



# Commonwealth of Virginia's Joint Legislative Audit and Review Commission

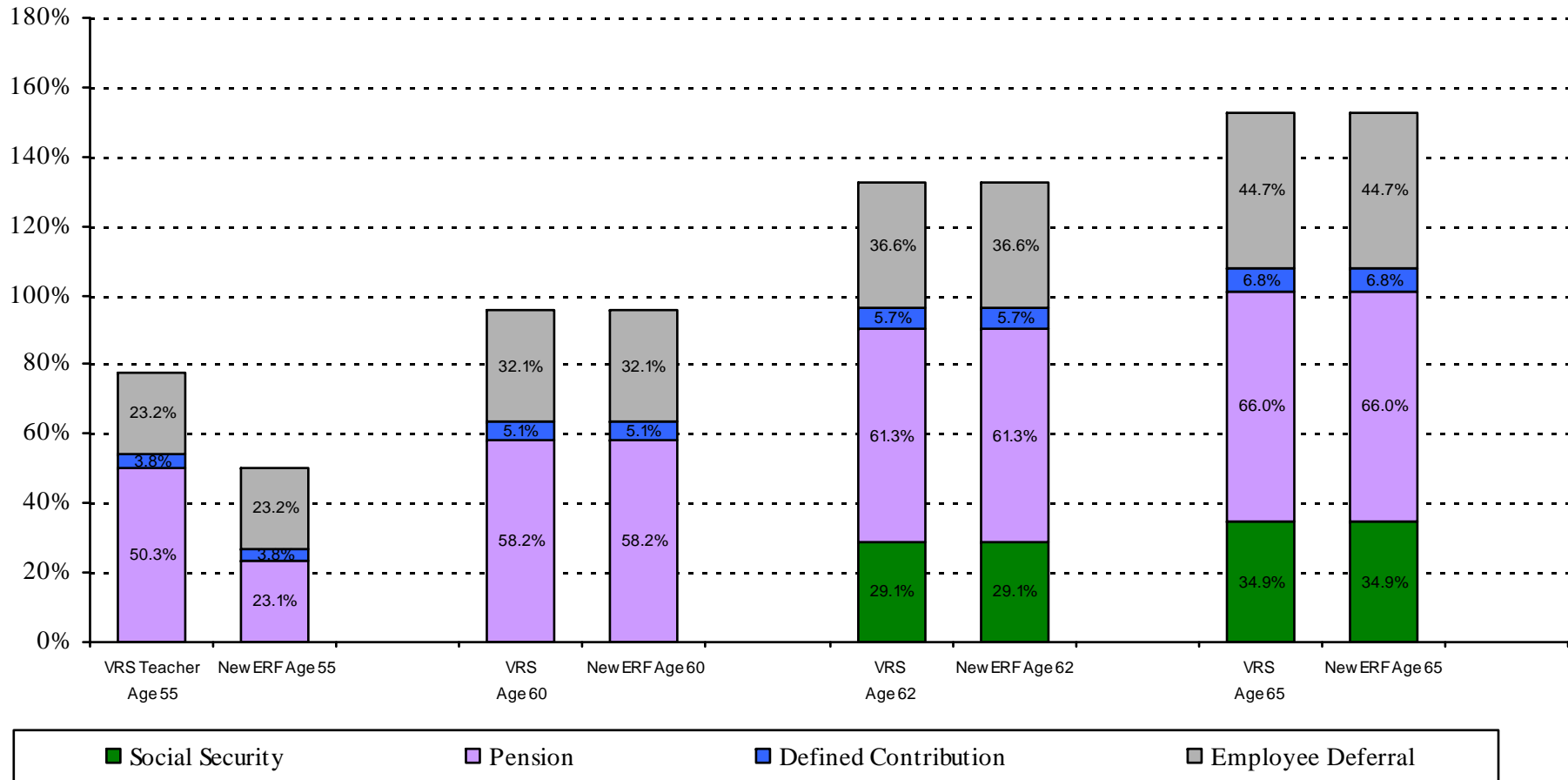
## Analysis of Projected Impact of Potential Plan Modifications — Appendix

**Final Report**  
September 9, 2008

Human Resource Services

Replacement Ratio under VRS Plans Versus Replacement Ratio Under 4.A.IV Plan\* at Ages 55, 60, 62, and 65 (retirement income divided by total pay)

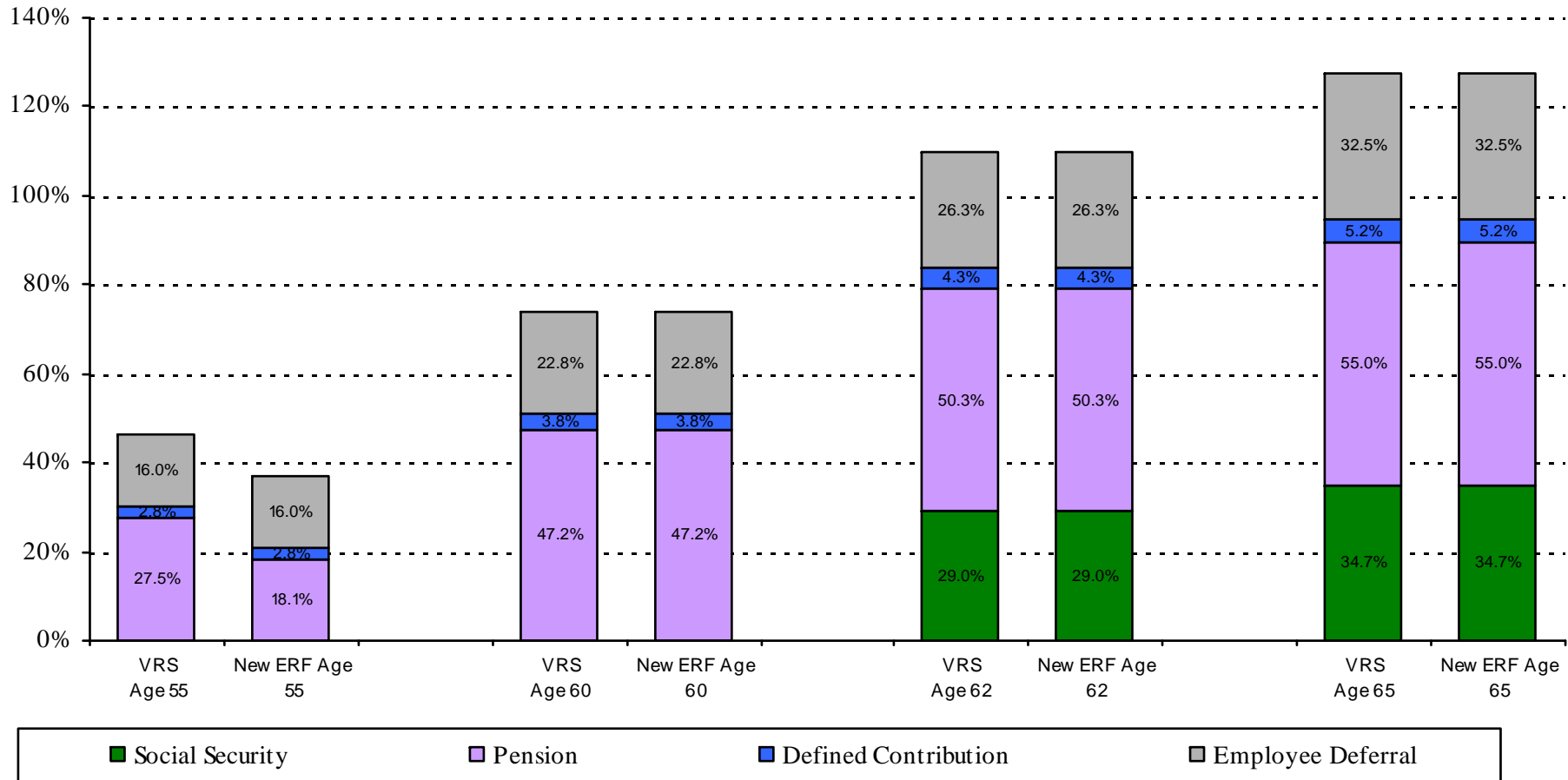
Teacher  
Age 23, Base Pay \$37,000



\*Scenario 4.A.IV illustrates an increase in the eligibility for unreduced early retirement benefits to age 60 with 30 years of service or age 65 with 5 years of service. In addition, early retirement for this scenario starts at age 55 and 10 years of service with reductions of .5% per month for the first 60 months and .4% per month for the next 60 months that benefits precede age 65.

