## Sequence of Returns Study

## Assumptions

Annual returns: S\&P 500, 2000-2019
Starting balance: $\$ 500,000$
Annual distribution: $6 \%(\$ 30,000)$ taken at start of each year
Average 20-year return: 7.6810\%

2000-2019

| Year | Return | Balance |  |
| :--- | :--- | :--- | ---: |
| Starting Balance | $\$$ | 500,000 |  |
| 2000 | $-9.10 \%$ | $\$$ | $454,499.96$ |
| 2001 | $-11.89 \%$ | $\$$ | $374,026.90$ |
| 2002 | $-22.10 \%$ | $\$$ | $267,996.96$ |
| 2003 | $28.68 \%$ | $\$$ | $306,254.48$ |
| 2004 | $10.88 \%$ | $\$$ | $306,310.97$ |
| 2005 | $4.91 \%$ | $\$$ | $289,877.84$ |
| 2006 | $15.79 \%$ | $\$$ | $300,912.55$ |
| 2007 | $5.49 \%$ | $\$$ | $285,785.65$ |
| 2008 | $-37.00 \%$ | $\$$ | $161,144.96$ |
| 2009 | $26.46 \%$ | $\$$ | $165,845.92$ |
| 2010 | $15.06 \%$ | $\$$ | $156,304.31$ |
| 2011 | $2.11 \%$ | $\$$ | $128,969.33$ |
| 2012 | $16.00 \%$ | $\$$ | $114,804.43$ |
| 2013 | $32.39 \%$ | $\$$ | $112,272.58$ |
| 2014 | $13.69 \%$ | $\$$ | $93,535.69$ |
| 2015 | $1.38 \%$ | $\$$ | $64,412.49$ |
| 2016 | $11.93 \%$ | $\$$ | $38,517.90$ |
| 2017 | $21.83 \%$ | $\$$ | $10,377.35$ |
| 2018 | $-4.38 \%$ | $\$$ | $(18,763.17)$ |
| 2019 | $31.49 \%$ | $\$ 84,118.70)$ |  |
| Total Time | Average Return | Ending Balance |  |
| 20 years | $7.6810 \%$ | $\$$ | $(64,118.70)$ |

2019-2000

| Year | Retur | Bolc |  |
| :---: | :---: | :---: | :---: |
| Starting Balance |  | s | 500,000 |
| 2000 | 31.49\% | \$ | 618,003.00 |
| 2001 | ${ }^{-4.38 \%}$ | \$ | 5622488.47 |
| 2002 | 21.33\% | \$ | 648,438.31 |
| 2003 | 11.93\% | \$ | 6992218.00 |
| 2004 | $1.38 \%$ | \$ | 671,356.61 |
| 2005 | 13.9\%\% | \$ | 729,159.33 |
| 2006 | 323\%\% | \$ | 925,615.71 |
| 2007 | 16.0\% | \$ | 1.038.944.22 |
| 2008 | 2.11\% | \$ | 1.038,202.31 |
| 2009 | 15.06\% | \$ | 1,150,832.78 |
| 2010 | 26.46\% | \$ | 1,417,405.14 |
| 2011 | .37.0\% | \$ | 874,065.24 |
| 2012 | 5.49\% | \$ | 890,404.42 |
| 2013 | 15.79\% | \$ | 996,262,27 |
| 2014 | 4.91\% | \$ | 1.013,75.75 |
| 2015 | 10.88\% | \$ | 1.090,732.94 |
| 2016 | 28.68\% | \$ | 1.364,951.15 |
| 2017 | -22.10\% | \$ | 1.039,926.94 |
| 2018 | -11.89\% | \$ | 889,84,633 |
| 2019 | 9.10\% | \$ | 781,600.59 |
| tal Iime | Average Return |  | 9 Balance |
| 20 years | 7.6810\% | s | 781,600.59 |
|  |  |  |  |
| erence: \$845,719.28 |  |  |  |

The opinions voiced in this material are for general information only and are not intended to provide specific advice or recommendations for any individual. All performance referenced is historical and is no guarantee of future results. All indices are unmanaged and may not be invested into directly.

S\&P 500 Index is a capitalization weighted index of 500 stocks designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.

Investing involves risk including loss of principal. No strategy assures success or protects against loss.

