



Bryan, Pendleton, Swats & McAllister, LLC  
A Wells Fargo Company

April 21, 2015

The Honorable David H. Lillard, Jr.  
Chairman  
Baccalaureate Education System Trust  
State of Tennessee Treasury Department  
Suite 1340, Andrew Jackson Building  
Nashville, TN 37243-0253

Dear Treasurer Lillard:

Submitted herewith are the results of the actuarial valuation of the Tennessee Baccalaureate Education System Trust prepared as of September 30, 2014 pursuant to T.C.A. § 49-7-818. This report details information concerning the Educational Services Plan (otherwise known as the "Prepaid Plan"). This report does not contain any information relating to the Educational Savings Plan.

We trust this report will be helpful in the formulation of policy with respect to the operation and financing of the program. We appreciate the opportunity to serve the State of Tennessee, and we will be pleased to supplement this report in any way, as you request.

This report has been prepared under the supervision of J. Sterling Price, F.S.A., a member of the American Academy of Actuaries, a Fellow of the Society of Actuaries, and a consulting actuary with Bryan, Pendleton, Swats, and McAllister, LLC of Brentwood, Tennessee, who has met the Qualifications Standards of the American Academy of Actuaries to render the actuarial opinions herein. To the best of my knowledge this report has been prepared in accordance with generally accepted actuarial standards, including the overall appropriateness of the analysis, assumptions, and results and conforms to appropriate Standards of Practice as promulgated from time to time by the Actuarial Standards Board. I am not aware of any direct or material indirect financial interest or relationship, including investment management or other services that could create, or appear to create, a conflict of interest that would impair the objectivity of our work. This report has been reviewed as part of our firm's peer review process.

The information contained in this report was prepared for the State of Tennessee in connection with our actuarial valuation of the plan. It is not intended nor necessarily suitable for other purposes. Further distribution or use of all or part of this report to other parties is expressly prohibited without BPS&M's prior written consent.

Respectfully submitted,

J. Sterling Price, F.S.A.

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**TENNESSEE  
BACCALAUREATE EDUCATION  
SYSTEM TRUST**

**ACTUARIAL VALUATION  
AND REPORT**

**SEPTEMBER 30, 2014**

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An actuarial valuation of the Tennessee Baccalaureate Education System Trust (“BEST”) program was conducted as of September 30, 2014. This valuation only relates to the Educational Services Plan. It does not contain any information relating to the Educational Savings Plan. The purpose of the valuation is to satisfy the requirements of T.C.A. § 49-7-818 which requires, among other things, that an actuary perform an actuarial valuation of the assets and liabilities of the fund at least once a year.

**Summary of Funded Status**

Generally, conclusions regarding the funded status of the program should be reached by examining the cost of the program’s future obligations. Program obligations include: (i) future tuition obligations and (ii) future operational expenses.

Tuition obligations are funded by amounts received from the purchase of tuition units and investment earnings thereon. The cost of tuition obligations is expected to escalate from current unit values as a result of future tuition inflation.

Operational expenses of the BEST program are funded by (i) the per unit adjustment to the unit purchase price for expenses and (ii) that portion of the market value of assets which is reserved for future expenses (such amounts are collectively referred to as the "Administrative Reserve"). As of September 30, 2014, the Administrative Reserve has been sufficient to cover the annual expenses of the program. The current policy and practice of the program is that future annual operational expenses will be funded by the Administrative Reserve. Accordingly, future program obligations attributable to expenses are not reflected in this valuation report.

The following exhibits show the funded status of the BEST program on a present value basis and on a termination basis as of September 30, 2014. There are important differences between the two approaches as discussed below.

**Present Value Basis**

Under the present value concept, the current value of the tuition obligations of the program is calculated by determining the fund amount that would be needed on the valuation date to satisfy those obligations. The calculation assumes that program assets earn 6.25% per annum during the period between the valuation date and the date each obligation is assumed to be satisfied. The present value amount is then compared to existing program assets. A surplus or deficit occurs when program assets either exceed or are less than the present value of benefits.

The funded status of the program on a present value basis shown below is based on a comparison of the market value of assets as of September 30, 2014 to the present value of future tuition payments.

The present value of future payments was calculated and aggregated for each beneficiary as of September 30, 2014 using the investment return, tuition inflation and tuition unit usage assumptions provided in the Summary of Actuarial Assumptions.

Market Value of Assets	\$ 84,619,932
Present Value of Future Payments from the Trust Fund	<u>(82,199,007)</u>
Surplus/(Deficit)	\$ 2,420,925
 Funded Percentage	 102.95%

**Termination Basis**

In addition to the Present Value Basis discussed above, the funded status of the program has also been determined on a termination basis. This approach is of limited value in evaluating the ongoing funding status of the program but is useful as a short-term evaluation measure. The funded status of the program on a termination basis is based on a

comparison of the market value of assets as of September 30, 2014 to the payout value of all tuition units outstanding as of September 30, 2014. The program termination payout value is based on the weighted average tuition in effect on September 30, 2014 and does not incorporate the projection of tuition unit values into the future.

Although there is no statutory requirement for the satisfaction of program liabilities on a termination basis, a comparison of the market value of assets to the termination liability as of September 30, 2014 may be helpful in analyzing a scenario whereby existing assets are used to settle the liability for outstanding units.

Market Value of Assets	\$ 84,619,932
Present Value of Accrued Benefits	<u>(79,979,929)</u>
Surplus/(Deficit)	\$ 4,640,003

Funded Percentage	105.80%
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### **Funded Status under Various Investment Returns and Tuition Inflation Scenarios**

The following summarizes the funded status on a present value basis under different investment return and future tuition inflation assumptions.

	Investment Returns Assumption							
	5.00%	5.50%	6.00%	6.25%	6.50%	7.00%	7.50%	8.00%
<u>Tuition Assumption</u>								
5.00%	4,638,929	5,495,360	6,323,602	6,727,552	7,124,926	7,900,534	8,651,561	9,379,082
5.50%	3,757,572	4,639,259	5,491,692	5,907,356	6,316,197	7,114,027	7,886,366	8,634,338
6.00%	2,853,484	3,761,309	4,638,770	5,066,550	5,487,252	6,308,063	7,102,439	7,871,549
6.50%	1,927,192	2,862,054	3,765,400	4,205,709	4,638,675	5,483,241	6,300,390	7,091,340
7.00%	978,072	1,940,903	2,871,019	3,324,284	3,769,927	4,639,051	5,479,734	6,293,248
7.50%	4,701	996,464	1,954,265	2,420,925	2,879,677	3,774,184	4,639,189	5,476,018
8.00%	(994,261)	27,464	1,013,929	1,494,456	1,966,775	2,887,551	3,777,721	4,638,668
8.50%	(2,017,766)	(965,062)	51,032	545,890	1,032,230	1,980,147	2,896,311	3,782,162
9.00%	(3,068,114)	(1,983,339)	(936,578)	(426,889)	73,958	1,049,955	1,993,004	2,904,611

Current assumptions are 6.25% investment return and 7.5% tuition inflation.