Replacement Ratio under VRS Plans Versus Replacement Ratio Under 4.A.IV Plan\* at Ages 55, 60, 62, and 65 (retirement income divided by total pay)

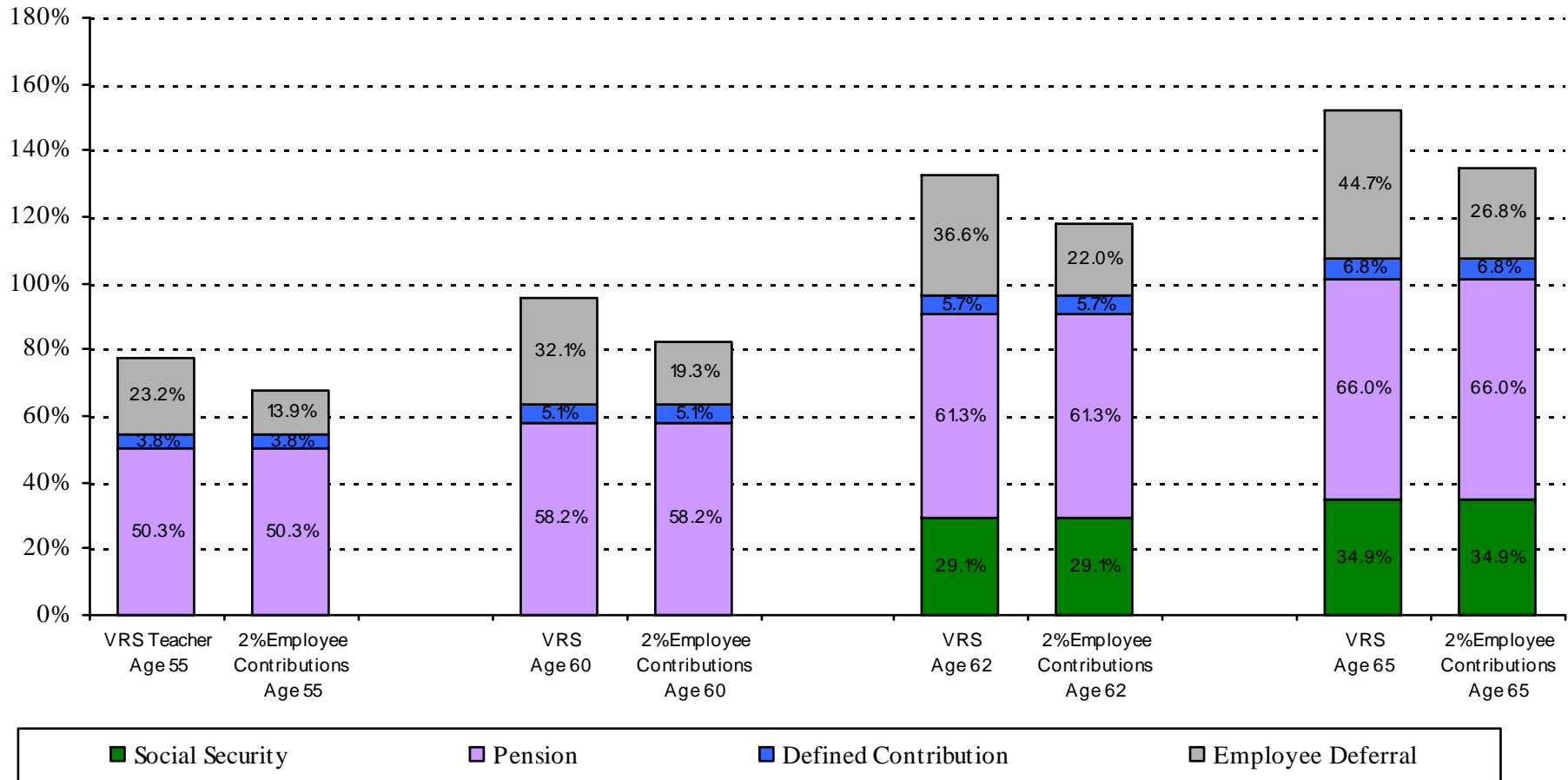
State Employee  
Age 30, Base Pay \$37,466



\*Scenario 4.A.IV illustrates an increase in the eligibility for unreduced early retirement benefits to age 60 with 30 years of service or age 65 with 5 years of service. In addition, early retirement for this scenario starts at age 55 and 10 years of service with reductions of .5% per month for the first 60 months and .4% per month for the next 60 months that benefits precede age 65.

Replacement Ratio under VRS Plans Versus Replacement Ratio Under 4.D.I Plan\* at Ages 55, 60, 62, and 65 (retirement income divided by total pay)

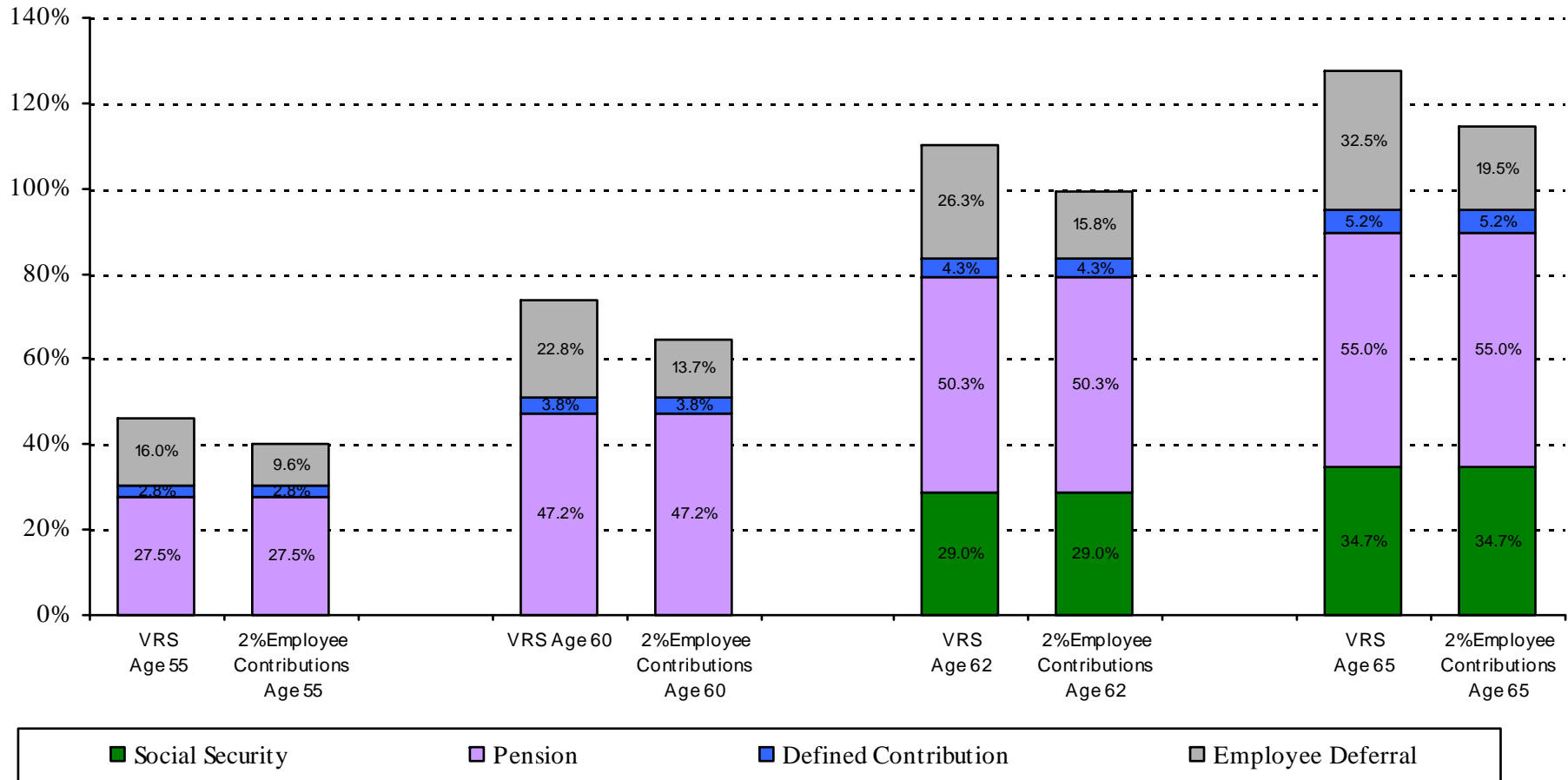
Teacher  
Age 23, Base Pay \$37,000



\*Scenario 4.D.I illustrates an increase in the employee contribution rate by 2%.

