How...

ASRS Employees Deliver Service With PRIDE!

PROFESSIONALISM

We promote, strive for and expect individuals, teams, and divisions to possess professional qualities and skills to lead the organization.

- Displays a friendly, respectful and courteous demeanor even when confronted by adversity
- Has proactive and responsive approach to internal and external customer needs
- Possesses good communication and active listening skills
- Is a trusted contributor (manager, leader, SME, analyst, teammate)
- Takes personal accountability • Has subject matter expertise
- Has critical thinking skills • Has an honest, fair, non-judgmental mind-set
- Is adaptable to beneficial change • Adheres to the ASRS Code of Conduct

RESULTS

We treasure the achievements of individuals, teams, divisions and the agency that energize the organization.

- Meets goals and objectives
- Completes projects
- Produces quality work products
- Satisfies customers
- Attains individual accomplishments
- Manages risks successfully

IMPROVEMENT

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

- Promotes new ideas
- Enhances outcomes and performance
- Solves problems
- Enhances morale
- Improves relationships
- Increases efficiency, effectiveness or reduces costs

DIVERSITY

We recognize that utilizing different talents, strengths and points of view, strengthens the agency and helps propel outcomes greater than the sum of individual contributors.

- Encourages an attitude of openness and a free flow of ideas and opinions
- Treats others with dignity and respect
- Works effectively to accomplish goals with teams comprised of dissimilar individuals
- Recognizes and promotes skills in others attained on and off the job

EXCELLENCE

We celebrate individuals, teams and divisions who exceed expectations and deliver service with a PRIDE that permeates the organization.

- Surpasses member, stakeholder and associate expectations
- Demonstrates a willingness to go the extra mile to engender a positive public image
- Embraces change in a manner that inspires others
- Accepts responsibility and challenges with enthusiasm
- Takes a personal interest in promoting teamwork through effective use of communication (verbal, non-verbal, written and technological techniques)
- Creates a motivated, healthy and productive work environment that celebrates and rewards the accomplishments of others

ARIZONA STATE RETIREMENT SYSTEM

ARIZONA STATE RETIREMENT SYSTEM

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Paul Matson
Director

AGENDA

NOTICE OF COMBINED PUBLIC MEETING AND POSSIBLE EXECUTIVE SESSION OF THE ARIZONA STATE RETIREMENT SYSTEM BOARD

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

December 5, 2014
8:30 a.m.

Pursuant to A.R.S. § 38-431.02 (F), notice is hereby given to the Trustees of the Arizona State Retirement System (ASRS) Board and to the general public that the ASRS Board will hold a meeting open to the public on Friday, December 5, 2014, beginning at 8:30 a.m., in the 10th Floor Board Room of the ASRS offices at 3300 N. Central Avenue, Phoenix, Arizona 85012. Trustees of the Board may attend either in person or by telephone conference call.

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

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

The Agenda for the meeting is as follows:

1. Call to Order; Roll Call; Opening Remarks .... Mr. Kevin McCarthy
   Board Chair

2. Presentation Regarding PRIDE Award for Diversity *(estimated time 5 minutes)*........................
   .... Mr. Paul Matson
   Director
   .... Mr. Anthony Guarino
   Deputy Director and Chief Operations Officer

3. Approval of the Minutes of the October 24, 2014 Public Meeting and Executive Sessions of the ASRS Board *(estimated time 1 minute)* .... Mr. Kevin McCarthy

4. Presentation, Discussion, and Appropriate Action Regarding the Arizona State Retirement System's Comprehensive Annual Financial Report (CAFR) for Fiscal Year 2014 *(estimated time 20 minutes)* ....
   .... Mr. Thomas R. Rey, Jr., CPA
   Partner, CliftonLarsonAllen

5. Presentation, Discussion and Appropriate Action with Regard to 2015 ASRS Legislative Initiatives and Legislative Committee Assignments *(estimated time 5 minutes)*.........................
.... Mr. Patrick Klein
Assistant Director External Affairs
.... Mr. Nicholas Ponder
Government Relations Officer

6. Presentation, Discussion and Appropriate Action Regarding the ASRS Membership (A FY 2015 Strategic Topic) *(estimated time 20 minutes)* .... Mr. Anthony Guarino
.... Mr. Patrick Klein
.... Ms. Sara Orozco
Manager Strategic Planning

7. Presentation, Discussion, and Appropriate Action Regarding ASRS Valuations, including Potential Implementation of Actuarial Audit Recommendations *(estimated time 60 minutes) ...*
.... Mr. Paul Matson
.... Mr. Charlie Chittenden
Actuary, Buck Consultants
.... Mr. David Kershner
Actuary, Buck Consultants
.... Mr. David Driscoll
Actuary, Buck Consultants

   a. The ASRS System Valuation and Actuary's Recommendation Regarding 13th Checks for Retired System Members
   b. The ASRS Pension Plan and Health Insurance Valuation
   c. The ASRS Long Term Disability (LTD) Valuation
   d. The ASRS Alternate Contribution Rate

8. Presentation, Discussion, and Appropriate Action Regarding ASRS Investment Program Updates *(estimated time 20 minutes)* .... Mr. Paul Matson
.... Mr. Gary Dokes
Chief Investment Officer
.... Mr. Dave Underwood
Assistant Chief Investment Officer
   a. ASRS Fund Positioning
   b. IMD Investment House Views
   c. Asset Class Committee (ACC) Activities
   d. Tactical Portfolio Positioning
   e. Strategic Asset Allocation Policy (SAAP) Implementation
   f. IMD Projects, Research, and Initiatives

9. Presentation, Discussion and Appropriate Action Regarding Independent Reporting, Monitoring, and Oversight of the ASRS Investment Program *(estimated time 20 minutes)* ....
.... Mr. Allan Martin
Partner, NEPC

10. Presentation and Discussion Regarding the Board Self-Evaluation Material Distribution *(estimated time 5 minutes)*..Mr. Kevin McCarthy

11. Presentation, Discussion, and Appropriate Action Regarding the Director's Report as well as Current Events *(estimated time 5 minutes)* ....Mr. Paul Matson
....Mr. Anthony Guarino
Deputy Director and Chief Operations Officer
    A. 2014 Compliance Report
    B. 2014 Investments Report
    C. 2014 Operations Report
    D. 2014 Budget and Staffing Reports
    E. 2014 Cash Flow Statement
    F. 2014 Appeals Report
    G. 2014 Employers Reporting

12. Presentation and Discussion with Regard to Informational Updates from Prior and Upcoming Committee Meetings *(estimated time 15 minutes)*
    a. Operations and Audit Committee (OAC) ....Mr. Jeff Tyne, Chair
    ....Mr. Anthony Guarino
    The next OAC Meeting will be held on December 9, 2014

    b. External Affairs Committee (EAC) ....Mr. Brian McNeil, Chair
    ....Mr. Patrick Klein
    The next EAC Meeting will be held further into the Legislative Session,

    c. Investment Committee (IC)..Mr. Tom Connelly, Chair
    ....Mr. Gary Dokes
    The next IC Meeting will be held on December 1, 2014

13. Board Requests for Agenda Items *(estimated time 1 minute)* ....Mr. Kevin McCarthy

14. Call to the Public ....Mr. Kevin McCarthy

    Those wishing to address the ASRS Board are required to complete a Request to Speak form before the meeting indicating their desire to speak. Request to Speak forms are available at the sign-in desk and should be given to the Board Administrator. Trustees of the Board are prohibited by A.R.S. § 38-431.01(G) from discussing or taking legal action on matters raised during an open call to the public unless the matters are properly noticed for discussion and legal action. As a result of public comment, the Board may direct staff to study and/or reschedule the matter for discussion and decision at a later date.

15. The next public ASRS Board meeting is scheduled for Friday, January 30, 2015, at 8:30 a.m., at 3300 N. Central Avenue, in the 10th Floor Board room, Phoenix, Arizona.

The balance of the meeting and possible executive session will take place in the 14th floor conference room.

Regarding the following agenda item, pursuant to A.R.S. § 38-431.03(A)(3), notice is hereby given to Trustees of the ASRS Board and the general public that the ASRS Board may vote to go into executive session for the purpose of discussion or consultation for legal advice with the attorney of the public body, which will not be open to the public.

16. Presentation and Discussion Regarding Trustee Fiduciary Education *(estimated time 30 minutes)*..Ms. Jothi Beljan

17. Adjournment of the ASRS Board.

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

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

Dated November 26, 2014

ARIZONA STATE RETIREMENT SYSTEM

Melanie Alexander Board Administrator	Date	Paul Matson Director	Date

ARIZONA STATE RETIREMENT SYSTEM

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Paul Matson
Director

MEMORANDUM

TO: Mr. Kevin McCarthy, Chair, Arizona State Retirement System (ASRS) Board

FROM: Mr. Paul Matson, Director

DATE: November 21, 2014

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

The ASRS employee recognition program recognizes employees who exemplify various PRIDE characteristics (Professionalism, Results, Improvement, Diversity, Excellence) throughout the year. The fourth award for 2014 is the PRIDE Diversity award.

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

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

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

The nominees for the 2014 PRIDE Diversity Award are:

- John Mathine
- Nicie Montanez
- Jenna Orozco
- Gary Rodriguez
- Kristi Zeller
- Brian Crockett
- Mark Muraoka
- Lisa Dailey

Chosen from the nominees as winner of the 2014 ASRS PRIDE Diversity award is Jenna Orozco. We invite the Board to join ASRS staff in recognizing Jenna as the award recipient of this year's award.

Nominees for the 2014 PRIDE Diversity Award

The Diversity Award is the fourth of our 2014 bimonthly awards. The following employees and teams were nominated by staff who feel they exemplify the diversity qualities listed below:

DIVERSITY

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

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

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<u>John Mathine</u>

John is the mail room Team Lead. He interacts throughout the day with a very diverse population of staff, middle management, senior management and executive management. He is consistently courteous in his communications with others no matter their level of authority and takes the time to be totally present when listening to their suggestions or concerns. John has frequently been called upon to research a topic and present his findings to teams comprised of front-line staff through upper level management. The dignity with which he carries himself and treats others encourages a free flow of ideas and opinions during these presentations and enables teams of individuals with dissimilar temperaments and authority to successfully accomplish its goals. John is the embodiment of Diversity.

<u>Nicie Montanez</u>

Nicie is the Benefits Accounting Analyst. Nicie wears many hats within Benefits Accounting and is frequently called upon to provide information for staff and management, including executive mangement, in a very short amount of time. No matter how busy Nicie is, she is consistently approachable to all levels of staff and management. She listens to their requirements, makes suggestions and maintains her poise even in stressful meetings/situations. The dignity with which she treats others creates an easy environment in which dissimilar individuals feel comfortable voicing their opinions. Nicie's ability to put others at ease who are dissimilar from herself and each other goes a long way toward effectively accomplishing goals!

<u>Jenna Orozco</u>

Jenna is the Agency's Appeals Analyst. Throughout the day she interacts not only with various staff, middle management, senior management and executive management, all of whom have dissimilar levels of authority and temperaments, she also interacts with members who are in varying degrees of emotional distress. Jenna consistently keeps her "cool" no matter how tense the situation, and treats all individuals with dignity and respect as she actively listens to their opinions or concerns. Jenna's ability to maneuver with ease among a diverse group of stakeholders has earned her the respect of this agency and she is very effective in helping teams of dissimilar individuals accomplish goals that are sometimes difficult to achieve.

<u>Gary Rodriguez</u>

I am honored and proud to nominate Gary who strives to and exhibits all the qualities and skills of a highly professional supervisor. Gary treats all staff, peers and superiors as equals. Gary recognizes and rewards staff for a job well done. Gary has excellent leadership skills, and the entire staff really knows how to work together to provide great customer service, and the interaction with members, ASRS staff, and external customers is positive. Gary is truly in tune with everyone he comes in contact with whether it entails working with CBRE to initiate and coordinate facility improvements and repairs to the three office suites, or working with his peers in a supportive role.

Gary has the passion to always display a positive attitude and makes sure everyone he comes in contact with knows they are the most important person, he cares about the service they receive, and is always willing and able to go above and beyond.

The Tucson team has clearly demonstrated "PRIDE" in action with the warm reception of visitors to support of their colleagues. The office is always very clean and provides a very professional public image for our members and staff. Members often comment on the office because of the caliber of respect and dignity expressed to all ASRS members.

The team may be many miles away, but that does not stop them from being a part of the ASRS and contributing to the strategic goals we all value and incorporate into the work environment. Gary ensures the team is actively participating in special projects and this positive experience helps staff and has an impact on internal and external customer experience. Here are a few examples Tucson staff are actively involved:

- Participating on P3 project and A3 project,
- Employee Committee,
- Work Environment Team,
- PRIDE Steering Committee,
- Remote Online Counseling Sessions,
- Assist with Appeal Letters,
- SECC Committee,
- Creating a new Member Benefit Brochure, Health Insurance and Service Purchase Brochure for Member Education,
- Most importantly, the team supports other areas with answering ASKMac emails, phones, and training.

Again, I am honored to nominate Gary who takes "PRIDE" in delivering a GREAT experience for everyone he comes in contact with from CBRE associates to other state agencies and ASRS staff.

<u>Kristi Zeller</u>

Kristiana Zeller has shown genuine caring of fellow ASRS colleagues which she has demonstrated in her ability to discuss various issues on Participant Demographics and obtain feedback from stakeholders in order to have an excellent working product. Kristi, has assisted on several projects and set up meetings for product owners in another division to ensure that products are developed based on business needs and all business areas are represented. Kristi, meets regularly with various groups throughout the ASRS and has a way of bringing ideas and people together by pointing out the commonality of any situation. Often she is the first person in the room to realize colleagues are saying the same idea in different ways and she quickly makes the connection on what is relevant to the discussion. Kristi has the ability to see the positive qualities of others and point them out to the individuals and others. Kristi thinks of the ASRS as a whole and is always interjecting other buisiness view points as business discussions take place. Kristi is intelligent and helpful on projects. Kristi is caring and thoughtful of others and will set up meetings and send emails in order to communicate effectively. I have noticed Kristi is a supervisor who really tries to make use of the tools available for supervisors to assist staff in training and job shadowing. She has encouraged staff to attend Ask Paul and Anthony Sessions and does follow-up discussions with staff. Kristi is very strong in recognizing others and frequently gives out PRIDE Award emails and appreciative emails. She also, encourages staff to attend ASRS Lunch and Learns and to get training in other areas of the ASRS. Kristi's staff have had opportunities to work in Contribution Accounting, Benefits Accounting, the Member Service Division, and the mailroom. Kristi is an outstanding role model of Diversity.

Brian Crockett

Brian Crockett is very busy with his daily responsibilities working in Strategic Planning. However, he has taken time to assist in the Oracle Modernization Project for Member Maintenance. His assistance has been extremely appreciated as his understanding of interest allocations proved to be incredibly helpful during the re-engineering phase of this project. Brian was very thoughtful of others' ideas and what other individuals did to add to the technical expertise. The difference is Brian was volunteering and assisting because he was willing to share his knowledge versus being assigned to the project. As we finished the "stories" for the Member Maintenance and began the Member Account Merge stories, Brian spent a significant amount of time putting together a chart of scenarios pertaining to member account merges which he shared during a stakeholder meeting. There was some confusion and frustration and even storming during the stakeholder meeting, however, Brian did bring back to the following meeting key points with responses from Legal Counsel and a method of handling the situations that clarified the process for all stakeholders. Brian works hard to maintain and to develop relationships with all business units and acts in a very professional manner. He listens to ideas of others and seeks understanding to the way others view the ASRS and has a very tactful way of interjecting another thought or way of doing things.

I would like to add, he has also assisted on other Oracle Modernization Projects and is an amazing example of what it means to be a diverse individual.

Mark Muraoka

This is a very significant award as it requires the individual nominated to be a collaborator, a consensus builder, knowledgeable of operational processes, policies, and workflow, a problem solver, a team builder, and a person who is attuned to the needs and frustrations of other group members to the point that others' needs may be recognized as outweighing his divisional or departmental needs. Mark Muraoka, Employer Liaison in the Employer Relations Department, has consistently been thought of as an individual who is very knowledgeable about many operational aspects of the ASRS, who can convey such knowledge to encourage a free flow of ideas and opinions, is respected by his peers for his ability to thoughtfully listen to others, and his ability to work effectively with others to accomplish or identify strategic goals. Mark is cognizant of the ebb and flow of group meetings, knowing that his role may be only one of consensus building for a common goal, or be the go-to guy for direction and acceptance. I believe he fully realizes the unique role he plays and coalesces his abilities, skills and talents to accomplish various outcomes. Mark is truly deserving of this award.

Lisa Dailey

I am nominating Lisa Dailey for the PRIDE Diversity Award due to her continued improvements of the POL Fiscal Year End Roll. As Project Manager, Lisa's ability to involve, organize and motivate a diverse team of individuals from FSD, TSD and MSD is truly a testament to her innate ability to foster a collaborative environment. Due to these efforts, this year's roll was the smoothest, most trouble-free roll in ASRS history.

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Paul Matson
Director

MINUTES

PUBLIC MEETING
ARIZONA STATE RETIREMENT SYSTEM BOARD

Friday, October 24, 2014
8:30 a.m., Arizona Time

The Arizona State Retirement System (ASRS) Board met in the 10th Floor Board Room, 3300 N. Central Avenue, Phoenix, Arizona. Mr. Michael Smarik, Vice-chair of the ASRS Board, called the meeting to order at 8:31 a.m., Arizona Time.

The meeting was teleconferenced to the ASRS office at 7660 E. Broadway, Tucson, Arizona 85710.

1. Call to Order; Roll Call; Opening Remarks

Present: Mr. Mike Smarik, Vice-chair
Professor Dennis Hoffman
Mr. Jeff Tyne
Mr. Marc Boatwright
Dr. Richard Jacob
Mr. Tom Connelly
Mr. Tom Manos

Absent: Mr. Kevin McCarthy, Chair
Mr. Brian McNeil

A quorum was present for the purpose of conducting business.

Mr. Mike Smarik opened the meeting stating that this was Mr. Marc Boatwright's last Board meeting. Mr. Smarik recognized Mr. Boatwright's for his expertise and service to the Board.

2. Approval of the Minutes of the September 26, 2014 Public Meeting and the Amended Minutes of the June 27, 2014 Public Meeting of the ASRS Board

Motion: Mr. Tom Manos moved to approve the minutes of the September 26, 2014 Public Meeting and the amended minutes of the June 27, 2014 Public Meeting of the ASRS Board. Mr. Jeff Tyne seconded the motion.

By a vote of 7 in favor, 0 opposed, 0 abstentions, and 2 excused, the motion was approved.

3. Approval, Modification, or Rejection of Recommended Administrative Law Judge's Decision Regarding Mr. Lenny Tasa-Bennett's Appeal for Long Term Disability (LTD) Benefits

Ms. Jothi Beljan said Mr. Tasa-Bennett notified the ASRS he would not be attending the Board meeting, however, he did ask that his appeal be discussed in Executive Session.

Motion: Mr. Jeff Tyne moved to go into Executive Session. Professor Dennis Hoffman seconded the motion.

By a vote of 7 in favor, 0 opposed, 0 abstentions, and 2 excused, the motion was approved.

The Board convened to Executive Session at 8:34 a.m.

The Board reconvened to Public Session at 8:48 a.m.

Motion: Mr. Tom Manos moved to accept the ruling of the Administrative Law Judge's Recommended Decision with a technical correction to change the typographical errors in Conclusions of Law Nos. 6 and 9 from A.R.S. § 38-979.07(A)(1)(a) to A.R.S. § 38-797.07(A)(1)(a). Professor Dennis Hoffman seconded the motion.

By a vote of 7 in favor, 0 opposed, 0 abstentions, and 2 excused, the motion was approved.

4. Presentation, Discussion, and Appropriate Action Regarding the Office of the Auditor General's ASRS Sunset Review

Motion: Dr. Richard Jacob moved to go into Executive Session. Mr. Jeff Tyne seconded the motion.

By a vote of 7 in favor, 0 opposed, 0 abstentions, and 2 excused, the motion was approved.

The Board convened to Executive Session at 8:50 a.m.

The Board reconvened to Public Session at 9:43 a.m.

5. Presentation, Discussion and Appropriate Action with Respect to the Possible Implementation and Timing of the 2014 Actuarial Audit Recommendations

Mr. Paul Matson, Director, provided background information of the hiring of Gabriel Roeder Smith & Company, stating they were hired to conduct an audit of the retained actuary, Buck Consultants. GRS presented the Actuarial Audit at the June 2014 Board meeting. Mr. Matson discussed GRS' recommended changes to the valuation reports and actuarial assumptions as well as the Director and staff recommended follow-up to those recommendations. The discussion was then turned over to Mr. Charlie Chittenden and Mr. David Kershner of Buck Consultants who further discussed the non-financial recommendations and the financial recommendations from the audit.

A detailed discussion occurred, with Trustees asking questions of Mr. Matson and Mr. Chittenden. Mr. Matson concluded by stating he would work with Buck Consultants on a series of pro-forma actuarial analyses to be presented at the December Board meeting.

Motion: Dr. Richard Jacob moved to accept the non-financial Actuarial Audit recommendations, 1 through 10, to the actuarial content of the 2013 valuation reports and the actuarial assumptions. Professor Dennis Hoffman seconded the motion.

By a vote of 7 in favor, 0 opposed, 0 abstentions, and 2 excused, the motion was approved.

6. Presentation, Discussion and Appropriate Action Regarding an Amendment to the Supplemental Retirement Savings Plan

Mr. Patrick Klein, Assistant Director External Affairs, discussed the background and history of the Supplemental Retirement Savings Plan. Mr. Klein also updated the Board on the plan membership numbers before turning the discussion over to Mr. Nick Ponder, Government Relations Officer, who explained the plan amendment and the need for the revision.

Motion: Professor Dennis Hoffman moved to adopt the Sixth Amended and Restated ASRS Supplemental Retirement Savings Plan;

And,

Authorize and direct the Director of the ASRS to execute such Sixth Amended and Restated Plan and amended Trust Agreement for and on behalf of the Board;

And,

Authorize staff to make necessary technical and conforming changes to either the Plan Statement or the Trust Agreement. Mr. Jeff Tyne seconded the motion.

By a vote of 7 in favor, 0 opposed, 0 abstentions, and 2 excused, the motion was approved.

Mr. Tom Connelly departed the meeting.

7. Presentation, Discussion and Appropriate Action Regarding ASRS Proposed Legislation for the 2015 Legislative Session

Mr. Klein explained that in July of this year the External Affairs Division pursued legislative suggestions from staff, the Board, and interested constituents. Staff then vetted the suggestions and in October presented them to the External Affairs Committee. Mr. Klein turned the discussion over to Mr. Ponder who reviewed each six ASRS legislative initiatives:

38-797.07. LTD program benefits; limitations; definitions
PROPOSAL: Remove the word “total” from our long term disability statutes when written prior to the term disability. The statutory definition only refers to the inability of a member to do his or her own occupation initially, then any occupation subsequently.

15-1451. Optional retirement plans
PROPOSAL: Currently the statute suggests that if an ASRS member becomes an employee of a community college district and elects to join the district’s Optional Retirement Plan (ORP), the ASRS must transfer all contributions from the ASRS account to the ORP. The ASRS is seeking to add language to the statute that restricts the ASRS to only transfer the account balance for active, inactive and disable members (excluding retired members). If a member is on LTD and joins the ORP of a community college district, under the proposed language, the member will be dropped from the ASRS LTD program.

38-737. Employer contributions
PROPOSAL: The ASRS is requesting the ability, but not requirement, to change its actuarial valuation method. Reasons to execute this change would include: to obtain consistency with GASB 67; to obtain great consistency with other states; the ability to maintain the aforementioned consistencies if appropriate.

38-703. Plans for coverage of employees of eligible political subdivisions; payroll audits
38-755. Information as to member's status; beneficiary designation; spousal consent; confidentiality
PROPOSAL: Remove the terms "provided in rules" and "subject to rules prescribed by the board" in both of these statutes.

38-797.10. Assurances and liabilities
PROPOSAL: Exempt the ASRS from "bad faith" claims as they relate to the ASRS LTD program. ERISA plans are protected from bad faith claims and because the ASRS uses ERISA as guidance for the ASRS plan in many circumstances the ASRS would like a similar protection.

Motion: Mr. Marc Boatwright moved to approve and support the 2015 legislative initiatives presented by staff. Permit staff to make all language changes and negotiate as necessary to obtain the most effective and efficient legislative provisions within the construct of today's discussion. Professor Dennis Hoffman seconded the motion.

By a vote of 6 in favor, 0 opposed, 0 abstentions, and 3 excused, the motion was approved.

8. Presentation, Discussion and Appropriate Action Regarding the 2015 Board Meeting Calendar

Mr. Smarik presented the two meeting calendar options; Version 1 would keep the meetings on the fourth Friday of the month, Version 2 would change the meeting to the last Friday of every month.

Motion: Dr. Richard Jacob moved to approve Version 2 (last Friday of the month) of the Board schedule for 2015. Mr. Jeff Tyne seconded the motion.

By a vote of 6 in favor, 0 opposed, 0 abstentions, and 3 excused, the motion was approved.

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

Mr. Matson provided the current fund market update of -2.8%.

Mr. Matson also provided positive comments of outgoing Trustee, Mr. Boatwright from the staff perspective. Mr. Matson stated that Mr. Boatwright has been a pleasure to work with and that staff have appreciated Mr. Boatwright's industry expertise and found his overall industry knowledge valuable and very helpful.

Mr. Boatwright expressed his pleasure to be on the Board and to work with Mr. Matson.

Professor Hoffman echoed Mr. Matson's positive comments of Mr. Boatwright.

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

a. Operations and Audit Committee (OAC)

Mr. Jeff Tyne said the next OAC meeting will be held on December 9, 2014 at 10:30 a.m. in the 14th floor conference room.

b. External Affairs Committee (EAC)

Mr. Pat Klein explained the EAC meetings will be postponed until the Legislative Session is underway and there are activities to report.

c. Investment Committee (IC)

Professor Dennis Hoffman said the next IC meeting will be held on December 1, 2014 at 2:30 p.m.in the 14th floor conference room.

11. Board Requests for Agenda Items

No requests were made.

12. Call to the Public

No members of the public requested to speak.

13. The next ASRS Board meeting is scheduled for Friday, December 5, 2014, at 8:30 a.m., at 3300 N. Central Avenue, 10th Floor Board room, Phoenix, Arizona.

14. Presentation and Discussion Regarding Trustee Fiduciary Education

The Fiduciary Education presentation was tabled until a future meeting.

15. Adjournment of the ASRS Board

Mr. Michael Smarik adjourned the October 24, 2014, Board meeting at 10:55 a.m.

ARIZONA STATE RETIREMENT SYSTEM

Gayle Williams Board Administrator	Date	Paul Matson Director	Date

ARIZONA STATE RETIREMENT SYSTEM

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Paul Matson
Director

MEMORANDUM

TO: Mr. Kevin McCarthy, Chair, Arizona State Retirement System (ASRS) Board

FROM: Mr. Paul Matson, Director
Mr. Anthony Guarino, Deputy Director and Chief Operations Officer
Ms. Nancy Bennett, Chief Financial Officer

DATE: November 12, 2014

RE: **Agenda Item #4**: Presentation, Discussion, and Appropriate Action Regarding the Arizona State Retirement System's Comprehensive Annual Financial Report for Fiscal Year 2014

Purpose
To inform the Board that the ASRS external auditor, CliftonLarsonAllen, LLP, issued an unmodified Independent Auditor's opinion for the fiscal year ending June 30, 2014, on the ASRS financial statements that collectively comprise the ASRS' financial statements as a whole (see page 16 of the Comprehensive Annual Financial Report (CAFR)). Mr. Thomas Rey, Partner, will speak on behalf of CliftonLarsonAllen, LLP.

Recommendation
Information item only; no action required.

Background
An unmodified opinion means that the Arizona State Retirement System's financial statements present fairly, in all material respects, the net position of the funds of the ASRS, a component unit of the State of Arizona, as of June 30, 2014, and the changes in net position of the funds for the year then ended in conformity with generally accepted accounting principles in the United States of America.

We anticipate the ASRS will once again receive the Government Finance Officers Association's Certificate of Achievement for Excellence in Financial Reporting for its June 30, 2014 CAFR. To receive this certificate, the ASRS must publish a CAFR that is easily readable, efficiently organized, and must satisfy both generally accepted accounting principles and applicable legal requirements.

In keeping with the state directive to conduct business electronically whenever possible, please note that an E-copy of the CAFR may be found at the following internet address after the external auditor presentation of the CAFR to the Board at the December 5, 2014 Board meeting:

https://www.azasrs.gov/web/FinancialReports.do

Attachment 1: Independent Auditors' Report
Attachment 2: Independent Auditors' Report on Internal Controls
Attachment 3: Independent Auditors' Required Communication with Those Charged with Governance
Attachment 4: Management's Representation Letter to Independent Auditors

Independent Auditors' Report

The Honorable Janice K. Brewer, Governor
State of Arizona and
Board of Trustees
Arizona State Retirement System

Report on the Financial Statements

We have audited the financial statements of the Arizona State Retirement System (ASRS), a component unit of the State of Arizona, which comprise the Combined Statements of Fiduciary Net Position as of June 30, 2014, and the related Combined Statements of Changes in Fiduciary Net Position for the year then ended, and the related Notes to the Basic Financial Statements, as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

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

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the net position of the ASRS as of June 30, 2014, and the respective changes in its net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis and the Schedules of Funding Progress, Contributions from the Employer and Other Contributing Entities, Changes in the Net Pension Liability, Net Pension Liability, Contributions from Employer, and Investment Returns, and related Notes, as listed in the table of contents, be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the financial statements, and other knowledge we obtained during our audit of the financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

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

The Additional Supplementary Information, as listed in the table of contents, is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. Such information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the Additional Supplementary Information is fairly stated, in all material respects, in relation to the financial statements as a whole.

The Introductory, Investment, Actuarial and Statistical sections, as listed in the table of contents, have not been subjected to the auditing procedures applied in the audit of the financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated November 7, 2014 on our consideration of the ASRS' internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the ASRS' internal control over financial reporting and compliance.

CliftonLarsonAllen LLP

Baltimore, Maryland
November 7, 2014

Independent Auditors' Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*

The Honorable Janice K. Brewer, Governor
State of Arizona

Board of Trustees
Arizona State Retirement System

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Arizona State Retirement System (ASRS), a component unit of the State of Arizona, which comprise the Combined Statement of Plan Net Position as of June 30, 2014, and the related Combined Statement of Changes in Plan Net Position for the year then ended, and the related Notes to the Basic Financial Statements, and have issued our report thereon dated November 7, 2014.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the ASRS' internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the ASRS' internal control. Accordingly, we do not express an opinion on the effectiveness of the ASRS' internal control.

A *deficiency in internal* control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the ASRS' financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the result of that testing, and not to provide an opinion on the effectiveness of the ASRS' internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering ASRS' internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

CliftonLarsonAllen LLP

Baltimore, Maryland
November 7, 2014

The Honorable Janice K. Brewer, Governor
State of Arizona and
Board of Trustees
Arizona State Retirement System

We have audited the financial statements of the Arizona State Retirement System (ASRS) for the year ended June 30, 2014, and have issued our report thereon dated November 7, 2014. We have previously communicated to you information about our responsibilities under auditing standards generally accepted in the United States of America and *Government Auditing Standards*, as well as certain information related to the planned scope and timing of our audit. Professional standards also require that we communicate to you the following information related to our audit.

Significant audit findings

Qualitative aspects of accounting practices

Accounting policies

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by the ASRS are described in Note 2 to the financial statements.

The following are new Government Accounting Standards Board (GASB) Statements effective for the year ended June 30, 2014.

As described in Note 2, the ASRS adopted Government Accounting Standards Board (GASB) Statement 67, *Financial Reporting for Pension Plans – an Amendment of GASB Statement 25*, in 2014. This statement addresses accounting and financial reporting requirements for pension plans that are administered through a trust. GASB 67 requires a change in the actuarial calculation of the total and net pension liability in addition to changes in the presentation of plan financial statements, expanded note disclosures and additional required supplementary information.

We noted no transactions entered into by the ASRS during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The following is management's description of the process utilized in forming estimates for the actuarial liability and the fair value of certain alternative investments.

Alternative investments (real estate, private equity and opportunistic) are primarily based upon amounts established by investment manager valuation committees and make up 19% of the total investment portfolio. The values for these investments are reported based upon the most recent financial data available and are adjusted for cash flows through June 30, 2014. Our audit procedures validated this approach through the use of confirmations sent directly to a sample of investment managers as well as through the review of recent audited fund financial statements. Furthermore, we quantified the unrealized gain/losses for the 4th quarter of fiscal year 2014 and determined that the financial statements were not materially misstated and therefore management's estimate was reasonable.

The actuarial valuations were based on the actuarial assumptions and methods adopted by the Board, including an actuarial expected investment rate of return of 8.0% per annum compounded annually. In accordance with GASB 67, the total pension liability of the retirement portion of the defined benefit pension plan was calculated as of June 30, 2014 using the promised benefits to which members were entitled as of June 30, 2013 as required by the Arizona Revised Statutes. In accordance with GASB 43, the actuarial accrued liability of the health supplement premium portion of the defined benefit pension plan and the LTD program was calculated as of June 30, 2013 using promised benefits as of this date to which members were entitled as required by the Arizona Revised Statutes. Our audit procedures included reviewing the actuarial valuation and related assumptions used therein and we believe the estimates to be reasonable.

We evaluated the key factors and assumptions used to develop the fair value of certain alternative investments and the total pension liability and actuarial accrued liabilities in determining that they are reasonable in relation to the financial statements taken as a whole.

Financial statement disclosures

Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. There were no particularly sensitive financial statement disclosures.

The financial statement disclosures are neutral, consistent, and clear.

Difficulties encountered in performing the audit

We encountered no significant difficulties in dealing with management in performing and completing our audit.

Uncorrected misstatements

Professional standards require us to accumulate all misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. Management did not identify and we did not notify them of any uncorrected financial statement misstatements.

Corrected misstatements

There we no misstatements detected as a result of audit procedures and corrected by management that were material, either individually or in the aggregate, to the financial statements taken as a whole.

Disagreements with management

For purposes of this letter, a disagreement with management is a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditors' report. No such disagreements arose during our audit.

Management representations
We have requested certain representations from management that are included in the attached management representation letter dated November 7, 2014.

Management consultations with other independent accountants
In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the entity's financial statements or a determination of the type of auditors' opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Significant issues discussed with management prior to engagement
We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to engagement as the ASRS' auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our engagement.

Significant findings or issues that were discussed, or the subject of correspondence, with management
We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our engagement.

Other information in documents containing audited financial statements
With respect to the required supplementary information (RSI) accompanying the financial statements, we made certain inquiries of management about the methods of preparing the RSI, including whether the RSI has been measured and presented in accordance with prescribed guidelines, whether the methods of measurement and preparation have been changed from the prior period and the reasons for any such changes, and whether there were any significant assumptions or interpretations underlying the measurement or presentation of the RSI. We compared the RSI for consistency with management's responses to the foregoing inquiries, the basic financial statements, and other knowledge obtained during the audit of the basic financial statements. Because these limited procedures do not provide sufficient evidence, we did not express an opinion or provide any assurance on the RSI.

With respect to the additional supplementary information accompanying the financial statements, on which we were engaged to report in relation to the financial statements as a whole, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period or the reasons for such changes, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the additional supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves. We have issued our report thereon dated November 7, 2014.

The introductory, investment, actuarial and statistical sections of the comprehensive annual financial report (the other information) is being included in documents containing the audited financial statements and the auditors' report thereon. Our responsibility for such other information does not extend beyond the financial information identified in our auditors' report. We have no responsibility for determining whether such other information is properly stated and do not have an obligation to perform any procedures to corroborate other information contained in such documents. As required by professional standards, we read the other information in order to identify material inconsistencies between the audited financial statements and the other information. We did not identify any material inconsistencies between the other information and the audited financial statements.

Our auditors' opinion, the audited financial statements, and the notes to financial statements should only be used in their entirety. Inclusion of the audited financial statements in a document you prepare, such as an annual report, should be done only with our prior approval and review of the document.

* * *

This communication is intended solely for the information and use of the Board of Trustees and management of the Arizona State Retirement System and is not intended to be, and should not be, used by anyone other than these specified parties.

CliftonLarsonAllen LLP

CliftonLarsonAllen LLP

Baltimore, Maryland
November 7, 2014

ARIZONA STATE RETIREMENT SYSTEM

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Paul Matson
Director

CliftonLarsonAllen LLP
9515 Deereco Road, Suite 500
Timonium, Maryland 21093

This representation letter is provided in connection with your audit of the financial statements of the Arizona State Retirement System (ASRS), which comprise the plan net position of the entity as of June 30, 2014, and the changes in plan net position for the year then ended, and the related notes to the financial statements, for the purpose of expressing opinions on whether the financial statements are presented fairly, in all material respects, in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP).

Certain representations in this letter are described as being limited to matters that are material. Items are considered material, regardless of size, if they involve an omission or misstatement of accounting information that, in light of surrounding circumstances, makes it probable that the judgment of a reasonable person relying on the information would be changed or influenced by the omission or misstatement.

We confirm, to the best of our knowledge and belief, as of November 7, 2014, the following representations made to you during your audit.

Financial Statements

- We have fulfilled our responsibilities, as set out in the terms of the contract (#ADSPO13-046756) dated January 11, 2013, for the preparation and fair presentation of the financial statements in accordance with U.S. GAAP. The financial statements include all financial information of the ASRS required by generally accepted accounting principles to be included in the financial reporting entity.

- We acknowledge and have fulfilled our responsibility for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

- We acknowledge our responsibility for the design, implementation, and maintenance of internal control to prevent and detect fraud.

- All significant plan amendments, adopted during the period or subsequent to the date of the financial statements, and their effects on benefits and financial status have been disclosed in the financial statements.

- The values of non-readily marketable investments represent good faith estimates of fair value. The methods and significant assumptions used result in a measure of fair value appropriate for financial measurement and disclosure purposes.

- We have identified all accounting estimates that could be material to the financial statements, including the key factors and significant assumptions used in making those estimates, and we believe the estimates (including those measured at fair value) and the significant assumptions used in making those accounting estimates are reasonable.

- Significant estimates have been appropriately accounted for and disclosed in accordance with the requirements of U.S. GAAP. Significant estimates are estimates at the financial statement date that could change materially within the next year.

- Related party relationships and transactions, including, but not limited to, revenues, expenditures/expenses, loans, transfers, leasing arrangements, and guarantees, and amounts receivable from or payable to related parties have been appropriately accounted for and disclosed in accordance with the requirements of U.S. GAAP.

- All events occurring subsequent to the date of the financial statements and for which U.S. GAAP requires adjustment or disclosure have been adjusted or disclosed. No events, including instances of noncompliance, have occurred subsequent to the financial statement date and through the date of this letter that would require adjustment to, or disclosure in, the financial statements.

- We have not identified or been notified of any uncorrected financial statement misstatements.

- The effects of all known actual or possible litigation, claims, and assessments have been accounted for and disclosed in accordance with U.S. GAAP.

- Guarantees, whether written or oral, under which the entity is contingently liable, if any, have been properly recorded or disclosed in accordance with U.S. GAAP.

- Arrangements with financial institutions involving repurchase, reverse repurchase, or securities lending agreements, compensating balances, or other arrangements involving restrictions on cash balances and line-of-credit or similar arrangements, have been properly recorded or disclosed in the financial statements.

- Receivables recorded in the financial statements represent valid claims against debtors for transactions arising on or before the financial statement date and have been reduced to their estimated net realizable value.

- We have no plans or intentions that may materially affect the carrying value or classification of assets, liabilities, or net position.

- With respect to actuarial assumptions and valuations:

    - The Arizona State Retirement System agrees with the actuarial methods and assumptions used by the actuary for funding purposes and for determining the actuarial accrued liability and has no knowledge or belief that would make such methods or assumptions inappropriate in the circumstances. We did not give any, nor cause any, instructions to be given to the Arizona State Retirement System's actuary with respect to values or amounts derived, and we are not aware of any matters that have impacted the independence or objectivity of the Arizona State Retirement System's actuary.

- There were no omissions from the participant data provided to the actuary for the purpose of determining the total pension liability and other actuarially determined amounts in the financial statements.

- There have been no changes in the actuarial methods or assumptions used in calculating the amounts recorded or disclosed in the financial statements. There have been no changes in plan provisions between the actuarial valuation date and the date of this letter, except as disclosed in the summary of legislative plan changes in the Actuarial Section of the June 30, 2014 CAFR.

Information Provided

- We have provided you with:

  - Access to all information, of which we are aware, that is relevant to the preparation and fair presentation of the financial statements such as records, documentation, and other matters.

  - Additional information that you have requested from us for the purpose of the audit.

  - Unrestricted access to persons within the entity from whom you determined it necessary to obtain audit evidence.

  - Complete minutes of the meetings of the governing board and related committees, or summaries of actions of recent meetings for which minutes have not yet been prepared.

  - All actuarial reports prepared for the plan during the year.

- All material transactions have been recorded in the accounting records and are reflected in the financial statements.

