



**JOINT LEGISLATIVE AUDIT
& REVIEW COMMISSION**
OF THE VIRGINIA GENERAL ASSEMBLY

**VRS Biennial Status and
Semi-Annual Investment Report
December 2006**

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Profile: Virginia Retirement System Investments (as of September 30, 2006)

Market Value of Assets: \$50.3 billion	Total Return on Investments			
Number of External Managers:	<i>10 years</i>	<i>5 years</i>	<i>3 years</i>	<i>1 year</i>
Public Equity – 51 (23 traditional, 28 hedge funds)	9.5%	10.0%	14.2%	11.6%
Fixed Income – 6	Performance/Intermediate Benchmark			
Number of External Investment Accounts:	8.8%	9.5%	13.4%	11.4%
Public Equity – 58 (28 traditional, 30 hedge funds)				
Fixed Income – 6				
Number of VRS Investment Department Staff: 48 authorized FTEs (11 vacant)				
FY 2006 Investment Expenses: \$226.6 million (46.7 basis points)				
FY 2006 Investment Department Operating Expenses: \$9.4 million (1.9 basis points)				

Investment Policy Indicators (as of September 30, 2006)

<u>Asset Class</u>	<i>Asset Allocation</i> (% of Total Assets)		<i>Asset Allocation</i> (% of Asset Class)		<i>Type of Management</i> (% of Asset Class)	
	<u>Target</u>	<u>Actual</u>	<u>Domestic</u>	<u>Non-U.S.</u>	<u>External</u>	<u>VRS</u>
Public Equity	64.7%	64.8%	69.0%	31.0%	76%	24%
Fixed Income	20.0%	19.8%	99.5%	0.5%	65%	35%
Private Equity	≤ 7.0%	5.6%	77.8%	22.2%	100%	0%
Real Estate	≤ 7.0%	5.0%	87.7%	12.3%	94.0%	6.0%
Credit Strategies	≤ 6.0%	4.4%	94.3%	5.7%	100%	0%

Introduction

The Virginia Retirement System (VRS) Oversight Act (Section 30-78 et seq. of the Code of Virginia) requires the preparation of biennial status and semi-annual investment reports. This report includes both the semi-annual investment report for December 2006 and the fifth biennial status report. The first section of the report provides an overview of each of the fund's asset classes and addresses the investment program, including the addition of a research department and changes to investment policies. Subsequent sections of this report focus on benefit changes, VRS' modernization effort, potential changes to the Code of Virginia relative to the disclosure of certain financial information, implementation of actuarial audit recommendations, actuarial funding, and the status of the severance recovery effort.

Overview

The Virginia Retirement System administers a defined benefit plan, a group life insurance plan, a deferred compensation plan and a cash match plan for Virginia's public sector employees, as well as an optional retirement plan for selected employees and the Virginia Sickness and Disability Program for State employees. VRS serves more than 562,000 active members, retirees and beneficiaries. The active employees include about 142,000 teachers, 98,000 local government employees and about 92,000 State employees. VRS provides benefits to more than 125,000 retirees and beneficiaries. In addition, there are almost 105,000 inactive and deferred members. In fiscal year 2006, the VRS payroll was \$2.1 billion. The retirement system ranks as the nation's 25th largest public or private pension fund and the 48th largest internationally.

Recent VRS Benefit Changes

A number of changes have been made to the benefits and programs administered by VRS since the last biennial status report in 2004. These changes range in complexity from relatively minor technical changes to modifications to some of the benefit structures. Substantive benefit changes enacted by the General Assembly in 2005 and 2006 are discussed below.

In 2005, the General Assembly conformed the Retirement Act to federal law allowing members who take military leave and return to their covered positions after the cessation of hostilities to receive credit for their service. The General Assembly also enacted a number of bills during the 2006 Session that made technical changes to Title 51.1 of the *Code of Virginia*, but some actions will more directly affect Virginia public employees and retirees. These include removing the monthly health insurance credit cap of \$120 for retired State employees, adding local emergency medical technicians to the list of local employees for whom localities may provide retirement benefits equivalent to those provided to State Police officers, and allowing retirees other than retired teachers to teach in critical shortage areas while continuing to receive a retirement allowance provided the retiree becomes licensed by the Virginia Board of Education to serve as a teacher or administrator in a local public school system.

Semi-Annual Investment Report

As of September 30, 2006, the market value of the VRS pension fund was \$50.3 billion. The return for the total fund for the one-year period ending September 30, 2006 was 11.6 percent. The fund's performance exceeded established benchmarks for the one-, three-, five-, and ten-year periods ending September 30, 2006. The fund also exceeded the assumed actuarial rate of return, 7.5 percent, for these periods. Performance indicators are provided in Table 1.

Public Equity. The public equity program continues to be VRS' largest asset class comprising 64.8 percent of the portfolio or \$32.6 billion. The public equity program exceeded established benchmarks for the three- and five-year periods ending September 30, 2006. Performance for the one-year period ending September 30, 2006, slightly lagged behind the benchmark. This was due in part to the strength of the dollar and its impact on VRS' active currency program and managers having a difficult time outperforming the benchmark during a transition period in the overall economy. Non-U.S. public equities constitute 20.1 percent of the total portfolio or \$10.1 billion.

