ACTUARIAL VALUATION
OF THE
VIRGINIA PREPAID
EDUCATION PROGRAM
AS OF JUNE 30, 2011

By:

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Board of the Virginia College Savings Plan
Commonwealth of Virginia
Virginia College Savings Plan
9001 Arboretum Parkway
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Ladies & Gentlemen:

This report presents the results of the actuarial valuation of the Virginia Prepaid Education Program (VPEP) as of June 30, 2011.

Purpose

The main purposes of this report are:

- to calculate the actuarial present value of the obligations under the prepaid tuition contracts purchased through June 30, 2011 and compare the value of those obligations with the assets in VPEP as of that date;

- to review the experience and changes in the actuarial assumptions during the last year and indicate their effects on the results; and

- to set forth the basis for the actuarial assumptions and methods utilized in those calculations.

The results contained in this report are based on contract data and preliminary financial statements provided by the Virginia College Savings Plan. We have relied on this data in preparing this report.

Background

In 1994, the Virginia General Assembly established the Virginia Higher Education Tuition Trust Fund (subsequently renamed the Virginia College Savings Plan) to enhance the accessibility and affordability of higher education for all citizens of the Commonwealth. VPEP funds consist of payments received pursuant to prepaid tuition contracts, bequests, endowments or grants from the United States government, its agencies and instrumentalities, and any other available sources of funds, public or private. Any moneys remaining in VPEP at the end of a biennium shall remain in VPEP. Interest and income earned from the investment of such funds shall remain in VPEP.

In 1998, the Virginia General Assembly passed legislation that requires the Governor to include in each year's state budget an amount to cover the Plan's obligations, which include VPEP, in the event "the Plan is unable to meet its current obligations." The Governor has included the provision in subsequent budget submissions to meet the VPEP obligations, and the General Assembly has included the provision in subsequent Appropriation Acts, including Chapter 890 of the 2011 Acts of Assembly (2011 Appropriation Act).

Program Design

The Virginia Prepaid Education Program is one of four Section 529 options offered by the Virginia College Savings Plan. Under VPEP, participants purchase tuition contracts that provide coverage of tuition and mandatory fees at a public university and/or community college in Virginia. At redemption, the contract pays the current tuition and mandatory fees at the Virginia public university or community college that the beneficiary attends. The benefits vary if the beneficiary does not attend a Virginia public university or community college. With the establishment of the Virginia Education Savings Trust, contract holders have the option of rolling over the value of their prepaid contract into a savings account. The value of the prepaid contract for such rollovers is the accumulated contributions at the reasonable rate of interest set by the Board. This option to roll over the contract has effectively added a minimum benefit to the Program.

Statutory Requirements

The Code of Virginia, Title 23, Chapter 4.9 provides limited guidance for establishing the actuarial basis to evaluate the Virginia Prepaid Education Program. The Code requires an annual audit of the Program and states in part that if the annual accounting and audit "reveal that there are insufficient funds to ensure the actuarial soundness of VPEP, the Board shall be authorized to adjust the terms of subsequent prepaid tuition contracts or arrange refunds for current purchasers to ensure actuarial soundness."

"Actuarial soundness" is not a precise concept and there is no generally accepted understanding of the meaning of this phrase within the actuarial profession, especially with respect to prepaid tuition plans. For purposes of this report, we have assumed that the phrase "actuarially sound," when applied to the Virginia Prepaid Education Program, means that the Fund has sufficient assets (including the value of future installment payments due under current contracts) to cover the actuarially estimated value of the tuition obligations under those contracts (including any administrative costs associated with those contracts).

We have also interpreted these Sections to require that the actuarial liabilities be evaluated using sound actuarial principles that are generally consistent with the practices and principles widely used for retirement programs. Reference to other programs is necessary because of the innovative nature of a prepaid tuition program. No generally accepted standard of practice has evolved within the actuarial profession specifically addressing prepaid tuition programs. We chose the standards applicable to retirement programs because these programs generally provide for payments at some future date where that payment has a high probability of payment at, or close to, some specific age.

Valuation Basis

The assumptions selected for this report are intended to be "best estimates".

