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Human Resource Consulting

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Quadrennial Actuarial Audit of the Virginia Retirement System

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Plans reviewed

- June 30, 2005 actuarial valuations
  - VRS Pension Benefits (including selected local governments)
  - Health Care Credit Program
  - Group Life Insurance Program
  - Virginia Sickness and Disability Program (VSDP)
- Last full review done for June 30, 2000 valuation
- Limited review done for June 30, 2004 valuation
- Previous reviews only covered VRS Pension Benefits

Scope of review

- Actuarial cost methods
- Actuarial asset valuation methods
- Actuarial assumptions
- Actuarial reports
- Data review
- Review of actuarial computations

Key findings

- VRS Pension Trust Funds, Health Care Credit Program, and Group Life Insurance Program
  - Work is reasonable and performed in accordance with generally accepted actuarial principles and practices using reasonable actuarial assumptions and methods
- VSDP
  - Mercer identified certain deficiencies which should be addressed
- Work performed by fully qualified actuaries

VRS Pension Trust Funds – Audit comments

- Actuarial assumptions
  - State police valuation uses male-only mortality rates – recommend using gender-distinct rates
  - No documentation provided for change in assumed pay growth assumption for persons in disability status under VSDP
- Actuarial reports
  - Several actuarial assumptions were misstated or omitted
  - Local government reports should be expanded to include full summaries of plan provisions and actuarial assumptions
  - Actuarial experience study report is not presented in sufficient detail

VRS Pension Trust Funds – Audit comments (cont.)

- Actuarial computations
  - For work-related disabilities, no consideration of offset for Workers' Compensation benefits
  - For judges, retirement incidence rates used are not consistent with stated actuarial assumptions

Comments on Assumed Investment Rate of Return

- Lowered to 7.5% at June 30, 2005 from 8% in prior valuations
- Mercer analyzed assumption based upon fund asset allocation and capital market assumptions developed by Mercer Investment Consulting as well as internally by VRS
- Average rate of return for all state retirement systems is about 8%

Asset allocation and expected returns

Asset class	Allocation	MIC Return	VRS Return
Domestic Equity	41%	8.16%	7.07%
Non-US Equity	21%	8.19%	6.71%
Hedge Funds	4%	5.10%	Same as domestic equity
Fixed Income	19%	4.93%	5.40%
Credit Strategies	4%	Same as fixed income	6.66%
Real Estate	5%	7.27	6.25% (public) 9.15% (private)
Private Equity	5%	9.38	9.32%
Cash	1%	3.29	3.15%

Expected return results

Percentile	MIC Assumptions	VRS Assumptions
25%	5.66%	5.46%
40%	6.90%	6.63%
50%	7.65%	7.33%
60%	8.39%	8.04%
75%	9.63%	9.20%

Comment: VRS actuarial assumption of 7.5% falls between the median results based upon MIC and VRS capital market assumptions

Review of VRS Funding Levels

Comparison to Other State Plans

Year	(Billions) Actuarial Value of Assets	(Billions) Actuarial Accrued Liability	Funded Ratio VRS	Funded Ratio All State Systems
2000	$28.6	$28.0	102%	103%
2001	31.5	30.1	105%	100%
2002	32.2	32.4	99%	93%
2003	32.3	34.2	95%	89%
2004	32.6	36.8	89%	88%
2005	33.0	41.3	80%	85%

Comment: VRS funding is about “in the middle” when compared to comparable systems

Health Care Credit Program

- Actuarial cost method
  - Will need to adopt method for disclosures under GASB 43* for year beginning July 1, 2006

**Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*

Group Life Insurance Program

- Actuarial cost method
  - Will need to adopt method for disclosures under GASB 43 for year beginning July 1, 2006
- Actuarial computations
  - Projections of benefit decreases after retirement not consistent with plan provisions

Virginia Sickness and Disability Program (VSDP)

- Actuarial cost method
  - Funding methodology should include projections of future plan liabilities
  - Will need to adopt method for disclosures under GASB 43 for year beginning July 1, 2006
- Actuarial assumptions
  - Asset allocation is same as for VRS pension funds, but discount rate is 4.5% compared to VRS assumption of 7.5%
  - Disability table should be updated
  - Explicit assumptions should be used for offset of Social Security disability
- Actuarial computations
  - Assumptions should be applied for each individual on disability rather than in the aggregate