A REPORT
TO THE
ARIZONA LEGISLATURE

Performance Audit Division

Performance Audit and Sunset Review

Arizona State Retirement System

The ASRS Defined Benefit Plan Is Not Fully Funded, but Steps Have Been Taken to Improve Its Long-term Sustainability and Some Additional Actions Can Further Strengthen Its Financial Condition

August • 2015
Report No. 15-106

STATE OF ARIZONA
OFFICE OF THE
AUDITOR
GENERAL

Debra K. Davenport
Auditor General

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Office of the Auditor General
2910 N. 44th Street, Suite 410 • Phoenix, AZ 85018 • (602) 553-0333

STATE OF ARIZONA
OFFICE OF THE
AUDITOR GENERAL

DEBRA K. DAVENPORT, CPA
AUDITOR GENERAL

MELANIE M. CHESNEY
DEPUTY AUDITOR GENERAL

August 20, 2015

Members of the Arizona Legislature

The Honorable Doug Ducey, Governor

Mr. Paul Matson, Director
Arizona State Retirement System

Transmitted herewith is a report of the Auditor General, *A Performance Audit and Sunset Review of the Arizona State Retirement System*. This report is in response to an October 3, 2013, resolution of the Joint Legislative Audit Committee and was conducted as part of the sunset review process prescribed in Arizona Revised Statutes §41-2951 et seq. I am also transmitting within this report a copy of the Report Highlights for this audit to provide a quick summary for your convenience.

As outlined in its response, the Arizona State Retirement System agrees with all of the findings and plans to implement all of the recommendations.

My staff and I will be pleased to discuss or clarify items in the report.

Sincerely,

Debbie Davenport
Auditor General

Attachment

cc: Arizona State Retirement System Board of Trustees

2910 NORTH 44th STREET • SUITE 410 • PHOENIX, ARIZONA 85018 • (602) 553-0333 • FAX (602) 553-0051

Arizona State Retirement System

STATE OF ARIZONA
OFFICE OF THE AUDITOR GENERAL

REPORT HIGHLIGHTS
PERFORMANCE AUDIT

Our Conclusion

The Arizona State Retirement System (ASRS) defined benefit plan's (ASRS plan) ratio of assets to estimated pension obligations (i.e., the ASRS plan's funded status) declined between June 30, 2005 through June 30, 2012, similar to the nation-wide trend for that time period. The decline was partially the result of unmet investment return expectations during this period. The ASRS and Legislature have taken several steps to improve the ASRS plan's funded status and long-term sustainability by increasing contribution rates and, for recent ASRS plan members, raising eligibility requirements and eliminating permanent benefit increases. In line with best practices, the ASRS should continue with its plans to adopt a funding policy, which outlines how it will improve the ASRS plan's funded status. The ASRS should also develop a method to ensure that future benefit increases do not impact the ASRS plan's sustainability. Finally, the ASRS should implement additional controls to minimize the impact of non-promotional salary increases.

2015

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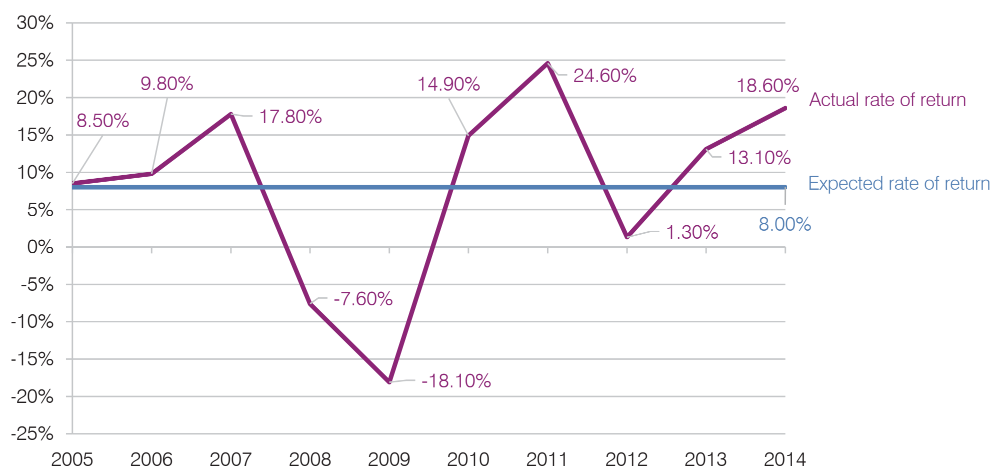
ASRS plan is not fully funded, but steps have been taken to improve its long-term sustainability

The ASRS plan is a defined benefit retirement plan that provides a guaranteed life-long pension benefit. This is in contrast to a defined contribution retirement plan, such as a 401(k), where the employee directs where the contributions are invested, and benefits depend on the investments' financial performance. As of June 30, 2014, there were over 550,000 ASRS plan members, including over 119,000 retirees.

Decline of ASRS plan's funded status not as severe as most peers' and is improving—Based on the actuarial value of assets, the ASRS plan's funded status decreased from 86.1 percent as of June 30, 2005, to 75.3 percent as of June 30, 2012.[1] This decline is similar to the decline experienced by public pension plans nation-wide during the same time period. Also, of the four peer states we identified, Arizona's decline was less severe than three of the four peers'. A pension plan's funded status is the ratio of assets to estimated pension obligations and is a measure of the financial health of the pension plan at a point in time. Ideally, the funded status should be 100 percent; in other words, assets are sufficient to cover all of the estimated pension obligations of a pension plan's members. As of June 30, 2014, the ASRS plan's funded status had increased slightly to 76.3 percent.

One reason for the decline in the ASRS plan's funded status is that the ASRS did not always meet its 8 percent expected rate of return on its investments. The average investment return rate for the ASRS plan from June 30, 2005 through June 30, 2014, was 7.53 percent. Although the 8 percent expected rate reflects the investment return that the ASRS plan expects to achieve on average over a rolling 20-year period of time, if the ASRS plan does not meet this rate in any year, its funded status may decline.

ASRS plan's actual and expected rates of investment returns
As of June 30, 2005 through June 30, 2014



[1] The actuarial funded status is calculated using the ASRS plan's actuarial value of assets. When determining the actuarial value of assets, the ASRS' actuary recognizes investment losses and/or gains over a rolling 10-year period.

ASRS and Legislature have taken steps to improve ASRS plan's sustainability—Consistent with best practices, the ASRS has taken several steps to improve the ASRS plan's funded status, including increasing the number and complexity of its investment strategies and developing a draft pension funding policy that identifies strategies for achieving a 100 percent funded status by fiscal year 2037. The ASRS plans to formally adopt the draft funding policy in August 2015. In addition, the ASRS increased contribution rates when recommended by its actuary. From June 30, 2005 to June 30, 2014, the combined employer and employee contribution rate for the pension plan rose from 9.3 percent to 22 percent to help improve the ASRS plan's funded status and sustainability.

The Legislature has also amended statutes to improve the ASRS plan's sustainability. Beginning with employees hired on or after July 1, 2011, they must be older or work longer to be eligible for pension benefits. According to the ASRS' actuary, this change will result in an estimated future cost savings of about $587 million over 30 years. The Legislature also eliminated permanent benefit increases, which are increases to retired members' pension benefits, for employees who become members on or after September 13, 2013.

Recommendation

The ASRS should continue with its plan to formally adopt its draft pension funding policy.

Additional actions can enhance ASRS plan's financial condition and long-term sustainability

ASRS should ensure permanent benefit increases do not impact ASRS plan's sustainability going forward—ASRS plan members who were hired before September 13, 2013, may receive a permanent benefit increase to their pensions if specific conditions outlined in statute are met, including investments exceeding the 8 percent expected rate of return on average over a rolling 10-year period. As of June 2015, there were 491,220 members who were eligible for a permanent benefit increase sometime in the future. Because permanent benefit increases are likely in the future and a large number of members remain eligible for such increases, the ASRS should work with its actuary to develop a method for ensuring that the cost of any future benefit increases do not impact the ASRS plan's sustainability.

Additional controls are needed to minimize the impact of preretirement salary increases—Pension benefits are calculated using a member's average salary over the last 3 or 5 years of employment depending on the date an employee was hired. Because the salary is averaged over 3 or 5 years, a normal promotional salary increase before retirement would not have much impact on a retiree's pension benefits—however, employer termination incentive programs, such as providing anything of value conditioned on a person's retirement or nonpromotion salary increases of 30 percent or more, would. To determine the ASRS plan's estimated pension obligations and contributions necessary to meet those obligations, the ASRS' actuary uses statistical data to estimate various factors, including mortality rates and increases in members' compensation over time. When a member's compensation experiences a greater-than-expected increase during the time period that determines average salary, this increase may generate an unfunded liability to the ASRS plan. Statute permits the ASRS to require the employer to cover the unfunded liability created. The ASRS indicated such increases are rare, but it should enhance its procedures for identifying them and assessing the employer the costs of any unfunded liabilities created.

Recommendations

The ASRS should:

- Work with its actuary to develop a method for ensuring that the cost of any future benefit increases do not impact the ASRS plan's sustainability; and
- Enhance its procedures for identifying employer termination incentive programs and assessing the cost of unfunded pension liabilities to the employers.

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INTRODUCTION
Scope and Objectives

The Office of the Auditor General has conducted a performance audit and sunset review of the Arizona State Retirement System (ASRS) pursuant to an October 3, 2013, resolution of the Joint Legislative Audit Committee. This audit was conducted as part of the sunset review process prescribed in Arizona Revised Statutes (A.R.S.) §41-2951 et seq. This performance audit and sunset review:

- Reports on the ASRS' ability to meet pension obligations and assesses the actions the ASRS and/or the Legislature have taken to improve the defined benefit plan's (ASRS plan) financial condition and ensure its long-term sustainability (see Finding 1);
- Recommends additional actions the ASRS should take to further enhance the ASRS plan's long-term sustainability (see Finding 2); and
- Provides responses to the statutory sunset factors.

ASRS provides retirement, long-term disability, survivor, and retiree health insurance benefits to public employees

Established in 1953, the ASRS contributes to its members' long-term financial security by providing retirement, long-term disability, survivor, and retiree health insurance benefits. ASRS benefits are available to employees of participating employers, including the State and the State's counties, universities, community colleges, school districts, and municipalities.[1] As of June 2014, there were 690 participating employers and more than 550,000 active, inactive, retired, and disabled members and other beneficiaries.

Defined benefit plan—The ASRS plan is a defined benefit plan. A defined benefit plan is distinct from a defined contribution plan in part because it provides a guaranteed life-long pension benefit (see textbox). The ASRS plan became effective on July 1, 1971. Specifically, in 1970, the Legislature agreed to enact the ASRS plan if 70 percent or more of state employees and teachers voted to transfer to it. More than 80 percent did so. Prior to this time, members were served by a hybrid defined contribution/defined benefit plan, referred to as the System.[2] The ASRS plan provides a fixed monthly benefit upon retirement that a formula specified in statute determines. The benefit formula is based on a member's length of government service and average monthly compensation during a defined period (see Table 1, page 2).

> **Defined benefit plan**—An employee retirement plan that provides a guaranteed lifetime retirement benefit of an amount calculated by a predetermined formula. The plan directs how contributions are invested.
>
> **Defined contribution plan**—An individual retirement account, such as a 401(k), where the employee directs how contributions are invested. Retirement income is based solely on the amount contributed and is dependent on investment performance.
>
> Source: Auditor general staff review of Olleman, M., & Boivie, I. (2011). *Decisions, decisions: Retirement plan choices for public employees and employers*. Washington, DC: National Institute on Retirement Security and Seattle, WA: Milliman.

Although the ASRS plan provides a lifelong monthly benefit, according to A.R.S. §38-712(A)(5), it is not expected to meet all of a member's post-retirement income requirements. Rather it is expected that a member's

1 Another state retirement system, the Public Safety Personnel Retirement System, provides retirement benefits for public safety personnel, correctional officers and employees, and elected officials and judges. In addition, two larger Arizona municipalities do not participate in the ASRS. Employees of the Cities of Phoenix and Tucson are members of the City of Phoenix Employees' Retirement System and the Tucson Supplemental Retirement System, respectively. Also, other political subdivision entities, such as charter schools, may choose but are not required to become an ASRS participating employer.

2 Because not all of the System's members opted to join the ASRS plan, some members remain in the System. As of June 30, 2014, there were 1,353 system members including 9 active members, 30 inactive members, and 1,314 retired members.

Table 1: Statutory formula for pension benefit determinations
As of May 2015
(Unaudited)

Benefit factors	Description
Total credited service	The total number of years the member worked for a participating employer plus any purchased and credited service.[1]
Service multiplier	A percentage multiplier based on total credited service. • Up to 19.99 years 2.10% • 20 to 24.99 years 2.15% • 25 to 29.99 years 2.20% • 30 plus years 2.30%
Average monthly compensation	Depending on the date ASRS plan membership started, the average is based on the member's highest compensation during a consecutive 3- or 5-year period within the last 10 years of credited service.
Example benefit formula	20.00 years total credited service x 2.15% service multiplier x $3,813.00 average monthly compensation $1,639.59 monthly benefit

[1] Credited service is earned for time worked for a participating employer.

Source: Auditor General staff illustration of benefit calculation requirements outlined in A.R.S. §§38-711 and 38-757.

retirement income would be supplemented by Social Security and personal savings. According to an ASRS document, the average ASRS plan benefit provides about 40 percent of what a retiree earned before retirement. In fiscal year 2014, the ASRS plan's average retirement benefit was approximately $1,640 per month, or about $19,500 per year.

The ASRS plan's lifetime monthly pension payments are funded through employer and employee contributions and investment earnings from the ASRS-managed investment portfolio. For all members who are actively employed, statute requires equal monetary contributions from both the employee and employer. Each year, an actuary weighs a number of factors, including the amount of money needed to pay for current and future pension obligations, projected investment performance, and member lifespans to determine how much employees and employers should contribute (see page 6 for more information on actuarial services). As shown in Table 2 (see page 3), for fiscal year 2014, both employees and employers were each required to contribute 11.54 percent of an employee's salary for the ASRS plan and other benefits, with most of the contribution supporting the retirement benefit.