In the table above, positive numbers represent a surplus, negative numbers represent a deficit.

**Development and Discussion of Actuarial Gain or Loss**

Under the present value approach, the actuarial experience for the past year is such that an actuarial gain occurred during the period.

Actuarial gains and losses occur due to differences between anticipated and actual experience and may over significant periods of observation be important indicators of the accuracy of the actuarial assumptions used in determining surplus levels.

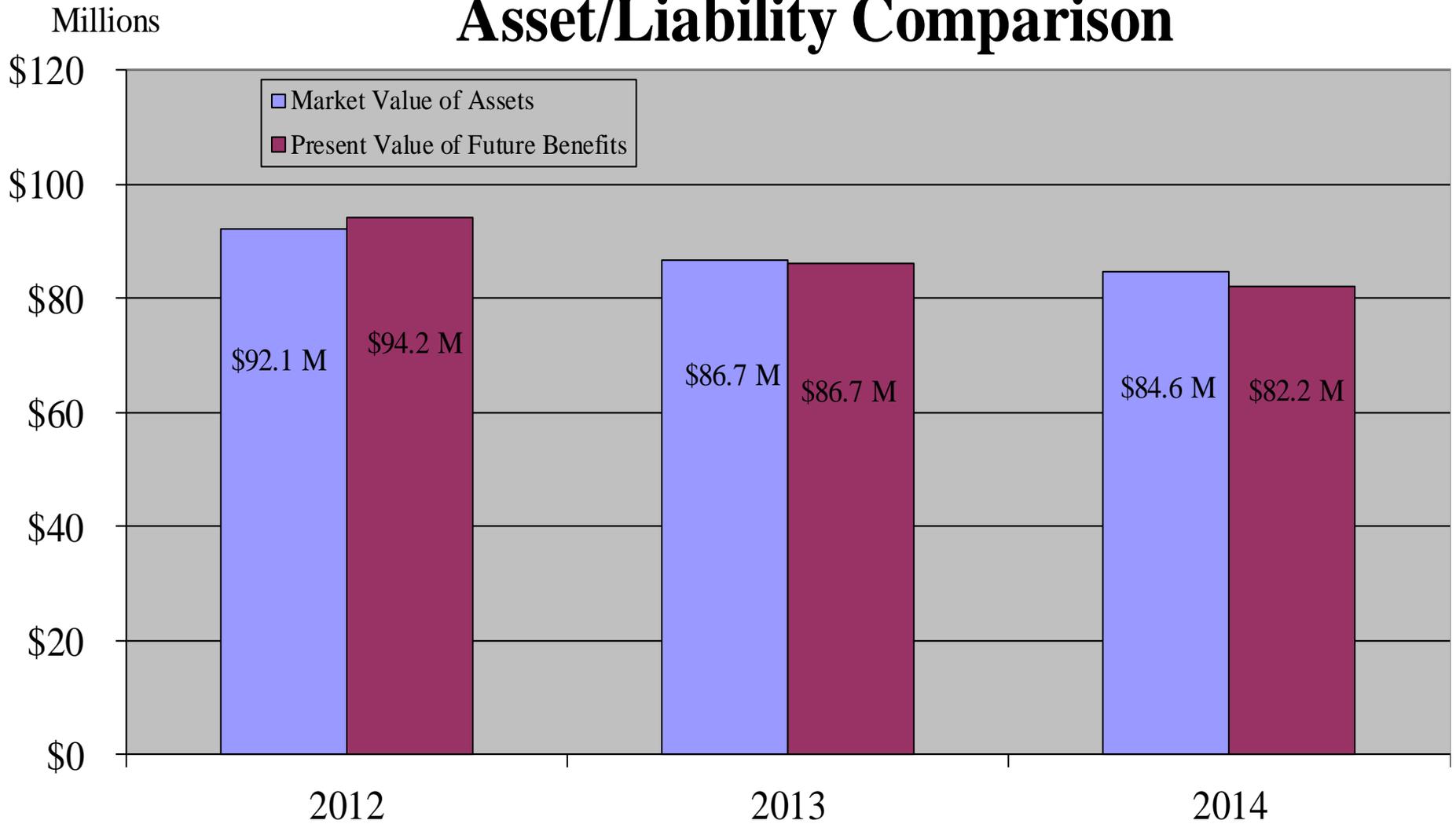
Among the identifiable sources of experience occurring during the year is an actuarial gain attributable to the investment return. The estimated market value dollar weighted investment return for the year of 8.1% was greater than the actuarially assumed return rate of 6.25%. The difference in the rates of return is responsible for an actuarial gain of approximately \$1,800,000.

An actuarial gain is associated with the assumed rate of tuition inflation of 7.5%. During the year, actual tuition increases were 5.71% resulting in a decrease to the expected liabilities for contracts in effect as of September 30, 2013. The actual tuition inflation resulted in an actuarial gain of \$800,000.

Other sources of actuarial experience gains and losses have not been identified but result from items such as the contract transfers, contract surrenders, operation of the expense reserve account, etc.

**EXECUTIVE SUMMARY**

# Asset/Liability Comparison



**Yearly Comparison of Selected Plan Information**

	Valuation Date				
	09/30/2010 <sup>#</sup>	09/30/2011	09/30/2012	09/30/2013	09/30/2014
Total Contracts	10,018	7,484	6,763	6,374	5,685
Units Purchased <sup>^</sup>	49,333	11,632	0	0	0
Outstanding Units	1,447,262	1,293,664	1,173,262	1,035,854	932,840
Present Value of Benefits	\$99,234,997	\$96,140,357	\$94,218,418	\$86,702,081	\$82,199,007
Market Value of Assets	\$99,508,527	\$92,341,306	\$92,072,912	\$86,749,210	\$84,619,932
Surplus/(Deficit)	\$273,530	(\$3,799,051)	(\$2,145,506)	\$47,129	\$2,420,925
Funded Percentage	100.28%	96.05%	97.72%	100.05%	102.95%

<sup>^</sup> Represents activity for 12-month period preceding the valuation date

<sup>#</sup> Additional capital contributed to the plan

**Funding and Other Issues**

**Tuition Inflation and Fees.** The 7.5% tuition inflation assumption utilized for this valuation is based on recommendations from BEST personnel in light of information concerning anticipated tuition and fee increases. This assumption was increased from 6.0% per year in 2007 after the Board conducted a study which indicated that future tuition rates were expected to increase at a rate higher than previously assumed.