The method for determining the "best estimate" liability for the Program reflects the possible variability of inflation, tuition, and investment returns and the correlation between each of these variables. The methodology is described in the section below, Variability of Results and Valuation Basis.

VPEP Investment Policy

On June 25, 2009, the Board of the Virginia College Savings Plan adopted a new target asset allocation strategy for the Virginia Prepaid Education Program.

The investment strategy is important because it sets forth acceptable investment allocations among asset classes. The asset allocation affects the magnitude and variability of expected investment returns and therefore the financial structure of the plan. For the valuation, we have assumed that Program investments will be allocated as shown below, based on the investment policy target allocations:

Asset Category	
Equities	32.5%
Core Fixed Income	25.0%
Non-Core Fixed Income	27.5%
Alternative Assets	15.0%

Actuarial Assumptions

The actuarial assumptions used to prepare this report are summarized in Appendix C. The two most significant of those assumptions are the rates of investment return and tuition growth in the future. The Virginia College Savings Plan selected both of these assumptions. They are:

- the investment return assumption of 7.00% per year, net of investment related expenses (this is the same as the assumption used to prepare the prior year's report); and,
- the annual tuition growth rate assumptions summarized in the table below.

	Universities		Community Colleges	
	New assumption	Prior assumption	New assumption	Prior assumption
Fall 2012	10.0%	10.0%	8.5%	8.5%
Fall 2013	10.0%	7.5%	7.5%	7.5%
Fall 2014 and thereafter	7.5%	7.5%	7.5%	7.5%

Summary of Results

The actuarial value of the obligations of the Virginia Prepaid Education Program as of June 30, 2011 is summarized below and compared with the total assets of the Program.

	Present Value of Obligations For Future Payments	Value of Total Program Assets	Actuarial Reserve/ (Deficit)
		(Amounts in Millions)	
Virginia Prepaid Education Program:			
Tuition Obligations	$2,188.3	n/a	n/a
Administrative Expenses	27.0	n/a	n/a
Grand Total	$2,215.3	$2,225.5	$10.2

As indicated above, the Virginia Prepaid Education Program has assets that exceed the “best estimate” of the obligations by roughly $10.2 million or 0.5%. Unfavorable future experience would adversely affect this position. It would be desirable to accumulate additional actuarial reserve over time that would positively affect this position.

The present value of future obligations for Administrative Expenses reflects the expected costs of maintaining each contract in place (as of June 30, 2011) until all tuition benefits have been paid and the expenses associated with making those payments. It does not include the future expenses of the Program associated with general overhead and marketing attributable to future contracts. The $27.0 million administrative expense obligation is equivalent to about $380 per contract.

Actuarial Gain/Loss Analysis

During the 2011 fiscal year, the actuarial reserve position of the Program improved from a deficit of $207.4 million to a surplus of $10.2 million or 0.5% of obligations. Actuarial gains add to the reserve (decrease the deficit) while actuarial losses decrease the reserve (increase the deficit). This year’s decrease to the deficit is mostly attributable to significant investment gains and lower than expected tuition increases, offset by the change to the assumption for future tuition growth. Each of the factors affecting the change in the actuarial reserve/(deficit) is discussed below.

The preliminary market value of assets used in last year's valuation was $3.0 million less than the final amount reported for the audited assets.

The actuarial deficit was expected to grow during the year by about $14.3 million due to the passage of time. (The obligations are calculated as present values which grow with interest with the passage of time.)

The rate of return on Program investments (net of investment management fees) for the fiscal year was 19.0% on a time-weighted and 18.8% on a dollar-weighted basis. For the previous valuation, a 7.0% rate of return was assumed. This produced a net actuarial gain of approximately $191.8 million.

The enrollment-weighted average university tuition and mandatory fee amount for the 2011-2012 school year increased by 8.0%, a smaller increase than the 10.0% rate assumed in the prior valuation. Average tuition and fees (not enrollment-weighted) at community colleges increased by about 8.7%, a smaller increase than the 9.5% rate assumed in the prior valuation. These smaller increases resulted in an actuarial gain of $31.7 million.

