \%$ during the quarter, while Treasuries increased $0.9 \%$ during the quarter.

REITs exhibited positive performance; the FTSE NAREIT Index declined $15.1 \%$ for the quarter. Private real estate fared worse; the NCREIF Property Index was up $3.3 \%$ for the quarter. The State Street Private Equity Index was down $-6.0 \%$ for the quarter.

The Dow Jones UBS commodities index was marginally positive, rising by $0.4 \%$ for the quarter. The Energy sector rose by $2.1 \%$ as oil increased $24.8 \%$ but natural gas fell $18.5 \%$. Precious metals fell $4.4 \%$ on a decrease in gold of $3.3 \%$. Industrial Metals were slightly positive, rising $1.5 \%$ as copper increased $9.0 \%$. The Agriculture sector was higher by $1.4 \%$ as corn and soybeans increased $9.1 \%$ and $1.7 \%$ respectively.

## 1st Quarter 2012

The continued supply of liquidity by major central banks and positive economic news buoyed global equities. Unemployment dipped while GDP growth tapered off. GDP expanded $2.4 \%$ for the quarter. The unemployment rate fell from $8.7 \%$ to $8.2 \%$ in the first quarter. The CPI Index rose $2.7 \%$ year-over-year. The Federal Funds rate was left unchanged, with a range of $0.00 \%$ to $0.25 \%$.

The equity markets were strong both domestically and internationally. The S\&P 500 increased $12.6 \%$ during the first quarter, underperforming mid-caps, but outperforming small-caps. The S\&P MidCap Index rose $13.5 \%$, while the S\&P SmallCap Index appreciated $12.0 \%$. Growth outperformed value across the capital spectrum. International equity markets also had a strong quarter. The MSCI EAFE Index increased $10.9 \%$ for the quarter. The MSCI ACWI excluding U.S. Index rose by $11.2 \%$. In the developed markets, Europe ex-UK led the way, while emerging markets were led by European based securities. Emerging markets were in-line with their developed counterparts. The MSCI EM Index rose $11.2 \%$ for the quarter.

The Barclays Aggregate Index lagged the equity markets, but advanced $0.3 \%$ during the quarter. Intermedi-ate-term issues outperformed shorter-term issues. Low-er-quality issues outperformed higher-quality issues in the investment credit space as high yield rallied. Mortgages returned $0.6 \%$ while Treasuries fell by $1.3 \%$.

REITs posted positive returns in the second quarter; the FTSE NAREIT Index increased $15.3 \%$. Private real estate fared worse; the NCREIF Property Index was up 3.0\%. The State Street Private Equity Index was up $6.6 \%$ for the quarter.

The Dow Jones UBS Commodities Index was modestly positive, rising by $0.9 \%$ for the quarter. The Energy sector was down by $6.1 \%$ as oil was up $4.2 \%$ but natural gas fell $28.9 \%$. Precious metals rose by $8.5 \%$ on an increase in gold of $6.5 \%$. Industrial metals were positive by $5.8 \%$ as copper rose $11.3 \%$. The Agriculture sector was higher by $3.2 \%$ as corn and soybeans increased $0.4 \%$ and $17.1 \%$ respectively.

## 2nd Quarter 2012

The European debt crisis wore on and was a drag to global growth, hurting equity returns. GDP expanded $2.3 \%$ for the quarter. The unemployment rate remained steady at $8.2 \%$ for the quarter. The CPI Index increased

## Investment Report (CONTINUED)

$1.7 \%$ year-over-year. The Federal Funds rate was left unchanged with a range of $0.00 \%$ to $0.25 \%$.

The rally in domestic equity fizzled in the second quarter. The S\&P 500 Index fell $2.8 \%$ for the quarter. Large cap stocks outperformed both mid and small caps. The S\&P 400 MidCap Index declined $4.9 \%$ and the S\&P 600 SmallCap Index decreased $3.6 \%$. Value outperformed growth across the cap spectrums. International equity markets also fell for the quarter. The MSCI EAFE Index declined $7.1 \%$ for the quarter. The MSCI ACWI excluding U.S. Index decreased by $7.6 \%$. The UK was the strongest in the developed world while Latin America and Europe brought down the emerging markets. Emerging markets lagged their developed counterparts. The MSCI EM Index declined $8.9 \%$ for the quarter.

The Barclays Aggregate Index rose $2.1 \%$ during the second quarter and outperformed equity markets. Longer-term issues outperformed shorter-term issues. Bonds had similar performance across the quality spectrum and high-yield performed in-line with investment grade. Mortgages gained $1.3 \%$ while Treasuries rose $2.8 \%$ during the quarter.

REITs were positive in the second quarter; the FTSE NAREIT Index rose $10.5 \%$. Private real estate fared worse; the NCREIF Property Index increased by $2.6 \%$. The State Street Private Equity index was up $6.6 \%$ for the quarter.

The Dow Jones UBS Commodities Index fell by $4.6 \%$ for the quarter. The Energy sector was down $9.0 \%$ as oil fell $17.5 \%$. Precious metals fell by $6.8 \%$ as gold declined $3.9 \%$. Industrial metals were negative by $9.0 \%$ as copper fell $8.8 \%$. The Agriculture sector was up $2.2 \%$ as corn and soybeans increased $4.4 \%$ and $7.8 \%$ respectively.

## Investment Goals and Results

1. Achieve a total fund rate of return equal to or greater than the actuarial assumed interest rate.
$\begin{array}{ll}\text { Rate of Return: } & 8.0 \% \text { (over } 20 \text { years) } \\ \text { Actual: } & 8.4 \% \text { (over } 20 \text { years) }\end{array}$
2. Achieve a total fund rate of return equal to or greater than the asset allocation benchmark.

Benchmark: $1.4 \%$ (1 year) and $12.6 \%$ ( 3 years)
Actual: $\quad 1.3 \%$ ( 1 year) and $13.2 \%$ (3 years)
3. Achieve a total fund rate of return equal to or greater than the amount projected in the most recent asset allocation (AA) study.

AA Study: $8.9 \%$ (over 5 years)
Actual: $1.8 \%$ (over 5 year)
4. Achieve asset class net rates of return equal to or greater than their respective broad asset class benchmarks.

## U.S. Equities:

Benchmark: 3.7\% (1-year) and 17.2\% (3-years)
Actual: $\quad 2.8 \%$ (1-year) and $17.5 \%$ (3-years)

International Equities:
Benchmark:-13.9\% (1-year) and 7.7\% (3-years)
Actual: $\quad-13.1 \%$ (1-year) and $7.3 \%$ (3-years)

Fixed Income:
Benchmark: 7.5\% (1-year) and 7.2\% (3-years)
Actual: $\quad 8.1 \%$ (1-year) and $8.0 \%$ (3-years)

Global Tactical Asset Allocation (GTAA):
Benchmark: 2.1\% (1-year) and 12.0\% (3-years)
Actual: $\quad 2.4 \%$ (1-year) and $15.8 \%$ (3-years)

Inflation-Linked: *
Benchmark: -14.3\% (1-year)
Actual: $\quad-13.7 \%$ (1-year)
*inception date $<3 y r s$

Real Estate:
Benchmark: 14.7\% (1-year) and 4.1\% (3-years)
Actual: $\quad 12.3 \%$ (1-year) and $9.8 \%$ (3-years)

Private Equity:
Benchmark:-0.2\% (1-year) and 26.9\% (3-years)
Actual: $\quad 15.4 \%$ (1-year) and $16.8 \%$ (3-years)
5. Achieve portfolio-level net rates of return equal to or greater than their respective portfolio benchmarks.

Public Market Portfolios:
$54 \%$ outperformed their benchmark (1-year)
$64 \%$ outperformed their benchmark (3-years)

Private Market Portfolios:
$62 \%$ outperformed their benchmark (1-year)
$37 \%$ outperformed their benchmark (3-years)
6. Ensure sufficient monies are available to meet cash flow requirements.

Achieved this goal.

## Asset Allocation Targets

During fiscal year 2012, the ASRS asset allocation policy targets and ranges were as follows:

| U.S. Equity | $40 \%$ | $(30-50 \%)$ |
| :--- | ---: | :--- |
| U.S. Fixed Income | $26 \%$ | $(16-36 \%)$ |
| International Equity | $18 \%$ | $(8-28 \%)$ |
| Real Estate | $6 \%$ | $(4-8 \%)$ |
| Private Equity | $7 \%$ | $(5-9 \%)$ |
| Opportunistic | $0 \%$ | $(0-10 \%)$ |
| Commodities | $3 \%$ | $(0-10 \%)$ |
| TOTAL | $\mathbf{1 0 0 \%}$ |  |

## Investment Policies

An integral part of the overall investment policy is the Strategic Asset Allocation Policy, which is designed to optimize returns while minimizing risk. The ASRS maintains its investment assets in accordance with Board approved Strategic Asset Allocation Policy. Investment assets are managed in 144 externally managed and 6 internally managed portfolios, which are diversified in U.S. equities, U.S. fixed income, international equities, real estate, private equity, opportunistic investments and commodity investments.

The ASRS adheres to all statutory requirements set by Arizona State law. In addition the ASRS established investment guidelines for its internal and external investment managers and a complete set of policies, procedures, compliance requirements, and oversight of internal investment management to ensure that investment assets are prudently managed. Both internal and external compliance procedures are in place. Oversight responsibilities reside with the ASRS Board. Details of investments are located at the end of this report.

## Performance Accounting/ Computation Standards

The ASRS investment performance rates of return are calculated on a total return basis, using time-weighted rates of return, based upon market values. Investment amounts are reflected at Fair Market Value. Private Real Estate, Private Equity and Opportunistic Investments are valued on a quarter lag basis adjusted for cash flows.

Performance is calculated on an accrual basis provided that the accrual information is available from the custodian or record-keeper. The rates of return are generated by asset class and include cash holdings.

Below are the rates of return on the overall portfolio, as well as specific asset classes, along with the benchmark used to compare performance.

## Annualized Rates of Return (Net of Fees)

## (Retirement \& HBS)

| Time Weighted Returns | $\mathbf{1}$ Year | 3 Year | 5 Year | 10 Year | Inception |
| :---: | ---: | ---: | ---: | ---: | ---: |
| Total Fund | $\mathbf{1 . 3} \%$ | $\mathbf{1 3 . 2 \%}$ | $\mathbf{1 . 8 \%}$ | $\mathbf{6 . 3} \%$ | $\mathbf{9 . 8 \%}$ |
| Interim SAA Policy Benchmark | $1.4 \%$ | $12.6 \%$ | $1.7 \%$ | $6.0 \%$ | $9.5 \%$ |
| Domestic Equity | $2.8 \%$ | $17.5 \%$ | $1.2 \%$ | $6.3 \%$ | $10.8 \%$ |
| S\&P Custom Index | $3.7 \%$ | $17.2 \%$ | $0.8 \%$ | $5.7 \%$ | $10.9 \%$ |
| Domestic Fixed Income | $8.1 \%$ | $8.0 \%$ | $7.3 \%$ | $6.0 \%$ | $8.9 \%$ |
| Custom Fixed Income Index | $7.5 \%$ | $7.2 \%$ | $6.9 \%$ | $5.7 \%$ | $\mathrm{n} / \mathrm{a}$ |
| International Equity | $-13.1 \%$ | $7.3 \%$ | $-4.7 \%$ | $5.7 \%$ | $5.8 \%$ |
| MSCI Custom Index | $-13.9 \%$ | $7.7 \%$ | $-4.0 \%$ | $6.7 \%$ | $5.4 \%$ |
| Commodities | $-13.5 \%$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $3.3 \%$ |
| DJUBS Commodity Index | $-14.3 \%$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $2.0 \%$ |
| Real Estate | $12.3 \%$ | $9.8 \%$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $1.1 \%$ |
| NFI-ODCE Index | $14.7 \%$ | $4.1 \%$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $4.0 \%$ |
| Private Equity | $15.4 \%$ | $16.8 \%$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $0.2 \%$ |
| Russell 2000 | $-0.2 \%$ | $26.9 \%$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $2.0 \%$ |
| Opportunistic | $2.9 \%$ | $19.3 \%$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $8.1 \%$ |

Historical Rates of Return ${ }^{1}$ (Net of Fees)
(Retirement \& HBS)

| Fiscal Year | Return | Fiscal Year | Return | Fiscal Year | Return |
| :---: | ---: | :---: | :---: | :---: | ---: |
| $2011-12$ | $1.3 \%$ | $2003-04$ | $17.5 \%$ | $1995-96$ | $16.7 \%$ |
| $2010-11$ | $24.6 \%$ | $2002-03$ | $2.4 \%$ | $1994-95$ | $17.8 \%$ |
| $2009-10$ | $14.9 \%$ | $2001-02$ | $-8.2 \%$ | $1993-94$ | $1.9 \%$ |
| $2008-09$ | $-18.1 \%$ | $2000-01$ | $-6.7 \%$ | $1992-93$ | $16.7 \%$ |
| $2007-08$ | $-7.6 \%$ | $1999-00$ | $10.0 \%$ | $1991-92$ | $14.6 \%$ |
| $2006-07$ | $17.8 \%$ | $1998-99$ | $16.8 \%$ | $1990-91$ | $8.0 \%$ |
| $2005-06$ | $9.8 \%$ | $1997-98$ | $21.3 \%$ | $1989-90$ | $9.5 \%$ |
| $2004-05$ | $8.5 \%$ | $1996-97$ | $20.6 \%$ | $1988-89$ | $14.3 \%$ |

[^2]
## Ten Year Review of Investment Income

(Dollars in Thousands)

| Fiscal Year | Income | + | Net Apprec/(Depr) | - | Expense | $=$ |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Net Income |  |  |  |  |  |  |
| $2002-2003$ | $\$$ | 442,870 | $\$$ | $(51,437)$ | $\$$ | 22,801 |
| $2003-2004$ | 447,623 |  | $2,811,047$ |  | 368,632 |  |
| $2004-2005$ | 454,389 |  | $1,382,587$ | 29,885 |  | $3,228,785$ |
| $2005-2006$ | 523,997 |  | $1,758,899$ | 33,584 | $1,803,392$ |  |
| $2006-2007$ | 604,320 | $3,766,089$ | 51,957 | $2,230,939$ |  |  |
| $2007-2008$ | 654,878 |  | $(2,645,900)$ | 59,891 | $4,310,518$ |  |
| $2008-2009$ | 285,665 | $(4,855,030)$ | 81,419 | $(2,072,441)$ |  |  |
| $2009-2010$ | 647,859 | $2,484,029$ | 104,125 | $(4,673,490)$ |  |  |
| $2010-2011$ | 925,578 | $4,893,382$ | 116,170 | $3,015,718$ |  |  |
| $2011-2012$ | 891,210 |  | $(419,010)$ | 128,281 | $5,690,679$ |  |

## Net Income from Investments

(Dollars in Millions)


## Asset Allocation

## Summary of Investments

## (Dollars in Thousands)

|  | Investments at Fair Value |  | Receivables |  | Payables |  |  |  | Total |  | \% of Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Temporary Investments | \$ | 1,500,354 | \$ | 789,542 | 1 | \$ | 794,756 | 2 | \$ | 1,495,140 |  | 5.41\% |
| Securities Lending Collateral |  | 50,070 |  | - |  |  | 50,070 |  |  | - |  | 0.00\% |
| Equity Securities: |  |  |  |  |  |  |  |  |  |  |  |  |
| Domestic Equity |  | 12,590,828 |  | - |  |  | - |  |  | 12,590,828 |  | 45.58\% |
| Non-U.S. Equity |  | 4,746,597 |  | - |  |  | - |  |  | 4,746,597 |  | 17.18\% |
| Fixed Income Securities: |  |  |  |  |  |  |  |  |  |  |  |  |
| Corporate Obligations |  | 2,228,419 |  | - |  |  | - |  |  | 2,228,419 |  | 8.07\% |
| Government Obligations |  | 3,147,369 |  | - |  |  | - |  |  | 3,147,369 |  | 11.39\% |
| Real Estate |  | 1,425,941 |  | 2,337 |  |  | - |  |  | 1,428,278 |  | 5.17\% |
| Private Equity |  | 1,333,375 |  | 163 |  |  | - |  |  | 1,333,538 |  | 4.83\% |
| Opportunistic |  | 653,543 |  | - |  |  | - |  |  | 653,543 |  | 2.37\% |
| Total Investments | \$ | 27,676,496 | \$ | 792,042 |  | \$ | 844,826 |  |  | 2,623,712 |  | 100.00\% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| ${ }^{1}$ RECEIVABLES INCLUDE: |  |  |  |  |  |  | YABLES INC |  |  |  |  |  |
| Accrued Interest \& Dividends | \$ | 67,534 |  |  |  |  | ayable for S | urit | es | urchased | \$ | 530,666 |
| Securities Sold |  | 439,563 |  |  |  |  | orward Cont | ts | Pay |  |  | 249,501 |
| Forward Contracts Receivables |  | 282,445 |  |  |  |  | ther Payable |  |  |  |  | 14,589 |
| Total | \$ | 789,542 |  |  |  |  | Total |  |  |  | \$ | 794,756 |

Note: A detailed listing of investments is available upon request.
Direct inquiries to: ASRS, 3300 North Central Avenue, Phoenix, AZ 85012

## Equity Sub-Sector Allocation

(Dollars in Thousands)

|  | \% of Equity <br> Portfolio | Fair Value |
| :--- | :---: | ---: |
| US Large Cap Equity | $54.06 \%$ | $\$$ |
| US Mid Cap Equity | 9.13 | $9,373,136$ |
| US Small Cap Equity | 9.43 | $1,582,876$ |
| Total US Equity | $\mathbf{7 2 . 6 2}$ | $1,634,816$ |
| Non US Equity | 27.38 | $\mathbf{1 2 , 5 9 0 , 8 2 8}$ |
| TOTAL EQUITY SECURITIES | $\mathbf{1 0 0 . 0 0 \%}$ | $\mathbf{\$}$ |

Ten Largest Domestic Equity Holdings

|  | \% of Domestic <br> Equity Portfolio |
| :--- | :---: |
| Apple, Inc. | $2.55 \%$ |
| Exxon Mobil, Corp. | 1.91 |
| Microsoft Corp. | 1.11 |
| Intl Business Machines Corp. | 1.09 |
| Chevron Corp. | 1.03 |
| AT\&T, Inc. | 0.87 |
| General Electric Co. | 0.86 |
| Wells Fargo \& Co. | 0.83 |
| Pfizer, Inc. | 0.83 |
| Philip Morris International | 0.77 |
| Total | $\mathbf{1 1 . 8 5 \%}$ |

Note: A detailed listing of investments is available upon request.
Direct inquiries to: ASRS, 3300 North Central Avenue, Phoenix, AZ 85012

## Distribution by Market Sector

|  | ASRS Domestic <br> Equity |  |
| :--- | :---: | :---: |
| Consumer Discretionary | $15.10 \%$ | S\&P 500 Index |$|$| $11.00 \%$ |
| :--- |
| Consumer Staples |
| Energy |
| Financials |
| Healthcare |
| Industrials |
| Information Technology |
| Materials |
| Telecommunication Services |
| Utilities |
| Total |

Ten Largest International Equity Holdings

|  | International <br> Equity Portfolio |
| :--- | :---: |
| Vodafone Group, PLC | $0.48 \%$ |
| Canon, Inc | 0.48 |
| Eni SPA | 0.48 |
| Roche Holding AG Genusschein | 0.45 |
| Standard Chartered, PLC | 0.43 |
| Novartis AG Reg | 0.42 |
| British American Tobacco, PLC | 0.39 |
| Nestle SA Reg | 0.38 |
| GDF Suez | 0.36 |
| Tenaris SA ADR | 0.35 |
| $\quad$ Total | $\mathbf{4 . 2 2 \%}$ |

## Summary of Broker Commissions

(Dollars in Thousands)

| Summary of Broker Commissions | Commission |  |
| :--- | :--- | ---: |
| Domestic Equity | $\$$ | 3,400 |
| International Equity | $\$$ | 1,048 |

Note: A detailed listing of investments is available upon request.
Direct inquiries to: ASRS, 3300 North Central Avenue, Phoenix, AZ 85012

## Distribution by Sector

|  | Percent |
| :--- | :---: |
| Asset Backed Securities | $3.80 \%$ |
| Commercial Mortgage Backed | 4.33 |
| Corporate Bonds | 32.71 |
| Non-Government Backed CMO's | 0.62 |
| Government Related | 9.47 |
| Government Agencies CMO's | 0.86 |
| Government Bonds (Treasury) | 23.19 |
| Government Mortgage Backed | $\mathbf{2 5 . 0 2}$ |
| Total | $\mathbf{1 0 0 . 0 0 \%}$ |

## Distribution by Maturity

|  | Percent |
| :--- | :---: |
| $0-2$ years | $6.66 \%$ |
| 2 to 3 years | 13.54 |
| 3 to 4 years | 24.55 |
| 4 to 5 years | 9.70 |
| 5 to 6 years | 7.91 |
| 6 to 8 years | 11.39 |
| $>8$ years | $\mathbf{2 6 . 2 5}$ |
|  | $\mathbf{1 0 0 . 0 0 \%}$ |

## Distribution by Coupon

|  | Percent |
| :---: | :---: |
| $0.00 \%-6.5 \%$ | $82.91 \%$ |
| $6.51 \%-7.50 \%$ | 6.28 |
| $7.51 \%-9.0 \%$ | 7.02 |
| $>9.00 \%$ | 3.79 |
| Total | $\mathbf{1 0 0 . 0 0 \%}$ |

Ten Largest Domestic Fixed Income Holdings
(Dollars in Thousands)

|  | Coupon | Maturity | Par Value |  | Fair Value |  | Percent |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| US TREASURY NOTE | 4.63\% | 2/15/2040 | \$ | 71,700 | \$ | 99,121 | 1.84\% |
| US TREASURY NOTE | 3.63\% | 5/15/2013 |  | 55,000 |  | 56,607 | 1.05 |
| US TREASURY NOTE | 0.88\% | 1/31/2017 |  | 55,100 |  | 55,569 | 1.03 |
| FED HM LN PC POOL A93995 | 4.50\% | 9/1/2040 |  | 51,070 |  | 54,596 | 1.02 |
| US TREASURY NOTE | 3.13\% | 4/30/2017 |  | 48,000 |  | 53,449 | 0.99 |
| US TREASURY NOTE | 3.50\% | 2/15/2018 |  | 45,000 |  | 51,487 | 0.96 |
| FNMA POOL AE6805 | 4.50\% | 11/1/2040 |  | 45,586 |  | 48,922 | 0.91 |
| US TREASURY NOTE | 3.13\% | 5/15/2021 |  | 38,500 |  | 43,825 | 0.82 |
| US TREASURY NOTE | 4.13\% | 5/15/2015 |  | 37,000 |  | 40,894 | 0.76 |
| FEDERAL HOME LOAN BANK | 5.00\% | 11/17/2017 |  | 30,000 |  | 36,268 | 0.67 |
| Total |  |  | \$ | 476,956 | \$ | 540,738 | 10.05\% |

[^3]
## Real Estate Portfolio Profile

## Ten Largest Real Estate Managers

(Dollars in Thousands)

|  | Fair Value | \% of Real Estate <br> Portfolio |  |
| :--- | ---: | :---: | :---: |
| AEW Core Property Trust (U.S.), Inc. | $\$$ | 190,119 | $13.66 \%$ |
| CIM Urban REIT, LLC | 79,292 | 5.70 |  |
| PLA Retail Fund I, LP | 63,434 | 4.56 |  |
| Almanac Realty Securities IV, LP | 63,303 | 4.55 |  |
| PRISA II | 54,564 | 3.92 |  |
| Blackstone Real Estate Partners VI, LP | 51,936 | 3.73 |  |
| PLA Residential III, LP | 51,897 | 3.73 |  |
| Lone Star Fund VI (US), LP | 51,185 | 3.68 |  |
| CIM Fund III, LP | 50,745 | 3.65 |  |
| CB Richard Ellis Strategic Partners US Value 5, LP |  | 43,303 | 3.11 |
| Total | $\mathbf{\$}$ | $\mathbf{6 9 9 , 7 7 8}$ | $\mathbf{5 0 . 2 9 \%}$ |

Note: A complete list of real estate investments appears on page 89.

