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Program Review

**Recommended
Florida Retirement System
Contribution Rates
Remain Reasonable;
Asset Growth Has Slowed**

Report No.03-21 March 2003

*Office of Program Policy Analysis
and Government Accountability*

an office of the Florida Legislature

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Florida Monitor: <http://www.oppaga.state.fl.us/>

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John W. Turcotte, OPPAGA Director



The Florida Legislature

OFFICE OF PROGRAM POLICY ANALYSIS AND GOVERNMENT ACCOUNTABILITY



John W. Turcotte, Director

March 2003

The President of the Senate,
the Speaker of the House of Representatives,
and the Joint Legislative Auditing Committee

Section 112.658, *Florida Statutes*, directs the Office of Program Policy Analysis and Government Accountability to review the actuarial valuation of the Florida Retirement System to determine whether the valuation complies with the Florida Protection of Employee Retirement Benefits Act, Ch. 112, Part VII, *Florida Statutes*. We also assessed the system's funding status.

The results of this review are presented to you in this report. To complete the review, we contracted with Buck Consultants, Inc., to serve as our actuarial consultant. Becky Vickers conducted the review under the supervision of Thomas S. Roth.

We wish to express our appreciation to the staff of the Florida Department of Management Services for their assistance.

Sincerely,

A handwritten signature in cursive script, appearing to read "John W. Turcotte".

John W. Turcotte
Director

Table of Contents

Review Summary	i
Program Review	1
Scope.....	1
Background	1
Findings.....	3
The system's 2002 valuation was made in accordance with standards, and its assumptions and methods are reasonable	3
The system continues to be fully funded in 2002, but asset growth has slowed	4
Recommendations.....	5
Appendix A: A Study of the 2002 Actuarial Valuation of the Florida Retirement System by Buck Consultants, Inc.....	7
Appendix B: Response From the Department of Management Services	37

Review Summary

Recommended Florida Retirement System Contribution Rates Remain Reasonable; Asset Growth Has Slowed

The Florida Retirement System continues to be fully funded. The 2002 actuarial valuation determined that the system's assets continued to exceed its liabilities, with a surplus of \$12.936 billion as of July 1, 2002. However, the 2002 actuarial valuation also shows that the growth rate in the system's ratio of assets to liabilities has leveled off and begun a downward trend. The system's ratio of assets to liabilities was 118.09% in Fiscal Year 1999-00, 117.93% in Fiscal Year 2000-01, and 114.96% in Fiscal Year 2001-02.

Buck Consultants, Inc., concluded that the 2002 valuation recommended reasonable contribution rates and was made in accordance with relevant state laws and rules, and actuarial standards. It further concluded that the assumptions and methods used in the 2002 valuation were generally reasonable.

However, it also made several technical recommendations.

- Although improvements have been made since the 2001 valuation, the department's consulting actuary should include a more detailed analysis of the causes of gains and losses to the system's liabilities. This would enable an outside actuary to better assess the factors causing recent gains and losses (page 19).
- Retirement rate assumptions should be monitored for appropriateness, especially for younger system members (page 22).

Buck Consultants, Inc.'s report is presented in its entirety in Appendix A, beginning on page 7.

The Secretary of the Department of Management Services provided a written response to our preliminary report. The Secretary described actions the department is taking to implement the actuary's recommendations. See Appendix B, page 37, for the response.

Recommended Florida Retirement System Contribution Rates Remain Reasonable; Asset Growth Has Slowed

Scope

Section 112.658, *Florida Statutes*, directs the Office of Program Policy Analysis and Government Accountability (OPPAGA) to review the 2002 actuarial valuation of the Florida Retirement System to determine whether it complies with provisions of the Florida Protection of Public Employee Retirement Benefits Act.¹ The act establishes reporting and disclosure standards for actuarial reports on local government retirement plans. These reports must address the adequacy of employer contribution rates, assess the plan's assets and projected liabilities, and use actuarial cost methods approved by the Employee Retirement Income Security Act of 1974 (ERISA) and as permitted under regulations prescribed by the U.S. Secretary of the Treasury. The act requires OPPAGA to use the same actuarial standards as the Department of Management Services uses to monitor local government pension plans.

Our review's objectives were to determine whether the Department of Management Services' consulting actuary made the 2002 actuarial valuation of the Florida Retirement System using generally accepted and statutorily required standards, methods, and procedures; whether the valuation's results were reasonable; and whether the system continued to have sufficient assets to pay future benefits when due. To complete this review, we contracted with Buck Consultants, Inc., to serve as our actuarial consultant.

The Florida Retirement System is currently undergoing an audit by the federal Department of Health and Human Services' Office of the Inspector General. According to the Office of the Inspector General work plan, this audit is being conducted to determine whether the state appropriately allocated pension costs to federally funded programs.² However, as of our report's publication, the Division of Retirement had not yet received a copy of the draft audit report. Once the division has

¹ Sections 112.60 to 112.67, *Florida Statutes*.

² The scope of our review and that of our actuary did not include assessing the 2002 valuation's compliance with federal requirements other than ERISA and regulations prescribed by the U.S. Secretary of the Treasury, as prescribed in the Florida Protection of Public Employee Retirement Benefits Act.

received the draft audit, it will have the opportunity to respond to the audit before it is published.

Background

Florida law requires the Department of Management Services to cause an actuarial valuation of the Florida Retirement System to be made annually with the results reported to the Legislature by December 31 prior to the next legislative session.

Actuarial valuations are made for several reasons:

- to determine the contribution rates needed to cover the system's normal costs (the percentage of salary needed to be contributed each year to cover the cost of future benefits owed system members);
- to determine the contribution rates needed to amortize any unfunded actuarial liability (the amount of pension liabilities not covered by contributions made at the normal cost rate or by investment of plan assets); and
- to assess the system's funding status (the ability of system assets to cover its liabilities).

The Florida Retirement System provides pension benefits to state employees and employees of local school districts, counties, certain cities, and community colleges. Most of the system's active members are not state employees. For example, in Fiscal Year 2000-01, school district employees composed 47.8% of the system's active members, state employees composed 23.8% of the FRS, county employees composed 22.2%, city and special district employees composed 3.5%, and community college employees composed 2.7%.