Starting with this year's valuation, we have changed the expected payout for community college tuition and mandatory fees from the average amount over all of the schools to the enrollment-weighted average amount. We expect this amount to better track the actual payouts in future years due to the increasing differences in the tuition and mandatory fee amounts among the schools and their enrollments. This change decreased the actuarial reserve by about $6.7 million.

Payouts for some of the contract holders are based on the account balance brought forward at the reasonable rate or the account balance brought forward at the actual rate of return on the portfolio. See Appendices C and F for an explanation of the assumptions and the payouts. During the past year the actual rate of return on the portfolio was 19.0% (an additional 12.0% above the 7.0% assumption) and the reasonable rate remained well below the 4.0% assumed in last year's valuation. The higher than expected actual account balances and lower than expected reasonable rate balances resulted in an actuarial loss of approximately $11.9 million.

The Program sold 3,618 new contracts during the year. Each contract was priced so as to contribute to the actuarial reserve. We estimate that the reserve was increased by about $12.3 million from these new contracts.

The Prepaid Program received $32.7 million in administrative fee revenue from all the VCSP programs, including CollegeAmerica. Total agency operating expenses were $16.2 million, of which $5.4 million was expected to be provided by the VPEP expense reserve. The balance of the fee revenue, $21.9 million, is an increase to the reserve.

The assumption for future tuition growth for universities was increased from 10.0% for fall 2012 and 7.5% per year thereafter to 10.0% for both fall 2012 and fall 2013 and 7.5% per year thereafter. The tuition growth assumption for community colleges was unchanged. The change resulted in a decrease to the actuarial reserve of approximately $26.5 million.

Other experience gains added about $16.3 million to the reserve. These could be from rollovers, more beneficiaries attending colleges with lower tuition levels than assumed in last year's valuation or other variations from the actuarial assumptions.

In summary, the effect of experience and assumption changes on the actuarial reserve/ (deficit) can be summarized as follows:

(Amounts in Millions)

Actuarial Reserve / (Deficit) as of June 30, 2010	$ (207.4)
Adjustment to match final financial statements	3.0
Interest on the deficit at 7.00%	(14.3)
Investment gain (loss)	191.8
Tuition gain (loss)	31.7
Change in payout assumption for community colleges	(6.7)
Higher than expected actual return account balances	(11.9)
Sales of new contracts	12.3
Administrative fee revenue from VCSP	21.9
Change in the assumptions	(26.5)
Other gains	16.3
Actuarial Reserve / (Deficit) as of June 30, 2011	$ 10.2

Variability of Results and Valuation Basis

The present values of the obligations shown above were based on assumptions which represent an estimate of anticipated experience under the Fund that are reasonably related to past educational cost and investment data. Differences between those projections and actual amounts will depend on the extent to which future experience conforms to the assumptions made for this analysis. It is certain that actual experience will not conform exactly to the assumptions used in this analysis. Actual amounts will differ from projected amounts to the extent that actual experience deviates from expected experience.

A prime source of variation will be normal fluctuations that occur in the rate of increase in tuition, investment returns, and expense inflation. One way of estimating the range of possible outcomes is to stochastically model the financial operation of the Program using “Monte Carlo” techniques. This approach involves preparing 1,000 projections of financial results under randomly derived scenarios of tuition growth, investment returns, and expense inflation. Each of these scenarios is based on statistical factors such as standard deviation and correlation that were established by reviewing historical results adjusted where appropriate to reflect current conditions. By tabulating the results under all of these projections we estimated the probability that current assets, along with all anticipated contract payments plus investment returns, will be sufficient to cover the obligations of the Virginia Prepaid Education Program.

We have summarized in the table below the results of this process. It is important to understand that these results are only illustrative of the range of results that are possible and are dependent on the assumptions utilized. The assumptions are presented in Appendix C.

(Amounts in Millions)

Percentage of “Best Estimate” Reserve	Total VPEP Fund Value at June 30, 2011	Probability of VPEP Funds Exceeding Obligation
80%	$1,772.2	9%
90%	1,993.7	27%
100%	2,215.3	50%
100.5%	2,225.5	51%*
110%	2,436.8	71%
120%	2,658.3	83%
130%	2,879.8	92%
140%	3,101.4	96%
150%	3,322.9	98%

*actual Fund position.