The ASRS plan is a cost-sharing, multiple-employer plan where participating employers' and their members' contributions are pooled. All ASRS plan assets are equally shared and are used to pay the pension benefits of any participating employer's retirees as well as the costs of administering the ASRS plan, including asset management.[1]

Table 2: Required contribution rates of employees' salaries Fiscal year 2014 (Unaudited)

Benefit	Employee rate	Employer rate
Retirement	11.30%	10.70%
Long-term disability	0.24	0.24
Health insurance premium[1]		0.60
Total[2]	11.54%	11.54%

1 According to the ASRS, 100 percent of the health insurance premium contribution is reflected under the employer balance to comply with U.S. Internal Revenue Code requirements.

2 For fiscal year 2015, the total employer and employee contribution rate increased slightly to 11.60 percent.

Source: Auditor General staff illustration of information in the ASRS *Popular Annual Financial Report For Fiscal Year Ended June 30, 2014*.

Other benefits—The ASRS also provides long-term disability, health insurance, and survivor benefits to its ASRS plan members. Specifically:

- **Long-term disability benefit—**Active ASRS plan members who become unable to perform their job duties because of a disability are eligible for a benefit equal to two-thirds of their pay at the time of the disablement. The ASRS contracts for this benefit's administration. Members must apply for this benefit, and the contractor determines eligibility. As of June 30, 2014, about 4,300 ASRS plan members were receiving disability benefits. For eligible members, disability payments are made for as long as members meet requirements, including being under a licensed physician's care and unable to perform work for compensation, and providing evidential documents as requested. In most cases, disability payments will stop when the member no longer meets the criteria or when the member reaches his or her normal retirement date, whichever is earlier. A separate equal contribution from ASRS plan employees and employers pays for the long-term disability benefit (see Table 2).

- **Health insurance premium benefit—**The ASRS offers optional medical and dental insurance, as well as hearing and vision benefits, to ASRS plan members who are receiving benefits and their eligible dependents. Although statute permits the ASRS to self-insure its retired members, it contracts for medical and dental plans. For calendar year 2014, premiums for medical plans ranged from about $200 per month for single coverage for Medicare Advantage plans to about $2,000 per month for family coverage outside of Arizona for non-Medicare plans. Medical insurance premium costs are deducted from members' pension checks.

  Additionally, statute requires that the ASRS provide a premium benefit to offset the cost of health insurance premiums for healthcare coverage offered by ASRS or members' former employers. In calendar year 2014, the premium benefit amount ranged from $50 to $260 per month.[2] According to the ASRS, member and employer contributions fund the premium

1 Other plan types include single employer, which include the assets and pension obligations of only a single employer, and agent multiple employer, whereby assets are pooled but pension obligations are each employer's responsibility.

2 The amount of this benefit depends on a member's years of service, number of dependents, and Medicare status.

benefit equally, but compliance with U.S. Internal Revenue Code regulations require accounting for the contribution under the employer balance (see Table 2, page 3).

- **Survivor benefits—**The benefits available to an ASRS plan member's survivors depend on various factors. If a member dies prior to becoming eligible for retirement, the member's beneficiary receives a benefit equal to the sum of contributions made by both the member and employer as well as service purchased by the member plus interest at the time of the member's death. When a member retires, he/she may choose to reduce his/her monthly pension payments to provide an annuity to a beneficiary at the time of the member's death.[1] Similarly, members who are eligible for a health insurance premium benefit may reduce that benefit and pass it on to a survivor after his/her death.

Members—As of June 30, 2014, the ASRS reported that it served more than 550,000 members (see Table 3, page 5, for membership types). To become an ASRS plan member, employees must work for a participating employer at least 20 hours each week for 20 weeks in a fiscal year. State and local government employers may participate in the ASRS plan, which included 690 participating employers as of June 30, 2014. The participating employers with the most employees enrolled in the ASRS plan are the Arizona Department of Administration, which includes many state agency employees, Maricopa County, Mesa Unified School District, the University of Arizona, and Tucson Unified School District.

Board membership, responsibilities, and staffing

A.R.S. §38-713 establishes a nine-member Board of Trustees (Board) to oversee the ASRS. Trustees are appointed by the Governor and serve 3-year terms. Five of the trustees must be ASRS plan members, while the remaining four trustees represent the public and cannot be ASRS plan members. Statute also requires that four of the nine trustees have at least 10 years of substantial experience in a field or fields related to public or private finances, such as experience as a portfolio manager in a fiduciary capacity, chartered financial analyst, or economist. In addition to overseeing the ASRS, the Board is responsible for setting investment policy goals and objectives, allocating assets to meet the investment goals and objectives, and reviewing the performance of investment managers to ensure their attainment of and adherence to the board-approved investment policy's goals and objectives. The Board also sets the annual member and employer contribution rates based on its contracted actuarial firm's recommendation and may accept or modify the recommendation.

In addition, the Board appoints a director to oversee the ASRS staff and operations. As of June 2015, the ASRS reported that it had 246.9 full-time equivalent positions of which 20.5 were vacant. The ASRS is organized as follows:

- **Member, Financial, and Technology Services (192 FTE, 18 vacant)—**This division is responsible for the ASRS' core functions, including the calculation, disbursement, and coordination of retirement, health, disability, and survivor benefits as well as refunds of

[1] Pursuant to A.R.S. §38-711(22), a life annuity pays equal monthly installments for the member's lifetime after retirement. The annuity is one of several options a member may choose at retirement. See A.R.S. §38-760.

Table 3: ASRS plan's membership types, descriptions, and number of members As of June 30, 2014 (Unaudited)

Membership type	Description	Number of members
Active	Members who are working for a participating employer and are contributing to the ASRS.	207,556
Inactive	Members who are not making contributions but did so in the past. They have not removed their contributions and are not drawing pension benefits from the ASRS.	211,546
Retiree	Members who are retired and receive a lifetime monthly benefit from the ASRS.	119,356
Survivor beneficiary	Deceased members' surviving beneficiaries who are receiving a monthly benefit from the ASRS.	7,345
Qualified domestic relations order	Alternate payees who receive a portion of a member's benefit based on a qualified domestic relations order or other court document.	1,180
Long-term disability	Active members who are unable to work who receive monthly benefits to partially replace lost income.	4,313
Total members		551,296[1]

[1] This total includes 1,353 system members. For more information on the System, see footnote 2 on page 1.

Source: Auditor General staff review of A.R.S. §§38-711, 38-762, 38-773, 38-797 et seq., and the ASRS *Popular Annual Financial Report For Fiscal Year Ended June 30, 2014*.

contributions by members who withdraw from the ASRS plan. Member Services also responds to telephone, Internet, and in-person questions and complaints (see Sunset Factor 6, pages 30 through 31, for more information on how inquiries are handled).

- **Investment Management (11 FTE, 1 vacant)**—This division is responsible for overseeing the investment of assets. The ASRS uses external investment managers and also employs its own staff who choose and manage investments designed to meet the board-approved investment policy's goals and objectives.

  The ASRS competes with the private financial market for professionals to staff this division. As a result, in 2013, the ASRS implemented an incentive compensation plan that provides investment staff an incentive of up to 25 percent of base salary for exceeding investment performance measures.[1] The authorizing statute allowing for such incentive plans was enacted

[1] As required, the ASRS' Incentive Compensation Plan was developed with Arizona Department of Administration consultation. For fiscal year 2014, the total incentive amount provided to division staff was approximately $226,000 and investment staff salaries ranged from $70,000 to $194,250. Salaries were established under Arizona Department of Administration oversight.

as part of the State's 2012 personnel system reform, and in part, this reform's intent was to recruit and retain qualified staff.

- **Administration and Support (43.9 FTE, 1.5 vacant)—**Comprises the various administrative functions needed to support the agency such as human resources, budgeting, internal auditing, and legal counsel.

The ASRS also contracts with professional advisors for services to assist staff with operations and investments. For a list of these services, see Sunset Factor 12, pages 33 through 34. These include actuarial services such as an annual actuarial valuation of estimated pension obligations and assets. To calculate estimated pension obligations, the ASRS' actuary uses statistical data to estimate various factors, including inflation, changes in ASRS plan member salaries, and mortality rates. To determine how well-funded the ASRS plan is, its actuary measures estimated pension obligations against assets. For more information on the ASRS' financial condition, see Finding 1, pages 11 through 18.

Budget

As illustrated in Table 4 (see page 7), the ASRS does not receive any State General Fund appropriations. Rather, its revenues consist of ASRS plan employer and member contributions and investment income. Fiscal year 2014 net revenues totaled nearly $8 billion. Expenditures totaled about $3 billion in fiscal year 2014 and included retirement and disability benefits, survivor benefits, and refunds to withdrawn members. Expenditures also include administrative expenses for personnel and professional and outside services. The Legislature appropriates the ASRS' administrative expenses. At the end of fiscal year 2014, the ASRS' fund balance was more than $35.5 billion.

ASRS' investments

As shown in Table 4 (see page 7), investment income generally has been the ASRS' largest source of revenues and is used along with contributions to cover the ASRS plan's benefits and other costs. As of June 30, 2014, the ASRS held investments with a value of more than $35.5 billion. Approximately $34 billion of these assets belonged to the ASRS plan with the remaining belonging to the health insurance premium and long-term disability benefits. The ASRS invests this money according to a board-approved investment policy, which is required to be consistent with statutory requirements.[1] See Figure 3, page 14, for more information on the ASRS' return on investment for fiscal years 2005 through 2014.

The ASRS investment portfolio is composed of six types of assets that fall within three broad asset classes (see Figure 1, page 8). Specifically:

1 The ASRS investment policy is subject to some statutory investment limitations. For example, A.R.S. §38-718 includes limitations on how much of the portfolio value may consist of equities and non-U.S. equities.

Table 4: Schedule of changes in fiduciary net position Fiscal years 2012 through 2014 (In thousands) (Unaudited)

	2012	2013	2014
Revenue (additions)[1]			
Contributions:			
Member contributions	$ 926,966	$ 968,885	$ 1,016,435
Employer contributions	927,628	989,790	1,041,002
Federal government reimbursement	19,978	-	-
Retrospective rate adjustment reimbursement[2]	15,495	25,826	-
Transfers from other plans	2,236	1,233	1,044
Purchased service[3]	51,423	70,790	32,441
Total contributions	1,943,726	2,056,524	2,090,922
Net investment income	338,728	3,569,876	5,799,734
Other income	-	-	29,848
Total additions	2,282,454	5,626,400	7,920,504
Expenses (deductions)[1]			
Retirement and disability benefits	2,457,052	2,566,275	2,690,828
Survivor benefits	29,731	38,442	39,334
Refunds to withdrawing members, including interest	207,289	218,607	246,201
Administrative expenses:			
Personal services and related benefits	16,174	16,991	17,153
Professional and outside services	12,822	13,747	8,443
Other operating	6,166	6,291	4,190
Total administrative expenses	35,162	37,029	29,786
Transfers to other plans	5,024	725	915
Other	767	4,174	1,361
Total deductions	2,735,025	2,865,252	3,008,425
Net increase in net position	(452,571)	2,761,148	4,912,079
Net position restricted for benefits, beginning of year	28,314,807	27,862,236	30,623,384
Net position restricted for benefits, end of year	$ 27,862,236	$ 30,623,384	$ 35,535,463

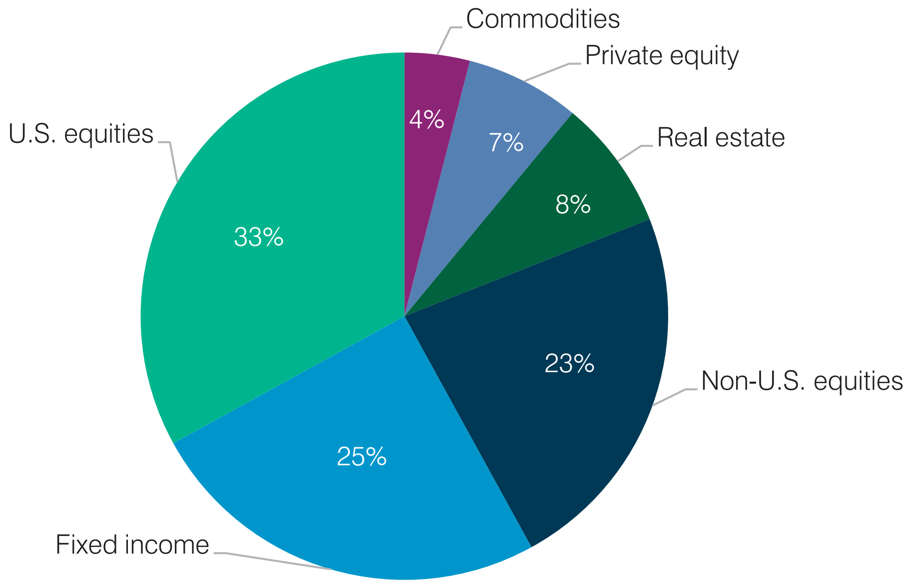
1 In accordance with governmental accounting standards for financial reporting for pension plans, the ASRS financial statements report revenues as additions and expenses as deductions.

2 Amount represents a reimbursement from the contracted health insurance provider. The ASRS' contract with its health insurance provider allowed for a portion of the difference between the total revenues and total claims expense incurred by the provider to be returned to the ASRS in the form of a retrospective rate adjustment reimbursement. The amount was calculated based on a targeted retention ratio as agreed upon in the contract.

3 Amount consists of contributions from active members for the purchase of past service time under specific qualified categories, including employment with other public entities, active and reserve military service, approved and unpaid leaves of absence from an ASRS employer, forfeited service from a termination, and periods of employment when an ASRS employer failed to withhold ASRS contributions, in accordance with A.R.S. §§38-738 and 38-742 through 38-745.