## Private Equity Portfolio Profile

## Ten Largest Private Equity Managers

(Dollars in Thousands)

|  | Fair Value | \% of Private Equity <br> Portfolio |
| :--- | :--- | :---: |
| Levine Leichtman Capital Partners IV, LP | $\$$ | 67,445 |
| Partners Group Secondary 2008, LP | 61,285 | $5.06 \%$ |
| First Reserve Fund XII, LP | 59,609 | 4.60 |
| Oakhill Capital Partners III, LP | 58,704 | 4.47 |
| Warburg Pincus Private Equity X, LP | 48,505 | 4.40 |
| TCW/Crescent Mezzanine Partners V, LP | 47,855 | 3.64 |
| Yucaipa American Alliance Fund II, LP | 47,730 | 3.59 |
| White Deer Energy, LP | 45,059 | 3.58 |
| Wayzata Opportunities Fund II, LP | 44,294 | 3.38 |
| Centerbridge Capital Partners, LP | 40,239 | 3.32 |
| Total | $\mathbf{5 2 0 , 7 2 5}$ | $\mathbf{3 9 . 0 6 \%}$ |

## Opportunistic Portfolio Profile

 Opportunistic Managers(Dollars in Thousands)

|  | Fair Value | \% of Opportunistic |
| :--- | :---: | :---: |
| Portfolio |  |  |$|$| TCW Capital Trust | $\$$ | 150,045 |
| :--- | :--- | :--- |
| Blackstone/GSO Capital Solutions Fund, LP | 123,836 | 18.95 |
| Avenue Europe Special Situations Fund II (US), LP | 93,865 | 14.36 |
| Blackrock Mortgage Investors, LP | 83,321 | 12.75 |
| Oaktree Opportunities Fund VIIIb, LP | 61,286 | 9.38 |
| Oaktree Opportunities Fund VIII, LP | 55,119 | 8.43 |
| OCM STR Co-Invest 1, LP | 52,733 | 8.07 |
| Blackrock Credit Investors II, LP | 18,436 | 2.82 |
| TPG Specialty Lending, Inc. |  | 14,902 |
| Total | $\mathbf{6 5 3 , 5 4 3}$ | $\mathbf{1 0 0 . 0 0 \%}$ |

[^4]
## Domestic Equity Trades

## (Dollars in Thousands)

| Broker Name | Dollar Amount of Trades |  | Number of Shares | Average Commission Per Share |  | Dollar Amount of Commission |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Barclays Capital Inc./LE | \$ | 200,498 | 6,245 | \$ | 0.0131 | \$ | 82 |
| Barclays Capital LE |  | 11,768 | 351 |  | 0.0427 |  | 15 |
| BMO Capital Markets |  | 12,162 | 388 |  | 0.0464 |  | 18 |
| BNP Paribas Brokerage Securities, Inc. |  | 23,550 | 1,012 |  | 0.0109 |  | 11 |
| BNY Convergex LJR |  | 185,217 | 3,950 |  | 0.0182 |  | 72 |
| BNY ESI \& Co., Inc. |  | 24,801 | 679 |  | 0.0412 |  | 28 |
| BTIG, LLC |  | 38,287 | 1,266 |  | 0.0482 |  | 61 |
| Cantor Fitzgerald \& Co. |  | 20,074 | 910 |  | 0.0264 |  | 24 |
| Capital Institutional Svcs Inc. Equities |  | 201,853 | 3,841 |  | 0.0263 |  | 101 |
| Citigroup Global Markets, Inc. |  | 536,662 | 11,125 |  | 0.0105 |  | 117 |
| Cowen \& Company, LLC |  | 14,353 | 526 |  | 0.0399 |  | 21 |
| Credit Suisse Securities (USA) LLC |  | 348,767 | 10,312 |  | 0.0178 |  | 184 |
| Deutsche Bank Securities, Inc. |  | 205,806 | 4,730 |  | 0.0345 |  | 163 |
| Fidelity Capital Markets |  | 124,749 | 4,113 |  | 0.0311 |  | 128 |
| Goldman Sachs \& Co. |  | 50,546 | 1,459 |  | 0.0404 |  | 59 |
| Goldman Sachs International |  | 14,686 | 367 |  | 0.0136 |  | 5 |
| Guzman \& Co. |  | 80,195 | 1,405 |  | 0.0285 |  | 40 |
| Instinet, LLC |  | 276,537 | 9,134 |  | 0.0177 |  | 162 |
| Investment Technology Group, Inc. |  | 726,082 | 30,181 |  | 0.0051 |  | 153 |
| ISI Group, Inc. |  | 13,633 | 533 |  | 0.0263 |  | 14 |
| ITF Inc. |  | 172,011 | 5,807 |  | 0.0103 |  | 60 |
| Janney Montgomery Scott, Inc. |  | 10,419 | 254 |  | 0.0394 |  | 10 |
| Jefferies \& Company, Inc. |  | 179,451 | 5,087 |  | 0.0193 |  | 98 |
| Keefe Bruyette \& Woods, Inc. |  | 13,459 | 414 |  | 0.0435 |  | 18 |
| Keybanc Capital Markets, Inc. |  | 25,607 | 602 |  | 0.0449 |  | 27 |
| Knight Equity Markets L.P. |  | 344,455 | 7,363 |  | 0.0277 |  | 204 |
| Liquidnet, Inc. |  | 113,942 | 4,073 |  | 0.0182 |  | 74 |
| Merrill Lynch Pierce Fenner \& Smith, Inc. |  | 288,933 | 8,381 |  | 0.0136 |  | 114 |
| Morgan Stanley \& Co., Inc. |  | 298,027 | 3,932 |  | 0.0170 |  | 67 |
| Nomura Securities International, Inc. |  | 528,257 | 18,501 |  | 0.0105 |  | 194 |
| Oppenheimer \& Co., Inc. |  | 25,993 | 667 |  | 0.0450 |  | 30 |

Domestic Equity Trades - continued
(Dollars in Thousands)

| Broker Name | Dollar Amount of Trades |  | Number of Shares | Average Commission Per Share |  | Dollar Amount of Commission |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Piper Jaffray | \$ | 12,517 | 419 | \$ | 0.0430 | \$ | 18 |
| Pulse Trading, LLC |  | 13,217 | 519 |  | 0.0135 |  | 7 |
| Raymond James And Associates Inc. |  | 34,941 | 961 |  | 0.0427 |  | 41 |
| RBC Capital Markets |  | 26,250 | 976 |  | 0.0389 |  | 38 |
| Robert W. Baird Co. Inc. |  | 50,881 | 1,392 |  | 0.0438 |  | 61 |
| Rosenblatt Securities, LLC |  | 121,892 | 2,309 |  | 0.0264 |  | 61 |
| Sanford C Bernstein Co., LLC |  | 83,778 | 2,064 |  | 0.0242 |  | 50 |
| Scott \& Stringfellow, Inc. |  | 11,262 | 206 |  | 0.0437 |  | 9 |
| State Street Global Markets, LLC |  | 417,313 | 9,323 |  | 0.0102 |  | 95 |
| Sterne, Agee \& Leach, Inc. |  | 13,671 | 416 |  | 0.0457 |  | 19 |
| Stifel Nicolaus \& Co., Inc. |  | 45,639 | 1,411 |  | 0.0482 |  | 68 |
| Sungard Brokerage \& Securities Svcs, LLC |  | 40,733 | 1,408 |  | 0.0071 |  | 10 |
| Suntrust Capital Markets, Inc. |  | 10,159 | 225 |  | 0.0444 |  | 10 |
| UBS Securities, LLC |  | 163,545 | 3,751 |  | 0.0243 |  | 91 |
| Wallachbeth Capital, LLC |  | 271,319 | 4,623 |  | 0.0100 |  | 46 |
| Weeden \& Co. |  | 145,281 | 3,329 |  | 0.0225 |  | 75 |
| Wells Fargo Securities, LLC |  | 21,845 | 698 |  | 0.0444 |  | 31 |
| William Blair \& Co., LLC |  | 18,111 | 572 |  | 0.0437 |  | 25 |
| Various Other Brokers |  | 1,036,316 | 788,931 |  | 0.0004 |  | 291 |
| Total | \$ | 7,649,450 | 971,141 | \$ | 0.0035 | \$ | 3,400 |

[^5]Direct inquiries to: ASRS, 3300 North Central Avenue, Phoenix, AZ 85012

## Foreign Equity Trades

(Dollars in Thousands)

| Broker Name | Dollar Amount of Trades |  | Number of Shares | Average Commission Per Share |  | Dollar Amount of Commission |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BNP Paribas Securities Services | \$ | 14,835 | 666 | \$ | 0.0330 | \$ | 22 |
| Credit Agricole Indosuez Cheuvreux |  | 24,772 | 1,562 |  | 0.0243 |  | 38 |
| Credit Suisse Securities (Europe) Ltd |  | 31,387 | 2,364 |  | 0.0161 |  | 38 |
| Credit Suisse Securities (USA) LLC |  | 37,197 | 5,727 |  | 0.0058 |  | 33 |
| Deutsche Bank Securities, Inc. |  | 53,058 | 6,048 |  | 0.0112 |  | 68 |
| Exane S.A. |  | 23,306 | 974 |  | 0.0349 |  | 34 |
| Goldman Sachs \& Co. |  | 28,417 | 2,388 |  | 0.0109 |  | 26 |
| Investment Technology Group, LTD |  | 11,310 | 1,281 |  | 0.0078 |  | 10 |
| JP Morgan Clearing Corp. |  | 10,478 | 470 |  | 0.0149 |  | 7 |
| JP Morgan Securities, PLC |  | 19,853 | 1,028 |  | 0.0282 |  | 29 |
| Merrill Lynch International |  | 36,219 | 3,724 |  | 0.0148 |  | 55 |
| Merrill Lynch Pierce Fenner Smith, Inc. NY |  | 28,737 | 3,423 |  | 0.0085 |  | 29 |
| Morgan Stanley Co., Inc. |  | 47,154 | 5,206 |  | 0.0125 |  | 65 |
| Nomura International, PLC |  | 10,281 | 942 |  | 0.0117 |  | 11 |
| Nomura Securities International, Inc. |  | 10,915 | 1,803 |  | 0.0116 |  | 21 |
| Sanford C. Bernstein, Ltd |  | 12,941 | 690 |  | 0.0290 |  | 20 |
| UBS AG |  | 18,305 | 2,856 |  | 0.0098 |  | 28 |
| UBS Securities Asia, Ltd |  | 21,151 | 7,076 |  | 0.0055 |  | 39 |
| Various Other Brokers |  | 461,496 | 122,016 |  | 0.0039 |  | 475 |
| Total | \$ | 901,812 | 170,244 | \$ | 0.0062 | \$ | 1,048 |

Note: A detailed listing of broker commissions is available upon request.
Direct inquiries to: ASRS, 3300 North Central Avenue, Phoenix, AZ 85012

## Equity and Fixed Income

## Excluding Securities Lending

(Dollars in Thousands)

|  | Assets Managed at Fair Value at June 30, 2012 |  | Management \& Other Fees |  |
| :---: | :---: | :---: | :---: | :---: |
| Aberdeen Asset Management | \$ | 391,232 | \$ | 2,465 |
| ASRS Internal |  | 10,508,068 |  | 34 |
| Blackrock Custom US Debt Fund |  | 326,183 |  | 496 |
| Blackrock Dow Jones/UBS |  | 4,407 |  | 19 |
| Blackrock EAFE Country Fund U/A |  | 1,571,288 |  | 1,162 |
| Blackrock Index Fund A |  | 320,815 |  | 36 |
| Blackrock Intermediate Govt/Credit Bond Index Fund |  | 23,088 |  | 5 |
| Blackrock MSCI EAFE Small Cap |  | 59,780 |  | 115 |
| Blackrock MSCI Emerging Markets Free B |  | 379,387 |  | 452 |
| Blackrock US Real Estate Securities Fund B |  | 15,547 |  | 22 |
| Blackrock US High Yield Bond Index Fund B |  | 6,021 |  | 11 |
| Blackrock US Debt Index Fund B |  | 58,856 |  | 36 |
| Blackrock Russell 1000 Index Fund B |  | 102,416 |  | 51 |
| Blackrock Russell 2000 Index Fund B |  | 17,960 |  | 12 |
| Brandes Investment Partners International Equity |  | 356,140 |  | 2,574 |
| Bridgewater Associates Global Tactical Asset Allocation |  | 2,285,572 |  | 12,502 |
| Cargill, Inc. |  | 124,326 |  | 376 |
| Champlain Investment Partners |  | 144,116 |  | 1,110 |
| Clear Channel Private Stock |  | 1,107 |  | - |
| Columbia Management Investment Advisors, LLC |  | 605,916 |  | 1,093 |
| Cramer Rosenthal McGynn Mid Cap Value |  | 146,063 |  | 711 |
| Credit Suisse Alternative Capital, Inc. |  | 2,137 |  | 1,609 |
| Dimensional Fund Advisors Equity Fund |  | 489,031 |  | 877 |
| Dimensional Fund Advisors International Small Cap |  | 100,201 |  | 999 |
| Eaton Vance Investment Managers |  | 335,266 |  | 2,799 |

## Equity and Fixed Income - continued

Excluding Securities Lending
(Dollars in Thousands)

|  | Assets Managed at Fair Value at June 30, 2012 |  | Management \& Other Fees |  |
| :---: | :---: | :---: | :---: | :---: |
| European Investors, Inc. | \$ | - | \$ | 18 |
| Forum Securities, Ltd. |  | 116 |  | - |
| Franklin Templeton Investments |  | 174,810 |  | 1,548 |
| Gresham Investment Management |  | 516,003 |  | 1,532 |
| Guggenheim Partners Management |  | 268,036 |  | 1,782 |
| Hansberger Global Investors, LC |  | 248,284 |  | 1,407 |
| Intech Large Capital |  | 777,732 |  | 2,430 |
| Jacobs Levy Equity Management |  | 222,911 |  | 2,103 |
| LSV Asset Management - Emerging Markets Equity Fund LP |  | 150,647 |  | 1,476 |
| LSV Asset Management - US Large Cap Value Account |  | 643,487 |  | 1,641 |
| Pacific Investment Management Company |  | 777,082 |  | 1,610 |
| QS Investors |  | 4 |  | 678 |
| Sankaty Advisors, LLC |  | - |  | 669 |
| Shenkman Capital Management |  | 149,398 |  | 598 |
| Timessquare Capital Management |  | 533,197 |  | 4,003 |
| Walter Scott \& Partners |  | 180,026 |  | 1,257 |
| Wellington Management Co. - Mid Cap Opportunities |  | 434,100 |  | 2,137 |
| William Blair \& Company |  | 291,958 |  | 1,599 |
| Windham Capital Management |  | 470,853 |  | 1,415 |
| Total | \$ | 24,213,567 | \$ | 57,469 |

## Real Estate

(Dollars in Thousands)

|  | Net Assets Managed at Fair Value at June 30, 2012 |  | Management \& Other Fees |  |
| :---: | :---: | :---: | :---: | :---: |
| AEW Core Property Trust (U.S.), Inc. | \$ | 190,119 | \$ | 928 |
| AEW Value Investors Fund II, LP |  | 32,699 |  | 372 |
| Alcion Real Estate Partners Tax-Exempt Parallel Fund II, LP |  | 9,358 |  | 1,159 |
| Almanac Realty Securities IV, LP |  | 63,303 |  | 505 |
| Almanac Realty Securities V, LP |  | 37,330 |  | 150 |
| ASRS Internal |  | 34,431 |  | 4,048 |
| Blackstone Real Estate Partners VI, LP |  | 51,936 |  | 2,210 |
| Carlyle Realty Partners V, LP |  | 34,881 |  | 590 |
| CB Richard Ellis Strategic Partners US Opportunity 5, LP |  | 39,697 |  | 440 |
| CB Richard Ellis Strategic Partners US Value 5, LP |  | 43,303 |  | 2,009 |
| CIM Fund III, LP |  | 50,745 |  | 554 |
| CIM Urban REIT, LLC |  | 79,292 |  | 842 |
| CIM VI (Urban REIT), LLC |  | 2,767 |  | 6 |
| Colony Investors VIII, LP |  | 14,382 |  | 470 |
| Dune Real Estate Fund II, LP |  | 33,720 |  | 1,555 |
| Dune Real Estate Fund, LP |  | 27,430 |  | 563 |
| Five Mile Capital II LOPO Co-Investment, LP |  | 13,758 |  | 568 |
| Five Mile Capital Partners II, LP |  | 36,762 |  | 852 |
| H/2 Special Opportunities II, LP |  | 34,871 |  | 849 |
| Harrison Street Real Estate Partners III, LP |  | 34,250 |  | 825 |
| Heitman Value Partners II, LP |  | 40,410 |  | 160 |
| Hines US Core Office Fund, LP |  | - |  | 60 |
| Hunt Commercial Realty Partners III, LP |  | 31,294 |  | 544 |
| Invesco Asian Real Estate Partners II (USD), LP |  | 15,324 |  | 243 |
| Lone Star Fund VI (US), LP |  | 51,185 |  | 2,003 |
| Lone Star Real Estate Fund (US), LP |  | 14,905 |  | 155 |
| M\&G Real Estate Debt Fund, LP |  | 35,540 |  | 1,510 |
| Oaktree Real Estate Opportunities Fund V, LP |  | 41,939 |  | 757 |
| PLA Residential III, LP |  | 51,897 |  | 721 |
| PLA Retail Fund I, LP |  | 63,434 |  | 876 |
| PRISA II |  | 54,564 |  | 583 |
| RREEF Global Opportunities Fund II, LLC |  | 29,250 |  | 599 |
| Tishman Speyer Real Estate Venture VI, LP |  | 16,592 |  | 138 |
| Tishman Speyer Real Estate Venture VII, LP |  | 31,258 |  | 691 |
| Waterton Residential Property Venture XI, LP |  | 15,727 |  | 707 |
| Westbrook Real Estate Fund VII, LP |  | 35,537 |  | 568 |
| Westbrook Real Estate Fund VIII, LP |  | 32,051 |  | 751 |
| Total | \$ | 1,425,941 | \$ | 30,561 |

## Private Equity

(Dollars in Thousands)

|  | Net Assets <br> Managed at <br> Fair Value at Management June 30, 2012 \& Other Fees |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Accel-KKR Capital Partners III, LP | \$ | 18,614 | \$ | 767 |
| Apollo Investment Fund VII, LP |  | 40,177 |  | 584 |
| Apollo Natural Resources Partners, LP |  | 11,851 |  | 532 |
| Arlington Capital Partners III, LP |  | 206 |  | 930 |
| Atlas Venture Fund VIII, LP |  | 9,030 |  | 505 |
| Baird Capital Partners V, LP |  | 20,768 |  | 2,834 |
| Blackrock Private Opportunities Fund, LP |  | 9,766 |  | 91 |
| Blackstone Capital Partners VI, LP |  | 9,425 |  | 898 |
| Bridgepoint Europe IV 'D', LP |  | 26,342 |  | 517 |
| Brookfield Special Situations Fund III (NR A), LP |  | 11,214 |  | 510 |
| Catalyst Fund Limited Partnership III |  | 24,339 |  | 1,005 |
| Centerbridge Capital Partners, LP |  | 40,239 |  | 1,513 |
| CMEA Ventures VII, LP |  | 5,610 |  | 196 |
| Crown European Buyout Opportunities II, Plc |  | 12,864 |  | 644 |
| CVC European Equity Partners V ( C ), LP |  | 38,979 |  | 2,169 |
| Edgewater Growth Capital Partners III, LP |  | 11,624 |  | 1,634 |
| Energy Capital Partners II-A, LP |  | 24,913 |  | 1,388 |
| First Reserve Fund XII, LP |  | 59,609 |  | 1,029 |
| IDG Ventures SF, LP |  | 5,339 |  | 236 |
| JLL Partners Fund VI, LP |  | 12,651 |  | (420) |
| Khosla Ventures IV, LP |  | 5,443 |  | 288 |
| Kinderhook Capital Fund III, LP |  | 18,854 |  | 1,363 |
| Levine Leichtman Capital Partners Deep Value Fund II |  | 415 |  | 435 |
| Levine Leichtman Capital Partners IV, LP |  | 67,445 |  | 873 |
| Linconshire Equity Fund IV-A, LP |  | 4,855 |  | 435 |
| Linden Capital Partners II, LP |  | 6,182 |  | 467 |
| Littlejohn Fund IV-A, LP |  | 13,221 |  | 302 |
| LLR Equity Partners III, LP |  | 25,493 |  | 600 |
| Maranon Mezzanine Fund, LP |  | 19,818 |  | 301 |
| Montreux Equity Partners IV, LP |  | 6,896 |  | 695 |
| Nautic Partners VI, LP |  | 37,097 |  | 389 |
| New Atlantic Ventures Fund III, LP |  | 8,616 |  | 223 |
| New Mountain Partners III, LP |  | 26,596 |  | 639 |
| Oakhill Capital Partners III, LP |  | 58,704 |  | 966 |
| Oaktree European Principal Fund III, LP |  | 13,920 |  | 250 |
| Onex Partners III, LP |  | 33,115 |  | 1,379 |
| Partners Group Secondary 2008, LP |  | 61,285 |  | 1,212 |
| Partners Group Secondary 2011 (USD), LP INC |  | 8,607 |  | - |
| Paul Capital Partners IX, LP |  | 26,338 |  | 458 |
| Peninsula Technology Ventures, LP |  | 8,992 |  | 220 |
| Pine Brook Capital Partners, LP |  | 31,027 |  | 2,497 |