The present value of obligations for future payments shown previously is the amount of assets necessary to have a 50% probability of meeting all program obligations, including administrative costs, associated with current contracts. The actual VPEP fund balance at June 30, 2011 of $2,225.5 million is 100.5% of the actuarially determined “Best Estimate” Reserve amount of $2,215.3 million. As indicated in the above table, this VPEP fund balance is estimated to have a 51% probability of being adequate to satisfy all Program obligations using current assumptions.

Data Reliance

In performing this analysis, we relied on data and other information (some oral and some in writing) provided by the staff of the Virginia College Savings Plan. This information includes, but is not limited to, contractual provisions, contract holder data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

Actuarial Assumptions

All costs, liabilities, and other factors for VPEP have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the Program and reasonable expectations). Further, the actuarial assumptions in the aggregate are reasonable and are related to the experience of the Program and to reasonable expectations. The following actuarial assumptions were set by the Virginia College Savings Plan:

1) the investment return assumption of 7.00% per year, and;

2) the tuition growth assumption for universities of 10.0% for both fall 2012 and fall 2013 and 7.5% per year thereafter and the tuition growth assumption for community colleges of 8.5% for fall 2012, and 7.5% per year thereafter.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: future experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and increases or decreases expected as part of the natural operation of the methodology used for these measurements. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

Cash Flow Projection

The table in Appendix E shows a cash flow projection based on a set of deterministic assumptions that produce the same Present Value of Obligations for Future Payments as the “best estimate” actuarial assumptions used in the Monte Carlo simulations. The deterministic cash flow projection assumes that University tuition increases 10.0% for two years and 7.5% thereafter, Community College tuition increases 8.5% next year and 7.5% thereafter, and Plan assets earn 6.82% each year. The starting Market Value of Invested Assets as of July 1, 2011 is $1,968.1 million. At the end of the 2036 Fiscal Year all tuition obligations associated with contracts already purchased are expected to have been paid resulting in a final cumulative surplus of $53.0 million. Since the actuarial assumptions are intended to represent “best estimates” of future expenses, there is a 50% chance that actual results will be better than this projection and a 50% chance that actual results will be worse.

Certification

Based on the foregoing assumptions, the Virginia Prepaid Education Program has sufficient assets, including the value of future installment payments, to cover the actuarially estimated value of the tuition obligations under all contracts outstanding as of the valuation date (including any administrative costs associated with those contracts). This determination has been based on reasonable actuarial assumptions that represent the Virginia College Savings Plan's best estimate of anticipated experience under the Program taking into account past experience and future expectations. Since the results of the valuation are dependent on the actuarial assumptions used, actual results can be expected to deviate from the figures indicated in this report to the extent that future experience differs from those assumptions.

This report was prepared exclusively for the Virginia College Savings Plan for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning the Virginia College Savings Plan's operations, and uses the Virginia College Savings Plan's data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

We look forward to reviewing the results of our analyses with you at your earliest convenience.

Respectfully submitted,

MILLIMAN, INC.

Alan H Perry

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Virginia Prepaid Education Program

I. Statement of Assets as of June 30, 2011

	Investments	Market Value
1)	Equities	$ 764,485,545
2)	Fixed Income including Accrued Interest	1,042,255,195
3)	REIT Index Fund and Real Estate	59,824,180
4)	Cash & Cash Equivalents	89,344,478
5)	Other Investments	0
6)	Other Receivables	2,557,271
7)	Accounts Receivable	8,087,647
8)	Property, Plant & Equipment	2,422,873
9)	Nondepreciable Capital Assets	245,547
10)	Payables	(540,194)
11)	Accrued Liabilities	(515,171)
12)	Other Payables	(67,153)
	Total Market Value of Investments	$ 1,968,100,218
	Present Value of Installment Contract Receivables	257,360,763
	Value of Total Fund Assets	$ 2,225,460,981