Fixed Income. The program generated consistent positive returns (3.7 percent, 3.7 percent, and 5.0 percent, respectively) for the one-, three-, and five-year periods ending September 30, 2006. The program also met its benchmark in all of these periods and outperformed it in two of three periods. Mounting inflation pressures and the Federal Reserve continuing to raise short-term interest rates created a challenging environment for both fixed income and credit-related strategies.

Private Equity. The private equity program continued to perform well and substantially outperformed its benchmark for the fiscal year to date as well as the one-, three-, and five-year periods ending September 30, 2006. The private equity program's dollar-weighted return, since the inception of the program in April 1989 through June 30, 2006, is 23.8 percent. The private equity benchmark (the dollar-weighted Russell 3000 plus 250 basis points) for this same period was 20 percent.

Table 1				
VRS Investment Performance for Period Ending September 30, 2006				
<i>Program / Performance Objective</i>	Fiscal Year to Date	1 Year	3 Years	5 Years
<i>Total Fund</i>	4.2%	11.6%	14.2%	10.0%
Total Fund Benchmark - Intermediate	4.0%	11.4%	13.4%	9.5%
Total Fund Benchmark - Long Term	4.4%	8.3%	10.1%	7.3%
<i>Total Public Equity</i>	4.2%	12.6%	16.8%	11.0%
Public Equity Custom Benchmark	4.4%	13.2%	16.5%	10.8%
<i>Total Fixed Income</i>	3.8%	3.7%	3.7%	5.0%
Lehman Total VRS Custom	3.8%	3.7%	3.4%	4.8%
<i>Total Private Equity</i>	4.4%	23.6%	24.9%	11.0%
Private Equity Custom Benchmark	-1.3%	12.1%	15.1%	6.1%
<i>Total Real Estate</i>	6.8%	24.2%	21.5%	16.8%
Real Estate Custom Benchmark	6.0%	22.5%	19.3%	14.7%
<i>Total Credit Strategies</i>	3.5%	7.2%	n/a	n/a
VRS Credit Strategies Custom	3.6%	7.9%	n/a	n/a

Source: JLARC staff analysis of VRS data.

Relative to other institutional investors, VRS began its private equity program early. By being an early adopter in this alternative asset class, VRS has enjoyed the benefit of association with top quartile managers and holds an advantage in developing new relationships in an increasingly crowded asset class.

Recently, VRS made a number of new private equity commitments. As a result of these new commitments and the effect of the timing of these commitments on the fund's interim returns, VRS expects private equity returns to be less robust than previously. This is largely due to the "J-Curve effect."

According to the J-Curve effect, in the early years, private equity funds will show low or negative returns. The investment gains usually come in the later years as the companies mature and, with the help of the general partner, increase in value. Initially, fund performance is impacted as management fees are charged on a fund's entire committed capital while invested capital, which is primarily held at cost, is only a portion of a fund's committed capital. Thus, in the early years, management fees and organizational expenses represent an unusually large portion of contributed capital. It can take several years for investments to be made and for the portfolio valuations to reflect the efforts of the general partners. Over time, progress is made by the investee companies and justifies a value for the business that is higher than its original cost, resulting in unrealized gains. In the final years of the fund, the higher valuations of the businesses are confirmed by the partial or complete sale of companies, resulting in cash flows to the partners. In practice, a private equity portfolio involves a series of J-Curves because funds are invested in at different times. However, not all funds will be profitable given the inherent risks of investing in private equity, including macroeconomic factors and the performance of underlying companies.

While VRS expects to see lower returns from its private equity program in the shorter term, in the longer term VRS expects that the program, including these new commitments, will continue to provide the fund with solid, though more normalized long-term returns.

Credit Strategies. VRS credit strategies include investments in areas such as public high-yield debt, private debt, convertibles, bank loans, and high-yield asset-backed securities. VRS' philosophy and approach to credit investing includes seeking investments with relatively high coupons and yields, minimizing credit losses, diversifying risk by sector and manager style, and employing active management.

The investments in this program have different characteristics from those in the fixed income program and are not part of the plan's fixed income allocation. The credit strategies program started on July 1, 2004. As of September 20, 2006, the program had \$2.2 billion in assets and represented 4.4 percent of the total fund. The credit strategies program fell short of meeting its benchmark for the one-year period ending September 30, 2006 (7.2 percent versus 7.9 percent). Like private equity, the private credit portion of the credit strategies program has some limited partnerships and custom relationships with managers which results in a similar "J-Curve effect." As the committed assets continue to be deployed, VRS staff expects the private portion of the credit strategies program to demonstrate an improving performance trend.

Real Estate. The VRS real estate program continued to have strong returns and outperformed its benchmark for the one-, three-, and five-year periods ending September 30, 2006 (24.2 percent, 21.5 percent, and 16.8 percent, respectively). The total value of the real estate portfolio as of September 30, 2006, was \$2.5 billion or 5.0 percent of the total fund.

VRS' publicly traded real estate portfolio (Real Estate Investment Trusts or REITs and real estate operating companies) was \$920 million as of September 30, 2006. During 2006, VRS' internal REIT team (consisting of VRS real estate staff and internal equity staff) developed new risk monitoring reports and converted one of the external REIT managers from a domestic mandate to a global mandate to achieve diversification benefits and a broader opportunity set.

