THE FUNDED STATUS OF LOUISIANA RETIREMENT SYSTEMS

ACTUARIAL SERVICES
INFORMATIONAL REPORT
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LOUISIANA LEGISLATIVE AUDITOR
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March 6, 2013

The Honorable John A. Alario, Jr.,
Chair of the Public Retirement Systems' Actuarial Committee
The Honorable Elbert L. Guillory,
Designee Chair of the Public Retirement Systems' Actuarial Committee
State Capitol
Post Office Box 94183
Baton Rouge, Louisiana 70804-4183

Dear Senators Alario and Guillory:

The attached report responds to questions posed to the Legislative Auditor by members of PRSAC at the June 20, 2012, committee meeting regarding the funded status of the four state and nine statewide retirement systems. The report addresses the following questions:

1. What are the causes of the UAL for the four state and nine statewide retirement systems? (pages 2-9)

2. What options does the state have to reduce the 8.25% rate it is currently paying on its UAL? (pages 10-11)

3. Why do some of the state and statewide retirement systems appear to be more successful than others in paying off the UAL and maintaining an adequate funded ratio? (pages 12-14)

Appendices A through E (pages 15-27) of this report contain supplemental information to these questions. I hope this information will benefit you in your decision-making process.

Sincerely,

Daryl G. Purpera, CPA, CFE
Legislative Auditor

DGP/ch

PRSAC 2013

1. What are the causes of the UAL for the four state and nine statewide retirement systems?

The four state[1] and nine statewide[2] retirement systems have incurred additional unfunded accrued liabilities (UALs) since 1987. UALs represent the value of benefit promises made by government to date that are not supported by current assets. As of June 30, 2011, the UAL of the four state systems was $18.5 billion. The UAL of the statewide retirement systems, at least for those systems for which UALs are calculated, was $1.6 billion.

New UALs can be attributed directly to specific events or circumstances associated with the retirement systems such as investment gains and losses, actuarial gains and losses, benefit improvements, and cost of living adjustments (COLAs).

State Retirement Systems

The state systems' UAL has increased about $12.7 billion since 1987. Table 1 shows the reasons for the increases, with each cause discussed on the following pages.

Table 1
Components of State Retirement Systems' UAL
As of Fiscal Year 2011

Component	Amount
Initial UAL (1989)	**$5,844,000,000**
Additions to UAL, including:	**12,668,000,000**
Delayed Amortization Leading to Principal Growth	3,370,000,000
Investment Losses	5,885,000,000
Allocations of Investment Gains to Pay COLAs	2,432,000,000
Additional Benefits Promised	148,000,000
Net Actuarial Losses	833,000,000
Total UAL at FYE 2011	**$18,512,000,000**

Source: Prepared by legislative auditor's staff using information from retirement systems' valuation reports.

As of the end of Fiscal Year 2012, based on valuations approved by the systems' boards of trustees, but not yet by PRSAC, the UAL had risen to $19.3 billion.

[1] Includes Louisiana State Employees Retirement System (LASERS), Teachers Retirement System of Louisiana (TRSL), Louisiana State Police Retirement System (STPOL), and Louisiana School Employees Retirement System (LSERS).

[2] Includes Louisiana Assessors' Retirement Fund (ASSR), Clerks of Court Retirement and Relief Fund (CCRS), District Attorneys' Retirement System (DARS), Firefighters' Retirement System (FRS), Municipal Employees' Retirement System (Plans A and B) (MERS), Municipal Police Employees' Retirement System (MPERS), Parochial Employees' Retirement System (Plans A and B) (PERS), Registrars of Voters Employees' Retirement System (RVRS), and Sheriffs' Pension and Relief Fund (SPRF).

Delayed Amortization Leading to Principal Growth. The Louisiana constitution was amended in 1988 to provide for the payment of the UAL that existed as of that date within a 40-year period. The state chose an amortization method for the initial debt (the initial unfunded accrued liability or IUAL) that called for an increasing series of payments. As a result, payments during the first 15 years of the 40-year schedule were less than the interest charged on the outstanding balance. Payments on the principal portion of the debt were not only postponed, but the debt was allowed to grow as well because of unpaid interest costs. The intent of the amortization method was to have payments that would be relatively constant as a percentage of payroll under the assumption that state payrolls would grow at the same rate as the payment schedule. The downside to this arrangement was that payments for the first 15 years would not be sufficient to pay interest and the debt would increase each year until about 2005. Thereafter, the outstanding debt would begin to decline, but it would not return to its original level until about 2020. Another downside was that if payroll growth failed to keep pace with the increasing payments, employer contribution requirements to pay off the debt as a percentage of payroll could increase significantly.

The state then modified payment schedules in 1992 to reduce near term payment amounts and create a payment stream that was even more heavily back loaded. These changes, illustrated in Appendix A, Exhibits 1 and 2, modestly reduced contribution requirements through 2009, only to cause them to be significantly larger in later years.

Because of the new payment schedule, growth of debt was extended for another ten years, from 2005 to 2015. Furthermore, the date that the debt would return to its original level was postponed from 2020 to 2024. The net effect was that payment toward the original debt was postponed for 24 years with the entire initial debt being paid off over the five-year period from 2024 to 2029. The legislature made significant revisions to the amortization schedule in 2004 and 2009. Nevertheless, a back-loaded payment stream continues to exist and the debt has grown by $3.4 billion.

Investment Losses. The UAL also increased because of net investment losses. An investment gain or loss occurs when a retirement system earns more or less respectively than its assumed investment rate of return. Retirement systems assume that investment losses and gains will even out over time. In fact, that is what occurred from 1989 through 2007. Investment gains as measured before any allocations of gains to COLAs were sufficient to offset investment losses that occurred in 2001 to 2003. The accumulated $5.9 billion of investment loss has occurred primarily since 2007. See Appendix A, Exhibits 3 and 4 for annual investment gains and losses for LASERS and TRSL.

Allocations of Investment Gains to Pay COLAs. The state has used $2.4 billion of investment gains since 1989 to provide COLAs. These gains were therefore unavailable to offset investment losses that have occurred during the same period. The four state retirement systems use a formula to provide for COLAs.[3] In years with investment gains, the retirement systems deposit 50% of the investment gain into an account called the Experience Account, specifically

[3] LASERS and TRSL have used a COLA formula since 1992. STPOL and LSERS have used one since 2007. However, LSERS and STPOL have not had any investment gains since the statute was added and thus have not used the formula to credit investment gains to the Experience Account.

established as a means to pay COLAs. Therefore, the full amount of investment gains since 1989 was not available to offset the investment losses that occurred in 2001-2003 and 2008-2011.

Additional Benefits Promised. The UAL increased because of additional benefits provided through legislation. Except for COLAs, benefit provisions for LASERS and TRSL have not changed significantly since 1988. However, benefit accrual rates for LSERS were increased significantly in 1993 and 2001 and benefit accrual rates for STPOL were increased in 2001. The net effect was a $148 million increase in UAL.

Net Actuarial Losses. The UAL increased because of net actuarial losses. To prepare a valuation, the actuary for a retirement system selects certain demographic assumptions to predict turnover, salaries, and the number of retirees, disabilities, and deaths. If the actuarial assumptions are reasonable over the long term, gains and losses should cancel each other out. Since 1989, losses have exceeded gains and the UAL has increased $771 million.

Statewide Retirement Systems

The four state retirement systems reflect annual gains and losses by adjusting the UAL, which changes the schedule of future amortization payments. Only two of the nine statewide retirement systems -- FRS and MPERS -- use this method. The remaining systems adjust the normal cost to reflect gains and losses. DARS, PERS-A, and RVRS reflect *new and old* gains and losses in the normal cost. ASSR, CCRS, MERS, PERS-B, and SPRF reflect only *new* gains and losses in the normal cost. Initial, or old, UALs were established for these systems, but they are not adjusted for *new* gains or losses. Table 2 summarizes these funding methods.

Table 2
Funding Methods for the Statewide Retirement Systems
As of June 20, 2011

System	Funding Method
FRS	Adjust the UAL Annually
MPERS	
DARS	Reflect Both IUAL and New UAL in Normal Cost (No Separate IUAL or New UAL)
PERS-B	
RVRS	
ASSR	Reflect Only New UAL in Normal Cost (IUAL Separate, but Not Adjusted)
CCRS	
MERS-A	
MERS-B	
PERS-A	
SPRF	

Source: Prepared by legislative auditor's staff using 2011 actuarial valuation reports.

UALs for FRS and MPERS have increased since 1997, the last year for which information is available (Appendix B, Exhibit 1). The primary reasons for these increases are investment losses, actuarial losses, COLAs, employer contribution shortfalls, and plan mergers. These losses were offset to some extent by assumption and actuarial method changes.

Normal costs for the remaining statewide systems[4] increased significantly between 1997 and 2011 (Appendix B, Exhibit 2). For example, the normal cost for ASSR increased from 11.63% of pay in 1997 to 31.98% of pay in 2011. For MERS-A, the normal cost increased from 4.79% to 17.31%. The primary reasons for these increases, as shown in Table 3, are investment losses, actuarial losses, plan improvements, COLAs, employer contribution shortfalls, assumption changes, and plan mergers. Actuarial gains, assumption changes, actuarial method changes, and new members entering the retirement systems offset these losses to some extent.