Replacement Ratio under VRS Plans Versus Replacement Ratio Under 4.D.I Plan\* at Ages 55, 60, 62, and 65 (retirement income divided by total pay)

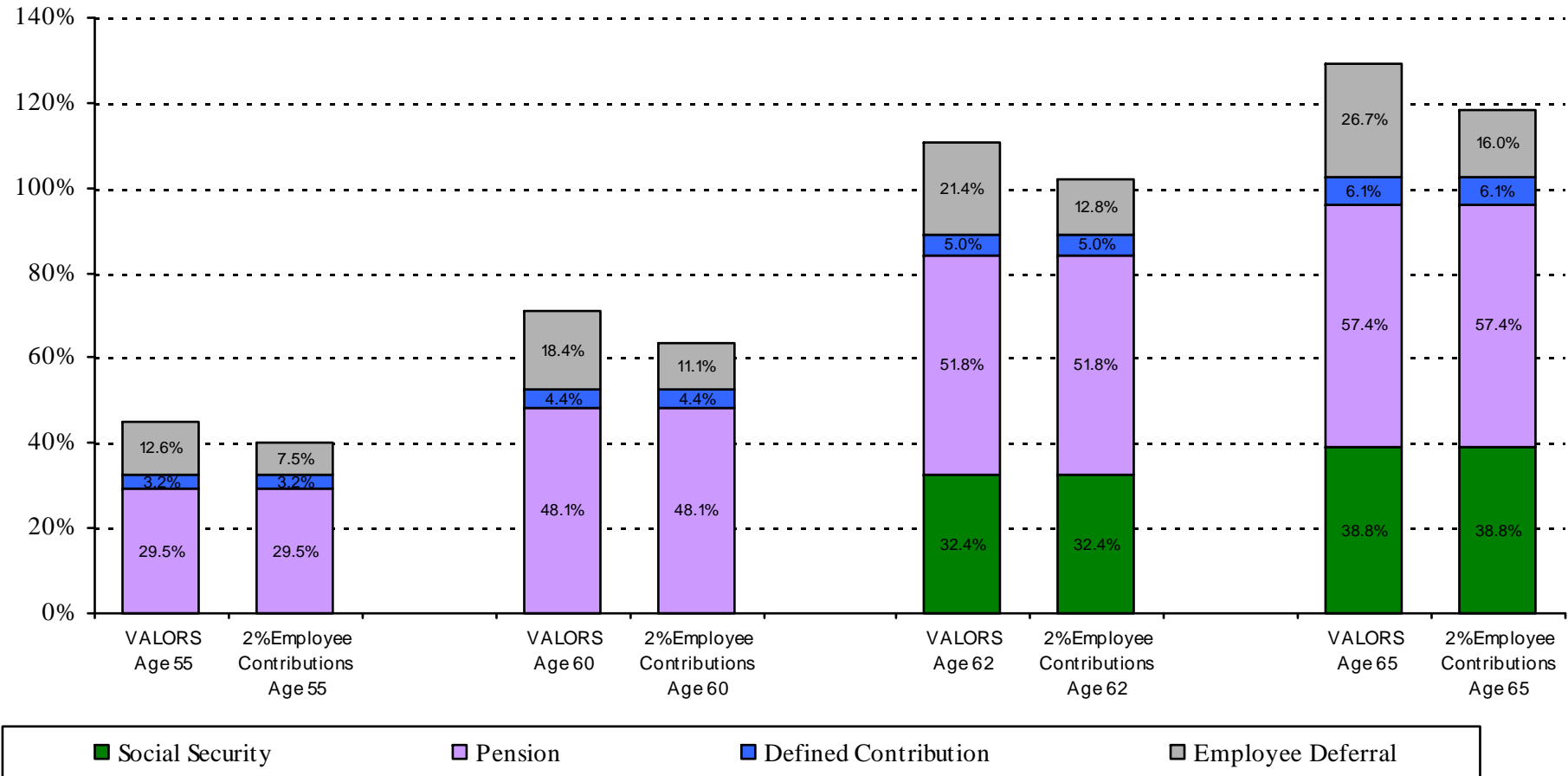
State Employee  
Age 30, Base Pay \$37,466



\*Scenario 4.D.I illustrates an increase in the employee contribution rate by 2%.

Replacement Ratio under VRS Plans Versus Replacement Ratio Under 4.D.I Plan\* at Ages 55, 60, 62, and 65 (retirement income divided by total pay)

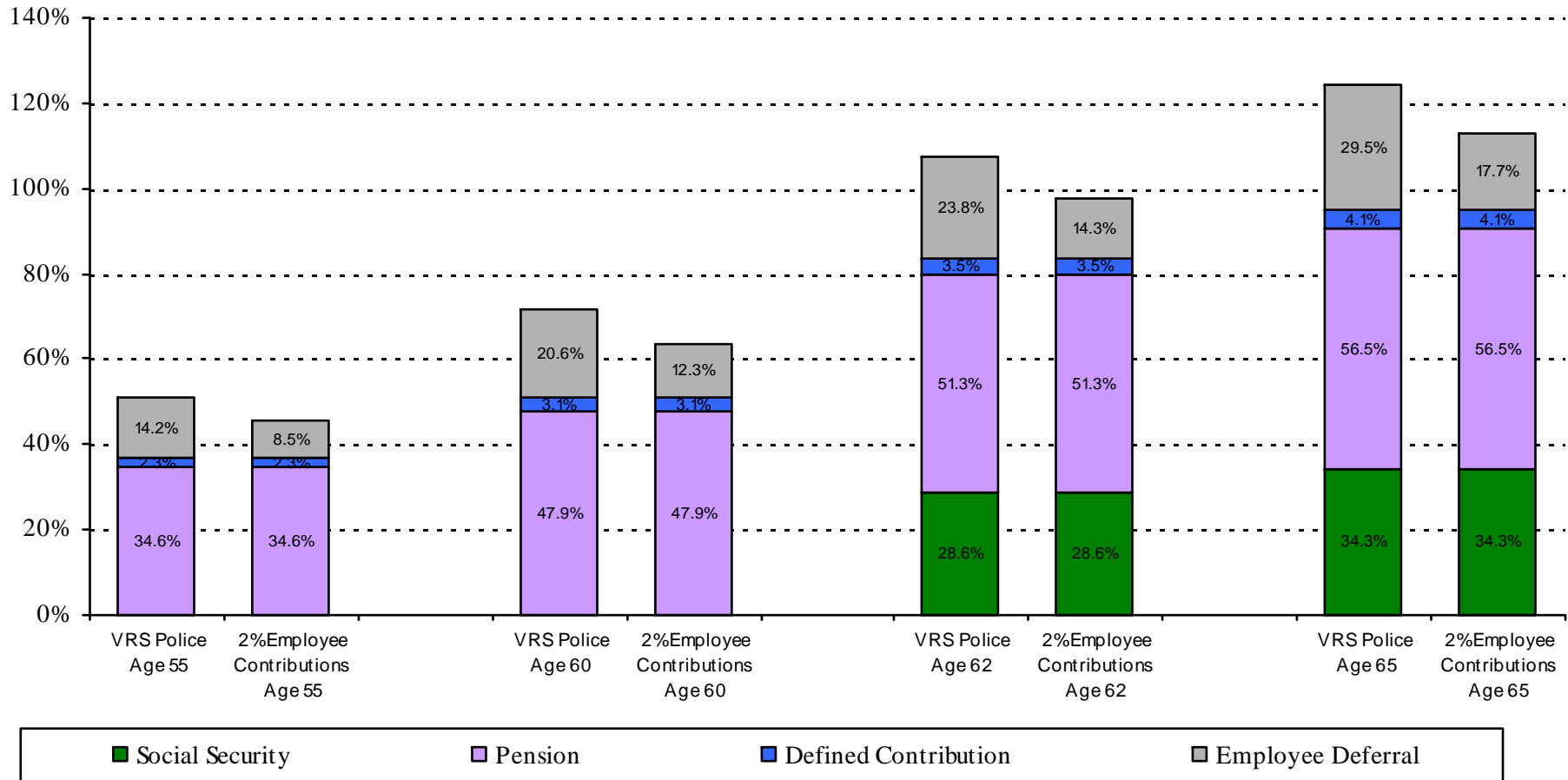
Law Enforcement  
Age 34, Base Pay \$27,000



\*Scenario 4.D.I illustrates an increase in the employee contribution rate by 2%.