**Surplus/deficit Status** – The surplus position of the program had deteriorated prior to 2007. This deterioration was as result of multiple years of actuarial losses caused by higher than assumed rates of actual tuition inflation and lower than assumed rates of investment return.

In 2007, the Board adopted a more conservative set of valuation assumptions. The use of these assumptions would hopefully decrease the likelihood that the program would experience actuarial losses going forward. However, the plan experienced extreme asset losses during the 2007-2008 plan year which caused the plan to return to a deficit status as of the prior valuation date. In 2007, \$25,950,000 was put into the plan to address the plan's unfunded liability. There was additional capital (\$14,750,000) contributed to the plan during the 2009-2010 plan year. The additional capital has been nearly sufficient to offset actuarial losses resulting from higher than assumed tuition inflation and lower than assumed investment returns.

**Valuation Date** - Prior to 2001, reports were prepared as of the end of the calendar year. The valuation date was changed to September 30 in order to provide up-to-date information for consideration by program officials and the legislature.

**Plan Closure** - Effective November 22, 2010, the program ceased accepting payments for the purchase of new units.

**Surplus/Deficit Equilibrium**

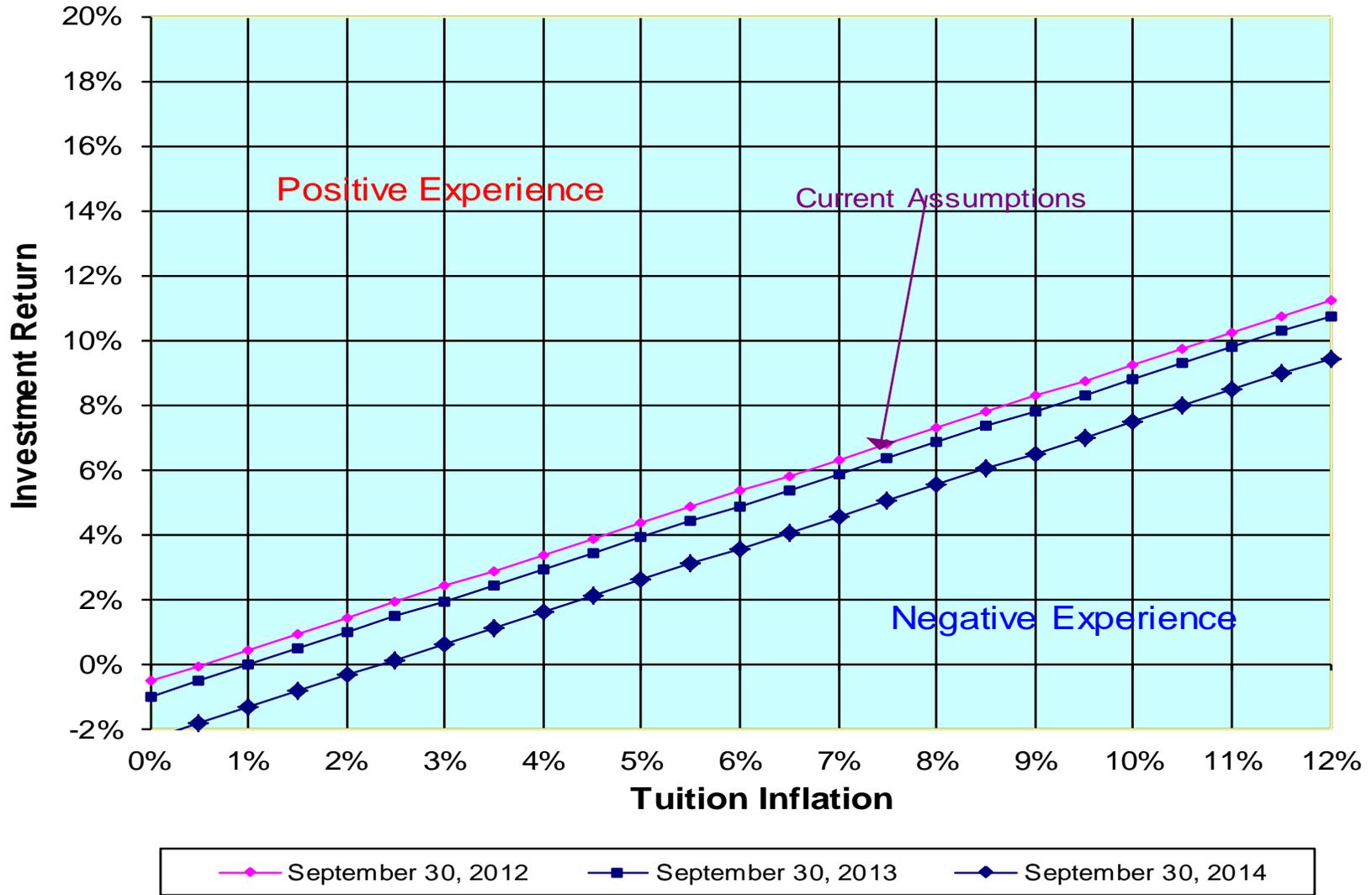
The graph on the following page may be helpful for planning purposes and for identifying potential risk for the BEST program.

The graph indicates that, for each rate of expected future tuition inflation, there exists a future investment return rate that, if realized, would result in liabilities for existing commitments exactly equaling existing assets. Under each set of these assumptions, the BEST program would be in equilibrium or balanced condition such that neither a surplus nor a deficit would be expected with respect to existing contracts. The surplus/deficit equilibrium line was determined on a present value basis using the September 30, 2014 valuation assumptions.

The equilibrium status of the program would be altered if the actual investment return rate were to exceed the equilibrium rate with the result that an asset surplus would exist after satisfaction of existing commitments. Similarly, a deficiency would occur if actual investment returns were less than the equilibrium return rate. For example, an 8.00% annual tuition rate could be satisfied by an investment return of approximately 5.51%. Higher returns would produce a surplus while lower returns would result in a deficiency. The 6.25% investment return rate assumed in producing this report in combination with an expected tuition inflation rate of 7.5% would maintain the current surplus.

**EXECUTIVE SUMMARY**

**Surplus/Deficit Equilibrium**



**ASSETS****Balance Sheet**

A summary balance sheet of the funds held on behalf of the BEST program is shown below.