Table 3
Reasons for Changes in Normal Costs and UALs
for Statewide Retirement Systems
1997-2011

Reasons for Increases	Reasons for Decreases
Investment losses	Actuarial gains
Actuarial losses	Assumption changes
Plan improvements	Actuarial method changes
COLAs	New members
Employer contribution shortfalls	
Assumption changes	
Plan mergers	

Source: Prepared by legislative auditor's actuarial staff.

Investment Losses. When a retirement system earns more than its assumed investment rate of return, an investment gain occurs. Conversely, when a system earns less than the assumed rate, an investment loss occurs. Retirement systems assume that investment gains and losses will even out over time. However, all nine statewide retirement systems have experienced net investment losses since 1997 because gains have not been sufficient to offset losses. As a result, increases in the normal cost rate have ranged from 6.87% for PERS-B to 33.44% for RVRS.

Actuarial Losses. When changes in pay, employment terminations, disablements, retirement, and deaths differ from the patterns predicted by the actuary, actuarial gains or losses occur. If the actuary's assumptions are reasonable over time, actuarial gains and losses will offset one another. Six of the nine statewide systems had experience from 1997 to 2011 that was favorable to the retirement systems and UALs or normal costs decreased. Three had unfavorable experience and UALs or normal costs increased.

[4] Includes ASSR, CCRS, DARS, MERS-A, MERS-B, PERS-A, PERS-B, RVRS, and SPRF.

Plan Changes. Benefit improvements produced larger UALs or normal costs. The legislature enacted benefit improvements between 1997 and 2011 for eight of the nine statewide retirement systems.

COLAs. The UAL or normal cost will increase whenever a board of trustees for a retirement system grants a COLA for retirees. The boards for all nine statewide retirement systems have granted COLAs using investment gains at various times between 1997 and 2011. This practice also decreased the amount of investment gains available to offset investment losses.

Employer Contribution Shortfalls. The nine statewide retirement systems establish an employer contribution rate that is applied against member salaries. This rate is established a year in advance based on a prediction of what the total member payroll will be. If payroll is more than expected, a gain occurs; if less, the system incurs a loss. Six of the statewide systems incurred losses between 1997 and 2011. For three systems, employer contributions exceeded expectations and gains occurred.

Assumption Changes. The actuary periodically conducts an experience study to determine whether his/her actuarial assumptions continue to be appropriate. As result of the study, the actuary may establish an assumption set that is more conservative and UALs or normal costs will increase. Alternatively, the actuary may determine that assumptions should be less conservative and UALs or normal costs will decrease. From 1997 to 2011, assumption sets for seven of the nine statewide systems were adjusted to be more conservative in the aggregate and the UAL or normal cost increased. Two were adjusted to be less conservative.

Funding Method Changes. Similarly, the actuary periodically examines the actuarial methods he/she uses to determine whether they continue to be appropriate for the retirement system. A change to a more conservative method will produce larger UALs or normal costs. A change to a less conservative method will reduce UALs or normal costs. Eight systems changed to less conservative methods and UALs or normal costs decreased. These changes were made essentially to provide employers partial relief from a pattern of increasing contribution rates. One system changed to a more conservative method and the UAL or normal cost increased.

Mergers. Several underfunded local Louisiana public retirement systems have been merged into FRS and MPERS since 1997. These mergers occurred primarily because the local government entity could no longer afford to independently maintain its own system. These systems were typically poorly funded with large UALs or normal costs. Benefit promises made to members of these systems were made more secure by merging these systems into the larger FRS and MPERS systems. However, as a result, UALs for FRS and MPERS increased.

New Members. The normal cost for a new member is typically lower than the normal cost for an individual who has been a member for several years. As a result, the addition of new members tends to reduce normal costs. Normal costs for eight of the nine statewide systems were reduced because of new members. The normal cost for DARS increased because of new members.

Legislative Responsibility and Board Composition – Effects on Policy Decisions

The legislature and the boards of the various retirement systems both have certain responsibilities that impact benefit, funding, and investment policy. The actions of the legislature and boards have influenced UALs and normal costs. Appendix C, Exhibits 1 and 2 summarize the composition of each board of trustees for the state and statewide retirement systems. Table 4 shows the general legislative role and board composition effects in benefit, funding, and investment policy areas.

Table 4
Legislative Responsibility and Board Composition - Effects on Policy Decisions

Role of the Legislature on Policy		
Policy	**State Systems**	**Statewide Systems**
Benefit	Significant	Minor
Funding	Significant	Minor
Investment	Minor	Minor
Effect of Board Composition on Policy		
Policy	**State Systems**	**Statewide Systems**
Benefit	Little to No Effect	Significant
Funding	Moderate Effect - Sets the Discount Rate	Significant
Investment	Significant	Significant

Source: Prepared by legislative auditor's actuarial staff.

Legislative Responsibility in State Systems. The legislature has a significant responsibility in establishing benefit and funding policies for the four state retirement systems. The boards of trustees retain the right to select the discount rate assumption, which has an effect on funding policy; but otherwise, the boards only influence legislative decisions by agreeing to support or not support policy legislation through testimony at retirement committee meetings.

On the other hand, the legislature has chosen to give the boards significant control over investment policy, with only relatively minor limitations. The boards have exercised that policy quite prudently, in all likelihood because the boards include trustees with strong financial backgrounds.

Legislative Responsibility in Statewide Systems. The legislature has a relatively minor role in the establishment of benefit, funding, and investment policy for the nine statewide systems. Although the legislature must enact laws implementing these policies, it generally does so only when asked by the systems' member-dominated boards. The boards propose benefit and funding policies and the legislature generally accepts their recommendations. Because the boards tend to be member-dominated, employers have less representation.

Investment policy is also the prerogative of the member-dominated boards. These board members do not always possess strong financial backgrounds and as a result, questionable investment decisions are sometimes made. In general, rates of return on investments have been significantly lower for the statewide retirement systems than rates earned by the two large state systems (LASERS and TRSL). Investment losses have been incurred and employer contribution requirements have increased.

Composition of the Boards of Trustees. The following observations and conclusions may be made from Appendix C, Exhibits 1 and 2 and an analysis of general governance associated with the state and statewide retirement systems.

State Systems

Funding and Benefit Policy. Because the legislature has the responsibility to make benefit and funding policy decisions through legislative instruments, the only policies completely under the discretion of the boards of trustees for the state retirement systems are the selection of the discount rate (a component of the funding policy) and investment policy.

Investment Policy. Trustees of the state systems generally have sufficient education and experience to foster competent investment decisions. LASERS and TRSL are large enough to employ internal staff to monitor investments and investment managers to adjust policies as necessary. In addition, the boards of the state systems include taxpayer and employer representation. As a result, state retirement boards have developed investment policies with appropriate checks and balances and have generally produced outstanding investment results compared with similar retirement systems throughout the country.

Statewide Systems

Funding Policy. With a few exceptions, the boards of trustees for the statewide retirement systems have managed funding policy effectively. They have generally adhered to conservative assumptions and funding methods. As a result, the systems are generally well-funded, even with the downturn of the market over the past several years.

Benefit Policy. The trustees of the statewide systems have sometimes promoted generous benefit provisions. The lack of sufficient taxpayer representation in the governance process is perhaps one factor contributing to these past decisions.

Investment Policy. The boards of trustees for the statewide retirement systems could improve their performance in establishing and implementing investment policy. Rates of return for the statewide systems have lagged behind rates of return for the state systems. For example, rates for the four state systems have averaged 4.0% to 5.6% over the past 5 years. Rates for ASSR, CCRS, FRS, MPERS, and RVRS have averaged under 3.0% and SPRF averaged 3.5%. Only DARS, MERS, and PERS have averaged rates that compare with the state systems. However, MERS and FRS have incurred extraordinary losses

over the past 12 months that will significantly compromise their long-term returns. Some of this can be attributed to the composition of the boards, a lack of trustees with comprehensive knowledge of investments and investment strategies, and a lack of internal professional staff dedicated to monitoring investments.

Other observations and conclusions about state and statewide boards are given below (see Appendix C, Exhibit 2):

- Although the percentage varies from system to system, 66% of the trustees of the state systems are members of the systems and represent the interests of system members. For statewide systems, 75% of the trustees are representatives for members of the systems.

- The Chairmen of the Senate and House retirement committees are on the boards of all 13 state and statewide retirement systems.

- The only other representatives for the taxpayer for the state systems are the State Treasurer (all four systems), the Commissioner of the Division of Administration (all four systems), the State Superintendent of Education (TRSL), and the Secretary of State (LSERS).

- Only two of the seven statewide systems have taxpayer representation -- FRS and MPERS. The State Treasurer, the Commissioner of the Division of Administration, and two mayors serve as trustees for these systems.

- It appears that association leadership may represent taxpayer and employer interests for ASSR, CCRS, MERS, and SPRF, but they are also members of the retirement systems.

- As pointed out above, only FRS and MPERS have trustees that represent employer and taxpayer interests. Nevertheless, the board of trustees for MPERS, the most poorly funded of the statewide retirement systems, supported legislation in 2005 to allow it to amortize gains and losses over a 30-year period instead of 15 years. As a result, employers received temporary relief from higher contribution requirements, which in turn has led to a systematic decline in funded ratios.

2. What options does the state have to reduce the 8.25% rate it is currently paying on its UAL debt?

A commonly asked question is, "Why does the state have to pay an interest rate of 8.25% on its debt to the retirement systems?" Two follow-up questions are:

1. Can the retirement systems lower the rate they charge on the debt and allow annual debt payments to be reduced?

2. Can the state issue pension obligation bonds (POBs) with a coupon rate of 4% or 5% and give the proceeds to the retirement system to pay off the UAL debt?

