



## *MCS Retirement Planning Simulations*

**An Illustration of the Impact of Variable Investment Returns on the  
Probability of Success in Relation to Reaching or Exceeding  
a Targeted Ending Investment Portfolio Value**

**AN ANALYSIS PREPARED EXCLUSIVELY FOR**

**Jack & Jill Flash**

*8.7% ROR/10.8% StdDev Changing to 9.0% ROR/11.3% StdDev*

## Monte Carlo Simulation Overview

*Jack & Jill Flash*

Traditional financial planning models use rate of return assumptions that do not vary with time. These assumptions often reflect average historical rates of return earned by particular asset classes or combinations thereof over an extended period. Returns have historically fluctuated from year to year in an unpredictable fashion, and future rates of return cannot be guaranteed or even predicted with certainty.

Since rates of return are inherently uncertain, utilizing unvarying return assumptions in a financial model would imply a level of certainty with respect to achieving certain outcomes that does not exist. Nevertheless, this is the basic approach used by traditional financial planning models: to project cash flows and investment capital under a defined set of conditions, where the value of all variables (including the assumed annual rate of return) is set and unchanging so that a single outcome is achieved at the end of the projection period (e.g., life expectancy). This type of projection is usually called "deterministic." A different type of projection, called "stochastic," produces a **range of results**, rather than a single result, by varying one or more of the dependent variables in the equation. One type of stochastic projection is Monte Carlo simulation (MCS).

MCS projects cash flows and investment capital multiple times—each under a different set of conditions—to yield a range of possible outcomes. Monte Carlo analysis is, therefore, able to incorporate uncertainty into the planning process by demonstrating how different assumptions about the future can impact the likelihood of your meeting or exceeding clearly defined financial planning goals. It is then up to you and your advisor to evaluate the reasonableness of these assumptions, and to modify your proposed financial plan accordingly.

The report that follows illustrates a type of MCS that relies on variable rates of return, which fluctuate from year to year in a random fashion.\* The software tool used to produce this Monte Carlo analysis applies these variable rates to selected assets (or combinations thereof) over time, and records the total investment capital at the end of the defined projection period for each iteration or trial. The results of the individual trials are then analyzed, summarized and plotted graphically. A trial whose ending investment capital equals or exceeds your target is considered a success. Conversely, a trial whose ending investment capital falls below your target is considered unsuccessful. A success rate can then be computed simply as the number of successful trials divided by the total number of trials.

Note that the results of any individual trial may not be significant. However, by evaluating the results of all trials together against benchmarks you set, you and your advisor may gain valuable insights into the merits of your proposed financial plan. For instance, if a series of MCS trials yields a success rate that is less than acceptable (e.g., a success rate of only 60% where you consider a minimum success rate of 80% to be acceptable), you might consider adopting a different asset allocation design, reducing your post-retirement cash flow needs or delaying your retirement to name just a few examples.

**IMPORTANT: The projections or other information generated by this financial plan regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results and are not guarantees of future results. Results herein may vary with each use of the software tool used to generate the MCS analysis that follows and over time.**

\* Despite the randomness of the return rate series, its basic character is determined by the average rate expected to be earned in the future over an extended period along with an expected range of deviations (i.e., standard deviation) from that average in a given year. In a normally distributed series (i.e., a bell-shaped curve), returns that deviate from the average by one standard deviation are expected to occur approximately 67% of the time, while returns that deviate from the average by two standard deviations are expected to occur approximately 95% of the time. This means that variable return series with larger standard deviations will normally produce greater year-over-year fluctuations in projected cash flows and investment capital than series with smaller standard deviations.



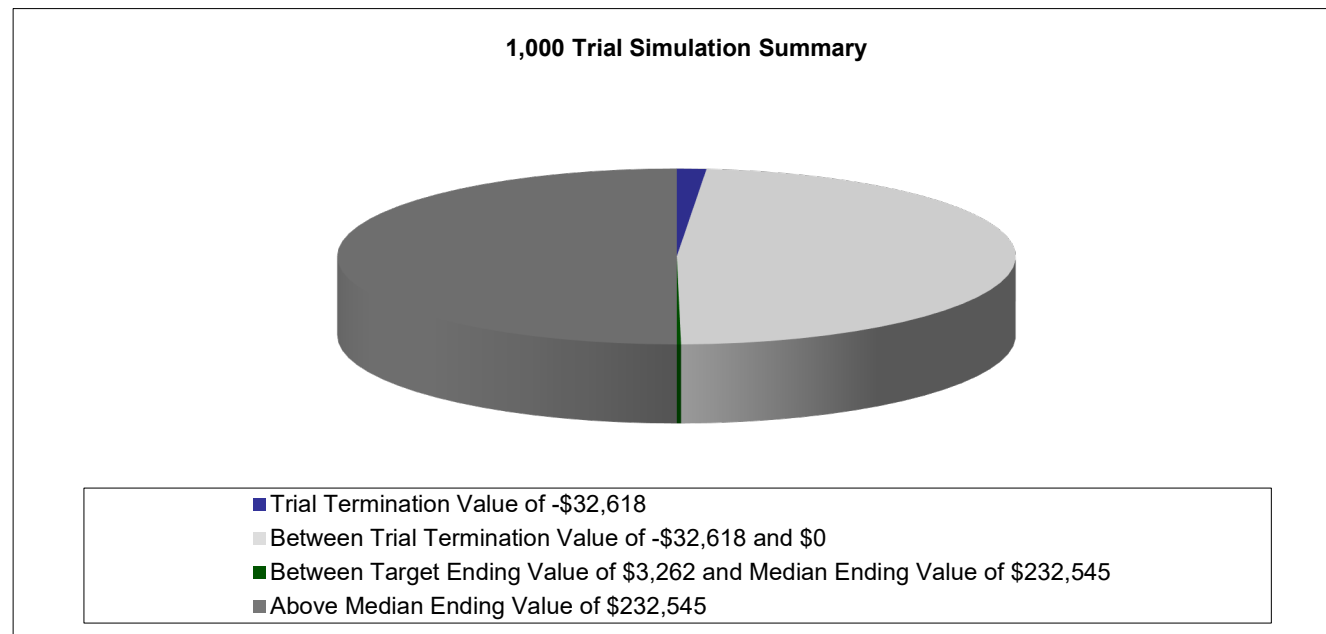
## Monte Carlo Simulation Summary

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Ending Inflation-Adjusted Investment Capital in 2062	
Median investment capital: 1,000 trials	0
Median investment capital net of outstanding loans: 1,000 trials	232,545
<b>Target inflation-adjusted investment capital</b>	<b>3,262</b>

Analysis of 1,000 Simulations Run Through 2062	
Trial termination value of -\$32,618	14
Between trial termination value of -\$32,618 and \$0	484
Between target ending value of \$3,262 and median ending value of \$232,545	2
Above median ending value of \$232,545	500
<b>Success rate</b>	<b>49.5%</b>

NOTE: A successful trial is one where projected investment capital equals or exceeds target investment capital.

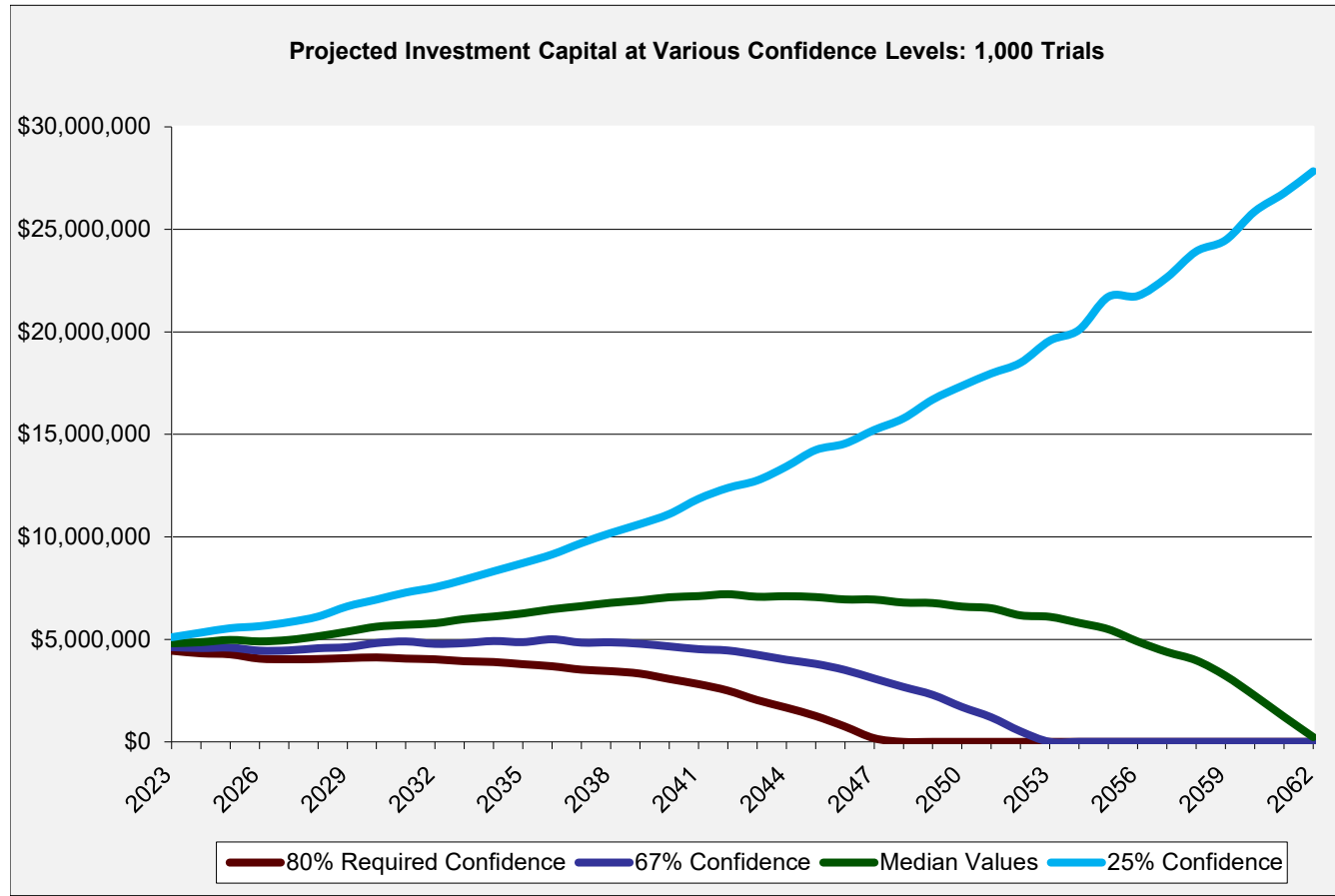


NOTE: The average number of years before investment capital was reduced to the trial termination value was 34.2.



## Variable Investment Rates Illustration

Jack & Jill Flash



The chart above shows projected investment capital over the planning horizon using variable investment returns. Each year a return is randomly generated on the basis of the investment portfolio's average return for the portfolio's combined asset classes. A normal distribution model is used and the range of returns is determined by the standard deviations associated with the different asset classes. Each line in the chart represents the probability that investment capital will exceed the amount shown on the graph at the end of each year. Values and results are not guaranteed.