- We have no knowledge of any fraud or suspected fraud that affects the entity and involves:

  - Management;

  - Employees who have significant roles in internal control; or

  - Others when the fraud could have a material effect on the financial statements.

- We have no knowledge of any allegations of fraud, or suspected fraud, affecting the entity's financial statements communicated by employees, former employees, regulators, or others.

- We have no knowledge of any instances of noncompliance or suspected noncompliance with laws and regulations and provisions of contracts, or abuse whose effects should be considered when preparing financial statements.

- We have disclosed to you all known actual or possible litigation, claims, and assessments whose effects should be considered when preparing the financial statements.

- There are no other material liabilities or gain or loss contingencies that are required to be accrued or disclosed in accordance with U.S. GAAP.

- We have disclosed to you the identity of the entity's related parties and all the related party relationships and transactions of which we are aware.

- The entity has satisfactory title to all owned assets, and there are no liens or encumbrances on such assets, nor has any asset been pledged as collateral, except as made known to you and disclosed in the financial statements.

- We are responsible for compliance with the laws, regulations, and provisions of contracts applicable to the ASRS, and we have identified and disclosed to you all laws, regulations, and provisions of contracts that we believe have a direct and material effect on the determination of financial statement amounts or other financial data significant to the audit objectives, including legal and contractual provisions for reporting specific activities in separate funds.

- There are no violations or possible violations of budget ordinances, laws and regulations (including those pertaining to adopting, approving, and amending budgets) or provisions of contracts whose effects should be considered for disclosure in the financial statements, or as a basis for recording a loss contingency, or for reporting on noncompliance.

- The entity has complied with all aspects of contractual agreements that would have a material effect on the financial statements in the event of noncompliance.

- We have followed all applicable laws and regulations in adopting, approving, and amending budgets.

- Interfund, internal, and intra-entity activity and balances have been appropriately classified and reported.

- Deposits, investment securities and derivative instruments are properly classified as to risk and are properly valued and disclosed.

- We have obtained the service auditor's report from our service organization State Street Corporation. We have reviewed such report, including the complementary user controls. We have implemented the relevant user controls, and they were in operation for the year ended June 30, 2014.

- We acknowledge our responsibility for the required supplementary information (RSI). The RSI is measured and presented within prescribed guidelines and the methods of measurement and presentation have not changed from those used in the prior period. We have disclosed to you any significant assumptions and interpretations underlying the measurement and presentation of the RSI.

- We acknowledge our responsibility for presenting the additional supplementary information in accordance with U.S. GAAP, and we believe the additional supplementary information, including its form and content, is fairly presented in accordance with U.S. GAAP. The methods of measurement and presentation of the additional supplementary information have not changed from those used in the prior period, and we have disclosed to you any significant assumptions or interpretations underlying the measurement and presentation of the additional supplementary information. If the additional supplementary information is not presented with the audited financial statements, we will make the audited financial statements readily available to the intended users of the additional supplementary information no later than the date we issue the supplementary information and the auditors' report thereon.

Signature: ______________________ Title: Executive Director
Paul Matson

Signature: ______________________ Title: Deputy Director, COO
Anthony Guarino

Signature: ______________________ Title: Chief Investment Officer
Gary Dokes

Signature: ______________________ Title: Assistant Director, CFO
Nancy Bennett

ARIZONA STATE RETIREMENT SYSTEM

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Paul Matson
Director

MEMORANDUM

TO: Mr. Kevin McCarthy, Chair, Arizona State Retirement System (ASRS) Board

FROM: Mr. Paul Matson, Director
Mr. Patrick Klein, Assistant Director, External Affairs Division
Mr. Nick Ponder, Government Relations Officer

DATE: November 20, 2014

RE: **Agenda Item #5**: Presentation, Discussion, and Appropriate Action Regarding 2015 ASRS Legislative Initiatives and Legislative Committee Assignments

Purpose
To discuss the status of the ASRS 2015 legislative initiatives as well as legislative committee assignments.

Recommendation
Information item only; no action required.

Background
At its October 24, 2014, meeting, the ASRS Board approved the 2015 ASRS Legislative Initiatives that were recommended by the External Affairs Committee (EAC) during its October 6, 2013, meeting. The 2015 legislative suggestions relate to technical changes, administrative concerns, and others.

Through Legislative Council, Bill Folders were opened on all Board-approved initiatives by the November 15 deadline.

SENATE LEADERSHIP

President:	Sen. Andy Biggs – LD12
Majority Leader:	Sen. Steve Yarbrough – LD17
Majority Whip:	Sen. Gail Griffin – LD14
Minority Leader:	Sen. Katie Hobbs – LD24
Asst. Minority Leader:	Sen. Steve Farley – LD9
Co-Whips:	Sen. Martin Quezada – LD29, and Sen. Lupe Contreras – LD19

HOUSE LEADERSHIP

Speaker:	Rep. Dave Gowan – LD14
Majority Leader:	Rep. Steve Montenegro – LD13
Majority Whip:	Rep. David Livingston – LD22
Minority Leader:	Rep. Eric Meyer – LD28
Asst. Minority Leader:	Rep. Bruce Wheeler – LD10
Minority Whip:	Rep. Rebecca Rios – LD27

COMMITTEE CHAIRS

*Senate Finance Committee:	Sen. Debbie Lesko – LD21
*Senate Government Committee:	Sen. John Kavanagh – LD23
*House Government & Higher Education Committee:	Rep. Bob Thorpe – LD6
*House Insurance Committee:	Rep. Karen Fann – LD1

**At this time legislative staffs in both the Senate and House are unsure of the committees through which retirement bills will be filtered.*

SENATE COMMITTEES

2014 SESSION	2015 SESSION
Appropriations	Appropriations
Commerce, Energy, and Military Affairs	Commerce and Workforce Development
Education	Education
Elections	Energy
Senate Ethics	Federalism, Mandates, and Fiscal Responsibility
Finance	**Finance***
Government and Environment	Financial Institutions
Health and Human Services	**Government***
Judiciary	Health and Human Services
Natural Resources and Rural Affairs	Judiciary
Public Safety	Natural Resources
Rules	Public Safety, Military, and Technology
Transportation	Rules
	Rural Affairs and Environment
	State Debt and Budget Reform
	Transportation

HOUSE COMMITTEES

2014 SESSION	2015 SESSION
Agriculture and Water	Agriculture , Water, and Lands
Appropriations	Appropriations
Commerce	Banking and Financial Institutions
Education	Children and Family Affairs
Energy, Environment, and Natural Resources	Commerce
Federalism and Fiscal Responsibility	County and Municipal Affairs
Financial Institutions	Education
Government	Elections
Health	Energy, Environment, and Natural Resources
Higher Education and Workforce Development	Federalism and States' Rights
Insurance and Retirement	**Government and Higher Education***
Judiciary	Health
Public Safety, Military and Regulatory Affairs	**Insurance***
Reform and Human Services	Judiciary
Rules	Military Affairs and Public Safety
Technology and Infrastructure	Rules
Transportation	Rural and Economic Development
Ways and Means	Transportation and Infrastructure
	Ways and Means

ARIZONA STATE RETIREMENT SYSTEM

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Paul Matson
Director

MEMORANDUM

TO: Mr. Kevin McCarthy, Chair, Arizona State Retirement System (ASRS) Board

FROM: Mr. Anthony Guarino, Deputy Director and Chief Operations Officer
Mr. Patrick M. Klein, Assistant Director, External Affairs
Ms. Sara Orozco, Manager, Strategic Planning and Analysis

DATE: November 24, 2014

RE: **Agenda Item #6**: Presentation, Discussion, and Appropriate Action Regarding ASRS Membership (A FY 2015 Strategic Topic)

Purpose
To discuss ASRS membership, including how membership is defined and its associated concerns.

Recommendation
Information item only; no action required.

Background
At the May 23, 2014 meeting, the Board approved a list of strategic topics of interest for discussion in fiscal year 2015. One such topic was ASRS Membership.

"Member" as defined by Arizona Revised Statute (A.R.S.) §38-711(23):

(a) Means any employee of an employer on the effective date.
(b) Means all employees of an employer who are eligible for membership pursuant to section §38-727 and who are engaged to work at least twenty weeks in each fiscal year and at least twenty hours each week.
(c) Means any person receiving a benefit under ASRS.
(d) Means any person who is a former active member of ASRS and who has not withdrawn contributions from ASRS pursuant to section §38-740.

Administrative Complexities and Issues Related to Membership
The date an employee is eligible to participate in the ASRS is dependent upon the intent of the employment when the employee is hired.

If the employee is…	then this action must occur
Hired with the intent to work at least 20 hours per week for at least 20 weeks (20/20)	Contributions begin immediately, even if there are fewer than 20 weeks left in the fiscal year.
Hired with the intent to work 20/20, but hours drop down to less than 20 per week	Contributions continue until the end of the fiscal year and then cease.
Hired with the intent to work less than 20/20 but the intent changes to work more than 20/20	Contributions begin when the intent changes.
Hired with the intent to work less than 20/20 (either fewer hours per week, fewer weeks than 20 or some combination) – though the intent did not change, but ended up meeting 20/20	Contributions begin the 20th week of working 20 or more hours per week in a fiscal year.

These rules also apply to any retiree who is hired to work for an ASRS employer during the first year after their retirement date. If a retiree satisfies the criteria for ASRS membership during this 12 month period, their pension is suspended and they return to active membership status.

The ASRS relies on employers to determine which employees qualify for ASRS membership, and to cease contributions when membership has not been satisfied. Although the definition of membership sounds relatively simple, the administration of these rules can be complex in certain situations. For example:

- While the hiring manager and Human Resources Division of the employer know the intent of employment, the Payroll Unit may not, resulting in contribution errors (submitted when not due or not submitted when due).
- Employers are expected to track the weekly hours of any employee not 'engaged' to work 20/20 to determine when/if the threshold of a 20th week of 20 or more hours of work is reached, so that contributions can be withheld. This is largely a manual process.
- Employers are also expected to have the capability to identify when an employee no longer meets the criteria for membership and cease contributions.
- Any mid-year change to the employment status and/or hours worked of an employee has the potential to add to the confusion.

To assist employers with administering membership rules, the ASRS has:

- A dedicated Employer Relations Department that offers:
    - Annual training conferences open to all employers
    - Personalized assistance via telephone during normal business hours
- A secure web portal for employers available 24 hours a day which contains literature, instructions, forms, and online tools including a member eligibility checker, ASRS enrollment for new hires, contribution reporting, and educational videos
- Employer communications including employer newsletters and broadcast emails to provide needed information
- An Internal Audit Division that performs employer audits and educates employers on deficiencies

While education and assistance helps employers understand ASRS membership, confusion and misunderstandings still occur.

In fiscal year 2014, of the 9 employer audits that were presented to the Operations and Audit Committee:

- 6 had findings of eligible members who had not contributed (172 members)
- 5 had findings of ineligible members who had contributed but should not have (1,045 members)

Part-time employment

ASRS statutes permit part-time employees (those meeting 20/20) to become members. Part-time employment can result in instances where membership issues occur, and also lead to instances where the ASRS is undercompensated for the benefit that is received at the end of a career.

Members who are actively contributing to the ASRS receive a full month of service credit for any month in which a pay period contribution is received, up to a maximum of one year of service credit. Service credit is not based on hours worked. A member working 20 hours per week receives the same service credit as a member working 40 hours per week. Since service credit accrual does not differ between part-time and full-time employees, the ASRS relies on the salary calculation portion of the benefit formula to adjust for the amount of benefit received.

If a member works part-time for a full career, the salary used to calculate their benefit will reflect the part-time nature of their employment. However, when a member fluctuates between part-time and full-time employment during their working career, but retires with the salary (and benefit calculation) of a full-time employee, the ASRS has been undercompensated for the benefit that was received for each year the employee worked part-time.

A review of the service-credit accrual method at 50 different retirement systems across the U.S. indicated that:

- 8 systems did not permit part-time employees to become eligible for membership
- 12 systems (including the ASRS), make no distinction between part-time and full-time employees for the purpose of service credit accrual.
- 30 systems pro-rate service based on the hours/days/weeks worked during the fiscal year.

<u>Possible Options</u>

To address the various issues that have been presented, the ASRS has the following options:

1. Eliminate the 20/20 membership rule and require all employees of an employer (unless specifically excluded by law) to be ASRS members

   Pro: Simpler to administer for employers

   Con: More expensive for employers

   Con: Would further exacerbate instances of ASRS being undercompensated in instances where a member's retirement calculation is based on full-time employment, but has worked part-time during their career

   Note: Would only apply to new employees

2. Limit ASRS membership to only full-time employees of an ASRS employer

   Pro: Simpler to administer for employers

   Con: May result in an economic impact to the ASRS (fewer members).

   Con: More difficult to administer as each employer could define full-time differently.

   Note: Would only apply to new employees

3. Maintain 20/20 but pro-rate service credit based on hours worked.

   Pro: A more precise way of applying service for hours worked

   Con: Implementation would be costly and complex

   Note: Would only apply to new employees

4. Maintain 20/20 and current service credit accrual but change the retirement benefit salary calculation to reflect the entire career salary history.

   Pro: A more precise way of calculating salary based on hours worked

   Con: Likely to have the effect of reducing a member's benefit calculation

   Note: Would only apply to new employees

5. Leave the eligibility criteria alone while additional research is conducted.

<u>Efforts Underway</u>

Currently, staff has no precise way to know the number of members who are currently working part-time, or have worked part-time during their career. Without this information it would difficult to assess the impact to employers and the ASRS of any change.

The ASRS is currently working with employers to expand the file reporting format to include the number of hours worked during a pay period. The ASRS hopes to have a majority of employers converted to the new file format by the end of fiscal year 2015.

Once the new format is implemented, staff will need to collect the hours worked data for a number of years before it can assess the impact of part-time and limited time employment and make recommendations for future actions.

Arizona State Retirement System Board Meeting

ASRS Membership FY15 Strategic Discussion Topic

December 5, 2014

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Retirement System

Table of Contents

- The Basics – What do the laws say?
- The Effort – What do we do to implement these laws?
- The Challenge – What do employers do to make our lives interesting?
- The Future – What direction regarding hours worked should we consider?

ASRS Membership – The Basics

- **A.R.S. § 38-711 (23)**
  - Member Means:
    - Employees of an employer who are engaged to work at least 20 weeks in each fiscal year and at least 20 hours each week
    - Any person receiving an ASRS benefit
    - Any person who is a former active member and who has not withdrawn contributions from the ASRS

ASRS Membership – The Basics

❑ A.R.S. § 38-727 – Eligibility

- Employees of the state and political subdivisions except for:
  - Employees who elect to participate in the university or community college optional retirement plans
  - Employees who are eligible and elect to participate in the:
    - Elected Officials’ Retirement Plan
    - Elected Officials’ DC Retirement Plan
    - Public Safety Personnel Retirement System
    - Corrections Officer Retirement Plan
  - Persons who are temporary employees of the legislature whose projected employment is for not more than 6 months

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ASRS Membership – The Basics

- **A.R.S. § 38-727 – Eligibility (Cont.)**
  - Employees of the state and political subdivisions except for (cont.):
    - Persons employed in postgraduate training in approved medical residency program or a post-doctoral scholar who is employed by a university
    - Persons employed by an employer after the person has attained at least age 65, is not an active, inactive, disabled, a retired member and does not have any credited service or prior service in ASRS
    - Persons who perform services in a hospital, home, or other institution as an inmate or patient

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ASRS Membership – The Basics

- **A.R.S. § 38-727 – Eligibility (Cont.)**
  - Employees of the state and political subdivisions except for (cont.):
    - Persons who perform agricultural labor services as defined in Section 210 of the Social Security Act
    - Persons who are non-resident aliens temporarily residing in the US and who held an F-1, J-1, M-1 or Q-1 visa
    - Persons who perform services for a school, college, a university in this state in which the person is enrolled as a student

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ASRS Membership – The Basics

- **A.R.S. § 38-766 – Retired Member; return to work**
  - A retired member who is engaged to work at least 20 weeks in a fiscal year and at least 20 hours each week resumes active ASRS membership

- **A.R.S. § 38-766.01 – Retired Member; return to work**
  - A retired member who returns to work may continue to receive retirement benefits if the member is:
    - At normal retirement, and
    - Terminated direct employment with an employer at least 365 consecutive days before returning to work.

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ASRS Membership – The Basics

- **A.R.S. § 38-711 (13)**
  - Employer means:
    - The State
    - Participating Political Subdivisions
    - Participating Political Subdivision Entities

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ASRS Membership – The Basics

- **A.R.S. § 15-187**

  A charter school is deemed to be a political subdivision if sponsored by a school district governing board, a university, a community college district, the State Board of Education or the State Board for Charter Schools.

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ASRS Membership – The Effort

Employer Relations

- Employer Conferences (25-30/yr.)
- Employer Workshops (3/qtr.)
- Employer Manual
- Quarterly Newsletter
- Specific Issue Emails
- Employer Onsite Training
- Hands on Training in ASRS PC Lab
- ASRS Website (guides and tutorials)
- Employer Liaisons

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ASRS Membership – The Effort

- **ASRS Internal Audit**
  - Onsite employer audits
  - Employer self-audits
- **ASRS Financial Services Division**
- **ASRS Member Services Division**
- **Employer Online Eligibility Tool**

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ASRS Membership – The Challenge

- Intent vs Engaged to Work
- Dropping hours worked
- Increasing hours worked
- Social Security Section 218 Agreement coverage (only through July 23, 2014)
- Dual employment (working at 2 or more ASRS employers)
- Increasing hours and, consequently, pay in the years preceding retirement

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ASRS Membership – The Challenge

- **Examples of dropping and increasing hours worked and the effect on ASRS membership**

  - **Engaged to work 20/20**
    - Date of hire, working at least 20 hours
      - Contributions begin day 1 and continue, per week, through the end of the FY
    - Date of hire, working at least 20 hours, per week, but hours drop below 20
      - Contributions begin day 1 and continue through the end of the FY

  - **Not engaged to work 20/20, but**
    - Date of hire, works 20 hours or more during some weeks
      - Upon reaching the 20th week of working at least 20 hours, contributions begin through the end of the FY

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ASRS Membership – The Future

❑ Accrual of Credited Service – Full-time

Eligibility from 50 System Survey	
ASRS	20 hours/week
20 System	20-40 hours/week*
7 System	80-160 hours/month
9 System	15-20 days/month
4 System	1,000-1,720 hours/year
8 System	1 month credit for each month a contribution is made
1 System	10+ months/year
* 10 System use 20 hours	

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ASRS Membership – The Future

❑ Accrual of Credited Service – Part-time

Eligibility from 50 System Survey	
ASRS	No distinction between full-time and part-time
11 System	No distinction between full-time and part-time
30 System	Service is pro-rated based on hours/days/weeks worked
8 System	Not eligible

ASRS Membership – The Future

- **Options**
  - Eliminate 20/20 criteria for membership but pro-rate service credit based on hours worked
  - Eliminate 20/20 criteria for membership but limit ASRS membership to full-time employees only
  - Maintain 20/20 criteria for membership but pro-rate service credit based on hours worked
  - Maintain 20/20 criteria for membership as well as maintain current credited service accrual method but change the retirement benefit salary calculation to reflect an average of the member’s entire career salary history
  - No changes but conduct additional research

ARIZONA STATE RETIREMENT SYSTEM

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Paul Matson
Director

MEMORANDUM

TO: Mr. Kevin McCarthy, Chair, Arizona State Retirement System (ASRS) Board

FROM: Mr. Paul Matson, Director

DATE: November 21, 2014

RE: **Agenda Item #7**: Presentation, Discussion and Appropriate Action Regarding ASRS Valuations, including Potential Implementation of Actuarial Audit Recommendations

Purpose

1. To present the Actuarial Valuations of the System, Plan, Health Benefit Supplement Program, and Long-Term Disability (LTD) Program prepared by the ASRS retained actuary, Buck Consultants.
2. To Present pro-forma analysis of implementing recommendations resulting from the Actuarial Audit performed by Gabriel Roeder Smith & Company (GRS) and presented to the Board at its June 27, 2014 meeting, and to determine the most appropriate implementation.

Recommendation

Adopt the valuation reports, contribution rates, and the actuarial assumptions as presented for the System and LTD, and incorporating adjustments from scenario (1 or 2 or 3 or 4) for the Plan, Health Insurance, and Alternate Contribution Rate (ACR).

Background

Each fiscal year the ASRS retained actuary performs a valuation of the plans and programs administered by the ASRS and calculates a recommended contribution rate for each plan and program.

A supplemental pro-forma analysis was also performed this year for the Plan and Health Benefit Supplement Program to illustrate the estimated contribution rate impacts and funded status impacts of the recommended changes outlined in the 2014 Actuarial Audit Report conducted by GRS. The pro-forma analysis includes the following scenarios:

1. Baseline June 30, 2014 Valuation Results
2. Baseline Valuation Results Incorporating:
    a. Historical Pay
    b. New Entrants in Normal Cost
    c. 5-Year Amortization of Contribution Lag
3. Baseline Valuation Results Incorporating:
    a. Historical Pay
    b. Phasing in New Entrants in Normal Cost over 3 years

   c. 5-Year Amortization of Contribution Lag
4. Baseline Valuation Results Incorporating:
   a. Historical Pay
   b. New Entrants in Normal Cost
   c. 5-Year Amortization of Contribution Lag
   d. Large Benefit Adjustment in Mortality Rates for all Active and Deferred Vested Members

Attachments:

Actuarial Valuation Results as of June 30, 2014 – Agenda and Disclosures
Actuarial Valuation of the System as of June 30, 2014
Actuarial Valuation of the Plan as of June 30, 2014
Actuarial Valuation of the Plan as of June 30, 2014 – Projections
Actuarial Valuation of the LTD Program as of June 30, 2014
Actuarial Valuation of the LTD Program as of June 30, 2014 – Projections
Aggregate Results and Alternate Contribution Rate as of June 30, 2014

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Actuarial Valuation Results
As of June 30, 2014

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Agenda

- June 30, 2014 Valuation of the System
- June 30, 2014 Valuation of the Plan
- Plan Projections
- June 30, 2014 Valuation of the LTD
- LTD Projections
- June 30, 2014 Valuation Aggregate Results

Disclosures

- These valuations are being developed for the Board of Trustees and Staff of ASRS
- These valuations and reports were developed based on generally accepted actuarial principles and techniques in accordance with all applicable Actuarial Standards of Practice (ASOPs)
- These valuations are based on member data and financial information as provided by ASRS Staff and summarized in this report. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness
- Buck's work product contained herein was prepared exclusively for the Board of Trustees and Staff of ASRS. It is a complex, technical analysis that assumes a high level of knowledge of ASRS programs.
- No third party recipient of Buck's work product should rely upon Buck's work product absent involvement of Buck or without our approval.

Disclosures

- The consultants who worked on this assignment are pension and/or health care actuaries with significant experience in public funds like ASRS. Buck's advice is not intended to be a substitute for qualified legal or accounting counsel.
- Charlie Chittenden, David Kershner and Reza Vahid are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. They are Fellows of the Society of Actuaries. Charlie and David are also Enrolled Actuaries. They are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

Arizona State Retirement System

Actuarial Valuation of the System
As of June 30, 2014

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Funded Status
($ in Millions)

	2013	2014
Assets	$ 348.4	$ 356.6
Liability	$ 432.9	$ 413.1
Surplus/(Deficit)	$ (84.5)	$ (56.5)
Funded Status	80.48%	86.32%

Liabilities
($ in Millions)

	2013	2014
Non-retired	$ 30.1	$ 28.8
Non-members*	$ 3.3	$ 0.3
Retired – Annuities	$ 357.5	$ 345.1
Retired – 13th Checks	$ 42.0	$ 38.9
Total	$ 432.9	$ 413.1

* Former members who are eligible for refunds. Referred to as Green Bar people.

Gain/Loss
($ in Millions)

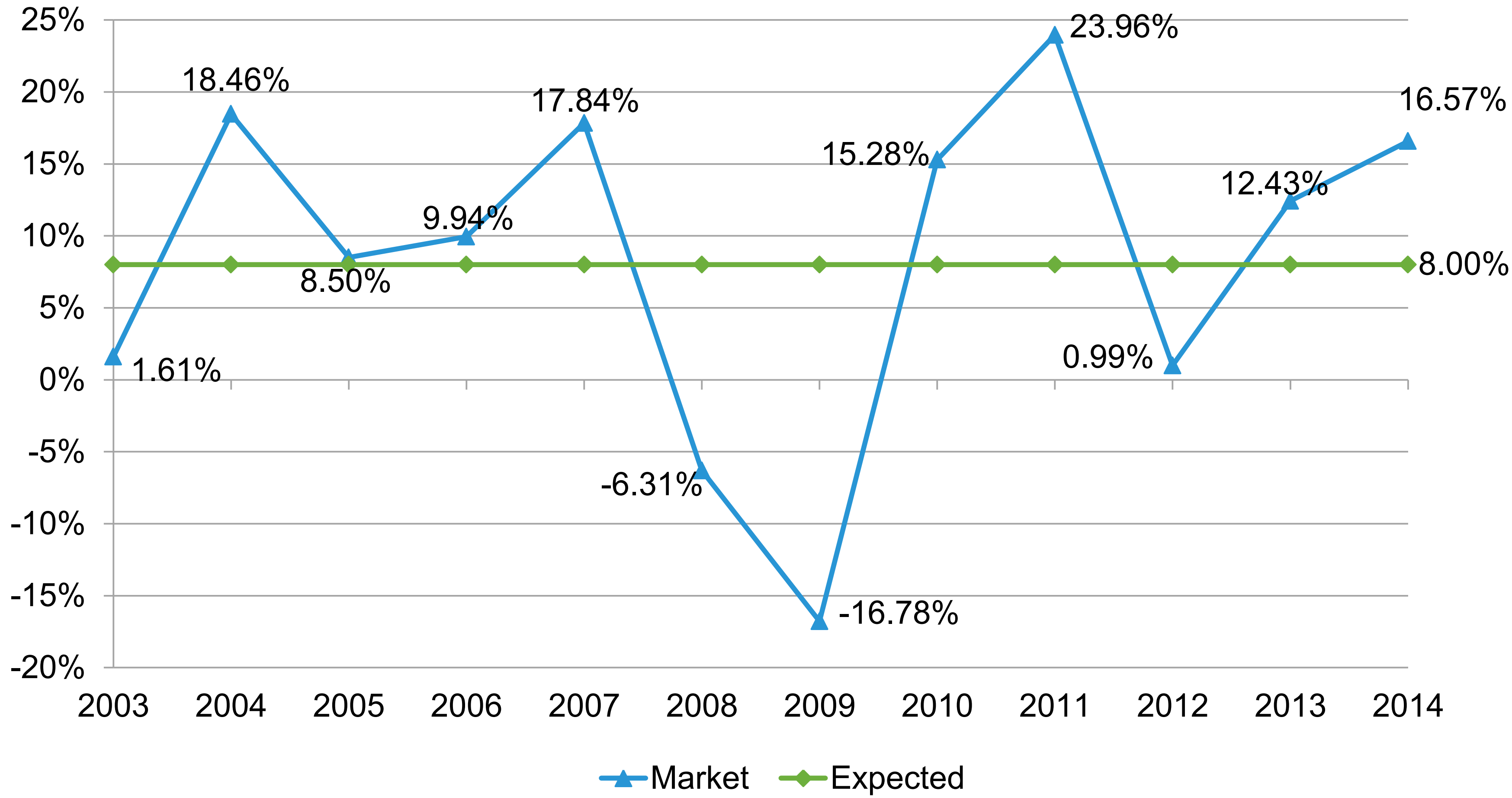
	2013	2014
1. Assets	$ 14.6	$ 27.8
2. Liability		
a. Mortality	$ 0.2	$ 3.4
b. Assumption Changes	(22.3)	0.0
c. Other	(0.5)	3.6*
d. Total Liability	$ (22.6)**	$ 7.0
3. Total Gain/(Loss) [(1) + (2d)]	$ (8.0)	$ 34.8

* Includes Green Bar member accounts presumed abandoned pursuant to §38-722 during fiscal year 2014.
**Without the assumption changes, the liability loss would have been $0.3 million.

Cash Flows
($ in Thousands)

	2012/13	2013/14
1. Beginning of Year Market Value	$ 354,380	$ 348,386
2. Contributions	89	78
3. Actual Benefit Payments	(46,977)	(45,548)
4. Expenses and Fees	(400)	(285)
5. Net Investment Return	41,296	53,936
6. Other	(2)	(9)
7. End of Year Market Value	$ 348,386	$ 356,558

Estimated Yields on System Assets



Projected Funded Status – MVA
($ in Millions)

Valuation Date	Funded Status - MVA	Liability	Assets	Unfunded Liability	Prior Year Cashflows
6/30/2014	86%	$413.1	$356.6	$56.5	$45.8
6/30/2015	85%	$396.7	$335.9	$60.8	$47.2
6/30/2016	83%	$380.2	$314.7	$65.5	$46.1
6/30/2017	81%	$363.4	$293.0	$70.4	$45.0
6/30/2018	78%	$346.6	$270.7	$75.9	$43.9
6/30/2019	75%	$329.5	$247.8	$81.7	$42.7
6/30/2020	72%	$312.4	$224.4	$88.0	$41.5
6/30/2021	68%	$295.3	$200.4	$94.9	$40.2
6/30/2022	63%	$278.1	$175.8	$102.3	$38.9
6/30/2023	58%	$261.1	$150.8	$110.3	$37.6

The funded status declines because the deficit becomes a larger percentage of the liability as the liability declines. The unfunded liability grows with interest – its present value as of June 30, 2014 remains roughly constant. These projections assume no future contributions will be made.

Guaranteed Liabilities
($ in Thousands)

	Members who retired prior to July 1, 1981	Members who retired, or will retire, on or after July 1, 1981
Assets	$ 247.0	$ 356,311.5
Liability	$ 286.1*	$ 412,797.1**
Surplus/(Deficit)	$ (39.1)	$ (56,485.6)
Funded Status	86.32%	86.32%

* Guaranteed by the State according to the Attorney General's opinion
** $392.1M using Plan assumptions guaranteed by the Plan

Attorney General's Opinion

- According to Attorney General's opinion, which the Board has adopted, System benefits cannot be reduced
- ASRS Plan guarantees benefits for members who retired or will retire on or after July 1, 1981
- State guarantees other System benefits
- System liabilities of $392.1M* for post-June 30, 1981 retirees are included in the Plan valuation
- Total System liabilities include an additional $0.3M for members who retired prior to July 1, 1981

* System Liability valued using Plan assumptions

Benefit Increase Decision

- Former rule called for Board to consider benefit increases whenever System's funded status exceeds 105%
- Funded status as of 6/30/2014 is 86.32%
- We recommend no benefit increase this year

Non-Retired Census Data

	2013	2014
Active Members	9	9
Member Balances	$ 17,413,339	$ 18,924,937
Average Balance	$ 1,934,815	$ 2,102,771
Average Age	67.4	68.4
Inactive Members	36	30
Member Balances	$ 12,675,602	$ 9,866,069
Average Balance	$ 352,100	$ 328,869
Average Age	81.4	84.8

Retiree Census Data

2014		
	Annuity	13th Check
Number of members	1,314	854*
Average age	79.9	82.8
Total annual amount	$38.6M	$5.3M
Average annual amount	$29,389	$6,245
Median annual amount	$17,071	$3,949
Maximum annual amount	$295,494	$44,800
* 1,172 eligible for 13th check. 318 eligible members have zero 13th check amounts.		

2013		
	Annuity	13th Check
Number of members	1,370	907*
Average age	79.2	82.1
Total annual amount	$39.4M	$5.6M
Average annual amount	$28,746	$6,208
Median annual amount	$16,396	$3,956
Maximum annual amount	$295,494	$44,800
* 1,232 eligible for 13th check. 325 eligible members have zero 13th check amounts.		

Data Reconciliation

	Active Members	Inactive Members	Retired Members	Total
Total at June 30, 2013	9	36	1,370	1,415
Vested Terminations	0	0	0	0
Nonvested Terminations	0	0	0	0
Transfer Out	0	0	0	0
Disabled	0	0	0	0
Retirements	0	(5)	5	0
New Beneficiaries	0	0	20	20
Deaths (with Beneficiary)	0	0	(19)	(19)
Deaths (without Beneficiary)	0	0	(58)	(58)
Benefit Termination/Cashout	0	(1)	(4)	(5)
Data Adjustments	0	0	0	0
Net Change	0	(6)	(56)	(62)
Total at June 30, 2014	9	30	1,314	1,353
Average annual benefit / balance for prior year for those leaving status during the year	**$0**	**$590,059**	**$23,224**	

Assumptions and Methods

Interest Rate

- 8%

Mortality

- 1994 GAM-Generational table with Projection Scale BB.
- Mortality rates are decreased for members with annual System income greater than $14,400 and increased for members with annual System income less than $6,000.
- After adjustments, rates are set back one year for males and 2 years for females.

Liabilities for Nonretired Members

- Assumed to be their account balances

Actuarial Cost Method

- Present value of projected benefits

Asset Valuation Method

- Market Value of Assets

Questions

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Arizona State Retirement System

Actuarial Valuation of the Plan
As of June 30, 2014

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Summary of Results

	June 30, 2013*			June 30, 2014*		
	401(a)	**401(h)**	**Total**	**401(a)**	**401(h)**	**Total**
Total Contribution Rate	**22.37%**	**0.59%**	**22.96%**	**22.20%**	**0.50%**	**22.70%**
Employee Contribution Rate	11.48%	0.00%	11.48%	11.35%	0.00%	11.35%
Employer Contribution Rate	10.89%	0.59%	11.48%	10.85%	0.50%	11.35%
Funded Ratio – AVA	75.44%	89.21%	75.94%	76.30%	93.05%	76.87%
Funded Ratio – MVA	72.72%	85.80%	73.19%	81.48%	99.21%	82.10%

*Unless otherwise noted, all results in this presentation include System assets and liabilities for members who retired or will retire on or after July 1, 1981 for 401(a).

Development of Contribution Rate [401(a) and 401(h) – Total Rate]

	2013	2014
1. Total Normal Cost	13.45%	13.40%
2. Amortization of Unfunded Actuarial Accrued Liabilities	9.51%	9.30%
3. Total Measured Contribution Rate	22.96%	22.70%

Summary of Change in Contribution Rate [401(a) and 401(h) – Total Rate]

	2013	2014
1. Calculated Contribution Rate Last Year	22.55%	22.96%
2. Plan Experience (Asset and Liability)	0.20%	(0.26)%
3. Plan Provision, and Assumption/Method Changes*	0.20%	0.00%
4. System Experience Allocated to the Plan	0.01%	0.00%
5. Total Change	0.41%	(0.26)%
6. Contribution Rate Measured as of Valuation Date	22.96%	22.70%

*Experience analysis assumption changes, interest on contributions changing to 2%, removal of the death annuity and 401(h) amortization period change to 15 years in 2013.

Change in Contribution Rate [401(a) and 401(h) – Total Rate]

Basis	Total Rate	Total Rate Change	UAAL - AVA - ($Millions)	UAAL - MVA - ($Millions)
1. 2013 Valuation	22.96%	-	$9,961	$11,098
2. Expected Experience*	22.65%	-0.31%	$9,892	$11,120
3. Contribution Gain/Loss	22.64%	-0.01%	$9,887	$11,115
4. Liability Experience	22.59%	-0.05%	$9,794	$11,022
5. Asset Experience	22.70%	+0.11%	$9,904	$7,681
6. System Experience	22.70%	+0.00%	$9,904	$7,668

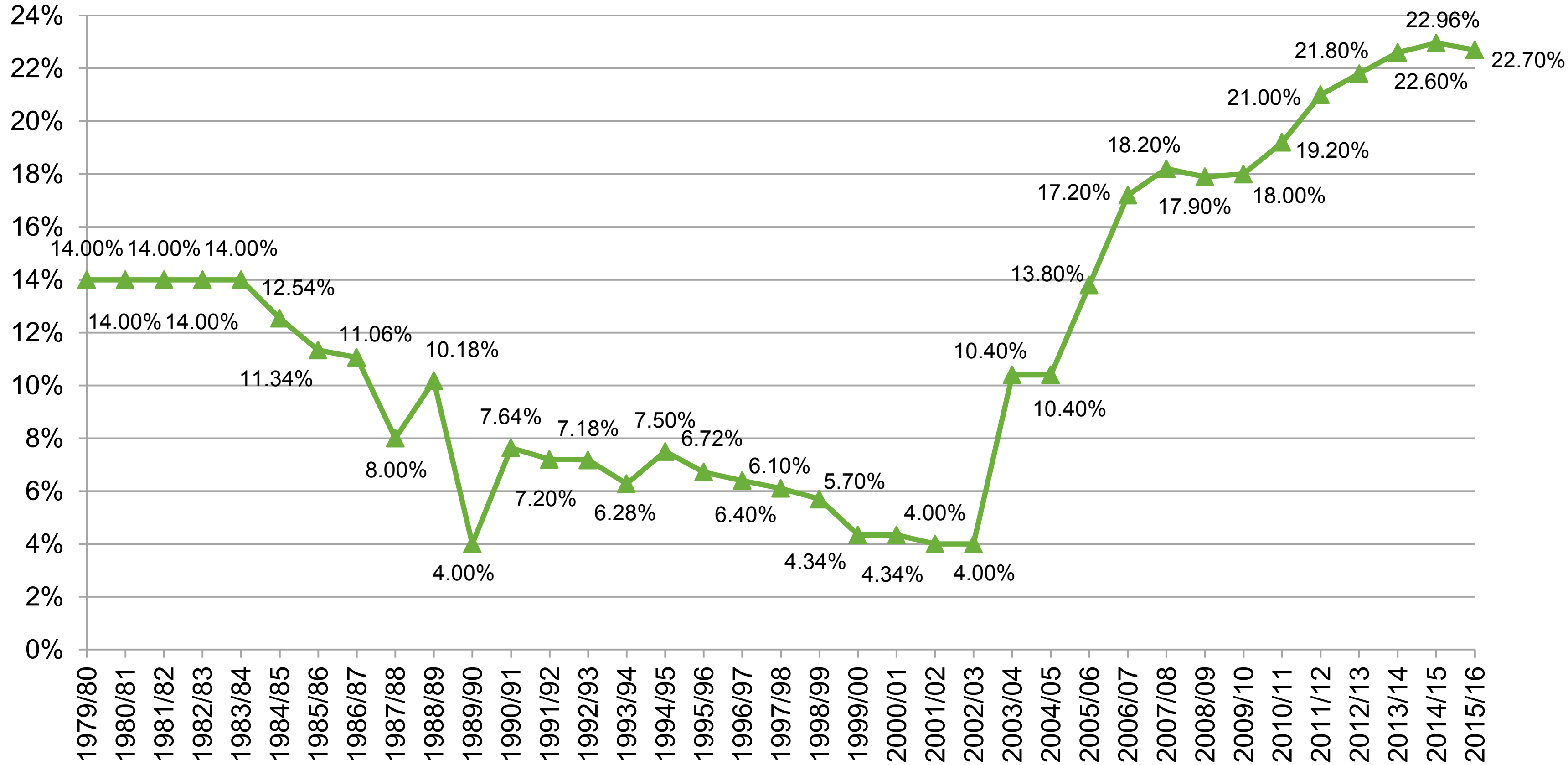
*Expected experience includes the changes expected from 2013 to 2014 due to passage of time and maturation of the plan.

