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## Sequence of Returns Risk

## In our video entitled, "Sequence of Returns Risk," Hans and Tom review this part of Income Planning.



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## S\&P 500 Large Cap Index - 1925-Present



## Don't let a down market change your retirement plans.

You work hard to accumulate assets to meet your retirement income needs, and you want to make sure they are protected from market volatility.

However, most people don't consider how the timing of market volatility can impact them as they are saving for retirement as well as once they start to take income in retirement.

## Market Volatility While You're Accumulating Assets

The chart demonstrates what a hypothetical $\$ 100,000$ would grow to after 25 years.

The two charts use the same set of annual returns, the only difference is the order of the returns has been reversed between the two to show the effects of strong early returns compared to negative early returns.

Scenario Results

- Same average annual return
- Same ending value over \$693,824


## Favorable Sequence of Returns

Strong returns in the early years

4

| 42 |
| :---: |
| 43 |
| 4 |
| 4 |


|  |
| :---: |
| 46 |


| 48 |
| ---: |
| 4 |


| 50 |
| ---: |
| 51 |


| 5 |
| :---: |
| 53 |
| 54 |


| 54 |
| :---: |
| 55 |
| 56 |
| 57 |
| 58 |
| 59 |
| 60 |
| 61 |
| 62 |
| 63 |
| 64 |



Balance

$$
\begin{aligned}
& \text { Annual } \\
& \text { Return }
\end{aligned}
$$

$\square$

| $2 \%$ | $\$ 102,000$ |
| :---: | :---: |
| $26 \%$ | $\$ 128,520$ |
| $15 \%$ | $\$ 147,798$ |


| $15 \%$ | $\$ 147,798$ |
| :---: | :---: |
| $2 \%$ | $\$ 150,754$ |
| $12 \%$ | $\$ 168,844$ |
| $27 \%$ | $\$ 214,432$ |

17\%

| $26 \%$ | $\$ 316,116$ |
| :---: | :---: |
| $4 \%$ | $\$ 328,76$ |



| $7 \%$ | $\$ 351,774$ |
| :---: | :---: |
| $-2 \%$ | $\$ 344,739$ |
| $34 \%$ | $\$ 461,950$ |
| $20 \%$ | $\$ 554,340$ |


| $31 \%$ | $\$ 726,185$ |
| :---: | :---: |
| $27 \%$ | $\$ 922,255$ |
| $20 \%$ | $\$ 1,106,706$ |
| $-10 \%$ | $\$ 996,036$ |
| $-13 \%$ | $\$ 866,551$ |
| $-23 \%$ | $\$ 667,244$ |
| $26 \%$ | $\$ 840,728$ |
| $9 \%$ | $\$ 916,393$ |
| $3 \%$ | $\$ 943,885$ |
| $14 \%$ | $\$ 1,076,029$ |
| $4 \%$ | $\$ 1,119,070$ |
| $-38 \%$ | $\$ 693,824$ |



| Unfavorable <br> Sequence of Returns <br> Weak returns in the <br> early years |  |
| :---: | :---: |
| Annual <br> Return | Balance |
| $-38 \%$ | $\$ 62,000$ |
| $4 \%$ | $\$ 64,480$ |
| $14 \%$ | $\$ 73,507$ |
| $3 \%$ | $\$ 75,712$ |
| $9 \%$ | $\$ 82,527$ |
| $26 \%$ | $\$ 103,983$ |
| $-23 \%$ | $\$ 80,067$ |
| $-13 \%$ | $\$ 69,659$ |
| $-10 \%$ | $\$ 62,693$ |
| $20 \%$ | $\$ 75,231$ |
| $27 \%$ | $\$ 95,544$ |
| $31 \%$ | $\$ 125,162$ |
| $20 \%$ | $\$ 150,195$ |
| $34 \%$ | $\$ 201,261$ |
| $-2 \%$ | $\$ 197,235$ |
| $7 \%$ | $\$ 211,042$ |
| $4 \%$ | $\$ 219,484$ |
| $26 \%$ | $\$ 276,549$ |
| $17 \%$ | $\$ 323,563$ |
| $27 \%$ | $\$ 410,925$ |
| $12 \%$ | $\$ 460,236$ |
| $2 \%$ | $\$ 469,440$ |
| $15 \%$ | $\$ 539,856$ |
| $26 \%$ | $\$ 680,219$ |
| $2 \%$ | $\$ 693,824$ |
| $8.00 \%$ |  |
|  |  |

The timing of negative market returns can have short term impacts as you are saving for retirement, but as you can see, the timing is less impactful over the long term.