## Assumptions

Jack & Jill Flash

<b>Personal</b>	<b>Jack</b>	<b>Jill</b>
Age	58.0	55.0
Calculated life expectancy	87.8	86.6
Life expectancy override	95.0	95.0
Retirement age	65.0	62.0
Year of death	2059	2062
<b>Planning Illustration</b>		
Analysis date		01-Jan-2023
Tax laws to apply		TCJA provisions sunset
Effective year for tax law changes		2026
Inflation rate		3.0%
<b>Monte Carlo Simulations</b>		
Target combined ending investment capital		1,000
Annual rate of increase in target investment capital		3.0%
Value tax-deferred portfolios after taxes		Yes
Value that triggers the end of a trial before death		-10,000
Annual rate of increase in trial termination trigger value		3.0%
Interest rate on loans obtained to fund cash flow deficits		6.00%
<b>Existing Portfolios</b>		
Current value of taxable portfolios		2,525,395
Current value of Jack's tax-deferred portfolios		2,805,000
Current value of Jill's tax-deferred portfolios		1,692,000
Tax-deferred portfolios invaded first to fund cash flow deficits		Jack's
<b>Single Premium Annuities</b>		
	<b>Annuity 1</b>	<b>Annuity 2</b>
Percentage of taxable portfolios used to fund single-premium fixed annuities	10.0%	10.0%
Amount of taxable portfolios used to fund single-premium fixed annuities	252,540	252,540
Primary annuitant	Jack	Jill
Age when annuity starts	65	65
Annuity rate per \$1,000 of premium	100.000	100.000
First-year annuity payment	25,254	25,254
Expected return multiple	Tables VI and VIA	Tables VI and VIA
Expected return	561,900	561,900
Exclusion ratio	44.9%	44.9%
Annual inc/-dec in annuity payments	0.0%	0.0%
Survivor benefit percentage	50.0%	50.0%



## Assumptions

Jack & Jill Flash

### Tax Rates

Ordinary income tax rate	See schedule
Capital gains tax rate	See schedule
State tax rate	5.0%

### Investment Rates

	Taxable	Tax-Deferred
<b>Current Income</b>		
Average rate for period 1	4.6%	4.6%
Standard deviation for period 1	0.0%	0.0%
Taxable income percentage 1	100.0%	NA
Qualified dividend percentage 1	43.5%	NA
Average rate for period 2	4.1%	4.1%
Standard deviation for period 2	0.0%	0.0%
Taxable income percentage 2	100.0%	NA
Qualified dividend percentage 2	38.6%	NA
Year of change	2031	2031
Percentage of taxable income and realized gains subject to Medicare surtax	100.0%	NA
<b>Capital Appreciation</b>		
Average rate for period 1	4.1%	4.1%
Standard deviation for period 1	10.8%	10.8%
Portfolio turnover rate 1	100.0%	NA
Average rate for period 2	4.9%	4.9%
Standard deviation for period 2	11.3%	11.3%
Portfolio turnover rate 2	100.0%	NA
Year of change	2031	2031

### Taxable Portfolio Additions

	Annual Savings
First-year addition in current dollars	50,000
Annual rate of inc/-dec in additions	3.0%
First addition year	Current year
Last addition year	Jack's retirement
Timing of additions	Start of year



## Assumptions

Jack & Jill Flash

<b>Tax-Deferred Portfolio Contributions - Sequence One</b>	<b>Jack</b>	<b>Jill</b>
First-year contribution in current dollars	73,500	34,500
Annual rate of inc/-dec in contribution	0.0%	0.0%
Contribution limit	401(k)/415 combo	401(k)
First contribution year	Current year	Current year
Last contribution year	Jack's retirement	Jill's retirement
Matching contribution percentage	0.0%	20.0%
Timing of contributions	End of year	End of year

<b>Tax-Deferred Portfolio Contributions - Sequence Two</b>	<b>Jack</b>	<b>Jill</b>
First-year contribution in current dollars	7,500	7,500
Annual rate of inc/-dec in contribution	0.0%	0.0%
Contribution limit	IRA	IRA
First contribution year	Current year	Current year
Last contribution year	Jack's retirement	Jill's retirement
Matching contribution percentage	0.0%	0.0%
Timing of contributions	End of year	End of year

<b>Social Security Benefits</b>	<b>Jack</b>	<b>Jill</b>
Benefits are based on own history	Yes	Yes
If Yes, primary insurance amount	30,000	20,000
Age benefits start	67	67
Growth rate	2.0%	2.0%
Percentage subject to federal tax	85.0%	85.0%
Percentage subject to state tax	0.0%	0.0%

<b>Pensions &amp; Other Income</b>	<b>Pension</b>	<b>Consulting</b>	<b>Baking</b>	<b>NQ Pension</b>
Amount in current dollars	60,000	50,000	10,000	40,000
Recipient	Jack	Jack	Jill	Jill
Annual rate of inc/-dec in income	0.0%	0.0%	0.0%	0.0%
First year of income	2031	2031	2031	2031
Last year of income	2062	2040	2045	2062
Timing of income	End of year	End of year	Start of year	Start of year
Survivor benefit percentage	50.0%	0.0%	0.0%	0.0%
Percentage subject to federal tax	100.0%	100.0%	100.0%	100.0%
Percentage subject to state tax	100.0%	100.0%	100.0%	100.0%



## Assumptions

Jack & Jill Flash

<b>Taxable Portfolio Distributions</b>	<b>Living Expenses</b>	<b>Debt Service</b>	<b>Travel &amp; Fun</b>	<b>Gifts</b>
Distribution base	Dollars	Dollars	Dollars	Dollars
First-year distribution in current dollars	250,000	60,000	50,000	60,000
Annual rate of inc/-dec in distributions	3.0%	3.0%	3.0%	3.0%
First distribution year	Current year	Current year	Current year	Jack's retirement
Last distribution year	Indefinite	2027	Indefinite	Indefinite
Timing of distributions	End of year	End of year	End of year	End of year
Distributions subject to income tax	0.0%	0.0%	0.0%	0.0%
Distributions subject to cap gains tax	30.0%	30.0%	30.0%	30.0%

<b>Taxable Portfolio Distribution Limits</b>	<b>Travel &amp; Fun</b>
Distribution limitation method	Appreciation %
Minimum portfolio appreciation rate	0.0%
Minimum portfolio appreciation amount	NA
Distribution reduction percentage	50.0%
Minimum after-tax portfolio distribution	0
Annual rate of inc/-dec in minimum distr.	0.0%

<b>Tax-Deferred Portfolio Distributions</b>	<b>Jack</b>	<b>Jack</b>	<b>Jill</b>	<b>Jill</b>
<b>Plan or Account Type</b>	<b>Tax-Deferred Plan</b>	<b>Roth Catchup Acct</b>	<b>Tax-Deferred Plan</b>	<b>Roth Catchup Acct</b>
RMDs apply	Yes	NA	Yes	NA
<b>Discretionary Distributions</b>				
Amount in current dollars	10,000	5,000	10,000	5,000
Annual rate of inc/-dec in distributions	0.0%	0.0%	0.0%	0
First distribution year	2037	2031	2040	2,031
Last distribution year	2062	2062	2062	2,062
Percentage subject to tax	100.0%	0.0%	100.0%	0







## *MCS Retirement Planning Simulations*

Chart Illustrations

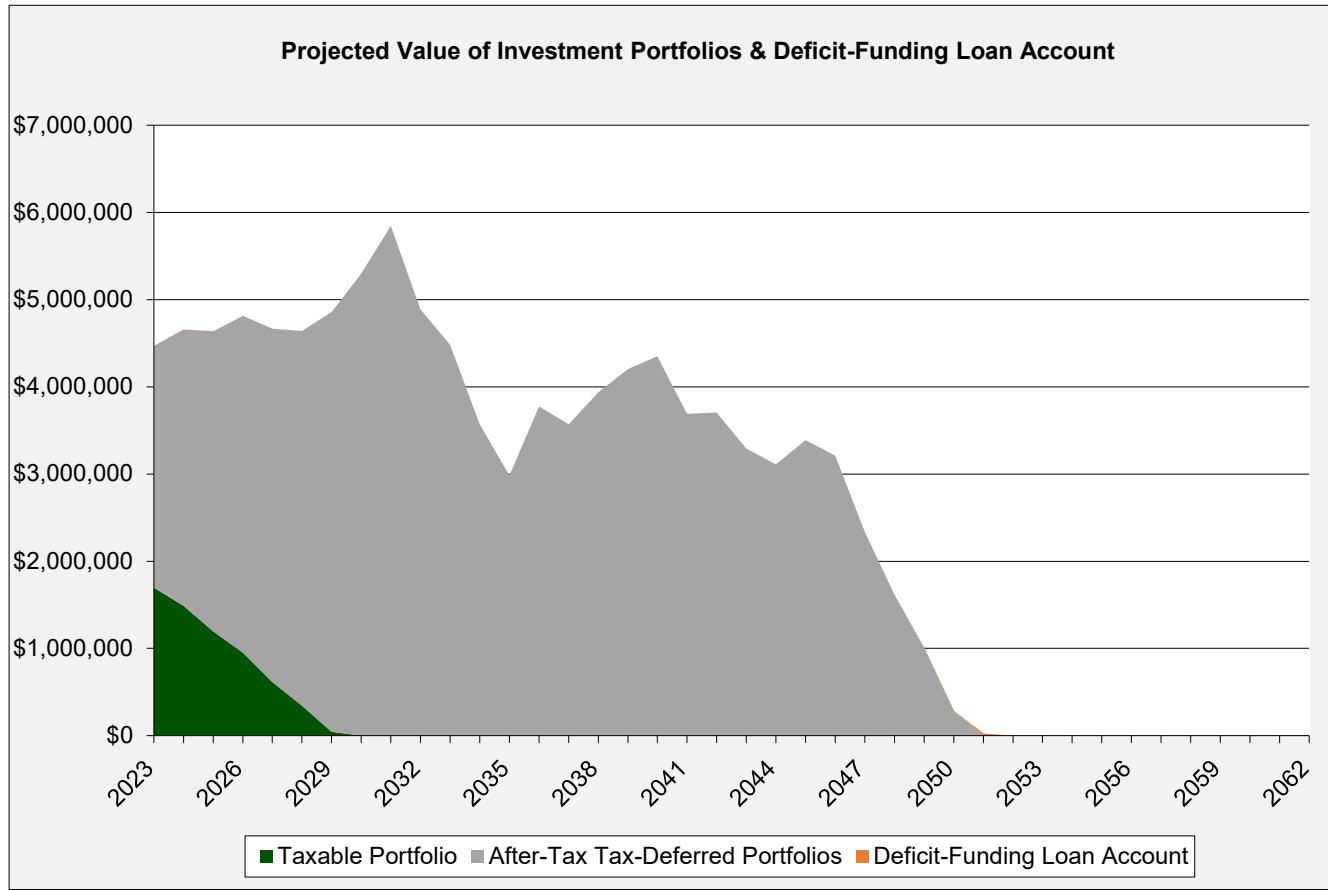
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## Annual Ending Balances Illustration