Unfortunately, the answers to these questions are that either it will not work or the risk is too large.

Decreasing the Discount Rate. Decreasing the discount rate of a retirement system would decrease the interest rate paid on the UAL debt, but the size of the debt would increase. The UAL or retirement debt is based on the future schedule of expected benefit payments, which is then discounted at the assumed interest (discount) rate to create a current value. A larger interest rate makes the current value smaller and a smaller interest rate makes the current value larger. For LASERS and TRSL, lowering the discount rate to 4% or 5% would increase the size of the debt significantly. In addition, interest on the larger debt, even at the lower rate, would be a larger amount than is currently being paid.

Issuing POBs. POBs could potentially offer savings to Louisiana, but with greatly increased risk. POBs are general obligation bonds of the government issued on a taxable basis (unlike most governmental and municipal bonds, which are tax-free). Because an investor must pay taxes on POB coupon income, Louisiana would have to offer a larger yield on the POBs than it would offer on similar tax-free bonds.

The process would involve the state issuing POBs with a lower coupon rate than the rate of return expected to be earned by the retirement system. The proceeds of the bond sale would then be turned over to the retirement system to reduce or eliminate the UAL. Essentially, the state would borrow money at 4% or 5% and then invest the proceeds with the retirement system trusting that the retirement system will earn its assumed rate of 8.25%.

Issuing POBs and giving the proceeds to the retirement system can produce savings for a government if the interest rate paid on the bonds is less than the rates of return actually earned by the retirement system. To get the higher rates of return, the retirement system must take more investment risk. However, many states have issued POBs, only to have the assets invested by the retirement systems lose value. When this happens, the state is not only liable for the POBs; it is also liable for investment losses (new UALs or debt) incurred by the retirement system.

In a report issued by the Center for Retirement Research Center at Boston College, researchers assessed how close POBs came to meeting the issuing system's investment return expectations. The results showed that only POBs issued years ago and during dramatic stock market recessions have earned positive returns to date. However, because 80% of POBs issued since 1992 are outstanding, the total result is unknown. Based on current projections, some of these may end up being extremely costly for the issuing government. The following examples summarize other retirement systems' experience with POBs.

- **Stockton, California** - According to a New York Times article,[5] Stockton sold $125 million worth of POBs to help its retirement system's funded ratio and pay down the UAL. This strategy did not work as expected, and the city is now in Chapter 9 bankruptcy. The bonds are not yet mature, so the outcome is unknown, but current estimates indicate that the bonds will not earn the gains or provide the budgetary relief initially expected. The article states that "critics contend that municipalities that try this are in essence borrowing money and betting it on the stock market, through their pension funds. The interest on pension obligation bonds is not tax exempt for this reason."

- **New Orleans Firefighters Pension and Relief Fund (NOFPRF)** - NOFPRF sold approximately $170 million of POBs in 2000. The bonds were sold under the assumption that NOFPRF would earn 10.7% on the proceeds which is an aggressive assumption considering the financial status of NOFPRF. Instead of earning a return, the proceeds lost value over the years. As a result, NOFPRF has since refinanced the debt through a new bond issuance backed by property taxes instead of investment returns.

- **Oakland, California** - According to a Los Angeles Times article,[6] Oakland issued POBs in 1997 that have lost $245 million for the city. To compensate for the losses, the city has proposed an additional POB issuance of $200 million. The article states that "If the pension funds make smart investments with the borrowed money, the returns can help pay the interest due to borrowers and sometimes even spin off some extra cash to pay pension costs. If they don't, the bonds can create additional costs for taxpayers, put the retirement funds…in jeopardy, and, the worst case scenario, force municipalities into bankruptcy."

POBs can be a valuable tool for governments, but they must be issued at the right time and by the right retirement system to be beneficial. Unfortunately, POBs are generally issued by governments already under financial stress and unable to bear the risk.

[5] Popper, Nathaniel. "More municipalities betting on pension bonds to cover obligations." *Los Angeles Times*, 26 March 2012. <http://articles.latimes.com/print/2012/mar/26/business/la-fi-pension-bonds-20120327>
[6] Williams Walsh, Mary. "How Plan to Help City Pay Pensions Backfired." *New York Times.* 3 September 2012. <http://www.nytimes.com/2012/09/04/business/how-a-plan-to-help-stockton-calif-pay-pensions-backfired.html?pagewanted=all&_r=0>

3. Why do some of the state and statewide retirement systems appear to be more successful than others in paying off the UAL and maintaining an adequate funded ratio?

Some Louisiana retirement systems may appear to be more successfully funded than others.

Appendix D contains graphs for each of the statewide retirement systems showing funded ratios from 1989 to 2011. These measurements, extracted from the annual valuation reports, do not present a perfect picture because the ratios were not prepared consistently throughout the entire period or determined using the same interest (discount) rate. Nevertheless, they do tell a story. Appendix E summarizes the difference in funding methods and discount rates in the state and statewide retirement systems.

1. Funded ratios over time have generally followed the investment marketplace. Ratios increased during rising markets and decreased during declining markets. The graph for each statewide system shows increasing funded ratios during the 1990s, a sharp decline at the beginning of the century, increasing values during the middle of the last decade, and finally another sharp downward trend beginning in 2008.

2. Funded ratios for DARS, FRS, MPERS, PERS-B, and RVRS were over 100% in 1989. The ratios for all systems have deteriorated because of the investment market. However, benefit improvements compromised ratios for FRS further. Plan mergers and the decision to amortize new debt over a period of 30 years rather than 15 have even further compromised ratios for MPERS.

3. Funded ratios for ASSR, CCRS, DARS, MERS, PERS, RVRS, and SPRF would have deteriorated even more than indicated by market conditions except for the fact that these systems employ a funding method that amortizes investment losses over the average working lifetime of its active members or about 10 to 15 years. When investment losses have occurred, these losses have been offset by significantly large employer contribution requirements. As a result, funded ratios have been stabilized.

Historical graphs were not prepared for the state retirement systems in Appendix D because there were significantly more discrepancies than for the statewide systems, making it too difficult to draw meaningful conclusions. However, Table 5 lists the FYE 2011 funded ratios for the state and statewide retirement systems.

Table 5 State and Statewide Retirement Systems Funded Ratios FYE 2011	
Retirement System	**2011 Funded Ratio**
State Systems	
LSERS	59.9%
LASERS	57.6%
TRSL	55.1%
STPOL	54.2%
Statewide Systems	
PERS-B	95.8%
PERS-A	93.0%
DARS	90.0%
MERS-B	88.4%
MERS-A	81.8%
SPRF	81.0%
ASSR	79.7%
RVRS	78.0%
FRS	76.4%
CCRS	74.2%
MPERS	58.1%
Source: Prepared by legislative auditor's staff using data from 2011 actuarial valuation reports.	

Current funded ratios reflect all past decisions by the legislature and the boards of trustees. Funded ratios for the state retirement systems are generally less than the ratios for the statewide systems.

The primary reasons why funded ratios are larger for the statewide systems are given below:

1. The legislature established a payment schedule to pay off its IUAL (i.e., the UAL for the state systems) that was significantly back loaded. Payments for the first 25 years of the 40-year schedule have been insufficient to pay interest on the outstanding debt, which has grown significantly (see details on page 3). Payment schedules for statewide UALs were generally not back loaded. If the debt owed by the employers to the state systems were recognized as an asset of the systems, the funded ratios would be considerably greater as shown in Table 6.

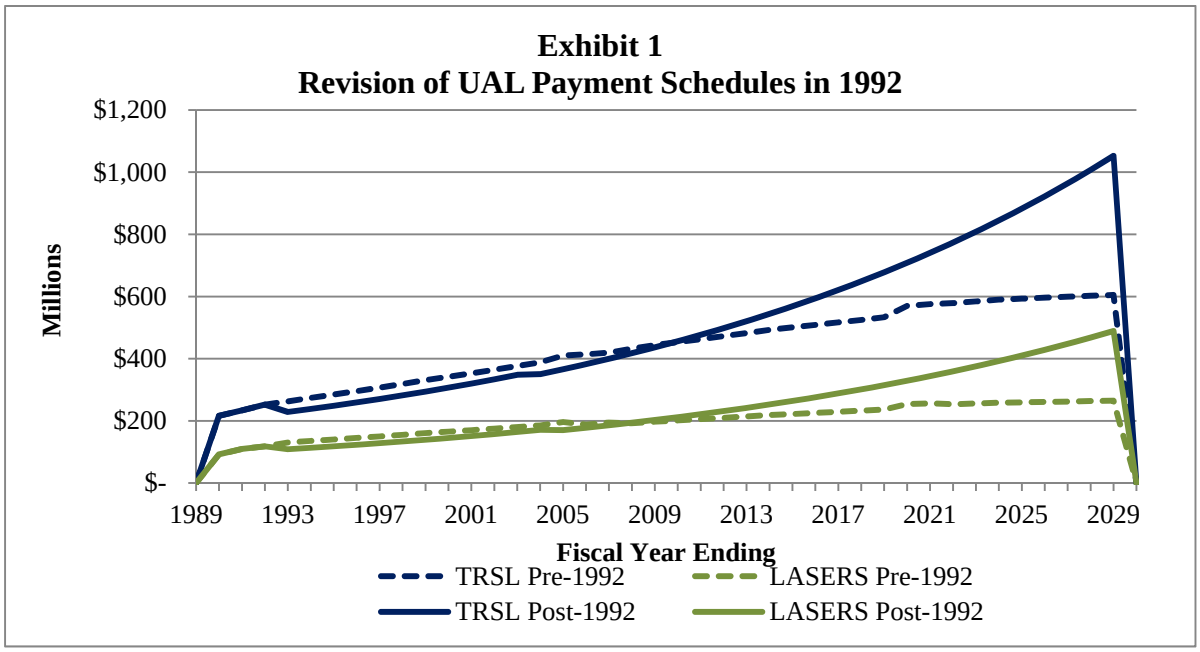
Table 6 Funded Ratios for the State Systems FYE 2011		
Retirement System	**Current Ratios**	**Ratios with IUALs Included as an Asset**
LASERS	57.6%	75.1%
TRSL	55.1%	80.0%
LSERS	59.9%	59.9%
STPOL	54.2%	54.2%
Weighted-Average (all four systems)	**56.2%**	**76.7%**
Source: Prepared by legislative auditor's staff using data from actuarial valuation reports.		

