

Seventy Years of Data Suggest a Startling Conclusion

In Focus

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The common stock is one of the most loved - and the most hated - of investments. From about 1982 - 2000, the common stock was on a tear as interest rates dropped, the U.S. became more productive, the boomers grew up and the Internet matured. People could not get enough of not just any common stock, but as the rally progressed they wanted increasing amounts of those which were either egregiously expensive or those which made no money but showed promise. Since 2000, the common stock has generally fallen out of favor.

One measure of the change from bullish to bearish can be seen in the book by James K. Glassman, Dow 36,000, published in 2000 (when the Dow Jones Industrial Average reached 10,000) and in his new book, Safety Net. Dow 36,000 was a cheerleader for the prior decade that soon ended in ruin. Safety Net is a cheerleader for the 2000's. The former was wildly optimistic - and clearly wrong. The latter is quite pessimistic - and also wrong? The jury is still out on the results of Glassman's new conversion. But one thing is clear. The data show a vastly different and far more consistent picture than either of Glassman's bi-polar books describe.

The Trinity Study

The Trinity Study analyzed annual data collected by Ibbotson and Associates covering the period 1926-1995. These data span 41 rolling 30-year periods. A rolling period advances from year to year. Therefore, the first rolling period of the study began in 1926 and ended in 1955, the second from 1927 through 1956 and the third from 1928 through 1957. The Trinity Study analyzed portfolio results over 15, 20, 25 and 30 year periods; we chose to report the 30 year results as they best approximate the outer bounds of a 65-year old retiree's life.

The Take Away

- A portfolio of at least 75% common stocks provides a solid 4%-5% annual withdrawal plus 3% COLA over 30 years AND offers the best chance of a sizeable remainder for heirs.
- Safety increases and volatility decreases if the initial lump sum retirement purchase is made at modest market valuations, not in already highly valued markets.
- Active investment management is a must for those who retire near long term market peaks, as it may soon be necessary to invest far more defensively to protect capital from serious loss.

The Trinity Study answers these two questions in the affirmative:

- 1) Is an investment portfolio safe?
- 2) Will a portfolio support substantial withdrawals over 30 years?

It also arrived at two conclusions, both of which show that relying on a portfolio composed mainly of common stocks for retirement income is viable.

Conclusion 1

The optimum inflation-adjusted withdrawal rate from a retirement portfolio is between 4% and 5% a year.

The study found that there was a positive balance left after 30 years in 39 of the 41 periods at a 4% annual withdrawal and in 35 of the 41 periods at a 5% annual withdrawal. (See Table 1 below for the remainder balances). Looking more deeply into the data, the study found that the “success” rate could have been increased to 100% if a person had avoided investing in stocks for the five years, 1926 - 1930. There are two reasons for this:

- 1) Stocks became overvalued in 1928, mandating that they be avoided.
- 2) The Great Depression and World War II both caused common stock prices to fall or languish for half of the 30-year periods from 1926 and 1927.

Valuation matters – it matters a lot. But valuation was not the only culprit for those retirees in 1926 and 1927. A failing economy in the 1930’s and World War II in the 1940’s combined to rob the common stock portfolio of its ability to sustain over 30 years. Is the 1926 - 1930 scenario repeating again for retirees in the 1996 - 2000 period?

Conclusion 2

It may not be enough for many retirees to know that their investment plan succeeds by leaving a balance. Perhaps they want to know just how much would be left. The Trinity Study presented average, maximum and minimum balances left after withdrawals over 30 years from a beginning balance of \$1,000 in three portfolios:

1. Portfolio 1 - 75% stocks and 25% bonds
2. Portfolio 2 - 50% stocks and 50% bonds
3. Portfolio 3 – 25% stocks and 75% bonds

A portfolio of 100% stocks was not analyzed. The study period was from 1926 through 1995 and included the Great Depression and World War II. The data were not inflation-adjusted. The following table presents the results.

There are two things of great interest in this table. First, the greater the proportion of stocks, the greater the mean remainder (terminal) value, but the greater the variability between minimum, mean and maximum. This is not surprising, as stocks are more naturally volatile than bonds. If at least the mean performance can be maintained, there will be a nice balance at the end of 30 years.

Second, there were significant differences in the remainder value of \$1,000 between the three portfolios. Although the higher bond allocations permitted greater withdrawals (looking only at the minimum result), they left lower balances. This result is explained by the higher, but more volatile, returns of common stocks.

Table 1: Ending Period Balances Based on The Trinity Study

Remaining Values of a \$1,000 Contribution Held 30 Years After Annual Withdrawals at 4% and 5%						
Balances:	Portfolio 1 (75% S / 25% B)		Portfolio 2 (50% S / 50% B)		Portfolio 3 (25% S / 75% B)	
	4%	5%	4%	5%	4%	5%
Mean	\$ 7,367	\$ 5,779	\$5,171	\$3,936	\$2,645	\$1,724
Maximum	\$16,983	\$14,980	\$8,423	\$7,212	\$5,407	\$3,451
Minimum	\$ 1,497	\$ 0	\$2,151	\$ 870	\$1,428	\$ 729

Source: Adaptation Table 4, *The Trinity Study Tables*. <http://www.retirement-ncome.net/trintable4.htm>

The study data suggest that a person whose advisor can manage a portfolio of at least 75% common stocks will likely have a much greater remainder account balance than the retiree whose advisor uses less than 75% common stocks. What correction should be done to the data to make them inflation-adjusted and thus more comparable to the discussion in Conclusion 1?

Using the Rule of 72 (a rough calculation for the time value of money) and an historical inflation rate of 3%, inflation would reduce the 30-year remainder balances by about half. Thus, a \$14,000 remainder balance can be roughly estimated to be \$7,000 after inflation and so on.

Note that the data used a diversified portfolio of common stocks. The portfolio contained, in addition to industrial and financial stocks, those of real estate investment trusts and commodity producers. Perhaps this great flexibility and inclusiveness was responsible for the outstanding performance achieved.

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