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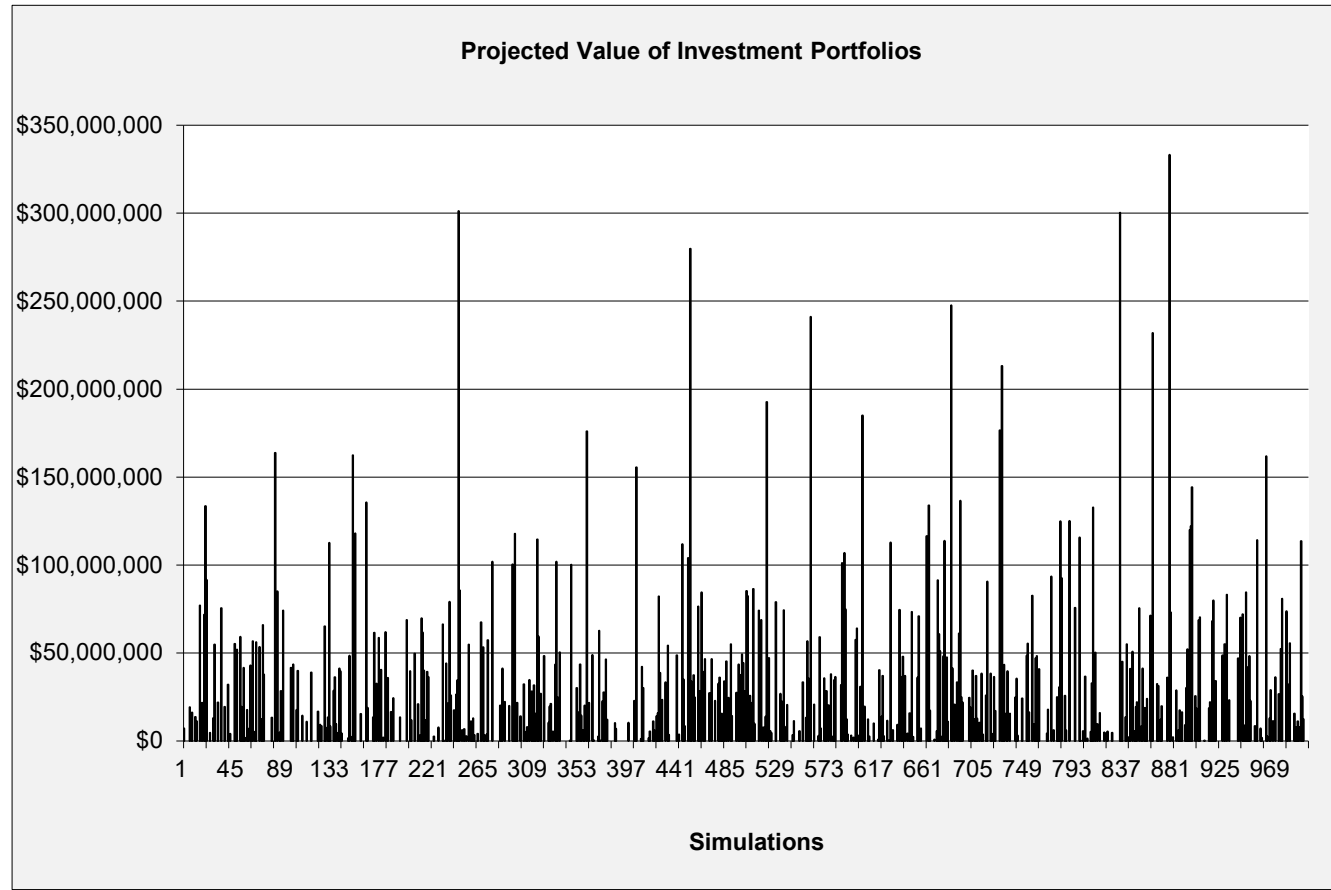


The chart above illustrates the changes in value over time of investment portfolios due to variable returns and cash flows. To the extent that desired distributions exceed the value of investments, shortfalls are made up through borrowing.



## Variable Investment Rates Illustration

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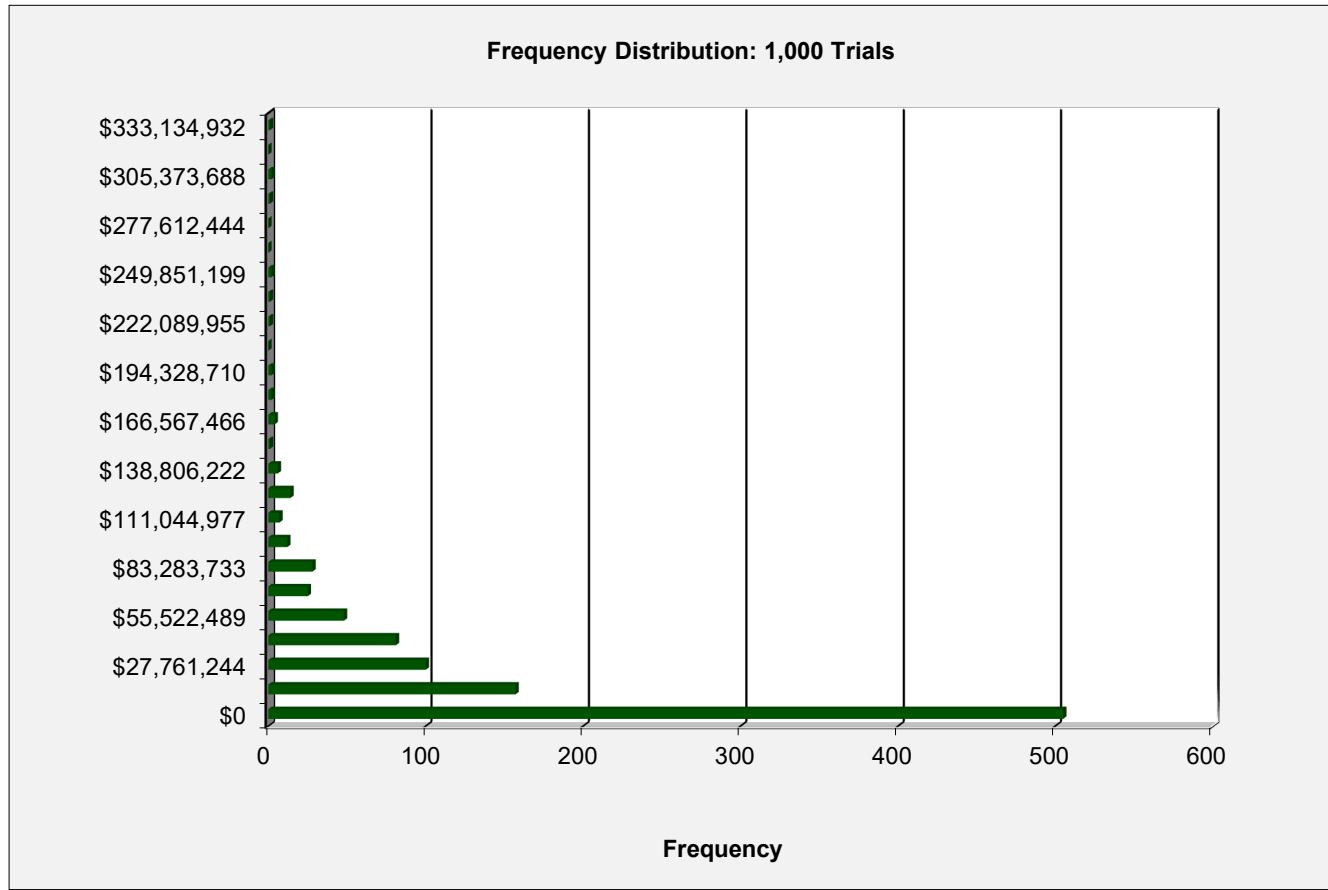


Each column in the chart above represents the ending value of investment portfolios in a variable return simulation. Simulations that do not show plot points represent instances where investment portfolios were fully depleted before 2062.



## Frequency Distribution for Variable Investment Rates Simulation

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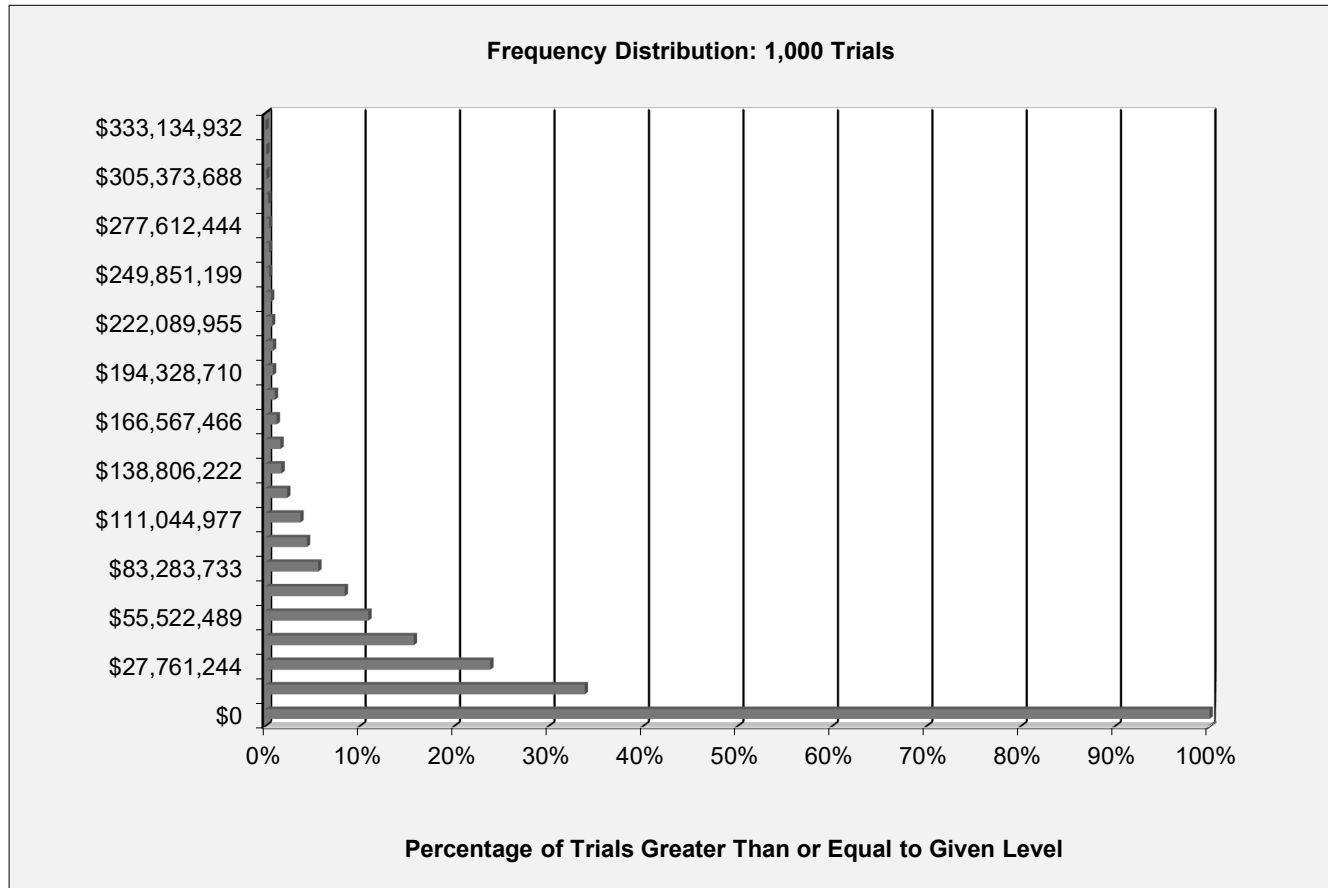


The chart above shows the frequency with which the combined ending value of all investment portfolios falls within a given range of values shown on the vertical axis.