Source: Auditor General staff analysis of the ASRS' fiscal years 2012, 2013, and 2014 financial statements audited by an independent certified public accounting firm.

Figure 1: Composition of ASRS investment portfolio As of June 30, 2014 (Unaudited)



Source: The ASRS *Popular Annual Financial Report For Fiscal Year Ended June 30, 2014.*

- **Equities—**This investment class accounts for nearly two-thirds of the ASRS portfolio and includes U.S. equities, non-U.S. equities, and private equity. Equities are shares of ownership in businesses. U.S. equities are publicly traded in domestic stock markets, non-U.S. equities are publicly traded in foreign stock markets, and private equity shares are not publicly traded but are instead purchased through partnership agreements. Private equity partnerships vary depending on contract terms, but typically require investors to make long-term investments to purchase a company with the objective of reselling the company for a profit in the future

- **Fixed income—**This investment class accounts for one quarter of the ASRS portfolio and includes investments in bonds that governments and private businesses issue to borrow money from investors. These investments pay fixed, regular payments.

- **Commodities and real estate—**This investment class accounts for about 12 percent of the ASRS portfolio and includes natural resources (such as timber), residential real estate, and commercial real estate (office, retail, and industrial).

Consultant review of selected ASRS areas

As a part of the ASRS' sunset review, the Office of the Auditor General retained Gallagher Fiduciary Advisors, LLC (Gallagher), a subsidiary of Arthur J. Gallagher & Co., to conduct an operational review of the following three areas:

- Determine the ASRS plan's investment performance during the past 10 fiscal years (2005 through 2014), identify the causes for and impact of any underperformance, and make recommendations for improving the ASRS plan's investment performance as appropriate;

- Determine if the ASRS has adequate processes and other controls for selecting, monitoring, and terminating contracts with alternative investment managers and valuing these investments, identify the reasons for and impact of any inadequate controls, and make recommendations for improving controls, as appropriate; and

- Determine if the ASRS has adequate processes and other controls over external investment manager fees, identify the reasons for and impact of any inadequate processes and controls, and make recommendations for improving processes and controls, as appropriate.

Gallagher's observations and recommendations in these areas are published separately from this report. See the *Independent Operational Review of the Arizona State Retirement System's Investment Strategies, Alternative Asset Investment Procedures, and Fees Paid to External Investment Managers* (Report No. 15-CR2).

FINDING 1

ASRS plan is not fully funded, but steps have been taken to improve its long-term sustainability

From June 30, 2005 to June 30, 2012, the Arizona State Retirement System's (ASRS) defined benefit plan (ASRS plan) experienced a decline in funded status (see footnotes 1 and 2), but the ASRS and Legislature have taken several steps to improve the ASRS plan's funded status and long-term sustainability. A pension plan's funded status is a general indicator of its financial health, reflecting the extent to which a plan's assets can cover its estimated pension obligations. Best practice organizations recommend that public pension plans target a 100 percent funded status. The ASRS plan's funded status decreased from 86.1 percent as of June 30, 2005, to a low of 75.3 percent as of June 30, 2012, but has since increased to 76.3 percent as of June 30, 2014. Unmet investment return expectations during this period are in part responsible for the decline in the ASRS plan's funded status. However, the ASRS has taken several steps to improve the ASRS plan's funded status, such as drafting a funding policy and increasing the percentage of an employee's salary that is contributed to pay for the ASRS plan's costs. In addition, the Legislature has enacted statutory changes that will help improve the ASRS plan's long-term sustainability over time, such as eliminating permanent benefit increases for members who joined the ASRS plan on or after September 13, 2013. The ASRS should continue with its plans to formally adopt its funding policy and make it publicly available by posting the policy on its Web site.

ASRS plan's funded status decline similar to national trend but less severe than most peers'

Based on the actuarial value of assets, the ASRS plan experienced a decline in funded status between June 30, 2005 and June 30, 2012, that was similar to the nation-wide trend, but as of June 30, 2014, it had a higher funded status than three of four peer pension plans identified by auditors.[1,2] Funded status, which measures the sufficiency of a pension plan's assets to meet its estimated pension obligations, is a general indicator of a pension plan's health at a specific point in time (see textbox for how to calculate funded status). Although funded status will vary over time, best practice organizations indicate that public pension plans target a 100 percent funded status.[3] As of

Calculating funded status

A typical method for determining funded status is to divide a pension plan's assets by its liabilities, or the amount needed to pay its estimated pension obligations for benefits that have been earned by all plan members (active, inactive, and retired), at a particular point in time. For example:

$90 billion in assets ÷ $100 billion in estimated pension obligations = 90 percent funded status

The deficit between a pension plan's assets and its estimated pension obligations is called an unfunded liability. In the example above, the pension plan has an unfunded liability of $10 billion.

Source: Auditor General staff analysis of information from: Society of Actuaries. (2014). *Report of the blue ribbon panel on public pension plan funding;* and National Institute on Retirement Security. (2014). *2014 NIRS/NRTA pension education toolkit.*

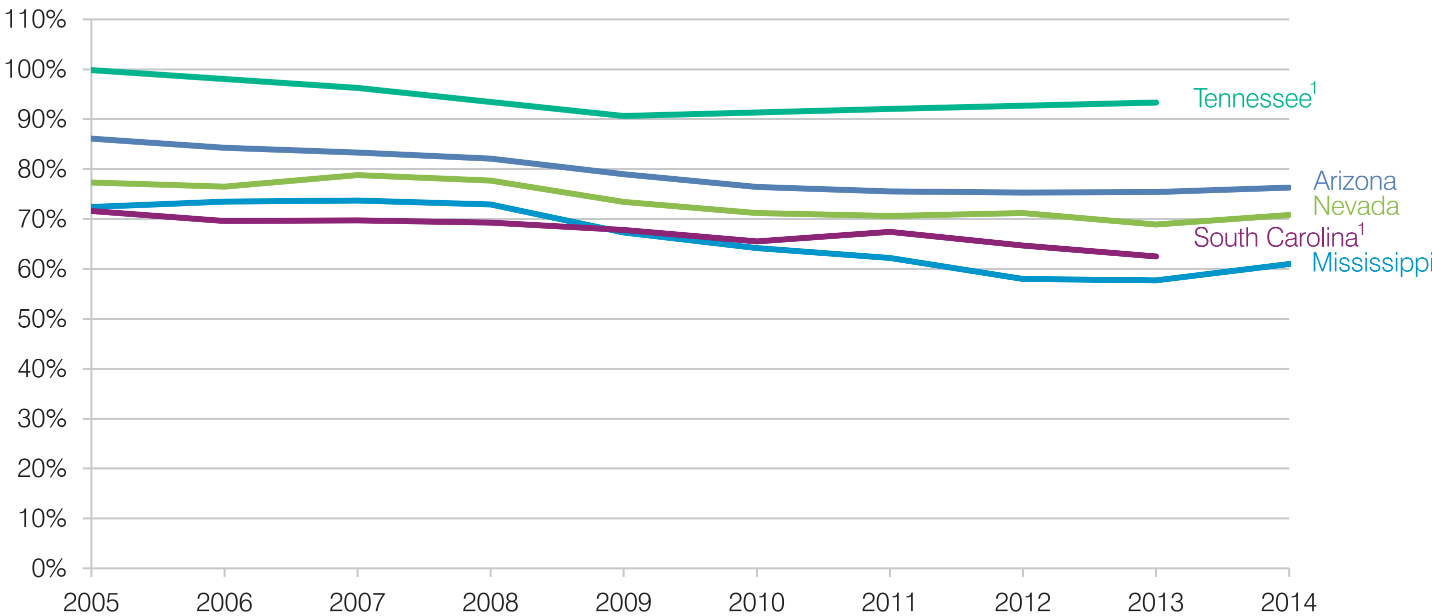
1 The actuarial funded status is calculated using the ASRS plan's actuarial value of assets. When determining the actuarial value of assets, the ASRS' actuary recognizes investment losses and/or gains over a rolling 10-year period. The ASRS plan's actuarial value of assets and funded status are critical for ASRS' operations because they are used to determine contribution rates and are also important factors in making funding decisions and establishing funding goals and objectives, such as those outlined in the ASRS' draft funding policy (see pages 15 through 16). Therefore, throughout this report, any discussions regarding funded statuses are based on the actuarial value of assets. Funded status can also be calculated using the market value of assets, which represents the fair market value of assets at a point in time, such as at fiscal year-end. The market value of assets is a more volatile measure because it can shift at any point in time because of market conditions. For example, the ASRS plan's funded status based on market value at June 30, 2005 through June 30, 2014, fluctuated up and down from a high of approximately 87 percent (2007) to a low of approximately 57 percent (2009). As of June 30, 2014, the ASRS plan's funded status was 81.5 percent based on market value of assets.

2 This report focuses solely on the ASRS' pension plan, and therefore any values presented, including funded statuses and contribution rates, pertain only to the pension plan. ASRS also administers a health insurance premium benefit (see Introduction, pages 3 through 4) that is a separately reported program with its own funded status. For example, as of June 30, 2014, this program was approximately 93 percent funded based on the actuarial value of assets.

3 Government Finance Officers Association. (2009). *Sustainable funding practices of defined benefit pension plans*; American Academy of Actuaries Issue Brief. (2012). *The 80% pension funding standard myth*.

June 30, 2014, the ASRS plan is below this target. As shown in Figure 2, the ASRS plan's funded status declined 10.8 percentage points, from 86.1 percent as of June 30, 2005, to 75.3 percent as of June 30, 2012, but it has since increased to 76.3 percent as of June 30, 2014. However, a decline in the ASRS plan's funded status means that its assets have not kept pace with its estimated pension obligations. Specifically, as of June 30, 2014, the ASRS plan had only about $31.5 billion in assets but $41.3 billion in estimated pension obligations, or, 76.3 percent of the assets needed to pay the estimated pension obligations to its more than 550,000 members.

Figure 2: ASRS plan's and other state peer plans' funded statuses As of June 30, 2005 through June 30, 2014 (Unaudited)



[1] Unlike the other ASRS peer plans, the funded statuses for the Tennessee State Employees, Teachers and Higher Education Employees Pension Plan and the South Carolina Retirement System are calculated as of July 1. The funded statuses for both of these plans were not available for July 1, 2014.

Source: Auditor General staff analysis of the ASRS plan's and Public Employees' Retirement System of Mississippi's actuarial valuation as of June 30, 2014; the Public Employees' Retirement System of Nevada's comprehensive annual financial report for the fiscal year ended June 30, 2014; the South Carolina Retirement System's actuarial valuation report as of July 1, 2013; and the Tennessee Consolidated Retirement System valuations and reports as of July 1, 2005, 2007, 2009, 2011, and 2013.

Auditors compared the ASRS plan's funded status to funded statuses of pension plans nation-wide and more specifically, to four plans that can be considered as peers because they are similar to the ASRS plan in a number of ways.[1] Specifically:

- **ASRS plan's trend in funded status similar to public pension plans nation-wide**—A national comparison indicated that the ASRS plan's decline in funded status is similar to the nation-wide trend. According to a 2015 report by the Public Fund Survey, the average funded status of 126 public pension plans throughout the nation declined by 13 percentage

[1] The four peer plans are the Public Employees' Retirement System of Mississippi, Public Employees' Retirement System of Nevada–Regular Employees, South Carolina Retirement System, and Tennessee State Employees, Teachers and Higher Education Employees Pension Plan. These plans were selected based on similarities in areas such as the market value of assets and retired-to-active member ratio (see Appendix A, pages a-1 through a-2, for additional information).

points, from 86.5 percent in fiscal year 2005 to 73.5 percent in fiscal year 2012.[1] This trend is similar to the ASRS plan's decline in funded status of approximately 10.8 percentage points from 86.1 percent as of June 30, 2005, to 75.3 percent as of June 30, 2012.

- **ASRS plan's funded status better than three of four peers—**As shown in Figure 2 (see page 12), the ASRS plan had a higher funded status compared to three of four peer pension plans identified by auditors. However, only one of these peer pension plans experienced a decline in funded status between June 30, 2005 and June 30, 2014, that was greater than what the ASRS plan experienced. Specifically, the Public Employees' Retirement System of Mississippi's funded status declined 16 percentage points, from 73.7 percent as of June 30, 2007, to 57.7 percent as of June 30, 2013. Of the four peers, only the Tennessee State Employees, Teachers and Higher Education Employees Pension Plan has had a consistently higher funded status than the ASRS plan. Although this plan's funded status decreased 9.19 percentage points from 99.83 percent as of July 1, 2005, to 90.64 percent as of July 1, 2009, its funded status had since risen to 93.34 percent as of July 1, 2013.[2]

Unmet 10-year investment return expectations have reduced ASRS plan's actuarial funded status