## Private Equity - continued

(Dollars in Thousands)

|  | Net Assets Managed at Fair Value at June 30, 2012 |  | Management \& Other Fees |  |
| :---: | :---: | :---: | :---: | :---: |
| Platinum Equity Capital Partners II, LP | \$ | 36,651 | \$ | 63 |
| Quantum Energy Partners V, LP |  | 5,702 |  | 1,100 |
| Saybrook Corporate Opportunity Fund, LP |  | 12,210 |  | 400 |
| Seidler Equity Partners IV, LP |  | 4,896 |  | 881 |
| Silver Lake Partners III, LP |  | 23,663 |  | 1,190 |
| TCW/Crescent Mezzanine Partners V, LP |  | 47,855 |  | 836 |
| Tenex Capital Partners, LP |  | 7,624 |  | 1,817 |
| The Resolute Fund II, LP |  | 23,229 |  | 453 |
| The Veritas Capital Fund IV, LP |  | 39,502 |  | 249 |
| Thomas H Lee Equity Fund VI, LP |  | 39,031 |  | 434 |
| Vista Equity Partners Fund IV, LP |  | 16,567 |  | - |
| Warburg Pincus Private Equity X, LP |  | 48,505 |  | 807 |
| Waud Capital Partners QP III, LP |  | 14,378 |  | 831 |
| Wayzata Opportunities Fund II, LP |  | 44,294 |  | 1,041 |
| White Deer Energy, LP |  | 45,059 |  | 3,623 |
| Yucaipa American Alliance Fund II, LP |  | 47,730 |  | 664 |
| Total | \$ | 1,333,375 | \$ | 45,943 |

## Opportunistic

(Dollars in Thousands)

|  | Net Assets <br> Managed at |  |  |
| :--- | ---: | ---: | ---: |
|  | Fair Value at <br> June 30, 2012 | Management <br> \& Other Fees |  |
| Avenue Europe Special Situations Fund II (US), LP | $\$$ | 93,865 | $\$$ |
| Blackrock Credit Investors II, LP | 18,436 | 1,539 |  |
| Blackrock Mortgage Investors, LP | 83,321 | $(994)$ |  |
| Blackstone/GSO Capital Solutions Fund, LP | 123,836 | 904 |  |
| Oaktree Opportunities Fund VIII, LP | 55,119 | 49 |  |
| Oaktree Opportunities Fund VIIIb, LP | 61,286 | $(840)$ |  |
| OCM STR Co-Invest 1, LP | 52,733 | 679 |  |
| TCW Capital Trust | 150,045 | 188 |  |
| TPG Specialty Lending, Inc. |  | 14,902 | 1,751 |
| Total |  | $\mathbf{6 5 3 , 5 4 3}$ | $\mathbf{\$}$ |
|  | $\mathbf{\$}$ | $\mathbf{3 , 9 3 2}$ |  |

## IV. Actuarial Section

## PLAN AND HBS

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## Actuarial Certification - Plan and HBS

Arizona State Retirement Plan
Actuarial Valuation - June 30, 2011

## Actuarial Certification ARIZONA STATE RETIREMENT PLAN <br> Actuarial Certification Statement

This is to certify that Buck Consultants has prepared an actuarial valuation of the Arizona State Retirement Plan as of June 30, 2011. The Plan provisions are described in Title 38, Chapter 4, Article 2 of the Arizona Revised Statutes. All benefits described in the statutes are reflected in this valuation, except that future PBI and enhanced PBI awards are not valued.

Actuarial calculations have been made with respect to a total of 530,513 members - 208,939 active members, 208,969 inactive members, 107,996 retired members and beneficiaries, and 4,609 members on long term disability. In addition, there are 259 System retirees receiving only ad hoc benefits, 545 System retirees receiving only health insurance benefits, and 134 System retirees receiving both ad hoc benefits and health insurance benefits from the Plan.

The actuarial calculations establish a total benefit cost of $21.80 \%$ of the annual compensation of members. The total normal cost rate is $13.34 \%$ of compensation and the required amortization payment determined in accordance with Section 38-737 is $8.46 \%$ of compensation.

## Actuarial Valuation of the Plan as of June 30, 2011

We have made all calculations for this report in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, the report's results comply with the requirements of the Arizona Constitution and statutes and, where applicable, the Internal Revenue Code, the Employee Retirement Income Security Act of 1974 (ERISA), and the Statements of the Governmental Accounting Standards Board. The undersigned actuary is independent. He is an Enrolled Actuary, Fellow of the Society of Actuaries and Member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. He is experienced in performing valuations for large public retirement systems and fully qualified to provide actuarial services to the State of Arizona. This report has been prepared in accordance with all applicable Actuarial Standards of Practice.

## Actuarial Valuations

The primary purpose of the valuation report is to determine the required member and employer contribution rates, to describe the current financial condition of the Plan, and to analyze changes in the Plan's condition. In addition, the report provides information that ASRS requires in connection with Governmental Accounting Standards Board Statement Numbers 25 and 43 (GASB Nos. 25 and 43) and it summarizes census data.
Valuations are performed annually as of June 30, the last day of both the Plan year and ASRS' fiscal year.

## Funding Objectives

The actuarial valuation calculates the contribution rates payable by members and participating employers. These rates, when applied to payroll, yield contribution amounts sufficient to provide for the normal cost and to amortize the Unfunded Actuarial Accrued Liability (UAAL) over the period specified in the statutes. The rate calculated becomes effective for the next fiscal year. For example, the total rate calculated in the June 30, 2011, valuation report (21.80\%) is applicable for the fiscal year beginning July 1, 2012.

## Arizona State Retirement Plan

Actuarial Valuation - June 30, 2011

## Funding Progress

The 2010 valuation determined the total rate for fiscal 2012 as $20.96 \%$. The 2011 valuation calculates a total rate of $21.80 \%$ to become effective July 1, 2012. These rates do not include contributions to the LTD program. Actual contributions have matched the calculated contributions in recent years except for temporary differences, and we assume that members and employers will continue to contribute the actuarially determined amounts. Contributing these amounts ensures the realization of funding objectives.

Section 38-737 of the Arizona Revised Statutes specifies that the UAAL is to be amortized over a rolling 30 -year period.

## Benefit Provisions

Our valuation will reflect the following changes in Plan provisions as they become effective:

1. State employees hired after July 20, 2011, will not be eligible for the ASRS Plan or LTD program before their 27th week of employment, unless they are already members of ASRS.
2. For members whose membership commences on or after July 1, 2011, the 85-point requirement is removed and replaced by two rules: age 60 and 25 years of credited service or age 55 and 30 years of credited service. Early retirement reductions are adjusted to reflect these new rules.
3. Purchases of Other Public Service, Leave of Absence Service, and Military Service (except USERRA or Heart Act purchases) are limited to 60 months for each type of purchase, and a member is required to have ten years of credited service before initiating a request to purchase such service.
4. Employers are required to pay an Alternate Contribution Rate (ACR) for retired members who return to work on or after July 1, 2012, in any capacity and in a position ordinarily filled by an employee of the employer. The ACR is the greater of $2 \%$ or the contribution rate to fund the deficits of the Plan and LTD program, but not greater than the employer's portion of the total contribution rate for the Plan and LTD program.
5. Retroactive to July 1, 2011, responsibility for making contributions to the ASRS Plan and LTD programs is changed from $50 \%$ employees and $50 \%$ employers to $53 \%$ employees and $47 \%$ employers. Pre-retirement survivor benefits are based on the sum of employee and employer balances, rather than twice the employee balance.

Section 11 gives details of benefit provisions.

[^6]
## Arizona State Retirement Plan

Actuarial Valuation - June 30, 2011

## Assumptions and Methods

We performed an experience study for the five-year period ended June 30, 2007, and recommended assumption changes based on the findings. On April 18, 2008, the Board adopted revised actuarial assumptions to be effective June 30, 2008. On November 23, 2009, the Board adopted further revised actuarial assumptions to be effective June 30, 2009. On November 18, 2011, the Board adopted an optional form load to liabilities and a new salary scale, where the wage inflation rate is decreased by $0.5 \%$, to be effective June 30, 2011.

On November 15, 2002, the Board adopted a change in the method of valuing actuarial assets. The Board removed the requirement that actuarial assets be within $20 \%$ of market value and prospectively changed the period for recognizing investment gains or losses from five to ten years. Section 9 of this report provides details of the assumptions and methods. The assumptions are internally consistent and are reasonably based on the actual experience of the Plan. These assumptions are in full compliance with GASB Statement Nos. 25 and 43.

Data
ASRS staff supplied census data for retired, active, and inactive members as of June 30, 2011. We have not audited these data, but have examined them for reasonableness and consistency with the prior year's data. ASRS staff also supplied asset information.

## Trend Data and Supporting Schedules

ASRS prepared all trend data schedules in the financial section of ASRS' Comprehensive Annual Financial Report (CAFR). ASRS also prepared all supporting schedules in the actuarial section of the CAFR.
Arizona State Retirement Plan Actuarial Valuation - June 30, 2011
The actuarial cost factors as of June 30, 2011, for the total Plan are as follows:


Arizona State Retirement Plan
Actuarial Valuation - June 30, 2011
The Board adopted a new asset valuation method (described in Section 9B) on November 15, 2002, to be effective for valuations on and after June 30, 2002.

On November 23, 2009 the Board adopted assumptions to be effective for valuations on and after June 30, 2011. On November 18, 2011, the Board adopted an optional form load on liabilities and the $0.50 \%$ decrease in the wage inflation assumption to be effective for valuations on and after June 30, 2011. These assumptions are as follows:

1. Investment yield - $8 \%$ per annum net of all expenses.
2. Salary increases

| Years of Service | Merit <br> Component | Total Salary Increase |
| :---: | :---: | :---: |
| 1 | 5.00\% | 9.00\% |
| 2 | 4.00 | 8.00 |
| 3 | 2.50 | 6.50 |
| 4 | 1.80 | 5.80 |
| 5 | 1.40 | 5.40 |
| 6 | 1.25 | 5.25 |
| 7 | 1.00 | 5.00 |
| 8 | 0.80 | 4.80 |
| 9 | 0.75 | 4.75 |
| 10 | 0.50 | 4.50 |
| 11 to 19 | 0.25 | 4.25 |
| 20 or more | 0.00 | 4.00 |
| $\begin{aligned} & \text { * Total salary increase rate }=\text { wage inflation }(\text { or growth }) \text { rate }(3.25 \%) \\ &+ \text { productivity increase rate }(0.75 \%) \\ &+ \text { merit component } \end{aligned}$ |  |  |

3. Rates of disability

| Age | Males | Females |
| :---: | :---: | :---: |
| 20 | 0.04\% | 0.06\% |
| 30 | 0.05 | 0.08 |
| 40 | 0.16 | 0.16 |
| 50 | 0.38 | 0.36 |
| 60 | 0.90 | 0.82 |

4. Rates of withdrawal - Sample ages and years of service

| Age | Years of Service |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male Members |  |  |  |  |
|  | 1 | 2 | 5 | 8 | 10+ |
| 20 | 20.50\% | 15.00\% | 9.25\% | 5.75\% | 17.24\% |
| 30 | 20.50 | 15.00 | 9.25 | 5.75 | 7.63 |
| 40 | 20.50 | 15.00 | 9.25 | 5.75 | 3.06 |
| 50 | 20.50 | 15.00 | 9.25 | 5.75 | 2.09 |
| 60 | 20.50 | 15.00 | 9.25 | 5.75 | 1.46 |

## Arizona State Retirement Plan

## Actuarial Valuation - June 30, 2011

| Age | Years of Service |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Female Members |  |  |  |  |
|  | 1 | 2 | 5 | 8 | 10+ |
| 20 | 20.50\% | 15.00\% | 9.25\% | 5.75\% | 29.00\% |
| 30 | 20.50 | 15.00 | 9.25 | 5.75 | 11.08 |
| 40 | 20.50 | 15.00 | 9.25 | 5.75 | 3.23 |
| 50 | 20.50 | 15.00 | 9.25 | 5.75 | 2.25 |
| 60 | 20.50 | 15.00 | 9.25 | 5.75 | 1.19 |

5. Rates of retirement - Sample ages and years of service

| Age | Years of Service |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 0-4 | 5 | 6-9 | 10-19 |
| 50 | 0.00\% | 10.00\% | 5.00\% | 5.00\% |
| 55 | 0.00 | 10.00 | 5.00 | 5.00 |
| 60 | 0.00 | 9.00 | 9.00 | 9.00 |
| 62 | 0.00 | 15.00 | 15.00 | 33.00 |
| 65 | 30.00 | 30.00 | 30.00 | 30.00 |
| 70 | 22.00 | 22.00 | 22.00 | 22.00 |
| Age | 20 | 25 | 30 | 31+ |
| 50 | 7.00\% | 8.67\% | 35.00\% | 20.00\% |
| 55 | 7.00 | 25.00 | 35.00 | 13.63 |
| 60 | 35.00 | 25.00 | 35.00 | 24.00 |
| 62 | 35.00 | 25.00 | 35.00 | 33.00 |
| 65 | 35.00 | 25.00 | 35.00 | 30.00 |
| 70 | 35.00 | 25.00 | 35.00 | 22.00 |

Deferred vested members are assumed to retire at their normal retirement age.
6. Mortality rates - 1994 GAM Static, Projected to 2010 with Projection Scale AA with no setback. This mortality assumption was chosen to be used from June 30, 2008 to June 30, 2012. The rates were projected to the middle point of this period and include an appropriate level of conservatism that reflects expected future mortality improvements.
7. Mortality rates after disability - Post disablement mortality rates are based on experience of other large public sector system and ASRS' own experience.
8. Future Retirees Eligible for the Health Insurance Premium Supplement - It is assumed that $70 \%$ of future retirees will be eligible to receive the post-retirement health insurance premium supplement and that $35 \%$ of those retirees will be eligible for the dependent premium supplement.

## Arizona State Retirement Plan

Actuarial Valuation - June 30, 2011
9. Portion of members who will not withdraw their contributions - It is assumed that active members who terminate (prior to eligibility for retirement) and deferred vested members who have already terminated will choose to receive the enhanced refund option if the value of the enhanced refund option is greater than the present value of the deferred benefit. Otherwise, the members are assumed to elect to receive the deferred benefit. If the member is assumed to elect the enhanced refund option, then it is also assumed that the member forfeits the health insurance premium supplement.

Members who terminate eligible for early retirement are assumed to commence payments immediately.
10. Spouse Assumptions - We assume that $100 \%$ of the members are married. We also assume that the husband is three years older than the wife.
11. Modified Cash Refund Assumption - We assume that members who elect a single life annuity will receive accumulated benefit payments equal to their contributions after three years of being in receipt.
12. 415(b) Limits - 415(b) limits are not applied in the Plan valuation because there is an excess plan that pays benefits above the 415 (b) limit.
13. Optional Form load on liabilities - A load of $0.087 \%$ has been added to the nonretired 401(a) liabilities to account for the election of optional forms other than a single life annuity.

The asset valuation method is the market value less ten year phase-in of excess (shortfall) investment income. See Section 9B.

The funding method is the projected unit-credit method as prescribed in Arizona Revised Statutes Section 38.757A.

The actuarial calculations have been performed by qualified actuaries in accordance with accepted actuarial procedures based on the current provisions of the Plan and on the actuarial assumptions adopted by the Board.

ASRS prepared all trend data schedules in the financial section and the supporting schedules in the actuarial section of its Comprehensive Annual Financial Report.

Sincerely,


Charles E. Chittenden, FSA, EA, MAAA

## General Actuarial Information - Plan and HBS

The following charts prepared by the actuary will serve to indicate some of the more important statistics regarding the retirement program; each chart will identify each membership category separately where possible.

As of June 30, 2011

|  | Higher <br> Education <br> Members | Other <br> Education <br> Members | City <br> Members | County <br> Members | State <br> Members | Political <br> Subdivision <br> Members | Total Active <br> Members |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of Members (active) | 24,352 | 113,103 | 16,992 | 21,704 | 26,685 | 6,103 | 208,939 |
| Average age | 46.8 | 45.0 | 45.4 | 46.9 | 47.0 | 46 | 45.7 |
| Average annual salary | $\$ 50,473$ | $\$ 38,170$ | $\$ 54,556$ | $\$ 46,920$ | $\$ 45,902$ | $\$ 56,390$ | $\$ 43,365$ |
| Average years of service | 9.7 | 9.2 | 10.0 | 9.6 | 10.1 | 7.6 | 9.4 |

As of June 30, 2011

|  | Higher <br> Education <br> Members | Other <br> Education <br> Members | City <br> Members | County <br> Members | State <br> Members | Political <br> Subdivision <br> Members | Total <br> Retired <br> Members |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of Retirees | 12,725 | 58,087 | 6,750 | 11,574 | 17,585 | 1,275 | 107,996 |
| Average age | 71.1 | 69.5 | 67.4 | 70.0 | 70.0 | 68.8 | 69.7 |
| Average monthly benefit | $\$ 1,801$ | $\$ 1,715$ | $\$ 1,799$ | $\$ 1,287$ | $\$ 1,378$ | $\$ 1,488$ | $\$ 1,627$ |
| Average years of service | 19.3 | 20.5 | 19.1 | 16.9 | 18.4 | 16.1 | 19.5 |

Of all plan retirees at June 30, 2011, $57.9 \%$ received annuities of more than $\$ 1,000$ per month. $12.6 \%$ received less than $\$ 300$ per month. Of the retirees $12.8 \%$ are less than 60 years old, $60.8 \%$ are between 60 and 75 years old, and $26.4 \%$ are over 75 years old.

## Funding Objective

The funding objective of the Arizona State Retirement System is to maintain reasonably stable contribution rates and to achieve an ultimate funded status of $100 \%$. As of June 30, 2011, the date of the most recent actuarial valuation, this funding level is $75.8 \%$. When the present actuarial asset value of $\$ 29.231$ billion is compared to the actuarial liabilities of $\$ 38.555$ billion, actuarial liabilities exceed actuarial assets by the amount of $\$ 9.324$ billion.

As of fiscal year 2008, statutory changes require annual actuarial valuations, not the biannual valuation required by a prior statutory change effective in 1998. The rates determined by the Plan, System and HBS (combined) valuations do not include contributions to the LTD program.

## Normal Costs and Required Contribution Rates (measured as of June 30, 2011)

The Plan's normal cost, for fiscal year (FY) 2010-2011 was $13.34 \%$ and for FY 2009-2010 was $13.33 \%$. The normal cost represents the present value cost, expressed as a percentage of pay, of the current level of benefits provided by the Plan. The Plan has a positive unfunded actuarial accrued liability (an actuarial deficit), which is treated as a debit on the Plan's required contribution rate. Because of the actuarial deficit, the required contribution rate is higher than the normal cost. If the actuarial value of assets and liabilities were equal, the required contribution rate would be the same as the normal cost. Because liabilities exceed assets, the required contribution rate is higher than the normal cost. Components of the normal cost are as follows:

| Components of Normal Cost ${ }^{\mathbf{1}}$ |  |
| :--- | ---: |
| Retirement benefits | $9.62 \%$ |
| Health insurance premium supplement | $0.42 \%$ |
| Survivor benefits | $0.38 \%$ |
| Withdrawals | $2.56 \%$ |
| Long-term disability benefit | $0.36 \%$ |
| Total, Normal Cost | $\mathbf{1 3 . 3 4 \%}$ |
| Amortization of the UAAL | $8.46 \%$ |
| $\quad$ Required contribution rate for FY 2012 | $\mathbf{2 1 . 8 0 \%}$ |
| Required contribution rate for FY 2012 | $10.48 \%$ |
| Required matching contribution rate shared by | $10.50 \% \mathbf{2}$ |
| member and employer to the nearest 0.05\% |  |

${ }^{1} 2010$ results include System liabilities and assets for members who retired or will retire on or after July 1, 1981.
${ }^{2}$ Subsequent to the completion of this actuarial valuation, the $50^{\text {th }}$ Arizona State Legislature enacted legislation which retroactively reverted the contribution rate percentage back to $50 \%$ for employees and $50 \%$ for employers, as of July 1, 2011.

## Asset Valuation

The ASRS actuary determines the actuarial value of assets by recognizing investment gains and losses over a period of time. For gains and losses that occurred before fiscal 2002, the period is five years. For gains and losses that occurred in fiscal 2002, or later years, the period is ten years. The gradual recognition of investment gains and losses reduces volatility in the year-to-year level of contribution rates.

## General Actuarial Information - Plan and HBS (continued)

## Long-Term Disability Benefit

In addition to pension, health insurance, and survivor benefits, the ASRS also offers a long-term disability benefit.

Effective October 1, 1995, to comply with Internal Revenue Code requirements, liabilities associated with the long-term disability benefit was separated from the Plan. No assets were transferred to the LTD fund. Accordingly, the objectives of the funding method that the Board adopted for the LTD program have been:

- To produce a positive cash flow
- To maintain reasonably stable contribution rates
- To build up the assets gradually

As determined by the 2011 and 2010 actuarial reports, the LTD contribution rate is $.49 \%, .26 \%$ for employees and $.23 \%$ for employers. These rates are effective for FY 2012 and 2011. ${ }^{1}$

## Summary of Actuarial Method for Long-Term Disability Benefit

The actuarial cost method changed, effective for the 2005 valuation, to the projected unit credit method. Assets are valued at market, less (or plus) an adjustment to reflect investment gains (or losses) over a 10-year period. This method applies to gains and losses incurred in fiscal 2006 and later years. The unfunded actuarial accrued liability is amortized over 15 years in level dollar payments.