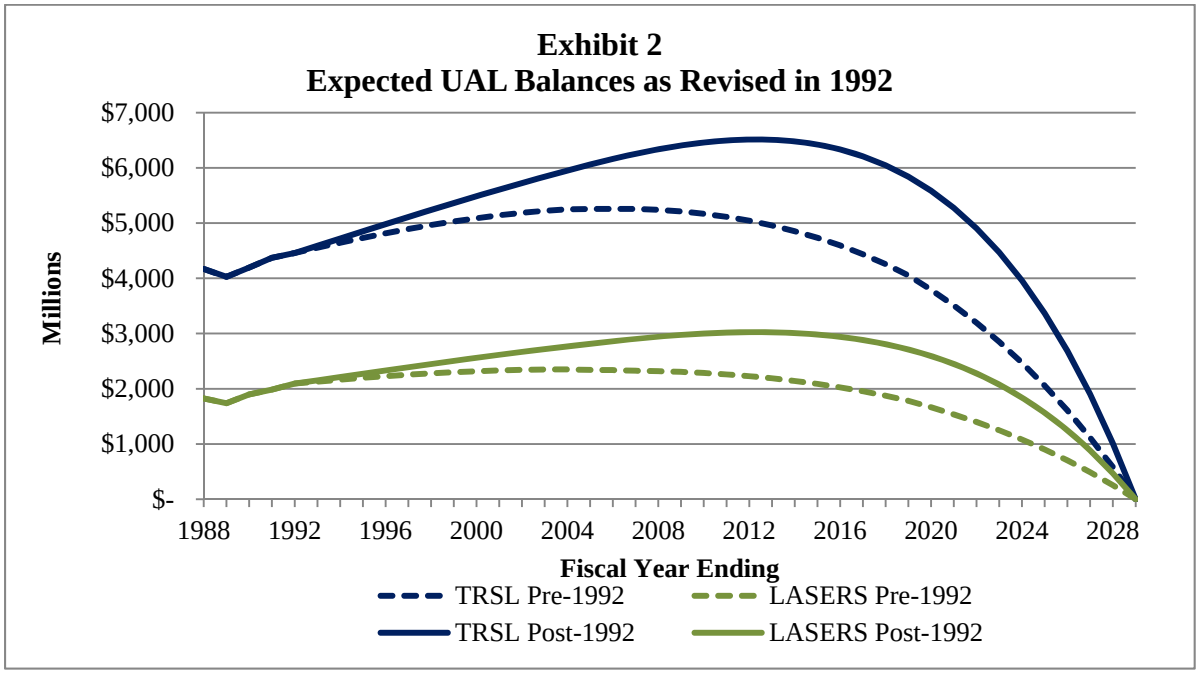
2. The legislature established funding methods for the statewide retirement systems that are more conservative than the methods it established for the state systems. As a result, employer contributions to the statewide systems have been comparatively larger.

3. The state retirement systems have used interest assumptions for its annual valuations that have been larger than those used by the statewide systems. As a result, contributions to the state systems have been smaller than they would have been had lower rates been used.

4. The statewide retirement systems have additional sources of funding. These systems receive either ad valorem taxes or payments from the Insurance Premium Tax Fund. Some statewide systems receive both.

APPENDIX A: INCREASES IN UAL - FOUR STATE SYSTEMS





Note: These graphs, which do not include any additional UAL created after 1992, are used to illustrate the impact of the 1992 revision.
Source: Prepared by legislative auditor's staff using information in the retirement systems' valuation reports and legislative acts.

Exhibit 3
LASERS Investment Gains and Losses

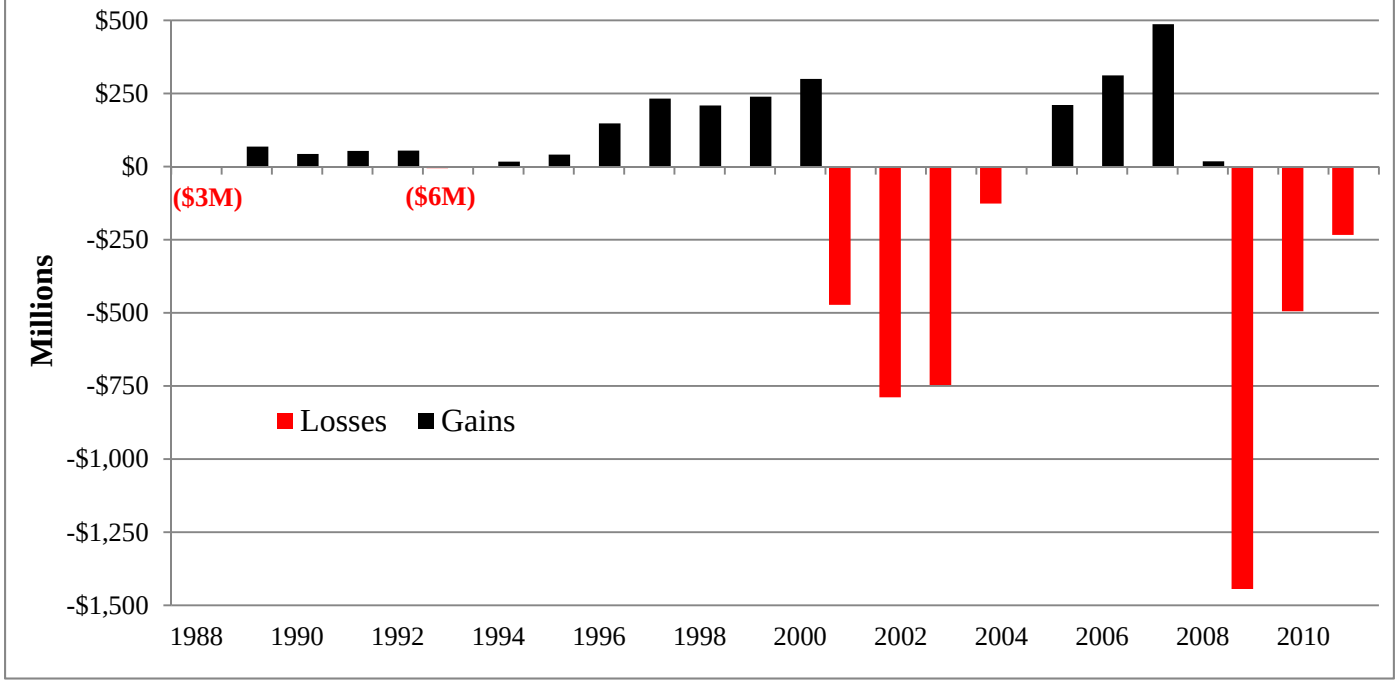
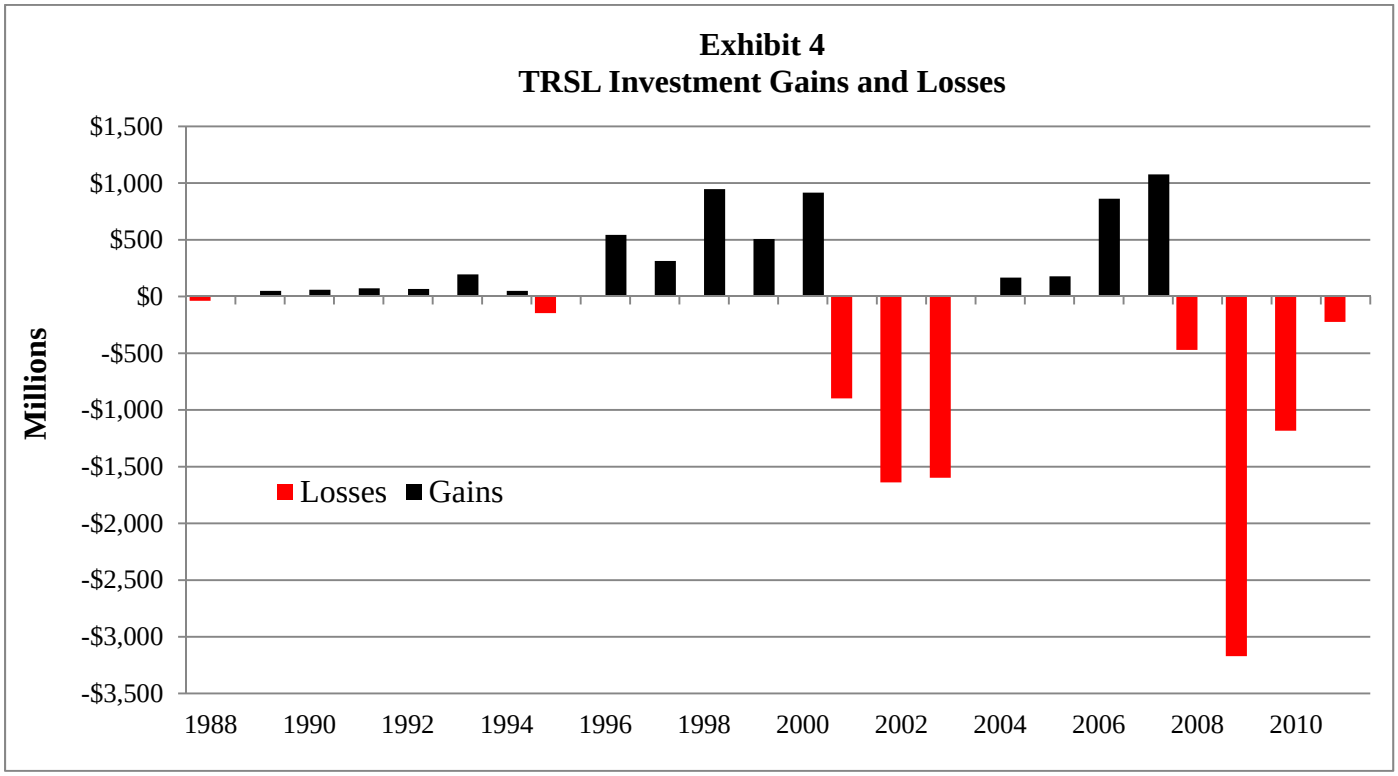