VRS' private real estate portfolio had a total of \$1.54 billion as of September 30, 2006. In recent years VRS' portfolio has been weighted toward enhanced core (value added) and opportunistic investments. These investments have performed well as the economy has recovered. Over the next few years, however, staff intends to lower the risk profile, effectively balancing the portfolio by adding lower risk investments. In 2006, VRS began this process by restructuring two separate accounts into lower risk strategies and made two commitments to high quality, core funds. Staff will continue to selectively invest in enhanced core and opportunity fund investments.

VRS staff expect real estate returns to moderate going forward, with future performance driven by economic growth and improving fundamentals in the commercial real estate markets.

VRS began exploring opportunities in infrastructure investing in spring 2006. While not necessarily real estate investments, VRS real estate staff has taken the lead in identifying and analyzing potential infrastructure investments. Infrastructure assets can be broadly classified into three main groups: utilities, transportation, and social investing. Australia and the United Kingdom have been the leading markets in privatized infrastructure.

Generally, proponents describe infrastructure assets as attractive because they tend to be lower risk, provide long-term reliable cash flows, and exhibit low correlation with traditional asset classes. Because the market is relatively new, there is some inefficiency in infrastructure investing and benchmarks are not readily available. Infrastructure assets are also illiquid. In addition, a significant risk associated with infrastructure investing is political risk. For example, a critical component of infrastructure investing is the underlying legal agreements detailing how issues such as ownership, usage, maintenance, and revenue generation and sharing will be handled. While there are a number of opportunities for investing outside of the United States, limiting investment to areas where there is a tradition of strong contract law might serve to lower some risk.

Due to the potential positive cash flows, low correlations to other asset classes, and the long-term nature of pension liabilities, some analysts view infrastructure investing as a potentially good match for pension funds like VRS. VRS has discussed both the benefits and substantial risks associated with this type of investing, and will evaluate each potential infrastructure investment on an individual basis. While today infrastructure is not a major asset class for most U.S. pension

funds, it might become one in the next 10 to 15 years. Like real estate, and to some extent private equity, infrastructure investing will require considerable resources, but carefully selected assets could be a source of potential returns and cash flow. In reviewing potential infrastructure investments, VRS must remain vigilant in assessing both the risk and the underlying assumptions associated with these assets.

Hedge Funds. While not considered a separate asset class, investments in hedge fund strategies constitute \$2.2 billion or 4.4 percent of the total portfolio. These investments can cut across several asset classes, but most of the hedge fund managers are public equity managers. As of September 30, 2006, there was one hedge fund credit manager.

In January 2006, VRS changed its approach toward hedge fund investing and now views these funds as active investment strategies that can be used within any of the investment programs, subject to a total policy limit set by the Board at 5 percent. The new approach, initiated in January 2006, allows for more flexibility and is designed to provide for better returns and stronger risk management.

When the hedge fund program began, the initial approach centered on hiring a larger number of managers in order to build a diversified allocation to hedge funds, treating hedge funds as a separate asset class. As the program has matured and VRS employed the knowledge and expertise obtained through advisory relationships developed during the program's launch, VRS has refined its approach and has decreased the number of managers and funds.

By decreasing the number of managers and funds, VRS has increased its ability to monitor assets, perform due diligence, know the fund managers and associated personnel, and more fully understand the underlying investments and strategies in each fund. In addition, by reducing the number of managers, VRS is better equipped to concentrate in larger positions and to target its investments to top performing managers. As of December 31, 2005, VRS invested in 50 hedge funds. As of September 30, 2006, VRS had reduced this number to 38.

The annualized performance of VRS' hedge fund exposure since the inception of the program in July 2003 is 9.71 percent. The custom benchmark is 8.32 percent. In comparison, during the same period the Russell 3000 returned 12.32 percent.

Research Department and Policy Changes Improve Risk Management

Significant progress was made over the last year and a half on a number of projects and initiatives that will improve investment processes. These include the implementation of a total fund risk management system, the development of an internal research department, the formulation of a management approach focused on collaboration and success of the total fund, and the revision of key policy documents that guide and govern investment philosophy and operations at VRS.

The Addition of the Investment Research Department Enhances Empirical and Methodological Uniformity Across Programs. The investment research department conducts both basic and applied research supporting the decision processes for the Chief Investment Officer (CIO) and program directors in their portfolio man-

agement efforts. Examples include risk control methodologies, forward looking return estimation, portfolio simulations and stress testing, macroeconomic forecasting, portfolio optimization and database management. Database management encompasses central data warehouse control for all programs as well as the design and programming of application software.

The department also conducts joint basic research with other programs in its effort to master and adopt state-of-the-art portfolio management tools and methodologies. Evidence of this activity can be found in the VRS White Paper Series, which houses drafts and finished manuscripts. The papers document a wide range of applications relating to risk management and risk budgeting, factor modeling, optimal rebalancing, and returns forecasting. In the past year, the investment department has published one paper in the *Financial Analysts Journal* ("Covariance Misspecification in Asset Allocation") and has another paper under review.