[^7]
## Summary of the Benefit Provisions - Plan and HBS

The Arizona State Retirement Plan makes provision for the retirement, disability, and death and survivor benefits to all employees of the State, instrumentalities of the State and certain political subdivisions. The major provisions of the Plan may be summarized as follows:

## A. RETIREMENT BENEFITS

## 1. Normal Retirement Date (the earliest of the following):

a) a member's sixty-fifth birthday,
b) a member's sixty-second birthday and completion of at least ten years of credited service, or
c) the first day immediately following the day that the sum of the member's age and his years of total credited service equal eighty for members hired before July 1, 2011 or for members hired on or after July 1, 2011, age 60 with 25 years of credited service or age 55 with 30 years of service.

## 2. Monthly Life Annuity

The product of a benefit multiplier (as determined below) and the member's best 36 month average compensation (in last 120 months) for members hired before July 1, 2011 and 60-month average compensation (in last 120 months) for members hired on or after July 1, 2011 multiplied by his or her years of total credited service. Members who commenced membership prior to 1984 can use a 60-month average and include additional types of compensation, if doing so produces a larger result.

| Years of Credited Service | Benefit <br> Multiplier |
| :--- | :---: |
| Less than 20 | $2.10 \%$ |
| 20.0 to 24.99 | $2.15 \%$ |
| 25.0 to 19.99 | $2.20 \%$ |
| 30 or more | $2.30 \%$ |

## 3. Normal Retirement Benefits

The sum of the monthly life annuity and any prior service benefits to which the employee was entitled under the System.

## 4. Early Retirement

Age 50 with 5 or more years of credited service.

## Summary of the Benefit Provisions - Plan and HBS (continued)

## 5. Early Retirement Benefits

If not eligible for normal retirement and at least age 50 with 5 years of total credited service, normal retirement benefit earned to the date of retirement, reduced according to the following table:

| Years of <br> Service | Age at Date of Retirement |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

Provided, however, that if the member meets the Rule of 77 (but not the Rule of 80 ), the reduction will be $3 \%$ for each unit below 80 for members hired before July 1, 2011.

## 6. Normal Form of Benefit

Straight life annuity with cash refund feature payable monthly with benefits commencing on the day following the date of termination of employment.

## 7. Optional Forms

a) joint and contingent annuity (with pop-up) with either $100 \%, 66-2 / 3 \%$ or $50 \%$ of the reduced retirement income payable for the life of the contingent annuitant upon the death of the retiring participant,
b) period certain and life annuity (with pop-up) with either five, ten, or fifteen years of payments guaranteed, or
c) a social security leveling option combined with any of the other forms of payment.

## 8. Minimum Benefit

The minimum monthly benefit payable to a retired member who is at least age 75 and who has 20 or more years of service is $\$ 600$.
B. DISABILITY BENEFITS (for disability after June 30, 1988)

## 1. Long-Term disability

Monthly benefit equal to two-thirds of monthly compensation, reduced by percentages of other income received payable commencing six months after date of disability until the earlier of:
a) Date of cessation of total disability, or
b) Normal retirement date.

This benefit is paid by a separate LTD plan.
2. Disability Payments if Member Remains Disabled Through Normal Retirement Date

Monthly benefit participant would have received if service had continued to normal retirement date assuming the participant's salary remained at the level it was at his or her date of disability, also provided that the amount of total credited service is limited to 30 years unless he or she had more than 30 years at date of disability.
3. The minimum monthly benefit payable to a disabled participant is $\mathbf{\$ 5 0 . 0 0}$.
C. DISABILITY BENEFITS (for disability before July 1, 1988)

## 1. Eligibility

Age 50 with 5 years of service.

## 2. Benefit Amount

A life annuity that can be provided by the member's contribution account. Disability payments after normal or early retirement eligibility are reduced by the actuarial value of the disability payments made up to the date of normal or early retirement eligibility.

## D. PRE-RETIREMENT DEATH BENEFITS

## 1. Eligibility

Applicable if death occurs prior to retirement.

## Summary of the Benefit Provisions - Plan and HBS (continued)

## 2. Benefit

Any one of the following, at the option of the beneficiary:
a) a lump sum equal to the sum of (i) and (ii):
i) the sum of the member's member and employer balances, and
ii) the amount of the member's employee and employer accounts, along with supplemental credits, if any, transferred from the System to the Plan, with interest
b) if (a) is greater than $\$ 5,000$, the beneficiary may elect to receive a monthly income for five or ten years certain and life thereafter which is actuarially equivalent to the amount in (a).

## 3. Death of an Active Member After 15 Years of Credited Service or After Eligibility for Early Retirement

Beneficiary receives a benefit in the form of a survivor annuity equal to the benefit that would have been payable to the beneficiary if the participant had retired on the date of his or her death and elected to receive an annuity payable in the form of joint and $100 \%$ survivor with the beneficiary named as the joint pensioner.

## E. VESTING OF BENEFITS

## 1. Vesting

A member is fully vested in his or her accrued benefit.

## 2. Benefits Upon Vesting

A fully vested member is entitled to either:
a) the enhanced refund option for members hired before July 1, 2011 or for members terminated due to an Employer Reduction in Force or position elimination for members hired on or after July 1, 2011, or
b) the retirement benefit payable at normal retirement earned to the date of member's termination.

The enhanced refund option allows members who terminate prior to eligibility for retirement to receive a refund of their member contributions with interest. In addition, if a member has at least five years of service, he or she is also entitled to a share of the employer contributions with interest. The share is $25 \%$ for members with five years of service and increases $15 \%$ for each additional year of service up to a maximum of $100 \%$ for ten or more years of service. The board reduced the interest rate to be credited on refund of contributions from $8 \%$ to $4 \%$, effective June 30, 2005.

## F. RETIREE HEALTH INSURANCE PREMIUM SUPPLEMENT

## 1. Eligibility

Retirement or disability after 5 years of credited service and covered by an employer-sponsored group insurance program for which the retired or disabled member must pay part of the cost. Employees who elect the enhanced refund option are not eligible for this benefit.

## 2. Benefit

The benefit is payable only with respect to allowable health insurance premiums for which the participant is responsible. There is no benefit payable after the retiree dies. The maximum benefits for participants with 10 or more years of service are:
a) with respect to premiums paid for retirees with member only coverage:

- $\quad \$ 150$ per month if the retiree is under age 65
- $\quad \$ 100$ per month if the retiree is 65 or over
b) with respect to premiums paid for retirees with family coverage:
- $\$ 260$ per month if the member and dependents are under age 65
- $\$ 170$ per month if the member and dependents are 65 or over
- $\$ 215$ per month if the member is over age 65 and the dependent is under age 65
- $\$ 215$ per month if the member is under age 65 and the dependent is over age 65

For members with five to nine years of service, the benefits are the same dollar amounts as above multiplied by a vesting fraction equal to 10 percent for each completed year of service (i.e., 50 percent to 90 percent).

## G. AUTOMATIC COST OF LIVING ADJUSTMENT BASED ON EXCESS INVESTMENT EARNINGS

1. Permanent Benefit Increase (PBI)

Retirees who have been retired one year and LTD members are eligible for a COLA up to a maximum of a $4 \%$ increase. The COLA is paid from a reserve of "Excess Investment Earnings." If there are no "Excess Investment Earnings" in reserve, then no COLA is paid.

## Summary of the Benefit Provisions - Plan and HBS (continued)

## 2. Permanent Benefit Increase Enhancement

Provides retired members with at least ten years of service who have been retired five or more years an additional benefit. For each complete 5-year period the member has been retired an incremental benefit is paid if monies to pay the benefit are available. This benefit is funded by an interest credit of $8.0 \%$ of the reserve for future PBIs.

PBI and enhanced PBI benefits are reflected in the valuation as soon as they are awarded. Future PBI and enhanced PBI are not included in the valuation.

## H. EMPLOYEE AND EMPLOYER CONTRIBUTIONS

The contribution rate for the fiscal year beginning on July 1st is based on the results of the most recent actuarial valuation as of the last day of the preceding plan year. The member's contribution rate is equal to $53 \%$ of the total contribution rate. The employer's contribution rate is equal to $47 \%$ of the total contribution rate. The total contribution rate for fiscal year 2012 is $20.96 \%$, based on the 2010 actuarial valuation. The total contribution rate for fiscal year 2013 will be $21.80 \%$ based on this valuation. Interest is credited at $8.00 \%$; however, interest is credited at $4 \%$ from July 1, 2005 for return of contributions upon termination for reasons other than retirement or death. ${ }^{1}$

[^8]
# Statement of Actuarial Methods and Assumptions <br> Plan and HBS 

ADOPTED BY BOARD ACTION ON NOVEMBER 23, 2009 AND NOVEMBER 18, 2011 EFFECTIVE AS OF JUNE 30, 2011

## A. Actuarial Assumptions

## 1. Investment Yield Rate

$8 \%$ per annum compounded annually, net of investment expenses

## 2. Mortality

The mortality assumption was chosen to be used from June 30, 2008 to June 30, 2012. The rates were projected to the middle point of this period and include an appropriate level of conservatism that reflects expected future mortality improvements.
a) Pre-retirement

Assumption: 1994 GAM - Static, Projected to 2010 With Projection Scale AA, with no setback.
Rates at representative ages are shown below:

| Rates of Mortality(Active) <br> AGEMALE <br> PARTICIPANTS |  | FEMALE <br> PARTICIPANTS |
| :---: | :---: | :---: |
| 20 | 0.000373 | 0.000219 |
| 25 | 0.000563 | 0.000232 |
| 30 | 0.000739 | 0.000299 |
| 35 | 0.000785 | 0.000400 |
| 40 | 0.000943 | 0.000557 |
| 45 | 0.001280 | 0.000752 |
| 50 | 0.001929 | 0.001085 |
| 55 | 0.003255 | 0.002017 |
| 60 | 0.006162 | 0.004097 |
| 65 | 0.011600 | 0.007970 |
| 70 | 0.018633 | 0.012672 |
| 75 | 0.029696 | 0.019950 |
| 80 | 0.052813 | 0.035208 |
| 85 | 0.086903 | 0.061520 |
| 90 | 0.143432 | 0.110808 |

## Statement of Actuarial Methods and Assumptions - Plan and HBS (continued)

b) Post-retirement

Assumptions: Non-Disabled rates are based on the 1994 GAM - Static, Projected to 2010 with Projection Scale AA with no setback. Disabled rates are based on the experience of other large public sector retirement systems and ASRS' own experience. Rates at representative ages are shown below.

| Rates of Mortality |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male Participants |  |  |  |  | Female Participants |
| AGE | NON-DISABLED | DISABLED | NON-DISABLED | DISABLED |  |  |
| 20 | 0.000373 | 0.051100 | 0.000219 | 0.027440 |  |  |
| 25 | 0.000563 | 0.063540 | 0.000232 | 0.038300 |  |  |
| 30 | 0.000739 | 0.058810 | 0.000299 | 0.053930 |  |  |
| 35 | 0.000785 | 0.040920 | 0.000400 | 0.056980 |  |  |
| 40 | 0.000943 | 0.034740 | 0.000557 | 0.037590 |  |  |
| 45 | 0.001280 | 0.031360 | 0.000752 | 0.025700 |  |  |
| 50 | 0.001929 | 0.031110 | 0.001085 | 0.022840 |  |  |
| 55 | 0.003255 | 0.030860 | 0.002017 | 0.024605 |  |  |
| 60 | 0.006162 | 0.033730 | 0.004097 | 0.026507 |  |  |
| 65 | 0.011600 | 0.048250 | 0.007970 | 0.028555 |  |  |
| 70 | 0.018633 | 0.055540 | 0.012672 | 0.030762 |  |  |
| 75 | 0.029696 | 0.090010 | 0.019950 | 0.036143 |  |  |
| 80 | 0.052813 | 0.146340 | 0.035208 | 0.046560 |  |  |
| 85 | 0.086903 | 0.228520 | 0.061520 | 0.056647 |  |  |
| 90 | 0.143432 | 0.313770 | 0.110808 | 0.068920 |  |  |

## 3. Disability Rates

| Rates of Decrement Due to Disability |  |  |
| :---: | :---: | :---: |
| AGE | MALE PARTICIPANTS | FEMALE PARTICIPANTS |
| 20 | 0.000431 | 0.000551 |
| 25 | 0.000479 | 0.000603 |
| 30 | 0.000548 | 0.000760 |
| 35 | 0.000822 | 0.001172 |
| 40 | 0.001583 | 0.001583 |
| 45 | 0.002519 | 0.002378 |
| 50 | 0.003846 | 0.003649 |
| 55 | 0.005786 | 0.005266 |
| 60 | 0.008994 | 0.008185 |

4. Withdrawal Rates (for causes other than death, disability or retirement)

Select and ultimate withdrawal rates are used. Rates at representative ages are shown below.

| Rates of Decrement Due to Withdrawal |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AGE | 0 | 1 | 2 |  | ARS OF | SERVIC $5$ | ES $6$ | 7 | 8 | 9 | 10+ |
| MALE EMPLOYEES |  |  |  |  |  |  |  |  |  |  |  |
| 20 | 0.2775 | 0.2050 | 0.1500 | 0.1250 | 0.1025 | 0.0925 | 0.0800 | 0.0700 | 0.0575 | 0.0525 | 0.1724 |
| 30 | 0.2775 | 0.2050 | 0.1500 | 0.1250 | 0.1025 | 0.0925 | 0.0800 | 0.0700 | 0.0575 | 0.0525 | 0.0763 |
| 40 | 0.2775 | 0.2050 | 0.1500 | 0.1250 | 0.1025 | 0.0925 | 0.0800 | 0.0700 | 0.0575 | 0.0525 | 0.0306 |
| 50 | 0.2775 | 0.2050 | 0.1500 | 0.1250 | 0.1025 | 0.0925 | 0.0800 | 0.0700 | 0.0575 | 0.0525 | 0.0209 |
| 60 | 0.2775 | 0.2050 | 0.1500 | 0.1250 | 0.1025 | 0.0925 | 0.0800 | 0.0700 | 0.0575 | 0.0525 | 0.0146 |
| 70 | 0.2775 | 0.2050 | 0.1500 | 0.1250 | 0.1025 | 0.0925 | 0.0800 | 0.0700 | 0.0575 | 0.0525 | 0.0243 |
| FEMALE EMPLOYEES |  |  |  |  |  |  |  |  |  |  |  |
| 20 | 0.2775 | 0.2050 | 0.1500 | 0.1250 | 0.1025 | 0.0925 | 0.0800 | 0.0700 | 0.0575 | 0.0525 | 0.2900 |
| 30 | 0.2775 | 0.2050 | 0.1500 | 0.1250 | 0.1025 | 0.0925 | 0.0800 | 0.0700 | 0.0575 | 0.0525 | 0.1108 |
| 40 | 0.2775 | 0.2050 | 0.1500 | 0.1250 | 0.1025 | 0.0925 | 0.0800 | 0.0700 | 0.0575 | 0.0525 | 0.0323 |
| 50 | 0.2775 | 0.2050 | 0.1500 | 0.1250 | 0.1025 | 0.0925 | 0.0800 | 0.0700 | 0.0575 | 0.0525 | 0.0225 |
| 60 | 0.2775 | 0.2050 | 0.1500 | 0.1250 | 0.1025 | 0.0925 | 0.0800 | 0.0700 | 0.0575 | 0.0525 | 0.0119 |
| 70 | 0.2775 | 0.2050 | 0.1500 | 0.1250 | 0.1025 | 0.0925 | 0.0800 | 0.0700 | 0.0575 | 0.0525 | 0.0194 |

## 5. Salary Scales

A select and ultimate salary scale made up of a merit component and general salary increase component as follows:

| Years of <br> Service | Merit <br> Component | Total Salary <br> Increase $^{1}$ |
| :---: | :---: | :---: |
| 1 | $5.00 \%$ | $9.00 \%$ |
| 2 | $4.00 \%$ | $8.00 \%$ |
| 3 | $2.50 \%$ | $6.50 \%$ |
| 4 | $1.80 \%$ | $5.80 \%$ |
| 5 | $1.40 \%$ | $5.40 \%$ |
| 6 | $1.25 \%$ | $5.25 \%$ |
| 7 | $1.00 \%$ | $5.00 \%$ |
| 8 | $0.80 \%$ | $4.80 \%$ |
| 9 | $0.75 \%$ | $4.75 \%$ |
| 10 | $0.50 \%$ | $4.50 \%$ |
| 11 to 19 | $0.25 \%$ | $4.25 \%$ |
| 20 or more | $0.00 \%$ | $4.00 \%$ |

[^9]
## Statement of Actuarial Methods and Assumptions - Plan and HBS (continued)

## 6. Retirement Age

Select and ultimate retirement rates are used. Rates at representative ages and years of service are shown below:

| Rates of Decrement Due to Retirement |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $0-4$ | 5 | $6-9$ | $10-19$ | 20 | 25 | 30 | $31+$ |  |
| AGE | 0.000 | 0.100 | 0.050 | 0.050 | 0.070 | 0.087 | 0.350 | 0.200 |  |
| 50 | 0.000 | 0.050 | 0.050 | 0.070 | 0.250 | 0.350 | 0.136 |  |  |
| 55 | 0.000 | 0.100 | 0.090 | 0.090 | 0.350 | 0.250 | 0.350 | 0.240 |  |
| 60 | 0.000 | 0.090 | 0.020 | 0.350 | 0.350 | 0.250 | 0.350 | 0.330 |  |
| 62 | 0.000 | 0.150 | 0.150 | 0.330 |  |  |  |  |  |
| 65 | 0.300 | 0.300 | 0.300 | 0.300 | 0.350 | 0.250 | 0.350 | 0.300 |  |
| 70 | 0.220 | 0.220 | 0.220 | 0.220 | 0.350 | 0.250 | 0.350 | 0.220 |  |

Deferred vested members are assumed to retire at normal retirement age.

## 7. Future Retirees Eligible for the Health Insurance Premium Supplement

It is assumed that $70 \%$ of future retirees will be eligible to receive the post-retirement health insurance premium supplement and that $35 \%$ of those retirees will be eligible for the dependent premium supplement.

## 8. Proportion of Vested Term Members Who Will Not Withdraw Their Contributions

It is assumed that active members who terminate (prior to eligibility for retirement) and deferred vested members who have already terminated will choose to receive the enhanced refund option if the value of the enhanced refund option is greater than the present value of the deferred benefit. Otherwise, the members are assumed to elect to receive the deferred benefit. If the member is assumed to elect the enhanced refund option, then it is also assumed that the member forfeits the health insurance premium supplement.

Members who terminate eligible for early retirement are assumed to commence payments.

## 9. Spouse Assumptions

We assume that $100 \%$ of the members are married. We also assume that the husband is three years older than the wife.

## 10. Modified Cash Refund Assumption

We assume that members who elect a single life annuity will receive accumulated benefit payments equal to their contributions after three years of being in receipt.

## 11. 415 (b) Limits

415(b) limits are not applied in the Plan valuation because there is an excess plan that pays benefits above the 415(b) limit.

## 12. Optional Form Load

A load of $0.087 \%$ has been added to the non-retired 401(a) liabilities to account for the election of optional forms other than a single life annuity.

## B. Actuarial Value of Assets

The actuarial value of assets is equal to the market value of assets less a ten-year phase in (five-year phase-in prior to June 30, 2002) of the Excess (Shortfall) between expected investment return and actual income on the market value of assets. There is no corridor around market value within which the actuarial value is required to fall.

## C. Actuarial Funding Method

Costs are determined under the projected unit credit method. The unfunded actuarial accrued liability is funded on a level dollar basis over the period of time described in Section 38-737. For the actuarial valuation as of June 30, 2011, the period is 30 years.

## D. Data for Valuation

In preparing the actuarial valuation as of June 30, 2011, the actuary has relied on data and assets provided by the staff of the Arizona State Retirement System. While not verifying the data at their source, the actuary has performed tests for consistency and reasonableness.

## Schedule of Plan Active Member Valuation Data

 Last 6 Years| Contributing Active Members |  |  |  |  |
| :---: | :---: | ---: | :---: | :---: |
| VALUATION <br> AS OF JUNE 30 | NUMBER | ANNUAL PAYROLL | ANNAL <br> AVERAGE PAY | INCREASE IN <br> AVERAGE PAY |
| 2006 | 217,676 | $8,311,869,615$ | 38,185 | $0.9 \%$ |
| 2007 | 224,001 | $9,161,803,726$ | 40,901 | $7.1 \%$ |
| 2008 | 226,415 | $9,708,352,896$ | 42,879 | $4.8 \%$ |
| 2009 | 222,515 | $9,834,810,345$ | 44,198 | $3.1 \%$ |
| 2010 | 213,530 | $9,419,951,810$ | 44,115 | $-0.2 \%$ |
| 2011 | 208,939 | $9,060,630,604$ | 43,365 | $-1.7 \%$ |

## Schedule of Plan Retirees Added to and Removed From Rolls

Last 6 Years
$\left.\begin{array}{|cccccccc|}\hline \begin{array}{c}\text { Valuation } \\ \text { as of } \\ \text { June 30 }\end{array} & \begin{array}{c}\text { Retirants and } \\ \text { Beneficiaries Added to } \\ \text { Rolls }\end{array} & \begin{array}{c}\text { Retirants and } \\ \text { Beneficiaries Removed } \\ \text { from Rolls }\end{array} & \begin{array}{c}\text { Retirants and } \\ \text { Beneficiaries Rolls End } \\ \text { of Year }\end{array} & \begin{array}{c}\text { \% Increase } \\ \text { in Annual } \\ \text { Allowance }\end{array} & \begin{array}{c}\text { Average } \\ \text { Annual }\end{array} \\ \hline & \text { Allowances }\end{array}\right]$
${ }^{1}$ Cost of Living Increases included here.

