Comprehensive Annual Financial Report

Arizona State Retirement System

A component unit of the State of Arizona

2016

For Fiscal Year Ended June 30, 2016

Delivering Service With

PRIDE

The Arizona State Retirement System

Our Vision:

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

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

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

Our Values:

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

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

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

Diversity
Engagement of diversity by the appreciation, recognition and support for all people will propel the organiztion 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. Kevin McCarthy, Chair
Paul Matson, Executive Director

Report prepared by the staff of the Arizona State Retirement System

Comprehensive Annual Financial Report
for fiscal year ended June 30, 2016

2016

Table of Contents

Introductory Section

Financial Section

Table of Contents

Investment Section

Table of Contents

Actuarial Section

Retirement and Health Benefit Supplement

Long Term Disability

Legislative Plan Changes

Table of Contents

Statistical Section

Financial Trends

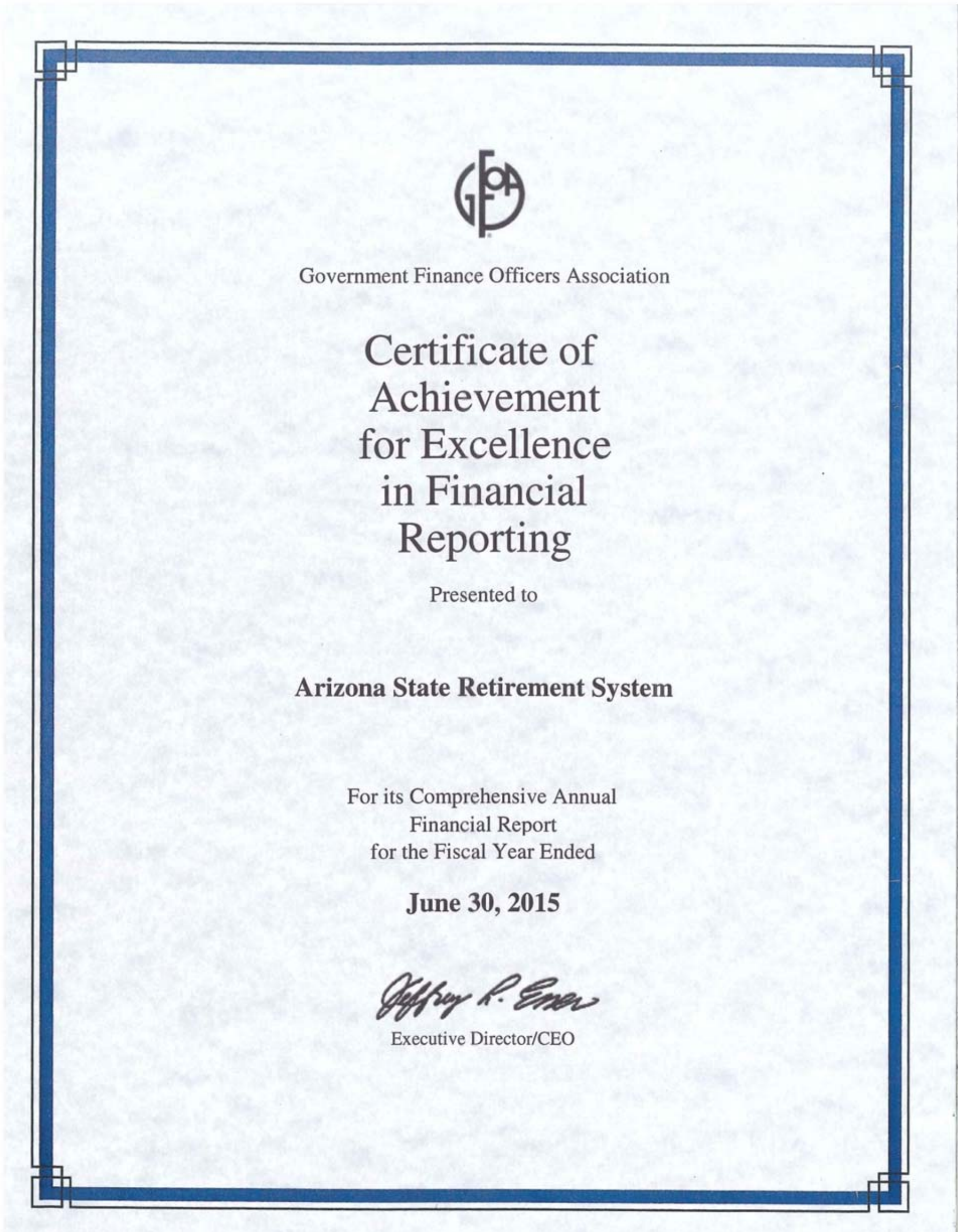
Revenues

Operations

Schedules and information are derived from ASRS internal sources unless otherwise noted.

introductory section

Certificate of Achievement for Excellence in Financial Reporting



Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

Arizona State Retirement System

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2015

Executive Director/CEO

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, 2015. This was the 27th 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
2016

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)

Alan H. Winkle
Program Administrator

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 2016. 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 12th consecutive year that the Arizona State Retirement System has received this prestigious award.

ARIZONA STATE RETIREMENT SYSTEM
3300 NORTH CENTRAL AVENUE • PO BOX 33910 • PHOENIX, AZ 85067-3910 • PHONE (602) 240-2000
4400 EAST BROADWAY BOULEVARD • SUITE 200 • TUCSON, AZ 85711-3554 • PHONE (520) 239-3100
TOLL FREE OUTSIDE METRO PHOENIX AND TUCSON 1 (800) 621-3778
WWW.AZASRS.GOV
Paul Matson
Director

December 16, 2016

To: The Arizona State Retirement System Board of Trustees

We are pleased to present, on behalf of the ASRS staff, the 63rd Comprehensive Annual Financial Report (CAFR) of the Arizona State Retirement System (ASRS), a component unit of the State of Arizona, for the fiscal year ended June 30, 2016.

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. Cost/benefit considerations, the risk of management override, and the risk of collusion are inherent limitations on any system of internal control.

CliftonLarsonAllen LLP has issued an unmodified (“clean”) opinion on the ASRS financial statements for the year ended June 30, 2016. 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, which became effective July 1, 1971. At June 30, 2016, total ASRS membership, including active, inactive, disabled and retired members was 573,844. There are 578 employer units participating in the ASRS, including school districts, charter schools, state colleges and universities, and local, county and state government.

In addition to pension benefits, the ASRS provides a health insurance premium benefit supplement (Health Benefit Supplement, HBS) 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.

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) if their employer has joined the plan. The SSDP is a qualified supplemental defined contribution plan under 403 (b) and 457 (b) of the Internal Revenue Code. In addition, the SRSP is a qualified supplemental defined contribution plan under 401 (a) of the Internal Revenue Code.

During fiscal year 2016, more than 142,203 retired annuitants, their survivors, and 4,032 disabled members received approximately $3 billion in benefits. As of June 30, 2016, there were 45,901 retired members and their families enrolled in the ASRS-sponsored medical program and 58,294 retired members and their families enrolled in dental plans through the ASRS.

Major Initiatives for Fiscal Year 2016

Investments

- Continued implementation of Strategic Asset Allocation ("SAA") adopted in March of 2015
  - Achieved target funding for real estate and private equity portfolios
  - Made substantial progress in implementing private debt with target funding projected to be achieved during the 2016/2017 fiscal year
  - Realigned equity and fixed income portfolios as envisioned in the SAA
- Upgraded compliance systems
  - The ASRS now tests all trades for policy and statutory compliance on a daily basis.
  - The ASRS implemented a private markets compliance monitoring program to test that valuation, expense and fee policies are all properly implemented in accordance with the partnership agreements and with appropriate reporting to the partners.
- Improved cash management and assetization operations in the following areas:
  - Reducing cash balances
  - Ensuring 100% assetization on a daily basis
  - Improving returns associated with the assetization process
- Began implementation of improved performance measurement systems
  - The ASRS completed systems for equity portfolio including returns and style based analysis.
  - Planned completion of fixed income and total fund systems during the 2016/2017 fiscal year.

Benefits Processing and Customer Service Improvements

- Disbursement of benefits: The ASRS completed the first year of a 4 year, $3.4 million effort to build an internal benefit disbursement process. Currently, the ASRS contracts with an external vendor to perform these services. When this project is complete, the agency expects to significantly reduce its yearly costs to disburse benefits. Yearly savings are estimated to be approximately $750,000 per year.
- Transfer processing improvements: The ASRS automated and improved its process for calculating and disbursing transfers to other in-state retirement systems.
- ASRS online health insurance enrollment: The ASRS built an online health insurance enrollment application for retirees to use when enrolling, changing, or removing ASRS medical and/or dental insurance age. The new application is expected to be in place for the fall 2016 open enrollment.
- Employer website improvements: Improvements were made to the secure employer website portal to improve its usability. In addition, a new secure message center was completed that will improve communications capability between employers and ASRS staff.
- Member website improvements: A new secure message center was completed that will improve communications capabilities between members and ASRS staff.

Administration

- Technology Systems: The ASRS is more than halfway through a $10.2 million effort to modernize and reengineer its legacy PERIS applications, written in Oracle Forms, to a Java-based environment. The Oracle Modernization Project, when complete, will modernize all the following benefit applications:
  - Member summary information used by front-line contact staff (complete)
  - Participant demographics (complete)
  - Employer demographics (complete)
  - Member accounting and maintenance (complete)
  - Service audit (complete)
  - Service purchase (in process)
  - Health insurance (in process)
  - Benefits accounting
  - Contributions accounting
  - Accounts Receivable Ledger
  - Fiscal Year End Close

Annualized Rates of Return (Net of Fees)

	1 Year	3 Year	5 Year	10 Year	Since Inception (June 30, 1975)
ASRS Retirement and Health Benefit Supplement Fund	0.6%	7.1%	7.1%	6.0%	9.6%

The ASRS has investment guidelines for its internal and external investment managers and a set of policies, procedures, compliance requirements, and oversight of internal investment management to ensure that investment assets are prudently managed. Both internally and externally generated compliance procedures are in place. Details of ASRS investment policies and 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. The Arizona Revised 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 a funded status of 100%. According to the most recently available actuarial valuation, dated June 30, 2015, the total actuarial value of the retirement fund and the HBS fund assets was $34.6 billion. The total actuarial accrued liability of these funds was $44.6 billion. The unfunded actuarial accrued liability of $10 billion results in an actuarial funding ratio of 77.5% for the total plan, which is a slight increase from 76.9% at June 30, 2014.

A detailed discussion of funding is provided in the Actuarial Section of this report.

Contribution Rate Projections

Although the ASRS funds are well-diversified and professionally managed, they incurred significant losses during the 2011 stock market correction and the global financial crisis of 2008 and 2009. These market corrections and crises, combined with a lower economic growth environment, significant prior benefit increases, and low contribution rates, have caused the combined Pension and Health Benefit Supplement contribution rates to rise significantly. These higher rates are now expected to last several more years before gradually beginning to fall.

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, 2015. The ASRS has received this prestigious award in each of the last 27 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 for one year only. 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, 2015 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. 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 current year. This is the fourth year the ASRS has received this award.

In addition, the Public Pension Coordinating Council awarded a Pension Standards Award for 2016 to the ASRS for meeting professional standards, 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. The areas assessed are comprehensive benefits program, funding adequacy, actuarial, audit, investments and communications. The Pension Standards Award is valid for one year. This is the 12th year the ASRS has received this award.

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.

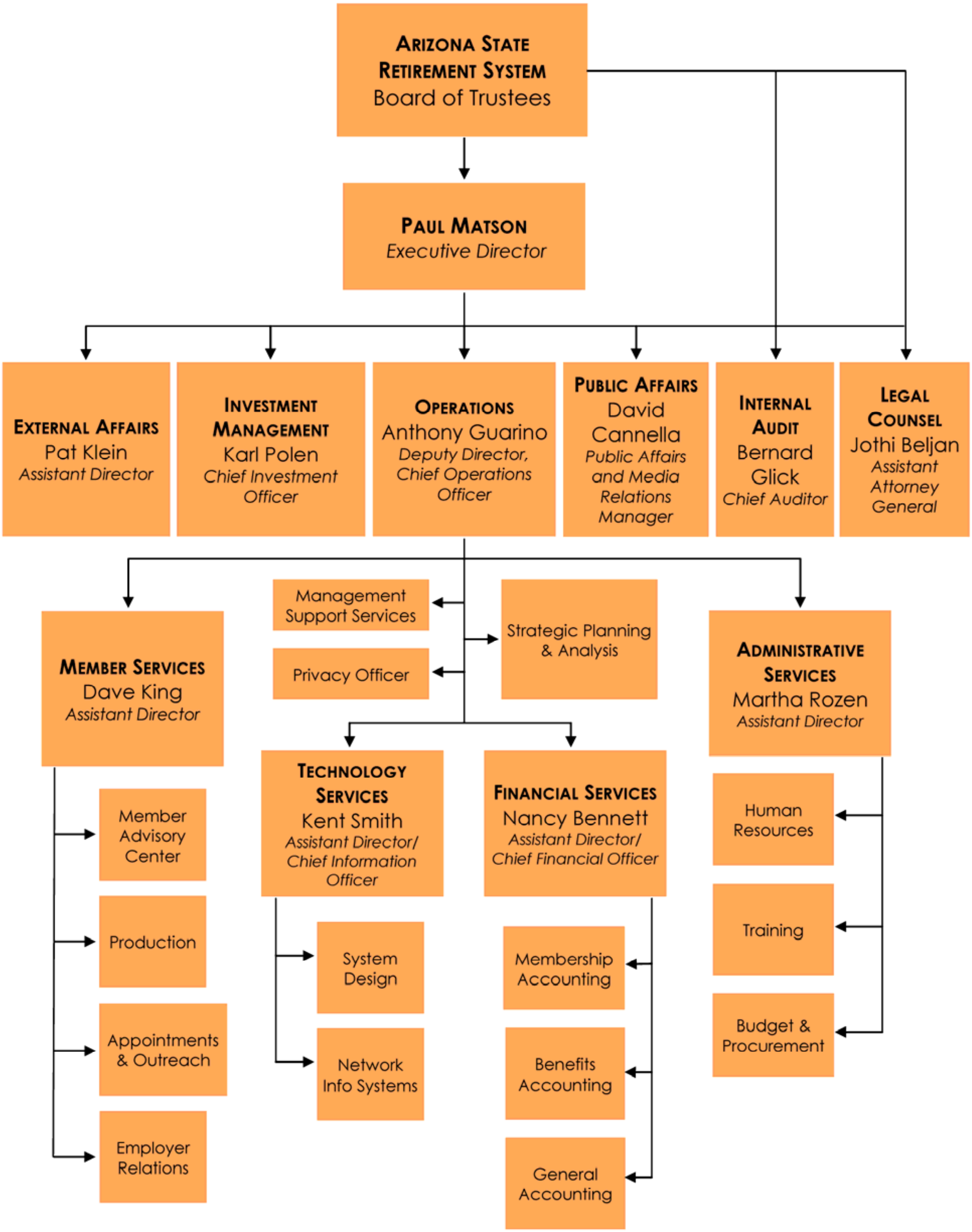
We would like to express our gratitude to the ASRS Board for its support and leadership in planning and conducting the financial affairs of the ASRS in a responsible and progressive manner. The ASRS Board, along with the ASRS Executive and Senior Management and the entire staff of the ASRS has been instrumental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

Respectfully submitted,

Paul Matson, Executive Director

Nancy Bennett, Chief Financial Officer

Organization Chart



Kevin McCarthy
Board Chair
Public

Tom Connelly
Public

Dennis Hoffman
Public

Dr. Richard Jacob
Educators

Tom Manos
Retirees

Clark Partridge
State Employees

Jeff Tyne
Political Subdivisions

Robert Wadsworth
Public

Lorenzo Romero
Members at Large

As of June 30, 2016

Paul Matson
Executive Director

Anthony Guarino
Deputy Director,
Chief Operations Officer

Karl Polen
Chief Investment Officer

Outside Professional Consultants

Actuarial Services	**Gabriel Roeder Smith & Company** Irving, TX
	Buck Consultants Phoenix, AZ
Long Term Disability Benefits	**Sedgwick Claims Management Services Company** Calabasas, CA
Custodial Bank	**State Street Bank and Trust Co.** Boston, MA
Pension Disbursement Services	**State Street Retiree Services** Jacksonville, FL
Independent Auditors	**CliftonLarsonAllen, LLP** Baltimore, MD
General Investment Consultant	**NEPC, LLC** Cambridge, MA
Private Real Estate Consultant	**RCLCO** Bethesda, MD
Private Equity Consultant	**Meketa Investment Group** Boston, MA
Investment Managers	Please refer to the Schedule of Broker Commissions, which begins on page 89 in the Investment Section, and the Schedule of Investment Fees on page 93 in the Investment Section.

financial section

CliftonLarsonAllen LLP
CLAconnect.com

INDEPENDENT AUDITORS' REPORT

The Honorable Douglas A. Ducey, Governor
State of Arizona and
Board of Trustees
Arizona State Retirement System

Report on the Financial Statements

We have audited the financial statements of the Arizona State Retirement System (ASRS), a component unit of the State of Arizona, which comprise the Combined Statements of Fiduciary Net Position as of June 30, 2016, the related Combined Statements of Changes in Fiduciary Net Position for the year then ended, and the related Notes to the Basic Financial Statements, as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. 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 from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the net position of the ASRS as of June 30, 2016, and the respective changes in its net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

A member of Nexia International

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis and the Schedules of Funding Progress, Contributions from Employer, Changes in the Net Pension Liability, Net Pension Liability, Employer Contributions, and Investment Returns, and related Notes, as listed in the table of contents, be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the 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 financial statements, and other knowledge we obtained during our audit of the 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.

Other Information

Our audit was conducted for the purpose of forming an opinion on the ASRS' financial statements. The Additional Supplementary Information, as listed in the table of contents, is presented for purposes of additional analysis and is not a required part of the financial statements.

The Additional Supplementary Information, as listed in the table of contents, is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. Such information has been subjected to the auditing procedures applied in the audit of the financial statements and certain 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, Investment, Actuarial and Statistical sections, as listed in the table of contents, have not been subjected to the auditing procedures applied in the audit of the financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated December 16, 2016 on our consideration of the ASRS' 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 internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the ASRS' internal control over financial reporting and compliance.

CliftonLarsonAllen LLP

CliftonLarsonAllen LLP

Baltimore, Maryland
December 16, 2016

This section presents Management's Discussion and Analysis (MD&A) of the Arizona State Retirement System's (ASRS) fiduciary net position and changes in fiduciary net position for the fiscal year ended June 30, 2016. 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 fiscal year 2016, the ASRS' assets decreased slightly due to lower investment earnings and increased benefit payments compared to fiscal year 2015. The lower investment earnings is primarily due to a slowed global economy for much of the fiscal year.

- At June 30, 2016, the ASRS held investments of $34.1 billion (excludes securities lending balances), a decrease of $1.1 billion from fiscal year 2015.
- The combined investment portfolio experienced a return of 0.6%, compared to 3.2% in fiscal year 2015.

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 fiduciary net position held in trust for benefits, for each of the funds administered by the ASRS, which includes Retirement, HBS and LTD, as of June 30, 2016. This financial information also summarizes the combined changes in fiduciary net position held in trust for benefits, for the year then ended. The information available in each of these sections is briefly summarized as follows:

Basic financial statements - For the fiscal year ended June 30, 2016, financial statements are presented for the funds administered by the ASRS. These fiduciary funds are held in trust for the benefit of the ASRS members.

- The Combined Statements of Fiduciary Net Position are presented as of June 30, 2016. This financial statement reflects the resources available to pay benefits to members, including retirees and beneficiaries, as of the end of the fiscal year.
- The Combined Statements of Changes in Fiduciary Net Position are presented for the year ended June 30, 2016. This statement reflects the changes in resources available to pay benefits to retirees and other beneficiaries for the year.

Notes to the Basic Financial Statements - The notes to the basic financial statements provide additional information, which 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 22-46 of this report.

Required Supplementary Information - The required supplementary information consists of six schedules and related notes. The Schedule of Funding Progress – HBS and LTD, and the Schedule of Contributions from Employer – HBS and LTD relate to the Health Benefit Supplement program, and the Long Term Disability program administered by the ASRS. The Schedule of Changes in the Net Pension Liability – Retirement, Schedule of Net Pension Liability – Retirement, Schedule of Employer Contributions – Retirement, and Schedule of Investment Returns – Retirement, relate to the retirement programs administered by the ASRS.

Additional Supplementary Schedules - These schedules include the Combining Schedules of Fiduciary Net Position and Changes in Fiduciary Net Position for the ASRS Plan and System retirement programs. 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 and trust. Detailed information about administrative expenses, consultant fees and investment expenses are also included in this section.

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. The 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.

Fiduciary Net Position – The ASRS total fiduciary net position held in trust for benefits at June 30, 2016 was $34.6 billion, a 2.4% decrease from $35.5 billion at June 30, 2015. The retirement fund's fiduciary net position was $32.9 billion compared to $33.6 billion last year, a 2.3% decrease. The HBS' fund net position was $1.5 billion at year end compared to $1.6 billion at fiscal year 2015, a 1.9% decrease. The LTD fund's fiduciary net position was $206 million at year end compared to $247 million last year, a 16.5% decrease. The decrease in the total fiduciary net position and the fiduciary net position of its individual funds is primarily due to lower investment earnings and increased retirement benefit payments, compared to fiscal year 2015.

Changes in Fiduciary Net Position - For the 2016 fiscal year, member and employer contributions totaled $2.1 billion, which was consistent with to the 2015 fiscal year contributions. There were no significant changes in the number of active plan members or contribution rates. Retirement and HBS contributions decreased from 11.48% in fiscal year 2015 to 11.35% in fiscal year 2016. LTD contribution rates were unchanged from fiscal year 2015 to 2016. For employers, the alternate contribution rate decreased from 9.57% in 2015 to 9.36% in 2016.

For fiscal year 2016, the ASRS recognized total net investment income of $235 million, which is a decrease in net investment income from $892 million in 2015. This 74% decrease is primarily due to a slowed global economy for much of the fiscal year, and the adverse market reaction to the British vote to exit from the European Union which occurred immediately before year end.

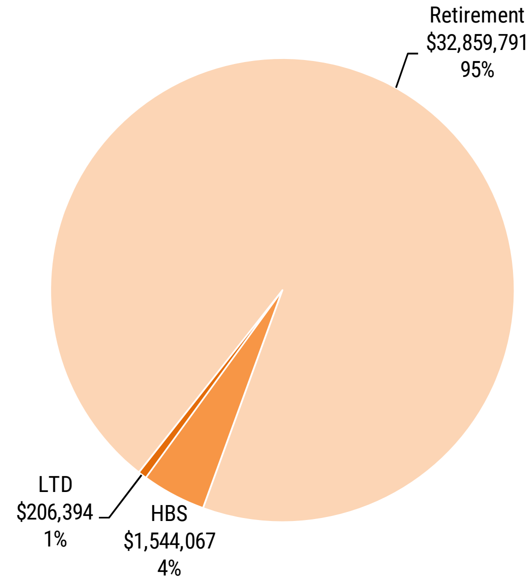
Deductions from the ASRS net position held in trust for benefits consist primarily of retirement, disability, health insurance, survivor benefits, member refunds and administrative expenses. For the 2016 fiscal year, retirement, disability, health insurance and survivor benefits totaled $3.0 billion, an increase of 4.3% over the $2.8 billion paid during fiscal year 2015. The 4.3% increase is attributed to an increase in total members or beneficiaries receiving benefits from 137,942 in fiscal year 2015, to 142,203 in fiscal year 2016. Refunds and transfers to other plans totaled $259 million in fiscal year 2016, a 1.2% increase from the $256 million paid out in fiscal year 2015. In fiscal year 2016, the cost of administering the ASRS benefits totaled $26.6 million, a decrease of 12.9% from the $30.6 million paid in fiscal year 2015, which is attributed to cost reduction initiatives, and a recovery of administrative expenses from prior years.

Exhibit F-1: ASRS Position by Fund

June 30, 2016

(Dollars in thousands)

Net Position by Fund



The following tables show the principal ASRS net position and changes in net position for fiscal years 2016 and 2015, in thousands of dollars:

Exhibit F-2: Condensed Summary of Fiduciary Net Position

(Dollars in thousands)

	2016	2015	Change	% Change
Assets				
Cash and receivables	$ 1,040,295	$ 317,175	$ 723,120	228.0%
Investments	34,094,867	35,237,203	(1,142,336)	-3.2%
Securities lending	287,489	314,730	(27,241)	-8.7%
Total assets	35,422,651	35,869,108	(446,457)	-1.2%
Liabilities				
Payables and other liabilities	524,910	88,164	436,746	495.4%
Securities lending	287,489	314,730	(27,241)	-8.7%
Total Liabilities	812,399	402,894	409,505	101.6%
Net Position Restricted for Pension/OPEB Benefits	$ 34,610,252	$ 35,466,214	$ (855,962)	-2.4%

Exhibit F-3: Condensed Summary of Changes in Fiduciary Net Position

(Dollars in thousands)

	2016	2015	Change	% Change
Additions				
Member contributions	$ 1,047,704	$ 1,042,679	$ 5,025	0.5%
Employer contributions	1,073,182	1,069,232	3,950	0.4%
Other income	8,455	31,507	(23,052)	-73.2%
Service credit purchase and transfers in	25,466	20,702	4,764	23.0%
Investment and security lending income	407,828	1,050,271	(642,443)	-61.2%
Investment and security lending expense	(173,285)	(158,367)	(14,918)	-9.4%
Total additions	2,389,350	3,056,024	(666,674)	-21.8%
Deductions				
Retirement and disability benefits	2,920,487	2,805,420	115,067	4.1%
Survivor benefits	38,863	33,034	5,829	17.6%
Refunds and transfers	259,323	256,243	3,080	1.2%
Administration and other	26,639	30,576	(3,937)	-12.9%
Total deductions	3,245,312	3,125,273	120,039	3.8%
Net Change	(855,962)	(69,249)	(786,713)	-1,136%
Net Position Restricted for Pension/OPEB Benefits				
Net position beginning of year	35,466,214	35,535,463	(69,249)	-0.2%
Net position end of year	$ 34,610,252	$ 35,466,214	$ (855,962)	-2.4%

Funded Status - Effective June 30, 2014, the ASRS implemented Governmental Accounting Standards Board Statement No. 67, Financial Reporting for Pension Plans, an amendment of GASB Statement No. 25 (GASB 67). GASB 67 requires public employee pension plans which have certain characteristics and whose assets are administered through trusts to use a prescribed accounting methodology for financial reporting purposes. The ASRS Retirement Fund meets the criteria to comply with GASB 67. As a result, the ASRS conducts two actuarial valuations each year for the Retirement Fund, one for accounting purposes and one for funding purposes. The differences between the two methodologies are as follows:

Exhibit F-4: Valuation Methodologies

Item	GASB 67 Methodology	ASRS Funding Methodology
Actuarial Method	Entry Age Normal	Projected Unit Credit
Assets	Market Value	Actuarial Value
Permanent Benefit Increase Included?	Yes	No
Discount Rate	8%	8%

In order to determine the Retirement Fund's funded status under GASB 67, the ASRS used the most recently available actuarial valuation, dated June 30, 2015, and rolled it forward to June 30, 2016. The Retirement Fund's net position at June 30, 2016 was $32.9 billion and the total pension liability was $49.0 billion, which results in a net pension liability of $16.1 billion. The Retirement Funds' fiduciary net position as a percentage of the total pension liability was 67.1%. The notes to the basic financial statements as well as the required supplementary information disclose more detailed information about the Retirement Fund's net pension liability.

The Health Benefit Supplement Fund and the Long Term Disability Fund are not subject to GASB 67 and those funds continue to use the same methodology for both financial reporting and funding purposes. The fiduciary net position at June 30, 2016 of the Health Benefit Supplement Fund was $1.5 billion and the Long Term Disability Fund fiduciary net position was $206 million. The funded status of the Health Benefit Supplement Fund and the Long Term Disability Fund at June 30, 2015, the most recently available actuarial valuation date, was 90% and 79%, respectively.

The Schedule of Funding Progress for the Health Benefit Supplement Fund and Long Term Disability Fund are presented in the required supplementary information.

A detailed discussion of the funded status of the Retirement Fund, the Health Benefit Supplement Fund and the Long Term Disability Fund, based on the ASRS funding methodology, is contained in the Actuarial Section of this report.

Investments - During the fiscal year 2016, the ASRS investments were broadly diversified in domestic and international equities, domestic fixed income, real estate, private equity, opportunistic, commodities and cash equivalent instruments. A few highlights of the year are as follows:

- As of June 30, 2016, the fund held investments of $34.1 billion (excludes securities lending balances), a decrease of $1.1 billion from the prior year.
- The combined investment portfolio generated approximately $235 million in net investment earnings during the year.
- The combined investment portfolio experienced a return of 0.6% compared to the Interim Total Fund Benchmark return of (0.6)%.
- The decrease in investments during the year is primarily due to a slowed global economy for much of the fiscal year, and the adverse market reaction to the British vote to exit the European Union that immediately preceded year end.

A detailed discussion of investments is provided in the Notes to the Basic Financial Statements and the Investment Section of this report.