II. Reconciliation of Investments

1)	Investments at June 30, 2010	$1,622,115,417
2)	Adjustment to match Financial Statements	3,044,476
3)	Contract Purchase Payments	139,958,787
4)	Application Fees	57,553
5)	Administrative Fee Revenue	32,674,643
6)	Interest and Dividends	53,933,779
7)	Realized and Unrealized Gains/(Losses)	255,262,087
8)	Tuition Payments, Refunds and Rollovers	(118,408,930)
9)	Administrative Expenses	(16,231,925)
10)	Investment Management Fees	(3,967,253)
11)	Transfers to the Commonwealth	(338,416)
12)	Investments at June 30, 2011	$ 1,968,100,218

Time-weighted rate of return	19.0%
Dollar-weighted rate of return	18.8%

Appendix A

Virginia Prepaid Education Program

Participant Data as of June 30, 2011 – Number of Contracts*

Plan Type

Total Years of Community College Purchased

Total Years of University Purchased

Matriculation Year	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	0	0	0	0	0	**Total by Payout Year**	**Percent of Total**
	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5	1	2	3	4	5		
2000-2001	1	0	0	0	0	0	6	0	1	0	0	0	0	0	0	0	0	0	1	3	1	38	1	52	0.1%
2001-2002	1	0	1	0	0	0	24	0	3	0	1	0	1	0	0	0	0	0	4	5	0	71	2	113	0.2%
2002-2003	2	0	0	0	0	0	20	4	4	0	0	0	0	0	0	0	1	0	15	10	4	113	11	184	0.3%
2003-2004	2	1	0	2	1	0	18	0	12	1	0	0	2	0	0	0	0	0	15	19	4	207	11	295	0.4%
2004-2005	4	1	0	1	0	0	32	3	13	0	1	0	5	0	0	0	0	1	32	29	7	252	19	400	0.6%
2005-2006	5	1	0	0	0	0	52	2	22	1	2	0	5	0	0	0	0	2	58	65	10	424	41	690	1.0%
2006-2007	4	6	1	0	1	0	51	4	41	1	1	1	6	0	0	0	0	1	65	74	29	613	65	964	1.4%
2007-2008	5	2	0	2	0	0	74	4	69	2	0	0	9	2	0	0	0	0	89	155	26	1036	93	1568	2.2%
2008-2009	7	7	6	7	0	0	72	11	110	2	0	0	8	2	0	0	0	3	185	258	83	2755	117	3633	5.1%
2009-2010	10	14	3	6	0	0	129	6	141	3	0	1	15	2	0	0	0	1	217	325	119	3045	122	4159	5.9%
2010-2011	41	12	7	9	1	0	164	9	154	5	0	1	14	2	0	1	0	3	342	589	124	3014	133	4625	6.5%
2011-2012	43	15	9	7	0	0	187	10	166	1	2	0	23	2	1	0	0	3	486	552	131	3100	135	4873	6.9%
2012-2013	52	20	9	12	2	0	192	8	140	3	0	1	34	1	1	1	0	1	583	626	140	3123	150	5099	7.2%
2013-2014	48	18	11	17	2	0	164	6	161	1	1	1	22	1	2	1	0	2	511	658	146	3062	130	4965	7.0%
2014-2015	63	13	7	18	1	1	183	16	164	2	0	0	32	0	0	0	0	1	640	612	167	3042	144	5106	7.2%
2015-2016	43	14	6	6	0	0	165	20	140	1	0	0	18	2	0	1	0	3	548	632	120	2923	123	4765	6.7%
2016-2017	47	10	8	8	0	1	134	16	147	0	3	0	13	1	0	0	0	2	501	542	148	2695	122	4398	6.2%
2017-2018	40	19	3	5	0	0	116	7	137	5	1	0	19	1	0	0	0	1	469	470	131	2450	137	4011	5.7%
2018-2019	29	11	4	6	0	0	91	6	133	2	0	0	15	3	0	1	0	1	404	449	103	2325	152	3735	5.3%
2019-2020	30	21	2	8	1	1	76	8	130	2	1	0	20	1	0	0	0	2	358	427	103	2035	135	3361	4.7%
2020-2021	40	8	2	4	2	0	72	8	97	2	0	0	11	2	0	0	0	0	298	334	78	1704	104	2766	3.9%
2021-2022	34	8	0	4	2	0	66	5	88	1	0	1	11	3	0	1	0	4	309	353	92	1626	123	2731	3.8%
2022-2023	34	4	3	4	1	0	64	5	64	4	0	0	3	3	1	0	0	0	294	313	60	1118	40	2015	2.8%
2023-2024	33	4	2	6	2	0	53	6	62	2	2	0	7	0	0	0	0	2	249	226	59	1012	45	1772	2.5%
2024-2025	27	1	2	3	0	1	36	5	47	0	0	1	5	1	0	0	0	1	196	196	46	744	56	1368	1.9%
2025-2026	24	3	3	3	0	0	30	3	32	3	0	0	3	0	0	0	0	1	170	140	22	580	36	1053	1.5%
2026-2027	10	2	1	3	1	0	35	5	23	1	0	0	9	0	0	0	0	1	145	124	14	454	12	840	1.2%
2027-2028	14	3	1	1	1	0	24	0	17	1	1	0	5	0	1	0	0	0	139	115	28	381	28	760	1.1%
2028-2029	14	2	2	1	0	0	21	1	8	0	0	0	1	0	0	0	0	0	91	70	13	255	7	486	0.7%
2029-2030	3	0	0	1	0	0	13	0	4	0	0	0	2	0	0	0	0	0	24	22	5	93	3	170	0.2%
Total	710	220	93	144	18	4	2364	178	2330	46	16	7	318	29	6	6	1	36	7438	8393	2013	44290	2297	70957	
Percent of Total	1.0%	0.3%	0.1%	0.2%	0.0%	0.0%	3.3%	0.3%	3.3%	0.1%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.1%	10.5%	11.8%	2.8%	62.4%	3.2%		