## Schedule of HBS Retirees Added to and Removed From Rolls

Last 3 Years ${ }^{2}$

| Valuation as of June 30 | Retirants and <br> Beneficiaries Added to Rolls |  |  | Retirants and Beneficiaries Removed from Rolls |  |  | Retirants and Beneficiaries Rolls End of Year |  |  | Increase in Annual Allowance | Average Annual Allowances |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NO. |  | ANNUAL OWANCES | NO. |  | ANNUAL OWANCES | NO. |  | ANNUAL LOWANCES |  |  |  |
| 2009 | N/A |  | N/A | N/A |  | N/A | 54,753 | \$ | 82,222,248 | N/A | \$ | 1,502 |
| 2010 | 5,689 | \$ | 10,358,376 | 2,647 | \$ | 6,487,680 | 57,795 |  | 86,092,944 | 4.7\% |  | 1,490 |
| 2011 | 6,047 | \$ | 10,459,392 | 3,199 | \$ | 7,707,744 | 60,643 |  | 88,844,592 | 3.2\% |  | 1,465 |

[^10]Schedule of Unfunded (Over) Accrued Liabilities (Plan and HBS combined) Last 10 Years

| Year <br> Ended <br> June 30 | Aggregate Accrued <br> Liabilities Plan | Actuarial Value of Net Plan Assets | Assets as a \% of Accrued Liabilities Plan | Unfunded (overfunded) Accrued Liabilities Plan (UAL) | Active Member Payroll | UAL as a \% of Active Member Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2002 | 22,586,920,751 | 23,623,015,969 | 105\% | $(1,036,095,218)$ | 6,989,339,000 | -14.80\% |
| 2003 | 24,303,639,447 | 23,516,898,511 | 97\% | 786,740,936 | 7,296,827,756 | 10.80\% |
| 2004 | 25,918,329,505 | 23,642,904,763 | 91\% | 2,275,424,742 | 7,485,590,038 | 30.40\% |
| 2005 | 27,942,601,285 | 23,836,519,123 | 85\% | 4,106,082,162 | 8,032,457,947 | 51.10\% |
| 2006 | 29,696,631,262 | 24,851,522,776 | 84\% | 4,845,108,486 | 8,311,869,615 | 58.30\% |
| 2007 | 31,995,671,426 | 26,476,687,905 | 83\% | 5,518,983,521 | 9,161,803,726 | 60.20\% |
| 2008 | 33,870,864,745 | 27,851,825,730 | 82\% | 6,019,039,015 | 9,708,352,896 | 62.00\% |
| 2009 | 35,742,538,572 | 28,360,159,450 | 79\% | 7,382,379,122 | 9,834,810,345 | 75.10\% |
| 2010 | 37,557,862,066 | 28,823,144,688 | 77\% | 8,734,717,378 | 9,419,951,810 | 92.70\% |
| 2011 | 38,555,369,013 | 29,230,960,267 | 76\% | 9,324,408,746 | 9,060,630,604 | 102.90\% |

## Solvency Test (Plan)

Last 10 Years

| Year End June 30 | Aggregate Accrued Liabilities for: |  |  |  |  | Portion of Accrued Liabilities Covered by Net Assets Available for Benefits |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | ACTIVE MEMBER CONTRIBUTIONS | RETIREES AND BENEFICIARIES | ACTIVEMEMBERS(EMPLOYERFINANCEDPORTION)(3) | Net Assets Available for Benefits |  |  |  |
|  |  | (1) | (2) |  |  | (1) | (2) | (3) |
| 2002 |  | 3,046,008,125 | 10,141,767,789 | 8,097,396,037 ${ }^{1}$ | 22,641,693,322 | 100\% | 100\% | 100.0\% |
| 2003 |  | 3,110,690,039 | 10,911,141,534 | 8,912,910,871 ${ }^{1}$ | 22,572,007,289 | 100\% | 100\% | 95.9\% |
| 2004 |  | 3,407,611,954 | 11,888,766,685 | 9,209,865,919 ${ }^{1}$ | 22,659,396,325 | 100\% | 100\% | 79.9\% |
| 2005 |  | 3,717,945,957 | 12,970,620,699 | 9,797,630,212 ${ }^{1}$ | 22,808,290,293 | 100\% | 100\% | 62.5\% |
| 2006 |  | 4,168,243,157 | 13,998,186,812 | 10,025,660,085 ${ }^{1}$ | 23,766,572,590 | 100\% | 100\% | 55.9\% |
| 2007 |  | 5,533,036,906 | 15,191,806,375 | 9,665,632,410 | 25,309,888,063 | 100\% | 100\% | 47.4\% |
| 2008 |  | 6,256,502,949 | 16,357,773,654 | 9,810,200,566 | 26,612,440,139 | 100\% | 100\% | 40.8\% |
| 2009 |  | 7,054,925,502 | 17,455,947,713 | 9,779,242,657 | 27,093,788,614 | 100\% | 100\% | 26.4\% |
| 2010 | 2 | 7,704,328,621 | 19,246,476,421 | 9,121,714,675 | 27,571,999,406 | 100\% | 100\% | 6.8\% |
| 2011 |  | 8,374,149,814 | 20,541,081,742 | 8,135,947,783 | 27,983,517,225 | 100\% | 95.5\% | 0.0\% |

[^11]
## Solvency Test (HBS)

Last 10 Years

| Year End June 30 | Aggregate Accrued Liabilities for: |  |  | Net Assets Available for Benefits | Portion of Accrued Liabilities Covered by Net Assets Available for Benefits |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ACTIVE MEMBER CONTRIBUTIONS <br> (1) | RETIREES AND BENEFICIARIES <br> (2) | ACTIVE MEMBERS (EMPLOYER FINANCED PORTION) |  |  |  |  |
|  |  |  | (3) |  | (1) | (2) | (3) |
| 2002 | - | 455,596,600 | 846,152,200 ${ }^{1}$ | 981,322,647 | 100\% | 100\% | 62.1\% |
| 2003 | - | 517,510,480 | 851,386,523 ${ }^{1}$ | 944,891,222 | 100\% | 100\% | 50.2\% |
| 2004 | - | 533,183,961 | 878,900,986 ${ }^{1}$ | 983,508,438 | 100\% | 100\% | 51.2\% |
| 2005 | - | 552,285,029 | 904,119,388 ${ }^{1}$ | 1,028,228,830 | 100\% | 100\% | 52.6\% |
| 2006 | - | 578,560,443 | 925,980,765 ${ }^{1}$ | 1,084,950,186 | 100\% | 100\% | 54.7\% |
| 2007 | - | 598,088,408 | 1,007,107,327 | 1,166,799,842 | 100\% | 100\% | 56.5\% |
| 2008 | - | 619,808,594 | 826,578,982 | 1,239,385,591 | 100\% | 100\% | 75.0\% |
| 2009 | - | 627,536,754 | 824,885,946 | 1,266,370,836 | 100\% | 100\% | 77.4\% |
| 2010 | - | 652,876,059 | 832,466,290 | 1,251,145,282 | 100\% | 100\% | 71.9\% |
| 2011 | - | 669,593,178 | 834,596,496 | 1,247,433,042 | 100\% | 100\% | 69.2\% |

${ }^{1}$ HBS Liabilities for 2006 and earlier are included in Plan liabilities for inactive members.

## Schedule of Recommended vs. Actual Plan Contributions

Last 10 Years

| Year Ended | Active Member |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| June 30 | Payroll | Employee <br> Contributions | Employer <br> Retirement <br> Contribution <br> Rate - Actual | Actuary <br> Recommended <br> Contribution |
| 2002 | $6,989,000,000$ | $135,274,945$ | $2.00 \%$ | $2.00 \%$ |
| 2003 | $7,297,000,000$ | $142,356,325$ | $5.20 \%$ | $5.20 \%$ |
| 2004 | $7,486,000,000$ | $377,436,100$ | $5.20 \%$ | $5.20 \%$ |
| 2005 | $8,032,000,000$ | $403,269,191$ | $5.20 \%$ | $5.20 \%$ |
| 2006 | $8,312,000,000$ | $570,581,044$ | $6.90 \%$ | 1 |
| 2007 | $9,162,000,000$ | $766,624,734$ | $8.60 \%$ | 1 |
| 2008 | $9,708,000,000$ | $857,502,851$ | $9.10 \%$ | $7.75 \%$ |
| 2009 | $9,835,000,000$ | $844,405,884$ | $8.95 \%$ | 1 |
| 2010 | $9,420,000,000$ | $808,81,419$ | $9.00 \%$ | $8.10 \%$ |
| 2011 | $9,061,000,000$ | $833,205,706$ | $9.60 \%$ | $9.00 \%$ |

[^12]
## Analysis of Financial Experience for the Plan

Last 10 Years (Dollars in Millions)

| Year Ended June 30 | Unfunded <br> Actuarial <br> Liability <br> (UAAL) <br> Prior Year | Normal Cost for the Year | Contributions for the Year | Interest <br> at 8\% <br> on UAAL | On Normal Cost | On Contributions | Total | Expected UAAL | Actual UAAL | Gain (Loss) for the Year ${ }^{1}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2002 | $(2,846.40)$ | 701.14 | (317.73) | (227.71) | 56.09 | (12.71) | (184.33) | $(2,647.32)$ | $(1,356.52)$ | $(1,290.80)$ |
| 2003 | $(1,356.52)$ | 781.41 | (371.27) | (108.52) | 62.51 | (14.85) | (60.86) | $(1,007.24)$ | 362.74 | $(1,369.98)$ |
| 2004 | 362.74 | 900.43 | (786.31) | 29.02 | 72.03 | (31.45) | 69.60 | 546.46 | 1,846.85 | $(1,300.39)$ |
| 2005 | 1,846.85 | 958.24 | (861.35) | 147.75 | 76.66 | (34.45) | 189.95 | 2,133.69 | 3,677.91 | $(1,544.22)$ |
| 2006 | 3,677.91 | 1,023.15 | $(1,171.73)$ | 294.23 | 81.85 | (46.87) | 329.22 | 3,858.54 | 4,425.52 | (566.98) |
| 2007 | 4,425.52 | 1,116.57 | $(1,527.70)$ | 354.04 | 89.33 | (61.11) | 382.26 | 4,396.65 | 5,080.59 | (683.94) |
| 2008 | 5,080.59 | 1,165.17 | $(1,616.67)$ | 406.45 | 93.21 | (64.67) | 434.99 | 5,064.08 | 5,812.04 | (747.96) |
| 2009 | 5,812.04 | 1,205.10 | $(1,598.33)$ | 464.96 | 96.41 | (63.93) | 497.44 | 5,916.24 | 7,196.33 | $(1,280.08)$ |
| 2010 | 7,196.33 | 1,234.67 | $(1,571.82)$ | 575.71 | 98.77 | (62.87) | 611.61 | 7,470.79 | 8,500.52 | $(1,029.73)$ |
| 2011 | 8,500.52 | 1,215.14 | $(1,619.79)$ | 680.04 | 97.21 | (64.79) | 712.46 | 8,808.33 | 9,067.66 | (259.33) |

${ }^{1}$ Gain/Loss includes assumption and plan changes.

## Analysis of Financial Experience for HBS

Last 10 Years (Dollars in Millions)

| Year Ended June 30 | Unfunded <br> Actuarial Liability (UAAL) Prior Year | Normal Cost for the Year | Contributions for the Year | Interest at 8\% on UAAL | On Normal Cost | On Contributions | Total | Expected UAAL | Actual UAAL | $\qquad$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2002 | 259.77 | 45.77 | (4.04) | 20.78 | 3.66 | (0.16) | 24.28 | 325.78 | 320.42 | 5.36 |
| 2003 | 320.42 | 50.32 | (4.26) | 25.63 | 4.03 | (0.17) | 29.49 | 395.97 | 424.00 | (28.03) |
| 2004 | 424.00 | 50.35 | (79.66) | 33.92 | 4.03 | (3.19) | 34.76 | 429.46 | 428.57 | 0.89 |
| 2005 | 428.57 | 51.98 | (85.35) | 34.29 | 4.16 | (3.41) | 35.03 | 430.23 | 428.17 | 2.06 |
| 2006 | 428.17 | 52.31 | (93.46) | 34.25 | 4.18 | (3.74) | 34.70 | 421.72 | 419.59 | 2.13 |
| 2007 | 419.59 | 55.04 | (103.47) | 33.57 | 4.40 | (4.14) | 33.83 | 404.99 | 438.39 | (33.40) |
| 2008 | 438.39 | 53.73 | (99.03) | 35.07 | 4.30 | (3.96) | 35.41 | 428.50 | 207.00 | 221.50 |
| 2009 | 207.00 | 46.38 | (90.48) | 16.56 | 3.71 | (3.62) | 16.65 | 179.55 | 186.05 | (6.50) |
| 2010 | 186.05 | 41.88 | (59.39) | 14.88 | 3.35 | (2.38) | 15.85 | 184.39 | 234.20 | (49.81) |
| 2011 | 234.20 | 40.28 | (51.05) | 18.74 | 3.22 | (2.04) | 19.92 | 243.35 | 256.75 | (13.40) |

Values shown for valuation dates on or after June 30, 2010, for the above two schedules, include System assets and liabilities for members who retired or will retire on or after July 1, 1981.

## History of Contribution Rates

| Fiscal Year <br> Beginning <br> July 1 | Calculated Rates |  | Actual Rates |  |  |  |  |  | Total Rate |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1980 | MEMBER | EMPLOYER | MEMBER | EMPLOYER | CALCULATED ACTUAL |  |  |  |  |  |
| 1981 | $7.00 \%$ | $6.28 \%$ | $7.00 \%$ | $7.00 \%$ | $13.28 \%$ | $14.00 \%$ |  |  |  |  |
| 1982 | $7.00 \%$ | $6.29 \%$ | $7.00 \%$ | $7.00 \%$ | $13.29 \%$ | $14.00 \%$ |  |  |  |  |
| 1983 | $7.00 \%$ | $5.79 \%$ | $7.00 \%$ | $7.00 \%$ | $12.79 \%$ | $14.00 \%$ |  |  |  |  |
| 1984 | $7.00 \%$ | $6.04 \%$ | $7.00 \%$ | $7.00 \%$ | $13.04 \%$ | $14.00 \%$ |  |  |  |  |
| 1985 | $6.27 \%$ | $6.27 \%$ | $6.27 \%$ | $6.27 \%$ | $12.54 \%$ | $12.54 \%$ |  |  |  |  |
| 1986 | $5.67 \%$ | $5.67 \%$ | $5.67 \%$ | $5.67 \%$ | $11.34 \%$ | $11.34 \%$ |  |  |  |  |
| 1987 | $5.53 \%$ | $5.53 \%$ | $5.53 \%$ | $5.53 \%$ | $11.06 \%$ | $11.06 \%$ |  |  |  |  |
| 1988 | $5.16 \%$ | $5.16 \%$ | $4.00 \%$ | $4.00 \%$ | $10.32 \%$ | $8.00 \%$ |  |  |  |  |
| 1989 | $5.09 \%$ | $5.09 \%$ | $5.09 \%$ | $5.09 \%$ | $10.18 \%$ | $10.18 \%$ |  |  |  |  |
| 1990 | $4.69 \%$ | $4.69 \%$ | $2.00 \%$ | $2.00 \%$ | $9.38 \%$ | $4.00 \%$ |  |  |  |  |
| 1991 | $3.82 \%$ | $3.82 \%$ | $3.82 \%$ | $3.82 \%$ | $7.64 \%$ | $7.64 \%$ |  |  |  |  |
| 1992 | $3.60 \%$ | $3.60 \%$ | $3.60 \%$ | $3.60 \%$ | $7.20 \%$ | $7.20 \%$ |  |  |  |  |
| 1993 | $3.59 \%$ | $3.59 \%$ | $3.59 \%$ | $3.59 \%$ | $7.18 \%$ | $7.18 \%$ |  |  |  |  |
| 1994 | $4.09 \%$ | $4.09 \%$ | $3.14 \%$ | $3.14 \%$ | $8.18 \%$ | $6.28 \%$ |  |  |  |  |
| 1995 | $3.75 \%$ | $3.75 \%$ | $3.75 \%$ | $3.75 \%$ | $7.50 \%$ | $7.50 \%$ |  |  |  |  |
| 1996 | $3.95 \%$ | $3.95 \%$ | $3.36 \%$ | $3.36 \%$ | $7.90 \%$ | $6.72 \%$ |  |  |  |  |
| 1997 | $3.20 \%$ | $3.20 \%$ | $3.20 \%$ | $3.20 \%$ | $6.40 \%$ | $6.40 \%$ |  |  |  |  |
| 1998 | $3.05 \%$ | $3.05 \%$ | $3.05 \%$ | $3.05 \%$ | $6.10 \%$ | $6.10 \%$ |  |  |  |  |
| 1999 | $2.85 \%$ | $2.85 \%$ | $2.85 \%$ | $2.85 \%$ | $5.70 \%$ | $5.70 \%$ |  |  |  |  |
| 2000 | $2.17 \%$ | $2.17 \%$ | $2.17 \%$ | $2.17 \%$ | $4.34 \%$ | $4.34 \%$ |  |  |  |  |
| 2001 | $2.73 \%$ | $\mathbf{1}$ | $2.73 \% \mathbf{1}$ | $2.17 \%$ | $2.17 \%$ | $5.46 \%$ |  |  |  |  |

[^13]
## Actuarial Certification - LTD

## buckconsultants

## A Xerox Company

January 20, 2012

Retirement Board
Arizona State Retirement System
3300 North Central Avenue
$14^{\text {th }}$ Floor
Phoenix, AZ 85012
Valuation of the ASRS Long Term Disability Program as of June 30, 2011
Dear Retirement Board Members:
We certify that the information contained in the attached 2011 actuarial valuation report is accurate and fairly presents the actuarial position of the Arizona State Retirement System Long Term Disability Program (the LTD Program) as of June 30, 2011.

We have made all calculations for this report in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, the report's results comply with the requirements of the Arizona Constitution and statutes and, where applicable, the Internal Revenue Code, the Employee Retirement Income Security Act of 1974 (ERISA), and the Statements of the Governmental Accounting Standards Board. The undersigned actuaries are independent. They are both Enrolled Actuaries, members of the American Academy of Actuaries and one is a Fellow and one is an Associate of the Society of Actuaries. Both are experienced in performing valuations for large public retirement systems and are fully qualified to provide actuarial services to the State of Arizona.

## Actuarial Valuations

The primary purpose of the valuation report is to determine the required member and employer contribution rates, to describe the current financial condition of the LTD Program, and to analyze changes in the LTD Program's condition. In addition, the report provides information that ASRS requires for its Comprehensive Annual Financial Report and it summarizes census data.

Valuations are performed annually as of June 30 which is the last day of both the LTD Program year and ASRS' fiscal year.

Retirement Board
January 20, 2012
Page 2

## Funding Objectives

The actuarial valuation calculates the contribution rates payable by members and participating employers. These rates, when applied to payroll, yield contribution amounts sufficient to fund the normal cost plus the amortization of unfunded actuarial accrued liability over a rolling 15-year period. Contribution rates are set annually, based on the valuation of the preceding year. The rate calculated in this report ( $0.49 \%$ in total) will apply in the fiscal year beginning July 1,2012 . The LTD program is meeting its funding objectives. ${ }^{1}$

## Experience Studies

Most of the assumptions of the LTD program are also assumptions of the ASRS defined benefit plan (the Plan). The actuary performs experience studies for ASRS every five years. The most recent experience analysis was completed in the first quarter of 2008 using experience from July 1, 2002 to June 30, 2007. Revised actuarial assumptions were approved and implemented for the June 30, 2008 valuation. Further revised actuarial assumptions were approved and implemented for the June 30, 2009 valuation and the June 30, 2011 valuation.

## Benefit Provisions

There have been no changes in benefit provisions since the last valuation.
The terms of the LTD Program are summarized on pages 13 to 15 of this report. There is no provision for LTD benefits to increase for cost-of-living adjustments.

## Assumptions and Methods

As a result of the experience analysis conducted on actual plan experience from July 1, 2002 to June 30, 2007, revised pre- and post-retirement mortality assumptions were adopted for the June 30, 2008 valuation. Further revised actuarial assumptions were adopted by ASRS for the June 30, 2009 valuation. Rates of retirement, rates of disability and rates of withdrawal were updated to rates recommended as a result of the last experience analysis. A revised salary scale was adopted by ASRS for the June 30, 2011 valuation. The wage inflation rate was decreased by $0.5 \%$.

The actuary originates the assumptions, in consultation with the ASRS Director and other ASRS staff members, and recommends the assumptions to the Board which makes the ultimate decision on which assumptions and methods to use.

The Board elected to use the projected unit credit method. Under this method, actuarial gains (or losses) are subtracted from (or added to) the unfunded actuarial accrued liability.
${ }^{1}$ Subsequent to the completion of this actuarial valuation, the $50^{\text {th }}$ Arizona State Legislature enacted legislation which retro actively reverted the contribution rate back to $50 \%$ for employees and $50 \%$ for employers. This has resulted in a revision of the total LTD rate to $.48 \%$ beginning July 1, 2012.

Retirement Board
January 20, 2012
Page 3

Data
ASRS staff and Sedgwick (the administrator of the LTD program) supplied census data for participants as of June 30, 2011. We have not audited these data, but have examined them for reasonableness and consistency with the prior year's data. ASRS staff also supplied asset information.

## Trend Data and Supporting Schedules

ASRS prepared all trend data schedules in the financial section of ASRS' Comprehensive Annual Financial Report (CAFR). ASRS also prepared all supporting schedules in the actuarial section of the CAFR.

We look forward to discussing this report with you at your convenience.

