

Stock Market Returns By Presidential Term

This document provides background information about the statistics presented in the OpEd “Capitalism and Skepticism” by Christopher Carroll.

The data on stock market performance are updated from data provided on Robert Shiller’s web page, http://www.econ.yale.edu/~shiller/data/ie_data.htm downloaded on 2008-09-16, which contains data originally constructed for his invaluable book *Irrational Exuberance* (Shiller (2000), ‘IE’ for short).

Shiller provides data for the closing price of the stock market index on the last day of the month for every month until July 2008. The S&P composite data for dividends (necessary for computing the real return) begin in 1926, which determines the time period for my estimates.¹ I have updated Shiller’s dataset using data from <http://finance.yahoo.com/> for the S&P 500 index end-of-month closing value (series GSPC) for August. I have updated Shiller’s CPI number for August to reflect the latest data from the Bureau of Economic Analysis, <http://www.bls.gov/news.release/cpi.t01.htm>.

If the nominal value of the stock index price at the end of month t is P_t and the price deflator is Π , then the real price level is $\mathcal{P}_t = P_t/\Pi_t$. Using $p = \log \mathcal{P}$ for the logarithm of the real price, the real capital gain for month t is

$$\Delta p_t = p_t - p_{t-1}, \quad (1)$$

and since there are 12 months in the year, at an annual rate this is

$$\Delta p_t^{ann} = 12(\Delta p_t). \quad (2)$$

The total return on the stock market is the sum of what is obtained from the capital gain or loss, and what is obtained from the receipt of dividends. If dividends are d_t , the logarithmic total return is given by

$$r_t = \log \left(\frac{p_t + d_t}{p_t} \right) \quad (3)$$

and the annualized return is

$$r_t^{ann} = 12(r_t). \quad (4)$$

¹IE, second edition, page 231, footnote 3.

An indicator variable \mathcal{G} (short for “GOP”) is equal to one in a given month if the President during that month was a Republican, and zero otherwise. The average annual rate of return during a Republican presidential month is therefore the sample average return minus the average value of $\mathcal{G}_t r_t$. The average return over an entire Presidential term of four years is four times the average annual return, $4\mathcal{G}_t r_t^{ann}$, and the cumulative Republican deficiency per term comes to about 0.158, the source of the statistic in the article that performance has been about 16 percentage points less for Republican terms. (This takes care of prorating partial terms like Richard Nixon’s).

Another way economists measure stock market performance is by the “excess return” that would be earned by having money invested in the stock market, over what could be earned by leaving the money in the bank. Designating the risk-free monthly interest rate as ι_t , the excess return is

$$x_t = \log(P_t/P_{t-1}) - \iota_t \tag{5}$$

and again the annualized version is $x_t^{ann} = 12x_t$ while the amount per Presidential term is $4x_t^{ann}$.² Republicans perform even worse using excess returns than using raw returns: The deficiency is about 27 percent per President.

The raw data underlying these calculations are available in the file `Stock>ReturnsByMonth.xls`, which gives the returns for every month in the sample. The average annual real returns (`rrealann`) and excess returns (`xrshrtann`) for each President’s term are available in `Stock>ReturnsForEachPresidentsTerm.xls`; an approximation to the returns per Presidential term can be obtained by weighting these returns by the length of each person’s Presidency.

For a more detailed comparison of the comparative performance of Republican and Democratic presidents, see the piece by in the top journal in academic finance (appropriately, the *Journal of Finance*) by Santa-Clara and Valkanov (2003); also, see the lucid description of their article by var (2003). They find that the fact is robust to a variety of alternative definitions of returns, and examine several potential explanations (none of which works).

See also the excellent piece by Michael Kinsley, cited in the OpEd.

²For the period since 1934 (when the data first become available), I use the yield on three month Treasury bills as my measure of the riskfree nominal rate. Before 1934, I use the CRSP interbank rate.

References

(2003): “Which Party in the White House Means Good Times for Investors?,” New York Times, November 20.

SANTA-CLARA, PEDRO, AND ROSSEN I. VALKANOV (2003): “The Presidential Puzzle: Political Cycles and the Stock Market,” Journal of Finance, 58, 1841–1872.

SHILLER, ROBERT J. (2000): Irrational Exuberance. Doubleday.