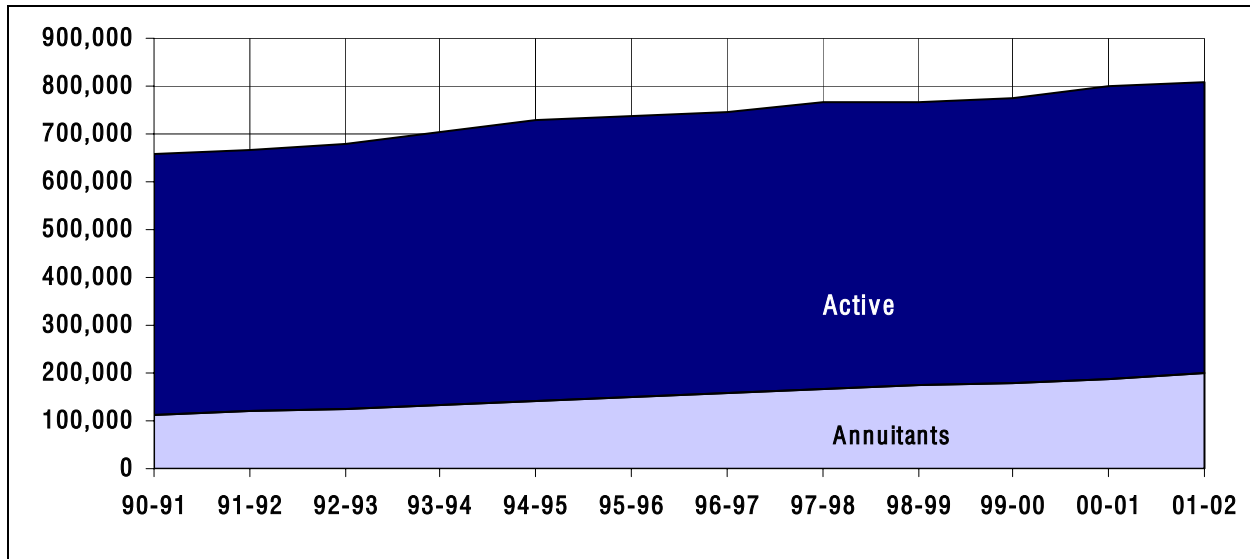
Over the past 21 years, the system has experienced significant growth in the number of active members and annuitants (retirees or their beneficiaries receiving retirement payments). Between Fiscal Years 1980-81 through 2001-02, the number of active system members increased from 393,894 to 611,178 (55%). During this same period, the number of system annuitants increased from 59,533 to 198,054 (233%). (See Exhibit 1.)

The Department of Management Services' Division of Retirement administers the Florida Retirement System. Pension benefits and all Division of Retirement operating expenses are paid from revenues deposited in the Florida Retirement System Trust Fund. For Fiscal Year 2002-03, the Legislature provided the Division of Retirement spending authority of \$26.8 million to operate the division and \$2.606 billion to pay retirement benefits.

The State Board of Administration invests Florida Retirement System Trust Fund assets. As of June 30, 2002, the market value of trust fund assets was \$89.688 billion.

The department contracted with Milliman USA to conduct the system's 2002 actuarial valuation.

Exhibit 1
The Number of FRS Members and Annuitants Are Increasing¹



¹ Data presented in this exhibit excludes (1) FRS members who are in the Deferred Retirement Option Program (DROP) and (2) terminated vested members (persons who are vested and are no longer working for a government entity participating in the system, but have not begun to receive retirement benefits). The 2002 actuarial valuation indicates that FRS has 28,389 DROP members and 56,635 terminated vested members as of July 1, 2002.

Source: Division of Retirement documents and the Florida Retirement System Actuarial Valuation as of July 1, 2002.

Findings

The system's 2002 valuation was made in accordance with standards, and its assumptions and methods are reasonable

Our consulting actuary, Buck Consultants, Inc., concluded that the 2002 actuarial valuation recommended contribution rates for covering the Florida Retirement System's liabilities that were calculated in accordance with relevant state laws and rules, and actuarial standards. It also concluded that the assumptions and methods used in the 2002 valuation were reasonable. Buck Consultants, Inc.'s report is presented in its entirety in Appendix A.

The system continues to be fully funded in 2002, but asset growth has slowed

Actuarial valuations provide a means to assess whether a pension system is making progress in improving its funding status. One indicator of a system's funding status is the sufficiency of its assets in covering benefit liabilities.

The 2002 valuation determined that the system's assets exceeded its liabilities by \$12.936 billion as of July 1, 2002. As shown in Exhibit 2, the system's ratio of assets to liabilities significantly increased from Fiscal Year 1992-93 to 2001-02 (69% to 115%). This improvement is due primarily to significantly higher than expected investment returns resulting from the exceptional performance of the stock market during the 1990s and member salary increases being lower than expected.³ However, the 2002 actuarial valuation also shows that the growth rate in the system's ratio of assets to liabilities has leveled off and begun a downward trend. The system's ratio of assets to liabilities was 118.09% in Fiscal Year 1999-00, 117.93% in Fiscal Year 2000-01, and 114.96% in Fiscal Year 2001-02. The downward trend over the last two years is due to poorer stock market performance during this time period.

As a result of the positive investment and member salary experience during the late 1990s, the system's contribution rates have decreased over time. For example, the contribution rate for regular members of the Florida Retirement System determined by the 1997 actuarial valuation was 15.51%, which included 4.87% for amortizing the system's unfunded liability. In contrast, the 2002 valuation made a preliminary recommendation for a contribution rate of 8.21% for regular members, with no contributions being needed for amortizing an unfunded liability, which was eliminated in 1999.⁴

Unlike prior valuation reports, the 2002 actuarial valuation does not make a final recommendation for the contribution rates. Instead, the valuation report makes recommendations for the contribution rates prior to any adjustments due to the application of a contribution rate "stabilization mechanism" prescribed in s. 121.031(1)(f), *Florida Statutes*. This mechanism uses the surplus in the value of the system's assets over liabilities to offset changes in contribution rates.