History of Contribution Rates [401(a) and 401(h)]

Actual Rates		
Fiscal Year Ending June 30	Employee	Employer
1980	7.00%	7.00%
1981	7.00%	7.00%
1982	7.00%	7.00%
1983	7.00%	7.00%
1984	7.00%	7.00%
1985	6.27%	6.27%
1986	5.67%	5.67%
1987	5.53%	5.53%
1988	4.00%	4.00%
1989	5.09%	5.09%
1990	2.00%	2.00%
1991	3.82%	3.82%
1992	3.60%	3.60%
1993	3.59%	3.59%
1994	3.14%	3.14%
1995	3.75%	3.75%
1996	3.36%	3.36%
1997	3.20%	3.20%
1998	3.05%	3.05%

Actual Rates		
Fiscal Year Ending June 30	Employee	Employer
1999	2.85%	2.85%
2000	2.17%	2.17%
2001	2.17%	2.17%
2002	2.00%	2.00%
2003	2.00%	2.00%
2004	5.20%	5.20%
2005	5.20%	5.20%
2006	6.90%	6.90%
2007	8.60%	8.60%
2008	9.10%	9.10%
2009	8.95%	8.95%
2010	9.00%	9.00%
2011	9.60%	9.60%
2012	10.50%	10.50%
2013	10.90%	10.90%
2014	11.30%	11.30%
2015	11.48%	11.48%
2016	11.35%	11.35%

Total Contribution Rate for the Plan Year [401(a) and 401(h) – Total Rate]

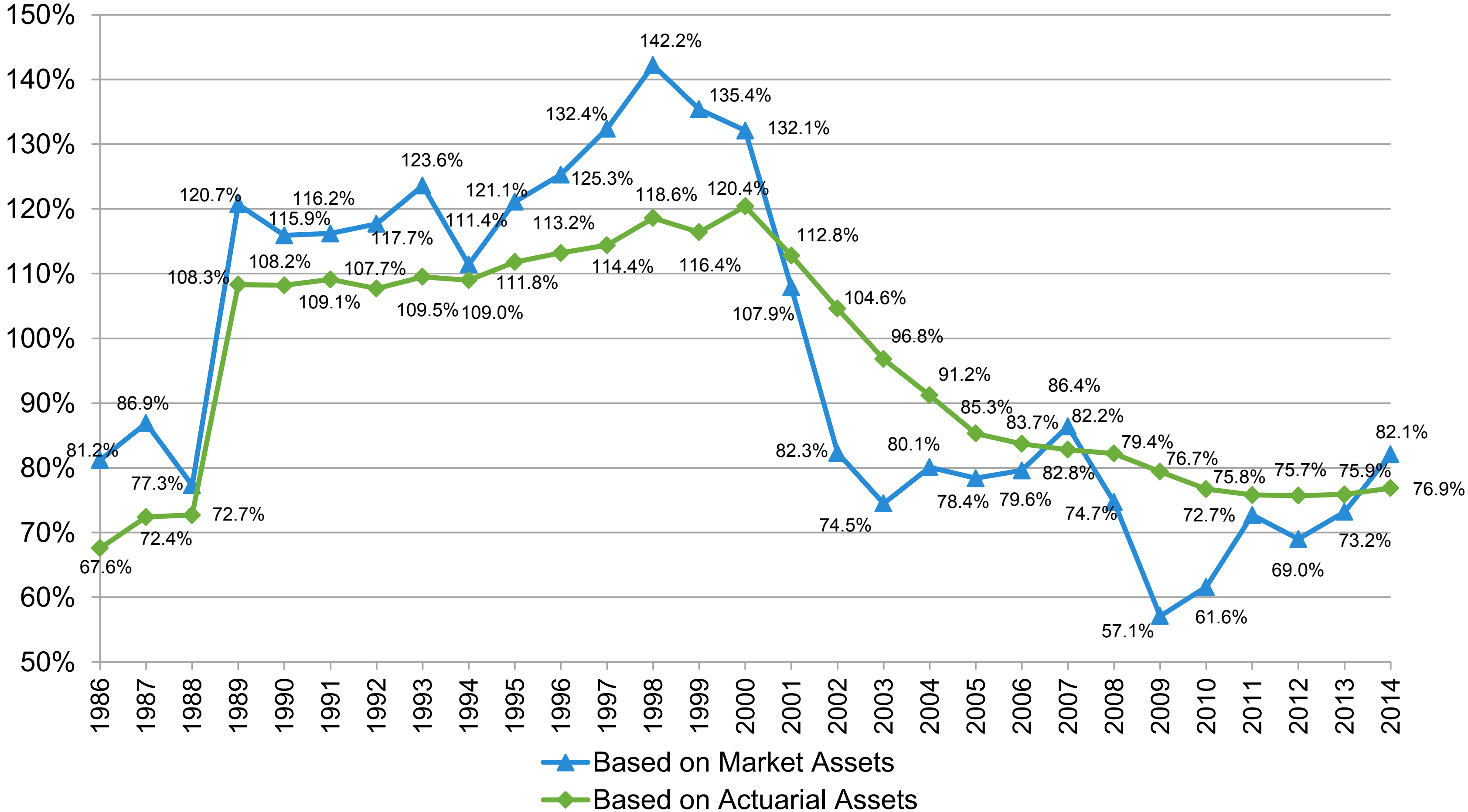


Includes System for 2010 and Beyond

Funded Status Summary

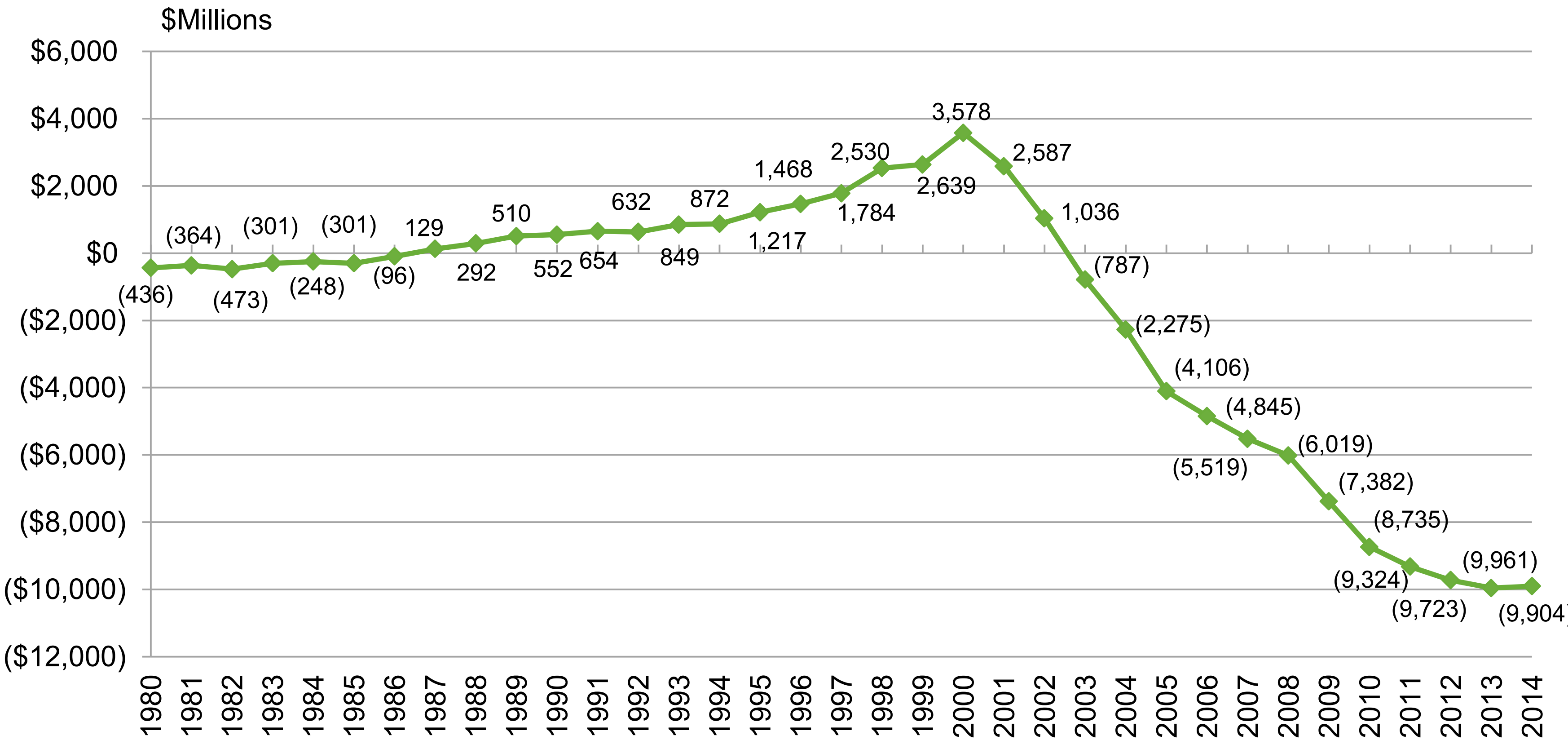
	2013		2014	
	Market Value	**Actuarial Value**	**Market Value**	**Actuarial Value**
Asset Amounts				
Pension 401(a)	$29,025,148,316	$30,110,632,566	$33,693,458,017	$31,547,987,085
Health 401(h)	1,274,036,072	1,324,595,696	1,465,095,569	1,374,129,582
Total Plan	$30,299,184,388	$31,435,228,262	$35,158,553,586	$32,922,116,667
Liabilities				
Pension 401(a)	$39,911,755,232	$39,911,755,232	$41,349,317,003	$41,349,317,003
Health 401(h)	1,484,820,255	1,484,820,255	1,476,696,928	1,476,696,928
Total Plan	$41,396,575,487	$41,396,575,487	$42,826,013,931	$42,826,013,931
Funded Status				
Pension 401(a)	72.72%	75.44%	81.48%	76.30%
Health 401(h)	85.80%	89.21%	99.21%	93.05%
Total Plan	73.19%	75.94%	82.10%	76.87%

Funded Ratio
[401(a) and 401(h)]



Includes System for 2010 and Beyond

Surplus / (Unfunded Accrued Liabilities) [401(a) and 401(h)]



Includes System for 2010 and Beyond

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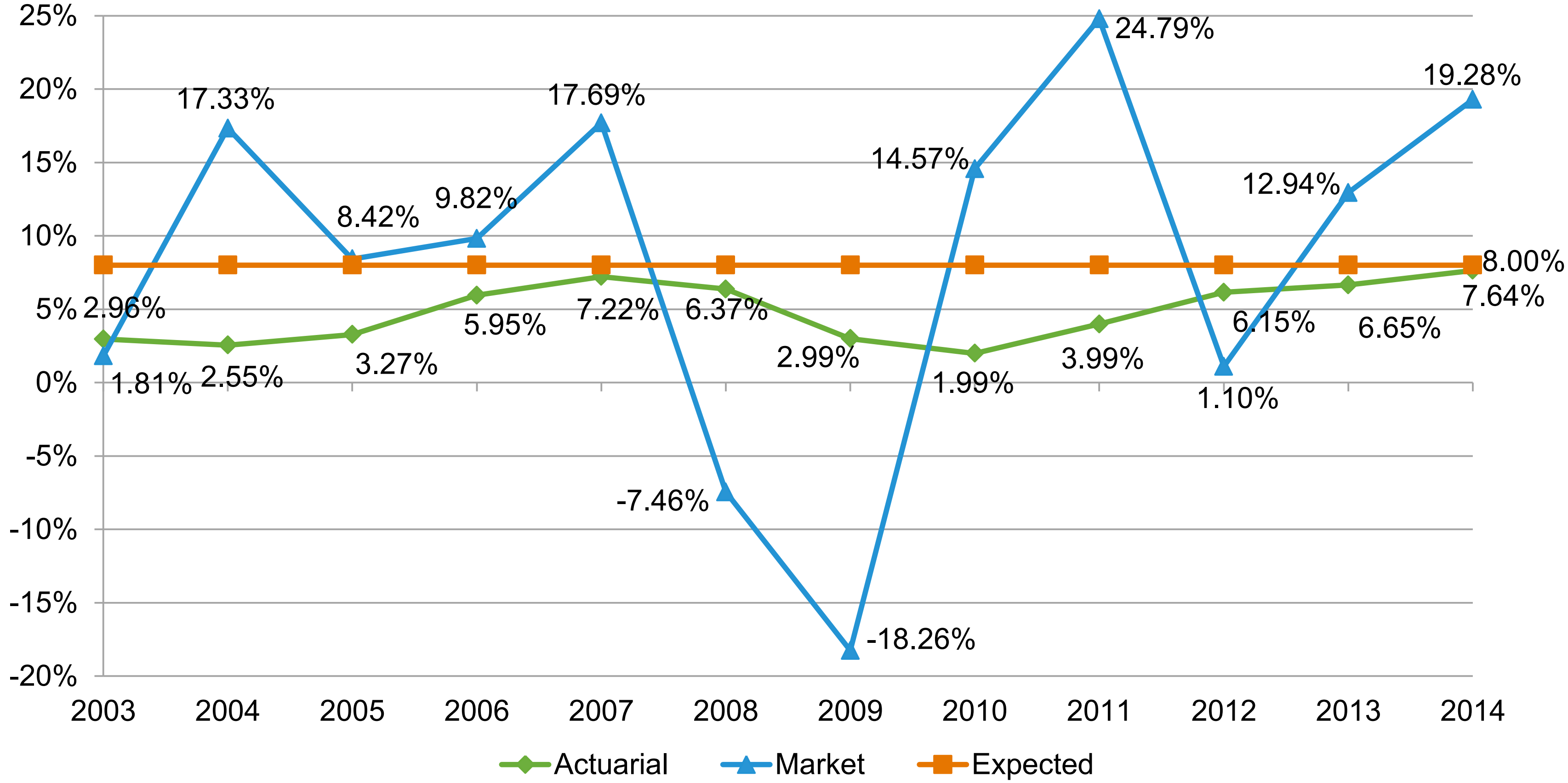
Actuarial Gain / (Loss) on Unfunded for the Year [401(a) and 401(h)]

($ in Millions)

	2012/13	2013/14
1. Experience Liability Gain/(Loss)	$ 194	$ 93
2. Asset Gain/(Loss) on Actuarial Value of Assets	(395)	(110)
3. Permanent Benefit Increase (PBI) Excess Earnings Reserve for Fiscal Year	0	0
4. Plan Provision and Assumption/Method Changes*	43	0
5. Total Gain/(Loss)	$ (158)	$ (17)

*Experience analysis assumption changes, interest on contributions changing to 2%, removal of the death annuity and 401(h) amortization period change to 15 years in 2012/13.

Estimated Return on Assets [401(a) and 401(h)]



Excludes System

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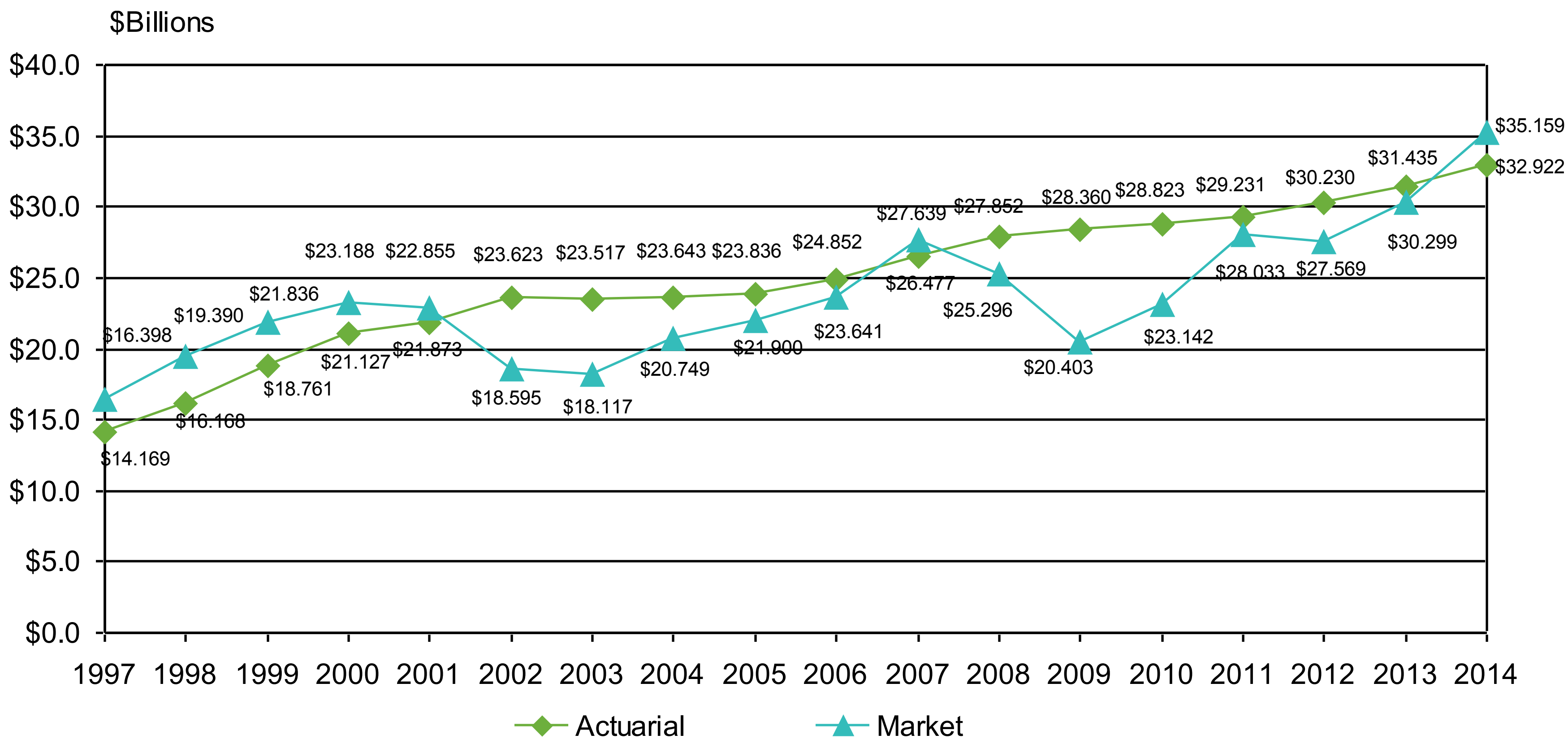
Market and Actuarial Values of Assets [401(a) and 401(h)]



4.6% average increase in market value since 1997

5.1% average increase in actuarial value since 1997

Actuarial assets are 93.6% of market. Market assets exceed actuarial assets by $2.2 billion.

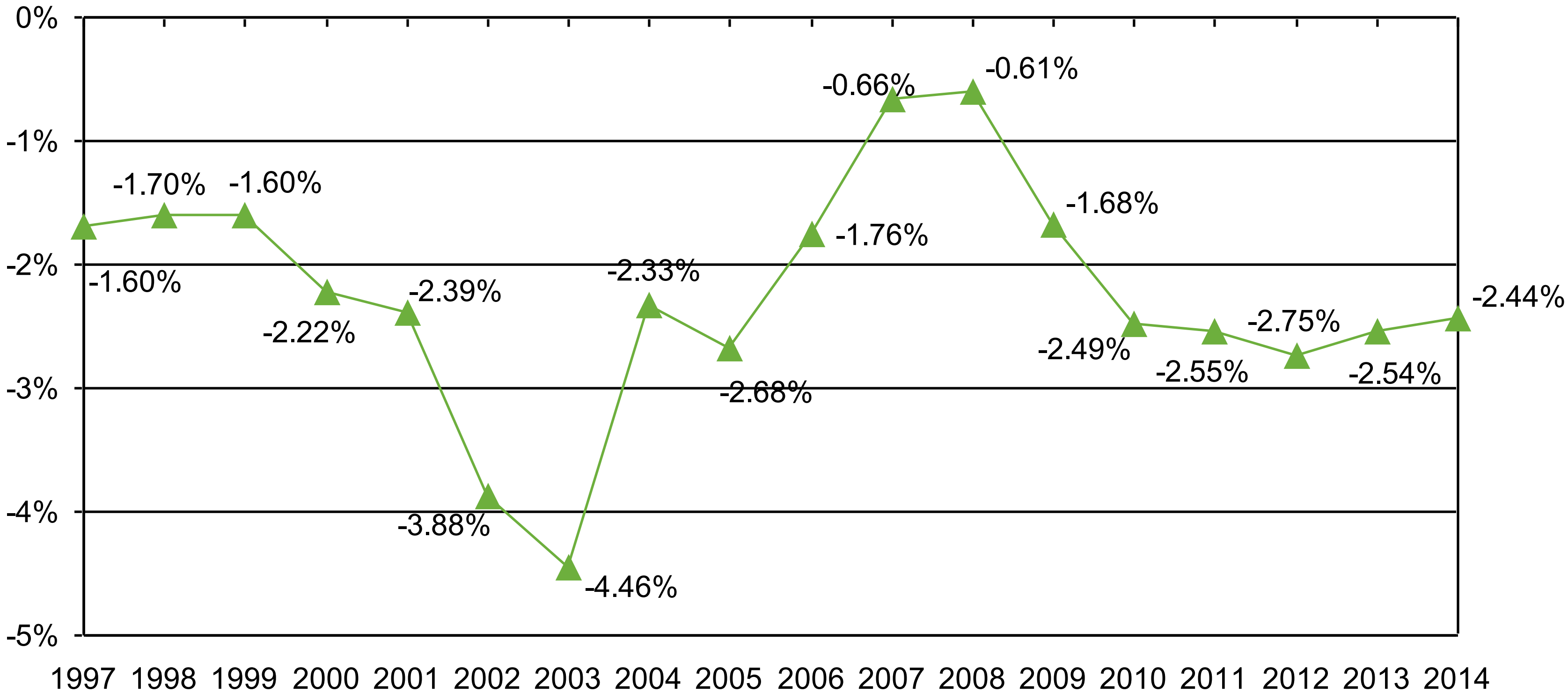
Includes System for 2010 and Beyond

Cash Flows [401(a) and 401(h)]
($ in Millions)

	2012/13	2013/14
1. Beginning of Year Market Value*	$ 27,215	$ 29,951
2. Contributions**	1,987	2,047
3. Actual Benefit Payments	(2,713)	(2,869)
4. Expenses and Fees	(34)	(27)
5. Transfers	1	0
6. Net Investment Return	3,495	5,700
7. End of Year Market Value*	$ 29,951	$ 34,802
8. System Assets Allocated to the Plan	348	357
9. End of Year Market Value Including System Assets	$ 30,299	$ 35,159

* Excludes System assets.
** Excludes ERPP, RRAA and Medical Loss Ratio amounts totaling $26 million in 2012/13 and $30 million in 2013/14.

External Cash Flow as Percentage of Market Value [401(a) and 401(h)]



Excludes System

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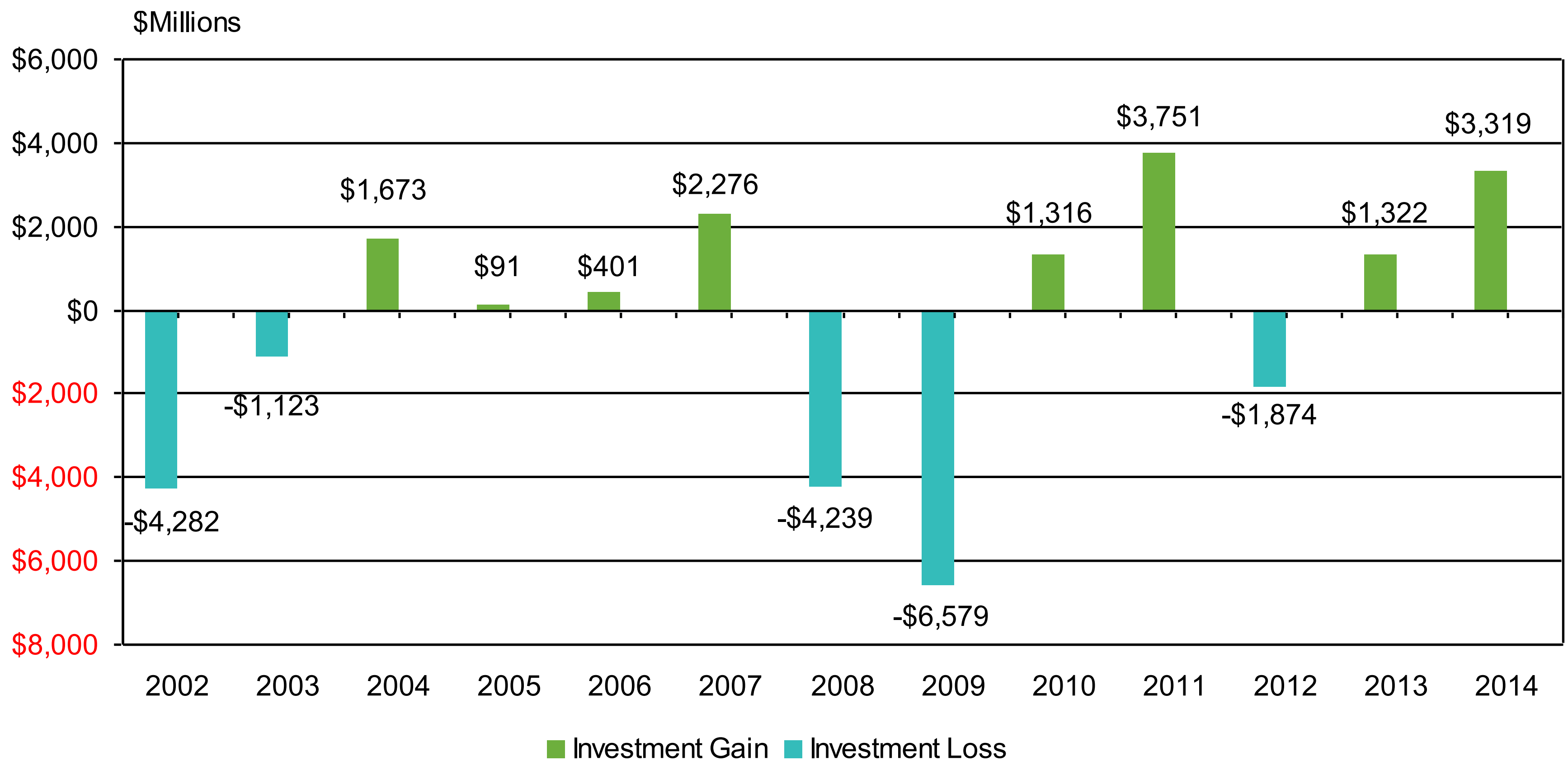
Investment Gains and Losses on Market Value of Assets [401(a) and 401(h)]



Excludes System

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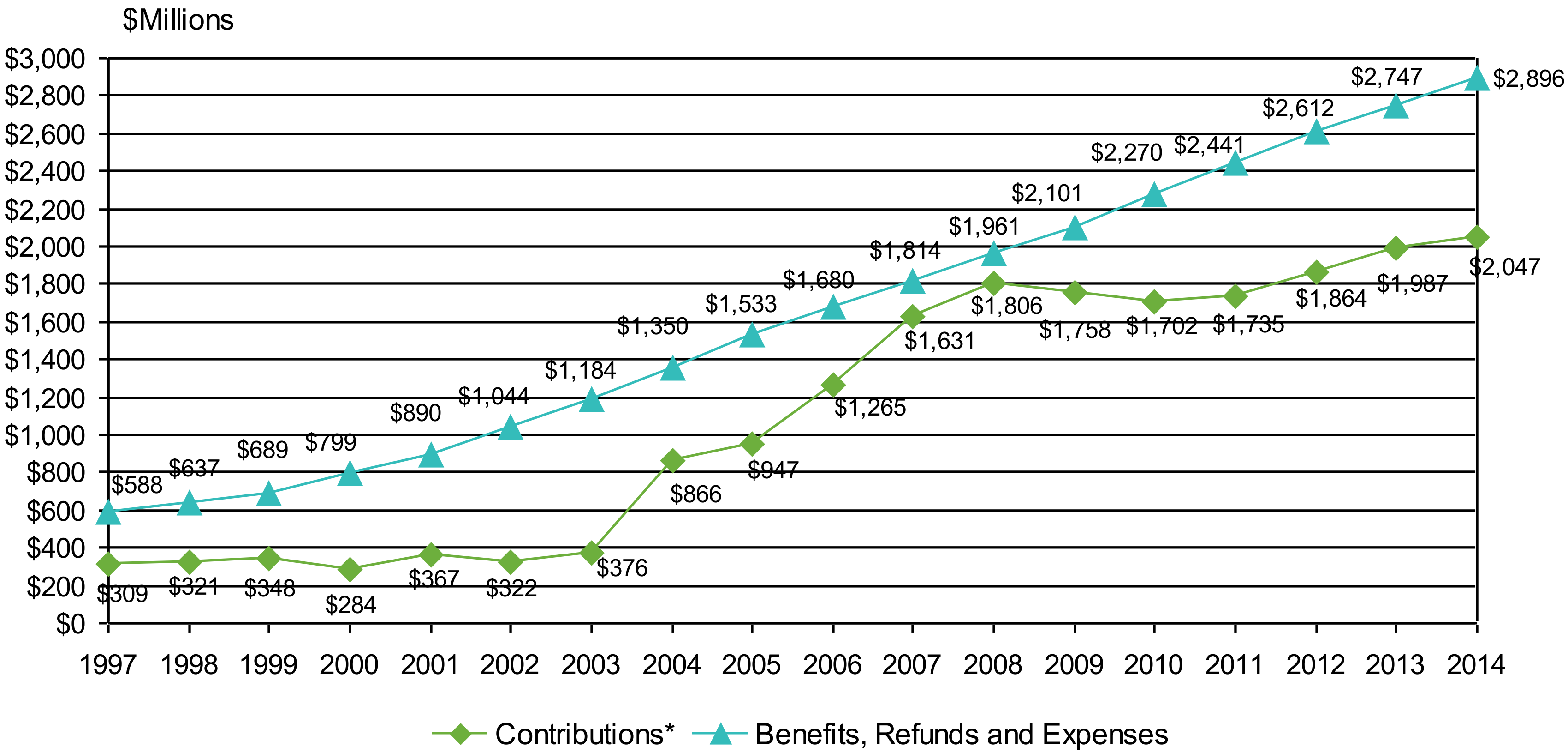
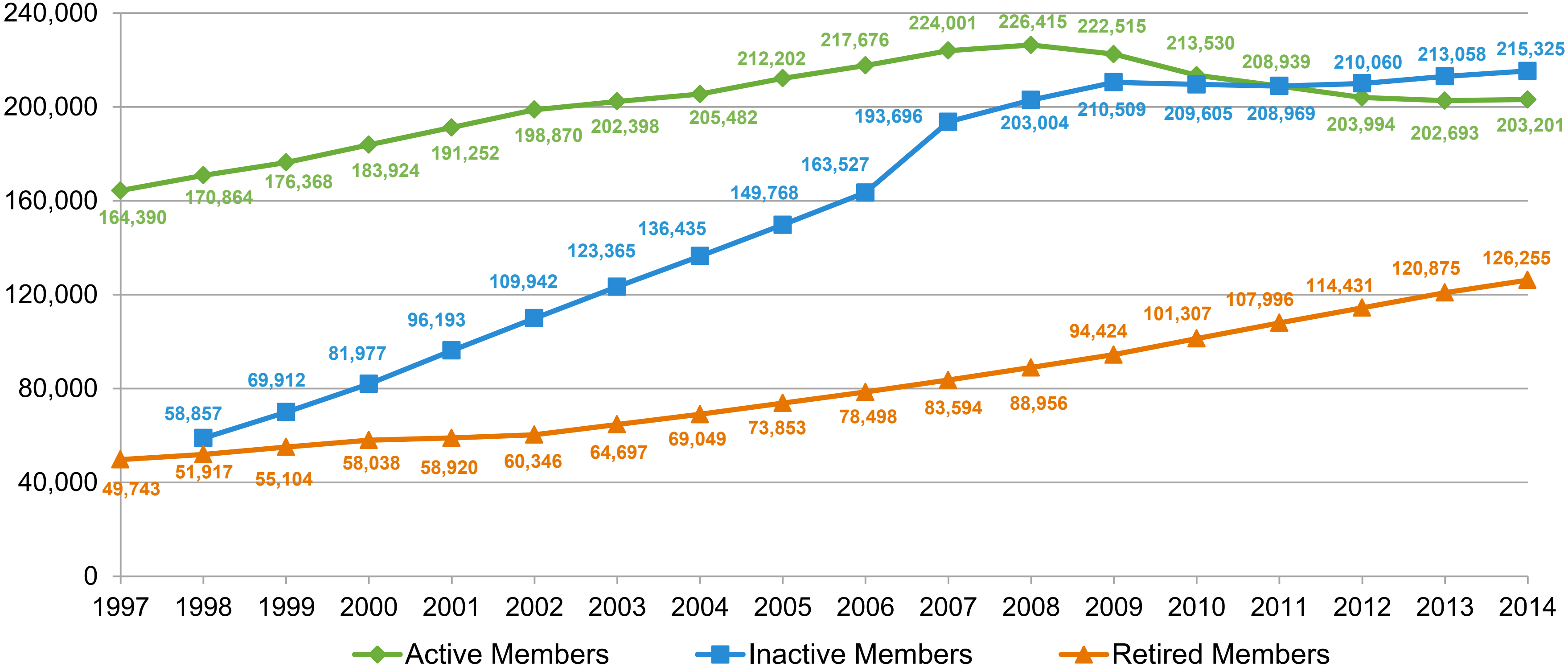
Contributions vs. Benefits, Refunds, and Expenses [401(a) and 401(h)]



* Includes member contributions, employer contributions and service purchase contributions

Excludes System

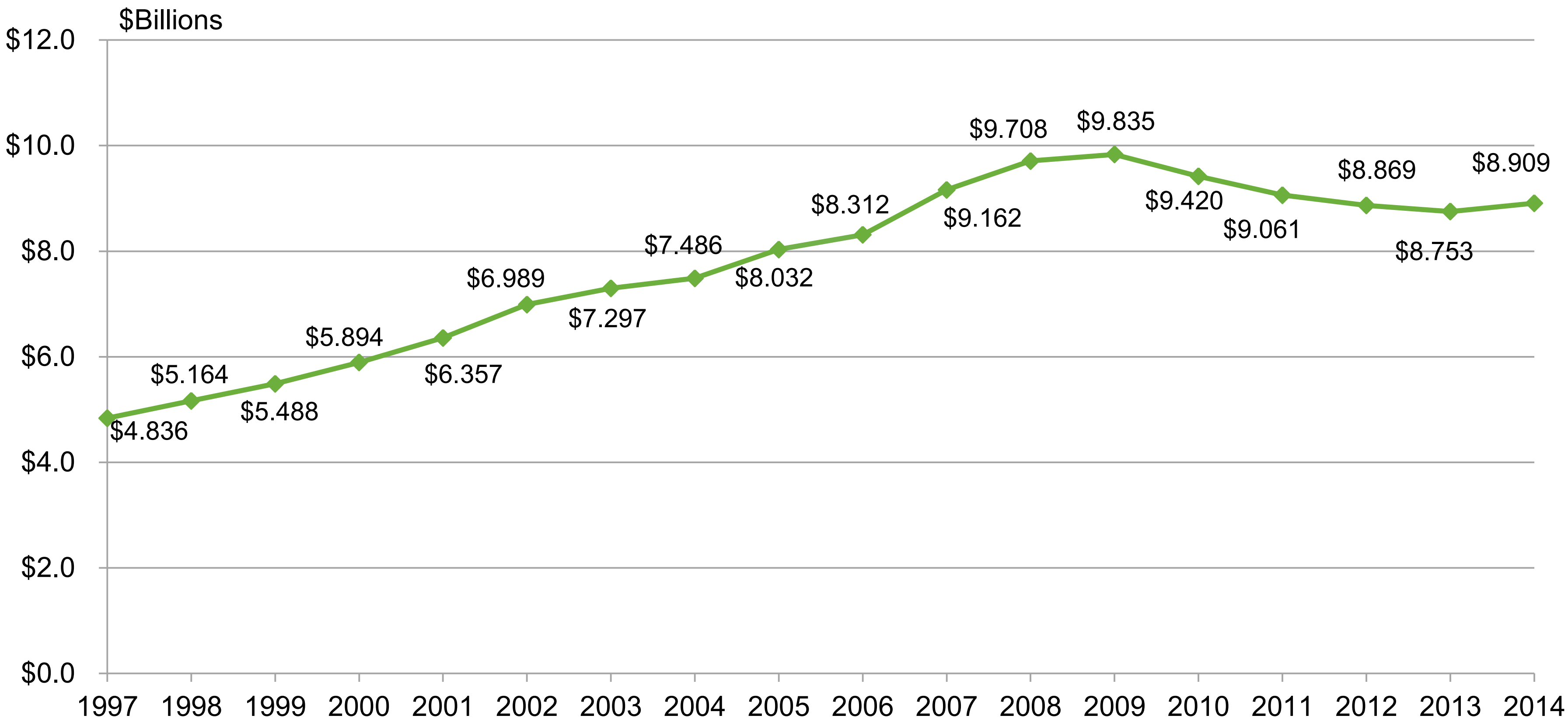
Active, Inactive, and Retired Members



1.3% average increase in number of active members since 1997, (1.8%) since 2008, 0.3% since 2013
8.4% average increase in number of inactive members since 1998, 1.1% since 2013
5.6% average increase in number of retired members since 1997, 4.5% since 2013

This exhibit excludes the 4,206 members receiving LTD benefits, 170 other-than-Plan (System) members who are receiving benefits from the 401(a) plan only, 501 other-than-Plan (System) members who are receiving benefits from the 401(h) plan only, and 97 other-than-Plan (System) members who are receiving benefits from both the 401(a) and 401(h) plan.

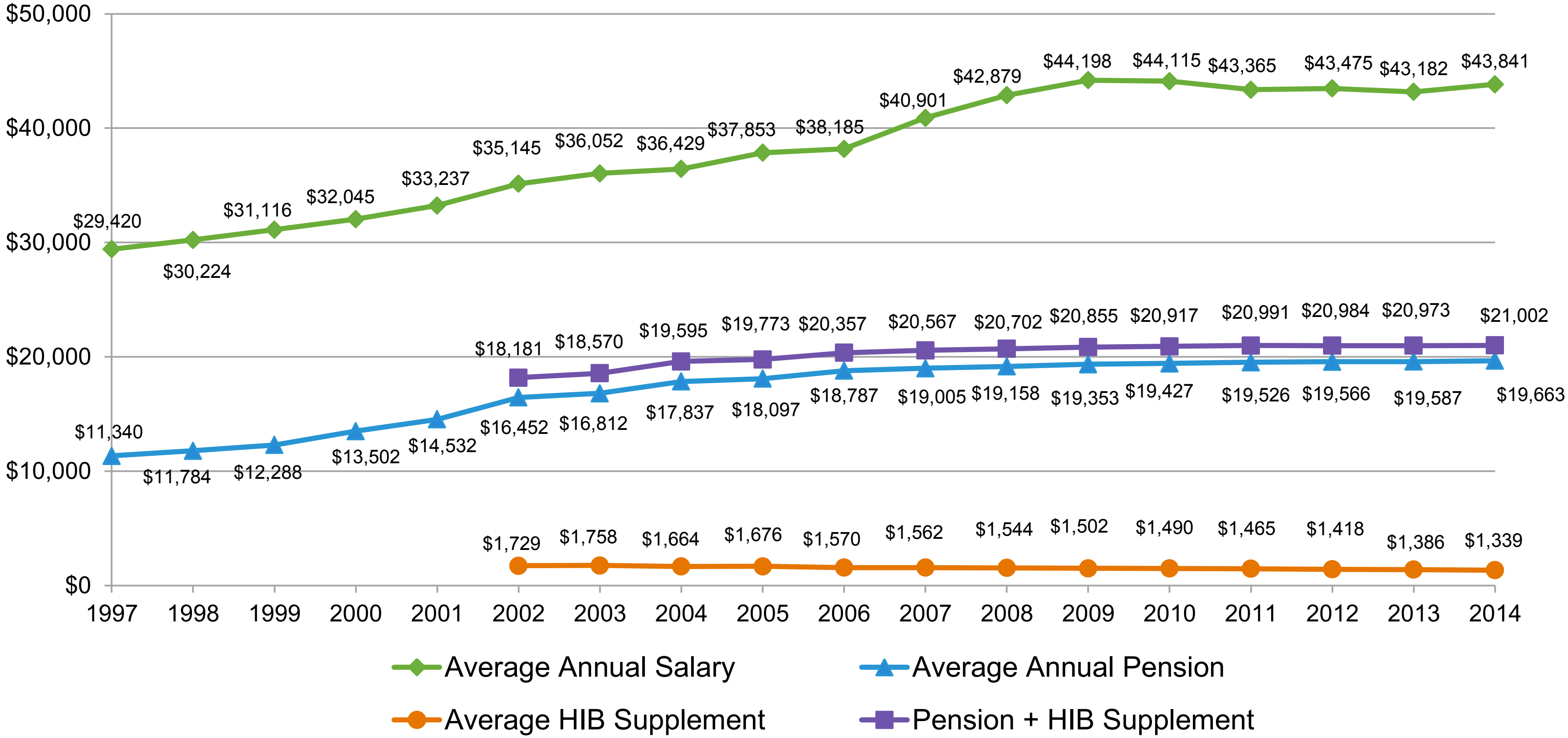
Active Payroll



3.7% average increase since 1997, (1.4%) since 2008, 1.8% between 2013 and 2014.