Request for Information – This financial report is designed to provide a general overview of the Arizona State Retirement System's finances. Questions concerning any of the information provided in this report or requests for additional information should be addressed to:

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

Combined Statements of Fiduciary Net Position

As of June 30, 2016

(Dollars in thousands)

	Retirement Fund	Health Benefit Supplement Fund	Long Term Disability Fund	Combined
Assets				
Cash	$ 9,696	$ 421	$ 7	$ 10,124
Receivables:				
Accrued interest and dividends	48,138	2,103	-	50,241
Securities sold	822,847	35,291	-	858,138
Futures contracts	26,916	1,054	-	27,970
Contributions	64,542	960	461	65,963
Due from other funds	2,967	7,774	3,050	13,791
Other	606	8,530	4,932	14,068
Total receivables	966,016	55,712	8,443	1,030,171
Investments:				
Short-term investments	828,304	139,781	2,838	970,923
Equity	17,932,143	779,855	117,412	18,829,410
Fixed income	8,934,482	386,882	52,519	9,373,883
Real estate	3,217,229	138,990	22,198	3,378,417
Commodities	-	-	3,314	3,314
Multi-asset	976,903	41,770	-	1,018,673
Other	498,479	21,768	-	520,247
Total investments	32,387,540	1,509,046	198,281	34,094,867
Securities lending collateral	275,684	11,805	-	287,489
Total assets	33,638,936	1,576,984	206,731	35,422,651
Liabilities				
Securities purchased	454,264	19,593	-	473,857
Securities lending collateral	275,684	11,805	-	287,489
Futures contracts	14,799	633	-	15,432
Due to other funds	13,791	-	-	13,791
Other	20,607	886	337	21,830
Total liabilities	779,145	32,917	337	812,399
Net position restricted for pension/OPEB benefits	$ 32,859,791	$ 1,544,067	$ 206,394	$ 34,610,252

The accompanying notes are an integral part of these statements.

Combined Statements of Changes in Fiduciary Net Position

For the Year Ended June 30, 2016

(Dollars in thousands)

	Retirement Fund	Health Benefit Supplement Fund	Long Term Disability Fund	Combined
Additions				
Contributions:				
Member contributions	$ 1,036,714	$ -	$ 10,990	$ 1,047,704
Employer contributions	1,015,974	46,046	11,162	1,073,182
Transfers from other plans	1,701	-	-	1,701
Purchased Service	23,765	-	-	23,765
Total Contributions	2,078,154	46,046	22,152	2,146,352
Investment Activity:				
Investment activity income (loss):				
Net appreciation (depreciation) in fair value of investments	(43,278)	501	(196)	(42,973)
Interest	127,317	5,487	2	132,806
Dividends	264,844	11,417	-	276,261
Other income	34,513	1,490	19	36,022
Total investment activity income (loss)	383,396	18,895	(175)	402,116
Investment activity expense:				
Management fees	(157,646)	(6,745)	(212)	(164,603)
Custody fees	(1,140)	(50)	-	(1,190)
Consultant and legal fees	(5,249)	(228)	-	(5,477)
Internal investment activity expense	(3,437)	(149)	-	(3,586)
Total investment activity expenses	(167,472)	(7,172)	(212)	(174,856)
Net income (loss) from investment activities	215,924	11,723	(387)	227,260
Securities lending activities:				
Securities lending income	5,476	236	-	5,712
Interest rebate	2,564	111	-	2,675
Management fees	(1,058)	(46)	-	(1,104)
Net income from securities lending activities	6,982	301	-	7,283
Total net investment income (loss)	222,906	12,024	(387)	234,543
Other income	-	8,455	-	8,455
Total additions	2,301,060	66,525	21,765	2,389,350
Deductions				
Retirement and disability benefits	2,765,668	94,754	60,065	2,920,487
Survivor benefits	38,863	-	-	38,863
Refunds to withdrawing members, including interest	258,315	-	-	258,315
Administrative expenses	22,965	999	2,298	26,262
Transfers to other plans	1,008	-	-	1,008
Other	96	-	281	377
Total deductions	3,086,915	95,753	62,644	3,245,312
Net decrease in net position	(785,855)	(29,228)	(40,879)	(855,962)
Net position restricted for pension/OPEB benefits				
Beginning of year	33,645,646	1,573,295	247,273	35,466,214
End of year	$ 32,859,791	$ 1,544,067	$ 206,394	$ 34,610,252

The accompanying notes are an integral part of these statements.

Note 1. Plan Description

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 pension plan has two components, the Plan and the System (collectively, Retirement Fund). The accumulated assets of the Retirement Fund are utilized to pay benefits to members of either component. The Plan is a defined benefit plan and the System is a closed defined contribution plan, with guaranteed benefits. These plans are administered through a trust.

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 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 non-retired 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 (HBS) and long term disability benefits (LTD), respectively. Effective July 1, 1995, the ASRS established an account for each benefit program and has reported those funds in the basic financial statements. Both the Health Benefit Supplement (HBS) Program and the Long Term Disability (LTD) Program are cost-sharing, multiple-employer 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 utilized solely for the payment of HBS eligible member benefits. The LTD Fund is administered through a separate trust, distinct from the trust that administers the Retirement Program and the HBS Fund.

Plan Administration - The operations and administration of the ASRS is vested with the ASRS Board of Trustees, which is comprised of nine members, whom are appointed by the Governor and confirmed by the Arizona Senate pursuant to A.R.S. §38-211. The ASRS Board of Trustees is responsible for establishing and maintaining the funding policy.

The composition of the ASRS Board, their qualifications and term are defined in A.R.S. §38-713. Five of the trustees must be ASRS members each representing one of the following member groups; an educator, an employee of a political subdivision, a retired member, an employee of the State and an at large member who may represent any ASRS member group. Each trustee representing an ASRS member group must have no less than five years of administrative management experience. Additionally, four trustees, who are not ASRS members are appointed to represent the public. Four trustees of the ASRS Board must have a minimum of 10 years of investment experience. There is no limit on the number of terms a trustee may serve.

Reporting Entity – The financial statements of the ASRS include the financial activities of the Retirement Fund, HBS Fund and LTD Fund. The ASRS is considered a component unit of the State of Arizona reporting entity and is included in the State's financial reports as a pension trust fund.

ASRS Membership - at June 30, 2016 ASRS membership and employer units consisted of the following:

Exhibit F-5: Plan Members

Member Status	Retirement Plan
Inactive plan members or beneficiaries receiving benefits	142,203 [1]
Inactive plan members entitled to, but not yet receiving benefits	222,900 [2]
Active plan members	208,741
Total membership	**573,844**

[1] 79,527 of the inactive plan members or beneficiaries receiving benefits are receiving Health Benefit Supplement (HBS) program benefits.

[2] Includes 4,032 members receiving Long Term Disability (LTD) program benefits.

Exhibit F-6: Employer Units

Member Type	Employer Unit Count
School districts	236
Charter schools	139
Cities and towns	79
Counties	15
Special districts	95
Community college districts	10
Universities	3
State government	1
Total employer units	**578**

Note: The 578 employer units represent 683 total employers.

Benefits – The ASRS provides benefits under formulas and provisions described in Arizona State law. Benefits and administrative expenses are paid from monies contributed by members and employers and from earnings on investments. The ASRS provides for retirement, disability, health insurance premium supplemental benefits and survivor benefits.

Retirement benefits are calculated on the basis of age, total credited service and average monthly compensation, 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 upon the earliest of attaining:

- Age 65;
- Age 62 with 10 years of credited service;
- Age plus credited service equaling 80 or more

Members with initial membership dates on or after July 1, 2011, are eligible for full retirement benefits upon the earliest of attaining:

- Age 65;
- Age 62 with 10 years of credited service;
- Age 60 with 25 years of credited service;
- Age 55 with 30 years of credited service

Average monthly compensation is determined by a 60-month or 36-month calculation depending on when a member began contributing to the ASRS.

The 60-month calculation is an option for members who began contributing to the ASRS before January, 1, 1984.

To determine a member's benefit using this formula, the ASRS averages the highest 60 consecutive months of salary within the last 120 months of service. This calculation includes base salary, additional contracts, overtime and any other form of eligible compensation. Termination payments may include sick pay (except for state and county employees), vacation pay, compensation time pay, retirement incentive pay (excludes payments made after retirement begins, such as VIP or ESP), or any other payments paid at the time of retirement. The average monthly compensation for members who began contributing before January 1, 1984 is automatically based on whichever calculation provides the greater benefit.

The 36-month calculation is required for members who began contributing to the ASRS on or after January 1, 1984. To determine a member's benefit using this formula, the ASRS averages the highest 36 consecutive months of salary within the last 120 months of service. This calculation excludes any termination payments the member received upon termination.

For members who began contributing to the ASRS on or after July 1, 2011, the average monthly compensation used in a retiring member's retirement benefit calculation is the average of the highest consecutive 60 months in the last 120 months. Unlike the pre-1984 60 month calculation, the 60 month calculation enacted in 2011 does not include termination pay such as sick leave, annual leave etc.

The graded multiplier is a percentage set by Arizona State statute. It is the percentage of the average monthly compensation members will receive for each year of credited service they have accrued at retirement. This percentage is based on their total years of service at retirement based on the following graded multiplier schedule:

Exhibit F-7: Graded Multiplier

Years of Service	Multiplier
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%

Permanent Benefit Increase (PBI) – Retired members who have been retired one year and members receiving LTD benefits are eligible for a benefit increase adjustment up to a maximum of 4%.

The PBI is paid from a reserve of excess investment earnings. Funds are reserved when total actuarial investment returns for each fiscal year are greater than 8%. If there are no excess investment earnings in the reserve, then no additional benefit increase is paid. As of June 30, 2016, there is a zero balance in the reserve for future PBIs.

Enhanced Permanent Benefit Increase (EPBI) – Retired members with at least 10 years of service who have been retired five or more years are eligible for an enhanced permanent benefit increase.

For each complete five-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% of the reserve for future PBIs.

Due to legislation enacted in the 2013 legislative session, PBIs and EPBIs will not be awarded to members hired after September 13, 2013.

For a more detailed summary of benefits, refer to the Summary of Plan Provisions in the Actuarial Section of this report.

Contributions – Per the Arizona Revised Statutes, contribution requirements for active members and their participating employers are established and may be amended by the ASRS Board. Contribution rates are actuarially determined and are expected to finance the costs of benefits accrued by plan members during the year and any unfunded accrued liability. The cost of administering the pension and other post-employment benefits is financed through employer contributions, member contributions and investment earnings.

Employers are also required to pay an Alternate Contribution Rate (ACR), for retired members who return to work. ACR contributions totaling $26.5 million were received during the 2016 fiscal year, and are included in Employer Contributions on the Statement of Changes in Fiduciary Net Position.

The contractually required contribution rates of employers as a percentage of covered payroll and the employees' matching contributions were as follows for fiscal year 2016:

Exhibit F-8: Contribution Rates

Contribution Rates	Employer	Member
Retirement	10.85%	11.35%
Health benefit supplement	0.50%	0.00%
Long term disability	0.12%	0.12%
Total required	11.47%	11.47%

Exhibit F-9: Alternate Contribution Rates

Alternate Contribution Rates	Employer	Member
ACR Retirement	9.17%	0.00%
ACR Health benefit supplement	0.13%	0.00%
ACR Long term disability	0.06%	0.00%
Total ACR required	9.36%	0.00%

The Arizona Revised 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. The Arizona Revised Statutes also allow purchase of military service regardless of whether a benefit may be paid.

Termination of Employment – Upon termination of employment, members may elect to receive their contributions made to the Plan, plus accrued interest.

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

Exhibit F-10: Vesting Period
(Initial membership date before July 1, 2011)

Years of Service	Vesting
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.

Note 2. Summary of Significant Accounting Policies

Basis of Accounting – The financial statements of the Arizona State Retirement System are prepared using the accrual basis of accounting. The accompanying financial statements are prepared in accordance with accounting principles generally accepted in the United States of America that apply to government accounting of fiduciary funds issued by the Governmental Accounting Standards Board (GASB).

Contributions are recognized as revenues when due, pursuant to statutory and contractual requirements. Benefits and refunds are recognized when due and payable and expenses are recorded when the corresponding liabilities are incurred, regardless of when contributions are received or payment is made. Administrative expenses are recognized when incurred.

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

See Note 4 for a schedule of investments measured at fair value and additional information regarding the inputs used to determine the fair value of investments.

The derivative instruments held by ASRS consist of futures, forward contracts, options, swaps, rights and warrants. Fair values of derivative instruments are determined by the custodial agent and reported on the Statement of Fiduciary Net Position. Changes in fair values of derivative instruments are reported as net appreciation (depreciation) of fair value on the Statement of Changes in Fiduciary Net Position.

The fair value of limited partnership investments are based on estimated current values and accepted industry practice. Fair value is based on estimates and assumptions from information and representations provided by the respective general partners, in the absence of readily ascertainable market values.

Investments classified as multi-asset and commodities are in commingled funds. Multi-asset commingled funds consist of various types of publicly traded investments. Commodities commingled funds consist of commodities futures.

Retirement and HBS 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.

Income derived from investments is recognized when earned. Investment expenses are recognized when incurred. The appreciation (depreciation) in fair value of investments is reported gross of investment manager fees on the Statement of Changes in Fiduciary Net Position. Performance fees (carried interest and incentive) are reported net of appreciation (depreciation) in the fair value of investments.

Net appreciation (depreciation) in the fair value of investment assets is determined by calculating the change in the fair value of investments between the end of the year and the beginning of the year, adjusting for cash flows related to investment purchases and sales. Interest income is recorded on the accrual basis and dividends are recorded on the ex-dividend date. Security transactions and any resulting gains or losses are accounted for on a trade date basis.

Public market investment managers, and some private market investment managers, are paid directly for manager fees. Private market investment managers, whose manager fees are not paid directly, report account valuations on a net of fee basis. The ASRS made a good faith effort to identify and report manager fees by requesting a confirmation of fees from the managers and reviewing investment capital account statements.

Capital Assets – Capitalization thresholds have been established as follows:

Exhibit F-11: Capitalization Thresholds

Capitalizable Assets	Threshold
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 June 30, 2016, there were no capitalizable expenditures at or above the stated thresholds.

Accounts Receivable – Accounts receivable are comprised of employer contributions that are expected to be received within 60 days of year end, member overpayments, and member service purchase payroll deduction amounts (PDA's) that are expected to be collected within one year or more.

Federal Income Tax Status – During the year ended June 30, 2016, 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 notes to the financial statements and required supplemental schedules for the HBS and LTD funds are based on the actuarial valuations performed as of June 30, 2015, which is the latest available information for those funds. The information presented for the retirement fund is based on the June 30, 2015 actuarial valuation, which was rolled forward to June 30, 2016. Significant actuarial assumptions used in the valuations are included in the notes to the financial statements and 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.

Adoption of New Accounting Standards – GASB Statement No. 72, Fair Value Measurement and Application, which was adopted during the year ended June 30, 2016, addresses accounting and reporting issues related to fair value measurements. This statement requires disclosures to be made about fair value measurements, the level of fair value hierarchy and valuation techniques. This report has been prepared to conform with this newly adopted GASB statement.

Note 3. Cash and Investments

Cash – Cash deposits are subject to custodial risk. Custodial risk is the risk that deposits owned by ASRS will not be returned in the event of a bank failure. The Arizona Revised Statutes do not require ASRS deposits to be collateralized. The ASRS board has not adopted a more restrictive policy. Cash on deposit with the Arizona State Treasurer in excess of FDIC coverage is collateralized at 100% of the deposit balance. 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 position.

Investments – The Arizona Revised Statutes authorize the ASRS to make investments in accordance with the "Prudent Person" rule. Section 38-718 (E) 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 a like capacity and familiar with the same matters would use in the conduct of an enterprise of a like character and with like aims as that of ASRS. 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 debt and equity investments.

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

- No more than 80% of the assets held by the ASRS may be invested at any given time in equities, measured at market value.
- No more than 5% of the assets held by the ASRS 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, measured at market value.
- No more than 40% of the assets held by the ASRS may be invested in non-U.S. public equity investments, measured at market value.
- No more than 60% of the assets held by the ASRS may be invested internally, measured at market value.
- No more than 10% of the assets held by the ASRS may be invested in bonds or other evidences of indebtedness of those multinational development banks in which the U.S. 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, measured at market value.

The Board has not formally adopted more restrictive policies than required by State Statute for the various types of risks. The management of the 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 $858.1 million and a payable for securities purchased of $473.9 million at June 30, 2016.

Investment Policy – The ASRS policy in regard to the allocation of invested assets is established and may be amended by the ASRS Board. Plan assets are managed on a total return basis with a long term objective of achieving and maintaining a fully funded status for benefits to be provided. The following is the asset allocation policy adopted by the ASRS Board as of June 30, 2016:

Exhibit F-12: Target Asset Allocation

Asset Class	Target Allocation
Equity	58%
Fixed income	25%
Commodities	2%
Real estate	10%
Multi-asset class	5%
Total	100%

Rate of Return – For the year ended June 30, 2016, the annual money-weighted rate of return on Retirement Fund investments held by the ASRS, net of investment expense, was 0.29%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

The following schedule is a summary of investments by type as of June 30, 2016:

Exhibit F-13: Summary of Investments by Type
(Dollars in thousands)

Investment Type	Retirement & HBS	LTD	Total
Short-term	$ 968,085	$ 2,838	$ 970,923
Public equity	10,505,654	-	10,505,654
Public fixed income	2,798,668	-	2,798,668
Real Estate	58,472	-	58,472
Commingled funds - equity	5,053,890	117,412	5,171,302
Commingled funds - fixed income	2,484,448	52,519	2,536,967
Commingled funds - real estate	-	22,198	22,198
Commingled funds - commodities	-	3,314	3,314
Commingled funds - multi-asset	1,018,673		1,018,673
Private market funds	11,008,696	-	11,008,696
Total investments at fair value	$33,896,586	$ 198,281	$34,094,867
Securities lending collateral	$ 287,489	$ -	$ 287,489

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.

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. Publicly traded securities are registered in the name of the ASRS including loaned securities.

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

Concentration of Credit Risk – Concentration of credit risk is the risk of substantial loss if investments are concentrated in one issuer. The Arizona Revised Statutes require that no more than 5% of the assets can be invested in one issuer, except for the U.S. government and its agencies. The ASRS Board has not adopted a more restrictive policy.

The following table presents the fixed income investments at June 30, 2016 categorized to give an indication of the level of credit quality risk assumed by the ASRS:

Exhibit F-14: Credit Quality Risk

Fixed Income Securities

(Dollars in thousands)

Credit Rating[1]	Fair Value	Fair Value as Percent of Total Debt Securities Investments
Aaa	$ 98,613	3.14%
Aa1-Aa3	1,497,852	47.63%
A1-A3	193,692	6.16%
Baa1-Baa3	351,438	11.18%
Ba1-Ba3	372,864	11.86%
B1-B3	440,817	14.02%
Caa1-Caa3	180,245	5.73%
Ca - C	1,129	0.04%
Not rated	7,665	0.24%
Total[2]	$ 3,144,315	100.00%

[1] When a security received split ratings between Moody's, S&P and Fitch, this schedule was prepared using the rating that is indicative of the highest degree of risk. Credit ratings are presented in the Moody's format.

[2] Total of $3,144,315 represents Public Fixed Income of $2,798,668 and Short-term Investments of $345,647.

Interest Rate Risk – Interest rate risk is the risk that debt securities will lose value due to rising interest rates. The Arizona Revised Statutes are silent regarding interest rate risk. The ASRS 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 utilizes effective duration to identify and manage 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 as of June 30, 2016:

Exhibit F-15: Interest Rate Risk

Fixed Income Securities

(Dollars in thousands)

Fixed Income Security Type		Fair Value	Effective Duration (in years)
U.S. Treasury Bills	$	226,050	0.4
Asset Backed Securities		10,208	3.6
Commercial Mortgage Backed Securities		55,905	3.7
Corporate Bonds		1,572,433	4.9
Municipal/Provincial Bonds		36,907	6.7
Government Related		9,844	5.7
Government Agencies		110,630	1.4
Government Bonds		611,701	7.9
Government Mortgage Backed Securities		510,637	1.6
Total[1]	$	3,144,315	

[1] Total of $3,144,315 represents Public Fixed Income of $2,798,668 and Short-term Investments of $345,647.

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 authorized to invest part of its assets in foreign investments. According to the Arizona Revised Statutes, no more than 40% of the assets held by the ASRS may be invested in foreign securities and the investments must be made by investment managers with expertise in those investments. The ASRS 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) as of June 30, 2016:

Exhibit F-16 Foreign Currency Risk

(Dollars in thousands)

Currency Type	Short-term Investments	Equity Securities	Private Equity	Real Estate	Total
Australian Dollar	$ 77	$ 27,352	$ -	$ -	$ 27,429
Brazilian Real	-	3,736	-	-	3,736
Canadian Dollar	103	9,744	-	-	9,847
Danish Krone	1	36,455	-	-	36,456
Euro Currency	16,844	631,039	151,136	-	799,019
Hong Kong Dollar	223	53,558	-	-	53,781
Japanese Yen	3,318	401,403	-	-	404,721
Mexican Peso	-		-	13,121	13,121
Israeli New Shekel	34	1,544	-	-	1,578
New Taiwan Dollar	325	-	-	-	325
New Zealand Dollar	4	947	-	-	951
Norwegian Krone	102	18,704	-	-	18,806
Philippine Peso	7	-	-	-	7
Pound Sterling	299	430,848	-	-	431,147
Singapore Dollar	97	17,792	-	-	17,889
South African Rand	-	1,000	-	-	1,000
South Korean Won	-	22,195	-	-	22,195
Swedish Krona	21	51,345	-	-	51,366
Swiss Franc	55	96,789	-	-	96,844
Total	$ 21,510	$ 1,804,451	$ 151,136	$ 13,121	$ 1,990,218

Note 4. Fair Value Measurements

Fair value measurements are categorized within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset and give the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level 1 measurements) and the lowest priority to unobservable inputs (level 3 measurements).

Level 1 Unadjusted quoted prices for identical instruments in active markets

Level 2 Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable

Level 3 Valuations derived from valuation techniques in which significant inputs are unobservable.

Investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not classified in the fair value hierarchy.

In instances where inputs used to measure fair value fall into different levels in the fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation. The assessment of the significance of particular inputs to these fair value measurements requires judgement and consideration of factors specific to each asset or liability.

Short-term investments measured at fair value generally include foreign currencies, U.S. Treasury bills and other bonds that mature within 1 year from the fiscal year end. Investments in U.S. Treasuries and other bonds are considered fixed income securities and are classified in Level 2.

Equity securities classified in Level 1 are valued using prices quoted in active markets for those securities.

Fixed income securities classified in Level 2 are valued using a compilation of primarily observable market information or a broker quote in a non-active market.

Real estate assets classified in Level 3 are real estate investments valued by external appraisals. An external appraisal is generally obtained at least annually and performed by an independent appraiser. The appraisals are performed using generally accepted valuation approaches applicable to the property type.

Reinvested securities lending collateral generally includes repurchase agreements. Although the carrying of reinvested securities lending collateral approximates fair value, investments in repurchase agreements are reported at cost plus accrued interest, and accordingly, are not categorized within the fair value level hierarchy.

Short-term investment funds (STIFs) are reported at cost plus accrued interest, which approximates fair value.

The following schedule presents investments categorized according to the fair value hierarchy, and is proceeded with additional information regarding investments measured at the net asset value as of June 30, 2016:

Exhibit F-17: Investments and Derivative Instruments Measured at Fair Value

(Dollars in thousands)

		Fair Value Measurements Using		
Investments by fair value level	**6/30/2016**	**Quoted Prices in Active Markets Identical Assets (Level 1)**	**Significant Other Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**
Short-term investments				
Foreign currency	$ 18,624	$ 18,624	$ -	$ -
Short-term investments, including U.S. treasuries	345,647	-	345,647	-
Total short-term investments	364,271	18,624	345,647	-
Equity securities				
U.S. Large Cap	6,737,367	6,737,367	-	-
U.S. Mid Cap	896,125	896,125	-	-
U.S. Small Cap	936,536	936,536	-	-
Developed Markets Large Cap	1,555,246	1,555,246	-	-
Developed Markets Small Cap	380,380	380,380	-	-
Total equity securities	10,505,654	10,505,654	-	-
Fixed income securities				
Core U.S. fixed income	1,769,108	-	1,769,108	-
High Yield U.S. fixed income	1,029,560	-	1,029,560	-
Total fixed income securities	2,798,668	-	2,798,668	-
Real estate	58,472	-	-	58,472
Total investments by fair value level	13,727,065	10,524,278	3,144,315	58,472
Investments measured at the net asset value (NAV)				
Commingled funds - equity	5,171,302			
Commingled funds - fixed income	2,536,967			
Commingled funds - real estate	22,198			
Commingled funds - commodities	3,314			
Commingled funds - multi asset	1,018,673			
Private equity funds	2,839,849			
Opportunistic equity funds	312,605			
Private debt funds	2,866,971			
Opportunistic debt funds	1,171,277			
Real estate funds	3,297,747			
Farmland fund	188,960			
Infrastructure fund	331,287			
Total investments measured at the NAV	19,761,150			
Short-term term investment funds at cost plus interest	606,652			
Total investments	$ 34,094,867			
Securities lending collateral	$ 287,489			

Exhibit F-18: Investments Measured at the NAV
(Dollars in thousands)

Investment	Fair Value	Unfunded Commitments	Redemption Frequency (if Currently Eligible)	Redemption Notice Period
Commingled funds - equity	$ 5,171,302	$ -	Daily, Monthly	1 - 3 Days
Commingled funds - fixed income	2,536,967	-	Daily	None
Commingled funds - real estate	22,198	-	Daily	None
Commingled funds - multi asset	1,018,673	-	Monthly	5 Days
Commingled funds - commodities	3,314	-	Daily	None
Private equity funds	2,839,849	1,823,000	N/A	N/A
Opportunistic equity funds	312,605	154,000	N/A	N/A
Private debt funds	2,866,971	2,520,000	N/A	N/A
Opportunistic debt funds	1,171,277	443,000	N/A	N/A
Real estate funds	3,297,747	1,420,000	N/A	N/A
Farmland funds	188,960	-	N/A	N/A
Infrastructure funds	331,287	-	N/A	N/A
Total investments measured at the NAV	$ 19,761,150	$ 6,360,000		

Commingled Funds – The types of strategies within commingled funds include investments in fixed income, public equity, real estate, commodities, and multi-asset type funds. Investments in the commingled multi-asset fund are in a fund that invests in liquid public securities. Multi-asset class strategies invest tactically within and across asset classes, seeking to exploit quantitative or fundamental drivers of asset class returns or risk allocations as market conditions warrant. The funds have a perpetual life. Redemption frequencies range from daily to monthly. There are no plans to liquidate the total portfolio.

Private Equity and Opportunistic Equity Funds – Private equity investments are invested primarily within limited partnerships. The types of investment strategies within these partnerships include: buyouts, distressed debt, special situations, secondaries, mezzanine and venture capital. These investments have an approximate life of 10 years and are considered illiquid. Redemptions are restricted over the life of the partnerships. During the life of the partnerships, distributions are received as underlying partnership investments are realized. There are no plans to liquidate the total portfolio.

Private Debt and Opportunistic Debt Funds – Opportunistic and Private Debt investments are invested within limited partnerships or limited liability companies. The types of investment strategies within these structures consist of corporate debt, real estate, asset backed and special situations. These investments have an approximate life of 7 to 10 years and are generally illiquid. Redemption restrictions are in place throughout the life of the investment. Distributions are received as investments are realized. There are no plans to liquidate the portfolio.

Real Estate and Infrastructure Funds – Investments in real estate and infrastructure funds are invested within limited partnerships or limited liability companies. Real estate investments include opportunistic, stabilized and development assets within multi-family and senior housing, industrial, retail, office, and self-storage, with a North America focus. Infrastructure investments consist of mature, operational core infrastructure assets located in countries with investment-grade ratings. These investments have an approximate life of 7 to 10 years and are generally illiquid. Redemption restrictions are in place throughout the life of the investment. Distributions are received as investments are realized. There are no plans to liquidate the portfolio.

Farmland Fund – Farmland investments are invested within one limited partnership. The investment strategy within this partnership includes: purchasing farmland, renting production land and active farming. This investment has an approximate life of 10 years and is considered illiquid. Redemptions are restricted over the life of the partnership. During the life of the partnerships, distributions are received as underlying partnership investments are realized. There are no plans to liquidate the investment.

Note 5. Securities Lending Program

The Arizona Revised Statutes Section 38-718(G) allows the ASRS to participate in a securities lending program. The custodial bank used by ASRS enters into agreements with borrowers to loan securities and have the same securities redelivered at a later date. Securities eligible for loan include U.S. fixed income securities, U.S. and international equities.

The ASRS currently receives as collateral at least 102% of the market value of the loaned securities and maintains collateral at no less than 100% for the duration of the loan. At year-end, the ASRS had limited counter party risk to borrowers because the collateral held by the ASRS for each loan exceeded the market value owed to the ASRS. Securities loaned are initially fully collateralized by cash (USD), U.S. Government or Agency securities, sovereign debt, corporate bonds and/or equities.

Cash collateral may be reinvested (under certain constraints) in:

- Instruments issued or fully guaranteed by the U.S. Government, Federal agencies, or sponsored agencies or sponsored corporations,
- Repurchase agreements,
- Money market mutual funds.

The ASRS records the reinvested cash collateral as an asset, and the cash collateral received as an obligation, for securities on loan on the Combined Statements of Fiduciary Net Position. 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 activities. The obligation for securities on loan is recorded as a liability because the ASRS must return the cash collateral to the borrower upon expiration of the loan.

At June 30, 2016, the fair value of securities on loan was $2.3 billion; of which $282 million were cash collateralized loans. Cash of $287.5 million received as collateral for securities loaned was reinvested and had a net asset value of $287.7 million as of June 30, 2016. The securities lending payable at June 30, 2016 was $287.5 million.

The ASRS does not have the ability to pledge or sell the collateral unless there is a borrower default. There are no statutory 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.

Note 6. Derivatives

A derivative instrument is a financial instrument or other contract with all three of the following characteristics:

- 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
- 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
- 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.

Derivatives are considered “Investment Derivative Instruments” as defined in GASB 53 “Accounting and Financial Reporting for Derivative Instruments”.