	<u>September 30, 2013</u>	<u>September 30, 2014</u>
<u>Assets</u>		
Cash/Short Term Investments	\$ 1,882,826	\$ 579,528
Short Term Investments		
Fixed Income	49,733,112	52,687,293
Domestic Passive/Equities	35,133,273	22,343,821
International Passive	N/A	9,009,290
Total	<u>\$ 86,749,210</u>	<u>\$ 84,619,932</u>
Reserve for Beneficiaries	\$ 86,749,210	\$ 84,619,932

**Summary of Operation**

A summary of operation of the funds held on behalf of the BEST program during the preceding two plan years is presented below.

	<u>October 1, 2012- September 30, 2013</u>	<u>October 1, 2013- September 30, 2014</u>
Balance as of Beginning of Plan Year	\$ 92,397,636	\$ 86,749,210
Receipts		
Contributions	0	0
Administrative Fees	0	0
Transfer from General Fund	0	0
Transfer from Savings Plan	0	0
Total Receipts	<u>0</u>	<u>0</u>
Investment Earnings	4,894,717	6,945,895
Disbursements		
Tuition Payments	(9,179,602)	(7,827,186)
Refunds	(1,124,169)	(898,161)
Total Disbursements	<u>(10,303,771)</u>	<u>(8,725,347)</u>
Expenses		
Administrative Cost	(239,372)	(349,827)
Total Expenses	<u>(239,372)</u>	<u>(349,827)</u>
Balance as of Valuation Date	\$ 86,749,210	\$ 84,619,933
Adjustment for cash and receivables as of Valuation Date	N/A	N/A
Balance as of Valuation Date	\$ 86,749,210	\$ 84,619,932
Investment Return	6.02%	8.17%

**Comparative Rates of Investment Returns**

The following plan and comparative market value rates of return for twelve-month periods ending on September 30 using standard industry indices may be of interest in evaluating past BEST program investment returns and future expectations.

	<b>Total Rates of Return for</b>		
	<b>2012</b>	<b>2013</b>	<b>2014</b>
BEST Program			
Domestic Equity	30.20%	19.23%	19.10%
International Equity	13.70	21.60	3.88
Domestic Fixed Income	5.10	(1.79)	3.92
Cash Equivalents	0.01	0.00	0.03
Total Return	11.40	6.02	8.17
Market Indices			
Standard & Poor's 500 Stocks	30.20%	19.34%	19.73%
Dow Jones Industrial Average	26.52	15.59	15.29
MSCI EAFE Index	13.75	23.77	4.25
Barclays Capital Aggregate Bond Index	5.16	(1.68)	3.96
90-Day U.S. Treasury Bills	0.05	0.07	0.04

## Summary of Provisions of the Program

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**Statutory Basis-** The BEST Prepaid Plan is a qualified tuition program under Section 529 of the Internal Revenue Code, and the plan is established pursuant to T.C.A. § 49-7-801 et seq. The requirements for participation and administration of the program are contained in Chapter 1700-5-1 of the Official Compilation of the Rules and Regulations of the State of Tennessee.

**Purpose** - BEST was created by the Tennessee General Assembly in order to assist students and their families in financing a portion of the cost of attending colleges and universities. In that regard, BEST allows parents and other interested persons to purchase tuition units on behalf of an eligible beneficiary. Those units entitle the beneficiary to pay for qualified post-secondary education expenses.

**Tuition Units** - Tuition costs are purchased in increments known as tuition units. One tuition unit represents one percent of the average cost, including tuition and mandatory fees, of attending a four-year undergraduate Tennessee public university. Thus, tuition and fee expenses for one academic year would be covered by roughly 100 tuition units.

**Weighted Average Tuition** - Each year, the board determines the weighted average tuition (“WAT”). The WAT is based on the actual tuition and actual fees at each of Tennessee’s four-year public universities for the academic year beginning on or after August 1. It is weighted based on enrollment at those schools at the beginning of the prior academic year.

**Purchase Price of Tuition Units** - The purchase price of a tuition unit is equal to the WAT plus a charge to cover administration and an additional charge to ensure the actuarial soundness of the program. Tuition units may be purchased (i) by automatic cash withdrawal from a checking or savings account, (ii) by automatic payroll deduction, (iii) by check, or (iv) by cash. It is the current policy of the BEST program that the purchase price remains constant during an enrollment period from August 1 to December 31. After December 31, the purchase price is increased.

**Payout Value of Tuition Units** – The payout value of a tuition unit is based on the WAT in effect when the beneficiary uses the unit for tuition.

**Usage of Tuition Units** – Tuition units may be applied toward the cost of tuition, mandatory fees and room and board at any accredited two or four-year school or any accredited graduate or professional school. Units may be used at both public and private schools. Units may be used at out-of-state schools as well as at schools located in the State of Tennessee.

**Two-year Limitation on Usage of Tuition Units** - Tuition units may not be used until two full years have passed following their purchase.

**Limit on Number of Tuition Units Purchased** - The total dollar value of tuition units which may be purchased by all persons on behalf of a single beneficiary under all contracts in the BEST Prepaid Plan may not exceed \$235,000.

**Rollover** – A BEST purchaser may transfer funds from a BEST Prepaid account to another 529 Plan once every 12 months without incurring federal income tax.

**Time Period for Use** - There is no absolute time period in which the tuition units in a beneficiary’s account must be used. However, BEST may terminate an account ten years after the beneficiary attains age 18 if there has been no contact or activity during that ten-year period.

**Transfer of Tuition Units** - Tuition units may be transferred to a new beneficiary provided that the new beneficiary is a member of the family of the original beneficiary as defined under Internal Revenue Section 529.

**Termination of Contract** - A tuition contract can be terminated upon one of the following events: (i) the beneficiary dies or becomes permanently disabled, (ii) the beneficiary is age 18 or older and decides not to attend college, (iii) the beneficiary obtains a higher education degree that is less than a bachelor's degree and decides not to pursue education further, (iv) the beneficiary obtains a bachelor's degree, and (v) the beneficiary's account contains 5 tuition units or less and no tuition units have been purchased for the beneficiary's account for a period of at least 3 consecutive years.

**Refund Upon Termination** - To request a refund, the refund recipient must send BEST written notice that the tuition units will not be used for college. A refund of tuition units for reasons other than death, disability, or scholarship will be subject to certain tax consequences. If the Refund Recipient is the child (Beneficiary) the refund will not be issued until the child reaches age 20.

**Tax Treatment**-Withdrawals for qualified higher educational expenses are exempt from municipal, state and federal taxation. Qualified withdrawals are withdrawals for tuition, books, supplies required for enrollment or attendance at a qualified higher educational institution, and some room and board expenses. Withdrawals for qualified scholarships or due to the beneficiary's attendance at a military academy are subject to federal income tax on the earnings only. Withdrawals for a scholarship refund or due to the beneficiary's attendance at a military academy are not subject to the 10% additional tax. The earnings on tuition units for non-qualified withdrawals are subject to federal income tax and a 10% additional tax.