* Table only includes contracts with at least one year of tuition remaining.

Appendix B

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Virginia Prepaid Education Program

Participant Data as of June 30, 2011 – Remaining Years of Tuition

Expected Payout Year	University Years	Community College Years
2010-2011	17,408	1,115
2011-2012	16,938	944
2012-2013	16,661	846
2013-2014	16,466	899
2014-2015	15,369	851
2015-2016	15,098	839
2016-2017	14,420	778
2017-2018	13,482	690
2018-2019	12,464	634
2019-2020	11,268	577
2020-2021	10,266	522
2021-2022	8,868	457
2022-2023	7,547	397
2023-2024	6,288	335
2024-2025	4,982	277
2025-2026	3,984	236
2026-2027	3,171	194
2027-2028	2,468	154
2028-2029	1,762	111
2029-2030	1,119	68
2030-2031	617	37
2031-2032	257	19
2032-2033	85	9
2033-2034	29	4
2034-2035	6	1
Total	201,023	10,994

Virginia Prepaid Education Program

Summary of Actuarial Assumptions

Investment / Economic Assumptions for Simulation Model

The standard deviation and correlation assumptions are based on actual historical returns and tuition growth. Expected return assumptions are based on Milliman's investment assumptions, but are adjusted so that the expected annualized return on the portfolio is 7.0%, which is the assumption set by the Board.

	Inflation	Reasonable Rate	Global Equity	High Volume Fixed-Income	Low Volume Fixed-Income	Private Equity	Real Estate	Univ Tuition	CC Tuition
Expected Arithmetic Mean	2.50%	4.00%	9.77%	6.27%	4.50%	11.27%	7.52%	7.58%	7.62%
Standard Deviation	2.00%	2.00%	17.65%	10.80%	4.60%	25.40%	19.20%	4.75%	6.25%
Correlation:									
Inflation	1.00	0.49	0.22	0.01	0.12	0.11	0.15	0.13	0.00
Reasonable Rate		1.00	0.21	0.14	0.37	0.03	-0.08	-0.09	-0.44
Global Equity			1.00	0.57	0.10	0.44	0.46	0.02	-0.12
High Volume Fixed Income				1.00	0.59	0.31	0.49	0.31	0.39
Low Volume Fixed Income					1.00	-0.26	0.23	0.28	0.31
Private Equity						1.00	0.18	-0.39	-0.34
Real Estate							1.00	0.23	0.23
Univ Tuition								1.00	0.76
CC Tuition									1.00