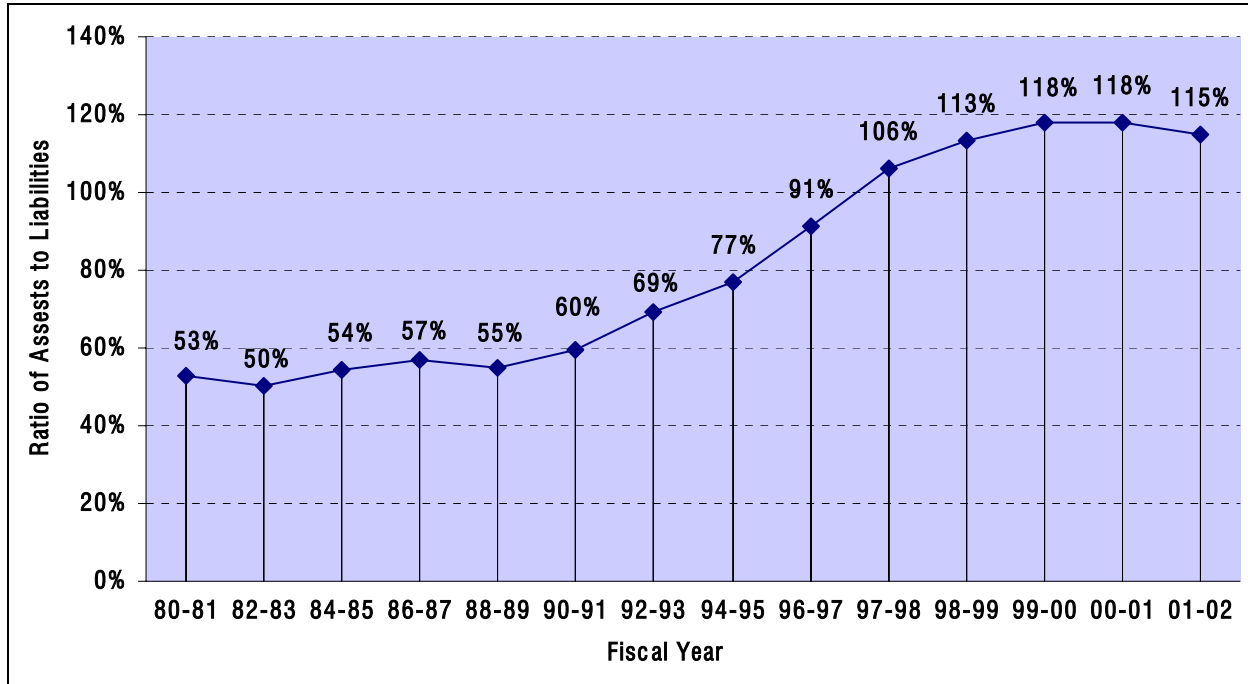
For Fiscal Year 2002-03, the Legislature adopted contribution rates that incorporated reductions due to the application of the stabilization

³ For purpose of the actuarial valuation, the value of assets is determined by using a five-year averaging methodology as required by s. 121.031(3)(a), *F.S.* This multi-year averaging methodology is used to smooth the wide fluctuations that can occur in the market value of assets. The market value of FRS assets was \$106.53 billion as of July 1, 2000, \$98.42 billion as of July 1, 2001, \$89.69 billion as of July 1, 2002, and \$83.5 billion as of December 31, 2002.

⁴ OPPAGA and its predecessor organization released numerous reports dating back to 1981 documenting the problem of the system's unfunded liability and recommended actions to eliminate it. These reports are listed on OPPAGA's Internet website. See <http://www.oppaga.state.fl.us/reports/agency/dms.html>.

mechanism. For example, the rates for regular and special risk members were reduced by 4.05%. During its 2003 session, the Legislature will determine the extent to which recognition of surplus assets will be used to adjust contribution rates.

Exhibit 2
The Florida Retirement System’s Funding Status Has Improved Over Time, But Has Levelled Off in Recent Years



Source: Division of Retirement documents.

Recommendations

Buck Consultants, Inc., made several technical recommendations for improving future actuarial valuations.

- The department’s consulting actuary should include a more detailed analysis of the causes of gains and losses to the system’s liabilities. This would enable an outside actuary to better assess the factors causing recent gains and losses.
- The department’s consulting actuary should monitor the retirement rate assumption used in the 2002 valuation to determine whether it continues to be appropriate. Buck Consultants noted that many experts believe that system members currently under the age of 40 will not retire in the same pattern as the current older generation of employees. It also noted that although the initial number of members electing to join the Public Employee Optional Retirement Program (PEORP) was significantly lower than expected, the PEORP would

have an effect on retirement expectations and the population eligible for FRS retirement.⁵ The state of the economy could also have an effect on the rate with which members leave the system. When other employment opportunities are scarcer, employees tend to remain with their current employer. When the economy is thriving, other opportunities are more likely to be pursued. Accordingly, Buck Consultants, Inc., proposed that the department's actuary analyze retirement rates, and, if needed, consider using the current retirement rate assumption for older employees and a reduced assumption for younger ones.

⁵ The Public Employee Optional Retirement Program (PEORP) was created by the 2000 Legislature. The PEORP is a defined contribution plan in which the retirement benefits are based on the amount of investment earnings on contributions made on the members' behalf. Under this plan, employees bear the investment risk. In contrast, the Florida Retirement System is a defined benefit plan in which the employer bears the investment risk and guarantees a certain level of benefits based on formulas that take into account a member's years of service, salary levels, and age of retirement.

Appendix A

**A STUDY OF THE
2002 ACTUARIAL VALUATION
OF THE
FLORIDA RETIREMENT SYSTEM**



18392 Highwoods Preserve Parkway, Suite 204
Tampa, Florida 33647

January 30, 2003

Ms. Becky Vickers
Chief Legislative Analyst
Office of Program Policy Analysis
and Government Accountability (OPPAGA)
Florida Legislature
111 West Madison Street, Suite 312
Tallahassee, FL 32399-1475

Dear Ms. Vickers:

We are pleased to present our "Study of the 2002 Actuarial Valuation of the Florida Retirement System". We have conducted this study in accordance with the terms of the contract between your office and our firm. Our review does not include any comments regarding the retiree health insurance subsidy. The review also does not include comments on the defined contribution plan, Public Employees Optional Retirement Plan (PEORP), which was scheduled to begin after the July 1, 2002 valuation that this report covers.

We look forward to discussing the study with you and your staff and are also available to discuss it with the legislature and other interested parties in the State of Florida.