Exhibit 4
TRSL Investment Gains and Losses



Source: Prepared by legislative auditor's staff using information in the retirement systems' valuation reports.

APPENDIX B: INCREASES IN UAL/NORMAL COST - NINE STATEWIDE SYSTEMS

Exhibit 1 Changes to UAL Balance - FRS and MPERS 1997 to 2011		
	FRS	**MPERS**
1997 UAL Balance - Starting Point	$62,634,001	($18,182,503)
Expected Changes to UAL		
Interest on UAL	201,376,519	205,764,197
Amortization Payment	(251,936,092)	(215,422,535)
Total	**($50,559,573)**	**($9,658,338)**
Other Changes		
Asset Experience	$322,985,592	$608,591,994
Liability Experience	93,702,201	197,890,189
Plan Changes		118,003
COLAs	56,708,856	83,736,130
Assumption Changes	10,760,681	(25,839,623)
Method Changes	(121,695,690)	(443,778)
Contribution (Gains)/Losses	19,865,506	49,287,823
Mergers	21,776,169	43,886,795
Total	**$404,103,315**	**$957,227,533**
2011 UAL Balance - End Point	$416,177,743	$929,386,692
Source: Prepared by legislative auditor's actuarial staff using information from FRS and MPERS valuation reports.		

Exhibit 2
Changes in Normal Cost for Seven Statewide Retirement Systems
1997 to 2011

	ASSR	CCRS	DARS	MERS-A	MERS-B	PERS-A	PERS-B	RVRS	SPRF
1997 Normal Cost - Starting Point	11.6295%	9.1328%	10.7217%	4.7858%	1.7310%	4.2977%	2.6080%	6.6875%	5.7986%
Additions and Subtractions to Normal Cost									
Asset Experience	14.1152%	17.4591%	21.6852%	16.5327%	9.5159%	12.8760%	6.8703%	33.4414%	15.5130%
Liability Experience	-4.4654%	-5.4425%	-7.2880%	-5.7207%	-3.7347%	-4.3419%	-1.8424%	-0.9072%	0.7034%
Plan Changes	7.4755%	0.9417%	2.2995%	2.3287%	4.0687%	0.1051%	0.3754%	4.5638%	2.6765%
COLAs	1.0352%	1.7183%	1.5362%	3.8624%	1.6837%	1.6462%	0.7393%	3.3700%	1.8556%
Assumption Changes	13.3138%	4.3104%	-1.6633%	3.5098%	2.9325%	0.2020%	4.5091%	-1.1482%	1.2254%
Method Changes	-1.5673%	-7.8047%	-7.2153%	-4.5336%	-2.5514%	2.9304%	-2.2510%	-10.0907%	-5.0227%
Contribution (Gains)/Losses	-0.3277%	0.2817%	0.5074%	0.4048%	-0.2375%	0.5476%	0.3498%	-0.3464%	0.0891%
New Members	-9.2324%	-2.2932%	1.6152%	-3.8592%	-3.1231%	-1.8832%	-0.3094%	-2.6940%	-4.7798%
Total Increase	**20.3469%**	**9.1708%**	**11.4769%**	**12.5249%**	**8.5541%**	**12.0822%**	**8.4411%**	**26.1887%**	**12.2605%**
2011 Normal Cost - End Point	31.9764%	18.3036%	22.1986%	17.3107%	10.2851%	16.3799%	11.0491%	32.8762%	18.0591%

Note: Cells shaded in red indicate the factors that increased the normal cost of that particular system.
Source: Prepared by legislative auditor's staff using information from valuation reports.

APPENDIX C: COMPOSITION OF THE BOARD OF TRUSTEES

Exhibit 1
Composition of the Boards of Trustees for the State Retirement Systems

Trustees	LASERS	TRSL	LSERS	STPOL	Total	% of Total
Chairman, House Committee on Retirement	x	x	x	x	8	15.1%
Chairman, Senate Committee on Retirement	x	x	x	x		
State Treasurer	x	x	x	x	10	18.9%
Commissioner of Division of Administration	x	x	x	x		
State Superintendent of Public Education		x				
Secretary of State			x			
Superintendent of Schools		x			2	3.8%
Superintendent of State Police				x		
President Louisiana School Bus Operators Association			x		33	62.2%
President of the Louisiana State Troopers Association				x		
President of the Central State Troopers Coalition				x		
Active Member #1	x	x	x	x		
Active Member #2	x	x	x	x		
Active Member #3	x	x	x			
Active Member #4	x	x	x			
Active Member #5	x	x				
Active Member #6	x	x				
Active Member #7		x				
Active Member #8		x				
Active Member #9		x				
Retired Member #1	x	x	x	x		
Retired Member #2	x	x	x	x		
Retired Member #3	x					
Total Number:	13	17	12	11	53	100.0%

Color Codes:
These trustees generally send legislative staff to board meetings to observe. Staff has no voting rights.
These trustees are generally either neutral or advocates for employers or plan sponsors.
These trustees may be sympathetic to employer needs, but their membership in the system influences their decisions.
These trustees are advocates for the members of the system.

Source: Prepared by legislative auditor's staff using information from Louisiana Revised Statutes.

Exhibit 2
Composition of the Boards of Trustees for the Statewide Retirement Systems

Trustees	ASSR	CCRS	DARS	FRS	MERS	MPERS	PERS	RVRS	SPRF	Total	% of Total
Chairman, House Committee on Retirement	x	x	x	x	x	x	x	x	x	18	17.6%
Chairman, Senate Committee on Retirement	x	x	x	x	x	x	x	x	x		
State Treasurer				x		x				8	7.8%
Commissioner of Division of Administration				x		x					
Mayor				x		x					
Mayor				x		x					
Association President	x	x			x				x	26	25.5%
Association Immediate Past President		x									
Association Vice President	x	x									
Association 2nd Vice President		x									
Association Treasurer	x	x							x		
Association Director #1		x									
Association Director #2		x									
Association Director #3		x									
Fire Chief				x						50	49.1%
Employee Representative #1	x										
Employee Representative #2	x										
Member of Association and System #1				x			x				
Member of Association and System #2				x							
Active Member #1	x		x		x	x	x	x	x		
Active Member #2	x		x		x	x	x	x	x		
Active Member #3	x		x		x	x	x	x	x		
Active Member #4	x		x		x	x		x	x		
Active Member #5	x		x		x	x		x	x		
Active Member #6	x		x		x	x		x	x		
Active Member #7	x					x					
Active Member #8	x										
Retired Member #1	x	x	x	x		x	x		x		
Retired Member #2	x					x			x		
Retired Member #3									x		
Retired Member #4									x		
Retired Member #5									x		
Retired Member #6									x		
Total Number:	15	11	9	10	9	15	7	8	14	102	100.0%

Color Codes:
These trustees generally send legislative staff to board meetings to observe. Staff has no voting rights.
These trustees are generally either neutral or advocates for employers or plan sponsors.
These trustees may be sympathetic to employer needs, but their membership in the system influences their decisions.
These trustees are advocates for the members of the system.

Source: Prepared by legislative auditor's staff using information from Louisiana Revised Statutes.