**Financial Aid Treatment**- Funds saved in prepaid 529 plans may affect the amount of financial aid that the beneficiary will qualify for. For BEST accounts owned by parents, the refund value of the prepaid BEST account must be reported. This amount is added to any other investments, which include, but are not limited to, real estate (not the family home), trust funds, UGMA or UTMA accounts, money market funds, certificates of deposits, stocks, stock options, bonds, other securities, Coverdell Education Savings Accounts, and 529 Savings accounts. Only a percentage of the value of all investments is considered in the calculation of the expected family contribution for aid qualification.

**Plan Closure**- Effective November 22, 2010, the program ceased accepting payments for the purchase of new units.

## **Summary of Actuarial Assumptions**

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### **Investment Return**

The valuation was conducted using a 6.25% investment rate of return.

### **Tuition Increases**

Tuition and fees were assumed to increase at 7.50% per year.

### **Expenses**

Operational expenses of the BEST program are assumed to be funded by (i) the per unit adjustment to the unit purchase price for expenses, (ii) the \$50 initiation fee charged for all new contracts purchased prior to March 29, 2000, and (iii) that portion of the market value of assets which is reserved for future expenses. Therefore, the impact of future expenses is not reflected in this valuation report. The actuarial funded status of the plan will be impacted if operational expenses are paid from trust assets. No attempt has been made by BEST management to estimate future operational costs given the closed status of the plan.

### **Age at Enrollment**

Age at enrollment is assumed to be (i) age 18, or (ii) for beneficiaries who are age 17 or older as of the beginning of the academic term with units purchased in the preceding year, two full years after the beginning of that academic term.

### **Rate of Usage**

Tuition units are used during the two-year period following the assumed enrollment age. Participants with more than one year's worth of units are assumed to use those units over more than one academic year.

### **Mortality Rates**

None

**2014 – 2015 Weighted Average Tuition**

The purchase price and payout value of tuition units are based primarily on the weighted average tuition (“WAT”). The WAT for a given enrollment year is based on actual tuition and actual fees at Tennessee’s public four-year universities for the academic year. The sum of the tuition and fee amounts for each school is then weighted by the school’s enrollment at the beginning of the prior academic year.

The purchase price of one unit is equal to one percent of the WAT plus an amount to cover administrative expenses and the actuarial soundness of the program.

	Fall 2013 Enrollment	2014-2015 Tuition & Fees *	Total Tuition
Austin Peay (APSU)	8,416	\$7,462	\$62,800,192
East Tennessee (ETSU)	12,374	7,985	98,806,390
Middle Tennessee (MTSU)	19,637	8,188	160,787,756
Tennessee State (TSU)	7,080	7,224	51,145,920
Tennessee Tech (TTU)	9,797	8,017	78,542,549
Univ of Memphis (UoM)	16,704	8,973	149,884,992
UT - Chattanooga (UTC)	10,208	8,138	83,072,704
UT - Knoxville (UTK)	23,860	10,276	245,185,360
UT - Martin (UTM)	6,555	8,024	52,597,320
	<u>114,631</u>		<u>\$982,823,183</u>
Weighted Average Tuition (total tuition divided by total enrollment)			\$8,574
Tuition Unit Payout Value (1% of WAT)			\$85.74
Adjustment for expenses			N/A
Adjustment for actuarial soundness			N/A
Tuition Unit Purchase Price			<u>\$85.74</u>

\* Tuition and fees are based on the actual amounts for the 2014-2015 academic year.

The Board of Regents approved a tuition schedule for the five four-year institutions under their jurisdiction that removed the twelve semester hour cap. Previously, students were not charged for any hours beyond the first twelve. Effective with the 2009-2010 academic year, a reduced hourly rate is charged for any hours taken after twelve. In accordance with the rules governing the Tennessee Baccalaureate Education System Trust, the 2009-2010 weighted average tuition is calculated using 15 semester hours for each semester for the five Board of Regents institutions. The University of Tennessee system did not remove the twelve semester hour cap.

**History of Payout Value**

The following table provides a historical account of the unit payout value and unit purchase price since the 1997-1998 plan year.

<b>Enrollment Year</b>	<b>Unit Payout Value</b>	<b>Adjustment for Expenses</b>	<b>Adjustment for Actuarial Soundness</b>	<b>Unit Purchase Price</b>	<b>Adjustment for Purchases after December 31</b>	<b>Adjusted Unit Purchase Price</b>
1997-1998	21.64	2.11	0.00	23.75	0	23.75
1998-1999	25.00	1.75	0.00	26.75	1.25	28.00
1999-2000	27.08	1.92	0.00	29.00	1.25	30.25
2000-2001	29.58	1.92	0.00	31.50	1.50	33.00
2001-2002	33.51	0.99	0.00	34.50	2.35	36.85
2002-2003	35.98	1.02	0.00	37.00	1.40	38.40
2003-2004	40.70	1.30	0.00	42.00	1.60	43.60
2004-2005	43.15	2.10	3.71	48.96	1.84	50.80
2005-2006	47.71	2.28	4.07	54.06	2.03	56.09
2006-2007	49.72	2.98	4.24	56.94	2.14	59.08
2007-2008	53.79	3.13	4.56	61.48	2.15	63.63
2008-2009	56.93	3.87	4.86	65.66	2.05	67.71
2009-2010	61.20	3.90	5.22	70.32	2.20	72.52
2010-2011*	65.57	5.68	5.59	76.84	2.40	79.24
2011-2012	72.15	N/A	N/A	72.15	N/A	72.15
2012-2013	76.88	N/A	N/A	76.88	N/A	76.88
2013-2014	81.11	N/A	N/A	81.11	N/A	81.11
2014-2015	85.74	N/A	N/A	85.74	N/A	85.74

\*Plan was closed to new unit purchases in November 2010.

**Projection of Payout Value**

The following table shows a projection of the tuition unit purchase price and payout value. The projected payout value is equal to the projected weighted average tuition using a tuition inflation rate of 7.5%. The actual values for the enrollment year beginning August 1, 2014 are shown.

<b><u>Enrollment Year Beginning</u></b>	<b><u>Projected Unit Payout Value</u></b>
August 1, 2014	85.74
August 1, 2015	92.17
August 1, 2016	99.08
August 1, 2017	106.51
August 1, 2018	114.50
August 1, 2019	123.09
August 1, 2020	132.32
August 1, 2021	142.24
August 1, 2022	152.91
August 1, 2023	164.38
August 1, 2024	176.71
August 1, 2025	189.96
August 1, 2026	204.21
August 1, 2027	219.53
August 1, 2028	235.99
August 1, 2029	253.69
August 1, 2030	272.72
August 1, 2031	293.17
August 1, 2032	315.16
August 1, 2033	338.80

**History of Increases – Tuition and Fees**

The table below and the tables on the succeeding pages show the history of increases in (i) tuition and fees combined, (ii) tuition only and (iii) fees only, respectively. These tables may be helpful in analyzing trends in tuition and fee inflation.