Sincerely,

/s/
Edward A. Macdonald
Principal, Consulting Actuary

/s/
Zanese B. Duncan
Associate Principal, Consulting Actuary

EAM/ZBD/sjh

Buck Consultants, Inc.
813 | 978-0275 Fax 813 | 866-8872

TABLE OF CONTENTS

	<u>Page</u>	
Section I.	Introduction and Summary	
	A. Scope of the Study	1
	B. General Approach to the Study	2
	C. Summary of Major Findings	8
Section II.	Actuarial Assumptions	
	A. General	11
	B. Demographic Assumptions	12
	C. Economic Assumptions	13
Section III.	Actuarial Methodology	
	A. General	15
	B. Actuarial Cost Method	15
	C. Asset Valuation Method	16
	D. Change in Contribution Rates	17
	E. Accounting Information	18
Section IV.	Actuarial Valuation Process	
	A. Membership Data	20
	B. Work of the State Actuary	21
	C. Work of the Actuary	21
	D. Frequency and Timing of Valuation	21
Section V.	The Actuarial Valuation Report	
	A. General	23
	B. Guidelines of the Actuarial Standards Board	23
	C. Legal Requirements of the State of Florida	23
	D. Disclosure Requirements of the Governmental Accounting Standards Board	25
	E. Report Format	25

SECTION I

INTRODUCTION AND SUMMARY

This section summarizes the scope of the study, the general approach taken to it and its major findings.

A. Scope of the Study

The Request for Proposal from the Office of Program Policy Analysis and Government Accountability of the Florida Legislature (OPPAGA) described the scope of this study as follows:

“The consulting actuary will examine and review the work and 2002 report of the Department of Management Services’ actuaries to determine the following:

- Whether the Department of Management Services’ actuaries complied with the requirements of the Florida Statutes, Department rules, and governmental accounting standards regarding disclosure of pension-related information in their actuarial review and valuation of the Florida Retirement System;
- Whether the Department’s actuaries used generally accepted actuarial cost methods, bases for assumptions, and reporting standards;
- Whether the specific economic and demographic assumptions used were arrived at from a sufficient level of detail considered, and were reasonable in light of recent experience;

- Whether the Department's actuaries provided sufficient information as to the causes for gains, losses, and net change in the unfunded liability to allow evaluation of specific factors;
- Whether the Department's actuaries' report adequately provided necessary information that another actuary, unfamiliar with the situation, would find sufficient to appraise the findings and arrive at reasonably similar results; and
- Whether other aspects of the Department's actuaries' work and report were sufficient."

B. General Approach to the Study

The July 1, 2002 actuarial valuation report, together with the conversations and information we received in past years, provided the basis for the Study. We have also reviewed certain information regarding the State's Deferred Retirement Option Program (DROP), which was effective July 1, 1998. We have not included analyses of the effect of the retiree health insurance subsidy. We have also not commented on the Public Employee Optional Retirement Plan (PEORP), which was scheduled to be offered after the date of this report as an option to the current FRS defined benefit plan.

Section 112.63, Florida Statutes, requires the actuarial valuation report to contain the following:

- (a) Adequacy of employer and employee contribution rates in meeting levels of employee benefits provided in the system and changes, if any, needed in such rates to achieve or preserve a level of funding deemed adequate to enable payment through the indefinite future of the benefit amounts prescribed by the system, which shall include a valuation of present assets, based on statement value, and prospective assets and liabilities of the system and the extent of unfunded accrued liabilities, if any.
- (b) A plan to amortize any unfunded liability and a description of actions taken to reduce the unfunded liability.
- (c) A description and explanation of actuarial assumptions.
- (d) A schedule illustrating the amortization of unfunded liabilities, if any.
- (e) A comparative review illustrating the actual salary increases granted and the rate of investment return realized over the 3-year period preceding the actuarial report with the assumptions used in both the preceding and current actuarial reports.
- (f) A statement by the enrolled actuary that the report is complete and accurate and that in his or her opinion the techniques and assumptions used are reasonable and meet the requirements and intent of the Chapter.

The actuarial cost methods utilized for establishing the amount of the annual actuarial normal cost to support the promised benefits shall be only those methods approved in the Employee Retirement Income Security Act of 1974 and as permitted under regulations prescribed by the Secretary of the Treasury.

In addition, Section 121.031, Florida Statutes requires the following:

1. The valuation of plan assets shall be based on a 5-year averaging methodology such as that specified in the United States Department of Treasury Regulations, 26 C.F.R. s. 1.412(c)(2)-1, or a similar accepted approach designed to attenuate fluctuations in asset values.
2. The study shall include a narrative explaining the changes in the covered group over the period between actuarial valuations and the impact of those changes on actuarial results.
3. When substantial changes in actuarial assumptions have been made, the study shall reflect the results of an actuarial assumption as of the current date based on the assumptions utilized in the prior actuarial report.
4. The study shall include an analysis of the changes in actuarial valuation results by the factors generating those changes. Such analysis shall reconcile the current actuarial valuation results with those results from the prior valuation.

5. The study shall include measures of funding status and funding progress designed to facilitate the assessment of trends over several actuarial valuations with respect to the overall solvency of the system. Such measures shall be adopted by the division and shall be used consistently in all actuarial valuations performed on the system.

6. The actuarial model used to determine the adequate level of funding for the Florida Retirement System shall include a specific rate stabilization mechanism, as prescribed in the Chapter.

It is the intent of the Legislature to maintain as a reserve a specific portion of any actuarial surplus, and to use such reserve for the purpose of offsetting future unfunded liabilities caused by experience losses, thereby minimizing the risk of future increases in contribution rates. It is further the intent of the Legislature that the use of any excess above the reserve to offset retirement system normal costs shall be in a manner that will allow system employers to plan appropriately for resulting cost reductions and subsequent cost increases.

The rate stabilization mechanism shall operate as follows:

- a. The actuarial surplus shall be the value of actuarial assets over actuarial liabilities, as is determined on the preceding June 30 or as may be estimated on the preceding December 31.

- b. The full amount of any experience loss shall be offset, to the extent possible, by any actuarial surplus.