## Percentage of Trials Producing a Given Ending Value

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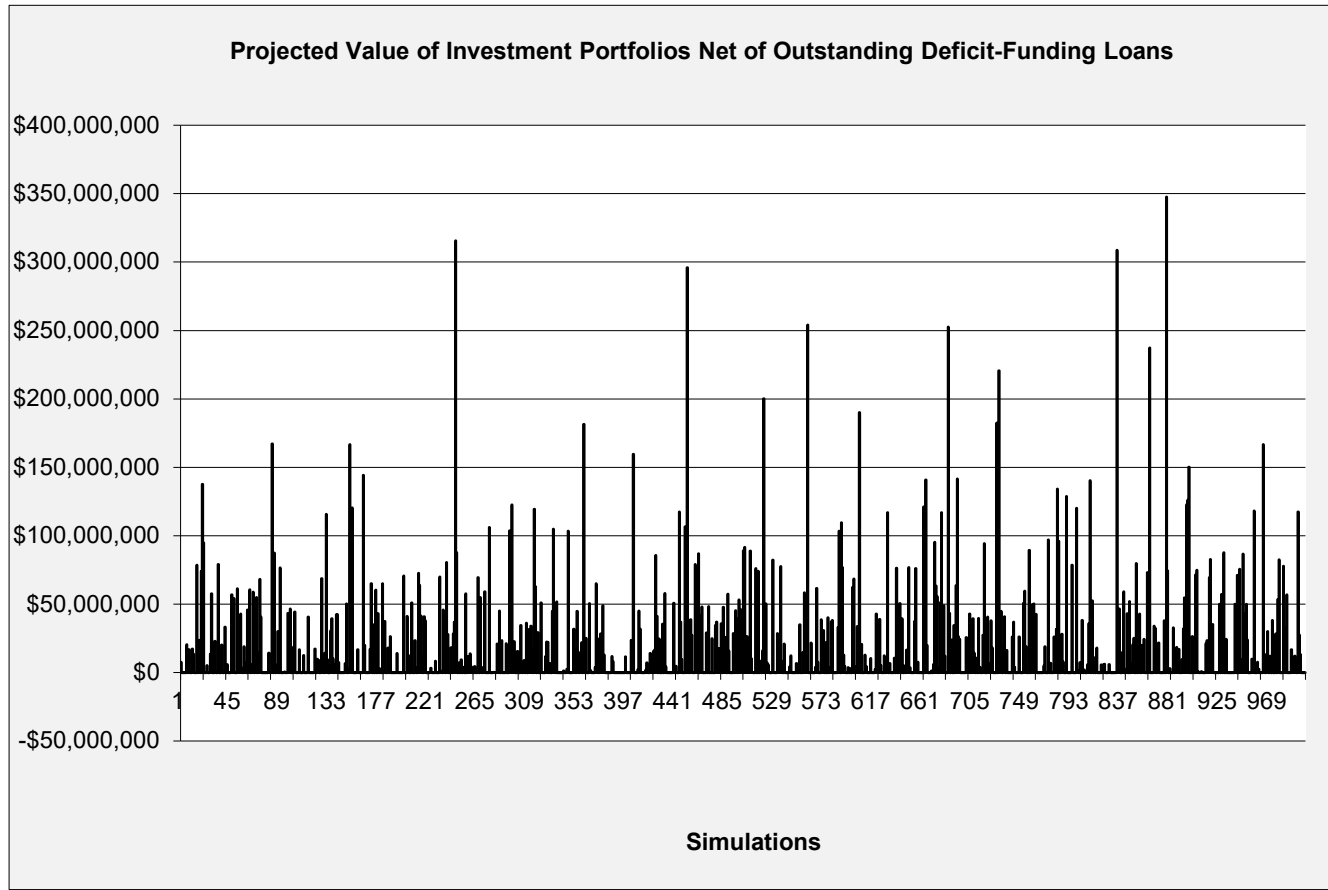


The chart above shows the cumulative percentage of trials in which the combined ending value of all investment portfolios falls within a given range of values shown on the vertical axis.



## Variable Investment Rates Illustration

Jack & Jill Flash

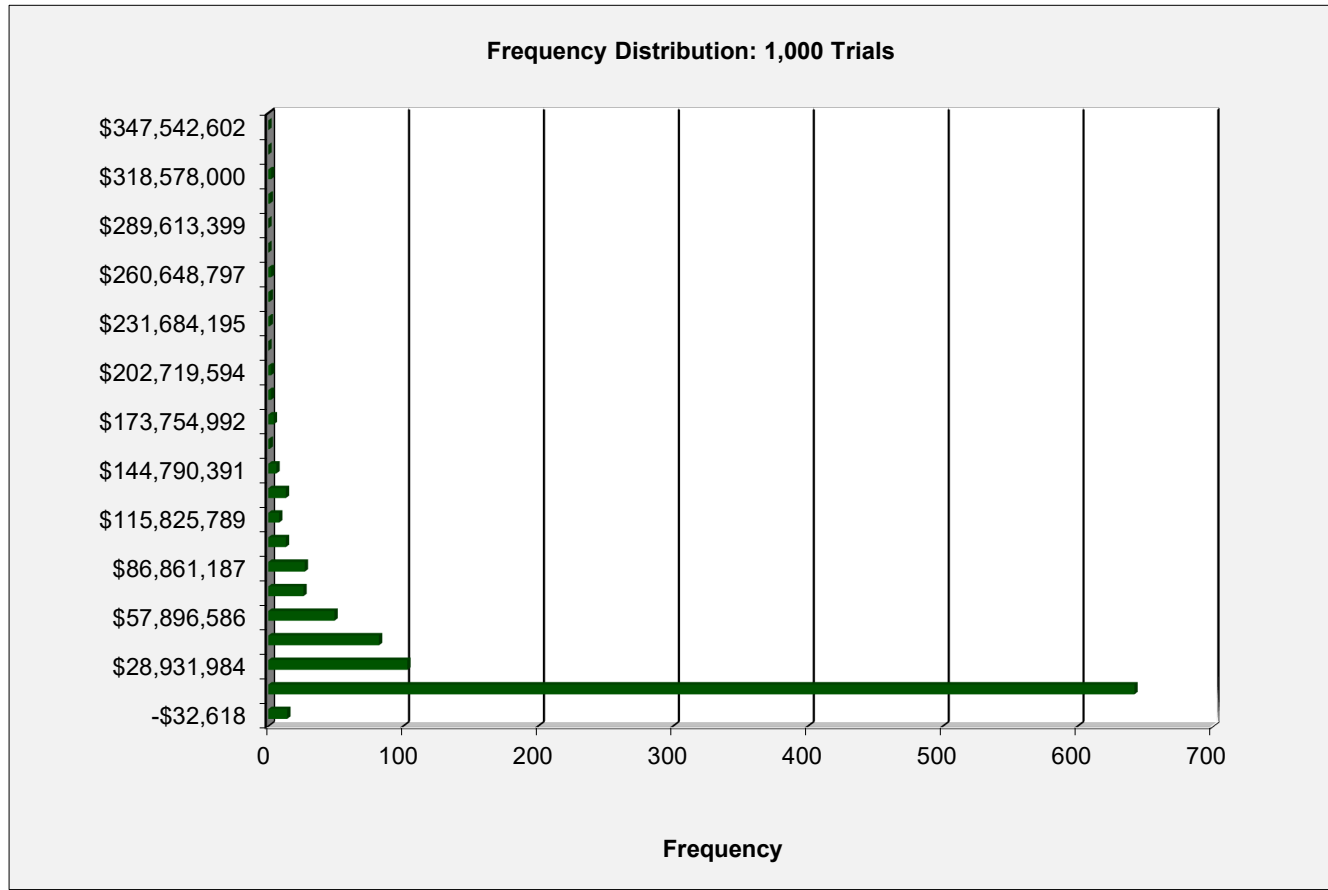


Each column in the chart above represents the combined net ending value of all portfolios in a variable return simulation. To the extent that desired distributions exceed the value of investments, shortfalls are made up through borrowing.



## Frequency Distribution for Variable Investment Rates (Net of Debt)

Jack & Jill Flash

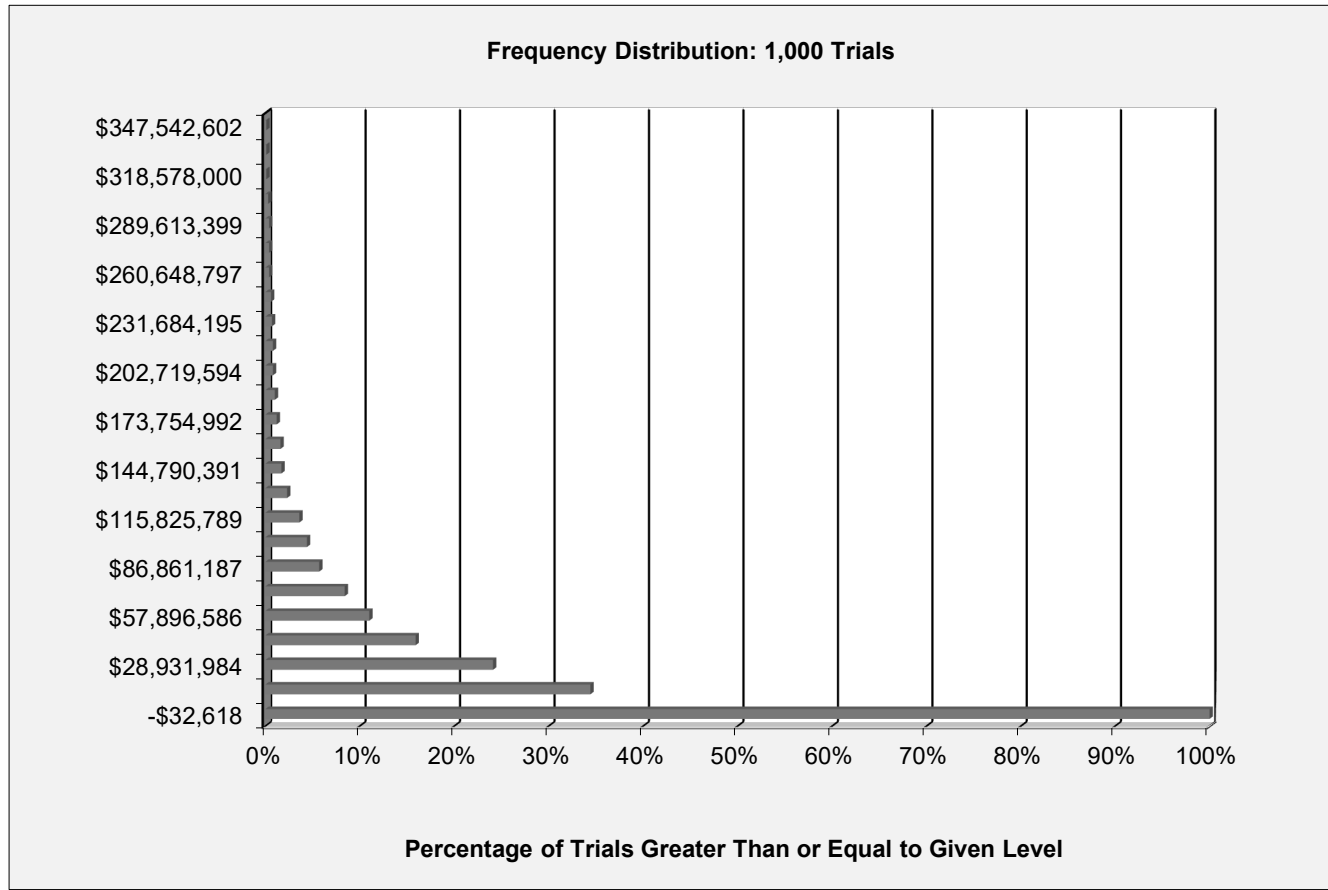


The chart above shows the frequency with which the combined ending value of investment portfolios (net of borrowing to fund cash deficits) falls within a given range of values shown on the vertical axis.