A Team Approach Is Fostered by the CIO and Reinforced by New Compensation Plan. In addition to the research department, the investment department has promoted increased collaboration among its investment program managers and placed greater importance on total fund performance versus individual asset class or program performance. The incentive compensation plan reflects this team approach to investing and through its structure the plan formalized an emphasis on collaboration and ultimately on total fund performance.

In today's market environment, investments may not always be easily categorized into traditional asset classes. The underlying characteristics of some investments can cut across multiple asset classes or strategies. By employing a team approach and harnessing the benefit of expertise across asset classes, VRS is better positioned to evaluate an investment not only on a stand-alone basis but also relative to other opportunities across the full spectrum of asset classes and opportunities. The team approach helps the investment staff to analyze these assets and more fully understand the relative risks and return characteristics of investments and their respective potential impact on the total fund, including its risk budget.

Evaluating assets from a total fund perspective is particularly significant at VRS because the Board has provided the investment staff with upper limits rather than specified targets for alternative investments. The investment policy statement allows staff the flexibility to invest only when they believe an asset will add value to the portfolio rather than employing a strategy to simply meet a target. Utilizing limits helps to ensure a more opportunistic approach to investing in alternative investments and fosters the desire to select investments that will enhance the risk and return profile of the total fund.

VRS Has Reviewed and Revised Key Investment Policy Documents. Over the last 12 months, VRS has revised a number of policy documents including the Investment Department Code of Ethics and Standards of Professional Conduct, the Investment Advisory Committee (IAC) Charter, and the Defined Benefit Plan Investment Policy Statement. The revised policy documents more clearly articulate the guidelines and responsibilities for the Board, staff and IAC relating to the handling of investments at VRS.

First, the revised Investment Department Code of Ethics and Standards of Professional Conduct defines the expected conduct of VRS investment department

employees in potential conflicts of interest situations and the disclosures that are expected in those situations. The updates primarily help to ensure that clear guidance is provided to VRS investment department employees.

Next, the revised IAC Charter clarified the role of the IAC and limited the requirements and responsibilities of the IAC to those set forth in the Code of Virginia. Specifically, as articulated in the Code, the new charter clearly states that the IAC's recommendations are not binding on the Board, and that the IAC has no authority over staff or investment decisions. In summary, the IAC is required to provide the Board with prudent advice and recommendations regarding existing investments, investment opportunities, and asset allocation.

Lastly, the Defined Benefit Plan Investment Policy Statement sets forth that the Board is responsible for establishing broad policy guidelines and benchmarks that will enable the fund to achieve its investment objective. Board decisions are required in the following areas: asset allocation targets and limits; rebalancing ranges; total fund and program level benchmarks; and active risk limits. The statement expressly provides a policy target for each asset class and investment strategies and a rebalancing range. Unlike the previous statement, the Board has established a total fund tracking error target and limit. The total fund tracking error limit is the maximum allowable observed tracking error calculated on a 36-month basis. The total fund tracking error target is the amount of expected tracking error based on the total fund's current mix and strategies. The CIO establishes individual program error tracking limits and targets. The Board's tracking error targets and limits allow for staff flexibility in terms of allocating its risk budget across asset classes and strategies while maintaining overall fund risk.

Changes in Disclosure Requirements for VRS Investments Being Considered

In response to a growing number of Freedom of Information Act (FOIA) requests for investment information and concern about the adverse effect these requests might have on the VRS fund and VRS' ability to achieve its investment objectives, VRS is seeking an exemption from the disclosure of certain investment data and information. VRS met with JLARC staff, the FOIA Advisory Council, and other stakeholders to discuss this potential change to the FOIA statute.

FOIA requests are more frequently being used by private individuals and companies as a means of collecting data and information from public pension plans to be sold to other investors. FOIA requests to VRS for investment information have grown from one investment request in 2001 to 21 requests [for investment information] in 2006. A number of other states, including California, Colorado, Florida, Illinois, Maryland, Massachusetts, Michigan, Minnesota, New Mexico, Pennsylvania, Rhode Island, South Carolina, Texas, and Utah are dealing with this issue and have passed or proposed various disclosure exemptions.

In responding to FOIA requests, VRS has generally released requested information, but it recently denied a request for certain private equity information. In denying the request, VRS relied upon an exemption under the current FOIA statute (Section 2.2-3705 (A)(47) of the Code of Virginia), which provides limited protection for private equity investments. VRS also received an opinion by the Attorney Gen-

eral which stated that confidential information provided to the VRS regarding underlying investments of limited partnerships not traded on a governmentally regulated securities exchange is exempt from public disclosure. However, the opinion also stated that information regarding the name of the limited partnership, amount, and present value of the investment is not exempt.

VRS' concerns related to disclosure can generally be categorized into two areas: (1) advance notice of investment strategies; and (2) maintaining the confidentiality of records associated with limited partnerships. As a fund with more than \$50 billion in assets, VRS' investment activity has the potential to impact markets. For example, when VRS is going to employ a new or opportunistic strategy, its magnitude will usually be at least one percent of the total fund or approximately \$500 million. Accordingly, early disclosure of VRS' investment strategies could potentially adversely impact the fund. In addition, the FOIA disclosure and protection issue became more critical recently when a top private equity manager with whom VRS has had a long and beneficial relationship declined to do additional business with VRS. The firm ended the relationship because it believed that the proprietary information provided to VRS would not be adequately protected by current statute.