Based on the economic assumptions above, the expected long-term annualized compound rate of return on investments is 7.00%. The expected long-term annualized compound rate of tuition growth is 10.0% for the next two years and 7.5% per year thereafter for university tuition, and 8.5% for the next year and 7.5% per year thereafter for community college tuition. The expected annual means shown above for University tuition are increased by 2.5% in the first two years, and the expected annual means shown above for community college tuition are increased by 1.0% in the first year to match this assumption.

Matriculation and Bias:

It is assumed that 80% of beneficiaries will attend a public university in Virginia, 10% will attend a private university in Virginia and 10% will attend a university in another state. Weighted average tuition for four-year public universities in Virginia was adjusted with a 10.0% load to add a bias for matriculation at more expensive schools. The highest tuition for a public university in Virginia was assumed to be 50% higher than weighted average tuition. Out-of-state students are assumed to receive a benefit equal to the payments made on the contract plus interest at the composite reasonable rate of return.

Virginia Prepaid Education Program

Summary of Actuarial Assumptions
(continued)

Utilization: It is assumed that participants will begin utilizing their contract at the following rates, and then redeem one year of tuition per year until the contract is depleted:

Years since Matriculation Year	Number of Years of Tuition Purchased 1	2	3	4	5	6	7	8
0	35%	60%	60%	85%	85%	100%	100%	100%
1	20%	10%	20%	7%	8%			
2	15%	15%	10%	5%	7%			
3	10%	5%	5%	3%				
4	10%	5%	5%					
5	5%	5%						
6	5%							

Expenses: The expenses included in the present value of future obligations are those relating to:

Annual Maintenance Expense per Contract = $53.76
Annual Distribution Cost per Contract in Payment Status = $13.44

These expenses are assumed to increase annually at the rate of inflation plus 0.5%.

Virginia Prepaid Education Program

History of Enrollment-Weighted Average Tuition and Mandatory Fees
at Four Year Universities and Community Colleges in Virginia

Academic Year	University Tuition and Fees	% Increase	Community College Tuition and Fees	% Increase
1986-1987	2,080	10.3%		
1987-1988	2,240	7.7%		
1988-1989	2,377	6.1%	$778	
1989-1990	2,544	7.0%	798	2.5%
1990-1991	2,702	6.2%	894	12.0%
1991-1992	2,985	10.5%	1,050	17.4%
1992-1993	3,357	12.5%	1,230	17.1%
1993-1994	3,659	9.0%	1,320	7.3%
1994-1995	3,789	3.6%	1,359	3.0%
1995-1996	3,949	4.2%	1,445	6.3%
1996-1997	4,002	1.3%	1,445	0.0%
1997-1998	4,095	2.3%	1,445	0.0%
1998-1999	4,217	3.0%	1,445	0.0%
1999-2000	3,721	(11.8%)	1,159	(19.8%)
2000-2001	3,793	1.9%	1,159	0.0%
2001-2002	3,843	1.3%	1,159	0.0%
2002-2003	4,122	7.3%	1,671	44.3%
2003-2004	5,033	22.1%	1,882	12.6%
2004-2005	5,559	10.5%	2,006	6.5%
2005-2006	5,990	7.8%	2,135	6.4%
2006-2007	6,529	9.0%	2,269	6.3%
2007-2008	6,966	6.7%	2,404	5.9%
2008-2009	7,562	8.6%	2,584	7.5%
2009-2010	7,912	4.6%	2,781	7.6%
2010-2011	8,803	11.3%	3,285	18.1%
2011-2012	9,507	8.0%	3,570/4,179*	8.7%/27.2%*

*Average community college tuition and mandatory fees is $3,570.
Enrollment-weighted average tuition and mandatory fees is $4,179.