## Sincerely,



Charles E. Chittenden, FSA, EA, MAAA Principal and Consulting Actuary


Douglas J. Fiddler, ASA, EA, MAAA
Director, Retirement Actuary

## General Actuarial Information - LTD

Effective October 1, 1995, to comply with Internal Revenue Code requirements, liabilities associated with the long-term disability benefit was separated from the Plan. No assets were transferred to the LTD fund. Accordingly, the objectives of the funding method that the Board adopted for the LTD program have been:

- To produce a positive cash flow
- To maintain reasonably stable contribution rates
- To build up the assets gradually

The following table summarizes the key results of the June 30, 2011, actuarial valuation of the Arizona State Retirement System (ASRS) Long Term Disability (LTD) Program.

|  |  |  |
| :--- | ---: | :---: |
| Amount in 000's | $\mathbf{2 0 1 0}$ | $\mathbf{2 0 1 1}$ |
| Normal Cost | 30,456 | $\$$ |
| Actuarial Accrued Liability | 477,266 | 455,695 |
| Valuation Assets | 319,308 | 307,537 |
| Funded Status on Valuation Assets | $66.90 \%$ | $67.49 \%$ |
| Market Value of Assets | 250,378 | 280,856 |
| Funded Status on Market Value of Assets | $52.46 \%$ | $61.63 \%$ |
| Unfunded Actuarial Accrued Liability (UAAL) | 157,958 | 148,158 |
| Past Service Cost | 17,087 | 16,027 |
| Annual Required Contribution (ARC) | 47,544 | 44,192 |
| Payroll | $9,419,952$ | $9,060,631$ |
| ARC as \% of payroll for each employer | $0.23 \%$ | $0.23 \%$ |
| ACR as \% of payroll for each employee | $0.26 \%$ | $0.26 \%$ |
| UAAL as \% of payroll | $1.70 \%$ | $1.60 \%$ |

The following chart will serve to indicate some of the more important statistics regarding the long-term disability program.

| Number of LTD Open Claim Members | 4,609 |  |
| :--- | ---: | ---: |
| Average Age | 54.3 |  |
| Average Monthly Benefit | $\$$ | 1,269 |

[^14]
## Summary of Benefit Provisions - LTD

The Arizona State Retirement System (ASRS) Long Term Disability (LTD) Program began on July 1, 1995. The program covers ASRS LTD Program participants who become disabled on or after July 1, 1995. ASRS members who were receiving LTD benefits prior to July 1, 1995, were transferred to the program on October 1, 1995. Contributions began July 1,1995 , and are now paid $47 \%$ by employers and $53 \%$ by active members. ${ }^{1}$

Below we have summarized the main provisions of the LTD Program.
Effective Date: The plan was established effective July 1, 1995.

Participation: To be eligible, members must be actively at work and engaged to work at least 20 weeks in a fiscal year and at least 20 hours each week. Coverage is contingent on payment of premiums.

Contributions: Members are required to contribute to the LTD Program in accordance with the schedule ratified each year by the Board. The FY13 rate is $0.26 \%$ of payroll. Employers have equal contributions ${ }^{1}$, and the Board allocates all contributions to the LTD Program's depository.

Qualifications for Benefit: Monthly benefits are not payable until a member has been totally disabled for a period of six consecutive months. Monthly benefits are not payable to a member whose disability is due to the following:

1. an intentionally self-inflicted injury
2. war, whether declared or not
3. an injury incurred while engaged in a felonious criminal act or enterprise
4. for employees hired on or after July 1, 1998, any injury, sickness, or pregnancy for which you received medical treatment within three months prior to the effective date coverage began under the LTD Income Plan. Except for any employee who becomes an active contributing member on or after July 1, 2008 and receives medical treatment within six months prior to the date coverage begins under the LTD Income Plan. This exclusion does not apply to a disability commencing after a person has been an active contributing member of a participating employer for twelve continuous months.

Monthly benefits are not payable to a member who is receiving retirement benefits from ASRS.
Totally Disabled: A member is considered totally disabled if:

1. during the first thirty months of a period of disability, the member is unable to perform all duties of the position held by the member when the member became totally disabled; and
2. for a member who has received monthly benefits for 24 or more total months, that a member is unable to perform any work for compensation or gain for which the member is reasonably qualified by education, training, or experience.
${ }^{1}$ Subsequent to the completion of this actuarial valuation, the $50^{\text {th }}$ Arizona State Legislature enacted legislation which retro actively reverted the contribution rate back to $50 \%$ for employees and $50 \%$ for employers, as of July 1, 2011.

## Summary of Benefit Provisions - LTD (continued)

Benefit Amount: Benefits payable from the plan equal two-thirds of a member's monthly compensation at the time of disability. Benefits are offset by:

1. $85 \%$ of social security disability benefits that the member or the member's dependents are eligible to receive;
2. $85 \%$ of social security retirement benefits that the member is eligible to receive;
3. all of any worker's compensation benefits;
4. all of any payments for a veteran's disability if both of the following apply:
a) the veteran's disability payment is for the same condition or a condition related to the condition currently causing the member's total disability;
b) the veteran's disability is due to service in the armed forces of the United States;
5. all of any other benefits by reason of employment that are financed partly or wholly by an employer, including payments for sick leave; and
6. $50 \%$ of any salary, wages, commissions, or similar pay that the member receives or is entitled to receive from any gainful employment in which the member engages.

Benefit Period: Monthly benefits cease to be payable to a member at the earliest of the following:

1. the date the member ceases to be totally disabled;
2. the date the member ceases to be under the direct care of a doctor or refuses to undergo any medical examination requested by the company selected by the Board to administer the LTD Program;
3. the date the member withdraws employee contributions with interest and ceases to be a member; and
4. the later of following:
a) the member's normal retirement date;
b) the month following 60 months of payments if disability occurs before age 65 ;
c) the month following attainment of age 70 if disability occurs at age 65 or after but before age 69 ;
d) the month following twelve-months of payments if disability occurs at or after age 69.

Expenses: Expenses associated with the operation of the LTD Program are payable by the LTD Program. The fee schedule is as follows:

| Administrative: | $\$ 13,000 /$ month |
| :--- | ---: |
| New Claims Fee: | $\$ 420 /$ claim |
| Claims Management: | $\$ 29 /$ claim / month |

Changes in Plan Terms Since the Prior Valuation: The contribution allocation between employees and employers has been changed from $50 \% / 50 \%$ to $53 \%$ for employees and $47 \%$ for employers. ${ }^{1}$

[^15]
## Statement of Actuarial Methods and Assumptions - LTD

We have prepared this report on our actuarial valuation of the assets and liabilities of the Arizona State Retirement System LTD Program as of June 30, 2011, in accordance with generally accepted actuarial principles, and with the requirements of GASB \#43.

The actuarial assumptions and methods on which our valuation has been based are, in our opinion, appropriate for the purpose of our current valuation. The ASRS Board has adopted the assumptions used in this valuation, except for the wage inflation assumption, in its meeting on November 23, 2009. The wage inflation assumption (a $0.50 \%$ decrease from the previous year's assumption) was adopted by the ASRS Board in it meeting on November 18, 2011.

We have not audited the data or the asset information used in this valuation, but believe them to be complete and accurate.

## Summary of Actuarial Methods

The actuarial cost method is the projected unit credit method. Assets are valued at market, less (or plus) an adjustment to reflect investment gains (or losses) over a 10-year period starting as of June 30, 2006. The unfunded actuarial accrued liability is amortized over a rolling 15 year period using a level dollar amortization method.

## Summary of Actuarial Assumptions

The assumptions unique to the LTD valuation were as follows:

## 1. Discount Rate

$8 \%$ per annum, net of investment expenses
2. Rates of Termination of Claims in Payment Due to Death or Recovery

1987 Commissioners' Group Long Term Disability Valuation Table (1987 CGDT), applicable to plans with a sixmonth elimination period.

## 3. Disability Incidence Rates for Active Members

Age and sex based rates as developed for the Plan. Rates at representative ages are given below:

| Age | Males | Females |
| :---: | :---: | :---: |
| 20 | $0.04 \%$ | $0.06 \%$ |
| 30 | $0.05 \%$ | $0.08 \%$ |
| 40 | $0.16 \%$ | $0.16 \%$ |
| 50 | $0.38 \%$ | $0.36 \%$ |
| 60 | $0.90 \%$ | $0.82 \%$ |

## Statement of Actuarial Methods and Assumptions - LTD (continued)

## 4. Offsets for Disabled Members

We are assuming that the amounts the administrator reports as offsets (other than overpayment offsets) will continue to apply to each member's benefit until that benefit expires. For members within first three years of receipt of LTD benefits, we have adjusted benefit amounts to reflect future offsets, assuming $90 \%$ of members will have offsets after 3 years.

We assume that these offsets reduce the gross benefits by $40 \%$. We also assume that the weighted average months of overpayment are equal to 19 months.

These assumptions are reviewed annually.

## 5. Offsets for Active Members

We assume that LTD Program benefits, after all applicable offsets are $60 \%$ of the benefits before the offsets. This is the percentage that applies for currently disabled members and is based on the experience study as of June 30, 2007.

## 6. Administrative Expense Reserve for Active Members

$2.8 \%$ of projected claim liabilities. This is the percentage that applies for currently disabled members.

## 7. Elimination Period

A 3\% reduction in liabilities is applied to reflect the six-month elimination period for benefits.

## 8. Changes in Assumptions Since the Prior Valuation

The wage inflation rate was decreased by $0.50 \%$.

| Years of Service | Previous Salary <br> Scale | Current Salary <br> Scale |
| :---: | :---: | :---: |
| 1 | $9.50 \%$ | $9.00 \%$ |
| 2 | $8.50 \%$ | $8.00 \%$ |
| 3 | $7.00 \%$ | $6.50 \%$ |
| 4 | $6.30 \%$ | $5.80 \%$ |
| 5 | $5.90 \%$ | $5.40 \%$ |
| 6 | $5.75 \%$ | $5.25 \%$ |
| 7 | $5.50 \%$ | $5.00 \%$ |
| 8 | $5.30 \%$ | $4.80 \%$ |
| 9 | $5.25 \%$ | $4.75 \%$ |
| 10 | $5.00 \%$ | $4.50 \%$ |
| 11 to 19 | $4.75 \%$ | $4.25 \%$ |
| 20 or more | $4.50 \%$ | $4.00 \%$ |

All other assumptions are the same as those used in the valuation of the Plan.

## LTD ScheduLEs

## Schedule of Benefit Recipients Added to and Removed from Rolls

Last 6 Years

| $\begin{aligned} & \text { Valuation } \\ & \text { as of } \\ & \text { June } 30 \end{aligned}$ | Retirants and Beneficiaries Added to Rolls |  |  | Retirants and Beneficiaries Removed from Rolls |  |  | Retirants and Beneficiaries Rolls End of Year |  |  | \% Increase in Annual Allowance | Average Annual Allowances |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NO. |  | NNUAL ${ }^{1}$ <br> OWANCES | NO. |  | NNUAL ${ }^{2}$ <br> OWANCES | NO. |  | NNUAL ${ }^{1}$ OWANCES |  |  |  |
| 2006 | 840 | \$ | 16,021,268 | 761 | \$ | 12,191,399 | 5,018 | \$ | 69,413,433 | 5.8\% | \$ | 13,833 |
| 2007 | 800 |  | 15,958,305 | 747 |  | 13,060,111 | 5,071 |  | 72,311,627 | 4.2\% |  | 14,260 |
| 2008 | 640 |  | 12,610,021 | 829 |  | 16,270,484 | 4,882 |  | 68,651,164 | -5.1\% |  | 14,062 |
| 2009 | 723 |  | 15,966,067 | 893 |  | 13,502,776 | 4,712 |  | 71,114,455 | 3.6\% |  | 15,092 |
| 2010 | 789 |  | 17,200,407 | 777 |  | 15,066,829 | 4,724 |  | 73,248,033 | 3.0\% |  | 15,506 |
| 2011 | 752 |  | 15,000,150 | 867 |  | 18,071,429 | 4,609 |  | 70,176,754 | -4.2\% |  | 15,226 |

${ }^{1}$ Reflects actual, but not assumed, benefit offsets. Does not include overpayment offsets.
${ }^{2}$ Includes changes in benefit amounts.

## Schedule of Unfunded (Over) Accrued Liabilities

Last 6 Years
(Dollars in Thousands)

| Year <br> Ended <br> June 30 | Actuarial Accrued Liabilities Plan | Actuarial Value of Net Plan Assets | Assets as a \% of Accrued Liabilities Plan | Unfunded (over funded) Accrued Liabilities Plan (AAL) | Active Member Payroll | UAAL as a \% of Active Member Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2006 | 574,701 | 194,297 | 33.8\% | 380,404 | 8,311,870 | 4.60\% |
| 2007 | 604,486 | 231,685 | 38.3\% | 372,800 | 9,161,804 | 4.10\% |
| 2008 | 553,185 | 274,902 | 49.7\% | 278,283 | 9,708,353 | 2.90\% |
| 2009 | 476,276 | 311,232 | 65.4\% | 165,044 | 9,834,810 | 1.70\% |
| 2010 | 477,266 | 319,308 | 66.9\% | 157,958 | 9,419,952 | 1.70\% |
| 2011 | 455,695 | 307,537 | 67.5\% | 148,158 | 9,060,631 | 1.60\% |

## Solvency Test

Last 6 Years
(Dollars in Thousands)

| Year End June 30 | Aggregate Accrued Liabilities for: |  |  |  | Portion of Accrued Liabilities Covered |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ACTIVE MEMBER CONTRIBUTIONS (1) | RETIREES AND BENEFICIARIES | ACTIVE MEMBERS (EMPLOYER FINANCED PORTION) <br> (3) | Net Assets Available for Benefits | Port <br> Liabi by Availa <br> (1) | n of A ities C Net As ble for <br> (2) | rued ered ts enefits (3) |
| 2006 | - | 247,577 | 327,124 | 194,297 | 100\% | 78\% | 0\% |
| 2007 | - | 274,947 | 329,539 | 231,685 | 100\% | 84\% | 0\% |
| 2008 | - | 233,871 | 319,315 | 274,902 | 100\% | 100\% | 13\% |
| 2009 | - | 235,921 | 240,355 | 311,232 | 100\% | 100\% | 31\% |
| 2010 | - | 242,098 | 235,168 | 319,308 | 100\% | 100\% | 33\% |
| 2011 | - | 234,155 | 221,540 | 307,537 | 100\% | 100\% | 33\% |

## Schedule of Recommended vs. Actual LTD Contributions

## Last 10 Years

(Dollars in Thousands)

| Year <br> Ended <br> June 30 | Active <br> Member <br> Payroll | Employee <br> Contributions | Employer <br> Contribution <br> Rate - Actual | Actuary <br> Recommended <br> Contribution |
| :---: | :---: | ---: | :---: | :---: |
| 2002 | $6,989,000$ | 34,945 | $0.50 \%$ | $0.50 \%$ |
| 2003 | $7,297,000$ | 36,485 | $0.50 \%$ | $0.50 \%$ |
| 2004 | $7,486,000$ | 37,430 | $0.50 \%$ | $0.50 \%$ |
| 2005 | $8,032,000$ | 40,160 | $0.50 \%$ | $0.50 \%$ |
| 2006 | $8,312,000$ | 41,560 | $0.50 \%$ | $0.50 \%$ |
| 2007 | $9,162,000$ | 45,810 | $0.50 \%$ | $0.50 \%$ |
| 2008 | $9,708,000$ | 48,540 | $0.50 \%$ | $0.50 \%$ |
| 2009 | $9,834,810$ | 49,174 | $0.50 \%$ | $0.50 \%$ |
| 2010 | $9,419,952$ | 37,680 | $0.40 \%$ | $0.40 \%$ |
| 2011 | $9,060,630$ | 23,558 | $0.48 \%$ | $0.48 \%$ 1 |

[^16]
## Analysis of Financial Experience for LTD

As of June 30, 2011

## Lives <br> Reserves

## 1. CHANGE IN OPEN CLAIMS RESERVES

The increase in the reserves for payments not yet due on disabled lives may be summarized as follows:

| (a) Open Claims Reserve Liability on July 1, 2010 | 4,724 | $\$$ | $235,540,669$ |
| :--- | :---: | :---: | :---: |
| (b) Change in reserve on 3,857 continuing disabled lives | N/A | $(31,889,111)$ |  |
| (c) Reserves released on terminated lives | $(867)$ | $(22,436,093)$ |  |
| (d) Reserves added on new lives | 752 | $46,476,269$ |  |
| (e) Open Claims Reserve Liability on June 30, 2011 <br> $=(a)+$ (b) + (c) + (d) | 4,609 | $\$ 227,691,734$ |  |

2. DEVELOPMENT OF LIABILITY (GAIN)/LOSS
(a) Actuarial Accrued Liability as of July 1, 2010
\$ 477,265,773
(b) Normal Cost for 2009/2010 30,456,285
(c) Expected Benefit Payments for 2009/2010 71,785,000
(d) Expected Actuarial Accrued Liability on June 30, 2011
$=((a)+(b)) \times 1.08-(c) \times(1+.08 \times 13 / 24) \quad 473,444,140$
(e) Change in Plan Terms

N/A
(f) Change in Assumptions
$(6,202,201)$
(g) Liability (Gain)/Loss
$(11,546,699)$
(h) Actual Actuarial Accrued Liability on June 30, 2011
$=(\mathrm{d})+(\mathrm{e})+(\mathrm{f})+(\mathrm{g})$
\$ 455,695,240
3. SOURCES OF LIABILITY (GAIN)/LOSS

| (a) Offset (Gain)/Loss | $(5,738,891)$ |
| :--- | ---: |
| (b) Liability for members who were terminated in last year's valuation | $8,970,566$ |
| (c) More Terminations than Expected | $(2,998,877)$ |
| (d) Fewer LTD Retirees than Expected | $(6,226,337)$ |
| (e) Salary Gain on Continuing Actives | $(10,226,530)$ |
| (f) New Active Entrants | $5,188,042$ |
| (g) Other (Gain)/Loss | $(514,672)$ |
| (h) Liability $($ Gain $) /$ Loss |  |
| $=(a)+(b)+$ (c) + (d) + (e) $+(f)+(g)$ | $\$(11,546,699)$ |

## 4. DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS

(a) Excess (Shortfall) of Investment Income:
(i) Current Year

| $\$ 36,999,159$ |  |
| ---: | ---: |
| $10,543,678$ |  |
|  | $(68,696,736)$ |
|  | $(44,661,134)$ |
|  | $11,421,699$ |
|  | $1,895,241$ |

(b) Deferral of Excess (Shortfall):
(i) Current Year ( $90 \%$ Deferral)

33,299,243
(ii) Current Year - 1 ( $80 \%$ Deferral)
(iii) Current Year - 2 ( $70 \%$ Deferral)

8,434,942
(iv) Current Year - 3 ( $60 \%$ Deferral)
$(48,087,715)$
(v) Current Year - 4 (50\% Deferral) $(26,796,680)$
(vi) Current Year - 5 (40\% Deferral)

5,710,850
(vi) Total Deferred for the Year

280,855,626
(c) Market Value of Assets as of June 30, 2011
(d) Actuarial Value of Assets as of June 30, $2011=$ (c) - (b) (vi)
\$ 307,536,890
5. DEVELOPMENT OF ASSET (GAIN)/LOSS
(a) Actuarial Value of Assets as of July 1, 2010
(b) Contributions
\$ 319,308,050
(c) Actual Benefit Payments for 2010/2011

43,378,524
(d) Administrative Expenses

66,123,876
(e) Expected Investment Income at 8\% Return $=$
((a) $\times .08)+((b) \times .08 \times 1 / 2)-((c) \times .08 \times 13 / 24)$
2,675,996

| $24,414,417$ |
| ---: |
| $318,301,119$ |
|  |
| $10,764,229$ |
| $\$ \quad 307,536,890$ |

(e) Expected Actuarial Assets as of
(f) Gain/(Loss) on Actuarial Assets
(g) Actuarial Assets as of June 30, $2010=(\mathrm{f})-(\mathrm{g})$
\$ 307,536,890
The asset loss occurred because investment earnings on actuarial assets were less than expected. The actual net return on actuarial assets was $4.47 \%$, compared to the assumption of $8 \%$. The actual net return on market value of assets was $23.66 \%$, compared to the assumption of $8 \%$.

| 6. ANALYSIS OF SEDGWICK OFFSETS | AMOUNT OF <br> MONTHLY <br> OFFSETS | NUMBER WITH <br> OFFSETS |
| :--- | ---: | ---: |
| Description of Offset from Sedgwick as of June 30, 2011 |  |  |
| Social Security Disability | $\$ 2,591,123$ | 3,431 |
| Social Security Retirement | 121,389 | 145 |
| Other | 492,182 | 986 |
| Total | $\mathbf{\$ 3 , 2 0 4 , 6 9 4}$ | $\mathbf{4 , 5 6 2}$ |
| Description of Offset from Sedgwick as of June 30, 2010 |  |  |
| Social Security Disability | $\mathbf{2 , 3 7 8 , 7 7 1}$ | $\mathbf{3 , 4 5 9}$ |
| Social Security Retirement | 143,371 | 169 |
| Other | 446,539 | 918 |
| Total | $\mathbf{\$ 2 , 9 6 8 , 6 8 1}$ | $\mathbf{4 , 5 4 6}$ |

## A. LEGISLATED PLAN CHANGES ENACTED BY THE 1989 LEGISLATURE OF the state of Arizona

## 1. Projected Unit Credit (PUC) Funding Method

Beginning with the June 30, 1989 actuarial valuation, the total employee and employer contributions payable beginning July 1, 1990 shall be determined using the Projected Unit Credit (PUC) funding method.

## 2. $\mathbf{\$ 1 2 , 0 0 0}$ Minimum Average Compensation for Current Retirees

Recalculation of the retirement benefit for all plan members retired before June 30, 1989 who had 10 years of credited service using a minimum average compensation of one thousand dollars per month.

## 3. $\mathbf{2 . 0 \%}$ Ad Hoc COLAs

- Effective July 1, 1989, all members retired on or before June 30, 1988 shall receive a $2.0 \%$ permanent benefit increase to their December 31, 1988 base benefit.
- Effective July 1, 1990, all members retired on or before June 30, 1989 shall receive a $2.0 \%$ permanent benefit increase to their June 30, 1990 base benefit.


## 4. Early Retirement Window

During the period of May 15, 1989 through November 14, 1989 a member who is eligible for either Normal Retirement or Early Retirement with age plus credited service at least equal to 80, may retire and receive a benefit calculated using a $2.2 \%$ multiplier instead of the $2.0 \%$ multiplier in effect at that time.

## 5. 3.0\% Tax Equity Allowance

Retroactive to the later of January 1, 1989 or the date payments commence, each member retiring on or before September 14,1989 shall receive a tax equity benefit allowance consisting of a permanent increase of $3.0 \%$ in his or her January 1, 1989 base benefit.