	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-2013</b>	<b>2013-2014</b>	<b>2014-2015</b>
<b>APSU</b>	<b>5,238</b>	<b>5,526</b>	<b>5,868</b>	<b>6,228</b>	<b>6,690</b>	<b>6,918</b>	<b>7,158</b>	<b>7,462</b>
Increase	8.29%	5.50%	6.19%	6.13%	7.42%	3.41%	3.47%	4.25%
<b>ETSU</b>	<b>4,887</b>	<b>5,201</b>	<b>5,593</b>	<b>6,004</b>	<b>6,529</b>	<b>6,997</b>	<b>7,543</b>	<b>7,985</b>
Increase	5.39%	6.43%	7.54%	7.35%	8.74%	7.17%	7.80%	5.86%
<b>MTSU</b>	<b>5,278</b>	<b>5,700</b>	<b>6,048</b>	<b>6,478</b>	<b>7,018</b>	<b>7,492</b>	<b>7,840</b>	<b>8,188</b>
Increase	10.74%	8.00%	6.11%	7.11%	8.34%	6.75%	4.64%	4.44%
<b>TSU</b>	<b>4,856</b>	<b>5,102</b>	<b>5,444</b>	<b>5,854</b>	<b>6,346</b>	<b>6,702</b>	<b>6,774</b>	<b>7,224</b>
Increase	7.10%	5.07%	6.70%	7.53%	8.40%	5.61%	1.07%	6.64%
<b>TTU</b>	<b>4,980</b>	<b>5,244</b>	<b>5,586</b>	<b>6,036</b>	<b>6,698</b>	<b>6,996</b>	<b>7,383</b>	<b>8,017</b>
Increase	9.16%	5.30%	6.52%	8.06%	10.97%	4.45%	5.53%	8.59%
<b>UoM</b>	<b>5,802</b>	<b>6,128</b>	<b>6,524</b>	<b>6,990</b>	<b>7,696</b>	<b>8,234</b>	<b>8,666</b>	<b>8,973</b>
Increase	10.39%	5.62%	6.46%	7.14%	10.10%	6.99%	5.25%	3.54%
<b>UTC</b>	<b>5,062</b>	<b>5,310</b>	<b>5,656</b>	<b>6,062</b>	<b>6,718</b>	<b>7,212</b>	<b>7,555</b>	<b>8,138</b>
Increase	7.98%	4.90%	6.52%	7.18%	10.82%	7.35%	4.76%	7.72%
<b>UTK</b>	<b>5,932</b>	<b>6,250</b>	<b>6,850</b>	<b>7,382</b>	<b>8,396</b>	<b>9,092</b>	<b>9,684</b>	<b>10,276</b>
Increase	6.38%	5.36%	9.60%	7.77%	13.74%	8.29%	6.51%	6.11%
<b>UTM</b>	<b>5,005</b>	<b>5,255</b>	<b>5,769</b>	<b>6,190</b>	<b>6,718</b>	<b>7,056</b>	<b>7,514</b>	<b>8,024</b>
Increase	7.29%	5.00%	9.78%	7.30%	8.53%	5.03%	6.49%	6.79%
<b><u>Averages</u></b>								
<b>Weighted Avg<sup>1</sup></b>	<b>5,379</b>	<b>5,693</b>	<b>6,120</b>	<b>6,557</b>	<b>7,215</b>	<b>7,688</b>	<b>8,111</b>	<b>8,574</b>
Increase	8.19%	5.84%	7.50%	7.14%	10.04%	6.56%	5.50%	5.71%
<b>Weighted Average<sup>2</sup></b>	<b>5,379</b>	<b>5,693</b>	<b>6,120</b>	<b>6,557</b>	<b>7,215</b>	<b>7,688</b>	<b>8,111</b>	<b>8,574</b>
Increase	8.19%	5.84%	7.50%	7.14%	10.04%	6.56%	5.50%	5.71%

<sup>1</sup> Weighted Averages shown are derived using Fall enrollment figures from the preceding year.

<sup>2</sup> The Weighted Average Tuition is the amount determined annually by the BEST board of trustees pursuant to T.C.A. 49-7-806.

**History of Increases – Tuition only**

	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-2013</b>	<b>2013-2014</b>	<b>2014-2015</b>
<b>APSU</b>	<b>4,058</b>	<b>4,302</b>	<b>4,644</b>	<b>5,004</b>	<b>5,466</b>	<b>5,694</b>	<b>5,874</b>	<b>6,198</b>
Increase	6.01%	6.01%	7.95%	7.75%	9.23%	4.17%	3.16%	5.52%
<b>ETSU</b>	<b>4,058</b>	<b>4,302</b>	<b>4,644</b>	<b>5,004</b>	<b>5,466</b>	<b>5,922</b>	<b>6,198</b>	<b>6,630</b>
Increase	6.01%	6.01%	7.95%	7.75%	9.23%	8.34%	4.66%	6.97%
<b>MTSU</b>	<b>4,058</b>	<b>4,302</b>	<b>4,644</b>	<b>5,004</b>	<b>5,520</b>	<b>5,898</b>	<b>6,222</b>	<b>6,552</b>
Increase	6.01%	6.01%	7.95%	7.75%	10.31%	6.85%	5.49%	5.30%
<b>TSU</b>	<b>4,058</b>	<b>4,302</b>	<b>4,644</b>	<b>5,004</b>	<b>5,466</b>	<b>5,772</b>	<b>5,844</b>	<b>6,198</b>
Increase	6.01%	6.01%	7.95%	7.75%	9.23%	5.60%	1.25%	6.06%
<b>TTU</b>	<b>4,058</b>	<b>4,302</b>	<b>4,644</b>	<b>5,004</b>	<b>5,520</b>	<b>5,748</b>	<b>6,096</b>	<b>6,474</b>
Increase	6.01%	6.01%	7.95%	7.75%	10.31%	4.13%	6.05%	6.20%
<b>UoM</b>	<b>4,652</b>	<b>4,978</b>	<b>5,370</b>	<b>5,778</b>	<b>6,450</b>	<b>6,978</b>	<b>7,410</b>	<b>7,410</b>
Increase	6.02%	7.01%	7.87%	7.60%	11.63%	8.19%	6.19%	0.00%
<b>UTC</b>	<b>3,972</b>	<b>4,210</b>	<b>4,506</b>	<b>4,912</b>	<b>5,398</b>	<b>5,722</b>	<b>6,065</b>	<b>6,430</b>
Increase	5.98%	5.99%	7.03%	9.01%	9.89%	6.00%	5.99%	6.02%
<b>UTK</b>	<b>5,120</b>	<b>5,428</b>	<b>5,918</b>	<b>6,450</b>	<b>7,224</b>	<b>7,802</b>	<b>8,270</b>	<b>8,766</b>
Increase	6.00%	6.02%	9.03%	8.99%	12.00%	8.00%	6.00%	6.00%
<b>UTM</b>	<b>4,150</b>	<b>4,400</b>	<b>4,708</b>	<b>5,132</b>	<b>5,640</b>	<b>5,978</b>	<b>6,336</b>	<b>6,336</b>
Increase	5.98%	6.02%	7.00%	9.01%	9.90%	5.99%	5.99%	0.00%