## Market Volatility as You're Taking Income

This next example shows a totally different story once you begin taking income.

This chart shows a hypothetical account balance of $\$ 693,824$ at retirement with $\$ 35,000$ in income being withdrawn each year. Similar to the first scenario, we reversed the order of the market returns.


- Same average annual return
- Drastically different balance with one running out of money

| Age |
| :---: |
| 65 |
| 66 |
| 67 |
| 68 |
| 69 |
| 70 |
| 71 |
| 72 |
| 73 |
| 74 |
| 75 |
| 76 |
| 77 |
| 78 |
| 79 |
| 80 |
| 81 |
| 82 |
| 83 |
| 84 |
| 85 |
| 86 |
| 87 |
| 88 |
| 89 |


| Average |
| :---: |
| Annual |
| Return |

Favorable Sequence of Returns
Strong returns in the early years

| Annual <br> Return | Balance |
| :---: | :---: |
| $2 \%$ | $\$ 672,000$ |
| $26 \%$ | $\$ 802,620$ |
| $15 \%$ | $\$ 882,763$ |
| $2 \%$ | $\$ 864,718$ |
| $12 \%$ | $\$ 929,284$ |
| $27 \%$ | $\$ 1,135,741$ |
| $17 \%$ | $\$ 1,287,867$ |
| $26 \%$ | $\$ 1,578,613$ |
| $4 \%$ | $\$ 1,605,357$ |
| $7 \%$ | $\$ 1,680,282$ |
| $-2 \%$ | $\$ 1,612,377$ |
| $34 \%$ | $\$ 2,113,685$ |
| $20 \%$ | $\$ 2,494,422$ |
| $31 \%$ | $\$ 3,221,842$ |
| $27 \%$ | $\$ 4,047,290$ |
| $20 \%$ | $\$ 4,814,748$ |
| $-10 \%$ | $\$ 4,301,773$ |
| $-13 \%$ | $\$ 3,712,092$ |
| $-23 \%$ | $\$ 2,831,361$ |
| $26 \%$ | $\$ 3,523,415$ |
| $9 \%$ | $\$ 3,802,372$ |
| $3 \%$ | $\$ 3,880,393$ |
| $14 \%$ | $\$ 4,383,749$ |
| $4 \%$ | $\$ 4,522,699$ |
| $-38 \%$ | $\$ 2,782,373$ |



Unfavorable Sequence of Returns
Weak returns in the early years

| $\begin{array}{l}\text { Annual } \\ \text { Return }\end{array}$ | Balance |
| :--- | :--- |


| $-38 \%$ | $\$ 408,47$ |
| :---: | :---: |
| $4 \%$ | $\$ 388,40$ |


| $4 \%$ | $\$ 388,409$ |
| :---: | :---: |
| $14 \%$ | $\$ 402,887$ |
| $3 \%$ | $\$ 378,923$ |
|  | $\$ 37,876$ |


| $9 \%$ | $\$ 374,876$ |
| :---: | :---: |
| $26 \%$ | $\$ 428,244$ |
| $-23 \%$ | $\$ 302,798$ |


| $-13 \%$ | $\$ 232,98$ |
| :---: | :---: |
| $-10 \%$ | $\$ 178,186$ |


| $20 \%$ | $\$ 171,823$ |
| :--- | :--- |
| $27 \%$ | $\$ 173,765$ |
| $31 \%$ | $\$ 181,783$ |


| $31 \%$ | $\$ 181,783$ |
| :--- | :--- |
| $20 \%$ | $\$ 176,139$ |
| $34 \%$ | $\$ 189,126$ |


| $-2 \%$ | $\$ 151,044$ |
| :---: | :---: |
| $7 \%$ | $\$ 124,167$ |


| $4 \%$ | $\$ 92,734$ |
| :---: | :---: |
| $26 \%$ | $\$ 72,744$ |
| $17 \%$ | $\$ 44,161$ |
| $27 \%$ | $\$ 11,634$ |
| $12 \%$ | - |
| $2 \%$ | - |
| $15 \%$ | - |
| $26 \%$ | - |
| $2 \%$ | - |

### 8.00\%

Make sure your long-term retirement strategy includes solutions designed to help protect you from the impact of negative market returns when you start taking income.