- c. If the actuarial surplus exceeds 5 percent of actuarial liabilities, one-half of the excess may be used to offset total retirement system costs. In addition, if the actuarial surplus exceeds 10 percent of actuarial liabilities, an additional one-fourth (i.e., 75%) of the excess above 10 percent may be used to offset total retirement costs. In addition, if the actuarial surplus exceeds 15 percent of actuarial liabilities, an additional one-fourth (i.e., 100%) of the excess above 15 percent may be used to offset total retirement system costs.

- d. Any surplus amounts available to offset total retirement system costs pursuant to subparagraph c. should be amortized each year over a 10-year rolling period on a level-dollar basis.

As outlined in the Table of Contents, the components of the study, together with the approach taken with each, are as follows:

1. Actuarial Assumptions - We reviewed the assumptions including modifications based on the most recent experience study for reasonableness and for their consistency with the experience of the System and with generally accepted actuarial practice.

2. Actuarial Methodology - We reviewed the actuarial cost method, the asset valuation method, the contribution rates, and the causes for changes, if any, in contribution rates. We also reviewed the approach taken to the disclosure required by Statements No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contributions Plans, and 27, Accounting for Pensions by State and Local Governmental Employers*, of the Governmental Accounting Standards Board (GASB 25 and GASB 27).

3. Actuarial Valuation Process - We reviewed the work of the Actuary as reflected in the valuation report, and considered the frequency and timing of actuarial valuations.

4. The Actuarial Valuation Report - We reviewed the valuation report for compliance with the published guidelines of the actuarial profession and with the relevant statutes and regulations of the State of Florida noted above, and, in accordance with 112.658, FS, and Chapter 60 T-1 (formerly Chapter 22D-1), Florida Administrative Code, regarding actuarial report standards for retirement systems.

C. Summary of Major Findings

Our major findings are as follows:

1. The recommended contribution rates were calculated in accordance with Chapter 112, Florida Statutes as modified by Chapter 121.

2. We believe that the actuarial assumptions should reasonably reflect the past and anticipated experience of the System. The overall annual salary increase assumption adopted in conjunction with the 1998 valuation averaging 6.25% with a general wage inflation assumption of 5.00% and an age-graded merit salary scale which varies from 5.00% at age 20 to 0.0% at age 65 and beyond continues to reasonably reflect anticipated experience of the System and to be consistent with the 8% net annual assumed interest rate.

3. The post-retirement mortality assumption, a version of the 1994 UP table, is also a reasonable expectation of future events and predicts a slightly longer life expectancy than the table recommended by the Department of Management Services for public plans in the State (1983 Group Annuity Table). The pre-retirement mortality assumption, the 1971 Group Annuity Table, set back 3 years, was reviewed by the Actuary in conjunction with the recent experience study and continues to be used. While the Actuary's statement that preretirement mortality is not a significant assumption is true, we feel the experience shows that a more modern (lower mortality) table is warranted. It would seem to make sense to make the pre- and post-retirement mortality tables the same. Also, the cost of any

potential change in death in service benefits would be better estimated with a more current pre-retirement mortality assumption.

4. The inflation component of 3.50% is consistent with future expectations.

5. The Actuary has provided some limited information as to the causes for gains, losses and net change in the unfunded liability. However, there is a lack of detailed analysis which would show, for example, the System's assumed number of member terminations by cause compared to actual terminations by cause. We are therefore unable to provide more than general commentary with regard to the causes for recent gains and losses, assuming such information is readily available. (However, there has been greater detail provided in several areas in some most recent years' valuations.) For example, information presented in the Table IV-1 format but with liabilities, rather than contribution rates, by source of decrement would be helpful.

6. The Actuary used generally accepted actuarial cost methods and reporting standards.

7. The amortization method that reflects only future plan changes, assumption changes and changes in funding method with a level dollar amortization over a period of 30 years is a reasonable method. An alternative, if permitted by Statute, would be to retain the prior method of amortizing these changes over increasing payroll which will produce lower contribution levels in the short term in years when there is an unfunded liability to amortize.

The method approved by the Legislature to gradually use some of the surplus of the separate experience gain base to maintain a stable contribution rate seems reasonable and, in fact, is used by other systems of which we are aware.

8. It is our understanding that the FASB 35 section included in the report is not required but could be of some interest to certain parties reviewing accrued, rather than projected, benefits. We believe the inclusion this year of a three-year history of GASB 27 information is a useful addition.. The included GASB 25 information is accurate in our opinion, although we feel the membership data information from paragraph 32 of GASB 25 should be included; however, it would be more helpful to show the information as it would be displayed in the State's financial statements, such as to include historical trend on funding progress and contributions and to show notes regarding assumptions (paragraphs 33-35 of GASB 25). We agree with the removal of GASB 5 information since that standard has been superseded by GASB 25/27.

SECTION II

ACTUARIAL ASSUMPTIONS

A. General

Appendix A of the Report on the Actuarial Valuation of the Florida Retirement System as of July 1, 2002 sets forth the various actuarial assumptions, methods and procedures used for the valuation. As Appendix A indicates, actuarial assumptions are required in order to estimate the future experience of the System's membership and the expected benefit flow and investment earnings (net of operating expenses) of the System. These assumptions are obviously important in determining the System's liabilities and the contribution rates to the System by the participating employers. They are also used to estimate the cost of proposed amendments to the System.

The decremental assumptions used for the current valuation (2002) were the same as those used for the preceding valuation (2001).

We have divided our discussion of the assumptions into two parts:

1. Demographic Assumptions - These assumptions reflect the flow of the membership through the System and include rates of mortality (both before and after retirement), disability, withdrawal and retirement.

2. Economic Assumptions - These assumptions reflect the economic forces operating on the System. These assumptions include expected rates of investment return, salary increases of individual members, payroll growth of the entire membership, and post-retirement benefit increases. Also included in the economic assumptions is the rate of future operating expense. Implicit in the economic assumptions is a rate of expected future inflation.

B. Demographic Assumptions

The demographic assumptions used are comprised of: (a) assumptions recommended by the previous System actuary based on experience prior to 1985, (b) revised retirement rates and withdrawal rates for regular and special risk members which were adopted for the 1989 valuation and continue to be used, and (c) the revised postretirement mortality rates adopted with the 1998 valuation and some revised withdrawal, disability and retirement assumptions (which should not yet be used in analyzing current experience).