Derivative instruments, which can consist of futures contracts, forward contracts, options, swaps, rights and warrants are measured at fair value and reported on the Statement of Combined Fiduciary Net Position. Changes in fair value of derivative instruments are reported as net appreciation of fair value on the Combined Statement of Changes in Fiduciary Net Position.

The fair value balances and notional amounts of derivative instruments outstanding at June 30, 2016, classified by type, and the changes in fair value of derivative instruments for the year then ended as reported in the June 30, 2016 financial statements are as follows:

Exhibit F-19: Investment Derivatives by Type

(Dollars in thousands)

	Changes in Fair Value[1]		Fair Value at June 30, 2016		
Investment Derivatives	**Classification**	**Amount[2]**	**Classification**	**Amount**	**Notional[3]**
Commodity Futures Long	Net Appreciation in Fair Value	$ (88,649)	Not Applicable	$ -	93,348
Commodity Futures Short	Net Appreciation in Fair Value	8,176	Not Applicable	-	(22)
Fixed Income Futures Long	Net Appreciation in Fair Value	2,650	Not Applicable	-	246,100
Fixed Income Futures Short	Net Appreciation in Fair Value	(1,656)	Not Applicable	-	(16,800)
Foreign Currency Forwards	Net Appreciation in Fair Value	5	Futures Receivable	-	$ -
Index Futures Long	Net Appreciation in Fair Value	(30,277)	Not Applicable	-	14,700
Index Futures Short	Net Appreciation in Fair Value	(16)	Not Applicable	-	-
Rights	Net Appreciation in Fair Value	(686)	Equity Securities	406	6,519
Warrants	Net Appreciation in Fair Value	5	Equity Securities	4	32
Total		$ (110,448)		$ 410	

[1] Excludes futures margin payments.

[2] Brackets refer to losses.

[3] Notional denotes the number of units held of each particular derivative instrument. A dollar sign indicates currency units. Brackets refer to short positions.

The fair value of derivative instruments reported by the ASRS is based on quoted market prices off national exchanges. The fair values 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. As of June 30, 2016, the ASRS did not have any investments in foreign currency forward contracts.

Credit Risk – 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.

The 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 investment manager is governed by its Investment Manager Agreement.

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

As of June 30, 2016, investing activity in derivative instruments included exchange traded futures contracts. The ASRS did not have any over-the-counter investment derivative instruments as of June 30, 2016. Accordingly, the ASRS was not exposed to loss in case of default of all counterparties of over-the-counter positions as of June 30, 2016.

Interest Rate Risk – The ASRS has exposure to interest rate risk due to the investments in fixed income futures. The required risk disclosures are included in the Interest Rate Risk schedule in Note 3.

The fair value balance and notional amount of the fixed income futures outstanding at June 30, 2016, for the year then ended as reported in the June 30, 2016 financial statements are as follows:

Foreign Currency Risk – The ASRS did not hold foreign currency forward contracts and future contracts as of June 30, 2016, and was not exposed to foreign currency risk through derivative instruments.

Exhibit F-20: Derivative Instruments Highly Sensitive to Interest Rate Changes

(Dollars in thousands)

Asset ID	Asset Description	Interest Rate	Fair Value	Notional[1]
Fixed Income Futures Long:				
ADI0HSWK4	US 5YR NOTE (CBT) SEP16	n/a	$ -	68,300
ADI0HSWX6	US 10YR NOTE (CBT) SEP16	n/a	-	58,200
ADI0HSY30	US 2YR NOTE (CBT) SEP16	n/a	-	87,400
ADI0KF8V1	US ULTRA BOND CBT SEP16	n/a	-	16,800
ADI0KPN34	US LONG BOND(CBT) SEP16	n/a	-	15,400
Total Fixed Income Futures Long			$ -	246,100
Fixed Income Futures Short:				
ADI0HSWX6	US 10YR NOTE (CBT) SEP16	n/a	$ -	(16,800)
Total Fixed Income Futures Short			$ -	(16,800)

[1] Notional denotes the number of units held of each particular derivative instrument. Brackets refer to short positions.

Note 7. Net Pension Liability of Employers

The components of the net pension liability of the participating employers at June 30, 2016 were as follows:

Exhibit F-21: Net Pension Liability of Employers
(Dollars in thousands)

Net Pension Liability	
Total pension liability	$ 49,000,795
Retirement fiduciary net position	(32,859,791)
Employers' net pension liability	$ 16,141,004
Retirement fiduciary net position as a percentage of total pension liability	67.06%

Actuarial Assumptions – The total pension liability was determined by an actuarial valuation as of June 30, 2015, and rolled forward using generally accepted actuarial procedures to June 30, 2016:

Exhibit F-22: Actuarial Assumptions – Retirement

Assumptions	
Actuarial valuation date	June 30, 2015
Actuarial roll forward date	June 30, 2016
Actuarial cost method	Entry age normal
Asset valuation	Fair value
Discount rate	8%
Projected salary increases	3 - 6.75%
Inflation	3%
Permanent benefit increase	Included
Mortality rates	1994 GAM Scale BB

The above actuarial assumptions pertain to assumptions utilized for financial reporting requirements and differ from the assumptions utilized for funding purposes. The principal differences between the actuarial assumptions for financial reporting purposes and those utilized for funding purposes are the actuarial cost methodology, amortization methodology, valuation of the Retirement Fund assets and the inclusion of the permanent benefit increase.

The actuarial assumptions related to funding appear in the Notes to Required Supplementary Information and the Actuarial Section. The actuarial assumptions related to funding were selected on the basis of an experience study which was performed for the five-year period ending June 30, 2012. The ASRS Board adopted the experience study which recommended changes and those changes were effective as of the June 30, 2013 actuarial valuation. Details of the assumptions resulting from the experience study performed as of June 30, 2012 appear in the *Actuarial Section* beginning on page 95.

The long term expected rate of return on investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Best estimates of arithmetic real rates of return for each major asset class included in the asset allocation policy as of June 30, 2016 (see the Asset Allocation Targets chart in the Investment Section of this report) are summarized in the following table:

Exhibit F-23: Expected Return, Arithmetic Basis

Asset Class	Target Asset Allocation	Real Return Arithmetic Basis	Long-term Expected Portfolio Real Rate of Return
Equity	58%	6.73%	3.90%
Fixed income	25%	3.70%	0.93%
Commodities	2%	3.84%	0.08%
Real estate	10%	4.25%	0.42%
Multi-asset	5%	3.41%	0.17%
Total	100%		5.50%
Inflation			3.25%
Expected arithmetic nominal return			8.75%

Actual returns may be different due to volatility of returns. The long term expected rate of return of 8.75% is higher than the 8% assumed rate of return used in the actuarial valuation. Details regarding the discount rate for actuarial purposes follows.

Discount rate – The discount rate used to measure the total pension liability was 8%. The projection of cash flows used to determine the discount rate assumed that contributions from participating employers will be made based on the actuarially determined rates based on the funding policy of the ASRS Board, which establishes the contractually required rate under Arizona statute. Based on those assumptions, the Retirement Fund's fiduciary net position was projected to be available to make all the projected future benefit payments of current members. Therefore, the long term expected rate of return on investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the net pension liability to changes in the discount rate – The table below presents the net pension liability of the participating employers calculated using the discount rate of 8%, as well as what the employers' net pension liability would be if it were calculated using the discount rate that is 1.00% lower (7.00%) or 1.00% higher (9.00%) than the current rate at June 30, 2016 (in thousands):

Exhibit F-24: Discount Rate Sensitivity

(Dollars in thousands)

1% Decrease (7.00%)	Current Discount Rate (8.00%)	1% Increase (9.00%)
$ 20,581,007	$ 16,141,004	$ 12,581,094

Note 8. Other Postemployment Benefits

In addition to retirement benefits, the ASRS provides retired members access to health insurance and a health insurance premium supplement benefit. Actively contributing members are eligible for long term disability benefits.

Pursuant to the Arizona Revised Statutes, contribution requirements for active members and their participating employers are established and may be amended by the ASRS Board. Contribution rates are actuarially determined and are expected to finance the costs of benefits earned by members during the year and any unfunded accrued liability. Cost of administering the Plan is financed through employer contributions, member contributions and investment earnings.

Health Insurance – 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.

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 a targeted retention ratio as agreed upon per the contract and may fluctuate from year-to-year. The ASRS received $8.5 million in retrospective rate adjustment refunds for revenue and claims expense activity during fiscal year 2016 which is presented as other income on the Statement of Changes in Fiduciary Net Position.

Health Benefit Supplement Program – 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 HBS 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. For a more detailed summary of benefits, refer to the Summary of Plan Provisions in the Actuarial Section of this report.

In accordance with the funding policy as of June 30, 2016, the required contribution rate for employers for their active members was .50% of covered payroll. There were 79,527 retired members or their beneficiaries receiving benefits as of June 30, 2016.

The funded status for the HBS Fund as of the most recent actuarial valuation date is as follows:

Exhibit F-25: Funded Status – HBS

(Dollars in millions)

Funded Status		
Actuarial valuation date		June 30, 2015
Actuarial value of assets (a)	$	1,447
Actuarial Accrued Liability-PUC (b)		1,605
Unfunded AAL (UAAL) (b-a)	$	158
Percent funded (a/b)		90%
Annual covered payroll (c)	$	9,072
UAAL percentage of covered payroll [(b-a)/c]		1.7%

Long Term Disability Program – Pursuant to A.R.S. §38-797, members of the ASRS are eligible for LTD benefits 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 greater than 30 years.

In accordance with the funding policy as of June 30, 2016, the required contribution rate for employers and active members was .12% of covered payroll. There were 4,032 disabled members receiving long term disability benefits as of June 30, 2016.

The funded status for the LTD fund as of the most recent actuarial valuation date is as follows:

Exhibit F-26: Funded Status – LTD
(Dollars in millions)

Funded Status	
Actuarial valuation date	June 30, 2015
Actuarial value of assets (a)	$ 253
Actuarial Accrued Liability-PUC (b)	320
Unfunded AAL (UAAL) (b-a)	$ 67
Percent funded (a/b)	79%
Annual covered payroll (c)	$ 9,072
UAAL percentage of covered payroll [(b-a)/c]	0.7%

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.

The accompanying schedules of employer contributions, present trend information about the amounts contributed to the HBS and LTD funds by employers in comparison to the annual required contribution (ARC), an amount that is actuarially determined in accordance with the parameters of GASB Statement 43. 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) in level dollars over a fifteen-year closed period.

Projections of benefits for financial reporting purposes are based on the substantive fund and include the types of benefit provided at the time of each valuation and the historical pattern of sharing costs between the employer and ASRS 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. Additional information as of the latest actuarial valuation follows:

Exhibit F-27: Actuarial Assumptions – HBS

Assumptions	
Actuarial valuation date	June 30, 2015
Actuarial cost method	Projected unit credit
Amortization method	Level Dollar 15 year closed
Asset valuation	10 year smoothed
Healthcare cost trend	n/a
Discount rate	8%
Inflation	3%
Mortality rates	1994 GAM Scale BB

Exhibit F-28: Actuarial Assumptions – LTD

Assumptions	
Actuarial valuation date	June 30, 2015
Actuarial cost method	Projected unit credit
Amortization method	Level Dollar
	15 year closed
Asset valuation	10 year smoothed
Discount rate	8%
Rates of termination	150% of 1987 CGDT
Disability incidence rates	Age -based unisex
Offsets for disabled members	90% after 3 years
Offsets for active members	55% of benefits
Incurred but not reported liability	20%

The assumptions were selected on the basis of an experience study which was performed for the five-year period ending June 30, 2012. The ASRS Board adopted the experience study which recommended changes and those changes were effective for the June 30, 2013 actuarial valuation. Details of the assumptions resulting from the experience study performed as of June 30, 2012 appear in the Actuarial Section beginning on page 95.

For a more detailed summary of benefits, refer to the Summary of Plan Provisions in the Actuarial Section of this report.

Note 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 financial position or results of operations of the ASRS.

Note 10. Commitments

The ASRS has unfunded capital commitments in connection with the purchase of various limited partnership interests in private equity, opportunistic equity, private debt, opportunistic debt, real estate, infrastructure and farmland portfolios. See Note 4 for additional information regarding these commitment amounts.

Note 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.

Note 12. Required Supplementary Schedules

Historical trend information designed to provide information about the progress of accumulating sufficient assets to pay benefits when due is required supplementary information with respect to the HBS and LTD funds. Required supplementary information prepared in accordance with the parameters of GASB Statement No. 43 and GASB Statement No. 67 is included immediately following the Notes to the Financial Statements.

Note 13. Subsequent Events

The ASRS has evaluated subsequent events through December 16, 2016, the date the financial statements were available to be issued. Events or transactions occurring after June 30, 2016, but prior to December 16, 2016 that provided additional evidence about conditions that existed at June 30, 2016 have been recognized in the financial statements for the year ended June 30, 2016. Events or transactions that provided evidence about conditions that did not exist at June 30, 2016, but arose before the financial statements were available to be issued have not been recognized in the financial statements for the year ended June 30, 2016.

Exhibit F-29: Schedule of Funding Progress – HBS and LTD

Last Three Years

(Dollars in millions)

Actuarial Valuation Date June 30,	Actuarial Value of Assets (a)	Actuarial Accrued Liability Projected Unit-Credit (b)	Unfunded Actuarial Accrued Liability (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	Unfunded Actuarial Accrued Liability as a Percentage of Covered Payroll (b - a) / (c)
Health Benefit Supplement Fund:						
2015	$ 1,447	$ 1,605	$ 158	90.1	$ 9,072	1.7%
2014	$ 1,374	$ 1,477	$ 103	93.0	$ 8,909	1.2%
2013	$ 1,325	$ 1,485	$ 160	89.2	$ 8,753	1.8%
Long Term Disability Fund:						
2015	$ 253	$ 320	$ 67	79.1	$ 9,072	0.7%
2014	$ 280	$ 329	$ 49	85.0	$ 8,909	0.6%
2013	$ 285	$ 333	$ 48	85.6	$ 8,753	0.5%

Exhibit F-30: Schedule of Contributions from Employer – HBS and LTD

Last Three Years

(Dollars in thousands)

Actuarial Valuation Date June 30,	Annual Required Contribution[1]	Percentage Contributed
Health Benefit Supplement Fund:		
2016	$ 45,672	100%
2015	$ 53,034	100%
2014	$ 52,874	100%
Long Term Disability Fund:		
2016	$ 11,162	100%
2015	$ 10,899	100%
2014	$ 21,628	100%

[1] The required contributions from the employer for the HBS fund reflect total employer contributions less ACR contributions. ACR is not part of the required contribution rate.

See Notes to Required Supplementary Information.

Exhibit F-31 Schedule of Changes in the Net Pension Liability - Retirement

Years Ended June 30,

(Dollars in thousands)

	2016	2015	2014
Total Pension Liability:			
Service cost	$ 1,144,436	$ 1,013,854	$ 966,705
Interest	3,906,808	3,832,255	3,607,440
Changes of benefit terms	-	-	-
Differences between expected and actual experience[1]	(967,522)	(1,187,231)	1,078,966
Changes of assumptions	(1,242,164)	-	-
Benefit payments	(3,062,846)	(2,927,102)	(2,812,573)
Net change in total pension liability	(221,288)	731,776	2,840,538
Total pension liability-beginning	49,222,083	48,490,307	45,649,769
Total pension liability-ending (a)	49,000,795	49,222,083	48,490,307
Retirement Fiduciary Net Position:			
Contributions - employers	$ 1,015,974	$ 1,004,747	$ 965,969
Contributions – members	1,036,714	1,031,954	995,284
Net investment income	222,906	849,160	5,514,246
Benefit payments, including refunds of member contributions	(3,062,846)	(2,927,102)	(2,812,573)
Administrative expenses	(22,965)	(26,400)	(26,107)
Other	24,362	19,582	31,456
Net change in retirement fiduciary net position	(785,855)	(48,059)	4,668,275
Retirement fiduciary net position-beginning	33,645,646	33,693,705	29,025,430
Retirement fiduciary net position-ending (b)	32,859,791	33,645,646	33,693,705
Retirement net pension liability-ending (a) - (b)	$ 16,141,004	$ 15,576,437	$ 14,796,602

[1] Includes the changes in Total Pension Liability due to the potential for future PBIs based on asset experience through the end of each fiscal year.

Note: This schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See Notes to Required Supplementary Information.

Exhibit F-32 Schedule of Net Pension Liability - Retirement

Years Ended June 30,

(Dollars in thousands)

Net Pension Liability	**2016**	**2015**	**2014**
Total pension liability - ending (a)	$ 49,000,795	$ 49,222,083	$ 48,490,307
Retirement fiduciary net position - ending (b)	32,859,791	33,645,646	33,693,705
Retirement's net pension liability - ending (a) - (b)	$ 16,141,004	$ 15,576,437	$ 14,796,602
Retirement fiduciary net position as a percentage of the total pension liability	67.06%	68.35%	69.49%
Covered payroll	$ 9,125,089	$ 9,226,319	$ 8,752,783
Net pension liability as a percentage of covered payroll	176.89%	168.83%	169.05%

Note: This schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See Notes to Required Supplementary Information.

Exhibit F-33 Schedule of Employer Contributions - Retirement

Last 10 Fiscal Years

(Dollars in thousands)

Fiscal Year Ended June 30,	Actuarial Determined Contribution	Contributions In Relation To The Actuarially Determined Contributions[1]	Contribution Deficiency (Excess)	Covered Employee Payroll	Contributions As A Percentage Of Covered Employee Payroll
2016	$ 990,072	$ 990,072	$ -	$ 9,125,089	10.85%
2015	$ 1,004,746	$ 1,004,746	$ -	$ 9,226,319	10.89%
2014	$ 965,969	$ 965,969	$ -	$ 9,027,752	10.70%
2013 [2]	$ 889,580	$ 889,580	$ -	$ 8,678,829	10.25%
2012 [3]	$ 850,456	$ 850,456	$ -	$ 8,616,575	9.87%
2011 [4]	$ 782,347	$ 782,347	$ -	$ 8,149,448	9.60%
2010 [5]	$ 749,636	$ 749,636	$ -	$ 8,329,289	9.00%
2009	$ 754,044	$ 754,044	$ -	$ 8,425,073	8.95%
2008	$ 759,482	$ 759,482	$ -	$ 8,345,956	9.10%
2007	$ 663,544	$ 663,544	$ -	$ 7,715,628	8.60%

[1] Beginning with fiscal year 2016, the required employer contributions to the retirement fund presented above reflect total employer contributions less ACR contributions. ACR is not part of the required contribution rate. Employers were required to pay ACR contributions beginning in 2013 for retired members who returned to work.

[2] The 2013 required contributions from the employer for the retirement fund reflect total employer contributions of $911,300 less $931 of unfunded employer liabilities.

[3] The 2012 required contributions from the employer for the retirement fund reflect total employer contributions of $852,167 less $1,711 of unfunded employer liabilities.

[4] The 2011 required contributions from the employer for the retirement fund reflect total employer contributions of $786,662 less $4,315 of unfunded employer liabilities.

[5] The 2010 required contributions from the employer for the retirement fund reflect total employer contributions of $763,100 less $13,464 of unfunded employer liabilities.

See Notes to Required Supplementary Information.

Exhibit F-34 Schedule of Investment Returns - Retirement

Years Ended June 30,

Fiscal Year Ended June 30,	Annual money-weighted rate of return, net of investment expenses
2016	0.29%
2015	3.04%
2014	17.78%

Note: This schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See Notes to Required Supplementary Information.

Actuarial Methods and Assumptions for Valuations Performed

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated, which is the most recent actuarial valuation.

Exhibit F-35: Actuarial Assumptions - Retirement

Assumptions	
Actuarial valuation date	June 30, 2015
Actuarial roll forward date	June 30, 2016
Actuarial cost method	Entry age normal
Asset valuation	Fair value
Discount rate	8%
Projected salary increases	3 - 6.75%
Inflation	3%
Permanent benefit increase	Included
Mortality rates	1994 GAM Scale BB

Exhibit F-36: Actuarial Assumptions – HBS

Assumptions	
Actuarial valuation date	June 30, 2015
Actuarial cost method	Projected unit credit
Amortization method	Level Dollar 15 year closed
Asset valuation	10 year smoothed
Healthcare cost trend	n/a
Discount rate	8%
Inflation	3%
Mortality rates	1994 GAM Scale BB

Exhibit F-37: Actuarial Assumptions – LTD

Assumptions	
Actuarial valuation date	June 30, 2015
Actuarial cost method	Projected unit credit
Amortization method	Level Dollar 15 year closed
Asset valuation	10 year smoothed
Discount rate	8%
Rates of termination	150% of 1987 CGDT
Disability incidence rates	Age -based unisex
Offsets for disabled members	90% after 3 years
Offsets for active members	55% of benefits
Incurred but not reported liability	20%

Significant Factors Affecting Identification of Trends

The following information is an executive summary of the 2012 Experience Study conducted by an independent actuary. The purpose of this experience study is to review actual experience in relation to the actuarial assumptions currently in effect. This Study covers the experience of active, inactive, and retired members for the period July 1, 2007, through June 30, 2012. The five-year period under study is an atypical period that includes the financial panic of 2008 and subsequent "Great Recession," it is important to use judgment regarding the extent to which future experience is expected to be like the experience for this period.

The ASRS Board adopted all of the proposed assumptions at its meeting on May 24, 2013. The Study does not include an analysis of the assumed investment rate of return. The assumptions adopted by the ASRS Board were included in the June 30, 2015 valuation. With respect to the retirement fund, the June 30, 2015 values were rolled forward to June 30, 2016.

The actual-to-expected ratios developed in this study are weighted by the accrued liabilities of each member under the Projected Unit Credit method. In this way, the ratios give more weight to members with large liabilities (generally the longest-serviced and highest-paid members).

Experience Analysis Purpose

To carry out an actuarial valuation of the assets and liabilities of the ASRS, the actuary must use assumptions for each of the following items:

Demographic assumptions

- The probabilities of members separating from active service on account of withdrawal, retirement, death, and disability.
- The probabilities of retirement and death for members who have separated from service, but have not yet retired.
- The mortality rates to be experienced among retired persons.
- Health plan coverage elections.
- Optional forms elected.
- Alternate contribution amounts.
- Timing of contributions.

Economic assumptions

- Investment returns to be realized on the funds over many years.
- The relative increases in a member's salary from the date of the valuation to the date of assumed separation from active status.

Summary of Results for Assumptions – Plan, HBS and LTD

The results of the 2012 Experience Study, adopted by the ASRS Board in its meeting on May 24, 2013, are summarized as follows:

Mortality for Active Members

- Number of deaths among active members (weighted by liability) is much lower than expected under current assumptions.
- We propose 50% of the 1994 GAM, sex-distinct, projected to 2015 using Scale BB.
- Actual-to-Expected ratios on the proposed table are 91% for males and 103% for females.

Disability

- Actual liability-weighted disabilities are less than those expected under current assumptions.
- We propose unisex rates, reduced at higher ages from the current rates, to reflect the actual experience.
- Actual-to-Expected ratios on the proposed table are 81% for males and 89% for females.

Withdrawal

- Liability-weighted withdrawals are higher than our assumptions predict and correlate more closely with service than age throughout members' careers.

- We propose new service-based rates for both male and female members to reflect the actual experience.
- Actual-to-Expected ratios on the proposed table are 106% for males and 105% for females.

Retirement

- Retirement rates are slightly lower than our assumptions predict.
- In our study of the retirement decrement, we excluded members who retired as a result of an early termination incentive offer. In that way, our proposed rates represent anticipated retirement experience in the absence of such offers.
- We propose new unisex rates to reflect the actual experience.
- Adjusted rates are applied for members hired on or after July 1, 2011 to reflect the new tier of retirement eligibilities.
- Actual-to-Expected ratio on the proposed tables is 95% for males and 95% for females.

Salary Experience

- Salary increases have varied greatly from year to year and, in aggregate, have been significantly lower than expected for the five-year period.
- We propose using 75% of the current rates.
- Proposed assumption increases Actual-to-Expected ratio to 97%.

Mortality for Retired Members

- Liability-weighted number of deaths among retired members is lower than expected.
- We propose updating the mortality assumption to the 1994 GAM, sex-distinct, projected to 2015 using Scale BB with adjustments for small and large benefit amounts. The previous table was projected to 2010 using Scale AA. The Retirement Plans Experience Committee of the Society of Actuaries promulgated Scale BB in 2012 as an interim table to be used until a new table and a new projection scale are completed. Scale AA had underestimated the rate of longevity improvement, and the Society developed Scale BB to incorporate the actual rate of improvement. By adjusting for large and small benefit amounts, the new assumption follows the analysis of the RP-2000 mortality study. Since longevity is greater for retirees with large incomes than for others, it is important to increase the liability for high-income retirees.
- Actual-to-Expected ratios on the proposed tables are 117% for males and 116% for females.

Mortality for Inactive Members

- Mortality experience for inactive non-retired members during 2007-2012 was not analyzed for this period. Due to a data clean-up on inactive members, reported deaths included many deaths that occurred before the experience period.

- We propose the 1994 GAM, sex-distinct, projected to 2015 using Scale BB – the same table that we propose for retired members, absent the adjustment for the size of the benefit.

Mortality for Disabled Members

- Number of deaths among disabled members is lower than expected.
- We propose returning to the mortality table used prior to 2008 with lower mortality rates for disabled members.
- Actual-to-Expected ratios on the proposed tables are 108% for males and 103% for females.

Health Insurance Benefit (HIB) Elections

- Actual number of retirees electing coverage is less than our current assumption predicts. However, among members who elected coverage, the actual number of retirees electing dependent coverage is greater than our current assumption predicts. In addition, the proportion of retirees electing coverage is significantly different during the first year of retirement than in later years.
- We propose changing the proportion of future retiring members who get the health insurance premium supplement benefit from 70% to 60% and the proportion of those retirees getting the dependent premium supplement from 35% to 40%. We also propose using those assumptions for members who have been retired less than one year and continuing to use actual elections for members who have been retired for at least one year.

Optional Form Load

- Optional form election experience has changed slightly since the optional form load was implemented.
- We propose changing the optional form load from 0.087% to 0.174%.

Alternate Contribution Rate

- Payment of the unfunded liability will be reduced by the alternate contribution rates the Plan is receiving.
- We propose using the total payroll for those paying the alternate contribution to adjust the calculated past service cost contribution rates.

Mid-Year Contributions

- Contribution rates are currently being calculated assuming contributions are paid at the beginning of the fiscal year, but they are actually paid with each payroll throughout the fiscal year.
- We propose that contribution rates be calculated assuming contributions are paid in the middle of the fiscal year.
- The proposed assumption will minimize losses experienced each year due to timing of contribution payments.

Summary of Results for Assumptions – LTD Only

LTD Rates of Termination of Claims due to Death or Recovery

- Recoveries among LTD members are higher than expected.
- We recommend using 150% of the current rates.
- Actual-to-Expected ratios on the proposed tables are 88% for males and 109% for females.

Offsets for Disabled and Active Members

- Offsets for current LTD members reduce their benefits by more than expected.
- We propose changing the percentage that offsets reduce LTD benefits to 45%.
- We also propose keeping the assumption that 90% of disabled members will have offsets to
- LTD benefits after 3 years.
- For active members, offsets are assumed to reduce the gross benefits by 45%.

Pre-existing Condition Period

- Current assumption is to reduce liabilities to account for the extension of the pre-existing condition period from 3 to 6 months.
- We propose removing the 3% reduction in liabilities because all experience data used to set the other LTD assumptions occurred under the 6-month pre-existing condition period.

Incurred but Not Reported (IBNR) Load Assumption

- No adjustment for IBNR is currently being made. Based on experience from 2007-2012, IBNR equals 20.25% of the liability for new LTD members.
- We propose adding a 20% load to the liability for new LTD recipients.

Summary of Results for Assumptions – System

Mortality for All Members

- We propose continuing to use a generational mortality table with mortality rates adjusted for members with annual benefits greater than $14,400, but adding an adjustment for members with annual benefits less than $6,000 and switching to Projection Scale BB. We also recommend setting male rates back 1 year and female rates back 2 years to better match experience. On the proposed table, Actual-to-Expected ratios become 150% for males and 134% for females with annual benefits less than $6,000, 91% for males and 171% for females with annual benefits between $6,000 and $14,400, and 105% for males and 97% for females with annual benefits over $14,400. Note that 90% of the liability for retired members is for members with annual benefits over $14,400.

Financial Impact of Assumption Changes – Plan, System, HBS and LTD

- Our proposed assumptions would result in slightly higher Plan contribution rates in the near future.
- Current Plan contribution rate would have been 23.07% under our proposed assumptions, rather than the current rate of 22.55%, if these assumption changes had been incorporated in the June 30, 2012 valuation.
- Overall change in total Plan actuarial liabilities is 0.73% under our proposed assumptions.
- Total Plan normal cost changes from 13.53% to 13.52% under our proposed assumptions.
- The Plan's Unfunded Liability changes from $9.723 billion to $10.015 billion under our proposed assumptions.
- The current LTD contribution rate would have been 0.23% under our proposed assumptions, rather than the current rate of 0.47%, if these assumption changes had been incorporated in the June 30, 2012 valuation.
- The System deficit would have increased from $70.810 million to $92.559 million based on the proposed mortality assumption if it had been incorporated in the June 30, 2012 valuation.