Excludes System

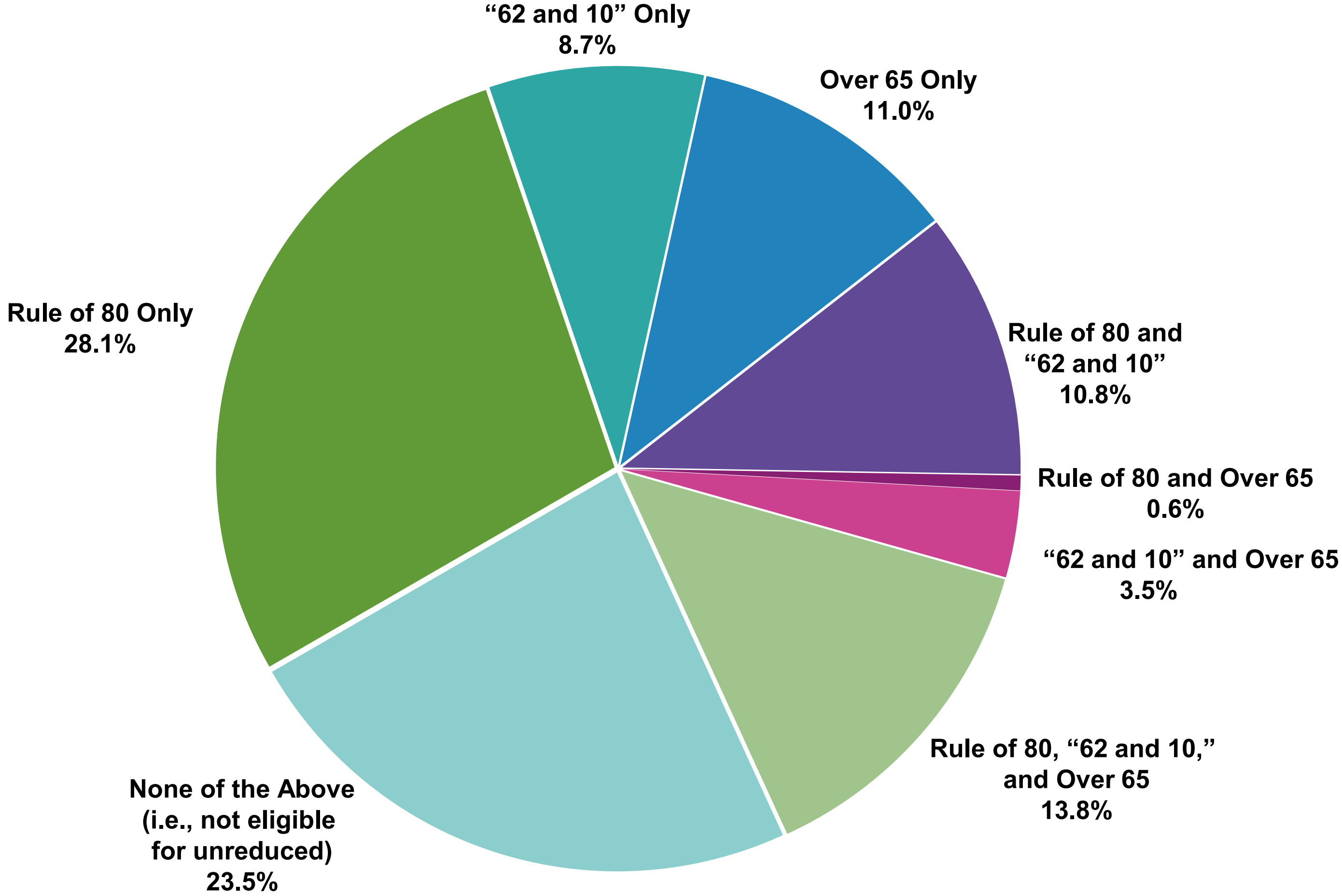
Average Salary and Average Benefit



2.4% average increase in average annual salary since 1997, 1.5% between 2013 and 2014
3.3% average increase in average annual pension benefit since 1997, 0.4% between 2013 and 2014

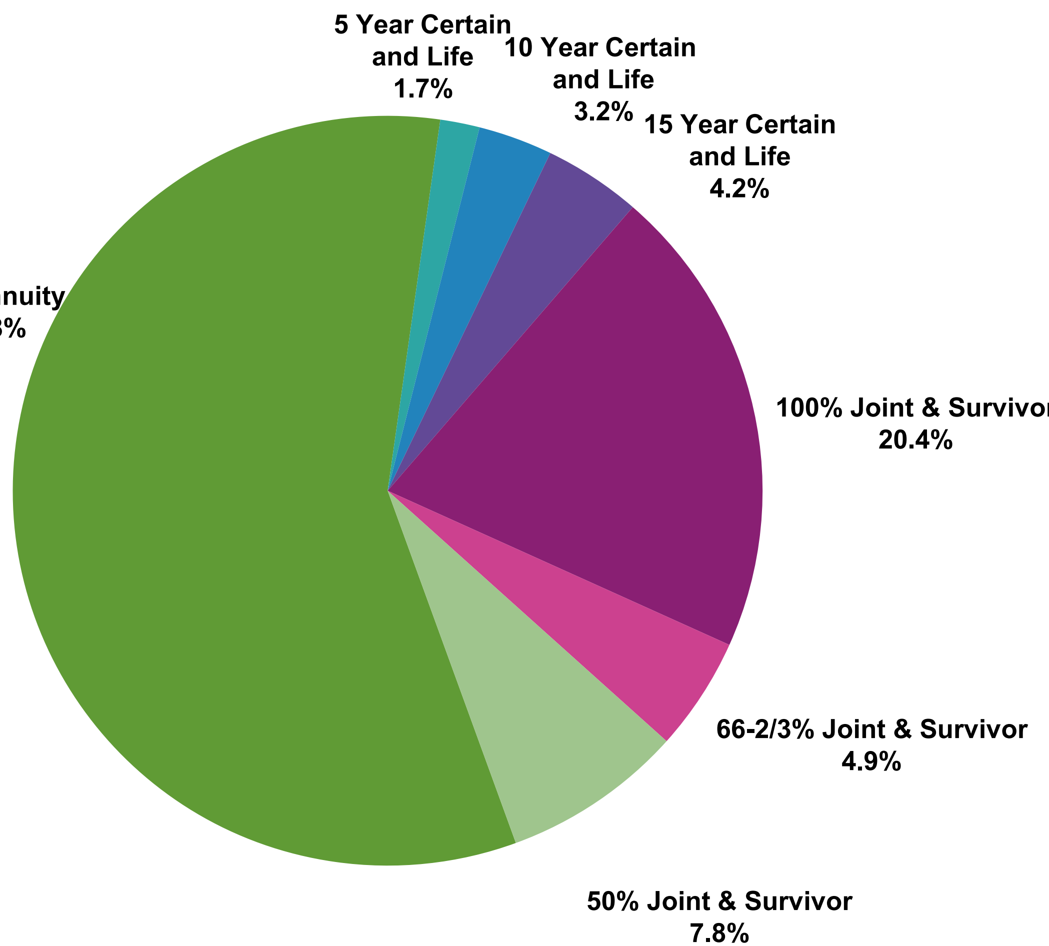
Excludes System

New Retiree Eligibility



Excludes System

Optional Form of Benefit for all Benefit Recipients



Total Retiree Members = 126,255

Note that 3,805 benefit recipients also received a partial lump sum and 1,471 benefit recipients elected a Social Security level income option in addition to their optional forms of payment.

Excludes System

Data Reconciliation

	Active Members	Inactive Members	Retired Members	Total Members
Total at June 30, 2013	202,693	213,058	120,875	536,626
Terminations	(14,721)	14,721	-	-
Refund	(6,080)	(6,498)	-	(12,578)
Transfer Out	(14)	(135)	-	(149)
Disabled	(511)	(144)	-	(655)
Retirements	(5,951)	(1,210)	7,161	-
Returned from LTD	32	168	436	636
New QDRO's	-	-	96	96
New Beneficiary	-	-	618	618
Deaths (with Beneficiary)	-	-	(618)	(618)
Deaths (without Beneficiary)	(222)	(506)	(2,157)	(2,885)
Benefit Expiration	-	-	(118)	(118)
Data Adjustments	(78)	(1,805)	70	(1,813)
New Entrants Terminated with Account	-	2,780	-	2,780
Balance	5,212	(5,104)	(108)	-
Rehires	22,841	-	-	22,841
New Entrants				
Net Change	508	2,267	5,380	8,155
Total at June 30, 2014	203,201	215,325	126,255	544,781

The inactive population includes former members who are eligible for refunds. Their printed records were discovered and first included in the June 30, 2006, valuation. They are referred to as the Green Bar people.

This exhibit excludes the 4,206 members receiving LTD benefits, 170 other-than-Plan (System) members who are receiving benefits from the 401(a) plan only, 501 other-than-Plan (System) members who are receiving benefits from the 401(h) plan only, and 97 other-than-Plan (System) members who are receiving benefits from both the 401(a) and 401(h) plan.

Excludes System

Changes in Member Counts

Year	Changes in Member Counts			
	Active Members	Inactive Members	Retired Members	Total Members
2014	508	2,267	5,380	8,155
2013	(1,301)	2,998	6,444	8,141
2012	(4,945)	1,091	6,435	2,581
2011	(4,591)	(636)	6,689	1,462
2010	(8,985)	(904)	6,883	(3,006)
2009	(3,900)	7,505	5,468	9,073
2008	2,414	9,308	5,362	17,084
2007	6,325	30,169	5,096	41,590

The inactive population includes former members who are eligible for refunds. Their printed records were discovered and first included in the June 30, 2006, valuation. They are referred to as the Green Bar people.

This exhibit excludes the 4,206 members receiving LTD benefits, 170 other-than-Plan (System) members who are receiving benefits from the 401(a) plan only, 501 other-than-Plan (System) members who are receiving benefits from the 401(h) plan only, and 97 other-than-Plan (System) members who are receiving benefits from both the 401(a) and 401(h) plan.

Excludes System

Actuarial Methods

Actuarial Cost Method

- Projected Unit Credit

Asset Valuation Method

- 10-year smoothing of investment gains or losses effective June 30, 2002

Amortization Method

- Level dollar amortization method

Amortization Period

- 30 years closed from point of recognition for 401(a)

Date of Unfunded Amount to Amortize	Years Left to Amortize	Initial Unfunded Amount	Outstanding Amount at 6/30/2014	Beginning of Year Payment
6/30/2013	29	$9,801,122,666	$9,714,603,909	$806,119,047
6/30/2014	30	$86,726,009	$86,726,009	$7,133,008

- 15 years closed from point of recognition for 401(h)

Date of Unfunded Amount to Amortize	Years Left to Amortize	Initial Unfunded Amount	Outstanding Amount at 6/30/2014	Beginning of Year Payment
6/30/2013	14	$160,224,559	$154,323,561	$17,332,372
6/30/2014	15	$(51,756,215)	$(51,756,215)	$(5,598,755)

Actuarial Assumptions

Major Assumptions

Interest Rate

- 8%

Mortality

- Actives (Pre-Retirement) – 50% of 1994 GAM projected to 2015 with Scale BB
- Inactives – 1994 GAM projected to 2015 with Scale BB
- In Receipt – 1994 GAM projected to 2015 with Scale BB
  - Rates are increased for members receiving less than $6,000 a year
  - Rates are decreased for members receiving more than $14,400 a year
- Disabled – Based on experience for the 5 year period ending June 30, 2012

Retirement, Withdrawal and Disability Decrements

- Based on experience for the 5 year period ending June 30, 2012

Salary Increases

- 6.75% with 0 years of service, grading down to 3.00% with 20 or more years of service

HIB Supplement

- 60% of future retirees will elect to receive the post-retirement health insurance premium supplement and 40% of those retirees will elect the dependent premium supplement

Audit Recommendations

Audit Recommendation Descriptions

- ## Historical Pay
  - Salaries are currently calculated by smoothing the prior 2 years of pay. Future pays and past pays are calculated by applying the assumed salary scale.
  - This change will use the prior years of historical salaries, up to 6 years, and project future pays and past pays from the historical pays with the assumed salary scale.

- ## New Entrants in Normal Cost
  - Normal cost does not currently account for any new entrants that will enter the Plan during the upcoming year.
  - This change will include a small load in the normal cost to account for new entrants that are assumed to enter the Plan during the year.

- ## 5 Year Amortization of Contribution Lag
  - Contribution rates are calculated as of the valuation date and go into effect in the following year. There is currently no method to account for this lag and a small gain or loss is created every year.
  - This change will include a 5 year open amortization of the difference between the calculated contribution rate and the actual contribution rate being paid to account for the lag and minimize futures gains or losses due to the lag.

- ## Large Benefit Adjustment in Mortality Rates for all Active and Inactive Members
  - All actives and inactive members are currently assumed to have no small or large benefit adjustment to the mortality rates during their retirement (as is currently applied for existing retirees).
  - This change assumes all active and inactive members will have the large benefit adjustment to the mortality rates during their retirement.

Plan Valuation Results with Audit Recommendations [401(a) and 401(h)]

	6/30/2013 Valuation Results	(1) 6/30/2014 Valuation Results	(2) Include Historical Pay, New Entrants in Normal Cost, and 5 Year Amortization of Contribution Lag	(3) Include Historical Pay, Phasing in New Entrants in Normal Cost over 3 years, and 5 Year Amortization of Contribution Lag	(4) Scenario (2) including Large Benefit Adjustment in Mortality Rates for all Actives and Inactives
Total Contribution Rate	22.96%	22.70%	23.23%	22.92%	23.93%
Funded Status – Actuarial Value of Assets	75.94%	76.87%	76.75%	76.75%	76.14%
Funded Status – Market Value of Assets	73.19%	82.10%	81.97%	81.97%	81.32%

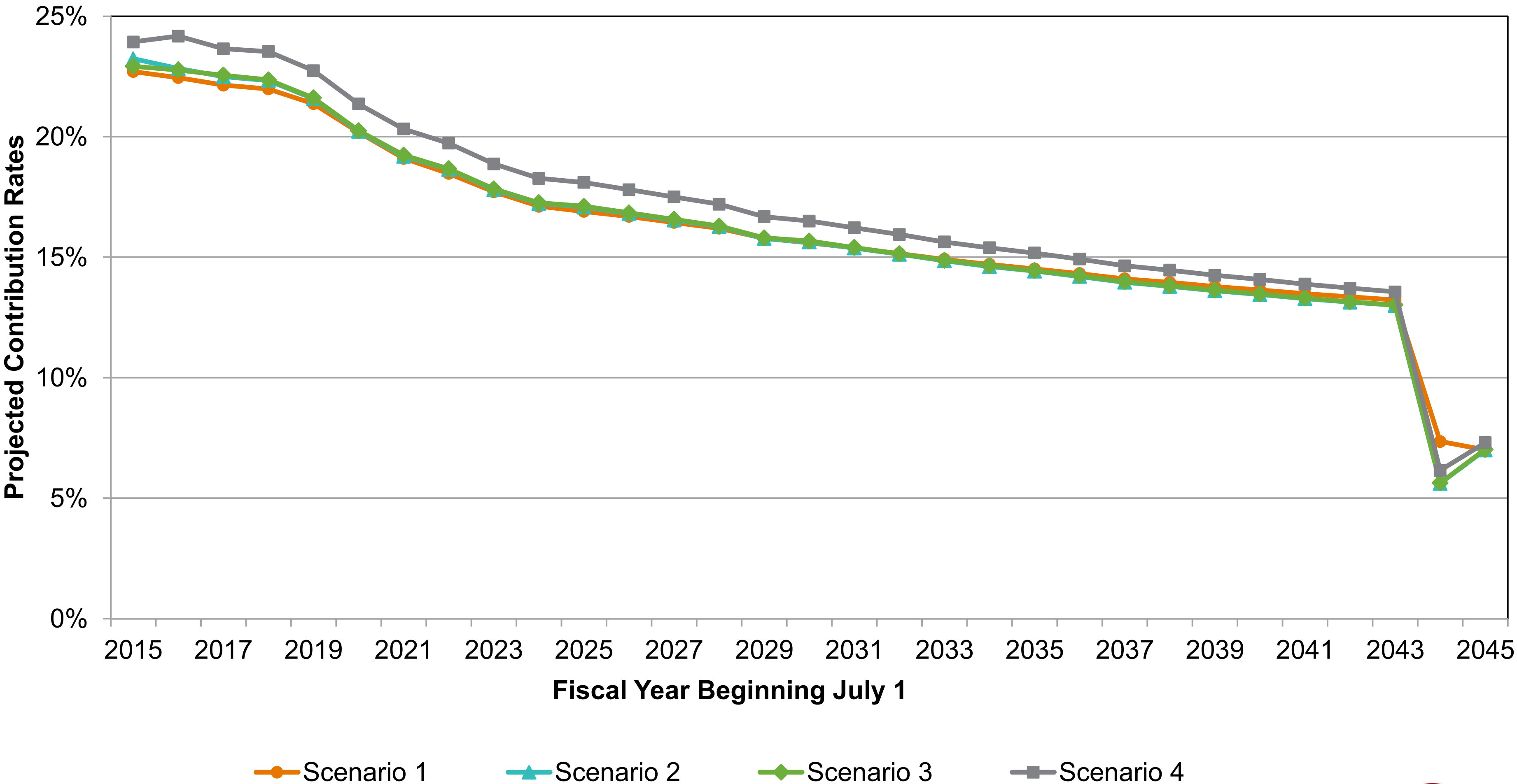
Audit Recommendation Projections

Current Mortality – Mortality improvements through 2015 are reflected throughout the projection period

- Scenario 1 – Baseline (no changes)
- Scenario 2 – Using historical pays, including a new entrant normal cost load, and amortizing the contribution lag over 5 years
- Scenario 3 – Same as Scenario 2, but the new entrant normal cost load is phased in over 3 years
- Scenario 4 – Same as Scenario 2, plus Active and Inactive members are assumed to have large mortality adjustment during retirement

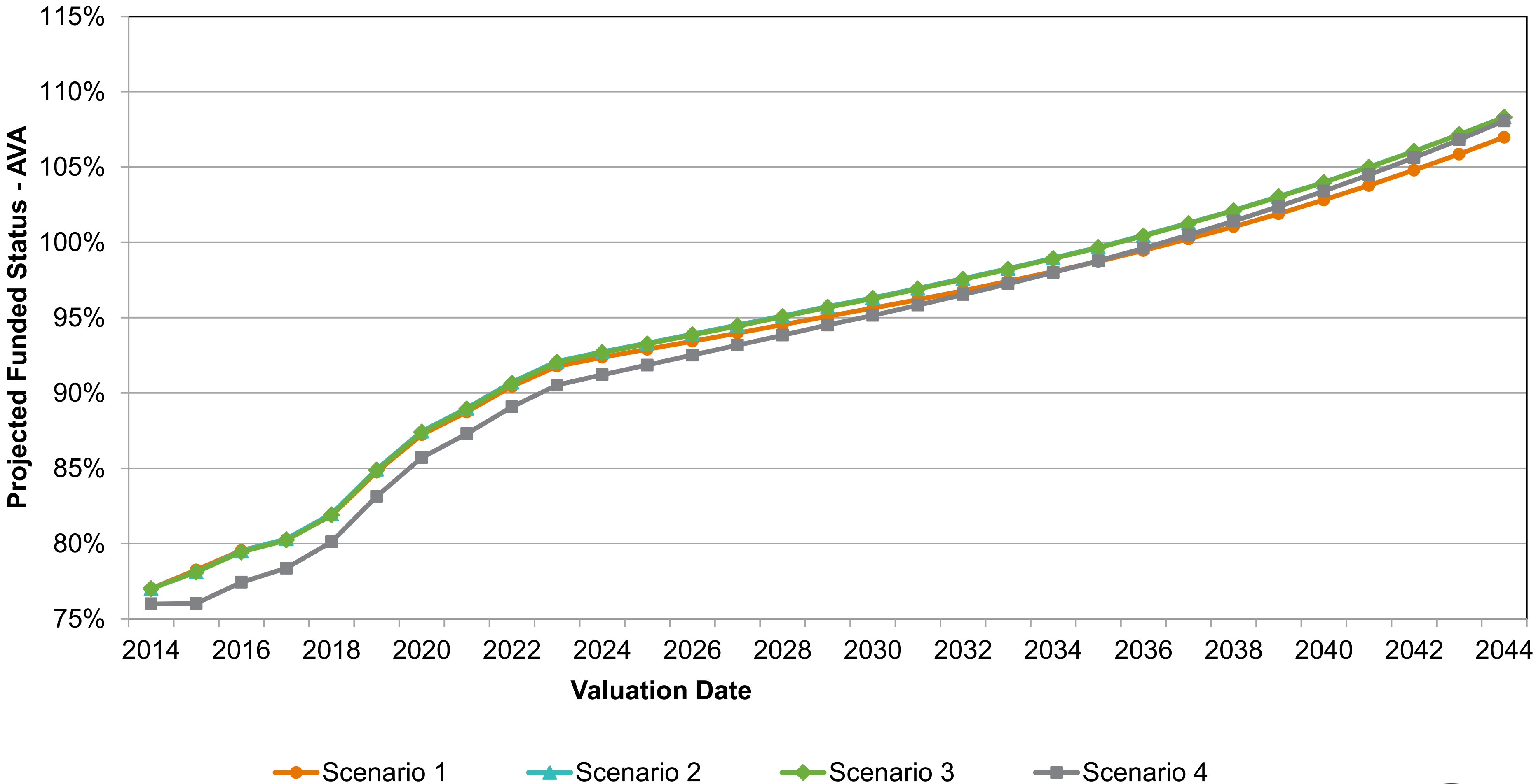
Projected Contribution Rates [401(a) and 401(h)]

Assumes future investment returns of 8.0% on Market Value of Assets and excludes future PBIs.
Assumes constant workforce size.



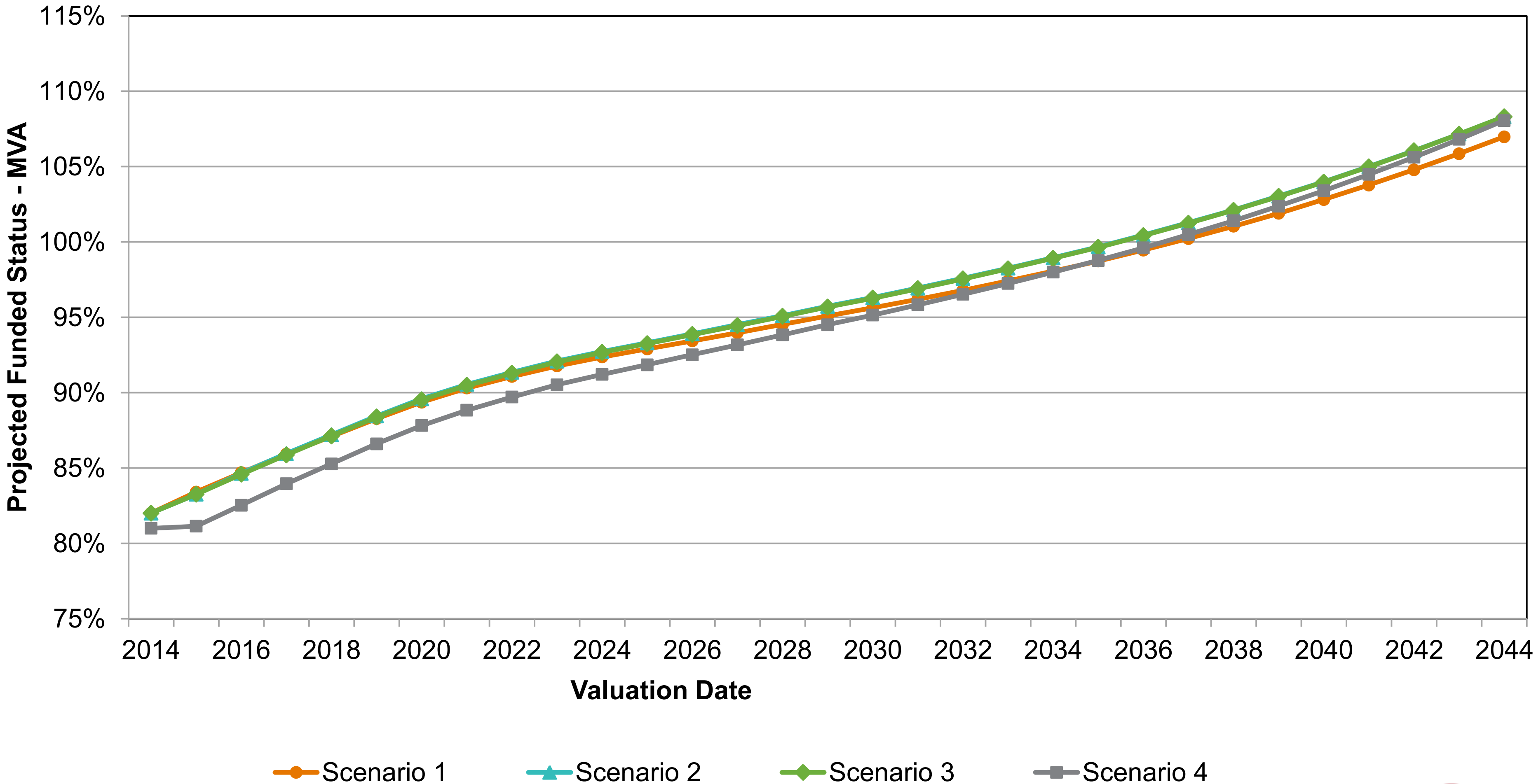
Projected Funded Status - AVA [401(a) and 401(h)]

Assumes future investment returns of 8.0% on Market Value of Assets and excludes future PBIs.
Assumes constant workforce size.



Projected Funded Status - MVA [401(a) and 401(h)]

Assumes future investment returns of 8.0% on Market Value of Assets and excludes future PBIs.
Assumes constant workforce size.



Audit Recommendation Projections

Anticipate Future Mortality Changes - Every 5 years, we update the year in which mortality improvements are reflected. For example, the projections for FY2019 include mortality improvements through 2020; the projections for FY2024 include mortality improvements through 2025, etc.

- Scenario 1 – Baseline (no changes)
- Scenario 2 – Using historical pays, including a new entrant normal cost load, and amortizing the contribution lag over 5 years
- Scenario 3 – Same as Scenario 2, but the new entrant normal cost load is phased in over 3 years
- Scenario 4 – Same as Scenario 2, plus Active and Inactive members are assumed to have large mortality adjustment during retirement

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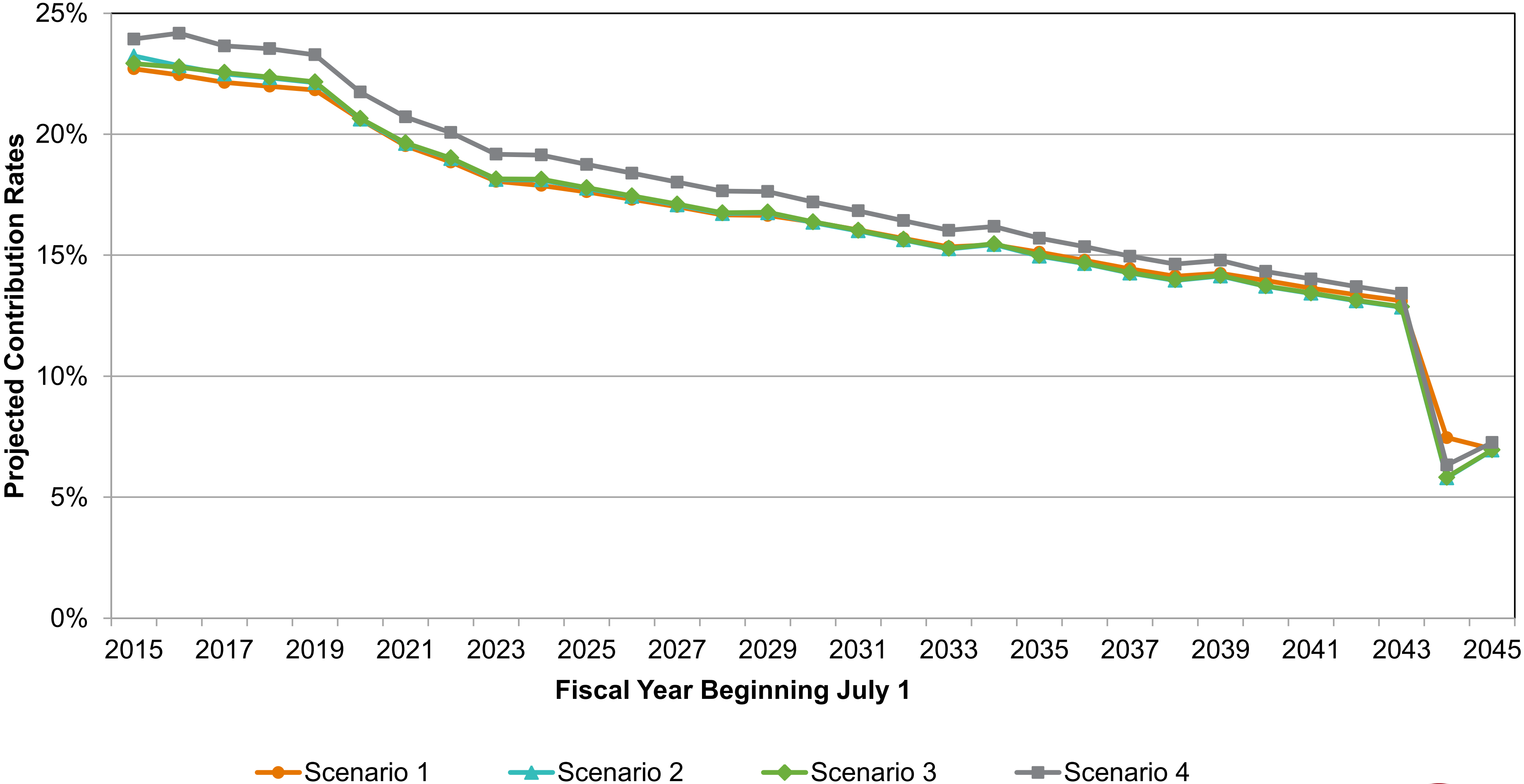
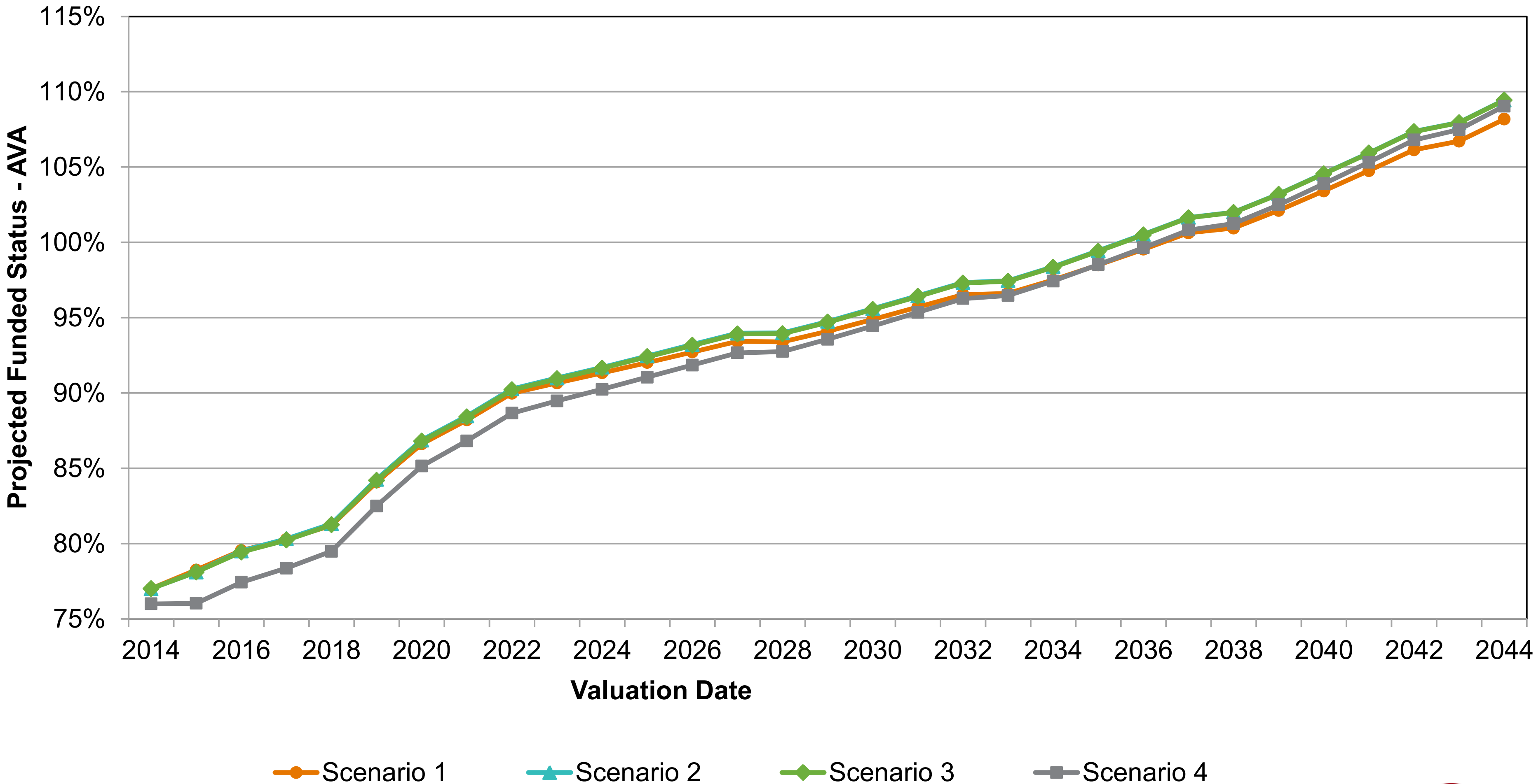
Projected Contribution Rates [401(a) and 401(h)]

Assumes future investment returns of 8.0% on Market Value of Assets and excludes future PBIs.
Assumes constant workforce size.



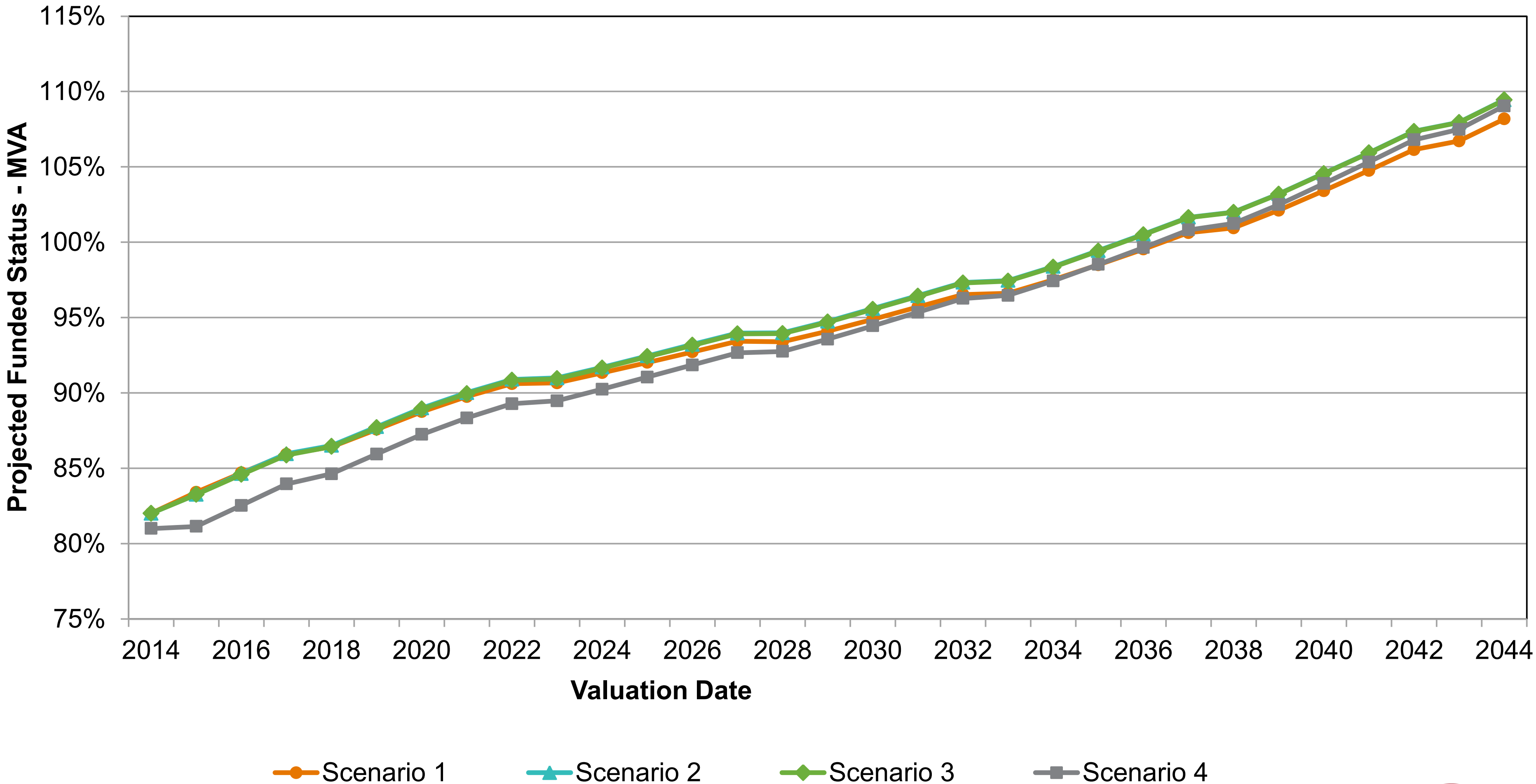
Projected Funded Status - AVA [401(a) and 401(h)]

Assumes future investment returns of 8.0% on Market Value of Assets and excludes future PBIs.
Assumes constant workforce size.



Projected Funded Status - MVA [401(a) and 401(h)]

Assumes future investment returns of 8.0% on Market Value of Assets and excludes future PBIs.
Assumes constant workforce size.



Questions

Appendix 1 – 401(a) Portion

Development of Contribution Rate [401(a) only – Total Rate]

	2013	2014
1. Total Normal Cost	13.06%	13.03%
2. Amortization of Unfunded Actuarial Accrued Liabilities	9.31%	9.17%
3. Total Measured Contribution Rate	22.37%	22.20%

Summary of Change in Contribution Rate [401(a) only– Total Rate]

	2013	2014
1. Calculated Contribution Rate Last Year	21.95%	22.37%
2. Plan Experience (Asset and Liability)	0.25%	(0.17)%
3. Plan Provision and Assumption/Method Changes*	0.16%	0.00%
4. System Experience Allocated to the Plan	0.01%	0.00%
5. Total Change	0.42%	(0.17)%
6. Contribution Rate Measured as of Valuation Date	22.37%	22.20%

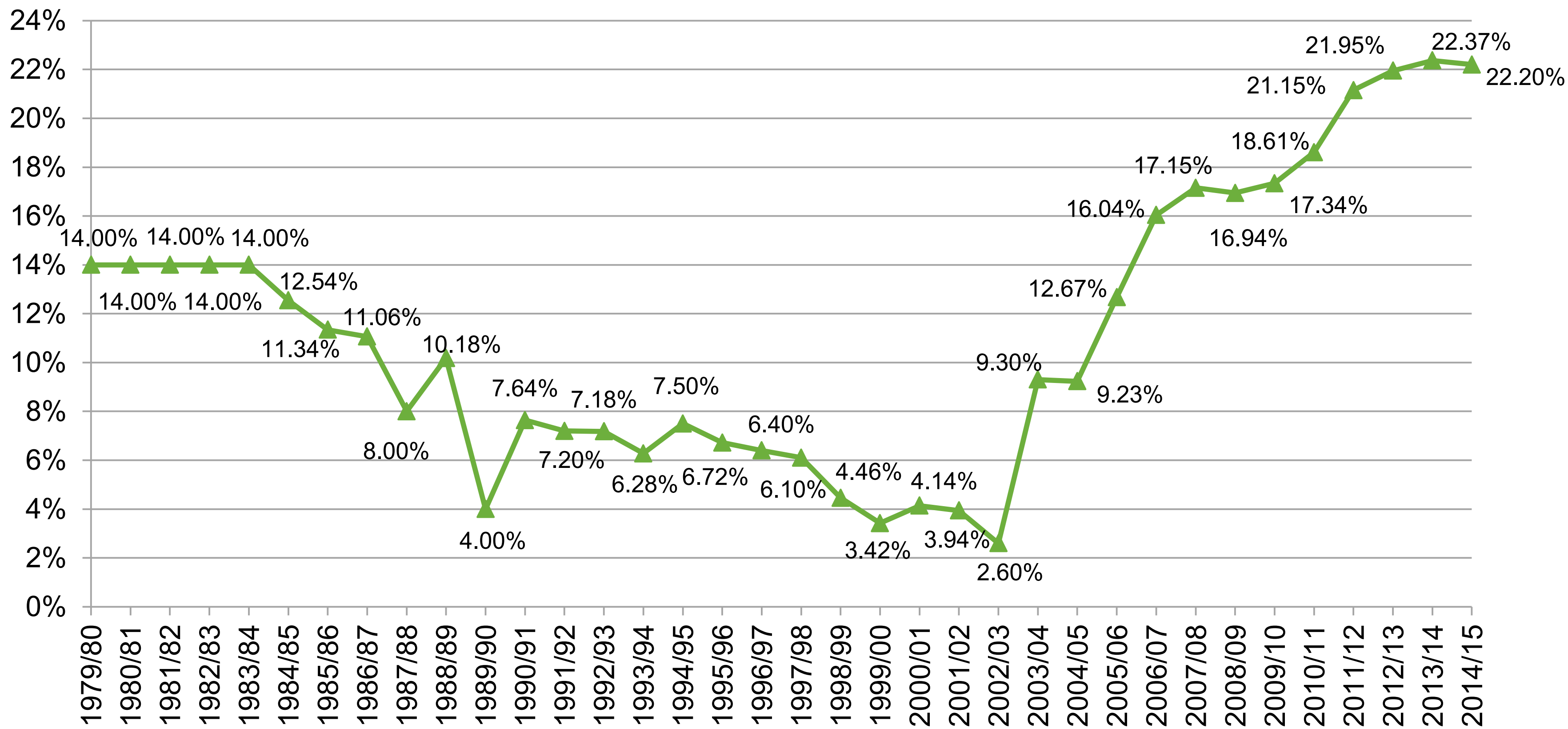
*Experience analysis assumption changes, interest on contributions changing to 2% and removal of the death annuity in 2012/13.