We recommend that the retirement rates be monitored for appropriateness for the younger members. Many experts believe that members currently under the age of 40 will not retire in the same pattern as the current older generation of employees. Although it is our understanding that the initial number of elections has been minimal, the addition of the Public Employees Optional Retirement Program (PEORP) will have some impact on retirement expectations and the population eligible for FRS retirement. The Actuary could consider this potential trend when determining the appropriate retirement rates for the System. If his analysis dictates, he could use two different retirement rate assumptions, the current schedule for older employees and a reduced schedule for younger employees. In addition, the state of the economy could have a noticeable

effect on termination rates. When employment opportunities are scarcer, employees tend to remain in service; when the economy is thriving, other opportunities are more likely to be pursued. The decision to retire is timed in part by economic forces.

The assumed retirement and withdrawal rates were reduced for the 1999 valuation, based on the 1998 experience study. The Actuary has previously noted that, although experience indicated reducing the normal retirement rates, the rates were not adjusted, based on the belief that some retirement-eligible members were awaiting final approval of the DROP provisions before making a retirement decision. We would agree that this situation should also continue to be monitored since retirement rates can have a significant impact on liabilities. In particular, the effect of seemingly accurate decremental rates when actually weighted by benefit amount could be different from that expected by decrement weighting only.

C. Economic Assumptions

The economic assumptions for the current valuation (2002) are the same as those used for the previous valuation (2001). A table of these assumptions is as follows:

<u>Type</u>	<u>Annual Rate</u>
Investment Return	8.00%*
Salary Increase	6.25%**
General Wage Inflation	5.00%
Inflation	3.50%
Post-retirement COLA	3.00%

* Net of assumed administrative expenses of .25% of assets.

** Average rate; individual salary growth is 5% plus an age-graded merit scale ranging from 5% at age 20 to 1.50% at age 40 to 0.25% at age 60.

Investment Return - We consider the 8.00% effective rate of investment return to be reasonable and appropriate. The expected real rate of return (investment return in excess of inflation) of 4.50% is also realistic. Our experience indicates that real rates of return as high as 5.00% are reasonable for a System with investment policies similar to the State Board of Administration policies.

Salary Increase - We agree that the combination of the 8.00% investment return and 6.25% overall salary increase assumption produces a reasonable spread between these rates of 1.75%.

We also agree with use of the age weighted salary scale which, we believe, is more accurate than a flat rate throughout. The weighted scale has a much different effect on timing of liabilities from a flat scale. In practice, salary increases are higher for employees earlier in their career than for employees toward the end of their career. Typically, such a graded scale would have salary increases during the later years approximately equal to inflation and considerably higher salary increases during the early years. The assumptions reflect this trend, and the overall equivalent rate of 6.25% is reasonable.

General Wage Inflation – The 5.00% general wage increase assumption, including the effect of membership changes, is probably at the high end of realistic assumptions since GASB 25 now limits the use to just general wage increases and no assumed membership growth, but still certainly reasonable.

SECTION III

ACTUARIAL METHODOLOGY

A. General

In this section, we discuss the actuarial cost method, the asset valuation method and the analysis of the proposed contribution rates. We also discuss the accounting information provided, including the actuarial disclosures required by GASB 25 and GASB 27. The information on GASB 25 on which we are relying is contained in correspondence from Mr. Chuck Janes and his associates dated December 10, 2002 and January 9, 2003. The Schedule of Employer Contributions required by GASB 25 is not a part of the Actuary's report, but its inclusion would be helpful, along with other historical tables used in GASB 25. We also addressed GASB 25 and 27 compliance issues under separate cover dated January 29, 2002.

B. Actuarial Cost Method

The actuarial cost method used to determine the required contribution to the System is the "entry age actuarial cost method", a description of which is contained in the Actuary's report. This is a standard actuarial cost method, and one used by the majority of state systems. It is a method approved by Florida law and is also the method used in previous years. Continuation of its use is reasonable and even desirable given its tendency to produce normal contributions expected to remain relatively level as a percentage of payroll.

Associated with the actuarial cost method is the period and method used to amortize the unfunded actuarial liability ("UAL") established by the basic cost method. Under current Florida law, any change in the UAL is to be amortized over a period not to exceed 30 plan years.

Effective July 1, 1998 and continuing through July 1, 2002, all bases have been assumed to be fully amortized (paid in full). The revised amortization/rate stabilization method will establish a new separate base only for plan changes, assumption changes and changes in funding method, and will use level dollar, rather than level percentage of pay, amortization over a period of 30 years. All other changes (i.e., experience gains and losses) will be accumulated in a single amortization base. The surplus produced from the fully funded status may be used while it exists, to preserve a stable contribution rate.

C. Asset Valuation Method

The method of valuing a retirement system's assets plays an important role in determining the level of contributions to the system and the stability of the contribution rates over time. The larger the current assets are, the lower the future contribution rates can be set; the more volatile the asset values are over time, the more variable the contribution rates are likely to be.

By statute, the Florida Retirement System is obligated to value plan assets using a five-year averaging methodology as specified in U.S. Treasury (IRS) regulations or "a similar accepted approach designed to attenuate fluctuations in asset values."

The IRS regulation [§1.412(c)(2)], as modified by the federal Omnibus Budget Reconciliation Act of 1987, specified in Chapter 121, Florida Statutes, provides that the asset valuation method must reflect fair market value, that any period for averaging asset values must not exceed five years, and that the asset value used must fall within a corridor of 80% to 120% of fair market value.

The asset valuation method used for the 2002 actuarial valuation of the System is the same as that used for the previous valuation. The method is reasonable and appears to meet the statutory requirements. The inclusion of Table II-4 of the report to indicate the method used to allocate assets to the various membership classes within the System is helpful for the understanding of a reader of the report. In addition, although there is a note on Table II-5A indicating that cash flow is assumed mid-year, assuming the amount of cash flow is accessible, a schedule showing the derivation of the actual investment return on actuarial (and perhaps market) value of assets would be useful also.

D. Change in Contribution Rates

The normal cost contribution rates determined by this valuation were essentially identical to those determined by the previous valuation for all groups. However, the final contribution rate could change depending on which of the scenarios presented by the actuary is adopted by the State for use of the surplus, similar to the alternate use of surplus by the State for the fiscal year 2002-2003. We agree with the results and presentation of the options for contribution rates.