APPENDIX D: HISTORY OF FUNDED RATIOS FOR STATEWIDE RETIREMENT SYSTEMS

Exhibit 1
History of ASSR Funded Ratio

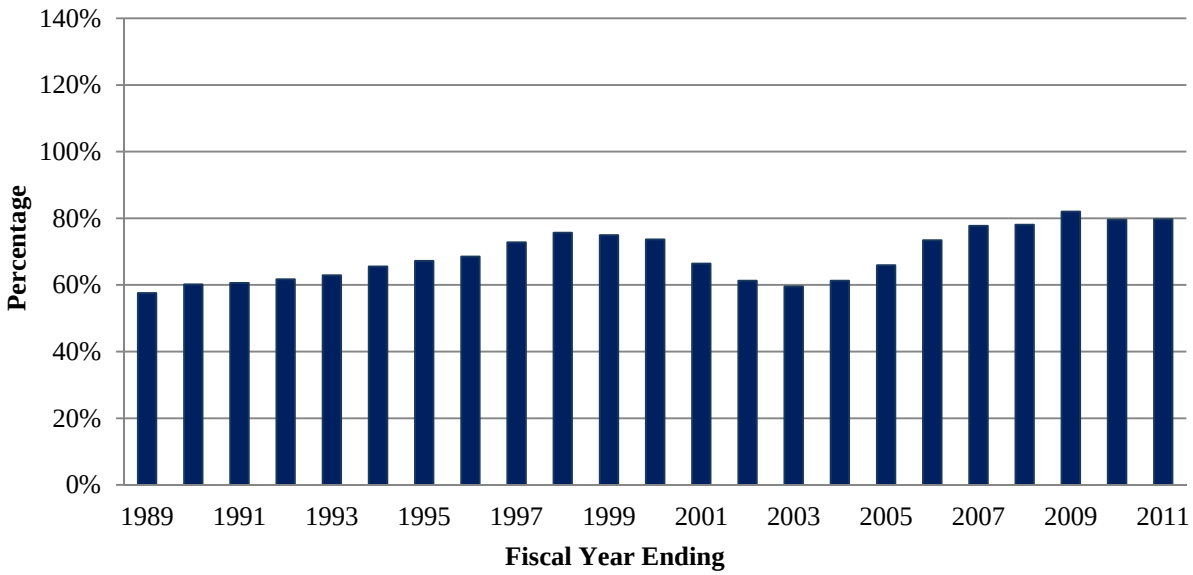
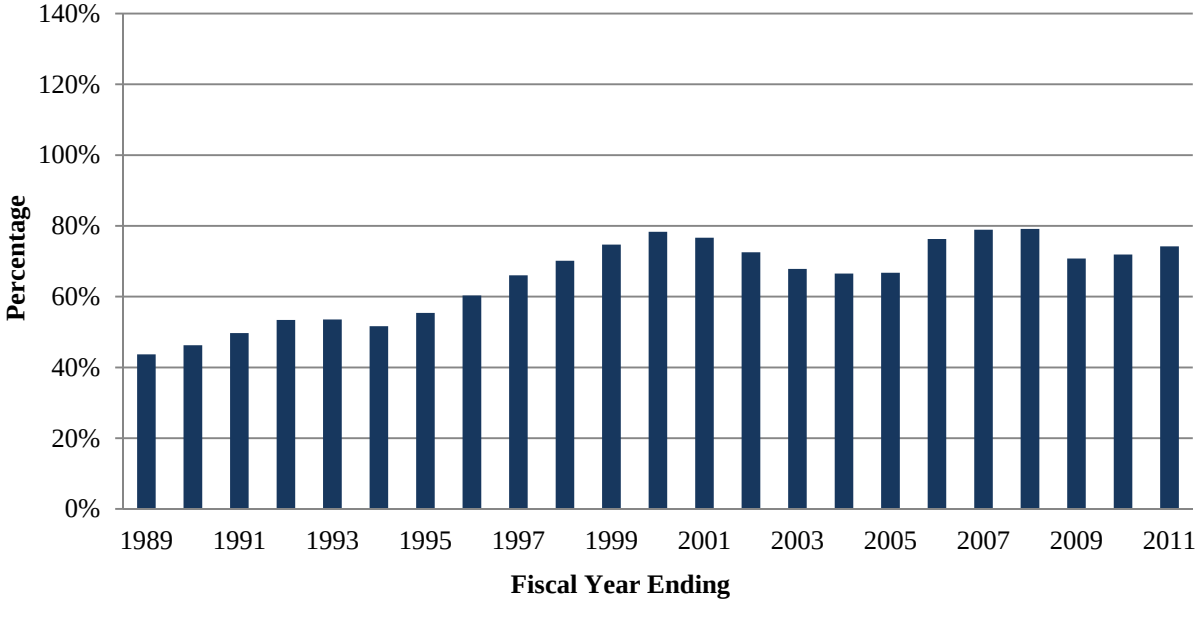


Exhibit 2
History of CCRS Funded Ratio



Source: Prepared by legislative auditor's staff based on valuation reports for the statewide systems.

Exhibit 3
History of DARS Funded Ratio

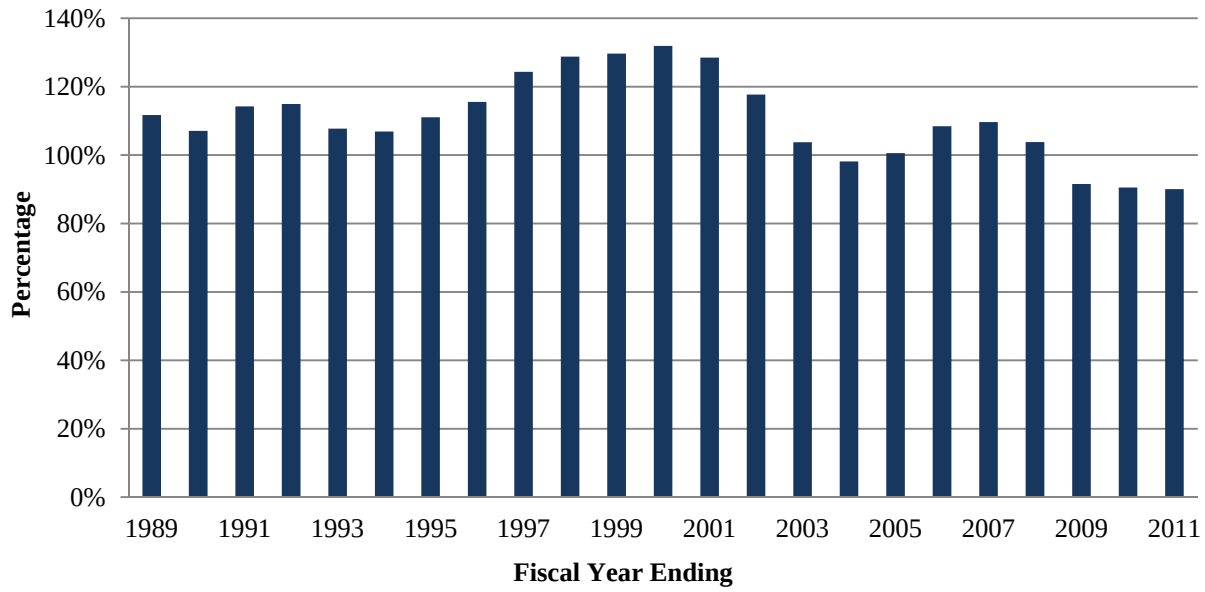
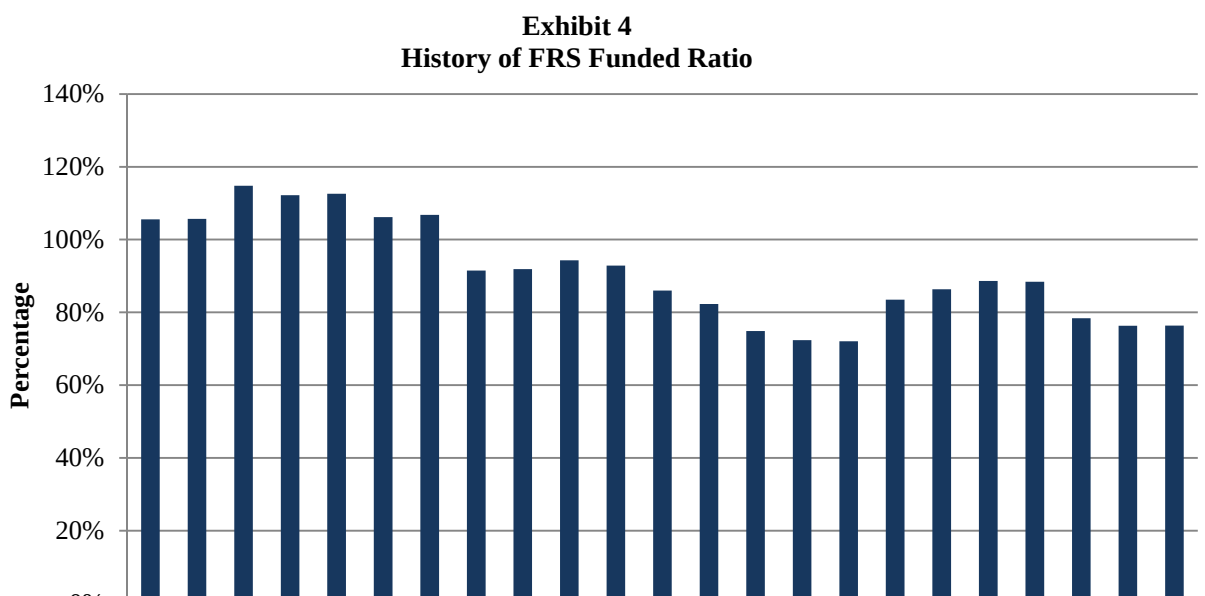


Exhibit 4
History of FRS Funded Ratio



Source: Prepared by legislative auditor's staff based on valuation reports for the statewide systems.