Private equity has consistently been one of VRS' top performing asset classes (providing a 23.8 percent dollar weighted return since the inception of the program). While VRS' private equity program has done extremely well, generally only the top private equity managers outperform publicly traded assets. As a result, there is a lot of competition for access to top performing managers and VRS wants to invest with the best managers to achieve greater risk adjusted returns for the fund. More institutional investors are making allocations to private equity. As an early investor in private equity, VRS has had long standing relationships with top managers which have afforded VRS the benefit of access. However, with more money entering into the marketplace, managers can choose between investors and will increasingly select a partner where the confidentiality of records will clearly be protected. As a result, public funds, like VRS, are no longer considered partners of choice by some top managers.

VRS draft language being vetted includes exempting the Board from disclosing investment records prior to the selection or termination of investment managers or the pursuit of investment strategies when the early disclosure might cause harm to or otherwise jeopardize the ability of VRS to achieve its investment objectives. Similarly, another concept being explored provides that the Board would not be required to disclose records relating to the acquisition, holding or disposition of an investment in an entity, where such investment is not traded on a governmentally regulated securities exchange, and where the disclosure might cause harm to or otherwise jeopardize the ability of VRS to achieve its investment objectives.

VRS indicated its desire to protect strategies from disclosure before transactions take place. Once transactions are executed, however, VRS indicated it would disclose records relating to the completed selection or termination of an investment manager and the completed purchase or sale of a specific investment. With respect to investments not traded on a governmentally regulated securities exchange, the planned changes would continue to allow for access to higher level information, such as the performance of the asset class or any sectors within a given asset class. Cur-

rent access to records by the Auditor of Public Accounts and JLARC will remain unchanged.

VRS Modernization Effort Underway

In June 2006, VRS received the approval of the VRS Board of Trustees to proceed with a six-year modernization program to update systems, business processes and customer services through state-of-the-art technology. The objectives of the modernization are to provide customers near "24/7" access to VRS services, enhance timeliness, accuracy, and consistency of customer service; implement comprehensive knowledge and learning desktop tools; improve business process efficiency; and update outmoded technology systems. The ultimate vision of the program is "to create a workplace where skilled and confident staff routinely deliver superior customer service in a collaborative work environment that encourages and supports continuous improvement."

VRS has structured its modernization plan so that it can achieve some "early wins." For example, VRS launched myVRS in May 2006, which provides active and deferred members secure online access to their retirement records. Members can verify their VRS records, create retirement estimates using their actual VRS data, and simulate various retirement options. They can also check the status of an application for retirement, purchase of prior service, or refund. Future phases of myVRS include plans for a version for employers and a version for retirees.

VRS also envisions the use of myVRS as an interactive tool for the submission and processing of retirement applications. VRS plans to design the system with built-in edits which will reduce errors, speed up processing, eliminate most manual application processing, and reduce most paper records.

Early results show that members are logging into and using myVRS. Since its inception, more than 23,000 members have logged into the system and created accounts. The implementation of myVRS has also eliminated the backlog of retirement estimates formerly completed manually by VRS staff because these may now be completed through myVRS. Almost 32,000 retirement estimates have been created using myVRS.

In addition to the myVRS initiative, VRS implemented the first phase of a new telephone system that enhances the efficiency of the Customer Contact Center as well as all agency staff. The new phone system, along with the use of part-time employees for periods of peak demand, helped VRS reduce the abandoned call rate from 23 percent to 7.3 percent. Other immediate projects include developing an RFP for information technology system architecture requirements and design, business process re-engineering, additional self-service improvements, data definition, online income verification, and imaging and workflow.

VRS completed a ten-year projection comparing the cost of an upgrade of the current environment to the cost of the modernization effort. The ten-year cost with modernization as estimated by VRS will be \$55 million and \$45 million without modernization.

Upgrading the current environment will provide for few long-term efficiencies or process improvements. In some cases, such as with the Retirement Management

Information System (RIMS), maintaining the current system is no longer a prudent or viable option. To illustrate, RIMS is an aging system, for which numerous patches, manual changes, informal and undocumented workarounds, system compatibility issues, increasing maintenance, and live data changes are common. These manual changes and workarounds create a control risk.

Modernizing should assist VRS in providing a more stable retirement system that is more responsive to changing customer needs and stakeholder expectations. Improvements in productivity through modernization should enable a slowdown of the rate of staff growth, but will likely not result in staff reductions from current levels. For example, classified employees at VRS have increased from 121 in FY 1996 to 239 in FY 2006 or a 98 percent increase in ten years. Over this same period, there was a 25 percent increase in the total number of active members and a 53 percent increase in retired members. The number of retirements processed annually has increased from 6,324 in FY 1996 to 9,533 in FY 2006 or an increase of 51 percent.

In addition to increases in active and retired membership during this ten-year period, many changes were made to the benefits and programs administered by VRS. These changes range in complexity from relatively minor technical clarifications to the establishment of entirely new programs such as the Virginia Law Officer's Retirement System (VaLORS), the Virginia Sickness and Disability Program, and the Cash Match Plan. In some cases, such as the effort to streamline the purchase of service program, considerable effort was expended by VRS to manage the influx of inquiries about applications for the program.