## B. LEGISLATED PLAN CHANGES ENACTED BY THE 1990 LEGISLATURE OF THE STATE OF ARIZONA

1. Rule of 82

Effective May 1, 1990, the number of points (sum of member's age and years of service) required to be eligible for normal retirement shall be reduced from 85 to 82 . Also, the early retirement reduction factor for employees with 77 or more points but less than 82 points shall be $3 \%$ for each point or fraction thereof less than 82 .

## 2. $\mathbf{3 . 0 \%}$ Tax Equity Allowance

Each member who retires between September 15, 1989 and September 14, 1990 shall receive a tax equity benefit allowance consisting of a permanent increase of $3.0 \%$ in his or her base benefit, retroactive to the date of retirement.

## 3. Graded Vesting for Health Insurance Premium Supplement

The Health Insurance Premium Supplement is extended to those qualifying members with between five and nine years of service. The member will be eligible to receive $10 \%$ of the benefit for each completed year of service (i.e., $50 \%$ to $90 \%$ ).

## C. LEGISLATED PLAN CHANGES ENACTED BY THE 1991 LEGISLATURE OF THE STATE OF ARIZONA

## 1. $\mathbf{3 . 0 \%}$ Tax Equity Allowance

Each member who retires between September 15, 1990 and September 14, 1991 shall receive a tax equity benefit allowance consisting of a permanent increase of $3.0 \%$ in his or her base benefit, retroactive to the date of retirement.

## 2. Recalculation of Retiree Benefits Using $\mathbf{2 . 0 \%}$ Benefit Multiplier

Each retired member with at least 10 years of service who retired prior to June 30,1985 shall have his or her benefit recomputed. The recomputed benefit shall be equal to $2 \%$ times final average earnings times credited service plus an additional $\$ 2$ for each year of service. The retired member will receive the larger of the recalculated benefit or his/her current benefit. This increase is effective October 1, 1991.

## 3. $\mathbf{2 . 3 \%}$ Ad Hoc Increase

Effective July 1, 1991 all members retired on or before June 30, 1990 shall receive a $2.3 \%$ permanent benefit increase in their June 30, 1991 base benefit.

## 4. Rule of $\mathbf{8 0}$

Effective July 1, 1992, the number of points (sum of member's age and years of service) required to be eligible for normal retirement shall be reduced from 82 to 80 . (For continuation purposes this legislation is not reflected until the 1993/94 fiscal year).

## 5. Pop-up Option

A pop-up option is added for retiring members who first participate in the Plan on or after December 31, 1991.

## D. LEGISLATED PLAN CHANGES ENACTED BY THE 1992 LEGISLATURE OF THE STATE OF ARIZONA

## 1. $\mathbf{3 . 0 \%}$ Tax Equity Allowance

Each member who retires between September 15, 1991 and September 14, 1992 shall receive a tax equity benefit allowance consisting of a permanent increase of $3.0 \%$ in his or her base benefit, retroactive to the date of retirement.

## 2. Minimum Retiree Benefit

Each retiree of the Arizona State Retirement Plan who is at least age 75 on December 31, 1992 and who had at least ten years of service upon retirement from the plan ten years of service upon retirement from the plan shall be eligible for a minimum benefit. If the eligible retiree had at least ten years of service but less than fifteen years, his minimum benefit is $\$ 350$ a month. If the eligible retiree had at least fifteen years of service but less than twenty, his minimum benefit is $\$ 500$. If the eligible retiree had at least twenty years of service his minimum benefit is $\$ 600$. The minimum benefit shall be compared to the retiree's current benefit (including all ad hoc increases).

## 3. 5\% Ad Hoc Increase

Effective November 1, 1992 all members retired on or before October 31, 1992 shall receive a 5\% permanent benefit increase in their October 31, 1992 benefit.

## 4. Forfeited Service Repurchase

Any present active member who has previously forfeited service has until December 31, 1994 to repurchase the forfeited service by paying the Plan the employee and employer contributions (accumulated with interest) which would have been contributed during the member's period of forfeited service.

## 5. Repurchase of Service Due to Reduction in Force

Any present active member who was terminated prior to December 31, 1992 as a result of a required reduction in force may purchase the credited service for the following period of unemployment if the member had five or more years of service at the time of termination and resumed employment with a participating employer within two years of termination. The cost of the repurchase is the total of the employee and employer contribution (accumulated with interest) which would have been contributed during the member's period of unemployment.
6. Change in Section 38-781.05 Funding Method

Section 38-781.05 of the plan was amended so that the funding period for the Plan would continue to be the period between valuation and June 30, 2003 as long as the Plan has a negative Unfunded Actuarial Accrued Liability. If the Plan were to have a positive UAAL, then the old funding mechanism would apply.

## E. LEGISLATED PLAN CHANGES ENACTED BY THE 1993 LEGISLATURE OF THE STATE OF ARIZONA

1. No benefit changes were passed by the 1993 Legislature.

However, the Legislature passed legislation to reduce the required contribution rate of $4.09 \%$ down to $3.14 \%$.

## F. LEGISLATED PLAN CHANGES ENACTED BY THE 1994 LEGISLATURE OF THE STATE OF ARIZONA

## 1. Minimum LTD Benefit

Each member on long term disability will receive a minimum monthly benefit of $\$ 50$.

## 2. Minimum Retiree Benefit

Each retiree of the Arizona State Retirement Plan who is at least age 75 and who had 20 or more years of service at retirement will receive a minimum monthly benefit of $\$ 600$.

## 3. Pop-up Benefit

Members who retired prior to January 1, 1992 and who elected a Joint and Survivor option shall receive a "Pop-up" in their retirement income if their beneficiary pre-deceases them.

## 4. Excess Investment Earnings COLA

Retirees at least age 55 who have been retired at least one year and members on long-term disability are eligible to receive a cost-of-living adjustment equal to one-half the increase in CPI for the prior calendar year. The COLA will be paid from a reserve of Excess Investment Earnings. If there are no Excess Investment Earnings in reserve, no COLA will be granted.

## 5. Change in Section 38-737 Funding Period

Section 38-737 was amended to change the funding period of the Plan to a rolling 30-year period. The change is to be phased-in over the next nineteen years. If the Plan ceases to have a surplus, the funding period would immediately go to 30 -years.

## G. LEGISLATED PLAN CHANGES ENACTED BY THE 1995 LEGISLATURE OF THE STATE OF ARIZONA

1. Change in Maximum Increase Provided by Excess Investment Earnings COLA

The maximum COLA payable from Excess Investment Earnings was increased from $50 \%$ to $100 \%$ of the increase in the CPI.

## 2. Removal of LTD Benefit from the Plan

The Legislature established a new LTD program and removed the LTD benefit from the Plan. Liabilities for current LTD recipients will be transferred to the new LTD program effective October 1, 1995.

## 3. Creation of Separate Account for the Health Premium Supplement

The Health Premium Supplement benefit is to be separated into a $401(\mathrm{~h})$ account. The assets and liabilities associated with the Health Premium Supplement will be accounted for separately.

## H. LEGISLATED PLAN CHANGES ENACTED BY THE 1996 LEGISLATURE OF THE STATE OF ARIZONA

## 1. No material changes.

## I. LEGISLATED PLAN CHANGES ENACTED BY THE 1997 LEGISLATURE OF THE STATE OF ARIZONA

1. Creation of family Health Supplement.

Allows unused portion of the Health Supplement of a member or dependent to be used to pay the other recipient's health insurance premium.
2. The calculation methodology for the Excess Investment Earnings COLA was modified.
3. The contribution rate will be determined on a biennial cycle beginning with the 2000 fiscal year.

## J. LEGISLATED PLAN CHANGES ENACTED BY THE 1998 LEGISLATURE OF the state of Arizona

1. No material changes.

## K. LEGISLATED PLAN CHANGES ENACTED BY THE 1999 LEGISLATURE OF the state of arizona

1. Enhanced Refund Option

Employees who terminate prior to eligibility for retirement may elect to receive a refund of their employee contributions with interest. If the employee has at least five years of service, the employee is also entitled to a share of the employer contributions with interest. The share is $50 \%$ with five years of service and increases $10 \%$ for each additional year of service to a maximum of $100 \%$ for ten or more years of service.
2. Benefit Multiplier Increased to $\mathbf{2 . 1 \%}$

The benefit multiplier increased from $2.0 \%$ to 2.1\% effective July 1, 2000.
3. 5\% Ad Hoc Increase

A 5\% retiree ad hoc increase for retirees and beneficiaries effective July 1, 2000.
4. Increase in Maximum Service While on LTD

Increase in the maximum amount of service that may be accrued while on LTD from 25 to 30 .

## 5. Changes in Permanent Benefit Increase COLA

a) The maximum aggregate COLA was increased from $3 \%$ to $4 \%$.
b) The threshold for determining "Excess Earnings" was lowered from $9 \%$ to $8 \%$.
c) The limitation of the COLA to the increase in the CPI was removed.

## L. LEGISLATED PLAN CHANGES ENACTED BY THE 2000 LEGISLATURE OF THE STATE OF ARIZONA

1. The age restriction on the Permanent Benefit Increase was eliminated.

## M. LEGISLATED PLAN CHANGES ENACTED BY THE 2001 LEGISLATURE OF the state of arizona

## 1. Health Insurance Premium Benefit Increase

Increases the health insurance premium benefit for eligible members as follows:

- Benefit for Medicare eligible member with member only coverage increased from $\$ 65$ to $\$ 100$
- Benefit for non-Medicare eligible member with member only coverage increased from $\$ 95$ to $\$ 150$
- Benefit for family coverage where member and dependent are non-Medicare eligible increased from $\$ 175$ to \$260
- Benefit for family coverage where member and dependent are Medicare eligible increased from $\$ 115$ to $\$ 170$
- Benefit for family coverage where member is Medicare eligible and dependent is non-Medicare eligible increased from $\$ 145$ to $\$ 215$
- Benefit for family coverage where member is non-Medicare eligible and dependent is Medicare eligible increased from $\$ 145$ to $\$ 215$


## 2. Graded Multiplier

Provides a graded multiplier in the retirement benefit formula, increasing with years of service according to the following:

- 0.00 to 19.99 Years of Service $2.10 \%$
- 20.00 to 24.99 Years of Service $2.15 \%$
- 25.00 to 29.99 Years of Service $2.20 \%$
- 30.00 or More Years of Service $2.30 \%$


## 3. Employer Option Service Purchase Incentive

Permits an employer to offer a member who is eligible to retire under the Rule of 80 a contract to work an additional three years of employment. No contributions are made to ASRS during the contract. If the employee completes the contract, then they receive an additional three years of service with the option to purchase three more years of service.

## 4. Permanent Benefit Increase Enhancement

Provides that interest at a rate of $8 \%$ be credited on the funds held in reserve for the permanent benefit increase (PBI). This interest will then be used to fund an additional increase for retirees who have at least 10 years of service and who have been retired at least five years. The increase is incremental for each five years of retirement.

## 5. Temporary Rural Health Insurance Premium Benefit

In addition to the premium benefit paid to ASRS retired and disabled members, the Legislature granted a temporary benefit for retired and disabled members who live in areas of the state not served by a managed care program (HMO) and who have 10 years of credited service in the following amounts:

- Benefit for Medicare eligible member with member only coverage of $\$ 170$ per month
- Benefit for non-Medicare eligible member with member only coverage of $\$ 300$ per month
- Benefit for Medicare eligible members with Medicare eligible dependent with family coverage of $\$ 350$ per month
- Benefit for non-Medicare eligible members with non-Medicare eligible dependent with family coverage of $\$ 600$ per month
- Benefit for Medicare eligible members with non-Medicare eligible dependent with family coverage of $\$ 470$ per month
- Benefit for non-Medicare eligible members with Medicare eligible dependent with family coverage of $\$ 470$ per month


## 6. Partial Lump Sum Option

Allows a retiring member to receive a portion of his benefit in a lump sum payment. The lump sum is limited to a maximum of 36 monthly payments. The member's monthly annuity is actuarially reduced to reflect the lump sum payment.

## 7. Maximum Benefit

Members who are hired after the date the graded multiplier became law have a maximum benefit equal to $80 \%$ of the member's 36 -month final average earnings.

## N. LEGISLATED PLAN CHANGES ENACTED BY THE 2002 LEGISLATURE OF THE STATE OF ARIZONA

## 1. No material changes.

## O. LEGISLATED PLAN CHANGES ENACTED BY THE 2003 LEGISLATURE OF THE STATE OF ARIZONA

## 1. Additional Temporary Health Insurance Premium Benefit (Rural Subsidy)

The Legislature extended the additional temporary Rural Health Insurance Subsidy for two years, beginning July 1, 2003 and ending June 30, 2005. The full benefit is provided to retired and disabled members who live in areas of the state not served by a Health Maintenance Organization (HMO) and who have 10 years of credited service. The Rural Health Insurance Subsidy now requires "minimum out of pocket" payments ranging from $\$ 100$ to $\$ 425$ per month, depending on the plan and coverage selected.

|  | Insurance Coverage <br> without Medicare <br> Parts A \& B | Insurance Coverage with <br> Rural Health Insurance Subsidy | Medicare Parts A \& B ${ }^{\mathbf{1}}$ |  |
| :--- | :---: | :---: | :---: | :---: |
| JUNE 1, 2003 - JUNE 30, 2005 | SINGLE | FAMILY | SINGLE | FAMILY |
| Required Minimum Out-of-Pocket Payment | $\$ 125$ | $\$ 425$ | $\$ 100$ | $\$ 200$ |
| Rural Health Insurance Subsidy (Maximums) | Up to $\$ 300$ | Up to $\$ 600$ | Up to $\$ 170$ | Up to $\$ 350$ |

${ }^{1}$ Combination plans that include Medicare eligible and non-Medicare eligible retiree and dependent coverage require a $\$ 400$ monthly out of pocket payment.

## P. LEGISLATED PLAN CHANGES ENACTED BY THE 2004 LEGISLATURE OF the state of Arizona

1. Service Purchase Program

The Arizona Legislature revised the method of calculating the cost of service purchases, so that future purchased would be made at true actuarial present value.

## 2. Early Retirement Incentive Programs

The Arizona Legislature provided that employers that participate in ASRS and offer early retirement incentives to their employees must notify the ASRS of the incentives. ASRS will determine the cost of the incentives and the employers will pay the cost.

## 3. Long-Term Disability Program

The Arizona Legislature revised and clarified LTD provisions so that disabled members will be required to participate in rehabilitation programs and to pursue Social Security Disability benefits. In addition, the legislation limited the receipt of disability benefits on the basis of a member's "own occupation" to 24 months, rather than to 24 consecutive months.

# Q. LEGISLATED PLAN CHANGES ENACTED BY THE 2005 LEGISLATURE OF THE STATE OF ARIZONA 

## 1. Temporary Rural Health Insurance Premium Benefit

The Legislature extended the temporary Rural Health Insurance Subsidy for the next two years, from July 1, 2005 to June 30, 2007. The benefit is provided to Medicare-eligible retirees and disabled members who live in Arizona counties with no Health Maintenance Organization (HMO) service area and who have 10 years of credited service.

## 2. Contribution Rates

The Legislature pegged the contribution rates for fiscal 2006 and 2007 at $6.90 \%$ and $8.60 \%$, respectively. After fiscal 2007, contribution rates are to be determined annually.

## R. LEGISLATED PLAN CHANGES ENACTED BY THE 2006 LEGISLATURE OF the state of arizona

1. Elections After Retirement

Legislature limited the ability of ASRS retirees to rescind their elections after retirement. Specifically, members who have chosen a form with a death benefit can "pop up" once to the single life form, but are then not allowed to "pop down" to a death benefit form. ASRS will implement this provision upon receipt of a private letter ruling from the Internal Revenue Service.

## 2. Conformance with Certain Federal Regulations

State statutes were modified to conform to federal regulations regarding military service purchases, optional forms of retirement benefits, and minimum required distributions.

## 3. Repeal of Deferred Retirement Option Plan

The Legislature repealed the modified Deferred Retirement Option Plan (DROP).

## S. LEGISLATED PLAN CHANGES ENACTED BY THE 2007 LEGISLATURE OF THE STATE OF ARIZONA

## 1. Social Security Offsets and Pre-Existing Condition Period

Offset percentages for Social Security disability benefits were increased from $64 \%$ to $85 \%$ and for Social Security retirement benefits from $83 \%$ to $85 \%$ for members who become disabled on or after July 1, 2008. The pre-existing condition period is increased from three months to six months for members hired on or after July 1, 2008. ASRS is required to recover overpayments by reducing future benefits to a member, beneficiary, or alternate payee.
2. Temporary Rural Health Insurance Premium Benefit

The Legislature extended the temporary Rural Health Insurance Subsidy for two years from July 1, 2007 to June 30, 2009. The benefit is provided to Medicare-eligible retirees and disabled members who live in Apache, Gila, Mohave, or Navajo counties if they have ten years of credited service.

## 3. Exemption of Post-Doctoral Scholars

Effective September 19, 2007, post-doctoral scholars are exempted from ASRS membership.

## 4. Expanded Eligibility for Active Military Service Credit

Effective July 1, 2007, the term "presidential" call-up is changed to "military" call-up. It applies death and disability benefits to those that occur during active military service rather than just to those that are a result of active service. The law allows a member who becomes disabled during or as a result of active service to receive service credit (paid by the employer) from the date active service began through one year after the member's date of disability if the member cannot return to work. The disability provision expires June 30, 2009.

## T. LEGISLATED PLAN CHANGES ENACTED BY THE 2008 LEGISLATURE OF THE STATE OF ARIZONA

1. Unclaimed Property Exemption and Procedures

Legislation exempted ASRS from unclaimed property statutes. ASRS members will forfeit their benefits if they do not claim them by the time they reach age $731 / 2$. If such a member later claims his benefit, his benefit will be restored with interest if applicable. ASRS will send notices to members beginning at age $651 / 2$, and will make efforts to find lost members.

## 2. Divestment from Companies Investing in Iran or Doing Business in Sudan

ASRS must engage with and potentially divest from companies that have invested, since August 5, 1996, \$20 million or more in any year in Iran's petroleum energy sector or that meet specific Sudan-related business operations criteria. Additionally, ASRS must divest from companies that violate paragraph 6(j) of the Export Administration Act.

## 3. Transfer Procedures

For voluntary transfers, the legislation allowed retired or disabled members to elect whether to remain with ASRS or to transfer to another system and specified how a transfer will affect payroll deduction agreements. For a transfer that is mandated by either statute or an employer, the legislation required retired or disabled members to remain with ASRS and specified how a transfer will affect payroll deduction agreements.

## 4. Transfer Out Bills

These bills expanded the ASRS credited service that a dispatcher may transfer to CORP and extended the time-frame for ASRS to transfer assets from 60 to 90 days. They expanded the definition of designated position to include State detention officers and provided that all prior ASRS service will transfer to CORP unless the employee irrevocably elects to remain with ASRS. They allowed the local board of the judiciary to designate certain positions within the Administrative Office to the Courts for membership in CORP.

## 5. Plan Administration

This bill modified one of the salary calculations used for service purchases to be the average of the three pay periods (out of the last five) that remain after the pay periods with the highest and lowest pay are removed. It clarified that the salary calculations used for other public service purchases are also used for leave of absence purchases. It granted the ASRS Board rulemaking authority over the Plan, LTD program, and transfers. It clarified that a member who purchases forfeited service credit is subject to the benefit structure in place when the person again becomes a member. Finally, it required ASRS to recover overpayments by reducing benefits owed to a member, beneficiary, or alternate payee.

## 6. Federal Conforming Changes

The Legislature made changes to comply with federal laws and IRS regulations, most notably the Economic Growth and Tax Relief Reconciliation Act of 2001.

## U. LEGISLATED PLAN CHANGES ENACTED BY THE 2009 LEGISLATURE OF THE STATE OF ARIZONA

## 1. Service Purchase

Effective July 1, 2010, members will be required to have five years of service credit in ASRS before initiating a service purchase.

## 2. $\mathbf{8 0 \%}$ Cap on Benefits

Effective July 1, 2010, the maximum limit on ASRS pensions of $80 \%$ of 36 -month final average earnings is eliminated.

## 3. Return to Work

Retired members who return to work with a suspension of benefits and work for at least 60 consecutive months will be permitted to choose a new optional form of benefit when they again retire.

Retired members are allowed to return to work without suspension if the member returns to a different position that does not require participation and the member participates in another program.

## 4. Administration

ASRS is exempt from State Personnel Management and Personnel Board provisions and the State classification and compensation statute.

## 5. Early Termination Incentives

The scope of the early termination incentive statute is broadened and exceptions are limited.
6. Dual Employment

Contributions from a second employer will count, beginning January 1, 2010, only if member meets 20/20 membership criteria with respect to the second employer, with certain exceptions.

# V. LEGISLATED PLAN CHANGES ENACTED BY THE 2010 LEGISLATURE OF THE STATE OF ARIZONA 

## 1. Average Monthly Compensation

The Average Monthly Compensation used in the retiring member's retirement benefit calculation is changed from the average of the highest consecutive 36 months in the last 120 months to the average of the highest consecutive 60 months in the last 120 months for a member whose membership commences on or after July 1, 2011.

## 2. Normal Retirement Date

The Normal Retirement Date definition is changed from 80 to 85 points (age plus years of service) for a member whose membership commences on or after July 1, 2011.

## 3. Early Retirement Deductions

The Early Retirement reductions were also modified to conform to the 85 point normal retirement for a member whose membership commences on or after July 1, 2011 by adjusting the period over which the reduction is calculated.

## 4. Employer Contribution Refunds

Employer contribution refunds are eliminated for a member hired on or after July 1, 2011 except for a member who was terminated due to an Employer Reduction in Force or position eliminated, in which case the member will receive the current refund vesting schedule.

## 5. Long-Term Disability Plan Appeals

A person appealing an ASRS decision under the LTD Program (usually a decision of an Administrative Law Judge) may request that the ASRS Board hear the appeal in Executive Session, rather than in a Public Hearing. The request for Executive Session must be made at least 48 hours in advance and the Board shall then conduct the hearing in Executive Session. The Board is required to follow existing Executive Session procedures established in the Open Meeting Law statutes. Minutes of and discussions held at an Executive Session are confidential except from the appellant for use in the appellant's further appear to the Superior Court.