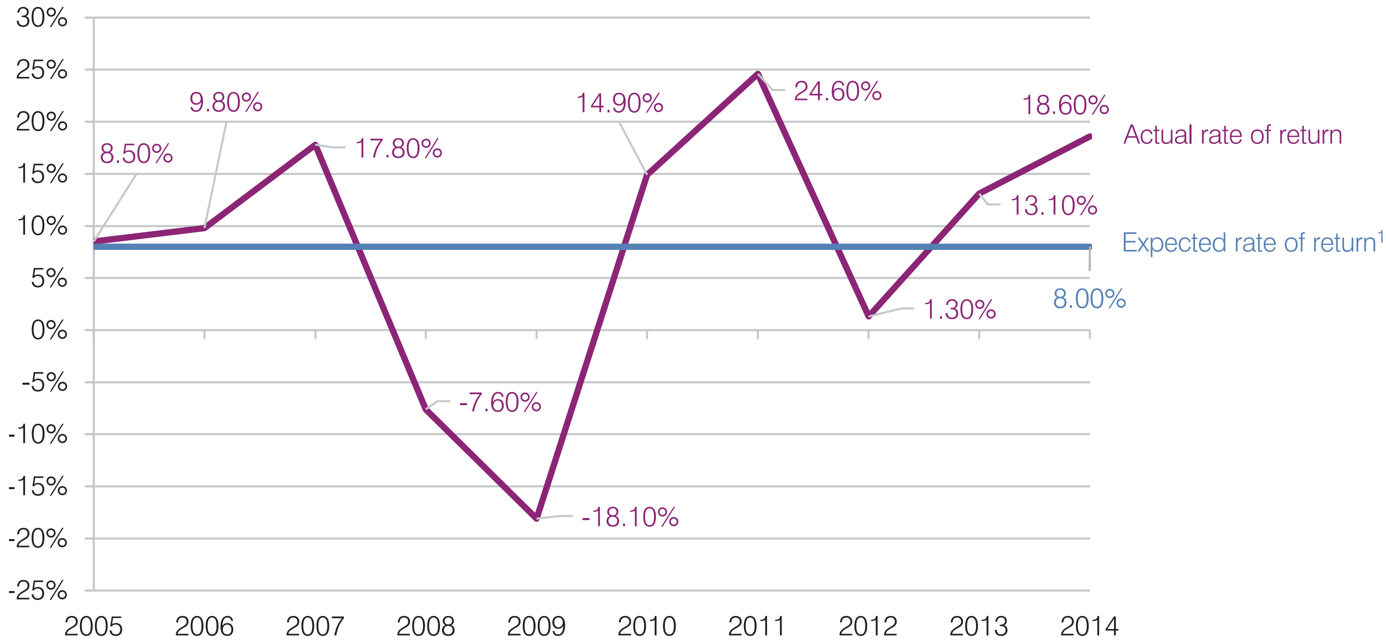
During June 30, 2005 through June 30, 2014, unmet investment return expectations were in part responsible for the decline in the ASRS plan's funded status. Specifically, the ASRS plan has fewer assets than expected to pay for its estimated pension obligations, in part because it did not always meet the expected rate of return on its investments during this 10-year period. The expected rate of return reflects the investment return that the ASRS plan expects to achieve, on average, over a rolling 20-year period of time. However, if the ASRS plan does not meet this rate in any year, its funded status may decline. To achieve this return, the ASRS invests contributions it receives. Based on information in the ASRS' comprehensive annual financial reports for the fiscal years ended June 30, 2005 through June 30, 2014, and as illustrated in Figure 3 (see page 14), the ASRS plan exceeded its expected rate of investment return for seven of the ten fiscal years between fiscal year 2005 and 2014. However, the average investment return during this 10-year period was 7.53 percent, which is below the expected rate of return of 8.00 percent. Since investment returns are a primary source of increasing the assets that the ASRS plan uses to pay estimated pension obligations, this underperformance has negatively affected its funded status during this 10-year period. Additionally, according to the ASRS and information in the ASRS' comprehensive annual financial reports, investment losses that occurred during fiscal years 2001, 2002, and 2003 also impacted the ASRS plan's funded status during the time frame analyzed in this audit report because of the continued recognition of those losses.[3] Finally, according to Gallagher Fiduciary Advisors, LLC (Gallagher), the economic crisis of 2008 and 2009 caused the ASRS plan to underperform its expected rate of investment return in those years. For more specific information on the ASRS plan's investment performance during fiscal years 2005 through 2014, see the *Independent Operational Review of the*

1 Public Fund Survey. (2015). *Summary of findings for FY 2013*.

2 The most recent actuarial valuation available for the Tennessee State Employees, Teachers and Higher Education Employees Pension Plan was as of July 1, 2013. The plan undergoes an actuarial valuation once every 2 years.

3 As indicated on page 11 (see footnote 1), the ASRS' actuary recognizes investment losses and/or gains over a rolling 10-year period.

Figure 3: ASRS plan's actual and expected rates of investment returns
As of June 30, 2005 through June 30, 2014
(Unaudited)



[1] Between June 30, 2005 and June 30, 2014, the ASRS plan maintained an 8.00 percent expected rate of investment return.

Source: Auditor General staff analysis of investment results based on market value of assets as reported in the ASRS' comprehensive annual financial reports for the fiscal years ended June 30, 2005 through June 30, 2014.

Arizona State Retirement System's Investment Strategies, Alternative Asset Investment Procedures, and Fees Paid to External Investment Managers (Gallagher Report).

In addition to investment losses, according to the ASRS, low contribution rates in the 1990s, and enactment of statutes that provided benefit increases without stipulating how to fund the increases were also a contributing factor to the ASRS plan's decline in funded status. However, these statutes were enacted prior to fiscal year 2005 through fiscal year 2014, the time frame analyzed in this audit report. For information about these benefit increases and their impact on the ASRS plan's funded status, see the Office of the Auditor General's performance audit and sunset review completed in 2005 (Report No. 05-09, page 49).

Although not a direct impact on the ASRS plan's funded status, the active-to-retired member ratio has declined. Specifically, the ASRS plan's active-to-retired member ratio has declined steadily over the past 10 fiscal years, from 2.87:1 as of June 30, 2005, to 1.61:1 as of June 30, 2014. This is due to a large increase in retired members while active members have decreased. For example, between fiscal years 2005 through 2014, the retired member population grew by approximately 52,000, or nearly 71 percent; whereas, the number of active members decreased by approximately 9,000, or about 4 percent. Although a declining active-to-retired member ratio by itself does not pose a direct problem to sustainability, it can result in relatively high contribution rates.[1]

[1] Public Fund Survey. (2015). *Summary of findings for FY 2013*.

ASRS and Legislature have taken several actions to improve ASRS plan's sustainability

The ASRS, its Board of Trustees (Board), and the Legislature have taken several actions to improve the ASRS plan's long-term sustainability. Specifically, the ASRS and the Board have processes in place and have taken actions that are consistent with best practices to help improve the ASRS plan's funded status and help enhance its long-term sustainability, such as changing investment strategies; developing a draft funding policy, which it should formally adopt; and increasing contribution rates. In addition, the ASRS has recommended and the Legislature has enacted some statutory changes that will help the ASRS plan's sustainability over time, including changing retirement eligibility requirements such as how long a person must work before he/she can retire.

Consistent with best practices, the ASRS has taken steps to improve the ASRS plan's funded status—To help increase the ASRS plan's funded status and promote its long-term sustainability, the ASRS has taken actions that are consistent with best practices. Specifically:

- **Changing investment strategies—**In its review of the ASRS' investment strategies for fiscal years 2005 through 2014, Gallagher reported that the number and complexity of investment strategies utilized by the ASRS has increased during this time to include emerging markets, private markets, global tactical asset allocation, and opportunistic investments. Gallagher noted that the ASRS' investment strategies and overall asset allocation appear to be reasonable and in line with industry standards and peers. For more information regarding the ASRS' asset allocation and other aspects of its investment strategies, see the Gallagher Report.

- **Developing a pension funding policy—**According to best practice literature, pension plans should have a documented strategy to attain or maintain a funded status of 100 percent or greater over a reasonable period of time and should adopt a pension funding policy as a strategy to help achieve these funding objectives.[1] According to the Pension Funding Task Force, a clear pension funding policy is important because it outlines a strategy to fund pensions, provides guidance in making annual budget decisions, demonstrates prudent financial management practices, and shows employees and the public how pensions will be funded.[2] Based on auditors' recommendations, the ASRS and the Board developed a draft pension funding policy during the audit. Consistent with best practices, the ASRS' policy explains its funding objectives and the elements that will be used to meet such objectives. For example, as recommended by the American Academy of Actuaries, the ASRS' draft funding policy includes an objective to achieve a 100 percent funded status and indicates that through a modification of contribution rates in combination with investment returns, the ASRS plan is expected to be fully funded by 2037. According to the ASRS, it plans to formally adopt this

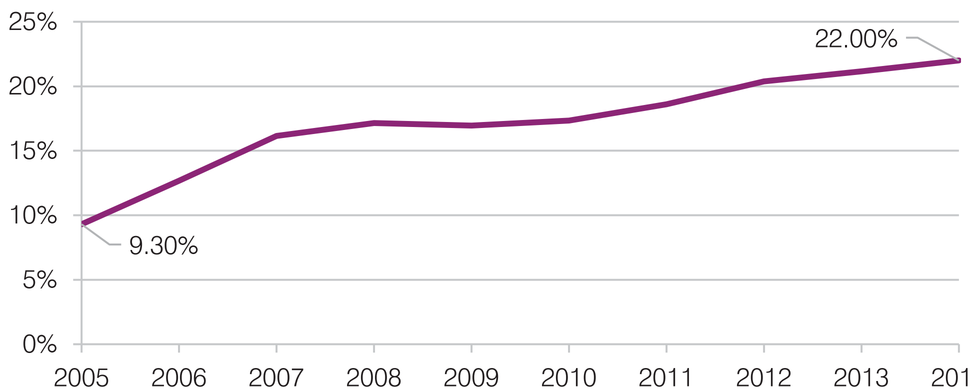
[1] American Academy of Actuaries Issue Brief. (2012). *The 80% pension funding standard myth*; Government Finance Officers Association (2013). *GFOA best practice: Core elements of a funding policy.*

[2] Pension Funding Task Force. (2013). *Pension funding: A guide for elected officials*. The Pension Funding Task Force was established in 2012 by the National Governors Association, National Conference of State Legislatures, Council of State Governments, National Association of Counties, National League of Cities, U.S. Conference of Mayors, the International City/County Management Association, and the Government Finance Officers Association. The National Association of State Auditors, Comptrollers and Treasurers; the National Association of State Retirement Administrators; and the National Council on Teacher Retirement also serve on the Task Force. The Center for State and Local Government Excellence is the convening organization for the Task Force.

draft funding policy in August 2015 and make it publicly available on its Web site. The ASRS should continue with its plans to formally adopt its draft funding policy and make it publicly available by posting the policy on its Web site.

- **Increasing contribution rates—**The Board increases contribution rates when its actuary recommends to do so. Consistent with best practices, statute requires that the member and employer contribution rates be determined by an annual valuation by the Board's actuary.[1] Based on a number of factors including the expected rate of investment return, the ASRS plan's actuary annually determines the contribution rates that will help pay for 100 percent of the ASRS plan's estimated pension obligations over time. Therefore, when the ASRS plan does not meet its expected rate of investment return, the actuary will recommend increasing contributions to ensure that the ASRS plan will have enough assets to pay for its estimated pension obligations. For example, in an effort to improve the ASRS plan's funded status and ensure its long-term sustainability, member and employer contributions have generally increased during fiscal years 2005 through 2014. Specifically, as illustrated in Figure 4, during this time, the total contribution rate for the ASRS plan has increased from 9.3 percent of an employee's salary to 22.0 percent.[2]

Figure 4: ASRS plan's total (member and employer) contribution rate Fiscal years 2005 through 2014 (Unaudited)



Source: Auditor General staff analysis of contribution rates as reported in the ASRS' comprehensive annual financial reports for the fiscal year ended June 30, 2014.

- **Reviewing actuarial assumptions—**The ASRS also undergoes two separate reviews that can help ensure the soundness of its actuarial assumptions. The first review is required by statute and the Board's actuary complies by reviewing the ASRS plan's actual experience in relation to the assumptions employed in preparing annual actuarial valuations at least once every 5 years.[3] In this experience study, the actuary compares the ASRS plan's actual experiences over a period of time with the assumptions in effect at that time. There are many assumptions used to develop the ASRS plan's annual

1 Arizona Revised Statutes (A.R.S.) §§38-714(G)(3), 38-736(A), and 38-737(C).

2 A.R.S. §38-736(A) provides that member contributions are a percentage of a member's compensation that is equal to an employer's contribution. The member's contribution rate is deducted from his/her pay, and the employer's contribution is made from other monies. For more information on employee and employer contribution rates in fiscal year 2014, see the Introduction, pages 2 through 3.

3 A.R.S. §38-714(G)(2).

actuarial valuations, including the expected rates of retirement among active members and the long-term rate of investment return (see textbox for examples of actuarial assumptions). Based on the results of this analysis, the actuary may make recommendations to the Board to change certain assumptions. For instance, one of the actuary's recommendations to the Board in the experience study for the period between July 1, 2007 and June 30, 2012, was to lower active, retired, and disabled members' mortality rates. Lowering these assumptions means that members are living longer. The Board accepted these recommendations at its May 2013 meeting. The actuary projected that changing the mortality assumptions would increase the ASRS plan's pension obligations by approximately $967 million.

Examples of actuarial assumptions

Withdrawal rates—Projects the number of members who leave a plan before retiring and receiving a pension benefit.

Mortality rates—Projects the number of members who will die based on their age.

Disability rates—Projects the number of active members who will become disabled based on their age.

Salary increase—Projects members' salary increases from the date of valuation to when these members stop contributing to a plan.

Source: Auditor General staff analysis of the ASRS plan's actuarial experience study for the period July 1, 2007 through June 30, 2012.

For the second review, consistent with best practice, the ASRS contracts with a separate actuarial firm every 5 years to provide an independent review or audit of the analyses and methodologies used in the experience study and corresponding valuations.[1] These audits may include recommendations for the ASRS plan's actuary to consider in future actuarial valuations. For example, one of the findings in a 2014 actuarial audit recommended that the ASRS plan's actuary should provide a thorough analysis of the ASRS plan's inflation assumption that includes separate analyses of price inflation and wage inflation components.[2]

Legislature also enacted changes to improve the ASRS plan's sustainability—

Arizona has taken actions consistent with actions taken in other states to help manage costs and improve plan sustainability over the long term.[3] Specifically, in 2010 and 2013, the ASRS recommended and the Legislature enacted the following legislative changes to improve the ASRS plan's funded status and enhance its sustainability:

- **Raised eligibility requirements—**Laws 2010, Ch. 50, amended statute to increase the number of years an ASRS plan member must work to be eligible for pension benefits. These changes apply to individuals who become members on or after July 1, 2011. Specifically, individuals who became ASRS plan members on or after this date must be older or work longer before they can retire than those who became members before this date. ASRS' actuary has estimated that increasing age and service requirements will result in future cost savings of approximately $587 million.[4]

[1] Government Finance Officers Association. (2013). *GFOA best practice: The role of the actuarial valuation report in plan funding*.