Combining Schedule of Retirement Fiduciary Net Position

As of June 30, 2016

(Dollars in thousands)

	Retirement Plan	Retirement System	Total Retirement Fund
Assets			
Cash	$ 9,611	$ 85	$ 9,696
Receivables:			
Accrued interest and dividends	47,717	421	48,138
Securities sold	815,642	7,205	822,847
Futures contracts	26,510	406	26,916
Contributions	64,542	-	64,542
Due from other funds	2,967	-	2,967
Other	606	-	606
Total receivables	957,984	8,032	966,016
Investments:			
Short-term investments	817,384	10,920	828,304
Equity	17,776,462	155,681	17,932,143
Fixed income	8,858,990	75,492	8,934,482
Real estate	3,188,970	28,259	3,217,229
Commodities	-	-	-
Multi-asset	968,312	8,591	976,903
Other	494,293	4,186	498,479
Total investments	32,104,411	283,129	32,387,540
Securities lending collateral	273,218	2,466	275,684
Total assets	33,345,224	293,712	33,638,936
Liabilities			
Securities purchased	450,069	4,195	454,264
Securities lending collateral	273,218	2,466	275,684
Futures contracts	14,672	127	14,799
Due to other funds	-	13,791	13,791
Other	20,426	181	20,607
Total liabilities	758,385	20,760	779,145
Net position restricted for pension benefits	$ 32,586,839	$ 272,952	$ 32,859,791

In accordance with GASB 34, 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 within a trust. The Combining Schedule of Retirement Fiduciary Net Position and Changes in Retirement Fiduciary Net Position are presented here to provide members with more detailed information about the two plan components.

Combining Schedule of Changes in Retirement Fiduciary Net Position

For the Year Ended June 30, 2016

(Dollars in thousands)

	Retirement Plan	Retirement System	Total Retirement Fund
Additions			
Contributions:			
Member contributions	$ 1,036,674	$ 40	$ 1,036,714
Employer contributions	1,015,934	40	1,015,974
Transfers from other plans	1,701	-	1,701
Purchased Service	23,765	-	23,765
Total Contributions	2,078,074	80	2,078,154
Investment Activity:			
Investment activity income:			
Net depreciation in fair value of investments	(40,853)	(2,425)	(43,278)
Interest	126,156	1,161	127,317
Dividends	262,452	2,392	264,844
Other income	34,200	313	34,513
Total investment activity income	381,955	1,441	383,396
Investment activity expense:			
Management fees	(156,505)	(1,141)	(157,646)
Custody fees	(1,130)	(10)	(1,140)
Consultant and legal fees	(5,203)	(46)	(5,249)
Internal investment activity expense	(3,407)	(30)	(3,437)
Total investment activity expenses	(166,245)	(1,227)	(167,472)
Net income from investment activities	215,710	214	215,924
Securities lending activities:			
Securities lending income	5,426	50	5,476
Interest rebate	2,541	23	2,564
Management fees	(1,048)	(10)	(1,058)
Net income from securities lending activities	6,919	63	6,982
Total net investment income	222,629	277	222,906
Other income	-	-	-
Total additions	2,300,703	357	2,301,060
Deductions			
Retirement and disability benefits	2,722,049	43,619	2,765,668
Survivor benefits	38,714	149	38,863
Refunds to withdrawing members, including interest	258,310	5	258,315
Administrative expenses	22,765	200	22,965
Transfers to other plans	1,008	-	1,008
Other	96	-	96
Total deductions	3,042,942	43,973	3,086,915
Net decrease in net position	(742,239)	(43,616)	(785,855)
Net position restricted for pension benefits			
Beginning of year	33,329,078	316,568	33,645,646
End of year	$ 32,586,839	$ 272,952	$ 32,859,791

In accordance with GASB 34, 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 within a trust. The Combining Schedule of Retirement Fiduciary Net Position and Changes in Retirement Fiduciary Net Position are presented here to provide members with more detailed information about the two plan components.

Exhibit F-38: Schedule of Administrative Expenses

For the Year Ended June 30, 2016

(Dollars in thousands)

Administrative Expense	
Personnel services:	
Salaries	$ 13,392
Retirement contributions	1,414
Other employee related expenses	3,561
Total personnel services	18,367
Professional services:	
Actuarial services	272
Attorney services	375
Auditing services	81
Banking services	1,543
Staffing services	2,415
LTD administrative services	2,297
Other professional services	227
Total professional services	7,210
Communications:	
Telephone	323
Printing	73
Postage and mailing	357
Total communications	753
Facilities:	
Lease expense	1,517
Total facilities	1,517
Software and equipment:	
Computer supplies and software	1,253
Maintenance agreements	76
Equipment and equipment rental	610
Total software and equipment	1,939
Education, meetings, and travel:	
Professional development	75
Travel	74
Tuition reimbursement	11
Total education, meetings, and travel	160
General:	
Advertising	17
Insurance	327
Membership dues	27
Office supplies	61
Periodicals and publications	71
Miscellaneous[1]	(4,187)
Total general	(3,684)
Total administrative expenses	$ 26,262

[1] Includes a recovery of prior year expenses.

Exhibit F-39: Schedule of Professional Consultant Fees

For the Year Ended June 30, 2016

(Dollars in thousands)

Professional/Consultant	
Actuarial services:	
Buck Consultants, LLC	$ 198
Mercer Health & Benefits LLC	74
Total actuarial services	272
Attorney services:	
Arizona Office of the Attorney General	248
Fennemore Craig, P.C.	46
Charles W. Whetstine, P.C.	38
Quarles & Brady, LLP	33
Arizona Office of Administrative Hearings	7
Atkinson-Baker, Inc.	3
Total attorney services	375
Auditing services:	
CliftonLarsonAllen, LLP	81
Total auditing services	81
Banking services:	
State Street Bank And Trust Company	1,543
Total banking services	1,543
Staffing services:	
Guidesoft Inc.	2,364
Randstad North America LP	51
Total staffing services	2,415
LTD program administrative services:	
Sedgwick Claims Management Services, Inc.	2,297
Total LTD program administrative services	2,297
Other professional services:	
CEM Benchmarking Inc.	45
Arizona Department of Administration	44
Qwest - Century Link	38
Titan Power	31
Staples, Inc.	22
Goodwin Consult LLC	14
Behavior Research Center, Inc.	10
The Centers for Habilitation	7
Iron Mountain, Inc.	6
enChoice, Inc	4
Commercial Computer Services Inc.	3
Catholic Community Services	1
Adkins Cabling LLC	1
Troxell Communications	1
Total other professional services	227
Total professional and consulting services	$ 7,210

Exhibit F-40: Schedule of Investment Expenses

For the Year Ended June 30, 2016

(Dollars in thousands)

	Management Fees	Other Expenses	Total
Investing Activity			
Management fees			
Public Equity	$ 27,666	$ -	$ 27,666
Public Fixed Income	4,205	-	4,205
Multi-Asset	21,228	-	21,228
Commodities	1,065	-	1,065
Private Equity	38,719	-	38,719
Opportunistic Equity	1,242	-	1,242
Opportunistic Debt	13,060	-	13,060
Private Debt	23,780	-	23,780
Real Estate	28,332	-	28,332
Farmland and Timber	2,337	-	2,337
Infrastructure	2,969	-	2,969
Total management fees	164,603	-	164,603
Investment custodial fees:			
State Street Bank and Trust Company	-	1,190	1,190
Total investment custodial fees	-	1,190	1,190
Investment consultant fees:			
Chicago Clearing Corporation	-	3	3
Institutional Shareholder Services, Inc.	-	118	118
Callan Associates Inc.	-	36	36
Meketa Investment Group	-	929	929
NEPC, LLC	-	500	500
RCLCO	-	1,815	1,815
State Street Bank and Trust Company	-	403	403
Total investment consultant fees	-	3,804	3,804
Outside investment legal fees:			
Cox, Castle & Nicholson LLP	-	57	57
Foley & Lardner LLP	-	1,616	1,616
Total outside investment and legal fees	-	1,673	1,673
Internal investment activity expenses - see detailed schedule		3,586	3,586
Total Investing Activity	$ 164,603	$ 10,253	$ 174,856
Securities Lending Activity			
Securities Lending Borrower Rebates	$ -	$ 2,675	$ 2,675
Securities Lending Management Fees	(1,104)		(1,104)
Total Securities Lending Activity Expenses	$ (1,104)	$ 2,675	$ 1,571

Exhibit F-41: Schedule of Internal Investment Activity Expenses

For Year Ended June 30, 2016
(Dollars in thousands)

Expense		Total
Personnel services:		
Salaries	$	1,460
Employee Insurance		132
Retirement Contributions - ASRS		161
Other Personnel Expense		110
Total Personnel Services		1,863
Facilities:		
Lease expense		45
Total Facilities		45
Education, meetings and travel:		
Professional development		5
Travel		13
Tuition reimbursement		2
Total Education, Meetings and Travel		20
General administrative expense:		
Research and information services:		1,645
Membership dues		11
Telephone		2
Total general administrative expense		1,658
Total internal investment activity expense	$	3,586

This page was intentionally left blank.

investment section

ARIZONA STATE RETIREMENT SYSTEM

3300 NORTH CENTRAL AVENUE • PO BOX 33910 • PHOENIX, AZ 85067-3910 • PHONE (602) 240-2000
4400 EAST BROADWAY BOULEVARD • SUITE 200 • TUCSON, AZ 85711-3554 • PHONE (520) 239-3100
TOLL FREE OUTSIDE METRO PHOENIX AND TUCSON 1 (800) 621-3778
WWW.AZASRS.GOV

Paul Matson
Director

December 16, 2016

Dear Members,

It is a privilege to deliver this Investment Section to the Comprehensive Annual Financial Report of the Arizona State Retirement System. In this section we will discuss our investment philosophy, the investment environment and our investment results. We will also discuss our commitment to compliance, governance, rigorous measurement, and transparent reporting. Finally, we will deliver various documents and schedules providing detailed information about the ASRS investment program.

Investment Philosophy

The ASRS believes that the strategic asset allocation is the most important investment decision. Investment returns are largely, but not entirely, determined by choices made in the strategic asset allocation process. The ASRS investment team seeks to enhance returns compared to strategic asset allocation benchmarks through its implementation of the investment program and tactical positioning relative to strategic targets.

Fundamentally, investment returns are rewards for risks taken. Traditional financial theory tends to regard volatility, the propensity of asset prices to go up and down, as the fundamental measure of risk. However, more recent literature takes a more nuanced view of risk considering characteristics such as valuation, liquidity, quality, momentum and market capitalization as fundamental risk factors which drive return. The ASRS positions its portfolio mindful of all these risks and the risk premiums associated with them in order to structure a portfolio designed to achieve positive risk adjusted returns.

The ASRS is a long term investor with a multi-decade horizon for its decisions. Additionally, the requirements to generate cash to fund payments to beneficiaries are highly forecastable and known well in advance. The current capital value of the ASRS trust is about 35 times the annual net cash requirement to fund benefits. This positions ASRS ideally with a natural advantage to use this liquidity and long term perspective to patiently seek market rewards.

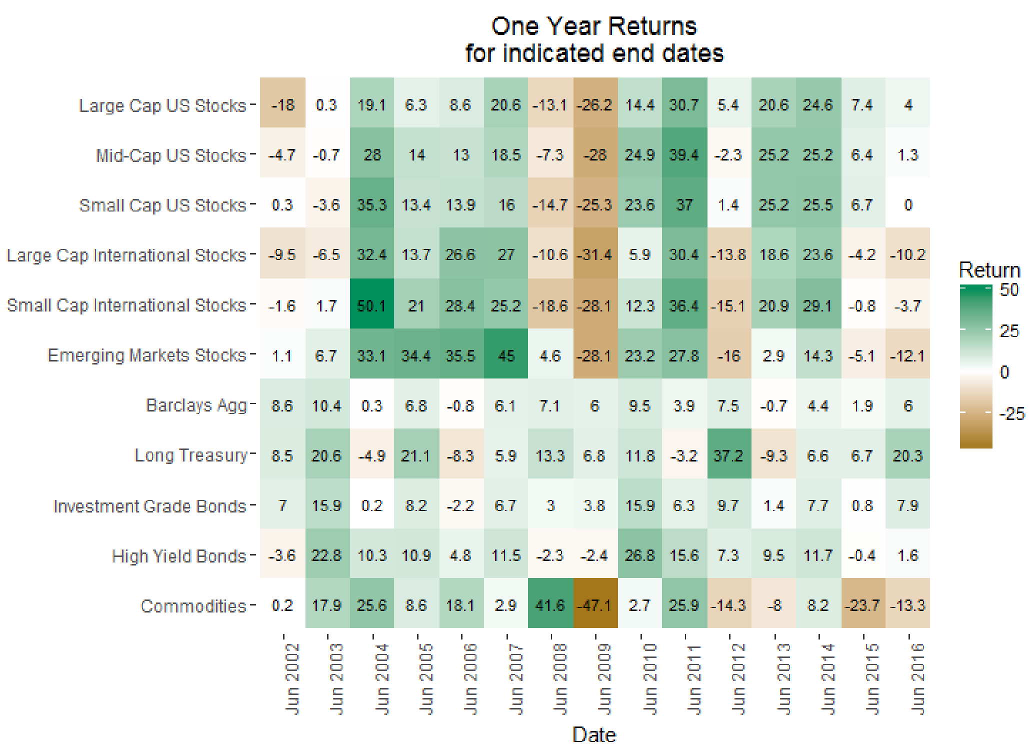
The ASRS uses this advantage to enhance returns. For example, the ASRS is a liquidity provider to the market, funding less liquid assets when warranted by the risk premiums available from this type of investment. The ASRS has significantly enhanced its returns and diversification through the implementation of its private markets investing program, which includes investments in real estate, private equity and private debt. In another example, the ASRS is a value oriented investor and we seek to capitalize on market dislocations, which affect asset prices and risk premiums. Although any form of market timing is notoriously difficult, we nevertheless favor assets priced cheaply to historic norms. Our goal is to buy assets when they are cheap and then patiently wait for them to recover. In a final example, regulatory changes affecting commercial banks have forced them to exit markets which they previously dominated. This has created attractive opportunities in these markets for non-bank participants for investors willing to commit to hold periods of several years.

Our long term horizon for our investments is a key advantage that allows us to tolerate short term volatility and enables us to focus on value, liquidity and other risk factors that produce superior returns but require patience to achieve results.

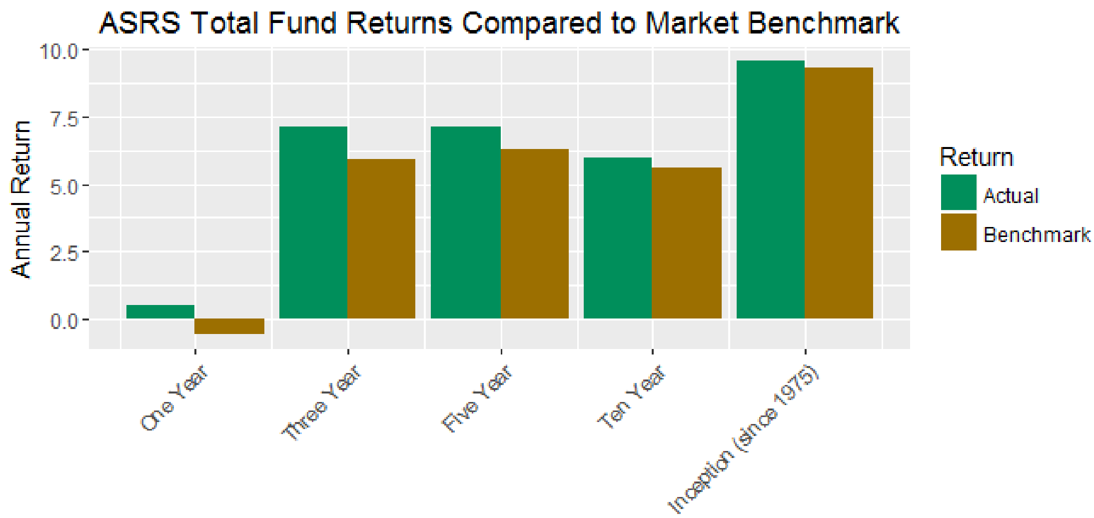
Investment Environment and Results

Global capital markets have been impacted in recent years by the global financial crisis and other market dislocations. While the market produced excellent returns after the end of the last recession, those returns have been lower in the last couple years as the expansion enters a later stage with slower growth. In order to sustain growth, central banks around the world have attempted to stimulate economic activity through low policy interest rates and so-called "quantitative easing," which involves central bank purchases of assets pushing liquidity in to the markets. These measures impact asset returns and asset prices. Interest rates are at record lows with negative interest rates seen in certain European and Asian markets. In this context, asset returns have recently been below long term averages.

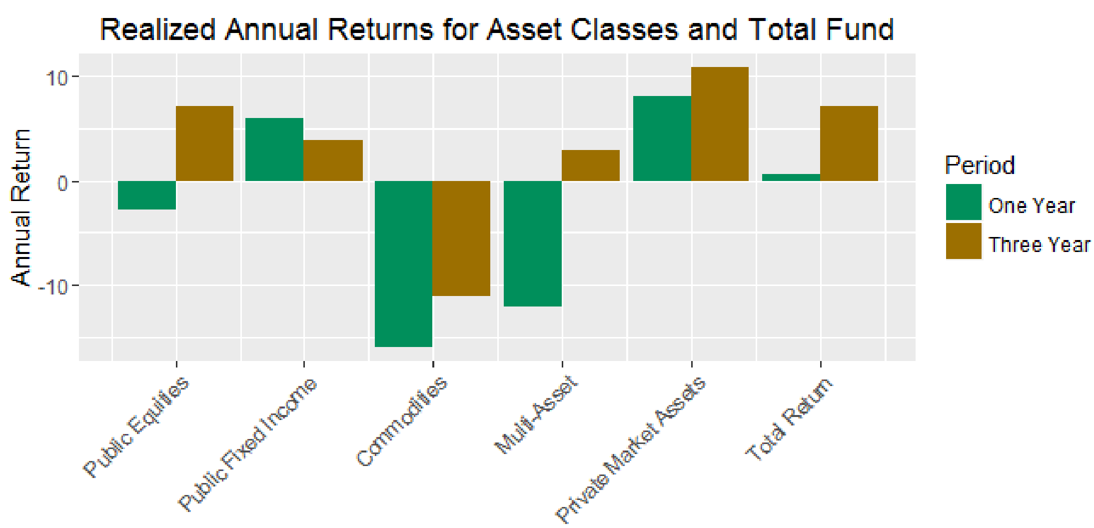
The following chart shows market returns for the last 15 years for the public market asset classes included in the ASRS strategic asset allocation.



The following chart shows returns earned by the ASRS over the last 40 years compared to market benchmarks. While the ASRS has achieved returns higher than its actuarial return target of 8% over a span of decades, the most recent ten year period which includes the global financial crisis has yielded lower returns. The ASRS has outperformed market benchmarks throughout the 40 year period. All returns presented in this report are on a total return basis, using time-weighted rates of return, net of all fees and based on market values.

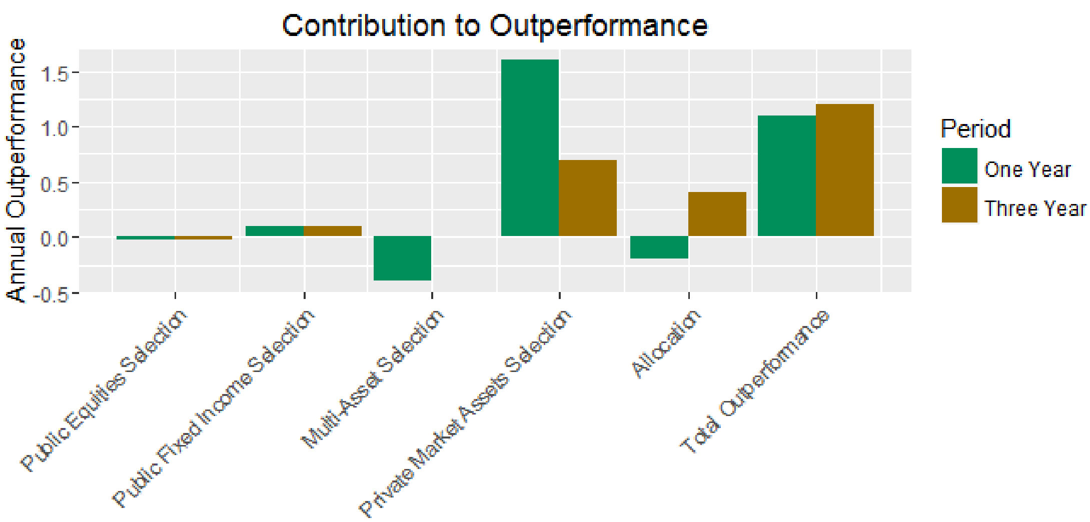


The following chart shows the returns realized by the ASRS for the major asset classes and total fund for the one and three year periods.



While recent market returns have been below long run averages, the ASRS investment team has been able to add value through their implementation of the investment program. In the most recent year, the benchmark market return for the ASRS portfolio was -.6%, but ASRS outperformed the total return by 1.2% yielding a total return of .6%. In the most recent three years, the market benchmark return was 5.9% and ASRS outperformed this benchmark by 1.2% yielding a total return of 7.1%.

An investment program can outperform in two ways. First, an investor can select managers or strategies which outperform the market and any difference in performance resulting from this is called "selection" effect. Second, an investor can overweight or underweight particular assets in comparison to the prescribed weight in the strategic asset allocation and any difference in performance resulting from this is called "allocation" effect. The following chart analyzes the ASRS outperformance by showing the source of the outperformance from selection effect in the major asset classes and overall allocation effect. As you can see, selection effects from private market assets were quite positive, contributing much of the overall outperformance. Outperformance from public market assets was smaller, as would be expected in these more efficient markets. Allocation effects were mixed, but positive over the three year period.



The investment environment of the last several years has been challenging with choppy equity markets and record low interest rates. With 50% of our assets invested in public equities, the ASRS returns are strongly influenced by the stock market. Our asset allocation strategies and our private market initiatives have made a positive contribution to both total return and outperformance. With 1.2% per annum outperformance over the last three years, the management efforts of the ASRS team have added over $1 billion in value to the ASRS fund.

Governance and Compliance

The ASRS operates the investment program in accordance with statutory requirements under the direction of the ASRS Board and Executive Director. The ASRS has adopted a formal and well documented governance process as set forth in the Board Governance Manual and various Strategic Investment Policies and Standard Operating Procedures, which have been adopted by the board and the ASRS management.

The investment program is further guided by an Investment Policy Statement which incorporates Investment Beliefs, which are adopted by the ASRS Board. As noted above, the investments are implemented in accordance with a Strategic Asset Allocation which is also adopted by the board with significant input from investment staff and the external investment consultant. Copies of the Investment Policy Statement and Strategic Asset Allocation are included in the materials for this Investment Section.

Investments are implemented by the ASRS investment team under the direction of the Executive Director and with oversight by the external investment consultant and the board investment committee. In accordance with written policies, investment decisions are made by asset class committees which meet monthly, or more frequently if necessary, and are documented by formal minutes and meeting materials which consist of staff reports and external consultant reports. The external investment consultant attends the asset class committee meetings to remain informed on investment matters and to monitor that all governance procedures are followed.

Compliance with statutes and policies is further monitored by our custody bank which checks every trade and reports daily on the compliance status of the portfolio. Additionally, external consultants monitor the private markets program reviewing partnerships annually to confirm that fees are correctly calculated and reported, valuation policies are observed and that partnership is being administered in accordance with the terms of the partnership agreement.

Cost

While cost management is not an investment strategy per se, cost reduction is one of the most important ways to improve investment performance. ASRS aggressively manages cost to help ensure the highest value is achieved for all our investment expenditures.

In the case of public markets, where research and experience indicate that the prospects for adding value through management are limited, we are parsimonious in the payment of fees. We manage approximately 50% of public market assets in house at effectively zero incremental cost. Any outsourced asset management occurs at competitively negotiated fees consistent with the market for investors our size.

In the case of private markets, we have implemented a program to reduce cost by concentrating our relationships with a smaller number of highly qualified managers who agree to enter in to custom negotiated partnerships at reduced fees. These partnerships, called "separate accounts", provide benefits to ASRS beyond reduced fees including custom investment criteria and favorable liquidity terms that give ASRS rights to influence or determine the pace of investment and liquidation of the partnership. ASRS has achieved substantial fee savings through the separate account program and returns from the program have exceeded market averages. ASRS plans to continue to grow the separate account program to around 75% of private market assets.

Reporting and Performance Measurement

The ASRS has implemented a comprehensive and transparent system of reports to keep the ASRS Management, Board and the public informed on the ASRS' investments. The ASRS complies with all required reporting under GASB standards and voluntarily complies with recommended disclosures of the Government Financial Officers Association ("GFOA"). All GFOA recommended disclosures are included in this investment section.

Additionally, the ASRS has been a leader in adopting rigorous investment performance measurement systems. The ASRS believes that sophisticated performance measurement contributes to the efficacy of portfolio management, improves decisions and leads to better results. Starting in 2012, the ASRS implemented performance measurement systems in its private markets investments based on new research recommending "public market equivalent" measurements of performance. The ASRS continued the performance measurement project focusing on public equities and implementing Brinson style attribution analysis across the portfolio, returns based performance analysis using various statistical methods across rolling time frames and holdings based style analysis across rolling time frames. The ASRS plans to complete the performance measurement project in 2017 adding processes for fixed income and total fund analysis.

Technology

The ASRS is committed to using state of the art technology to bring the most sophisticated analytical methods to its decisions, to implement quality in data bases and information systems and to continuously enhance the productivity of the investment team. As noted above, the ASRS is implementing an ambitious performance measurement system project that greatly increases both the quality and quantity of information available for investment decisions. We are implementing this at essentially zero incremental cost utilizing the analytical expertise and software coding skills of existing staff. Through automation of tasks we are increasing the amount of time available for higher value and more creative work. We also increase the reliability of information through automation and elimination of manual steps. We plan to continue these efforts through completion of the performance measurement system, further enhancements to reporting systems and potential enhancements of risk management systems.

Conclusion

It is an honor to serve the members and beneficiaries as your Chief Investment Officer. We hope you find the materials in this Investment Section informative and helpful in understanding the investments of the Arizona State Retirement System.

Sincerely,

Karl Polen, Chief Investment Officer

Purpose

The purpose of this Investment Policy Statement (IPS) is to set forth the investment, beliefs, goals & objectives, constraints and establish the guidelines for the development and implementation of the ASRS strategic and tactical asset allocation policy.

The ASRS recognizes that a well-articulated investment policy is important to the long term success of achieving the ASRS investment objectives. As such, the ASRS has developed this IPS with the following goals in mind:

To clearly and explicitly establish the objectives and parameters that govern the investments of the ASRS' assets;

To establish a target asset allocation that is long-term in nature but dynamic to allow the ASRS to take advantage of market opportunities which is expected to achieve its investment rate of return objectives;

To help protect the financial health of the ASRS through the implementation of this policy statement;

To establish a framework for monitoring investment activity, and promote effective communication between the Board, Staff, and other involved parties.

Investment Goals & Objectives

The ASRS has established a set of Investment Goals and Objectives that describe the macro-level expected outcomes that the ASRS seeks to achieve.

Goals

1. Maximizes Fund Rates of Return for Acceptable Levels of Fund Risk.

   This goal has an asset oriented focus. Here, the returns generated or earned by the investment Fund should be considered in conjunction with the risk or volatility that the Fund will support, where risk is essentially the possibility of a change in the value of the ASRS Fund attributed to changes in economic conditions, interest rates, dividend policy and other variables in any given year.

2. Achieves 75th Percentile Rates of Return Compared to Peers.

   This goal compares the performance of ASRS' aggregate investment portfolio to other public pension funds with over $1 billion of assets under management. Though ASRS' asset allocation policy will differ from other public pension funds given its risk return profile and investment beliefs, it is common practice to compare returns between comparable public pension funds.

3. Achieves Long-term Fund Rates of Return Equal to or Greater than the Actuarial Assumed Interest Rate.

   This goal has a liability oriented focus. Here, the returns generated or earned by the investment Fund should be considered in conjunction with the actuarial assumed interest rate, where this interest rate is essentially an estimate of the long-term average of the combination of expected inflation rates and expected real rates of return. The actuarial assumed interest rate is also the discount rate used to calculate the present value of liabilities.

4. Achieves Long-term Economic and Actuarial Funded Statuses of 100 percent.

   This goal has a funded-status oriented focus. Here, the structuring of the investment fund should be considered in conjunction with the level, volatility, and direction of the economic and actuarial funded status of the Fund. Although both actuarial and economic funded status levels are valuable for discussion and decision-making, economic-funded status is more reflective of financial condition and long-term policy implications. Economic-funded status is defined as the actual or market value of investments as a percentage of the actual or market value of liabilities and excludes such accounting constructs as smoothing and amortization.

5. Mitigates Contribution Rate Volatility.

   This goal has a contribution-rate orientation focus. Here, the structuring of the investment Fund should be considered in conjunction with the level, volatility, and direction of the contribution rates that will need to be paid by both employees and employers in the Fund. In general, lower levels and volatility in contribution rates are preferred.

Collectively, the above goals incorporate the following elements that are important for a fund's comprehensive investment structure:

1. Complementary use of absolute and relative rates-of-return perspectives.
2. Complementary use of asset-only and asset-liability perspectives.
3. Complementary use of economic and actuarial perspectives.

Objectives

Total Fund Performance

1. Achieve a 20-year rolling annual total fund net rate of return equal to or greater than the actuarial assumed interest rate of 8%.

Twenty-year Total Fund Net Rate of Return	Twenty Years	
	Actual	Benchmark
Twenty-year rolling annual total fund net rate of return	7.3%	8.0%

2. Achieve 1-year and 3-year rolling annual total fund net rates of return equal to or greater than the return of the ASRS asset allocation policy (SAAP) Benchmark.

One and Three-year Total Fund Net Rate of Return	One Year		Three Years	
	Actual	Benchmark	Actual	Benchmark
Rolling annual total fund net rate of return	0.6%	-0.6%	7.1%	5.9%

Asset Class Performance

3. Achieve 1-year and 3-year rolling annual net rates of return for ASRS strategic asset classes that are equal to or greater than their respective strategic asset class benchmarks.