Replacement Ratio under VRS Plans Versus Replacement Ratio Under 4.D.I Plan\* at Ages 55, 60, 62, and 65 (retirement income divided by total pay)

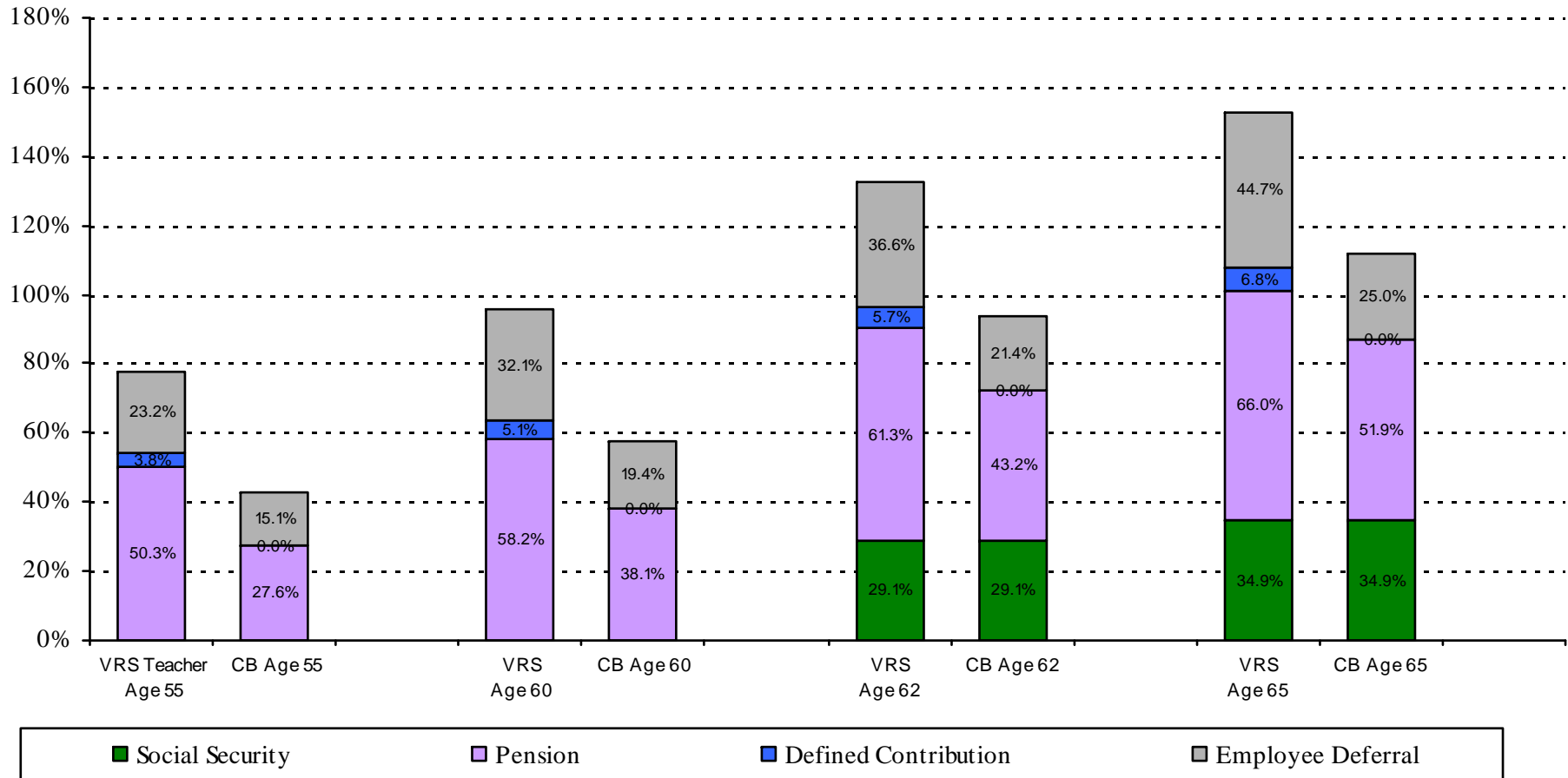
Police  
Age 32, Base Pay \$39,000



\*Scenario 4.D.I illustrates an increase in the employee contribution rate by 2%.

Replacement Ratio under VRS Plans Versus Replacement Ratio Under 4.D.III Plan\* at Ages 55, 60, 62, and 65 (retirement income divided by total pay)

Teacher  
Age 23, Base Pay \$37,000



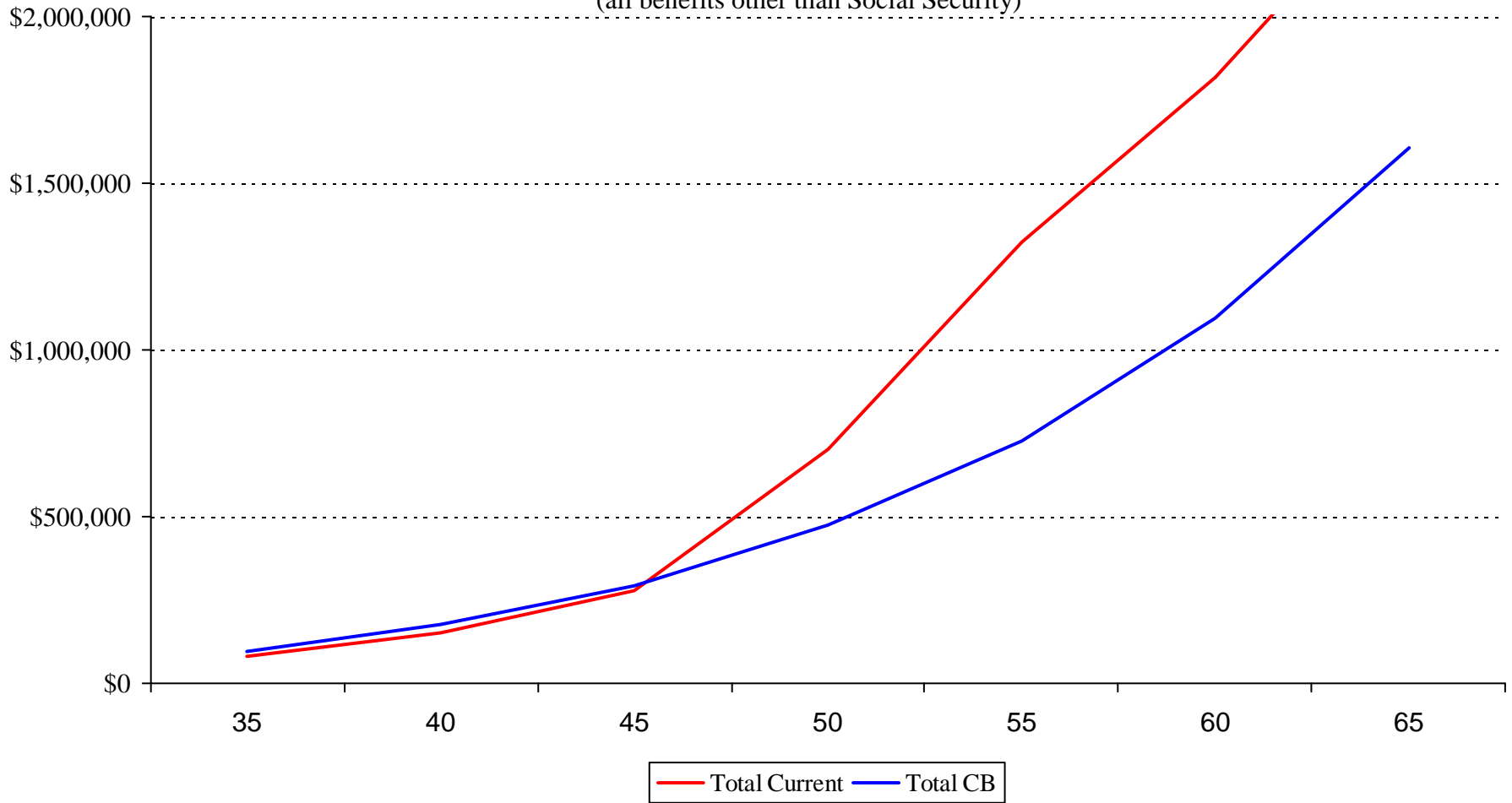
\*The cash balance allocations are:

7% of pay for the first 10 years; 10% of pay for years 11-20; 13% of pay for years 21-30; 16% of pay for years after 30

Employees contribute 5% of pay to their accounts.

Annual interest credits of 5%.

