

# Monte Carlo Simulation

Zephyr AllocationADVISOR: Advanced Financial Strategists, Inc

## Simulation Case

### Sample Case

#### Inputs

|                   |        |
|-------------------|--------|
| Years to Simulate | 40     |
| Trials            | 10,000 |
| Inflation Rate    | 2.30%  |

#### Distribution

|                        |             |               |
|------------------------|-------------|---------------|
| Lognormal Distribution | Mean: 8.00% | StdDev: 6.00% |
|------------------------|-------------|---------------|

#### Values

|                         |             |             |             |           |
|-------------------------|-------------|-------------|-------------|-----------|
| Initial Portfolio Value | \$750,000   |             |             |           |
| Wealth Goal             | \$1,000,000 |             |             |           |
| Probability Targets     | \$5,000,000 | \$3,000,000 | \$2,000,000 | \$500,000 |

#### Flows - Beginning of year

|                                |            |                    |          |               |
|--------------------------------|------------|--------------------|----------|---------------|
| Post-Social Security Withdraws | Withdrawal | Inflation Adjusted | \$60,000 | Years 13 - 40 |
| Pre-Social Security Withdraws  | Withdrawal | Inflation Adjusted | \$80,000 | Years 11 - 12 |

#### Flows - End of year

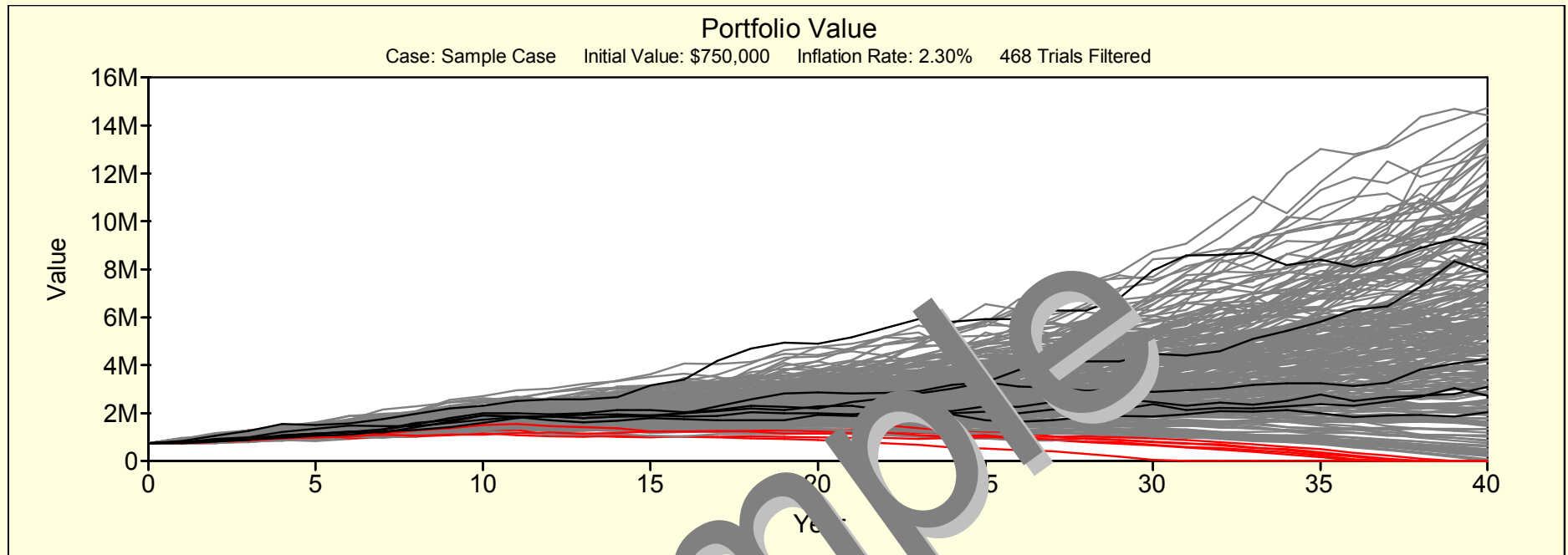
|                        |          |       |          |              |
|------------------------|----------|-------|----------|--------------|
| Pre-Retirement Savings | Deposits | Fixed | \$15,000 | Years 1 - 10 |
|------------------------|----------|-------|----------|--------------|

#### Filter

|               |             |
|---------------|-------------|
| Maximum Value | \$5,000,000 |
|---------------|-------------|

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| Portfolio Value   |                   |             |             |             |             |             |             |              |
|---|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| Case: Sample Case Initial Value: \$750,000 Wealth Goal: \$1,000,000 Inflation Rate: 2.30% 468 Trials Filtered |                   |             |             |             |             |             |             |              |
|   | Simulation Trials |             |             |             |             |             |             |              |
| Portfolio Value   | Year 5            | Year 10     | Year 15     | Year 20     | Year 25     | Year 30     | Year 35     | Year 40      |
| 10th Percentile:  | \$1,361,700       | \$2,000,000 | \$2,000,000 | \$3,459,705 | \$4,481,505 | \$5,880,463 | \$7,898,669 | \$10,844,626 |
| 25th Percentile:  | \$1,269,800       | \$1,700,000 | \$1,700,000 | \$2,917,211 | \$3,649,777 | \$4,685,510 | \$6,026,571 | \$7,951,015  |
| 50th Percentile:  | \$1,173,508       | \$1,794,800 | \$2,022,539 | \$2,379,848 | \$2,829,367 | \$3,380,364 | \$4,095,461 | \$5,067,400  |
| 75th Percentile:  | \$1,084,474       | \$1,611,000 | \$1,712,791 | \$1,893,310 | \$2,096,078 | \$2,312,377 | \$2,521,045 | \$2,817,622  |
| 90th Percentile:  | \$1,012,230       | \$1,400,000 | \$1,460,925 | \$1,518,703 | \$1,517,216 | \$1,467,638 | \$1,304,173 | \$998,801    |
| Flows   |                   |             |             |             |             |             |             |              |
| <u>Post-Social Security Withdraws</u>   |                   |             |             |             |             |             |             |              |
| Average Flow:   |                   |             | (\$84,389)  | (\$94,551)  | (\$105,936) | (\$118,523) | (\$131,178) | (\$143,236)  |
| <u>Pre-Social Security Withdraws</u>  |                   |             |             |             |             |             |             |              |
| Average Flow:   |                   |             |             |             |             |             |             |              |
| <u>Pre-Retirement Savings</u>   |                   |             |             |             |             |             |             |              |
| Average Flow:   | \$15,000          | \$15,000    |             |             |             |             |             |              |