## Percentage of Trials Producing a Given Ending Value (Net of Debt)

Jack & Jill Flash



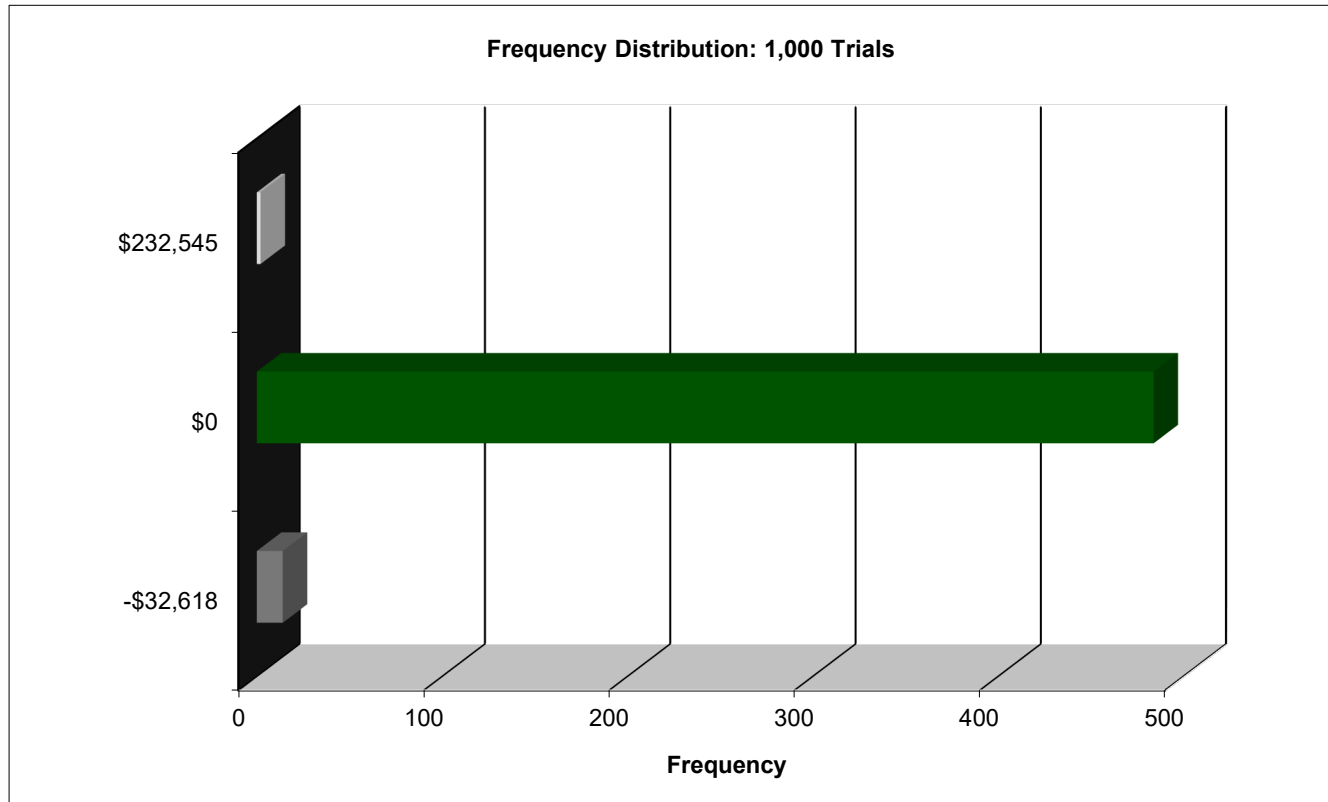
The chart above shows the cumulative percentage of trials in which the combined ending value of investment portfolios (net of borrowing to fund cash deficits) falls within a given range of values shown on the vertical axis.





## Truncated Frequency Distribution for Projected Investment Capital

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The chart above shows the frequency with which the combined ending value of investment portfolios (net of borrowing to fund cash deficits) falls within a given range of values shown on the vertical axis.

The 500 trials producing ending values above the \$232,545 median ending value are not shown. Hence the term truncated.

### Explanation of Values on Vertical Axis

-\$32,618: Ending values equal to trial termination value

\$0: Ending values between trial termination value and \$0

\$232,545: Ending values between target ending value and median ending value





## *MCS Retirement Planning Simulations*

Supporting Schedules for  
**INVESTMENT PORTFOLIOS**

AN ANALYSIS PREPARED EXCLUSIVELY FOR

**Jack & Jill Flash**

*8.7% ROR/10.8% StdDev Changing to 9.0% ROR/11.3% StdDev*

## Taxable Portfolio Illustration

Jack & Jill Flash

NOTE: The values shown below represent the results of a single MCS trial.

Year	Beginning Balance	Beginning of Year Additions	Current-Year Returns			End of Year Additions + Annuity Pmts + Addt'l TD Plan Distributions	End of Year Distributions	Ending Balance
			Current Income	Capital Appreciation/-Depreciation Rate	Capital Appreciation/-Depreciation			
2023	2,020,316	50,000	60,337	-3.35%	-69,277	0	364,527	1,696,849
2024	1,696,849	51,500	50,988	5.41%	94,573	0	403,482	1,490,429
2025	1,490,429	53,045	45,013	1.38%	21,295	0	415,587	1,194,197
2026	1,194,197	54,636	35,692	7.58%	94,705	0	427,775	951,455
2027	951,455	56,275	28,801	-1.17%	-11,794	0	410,010	614,727
2028	614,727	57,964	19,226	-0.24%	-1,606	0	346,673	343,638
2029	343,638	59,703	11,528	4.23%	17,065	0	389,534	42,399
2030	42,399	61,494	2,969	6.59%	6,844	287,513	401,220	0
2031	0	28,700	729	9.44%	2,708	463,772	495,908	0
2032	0	28,700	729	-11.71%	-3,361	449,247	475,314	0
2033	0	28,700	729	-4.44%	-1,275	461,420	489,574	0
2034	0	28,700	729	-13.01%	-3,733	478,565	504,261	0
2035	0	28,700	729	-8.58%	-2,462	492,422	519,389	0
2036	0	28,700	729	25.66%	7,366	538,100	574,894	0
2037	0	28,700	729	0.88%	252	562,460	592,140	0
2038	0	28,700	729	12.99%	3,727	576,749	609,905	0
2039	0	28,700	729	10.07%	2,889	595,885	628,202	0
2040	0	28,700	729	7.40%	2,124	615,495	647,048	0
2041	0	28,700	729	-6.75%	-1,938	592,687	620,177	0
2042	0	28,700	729	7.60%	2,181	654,844	686,453	0
2043	0	28,700	729	-1.52%	-438	628,955	657,946	0
2044	0	28,700	729	5.43%	1,559	697,271	728,258	0
2045	0	28,700	729	17.07%	4,899	715,778	750,106	0
2046	0	22,960	583	6.32%	1,450	747,616	772,609	0
2047	0	22,960	583	-10.33%	-2,371	719,352	740,524	0
2048	0	22,960	583	-7.14%	-1,639	740,836	762,740	0
2049	0	22,960	583	-2.48%	-569	762,649	785,622	0
2050	0	22,960	583	-9.06%	-2,079	787,727	809,191	0
2051	0	22,960	583	-5.97%	-1,370	585,817	833,466	0
2052	0	0	0	0.00%	0	0	0	0
2053	0	0	0	0.00%	0	0	0	0
2054	0	0	0	0.00%	0	0	0	0
2055	0	0	0	0.00%	0	0	0	0
2056	0	0	0	0.00%	0	0	0	0
2057	0	0	0	0.00%	0	0	0	0
2058	0	0	0	0.00%	0	0	0	0
2059	0	0	0	0.00%	0	0	0	0
2060	0	0	0	0.00%	0	0	0	0
2061	0	0	0	0.00%	0	0	0	0
2062	0	0	0	0.00%	0	0	0	0



### Jack's Qualified Plan & IRA Illustration

Jack & Jill Flash

NOTE: The values shown below represent the results of a single MCS trial.

Year	Jack's Attained-Age	Beginning Balance	Plan Contributions	Income & Growth	Planned Distributions			Deficit-Funding Distributions	Ending Balance	After-Tax Distributions	
					Applicable Divisor	Minimum Distributions	Discretionary Distributions			Planned Distributions 100.0%	Deficit-Funding Distributions 100.0%
2023	58.9	2,805,000	81,000	6,727	0.0	0	0	0	2,892,727	0	0
2024	59.9	2,892,727	74,500	347,417	0.0	0	0	0	3,314,644	0	0
2025	60.9	3,314,644	77,500	215,120	0.0	0	0	0	3,607,264	0	0
2026	61.9	3,607,264	80,000	539,647	0.0	0	0	0	4,226,911	0	0
2027	62.9	4,226,911	82,100	130,189	0.0	0	0	0	4,439,200	0	0
2028	63.9	4,439,200	84,600	190,442	0.0	0	0	0	4,714,242	0	0
2029	64.9	4,714,242	86,600	489,338	0.0	0	0	0	5,290,180	0	0
2030	65.9	5,290,180	89,700	719,464	0.0	0	0	435,398	5,663,947	0	249,918
2031	66.9	5,663,947	0	965,137	0.0	0	0	615,047	6,014,036	0	353,037
2032	67.9	6,014,036	0	-665,152	0.0	0	0	544,992	4,803,892	0	312,825
2033	68.9	4,803,892	0	-77,823	0.0	0	0	565,298	4,160,771	0	324,481
2034	69.9	4,160,771	0	-530,082	0.0	0	0	594,254	3,036,435	0	341,102
2035	70.9	3,036,435	0	-212,247	0.0	0	0	585,815	2,238,373	0	336,258
2036	71.9	2,238,373	0	877,666	0.0	0	0	663,809	2,452,231	0	381,026
2037	72.9	2,452,231	0	131,194	0.0	0	10,000	694,630	1,878,795	5,740	398,718
2038	73.9	1,878,795	0	411,268	0.0	0	10,000	717,872	1,562,192	5,740	412,058
2039	74.9	1,562,192	0	279,632	0.0	0	10,000	749,533	1,082,291	5,740	430,232
2040	75.9	1,082,291	0	154,335	24.6	43,996	0	737,980	454,650	25,253	423,601
2041	76.9	454,650	0	-21,005	23.7	19,184	0	414,462	0	11,011	237,901
2042	77.9	0	0	0	22.9	0	0	0	0	0	0
2043	78.9	0	0	0	22.0	0	0	0	0	0	0
2044	79.9	0	0	0	21.1	0	0	0	0	0	0
2045	80.9	0	0	0	20.2	0	0	0	0	0	0
2046	81.9	0	0	0	19.4	0	0	0	0	0	0
2047	82.9	0	0	0	18.5	0	0	0	0	0	0
2048	83.9	0	0	0	17.7	0	0	0	0	0	0
2049	84.9	0	0	0	16.8	0	0	0	0	0	0
2050	85.9	0	0	0	16.0	0	0	0	0	0	0
2051	86.9	0	0	0	15.2	0	0	0	0	0	0
2052	87.9	0	0	0	14.4	0	0	0	0	0	0
2053	88.9	0	0	0	13.7	0	0	0	0	0	0
2054	89.9	0	0	0	12.9	0	0	0	0	0	0
2055	90.9	0	0	0	12.2	0	0	0	0	0	0
2056	91.9	0	0	0	11.5	0	0	0	0	0	0
2057	92.9	0	0	0	10.8	0	0	0	0	0	0
2058	93.9	0	0	0	10.1	0	0	0	0	0	0
2059	94.9	0	0	0	9.5	0	0	0	0	0	0
2060	0.0	0	0	0	8.9	0	0	0	0	0	0
2061	0.0	0	0	0	8.4	0	0	0	0	0	0
2062	0.0	0	0	0	7.8	0	0	0	0	0	0



### Jill's Qualified Plan & IRA Illustration

Jack & Jill Flash

NOTE: The values shown below represent the results of a single MCS trial.