Net Rate of Return by Asset Class	One Year		Three Years	
	Actual	Benchmark	Actual	Benchmark
Public Markets Fixed Income	5.9%	4.9%	3.8%	2.9%
Private Debt	8.5%	1.4%	10.1%	3.7%
Opportunistic Debt[1]	-5.1%	8-11%	3.2%	8-11%
Total Domestic and International Equity	-2.8%	-3.2%	7.0%	7.1%
Domestic Equity	3.7%	3.2%	11.3%	11.4%
International Equity	-10.4%	-9.9%	1.5%	1.8%
Private Equity	5.8%	-10.9%	10.6%	5.2%
Opportunistic Equity [1]	6.2%	11.0%	22.0%	11.0%
Real Estate	13.8%	14.2%	13.8%	13.1%
Infrastructure	10.3%	5.8%	n/a	n/a
Farmland & Timber	4.3%	5.8%	n/a	n/a
Commodities	-15.9%	-13.3%	-11.1%	-10.6%
Multi-Asset Class Strategies	-12.0%	-0.9%	2.8%	5.7%

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

Cash Flow Performance

4. Ensure sufficient monies are available to meet pension benefits, health insurance, member refunds, administrative payments, and other cash-flow requirements.

Investment Beliefs

Frame of Reference

The following Investment Beliefs have been established to ensure the development of congruent and synergistic investment strategies, and to ensure the effective and efficient allocation of resources. These Investment Beliefs determine the general paradigm within which investment strategies are developed, investment ideas are reviewed, and investment decisions are implemented.

Modifications to these Investment Beliefs will occur if experiential, academic, conceptual, and/or practical perspectives suggest that a superior belief system exists.

Investment Beliefs

1. **Asset Class Decisions are Key**: In general, decisions with respect to which asset classes and sub-asset classes to invest in, and the allocations to these asset classes and sub-asset classes, have a greater impact on total fund investment returns than decisions in which specific securities to invest.

2. **Theories and Concepts Must be Sound:** Over longer periods of time, investment outcomes (e.g. rates of return, volatility) conform to logical theories and concepts. Significant deviations (e.g. internet bubble, pre-subprime erosion of risk premiums) from theoretically and conceptually sound investment constructs are usually not sustainable and are typically self-reverting.

3. **House Capital Market Views Are Imperative:** The development and articulation of sound *House Views* (e.g. views on interest rates, corporate spreads, asset valuations) will ensure consistency among investment decisions, clarity of investment direction, baselines for debates, and conformity of understanding.

4. **Investment Strategies Must be Forward Looking**: Investment strategies will be developed based on forward-looking insights, rather than simply on successful strategies of the past.

   Asset class valuations and security valuations are significantly affected by endogenous outcomes (e.g. earnings, GDP growth rates, competitive barriers) that are probabilistic, and these outcomes are typically well analyzed by the investment industry.

   Asset class valuations and security valuations are also significantly affected by random outcomes (e.g. natural disasters, certain supply & demand shocks) that are virtually unpredictable, and these outcomes are typically not analyzed directly by the investment industry.

   Asset class valuations and security valuations are also significantly affected by exogenous outcomes (e.g. foreign policies, global cultural interactions) that can possibly be modeled, and these outcomes are typically not analyzed by the investment industry.

5. **Public Markets are Generally Informationally Efficient:**

   Asset Class Valuations

   Asset class valuations (e.g. stock market levels versus interest rate levels) are often in equilibrium with one another, but anomalous situations do occur which result in disequilibria between asset class valuations. These disequilibria offer valuable investment opportunities which we will pro-actively seek and capitalize on.

   Security Valuations

   Security valuations (e.g. IBM versus Cisco) are often in equilibrium with one another, but private markets and anomalous public market situations do occur which result in disequilibria between security valuations. These disequilibria offer valuable investment opportunities which we will pro-actively seek and capitalize on.

The extent of informational efficiency varies across asset classes.

Private markets offer significant opportunities for asset mispricing and manager excellence which we will pro-actively seek and capitalize on.

6. **Market Frictions are Highly Relevant:** Market frictions (e.g. management fees, carried interest, revenue sharing, expenses, costs, transaction spreads, market impacts, taxes, commissions) can be significantly detrimental to investment performance and as a result transactions will be initiated only to the extent there is a strong level of conviction that they will result in increased investment returns or decreased risks net of all market frictions.

7. **Internal Investment Professionals are the Foundation of a Successful Investment Program:** In-house investment management capability engaged in direct portfolio management results in superior investment decision-making.

   In-house investment management pro-actively monitors capital markets in order to determine mispricing opportunities & allocate capital and will successfully increase risk adjusted returns.

   In-house investment professionals are more closely aligned with, and have a better understanding of, the purpose and risk & reward tolerance of the ASRS than external parties.

   In-house investment professionals will impact direct investment negotiations, better align economic interests, and influence investment industry conditions (e.g. private deal structures, fee levels, introduction of innovative products & strategies).

8. **External Investment Management is Beneficial:** External investment organizations can often offer greater expertise, resources, and/or flexibility than internal personnel for various investment strategies.

9. **Investment Consultants:** Investment consultants will be effectively utilized in the following four general categories, and utilization of consultants will be focused on situations where there is a demonstrable need in at least one of the four areas:

   - Independence: When oversight or controls should be enhanced
   - Perspective: When internal perspectives are not broad enough
   - Special Skills: When internal skills are not deep enough
   - Resource Allocation: When Investment Management’s resources can be enhanced.

10. **Trustee Expertise:** Trustees often have expertise in various areas of investment management, and this expertise should be utilized while ensuring separation between Board oversight and staff management.

Investment Considerations

1. Arizona State Statutes

ASRS investments may be limited by Arizona Revised Statutes. To ensure compliance, checks and balances have been established which both reside within and external to the ASRS Investment Management Division. Reporting processes are implemented and, as appropriate, disseminated to the Director, Board Committees, and Board.

2. Time Horizon

The ASRS is managed on a going-concern basis. The following timeframes are utilized for portfolio construction decisions and contribution rate determination:

<u>Portfolio Construction Decisions:</u>

- Strategic asset allocations focus on medium term (3-5 years) capital market expectations, subject to the constraint of meeting the long-term assumed actuarial rate based on long-term (30 year) Capital Market Assumptions.

- Tactical deviation decisions are based on shorter term (less than 3-5years) capital market expectations.

<u>Contribution Rate Determination:</u>

- Liabilities are discounted based upon long-term (30 year) capital market expectations.

- Contribution rates are set based upon longer-term (currently 10 year) investment valuation smoothing periods, and longer-term (currently 30 years ‘closed’) deficit/surplus amortization periods.

The impact on contribution rates of any realized short-term volatility of returns will be mitigated through actuarial time-series diversification (smoothing & amortizing), rather than by lowering short-term expected return volatility at the expense of lower expected returns (and therefore higher aggregate contribution rates).

Contribution rates are the realized cash flow financial outputs, and based upon the above, they are relatively insensitive to shorter-term portfolio volatilities. This enables the ASRS to combine the traditional cross-sectional diversification benefits of a large employee pooled plan with time-series diversification benefits of a multi-generational plan, resulting in higher expected short-term return volatility which enables higher expected long-term returns.

3. Liquidity and Cash-Flow

The ASRS maintains a long-term investment horizon; however, managing short-term liquidity and cash-flow is paramount to ensure that pension obligations, health insurance, member refunds, administrative payments and other cash-flow requirements are made. This requires Investment Management and Financial Services Divisions to anticipate internal and external cash-flow needs, and to efficiently manage transactions in order to mitigate the costs of ensuring adequate liquidity.

Risk Management, Monitoring and Reporting

The ASRS applies a risk management framework for identifying, managing and reporting on ASRS Investments. These include, but are not limited to, operational risk (e.g., internal and external portfolio(s) guideline compliance, cash management, securities lending, Investment Management business continuity, etc.) and investment risk (e.g., deviations from target allocation, manager oversight, performance measurement/attribution, ability to achieve investment objectives, etc.).

In conjunction with the agency risk management program, appropriate steps are taken to provide reasonable assurance to Executive Management and the Board that investment management programs are designed, implemented and maintained to achieve investment goals and objectives as referenced in the ASRS Strategic Plan.

Responsibilities reside with the ASRS investment staff, custody bank, general consultant, project consultants, investment managers, and ASRS Internal Audit.

Reporting periodicity and the level of investment information dissemination vary depending upon target audience. Daily report generation and investment monitoring reside with the custody bank and Investment Management /Internal Audit; Quarterly/Annual aggregate, portfolio positions, and asset class performance are reported to the Investment Committee/Board.

The use of leverage is defined in the applicable ASRS investment documentation. For separate account public market investments (internally or externally managed portfolios), authorization to permit or not permit leverage is explicitly denoted in the managers' Letter of Direction and Clarification; monitoring is conducted by Investment Management and ASRS consultants. For commingled public and private markets investments, authorization to permit or not permit leverage is explicitly denoted in the managers' contracts or partner agreements; monitoring is conducted by the designated partnership agreement external auditor and, as applicable, reviewed at limited partnership advisory meetings.

The use of derivatives is defined in the applicable ASRS investment documentation. For separate account public market investments (internally or externally managed portfolios), authorization to permit or not permit derivatives is explicitly denoted in the managers' Letter of Direction and Clarification; monitoring is conducted by Investment Management and ASRS consultants. For commingled public and private markets investments, authorization to permit or not permit derivatives is explicitly denoted in the managers' contracts or partner agreements; monitoring is conducting by the designated partnership agreement external auditor and, as applicable, reviewed at limited partnership advisory meetings.

The management of currency exposure is defined in the applicable ASRS investment documentation. For separate account public market investments (internally or externally managed portfolios), authorization to permit or not permit currency hedging is explicitly denoted in the managers' Letter of Direction and Clarification; monitoring is conducted by Investment Management and ASRS consultants. For commingled public and private markets investments, authorization to permit or not permit currency hedging is explicitly denoted in the managers' contracts or partner agreements; monitoring is conducting by the designated partnership agreement external auditor and, as applicable, reviewed at limited partnership advisory meetings.

Asset Allocation

As part of strategic asset allocation development, the ASRS asset mix will reflect investments in strategic and tactical asset classes and strategies whose collective risk/return profile are anticipated to achieve its long-term investment rate of return goals and objectives.

The ASRS employs a dynamic strategic asset allocation study approach whose initiation and periodicity will primarily be a function of market dynamics. The strategic asset allocation is used to determine the long-term policy asset weights. Investment opportunities and asset classes are constantly evolving and developing, such that they may become attractive and suitable for institutional investment portfolios before the next scheduled policy review. Therefore, asset allocation reviews in addition to periodic studies are conducted as warranted or triennially, whichever is shorter.

The strategic asset allocation study may include, but not be limited to, the following:

- Discussion and analysis of existing and evolving asset classes and investment strategies.
- Evaluation of expected sources of investment returns, risk and diversification (quantitatively/qualitatively).
- Reviewing investment industry developments (academic and pragmatic).
- Utilization of quantitative tools (e.g., efficient frontier mean-variance optimization, risk budgeting) and evaluation of multiple scenarios.
- Reviewing and engaging discussions regarding capital market assumptions.
- Reviewing asset allocation policies from other public and non-public entities.

Rebalancing

The ASRS has established and maintains an asset class rebalancing policy(s) which encompasses the guidelines and processes for identifying and determining potential courses of action precipitated by the ASRS asset class over/under weight deviations relative to its broad strategic asset allocation policy (SAAP), ASRS cash-flow needs and/or to take tactical positions between and within SAAP asset classes.

The frequency and magnitude of portfolio rebalancing is determined by the Investment Rebalancing Committee consisting of the Director, CIO, and Investment Management Asset Class Portfolio Managers. The CIO reports asset class rebalancing activities to the Director and, through the Director, to the Investment Committee and full Board.

Voting of Portfolio Proxies

The ASRS votes its ownership interest with an objective of maximizing the present value of its investment. Proxy voting for the ASRS internally-managed equity ("E") portfolios and those assigned to external U.S. and non-U.S. equity managers shall not be influenced or directed by political or social prerogatives that may diminish or impair the economic value of an investment.

The ASRS currently engages Institutional Shareholder Services (ISS) and employs its research and voting guidelines for the voting of proxies for the "E" portfolios. This process is not applicable to ASRS externally-managed equity portfolios.

The ASRS external equity managers use their discretion to vote their portfolio proxies; voting records are monitored for consistency with both the individual external manager's voting policy and the ISS proxy voting policy. External equity manager voting records found to be inconsistent with or different from the ISS proxy voting policy are researched and documented. Investment Management retains the right to direct external equity managers' voting on any issue(s) if doing so is deemed beneficial to the Fund.

Securities Litigation

The ASRS monitors and participates in securities litigations when appropriate to protect the ASRS interests. From time to time, class action lawsuits are brought against companies, their directors, and/or their officers, as well as third parties such as the companies' independent public accountants, for alleged violations of federal and state securities laws relating to various disclosure obligations and breaches of fiduciary or other duties. As a shareholder or bondholder, the ASRS may join or initiate a securities class action or pursue a private action when securities fraud and other acts of wrongdoing have taken place.

Monitoring and reporting is carried out by the ASRS contracted outside counsel who may make recommendations to the ASRS and depending on the merits of the recommendation are discussed by the Securities Litigations Oversight Committee (SLOC). In the event the SLOC recommends the ASRS consider pursuing lead plaintiff or private action, Board approval is required before such action can be taken.

Securities Lending

The ASRS is allowed to lend securities with either the custody bank or tri-party in a separate account or commingled security lending structure. The CIO and Director will determine the ASRS securities lending program parameters (risk profile, aggregate lending balance, types of securities on loan, collateral requirements, etc.). The ASRS securities lending program primarily focuses on identifying loan intrinsic value.

Management of Investment Management Fees (Cost)

The ASRS strives to maintain an efficient and relatively low aggregate investment management fee structure. The ASRS internally-managed public market portfolios are managed to provide beta-like market returns with low management fees (approximately 1 bps); external public and private portfolios are anticipated to generally provide alpha, take active risk and enable the ASRS the ability to access market capital opportunities which may not be available through ASRS internal investment program.

To the extent possible, the ASRS negotiates and monitors investment fees for external public and private investment managers. For external public equity managers, securities-level transaction(s) cost analyses will be evaluated by Investment Management staff. Those managers whose transaction costs appear high relative to the market in which they trade or who use soft dollars may be subject to participation in the ASRS commission recapture program.

The ASRS Investment Management staff will oversee public manager portfolio transitions, e.g., securities from one public manager to another. These transactions may be executed on a security-level basis by either Investment Management staff or through an intermediary who may possess skills and/or can execute transactions on a more effective cost basis. Pre- and post-transaction cost analyses (commission, trading costs, market impact, etc.) are evaluated by the Investment Management staff.

Roles & Responsibilities

The ASRS Board governance structure provides the Investment Committee with general investment oversight responsibilities. In addition, the Director's Asset Class Committees implement Board policies and provide detail oversight of the ASRS investments. Specific duties of the Investment Committee and Asset Class Committees are outlined in the ASRS Board Governance Policy Handbook.

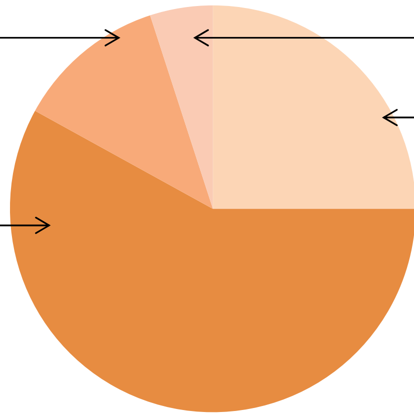
Asset Allocation

Exhibit I-1: Asset Allocation Targets

During fiscal year 2016, the ASRS asset allocation policy targets and ranges were as follows:

Asset Allocation Targets

Inflation Linked Assets (Range 10-16%)	**12.0%**
Commodities	2.0%
Real Estate	10.0%
Infrastructure	0.0%
Farmland & Timber	0.0%
Opportunistic Inflation Linked	0.0%
Equity (Range 48-65%)	**58.0%**
Large Cap	20.0%
Mid Cap	3.0%
Small Cap	3.0%
Developed Large Cap	17.0%
Developed Small Cap	2.0%
Emerging	5.0%
Private Equity	8.0%
Opportunistic Equity	0.0%



Multi-Asset Class Strategies (Range 0-12%)	**5.0%**
Multi-Asset Class Strategies	5.0%
Fixed Income (Range 18-35%)	**25.0%**
Core Bonds	11.0%
High Yield	4.0%
Private Debt	10.0%
Treasuries (Long Duration)	0.0%
Opportunistic Debt	0.0%
Cash (Range 0-3%)	**0.0%**
Tactical Cash (Unassetized)	0.0%
Operating Cash (Unassetized)	0.0%
Operating Cash (Assetized)	0.0%

Notes:

1) Total Opportunistic Equity, Debt and Inflation-Linked in aggregate will not exceed 10% of the Total Fund market value and is a) tactical in nature, outside of the SAAP benchmark and b) within the SAAP benchmark but are absolute return oriented.
2) Tactical cash reviewed as a defensive and tactical vehicle, will be consistent with House Views and may be employed as a hedge to dampen the effects of anticipated negative returns to the aggregate market value of the Total Fund.
3) Operating cash includes a nominal balance to cover unexpected deviations in cash flow requirements. Equitized operating cash includes excess cash balances that are exposed to the markets using futures and/or ETFs to minimize cash drag while facilitating larger internal and external fund obligations.
4) Multi-Asset Class strategies invest tactically within and across asset classes, seeking to exploit quantitative or fundamental drivers of asset class returns or risk allocations as market conditions warrant.

Exhibit I-2: Schedule of Investment Portfolios by Asset Class

(Dollars in thousands)

Investment Portfolios by Asset Class		Fair Value	Percentage of Investments at Fair Value
Short-Term Investments	$	970,923	2.8%
U.S. Fixed Income		5,335,635	15.6%
Private Debt		2,866,971	8.5%
Opportunistic Debt		1,171,277	3.5%
U.S. Equity		8,640,329	25.3%
Non-U.S. Equity		7,036,627	20.6%
Private Equity		2,839,849	8.3%
Opportunistic Equity		312,605	0.9%
Commodities		3,314	0.0%
Real Estate		3,378,417	9.9%
Infrastructure		331,287	1.0%
Farmland and Timber		188,960	0.6%
Multi-Asset		1,018,673	3.0%
		34,094,867	

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

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. The fair value of real estate, private equity and opportunistic investments are based on estimated values. Fair value is based on estimates and assumptions from information and representations provided by the respective general partners, in the absence of readily ascertainable market values.

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.

Exhibit I-3: Annualized Rates of Return (Net of Fees)

(Retirement & HBS)

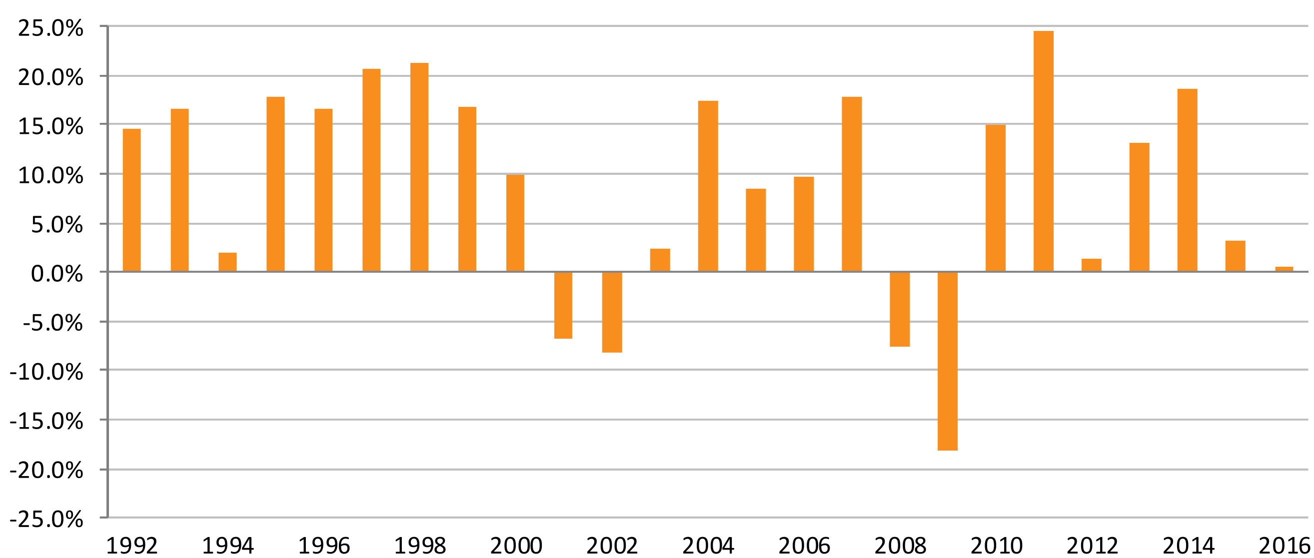
	Time Weighted Rates of Return				
Asset Class / Benchmark	**1 Year**	**3 Year**	**5 Year**	**10 Year**	**Inception July 1, 1975**
Total Fund	**0.6%**	**7.1%**	**7.1%**	**6.0%**	**9.6%**
Interim SAA Policy Benchmark	-0.6%	5.9%	6.3%	5.6%	9.3%
Domestic Fixed Income	**5.9%**	**3.8%**	**3.8%**	**5.3%**	**8.3%**
ASRS Custom Index	4.9%	2.9%	3.2%	4.8%	n/a
Private Debt	**8.5%**	**10.1%**	**n/a**	**n/a**	**10.6%**
S&P Loan Syndications and Trading Association Leveraged Loan Index + 2.5%	1.4%	3.7%	n/a	n/a	4.1%
Opportunistic Debt	**-5.1%**	**3.2%**	**4.5%**	**n/a**	**9.0%**
Total Equity	**-2.8%**	**7.0%**	**7.4%**	**5.6%**	**6.2%**
Custom Total Equity Index	-3.2%	7.1%	7.5%	5.8%	5.6%
Domestic Equity	**3.7%**	**11.3%**	**11.6%**	**7.9%**	**11.1%**
S&P Custom Index	3.2%	11.4%	11.8%	7.9%	11.2%
International Equity	**-10.4%**	**1.5%**	**0.7%**	**1.8%**	**5.6%**
MSCI Custom Index	-9.9%	1.8%	0.9%	2.5%	5.3%
Private Equity	**5.8%**	**10.6%**	**11.8%**	**n/a**	**10.8%**
Russell 2000	-10.9%	5.2%	6.5%	n/a	8.8%
Opportunistic Equity	**6.2%**	**22.0%**	**n/a**	**n/a**	**23.6%**
Commodities	**-15.9%**	**-11.1%**	**-10.4%**	**n/a**	**-5.5%**
Bloomberg Commodity Index	-13.3%	-10.6%	-10.8%	n/a	-6.2%
Real Estate	**13.8%**	**13.8%**	**13.3%**	**n/a**	**8.1%**
NFI-ODCE Index	14.2%	13.1%	12.5%	n/a	7.3%
Infrastructure	**10.3%**	**n/a**	**n/a**	**n/a**	**6.3%**
CPI (excl. food & energy) + 3.5%	5.8%	n/a	n/a	n/a	5.5%
Farmland	**4.3%**	**n/a**	**n/a**	**n/a**	**4.0%**
CPI (excl. food & energy) + 3.5%	5.8%	n/a	n/a	n/a	5.6%
Multi-Asset Class Strategies	**-12.0%**	**2.8%**	**4.6%**	**5.7%**	**6.2%**
Custom Index	-0.9%	5.7%	6.3%	5.2%	5.7%

Exhibit I-4: Historical Rates of Return (Net of Fees)
(Retirement & HBS)

Fiscal Year Ended	Rate of Return	Fiscal Year Ended	Rate of Return	Fiscal Year Ended	Rate of Return
June 30, 2016	0.6%	June 30, 2008	-7.6%	June 30, 2000	10.0%
June 30, 2015	3.2%	June 30, 2007	17.8%	June 30, 1999	16.8%
June 30, 2014	18.6%	June 30, 2006	9.8%	June 30, 1998	21.3%
June 30, 2013	13.1%	June 30, 2005	8.5%	June 30, 1997	20.6%
June 30, 2012	1.3%	June 30, 2004	17.5%	June 30, 1996	16.7%
June 30, 2011	24.6%	June 30, 2003	2.4%	June 30, 1995	17.8%
June 30, 2010	14.9%	June 30, 2002	-8.2%	June 30, 1994	1.9%
June 30, 2009	-18.1%	June 30, 2001	-6.7%	June 30, 1993	16.7%

Note: Returns on private equity investments have not been included in total fund performance for fiscal years ended June 30, 2008 and 2009.

Exhibit I-5: Historical Rates of Return (Net of Fees) - Chart
(Retirement & HBS)



Note: Returns on private equity investments have not been included in total fund performance for fiscal years ended June 30, 2008 and 2009.

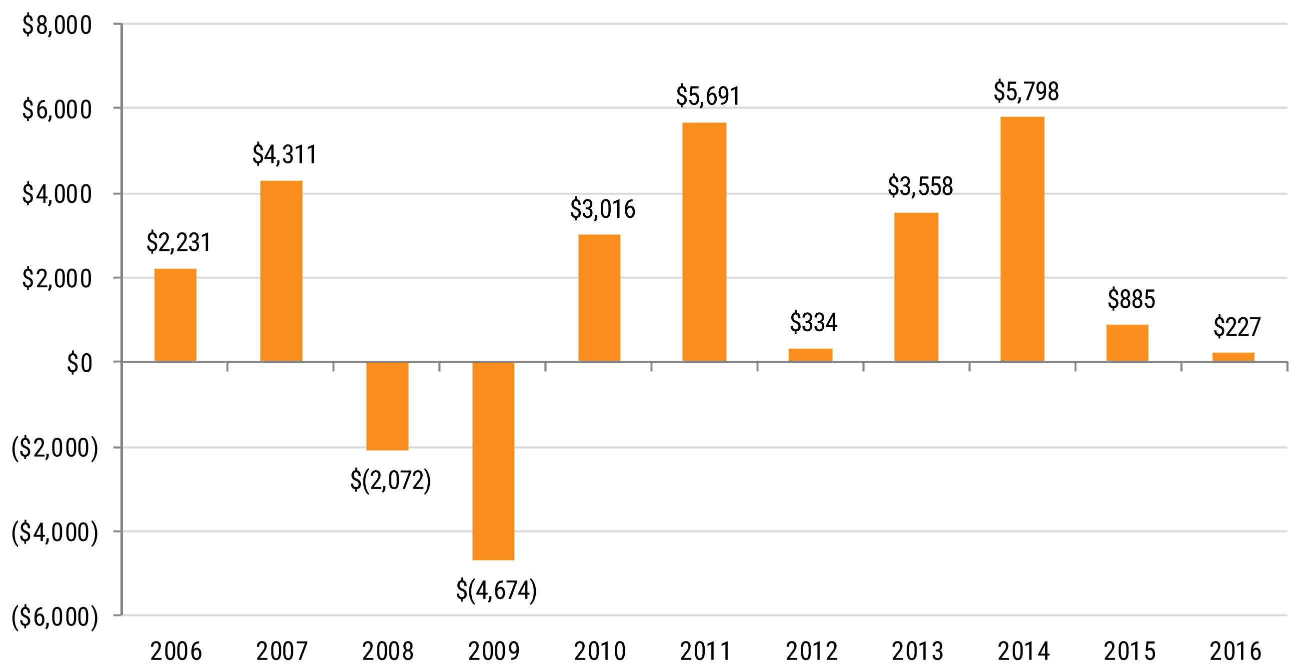
Exhibit I-6: Ten Year Review of Investment Income

(Dollars in thousands)

Fiscal Year Ended	Income	Net Appreciation (Depreciation)	Investing Activity Expense	Net Income (Loss)
June 30, 2016	$ 445,089	$ (42,973)	$ 174,856	227,260
June 30, 2015	491,750	553,368	159,655	885,463
June 30, 2014	564,891	5,382,920	150,083	5,797,728
June 30, 2013	1,167,263	2,579,350	188,770	3,557,843
June 30, 2012	891,210	(419,010)	137,905	334,295
June 30, 2011	925,578	4,893,382	128,281	5,690,679
June 30, 2010	647,859	2,484,029	116,170	3,015,718
June 30, 2009	285,665	(4,855,030)	104,125	(4,673,490)
June 30, 2008	654,878	(2,645,900)	81,419	(2,072,441)
June 30, 2007	604,320	3,766,089	59,891	4,310,518
June 30, 2006	523,997	1,758,899	51,957	2,230,939

Exhibit I-7: Ten Year Review of Investment Income (Chart)

(Dollars in millions)



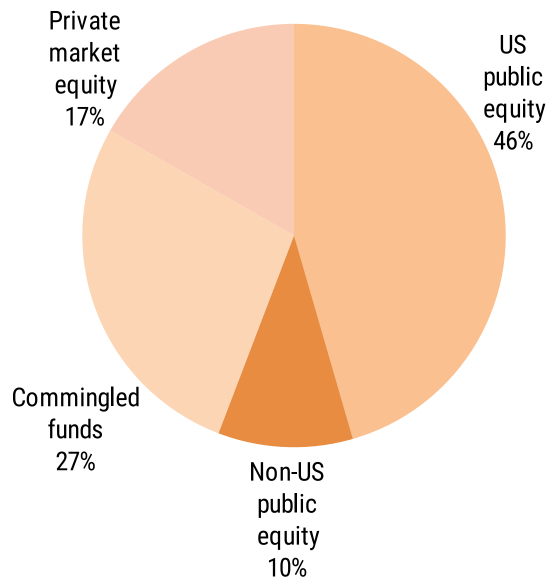
Equity Portfolio Profile

Exhibit I-8: Equity Sub-Sector Allocation

June 30, 2016

(Dollars in thousands)

Sub-Sector	% of Equity Portfolio	Fair Value
US equity:		
US large cap	35.78%	$ 6,737,367
US mid cap	4.76%	896,125
US small cap	4.98%	936,536
Total US equity	45.52%	8,570,028
Non-US equity	10.28%	1,935,626
Commingled funds - equity	27.46%	5,171,302
Private equity	15.08%	2,839,849
Opportunistic equity	1.66%	312,605
Total equity	100.00%	$ 18,829,410



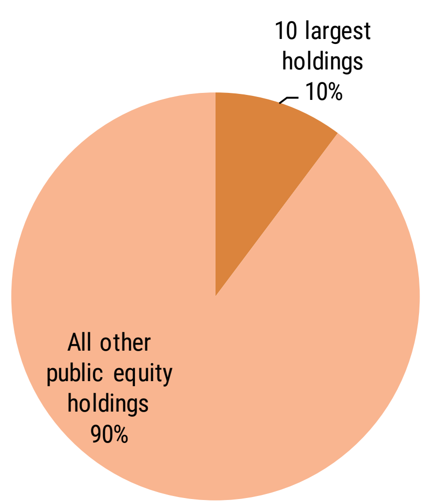
Note: Schedule does not include securities lending collateral investments.