Compounded Increase in Tuition

Over last 5 years:	7.8%	13.0%
Over last 10 years:	9.5%	13.7%
Over last 15 years	5.9%	7.3%
Over last 20 years:	6.0%	7.2%
Over last 25 years:	6.3%	n/a

Virginia Prepaid Education Program

Cash Flow Projection
(amounts in millions)

Fiscal Year	Beginning Balance	Monthly Payments	Tuition Benefits	Expenses	Investment Income	Ending Balance
2012	$1,968.1	$59.5	$178.0	$4.0	$126.9	$1,972.5
2013	1,972.5	52.2	189.1	4.0	126.4	1,958.0
2014	1,958.0	44.6	203.8	3.8	124.5	1,919.5
2015	1,919.5	36.7	217.3	3.7	120.9	1,856.1
2016	1,856.1	29.4	218.6	3.2	116.3	1,780.0
2017	1,780.0	22.3	230.8	3.0	110.3	1,678.8
2018	1,678.8	19.3	236.8	2.7	103.0	1,561.6
2019	1,561.6	16.4	237.6	2.5	94.8	1,432.7
2020	1,432.7	13.6	236.0	2.2	86.1	1,294.2
2021	1,294.2	11.3	229.5	2.0	77.0	1,151.0
2022	1,151.0	9.0	225.2	1.7	67.3	1,000.4
2023	1,000.4	7.0	210.2	1.5	57.7	853.4
2024	853.4	5.2	193.6	1.2	48.5	712.3
2025	712.3	3.8	174.5	1.0	39.7	580.3
2026	580.3	2.6	149.8	0.8	32.1	464.4
2027	464.4	1.6	129.4	0.6	25.1	361.1
2028	361.1	0.7	111.1	0.5	19.0	269.2
2029	269.2	0.2	93.2	0.4	13.7	189.5
2030	189.5	0.0	71.6	0.2	9.3	127.0
2031	127.0	0.0	48.7	0.2	6.2	84.3
2032	84.3	0.0	28.9	0.1	4.3	59.6
2033	59.6	0.0	13.0	0.0	3.4	50.0
2034	50.0	0.0	4.7	0.0	3.2	48.5
2035	48.5	0.0	1.7	0.0	3.2	50.0
2036	50.0	0.0	0.4	0.0	3.4	53.0

Virginia Prepaid Education Program

Prepaid Tuition Benefits

For beneficiaries attending a Virginia public college, university, or community college, VPEP will pay the full amount of in-state undergraduate tuition and all mandatory fees on a semester-by-semester basis for the type of school and number of years purchased. VPEP payments to in-state public schools will not exceed the actual cost of the in-state undergraduate tuition and mandatory fees. The contract-holder has the option to transfer the total amount of all payments, accumulated at the reasonable rate of return, to the Virginia Education Savings Trust (VEST), and request a distribution from VEST to pay for qualified higher education expenses.

For beneficiaries attending a Virginia independent (private) college or university, VPEP will pay to the Virginia private school, including certain private career schools, the lesser of 1) the payments made on the contract plus the actual rate of return earned on the VPEP Trust or 2) the highest in-state undergraduate tuition and mandatory fees at a Virginia public school in the same academic year the benefits are used. All payments will be made directly to the school on a semester-by-semester basis following the school's add-drop period. The student or his or her family is responsible for any additional expenses not covered by VPEP. The contract-holder has the option to transfer the total amount of all payments, accumulated at the reasonable rate of return, to the Virginia Education Savings Trust, and request a distribution from VEST to pay for qualified higher education expenses.

For beneficiaries attending an out-of-state public or private college or university, VPEP will pay the lesser of 1) the payment made on the contract plus interest at the composite reasonable rate of return or 2) the average in-state undergraduate tuition and mandatory fees at Virginia public schools for the same academic year the benefits are used. All payments will be made directly to the school on a semester-by-semester basis. The student or his or her family is responsible for any additional expenses not covered by VPEP. The contract-holder has the option to transfer the total amount of all payments, accumulated at the reasonable rate of return, to the Virginia Education Savings Trust, and request a distribution from VEST to pay for qualified higher education expenses.

The reasonable rate of return tracks the quarterly performance of the Institutional Money Funds Index as reported in the Money Fund Monitor by iMoneyNet.