Although VRS' staffing levels have increased over time, VRS compares favorably with its peers in terms of costs per member and annuitant. VRS annually participates in a cost effectiveness comparison study conducted by CEM Benchmarking, Inc. (CEM). CEM, a research and assessment service for national and international public pension systems, reported that VRS' total adjusted cost of administration in 2005 was \$37 per active member and annuitant, down from \$40 in 2004. This compares to a peer group average of \$77 for public pension systems participating in the study.

While reductions in staffing levels aren't expected, redeployments or reallocation of staff resources will likely occur. As a result of increased numbers of employers, programs, members, and retirees as well as continuing increases in demands for services, VRS will need to maintain adequate staff to meet customer needs.

VRS estimates that the modernization effort will cost approximately \$43 million over six years. VRS has requested the first installment of modernization funding in the amount of \$4.7 million for FY 2008. VRS funded FY 2007 modernization expenses (\$1.2 million) through previously approved funds and the reallocation of other funds.

2006 Actuarial Valuation Incorporates Quadrennial Actuarial Audit Recommendations

Section 30-81 of the Code of Virginia directs JLARC with the assistance of an actuary (Mercer Human Resource Consulting) to conduct an actuarial review of the

VRS once every four years. The last audit was based on the June 30, 2005, valuation of VRS, performed by Palmer and Cay (now Wachovia Retirement Services). The results of the audit were presented to JLARC in July 2006. The primary purpose of the audit was to perform an independent verification and analysis of the assumptions, procedures, and methods used by Wachovia Retirement Services in preparing the various actuarial valuations. In addition to reviewing the pension fund, the audit included a review of the valuations for the Health Insurance Credit Program, the Group Life Insurance Program, and the Virginia Sickness and Disability Program (VSDP).

Mercer Human Resource Consulting found Wachovia's work to be reasonable and performed according to generally accepted actuarial standards and principles and that the work was performed by fully qualified actuaries. However, Mercer identified certain deficiencies in the valuation of the VSDP which needed to be addressed. In addition to its comments concerning VSDP, Mercer provided a number of other specific recommendations. A copy of the audit report can be found on JLARC's website at <http://jlarc.state.va.us>.

Based on the findings of the audit, the VRS actuary recommended a number of the proposed changes for the 2006 valuation to the VRS Benefits and Actuarial Committee, including

- changing the post-retirement mortality for State Police Officers' Retirement System (SPORS), Virginia Law Officers' Retirement System (VaLORS), and Local Enforcement Officers Retirement System (LEOS) to gender distinct tables;
- updating the VSDP disability table for actual VRS experience from the last three years;
- changing the discount rate for VSDP to 7.5 percent;
- changing to an explicit Social Security award for VSDP;
- changing funding methodology for the Health Insurance Credit, Group Life, and VSDP to the same asset smoothing method used for pension valuations to comply with Governmental Accounting Standards Board (GASB) 43 requirements ; and
- considering a change in mortality rates to reflect future mortality improvements and default beneficiary age difference in the next experience study.

The recommended changes were approved by the Board of Trustees and incorporated into the 2006 valuation.

Review of VRS' Actuarial Valuations and Benefit Funding

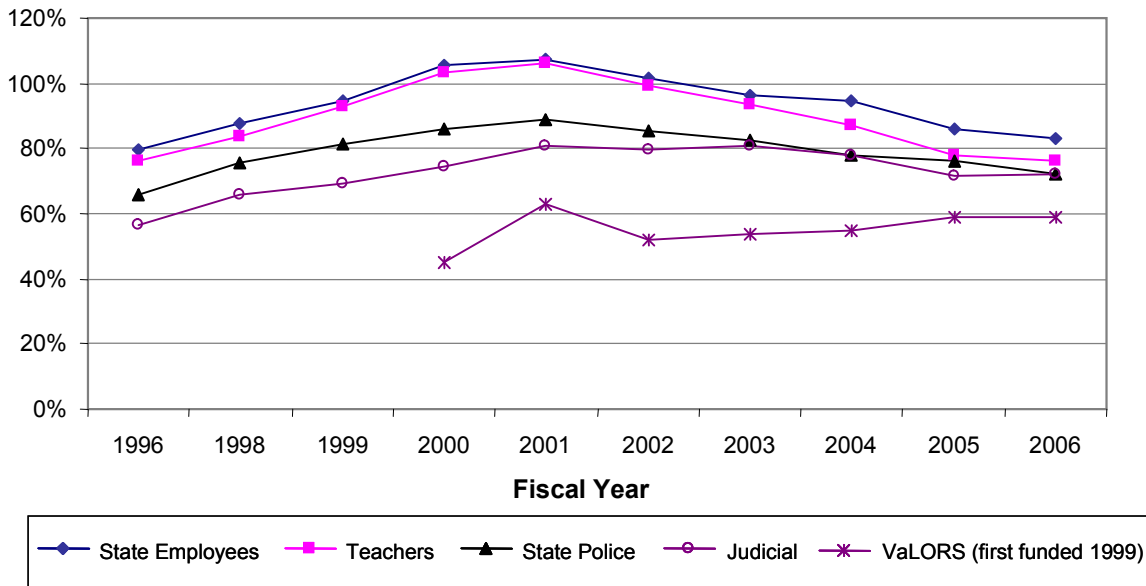
VRS pension benefits are funded through a combination of member contributions, employer contributions, and investment income. The member contribution rate is fixed by the Code of Virginia at five percent of salary. The State, as well as most of its political subdivisions, pays the member contribution for its employees. The employer contribution rate is calculated by the VRS actuary at least every two years during the valuation process and typically varies over time in response to a number of factors. Separate employer contribution rates are calculated for State employees, teachers, State Police, other Virginia law officers, and judges. Each political subdivision has its own unique employer contribution rate. In addition, valuations

are conducted and rates are calculated for the health insurance credit program, group life insurance program, and VSDP.