## 6. Health Insurance

A retiree may no longer purchase individual health care coverage and receive the Health Benefit Supplement (HBS). [NOTE: this provision will not eliminate the HBS or ASRS insurance enrollees or retirees enrolled in their former Employer's insurance.] ASRS may continue to pay the HBS to a retiree who is receiving the payment under the current statutory provisions (one retiree).

## 7. Compensation

I.R.C. 415 Compensation Regulations and military differential wage payments from the Heroes Earnings Assistance and Relief Tax Act of 2008 (HEART Act) have been updated as required by the Internal Revenue Service.

# W.LEGISLATED PLAN CHANGES ENACTED BY THE 2011 LEGISLATURE OF THE STATE OF ARIZONA 

## 1. Eligibility of New State Employees

State employees hired after July 20, 2011, will not be eligible for the ASRS Plan or LTD program before their $27^{\text {th }}$ week of employment, unless they are already members of ASRS.

## 2. Normal Retirement Age

For members whose membership commenced on or after July 1, 2011, the 85 -point requirement is removed and replaced by two rules: age 60 and 25 years of credited service or age 55 and 30 years of credited service. Early retirement reductions are adjusted to reflect these new rules.

## 3. Service Purchase Rules

Purchases of Other Public Service, Leave of Absence Service, and Military Service (except USERRA or Heart Act purchases) are limited to 60 months for each type of purchase, and a member is required to have ten years of credited service before initiating a request to purchase such service.

## 4. Return to Work Rules

Employers are required to pay an Alternate Contribution Rate (ACR) for retired members who return to work on or after July 1, 2012, in any capacity and in a position ordinarily filled by an employee of the employer. The ACR is the greater of $2 \%$ or the contribution rate to fund the deficits of the Plan and LTD program, but not greater than the employer's portion of the total contribution rate for the Plan and LTD program.

## 5. Split of Contributions

Retroactive to July 1, 2011, responsibility for making contributions to the ASRS Plan and LTD programs is changed from $50 \%$ employees and $50 \%$ employers to $53 \%$ employees and $47 \%$ employers. Pre-retirement survivor benefits are based on the sum of the employee and employer balances, rather than twice the employee balance. ${ }^{1}$
${ }^{1}$ Subsequent to the completion of this actuarial valuation, the $50^{\text {th }}$ Arizona State Legislature enacted legislation which retro actively reverted the contribution rate back to $50 \%$ for employees and $50 \%$ for employers, beginning July 1, 2011.

## V. Statistical Section

This part of the Arizona State Retirement System's Comprehensive Annual Financial Report presents detailed information as a context for understanding what the information in the financial statements, note disclosures, and required summary information says about the ASRS's overall financial health.

## Financial Trends

These schedules contain trend information to help the reader understand how the ASRS's Financial Performance has changed over the past 10 years.
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## Revenues

These schedules contain information to help the reader understand the ASRS's funding over the last 10 years.
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## Operations

These schedules contain information about the ASRS's Operations.
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Schedules and information is derived from ASRS internal sources unless otherwise noted.

# Net Assets <br> Last 10 Fiscal Years (Dollars in Thousands) 



| LTD Net Assets | Fiscal Year |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ASSETS |  | 2003 |  | 2004 |  | 2005 |  | 2006 |  | 2007 |  | 2008 |  | 2009 |  | 2010 |  | 2011 |  | 2012 |
| Cash, Receivables, and Prepaids | \$ | 4,145 | \$ | 7,641 | \$ | 14,040 | \$ | 15,241 | \$ | 10,565 | \$ | 12,331 | \$ | 11,998 | \$ | 6,808 | \$ | 6,371 | \$ | 7,172 |
| Investments at Fair Value |  | 108,364 |  | 130,428 |  | 151,025 |  | 180,983 |  | 233,148 |  | 233,062 |  | 215,151 |  | 243,823 |  | 274,734 |  | 250,594 |
| Total Assets |  | 112,509 |  | 138,069 |  | 165,065 |  | 196,224 |  | 243,713 |  | 245,393 |  | 227,149 |  | 250,631 |  | 281,105 |  | 257,766 |
| LIABILITIES |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Investments Payable |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |
| Other Payables |  | 2,308 |  | 207 |  | 231 |  | 222 |  | 227 |  | 222 |  | 4,341 |  | 252 |  | 250 |  | 443 |
| Total Liabilities |  | 2,308 |  | 207 |  | 231 |  | 222 |  | 227 |  | 222 |  | 4,341 |  | 252 |  | 250 |  | 443 |
| TOTAL NET ASSETS | \$ | 110,201 | \$ | 137,862 | \$ | 164,834 | \$ | 196,002 | \$ | 243,486 | \$ | 245,171 | \$ | 222,808 | \$ | 250,379 | \$ | 280,855 | \$ | 257,323 |

## Changes in Net Assets

Last 10 Fiscal Years (Dollars in Thousands)



# Actual Contribution Rates <br> Last 10 Fiscal Years 

| Retirement ${ }^{\mathbf{1}}$ <br> Contribution Rates | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | 2.00 | 5.20 | 5.20 | 6.90 | 8.60 | 9.10 | 8.95 | 9.00 | 9.60 | 10.50 |
| Member | 1.94 | 4.10 | 4.10 | 5.77 | 7.55 | 8.05 | 7.99 | 8.34 | 9.01 | 9.87 |


| HBS <br> Contribution Rates | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0.06 | 1.10 | 1.10 | 1.13 | 1.05 | 1.05 | 0.96 | 0.66 | 0.59 | 0.63 |
| Employer |  |  |  |  |  |  |  |  |  |  |


| LTD <br> Contribution Rates | Fiscal Years |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| Member | 0.49 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.40 | 0.25 | 0.24 |
| Employer | 0.49 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.40 | 0.25 | 0.24 |

${ }^{1}$ The above schedule does not include System retirees.
Source: Buck Consultants, LLC

## OPERATIONS

## Members by Type of Benefit As of June 30, 2012

| Retirement <br> Monthly Benefit ${ }^{2}$ | Options $^{\mathbf{1}}$ |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |

${ }^{1}$ OPTIONS KEY

1. Life Annuity
2. Life Annuity - guaranteed 5 years
3. Life Annuity - guaranteed 10 years
4. Life Annuity - guaranteed 15 years
5. Joint Annuity - 100 percent to contingent survivor
6. Joint Annuity - $662 / 3$ percent to contingent survivor
7. Joint Annuity - 50 percent to contingent survivor
${ }^{2}$ Most recent information available is 2012.

Source: Buck Consultants, LLC

| HBS Monthly Benefits | Members |
| :--- | ---: |
| $\$ 1-199$ | 64,770 |
| $\$ 200-299$ | 3,308 |
| $\$ 300-399$ | 280 |
| $\$ 400$ \& Over | 0 |
| Total | $\mathbf{6 8 , 3 5 8}$ |

Source: ASRS Pension Administration System

| LTD MONTHLY BENEFIT | MEMBERS |
| :--- | ---: |
| $\$ 1-299$ | 8 |
| $\$ 300-499$ | 31 |
| $\$ 500-999$ | 421 |
| $\$ 1,000-1,499$ | 1,092 |
| $\$ 1,500-1,999$ | 1,160 |
| $\$ 2,000$ \& over | 1,934 |
| TOTAL | $\mathbf{4 , 6 4 6}$ |

Source: Sedgwick CMS

## Average Benefit Payments Last 10 Fiscal Years

| Retirement | Years of Credited Service |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45+ |
| FISCAL YEAR 2002 |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Benefit | \$ 142 | \$ 317 | \$ 664 | \$1,042 | \$1,578 | \$2,368 | \$2,990 | \$3,286 | \$3,195 | \$3,958 |
| Number of Retirees | 1,397 | 9,357 | 12,188 | 10,145 | 10,443 | 10,023 | 5,399 | 1,193 | 182 | 19 |
| FISCAL YEAR 2003 |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Benefit | \$ 149 | \$ 328 | \$ 695 | \$1,068 | \$1,571 | \$2,312 | \$2,957 | \$3,314 | \$3,535 | \$4,335 |
| Number of Retirees | 1,555 | 9,744 | 12,811 | 10,568 | 11,103 | 10,838 | 6,477 | 1,373 | 203 | 25 |
| FISCAL YEAR 2004 |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Benefit | \$ 139 | \$ 345 | \$ 726 | \$1,109 | \$1,629 | \$2,384 | \$3,092 | \$3,499 | \$3,863 | \$4,413 |
| Number of Retirees | 1,716 | 10,153 | 13,268 | 10,984 | 11,747 | 11,567 | 7,607 | 1,611 | 248 | 30 |
| FISCAL YEAR 2005 |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Benefit | \$ 125 | \$ 326 | \$ 687 | \$1,742 | \$1,995 | \$2,460 | \$2,894 | \$3,035 | \$3,082 | \$2,817 |
| Number of Retirees | 1,697 | 10,290 | 13,540 | 19,674 | 16,813 | 8,394 | 2,815 | 550 | 77 | 3 |
| FISCAL YEAR 2006 |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Benefit | \$ 126 | \$ 334 | \$ 702 | \$1,746 | \$2,079 | \$2,541 | \$3,001 | \$3,190 | \$3,427 | \$3,255 |
| Number of Retirees | 1,889 | 10,789 | 13,986 | 19,845 | 18,680 | 9,419 | 3,215 | 592 | 81 | 2 |
| FISCAL YEAR 2007 |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Benefit | \$ 121 | \$ 329 | \$ 697 | \$1,743 | \$2,101 | \$2,572 | \$3,034 | \$3,268 | \$3,616 | \$4,542 |
| Number of Retirees | 2,124 | 11,416 | 14,534 | 20,663 | 20,232 | 10,474 | 3,454 | 615 | 78 | 4 |
| FISCAL YEAR 2008 |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Benefit | \$ 122 | \$ 339 | \$ 717 | \$1,106 | \$1,655 | \$2,425 | \$3,273 | \$3,776 | \$4,422 | \$4,760 |
| Number of Retirees | 2,952 | 12,530 | 15,527 | 13,045 | 14,970 | 14,789 | 12,392 | 2,347 | 361 | 43 |
| FISCAL YEAR 2009 |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Benefit | \$ 195 | \$ 339 | \$ 715 | \$1,105 | \$1,663 | \$2,435 | \$3,321 | \$3,862 | \$4,453 | \$4,845 |
| Number of Retirees | 3,385 | 13,236 | 16,321 | 13,658 | 15,995 | 15,587 | 13,314 | 2,499 | 380 | 49 |
| FISCAL YEAR 2010 |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Benefit | \$ 119 | \$ 338 | \$ 714 | \$1,108 | \$1,674 | \$2,445 | \$3,342 | \$3,900 | \$4,533 | \$5,040 |
| Number of Retirees | 4,011 | 14,223 | 17,233 | 14,418 | 17,150 | 16,581 | 14,549 | 2,691 | 399 | 52 |
| FISCAL YEAR $2011{ }^{\mathbf{1}}$ |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Benefit | \$ 121 | \$ 339 | \$ 716 | \$1,111 | \$1,681 | \$2,457 | \$3,368 | \$3,944 | \$4,661 | \$5,134 |
| Number of Retirees | 4,420 | 15,231 | 18,329 | 15,157 | 18,371 | 17,557 | 15,608 | 2,840 | 426 | 57 |

${ }^{1}$ Most recent information available.
Note: The above schedule does not include System retirees.
Average final salary information is not available.
Source: Buck Consultants, LLC

# Average Benefit Payments Last 7 Fiscal Years 

| HBS | Years of Credited Service |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5 | 6 | 7 | 8 | 9 | 10 or more |
| FISCAL YEAR 2006 |  |  |  |  |  |  |
| Average Monthly Benefit | \$ 65 | \$ 71 | \$ 81 | \$ 86 | \$ 103 | \$ 130 |
| Number of HBS Participants | 1,008 | 861 | 872 | 869 | 895 | 47,117 |
| FISCAL YEAR 2007 |  |  |  |  |  |  |
| Average Monthly Benefit | \$ 57 | \$ 69 | \$ 83 | \$ 89 | \$ 96 | \$ 130 |
| Number of HBS Participants | 1,046 | 877 | 903 | 885 | 891 | 49,368 |
| FISCAL YEAR 2008 |  |  |  |  |  |  |
| Average Monthly Benefit | \$ 61 | \$ 72 | \$ 76 | \$ 89 | \$ 97 | \$ 130 |
| Number of HBS Participants | 1,082 | 917 | 911 | 934 | 897 | 51,167 |
| FISCAL YEAR 2009 |  |  |  |  |  |  |
| Average Monthly Benefit | \$ 61 | \$ 70 | \$ 78 | \$ 89 | \$ 100 | \$ 130 |
| Number of HBS Participants | 1,123 | 941 | 916 | 951 | 906 | 53,198 |
| FISCAL YEAR 2010 |  |  |  |  |  |  |
| Average Monthly Benefit | \$ 61 | \$ 67 | \$ 76 | \$ 86 | \$ 97 | \$ 127 |
| Number of HBS Participants | 1,149 | 941 | 928 | 998 | 924 | 54,589 |
| FISCAL YEAR 2011 |  |  |  |  |  |  |
| Average Monthly Benefit | \$ 59 | \$ 67 | \$ 75 | \$ 87 | \$ 92 | \$ 126 |
| Number of HBS Participants | 1,252 | 1,018 | 999 | 1,057 | 983 | 58,656 |
| FISCAL YEAR 2012 |  |  |  |  |  |  |
| Average Monthly Benefit | \$ 64 | \$ 74 | \$ 78 | \$ 96 | \$ 100 | \$ 144 |
| Number of HBS Participants | 1,352 | 1,074 | 1,087 | 1,094 | 1,045 | 62,706 |

Note: Information prior to 2006 is not available.
Source: ASRS Pension Administration System

# Average Benefit Payments <br> <br> Last 7 Fiscal Years 

 <br> <br> Last 7 Fiscal Years}

| LTD |  |
| :--- | ---: |
| FISCAL YEAR 2006 |  |
| Average Monthly Benefit | $\$ 1,689$ |
| Number of LTD Participants | 4,968 |
| FISCAL YEAR 2007 |  |
| Average Monthly Benefit | $\$ 1,743$ |
| Number of LTD Participants | 4,976 |
| FISCAL YEAR 2008 |  |
| Average Monthly Benefit | $\$ 1,823$ |
| Number of LTD Participants | 4,957 |
| FISCAL YEAR 2009 |  |
| Average Monthly Benefit | $\$ 1,886$ |
| Number of LTD Participants | 4,672 |
| FISCAL YEAR 2010 |  |
| Average Monthly Benefit | $\$ 1,966$ |
| Number of LTD Participants | 4,797 |
| FISCAL YEAR 2011 |  |
| Average Monthly Benefit | $\$ 1,931$ |
| Number of LTD Participants | 4,785 |
| FISCAL YEAR 2012 |  |
| Average Monthly Benefit | $\$ 1,240$ |
| Number of LTD Participants | 4,646 |

Note: Long term disability payments are based on salary and not years of credited service. Information prior to 2006 is not available.

Source: Sedgwick CMS

## Principal Participating Employers Current Year and Nine Years Ago

| Participating Employer | 2012 |  |  | 2003 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | COVERED <br> EMPLOYEES | RANK | $\begin{gathered} \text { \% OF } \\ \text { MEMBERSHIP } \end{gathered}$ | COVERED <br> EMPLOYEES | RANK | $\begin{gathered} \text { \% OF } \\ \text { MEMBERSHIP } \end{gathered}$ |
| Dept Of Administration | 26,998 | 1 | 12.60\% | 30,289 | 1 | 14.95\% |
| Maricopa County | 8,992 | 2 | 4.20\% | 9,467 | 3 | 4.67\% |
| Mesa Unified Dist 4 | 8,466 | 3 | 3.95\% | 8,178 | 4 | 4.04\% |
| Tucson Unified Dist 1 | 7,087 | 4 | 3.31\% | 7,416 | 5 | 3.66\% |
| University Of Arizona | 7,061 | 5 | 3.29\% | 7,047 | 6 | 3.48\% |
| Maricopa County Community College District | 6,729 | 6 | 3.14\% | 4,672 | 9 | 2.31\% |
| Arizona State University | 5,323 | 7 | 2.48\% | 4,843 | 8 | 2.39\% |
| Pima County | 5,274 | 8 | 2.46\% | 6,471 | 7 | 3.19\% |
| Gilbert Unified Dist 41 | 4,647 | 9 | 2.17\% |  |  |  |
| Chandler Unified Dist 80 | 4,141 | 10 | 1.93\% |  |  |  |
| Maricopa County School Office |  |  |  | 13,440 | 2 | 6.63\% |
| Maricopa Country Health Services |  |  |  | 4,069 | 10 | 2.01\% |
| ${ }^{1}$ All other | 129,628 |  | 60.48\% | 106,754 |  | 52.68\% |
| Total | 214,346 |  | 100\% | 202,646 |  | 100.00\% |


| In 2012, "All Other" consisted of: |  |  |
| :--- | ---: | ---: |
| TYPE | NUMBER | EMPLOYEES |
| Public Schools | 239 | 87,482 |
| Charter Schools | 148 | 4,691 |
| Cities | 80 | 17,192 |
| Counties | 13 | 8,040 |
| Higher Education | 10 | 5,698 |
| Other | 93 | 6,525 |
| Total | $\mathbf{5 8 3}$ | $\mathbf{1 2 9 , 6 2 8}$ |

Note: All participating employers participate in the retirement, HBS and LTD Plans.
Source: ASRS Pension Administration System


## ARIZONA STATE RETIREMENT SYSTEM

A Component Unit of the State of Arizona
Visit ASRS Online at: www.azasrs.gov

3300 North Central Avenue
Phoenix, AZ 85012

7660 E. Broadway Blvd., Suite 108
Tucson, AZ 85710


[^0]:    ${ }^{2}$ The difference is due to rounding adjustment resulting from the retroactive reversion of the contribution rate from 53/47 back to $50 / 50$ as of July 1, 2011.

[^1]:    ${ }^{1}$ Values shown for valuation dates on or after June 30,2010 include System liabilities and assets for members who retired or will retire on or after July $1,1981$.

[^2]:    ${ }^{1}$ Return on Private Equity Investments have not been included in Total Fund Performance for FY 2008 or 2009.

[^3]:    Note: A detailed listing of investments is available upon request.
    Direct inquiries to: ASRS, 3300 North Central Avenue, Phoenix, AZ 85012

[^4]:    Note: A complete list of private equity and opportunistic investments appears on pages 90 and 91 , respectively.

[^5]:    Note: A detailed listing of broker commissions is available upon request.

[^6]:    ${ }^{1}$ Subsequent to the completion of this actuarial valuation, the $50^{\text {th }}$ Arizona State Legislature enacted legislation which retroactively reverted the contribution rate percentage back to $50 \%$ for employees and $50 \%$ for employers, as of July 1, 2011.

[^7]:    ${ }^{1}$ Subsequent to the completion of this actuarial valuation, the $50^{\text {th }}$ Arizona State Legislature enacted legislation which retroactively reverted the contribution rate back to $.48 \%$, shared equally by employees and employers, as of July 1, 2011.

[^8]:    ${ }^{1}$ Subsequent to the completion of this actuarial valuation, the $50^{\text {th }}$ Arizona State Legislature enacted legislation which retroactively reverted the contribution rate percentage back to $50 \%$ for employees and $50 \%$ for employers, as of July 1,2011 .

[^9]:    ${ }^{1}$ Total salary increase rate $=$ wage inflation (or growth) rate $(3.25 \%)+$ productivity increase rate $(0.75 \%)+$ merit component ${ }^{2}$
    ${ }^{2}$ Wage inflation assumption was lowered $0.50 \%$ pursuant to Board action on November 18, 2011.

[^10]:    ${ }^{2}$ Information not available for prior years.
    ${ }^{3}$ Includes 679 System members receiving HBS benefits and 1,705 members receiving LTD benefits and HBS benefits.

[^11]:    ${ }^{1}$ 401(a) liabilities for 2006 and earlier include 401 (h) liabilities for inactive members.
    ${ }^{2} 2010$ and subsequent years results include System liabilities and assets for members who retired or will retire on or after July1, 1981.

[^12]:    ${ }^{1}$ The $7.75 \%$ rate was determined in the 2004 valuation and would have applied to the 2006/2007 biennium. The Legislature adopted a stairstep approach to increasing contribution rates and set the rate at $6.9 \%$ for fiscal year 2006 and $8.6 \%$ for fiscal year 2007.

[^13]:    ${ }^{1}$ Hypothetical Rate. The actual contribution rate was set by the prior year valuation.
    ${ }^{2}$ Legislation action has fixed the rates for fiscal 2006and 2007 at $6.9 \%$ and $8.6 \%$ respectively.
    ${ }^{3}$ Includes System liabilities and assets for members who retired and will retire on or after July 1, 1981. Reflects the change in contribution responsibility from $50 \%$ employees and $50 \%$ employers to $53 \%$ employees and $47 \%$ employers.
    ${ }^{4}$ Reflects the change in contribution responsibility from $50 \%$ employees and $50 \%$ employers to $53 \%$ employees and $47 \%$ employers.
    ${ }^{5}$ Subsequent to the completion of this actuarial valuation, the 50th Arizona State Legislature enacted legislation which retroactively reverted the contribution rate percentage back to $50 \%$ for employees and $50 \%$ for employers, as of July 1, 2011.

[^14]:    ${ }^{1}$ Subsequent to the completion of this actuarial valuation, the $50^{\text {th }}$ Arizona State Legislature enacted legislation which retro actively reverted the contribution rate back to $50 \%$ for employees and $50 \%$ for employers, as of July 1, 2011.

[^15]:    ${ }^{1}$ Subsequent to the completion of this actuarial valuation, the $50^{\text {th }}$ Arizona State Legislature enacted legislation which retro actively reverted the contribution rate back to $50 \%$ for employees and $50 \%$ for employers, as of July 1, 2011.

[^16]:    ${ }^{1}$ Subsequent to the completion of the June 30, 2011 Actuarial Valuation which set the LTD rate at $.50 \%$ beginning July 1, 2011, the $50{ }^{\text {th }}$ Arizona State Legislature enacted legislation which retroactively reverted contribution rates back to $50 \%$ for employees and $50 \%$ for employers and resulted in a revision of the LTD rate to $.48 \%$ beginning July 1, 2011.