Exhibit I-9: Ten Largest Public Equity Holdings

June 30, 2016

(Dollars in thousands)

Company	Shares	Fair Value
Exxon Mobil Corp	1,564,542	$146,660
Johnson + Johnson	1,137,714	138,005
Microsoft Corp	2,532,232	129,574
Apple Inc	1,347,285	128,800
At+T Inc	2,780,948	120,165
Pfizer Inc	2,702,252	95,146
Procter + Gamble Co When Dis	1,032,541	87,425
Chevron Corp	754,103	79,053
Verizon Communications Inc	1,353,109	75,558
Berkshire Hathaway Inc Cl B	507,329	73,456
Total	15,712,055	$1,073,842



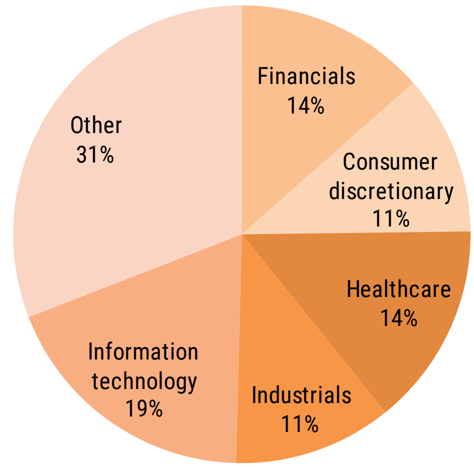
Note: A detail listing of investments is available upon request.
Direct inquiries to: ASRS, 3300 North Central Avenue, Phoenix, AZ 85012

Equity Portfolio Profile

Exhibit I-10: Distribution by Market Sector

June 30, 2016

Market Sector	ASRS Domestic Equity	Benchmark Index[1]
Consumer Discretionary	11.3 %	12.3 %
Consumer Staples	9.7	8.8
Energy	6.7	6.3
Financials	13.5	13.3
Healthcare	14.4	14.0
Industrials	11.2	11.5
Information Technology	18.7	18.8
Materials	3.5	3.8
Real Estate	3.9	4.8
Telecommunication Services	2.7	2.3
Utilities	4.4	4.1
Total	100.0 %	100.0 %



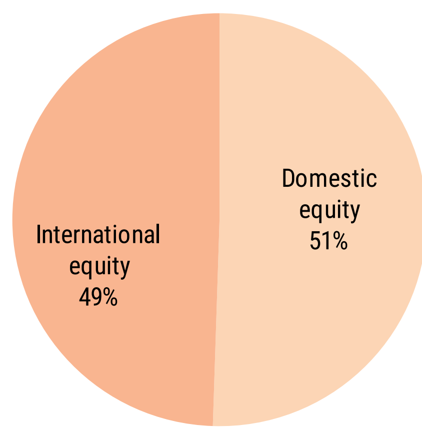
[1] The benchmark index presented is a blended composite of the S&P 500 Index (74%), S&P MidCap 400 Index (13%) and the S&P SmallCap 600 Index (13%).

Exhibit I-11: Summary of Broker Commissions

June 30, 2016

(Dollars in thousands)

Domestic/International	Commission
Domestic equity	$ 1,673
International equity	$ 1,639

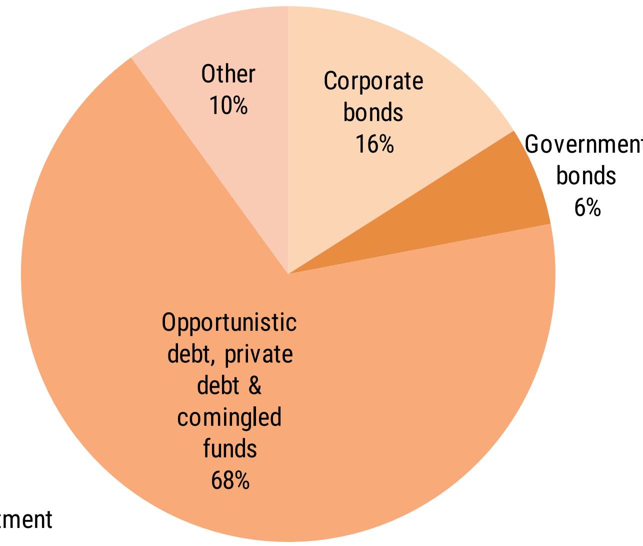


Fixed Income Portfolio Profile

Exhibit I-12: Distribution by Sector

June 30, 2016

Sector	Percent
U.S. Treasury Bills	2.33 %
Asset Backed Securities	0.11
Commercial Mortgage Backed	0.58
Corporate Bonds	16.18
Government Related	0.10
Government Agencies	1.14
Government Bonds	6.29
Government Mortgage Backed	5.25
Municipal/Provincial Bonds	0.38
Duration Not Available[1]	67.64
Total	100.00 %



[1] Represents private market investment funds and commingled investment funds. The fair value of these investment types is $6.6 Billion, and is comprised of opportunistic debt funds of $1.2 Billion, private debt funds of $2.9 Billion, and commingled funds of $2.5 Billion.

Exhibit I-13: Distribution by Coupon

June 30, 2016

Coupon Rate	Percent
0.00% - 6.5%	85.75 %
6.51% - 7.50%	6.45
7.51% - 9.0%	5.59
> 9.00%	2.21
Total	100.00 %

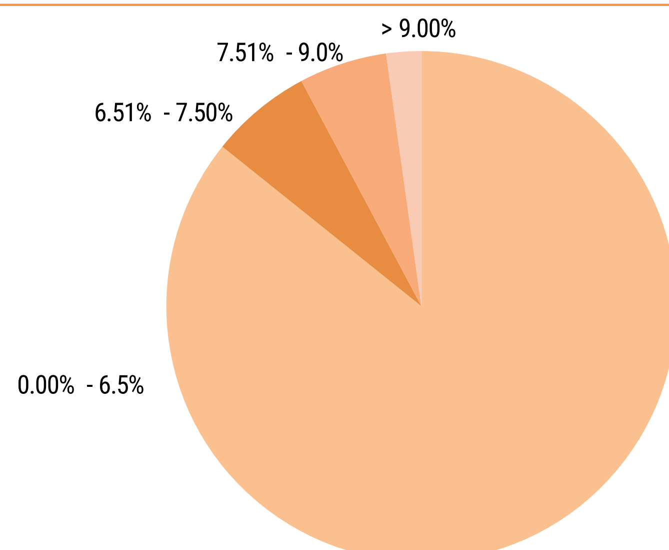


Exhibit I-14: Distribution by Maturity

June 30, 2016

Maturity	Percent
0 - 2 years	18.75 %
2 to 3 years	5.98
3 to 4 years	19.27
4 to 5 years	14.37
5 to 6 years	6.87
6 to 8 years	13.27
> 8 years	21.49
Total	100.00 %

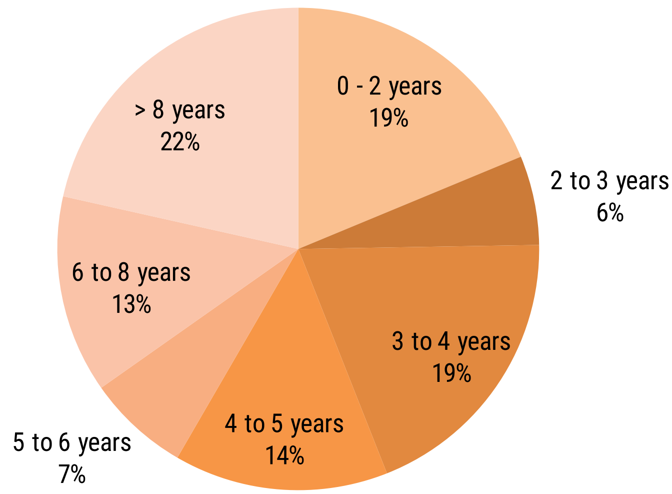


Exhibit I-15: Ten Largest Fixed Income Holdings

Year Ended June 30, 2016

(Dollars in thousands)

Holding	Coupon	Maturity	Rating	Par Value	Fair Value	Percent
US TREASURY N/B	2.75%	11/15/2023	Aa1	$ 48,000	$ 52,910	0.006 %
US TREASURY N/B	3.13%	4/30/2017	Aa1	48,000	49,045	0.005
FNMA POOL AV0691	4.00%	12/1/2043	Aa1	41,534	44,523	0.005
US TREASURY N/B	4.75%	2/15/2041	Aa1	23,200	34,754	0.004
US TREASURY N/B	4.63%	2/15/2040	Aa1	22,500	33,023	0.004
FEDERAL HOME LOAN BANK	5.00%	11/17/2017	Aa1	30,000	31,760	0.003
US TREASURY N/B	1.63%	7/31/2020	Aa1	27,000	27,767	0.003
FNMA POOL BC4841	3.00%	1/1/2046	Aa1	24,917	25,864	0.003
FED HM LN PC POOL G08653	3.00%	7/1/2045	Aa1	23,723	24,598	0.003
US TREASURY N/B	3.75%	11/15/2043	Aa1	17,000	22,388	0.002
Total				$ 305,874	$ 346,632	0.038 %

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

Schedule of Broker Commissions

Exhibit I-16: Domestic Equity Trades

Year Ended June 30, 2016

(Dollars and shares in thousands)

Broker Name	Dollar Amount of Trades	Number of Shares	Average Commission Per Share	Dollar Amount of Commission
Barclays Capital Inc./Le	$ 293,369	6,952	$ 0.0103	$ 71
Barclays Capital Le	12,676	407	0.0497	20
Bnp Paribas Prime Brokerage, Inc.	165,481	3,137	0.0100	31
Btig, Llc	32,286	903	0.0430	39
Capital Institutional Svcs Inc Equities	28,548	558	0.0252	14
Citigroup Global Markets Inc	401,671	10,228	0.0107	109
Cowen And Company, Llc	20,071	565	0.0492	28
Credit Suisse Securities (Usa) Llc	289,666	6,261	0.0141	88
Deutsche Bank Securities Inc	247,497	4,992	0.0154	77
Frank Russell Sec/Broadcort Cap Clearing	15,519	339	0.0409	14
Goldman Sachs + Co	26,164	1,133	0.0180	20
Guzman And Company	38,704	597	0.0286	17
Instinet	118,745	4,546	0.0094	43
Instinet Llc	1,033,261	23,570	0.0100	236
Investment Technology Group Inc.	236,154	4,045	0.0123	50
Isi Group Inc	15,933	766	0.0262	20
Itg Inc.	239,432	4,650	0.0113	53
J.P. Morgan Securities Inc.	123,279	2,576	0.0265	68
Jefferies + Company Inc	85,152	2,526	0.0195	49
Jonestrading Institutional Services Llc	14,995	401	0.0301	12
Kcg Americas Llc	18,703	904	0.0084	8
Knight Equity Markets L.P.	48,022	1,604	0.0450	72
Liquidnet Inc	29,263	887	0.0172	15
Loop Capital Markets	11,508	326	0.0300	10
Merrill Lynch Pierce Fenner + Smith Inc	129,986	3,203	0.0076	24
Morgan Stanley Co Incorporated	36,097	1,300	0.0126	16
Oppenheimer + Co. Inc.	18,826	369	0.0490	18
Raymond James And Associates Inc	20,488	534	0.0469	25
Rbc Capital Markets	43,197	1,333	0.0264	35
Robert W.Baird Co.Incorporate	17,521	455	0.0455	21
Rosenblatt Securities Llc	48,870	781	0.0293	23
Sanford Cbernstein Co Llc	42,842	1,277	0.0165	21
State Street Global Markets	397,551	8,823	0.0100	88
Stifel Nicolaus + Co Inc	23,230	573	0.0458	26
Sungard Brokerage & Securities Svcs Llc	13,593	185	0.0070	1

(continued)

Schedule of Broker Commissions

Exhibit I-16: Domestic Equity Trades (Continued)

Year Ended June 30, 2016

(Dollars and shares in thousands)

Broker Name	Dollar Amount of Trades	Number of Shares	Average Commission Per Share	Dollar Amount of Commission
Ubs Securities Llc	377,462	6,414	0.0126	81
Weeden + Co.	40,989	558	0.0184	10
William Blair & Company L.L.C	22,475	456	0.0385	18
Various Other Brokers	83,867	2,820	0.0362	102
Total	$ 4,863,093	111,954	$ 0.0149	$ 1,673

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

Exhibit I-17: Foreign Equity Trades

Year Ended June 30, 2016

(Dollars and shares in thousands)

Broker Name	Dollar Amount of Trades	Number of Shares	Average Commission Per Share	Dollar Amount of Commission
Barclays Capital	$ 24,543	1,291	$ 0.0219	28
Bnp Paribas Securities Services	30,373	2,128	0.0176	38
Citigroup Global Markets Inc.	30,158	5,166	0.0055	29
Citigroup Global Markets Limited	66,493	24,624	0.0030	73
Clsa Singapore Pte Ltd.	28,180	893	0.0466	42
Credit Suisse Securities (Europe) Ltd	43,943	1,365	0.0231	32
Credit Suisse Securities (Usa) Llc	32,458	6,740	0.0058	39
Daiwa Sbcm Europe	14,225	674	0.0317	21
Daiwa Securities America Inc	25,345	1,026	0.0252	26
Deutsche Bank Ag London	27,231	3,120	0.0081	25
Deutsche Bank Securities Inc	46,520	8,828	0.0063	55
Exane S.A.	20,710	831	0.0311	26
Goldman Sachs + Co	97,270	53,849	0.0008	42
Goldman Sachs International	731,445	62,297	0.0045	279
Hsbc Bank Plc	11,721	710	0.0193	14
Instinet U.K. Ltd	92,166	12,650	0.0064	81
Investment Technology Group Ltd	35,555	2,694	0.0103	28
Itg Australia Ltd.	11,835	1,858	0.0050	9
J P Morgan Securities Inc	32,724	1,990	0.0164	33
J.P. Morgan Clearing Corp.	33,021	1,724	0.0136	23
Jefferies + Company Inc	14,141	2,098	0.0073	15
Jefferies International Ltd	30,778	5,048	0.0053	27
Jp Morgan Securities Plc	57,392	2,347	0.0241	56
Liquidnet Europe Limited	13,971	2,386	0.0042	10
Merrill Lynch International	129,869	19,866	0.0046	91
Mizuho Securities Usa Inc	20,274	641	0.0325	21
Morgan Stanley Co Incorporated	161,223	50,617	0.0021	108
Nomura Securities International Inc	11,622	323	0.0348	11

(continued)

Exhibit I-17: Foreign Equity Trades (Continued)

Year Ended June 30, 2016

(Dollars and shares in thousands)

Broker Name	Dollar Amount of Trades	Number of Shares	Average Commission Per Share	Dollar Amount of Commission
Pershing Securities Limited	16,169	2,313	0.0055	13
Redburn Partners Llp	13,646	2,107	0.0092	19
Sanford C. Bernstein Ltd	77,338	4,869	0.0131	64
Societe Generale London Branch	32,520	2,985	0.0098	29
Ubs Limited	53,785	11,316	0.0044	50
Various Other Brokers	165,802	22,461	0.0081	181
Total	$ 2,234,446	323,835	$ 0.0051	$ 1,638

Note: A detailed listing of broker commissions is available upon request.

Direct inquiries to: ASRS, 3300 North Central Avenue, Phoenix, AZ 85012

Schedule of Investment Fees

Exhibit I-18: Schedule of Investment Fees

Year Ended June 30, 2016

(Dollars in thousands)

Asset Class	Assets Managed at Fair Value at June 30, 2016[1]	Management Fees[2]	Performance Fees[2]	Total
Equity:				
Public equity	$ 15,676,956	$ 27,666	$ -	$ 27,666
Private equity	2,839,849	38,719	26,481	65,200
Opportunistic equity	312,605	1,242	2,122	3,364
Total equity	18,829,410	67,627	28,603	96,230
Fixed income:				
Public fixed income	5,335,635	4,205	-	4,205
Opportunistic debt	1,171,277	13,060	(1,442)	11,618
Private debt	2,866,971	23,780	26,678	50,458
Total fixed income	9,373,883	41,045	25,236	66,281
Real estate	3,378,417	28,332	33,186	61,518
Commodities	3,314	1,065	-	1,065
Multi-asset	1,018,673	21,228	-	21,228
Infrastructure	331,287	2,969	-	2,969
Farmland and timber	188,960	2,337	-	2,337
Total	$ 33,123,944	$ 164,603	$ 87,025	$ 251,628

[1] Does not include Short-term investments.

[2]The Investment fee schedule above identifies investment manager fees and performance fees (carried interest and incentive) that are readily separable from investment income.

Public market investment managers, and some private market investment managers, are paid directly for fees. Private market investment managers, whose fees are not paid directly, report account valuations on a net of fee basis. The ASRS made a good faith effort to identify these fees by requesting a confirmation of fees from the managers and reviewing investment capital account statements.

In addition to the manager and performance fees included above, the ASRS paid approximately $9.1 million in certain other fees and expenses that were contractually agreed-upon. The amounts paid for the other contractually agreed-upon fees and expenses were determined by the custodial bank through a review of capital funding requests and are reported on a cash basis.

The appreciation/depreciation in fair value of investments is reported gross of investment manager fees on the Statement of Changes in Fiduciary Net Position. Performance fees are reported in net depreciation in fair value of investments.

This page was intentionally left blank.

actuarial section

xerox

David J. Kershner
Principal, Retirement
Wealth Practice
David.Kershner@xerox.com
602.864.3507

Troy Jaros
Senior Consultant, Retirement
Wealth Practice
Troy.Jaros@xerox.com
952.806.6107

Buck Consultants, LLC.
3200 North Central Avenue
Suite 2200
Phoenix, AZ 85012
Fax: 602.864.3535

March 4, 2016

Retirement Board
Arizona State Retirement System
3300 North Central Avenue
14th Floor
Phoenix, Arizona 85012

Arizona State Retirement System Plan
Actuarial Certification – 401(a) Portion of the Plan

This is to certify that Buck Consultants, LLC has prepared an actuarial valuation of the Arizona State Retirement System (ASRS) Plan (the Plan) as of June 30, 2015. The results of our valuation are contained in our Actuarial Report on the Valuation of the Plan as of June 30, 2015, dated March 4, 2016.

Actuarial valuations are performed annually as of June 30, the last day of both the Plan year and ASRS' fiscal year. The primary purpose of the valuation 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 financial condition since the prior valuation.

The actuarial valuation determines 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 that ASRS has adopted. The contribution rates calculated become effective for the next fiscal year. For example, the rates calculated in the June 30, 2015 valuation are applicable for the fiscal year beginning July 1, 2016.

Summary of Valuation Results

The funded status of the plan is determined by comparing the Actuarial Value of Assets to the Actuarial Accrued Liability. As of June 30, 2015, the 401(a) funded status of the Plan is 77.06%. This compares to a June 30, 2014 401(a) funded status of 76.30%.

The June 30, 2015 actuarial valuation establishes a total 401(a) contribution rate of 22.11% of the annual compensation of members. The total normal cost rate is 12.94% of compensation, and the UAAL amortization payment is 9.17% of compensation.

Plan Provisions

The Plan provisions are described in Title 38, Chapter 4, Article 2 of the Arizona Revised Statutes. All 401(a) benefits described in the statutes are reflected in this valuation, except that future PBI and enhanced PBI awards are not valued. A summary of the Plan provisions and changes enacted since 1989 are listed in Sections 10 and 11 of our valuation report.

Member Data

ASRS staff supplied census data for retired, active, and inactive members as of June 30, 2015. We have not audited this data, but have examined the data for reasonableness and consistency with the prior year's data. ASRS staff also supplied asset information.

The June 30, 2015 valuation includes a total of 558,136 members – 203,252 active members, 219,346 inactive members, 131,536 retired members and beneficiaries, and 4,002 members on long term disability. In addition, there are 245 System retirees receiving ad hoc 401(a) benefits from the Plan. The member data is summarized in Section 12 of our valuation report.

Assumptions and Methods

On May 24, 2013, the Board adopted revised actuarial assumptions to be effective beginning with the June 30, 2013 valuation. These assumptions were based on the experience study we performed for the five-year period ended June 30, 2012.

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.

On November 18, 2013, the Board adopted a change in the UAAL amortization method. The new method, effective for the June 30, 2013 and later valuations, amortizes the 401(a) UAAL over closed 30-year periods.

The actuarial assumptions and methods are attached to this letter and are summarized in Section 9 of our valuation report. We believe the assumptions used in the valuation are reasonable, taking into account the experience of the Plan and reasonable expectations, and represent our best estimate of anticipated experience under the Plan.

We certify that the valuation was performed in accordance with generally accepted actuarial principles and procedures, and has been prepared in accordance with all applicable Actuarial Standards of Practice. In our opinion, the valuation results comply with the requirements of the Arizona Constitution and statutes and, where applicable, the Internal Revenue Code and the Employee Retirement Income Security Act of 1974 (ERISA). The undersigned actuaries are independent. They are both Fellows of the Society of Actuaries, Enrolled Actuaries and Members of the American Academy of Actuaries. They meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein and in our valuation report. They are experienced in performing valuations for large public retirement systems and are fully qualified to provide actuarial services to the State of Arizona.

xerox

We prepared the following exhibits in Section 8 of our valuation report (information shown in these exhibits for years prior to 2002 was provided by ASRS):

- Exhibit 8.1a – Schedule of Funding Progress
- Exhibit 8.1b – Schedule of Employer Contributions
- Exhibit 8.3 – Notes to Required Supplementary Information
- Exhibit 8.4 – Components of Normal Cost
- Exhibit 8.5 – Schedule of Plan Active Member Valuation Data
- Exhibit 8.6a – Schedule of Plan Retirees Added and Removed from Rolls
- Exhibit 8.7 – Schedule of Unfunded (Over) Accrued Liabilities
- Exhibit 8.8a and 8.8c – Solvency Test
- Exhibit 8.9 – Schedule of Recommended Versus Actual Plan Contributions
- Exhibit 8.10a and 8.10c – Analysis of Financial Experience
- Exhibit 8.11 – Contributions Calculated and Received

Buck Consultants, LLC

David J. Kershner, FSA, EA, MAAA, FCA
Principal and Consulting Actuary

Troy Jaros, FSA, EA, MAAA, FCA
Senior Consultant, Retirement Actuary

xerox

David J. Kershner
Principal, Retirement Wealth Practice
David.Kershner@xerox.com
602.864.3507

Troy Jaros
Senior Consultant, Retirement Wealth Practice
Troy.Jaros@xerox.com
952.806.6107

Buck Consultants, LLC.
3200 North Central Avenue
Suite 2200
Phoenix, AZ 85012
Fax: 602.864.3535

March 4, 2016

Retirement Board
Arizona State Retirement System
3300 North Central Avenue
14th Floor
Phoenix, Arizona 85012

Arizona State Retirement System Plan
Actuarial Certification – 401(h) Portion of the Plan

This is to certify that Buck Consultants, LLC has prepared an actuarial valuation of the Arizona State Retirement System (ASRS) Plan (the Plan) as of June 30, 2015. The results of our valuation are contained in our Actuarial Report on the Valuation of the Plan as of June 30, 2015, dated March 4, 2016.

Actuarial valuations are performed annually as of June 30, the last day of both the Plan year and ASRS' fiscal year. The primary purpose of the valuation 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 financial condition since the prior valuation.

The actuarial valuation determines 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 that ASRS has adopted. The contribution rates calculated become effective for the next fiscal year. For example, the rates calculated in the June 30, 2015 valuation are applicable for the fiscal year beginning July 1, 2016.

Summary of Valuation Results

The funded status of the plan is determined by comparing the Actuarial Value of Assets to the Actuarial Accrued Liability. As of June 30, 2015, the 401(h) funded status of the Plan is 90.11%. This compares to a June 30, 2014 401(h) funded status of 93.05%.

The June 30, 2015 actuarial valuation establishes a total 401(h) contribution rate of 0.56% of the annual compensation of members. The total normal cost rate is 0.35% of compensation, and the UAAL amortization payment is 0.21% of compensation.

Plan Provisions

The Plan provisions are described in Title 38, Chapter 4, Article 2 of the Arizona Revised Statutes. All 401(h) benefits described in the statutes are reflected in this valuation. A summary of the Plan provisions and changes enacted since 1989 are listed in Sections 10 and 11 of our valuation report.

Member Data

ASRS staff supplied census data for retired, active, and inactive members as of June 30, 2015. We have not audited this data, but have examined the data for reasonableness and consistency with the prior year's data. ASRS staff also supplied asset information.

The June 30, 2015 valuation includes a total of 558,136 members – 203,252 active members, 219,346 inactive members, 131,536 retired members and beneficiaries, and 4,002 members on long term disability. In addition, there are 595 System retirees receiving 401(h) benefits from the Plan. The member data is summarized in Section 12 of our valuation report.

Assumptions and Methods

On May 24, 2013, the Board adopted revised actuarial assumptions to be effective beginning with the June 30, 2013 valuation. These assumptions were based on the experience study we performed for the five-year period ended June 30, 2012.

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.

On November 18, 2013, the Board adopted a change in the UAAL amortization method. The new method, effective for the June 30, 2013 and later valuations, amortizes the 401(h) UAAL over closed 15-year periods.

The actuarial assumptions and methods are attached to this letter and are summarized in Section 9 of our valuation report. We believe the assumptions used in the valuation are reasonable, taking into account the experience of the Plan and reasonable expectations, and represent our best estimate of anticipated experience under the Plan.

We certify that the valuation was performed in accordance with generally accepted actuarial principles and procedures, and has been prepared in accordance with all applicable Actuarial Standards of Practice. In our opinion, the valuation 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 Statement No. 43 of the Governmental Accounting Standards Board. The undersigned actuaries are independent. They are both Fellows of the Society of Actuaries, Enrolled Actuaries and Members of the American Academy of Actuaries. They meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein and in our valuation report. They are experienced in performing valuations for large public retirement systems and are fully qualified to provide actuarial services to the State of Arizona.

We prepared the following exhibits in Section 8 of our valuation report (information shown in these exhibits for years prior to 2002 was provided by ASRS):

- Exhibit 8.2a – Schedule of Funding Progress
- Exhibit 8.2b – Schedule of Employer Contributions
- Exhibit 8.3 – Notes to Required Supplementary Information
- Exhibit 8.4 – Components of Normal Cost
- Exhibit 8.5 – Schedule of Plan Active Member Valuation Data
- Exhibit 8.6d – Schedule of Benefit Recipients Added to and Removed from Rolls
- Exhibit 8.7 – Schedule of Unfunded (Over) Accrued Liabilities
- Exhibit 8.8b and 8.8c – Solvency Test
- Exhibit 8.10b and 8.10c – Analysis of Financial Experience
- Exhibit 8.11 – Contributions Calculated and Received

Buck Consultants, LLC

David J. Kershner, FSA, EA, MAAA, FCA
Principal and Consulting Actuary

Troy Jaros, FSA, EA, MAAA, FCA
Senior Consultant, Retirement Actuary

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%. The ASRS Board of Trustees is responsible for establishing and maintaining the funding policy.

The actuarial cost methodology utilized for funding purposes differs from the actuarial cost methodology utilized for financial reporting purposes. The identification and discussion regarding the differences between the actuarial assumptions for financial reporting purposes and those utilized for funding purposes is contained in the Notes to the Basic Financial Statements. The Projected Unit Credit (PUC) Method is utilized as the actuarial cost methodology for funding purposes. The ASRS has been utilizing the PUC since 1989, when it became law in 1989 as a result of action taken by the legislature.

As of June 30, 2015, the date of the most recent actuarial valuation, this funding level is 77.5%. When the present actuarial asset value of $34.6 billion is compared to the actuarial liabilities of $44.6 billion, actuarial liabilities exceed actuarial assets by the amount of $10 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.

Asset Valuation

The ASRS actuary determines the actuarial value of assets by recognizing investment gains and losses over a ten year period. The gradual recognition of investment gains and losses reduces volatility in the year-to-year level of contribution rates.

Actuarial Schedules

The exhibit references within the actuarial certification letters correspond to exhibits found in the June 30, 2015 actuarial valuation report. They do not match the exhibit numbers used within this comprehensive annual financial report.

A copy of the June 30, 2015 actuarial valuation report is available at our website, https://azasrs.gov.

Please reference the ten-year schedule of actuarially determined and actual contributions in Required Supplementary Information.