The report's Executive Summary reconciliations of the change in liability, change in unfunded liability and change, if any, in contributions continue to be useful as an aid in understanding System dynamics. However, showing more detailed analysis of gains and losses and experience by source and the effect on the unfunded liability would be helpful. In particular, a table showing the associated dollar amounts and liabilities, similar to Tables IV-1 and IV-5, which show the percentage rates, would clarify how specific contribution offsets, such as the rate stabilization method in Section 121.031(1)(f), Florida Statutes, are applied. Table D-3 is helpful somewhat in that respect. The allocation of the surplus equally to the various groups in Table IV-5 seems

reasonable, but the allocation used in 2000 on the basis of benefits earned during the year seems fairer.

E. Accounting Information

We agree with the removal of GASB 5 information since it is no longer applicable. The inclusion of GASB 27 information this year, we believe, is a good addition. As noted in Section V of the Actuary's report, the method of using surplus assets to stabilize the contribution rate may require disclosure under GASB 27.

GASB 25 requires the disclosure of certain pension actuarial information for the System. Section V of the Actuary's report outlines these disclosure requirements and provides the required information in detail. It would be helpful, however, to include more historical information and notes, much like the financial disclosures would show. The requirement in Chapter 121, Florida Statutes, for the report to facilitate the assessment of trends would be better achieved by the addition of this historical data. Also, the membership data breakdown in GASB 25 disclosures would be a helpful table to be shown.

The intended purpose of the GASB 25 disclosures is to provide a measure of funding status, to facilitate comparison among different retirement systems, and to track funding progress over time for a given system.

Table V-5 of the Actuary's report shows, for example, that the funded status of the Actuarial Accrued Liability (AAL) for the entire System is 114.96%, based on the actuarial value of assets. This funded ratio compares with 117.93% and 118.09% determined by the July 1, 2001 and 2000

valuations, respectively. The relative stability in funded status reflects primarily the growth in actuarial assets, while the market value has declined. Table V-5 also shows that the amount of surplus (AAL less actuarial value of assets) has decreased somewhat over the two-year period since 2000, from a surplus of \$13.55 billion to a surplus of \$14.52 billion and then a reduction in surplus to \$12.94 billion. In 1997, there was an unfunded AAL of \$5.39 billion, in 1998, a surplus of \$3.79 billion, and 1999, a surplus of \$9.22 billion.

SECTION IV**ACTUARIAL VALUATION PROCESS****A. Membership Data**

Previous actuarial audits of the System stressed the need for continuing improvement in the quality of the membership data furnished the Actuary and have mentioned that the data problems have been diminishing. The Actuary has stated in the 2002 valuation report that the data was reasonably consistent and comparable with that used in prior valuations. In a few instances (e.g., Tables C-25 and C-26), population data reported and compensation are internally inconsistent. We believe that the data should agree or an explanation should clarify why the data do not agree. Also, we feel Table E-2 should indicate the number and reconciliation of terminated vested members for use by readers of the report.

We concur with the objective of continuing to improve the quality of the data. Good data is important to ensure the validity of the valuation results and the credibility of experience studies.

In addition to incomplete or obviously erroneous data, there is also the possible problem of inaccurate data. This type of problem -- transposition of the last two digits of the date of birth, for example -- may not be obvious from the usual data checks performed as a part of the valuation. This type of error can be found only by comparing the valuation data with the original source. We recommend that the Auditor General's office sample and compare future valuation data with the original source records as it has in the past. As an aid to our review and that of others, information showing trends and data for average age, average service, average salary for active members, and average benefit for retired members would be useful.

B. Work of the State Actuary

Until 1998, the State Actuary developed the present value of future benefits payable to retired members and prepared the experience investigation and gain/loss analysis for these members. Since 1998, the Actuary calculated these liabilities and performed the experience analysis. We have not reviewed these specific liabilities since all liabilities were calculated from the Actuary's system.

C. Work of the Actuary

The Actuary has overall responsibility for the actuarial work of the System and, among other things, calculation of the present value of benefits for the active membership, and since 1998, the retired, disabled and terminated vested participants.

From past discussions with the Actuary and a review of the liabilities and other calculations in the valuation report, we feel that the liabilities and other actuarial values resulting from the Actuary's calculations are reasonable, based on the assumptions employed. The analyses of changes from the prior year--appear accurate and complete. However, given the absence of detailed reconciliations by group of changes in liabilities and contribution rates, we are unable to confirm the overall reliability of the actuarial valuation process being used by the Actuary.

D. Frequency and Timing of Valuation

Because of the dynamic nature of the System, which reflects the nature of the State, we concur with the State mandate for valuations to be performed at least annually. Not only do annual valuations keep the contribution rates current and enable better (more current) estimates of the cost of any proposed benefit changes, they also facilitate analysis and review of the System's experience. Furthermore, annual valuations are easier to prepare, reconcile and review and could usually be

completed on a timelier basis. The use of annual valuations will be particularly important to monitor the effect of the defined contribution Public Employees Optional Retirement Program, effective after the valuation in 2002, on the defined benefit FRS, as members are given the opportunity to choose a retirement plan by type (and possibly select against one or the other).

SECTION V**THE ACTUARIAL VALUATION REPORT**A. General

This section discusses the disclosure quality of the Actuary's report and its compliance with generally accepted actuarial disclosure principles, the disclosure requirements of Florida statutes and regulations and the disclosure requirements required by the Governmental Accounting Standards Board. The disclosure guidelines of the Actuarial Standards Board have been used as the standard of generally accepted actuarial disclosure principles.

B. Guidelines of the Actuarial Standards Board

The Actuarial Standards Board has adopted and published guidelines for Pension Actuarial Communications as a part of its Actuarial Standards of Practice No. 4, *Measuring Pension Obligations*; No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*; and No. 35, *Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations*. We believe that the Actuary's report complies with these guidelines.

C. Legal Requirements of the State of Florida

The disclosure requirements governing actuarial valuation reports of the Florida State Retirement System are contained in Section 112.63, Florida Statutes, as implemented by Chapter 60T-1 (formerly Chapter 22D-1.03), Florida Administrative Code, and in Section 121.031, Florida Statutes.