Change in Contribution Rate [401(a) only – Total Rate]

Basis	Total 401(a) Rate	Total 401(a) Rate Change	UAAL -- AVA -- ($Millions)	UAAL -- MVA -- ($Millions)
1. 2013 Valuation	22.37%	-	$9,801	$10,887
2. Expected Experience*	22.06%	-0.31%	$9,734	$10,907
3. Contribution Gain/Loss	22.06%	+0.00%	$9,734	$10,907
4. Liability Experience	22.10%	+0.04%	$9,697	$10,870
5. Asset Experience	22.20%	+0.10%	$9,801	$7,669
6. System Experience	22.20%	+0.00%	$9,801	$7,656

*Expected experience includes the changes expected from 2013 to 2014 due to passage of time and maturation of the plan.

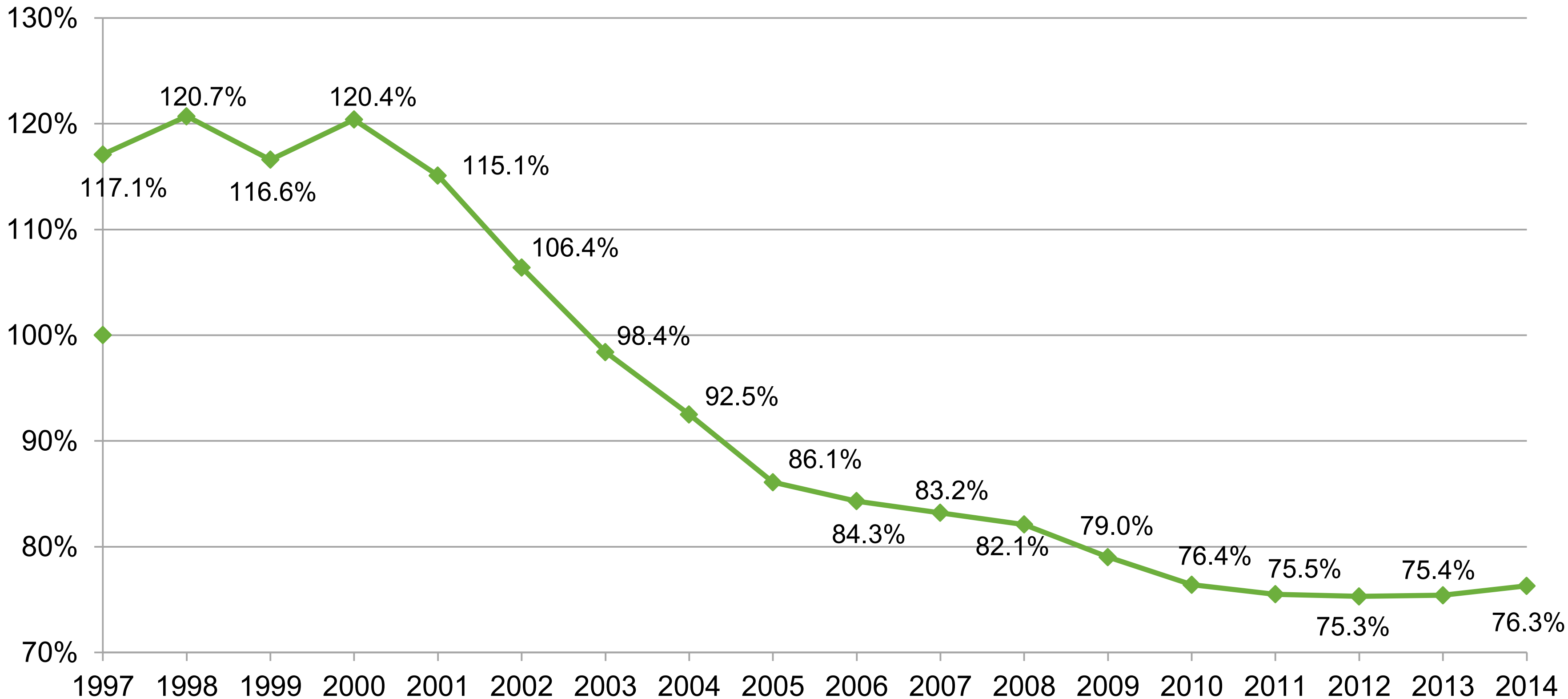
Contribution Rate for the Plan Year [401(a) only – Total Rate]



Prior to 1997, 401(a) and 401(h) contribution rates are combined.

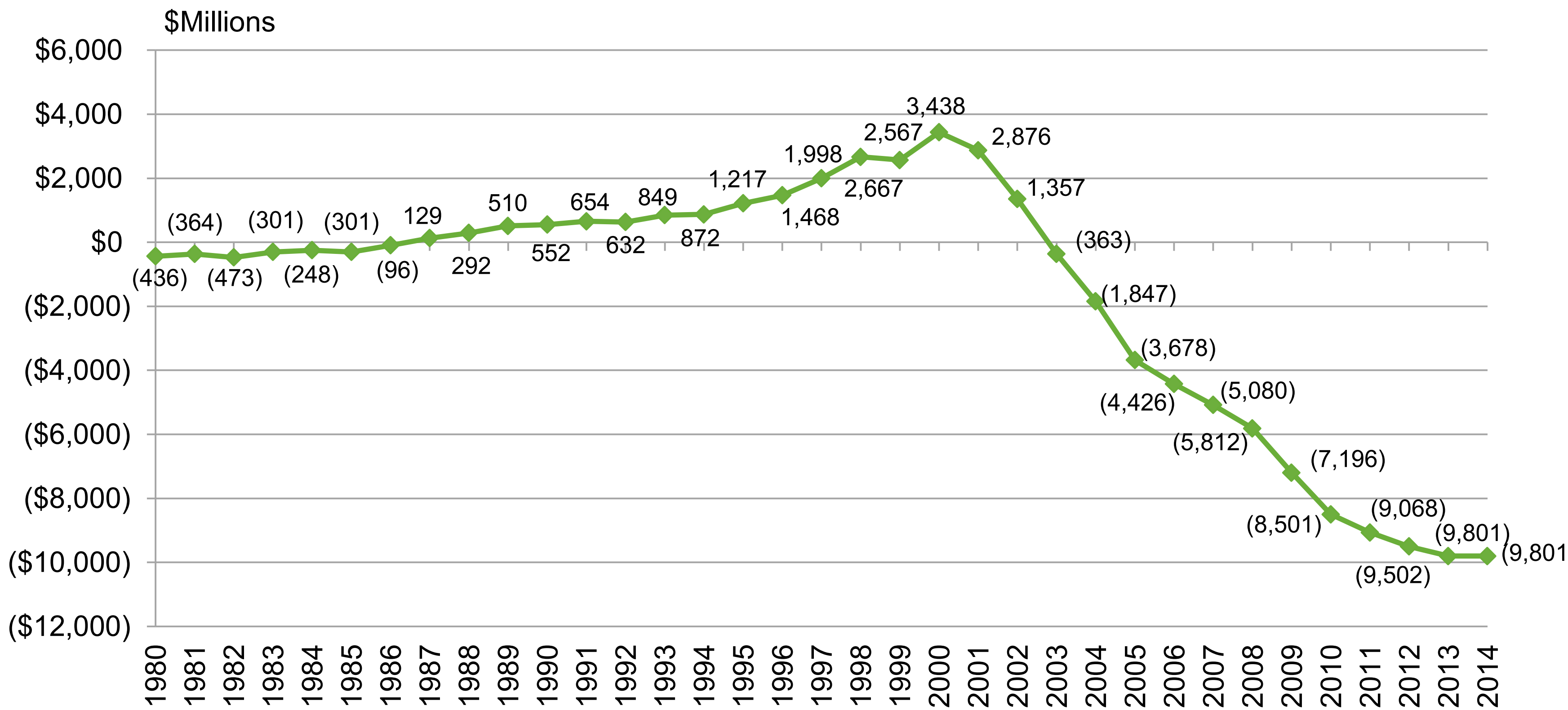
Includes System for 2010 and Beyond

Funded Ratio based on Actuarial Assets [401(a) only]



Includes System for 2010 and Beyond

Surplus / (Unfunded Accrued Liabilities) [401(a) only]



Prior to 1997, 401(a) and 401(h) liabilities are combined.

Includes System for 2010 and Beyond

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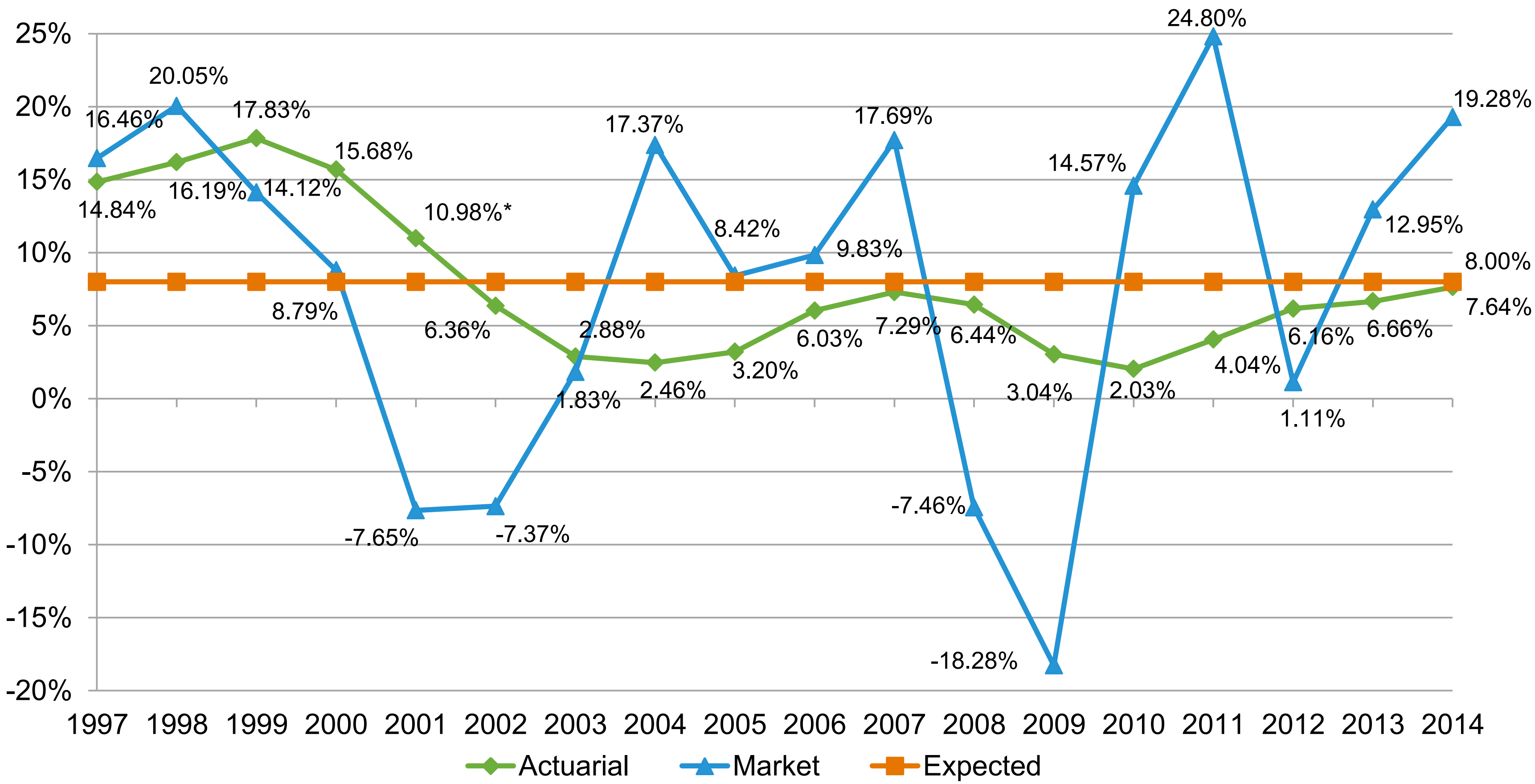
Actuarial Gain / (Loss) on Unfunded for the Year [401(a) only] ($ in Millions)

	2012/13	2013/14
1. Experience Liability Gain/(Loss)	$ 129	$ 37
2. Asset Gain/(Loss) on Actuarial Value of Assets	(376)	(104)
3. Permanent Benefit Increase (PBI) Excess Earnings Reserve for Fiscal Year	0	0
4. Plan Provision and Assumption/Method Changes*	32	0
5. Total Gain/(Loss)	$ (215)	$ (67)

*Experience analysis assumption changes, interest on contributions changing to 2% and removal of the death annuity in 2012/13.

Estimated Returns on Assets [401(a) only]



* Changed 2001 Actuarial Asset Yield to 10.41% and PBI adjusted in 2004 valuation

Excludes System

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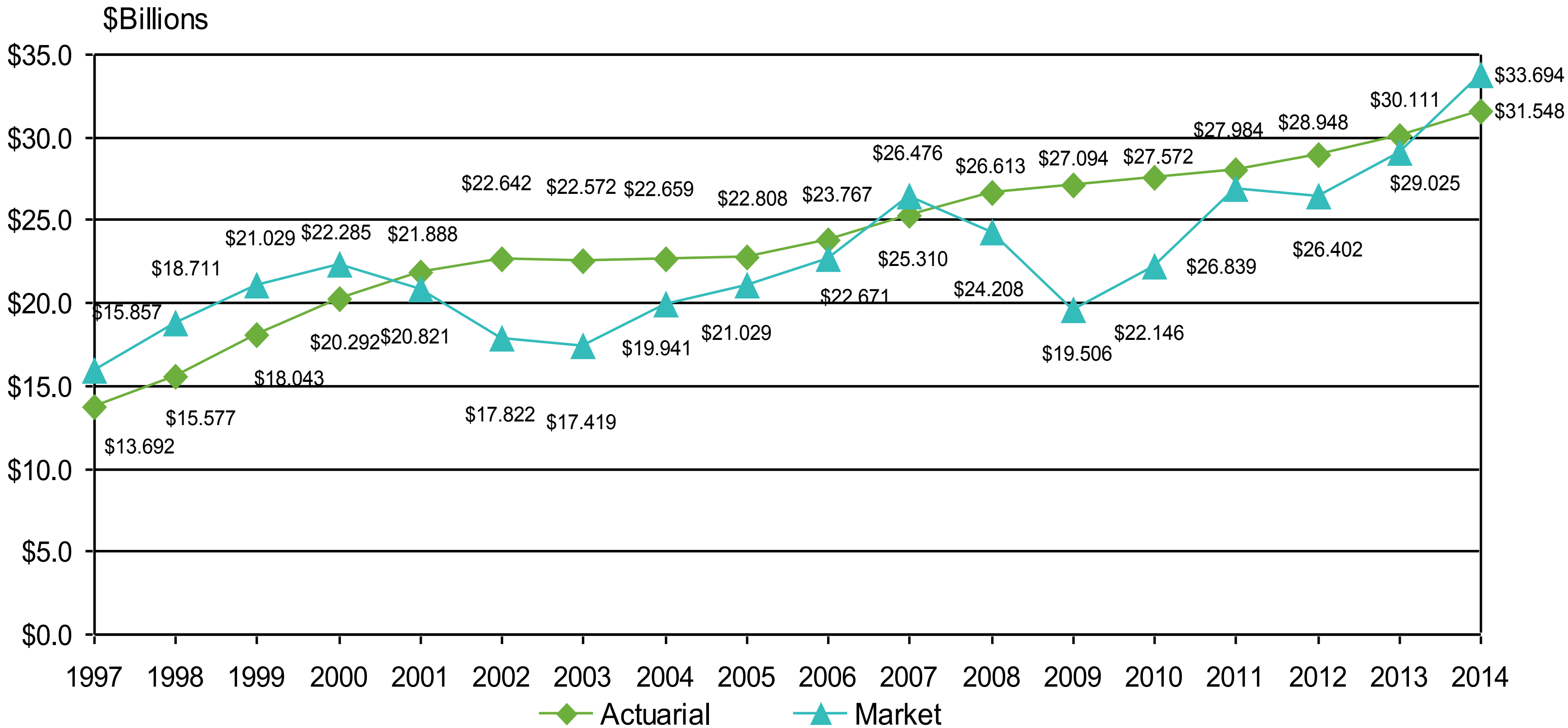
Market and Actuarial Values of Assets [401(a) only]



4.5% average increase in market value since 1997
5.0% average increase in actuarial value since 1997
Actuarial assets are 93.6% of market. Market assets exceed actuarial assets by $2.1 billion.

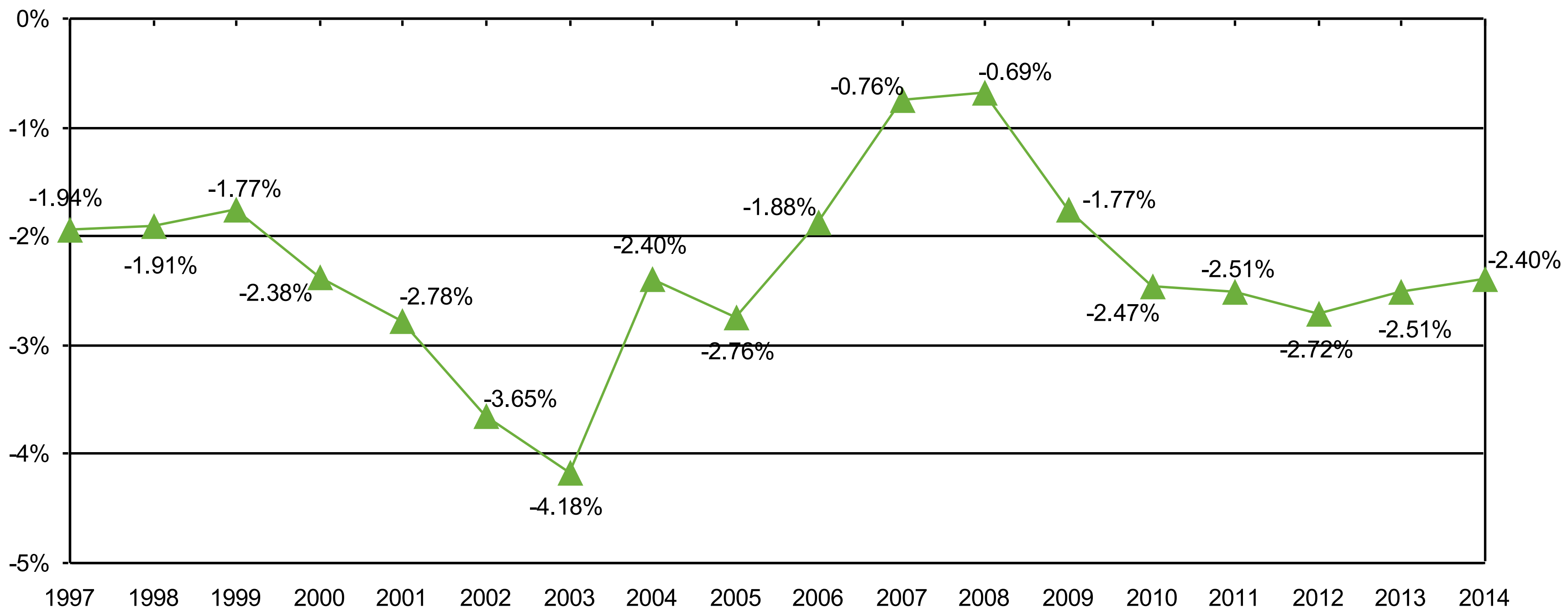
Includes System for 2010 and Beyond

Cash Flows [401(a) only]
($ in Millions)

	2012/13	2013/14
1. Beginning of Year Market Value*	$ 26,048	$ 28,677
2. Contributions	1,930	1,994
3. Actual Benefit Payments	(2,617)	(2,767)
4. Expenses and Fees	(33)	(26)
5. Transfers	1	0
6. Net Investment Return	3,348	5,459
7. End of Year Market Value*	$ 28,677	$ 33,337
8. System Assets Allocated to the Plan	348	357
9. End of Year Market Value Including System Assets	$ 29,025	$ 33,694

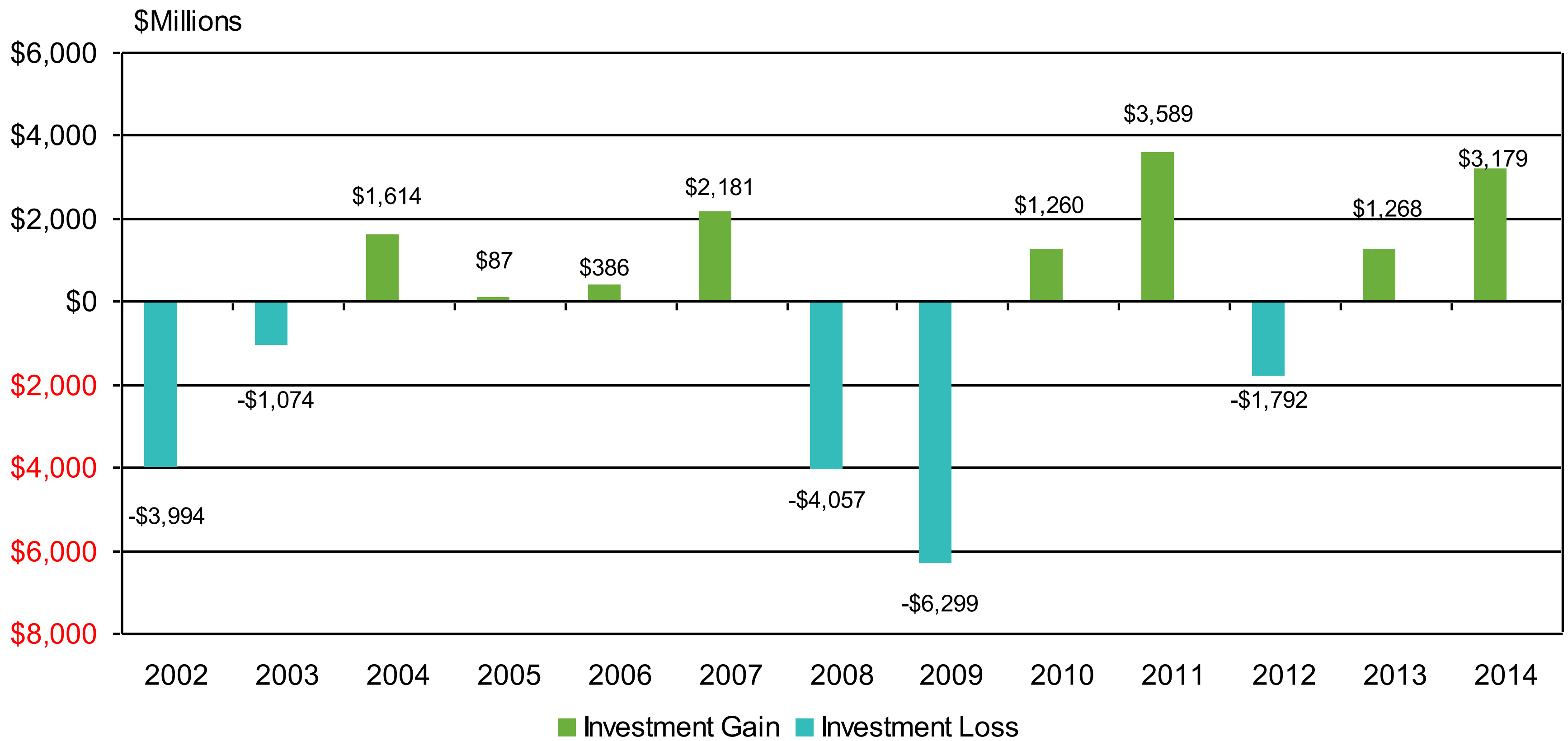
* Excludes System assets.

External Cash Flow as Percentage of Market Value [401(a) only]



Excludes System

Investment Gains and Losses on Market Value of Assets [401(a) only]



Excludes System

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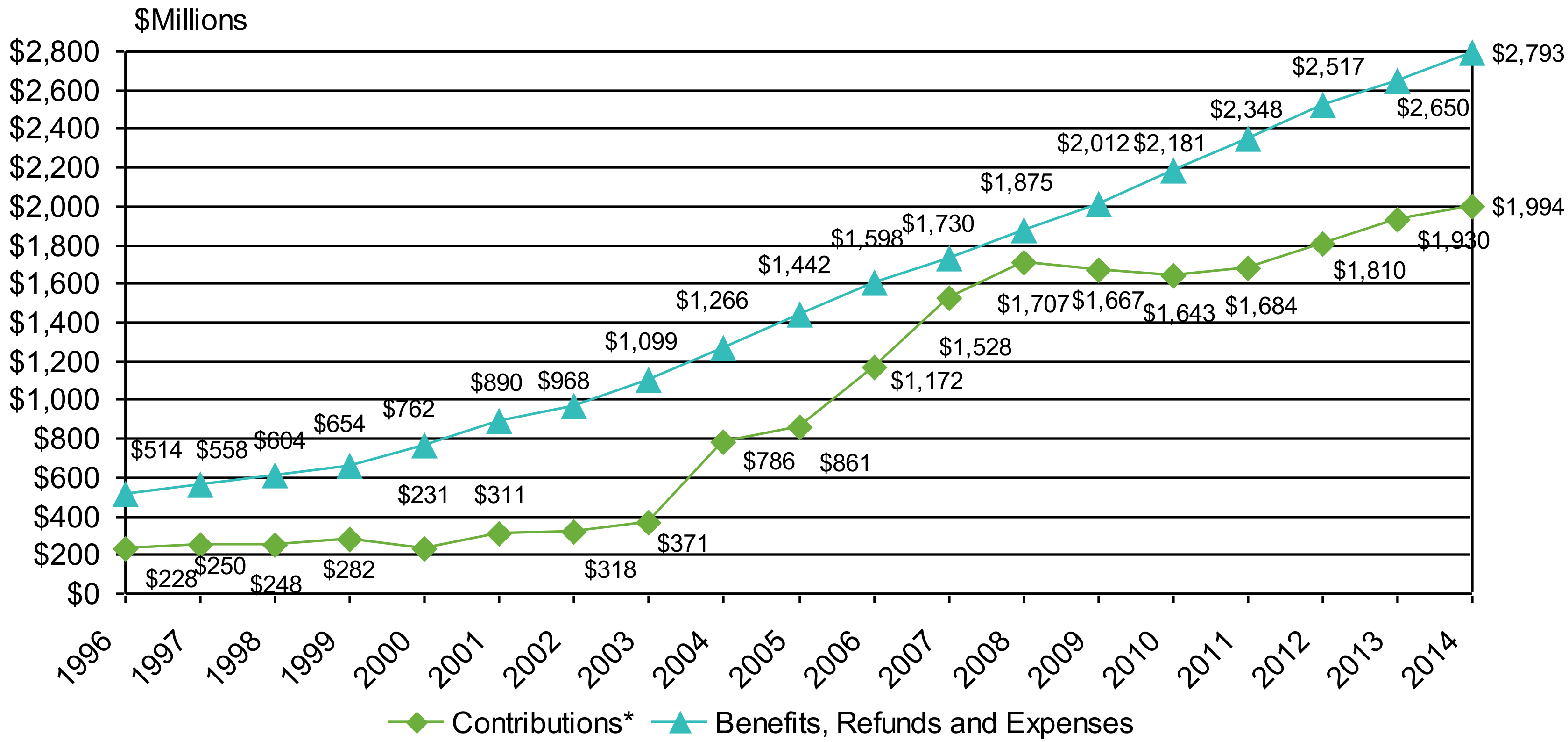
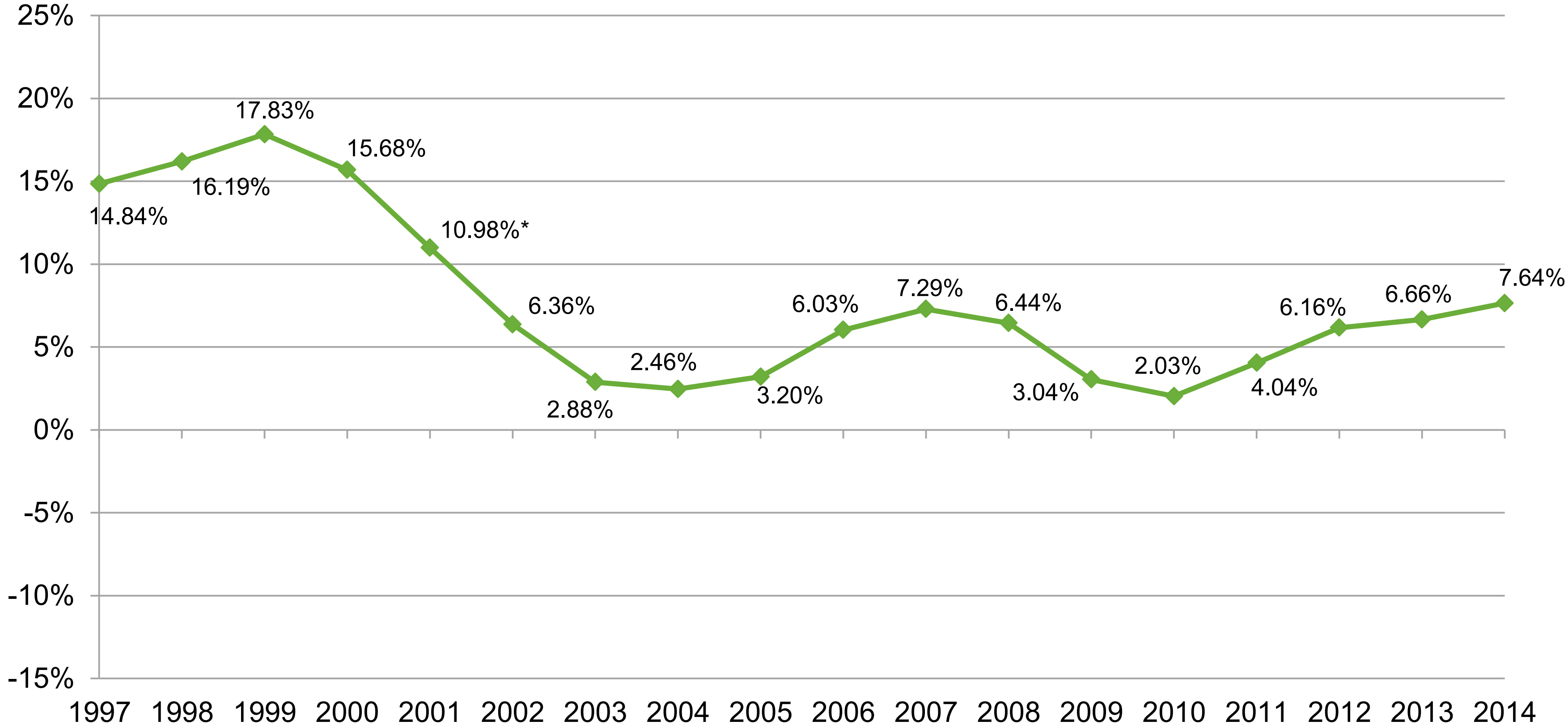
Contributions vs. Benefits, Refunds, and Expenses [401(a) only]



*Includes member contributions, employer contributions and service purchase contributions

Excludes System

Estimated Returns on Actuarial Value of Assets – For PBI Purposes [401(a) only]



*Changed 2001 Actuarial Asset Yield to 10.41% and PBI adjusted in 2004 valuation

Excludes System

Change in Reserves for Future Potential Permanent Benefit Increases (PBI)

1. Carry Forward After Payment of July 1, 2014 PBI, if any	$ 0
2. Excess Earnings for 2013/2014 Fiscal Year	0
3. Total Excess Earnings for July 1, 2015 PBI	$ 0
4. Permanent Benefit Increase (PBI) for July 1, 2015	$ 0
5. Enhanced Permanent Benefit Increases (EPBI) for July 1, 2015	$ 0

Permanent Benefit Increase

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Appendix 2 – 401(h) portion

Development of Contribution Rate [401(h) only – Total Rate]

	2013	2014
1. Total Normal Cost	0.39%	0.37%
2. Amortization of Unfunded Actuarial Accrued Liabilities	0.20%	0.13%
3. Total Measured Contribution Rate	0.59%	0.50%

Summary of Change in Contribution Rate [401(h) only – Total Rate]

	2013	2014
1. Calculated Contribution Rate Last Year	0.60%	0.59%
2. Plan Experience (Asset and Liability)	(0.05%)	(0.09%)
3. Plan Provision and Assumption/Method Changes*	0.04%	0.00%
4. Total Change	(0.01%)	(0.09%)
5. Contribution Rate Measured as of Valuation Date	0.59%	0.50%

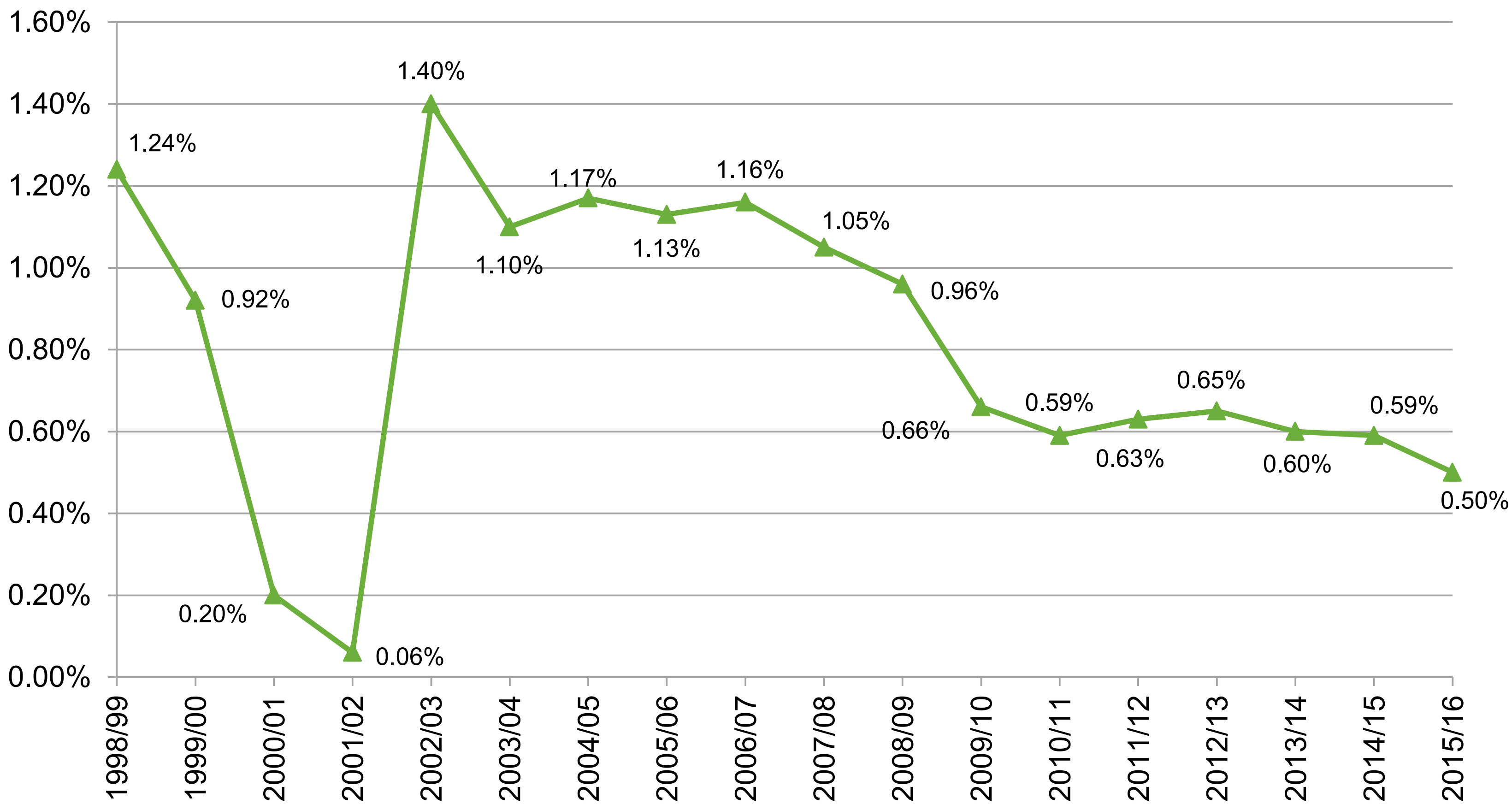
*Experience analysis assumption changes, interest on contributions changing to 2%, removal of the death annuity and 401(h) amortization period change to 15 years in 2013.

Change in Contribution Rate [401(h) only – Total Rate]

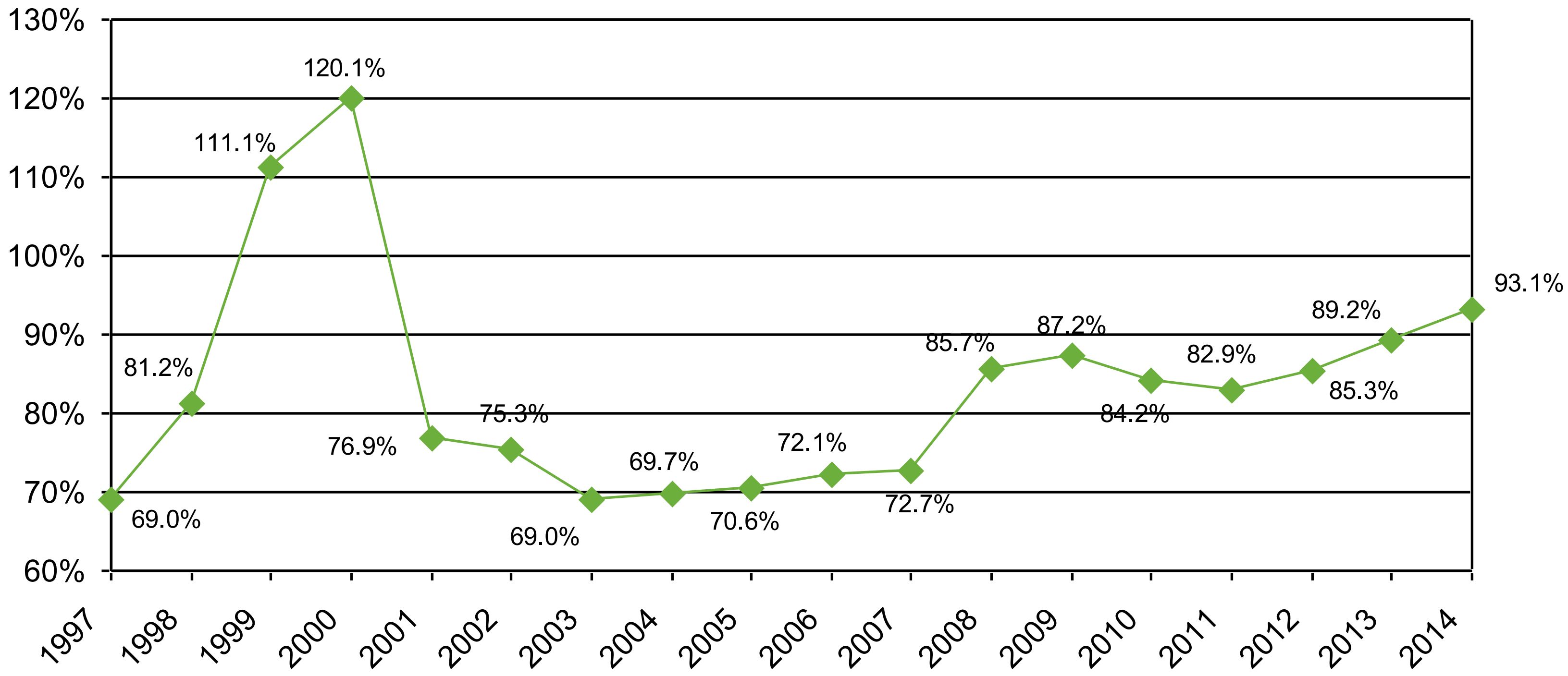
Basis	Total 401(h) Rate	Total 401(h) Rate Change	UAAL -- AVA -- ($Millions)	UAAL -- MVA -- ($Millions)
1. 2013 Valuation	0.59%	-	$160	$211
2. Expected Experience*	0.59%	+0.00%	$158	$213
3. Contribution Gain/Loss	0.58%	-0.01%	$153	$208
4. Liability Experience	0.49%	-0.09%	$97	$152
5. Asset Experience	0.50%	+0.01%	$103	$12

* Expected experience includes the changes expected from 2013 to 2014 due to passage of time and maturation of the plan.