Exhibit 5
History of MERS-A Funded Ratio

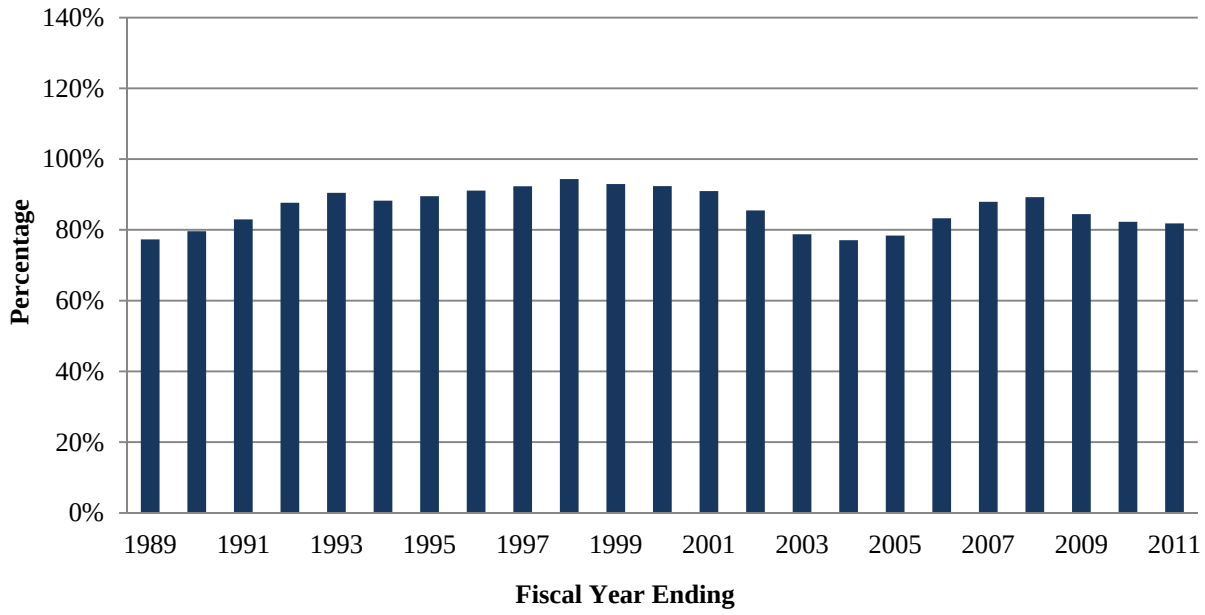
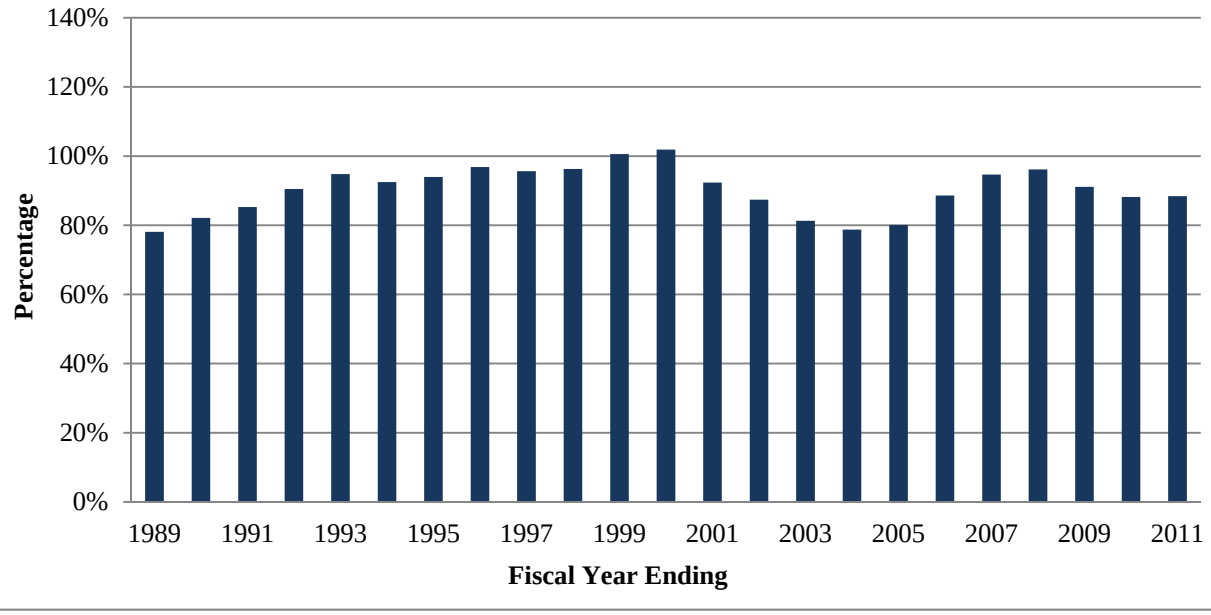


Exhibit 6
History of MERS-B Funded Ratio



Source: Prepared by legislative auditor's staff based on valuation reports for the statewide systems.

Exhibit 7
History of MPERS Funded Ratio

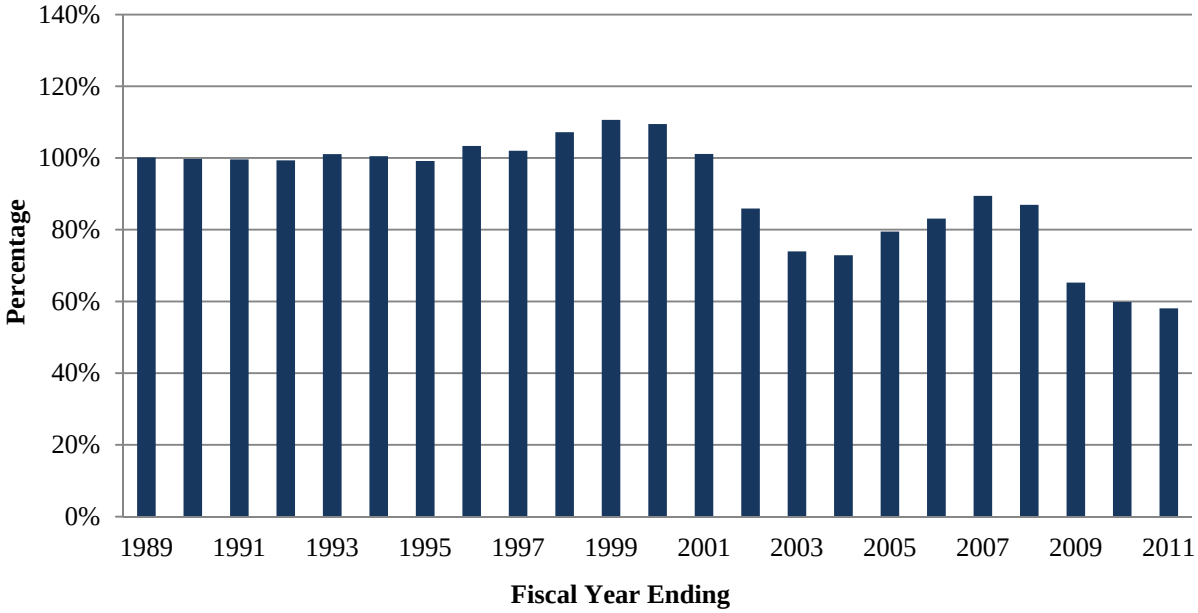
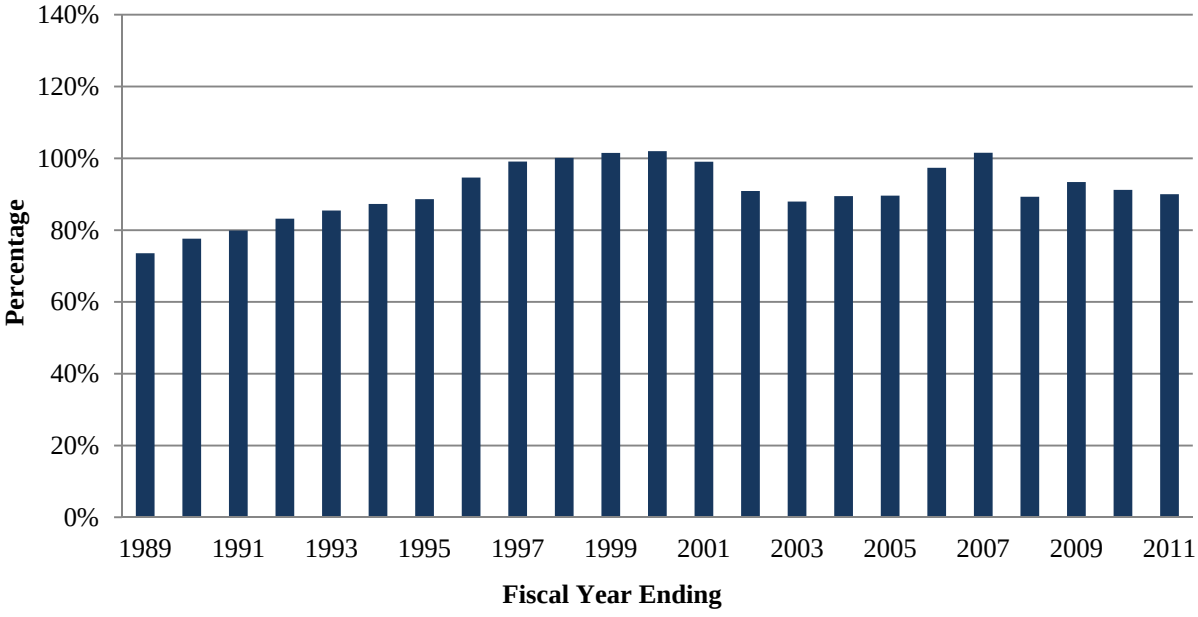


Exhibit 8
History of PERS-A Funded Ratio



Source: Prepared by legislative auditor's staff based on valuation reports for the statewide systems.