The Arizona State Retirement System 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. Please refer to the Financial Section of this report for an in-depth discussion of plan provisions. 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.

Exhibit A-1: Benefit Multiplier

Years of Credited Service	Benefit Multiplier
Less than 20	2.10%
20.0 to 24.99	2.15%
25.0 to 29.99	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 five or more years of credited service.

5. Early Retirement Benefits

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

Exhibit A-2: Early Retirement Benefit Reduction Rates, Members Hired before July 1, 2011

	Age At Date Of Retirement															
Years of Service	**50**	**51**	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**	**61**	**62**	**63**	**64**	**65**
5-9.99	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	88%	91%	94%	97%	100%
10-19.99	44%	49%	54%	59%	64%	69%	74%	79%	84%	89%	94%	97%	100%	100%	100%	100%
20	50%	55%	60%	65%	70%	75%	80%	91%	94%	97%	100%	100%	100%	100%	100%	100%
21	50%	55%	60%	65%	70%	75%	91%	94%	97%	100%	100%	100%	100%	100%	100%	100%
22	50%	55%	60%	65%	70%	91%	94%	97%	100%	100%	100%	100%	100%	100%	100%	100%
23	50%	55%	60%	65%	91%	94%	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%
24	50%	55%	60%	91%	94%	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
25	50%	55%	91%	94%	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
26	50%	91%	94%	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
27	91%	94%	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
28	94%	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
29	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
30+	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

If a member has at least 77 points, but less than 80 points, the reduction will be 3% for each unit below 80 for members hired before July 1, 2011.

Exhibit A-3: Early Retirement Benefit Reduction Rates, Members Hired on or after July 1, 2011

	Age At Date Of Retirement															
Years of Service	**50**	**51**	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**	**61**	**62**	**63**	**64**	**65**
5-9.99	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	88%	91%	94%	97%	100%
10-24.99	44%	49%	54%	59%	64%	69%	74%	79%	84%	89%	94%	97%	100%	100%	100%	100%
25-29.99	44%	49%	54%	59%	64%	69%	74%	79%	84%	89%	100%	100%	100%	100%	100%	100%
30+	44%	49%	54%	59%	64%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

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, or

b) period certain and life annuity (with pop-up) with either five, ten, or fifteen years of payments guaranteed.

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 the separate LTD trust.

2. Disability Payments if Member Remains Disabled Through Normal Retirement Date

Monthly benefit member would have received if service had continued to normal retirement date assuming the member'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 $50.00.

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.

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 member and employer accounts, along with any supplemental credits transferred from the System to the Plan, with interest

b) the beneficiary may elect to receive a monthly income, in the single life form, which is actuarially equivalent to the amount in (a) at 8%.

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 refund option for members hired on or after July 1, 2011 who are not terminated due to an Employer Reduction in Force or position elimination, or,

c) 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 ASRS Board reduced the interest rate to be credited on refund of contributions from 8% to 4%, effective June 30, 2005, and from 4% to 2% effective June 30, 2013.

The refund option is the same as the enhanced refund option except it does not include any shares of the employer contributions with interest.

F. Health Insurance Premium Benefit Supplement (HBS)

1. Eligibility

Retirement or disability after five 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. Members 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 member is responsible. The maximum benefits for members with 10 or more years of service are:

a) with respect to premiums paid for retirees with member only coverage:

   i. $150 per month if the retiree is under age 65

   ii. $100 per month if the retiree is 65 or over

b) with respect to premiums paid for retirees with family coverage:

   i. $260 per month if the member and dependents are under age 65

   ii. $170 per month if the member and dependents are 65 or over

   iii. $215 per month if the member is over age 65 and the dependent is under age 65

   iv. $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% for each completed year of service (i.e., 50% to 90%).

G. Automatic Benefits Adjustments Based on Excess Investment Earnings

1. Permanent Benefit Increase (PBI)

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

2. Permanent Benefit Increase Enhancement (Enhanced PBI)

Provides retired members with at least ten years of service who have been retired five or more years an additional benefit. For each complete five-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.

Due to legislation enacted in the 2013 legislative session, PBIs and enhanced PBIs will not be awarded to members hired on or after September 13, 2013.

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 the required employer contribution rate. The contribution rate for fiscal year 2016 is 11.35% for each member and each employer, based on the 2014 actuarial valuation. The contribution rate for fiscal year 2017 will be 11.34% based on this valuation. Interest is credited at 8.00%; however, interest is credited at 4% from July 1, 2005 and 2% from July 1, 2013 for return of contributions upon withdrawal.

Please refer to the *Schedule of Employer Contributions – Retirement* in Required Supplementary Information for a history of actuarially determined and actual contributions for the last 10 years.

Actuarial Methods and Assumptions were adopted by the ASRS Board of Trustees on May 24, 2013 with an effective date as of June 30, 2013.

A. Actuarial Assumptions

Determined from experience analysis from July 1, 2007 through June 30, 2012. Any changes as a result of the actuarial study or plan provisions have been taken into account in the most recent actuarial valuation.

1. Investment Yield Rate

The assumed rate of return on pension assets is 8% per annum compounded annually, net of all expenses (determined from the ASRS Board's strategic session). This rate consistent with the rate used to discount the actuarial accrued liability.

2. Mortality

The mortality assumption was chosen to be used from June 30, 2013 to June 30, 2017. The rates were projected to the middle point of this period and include an appropriate level of conservatism that reflects expected future mortality improvements.

Pre-retirement

Assumption: 50% of 1994 GAM – Static, Projected to 2015 With Projection Scale BB, with no setback, and no adjustment for amount of Plan/System income.

Rates at representative ages are shown are as follows:

Exhibit A-4: Rates of Mortality, Active Members

Age	Male Participants	Female Participants
20	0.000207	0.000128
25	0.000270	0.000127
30	0.000269	0.000146
35	0.000292	0.000211
40	0.000406	0.000344
45	0.000692	0.000476
50	0.001127	0.000639
55	0.001882	0.000987
60	0.003149	0.001779
65	0.005325	0.003450
70	0.008633	0.005639
75	0.013718	0.009380
80	0.023121	0.016632
85	0.038025	0.029474
90	0.066498	0.052712

Post-retirement

Assumptions: Non-Disabled rates are based on the 1994 GAM – Static, Projected to 2015 with Projection Scale BB with adjustments for small and large benefit amounts. Disabled rates are based on the experience of other large public sector retirement systems and experience of the ASRS. Rates (with no adjustments for benefit amount) after retirement, at representative ages are shown below.

Exhibit A-5: Rates of Mortality, Post-retirement

	Male Participants		Female Participants	
Age	Non-disabled	Disabled	Non-disabled	Disabled
20	0.000414	0.034940	0.000256	0.026940
25	0.000539	0.038890	0.000253	0.027440
30	0.000538	0.051100	0.000292	0.038300
35	0.000584	0.063540	0.000423	0.053930
40	0.000812	0.058810	0.000688	0.056980
45	0.001384	0.040920	0.000951	0.037590
50	0.002253	0.034740	0.001277	0.025700
55	0.003763	0.031360	0.001975	0.022840
60	0.006299	0.031110	0.003558	0.018030
65	0.010650	0.030860	0.006901	0.013930
70	0.017267	0.033730	0.011278	0.012990
75	0.027435	0.048250	0.018760	0.020770
80	0.046241	0.055540	0.033265	0.036470
85	0.076050	0.090010	0.058948	0.063400
90	0.132997	0.146340	0.105424	0.112480

3. Disability Rates

Exhibit A-6: Rates of Decrement Due to Disability

Age	Unisex Rates
20	0.000491
25	0.000541
30	0.000654
35	0.000997
40	0.001583
45	0.002449
50	0.003649
55	0.004280
60	0.004655

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

Rates by completed years of service are shown below:

Exhibit A-7: Rate of Decrement Due to Withdrawal

Year of Service	Males	Females
0	18.50%	21.75%
1	15.75%	17.00%
2	12.75%	14.75%
3	10.75%	11.75%
4	9.50%	10.25%
5	8.50%	9.75%
6	7.75%	8.50%
7	6.75%	7.75%
8	5.75%	6.25%
9	5.50%	5.75%
10	5.25%	5.00%
11	4.75%	4.50%
12	4.25%	4.10%
13	3.50%	3.80%
14	3.25%	3.50%
15	3.00%	3.25%
16	2.75%	3.00%
17	2.75%	2.75%
18	2.50%	2.50%
19	2.25%	2.25%
20+	2.00%	2.00%

5. Salary Scales

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

Exhibit A-8: Salary Scale

Years of Service	Merit Component	Total Salary Increase[1]
1	3.75%	6.75%
2	3.00%	6.00%
3	1.90%	4.90%
4	1.35%	4.35%
5	1.05%	4.05%
6	0.95%	3.95%
7	0.75%	3.75%
8	0.60%	3.60%
9	0.60%	3.60%
10	0.40%	3.40%
11 to 19	0.20%	3.20%
20 or more	0.00%	3.00%

[1] Total salary increase rate is equal to wage inflation (or growth) rate (3.00%) plus merit component.

6. Retirement Age

Select and ultimate retirement rates are used. Rates at representative ages and years of service are shown on the following schedule. Deferred vested members are assumed to retire at normal retirement age.

Exhibit A-9: Rates of Decrement Due to Retirement, Members Hired before July 1, 2011

	Years of Service - All Members			
Age	0-3	11-18	25	31+
50	0.00%	4.00%	5.00%	25.00%
55	0.00%	4.00%	25.00%	25.00%
60	0.00%	9.00%	25.00%	25.00%
62	0.00%	33.00%	25.00%	25.00%
65	33.00%	33.00%	33.00%	33.00%
70	15.00%	25.00%	33.00%	25.00%

Exhibit A-10: Rates of Decrement Due to Retirement, Members Hired on or after July 1, 2011

	Years of Service - All Members			
Age	0-3	11-18	25	31+
50	0.00%	4.00%	8.33%	14.00%
55	0.00%	4.00%	10.89%	33.00%
60	0.00%	9.00%	30.00%	25.00%
62	0.00%	33.00%	25.00%	25.00%
65	33.00%	33.00%	33.00%	33.00%
70	15.00%	25.00%	33.00%	25.00%

7. Future Retirees Eligible for the Health Insurance Premium Benefit Supplement (HBS)

It is assumed that 60% of future retirees will be eligible to receive the post-retirement health insurance premium supplement and that 40% of those retirees will be eligible for the dependent premium supplement. These assumptions also apply to members who have been retired less than one year.

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 are assumed to commence payments if eligible for early retirement.

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 retirement.

11. 415 (b) Limits – Statutory

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 0.174% has been added to the non-retired 401(a) liabilities to account for the election of optional forms other than a single life annuity.

13. Alternate Contribution Rate

The past service contribution rate is adjusted to consider alternate contribution rate payments. The past amortization amount was reduced by the anticipated amount of alternate contributions, and adjusted for interest.

14. Adjustment for Contribution Timing

Contribution rates are increased by ½ of a year’s interest to reflect the fact that contributions are made throughout the fiscal year.

15. Future Permanent Benefit Increases (PBIs)

Future PBIs are not valued for funding purposes.

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 was previously funded on a level dollar basis over the period of time described in A.R.S. § 38-737. Beginning with the June 30, 2013 valuation, the period is a closed 30-year period for the 401(a) portion of the Plan and a closed 15-year period for the 401(h) portion.

D. Data for Valuation

In preparing the actuarial valuation as of June 30, 2015, 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.

Exhibit A-11: Schedule of Active Member Valuation Data (Retirement)

Last 10 Years

Valuation as of June 30,	Number of Participating Employers	Active Members	Annual Payroll	Annual Average Pay	Increase in Average Pay
			Contributing Active Members		
2015	577	203,252	$ 9,072,376,682	$ 44,636	1.8%
2014	585	203,201	8,908,620,792	43,841	1.5%
2013	585	202,693	8,752,783,004	43,182	-0.7%
2012	593	203,994	8,868,678,184	43,475	0.3%
2011	595	208,939	9,060,630,604	43,365	-1.7%
2010	599	213,530	9,419,951,810	44,115	-0.2%
2009	599	222,515	9,834,810,345	44,198	3.1%
2008	586	226,415	9,708,352,896	42,879	4.8%
2007	597	224,001	9,161,803,726	40,901	7.1%
2006	599	217,676	8,311,869,615	38,185	0.9%

Exhibit A-12: Schedule of Retirees Added to and Removed from Rolls (Retirement)

Last 10 Years

Valuation as of June 30,	Retirants and Beneficiaries Added to Rolls		Retirants and Beneficiaries Removed from Rolls		Retirants and Beneficiary Rolls End of Year		% Increase in Annual Allowance	Average Annual Allowances
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances [1]		
2015	8,695	$ 169,138,375	3,414	$ 52,490,287	131,536	$ 2,599,155,944	4.7%	$ 19,760
2014	8,385	160,478,869	3,005	45,575,405	126,255	2,482,507,856	4.9%	19,663
2013	9,489	175,974,484	3,045	47,326,711	120,875	2,367,604,392	5.7%	19,587
2012	9,227	171,972,274	2,792	41,695,405	114,431	2,238,956,619	6.2%	19,566
2011	9,288	179,066,507	2,599	38,511,310	107,926	2,108,679,750	7.1%	19,526
2010	9,360	176,419,906	2,477	35,666,261	101,307	1,968,124,553	7.7%	19,427
2009	7,958	153,218,995	2,490	30,033,184	94,424	1,827,370,908	7.2%	19,353
2008	7,784	148,885,733	2,422	33,418,979	88,956	1,704,185,097	7.3%	19,158
2007	7,393	144,536,847	2,297	30,532,270	83,594	1,588,718,343	7.7%	19,005
2006	7,143	170,867,676	2,498	32,717,257	78,498	1,474,713,766	10.3%	18,787

[1] PBIs included here.

Exhibit A-13: Schedule of Retirees Added to and Removed from Rolls (HBS)

Last 7 Years[1]

	Retirants and Beneficiaries Added to Rolls		Retirants and Beneficiaries Removed from Rolls		Retirants and Beneficiaries Rolls End of Year			
Valuation as of June 30,	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	% Increase in Annual Allowance	Average Annual Allowances
2015	7,429	$ 15,954,804	3,119	$ 7,965,132	71,496 [4]	$ 97,982,688	8.9%	$ 1,370
2014	5,609	8,620,656	3,350	8,597,436	67,186 [3]	89,993,016	0.0%	1,339
2013	5,861	9,434,508	4,159	9,127,908	64,927 [2]	89,969,796	0.3%	1,386
2012	5,867	9,754,788	3,285	8,936,184	63,225	89,663,196	0.9%	1,418
2011	6,047	10,459,392	3,199	7,707,744	60,643	88,844,592	3.2%	1,465
2010	5,689	10,358,376	1,821	6,487,680	57,795	86,092,944	4.7%	1,490
2009	n/a	n/a	n/a	n/a	54,753	82,222,248	n/a	1,502

[1] Information not available for prior years.
[2] Includes 627 System members receiving HBS benefits and 1,516 members receiving LTD benefits and HBS benefits.
[3] Includes 608 System members receiving HBS benefits and 1,383 members receiving LTD benefits and HBS benefits.
[4] Includes 595 System members receiving HBS benefits and 1280 members receiving LTD benefits and HBS benefits.

Exhibit A-14: Schedule of Funding Progress (Retirement and HBS)

Last 10 Years

Year Ended June 30,	Actuarial Value of Assets (a)	Actuarial Accrued Liabilities (AAL) (b)	Unfunded Actuarial Accrued Liabilities (UAAL) (b - a)	Assets as a % of Accrued Liabilities (a / b)	Covered Employee Payroll (c)	UAAL as a % of Covered Employee Payroll ((b - a) / c)
2015	$ 34,559,692,891	$ 44,573,559,015	$ 10,013,866,124	77.5%	$ 9,072,376,682	110.4%
2014	32,922,116,667	42,826,013,931	9,903,897,264	76.9%	8,908,620,792	111.2%
2013	31,435,228,262	41,396,575,487	9,961,347,225	75.9%	8,752,783,004	113.8%
2012	30,229,577,272	39,952,371,191	9,722,793,919	75.7%	8,868,678,184	109.6%
2011	29,230,960,267	38,555,369,013	9,324,408,746	75.8%	9,060,630,604	102.9%
2010	28,823,144,688	37,557,862,066	8,734,717,378	76.7%	9,419,951,810	92.7%
2009	28,360,159,450	35,742,538,572	7,382,379,122	79.3%	9,834,810,345	75.1%
2008	27,851,825,730	33,870,864,745	6,019,039,015	82.2%	9,708,352,896	62.0%
2007	26,476,687,905	31,995,671,426	5,518,983,521	82.8%	9,161,803,726	60.2%
2006	24,851,522,776	29,696,631,262	4,845,108,486	83.7%	8,311,869,615	58.3%

Exhibit A-15: Solvency Test (Retirement)

Last 10 Years

Year End June 30,	Aggregate Accrued Liabilities for: Active Member Contributions (1)	Retirees and Beneficiaries (2)	Active Members (Employer Financed Portion) (3)	Actuarial Value of Assets Available for Benefits	Portion of Actuarial Accrued Liabilities Covered by Assets Available for Benefits (1)	(2)	(3)
2015	$ 11,714,896,096	$ 25,757,665,962	$ 5,495,566,397	$ 33,112,994,638	100%	83%	0.0%
2014	10,780,693,824	24,689,077,682	5,879,545,497	31,547,987,085	100%	84.1%	0.0%
2013	9,917,301,188	23,684,426,598	6,310,027,446	30,110,632,566	100%	85.3%	0.0%
2012	9,110,894,718	21,699,459,353	7,639,934,669	28,948,010,913	100%	91.4%	0.0%
2011	8,374,149,814	20,541,081,742	8,135,947,783	27,983,517,225	100%	95.5%	0.0%
2010[2]	7,704,328,621	19,246,476,421	9,121,714,675	27,571,999,406	100%	100%	6.8%
2009	7,054,925,502	17,455,947,713	9,779,242,657	27,093,788,614	100%	100%	26.4%
2008	6,256,502,949	16,357,773,654	9,810,200,566	26,612,440,139	100%	100%	40.8%
2007	5,533,036,906	15,191,806,375	9,665,632,410	25,309,888,063	100%	100%	47.4%
2006	4,168,243,157	13,998,186,812	10,025,660,085 [1]	23,766,572,590	100%	100%	55.9%

[1] 401(a) liabilities for 2006 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 July 1, 1981.

Exhibit A-16: Solvency Test (HBS)

Last 10 Years

Year End June 30,	Aggregate Accrued Liabilities for: Active Member Contributions (1)	Retirees and Beneficiaries (2)	Active Members (Employer Financed Portion) (3)	Actuarial Value of Assets Available for Benefits	Portion of Actuarial Accrued Liabilities Covered by Assets Available for Benefits (1)	(2)	(3)
2015	$ -	$ 833,901,538	$ 771,529,022	$ 1,446,698,253	100%	100%	79.4%
2014	-	734,450,033	742,246,895	1,374,129,582	100%	100%	86.2%
2013	-	738,731,217	746,089,038	1,324,596,696	100%	100%	78.5%
2012	-	674,713,116	827,369,335	1,281,566,359	100%	100%	73.3%
2011	-	669,593,178	834,596,496	1,247,433,042	100%	100%	69.2%
2010	-	652,876,059	832,466,290	1,251,145,282	100%	100%	71.9%
2009	-	627,536,754	824,885,946	1,266,370,836	100%	100%	77.4%
2008	-	619,808,594	826,578,982	1,239,385,591	100%	100%	75.0%
2007	-	598,088,408	1,007,107,327	1,166,799,842	100%	100%	56.5%
2006	-	578,560,443	925,980,765 [1]	1,084,950,186	100%	100%	54.7%

[1] HBS Liabilities for 2006 are included in Plan liabilities for inactive members.

Exhibit A-17: Analysis of Financial Experience (Retirement)

Last 10 Years *(Dollars in millions)*

Year Ended June 30,[3]	Unfunded Actuarial Accrued Liability (UAAL) Prior Year	Normal Cost for the Year	Contributions for the Year	Interest at 8% on UAAL	Interest at 8% on Normal Cost[2]	Interest at 8% on Contributions	Total Interest	Expected UAAL	Actual UAAL	Gain (Loss) for the Year[1]
2015	$ 9,801.33	$ 1,161.38	$ (2,056.69)	$ 784.11	$ 46.46	$ (82.27)	$ 748.30	$ 9,654.32	$ 9,855.13	$ (200.81)
2014	9,801.12	1,143.11	(1,961.18)	784.09	45.72	(78.45)	751.36	9,734.41	9,801.33	(66.92)
2013	9,502.28	1,164.58	(1,859.21)	760.18	93.17	(74.37)	778.98	9,586.63	9,801.12	(214.49)
2012	9,067.66	1,170.47	(1,758.02)	725.41	93.64	(70.32)	748.73	9,228.84	9,502.28	(273.44)
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)
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)
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)
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)
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)
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)

[1] Gain/Loss includes assumption and plan changes.

[2] Middle of year beginning in 2014, beginning of year prior to 2014.

[3] 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.

Exhibit A-18: Analysis of Financial Experience (HBS)

Last 10 Years *(Dollars in millions)*

Year Ended June 30,[3]	Unfunded Actuarial Accrued Liability (UAAL) Prior Year	Normal Cost for the Year	Contributions for the Year	Interest at 8% on UAAL	Interest at 8% on Normal Cost[2]	Interest at 8% on Contributions	Total Interest	Expected UAAL	Actual UAAL	Gain (Loss) for the Year[1]
2015	$ 102.57	$ 33.27	$ (73.56)	$ 8.20	$ 1.33	$ (2.14)	$ 7.39	$ 69.67	$ 158.74	$ (89.07)
2014	160.23	34.05	(53.40)	12.82	1.36	(2.14)	12.04	152.92	102.57	50.35
2013	220.51	35.54	(57.16)	17.64	2.84	(2.28)	18.20	217.09	160.23	56.86
2012	256.75	38.42	(54.46)	20.54	3.07	(2.18)	21.43	262.14	220.51	41.63
2011	234.20	40.28	(51.05)	18.74	3.22	(2.04)	19.92	243.35	256.75	(13.40)
2010	186.05	41.88	(59.39)	14.88	3.35	(2.38)	15.85	184.39	234.20	(49.81)
2009	207.00	46.38	(90.48)	16.56	3.71	(3.62)	16.65	179.55	186.05	(6.50)
2008	438.39	53.73	(99.03)	35.07	4.30	(3.96)	35.41	428.50	207.00	221.50
2007	419.59	55.04	(103.47)	33.57	4.40	(4.14)	33.83	404.99	438.39	(33.40)
2006	428.17	52.31	(93.46)	34.25	4.18	(3.74)	34.70	421.72	419.59	2.13

[1] Gain/Loss includes assumption and plan changes.

[2] Middle of year beginning in 2014, beginning of year prior to 2014.

[3] 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.

xerox

David J. Kershner
Principal, Retirement Wealth Practice
David.Kershner@xerox.com
602.864.3507

Troy Jaros
Senior Consultant, Retirement Wealth Practice
Troy.Jaros@xerox.com
952.806.6107

Buck Consultants, LLC.
3200 North Central Avenue
Suite 2200
Phoenix, AZ 85012
Fax: 602.864.3535

March 4, 2016

Retirement Board
Arizona State Retirement System
3300 North Central Avenue
14th Floor
Phoenix, Arizona 85012

Arizona State Retirement System Long-Term Disability Program Actuarial Certification – LTD Program

This is to certify that Buck Consultants, LLC has prepared an actuarial valuation of the Arizona State Retirement System (ASRS) Long-Term Disability Program (the LTD Program) as of June 30, 2015. The results of our valuation are contained in our Actuarial Report on the Valuation of the LTD Program as of June 30, 2015, dated March 4, 2016.

Actuarial valuations are performed annually as of June 30, the last day of both the LTD Program plan year and ASRS' fiscal year. The primary purpose of the valuation 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 financial condition since the prior valuation.

The actuarial valuation determines 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 that ASRS has adopted. The contribution rates calculated become effective for the next fiscal year. For example, the rates calculated in the June 30, 2015 valuation are applicable for the fiscal year beginning July 1, 2016.

Summary of Valuation Results

The funded status of the LTD Program is determined by comparing the Actuarial Value of Assets to the Actuarial Accrued Liability. As of June 30, 2015, the funded status of the LTD Program is 79.06%. This compares to a June 30, 2014 funded status of 84.99%.

The June 30, 2015 actuarial valuation establishes a total contribution rate of 0.28% of the annual compensation of members. The total normal cost rate is 0.19% of compensation, and the UAAL amortization payment is .09% of compensation.

LTD Program Terms

The LTD Program terms are described in Section 38-797 of the Arizona Revised Statutes. All LTD benefits described in the statutes are reflected in this valuation. A summary of the LTD Program terms is listed in Section 9 of our valuation report.

Member Data

ASRS staff and Sedgwick (the administrator of the LTD Program) supplied census data for disabled and active members as of June 30, 2015. We have not audited this data, but have examined the data for reasonableness and consistency with the prior year's data. ASRS staff also supplied asset information.

The June 30, 2015 valuation includes a total of 207,254 members – 203,252 active members and 4,002 disabled members. The member data is summarized in Section 10 of our valuation report.

Assumptions and Methods

On May 24, 2013, the Board adopted revised actuarial assumptions to be effective beginning with the June 30, 2013 valuation. These assumptions were based on the experience study we performed for the five-year period ended June 30, 2012.

On November 18, 2013, the Board adopted a change in the UAAL amortization method. The new method, effective for the June 30, 2013 and later valuations, amortizes the UAAL over closed 15-year periods.

The actuarial assumptions and methods are attached to this letter and are summarized in Sections 7 and 8 of our valuation report. We believe the assumptions used in the valuation are reasonable, taking into account the experience of the LTD Program and reasonable expectations, and represent our best estimate of anticipated experience under the LTD Program.

We certify that the valuation was performed in accordance with generally accepted actuarial principles and procedures, and has been prepared in accordance with all applicable Actuarial Standards of Practice. In our opinion, the valuation results comply with the requirements of the Arizona Constitution and statutes and, where applicable, the Internal Revenue Code and the Employee Retirement Income Security Act of 1974 (ERISA). The undersigned actuaries are independent. They are both Fellows of the Society of Actuaries, Enrolled Actuaries and Members of the American Academy of Actuaries. They meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein and in our valuation report. Additionally, the valuation was reviewed by Barry Goldberg (Associate of the Society of Actuaries and Member of the American Academy of Actuaries).

We prepared the following sections in our valuation report:

- Section 3 – Schedule of Funding Progress
- Section 4 – Schedule of Benefit Recipients Added to and Removed from Rolls
- Section 5 – Solvency Test
- Section 6 – Analysis of Financial Experience

Buck Consultants, LLC

David J. Kershner, FSA, EA, MAAA, FCA
Principal and Consulting Actuary

Troy Jaros, FSA, EA, MAAA, FCA
Senior Consultant, Retirement Actuary

General Actuarial Information – LTD

Effective October 1, 1995, to comply with Internal Revenue Code requirements, liabilities associated with the Long Term Disability (LTD) benefit were separated from the Plan. No assets were transferred to the LTD fund. Accordingly, the objectives of the funding method that the ASRS 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 Arizona State Retirement System (ASRS) Long Term Disability (LTD) Program began on July 1, 1995. The program covers participants who become disabled on or after July 1, 1995. The 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 paid 50% by employers and 50% by active members.

LTD Program Overview

Effective Date: The LTD program 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 ASRS Board. The fiscal year 2015 rate was 0.12% of payroll. Employers have equal contributions, 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:

- an intentionally self-inflicted injury
- war, whether declared or not
- an injury incurred while engaged in a felonious criminal act or enterprise
- 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 the ASRS.

Totally Disabled: A member is considered totally disabled if:

- 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
- 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.

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

- 85% of social security disability benefits that the member or the member's dependents are eligible to receive;
- 85% of social security retirement benefits that the member is eligible to receive;
- all of any worker's compensation benefits;
- all of any payments for a veteran's disability if both of the following apply:
- the veteran's disability payment is for the same condition or a condition related to the condition currently causing the member's total disability;
- the veteran's disability is due to service in the armed forces of the United States;
- all of any other benefits by reason of employment that are financed partly or wholly by an employer, including payments for sick leave; and
- 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:

- the date the member ceases to be totally disabled;
- 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;
- the date the member withdraws employee contributions with interest and ceases to be a member; and
- the later of following:
    - the member's normal retirement date;
    - the month following 60 months of payments if disability occurs before age 65;
    - the month following attainment of age 70 if disability occurs at age 65 or after but before age 69;
    - 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:

Exhibit A-19: LTD Program Fees

Fee Schedule	
Administrative:	$13,000 / month
New Claims Fee:	$420 / claim
Claims Management:	$29 / claim / month

Changes in LTD Terms since the Prior Valuation: No changes have been made since the last valuation on June 30, 2015.

Summary of Actuarial Methods

The actuarial cost method is the projected unit credit method. Benefits are attributed from hire to expected date of disability. 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 closed 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

150% of the rates in the 1987 Commissioners' Group Long Term Disability Valuation Table (1987 CGDT), applicable to plans with a six-month elimination period.

3. Disability Incidence Rates for Active Members

Disability Incidence Rates for Active Members are based on actual disability experience from experience analysis for July 1, 2007 through June 30, 2012

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

Exhibit A-20: Disability Incidence Rates

Age	Unisex Disability Rate
20	0.05%
30	0.07%
40	0.16%
50	0.36%
60	0.47%

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 45%. 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 55% of the benefits before the offsets. This is the percentage that applies for currently disabled members.

6. Incurred But Not Reported (IBNR)

The liability for new LTD recipients was loaded by 20% to reflect IBNR.

7. Alternate Contribution Rate

We have adjusted the past service contribution rate to consider alternate contribution rate payments.