[2] Gabriel Roeder Smith & Company, Consultants & Actuaries. (2014). *Arizona State Retirement System report of an actuarial audit, June 13, 2014*. Separating the price inflation and wage inflation components would allow the ASRS plan's actuary and the ASRS Board to closely monitor members' salary increases in the current economic cycle to determine whether this underlying long-term assumption is reasonable.

[3] United States Government Accountability Office. (2012). *State and local government pension plans: Economic downturn spurs efforts to address costs and sustainability.* Washington, DC.

[4] The cost savings that the ASRS' actuary estimated were based on changes in contribution rates over a 30-year period using the same actuarial assumptions that determine these contribution rates.

- **Adjusted the pension benefit formula—**Laws 2010, Ch. 50, also changed the formula for calculating ASRS plan pension benefits.[1] This change applies to individuals who become members on or after July 1, 2011. For example, for those who became ASRS plan members on or after this date, the legislation increased the time period used to calculate average monthly compensation from the highest 36 months to the highest 60 months of compensation in the last 120 months of service. Expanding the time period for calculating final average salaries generally results in reduced pension benefits because a lower average salary is used to determine these benefits.

- **Eliminated permanent benefit increases—**Laws 2013, Ch. 110, eliminated permanent benefit increases for individuals whose ASRS plan membership began on or after September 13, 2013. For members who joined the ASRS plan before this date, statute directs the ASRS to provide a permanent increase in retired members' pension benefits of up to 4 percent, when specific conditions are met such as exceeding the expected investment rate of return over a rolling 10-year period.[2] Although providing benefit increases can help retain the value of a retiree's benefit over time, these increases can also create unfunded liabilities, thus reducing a pension plan's funded status (see Finding 2, pages 19 through 20, for more information on the permanent benefit increases).

Although many states have made changes to their plans' pension benefits, legal constraints have limited these changes to new plan members. According to a 2012 report by the National Conference of State Legislatures, from 2009 to 2011, 43 states (including Arizona) modified at least one state-sponsored defined benefit system to reduce member benefits and lower future pension obligations by either adjusting the pension benefit formula, raising eligibility requirements, and/or limiting post-retirement benefits.[3] As was the case with the Arizona legislative changes noted earlier, a 2012 Center for Retirement Research report noted that these types of benefit changes are generally limited to new plan members because of legal constraints.[4] Specifically, the U.S. Constitution's Contract Clause and similar provisions in many state constitutions prohibit the enactment of laws that would impair existing public or private contracts. However, according to a 2012 U.S. Government Accountability Office report, although these types of benefit reductions for new employees can reduce plans' pension obligations, it can take a decade or more for the changes to make any significant reduction because it takes time for new employees to represent a significant portion of the workforce.[5]

Recommendation:

1.1. The ASRS should continue with its plans to formally adopt its funding policy and make it publicly available by posting the policy on its Web site.

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[1] A member's retirement benefit is calculated using a statutory formula that includes three main elements: years of credited service, a multiplier, and average monthly compensation. For an example of calculated benefits, see the Introduction, page 2.

[2] See A.R.S. §38-767. The ASRS last provided a permanent benefit increase to ASRS plan members in 2005.

[3] Snell, R. (2012). *State pension reform, 2009-2011*. Washington, DC: National Conference of State Legislatures.

[4] Munnell, A.H. & Quinby, L. (2012). *Legal constraints on changes in state and local pensions*. Boston, MA: Boston College, Center for Retirement Research.

[5] U.S. GAO, 2012.

FINDING 2

Additional actions can enhance ASRS plan's financial condition and long-term sustainability

Although the Arizona State Retirement System (ASRS) and the Legislature have taken several steps to improve the defined benefit plan's (ASRS plan) long-term sustainability, some additional actions would strengthen these efforts. First, although permanent benefit increases did not impact the ASRS plan's sustainability during the time period auditors reviewed, since increases are likely in the near future, the ASRS should ensure these increases do not impact the ASRS plan's sustainability going forward. Second, to determine which actuarial cost method is most appropriate for determining contribution rates and helping it meet its funding policy objectives, the ASRS and its Board of Trustees (Board) should develop and implement a policy and procedure for periodically reviewing its actuarial cost method. Third, to help prevent inappropriate preretirement salary increases (i.e., pension spiking), the ASRS should implement additional controls, such as establishing a methodology to identify such increases and clarifying procedures to investigate them.

ASRS should develop method to ensure future benefit increases do not impact ASRS plan's sustainability

The ASRS and the Board should work with its actuary to ensure the cost of expected future benefit increases do not impact the ASRS plan's sustainability. Permanent benefit increases are permanent increases provided to retired members' pensions.[1] The ASRS last provided a benefit increase to retired members in 2005. As a result, permanent benefit increases did not impact the ASRS plan's sustainability during the time period auditors reviewed—June 30, 2005 to June 30, 2014. The ASRS plan's permanent benefit increase structure includes features that help limit the impact of increases on the ASRS plan's sustainability. Specifically, permanent benefit increases are not provided unless the ASRS plan's investment performance exceeds 8 percent on average over a rolling 10-year period and/or a separate account reserved for benefit increases has sufficient monies available to provide at least a 1 percent increase for retired members.[2]

Although Laws 2013, Ch.110, eliminated permanent benefit increases for individuals whose ASRS plan membership began on or after September 13, 2013 (see Finding 1, page 18), permanent benefit increases still would be available to ASRS plan members who started before that date. According to the ASRS, as of June 2015, there were 491,220 ASRS plan members who were eligible for a permanent benefit increase in the future.[3] In addition, the ASRS' actuary estimated that a small benefit increase, such as a 2 percent increase, may be available to eligible members on July 1, 2019, if the ASRS plan's investment returns are at least 8 percent during fiscal years 2015 through 2018 and the other permanent benefit increase conditions are met (see previous paragraph).[4] If these conditions are met, the ASRS must provide a permanent benefit increase. Thus, even though this increase is not provided annually, it could be considered automatic as opposed to an increase that would be

1 For some public pension plans, increases to members' pensions are sometimes referred to as cost-of-living adjustments, or COLAs; however, unlike the ASRS plan's permanent benefit increase, COLAs are often tied to the consumer-price index and designed to help ensure benefits keep pace with cost-of-living increases.

2 Arizona Revised Statutes (A.R.S.) §38-767 outlines the conditions that must be met to require the ASRS to provide permanent benefit increases to ASRS plan retired members and specifies how the increases are determined.

3 This consists of 100,264 retired members and 390,956 nonretired members.

4 These estimates are based on ASRS plan data and provisions, and actuarial methods and assumptions for the ASRS plan's June 30, 2014, valuation.

considered ad hoc, meaning that it is granted at the ASRS' or Legislature's discretion (see textbox). According to the National Institute on Retirement Security, automatic increases should be prefunded, meaning they should be incorporated into the calculation of employer and employee contribution rates, and the unfunded liabilities created by an ad hoc increase can be amortized over a shorter period than the traditional 30-year period.[1] Both automatic and ad hoc increases cost money. The ASRS has not incorporated benefit increases into its contribution rates since 2005. However, since increases in the future are likely and a large number of members remain eligible for such increases for many years into the future, the ASRS and its Board should work with its actuary to develop a method for ensuring that the cost of any future benefit increases do not impact the ASRS plan's sustainability. In developing this method, the ASRS should ensure that it aligns with its funding policy's goals and objectives.

Automatic benefit increase—A retiree's pension benefit increases automatically every year by a certain percentage.

Ad hoc benefit increase—A benefit increase that is granted at the discretion of the plan sponsor, and usually when the plan is close to being fully funded and investment gains have exceeded expectations.

Source: Auditor General staff analysis of Peng, J., & Boivie, I. (2011). *Lessons from well-funded public pensions: An analysis of six plans that weathered the financial storm*. Washington, DC: National Institute on Retirement Security.

ASRS and Board should periodically review its actuarial cost method

The ASRS and its Board should periodically determine which actuarial cost method is appropriate for determining contributions and achieving its policy objectives. A core element of a pension funding policy is an actuarial cost method, which is a technique actuaries use to determine the contribution requirements necessary to fund estimated pension obligations. In 1989, the ASRS was mandated by statute to use the Projected Unit Credit actuarial cost method to determine contribution requirements. This actuarial cost method estimates lower contribution requirements early in an employee's career and higher contribution requirements as an employee nears retirement. The ASRS is required by statute to use this method through the end of June 2016.

Beginning in July 2016, the ASRS will have more flexibility in selecting an actuarial cost method. Starting June 30, 2016, Laws 2015, Ch. 65, §2, authorizes the Board to select and use any generally accepted actuarial cost method when determining contribution rates.[2,3] This will allow the Board to align its actuarial cost method with the ASRS plan's member population and funding objectives. Although in the future the Board will be able to select different actuarial cost methods, it should not change these methods just to obtain a more favorable funded status.

1 Peng, J., & Boivie, I. (2011). *Lessons from well-funded public pensions: An analysis of six plans that weathered the financial storm*. Washington, DC: National Institute on Retirement Security.

2 Actuarial Standards Board, Actuarial Standards of Practice (ASOP) No. 4: Measuring Pension Obligations and Determining Pension Plan Costs or Contributions, provides criteria to select an actuarial cost method for determining contribution requirements.

3 Actuarial cost methods estimate an employee's salary and years of service at retirement and then spread the cost of the estimated pension obligation over the employee's career. Based on auditors' review of data from the 2013 Public Fund Survey, an online compendium of data from 126 public pension plans in the United States, the Entry Age Normal actuarial cost method is the most common method among the pension plans listed. The Entry Age Normal cost method allocates costs evenly as a level percentage of pay throughout an employee's projected career.

Specifically, the Pension Funding Task Force states that the actuarial cost method adopted should be consistent with funding policy objectives.[1] To determine which generally accepted actuarial cost method is appropriate for determining contributions and helping meet these objectives, the ASRS and its Board should develop and implement a policy and procedure for periodically reviewing its actuarial cost method. In developing this procedure, the ASRS should ensure that its adopted policy and procedures include a time frame to review the appropriateness of the actuarial cost method periodically, such as every 5 years when it conducts actuarial experience studies, as required by statute.[2] In addition, the ASRS should ensure that its adopted policy and procedures do not allow the Board and/or the actuary to change actuarial methods for the sole purpose of achieving a more favorable funded status, or fiscal result.

ASRS should implement additional controls for minimizing the impact of preretirement salary increases

The ASRS should enhance its efforts to identify and resolve potential instances of pension spiking. Although statutes provide some protections to limit pension spiking and the ASRS has two processes that can help identify pension spiking, these processes lack important components. As a result, ASRS should enhance its procedures for identifying pension spiking and assessing the costs of any resulting unfunded liabilities, including developing a new process for regularly querying its data to look for potential instances of pension spiking.

ASRS plan has some protections to limit pension spiking—Statutes and some ASRS processes help identify or prevent pension spiking. Statutes establish a formula for determining an ASRS plan member's pension benefit (see Introduction, pages 1 through 2). This formula considers a member's years of service and average monthly compensation, or final average salary. According to a 2011 report by the National Institute on Retirement Security, pension spiking refers to the practice of substantially increasing an employee's final average salary beyond what is expected from normal salary increases.[3] This substantial increase can happen when the final average salary includes unusually large overtime payments, payments for unused sick leave or vacation time, or a larger-than-normal salary increase.

Statutes provide some protections to limit pension spiking. In particular, A.R.S. §38-711(7) forbids including lump sum payments for accumulated vacation, sick leave, and compensatory time when calculating an ASRS plan member's pension benefit. In addition, for those who became ASRS plan members between January 1, 1984 and July 1, 2011, A.R.S. §38-711(5) minimizes the impact of any potential pension spiking by using a 36-month period to determine a member's average monthly compensation. For those who became ASRS plan members after July 1, 2011, the statute

1 Pension Funding Task Force. (2013). *Pension funding: A guide for elected officials*. The Pension Funding Task Force was established in 2012 by the National Governors Association, National Conference of State Legislatures, Council of State Governments, National Association of Counties, National League of Cities, U.S. Conference of Mayors, International City/County Management Association, and Government Finance Officers Association. The National Association of State Auditors, Comptrollers and Treasurers; National Association of State Retirement Administrators; and National Council on Teacher Retirement also serve on the Task Force. The Center for State and Local Government Excellence is the convening organization for the Task Force.

2 A.R.S. §38-714(G)(2) requires the Board to contract with an actuary at least once every 5 years to review the ASRS plan's actual experience in relation to the assumptions employed in preparing its annual actuarial valuations. See Finding 1, page 16 through 17, for more information on the actuarial experience study.

3 Peng & Boivie, 2011.

lengthens this period to 60 months. Finally, A.R.S. §38-749 allows the ASRS to recover the costs of larger-than-normal salary increases from employers by regulating what statute calls "employer termination incentive programs" (see textbox for the definition of these programs). Specifically, A.R.S. §38-749(A)(C) states that when the ASRS identifies employer termination incentive programs, it must assess the cost of any resulting unfunded liabilities to the employer. To determine the ASRS plan's estimated pension obligations and contributions necessary to meet those obligations, the ASRS' actuary uses statistical data to estimate various factors, including mortality rates and increases in members' compensation over time. When a member's compensation experiences a greater-than-expected increase during the time period that determines average monthly compensation, this increase may generate an unfunded liability to the ASRS plan.

Employer termination incentive programs

Termination incentive—An employer offers anything of value that is conditioned on the member's termination.

Example: An employer provides a member with a $30,000 lump sum payment if that member retires.

Salary increase—A member receives a 30 percent or greater, nonpromotion salary increase that occurs during the time period used to determine the member's final average salary and thus factors into his/her pension benefit calculation.

Source: Auditor General staff analysis of A.R.S. §38-749(D).