In general, we believe the 2002 actuarial report complies with the requirements of Section 60T-1, FAC. However, we would note that if it is available, Appendix E should show information on asset returns for three years rather than two, in accordance with Section 112.63, Florida Statutes, similar to the three-year salary increase history shown.

The report should indicate more clearly in the executive summary that the 2002 valuation determines preliminary contributions for the year beginning July 1, 2003, although there is a reference to the period the prior valuation covered. Since annual valuations will now be required, this statement would emphasize that the valuation is not for the current year.

Since this is only the fourth valuation including DROP members, the available information is limited. Future reports may need greater detail if trends emerge. However, the State's GASB 25 disclosure seems consistent with the report's DROP information. The analysis for the DROP group separately, with the note regarding future allocation to the respective retired group as status changes occur following the DROP period, is helpful, but more detail about the derivation of the contribution rate on behalf of DROP members, even if a historical note only, would be appropriate. Also, we do not think that assets for the DROP portion should be allocated as negative even if the cash flow coupled with the prior year's allocation would produce "negative" assets. We would propose the DROP assets and liability be identical.

D. Disclosure Requirements of the Governmental Accounting Standards Board

The information on GASB 25 on which we are relying is contained in correspondence from Mr. Chuck Janes' office dated December 10, 2002 and January 9, 2003. Information regarding the Schedule of Employer Contributions is not contained in the Actuary's report but would be a helpful addition. Specific review of GASB 25 and 27 information was previously furnished January 29, 2003.

Some information under GASB 27 has been included in this year's report by the Actuary. As previously noted, the method of using surplus assets to stabilize the contribution may require a footnote or disclosure under GASB 27.

E. Other Report Format

We think inclusion of the Solvency Test as recommended by the Government Finance Officers Association (GFOA) standards is useful. The 2002 actuarial report appears to be well organized and generally accurate, and except as previously noted, seems complete. In a few instances, member data and payroll amounts are not consistent from table to table. We believe the figures should be consistent (e.g., Tables C-25 and C-26). We would like to see more information comparing results and data to prior years, particularly average age, active member average service and average pay or average benefit information by group. We feel further details on reconciliation and development of unfunded liability amounts would be helpful, including liabilities by source of decrement. We agree that some information may need to be modified to reflect the impact of the Public Employees Optional Retirement Plan (PEORP), effective after the 2002 valuation, particularly as the details of the relationship between the PEORP and FRS continue to evolve. The included glossary of terms may also need to be expanded when the PEORP becomes effective.

Response From the Department of Management Services

In accordance with the provisions of s. 11.51(5), *Florida Statutes*, a draft of our report was submitted to the Secretary of the Department of Management Services for her review and response.

The Secretary's written response is reprinted herein beginning on page 38.



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March 6, 2003

John W. Turcotte, Director
Office of Program Policy Analysis
And Government Accountability
Claude Pepper Building, Room 312
111 West Madison Street
Tallahassee, Florida 32399-1475

Dear Mr. Turcotte:

Pursuant to Section 11.51(5), Florida Statutes, this is our response to your report, Recommended Florida Retirement System Contribution Rates Remain Reasonable, Asset Growth Has Slowed. Our response corresponds with the order of your findings and recommendations.

Finding:

The system's 2002 valuation was made in accordance with standards, and its assumptions and methods are reasonable.

Our consulting actuary, Buck Consultants, Inc., concluded that the 2002 actuarial valuation recommended contribution rates for covering the Florida Retirement System's liabilities were calculated in accordance with relevant state laws and rules, and actuarial standards. It also concluded that the assumptions and methods used in the 2002 valuation were reasonable.

Recommendations:

Buck Consultants, Inc., made several technical recommendations for improving future actuarial valuations.

- The department's consulting actuary should include a more detailed analysis of the causes of gains and losses to the system's liabilities. This would enable an outside actuary to better assess the factors causing recent gains and losses.

Mr. John Turcotte
March 6, 2003
Page 2

- The department's consulting actuary should monitor the retirement rate assumption used in the 2002 valuation to determine whether it continues to be appropriate. Buck Consultants noted that many experts believe that members currently under the age of 40 will not retire in the same pattern as the current older generation of employees. It is also noted that although the initial number of members electing to join the Public Employees Optional Retirement Program (PEORP) was significantly lower than expected, the PEORP would have an effect on retirement expectations and the population eligible for FRS retirement. The state economy could also have an effect on the rate with which members leave the system. When other employment opportunities are scarcer, employees tend to remain with the current employer. When the economy is thriving, other opportunities are more likely to be pursued. Accordingly Buck Consultants, Inc., proposed that the department's actuary consider using the current retirement rate assumption for older employees and a reduced assumption for younger ones.

Response:

We are pleased with the conclusion from Buck Consultants, Inc., that the 2002 actuarial valuation recommended contribution rates for covering the Florida Retirement System's liabilities were calculated in accordance with relevant state laws, rules, and actuarial standards. We are also pleased that the assumptions and methods used in the 2002 valuation were reasonable. Our responses to the technical recommendations are:

- Based on previous conclusions by Buck Consultants, Inc., our consulting actuaries included more detailed information in the 2002 valuation on the causes of losses and gains to the system's liabilities. In the future, our actuaries will continue to increase the level of information presented on this issue. Currently, withdrawals, death and retirement are grouped into one category. The Division will work with the actuaries to accomplish a break out by cause in the 2003 valuation.
- Our actuaries agree with Buck Consultants, Inc., on pre-retirement mortality figures. They also agree to study the retirement rate assumption, as a result of changes in the economy and plan development which might change previously established retirement behaviors. Both Buck Consultants, Inc., and our actuaries agree that these issues would most appropriately be handled in conjunction with an experience study, which will be conducted during 2003. The results of the experience study will be used to influence the 2004 actuarial evaluation.

Appendix B

Mr. John Turcotte
March 6, 2003
Page 3

If further information concerning our response is needed, please contact Steve Rumph, Acting Inspector General, or John Davis, Audit Director at 488-5285.

Sincerely,

/s/ Simone Marsteller
Interim Secretary

SM/jwd

cc: Edwin Rodriguez, Deputy Secretary
Robert Hosay, Assistant Deputy Secretary
Erin Sjostrom, Director,
Division of Retirement