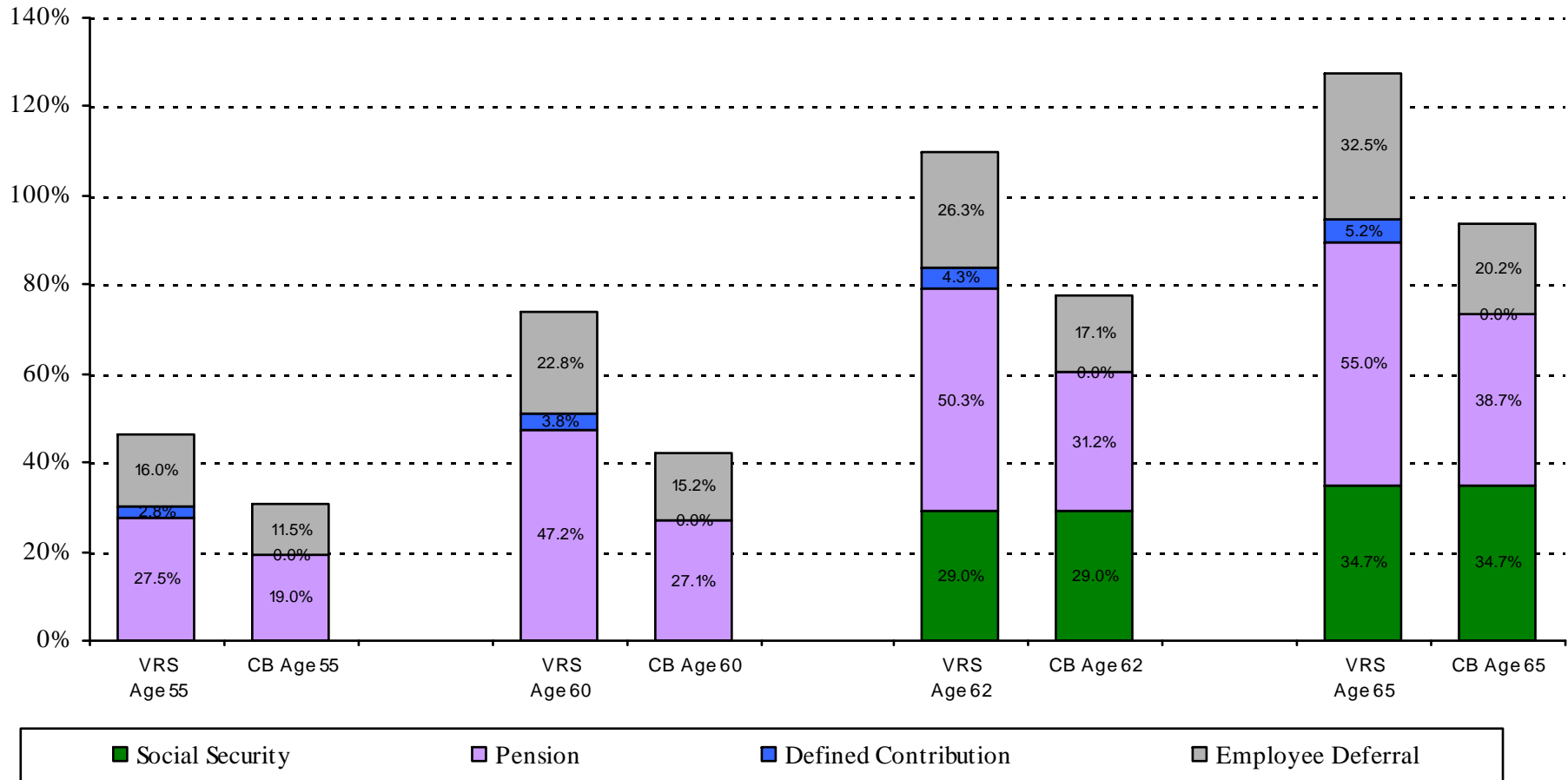
Growth in Value of Retirement Benefits - Current Versus Cash Balance  
 Teacher, Age 23, Base Pay \$37,000  
 (all benefits other than Social Security)



Age	35	40	45	50	55	60	65
Total Current	\$78,812	\$153,051	\$277,503	\$701,691	\$1,320,817	\$1,819,699	\$2,454,183
Total CB	\$95,299	\$176,662	\$295,019	\$474,068	\$727,555	\$1,096,748	\$1,604,381

Replacement Ratio under VRS Plans Versus Replacement Ratio Under 4.D.III Plan\* at Ages 55, 60, 62, and 65 (retirement income divided by total pay)

State Employee  
Age 30, Base Pay \$37,466



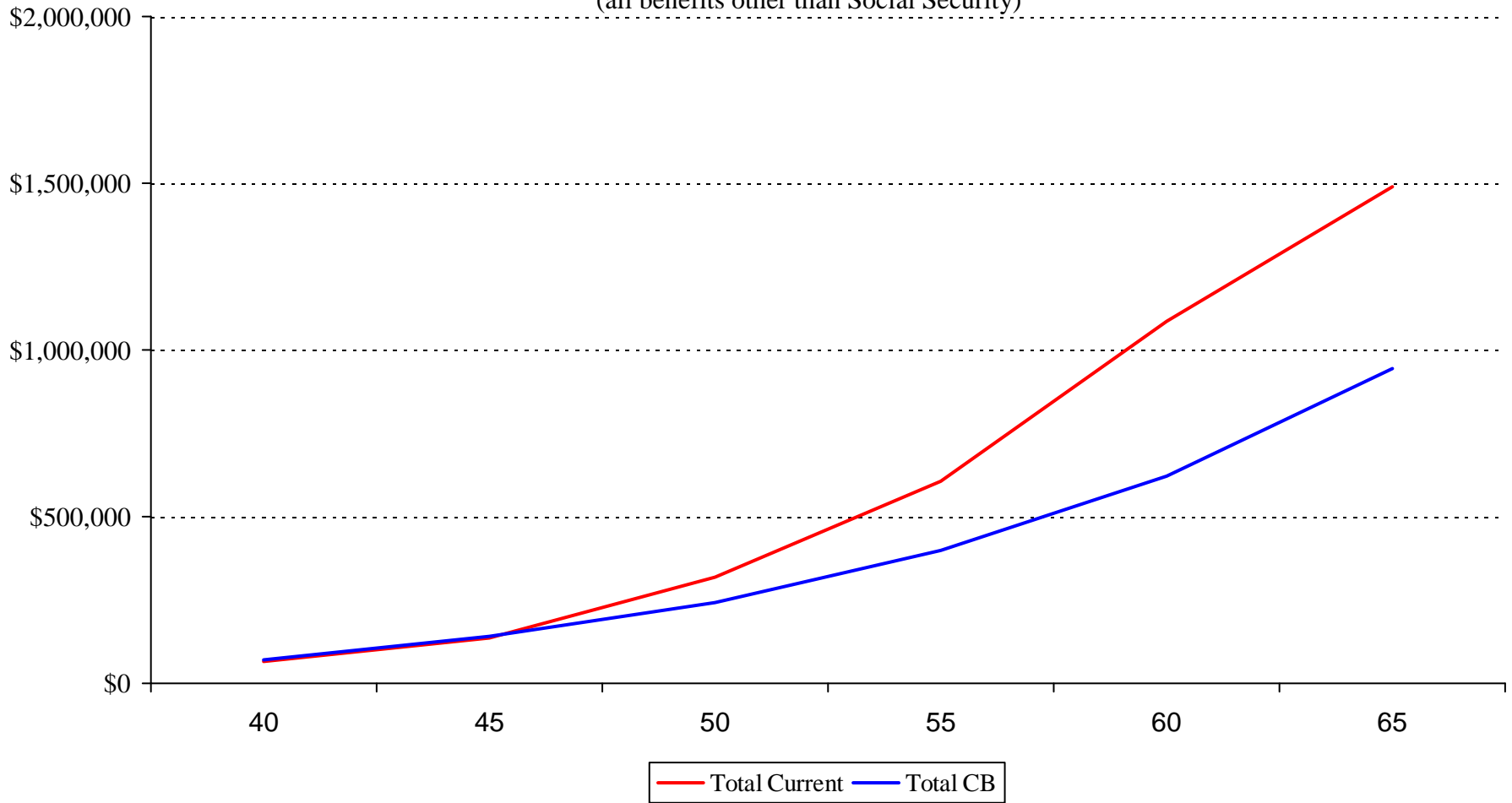
\*The cash balance allocations are:

7% of pay for the first 10 years; 10% of pay for years 11-20; 13% of pay for years 21-30; 16% of pay for years after 30

Employees contribute 5% of pay to their accounts.

Annual interest credits of 5%.