**Averages**

<b>Weighted Average</b>	<b>4,383</b>	<b>4,653</b>	<b>5,031</b>	<b>5,428</b>	<b>5,989</b>	<b>6,395</b>	<b>6,748</b>	<b>7,090</b>
Increase	5.95%	6.16%	8.12%	7.89%	10.34%	6.78%	5.52%	5.07%

\* The Weighted Averages shown are derived using Fall enrollment figures from the preceding year.

**History of Increases – Fees only**

	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-2013</b>	<b>2013-2014</b>	<b>2014-2015</b>
<b>APSU</b>	<b>1,180</b>	<b>1,224</b>	<b>1,224</b>	<b>1,224</b>	<b>1,224</b>	<b>1,224</b>	<b>1,284</b>	<b>1,264</b>
Increase	16.95%	3.73%	0.00%	0.00%	0.00%	0.00%	4.90%	-1.56%
<b>ETSU</b>	<b>829</b>	<b>899</b>	<b>949</b>	<b>1,000</b>	<b>1,063</b>	<b>1,075</b>	<b>1,345</b>	<b>1,355</b>
Increase	2.47%	8.44%	5.56%	5.37%	6.30%	1.13%	25.12%	0.74%
<b>MTSU</b>	<b>1,220</b>	<b>1,398</b>	<b>1,404</b>	<b>1,474</b>	<b>1,498</b>	<b>1,594</b>	<b>1,618</b>	<b>1,636</b>
Increase	30.06%	14.59%	0.43%	4.99%	1.63%	6.41%	1.51%	1.11%
<b>TSU</b>	<b>798</b>	<b>800</b>	<b>800</b>	<b>850</b>	<b>880</b>	<b>930</b>	<b>930</b>	<b>1,026</b>
Increase	13.03%	0.25%	0.00%	6.25%	3.53%	5.68%	0.00%	10.32%
<b>TTU</b>	<b>922</b>	<b>942</b>	<b>942</b>	<b>1,032</b>	<b>1,178</b>	<b>1,248</b>	<b>1,287</b>	<b>1,543</b>
Increase	25.61%	2.17%	0.00%	9.55%	14.15%	5.94%	3.13%	19.89%
<b>UoM</b>	<b>1,150</b>	<b>1,150</b>	<b>1,154</b>	<b>1,212</b>	<b>1,246</b>	<b>1,256</b>	<b>1,256</b>	<b>1,563</b>
Increase	32.49%	0.00%	0.35%	5.03%	2.81%	0.80%	0.00%	24.44%
<b>UTC</b>	<b>1,090</b>	<b>1,100</b>	<b>1,150</b>	<b>1,150</b>	<b>1,320</b>	<b>1,490</b>	<b>1,490</b>	<b>1,708</b>
Increase	15.96%	0.92%	4.55%	0.00%	14.78%	12.88%	0.00%	14.63%
<b>UTK</b>	<b>812</b>	<b>822</b>	<b>932</b>	<b>932</b>	<b>1,172</b>	<b>1,290</b>	<b>1,414</b>	<b>1,510</b>
Increase	8.85%	1.23%	13.38%	0.00%	25.75%	10.07%	9.61%	6.79%
<b>UTM</b>	<b>855</b>	<b>855</b>	<b>1,061</b>	<b>1,058</b>	<b>1,078</b>	<b>1,078</b>	<b>1,178</b>	<b>1,308</b>
Increase	14.15%	0.00%	24.09%	-0.28%	1.89%	0.00%	9.28%	11.04%

**Averages**

<b>Weighted Average</b>	<b>995</b>	<b>1,040</b>	<b>1,090</b>	<b>1,129</b>	<b>1,226</b>	<b>1,293</b>	<b>1,363</b>	<b>1,484</b>
Increase	19.16%	4.52%	4.81%	3.58%	8.59%	5.46%	5.41%	8.88%

\* Weighted Averages shown are derived using Fall enrollment figures from the preceding year.

**Cash Flow Analysis**

The following exhibit was generated from a cash flow model which considers only those tuition units outstanding as of September 30, 2014.

The model utilizes the valuation assumptions in determining future tuition payments. Based on the valuation assumptions, all tuition units outstanding as of September 30, 2014 are assumed to be paid out on or before September 30, 2032.

<b>Plan Year Ending</b>	<b>Market Value BOY</b>	<b>Tuition Payments</b>	<b>Investment Income</b>	<b>Market Value EOY</b>
2015	84,619,933	32,393,772	3,264,135	55,490,296
2016	55,490,296	12,920,483	2,660,613	45,230,426
2017	45,230,426	8,775,119	2,278,457	38,733,764
2018	38,733,764	8,450,397	1,892,710	32,176,077
2019	32,176,077	6,879,733	1,581,022	26,877,366
2020	26,877,366	5,705,468	1,323,244	22,495,142
2021	22,495,142	4,562,658	1,120,780	19,053,264
2022	19,053,264	4,124,960	933,019	15,861,323
2023	15,861,323	3,475,338	774,124	13,160,109
2024	13,160,109	2,071,846	693,016	11,781,279
2025	11,781,279	2,400,959	586,270	9,966,590
2026	9,966,590	1,864,267	506,395	8,608,718
2027	8,608,718	1,731,497	429,826	7,307,047
2028	7,307,047	1,504,220	362,677	6,165,504
2029	6,165,504	380,416	361,568	6,146,656
2030	6,146,656	328,021	363,665	6,182,300
2031	6,182,300	13,636	385,542	6,554,206
2032	6,554,206	0	409,638	6,963,844

**Unit Purchases by Year**

The following exhibit summarizes unit purchase activity by enrollment year. The cumulative units at the end of the enrollment year equal cumulative units at the beginning of the year plus purchases and transfers less withdrawals.