In determining costs and liabilities, actuaries use assumptions about the future, such as rates of salary increase, probabilities of retirement, termination, death and disability, and an investment return assumption. The most important assumptions are (1) the assumed rate of investment return, (2) the assumption regarding future salary increases, which is currently based on a table that varies by service, and (3) the assumption regarding future increases in the automatic cost-of-living adjustment (COLA). Since the last biennial status report, several changes to the assumptions have been made. Most significantly, in May 2005 the Board lowered the actuarial return expectation from 8.0 percent to 7.5 percent and lowered the long-term inflation expectation from 3.0 percent to 2.5 percent. The Board changed the return expectation because it was less optimistic about future investment returns. The Board also used an amortization period of 20 years for the FY 2006 valuation.

While VRS funding levels have declined in the last five years, they are similar to the levels observed in the late nineties (Figure 1). Over this period, the change in funded status related in part to changes in market conditions. The funded ratio for State employees, teachers, and State Police declined slightly from the 2005 valuation. However, the judges and VaLORS systems experienced a small improvement in their funded ratios. Declines in the funded status for the other three systems have been taking place since the 2002 valuation. The declines are largely due to asset losses on the actuarial value of assets, but also to funded contribution rates less than those certified by the Board of Trustees and experience outside of the parameters of plan assumptions.

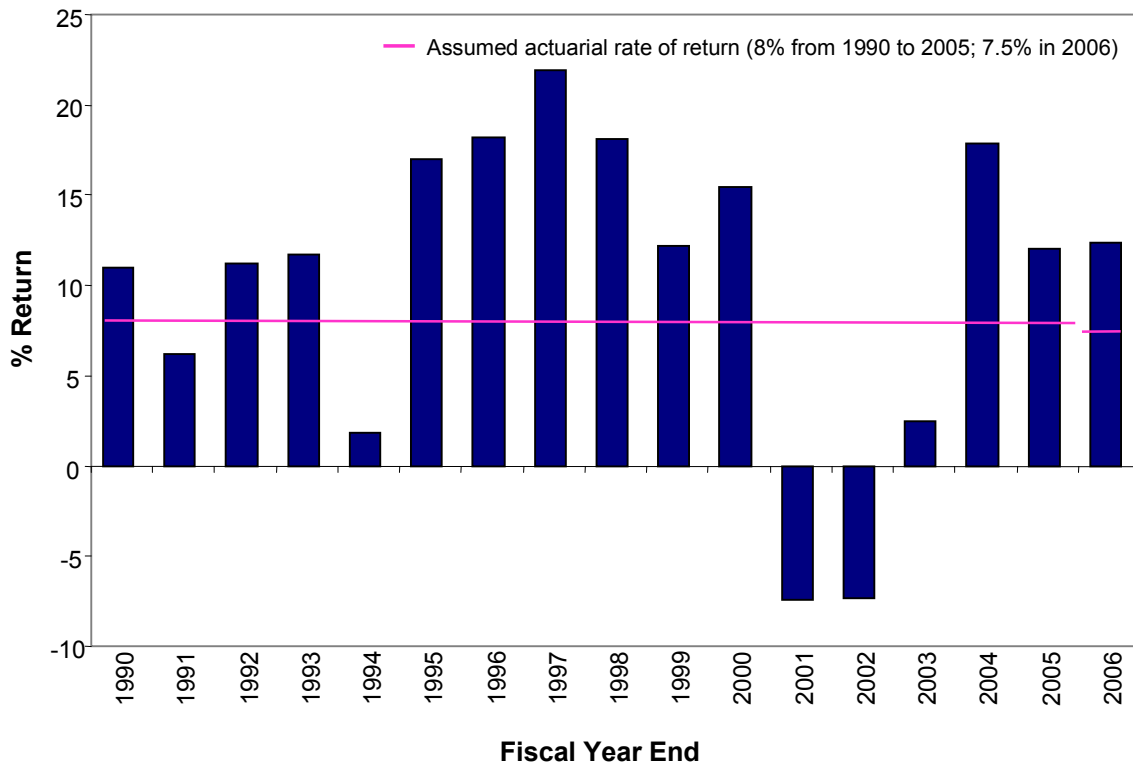
Figure 1
Funded Status of the Actuarial Value of Assets



Investment returns for the 16-year period are provided in Figure 2. Figure 2 shows that in 1991, 1994, and from 2001 through 2003, the fund did not achieve the assumed 8 percent actuarial rate of return. Beginning in FY 2006, the assumed rate of return is 7.5 percent. The investment rate of return is generally considered one of the most important factors affecting contribution rates. Despite strong investment returns in 2004, 2005, and 2006, the actuarial funded ratio on the actuarial value of assets has not immediately improved. This is because of the five-year smoothing technique employed by the actuary. Due to the use of this smoothing technique, the recognition of prior deferred losses causes losses on the actuarial value of assets in the June 30, 2006, valuation. In any given year, only 20 percent of the excess gain or loss is recognized. For the 2006 valuation, as an example, losses experienced in 2002 are still being recognized.