Additionally, the ASRS has two processes to identify employer termination incentive programs.[1] First, ASRS staff may identify these programs by reviewing a member's salary history when processing a member's application for retirement benefits. The system that staff use to process these benefits will also highlight any pay periods with salary increases that are 30 percent or greater than the average in a fiscal year. Second, the ASRS may identify termination incentive programs when it conducts audits of employers for compliance with ASRS policies and relevant statutes.[2] As part of these audits, staff review payroll records of employers for evidence of termination incentive programs.[3] Employer termination incentive programs that auditors identify are noted in reports to the Board, which include recommendations that the employer pay for any unfunded liabilities.

ASRS' processes lack some important components—Although the ASRS has established some processes to identify employer termination incentive programs, these processes lack important components for effectively regulating these programs. Specifically:

- **Procedures for processing retirement benefits unclear—**The ASRS' procedures for processing retirement benefits do not fully address salary increases that may indicate termination incentive programs. Specifically, although these procedures direct staff to look for some abnormal salary increases, they do not specifically direct staff to look for or provide guidance on how to identify a termination incentive program. Additionally, these procedures instruct staff to contact employers for explanations on abnormal salary

1 A.R.S. 38-749(B) requires ASRS employers to self-report any employer termination incentive programs.

2 As indicated in the Introduction (see page 1), ASRS employers include the State and the State's counties, universities, community colleges, school districts, most municipalities, and other political subdivision entities, such as charter schools.

3 According to the ASRS' internal audit plan, of its 690 participating employers, ASRS planned to audit ten employers in fiscal year 2015. In addition to conducting employer audits, ASRS internal auditors also conduct audits of high-risk areas within the ASRS as well as annually reviewing certain functions for compliance with statutes and agency policies.

increases, but they do not provide instructions on who within ASRS these staff should notify to handle a potential termination incentive program. Further, ASRS staff reported that the decisions to investigate abnormal or irregular increases were ultimately left to their discretion rather than being guided by a specific procedure.

- **Procedures for determining programs and assessing employers for the resulting pension obligations lacking—**Even when the ASRS may have identified employer termination incentive programs, it has not always determined and assessed the cost of any resulting unfunded liabilities. Between September 2009 and September 2012, the ASRS reported that it had invoiced 17 participating employers for approximately $20 million in unfunded liabilities resulting from employers providing termination incentives to employees. However, the ASRS has not determined and assessed the cost of any unfunded liabilities in instances where nonpromotion salary increases of 30 percent or greater may have occurred (see employer termination incentive programs textbox, page 22). Specifically, ASRS staff reported that the ASRS has not yet established a method for determining when a 30 percent or greater increase in compensation has occurred. Additionally, auditor's review of ASRS policies and procedures did not identify guidance or instruction for making this determination. Consequently, even though a 2012 ASRS employer audit may have identified five recent retirees who experienced salary increases between 32 and 63 percent in their final years of employment, the ASRS did not determine and invoice the employer for the cost of the resulting unfunded liabilities.

ASRS should enhance its procedures for identifying pension spiking and assessing the costs of any resulting unfunded liabilities—Although ASRS staff indicated that employer termination incentive programs are rare, public trust may be undermined if the ASRS does not effectively address this issue, and ASRS members may unfairly bear the cost of these undetected programs. According to the National Institute on Retirement Security, even though pension spiking is not common, a few isolated instances can create the impression of widespread abuse.[1] In addition, because the ASRS is a cost-sharing plan, if an employer is not assessed the cost of the unfunded liabilities that result from an employer termination incentive program, all participating employers and members will share the cost of these unfunded liabilities.[2] To address these issues, the ASRS should enhance its procedures for identifying employer termination incentive programs and assessing the cost of any resulting unfunded liabilities. Specifically, the ASRS should:

- Determine a methodology for calculating when a 30 percent or greater increase in a member's compensation not attributable to a promotion occurs. However, the ASRS is party to outstanding litigation regarding whether it needs to adopt administrative rules on how to calculate the unfunded liability and assess the cost of this unfunded liability to the employer as required by A.R.S. §38-749.[3] Depending on the outcome of this litigation, the ASRS may also need to adopt rules for calculating when this 30 percent increase occurs;

1 Peng & Boivie, 2011.

2 See the Introduction, pages 2 through 3, for more information about cost-sharing plans.

3 In May 2015, the Arizona Court of Appeals ruled in *Arizona State University ex rel. Arizona Board of Regents v. Arizona State Retirement System* that the ASRS' policy for calculating unfunded liability was a rule that it had adopted without following the rule-making procedure provided in Arizona's Administrative Procedure Act and was therefore invalid. The ASRS filed an appeal of this decision with the Arizona Supreme Court on June 29, 2015.

- Develop and implement policy and procedures for executing the methodology for determining when a 30 percent or greater nonpromotion salary increase has occurred, and train staff on these policy and procedures;

- Assess the feasibility of implementing this procedure for all members who have retired since September 30, 2009. This represents the date when the current termination incentive programs requirements outlined in A.R.S. §38-749 became effective. Accordingly, the ASRS should identify and investigate potential instances of employer termination incentive programs that may have occurred since September 30, 2009, including those involving nonpromotion salary increases of 30 percent or more. Further, when an instance is identified, the ASRS should assess the cost of any resulting unfunded liabilities to the employer;

- Include information in its retirement benefit processing procedures on how to identify and what its staff should do when they identify salary increases that appear to qualify as an employer termination incentive program, such as nonpromotion salary increases of 30 percent or greater. These procedures should also identify which ASRS staff are responsible for conducting further investigations of such cases and which staff are responsible for assessing the cost of the unfunded liability to the employer; and

- Develop and implement a policy and procedures for regularly querying the ASRS contribution accounting system for increases in compensation that could indicate employer termination incentive programs. Beginning in calendar year 2013, the ASRS began expanding the capabilities of its contribution accounting system so that it will collect information on the number of hours members work and the types of pay members receive, such as base pay, overtime pay, and performance pay. According to the ASRS, 85 percent of employers were included in the system as of July 1, 2015, and it will continue working to include the remaining employers. The adopted policy and procedures should also state which ASRS staff are responsible for conducting further investigations on potential cases identified through its queries, and which staff are responsible for assessing the cost of any unfunded liability to the employer.

Recommendations:

2.1. The ASRS and its Board should work with its actuary to develop a method for ensuring the cost of future benefit increases do not impact the ASRS plan's sustainability. In developing this method, the ASRS should ensure that it aligns with its funding policy's goals and objectives.

2.2. The ASRS and its Board should develop and implement a policy and procedure for periodically reviewing its actuarial cost method to determine which generally accepted actuarial cost method is appropriate for determining contributions and helping to meet its Funding Policy's objectives. In developing this procedure, the ASRS should ensure that its adopted policy and procedures:

a. Establish a time frame to review the appropriateness of the actuarial cost method periodically, such as every 5 years when it conducts actuarial experience studies; and

b. Do not allow the Board and/or the actuary to change actuarial methods for the sole purpose of achieving a more favorable funding status, or fiscal result.

2.3. The ASRS should enhance its procedures for identifying employer termination incentive programs and assessing the cost of any resulting unfunded liability to an employer. Further, depending on the final resolution of outstanding litigation, the ASRS may also need to adopt administrative rules in order to legally enforce A.R.S. §38-749. Specifically, the ASRS should:

a. Determine a methodology for calculating when a 30 percent or greater increase in a member's compensation not attributable to a promotion has occurred;

b. Develop and implement written policy and procedures executing the methodology to determine when a 30 percent or greater nonpromotion salary increase has occurred, and train staff on the policy and procedures;

c. Assess the feasibility of implementing this procedure for all members who have retired since September 30, 2009. Accordingly, the ASRS should identify and investigate potential instances of employer termination incentive programs, including those involving nonpromotion salary increases of 30 percent or more. Further, when an instance is identified, the ASRS should assess the cost of any resulting unfunded liabilities to the employer;

d. Include information in its retirement benefit processing procedures on how to identify and what ASRS staff should do when they identify salary increases that appear to be a result of an employer termination incentive program or an inappropriate preretirement salary increase, as well as which staff are responsible for conducting further investigations on such cases and for assessing the cost of the unfunded liability to the employer; and

e. Develop and implement a policy and procedures for regularly querying the ASRS contribution accounting system for increases in compensation that could indicate employer termination incentive programs. The adopted policy and procedures should also state which ASRS staff are responsible for conducting further investigations on potential cases identified through its queries, and which staff are responsible for assessing the cost of any unfunded liability to the employer.

SUNSET FACTORS

In accordance with Arizona Revised Statutes (A.R.S.) §41-2954, the Legislature should consider the following factors in determining whether the Arizona State Retirement System (ASRS) should be continued or terminated.

This analysis includes recommendations for the ASRS to enhance some of its information technology (IT) practices (see Sunset Factor 2, pages 28 through 29).

Sunset factor analysis

1. **The objective and purpose in establishing the ASRS and the extent to which the objective and purpose are met by private enterprises in other states.**

   Established in 1953, the ASRS' primary statutory objective is to provide and administer a defined benefit retirement (pension) plan (ASRS plan) for general employees of the State, counties, municipalities, universities, community colleges, and school districts.[1] All 50 states sponsor at least one defined benefit retirement plan for their general (i.e., nonpublic safety) employees. Auditors did not identify any state retirement plans that meet their objective and purpose entirely through private enterprise. However, the ASRS uses private enterprises to help meet its mission (see Sunset Factor 12, pages 33 through 34, for more information on its use of private enterprises).

2. **The extent to which the ASRS has met its statutory objective and purpose and the efficiency with which it has operated.**

   The ASRS has generally met its statutory objective and purpose of providing and administering a pension plan for general employees, but auditors also identified areas where improvement is needed. As indicated in Finding 1 (see pages 11 through 18), the ASRS has established processes for and has taken actions to improve the ASRS plan's funded status, or the extent to which the ASRS plan's assets can meet its estimated pension obligations. These actions include drafting a funding policy that includes an objective to reach a 100 percent funded status, and increasing contribution rates. In addition, the ASRS has recommended and the Legislature has enacted statutory changes that will help improve the ASRS plan's long-term sustainability over time.

   Additionally, the ASRS has taken several steps to improve its operational efficiency, including the following:

   - Implemented an effective Incentive Compensation Plan (compensation plan) for its investment staff in 2013. The compensation plan provides an incentive to help the ASRS compete with the private financial market for investment professionals (see Introduction, pages 5 through 6, for more details). Auditors' review of the compensation

[1] In addition to its defined benefit retirement plan (ASRS plan), the ASRS also provides a system plan (System) that pre-dates the ASRS plan to certain members. In 1970, the Legislature authorized creation of the ASRS plan, which became effective on July 1, 1971. At that time, existing system members could opt to stay in the System or move to the ASRS plan. As of June 30, 2014, there were 1,353 system members including 9 active members, 30 inactive members, and 1,314 retired members. See Introduction, pages 3 through 4, for more information on the various other benefits the ASRS provides.

plan indicates it is consistent with federal guidance for financial institutions' design and implementation of incentive compensation arrangements.[1] As recommended by this guidance, the compensation plan aligns incentives with investment goals to prevent imprudent risk taking, includes internal controls over its design and implementation, and requires oversight by the ASRS' Board of Trustees (Board).

- Implemented objectives in its *Fiscal Years 2014-2018 Strategic Plan* for processing member issues in a timely manner. For example, the ASRS established an objective in its *Fiscal Years 2014-2018 Strategic Plan* that at least 80 percent of all phone calls to the ASRS Member Advisory Center must be answered within 20 seconds of entering the queue. According to ASRS information, the ASRS met this objective in 10 of the 12 months in fiscal year 2014. According to an ASRS report, the only 2 months where it did not meet this objective were July and August 2013, when the average wait times were, respectively, approximately 4 and 2½ minutes. According to the ASRS, lower-than-expected staffing levels and higher-than-projected call volumes caused these longer wait times. Additionally, the ASRS established an objective that 90 percent of member appeals at the assistant director and/or director level should be handled within 10 business days. According to an ASRS report, the ASRS achieved this objective in 10 of the 12 months in fiscal year 2014. The report also indicates that in the month in which the percentage was lowest, ASRS staff handled 85 percent of these appeals within 10 business days. ASRS staff attributed this lower percentage to a vacant appeals analyst position that the ASRS was in the process of filling.

- Improved its information technology (IT) practices. Office of the Auditor General IT auditors reviewed ASRS' IT processes in March 2014 and determined that the ASRS could improve its IT policies and procedures for change management, disaster recovery, access controls, logging and monitoring, and encryption.[2] IT auditors followed up on their initial recommendations in June 2015 and determined that the ASRS was working to improve all areas and had created procedures that appropriately addressed one of the areas, encryption. In addition, the ASRS provided a 5-year project plan, which included proposed activities for addressing the remaining areas. As part of its continuing efforts to enhance its IT practices, the ASRS should:

    - Develop a process for documenting the review and approval of IT system coding changes prior to implementing those changes;

    - Periodically update its disaster recovery plan to ensure that all information pertaining to devices, personnel, software, and processes are as up to date as possible;

    - Continue enhancing its data access process to ensure that access is limited to appropriate personnel;

[1] *Guidance on sound incentive compensation policies*, 75 Fed. Reg. 122 (June 25, 2010), pp. 36395–36414.

[2] Change management policies and procedures standardize how staff make changes to IT systems. Disaster recovery plans are policies and procedures that guide an organization when it sustains a loss of IT capability or damage to its systems. Access controls involve the process of granting or denying specific requests to access information or enter specific physical facilities. Logging is recording IT system activities. Monitoring is the analysis, assessment, and review of information to identify potential violations of IT system security. Encryption is the process of changing plaintext into ciphertext for the purpose of security or privacy.

- Develop a process to review logs for key activities on its networks and systems; and

- Continue evaluating the recommendations it received from a 2014 limited security assessment and implement them as appropriate.

