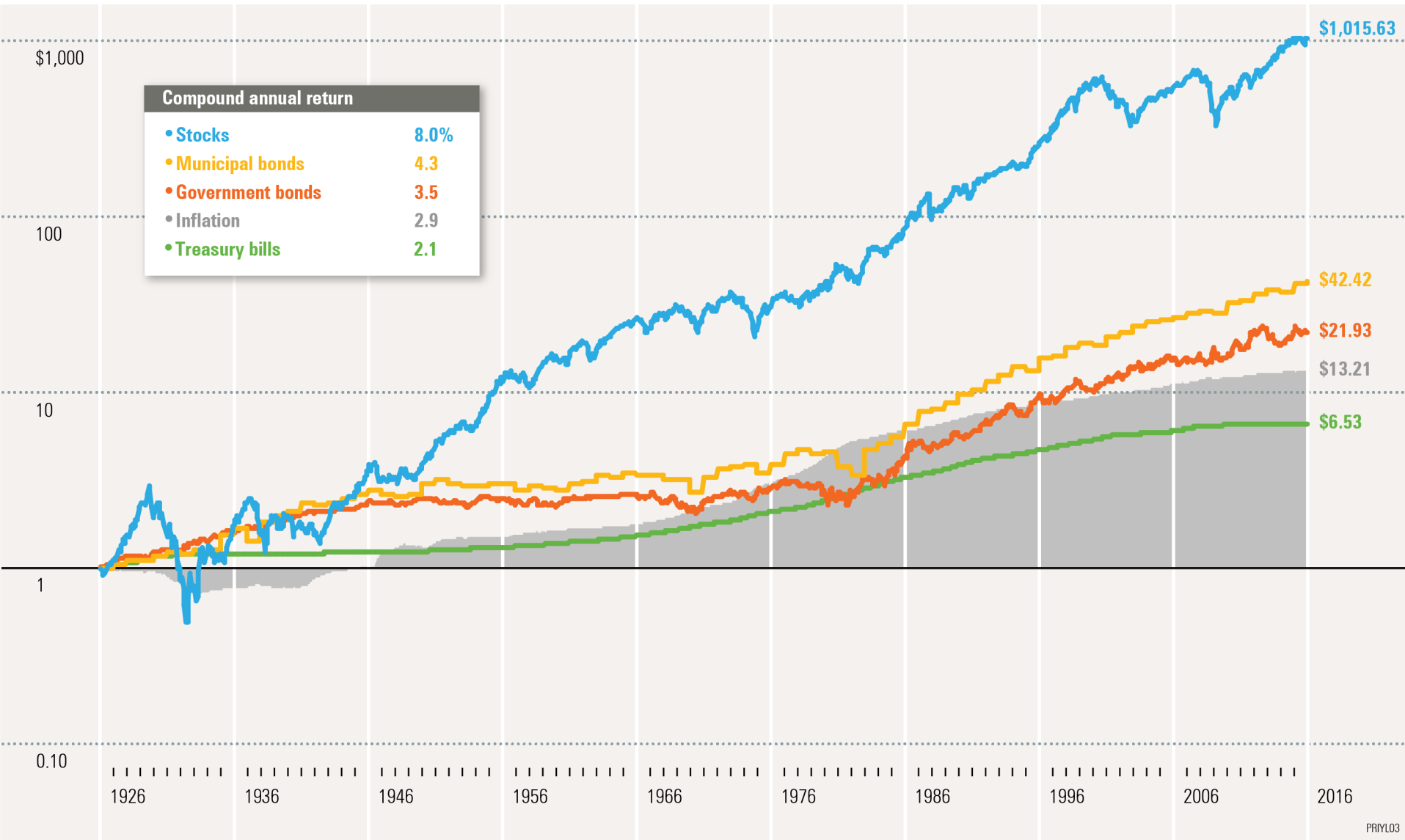


Ibbotson® SBBI® After Taxes 1926–2015



Past performance is no guarantee of future results. Hypothetical value of \$1 invested at the beginning of 1926, with taxes paid monthly. No capital gains taxes are assumed for municipal bonds. This is for illustrative purposes only and not indicative of any investment. An investment cannot be made directly in an index. Assumes reinvestment of income and no transaction costs. © Morningstar. All Rights Reserved.

Ibbotson® SBBI® After Taxes

1926–2015

Federal income tax is calculated using the historical marginal and capital gains tax rates for a single taxpayer earning \$110,000 in 2010 dollars. This annual income is adjusted using the Consumer Price Index in order to obtain the corresponding income level for each year. Income is taxed at the appropriate federal income tax rate as it occurs. When realized, capital gains are calculated assuming the appropriate capital gains rates. The holding period for capital gains tax calculation is assumed to be five years for stocks, while government bonds are held until replaced in the index. No capital gains taxes on municipal bonds are assumed. No state income taxes are included.

Stocks are represented by the Ibbotson® Large Company Stock Index. Municipal bonds are represented by 20-year prime issues from Salomon Brothers' Analytical Record of Yields and Yield Spreads for 1926 -1985 and Mergent's Bond Record thereafter. Government bonds are represented by the 20-year U.S. government bond, inflation by the Consumer Price Index, and Treasury bills by the 30-day U.S. Treasury bill. An investment cannot be made directly in an index.

Ibbotson® SBBI® After Taxes 1926 -2014

Taxes can have a dramatic effect on an investment portfolio. Stocks are one of the few asset classes that have provided significant after-tax growth over time. This image illustrates the hypothetical growth of inflation and a \$1 investment in stocks, municipal bonds, government bonds, and Treasury bills after taxes over the time period January 1, 1926, through December 31, 2014.

Over the long run, the adverse effect of taxes on investment returns becomes especially pronounced. Stocks are the only asset class depicted that provided any significant long-term growth. After considering taxes, government bonds barely outperformed inflation over this time period. Municipal bonds (for which income is exempt from federal income taxes) outperformed government bonds but significantly underperformed stocks. In a world with taxes, focusing on fixed-income assets alone has not provided investors with a substantial increase in wealth.

If you desire substantial after-tax growth, you may want to consider a larger allocation to stocks. Another alternative, if you are able, is to consider tax-deferred investment vehicles.

Ibbotson® SBBI® After Taxes

1926–2015

Government bonds and Treasury bills are guaranteed by the full faith and credit of the U.S. government as to the timely payment of principal and interest, while stocks and municipal bonds are not guaranteed. Stocks have been more volatile than the other asset classes. Municipal bonds may be subject to the alternative minimum tax (AMT) and state or local taxes, and federal taxes would apply to any capital gains distributions.

About the data

Federal income tax is calculated using the historical marginal and capital gains tax rates for a single taxpayer earning \$110,000 in 2010 dollars every year. This annual income is adjusted using the Consumer Price Index in order to obtain the corresponding income level for each year. Income is taxed at the appropriate federal income tax rate as it occurs. When realized, capital gains are calculated assuming the appropriate capital gains rates. The holding period for capital gains tax calculation is assumed to be five years for stocks, while government bonds are held until replaced in the index. No capital gains taxes on municipal bonds are assumed. No state income taxes are included.

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