8. Mid-Year Timing

We have adjusted the contribution rates to anticipate contributions being made throughout the year.

9. Expenses

We include expenses in the liabilities. The liability for actives was loaded by 2.8% and the liability for currently disabled members is increased by assumed expenses according to the Plan Provisions.

10. Changes in Assumptions Since the Prior Valuation

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

Exhibit A-21 Schedule of Benefit Recipients Added to and Removed from Rolls (LTD)

Last 10 Years

Valuation as of June 30,	Retirants and Beneficiaries Added to Rolls: No.	Retirants and Beneficiaries Added to Rolls: Annual Allowances[1]	Retirants and Beneficiaries Removed from Rolls: No.	Retirants and Beneficiaries Removed from Rolls: Annual Allowances[2]	Retirants and Beneficiaries Rolls End of Year: No.	Retirants and Beneficiaries Rolls End of Year: Annual Allowances[1]	% Increase in Annual Allowance	Average Annual Allowances
2015	522	$ 10,914,070	726	$ 13,155,382	4,002	$ 63,108,108	-3.4%	$ 15,769
2014	658	13,947,128	759	14,675,124	4,206	65,349,420	-1.1%	15,537
2013	735	15,094,316	868	17,168,470	4,307	66,077,416	-3.0%	15,342
2012	709	14,394,030	878	16,419,214	4,440	68,151,570	-2.9%	15,349
2011	752	15,000,150	867	18,071,429	4,609	70,176,754	-4.2%	15,226
2010	789	17,200,407	777	15,066,829	4,724	73,248,033	3.0%	15,506
2009	723	15,966,067	893	13,502,776	4,712	71,114,455	3.6%	15,092
2008	640	12,610,021	829	16,270,484	4,882	68,651,164	-5.1%	14,062
2007	800	15,958,305	747	13,060,111	5,071	72,311,627	4.2%	14,260
2006	840	16,021,268	761	12,191,399	5,018	69,413,433	5.8%	13,833

[1] Reflects actual, but not assumed, benefit offsets. Does not include overpayment offsets.

[2] Includes changes in benefit amounts.

Exhibit A-22: Schedule of Funding Progress (LTD)

Last 10 Years
(Dollars in thousands)

Year Ended June 30,	Actuarial Value of Assets (a)	Actuarial Accrued Liabilities (AAL) (b)	Unfunded Actuarial Accrued Liabilities (UAAL) (b - a)	Assets as a % of Accrued Liabilities (a / b)	Covered Employee Payroll (c)	UAAL as a % of Covered Employee Payroll ((b - a) / c)
2015	$ 253,470	$ 320,624	$ 67,154	79.06%	$ 9,072,377	0.70%
2014	279,560	328,928	49,368	84.99%	8,908,621	0.60%
2013	285,018	332,597	47,579	85.69%	8,752,783	0.50%
2012	295,786	439,706	143,920	67.27%	8,868,678	1.60%
2011	307,537	455,695	148,158	67.49%	9,060,631	1.60%
2010	319,308	477,266	157,958	66.90%	9,419,952	1.70%
2009	311,232	476,276	165,044	65.35%	9,834,810	1.70%
2008	274,902	553,185	278,283	49.69%	9,708,353	2.90%
2007	231,685	604,486	372,800	38.33%	9,161,804	4.10%
2006	194,297	574,701	380,404	33.81%	8,311,870	4.60%

Exhibit A-23: Solvency Test (LTD)

Last 10 Years
(Dollars in thousands)

	Aggregate Accrued Liabilities for:				Portion of Actuarial Accrued Liabilities Covered by Assets Available for Benefits		
Year End June 30,	Active Member Contributions (1)	Retirees and Beneficiaries (2)	Active Members (Employer Financed Portion) (3)	Actuarial Value of Assets Available for Benefits	(1)	(2)	(3)
2015	$ -	$ 193,129	$ 127,495	$ 253,470	100%	100%	47%
2014	-	202,999	125,929	279,560	100%	100%	61%
2013	-	207,331	125,265	285,018	100%	100%	62%
2012	-	224,090	215,616	295,786	100%	100%	33%
2011	-	234,155	221,540	307,537	100%	100%	33%
2010	-	242,098	235,168	319,308	100%	100%	33%
2009	-	235,921	240,355	311,232	100%	100%	31%
2008	-	233,871	319,315	274,902	100%	100%	13%
2007	-	274,947	329,539	231,685	100%	84%	0%
2006	-	247,577	327,124	194,297	100%	78%	0%

Exhibit A-24: Analysis of Financial Experience (LTD)

As of June 30, 2015	Lives		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, 2014	4,206	$	197,563,866
(b) Change in reserve on 3,480 continuing disabled lives	N/A		(22,620,718)
(c) Reserves released on terminated lives	(726)		(14,852,493)
(d) Reserves added on new lives	522		27,881,845
(e) Open Claims Reserve Liability on June 30, 2015			
= (a) + (b) + (c) + (d)	4,002	$	187,972,500
2. DEVELOPMENT OF LIABILITY GAIN/(LOSS)			
(a) Actuarial Accrued Liability as of July 1, 2014		$	328,928,280
(b) Normal Cost			16,377,427
(c) Benefit Payments			61,044,734
(d) Administrative Expenses			2,287,319
(e) Expected Actuarial Accrued Liability on June 30, 2015			
= (a) x 1.08 + (b) x 1.04 – (c) x (1 + .08 x 13/24) - (d)			306,297,741
(f) Change in Plan Terms			N/A
(g) Change in Assumptions			N/A
(h) Liability Gain/(Loss)			(14,325,795)
(i) Actual Actuarial Accrued Liability on June 30, 2015			
= (e) + (f) + (g) - (h)		$	320,623,536
3. SOURCES OF LIABILITY GAIN/(LOSS)			
(a) Offset Gain/(Loss)		$	(162,377)
(b) Gain for members who were not active in last year's valuation			2,094,664
(c) More Terminations than Expected			433,084
(d) Fewer LTD Retirees than Expected			1,458,517
(e) Salary Loss on Continuing Actives			(960,192)
(f) New Active Entrants			(3,522,362)
(g) Continuing Disabled Lives Gain/(Loss)			(1,557,698)
(h) New Disabled Lives Gain/(Loss)			(2,593,252)
(i) Expenses			(540,697)
(j) Benefit Payments			(5,144,711)
(k) Other Gain/(Loss)			(3,830,771)
(l) Liability Gain/(Loss)			
= (a) + (b) + (c) + (d) + (e) + (f) + (g) + (h) + (i) + (j) + (k)		$	(14,325,795)

(continued)

Exhibit A-24: Analysis of Financial Experience (LTD) (continued)

As of June 30, 2015	Lives	Reserves
4. DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS		
(a) Excess (Shortfall) of Investment Income:		
(i) Current Year		$ (17,595,438)
(ii) Current Year – 1		24,669,551
(iii) Current Year – 2		9,913,473
(iv) Current Year – 3		(18,922,274)
(v) Current Year – 4		36,999,159
(vi) Current Year – 5		10,543,678
(vii) Current Year – 6		(68,696,736)
(viii) Current Year - 7		(44,661,134)
(ix) Current Year - 8		11,421,699
(b) Deferral of Excess (Shortfall):		
(i) Current Year (90% Deferral)		(15,835,894)
(ii) Current Year – 1 (80% Deferral)		19,735,641
(iii) Current Year – 2 (70% Deferral)		6,939,431
(iv) Current Year – 3 (60% Deferral)		(11,353,364)
(v) Current Year – 4 (50% Deferral)		18,499,580
(vi) Current Year – 5 (40% Deferral)		4,217,471
(vii) Current Year – 6 (30% Deferral)		(20,609,021)
(viii) Current Year - 7 (20% Deferral)		(8,932,227)
(ix) Current Year - 8 (10% Deferral)		1,142,170
(x) Total Deferred for the Year		(6,196,213)
(c) Market Value of Assets as of June 30, 2015		247,273,447
(d) Actuarial Value of Assets as of June 30, 2015 = (c) - (b)(x)		$ 253,469,660
5. DEVELOPMENT OF ASSET GAIN/(LOSS)		
(a) Actuarial Value of Assets as of July 1, 2014		$ 279,560,267
(b) Contributions		21,623,750
(c) Benefit Payments		61,044,734
(d) Administrative Expenses		2,287,319
(e) Expected Investment Income at 8% Return = ((a) x .08) + ((b) x .08 x 1/2) - ((c) x .08 x 13/24)		20,584,500
(f) Expected Actuarial Assets as of June 30, 2015 = (a) + (b) - (c) - (d) + (e)		258,436,464
(g) Gain/(Loss) on Actuarial Assets		(4,966,804)
(h) Actuarial Assets as of June 30, 2015 = (f) + (g)		$ 253,469,660

The asset loss occurred because investment earnings on actuarial assets were less than expected. The actual net return on actuarial assets was 6.07%, compared to the assumption of 8%. The actual net return on market value of assets was 1.32%, compared to the assumption of 8%.

(continued)

Exhibit A-24: Analysis of Financial Experience (LTD) (continued)

As of June 30, 2015	Amount of Monthly Offsets	Number of Offsets
6. ANALYSIS OF OFFSETS		
Description of Offset from the plan administrator as of June 30, 2015		
Social Security Disability	$ 2,631,139	2,829
Social Security Retirement	70,729	73
Other	496,489	841
Total	**$ 3,198,357**	**3,743**
Description of Offset from the plan administrator as of June 30, 2014		
Social Security Disability	$ 2,745,937	3,057
Social Security Retirement	79,854	82
Other	467,116	939
Total	**$ 3,292,907**	**4,078**

Legislated Plan Changes Enacted by the 2015 Legislature of the State of Arizona

1. Actuarial Valuation Methods

The legislation gives the Arizona State Retirements System of Trustees authority to change the actuarial valuation method of the Plan beginning June 30, 2016. Prior to the passage of this legislation, the ASRS was required by statutes to use the Projected Unit Credit method.

2. Service Purchase

The legislation modified service purchase laws so that they are consistent with Arizona case law whereby the right to purchase service was defined as a benefit by the Arizona Court of Appeals. As a result, legislation delineated service purchase rights that individuals hired on or after July 20, 2011 could purchase no more than 60 months of credited service and individuals hired on or after July 1, 2010 must have at least 5 years of service to initiate a service purchase request.

3. Participation Opt-out

Legislation passed in 2012 allowed individuals of 65 years of age, or older, and with no prior ASRS membership, to opt-out of participation in the Plan. The ability to opt-out was to expire on July 1, 2015. The legislation removed the July 1, 2015 sunset on the election, thereby permitting the opt-out provision in perpetuity.

These changes were taken into account in the most recent actuarial valuation.

statistical section

Overview

The Statistical Section 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 Information

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

- Fiduciary Net Position – *Last Ten Fiscal Years*
- Changes in Fiduciary Net Position – *Last Ten Fiscal Years*

Revenues Information

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

- Actual Contribution Rates – *Last Ten Fiscal Years*

Operating Information

These schedules contain information about the ASRS's Operations.

- Retired Members by Type of Benefit
- HBS Recipients by Benefit Amount
- LTD Recipients by Benefit Amount
- Average Benefit Payments – Retirement
- Average Benefit Payments – Health Benefit Supplement
- Average Benefit Payments – Long Term Disability
- Principal Participating Employers

Exhibit S-1: Fiduciary Net Position

Last 10 Fiscal Years
(Dollars in thousands)

Retirement Fund	2016	2015	2014	2013
Assets				
Cash, Receivables, and Prepaids	$ 975,712	$ 261,074	$ 593,804	$ 1,062,311
Investments	32,663,224	33,771,371	33,845,069	29,225,574
Total Assets	**33,638,936**	**34,032,445**	**34,438,873**	**30,287,885**
Liabilities				
Investments Payable	744,747	342,687	708,243	1,187,021
Other Payables	34,398	44,112	36,925	75,434
Total Liabilities	**779,145**	**386,799**	**745,168**	**1,262,455**
Net positon restricted for benefits	**$ 32,859,791**	**$ 33,645,646**	**$ 33,693,705**	**$ 29,025,430**

HBS Fund	2016	2015	2014	2013
Assets				
Cash, Receivables, and Prepaids	$ 56,133	$ 48,294	$ 60,353	$ 75,951
Investments	1,520,851	1,540,851	1,527,901	1,314,249
Total Assets	**1,576,984**	**1,589,145**	**1,588,254**	**1,390,200**
Liabilities				
Investments Payable	32,031	14,547	30,738	51,936
Other Payables	886	1,303	1,274	2,930
Total Liabilities	**32,917**	**15,850**	**32,012**	**54,866**
Net positon restricted for benefits	**$ 1,544,067**	**$ 1,573,295**	**$ 1,556,242**	**$ 1,335,334**

LTD Fund	2016	2015	2014	2013
Assets				
Cash, Receivables, and Prepaids	$ 8,450	$ 7,807	$ 6,864	$ 7,254
Investments	198,281	239,711	278,932	255,636
Total Assets	**206,731**	**247,518**	**285,796**	**262,890**
Liabilities				
Investments Payable	-	-	-	-
Other Payables	337	245	280	270
Total Liabilities	**337**	**245**	**280**	**270**
Net positon restricted for benefits	**$ 206,394**	**$ 247,273**	**$ 285,516**	**$ 262,620**

2012	2011	2010	2009	2008	2007
$ 1,006,349	$ 1,056,204	$ 975,021	$ 867,888	$ 2,095,722	$ 2,197,053
26,247,996	27,911,298	24,620,142	23,379,787	29,021,366	30,978,445
27,254,345	**28,967,502**	**25,595,163**	**24,247,675**	**31,117,088**	**33,175,498**
795,215	2,086,445	3,404,191	4,313,128	6,368,470	6,078,211
57,036	41,834	44,012	54,094	31,431	27,729
852,251	**2,128,279**	**3,448,203**	**4,367,222**	**6,399,901**	**6,105,940**
$ 26,402,094	**$ 26,839,223**	**$ 22,146,960**	**$ 19,880,453**	**$ 24,717,187**	**$ 27,069,558**
$ 79,217	$ 52,196	$ 48,532	$ 45,385	$ 94,213	$ 90,106
1,177,906	1,236,614	1,101,174	1,046,717	1,273,867	1,335,221
1,257,123	**1,288,810**	**1,149,706**	**1,092,102**	**1,368,080**	**1,425,327**
35,022	92,594	152,374	193,139	279,619	261,980
19,282	1,487	1,737	1,770	475	394
54,304	**94,081**	**154,111**	**194,909**	**280,094**	**262,374**
$ 1,202,819	**$ 1,194,729**	**$ 995,595**	**$ 897,193**	**$ 1,087,986**	**$ 1,162,953**
$ 7,172	$ 6,371	$ 6,808	$ 11,998	$ 12,331	$ 10,565
250,594	274,734	243,823	215,151	233,062	233,148
257,766	**281,105**	**250,631**	**227,149**	**245,393**	**243,713**
-	-	-	-	-	-
443	250	252	4,341	222	227
443	**250**	**252**	**4,341**	**222**	**227**
$ 257,323	**$ 280,855**	**$ 250,379**	**$ 222,808**	**$ 245,171**	**$ 243,486**

Exhibit S-2: Changes in Fiduciary Net Position

Last 10 Fiscal Years

(Dollars in thousands)

Retirement Fund	2016	2015	2014	2013
Additions				
Member Contributions	$ 1,036,714	$ 1,031,954	$ 995,284	$ 948,004
Employer Contributions	1,015,974	1,004,747	965,969	911,300
Purchased Service/Transfers	25,466	20,702	33,485	72,023
Net Investment Income (Loss)	222,906	849,160	5,514,246	3,393,599
Total Additions (Reductions)	**2,301,060**	**2,906,563**	**7,508,984**	**5,324,926**
Deductions				
Retirement Benefits	$ 2,765,668	$ 2,638,462	$ 2,527,038	2,406,899
Survivor Benefits	38,863	33,034	39,334	38,442
Refunds due to Separation	258,315	255,606	246,201	218,607
Transfers Out	1,008	637	915	725
Administration and Other	23,061	26,883	27,221	36,917
Total Deductions	**3,086,915**	**2,954,622**	**2,840,709**	**2,701,590**
Net change	**(785,855)**	**(48,059)**	**4,668,275**	**2,623,336**
Fiduciary net position, beginning of year	33,645,646	33,693,705	29,025,430	26,402,094
Net positon restricted for benefits	**$ 32,859,791**	**$ 33,645,646**	**$ 33,693,705**	**$ 29,025,430**

HBS Fund	2016	2015	2014	2013
Additions				
Employer Contributions	$ 46,046	$ 53,586	$ 53,405	$ 57,154
Other Income	8,455	31,507	29,848	25,826
Net Investment Income (Loss)	12,024	39,022	240,538	146,737
Total Additions (Reductions)	**66,525**	**124,115**	**323,791**	**229,717**
Deductions				
Health Premium Benefits	94,754	105,913	101,746	95,763
Administration and Other	999	1,149	1,137	1,439
Total Deductions	**95,753**	**107,062**	**102,883**	**97,202**
Net change	**(29,228)**	**17,053**	**220,908**	**132,515**
Fiduciary net position, beginning of year	1,573,295	1,556,242	1,335,334	1,202,819
Net positon restricted for benefits	**$ 1,544,067**	**$ 1,573,295**	**$ 1,556,242**	**$ 1,335,334**

LTD Fund	2016	2015	2014	2013
Additions				
Member Contributions	$ 10,990	$ 10,725	$ 21,151	$ 20,881
Employer Contributions	11,162	10,899	21,628	21,336
Net Investment Income (Loss)	(387)	3,722	44,950	29,540
Total Additions (Reductions)	**21,765**	**25,346**	**87,729**	**71,757**
Deductions				
Disability Benefits	60,065	61,045	62,044	63,613
Administration and Other	2,579	2,544	2,789	2,847
Total Deductions	**62,644**	**63,589**	**64,833**	**66,460**
Net change	**(40,879)**	**(38,243)**	**22,896**	**5,297**
Fiduciary net position, beginning of year	247,273	285,516	262,620	257,323
Net positon restricted for benefits	**$ 206,394**	**$ 247,273**	**$ 285,516**	**$ 262,620**

	2012	2011	2010	2009	2008	2007
	$ 905,968	$ 833,287	$ 808,908	$ 844,540	$ 857,813	$ 766,962
	852,167	786,662	763,099	754,044	759,482	663,544
	53,659	70,812	73,973	72,436	95,226	107,548
	322,870	5,406,714	2,872,297	(4,433,461)	(1,963,259)	4,105,644
	2,134,664	**7,097,475**	**4,518,277**	**(2,762,441)**	**(250,738)**	**5,643,698**
	2,297,947	2,166,779	2,031,119	1,888,931	1,768,219	1,650,818
	29,731	23,949	26,472	30,378	22,648	21,590
	207,289	180,719	154,144	120,689	104,387	77,910
	5,024	6,256	11,455	5,706	177,176	10,117
	31,802	27,509	28,580	28,589	29,203	33,351
	2,571,793	**2,405,212**	**2,251,770**	**2,074,293**	**2,101,633**	**1,793,786**
	(437,129)	**4,692,263**	**2,266,507**	**(4,836,734)**	**(2,352,371)**	**3,849,912**
	26,839,223	22,146,960	19,880,453	24,717,187	27,069,558	23,219,646
	$ 26,402,094	**$ 26,839,223**	**$ 22,146,960**	**$ 19,880,453**	**$ 24,717,187**	**$ 27,069,558**
	$ 54,463	$ 51,048	$ 59,393	$ 90,490	$ 99,027	$ 103,473
	35,473	-	-	-	-	-
	13,439	240,994	128,258	(192,303)	(87,559)	174,348
	103,375	**292,042**	**187,651**	**(101,813)**	**11,468**	**277,821**
	93,915	91,699	87,983	87,723	85,132	83,236
	1,370	1,209	1,266	1,257	1,303	1,378
	95,285	**92,908**	**89,249**	**88,980**	**86,435**	**84,614**
	8,090	**199,134**	**98,402**	**(190,793)**	**(74,967)**	**193,207**
	1,194,729	995,595	897,193	1,087,986	1,162,953	969,746
	$ 1,202,819	**$ 1,194,729**	**$ 995,595**	**$ 897,193**	**$ 1,087,986**	**$ 1,162,953**
	$ 20,998	$ 21,689	$ 35,939	$ 47,213	$ 47,171	$ 44,518
	20,998	21,689	35,939	47,213	47,171	44,518
	2,419	56,744	27,661	(47,726)	(21,623)	30,526
	44,415	**100,122**	**99,539**	**46,700**	**72,719**	**119,562**
	65,190	66,124	69,148	65,781	68,284	69,221
	2,757	3,522	2,820	3,282	2,750	2,857
	67,947	**69,646**	**71,968**	**69,063**	**71,034**	**72,078**
	(23,532)	**30,476**	**27,571**	**(22,363)**	**1,685**	**47,484**
	280,855	250,379	222,808	245,171	243,486	196,002
	$ 257,323	**$ 280,855**	**$ 250,379**	**$ 222,808**	**$ 245,171**	**$ 243,486**

Exhibit S-3: Actual Contribution Rates

Last 10 Fiscal Years

Retirement Contribution Rates[1]	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Member	11.35%	11.48%	11.30%	10.90%	10.50%	9.60%	9.00%	8.95%	9.10%	8.60%
Employer	10.85%	10.89%	10.70%	10.25%	9.87%	9.01%	8.34%	7.99%	8.05%	7.55%

HBS Contribution Rates	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Employer	0.50%	0.59%	0.60%	0.65%	0.63%	0.59%	0.66%	0.96%	1.05%	1.05%

LTD Contribution Rates	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Member	0.12%	0.12%	0.24%	0.24%	0.24%	0.25%	0.40%	0.50%	0.50%	0.50%
Employer	0.12%	0.12%	0.24%	0.24%	0.24%	0.25%	0.40%	0.50%	0.50%	0.50%

[1] Retirement contribution rates do not include System retirees.

Exhibit S-4: Retired Members by Type of Benefit

As of June 30, 2015

	Number of retirees by Benefit Option						
Amount of monthly benefit	1	2	3	4	5	6	7
Under $300	11,707	212	321	760	2,982	270	696
$300 - $499	8,050	223	344	586	2,509	329	751
$500 - $999	15,910	478	830	1,093	4,814	904	1,831
$1,000 - $1,499	10,621	368	644	697	3,809	970	1,625
$1,500 - $1,999	7,578	234	435	510	3,095	936	1,369
$2,000 - $2,499	6,221	159	330	452	2,667	785	1,211
$2,500 - $2,999	4,966	130	298	388	2,208	605	956
$3,000 - $3,499	3,961	96	197	291	1,824	556	813
$3,500 - $3,999	2,643	45	105	218	1,238	390	550
$4,000 & Over	4,438	57	181	300	2,038	762	966
Totals	76,095	2,002	3,685	5,295	27,184	6,507	10,768

Options:

1. Life Annuity	Refund provision
2. Life Annuity	5 year certain and life
3. Life Annuity	10 years certain and life
4. Life Annuity	15 years certain and life
5. Joint Annuity	100 percent to contingent survivor
6. Joint Annuity	66 2/3 percent to contingent survivor
7. Joint Annuity	50 percent to contingent survivor

Note: The 2015 actuarial valuation report is the most recent report available.

Source: 2015 actuarial valuation report.

Exhibit S-5: HBS Recipients by Benefit Amount

As of June 30, 2016

HBS Monthly Benefits	Members Receiving Benefits
$1-199	76,445
$200-299	2,903
$300-399	179
$400 & Over	0
Total	79,527

Source: ASRS pension administration system

Exhibit S-6: LTD Recipients by Benefit Amount

As of June 30, 2016

LTD Monthly Benefits	Members Receiving Benefits
$1-299	5
$300-499	23
$500-999	295
$1,000-1,499	841
$1,500-1,999	1,048
$2,000 & over	1,820
Total	4,032

Note: Amounts are based on gross benefits, before social security income adjustments.

Source: Long term disability program administrator

Exhibit S-7: Average Benefit Payments - Retirement

Last 10 Fiscal Years

		Years of Credited Service									
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45+
2015	Average Monthly Benefit	$ 136	$ 354	$ 730	$ 1,119	$ 1,711	$ 2,486	$ 3,424	$ 4,049	$ 4,769	$ 5,340
	Number of Retirees	5,801	18,799	22,279	18,076	22,431	21,166	19,002	3,357	559	66
2014	Average Monthly Benefit	$ 131	$ 347	$ 723	$ 1,116	$ 1,702	$ 2,478	$ 3,411	$ 4,048	$ 4,744	$ 5,344
	Number of Retirees	5,626	18,060	21,325	17,327	21,563	20,332	18,199	3,235	526	62
2013	Average Monthly Benefit	$ 125	$ 344	$ 721	$ 1,113	$ 1,694	$ 2,468	$ 3,397	$ 4,022	$ 4,809	$ 5,229
	Number of Retirees	5,422	17,223	20,406	16,637	20,540	19,522	17,448	3,121	495	61
2012	Average Monthly Benefit	$ 124	$ 341	$ 718	$ 1,112	$ 1,685	$ 2,464	$ 3,383	$ 3,980	$ 4,768	$ 5,224
	Number of Retirees	4,864	16,228	19,419	15,867	19,447	18,547	16,564	2,979	458	58
2011	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
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
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
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
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
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

Notes:
This schedule does not include System retirees.
Average final salary information is not available.
The 2015 actuarial valuation report is the most recent report available.

Source: Historical actuarial valuation reports.

Exhibit S-8: Average Benefit Payments – Health Benefit Supplement

Last 10 Fiscal Years

		Years of Credited Service					
		5	6	7	8	9	10+
2016	Average Monthly Benefit	$ 52	$ 57	$ 61	$ 68	$ 72	$ 103
	Number of HBS Participants	1,619	1,251	1,355	1,440	1,337	72,525
2015	Average Monthly Benefit	$ 57	$ 62	$ 68	$ 74	$ 81	$ 116
	Number of HBS Participants	1,580	1,286	1,356	1,399	1,299	70,703
2014	Average Monthly Benefit	$ 58	$ 63	$ 71	$ 77	$ 83	$ 116
	Number of HBS Participants	1,463	1,151	1,188	1,205	1,122	65,159
2013	Average Monthly Benefit	$ 64	$ 72	$ 79	$ 85	$ 95	$ 152
	Number of HBS Participants	1,402	1,120	1,130	1,161	1,074	64,354
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
2011	Average Monthly Benefit	$ 59	$ 67	$ 75	$ 87	$ 92	$ 126
	Number of HBS Participants	1,252	1,018	999	1,057	983	58,656
2010	Average Monthly Benefit	$ 61	$ 67	$ 76	$ 86	$ 97	$ 127
	Number of HBS Participants	1,149	941	928	998	924	54,589
2009	Average Monthly Benefit	$ 61	$ 70	$ 78	$ 89	$ 100	$ 130
	Number of HBS Participants	1,123	941	916	951	906	53,198
2008	Average Monthly Benefit	$ 61	$ 72	$ 76	$ 89	$ 97	$ 130
	Number of HBS Participants	1,082	917	911	934	897	51,167
2007	Average Monthly Benefit	$ 57	$ 69	$ 83	$ 89	$ 96	$ 130
	Number of HBS Participants	1,046	877	903	885	891	49,368

Source: ASRS pension administration system

Exhibit S-9: Average Benefit Payments – Long Term Disability

Last 10 Fiscal Years

		Years of Credited Service
		N/A
2016	Average Monthly Benefit	$ 1,297
	Number of LTD Participants	4,032
2015	Average Monthly Benefit	$ 1,295
	Number of LTD Participants	4,107
2014	Average Monthly Benefit	$ 1,260
	Number of LTD Participants	4,313
2013	Average Monthly Benefit	$ 1,244
	Number of LTD Participants	4,443
2012	Average Monthly Benefit	$ 1,240
	Number of LTD Participants	4,646
2011	Average Monthly Benefit	$ 1,931
	Number of LTD Participants	4,785
2010	Average Monthly Benefit	$ 1,966
	Number of LTD Participants	4,797
2009	Average Monthly Benefit	$ 1,886
	Number of LTD Participants	4,672
2008	Average Monthly Benefit	$ 1,823
	Number of LTD Participants	4,957
2007	Average Monthly Benefit	$ 1,743
	Number of LTD Participants	4,976

Note: Long term disability payments are based on salary and not years of credited service.

Source: Long term disability program administrator

Exhibit S-10: Principal Participating Employers

Current Year and Nine Years Ago

Participating Employer	2016 Covered Employees	2016 Rank	2016 Percent of Membership	2007 Covered Employees	2007 Rank	2007 Percent of Membership
State of Arizona, Dept. of Administration	26,208	1	12.56%	32,230	1	14.34%
Maricopa County	9,206	2	4.41%	10,653	2	4.74%
Mesa Unified District 4	8,498	3	4.07%	8,487	3	3.78%
University of Arizona	6,940	4	3.32%	7,087	5	3.15%
Tucson Unified School District	6,176	5	2.96%	7,860	4	3.50%
Maricopa County Community College District	5,937	6	2.84%	5,904	7	2.63%
Arizona State University	5,757	7	2.76%	5,620	8	2.50%
Pima County	4,854	8	2.33%	6,399	6	2.85%
Chandler Unified District 80	4,480	9	2.15%			
Gilbert Unified District 41	4,228	10	2.02%	4,684	9	2.08%
Peoria Unified District 11				3,757	10	1.67%
All other	126,457		60.58%	132,085		58.76%
Total	208,741		100.00%	224,766		100.00%

	2016	2007
Total employer units	578	597
Total employers	683	745

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

3300 N. Central Avenue
Phoenix, AZ 85012

4400 E Broadway Blvd, Suite 200
Tucson, AZ 85711

visit us online at AZasrs.gov