Contribution Rate for the Plan Year [401(h) only – Total Rate]



Funded Ratio based on Actuarial Assets [401(h) only]



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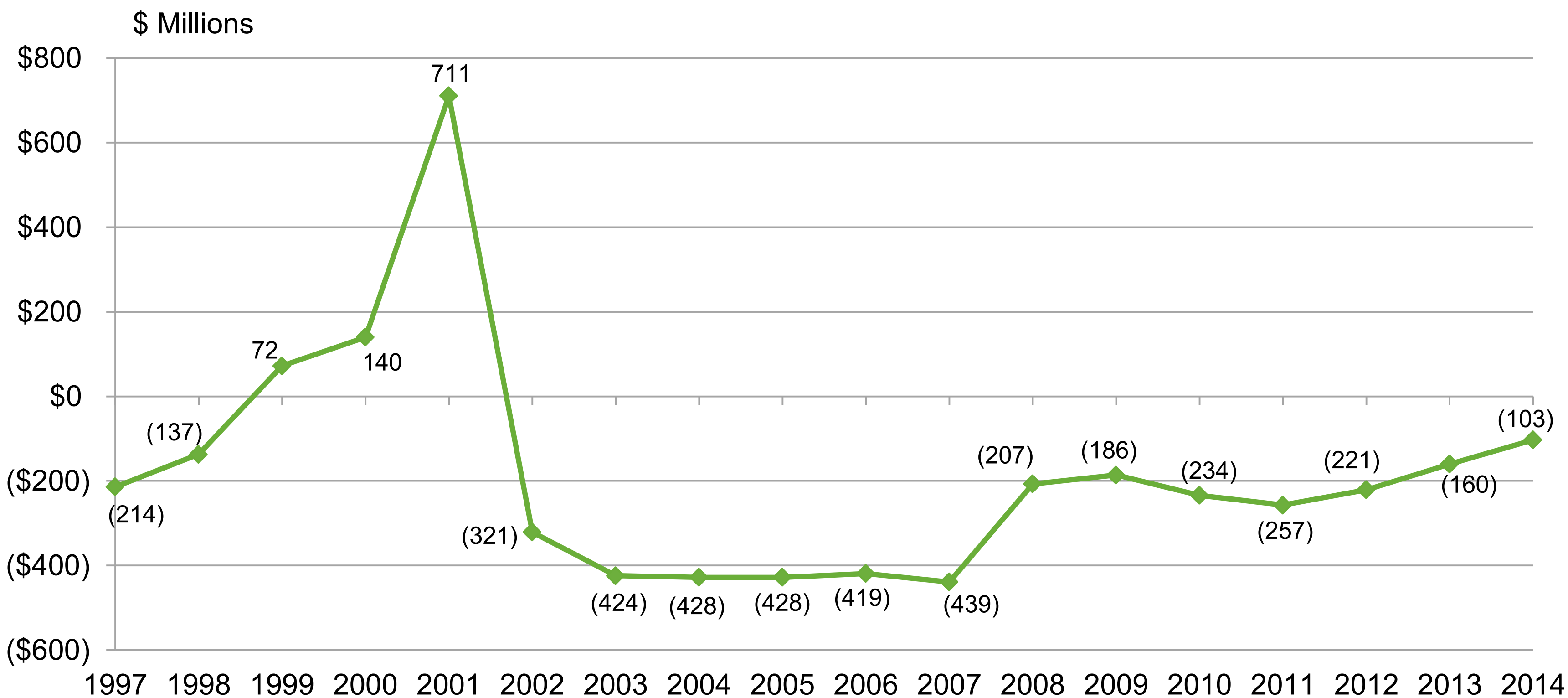
Surplus / (Unfunded Accrued Liabilities) [401(h) only]

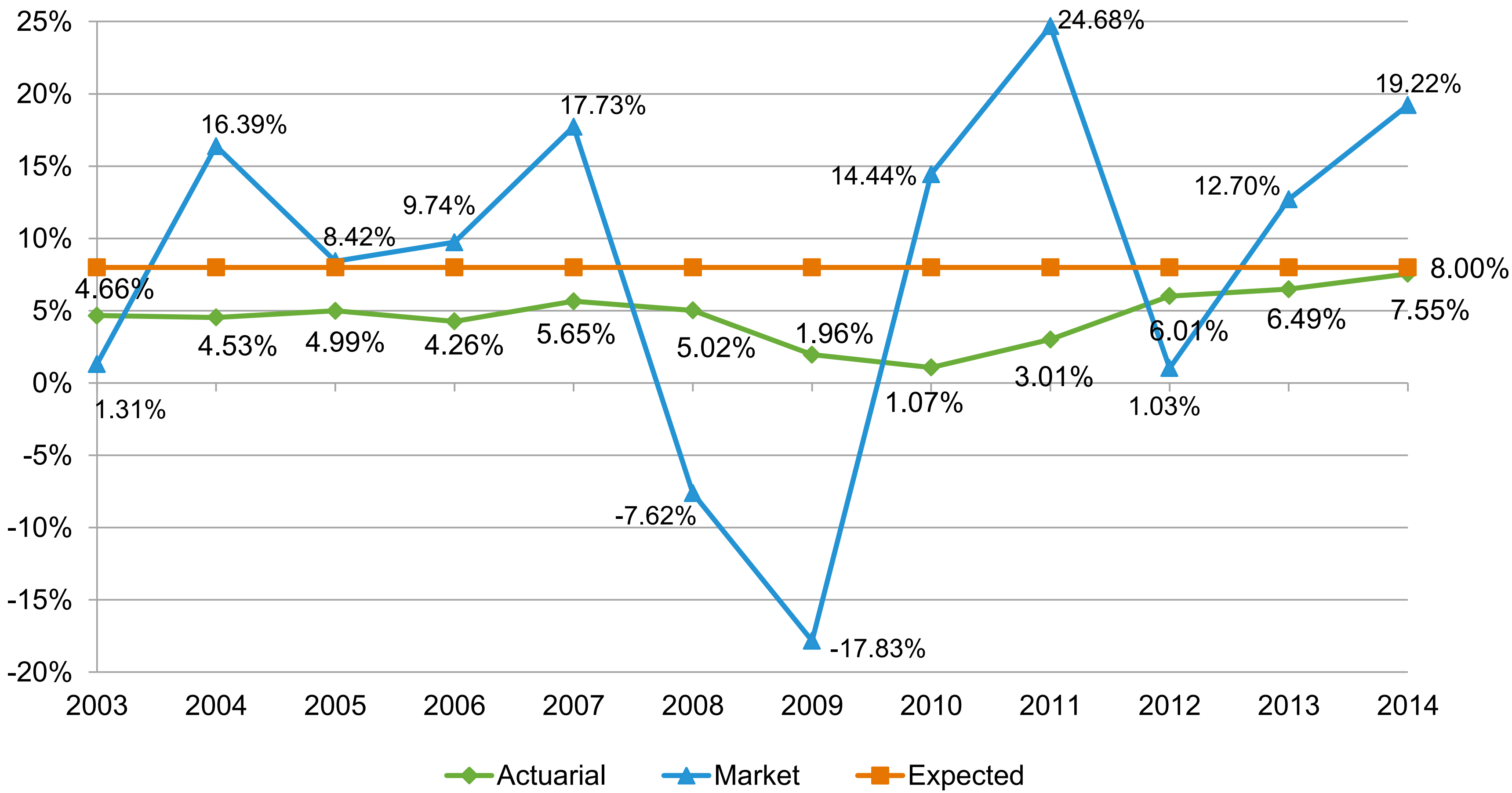


Actuarial Gain / (Loss) on Unfunded for the Year [401(h) only]
($ in Millions)

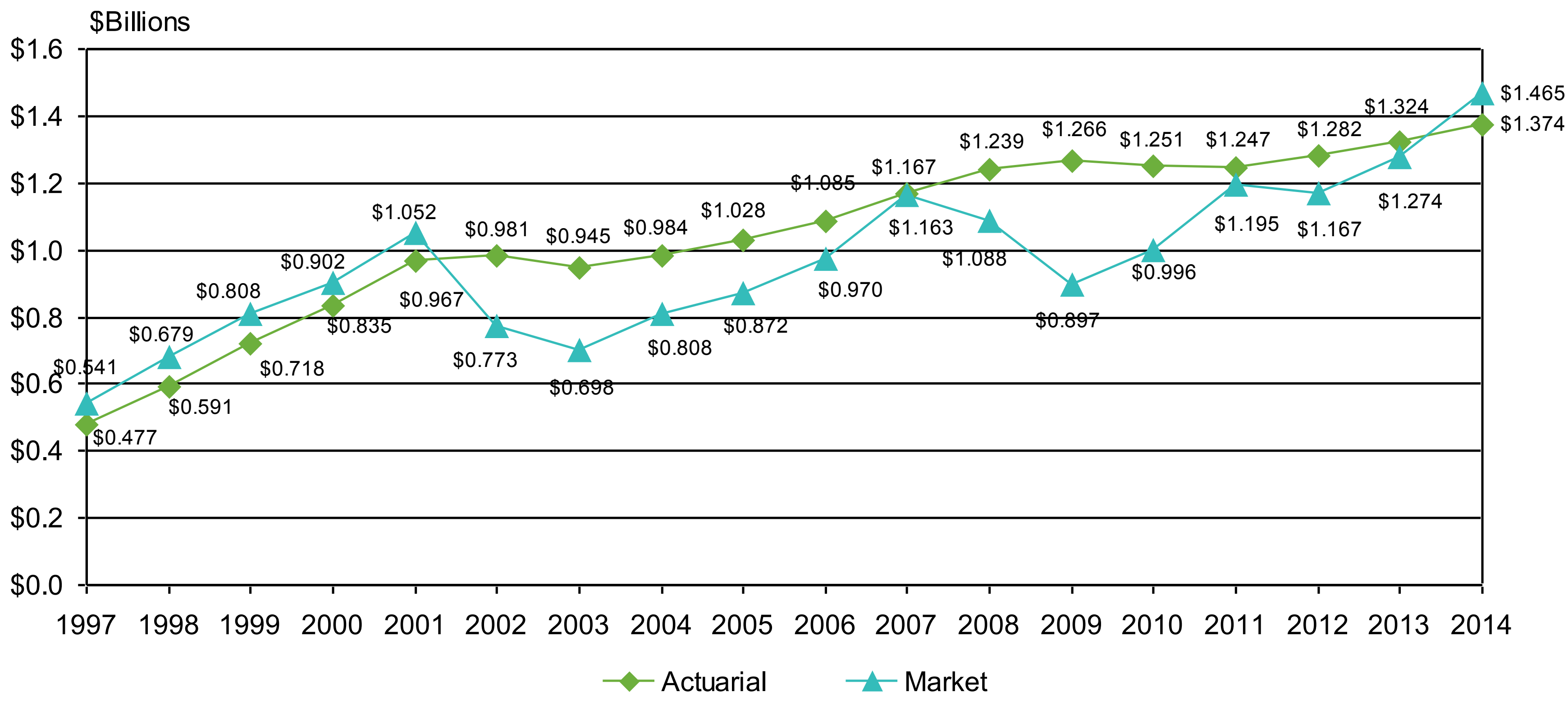
	2012/13	2013/14
1. Experience Liability Gain/(Loss)	$65	$56
2. Asset Gain/(Loss) on Actuarial Value of Assets	(19)	(6)
3. Plan Provision and Assumption/Method Changes*	11	0
4. Total Gain/(Loss)	$57	$50

*Experience analysis assumption changes, interest on contributions changing to 2%, removal of the death annuity and 401(h) amortization period change to 15 years in 2012/13.

Estimated Returns on Assets [401(h) only]



Market and Actuarial Values of Assets [401(h) only]



6.0% average increase in market value since 1997

6.4% average increase in actuarial value since 1997

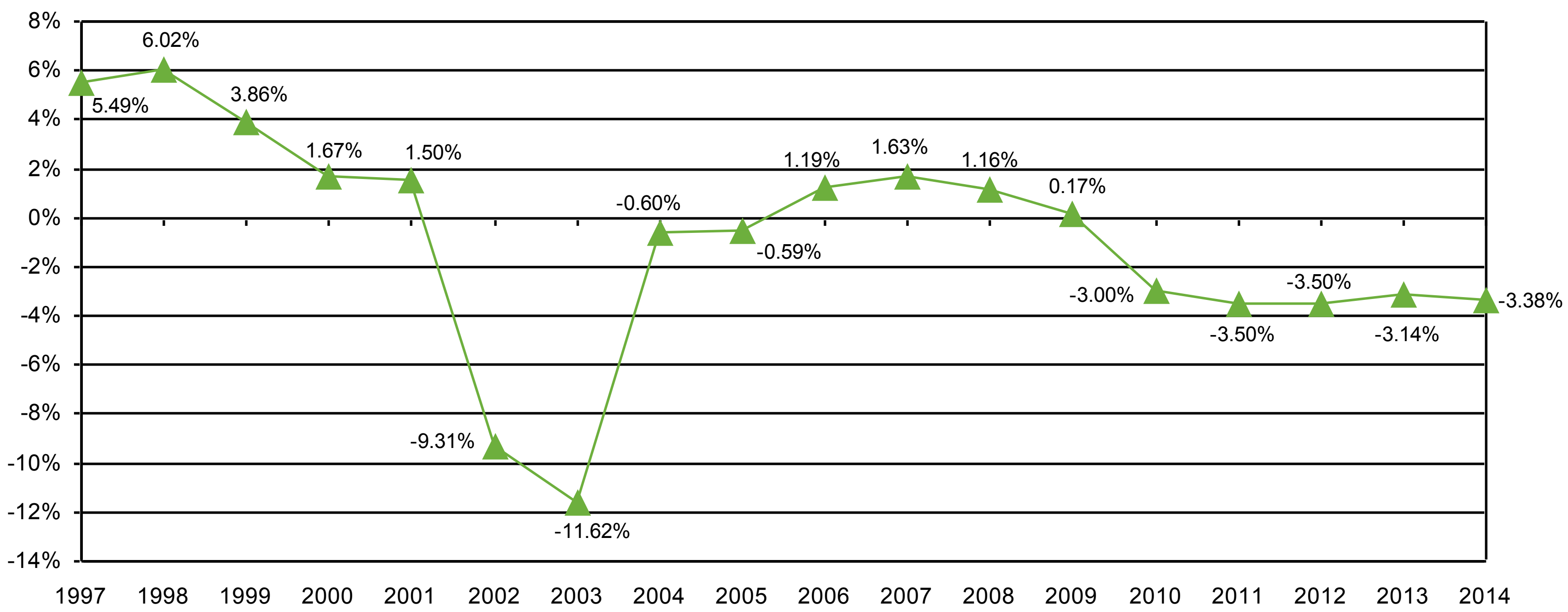
Actuarial assets are 93.8% of market. Market assets exceed actuarial assets by $91 million.

Cash Flows [401(h) only]
($ in Millions)

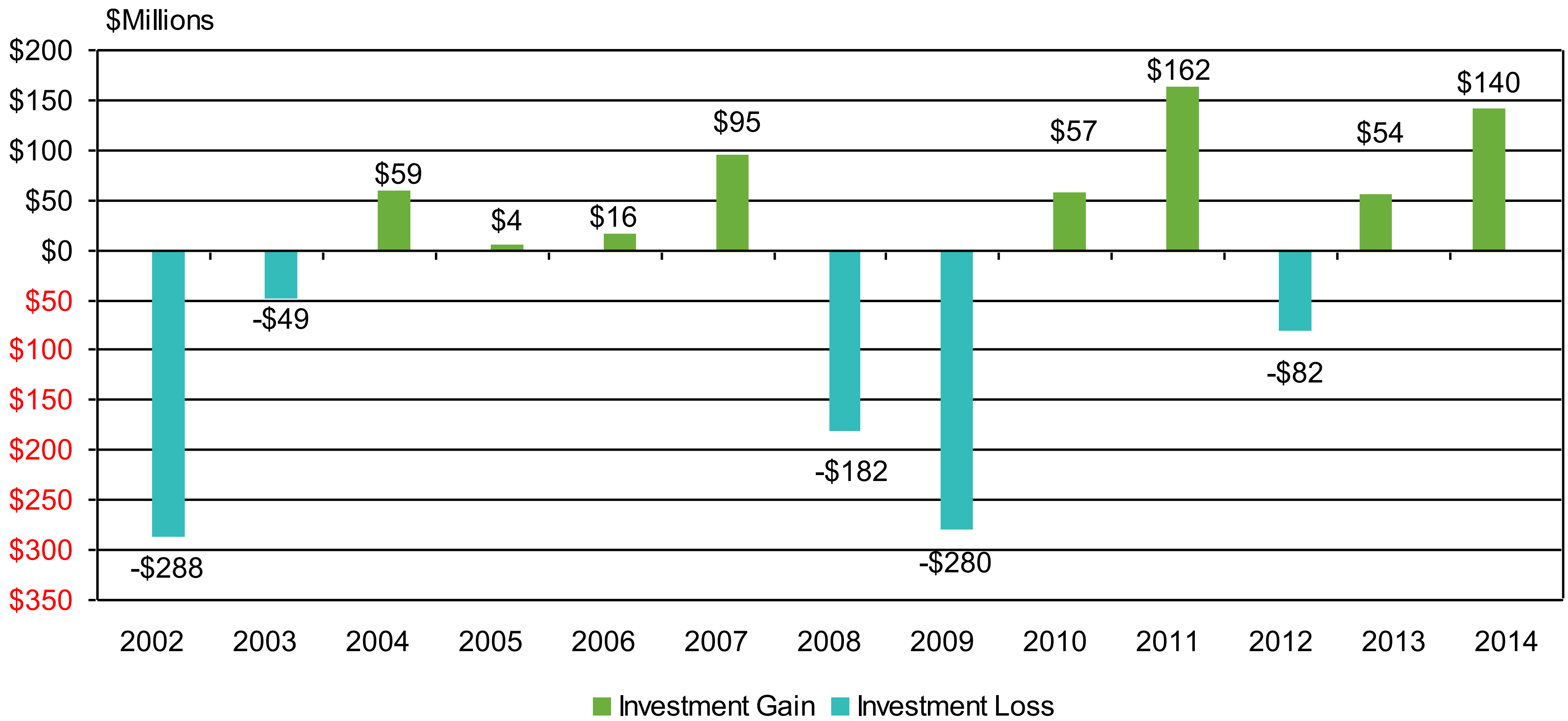
	2012/13	2013/14
1. Beginning of Year Market Value	$ 1,167	$ 1,274
2. Contributions*	57	53
3. Actual Benefit Payments	(96)	(102)
4. Expenses and Fees	(1)	(1)
5. Net Investment Return	147	241
6. End of Year Market Value	$ 1,274	$ 1,465

* Excludes ERPP, RRAA and Medical Loss Ratio amounts totaling $26 million in 2012/13 and $30 million in 2013/2014.

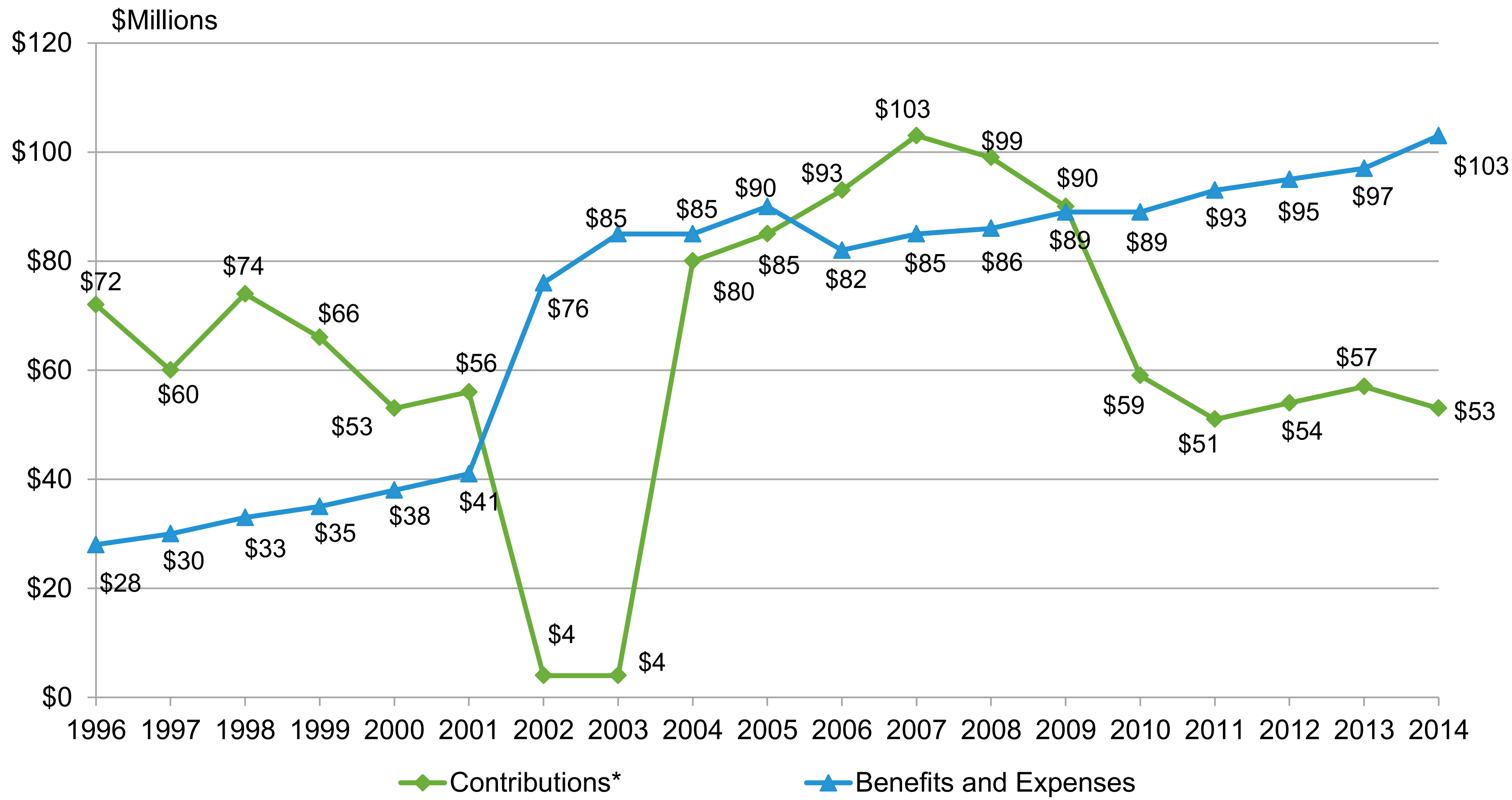
External Cash Flow as Percentage of Market Value [401(h) only]



Investment Gains and Losses on Market Value of Assets [401(h) only]



Contributions vs. Benefits and Expenses [401(h) only]



* Includes employer contributions and service purchase contributions.

Appendix 3 – Audit Recommendation Projection Tables

Audit Recommendation Projections

Current Mortality – Mortality improvements through 2015 are reflected throughout the projection period

- Scenario 1 – Baseline (no changes)
- Scenario 2 – Using historical pays, including a new entrant normal cost load, and amortizing the contribution lag over 5 years
- Scenario 3 – Same as Scenario 2, but the new entrant normal cost load is phased in over 3 years
- Scenario 4 – Same as Scenario 2, plus Active and Inactive members are assumed to have large mortality adjustment during retirement

Projected Contribution Rates [401(a) and 401(h)]

Fiscal Year Beginning July 1	Scenario 1	Scenario 2	Scenario 3	Scenario 4
2015	22.70%	23.23%	22.92%	23.93%
2016	22.45%	22.83%	22.77%	24.17%
2017	22.14%	22.49%	22.55%	23.65%
2018	21.98%	22.33%	22.36%	23.53%
2019	21.37%	21.57%	21.61%	22.74%
2020	20.18%	20.22%	20.25%	21.36%
2021	19.10%	19.19%	19.23%	20.32%
2022	18.47%	18.64%	18.67%	19.73%
2023	17.71%	17.80%	17.83%	18.87%
2024	17.11%	17.23%	17.26%	18.27%
2025	16.90%	17.08%	17.11%	18.10%
2026	16.69%	16.81%	16.84%	17.80%
2027	16.44%	16.54%	16.57%	17.50%
2028	16.20%	16.27%	16.29%	17.20%
2029	15.78%	15.77%	15.80%	16.68%
2030	15.60%	15.63%	15.67%	16.50%
2031	15.39%	15.38%	15.40%	16.22%
2032	15.15%	15.12%	15.14%	15.94%
2033	14.91%	14.85%	14.87%	15.63%
2034	14.70%	14.61%	14.64%	15.39%
2035	14.51%	14.42%	14.44%	15.17%
2036	14.32%	14.20%	14.23%	14.92%
2037	14.10%	13.96%	13.98%	14.64%
2038	13.95%	13.79%	13.81%	14.46%
2039	13.78%	13.61%	13.63%	14.25%
2040	13.64%	13.45%	13.47%	14.07%
2041	13.48%	13.28%	13.30%	13.88%
2042	13.35%	13.13%	13.15%	13.71%
2043	13.22%	13.00%	13.02%	13.56%
2044	7.35%	5.61%	5.63%	6.15%
2045	7.00%	7.00%	7.02%	7.30%

Projected Funded Status - AVA [401(a) and 401(h)]

Valuation Date	Scenario 1	Scenario 2	Scenario 3	Scenario 4
6/30/2014	77%	77%	77%	76%
6/30/2015	78%	78%	78%	76%
6/30/2016	80%	80%	79%	77%
6/30/2017	80%	80%	80%	78%
6/30/2018	82%	82%	82%	80%
6/30/2019	85%	85%	85%	83%
6/30/2020	87%	87%	87%	86%
6/30/2021	89%	89%	89%	87%
6/30/2022	90%	91%	91%	89%
6/30/2023	92%	92%	92%	91%
6/30/2024	92%	93%	93%	91%
6/30/2025	93%	93%	93%	92%
6/30/2026	93%	94%	94%	93%
6/30/2027	94%	95%	94%	93%
6/30/2028	95%	95%	95%	94%
6/30/2029	95%	96%	96%	95%
6/30/2030	96%	96%	96%	95%
6/30/2031	96%	97%	97%	96%
6/30/2032	97%	98%	98%	97%
6/30/2033	97%	98%	98%	97%
6/30/2034	98%	99%	99%	98%
6/30/2035	99%	100%	100%	99%
6/30/2036	99%	100%	100%	100%
6/30/2037	100%	101%	101%	100%
6/30/2038	101%	102%	102%	101%
6/30/2039	102%	103%	103%	102%
6/30/2040	103%	104%	104%	103%
6/30/2041	104%	105%	105%	104%
6/30/2042	105%	106%	106%	106%
6/30/2043	106%	107%	107%	107%
6/30/2044	107%	108%	108%	108%

Projected Funded Status - MVA [401(a) and 401(h)]

Valuation Date	Scenario 1	Scenario 2	Scenario 3	Scenario 4
6/30/2014	82%	82%	82%	81%
6/30/2015	83%	83%	83%	81%
6/30/2016	85%	85%	85%	83%
6/30/2017	86%	86%	86%	84%
6/30/2018	87%	87%	87%	85%
6/30/2019	88%	88%	88%	87%
6/30/2020	89%	90%	90%	88%
6/30/2021	90%	91%	90%	89%
6/30/2022	91%	91%	91%	90%
6/30/2023	92%	92%	92%	91%
6/30/2024	92%	93%	93%	91%
6/30/2025	93%	93%	93%	92%
6/30/2026	93%	94%	94%	93%
6/30/2027	94%	95%	94%	93%
6/30/2028	95%	95%	95%	94%
6/30/2029	95%	96%	96%	95%
6/30/2030	96%	96%	96%	95%
6/30/2031	96%	97%	97%	96%
6/30/2032	97%	98%	98%	97%
6/30/2033	97%	98%	98%	97%
6/30/2034	98%	99%	99%	98%
6/30/2035	99%	100%	100%	99%
6/30/2036	99%	100%	100%	100%
6/30/2037	100%	101%	101%	100%
6/30/2038	101%	102%	102%	101%
6/30/2039	102%	103%	103%	102%
6/30/2040	103%	104%	104%	103%
6/30/2041	104%	105%	105%	104%
6/30/2042	105%	106%	106%	106%
6/30/2043	106%	107%	107%	107%
6/30/2044	107%	108%	108%	108%

Audit Recommendation Projections

Anticipate Future Mortality Changes - Every 5 years, we update the year in which mortality improvements are reflected. For example, the projections for FY2019 include mortality improvements through 2020; the projections for FY2024 include mortality improvements through 2025, etc.

- Scenario 1 – Baseline (no changes)
- Scenario 2 – Using historical pays, including a new entrant normal cost load, and amortizing the contribution lag over 5 years
- Scenario 3 – Same as Scenario 2, but the new entrant normal cost load is phased in over 3 years
- Scenario 4 – Same as Scenario 2, plus Active and Inactive members are assumed to have large mortality adjustment during retirement

Projected Contribution Rates [401(a) and 401(h)]

Fiscal Year Beginning July 1	Scenario 1	Scenario 2	Scenario 3	Scenario 4
2015	22.70%	23.23%	22.92%	23.93%
2016	22.45%	22.83%	22.77%	24.17%
2017	22.14%	22.49%	22.55%	23.65%
2018	21.98%	22.33%	22.36%	23.53%
2019	21.83%	22.13%	22.16%	23.28%
2020	20.61%	20.62%	20.65%	21.74%
2021	19.52%	19.61%	19.64%	20.71%
2022	18.85%	18.99%	19.02%	20.07%
2023	18.05%	18.12%	18.15%	19.17%
2024	17.88%	18.11%	18.14%	19.14%
2025	17.62%	17.76%	17.79%	18.75%
2026	17.31%	17.42%	17.45%	18.39%
2027	17.01%	17.08%	17.11%	18.02%
2028	16.67%	16.72%	16.75%	17.65%
2029	16.64%	16.75%	16.78%	17.63%
2030	16.37%	16.35%	16.38%	17.20%
2031	16.04%	16.00%	16.03%	16.83%
2032	15.69%	15.63%	15.65%	16.43%
2033	15.34%	15.26%	15.28%	16.03%
2034	15.43%	15.44%	15.47%	16.19%
2035	15.12%	14.96%	14.99%	15.70%
2036	14.79%	14.65%	14.68%	15.35%
2037	14.44%	14.26%	14.28%	14.96%
2038	14.13%	13.96%	13.98%	14.63%
2039	14.25%	14.14%	14.16%	14.79%
2040	13.95%	13.71%	13.73%	14.33%
2041	13.64%	13.42%	13.44%	14.02%
2042	13.36%	13.11%	13.13%	13.70%
2043	13.11%	12.85%	12.87%	13.42%
2044	7.46%	5.80%	5.82%	6.33%
2045	6.99%	6.94%	6.95%	7.26%

Projected Funded Status - AVA [401(a) and 401(h)]

Valuation Date	Scenario 1	Scenario 2	Scenario 3	Scenario 4
6/30/2014	77%	77%	77%	76%
6/30/2015	78%	78%	78%	76%
6/30/2016	80%	80%	79%	77%
6/30/2017	80%	80%	80%	78%
6/30/2018	81%	81%	81%	79%
6/30/2019	84%	84%	84%	82%
6/30/2020	87%	87%	87%	85%
6/30/2021	88%	88%	88%	87%
6/30/2022	90%	90%	90%	89%
6/30/2023	91%	91%	91%	89%
6/30/2024	91%	92%	92%	90%
6/30/2025	92%	92%	92%	91%
6/30/2026	93%	93%	93%	92%
6/30/2027	93%	94%	94%	93%
6/30/2028	93%	94%	94%	93%
6/30/2029	94%	95%	95%	94%
6/30/2030	95%	96%	96%	94%
6/30/2031	96%	96%	96%	95%
6/30/2032	97%	97%	97%	96%
6/30/2033	97%	97%	97%	96%
6/30/2034	97%	98%	98%	97%
6/30/2035	98%	99%	99%	99%
6/30/2036	100%	101%	100%	100%
6/30/2037	101%	102%	102%	101%
6/30/2038	101%	102%	102%	101%
6/30/2039	102%	103%	103%	102%
6/30/2040	103%	105%	105%	104%
6/30/2041	105%	106%	106%	105%
6/30/2042	106%	107%	107%	107%
6/30/2043	107%	108%	108%	107%
6/30/2044	108%	109%	109%	109%

Projected Funded Status - MVA [401(a) and 401(h)]

Valuation Date	Scenario 1	Scenario 2	Scenario 3	Scenario 4
6/30/2014	82%	82%	82%	81%
6/30/2015	83%	83%	83%	81%
6/30/2016	85%	85%	85%	83%
6/30/2017	86%	86%	86%	84%
6/30/2018	86%	87%	86%	85%
6/30/2019	88%	88%	88%	86%
6/30/2020	89%	89%	89%	87%
6/30/2021	90%	90%	90%	88%
6/30/2022	91%	91%	91%	89%
6/30/2023	91%	91%	91%	89%
6/30/2024	91%	92%	92%	90%
6/30/2025	92%	92%	92%	91%
6/30/2026	93%	93%	93%	92%
6/30/2027	93%	94%	94%	93%
6/30/2028	93%	94%	94%	93%
6/30/2029	94%	95%	95%	94%
6/30/2030	95%	96%	96%	94%
6/30/2031	96%	96%	96%	95%
6/30/2032	97%	97%	97%	96%
6/30/2033	97%	97%	97%	96%
6/30/2034	97%	98%	98%	97%
6/30/2035	98%	99%	99%	99%
6/30/2036	100%	101%	100%	100%
6/30/2037	101%	102%	102%	101%
6/30/2038	101%	102%	102%	101%
6/30/2039	102%	103%	103%	102%
6/30/2040	103%	105%	105%	104%
6/30/2041	105%	106%	106%	105%
6/30/2042	106%	107%	107%	107%
6/30/2043	107%	108%	108%	107%
6/30/2044	108%	109%	109%	109%

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Ready For Real Business

Arizona State Retirement System

Actuarial Valuation of the Plan
As of June 30, 2014

Projections

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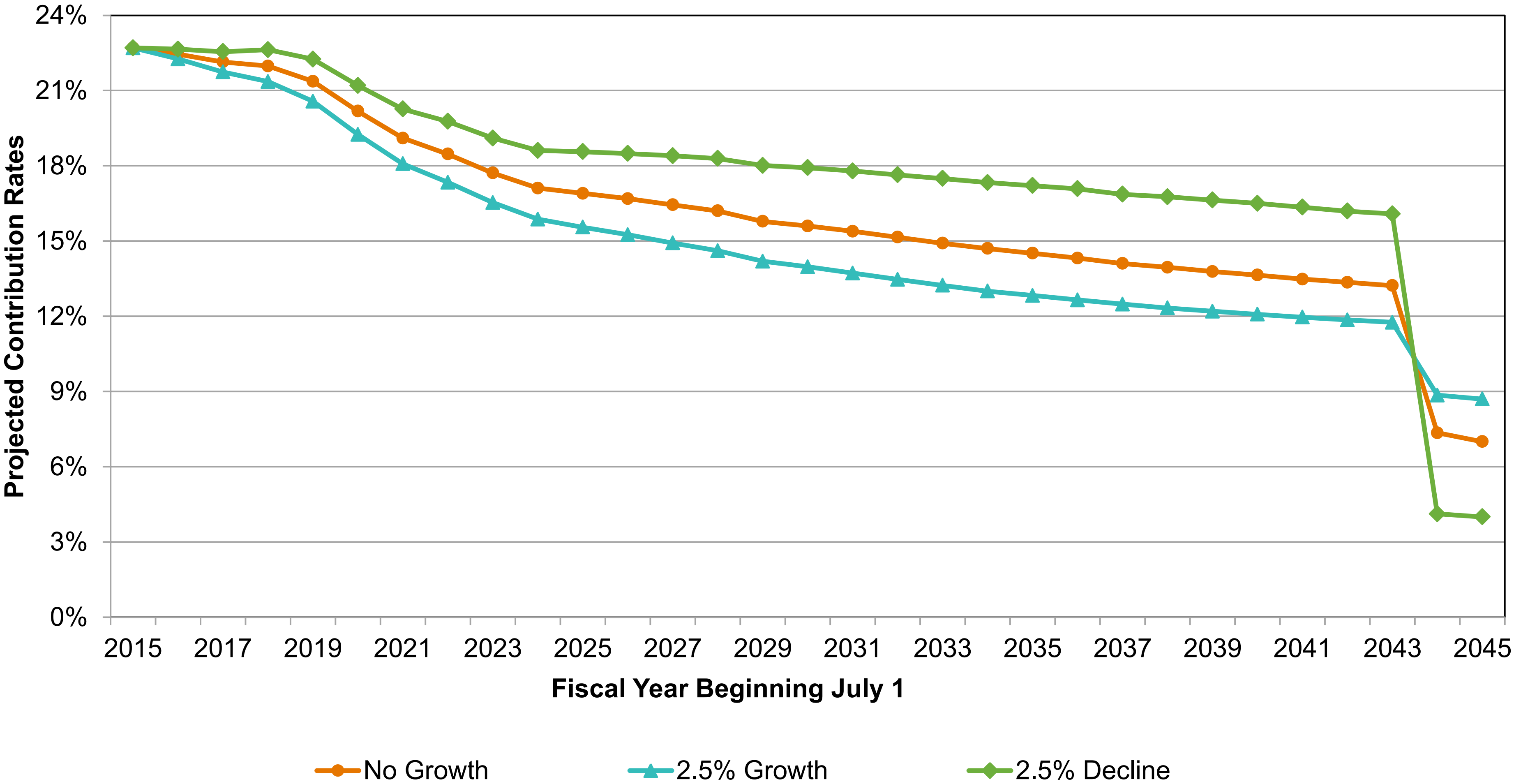
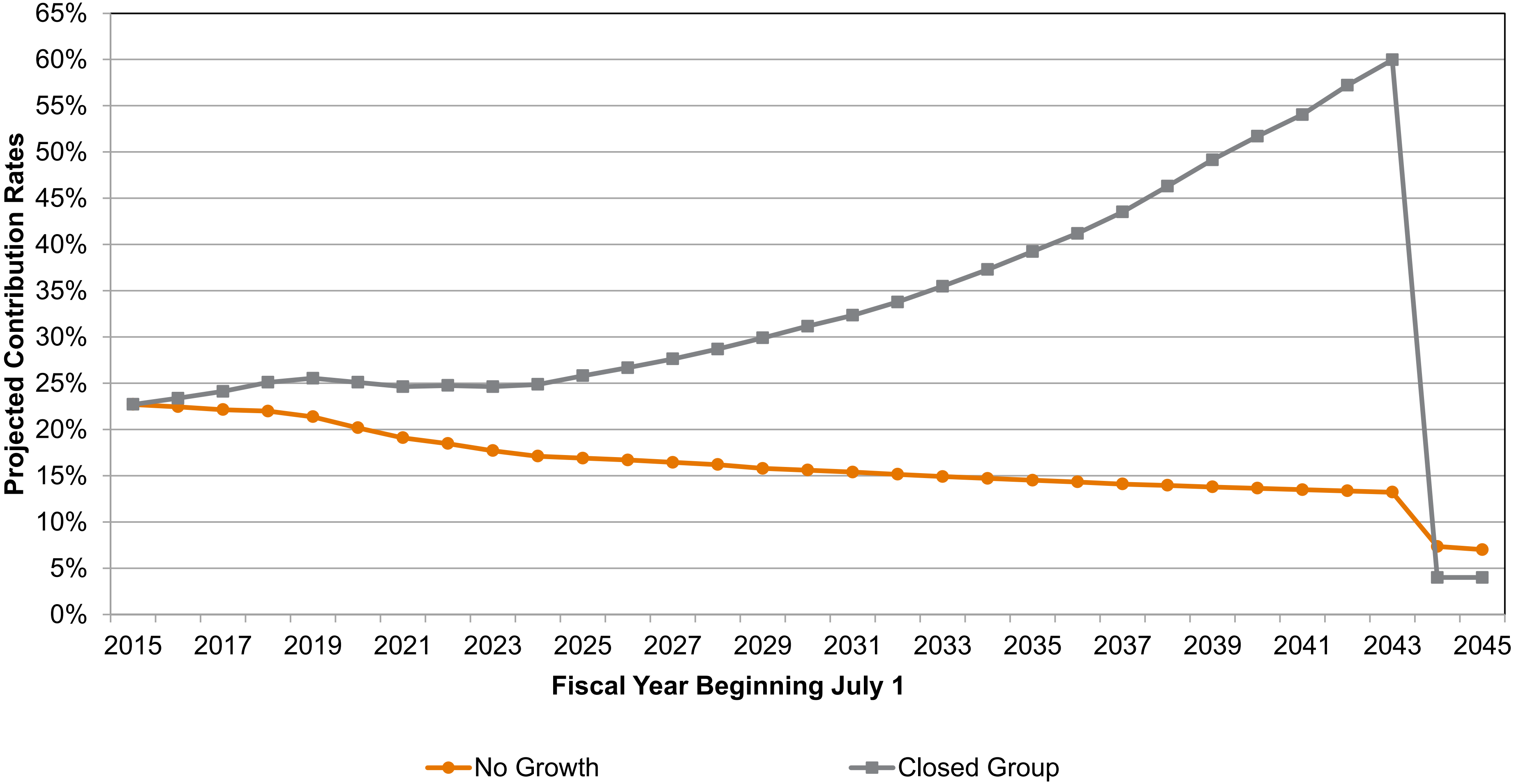
Projected Contribution Rates [401(a) and 401(h)]

Assumes future investment returns of 8.0% on Market Value of Assets and excludes future PBIs.