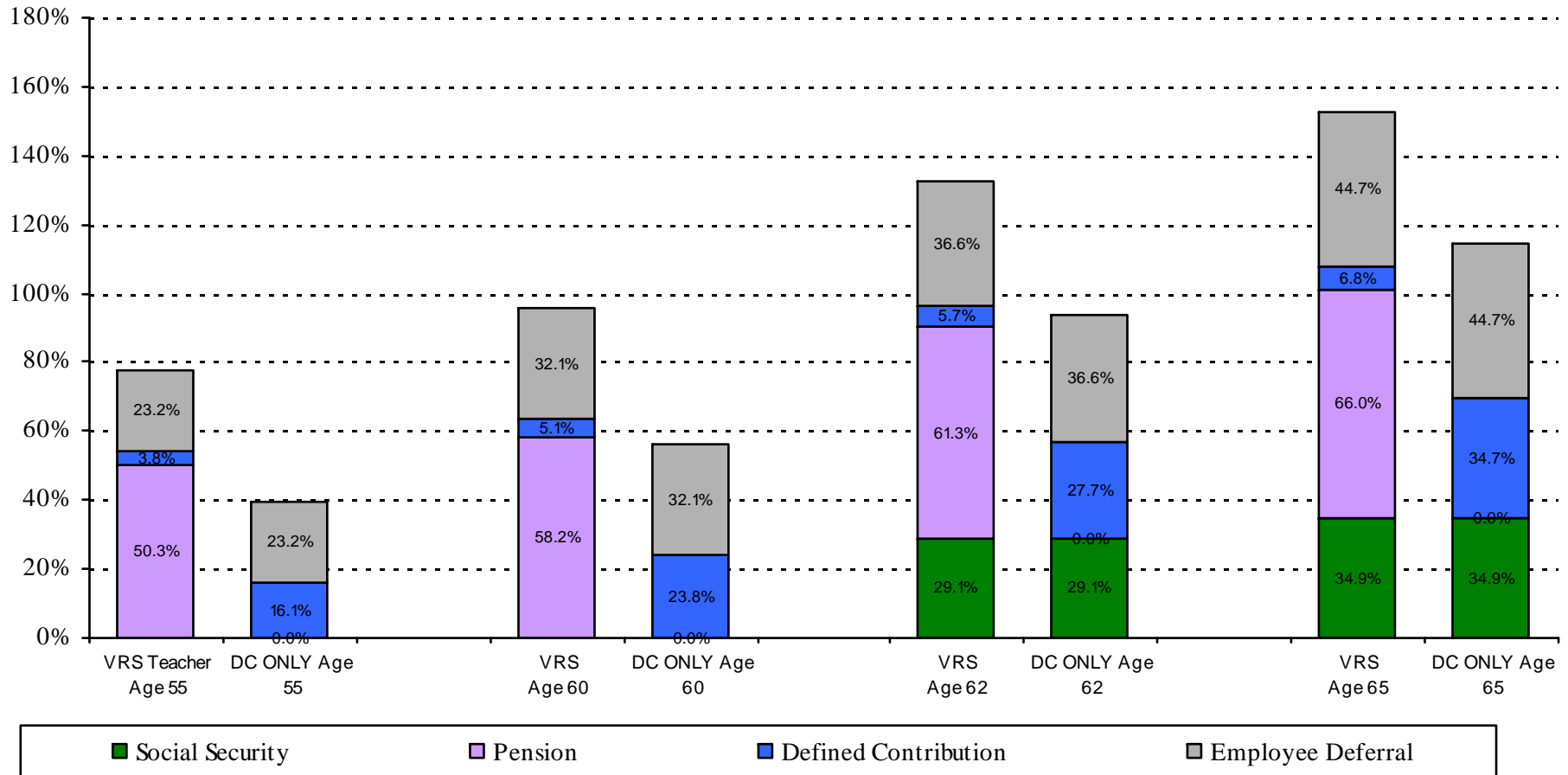
Growth in Value of Retirement Benefits - Current Versus Cash Balance  
 State Employee, Age 30, Base Pay \$37,466  
 (all benefits other than Social Security)



Age	40	45	50	55	60	65
Total Current	\$65,897	\$136,879	\$317,462	\$608,397	\$1,083,587	\$1,489,651
Total CB	\$72,772	\$142,327	\$244,334	\$400,088	\$621,727	\$946,410

Replacement Ratio under VRS Plans Versus Replacement Ratio Under 4.D.IV Plan\* at Ages 55, 60, 62, and 65 (retirement income divided by total pay)

Teacher  
Age 23, Base Pay \$37,000



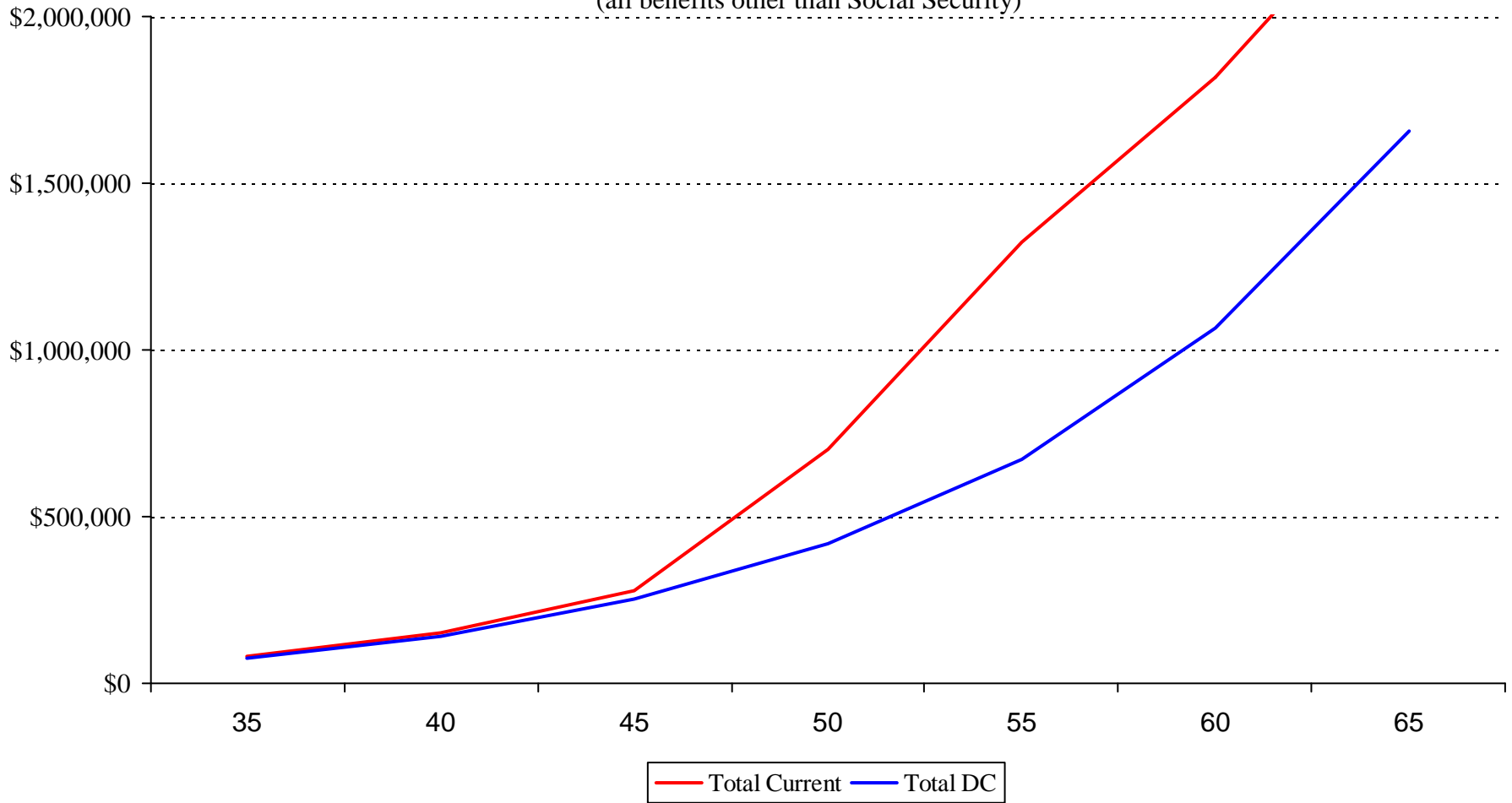
\*The DC allocations are:

3% of pay for the first 10 years; 4% of pay for years 11-20; 5% of pay for years 21-30; 7% of pay for years after 30

Employees contribute 5% of pay.

Interest is assumed to be earned at a rate of 7.5%.