This audit also identified changes that the ASRS and its Board should make to further enhance the ASRS plan's long-term sustainability. Specifically, as indicated in Finding 1 (see pages 15 through 16), the ASRS should continue with its plans to formally adopt its funding policy and make it publicly available by posting the policy on its Web site. As indicated in Finding 2 (see pages 19 through 25), the ASRS and its Board should work with its actuary to develop a method for ensuring that the cost of expected future benefit increases do not impact the ASRS plan's sustainability. In addition, the ASRS and its Board should develop and implement policy and procedures for periodically reviewing its actuarial cost method to determine which generally accepted actuarial cost method is appropriate for determining contributions and helping it to meet its funding policy objectives. Finally, the ASRS should develop and implement additional policies and procedures for identifying and assessing the cost of inappropriate preretirement salary increases to the employer, and depending on the outcome of outstanding litigation, it may also need to adopt administrative rules.

3. The extent to which the ASRS serves the entire State rather than specific interests.

The ASRS serves the entire State by administering retirement, long-term disability, survivor and retiree health insurance benefits to employees of the State, counties, municipalities, universities, community colleges, and school districts. These benefits can help government employers recruit employees to serve the public.

Although members are spread throughout the State, the ASRS ensures that its services are accessible. The ASRS has offices in the Phoenix and Tucson metropolitan areas. In addition, members may receive services by phone, e-mail, and the Internet. Services available on the ASRS' Web site include *my*ASRS, an online tool members may use to update personal information, securely communicate with ASRS staff, check payments, estimate pension benefits, and apply for benefits. Finally, the ASRS conducts informational meetings for members nearing retirement at their Phoenix and Tucson offices, via webinar, and by request for in-person appointments. Members may also connect with the ASRS through social media, including Facebook, Twitter, and YouTube.

4. The extent to which the rules adopted by the ASRS are consistent with the legislative mandate.

General Counsel for the Office of the Auditor General has analyzed the ASRS' rule-making statutes and found that the ASRS' rules are consistent with its legislative mandate. However, the ASRS is currently party to outstanding litigation regarding whether it needs to adopt administrative rules on how to calculate the unfunded liability resulting from an employer termination incentive program and assess the cost of this unfunded liability to the employer as required by A.R.S. §38-749. Depending on the outcome of this litigation, the ASRS may also need to adopt rules in order to legally enforce A.R.S. §38-749 (see Finding 2, pages 19 through 25).

5. **The extent to which the ASRS has encouraged input from the public before adopting its rules and the extent to which it has informed the public as to its actions and their expected impact on the public.**

The ASRS has statutory authority to promulgate rules. It encourages input from and informs the public about rule makings and their expected impact on the public through the Arizona Administrative Register, public comment meetings, and its Web site.

From April to October 2014, auditors evaluated compliance with open meeting law requirements for seven public meetings held by the Board and its three committees—the Investment Committee, External Affairs Committee, and Operations and Audit Committee. The evaluation included review of public meeting information available on the ASRS' Web site and provided by staff, observation of the Board's and committees' meetings, and a review of board meeting minutes. Based on this evaluation, the Board and its committees complied with all provisions of the State's open meeting law, including statutory requirements that meetings are open to the public, public meeting notices and agendas for such meetings are posted 24 hours in advance of the meeting on the ASRS Web site and at the ASRS' offices, and the Board takes written minutes for its meetings and makes the written minutes or a recording of its meetings available to the public within 3 working days.

The ASRS also informs the public about its activities through its Web site, e-mailed newsletters, and social media outlets, such as Facebook, Twitter, and YouTube. For example, its Web site has information about legislation, annual reports, and changes in contribution rates.

The ASRS also complies with A.R.S. §41-1091.01, which requires agencies to post on their Web site the full text, or the Web site address and location of the full text, of each rule in use.

6. **The extent to which the ASRS has been able to investigate and resolve complaints that are within its jurisdiction.**

Although this factor is not applicable because the ASRS is not a regulatory agency, the ASRS has established processes for handling all ASRS plan member inquiries, including complaints. ASRS plan members can contact the Member Advisory Center, which acts as the ASRS' first point of contact, through e-mail, over the phone, or by making an appointment. In fiscal year 2014, according to ASRS information, it responded to more than 176,000 member inquiries. To track these member inquiries, the ASRS maintains a ticketing system. According to ASRS staff, each ticket contains information on a member's issue or question and a list of all staff who have handled it from its receipt to its resolution. ASRS staff also indicated that they are responsible for monitoring and resolving the tickets they receive in a timely manner. The ASRS has established several performance measures for the Member Advisory Center that are directly linked to the ASRS' strategic plan. For example, one objective requires that the ASRS' call center, which is part of the Member Advisory Center, ensure less than a 5 percent call abandonment rate. During fiscal year 2014, according to ASRS information, the call center met this objective in 10 of 12 months. In July and August 2013, the call abandonment rates were approximately 16 and 10 percent, respectively. According to the ASRS, lower-than-expected staffing levels and higher-than-projected call volumes caused these higher call abandonment rates.

If ASRS plan members are not satisfied with the information they initially receive, the ASRS also provides a process for escalating member inquiries or complaints. Specifically, members can appeal decisions to increasingly higher levels within the ASRS, which may culminate in a hearing before the Board, if necessary. Based on its strategic plan objectives, the ASRS has also established performance measures for the appeals process. Specifically, ASRS staff should respond to 90 percent or more of member appeals related to health and disability determinations at the Member Services Division and/or director level within 15 business days. According to ASRS information, staff met these performance measures in 10 of 12 months during fiscal year 2014. Data was not available to determine whether the ASRS met this performance measure for the remaining 2 months. For all other member appeals to the Member Services Division and/or the director, the ASRS has a similar objective that it should handle 90 percent of appeals within 10 business days. As indicated in Sunset Factor 2 (see page 28), according to an ASRS report, the ASRS achieved this objective in 10 of the 12 months in fiscal year 2014. This report also indicates that in the month in which this percentage was the lowest, ASRS staff handled 85 percent of these appeals within 10 business days. ASRS staff attributed this lower percentage to a vacant appeals analyst position that the ASRS was in the process of filling.

7. The extent to which the Attorney General or any other applicable agency of state government has the authority to prosecute actions under the enabling legislation.

The ASRS' enabling legislation does not provide authority for the Attorney General or any other applicable agency of state government to prosecute actions. However, the Attorney General is the ASRS' legal advisor and renders legal services as needed according to A.R.S. §41-192(A). The ASRS and the Attorney General's Office have entered into an interagency service agreement to provide a full-time, onsite Assistant Attorney General who may represent the ASRS and the Board, advise these parties, and assist the ASRS in strategic planning, developing policies and procedures, drafting rules, and drafting legislation the ASRS recommends for the Legislature's consideration. For example, A.R.S. §38-735(C) authorizes the ASRS to recover delinquent payments from employers through court actions, and the ASRS reported that the Attorney General files complaints with the relevant court and represents ASRS in these cases. However, the ASRS stated that these instances are rare because the statute also allows the ASRS to deduct delinquent contributions from other monies payable to the employer by any State of Arizona agency or department.

As allowed by A.R.S. §38-715(H), the Board also contracts with private attorneys for specialized legal assistance in investment law. The ASRS uses private legal counsel to a similar extent as its peer public pension plans (see Sunset Factor 12, page 33, for more information).

8. The extent to which the ASRS has addressed deficiencies in its enabling statutes that prevent it from fulfilling its statutory mandate.

According to ASRS management, there are no deficiencies in its enabling statutes that prevent it from fulfilling its statutory mandate. However, the Legislature has passed laws since 2010 that have affected the ASRS plan in several ways. Specifically, as outlined in other parts of this report, various laws have raised eligibility requirements, changed the pension benefit formula, and eliminated permanent benefit increases (see Finding 1, pages 17 through 18, for a discussion of these changes). In addition, some other changes have included:

- **Reduced service purchase eligibility—**Laws 2012, Ch. 362, reduced the amount of credited service that a member must have before initiating a service purchase of other public service, leave of absence, or military service from 10 to 5 years.

- **Self-insured health insurance program—**Laws 2013, Ch. 110, permitted the Board to establish a self-insured health insurance program if the Board determines, considering risks and costs, that self-insuring would be more cost-effective than a fully insured plan. As indicated in the Introduction (see page 3), the ASRS is contracting for the optional health insurance benefits it offers to members and their qualified dependents who are receiving benefits.

- **Expanding membership—**Laws 2014, Ch. 44, eliminated the requirement that individuals must be covered by a participating employer's Social Security 218 agreement to be eligible for ASRS plan membership. Section 218 of the Social Security Act allows the Commissioner of Social Security to, at the request of a state, extend Social Security coverage to employees of that state and its political subdivisions through a formal agreement.[1] Before this legislation passed, individuals had to be contributing to Social Security through a 218 agreement in order to be ASRS plan members.

9. The extent to which changes are necessary in the laws of the ASRS to adequately comply with the factors listed in the sunset law.

This audit did not identify any needed changes to the ASRS' statutes.

10. The extent to which the termination of the ASRS would significantly affect the public health, safety, or welfare.

Terminating the ASRS would significantly harm the public welfare. The ASRS had obligations to or provided retirement, long-term disability, survivor, and retiree health insurance benefits to more than 550,000 active, inactive, retired, and disabled members and other beneficiaries as of June 30, 2014 (see Table 3 in the Introduction, page 5, for the numbers and description of each member type). The Arizona State Constitution specifies that membership in a public retirement system is a contractual relationship and that benefits cannot be "diminished or impaired." Therefore, if the ASRS were terminated, another entity would need to assume the legal obligation for covering the nearly $43.2 billion in retirement, health insurance premium benefit, and long-term disability obligations that the ASRS had as of June 30, 2014.

Further, A.R.S. §38-712 states that the primary intent of the ASRS is to "provide an incentive in the recruitment and retention of employees of the highest possible quality." According to literature cited by the National Institute on Retirement Security, employers with defined benefit pensions may experience lower rates of employee turnover than those that do not

[1] 42 U.S.C. §418(a)(1).

offer pensions.[1] Therefore, discontinuing the ASRS may also undermine the ability of its 690 reported public employers within the State of Arizona—including school districts, charter schools, community college districts, and state universities, as well as local, county, and state governments—to attract and maintain a professional workforce. As a result, these employers could face difficulties in providing public services.

11. **The extent to which the level of the regulation exercised by the ASRS compares to other states and is appropriate and whether less or more stringent levels of regulation would be appropriate.**

    This factor does not apply because the ASRS is not a regulatory agency.

12. **The extent to which the ASRS has used private contractors in the performance of its duties as compared to other states and how more effective use of private contractors could be accomplished.**

    The ASRS uses private contractors to a similar extent as its peer public pension plans. Auditors reviewed each peer's most recent comprehensive annual financial report available at the time the audit work was conducted for information regarding use of contractors and asked staff at those four public pension plans if they used private contractors for any other functions critical to their plans' missions.[2] Similar to the ASRS, all four public pension plans use private contractors or vendors in the six following common areas, including investment management and actuarial services:

    - **Investment management—**The ASRS contracts with external investment management organizations to invest ASRS plan assets in accordance with the ASRS' investment strategies.

    - **Investment consultants—**The ASRS contracts with consultants to provide investment advice.

    - **Actuarial services—**Statute requires the ASRS to conduct an annual actuarial valuation of its assets and pension obligations. In addition, the ASRS uses an actuary to determine contribution rates and conduct experience studies, which compare the conditions that the ASRS plan is experiencing to assumptions the actuary makes to develop its valuations and determinations.

    - **Custodial banking services—**The ASRS contracts with a custodial bank to hold assets of the ASRS trust, value assets, and provide reports on ASRS plan assets.

    - **Legal services—**The ASRS contracts with private attorneys for specialized legal assistance in tax and investment law.

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1 National Institute on Retirement Security. (2010). *Public pension resource guide: Why do pensions matter?*

2 Auditors identified four peers to the ASRS: the Mississippi Public Employees' Retirement System, Public Employees' Retirement System of Nevada, South Carolina Retirement Systems, and the Tennessee State Employees, Teachers and Higher Education Employees Pension Plan. See Appendix A, pages a-1 through a-2, for information on the factors auditors considered in selecting these peers.

- **Information technology services—**The ASRS contracts for IT services for systems that disburse benefit payments to members.

Similar to the ASRS, three of the four public pension plans also contract for external audit services and long-term disability plan administration, two of these public pension plans contract for proxy voting, and one contracted with a consultant to perform a governance review.[1] In addition to these services, the ASRS also contracts with a private entity to evaluate the effectiveness of the customer service it provides, which none of the other pension plans did.

The audit did not identify any other opportunities for the ASRS to use private contractors.

Recommendations:

1. As part of its continuing efforts to enhance its IT practices, the ASRS should:

    a. Develop a process for documenting the review and approval of IT system coding changes prior to implementing the changes;

    b. Periodically update its disaster recovery plan to ensure that all information pertaining to devices, personnel, software, and processes are as up to date as possible;

    c. Continue enhancing its data access process to ensure that access is limited to appropriate personnel;

    d. Develop a process to review logs for key activities on its networks and systems; and

    e. Continue evaluating the recommendations it received from a 2014 limited security assessment and implement them as appropriate (see Sunset Factor 2, pages 28 through 29).

[1] Investments sometimes require that shareholders make management decisions. The ASRS contracts with a proxy voting service to facilitate decision making. The ASRS also contracted with a consultant in 2012 to perform a governance review, i.e., to evaluate policies and procedures related to how the Board and the ASRS staff make decisions and to make recommendations on how the policies and procedures could be improved.

