

<u>Input Parameters</u>		Table of Contents
Number of Lives:	Joint	
Names:	James	Judy
Issue Age:	62	60
Gender:	Male	Female
Health:	Poor	Good
Assets		
Stocks:	\$600,000	
Bonds:	\$400,000	
Cash:	\$200,000	
Monthly Income:	\$6,000	
Adjust Income for Inflation?:	No	
Monthly Income Start Year:	0	
Economic Type:	Realistic	
		Inputs1 Traditional Analysis2 Mortality Risk3 Retirement Income Risk .4 Sample Fund Graph5

Report provided by: **Mike Carmody**

This retirement risk analysis should only be one of many tools used to assess your financial position. Since no one can predict the future, this analysis is based on a model of future economic scenarios. The projected values are only estimates to be used as guidelines. You should consult a qualified financial counselor when making decisions about your retirement.

TRADITIONAL ANALYSIS ON RETIREMENT ADEQUACY

The traditional approach to retirement planning assumes a specific earned rate on the assets and single life expectancy. Unfortunately, this ignores the two fundamental risks in retirement: investment and mortality. No one can predict investment earnings over the next month, much less over the next 30 years. Likewise, no one can forecast a date of death with any certainty. A proper retirement analysis should incorporate both of these risks.

Under a traditional approach the following analysis would be done.

6.00% Expected earned rate on assets (based on current mix)

3.00% Expected inflation

30.9 Life expectancy (in years)

\$1,200,000 Initial Asset Balance

\$6,000 Desired Monthly Income

The retirement monthly income will last 62.3 years if it is not adjusted for inflation.

The retirement monthly income will last 22.7 years if it is adjusted for inflation.

\$1,029,198 Assets needed to fund monthly benefits over life expectancy (30.9 years) with no inflation adjustment

\$1,473,756 Assets needed to fund monthly benefits over life expectancy (30.9 years) adjusted for inflation

The asset are sufficient to fund the monthly benefits in retirement only if they are not adjusted for inflation.

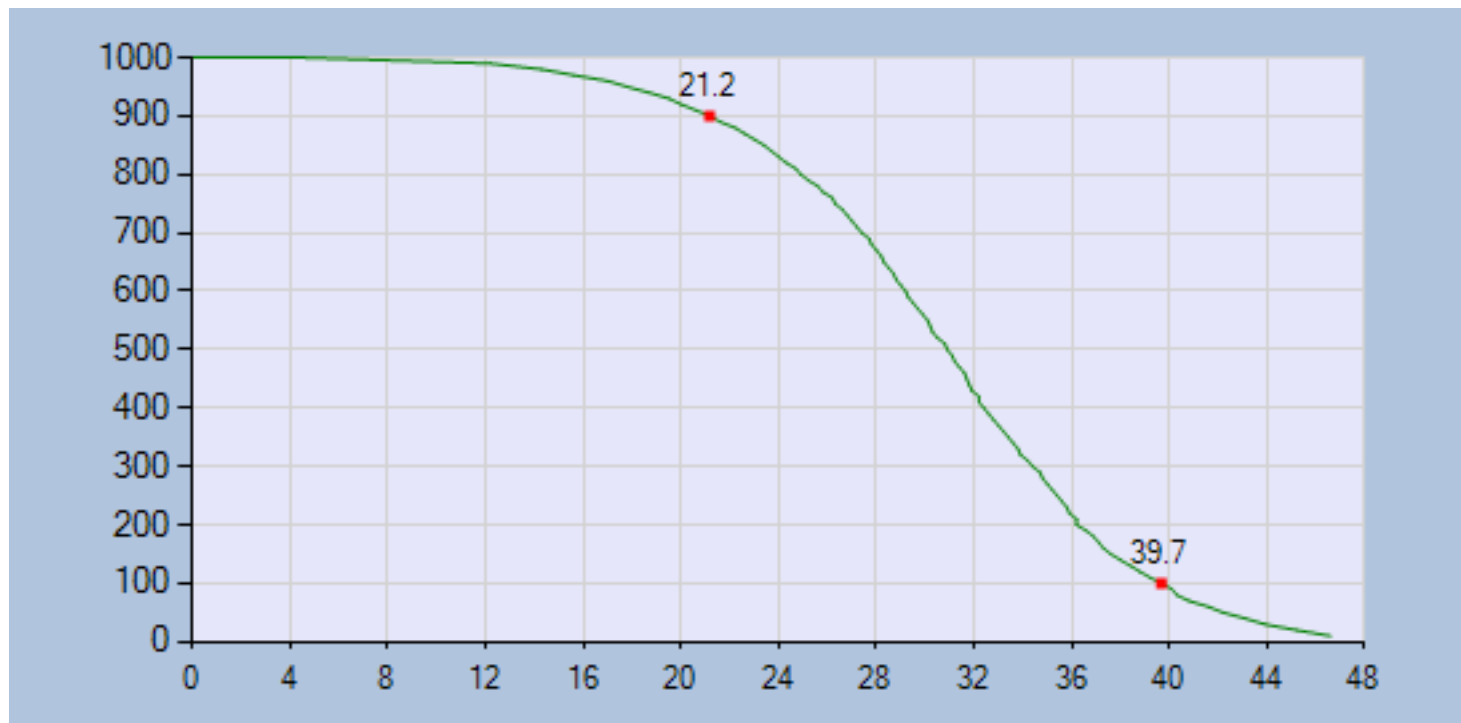
As you can see, the traditional approach is appealing in its simplicity. However, while simple solutions to complex problems are often abundant, they are seldom correct. The following pages will take a more rigorous approach to determine the assets needed to fund your retirement