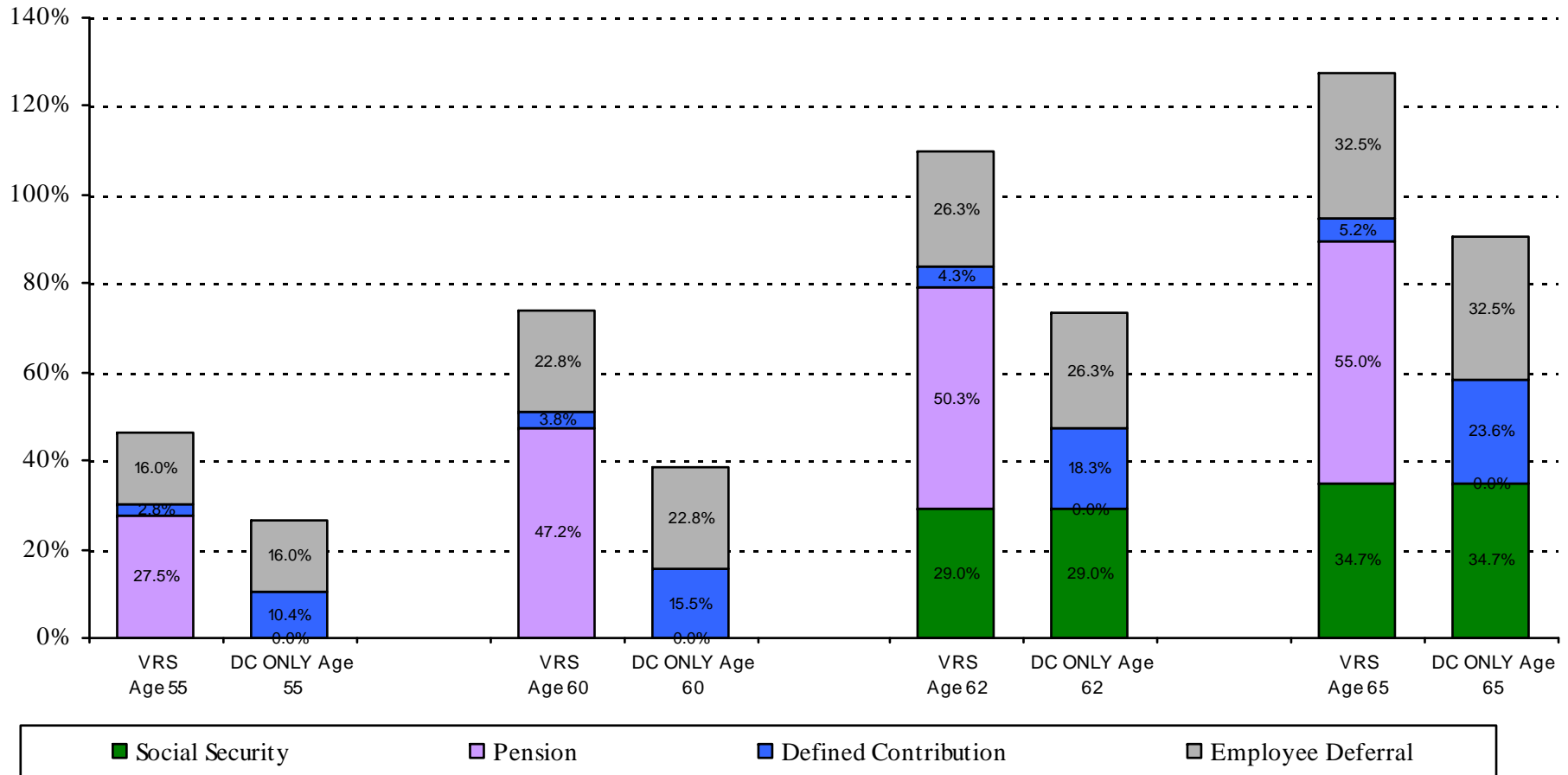
Growth in Value of Retirement Benefits - Current Versus Defined Contribution  
 Teacher, Age 23, Base Pay \$37,000  
 (all benefits other than Social Security)



Age	35	40	45	50	55	60	65
Total Current	\$78,812	\$153,051	\$277,503	\$701,691	\$1,320,817	\$1,819,699	\$2,454,183
Total DC	\$75,380	\$143,594	\$250,062	\$417,054	\$671,959	\$1,067,473	\$1,657,554

Replacement Ratio under VRS Plans Versus Replacement Ratio Under 4.D.IV Plan\* at Ages 55, 60, 62, and 65 (retirement income divided by total pay)

State Employee  
Age 30, Base Pay \$37,466



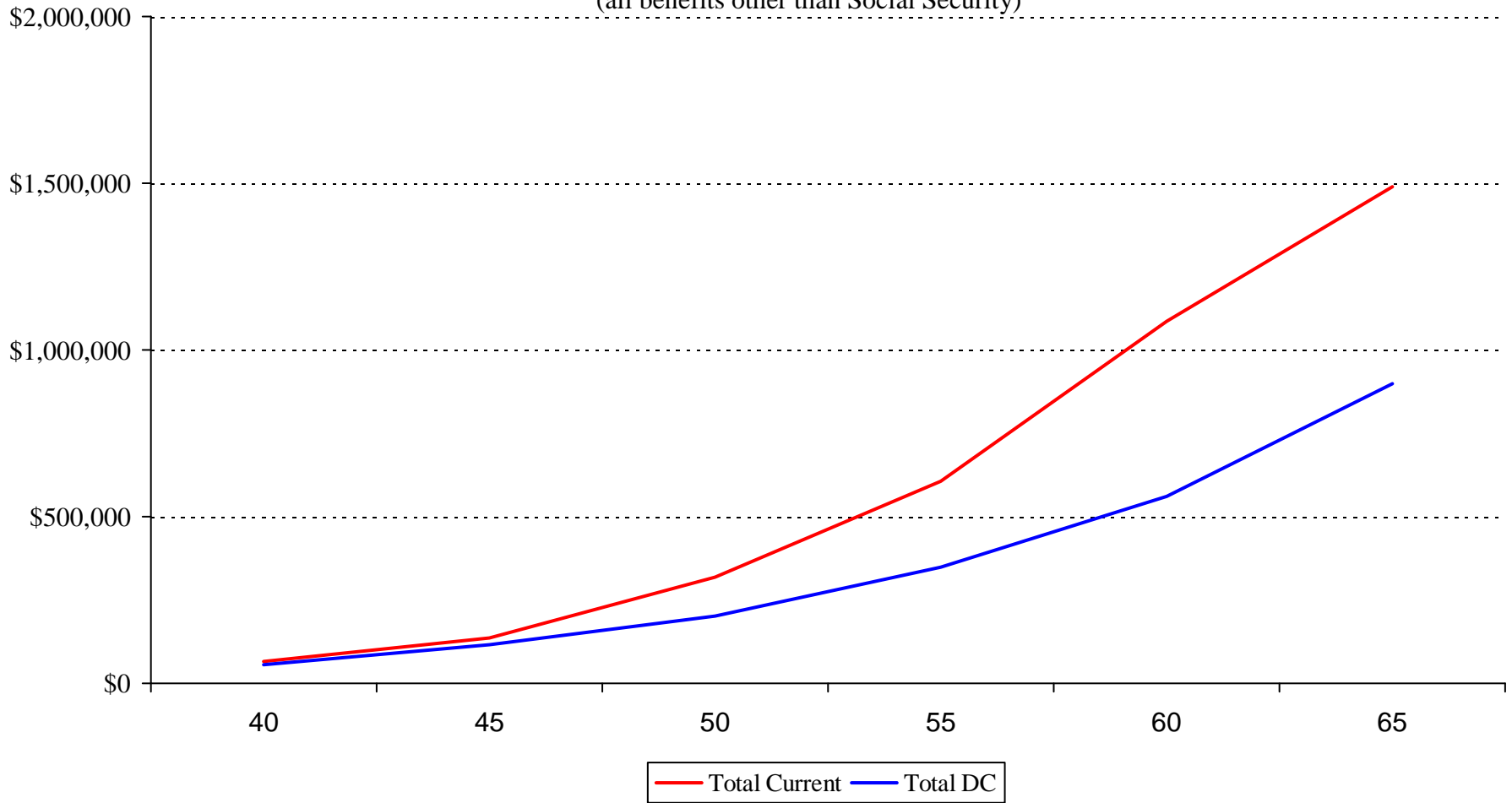
\*The DC allocations are:

3% of pay for the first 10 years; 4% of pay for years 11-20; 5% of pay for years 21-30; 7% of pay for years after 30

Employees contribute 5% of pay.

Interest is assumed to be earned at a rate of 7.5%.