Year	Jill's Attained-Age	Beginning Balance	Plan Contributions	Income & Growth	Plan Distributions			Deficit-Funding Distributions	Ending Balance	After-Tax Distributions	
					Applicable Divisor	Minimum Distributions	Discretionary Distributions			Planned Distributions 100.0%	Deficit-Funding Distributions 100.0%
2023	55.9	1,692,000	42,000	4,058	0.0	0	0	0	1,738,058	0	0
2024	56.9	1,738,058	35,100	208,741	0.0	0	0	0	1,981,899	0	0
2025	57.9	1,981,899	35,700	128,625	0.0	0	0	0	2,146,224	0	0
2026	58.9	2,146,224	37,400	321,075	0.0	0	0	0	2,504,699	0	0
2027	59.9	2,504,699	38,100	77,145	0.0	0	0	0	2,619,944	0	0
2028	60.9	2,619,944	39,800	112,396	0.0	0	0	0	2,772,139	0	0
2029	61.9	2,772,139	40,400	287,748	0.0	0	0	0	3,100,288	0	0
2030	62.9	3,100,288	41,700	421,639	0.0	0	0	0	3,563,627	0	0
2031	63.9	3,563,627	0	607,242	0.0	0	0	0	4,170,869	0	0
2032	64.9	4,170,869	0	-461,298	0.0	0	0	0	3,709,571	0	0
2033	65.9	3,709,571	0	-60,095	0.0	0	0	0	3,649,476	0	0
2034	66.9	3,649,476	0	-464,943	0.0	0	0	0	3,184,532	0	0
2035	67.9	3,184,532	0	-222,599	0.0	0	0	0	2,961,934	0	0
2036	68.9	2,961,934	0	1,161,374	0.0	0	0	0	4,123,308	0	0
2037	69.9	4,123,308	0	220,597	0.0	0	0	0	4,343,905	0	0
2038	70.9	4,343,905	0	950,881	0.0	0	0	0	5,294,785	0	0
2039	71.9	5,294,785	0	947,767	0.0	0	0	0	6,242,552	0	0
2040	72.9	6,242,552	0	890,188	0.0	0	10,000	0	7,122,740	5,740	0
2041	73.9	7,122,740	0	-329,071	0.0	0	10,000	356,850	6,426,820	5,740	204,832
2042	74.9	6,426,820	0	933,817	0.0	0	10,000	897,002	6,453,634	5,740	514,879
2043	75.9	6,453,634	0	140,044	24.6	262,343	0	597,743	5,733,593	150,585	343,104
2044	76.9	5,733,593	0	663,377	23.7	241,924	0	735,318	5,419,728	138,864	422,072
2045	77.9	5,419,728	0	1,488,799	22.9	236,669	0	770,931	5,900,927	135,848	442,514
2046	78.9	5,900,927	0	754,138	22.0	268,224	0	792,912	5,593,929	153,961	455,132
2047	79.9	5,593,929	0	-517,998	21.1	265,115	0	744,817	4,065,999	152,176	427,525
2048	80.9	4,065,999	0	-208,179	20.2	201,287	0	844,051	2,812,482	115,539	484,485
2049	81.9	2,812,482	0	26,156	19.4	144,973	0	936,320	1,757,345	83,215	537,448
2050	82.9	1,757,345	0	-133,734	18.5	94,992	0	1,027,912	500,708	54,525	590,021
2051	83.9	500,708	0	-18,025	17.7	28,289	0	454,394	0	16,238	260,822
2052	84.9	0	0	0	16.8	0	0	0	0	0	0
2053	85.9	0	0	0	16.0	0	0	0	0	0	0
2054	86.9	0	0	0	15.2	0	0	0	0	0	0
2055	87.9	0	0	0	14.4	0	0	0	0	0	0
2056	88.9	0	0	0	13.7	0	0	0	0	0	0
2057	89.9	0	0	0	12.9	0	0	0	0	0	0
2058	90.9	0	0	0	12.2	0	0	0	0	0	0
2059	91.9	0	0	0	11.5	0	0	0	0	0	0
2060	92.9	0	0	0	10.8	0	0	0	0	0	0
2061	93.9	0	0	0	10.1	0	0	0	0	0	0
2062	94.9	0	0	0	9.5	0	0	0	0	0	0



### Jack's Roth Account for Qualified Plan Catchup Contributions Illustration

Jack & Jill Flash

NOTE: The values shown below represent the results of a single MCS trial.

Year	Beginning Balance	Account Contributions	Income & Growth	Discretionary Distributions	Deficit-Funding Distributions	Ending Balance	Tax-Free Distributions	
							Discretionary Distributions	Deficit-Funding Distributions
2023	0	0	0	0	0	0	0	0
2024	0	7,500	0	0	0	7,500	0	0
2025	7,500	11,250	487	0	0	19,237	0	0
2026	19,237	12,000	2,878	0	0	34,115	0	0
2027	34,115	12,000	1,051	0	0	47,165	0	0
2028	47,165	12,750	2,023	0	0	61,939	0	0
2029	61,939	8,500	6,429	0	0	76,868	0	0
2030	76,868	9,000	10,454	0	0	96,322	0	0
2031	96,322	0	16,413	5,000	0	107,735	5,000	0
2032	107,735	0	-11,916	5,000	0	90,820	5,000	0
2033	90,820	0	-1,471	5,000	0	84,348	5,000	0
2034	84,348	0	-10,746	5,000	0	68,602	5,000	0
2035	68,602	0	-4,795	5,000	0	58,807	5,000	0
2036	58,807	0	23,058	5,000	0	76,865	5,000	0
2037	76,865	0	4,112	5,000	0	75,978	5,000	0
2038	75,978	0	16,632	5,000	0	87,609	5,000	0
2039	87,609	0	15,682	5,000	0	98,291	5,000	0
2040	98,291	0	14,016	5,000	0	107,308	5,000	0
2041	107,308	0	-4,958	5,000	0	97,350	5,000	0
2042	97,350	0	14,145	5,000	0	106,495	5,000	0
2043	106,495	0	2,311	5,000	0	103,806	5,000	0
2044	103,806	0	12,010	5,000	0	110,816	5,000	0
2045	110,816	0	30,441	5,000	0	136,257	5,000	0
2046	136,257	0	17,414	5,000	0	148,671	5,000	0
2047	148,671	0	-13,767	5,000	0	129,904	5,000	0
2048	129,904	0	-6,651	5,000	0	118,253	5,000	0
2049	118,253	0	1,100	5,000	0	114,353	5,000	0
2050	114,353	0	-8,702	5,000	0	100,651	5,000	0
2051	100,651	0	-3,623	5,000	92,027	0	5,000	92,027
2052	0	0	0	0	0	0	0	0
2053	0	0	0	0	0	0	0	0
2054	0	0	0	0	0	0	0	0
2055	0	0	0	0	0	0	0	0
2056	0	0	0	0	0	0	0	0
2057	0	0	0	0	0	0	0	0
2058	0	0	0	0	0	0	0	0
2059	0	0	0	0	0	0	0	0
2060	0	0	0	0	0	0	0	0
2061	0	0	0	0	0	0	0	0
2062	0	0	0	0	0	0	0	0



### Jill's Roth Account for Qualified Plan Catchup Contributions Illustration

Jack & Jill Flash

NOTE: The values shown below represent the results of a single MCS trial.

Year	Beginning Balance	Account Contributions	Income & Growth	Discretionary Distributions	Deficit-Funding Distributions	Ending Balance	Tax-Free Distributions	
							Discretionary Distributions	Deficit-Funding Distributions
2023	0	0	0	0	0	0	0	0
2024	0	7,500	0	0	0	7,500	0	0
2025	7,500	7,500	487	0	0	15,487	0	0
2026	15,487	8,000	2,317	0	0	25,804	0	0
2027	25,804	8,000	795	0	0	34,598	0	0
2028	34,598	12,750	1,484	0	0	48,833	0	0
2029	48,833	12,750	5,069	0	0	66,651	0	0
2030	66,651	13,500	9,065	0	0	89,216	0	0
2031	89,216	0	15,202	5,000	0	99,418	5,000	0
2032	99,418	0	-10,996	5,000	0	83,423	5,000	0
2033	83,423	0	-1,351	5,000	0	77,071	5,000	0
2034	77,071	0	-9,819	5,000	0	62,252	5,000	0
2035	62,252	0	-4,351	5,000	0	52,901	5,000	0
2036	52,901	0	20,742	5,000	0	68,643	5,000	0
2037	68,643	0	3,672	5,000	0	67,316	5,000	0
2038	67,316	0	14,735	5,000	0	77,051	5,000	0
2039	77,051	0	13,792	5,000	0	85,843	5,000	0
2040	85,843	0	12,241	5,000	0	93,085	5,000	0
2041	93,085	0	-4,301	5,000	0	83,784	5,000	0
2042	83,784	0	12,174	5,000	0	90,958	5,000	0
2043	90,958	0	1,974	5,000	0	87,932	5,000	0
2044	87,932	0	10,174	5,000	0	93,106	5,000	0
2045	93,106	0	25,576	5,000	0	113,682	5,000	0
2046	113,682	0	14,529	5,000	0	123,210	5,000	0
2047	123,210	0	-11,409	5,000	0	106,801	5,000	0
2048	106,801	0	-5,468	5,000	0	96,333	5,000	0
2049	96,333	0	896	5,000	0	92,229	5,000	0
2050	92,229	0	-7,019	5,000	0	80,210	5,000	0
2051	80,210	0	-2,888	5,000	72,322	0	5,000	72,322
2052	0	0	0	0	0	0	0	0
2053	0	0	0	0	0	0	0	0
2054	0	0	0	0	0	0	0	0
2055	0	0	0	0	0	0	0	0
2056	0	0	0	0	0	0	0	0
2057	0	0	0	0	0	0	0	0
2058	0	0	0	0	0	0	0	0
2059	0	0	0	0	0	0	0	0
2060	0	0	0	0	0	0	0	0
2061	0	0	0	0	0	0	0	0
2062	0	0	0	0	0	0	0	0



### Deficit-Funding Loan Account Illustration

Jack & Jill Flash

NOTE: The values shown below represent the results of a single MCS trial.

Year	Beginning Balance	Additional Borrowing to Fund Cash Deficits			Loan Payoff	Ending Balance
		Borrowing Limit	Actual Need	Additional Borrowing		
2023	0	10,299	0	0	0	0
2024	0	10,609	0	0	0	0
2025	0	10,927	0	0	0	0
2026	0	11,254	0	0	0	0
2027	0	11,592	0	0	0	0
2028	0	11,940	0	0	0	0
2029	0	12,298	0	0	0	0
2030	0	12,667	0	0	0	0
2031	0	13,046	0	0	0	0
2032	0	13,439	0	0	0	0
2033	0	13,841	0	0	0	0
2034	0	14,256	0	0	0	0
2035	0	14,684	0	0	0	0
2036	0	15,125	0	0	0	0
2037	0	15,579	0	0	0	0
2038	0	16,046	0	0	0	0
2039	0	16,527	0	0	0	0
2040	0	17,024	0	0	0	0
2041	0	17,534	0	0	0	0
2042	0	18,060	0	0	0	0
2043	0	18,601	0	0	0	0
2044	0	19,160	0	0	0	0
2045	0	19,735	0	0	0	0
2046	0	20,326	0	0	0	0
2047	0	20,936	0	0	0	0
2048	0	21,565	0	0	0	0
2049	0	22,212	0	0	0	0
2050	0	22,877	0	0	0	0
2051	0	23,563	225,477	23,563	0	23,563
2052	0	0	0	0	0	0
2053	0	0	0	0	0	0
2054	0	0	0	0	0	0
2055	0	0	0	0	0	0
2056	0	0	0	0	0	0
2057	0	0	0	0	0	0
2058	0	0	0	0	0	0
2059	0	0	0	0	0	0
2060	0	0	0	0	0	0
2061	0	0	0	0	0	0
2062	0	0	0	0	0	0







## *MCS Retirement Planning Simulations*

Supporting Schedules for  
**ANNUITY CONTRACTS, OTHER SOURCES OF INCOME  
& TAXABLE PORTFOLIO ADDITIONS/DISTRIBUTIONS**