MORTALITY RISK

The first risk we will analyze is mortality risk. This simply recognizes people do not control when they die. When planning for retirement, it is prudent to consider the risk of living longer than expected.

Retirement income will be needed for as long as either person is alive. Based on a standard mortality table and the information you submitted, retirement income will be needed for 30.9 years. This is only an estimate. As the chart below illustrates, there is much variability in this estimate.

The chart below starts with 1000 lives that match your ages and health statuses. Then using a standard mortality table, the number of couples with at least one still living is projected over many years. As you can see the number of people alive eventually goes to zero.



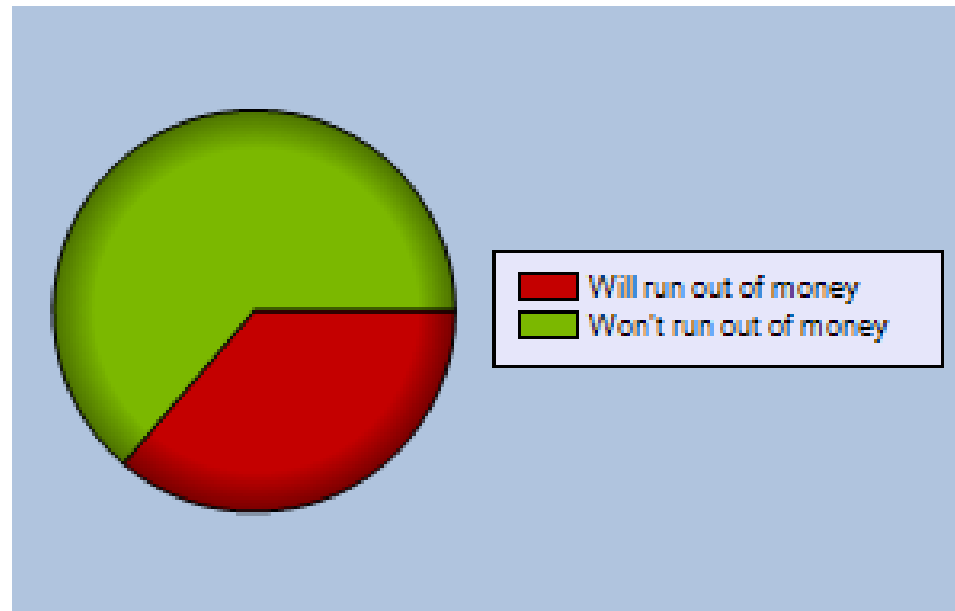
There are two points labeled on the graph. The upper number on the left indicates there is a 10% chance you will need retirement income for less than 21.2 years. The lower number on the right implies there is a 10% chance you will need retirement income for more than 39.7 years. This further illustrates the uncertainty in the amount of time retirement income is needed.

RETIREMENT INCOME RISK

This analysis combines the investment and mortality risk. Many economic scenarios are generated to fully analyze the risk of running out of money during retirement. According to the analysis, there is a 36% chance you will run out of money.

If you do not run out of money, on average you will have 944,000 extra in today's dollars. If you do run out of money, on average you will be without income for 9.2 years.