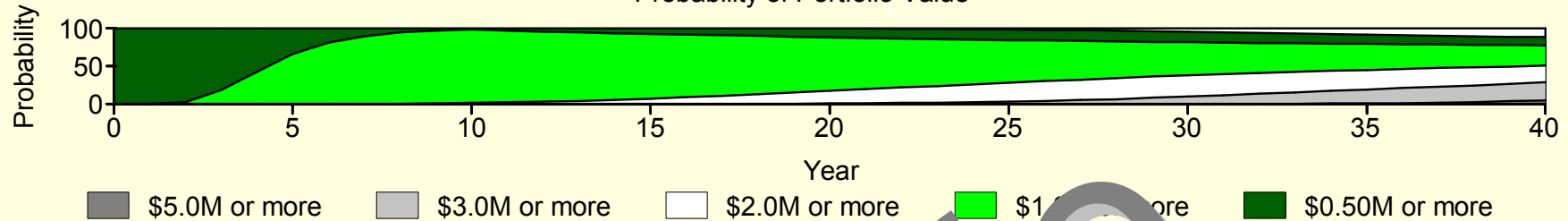
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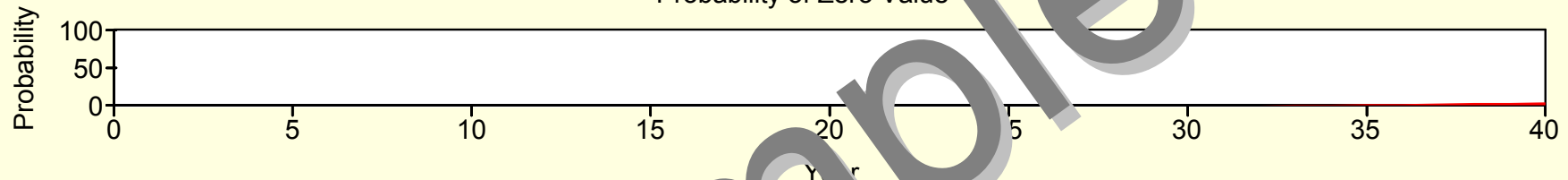
## Simulation Probabilities

Case: Sample Case Initial Value: \$750,000 Wealth Goal: \$1,000,000 Targets inflation adjusted Inflation Rate: 2.30% 468 Trials Filtered

### Probability of Portfolio Value



### Probability of Zero Value



## Simulation Probabilities

Case: Sample Case Initial Value: \$750,000 Wealth Goal: \$1,000,000 Targets inflation adjusted Inflation Rate: 2.30% 468 Trials Filtered

### Portfolio Probabilities

|                            |              | Year 5                       | Year 10     | Year 15     | Year 20     | Year 25     | Year 30     | Year 35     | Year 40     |
|----------------------------|--------------|------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Probability of:            | \$5,000,000  | Inflated Target: \$5,602,000 | \$6,200,000 | \$6,800,000 | \$7,400,000 | \$8,000,000 | \$8,600,000 | \$9,200,000 | \$9,800,000 |
|                            |              | Probability: 0%              | 0%          | 0%          | 0%          | 0%          | 0%          | 1%          | 5%          |
| Probability of:            | \$3,000,000  | Inflated Target: \$3,301,239 | \$3,651,239 | \$4,001,239 | \$4,351,239 | \$4,701,239 | \$5,051,239 | \$5,401,239 | \$5,751,239 |
|                            |              | Probability: 0%              | 0%          | 0%          | 0%          | 3%          | 10%         | 19%         | 28%         |
| Probability of:            | \$2,000,000  | Inflated Target: \$2,200,000 | \$2,400,000 | \$2,600,000 | \$2,800,000 | \$3,000,000 | \$3,200,000 | \$3,400,000 | \$3,600,000 |
|                            |              | Probability: 0%              | 2%          | 7%          | 17%         | 28%         | 38%         | 45%         | 51%         |
| Probability of:            | \$1,000,000  | Inflated Target: \$1,120,413 | \$1,255,325 | \$1,406,483 | \$1,575,842 | \$1,765,594 | \$1,978,195 | \$2,216,395 | \$2,483,278 |
|                            |              | Probability: 66%             | 99%         | 92%         | 88%         | 85%         | 82%         | 80%         | 78%         |
| Probability of:            | \$500,000    | Inflated Target: \$560,207   | \$627,663   | \$703,242   | \$787,921   | \$882,797   | \$989,097   | \$1,108,198 | \$1,241,639 |
|                            |              | Probability: 100%            | 100%        | 100%        | 100%        | 98%         | 96%         | 92%         | 88%         |
| Probability of Zero Value: |              |                              |             |             |             |             |             |             |             |
|                            | Probability: | 0%                           | 0%          | 0%          | 0%          | 0%          | 0%          | 2%          | 4%          |