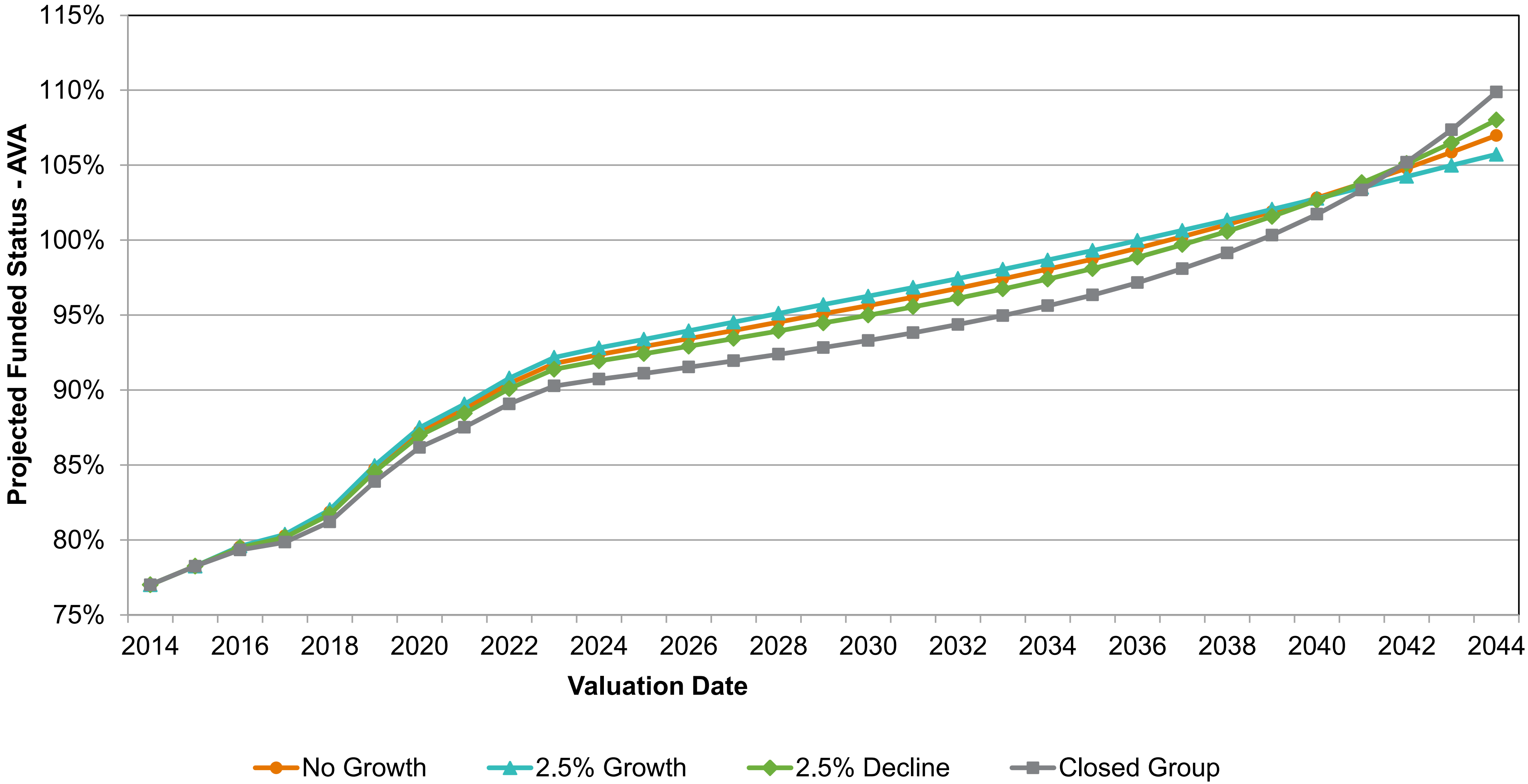
Projected Contribution Rates [401(a) and 401(h)]

Assumes future investment returns of 8.0% on Market Value of Assets and excludes future PBIs.



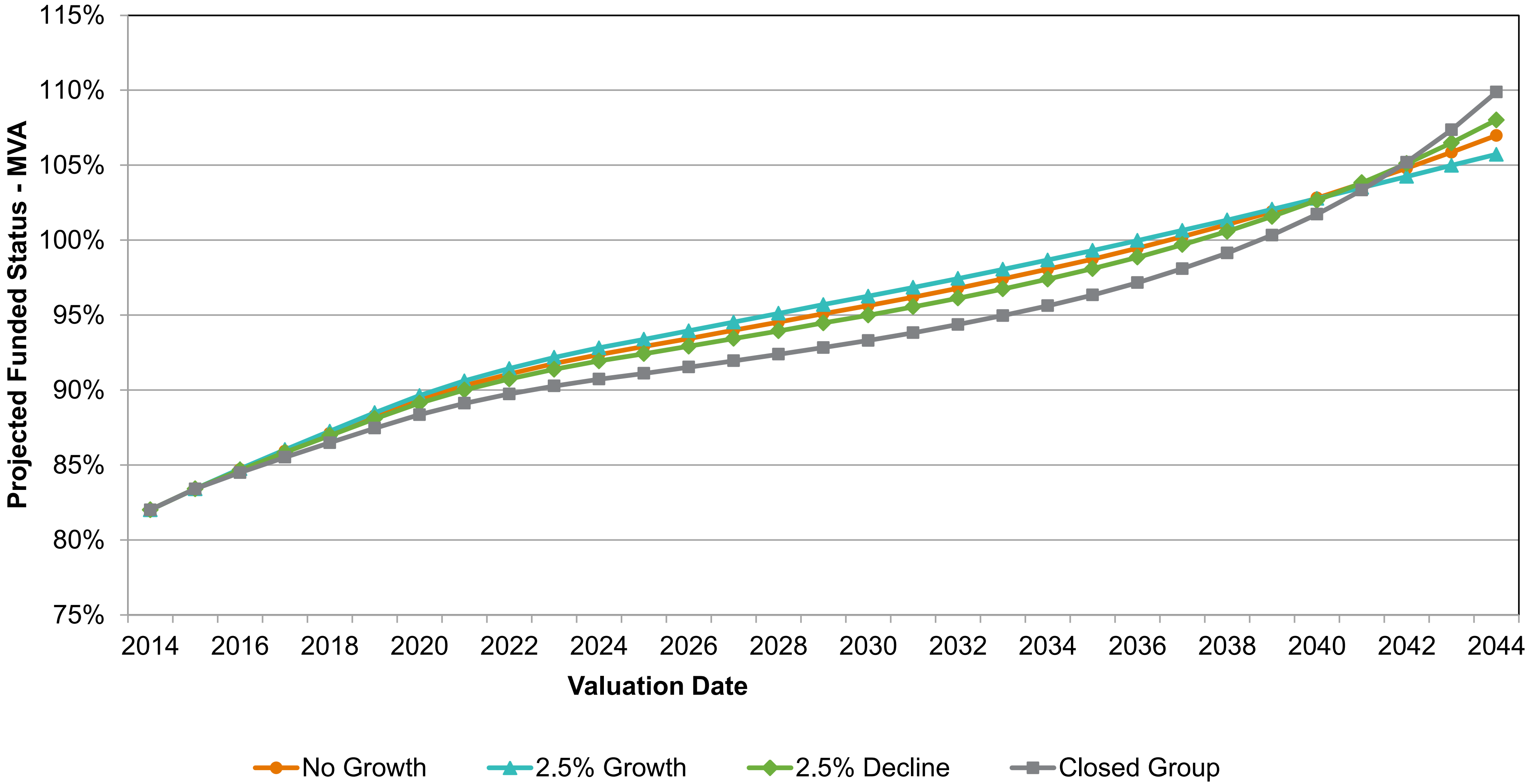
Projected Funded Status - AVA [401(a) and 401(h)]

Assumes future investment returns of 8.0% on Market Value of Assets and excludes future PBIs.



Projected Funded Status - MVA [401(a) and 401(h)]

Assumes future investment returns of 8.0% on Market Value of Assets and excludes future PBIs.



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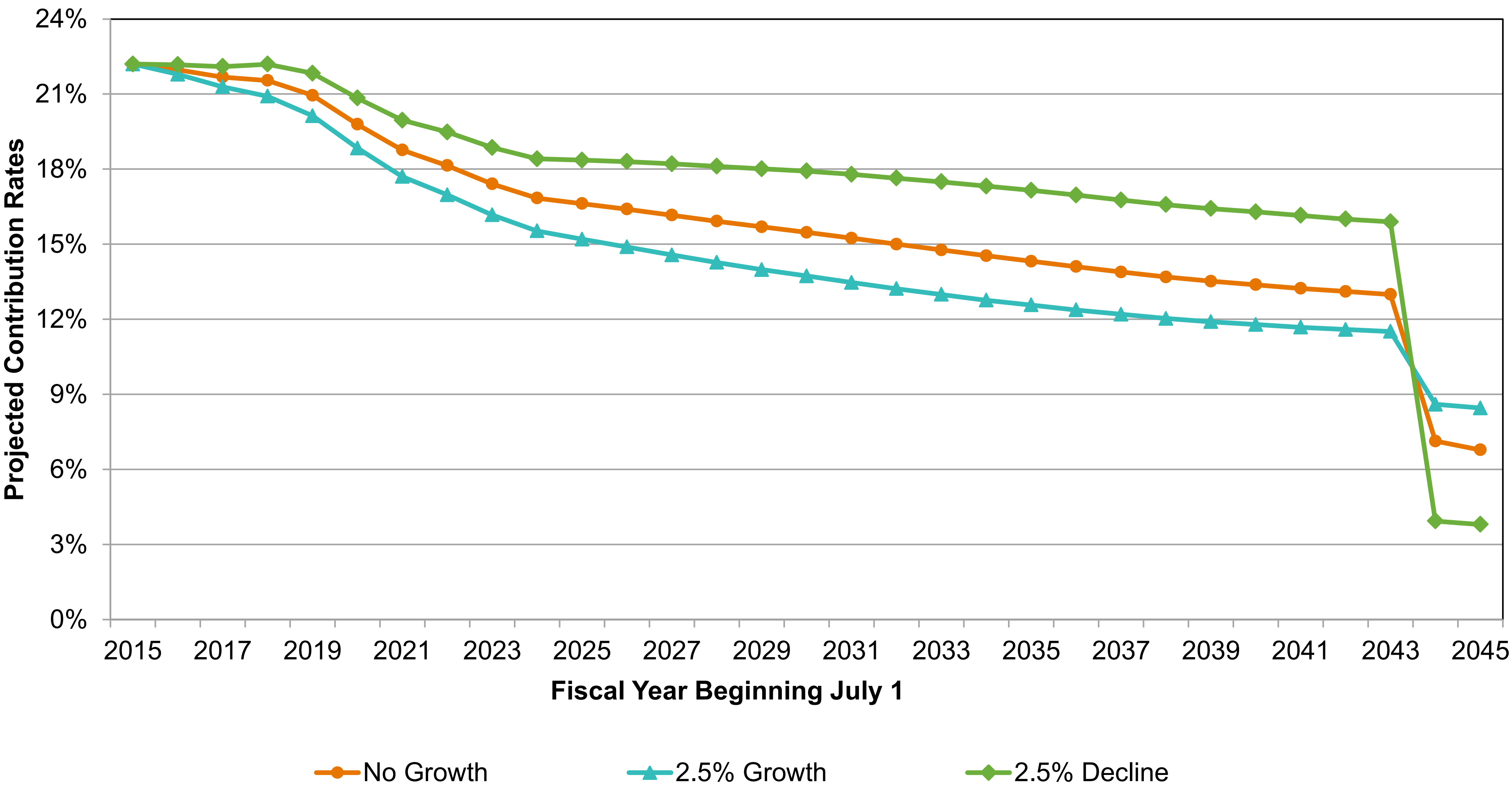
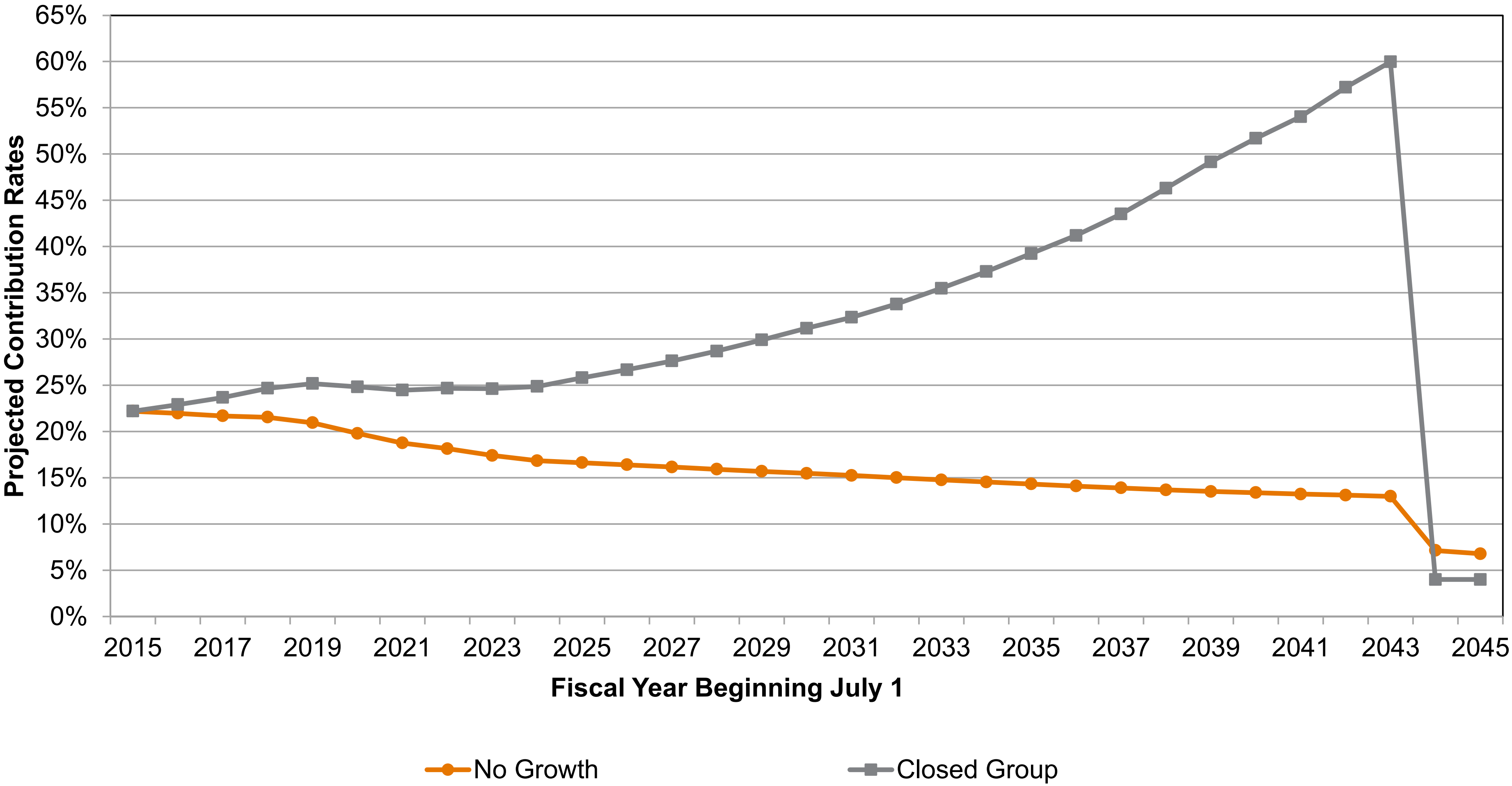
Projected Contribution Rates [401(a)]

Assumes future investment returns of 8.0% on Market Value of Assets and excludes future PBIs.



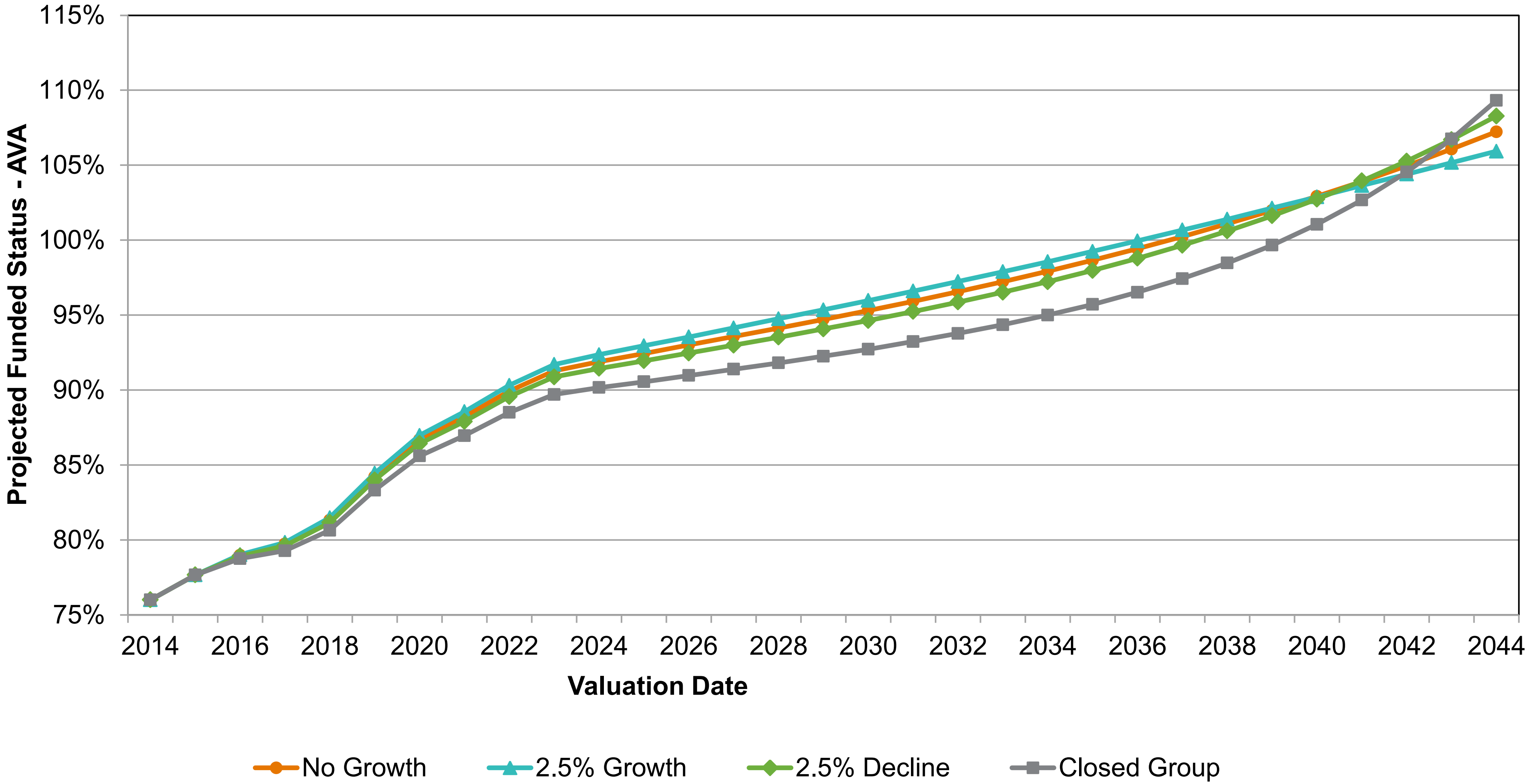
Projected Contribution Rates [401(a)]

Assumes future investment returns of 8.0% on Market Value of Assets and excludes future PBIs.



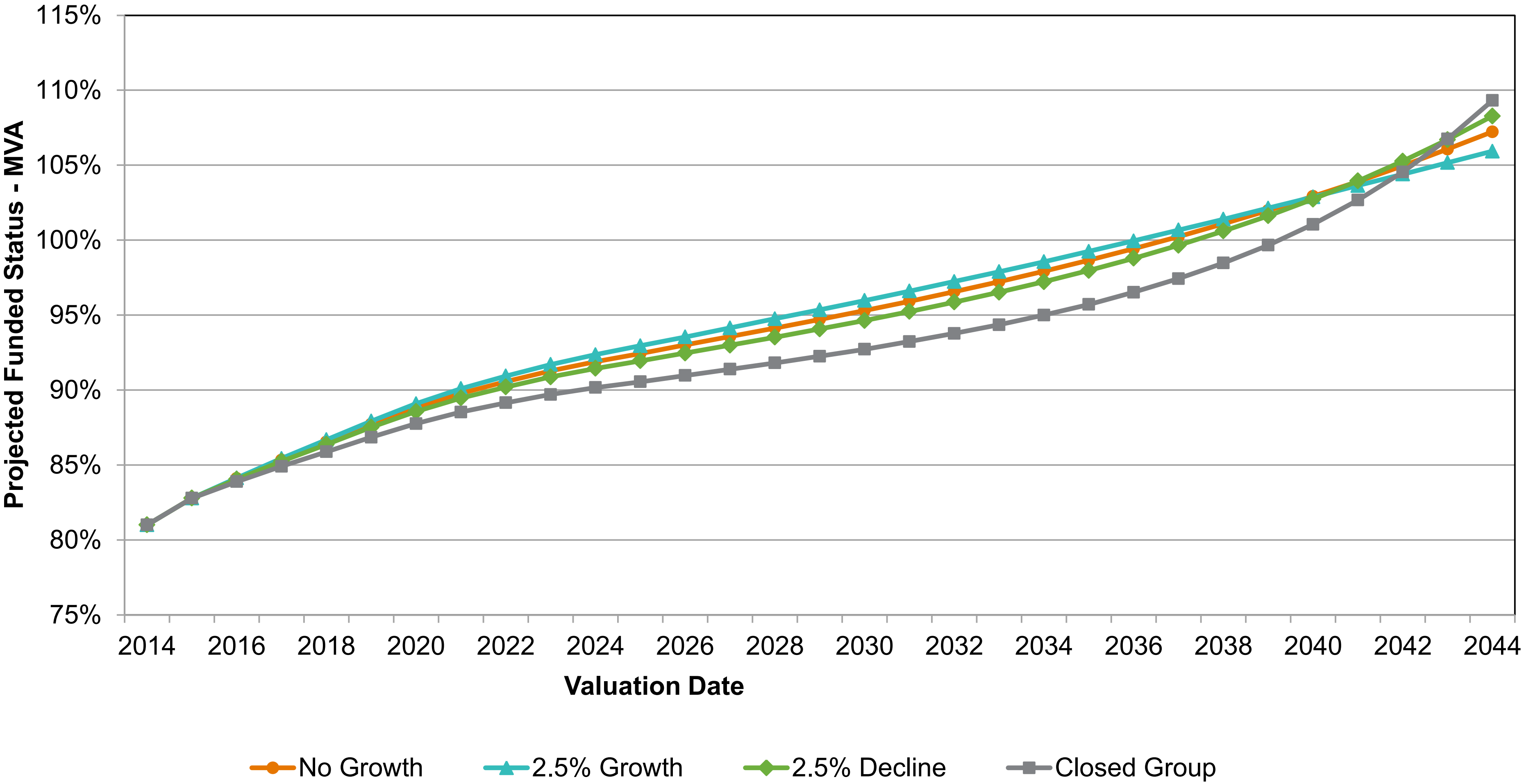
Projected Funded Status - AVA [401(a)]

Assumes future investment returns of 8.0% on Market Value of Assets and excludes future PBIs.



Projected Funded Status - MVA [401(a)]

Assumes future investment returns of 8.0% on Market Value of Assets and excludes future PBIs.



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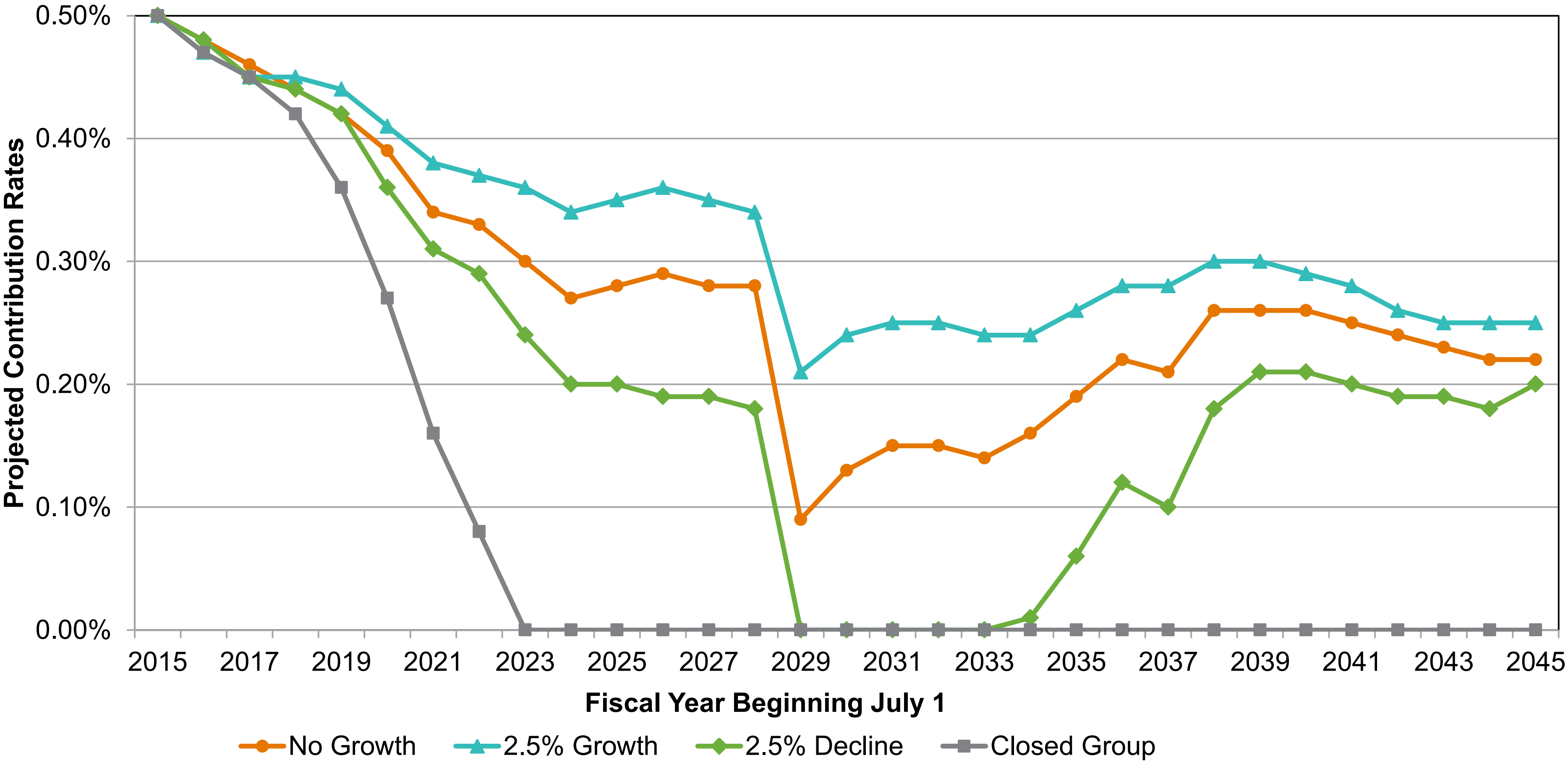
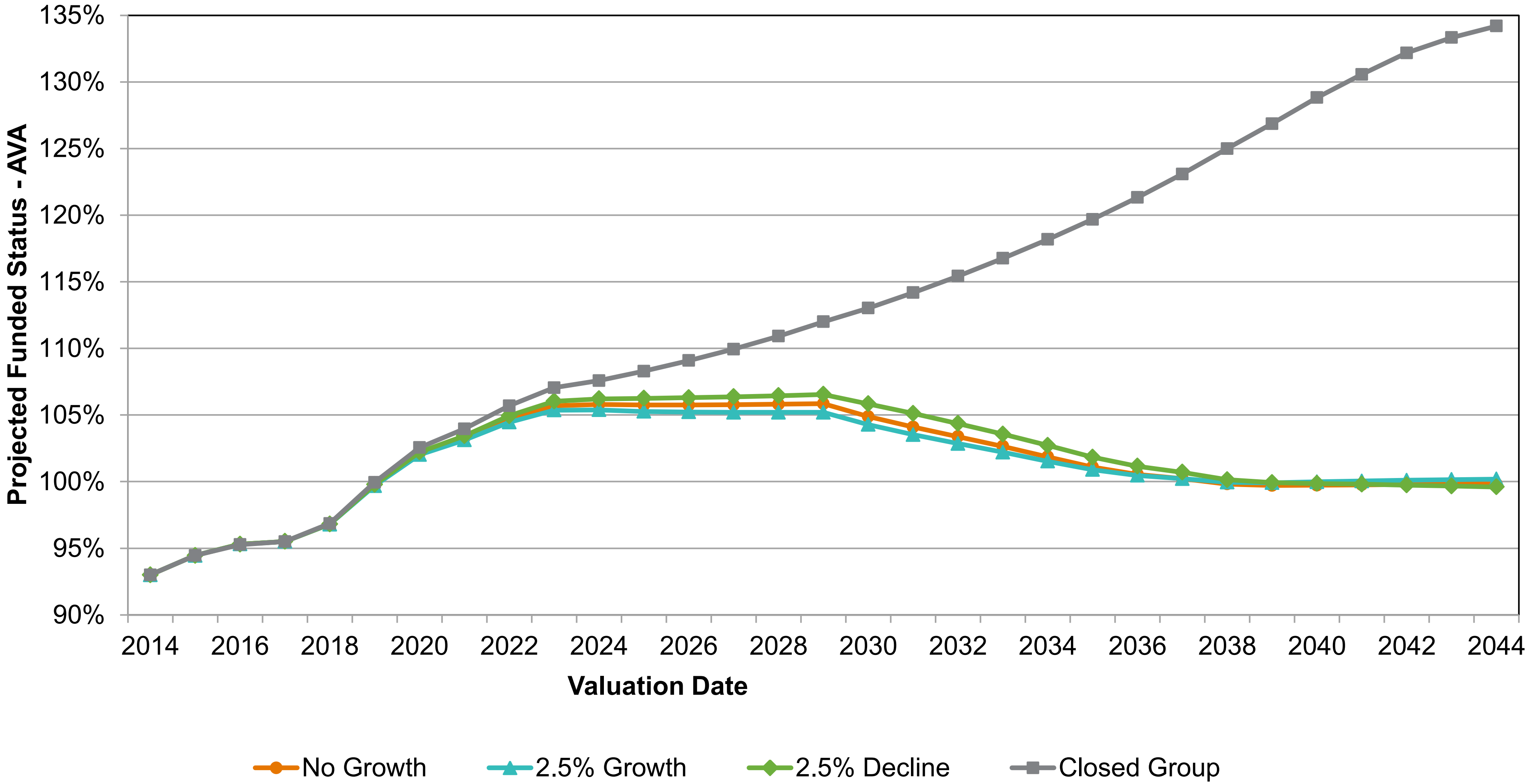
Projected Contribution Rates [401(h)]

Assumes future investment returns of 8.0% on Market Value of Assets and excludes future PBIs.



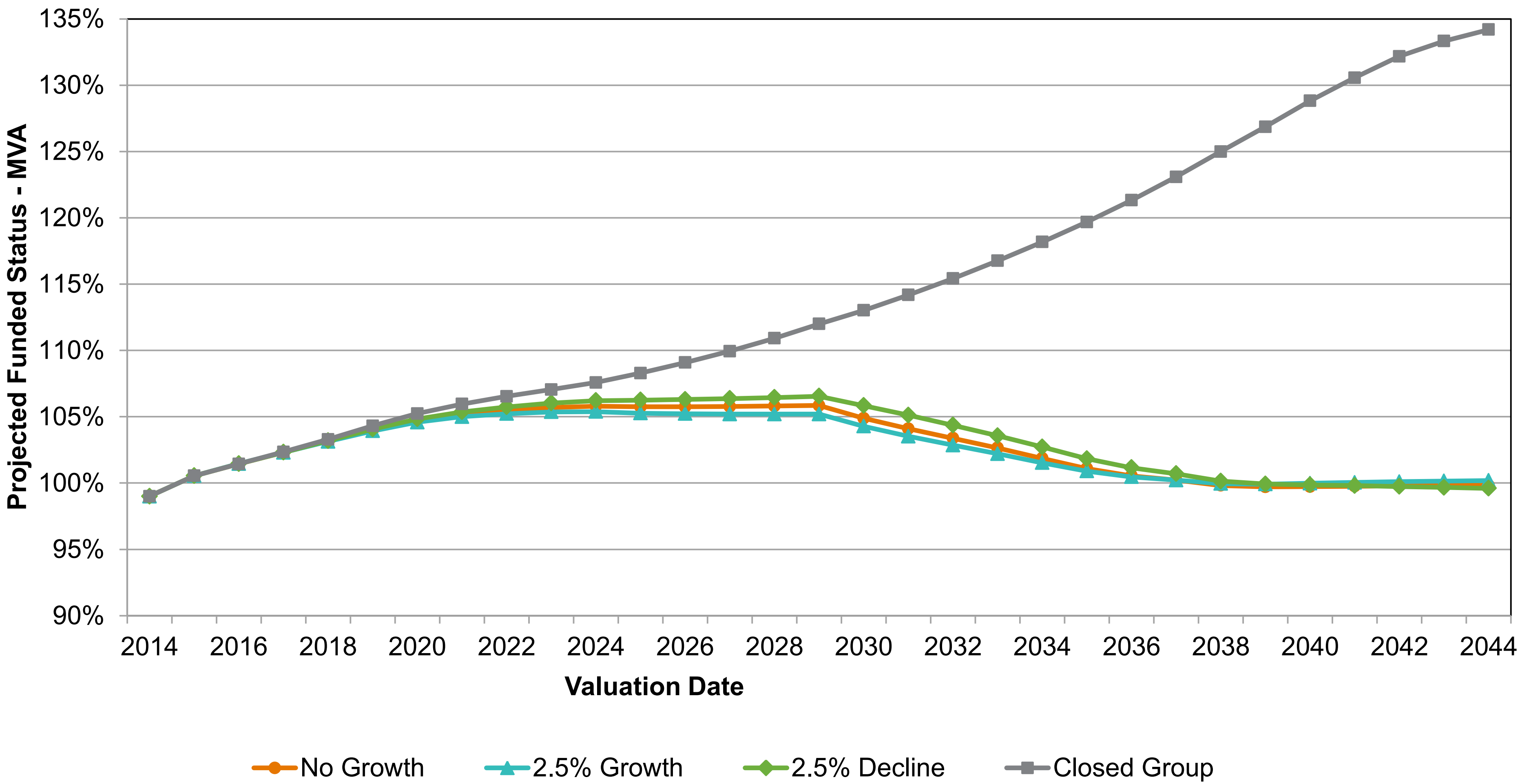
Projected Funded Status - AVA [401(h)]

Assumes future investment returns of 8.0% on Market Value of Assets and excludes future PBIs.



Projected Funded Status - MVA [401(h)]

Assumes future investment returns of 8.0% on Market Value of Assets and excludes future PBIs.



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Projected Contribution Rates [401(a) and 401(h)]

Fiscal Year Beginning July 1	No Growth	2.5% Annual Growth	2.5% Annual Reduction	Closed Group (No New Entrants)
2015	22.70%	22.70%	22.70%	22.70%
2016	22.45%	22.26%	22.65%	23.38%
2017	22.14%	21.74%	22.55%	24.12%
2018	21.98%	21.36%	22.63%	25.09%
2019	21.37%	20.57%	22.25%	25.54%
2020	20.18%	19.25%	21.20%	25.10%
2021	19.10%	18.08%	20.26%	24.63%
2022	18.47%	17.34%	19.77%	24.75%
2023	17.71%	16.53%	19.10%	24.63%
2024	17.11%	15.87%	18.61%	24.87%
2025	16.90%	15.55%	18.56%	25.81%
2026	16.69%	15.25%	18.49%	26.67%
2027	16.44%	14.92%	18.40%	27.62%
2028	16.20%	14.61%	18.29%	28.69%
2029	15.78%	14.19%	18.01%	29.90%
2030	15.60%	13.97%	17.92%	31.16%
2031	15.39%	13.72%	17.79%	32.34%
2032	15.15%	13.47%	17.64%	33.77%
2033	14.91%	13.23%	17.49%	35.48%
2034	14.70%	13.00%	17.33%	37.29%
2035	14.51%	12.83%	17.21%	39.23%
2036	14.32%	12.65%	17.08%	41.19%
2037	14.10%	12.48%	16.86%	43.51%
2038	13.95%	12.33%	16.76%	46.29%
2039	13.78%	12.20%	16.63%	49.15%
2040	13.64%	12.08%	16.50%	51.69%
2041	13.48%	11.96%	16.35%	54.04%
2042	13.35%	11.85%	16.19%	57.20%
2043	13.22%	11.76%	16.08%	59.96%
2044	7.35%	8.85%	4.12%	4.00%
2045	7.00%	8.70%	4.00%	4.00%

Projected Funded Status - AVA [401(a) and 401(h)]

Valuation Date	No Growth	2.5% Annual Growth	2.5% Annual Reduction	Closed Group (No New Entrants)
6/30/2014	77%	77%	77%	77%
6/30/2015	78%	78%	78%	78%
6/30/2016	80%	80%	79%	79%
6/30/2017	80%	80%	80%	80%
6/30/2018	82%	82%	82%	81%
6/30/2019	85%	85%	85%	84%
6/30/2020	87%	87%	87%	86%
6/30/2021	89%	89%	88%	88%
6/30/2022	90%	91%	90%	89%
6/30/2023	92%	92%	91%	90%
6/30/2024	92%	93%	92%	91%
6/30/2025	93%	93%	92%	91%
6/30/2026	93%	94%	93%	92%
6/30/2027	94%	95%	93%	92%
6/30/2028	95%	95%	94%	92%
6/30/2029	95%	96%	94%	93%
6/30/2030	96%	96%	95%	93%
6/30/2031	96%	97%	96%	94%
6/30/2032	97%	97%	96%	94%
6/30/2033	97%	98%	97%	95%
6/30/2034	98%	99%	97%	96%
6/30/2035	99%	99%	98%	96%
6/30/2036	99%	100%	99%	97%
6/30/2037	100%	101%	100%	98%
6/30/2038	101%	101%	101%	99%
6/30/2039	102%	102%	102%	100%
6/30/2040	103%	103%	103%	102%
6/30/2041	104%	104%	104%	103%
6/30/2042	105%	104%	105%	105%
6/30/2043	106%	105%	106%	107%
6/30/2044	107%	106%	108%	110%

Projected Funded Status - MVA [401(a) and 401(h)]

Valuation Date	No Growth	2.5% Annual Growth	2.5% Annual Reduction	Closed Group (No New Entrants)
6/30/2014	82%	82%	82%	82%
6/30/2015	83%	83%	83%	83%
6/30/2016	85%	85%	85%	84%
6/30/2017	86%	86%	86%	86%
6/30/2018	87%	87%	87%	86%
6/30/2019	88%	88%	88%	87%
6/30/2020	89%	90%	89%	88%
6/30/2021	90%	91%	90%	89%
6/30/2022	91%	91%	91%	90%
6/30/2023	92%	92%	91%	90%
6/30/2024	92%	93%	92%	91%
6/30/2025	93%	93%	92%	91%
6/30/2026	93%	94%	93%	92%
6/30/2027	94%	95%	93%	92%
6/30/2028	95%	95%	94%	92%
6/30/2029	95%	96%	94%	93%
6/30/2030	96%	96%	95%	93%
6/30/2031	96%	97%	96%	94%
6/30/2032	97%	97%	96%	94%
6/30/2033	97%	98%	97%	95%
6/30/2034	98%	99%	97%	96%
6/30/2035	99%	99%	98%	96%
6/30/2036	99%	100%	99%	97%
6/30/2037	100%	101%	100%	98%
6/30/2038	101%	101%	101%	99%
6/30/2039	102%	102%	102%	100%
6/30/2040	103%	103%	103%	102%
6/30/2041	104%	104%	104%	103%
6/30/2042	105%	104%	105%	105%
6/30/2043	106%	105%	106%	107%
6/30/2044	107%	106%	108%	110%

Projected Contribution Rates [401(a)]

Fiscal Year Beginning July 1	No Growth	2.5% Annual Growth	2.5% Annual Reduction	Closed Group (No New Entrants)
2015	22.20%	22.20%	22.20%	22.20%
2016	21.97%	21.79%	22.17%	22.91%
2017	21.68%	21.29%	22.10%	23.67%
2018	21.54%	20.91%	22.19%	24.67%
2019	20.95%	20.13%	21.83%	25.18%
2020	19.79%	18.84%	20.84%	24.83%
2021	18.76%	17.70%	19.95%	24.47%
2022	18.14%	16.97%	19.48%	24.67%
2023	17.41%	16.17%	18.86%	24.63%
2024	16.84%	15.53%	18.41%	24.87%
2025	16.62%	15.20%	18.36%	25.81%
2026	16.40%	14.89%	18.30%	26.67%
2027	16.16%	14.57%	18.21%	27.62%
2028	15.92%	14.27%	18.11%	28.69%
2029	15.69%	13.98%	18.01%	29.90%
2030	15.47%	13.73%	17.92%	31.16%
2031	15.24%	13.47%	17.79%	32.34%
2032	15.00%	13.22%	17.64%	33.77%
2033	14.77%	12.99%	17.49%	35.48%
2034	14.54%	12.76%	17.32%	37.29%
2035	14.32%	12.57%	17.15%	39.23%
2036	14.10%	12.37%	16.96%	41.19%
2037	13.89%	12.20%	16.76%	43.51%
2038	13.69%	12.03%	16.58%	46.29%
2039	13.52%	11.90%	16.42%	49.15%
2040	13.38%	11.79%	16.29%	51.69%
2041	13.23%	11.68%	16.15%	54.04%
2042	13.11%	11.59%	16.00%	57.20%
2043	12.99%	11.51%	15.89%	59.96%
2044	7.13%	8.60%	3.94%	4.00%
2045	6.78%	8.45%	3.80%	4.00%