Exhibit 9
History of PERS-B Funded Ratio

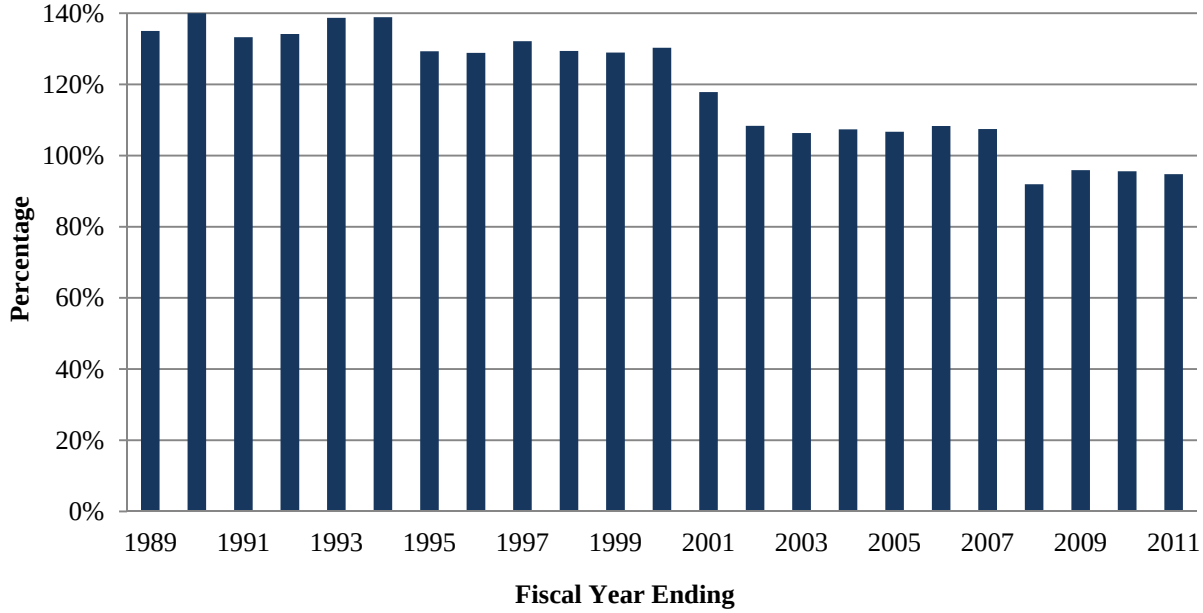
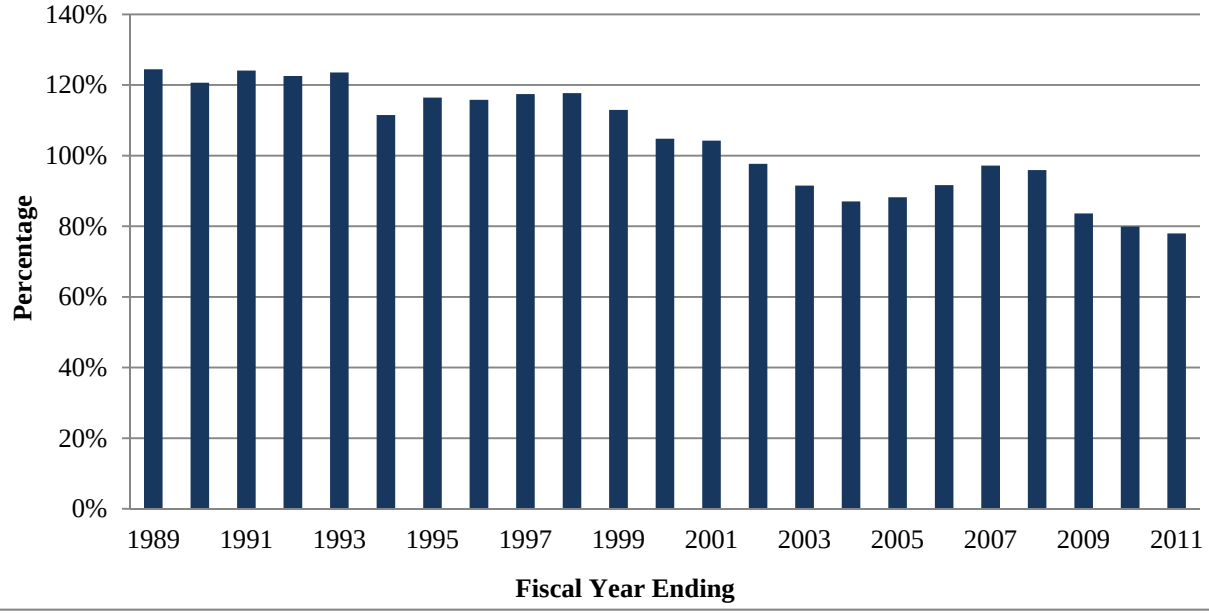
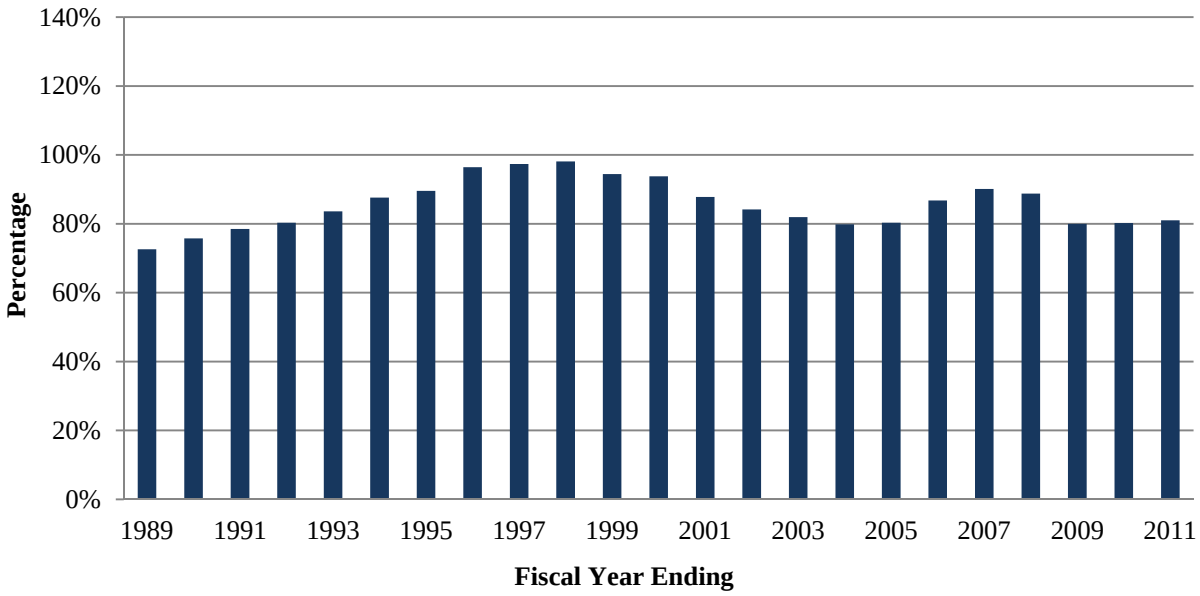


Exhibit 10
History of RVRS Funded Ratio



Source: Prepared by legislative auditor's staff based on valuation reports for the statewide systems.

Exhibit 11
History of SPRF Funded Ratio



Source: Prepared by legislative auditor's staff based on valuation reports for the statewide systems.

APPENDIX E: FUNDING METHODS AND DISCOUNT RATES OF STATE AND STATEWIDE RETIREMENT SYSTEMS

Exhibit 1
Funding Methods and Discount Rates of State and Statewide Retirement Systems
As of June 30, 2011

Retirement System	Funding Method	Creates UAL?	Discount Rate
State Systems			
LASERS	Projected Unit Credit	Yes	8.25%
TRSL	Projected Unit Credit	Yes	8.25%
STPOL	Entry Age Normal	Yes	7.50%
LSERS	Entry Age Normal	Yes	7.50%
Statewide Systems			
ASSR	Frozen Attained Age Normal	IUAL Only	7.50%
CCRS	Frozen Attained Age Normal	IUAL Only	8.00%
DARS	Aggregate	No	8.00%
FRS	Entry Age Normal	Yes	7.50%
MERS-A	Frozen Attained Age Normal	IUAL Only	8.00%
MERS-B	Frozen Attained Age Normal	IUAL Only	7.50%
MPERS	Entry Age Normal	Yes	8.00%
PERS-A	Frozen Attained Age Normal	IUAL Only	8.00%
PERS-B	Aggregate	No	7.50%
RVRS	Aggregate	No	7.50%
SPRF	Frozen Attained Age Normal	IUAL Only	8.00%

Source: Prepared by legislative auditor's staff using 2011 actuarial valuation reports.