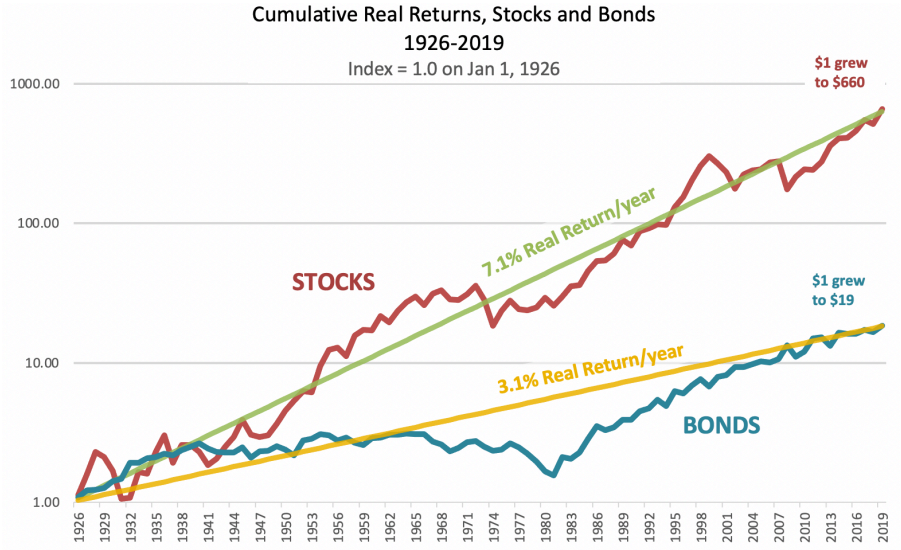
Real Returns for Stock and Bonds

This is a plot of cumulative, real (inflation-adjusted) returns for Stocks and Bonds from 1926 through 2019. I plot cumulative returns, indexed from January 1, 1926, on a semi-log scale. This means the slope of the line between any two points is a rate of return. A horizontal line drawn between two points on a plot line is 0% cumulative return. An upward slope is positive return; a steeper slope means a greater return rate. A downward slope is negative return.



The expected return rate — the average annual compound return rate over 93 years — for stocks is 7.1%. The expected return rate for bonds 3.1%. The expected return for stocks is 2.3 times that of bonds (7.1%/3.1%).

Compounding of returns over time magnifies the difference in return rate. Due to compounding, stocks double in spending power in about 10 years. Bonds double in about 23 years. In the 93 years since January 1, 1926, $1 in stocks grew to $660 in spending power; that's the effect of ~9.3 doublings. $1 invested in bonds grew to $19; that's the effect of ~4.2 doublings. You'd have 35 times more to spend from each $1 invested in stocks as opposed to bonds.

We retirees focus on the bad things that can happen in the future, and in *Nest Egg Care* I use the most horrible sequence of stock and bond returns as the basis for a retirement plan. Both stocks and bonds have had long periods 0% cumulative returns. The three worst periods for stocks — each lasting about 15 years — were 1928-1943, 1968-1983, 1999-2013; within each of those periods, there was a two or three-year period when stocks declined in by at least 40% in spending power. The worst period for bonds was ~50 year (!) run of 0% cumulative return from 1934 to 1983; within that period, bonds declined by almost 40% from 1976 to 1982.

The unusual period for bonds ran from their nadir of cumulative return in 1981 to 2009. The slope of a line between those two years is steeper for bonds than for stocks. That means bonds outperformed stocks over that long period.

Data source: Stock, Bonds, Bills and Inflation (SBBI Yearbook). Ibbotson et. al. The latest yearbook I can access is the 2017 yearbook (data through 2016). I used Index Returns r the three years thereafter. I use returns for Large Company Stocks and Long-Term US Government Bonds, which is the most widely published record of bond returns.

Tom Canfield. September 4, 2020.