Projected Funded Status - AVA [401(a)]

Valuation Date	No Growth	2.5% Annual Growth	2.5% Annual Reduction	Closed Group (No New Entrants)
6/30/2014	76%	76%	76%	76%
6/30/2015	78%	78%	78%	78%
6/30/2016	79%	79%	79%	79%
6/30/2017	80%	80%	80%	79%
6/30/2018	81%	81%	81%	81%
6/30/2019	84%	84%	84%	83%
6/30/2020	87%	87%	86%	86%
6/30/2021	88%	89%	88%	87%
6/30/2022	90%	90%	90%	89%
6/30/2023	91%	92%	91%	90%
6/30/2024	92%	92%	91%	90%
6/30/2025	92%	93%	92%	91%
6/30/2026	93%	94%	92%	91%
6/30/2027	94%	94%	93%	91%
6/30/2028	94%	95%	94%	92%
6/30/2029	95%	95%	94%	92%
6/30/2030	95%	96%	95%	93%
6/30/2031	96%	97%	95%	93%
6/30/2032	97%	97%	96%	94%
6/30/2033	97%	98%	97%	94%
6/30/2034	98%	99%	97%	95%
6/30/2035	99%	99%	98%	96%
6/30/2036	99%	100%	99%	97%
6/30/2037	100%	101%	100%	97%
6/30/2038	101%	101%	101%	98%
6/30/2039	102%	102%	102%	100%
6/30/2040	103%	103%	103%	101%
6/30/2041	104%	104%	104%	103%
6/30/2042	105%	104%	105%	105%
6/30/2043	106%	105%	107%	107%
6/30/2044	107%	106%	108%	109%

Projected Funded Status - MVA [401(a)]

Valuation Date	No Growth	2.5% Annual Growth	2.5% Annual Reduction	Closed Group (No New Entrants)
6/30/2014	81%	81%	81%	81%
6/30/2015	83%	83%	83%	83%
6/30/2016	84%	84%	84%	84%
6/30/2017	85%	85%	85%	85%
6/30/2018	87%	87%	86%	86%
6/30/2019	88%	88%	88%	87%
6/30/2020	89%	89%	89%	88%
6/30/2021	90%	90%	89%	89%
6/30/2022	91%	91%	90%	89%
6/30/2023	91%	92%	91%	90%
6/30/2024	92%	92%	91%	90%
6/30/2025	92%	93%	92%	91%
6/30/2026	93%	94%	92%	91%
6/30/2027	94%	94%	93%	91%
6/30/2028	94%	95%	94%	92%
6/30/2029	95%	95%	94%	92%
6/30/2030	95%	96%	95%	93%
6/30/2031	96%	97%	95%	93%
6/30/2032	97%	97%	96%	94%
6/30/2033	97%	98%	97%	94%
6/30/2034	98%	99%	97%	95%
6/30/2035	99%	99%	98%	96%
6/30/2036	99%	100%	99%	97%
6/30/2037	100%	101%	100%	97%
6/30/2038	101%	101%	101%	98%
6/30/2039	102%	102%	102%	100%
6/30/2040	103%	103%	103%	101%
6/30/2041	104%	104%	104%	103%
6/30/2042	105%	104%	105%	105%
6/30/2043	106%	105%	107%	107%
6/30/2044	107%	106%	108%	109%

Projected Contribution Rates [401(h)]

Fiscal Year Beginning July 1	No Growth	2.5% Annual Growth	2.5% Annual Reduction	Closed Group (No New Entrants)
2015	0.50%	0.50%	0.50%	0.50%
2016	0.48%	0.47%	0.48%	0.47%
2017	0.46%	0.45%	0.45%	0.45%
2018	0.44%	0.45%	0.44%	0.42%
2019	0.42%	0.44%	0.42%	0.36%
2020	0.39%	0.41%	0.36%	0.27%
2021	0.34%	0.38%	0.31%	0.16%
2022	0.33%	0.37%	0.29%	0.08%
2023	0.30%	0.36%	0.24%	0.00%
2024	0.27%	0.34%	0.20%	0.00%
2025	0.28%	0.35%	0.20%	0.00%
2026	0.29%	0.36%	0.19%	0.00%
2027	0.28%	0.35%	0.19%	0.00%
2028	0.28%	0.34%	0.18%	0.00%
2029	0.09%	0.21%	0.00%	0.00%
2030	0.13%	0.24%	0.00%	0.00%
2031	0.15%	0.25%	0.00%	0.00%
2032	0.15%	0.25%	0.00%	0.00%
2033	0.14%	0.24%	0.00%	0.00%
2034	0.16%	0.24%	0.01%	0.00%
2035	0.19%	0.26%	0.06%	0.00%
2036	0.22%	0.28%	0.12%	0.00%
2037	0.21%	0.28%	0.10%	0.00%
2038	0.26%	0.30%	0.18%	0.00%
2039	0.26%	0.30%	0.21%	0.00%
2040	0.26%	0.29%	0.21%	0.00%
2041	0.25%	0.28%	0.20%	0.00%
2042	0.24%	0.26%	0.19%	0.00%
2043	0.23%	0.25%	0.19%	0.00%
2044	0.22%	0.25%	0.18%	0.00%
2045	0.22%	0.25%	0.20%	0.00%

Projected Funded Status - AVA [401(h)]

Valuation Date	No Growth	2.5% Annual Growth	2.5% Annual Reduction	Closed Group (No New Entrants)
6/30/2014	93%	93%	93%	93%
6/30/2015	94%	94%	94%	94%
6/30/2016	95%	95%	95%	95%
6/30/2017	96%	96%	96%	96%
6/30/2018	97%	97%	97%	97%
6/30/2019	100%	100%	100%	100%
6/30/2020	102%	102%	102%	103%
6/30/2021	103%	103%	103%	104%
6/30/2022	105%	104%	105%	106%
6/30/2023	106%	105%	106%	107%
6/30/2024	106%	105%	106%	108%
6/30/2025	106%	105%	106%	108%
6/30/2026	106%	105%	106%	109%
6/30/2027	106%	105%	106%	110%
6/30/2028	106%	105%	106%	111%
6/30/2029	106%	105%	107%	112%
6/30/2030	105%	104%	106%	113%
6/30/2031	104%	104%	105%	114%
6/30/2032	103%	103%	104%	115%
6/30/2033	103%	102%	104%	117%
6/30/2034	102%	102%	103%	118%
6/30/2035	101%	101%	102%	120%
6/30/2036	101%	100%	101%	121%
6/30/2037	100%	100%	101%	123%
6/30/2038	100%	100%	100%	125%
6/30/2039	100%	100%	100%	127%
6/30/2040	100%	100%	100%	129%
6/30/2041	100%	100%	100%	131%
6/30/2042	100%	100%	100%	132%
6/30/2043	100%	100%	100%	133%
6/30/2044	100%	100%	100%	134%

Projected Funded Status - MVA [401(h)]

Valuation Date	No Growth	2.5% Annual Growth	2.5% Annual Reduction	Closed Group (No New Entrants)
6/30/2014	99%	99%	99%	99%
6/30/2015	101%	101%	101%	101%
6/30/2016	101%	101%	101%	101%
6/30/2017	102%	102%	102%	102%
6/30/2018	103%	103%	103%	103%
6/30/2019	104%	104%	104%	104%
6/30/2020	105%	105%	105%	105%
6/30/2021	105%	105%	105%	106%
6/30/2022	105%	105%	106%	107%
6/30/2023	106%	105%	106%	107%
6/30/2024	106%	105%	106%	108%
6/30/2025	106%	105%	106%	108%
6/30/2026	106%	105%	106%	109%
6/30/2027	106%	105%	106%	110%
6/30/2028	106%	105%	106%	111%
6/30/2029	106%	105%	107%	112%
6/30/2030	105%	104%	106%	113%
6/30/2031	104%	104%	105%	114%
6/30/2032	103%	103%	104%	115%
6/30/2033	103%	102%	104%	117%
6/30/2034	102%	102%	103%	118%
6/30/2035	101%	101%	102%	120%
6/30/2036	101%	100%	101%	121%
6/30/2037	100%	100%	101%	123%
6/30/2038	100%	100%	100%	125%
6/30/2039	100%	100%	100%	127%
6/30/2040	100%	100%	100%	129%
6/30/2041	100%	100%	100%	131%
6/30/2042	100%	100%	100%	132%
6/30/2043	100%	100%	100%	133%
6/30/2044	100%	100%	100%	134%

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Ready For Real Business

Arizona State Retirement System LTD Program

Actuarial Valuation of the LTD Program
As of June 30, 2014

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Summary of Results

	June 30, 2013	June 30, 2014
Funded Ratio - AVA Funded Ratio - MVA	85.69% 78.96%	84.99% 86.80%
Total Normal Cost % Total Past Service Cost % Total Contribution Rate	0.1819% 0.0557% 0.2376%	0.1838% 0.0625% 0.2463%
Recommended Rate for each Employee and Employer	0.12%	0.12%

Summary of Valuation Results

(Amounts in 000's)	June 30, 2013	June 30, 2014
Normal Cost	$ 15,925	$ 16,377
Actuarial Accrued Liability	$ 332,597	$ 328,928
Valuation Assets	$ 285,018	$ 279,560
Funded Status	85.69%	84.99%
Unfunded Actuarial Accrued Liability	$ 47,579	$ 49,368
Past Service Cost	$ 4,873	$ 5,566
Annual Required Contribution (ARC)	$ 20,798	$ 21,943
Payroll	$ 8,752,783	$ 8,908,621
Total ARC as % of payroll	0.24%	0.24%

Funded Ratio

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percent of Covered Payroll ((b-a)/c)
6/30/04	$ 137,861	$ 544,205	$ 406,344	25.3%	$ 7,485,590	5.4%
6/30/05	164,834	577,405	412,571	28.5%	8,032,458	5.1%
6/30/06	194,297	574,701	380,404	33.8%	8,311,870	4.6%
6/30/07	231,685	604,485	372,800	38.3%	9,161,804	4.1%
6/30/08	274,902	553,185	278,283	49.7%	9,708,353	2.9%
6/30/09	311,232	476,276	165,044	65.4%	9,834,810	1.7%
6/30/10	319,308	477,266	157,958	66.9%	9,419,952	1.7%
6/30/11	307,537	455,695	148,158	67.5%	9,060,631	1.6%
6/30/12	295,786	439,706	143,920	67.3%	8,868,678	1.6%
6/30/13	285,018	332,597	47,579	85.7%	8,752,783	0.5%
6/30/14	279,560	328,928	49,368	85.0%	8,908,621	0.6%

Schedule of Funding Progress (dollar amounts in thousands)

Actuarial Gain (loss) for the Year

(Amounts in 000's)

	2012/13	2013/14
1. Experience Liability Gain/(Loss)	$ 3,286	$ (17,894)
2. Asset Gain/(Loss) on Actuarial Value of Assets	(9,228)	(5,476)
3. Change in Plan Terms	0	0
4. Change in Assumptions	97,475	0
5. Total Gain/(Loss)	$ 91,533	$ (23,370)

Market Value Cash Flows
(Amounts in 000's)

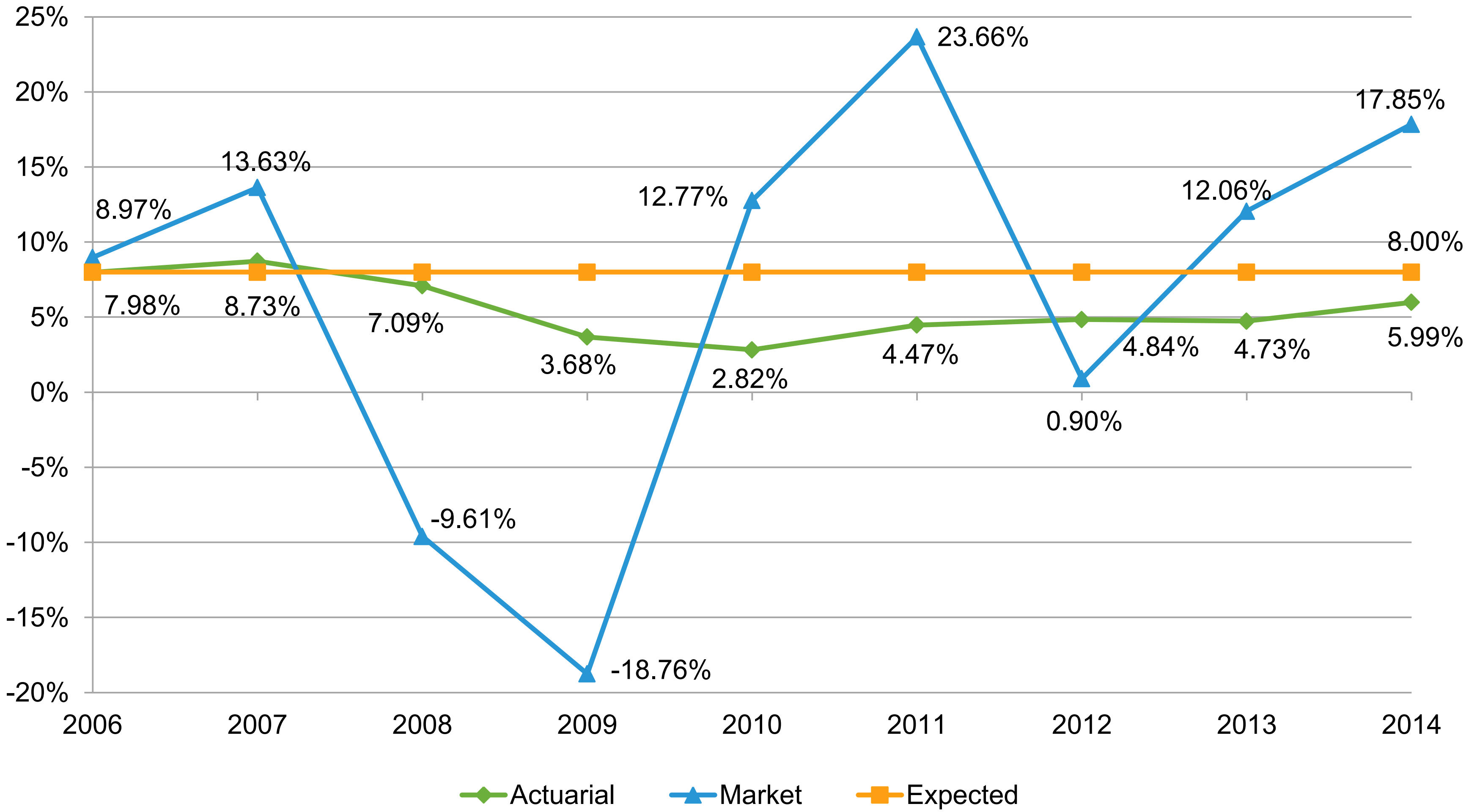
	2012/13	2013/14
1. Beginning Market Value	$ 257,324	$ 262,621
2. Contributions	42,217	42,779
3. Actual Benefit Payments	(63,613)	(62,044)
4. Expenses and Fees	(2,739)	(2,542)
5. Net Investment Return	29,432	44,702
6. Ending Market Value	$ 262,621	$ 285,516

Market and Actuarial Values of Assets

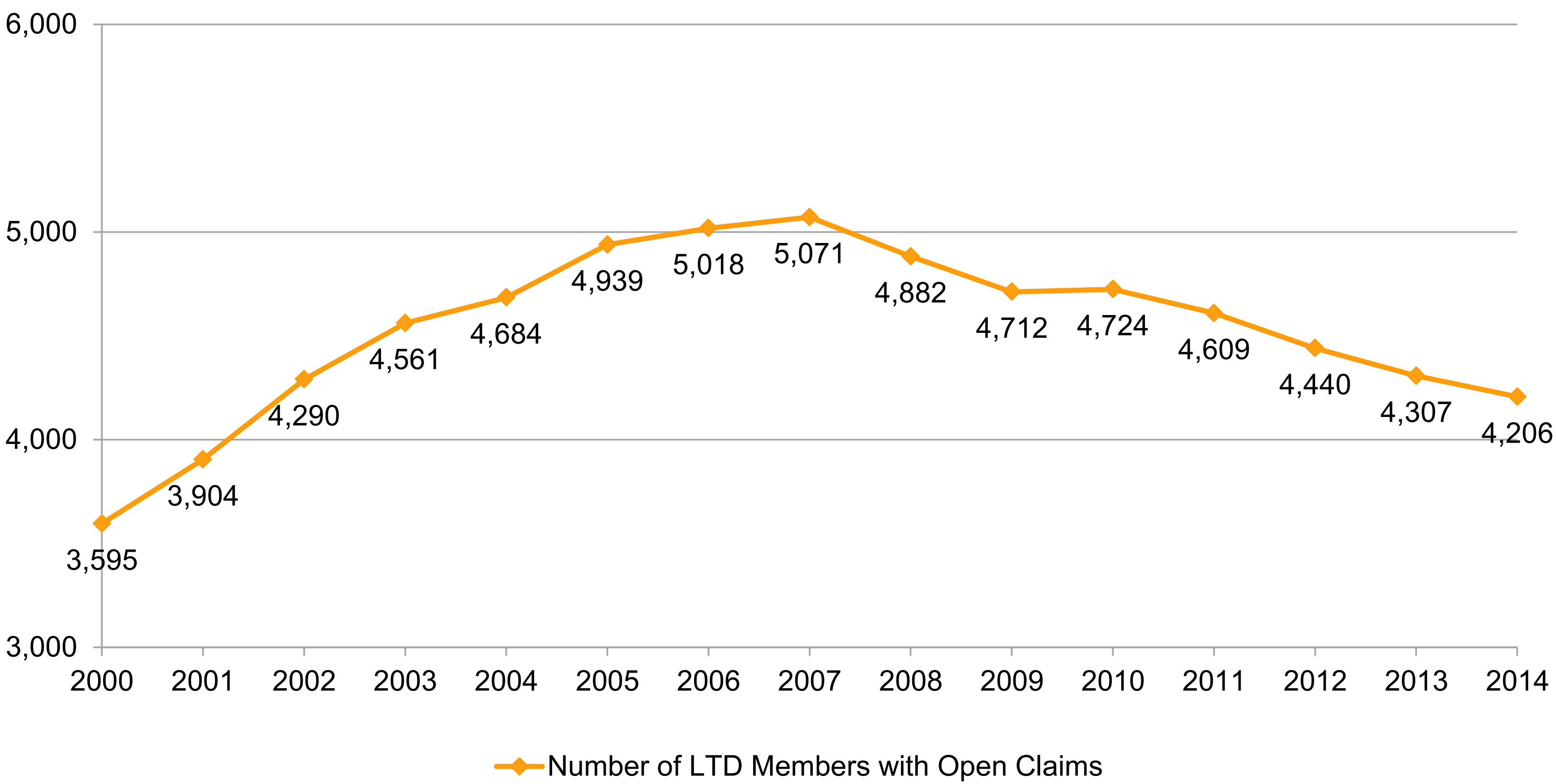
(Amounts in thousands)

Valuation Date	Actuarial Value of Assets	Market Value of Assets	AVA / MVA Ratio
06/30/2006	$ 194,297	$ 196,002	99.1%
06/30/2007	$ 231,685	$ 243,481	95.2%
06/30/2008	$ 274,902	$ 245,171	112.1%
06/30/2009	$ 311,232	$ 222,808	139.7%
06/30/2010	$ 319,308	$ 250,378	127.5%
06/30/2011	$ 307,537	$ 280,856	109.5%
06/30/2012	$ 295,786	$ 257,324	114.9%
06/30/2013	$ 285,018	$ 262,621	108.5%
06/30/2014	$ 279,560	$ 285,516	97.9%

Estimated Yields in LTD Assets



LTD Members with Open Claims



1.1% average increase in number of disabled members since 2000,
(2.6%) since 2007, (2.3%) since 2013

LTD Flow of Lives

	Count
LTD Members as June 30, 2013	4,307
Recovered	(240)
Retired	(436)
Deceased	(83)
Became Disabled	658
LTD Members as June 30, 2014	4,206

Summary of LTD Open Claim Members

	June 30, 2013	June 30, 2014
Number	4,307	4,206
Average Age	54.5	54.6
Average Monthly Benefit*	$ 1,250	$ 1,272
Total Monthly Benefit*	$ 5,383,000	$ 5,351,000

* Benefit amounts after applying overpayment offsets and before applying offset assumption.

Actuarial Methods

Actuarial Cost Method:	Projected unit credit
Asset Valuation Method:	10-year smoothing of excess earnings effective June 30, 2006
Amortization Method:	Level dollar amortization method
Amortization Period:	15 years closed from point of recognition

Actuarial Assumptions

Major Assumptions

Interest Rate

- 8%

Rates of Termination of Claims in Payment

- 150% of the Rates in the 1987 Commissioners' Group LTD Table.

Decrements, Including Disability Rates, for Active Members

- Same as Pension Plan.

Rates of Salary Increase for Active Members

- Same as Pension Plan.

Offsets for Active Members

- Net LTD benefit is 55% of gross LTD benefit.

Offsets for Open Claims

- LTD benefit for members within first three years of receipt have benefit adjusted to reflect future offsets.

Administrative Expense Reserve for Active Members

- 2.8% of claim liabilities.

Incurred But Not Reported (IBNR) Load

- 20% load to the liability for new LTD recipients.

Questions

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Arizona State Retirement System

Actuarial Valuation of the LTD Program
As of June 30, 2014

Projections

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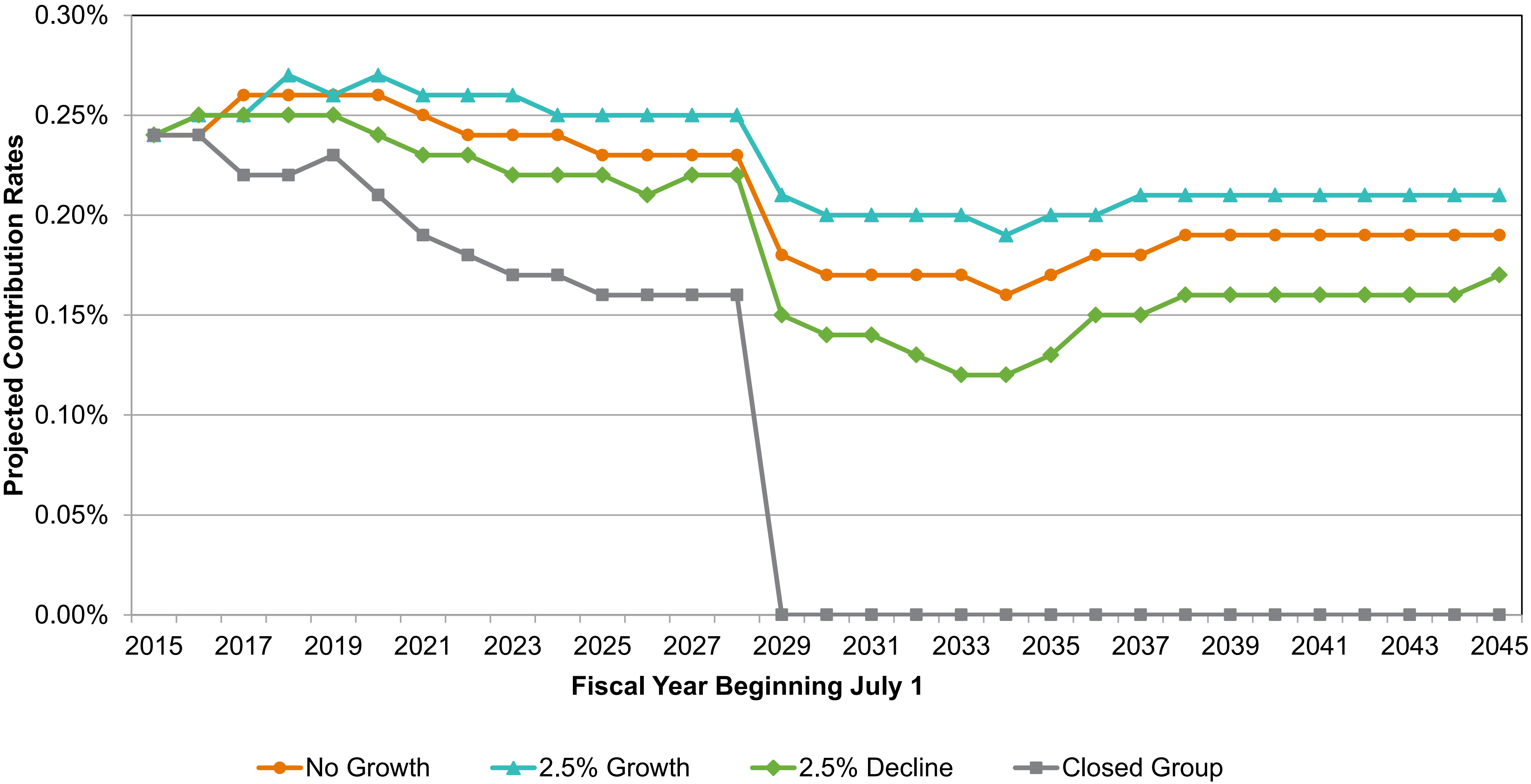
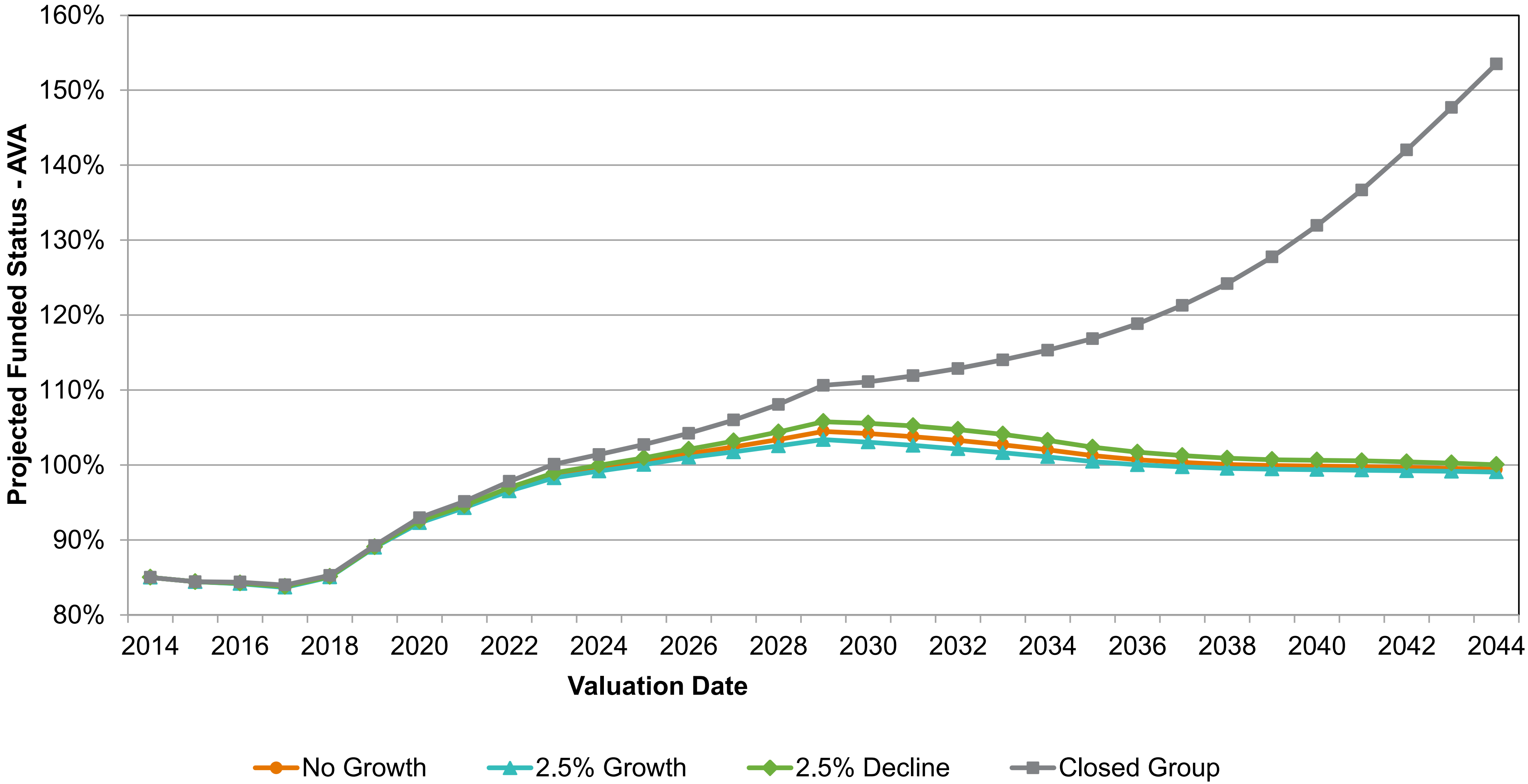
Projected Contribution Rates

Assumes future investment returns of 8.0% on Market Value of Assets.



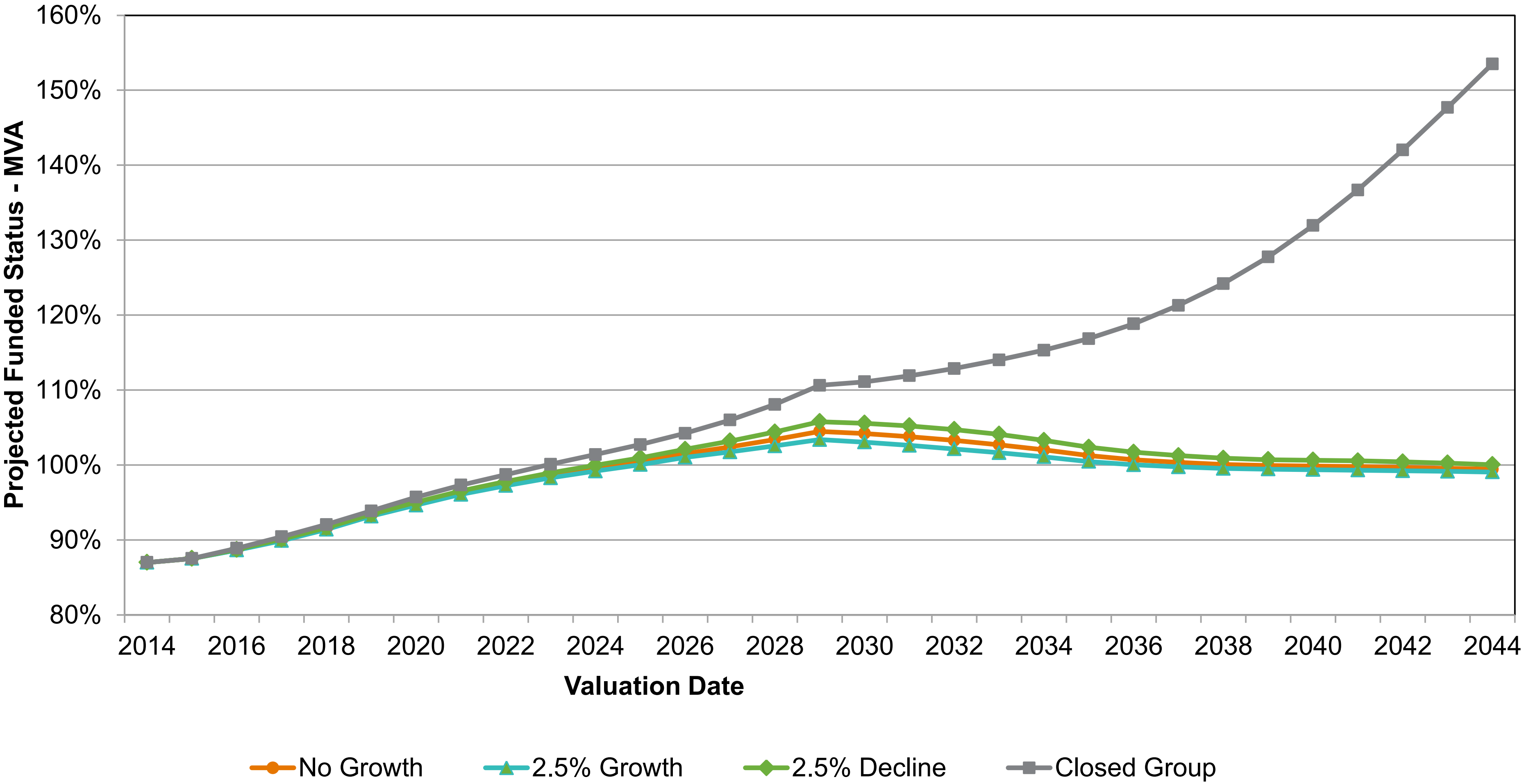
Projected Funded Status - AVA

Assumes future investment returns of 8.0% on Market Value of Assets.



Projected Funded Status - MVA

Assumes future investment returns of 8.0% on Market Value of Assets.



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Projected Contribution Rates

Fiscal Year Beginning July 1	No Growth	2.5% Annual Growth	2.5% Annual Reduction	Closed Group (No New Entrants)
2015	0.24%	0.24%	0.24%	0.24%
2016	0.24%	0.25%	0.25%	0.24%
2017	0.26%	0.25%	0.25%	0.22%
2018	0.26%	0.27%	0.25%	0.22%
2019	0.26%	0.26%	0.25%	0.23%
2020	0.26%	0.27%	0.24%	0.21%
2021	0.25%	0.26%	0.23%	0.19%
2022	0.24%	0.26%	0.23%	0.18%
2023	0.24%	0.26%	0.22%	0.17%
2024	0.24%	0.25%	0.22%	0.17%
2025	0.23%	0.25%	0.22%	0.16%
2026	0.23%	0.25%	0.21%	0.16%
2027	0.23%	0.25%	0.22%	0.16%
2028	0.23%	0.25%	0.22%	0.16%
2029	0.18%	0.21%	0.15%	0.00%
2030	0.17%	0.20%	0.14%	0.00%
2031	0.17%	0.20%	0.14%	0.00%
2032	0.17%	0.20%	0.13%	0.00%
2033	0.17%	0.20%	0.12%	0.00%
2034	0.16%	0.19%	0.12%	0.00%
2035	0.17%	0.20%	0.13%	0.00%
2036	0.18%	0.20%	0.15%	0.00%
2037	0.18%	0.21%	0.15%	0.00%
2038	0.19%	0.21%	0.16%	0.00%
2039	0.19%	0.21%	0.16%	0.00%
2040	0.19%	0.21%	0.16%	0.00%
2041	0.19%	0.21%	0.16%	0.00%
2042	0.19%	0.21%	0.16%	0.00%
2043	0.19%	0.21%	0.16%	0.00%
2044	0.19%	0.21%	0.16%	0.00%
2045	0.19%	0.21%	0.17%	0.00%

Projected Funded Status - AVA

Valuation Date	No Growth	2.5% Annual Growth	2.5% Annual Reduction	Closed Group (No New Entrants)
6/30/2014	85%	85%	85%	85%
6/30/2015	84%	84%	84%	84%
6/30/2016	84%	84%	84%	84%
6/30/2017	84%	84%	84%	84%
6/30/2018	85%	85%	85%	85%
6/30/2019	89%	89%	89%	89%
6/30/2020	92%	92%	93%	93%
6/30/2021	94%	94%	95%	95%
6/30/2022	97%	97%	97%	98%
6/30/2023	99%	98%	99%	100%
6/30/2024	100%	99%	100%	101%
6/30/2025	100%	100%	101%	103%
6/30/2026	102%	101%	102%	104%
6/30/2027	102%	102%	103%	106%
6/30/2028	103%	103%	104%	108%
6/30/2029	104%	103%	106%	111%
6/30/2030	104%	103%	106%	111%
6/30/2031	104%	103%	105%	112%
6/30/2032	103%	102%	105%	113%
6/30/2033	103%	102%	104%	114%
6/30/2034	102%	101%	103%	115%
6/30/2035	101%	100%	102%	117%
6/30/2036	101%	100%	102%	119%
6/30/2037	100%	100%	101%	121%
6/30/2038	100%	100%	101%	124%
6/30/2039	100%	99%	101%	128%
6/30/2040	100%	99%	101%	132%
6/30/2041	100%	99%	101%	137%
6/30/2042	100%	99%	100%	142%
6/30/2043	100%	99%	100%	148%
6/30/2044	99%	99%	100%	154%

Projected Funded Status - MVA

Valuation Date	No Growth	2.5% Annual Growth	2.5% Annual Reduction	Closed Group (No New Entrants)
6/30/2014	87%	87%	87%	87%
6/30/2015	88%	88%	88%	88%
6/30/2016	89%	89%	89%	89%
6/30/2017	90%	90%	90%	90%
6/30/2018	92%	91%	92%	92%
6/30/2019	93%	93%	93%	94%
6/30/2020	95%	95%	95%	96%
6/30/2021	96%	96%	97%	97%
6/30/2022	98%	97%	98%	99%
6/30/2023	99%	98%	99%	100%
6/30/2024	100%	99%	100%	101%
6/30/2025	100%	100%	101%	103%
6/30/2026	102%	101%	102%	104%
6/30/2027	102%	102%	103%	106%
6/30/2028	103%	103%	104%	108%
6/30/2029	104%	103%	106%	111%
6/30/2030	104%	103%	106%	111%
6/30/2031	104%	103%	105%	112%
6/30/2032	103%	102%	105%	113%
6/30/2033	103%	102%	104%	114%
6/30/2034	102%	101%	103%	115%
6/30/2035	101%	100%	102%	117%
6/30/2036	101%	100%	102%	119%
6/30/2037	100%	100%	101%	121%
6/30/2038	100%	100%	101%	124%
6/30/2039	100%	99%	101%	128%
6/30/2040	100%	99%	101%	132%
6/30/2041	100%	99%	101%	137%
6/30/2042	100%	99%	100%	142%
6/30/2043	100%	99%	100%	148%
6/30/2044	99%	99%	100%	154%

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Arizona State Retirement System

Aggregate Results and Alternate Contribution Rate
As of June 30, 2014

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Summary of Plan and LTD
June 30, 2013 Results

	Plan			LTD
	401(a)	401(h)	Total	
Total Contribution Rate	**22.37%**	**0.59%**	**22.96%**	**0.24%**
Employee Contribution Rate	11.48%	0.00%	11.48%	0.12%
Employer Contribution Rate	10.89%	0.59%	11.48%	0.12%
Funded Ratio – Actuarial Value of Assets	75.44%	89.21%	75.94%	85.69%
Funded Ratio – Market Value of Assets	72.72%	85.80%	73.19%	78.96%

Summary of Plan and LTD
June 30, 2014 Results
No Audit Recommendation Changes

	Plan			LTD
	401(a)	401(h)	Total	
Total Contribution Rate	**22.20%**	**0.50%**	**22.70%**	**0.24%**
Employee Contribution Rate	11.35%	0.00%	11.35%	0.12%
Employer Contribution Rate	10.85%	0.50%	11.35%	0.12%
Funded Ratio – Actuarial Value of Assets	76.30%	93.05%	76.87%	84.99%
Funded Ratio – Market Value of Assets	81.48%	99.21%	82.10%	86.80%

Summary of Alternate Contribution Rate June 30, 2013 Results (Paid in FY15)

	Plan	LTD	Total
Normal Cost Rate	13.45%	0.18%	13.63%
Past Service Cost Rate	9.51%	0.06%	9.57%
Total Rate	22.96%	0.24%	23.20%
Alternate Contribution Rate	9.51%	0.06%	9.57%

Summary of Alternate Contribution Rate June 30, 2014 Results (Paid in FY16) No Audit Recommendation Changes

	Plan	LTD	Total
Normal Cost Rate	13.40%	0.18%	13.58%
Past Service Cost Rate	9.30%	0.06%	9.36%
Total Rate	22.70%	0.24%	22.94%
Alternate Contribution Rate	9.30%	0.06%	9.36%

Summary of Plan and LTD Valuation Results Audit Recommendation Changes

	6/30/2013 Valuation Results	(1) 6/30/2014 Valuation Results	(2) Include Historical Pay, New Entrants in Normal Cost, and 5 Year Amortization of Contribution Lag	(3) Include Historical Pay, Phasing in New Entrants in Normal Cost over 3 years, and 5 Year Amortization of Contribution Lag	(4) Scenario (2) including Large Benefit Adjustment in Mortality Rates for all Actives and DV's
Total Plan and LTD Contribution Rate	23.20%	22.94%	23.47%	23.16%	24.17%
Total Plan and LTD Alternate Contribution Rate	9.57%	9.36%	9.47%	9.41%	9.94%
Total Plan Funded Status – Actuarial Value of Assets	75.94%	76.87%	76.75%	76.75%	76.14%
Total Plan Funded Status – Market Value of Assets	73.19%	82.10%	81.97%	81.97%	81.32%

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