Analyzing Retirement Portfolio Survival over the Past 98 Years

Craig L. Israelsen, Ph.D.
Financial Planning Program
Utah Valley University

Email: craig@7TwelvePortfolio.com

Website: www.7TwelvePortfolio.com

Will my portfolio balance decline during retirement?

Will I run out of money in retirement?

From 1926 to 2023 (98 years) there have been 74 rolling 25-year periods.

The first 25-year period was 1926-1950, the second from 1927-1951, and so on. The 74th 25-year period was from 1999-2023.

Let's assume that each of those rolling periods represents a 25-year retirement "window" for 74 different retirees (say, from age of 73 to 98). Each retiree withdraws money from their portfolio at the end of each year.

We will now analyze sequence-of-returns risk by studying historical outcomes over 74 rolling 25-year periods using actual index performance data. The results being reported are NOT from a Monte Carlo simulation.

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Historical evidence suggests that a retirement portfolio can GROW over time!
These results assume that the retiree stayed in the portfolio and didn't bail out during scary periods.

How Often Was a Retirement Portfolio Larger Than the Starting Balance After 25 Years of Withdrawals?

Overall Asset Allocation	Sub Allocations	RMD From age 73-98	4% Annual Withdrawal	5% Annual Withdrawal
60% Equity 40% Fixed	40% Large Stock 20% Small Stock 30% Bonds 10% Cash	82.4%	100%	95.9%

Analysis of 74 rolling 25-year periods from 1926 to 2023

Large-cap US stock was represented by the S&P 500 Index.

Small-cap US stock was represented by the Ibbotson Small Companies Index from 1926-1978 and the Russell 2000 Index from 1979-2023.

U.S. bond returns were represented by SBBI US Intermediate Government Bonds from 1926-1975 and the Bloomberg Aggregate Bond Index from 1976-2023.

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Assumed portfolio cost was 125 bps

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40% Equity 60% Fixed	25% Large Stock 15% Small Stock 45% Bonds 15% Cash	**43.2%**	**98.6%**	**91.9%**
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80% Equity 20% Fixed	50% Large Stock 30% Small Stock 15% Bonds 5% Cash	**93.2%**	**100%**	**100%**

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As expected, asset allocation makes a difference.

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How Often Was a Retirement Portfolio Totally Depleted After 25 Years of Withdrawals?

Overall Asset Allocation	Sub Allocations	RMD From age 73-97	4% Annual Withdrawal	5% Annual Withdrawal
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Reasonable %-based withdrawals don't kill a portfolio.

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Indexes Used in Retirement Portfolio Calculations

1926-2023

- ***Large-cap US equity*** *represented by the* ***S&P 500 Index*** *from 1926-2023.*
- ***Small-cap US equity*** *represented by the Ibbotson Small Companies Index from 1926-1978 and the* ***Russell 2000 Index*** *from 1979-2023.*
- ***U.S. Bonds*** *represented by SBBI US Intermediate Government Bonds from 1926-1975 and the Bloomberg* ***Aggregate Bond Index*** *from 1976-2023.*
- ***Cash*** *represented by 3-month* ***Treasury Bills*** *from 1926-2023.*

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* Social Security monthly benefit
* Other income (earned, annuity, etc.)
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<u>Retirement "Capital" can ACCUMULATE</u>

Let's now spend a few minutes examining retirement portfolios in a "live" spreadsheet tool.

We can also examine (historically) this idea of "Accumulated Retirement Capital".

This particular spreadsheet tool is called the "Retirement Portfolio Analyzer" (RPA).

The RPA is a spreadsheet that I have built and continue to refine.

Questions?

Feel free to email me: Craig Israelsen

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