<b>Enrollment Year*</b>	<b>Cumulative Units at Beginning of Enrollment year</b>	<b>Purchases</b>	<b>Withdrawals</b>	<b>Cumulative Units at End of Enrollment year</b>
1996-1997	0	36,494	0	36,494
1997-1998	36,494	344,850	102	381,242
1998-1999	381,242	266,774	368	647,648
1999-2000	647,648	196,726	7,376	836,998
2000-2001	836,998	221,167	13,893	1,044,272
2001-2002	1,044,272	240,045	31,356	1,252,961
2002-2003	1,252,961	245,004	38,092	1,459,873
2003-2004	1,459,873	184,210	63,301	1,580,782
2004-2005	1,580,782	160,632	94,773	1,646,641
2005-2006	1,646,641	94,491	82,115	1,659,017
2006-2007	1,659,017	97,791	114,499	1,642,309
2007-2008	1,642,309	82,005	123,631	1,600,683
2008-2009	1,600,683	64,083	121,806	1,542,960
2009-2010	1,542,960	49,857	125,576	1,467,241
2010-2011	1,467,241	4,273	177,850	1,293,664
2011-2012	1,293,664	0	120,402	1,173,262
2012-2013	1,173,262	0	137,408	1,035,854
2013-2014	1,035,854	0	103,014	932,840

\*Enrollment year is defined as August 1 through July 31.

**New Contracts by Year**

The following exhibit summarizes contract purchase activity by enrollment year.

<b><u>Enrollment Year*</u></b>	<b><u>Cumulative Contracts at Beginning of Enrollment year</u></b>	<b><u>Net Change in Number of Contracts</u></b>	<b><u>Cumulative Contracts at End of Enrollment year</u></b>
1996-1997	0	675	675
1997-1998	675	2,685	3,360
1998-1999	3,360	1,581	4,941
1999-2000	4,941	1,119	6,060
2000-2001	6,060	849	6,909
2001-2002	6,909	808	7,717
2002-2003	7,717	566	8,283
2003-2004	8,283	398	8,681
2004-2005	8,681	298	8,979
2005-2006	8,979	199	9,178
2006-2007	9,178	224	9,402
2007-2008	9,402	265	9,667
2008-2009	9,667	212	9,879
2009-2010	9,879	99	9,978
2010-2011	9,978	(2,130)	7,484
2011-2012	7,484	(721)	6,763
2012-2013	6,763	(389)	6,374
2013-2014	6,374	(688)	5,686

\*Enrollment year is defined as August 1 through July 31.

**Units Outstanding by Age Group**

The following exhibit summarizes units outstanding as of the valuation date grouped by age range.

<b>Age Range</b>	<b>Units Outstanding</b>	<b>Percent of Total</b>
0	-	0.00%
1	-	0.00%
2	-	0.00%
3	50	0.01%
4	1,293	0.14%
5	1,612	0.17%
6	6,852	0.73%
7	8,479	0.91%
8	9,814	1.05%
9	13,587	1.46%
10	12,604	1.35%
11	22,728	2.44%
12	29,000	3.11%
13	34,482	3.70%
14	46,352	4.97%
15	60,085	6.44%
16	79,339	8.51%
17	88,566	9.49%
18	95,565	10.24%
19	89,232	9.57%
20	77,924	8.35%
21	59,598	6.39%
22	41,689	4.47%
23	31,890	3.42%
24	23,130	2.48%
25	28,090	3.01%
26	13,430	1.44%
27	15,948	1.71%
28	10,832	1.16%
29	8,656	0.93%
over 30	22,013	2.36%

## BENEFICIARY DATA

### Unit Purchases by Age

The following exhibit may be helpful in analyzing the demographic composition of BEST beneficiaries. A breakdown of unit purchases for last four enrollment years is shown, along with a breakdown of units outstanding as of September 30, 2014. Note that the 2009-2010 plan year was the last complete plan year in which new units were sold.

Age Last Birthday at End of Enrollment Year	2006-07		2007-08		2008-09		2009-10*		Total at 9/30/2014	
	Units Purchases	Percent of Total	Units Outstanding	Percent of Total						
0	702	0.72%	287	0.35%	301	0.47%	1,027	2.06%	0	0.00%
1	4,519	4.62%	1,693	2.06%	2,180	3.40%	2,520	5.05%	0	0.00%
2	2,671	2.73%	2,254	2.75%	1,705	2.66%	2,698	5.41%	0	0.00%
3	1,734	1.77%	2,106	2.57%	1,801	2.81%	755	1.51%	50	0.01%
4	2,250	2.30%	2,936	3.58%	2,292	3.58%	1,685	3.38%	1,293	0.14%
5	3,201	3.27%	2,012	2.45%	1,738	2.71%	866	1.74%	1,612	0.17%
6	3,184	3.26%	2,077	2.53%	2,591	4.04%	989	1.98%	6,852	0.73%
7	4,477	4.58%	3,545	4.32%	2,352	3.67%	2,135	4.28%	8,479	0.91%
8	5,967	6.10%	5,612	6.84%	1,971	3.08%	1,423	2.85%	9,814	1.05%
9	4,461	4.56%	4,949	6.04%	3,415	5.33%	2,258	4.53%	13,587	1.46%
10	5,846	5.98%	4,953	6.04%	2,242	3.50%	3,021	6.06%	12,604	1.35%
11	6,818	6.97%	5,007	6.11%	4,989	7.78%	2,679	5.37%	22,728	2.44%
12	4,600	4.70%	7,215	8.80%	4,933	7.70%	4,130	8.28%	29,000	3.11%
13	6,536	6.68%	4,299	5.24%	4,257	6.64%	3,367	6.75%	34,482	3.70%
14	5,305	5.43%	4,302	5.25%	3,916	6.11%	3,197	6.41%	46,352	4.97%
15	5,280	5.40%	5,584	6.81%	4,019	6.27%	2,974	5.97%	60,085	6.44%
16	5,950	6.08%	6,275	7.65%	4,886	7.62%	4,590	9.21%	79,339	8.51%
17	6,290	6.43%	4,020	4.90%	3,191	4.98%	2,838	5.69%	88,566	9.49%
18	4,735	4.84%	4,433	5.41%	4,154	6.48%	2,168	4.35%	95,565	10.24%
19	4,544	4.65%	3,043	3.71%	3,037	4.74%	1,733	3.48%	89,232	9.57%
over 20	8,718	8.92%	5,404	6.59%	4,112	6.42%	2,805	5.63%	333,198	35.72%
Total	97,791	100.00%	82,005	100.00%	64,083	100.00%	49,857	100.00%	932,840	100.00%

\* The 2009-2010 plan year was the last complete year that the plan was open to the purchase of additional units.