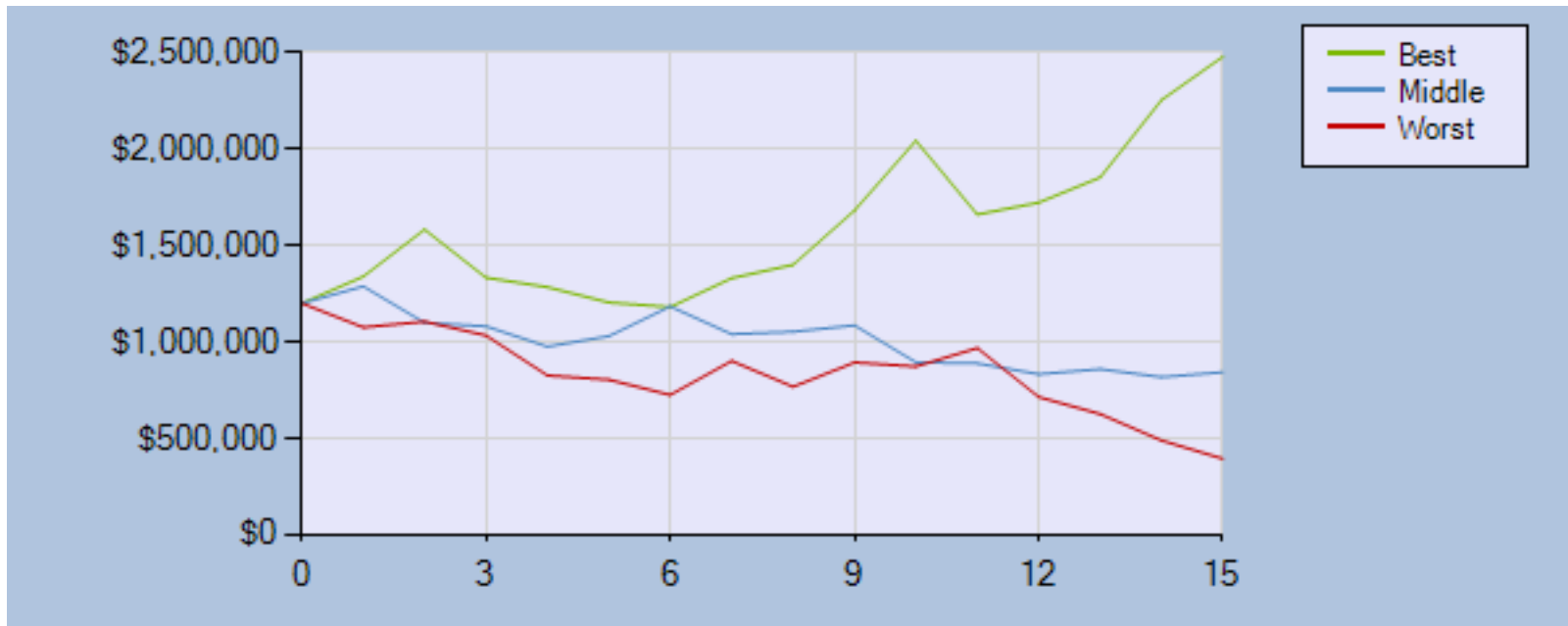
Probability of Running Out of Money



What if you wanted to be more certain the monthly income would last throughout retirement. While no one can guarantee the money will last, you could ensure a 95% probability (i.e. only a 5% chance of running out of money). To do that, you could either increase your starting balance or decrease your monthly income. More specifically, you would need to increase your starting asset balance from \$1,200,000.00 to \$1,795,000 or decrease your monthly income from \$6,000.00 to \$4,015. You could also adjust your asset allocation to improve your retirement position.

SAMPLE FUND BALANCE GRAPH

For illustrative purposes, the graph below shows your retirement asset balance over 15 years under three different scenarios. The three scenarios chosen are the best, middle, and worst. The may give you a better perspective of how your asset balance could evolve over time.



Year	Best	Middle	Worst
0	\$1,200,000	\$1,200,000	\$1,200,000
1	\$1,338,831	\$1,288,021	\$1,075,560
2	\$1,582,492	\$1,098,985	\$1,105,316
3	\$1,332,397	\$1,080,285	\$1,032,791
4	\$1,283,733	\$976,014	\$825,852
5	\$1,204,460	\$1,030,022	\$803,699
6	\$1,180,168	\$1,183,526	\$725,390
7	\$1,330,396	\$1,040,048	\$901,076

Year	Best	Middle	Worst
8	\$1,399,304	\$1,052,613	\$767,280
9	\$1,681,463	\$1,085,905	\$893,701
10	\$2,043,022	\$894,703	\$872,327
11	\$1,660,018	\$888,455	\$968,288
12	\$1,721,966	\$832,929	\$714,432
13	\$1,852,771	\$859,126	\$626,272
14	\$2,253,259	\$817,320	\$488,872
15	\$2,478,549	\$842,587	\$394,005