AN ANALYSIS PREPARED EXCLUSIVELY FOR

**Jack & Jill Flash**

*8.7% ROR/10.8% StdDev Changing to 9.0% ROR/11.3% StdDev*

### SPA #1 Illustration

Jack & Jill Flash

Year	Jack's Annuity Payments	Jill's Annuity Payments	Gross Annuity Payments	After-Tax Payments			
				Tax-Free Recovery of Investment 44.9%	Cumulative Tax-Free Recovery of Investment	Taxable Annuity Payments	After-Tax Annuity Payments
2023	0	0	0	0	0	0	0
2024	0	0	0	0	0	0	0
2025	0	0	0	0	0	0	0
2026	0	0	0	0	0	0	0
2027	0	0	0	0	0	0	0
2028	0	0	0	0	0	0	0
2029	0	0	0	0	0	0	0
2030	25,254	0	25,254	11,339	11,339	13,915	18,797
2031	25,254	0	25,254	11,339	22,678	13,915	18,797
2032	25,254	0	25,254	11,339	34,017	13,915	18,797
2033	25,254	0	25,254	11,339	45,356	13,915	18,797
2034	25,254	0	25,254	11,339	56,695	13,915	18,797
2035	25,254	0	25,254	11,339	68,034	13,915	18,797
2036	25,254	0	25,254	11,339	79,373	13,915	18,797
2037	25,254	0	25,254	11,339	90,712	13,915	18,797
2038	25,254	0	25,254	11,339	102,051	13,915	18,797
2039	25,254	0	25,254	11,339	113,390	13,915	18,797
2040	25,254	0	25,254	11,339	124,729	13,915	18,797
2041	25,254	0	25,254	11,339	136,068	13,915	18,797
2042	25,254	0	25,254	11,339	147,407	13,915	18,797
2043	25,254	0	25,254	11,339	158,746	13,915	18,797
2044	25,254	0	25,254	11,339	170,085	13,915	18,797
2045	25,254	0	25,254	11,339	181,424	13,915	18,797
2046	25,254	0	25,254	11,339	192,763	13,915	18,797
2047	25,254	0	25,254	11,339	204,102	13,915	18,797
2048	25,254	0	25,254	11,339	215,441	13,915	18,797
2049	25,254	0	25,254	11,339	226,780	13,915	18,797
2050	25,254	0	25,254	11,339	238,119	13,915	18,797
2051	25,254	0	25,254	11,339	249,459	13,915	18,797
2052	25,254	0	25,254	3,081	252,540	22,173	14,966
2053	25,254	0	25,254	0	252,540	25,254	13,536
2054	25,254	0	25,254	0	252,540	25,254	13,536
2055	25,254	0	25,254	0	252,540	25,254	13,536
2056	25,254	0	25,254	0	252,540	25,254	13,536
2057	25,254	0	25,254	0	252,540	25,254	13,536
2058	25,254	0	25,254	0	252,540	25,254	13,536
2059	25,254	0	25,254	0	252,540	25,254	13,536
2060	0	12,627	12,627	0	252,540	12,627	6,768
2061	0	12,627	12,627	0	252,540	12,627	6,768
2062	0	12,627	12,627	0	252,540	12,627	6,768



## SPA #2 Illustration

Jack & Jill Flash

Year	Jill's Annuity Payments	Gross Annuity Payments	After-Tax Payments			
			Tax-Free Recovery of Investment 44.9%	Cumulative Tax-Free Recovery of Investment	Taxable Annuity Payments	After-Tax Annuity Payments
2023	0	0	0	0	0	0
2024	0	0	0	0	0	0
2025	0	0	0	0	0	0
2026	0	0	0	0	0	0
2027	0	0	0	0	0	0
2028	0	0	0	0	0	0
2029	0	0	0	0	0	0
2030	25,254	25,254	11,339	11,339	13,915	18,797
2031	25,254	25,254	11,339	22,678	13,915	18,797
2032	25,254	25,254	11,339	34,017	13,915	18,797
2033	25,254	25,254	11,339	45,356	13,915	18,797
2034	25,254	25,254	11,339	56,695	13,915	18,797
2035	25,254	25,254	11,339	68,034	13,915	18,797
2036	25,254	25,254	11,339	79,373	13,915	18,797
2037	25,254	25,254	11,339	90,712	13,915	18,797
2038	25,254	25,254	11,339	102,051	13,915	18,797
2039	25,254	25,254	11,339	113,390	13,915	18,797
2040	25,254	25,254	11,339	124,729	13,915	18,797
2041	25,254	25,254	11,339	136,068	13,915	18,797
2042	25,254	25,254	11,339	147,407	13,915	18,797
2043	25,254	25,254	11,339	158,746	13,915	18,797
2044	25,254	25,254	11,339	170,085	13,915	18,797
2045	25,254	25,254	11,339	181,424	13,915	18,797
2046	25,254	25,254	11,339	192,763	13,915	18,797
2047	25,254	25,254	11,339	204,102	13,915	18,797
2048	25,254	25,254	11,339	215,441	13,915	18,797
2049	25,254	25,254	11,339	226,780	13,915	18,797
2050	25,254	25,254	11,339	238,119	13,915	18,797
2051	25,254	25,254	11,339	249,459	13,915	18,797
2052	25,254	25,254	3,081	252,540	22,173	14,966
2053	25,254	25,254	0	252,540	25,254	13,536
2054	25,254	25,254	0	252,540	25,254	13,536
2055	25,254	25,254	0	252,540	25,254	13,536
2056	25,254	25,254	0	252,540	25,254	13,536
2057	25,254	25,254	0	252,540	25,254	13,536
2058	25,254	25,254	0	252,540	25,254	13,536
2059	25,254	25,254	0	252,540	25,254	13,536
2060	25,254	25,254	0	252,540	25,254	13,536
2061	25,254	25,254	0	252,540	25,254	13,536
2062	25,254	25,254	0	252,540	25,254	13,536



## Taxable Portfolio Additions Illustration

Jack & Jill Flash

Year	Annual Savings 3.0%	After-Tax Income					Total Additions & After-Tax Income	After-Tax Distributions from TD Plans & Roth Catchup Accounts	After-Tax Annuity Payments
		Jack's After-Tax Pension	Jack's After-Tax Consulting	Jill's After-Tax Baking	Jill's After-Tax NQ Pension	Social Security Benefits			
2023	50,000	0	0	0	0	0	50,000	0	0
2024	51,500	0	0	0	0	0	51,500	0	0
2025	53,045	0	0	0	0	0	53,045	0	0
2026	54,636	0	0	0	0	0	54,636	0	0
2027	56,275	0	0	0	0	0	56,275	0	0
2028	57,964	0	0	0	0	0	57,964	0	0
2029	59,703	0	0	0	0	0	59,703	0	0
2030	61,494	0	0	0	0	0	61,494	249,918	37,595
2031	0	34,440	28,700	5,740	22,960	0	91,840	363,037	37,595
2032	0	34,440	28,700	5,740	22,960	25,687	117,527	322,825	37,595
2033	0	34,440	28,700	5,740	22,960	26,204	118,044	334,481	37,595
2034	0	34,440	28,700	5,740	22,960	26,728	118,568	351,102	37,595
2035	0	34,440	28,700	5,740	22,960	45,430	137,270	346,258	37,595
2036	0	34,440	28,700	5,740	22,960	46,338	138,178	391,026	37,595
2037	0	34,440	28,700	5,740	22,960	47,267	139,107	414,458	37,595
2038	0	34,440	28,700	5,740	22,960	48,216	140,056	427,798	37,595
2039	0	34,440	28,700	5,740	22,960	49,178	141,018	445,972	37,595
2040	0	34,440	28,700	5,740	22,960	50,166	142,006	464,594	37,595
2041	0	34,440	0	5,740	22,960	51,168	114,308	469,484	37,595
2042	0	34,440	0	5,740	22,960	52,190	115,330	530,619	37,595
2043	0	34,440	0	5,740	22,960	53,231	116,371	503,689	37,595
2044	0	34,440	0	5,740	22,960	54,299	117,439	570,937	37,595
2045	0	34,440	0	5,740	22,960	55,381	118,521	588,363	37,595
2046	0	34,440	0	0	22,960	56,489	113,889	619,092	37,595
2047	0	34,440	0	0	22,960	57,616	115,016	589,701	37,595
2048	0	34,440	0	0	22,960	58,777	116,177	610,024	37,595
2049	0	34,440	0	0	22,960	59,951	117,351	630,662	37,595
2050	0	34,440	0	0	22,960	61,146	118,546	654,547	37,595
2051	0	34,440	0	0	22,960	62,373	119,773	451,409	37,595
2052	0	34,440	0	0	22,960	63,620	121,020	0	29,931
2053	0	34,440	0	0	22,960	64,894	122,294	0	27,072
2054	0	34,440	0	0	22,960	66,187	123,587	0	27,072
2055	0	34,440	0	0	22,960	67,514	124,914	0	27,072
2056	0	34,440	0	0	22,960	68,861	126,261	0	27,072
2057	0	34,440	0	0	22,960	70,241	127,641	0	27,072
2058	0	34,440	0	0	22,960	71,647	129,047	0	27,072
2059	0	34,440	0	0	22,960	73,074	130,474	0	27,072
2060	0	17,220	0	0	22,960	44,720	84,900	0	20,304
2061	0	17,220	0	0	22,960	45,615	85,795	0	20,304
2062	0	17,220	0	0	22,960	46,531	86,711	0	20,304



## After-Tax Income Illustration

Jack & Jill Flash

Year	Pretax Income					After-Tax Income					Total After-Tax Income	
	Jack's Pretax Pension 0.0%	Jack's Pretax Consulting 0.0%	Jill's Pretax Baking 0.0%	Jill's Pretax NQ Pension 0.0%	Social Security Benefits	Jack's After-Tax Pension	Jack's After-Tax Consulting	Jill's After-Tax Baking	Jill's After-Tax NQ Pension	Social Security Benefits		
2023	0	0	0	0	0	0	0	0	0	0	0	0
2024	0	0	0	0	0	0	0	0	0	0	0	0
2025	0	0	0	0	0	0	0	0	0	0	0	0
2026	0	0	0	0	0	0	0	0	0	0	0	0
2027	0	0	0	0	0	0	0	0	0	0	0	0
2028	0	0	0	0	0	0	0	0	0	0	0	0
2029	0	0	0	0	0	0	0	0	0	0	0	0
2030	0	0	0	0	0	0	0	0	0	0	0	0
2031	60,000	50,000	10,000	40,000	0	34,440	28,700	5,740	22,960	0	91,840	
2032	60,000	50,000	10,000	40,000	38,720	34,440	28,700	5,740	22,960	25,687	117,527	
2033	60,000	50,000	10,000	40,000	39,500	34,440	28,700	5,740	22,960	26,204	118,044	
2034	60,000	50,000	10,000	40,000	40,290	34,440	28,700	5,740	22,960	26,728	118,568	
2035	60,000	50,000	10,000	40,000	68,480	34,440	28,700	5,740	22,960	45,430	137,270	
2036	60,000	50,000	10,000	40,000	69,850	34,440	28,700	5,740	22,960	46,338	138,178	
2037	60,000	50,000	10,000	40,000	71,250	34,440	28,700	5,740	22,960	47,267	139,107	
2038	60,000	50,000	10,000	40,000	72,680	34,440	28,700	5,740	22,960	48,216	140,056	
2039	60,000	50,000	10,000	40,000	74,130	34,440	28,700	5,740	22,960	49,178	141,018	
2040	60,000	50,000	10,000	40,000	75,620	34,440	28,700	5,740	22,960	50,166	142,006	
2041	60,000	0	10,000	40,000	77,130	34,440	0	5,740	22,960	51,168	114,308	
2042	60,000	0	10,000	40,000	78,670	34,440	0	5,740	22,960	52,190	115,330	
2043	60,000	0	10,000	40,000	80,240	34,440	0	5,740	22,960	53,231	116,371	
2044	60,000	0	10,000	40,000	81,850	34,440	0	5,740	22,960	54,299	117,439	
2045	60,000	0	10,000	40,000	83,480	34,440	0	5,740	22,960	55,381	118,521	
2046	60,000	0	0	40,000	85,150	34,440	0	0	22,960	56,489	113,889	
2047	60,000	0	0	40,000	86,850	34,440	0	0	22,960	57,616	115,016	
2048	60,000	0	0	40,000	88,600	34,440	0	0	22,960	58,777	116,177	
2049	60,000	0	0	40,000	90,370	34,440	0	0	22,960	59,951	117,351	
2050	60,000	0	0	40,000	92,170	34,440	0	0	22,960	61,146	118,546	
2051	60,000	0	0	40,000	94,020	34,440	0	0	22,960	62,373	119,773	
2052	60,000	0	0	40,000	95,900	34,440	0	0	22,960	63,620	121,020	
2053	60,000	0	0	40,000	97,820	34,440	0	0	22,960	64,894	122,294	
2054	60,000	0	0	40,000	99,770	34,440	0	0	22,960	66,187	123,587	
2055	60,000	0	0	40,000	101,770	34,440	0	0	22,960	67,514	124,914	
2056	60,000	0	0	40,000	103,800	34,440	0	0	22,960	68,861	126,261	
2057	60,000	0	0	40,000	105,880	34,440	0	0	22,960	70,241	127,641	
2058	60,000	0	0	40,000	108,000	34,440	0	0	22,960	71,647	129,047	
2059	60,000	0	0	40,000	110,150	34,440	0	0	22,960	73,074	130,474	
2060	30,000	0	0	40,000	67,410	17,220	0	0	22,960	44,720	84,900	
2061	30,000	0	0	40,000	68,760	17,220	0	0	22,960	45,615	85,795	
2062	30,000	0	0	40,000	70,140	17,220	0	0	22,960	46,531	86,711	