APPENDIX A

Peer plan selection

This appendix provides information on the methods auditors used to select peer public retirement plans for the Arizona State Retirement System plan (ASRS plan). Auditors selected ASRS plan peers using data from the 2012 Public Fund Survey (PFS), which is an online compendium of data from 126 public pension plans in the United States.[1] Auditors selected peer plans based primarily on similarities in the following characteristics: the market value of assets, retired-to-active member ratio, and the investment return assumption. In addition, auditors reduced the pool of plans to those that are similar cost-sharing plans for general employees. Through this analysis, auditors identified four peer plans: the Public Employees' Retirement System of Mississippi (Mississippi); the Public Employees' Retirement System of Nevada–Regular Employees (Nevada); the South Carolina Retirement System (South Carolina); and the Tennessee State Employees, Teachers and Higher Education Employees Pension Plan (Tennessee).[2] In addition to some of the characteristics used in selecting the peer plans, Tables 5 and 6 contain additional comparative information, including the number of members, funded status, and contribution rates for employers and members.

Table 5: ASRS plan's and other state peer plans' asset and demographic information
As of June 30, 2014[1]
(Unaudited)

State plan	Funded status	Actuarial value of assets (In millions)	Retired members	Active members	Retired/active member ratio
ASRS plan	76.3%	$31,548	126,255	203,201	0.62:1
Mississippi	61.0	22,570	93,504	161,360	0.58:1
Nevada	70.8	31,466	43,136	88,709	0.49:1
South Carolina	62.5	25,753	127,696	184,690	0.69:1
Tennessee	93.3	31,851	90,414	132,900	0.68:1

1 All information is as of June 30, 2014, except for Tennessee's and South Carolina's, which is as of July 1, 2013.

Source: Auditor General staff analysis of the ASRS plan's and Mississippi plan's actuarial valuations as of June 30, 2014; the Nevada plan's comprehensive annual financial report for the fiscal year ended June 30, 2014; and the South Carolina plan's and Tennessee plan's actuarial valuations as of July 1, 2013.

1 Auditors reviewed the validity and reliability of the PFS' data by contacting the survey's administrator and verifying its data reliability process. In addition, auditors conducted a data accuracy and reliability test by reviewing data elements PFS reported and comparing them to ASRS plan financial reports for fiscal year 2012, such as the Fiscal Year 2012 Comprehensive Annual Financial Report. Auditors did not find any significant differences in the data elements tested and concluded that the data obtained from the PFS was sufficiently accurate and reliable for the purpose of selecting peer systems.

2 In fiscal year 2014, the Tennessee General Assembly split this plan so that teachers and state employees are in two separate plans.

Table 6: ASRS plan's and other state peer plans' actuarial information As of June 30, 2014[1] (Unaudited)

State plan	Actuarial cost method[2]	Investment return assumption	Employer contribution rate	Employee contribution rate
ASRS plan	Projected Unit Credit	8.00%	10.70%	11.30%
Mississippi	Entry Age	8.00	15.75	9.00
Nevada	Entry Age	8.00	25.75/13.25[3]	None/13.25[3]
South Carolina	Entry Age	7.50	10.60	7.50
Tennessee	Entry Age	7.50	15.03/8.88[4]	None/5.00[4]

1 All information is as of June 30, 2014, except for South Carolina's actuarial cost method and Tennessee's actuarial cost method and investment return assumption, which are as of July 1, 2013.

2 Each of these actuarial cost methods estimate an employee's salary and years of service at retirement and then spread the cost of the estimated pension obligation over the employee's career. The Projected Unit Credit cost method allocates lower costs early in an employee's career that gradually increase as an employee nears retirement. The Entry Age cost method allocates costs evenly, as a level percentage of pay, throughout an employee's projected career.

3 Nevada has two different employer and member contribution rates. For the Employer-Pay Contribution Plan, employers have a contribution rate of 25.75 percent and members do not contribute. For the Employer/Employee Contribution Plan, employers and members each contribute 13.25 percent.

4 Employer contribution rates for Tennessee vary depending on the employer group. Employers for state and higher education employees contribute 15.03 percent and employers for teachers contribute 8.88 percent. Members in the state and higher education groups do not contribute while employees in the teachers group contribute 5 percent.

Source: Auditor General staff analysis of the ASRS plan's and Mississippi plan's actuarial valuations as of June 30, 2014; the Mississippi, Nevada, South Carolina, and Tennessee plans' comprehensive annual financial reports for the fiscal year ended June 30, 2014; and the South Carolina plan's and Tennessee plan's actuarial valuations as of July 1, 2013.

APPENDIX B

This appendix provides information on the methods auditors used to meet the audit objectives.

This audit was conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The Auditor General discloses that she and her agency staff are members of the Arizona State Retirement System (ASRS). However, generally accepted government auditing standards do not preclude auditors from auditing pension plans they participate in if (1) the auditors have no control over the investment strategy, benefits, or other management issues associated with the pension plan and (2) the auditors belong to such a pension plan as a part of their employment with the audit organization, provided that the plan is normally offered to all employees in equivalent employment positions.

The Auditor General and staff express appreciation to the ASRS Board of Trustees (Board), Director, and staff for their cooperation and assistance throughout the audit.

Methodology

Auditors used various methods to study the issues addressed in this report. Auditors interviewed board members, the executive director, and staff, attended several board meetings from April 2014 to October 2014, and reviewed and analyzed information in various documents including the *ASRS Board Governance Policy Handbook*, board policies, and a prior audit report. Auditors also reviewed state statutes and rules applicable to the ASRS and its Board.

Auditors also used the following specific methods to address the audit's objectives:

- To determine the funded status of the ASRS defined benefit plan (ASRS plan) from fiscal years 2005 through 2014 and assess the actions the ASRS and/or the Legislature have taken to improve the ASRS plan's long-term sustainability, auditors analyzed information from the ASRS' annual *Actuarial Valuation* reports as of June 30, 2005 through June 30, 2014. In addition, auditors compared changes the ASRS and Legislature had taken to improve the ASRS plan's sustainability to recommended practices or actions taken in other states as outlined in various reports, including those published by the American Academy of Actuaries, the Government Finance Officers Association, and the National Conference of State Legislatures.

- To identify and develop recommendations for the ASRS' permanent benefit increase structure, auditors reviewed ASRS statutes and other documents and compared them to recommended practices for permanent benefit increases as explained in various reports, including those published by the National Institute on Retirement Security. In addition, to determine how the ASRS defines, identifies, investigates, resolves, and tracks instances of pension spiking, auditors interviewed ASRS management and staff, reviewed statutes related to calculating member benefits and termination incentive programs, and reviewed agency documents. Auditors also obtained information through the four ASRS peers' comprehensive annual financial reports and conducted interviews with these plans' representatives and reviewed statutes and other documents (see Appendix A, pages a-1 through a-2, for information on these peer plans).

- To obtain information for the Introduction and Sunset Factors, auditors reviewed and compiled information from statutes, the *State of Arizona–The Master List of State Government Programs and State Agencies' Five Year Strategic Plans* (2015), and ASRS documents, such as its *2015 Retiree Group Health Insurance Initial Enrollment Guide*, and its *Comprehensive Annual Financial Reports* as of June 30, 2014. Auditors also reviewed peer retirement plan comprehensive annual financial reports for fiscal year 2013 and interviewed peer retirement plan officials to determine the extent of their use of private contractors. Finally, auditors reviewed ASRS documents related to how it handles member communications in its Member Advisory Center and manages its member appeals process, as well as interviewed staff involved in these processes.

- Auditors' work on internal controls focused on the steps the ASRS has taken to improve the ASRS plan's long-term sustainability and the proper management of its information technology systems. Auditors' conclusions on internal controls are reported in Findings 1 and 2, and Sunset Factor 2 of the report. In addition, the Office of the Auditor General contracted with Gallagher Fiduciary Advisors, LLC (Gallagher) to assess internal controls over investments, and conclusions on these controls are found in Gallagher's report—*Independent Operational Review of the Arizona State Retirement System's Investment Strategies, Alternative Asset Investment Procedures, and Fees Paid to External Investment Managers*.

AGENCY RESPONSE

ARIZONA STATE RETIREMENT SYSTEM

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

Paul Matson
Director

August 12, 2015

Ms. Debbie Davenport, Auditor General
Office of the Auditor General
2910 N. 44th St., Ste. 410
Phoenix, AZ 85018

Dear Ms. Davenport:

The Arizona State Retirement System (ASRS) appreciates the opportunity to respond to the Office of the Auditor General recommendations issued in the performance audit and sunset review report. The ASRS would like to commend the Office of the Auditor General staff on their professionalism and responsiveness during the course of this audit. They ensured the audit process proceeded smoothly with a minimum of disruption to daily operations. It was a pleasure to work with them.

<u>Finding 1: ASRS plan is not fully funded, but steps have been taken to improve its long-term sustainability.</u>

> 1.1 Recommendation: The ASRS should continue with its plans to formally adopt its funding policy and make it publicly available by posting the policy on its Web site.
>
> *ASRS Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented. This item is scheduled to be discussed at the August 2015 Board of Trustees meeting.*

<u>Finding 2: Additional actions can enhance ASRS plan's financial condition and long-term sustainability.</u>

> 2.1 Recommendation: The ASRS and its Board should work with its actuary to develop a method for ensuring the cost of future benefit increases do not impact the ASRS plan's sustainability. In developing this method, the ASRS should ensure that it aligns with its funding policy's goals and objectives.
>
> *ASRS Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented. The ASRS will incorporate this responsibility into its Funding Policy.*
>
> 2.2 Recommendation: The ASRS and its Board should develop and implement a policy and procedure for periodically reviewing its actuarial cost method to determine which generally accepted actuarial cost method is appropriate for determining contributions and

helping to meet its Funding Policy's objectives. In developing this procedure, the ASRS should ensure that its adopted policy and procedures:

a) Establish a time frame to review the appropriateness of the actuarial cost method periodically, such as every 5 years when it conducts its actuarial experience studies

ASRS Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented. The ASRS will incorporate this responsibility into its Funding Policy.

b) Do not allow the Board and/or the actuary to change actuarial methods for the sole purpose of achieving a more favorable funding status, or fiscal result

ASRS Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented. The ASRS will incorporate this responsibility into its Funding Policy.

2.3 Recommendation: The ASRS should enhance its procedures for identifying employer termination incentive programs and assessing the cost of any resulting unfunded liability to an employer. Further, depending on the final resolution of outstanding litigation, the ASRS may also need to adopt administrative rules in order to legally enforce A.R.S. §38-749. Specifically the ARS should:

a) Determine a methodology for calculating when a 30 percent or greater increase in a member's compensation not attributable to a promotion has occurred

ASRS Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented. The ASRS is currently involved in litigation related to this topic and will determine how to address the Auditor General's findings at the conclusion of these legal proceedings.

b) Develop and implement written policy and procedures executing the methodology to determine when a 30 percent or greater non-promotion salary increase has occurred, and train staff on the policy and procedures

ASRS Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented. The ASRS is currently involved in litigation related to this topic and will determine how to address the Auditor General's findings at the conclusion of these legal proceedings.

c) Assess the feasibility of implementing this procedure for all members who have retired since September 30, 2009. Accordingly, the ASRS should identify and investigate potential instances of employer termination programs, including those involving non-promotion salary increases of 30 percent or more. Further, when an instance is identified, the ASRS should assess the cost of any resulting unfunded liabilities to the employer

ASRS Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented. The ASRS is currently involved in litigation related to this topic and will determine how to address the Auditor General's findings at the conclusion of these legal proceedings.

d) Include information in its retirement benefit processing procedures on how to identify and what ASRS staff should do when they identify salary increases that appear to be a result of an employer termination incentive program or an inappropriate pre-retirement salary increase, as well as which staff are responsible for conducting further investigations on such cases and for assessing the cost of the unfunded liability to the employer

ASRS Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented. The ASRS is currently involved in litigation related to this topic and will determine how to address the Auditor General's findings at the conclusion of these legal proceedings.

e) Develop and implement a policy and procedures for regularly querying the ASRS contribution accounting system for increases in compensation that could indicate employer termination incentive programs. The adopted policy and procedures should also state which ASRS staff are responsible for conducting further investigations on potential cases identified through its queries, and which staff are responsible for assessing the cost of any unfunded liability to the employer

ASRS Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented. The ASRS is currently involved in litigation related to this topic and will determine how to address the Auditor General's findings at the conclusion of these legal proceedings.

Sunset Factors Finding: The ASRS should enhance some of its information technology (IT) practices.

1. Recommendation: As part of its continuing efforts to enhance its IT practices, the ASRS should:

a) Develop a process for documenting the review and approval of IT system coding changes prior to implementing changes

ASRS Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

b) Periodically update its disaster recovery plan to ensure that all information pertaining to devices, personnel, software, and processes are as up to date as possible

ASRS Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

c) Continue enhancing its data access process to ensure that access is limited to appropriate personnel

ASRS Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

d) Develop a process to review logs for key activities on its networks and systems

ASRS Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

e) Continue evaluating the recommendations it received from a 2014 limited security assessment and implement them as appropriate

ASRS Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

Sincerely,

Paul Matson
Director

Performance Audit Division reports issued within the last 18 months

14-101	Arizona Department of Economic Security—Children Support Services—Transportation Services
14-102	Gila County Transportation Excise Tax
14-103	Arizona State Board of Dental Examiners
14-104	Arizona Office of Administrative Hearings
14-105	Arizona Board of Executive Clemency
14-106	State of Arizona Naturopathic Physicians Medical Board
14-107	Arizona Department of Child Safety—Children Support Services—Emergency and Residential Placements
14-108	Arizona Department of Administration—Arizona State Purchasing Cooperative Program
15-101	Arizona Department of Child Safety—Child Abuse or Neglect Reports, Substantiation Rate, and Office of Child Welfare Investigations
15-102	Arizona Department of Administration—State-wide Procurement
15-103	Arizona Medical Board—Licensing and Registration Processes
15-104	Arizona Department of Transportation—Motor Vehicle Division
15-105	Arizona Department of Revenue—Use of Information Technology
15-CR1	Independent Review—Arizona's Child Safety System and the Arizona Department of Child Safety
15-CR1SUPP	Supplemental Report to the Independent Review—Arizona's Child Safety System and the Arizona Department of Child Safety

Future Performance Audit Division reports

Arizona Sports and Tourism Authority