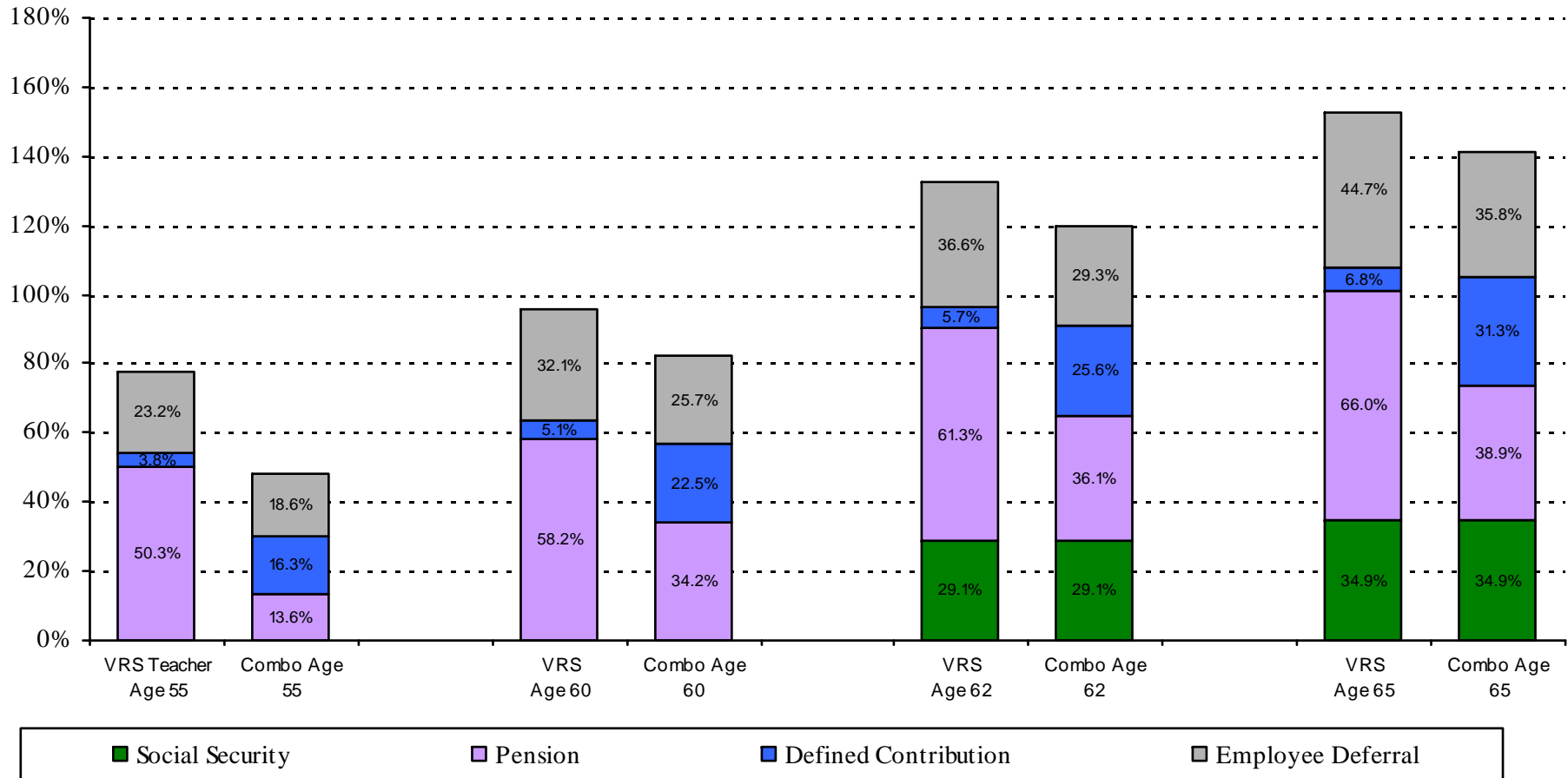
Growth in Value of Retirement Benefits - Current Versus Defined Contribution  
 State Employee, Age 30, Base Pay \$37,466  
 (all benefits other than Social Security)



Age	40	45	50	55	60	65
Total Current	\$65,897	\$136,879	\$317,462	\$608,397	\$1,083,587	\$1,489,651
Total DC	\$56,898	\$114,034	\$204,005	\$346,091	\$562,987	\$901,104

Replacement Ratio under VRS Plans Versus Replacement Ratio Under 4.D.V Plan\* at Ages 55, 60, 62, and 65 (retirement income divided by total pay)

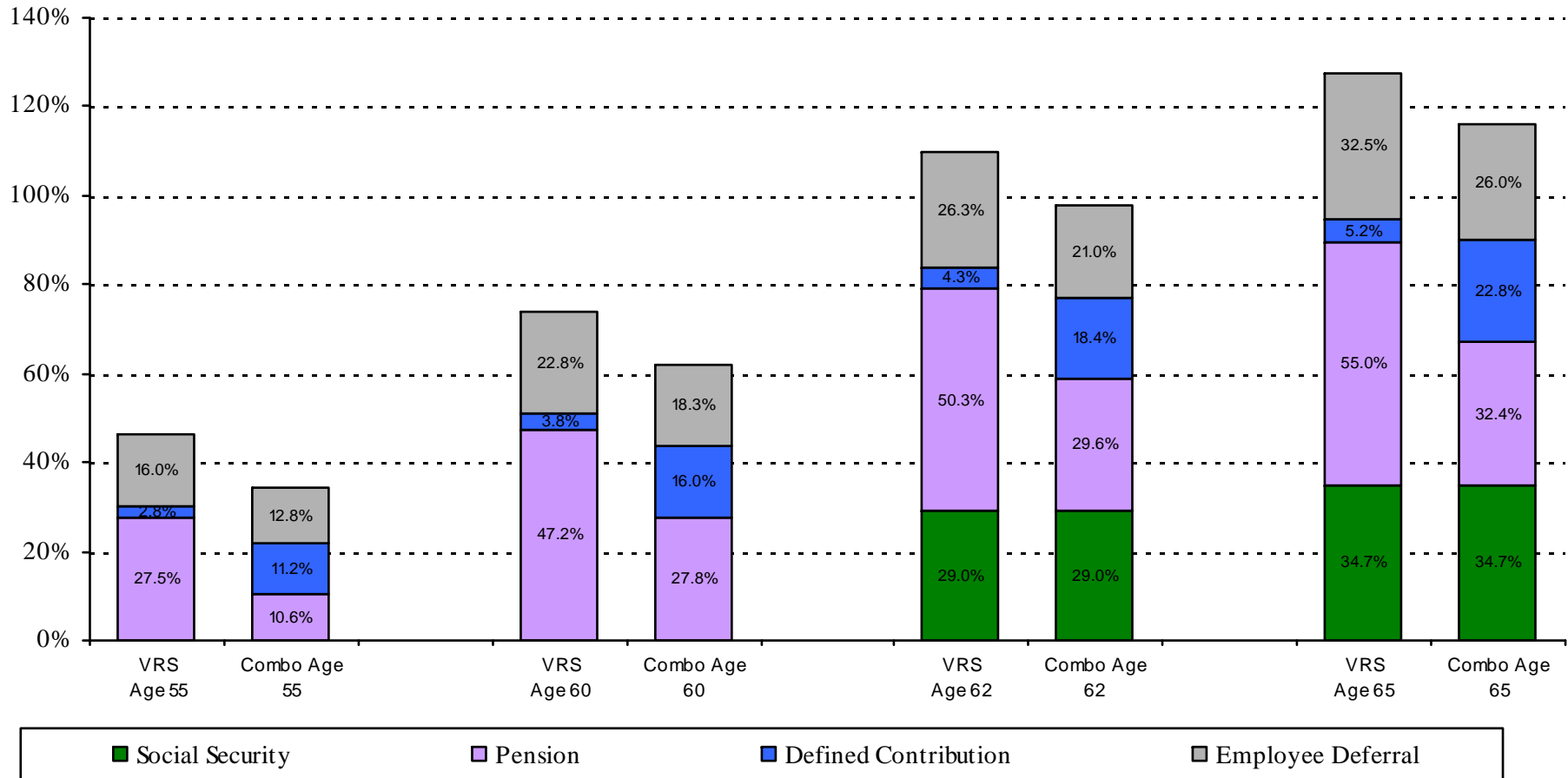
Teacher  
Age 23, Base Pay \$37,000



\*Defined Benefit: 1% Defined Benefit pension plan multiplier  
 1% of pay employee contributions to DB Plan  
 Same early retirement at 4.A.IV provision  
 Defined Contribution: 100% match on first 3% of pay contributed by employees  
 50% match on next 4%

Replacement Ratio under VRS Plans Versus Replacement Ratio Under 4.D.V Plan\* at Ages 55, 60, 62, and 65 (retirement income divided by total pay)

State Employee  
Age 30, Base Pay \$37,466



\*Defined Benefit: 1% Defined Benefit pension plan multiplier  
 1% of pay employee contributions to DB Plan  
 Same early retirement at 4.A.IV provision  
 Defined Contribution: 100% match on first 3% of pay contributed by employees  
 50% match on next 4%