For the 2006 valuation, the higher than expected pay increases for State employees and teachers resulted in higher liabilities and impacted the funded status of the plans. While the market value return was more than 12 percent, the actuarial value return was approximately 7.3 percent, which is less than the assumed return of 7.5 percent. The negative cash flow in all systems except VaLORS results in increased contribution rates even if the return on the actuarial value of assets meets the assumed 7.5 percent return (with a 7.5 percent increase in liabilities and normal cost). Further, actuarial valuations declined because the assumed contributions were not actually received.

Figure 2
VRS Annual Performance



Beginning in 1995 through 2005, the funded rates were less than the actuarially calculated rates. Last year, the Governor and the General Assembly nearly fully funded the certified rates for FY 2007 and FY 2008, but these new rates are not reflected in the June 2006 valuation. According to a five-year projection conducted by the VRS actuary for State employees and teachers, if the current budgeted rates for FY 2007 and FY 2008 continue to be fully funded and all other assumptions are met, the funded status for these plans will continue to improve. However, the VRS actuary expects an increase in rates for FY 2009 and FY 2010, but a decrease in the rates for FY 2011 and FY 2012, when they are expected to return to levels similar to those budgeted for FY 2008.

Funded Status for Local Plans Reflects Fully Funding Actuarially Calculated Contributions. VRS political subdivisions or localities consist of 99,008 active and 28,646 retired employees representing 574 different employers. For the past several years, the number of political subdivision employees exceeded the number of State employees. The average funded ratio on the actuarial value of assets for all of the localities is 98.4 percent, using an investment return of 7.5 percent. The average local employer contribution rate is 6.4 percent although rates vary across localities based on their experience. Smaller plans (those with \$20 million or less in assets) tend to be better funded than larger plans and in some cases the smaller plans have funded ratios in excess of 100 percent. The over funded status (in excess of 100 percent) of the smaller plans reduces their contribution rates. The funded status for each of the top ten largest localities is less than the average due mainly to a large incidence of disability, salary increases in excess of assumptions, and the status of the funds when they entered into VRS. According to the VRS actuary, because localities are required to fund the actuarially determined contribution rates the plans have higher funded ratios than the State and teacher plans.

GASB 43 Changes Funding Method for VRS' Other Post Employment Benefits (OPEB) plans. Contribution rates for the health insurance credit program, group life insurance program, and VSDP were developed on a pre-funded basis under the new GASB 43 standard. Historically, rates had been funded on a pay-as-you-go basis. According to the VRS actuary, under GASB 43 the overall funding method for other post-employment benefits or OPEB changed from "terminal funding" to a "projected method." As a result of the change in funding method, comparisons of results to prior years can not be made.

Return of Severance Benefit Remains Unresolved

In June 2005, the Retirement System Oversight Subcommittee of JLARC directed staff to complete a special study of two personnel issues at VRS. One of these issues related to the handling of the former director's severance agreement. With regard to the handling of the former director's severance, the review found that the severance agreement was executed by the former Board chairman without the full knowledge and proper authorization of the Board and the Board failed to carry out its duty to monitor the final disposition of the terms for the director's retirement. As a result, JLARC staff found that the agreement may be invalid. JLARC staff also found that the terms of the agreement appear excessive in comparison to normal practices, such as those outlined in the Workforce Transition Act (WTA).

JLARC recommended that the Board of Trustees of the Virginia Retirement System should act promptly to either recover the funds paid to the former director but never authorized by the Board, or authorize the severance benefits as provided for in the termination agreement dated December 1, 2004. The VRS Board of Trustees acted immediately to address the JLARC recommendations. The day after the JLARC report was made public; the Board of Trustees held a special meeting and declined to adopt a resolution authorizing the severance benefits as provided for in the termination agreement dated December 1, 2004. While the Board rejected the two-year severance payment that was provided to the former director, it authorized a severance provided under the WTA equivalent to six weeks salary. VRS initiated legal proceedings to recover the excess funds paid to the former director. VRS later amended the legal complaint by adding the former Board Chairman as a defendant. Presently, the litigation remains pending in the Circuit Court of the City of Richmond.

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VRS Oversight Report is published periodically by the Joint Legislative Audit and Review Commission (JLARC) in fulfillment of Section 30-78 *et seq.* of the *Code of Virginia*. This statute requires JLARC to provide the General Assembly with oversight capability concerning the Virginia Retirement System (VRS) and to regularly update the Legislature on oversight findings.

JLARC Staff Assigned to VRS Oversight:

Glen S. Tittermary, Deputy Director

Patricia S. Bishop, Principal Legislative Analyst

Martha Erwin, *VRS Oversight Report* Editor