## Social Security Benefits Illustration

Jack & Jill Flash

Year	Pretax Social Security Benefits			Taxation of Social Security Benefits			After-Tax Benefits
	Jack's Benefits	Jill's Benefits	Total Benefits	Federally Taxable Benefits	Federal Taxes	Total Taxes	
2023	0	0	0	0	0	0	0
2024	0	0	0	0	0	0	0
2025	0	0	0	0	0	0	0
2026	0	0	0	0	0	0	0
2027	0	0	0	0	0	0	0
2028	0	0	0	0	0	0	0
2029	0	0	0	0	0	0	0
2030	0	0	0	0	0	0	0
2031	0	0	0	0	0	0	0
2032	38,720	0	38,720	32,912	13,033	13,033	25,687
2033	39,500	0	39,500	33,575	13,296	13,296	26,204
2034	40,290	0	40,290	34,247	13,562	13,562	26,728
2035	41,090	27,390	68,480	58,208	23,050	23,050	45,430
2036	41,910	27,940	69,850	59,373	23,512	23,512	46,338
2037	42,750	28,500	71,250	60,563	23,983	23,983	47,267
2038	43,610	29,070	72,680	61,778	24,464	24,464	48,216
2039	44,480	29,650	74,130	63,011	24,952	24,952	49,178
2040	45,370	30,250	75,620	64,277	25,454	25,454	50,166
2041	46,280	30,850	77,130	65,561	25,962	25,962	51,168
2042	47,200	31,470	78,670	66,870	26,480	26,480	52,190
2043	48,140	32,100	80,240	68,204	27,009	27,009	53,231
2044	49,110	32,740	81,850	69,573	27,551	27,551	54,299
2045	50,090	33,390	83,480	70,958	28,099	28,099	55,381
2046	51,090	34,060	85,150	72,378	28,661	28,661	56,489
2047	52,110	34,740	86,850	73,823	29,234	29,234	57,616
2048	53,160	35,440	88,600	75,310	29,823	29,823	58,777
2049	54,220	36,150	90,370	76,815	30,419	30,419	59,951
2050	55,300	36,870	92,170	78,345	31,024	31,024	61,146
2051	56,410	37,610	94,020	79,917	31,647	31,647	62,373
2052	57,540	38,360	95,900	81,515	32,280	32,280	63,620
2053	58,690	39,130	97,820	83,147	32,926	32,926	64,894
2054	59,860	39,910	99,770	84,805	33,583	33,583	66,187
2055	61,060	40,710	101,770	86,505	34,256	34,256	67,514
2056	62,280	41,520	103,800	88,230	34,939	34,939	68,861
2057	63,530	42,350	105,880	89,998	35,639	35,639	70,241
2058	64,800	43,200	108,000	91,800	36,353	36,353	71,647
2059	66,090	44,060	110,150	93,628	37,076	37,076	73,074
2060	0	67,410	67,410	57,299	22,690	22,690	44,720
2061	0	68,760	68,760	58,446	23,145	23,145	45,615
2062	0	70,140	70,140	59,619	23,609	23,609	46,531



**Taxable Portfolio Distributions Illustration***Jack & Jill Flash* NOTE: The values shown below represent the results of a single MCS trial.

Year	Living Expenses 3.0%	Debt Service 3.0%	Travel & Fun 3.0%	Gifts 3.0%	Total Distributions
2023	272,035	65,288	27,203	0	364,527
2024	280,196	67,247	56,039	0	403,482
2025	288,602	69,264	57,720	0	415,587
2026	297,066	71,296	59,413	0	427,775
2027	305,978	73,435	30,598	0	410,010
2028	315,157	0	31,516	0	346,673
2029	324,612	0	64,922	0	389,534
2030	334,350	0	66,870	0	401,220
2031	344,381	0	68,876	82,651	495,908
2032	354,712	0	35,471	85,131	475,314
2033	365,354	0	36,535	87,685	489,574
2034	376,314	0	37,631	90,315	504,261
2035	387,604	0	38,760	93,025	519,389
2036	399,232	0	79,846	95,816	574,894
2037	411,209	0	82,242	98,690	592,140
2038	423,545	0	84,709	101,651	609,905
2039	436,251	0	87,250	104,700	628,202
2040	449,339	0	89,868	107,841	647,048
2041	462,819	0	46,282	111,077	620,177
2042	476,703	0	95,341	114,409	686,453
2043	491,005	0	49,100	117,841	657,946
2044	505,735	0	101,147	121,376	728,258
2045	520,907	0	104,181	125,018	750,106
2046	536,534	0	107,307	128,768	772,609
2047	552,630	0	55,263	132,631	740,524
2048	569,209	0	56,921	136,610	762,740
2049	586,285	0	58,629	140,708	785,622
2050	603,874	0	60,387	144,930	809,191
2051	621,990	0	62,199	149,278	833,466
2052	640,650	0	128,130	153,756	922,535
2053	659,869	0	65,987	158,369	884,225
2054	679,665	0	135,933	163,120	978,718
2055	700,055	0	140,011	168,013	1,008,079
2056	721,057	0	144,211	173,054	1,038,322
2057	742,688	0	148,538	178,245	1,069,471
2058	764,969	0	152,994	183,593	1,101,556
2059	787,918	0	157,584	189,100	1,134,602
2060	811,556	0	81,156	194,773	1,087,485
2061	835,902	0	167,180	200,617	1,203,699
2062	860,979	0	172,196	206,635	1,239,810





## *MCS Retirement Planning Simulations*

Supporting Schedules for  
**TAX, INVESTMENT & EFFECTIVE DISTRIBUTION RATES**

AN ANALYSIS PREPARED EXCLUSIVELY FOR

**Jack & Jill Flash**

*8.7% ROR/10.8% StdDev Changing to 9.0% ROR/11.3% StdDev*



## Tax & Investment Rates

Jack & Jill Flash

NOTE: The investment rates shown below represent the results of a single MCS trial.

Year	Tax Rates				Taxable Portfolio				Tax-Deferred Portfolios	
	Federal Ordinary Income Tax Rate	Effective State Income Tax Rate 5.0%	Combined Ordinary Income Tax Rate	Combined Capital Gains Tax Rate	Pretax Income Rate	After-Tax Income Rate	Pretax Appreciation/-Depreciation Rate	After-Tax Appreciation/-Depreciation Rate	Income Rate	Capital Appreciation/-Depreciation Rate
2023	37.0%	3.2%	40.2%	23.2%	4.60%	2.92%	-4.36%	-3.35%	4.60%	-4.36%
2024	37.0%	3.2%	40.2%	23.2%	4.60%	2.92%	7.41%	5.41%	4.60%	7.41%
2025	37.0%	3.2%	40.2%	23.2%	4.60%	2.92%	1.89%	1.38%	4.60%	1.89%
2026	39.6%	3.0%	42.6%	23.0%	4.60%	2.86%	10.36%	7.58%	4.60%	10.36%
2027	39.6%	3.0%	42.6%	23.0%	4.60%	2.86%	-1.52%	-1.17%	4.60%	-1.52%
2028	39.6%	3.0%	42.6%	23.0%	4.60%	2.86%	-0.31%	-0.24%	4.60%	-0.31%
2029	39.6%	3.0%	42.6%	23.0%	4.60%	2.86%	5.78%	4.23%	4.60%	5.78%
2030	39.6%	3.0%	42.6%	23.0%	4.60%	2.86%	9.00%	6.59%	4.60%	9.00%
2031	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	12.89%	9.44%	4.15%	12.89%
2032	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	-15.21%	-11.71%	4.15%	-15.21%
2033	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	-5.77%	-4.44%	4.15%	-5.77%
2034	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	-16.89%	-13.01%	4.15%	-16.89%
2035	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	-11.14%	-8.58%	4.15%	-11.14%
2036	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	35.06%	25.66%	4.15%	35.06%
2037	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	1.20%	0.88%	4.15%	1.20%
2038	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	17.74%	12.99%	4.15%	17.74%
2039	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	13.75%	10.07%	4.15%	13.75%
2040	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	10.11%	7.40%	4.15%	10.11%
2041	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	-8.77%	-6.75%	4.15%	-8.77%
2042	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	10.38%	7.60%	4.15%	10.38%
2043	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	-1.98%	-1.52%	4.15%	-1.98%
2044	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	7.42%	5.43%	4.15%	7.42%
2045	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	23.32%	17.07%	4.15%	23.32%
2046	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	8.63%	6.32%	4.15%	8.63%
2047	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	-13.41%	-10.33%	4.15%	-13.41%
2048	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	-9.27%	-7.14%	4.15%	-9.27%
2049	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	-3.22%	-2.48%	4.15%	-3.22%
2050	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	-11.76%	-9.06%	4.15%	-11.76%
2051	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	-7.75%	-5.97%	4.15%	-7.75%
2052	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	21.43%	0.00%	4.15%	21.43%
2053	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	-3.70%	0.00%	4.15%	-3.70%
2054	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	8.20%	0.00%	4.15%	8.20%
2055	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	10.69%	0.00%	4.15%	10.69%
2056	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	22.48%	0.00%	4.15%	22.48%
2057	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	2.11%	0.00%	4.15%	2.11%
2058	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	13.62%	0.00%	4.15%	13.62%
2059	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	7.78%	0.00%	4.15%	7.78%
2060	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	-15.32%	0.00%	4.15%	-15.32%
2061	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	15.78%	0.00%	4.15%	15.78%
2062	39.6%	3.0%	42.6%	23.0%	4.15%	2.54%	18.82%	0.00%	4.15%	18.82%



### Effective Taxable Portfolio Distribution Rates

Jack & Jill Flash

Year	Living Expenses		Debt Service		Travel & Fun		Gifts	
	Effective Tax Rate 0.0% 30.0%	Distribution Gross-Up Rate	Effective Tax Rate 0.0% 30.0%	Distribution Gross-Up Rate	Effective Tax Rate 0.0% 30.0%	Distribution Gross-Up Rate	Effective Tax Rate 0.0% 30.0%	Distribution Gross-Up Rate
2023	8.1%	91.9%	8.1%	91.9%	8.1%	91.9%	8.1%	91.9%
2024	8.1%	91.9%	8.1%	91.9%	8.1%	91.9%	8.1%	91.9%
2025	8.1%	91.9%	8.1%	91.9%	8.1%	91.9%	8.1%	91.9%
2026	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2027	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2028	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2029	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2030	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2031	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2032	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2033	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2034	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2035	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2036	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2037	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2038	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2039	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2040	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2041	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2042	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2043	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2044	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2045	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2046	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2047	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2048	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2049	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2050	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2051	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2052	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2053	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2054	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2055	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2056	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2057	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2058	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2059	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2060	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2061	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%
2062	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%	8.0%	92.0%

