

Why Liberals Should Enthusiastically Support Social Security Personal Accounts¹

KONSTANTIN MAGIN

iberals have been suspicious of Social Security personal accounts (aka "privatization") in part because conservatives proposed the reforms.

This is misguided.

I invite them to step back and consider the political economy and the financial economics afresh. If they do, they will likely become enthusiastic supporters of properly-structured Social Security personal accounts.

First, the finance: roughly half of Americans have little or no stock market investments either directly or indirectly through pensions. This is too bad, because in the long run, U.S. stocks have remarkably high returns (about 6.6 percent

Konstantin Magin is a lecturer at the University of California, Berkeley Department of Economics. His primary research field is financial economics. He co-authored several articles with Brad DeLong on the equity risk premium and financial bubbles.

per year even after adjusting for inflation). And, although liberals fear that these returns come at too high a risk, I will show here that that just isn't so. Private Social Security accounts invested in long-run diversified equity portfolios promise substantial increases in the lifetime wealth of middle- and working-class Americans, at low risk.

Second, the political economy: the Greenspan Commission recommended the partial prefunding of Social Security by accumulating a large positive balance in the Social Security Trust Fund. The problem has been that the government has since proven that it can't be trusted to save money. What it saves in one hand, it spends with the other. Kent Smetters and others have shown that Social Security surpluses have been roughly offset dollar-for-dollar by on-budget deficits. Politics makes prefunding effectively impossible

inside a government-run retirement system. The system has remained pay-as-you-go with only the pretense of internal government bookkeeping claiming otherwise. This experience suggests giving private accounts another look.

EQUITY RISK AND RETURN

A\$1000 invested at 6.6 percent real return, the historical return for stocks, will yield \$3,800 in twenty years and \$6,800 in thirty years. These returns are much higher than the existing pay-as-you-go social security system promises. The question though is: how much long-run risk is associated with diversified equity investments?

Investment manager Edgar L. Smith wrote an *Atlantic Monthly* article in 1924 and a subsequent book showing that there had been negligible long run risk associated with diversified equity

Economists' Voice December, 2007

© The Berkeley Electronic Press

Brought to you by | University of California - Berkeley
Authenticated | 169.229.32.136 -1Download Date | 11/16/12 8:20 PM

portfolios and predicted the same in the future. Subsequent historical returns have borne this out.

Since 1945, the longest it has taken for a diversified stock portfolio to recover its initial value is our current episode—from 2000 to the present. Why so? Three reasons. First, the average return of equities is high. Second, the law of averages means that over a long period your average return is likely to be close to the population mean even if low returns one year do not make high returns the following year more likely. Third, stock prices have substantial mean reversion as documented by two great teams of economists—Eugene Fama & Kenneth French and Jim Poterba & Larry Summers-which means that a significant fall in prices is likely to be followed by a significant rise. Even without considering this mean reversion, I will show that the long-run risk is low.

One yardstick of the long term risk of an equity portfolio is to ask how much it should cost an investor to "insure" his or her portfolio against loss. Such insurance is equivalent to buying a put option that allows you to sell your portfolio for its initial value, even if it has fallen in value. Fisher Black and Myron Scholes got a

Nobel prize for figuring out just how much such a put option should cost.

Consider investing \$1 in an index fund tracking the S&P Composite. The historical return on this portfolio since 1870 is roughly lognormally distributed with mean real return of 6.6 percent per year and with a long-run variance that grows linearly, increasing by 0.01 with every year. Given this history, how likely is it that the initial investment will more than double over twenty years? 86 percent. How likely is the portfolio to lose value in real terms? Only 0.4 percent! Over a 30-year holding period, the probability that the initial investment will more than double climbs to 98 percent; the chance that the portfolio falls in value is a mere 0.06 percent The full thirty-year distribution given historical return patterns is shown in Figure 1 (see next page).

Diversified long-term investments in stocks largely insure themselves. But suppose you wanted to be absolutely protected against loss. What do Fisher Black and Myron Scholes say such protection should cost?

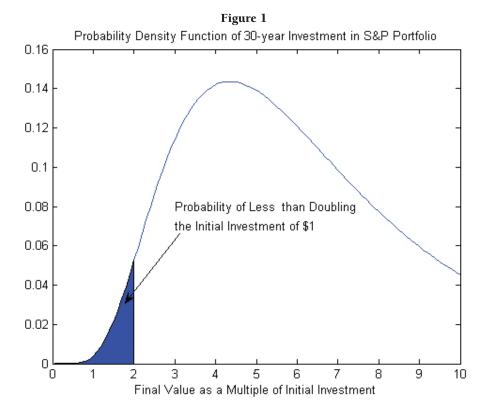
The cost of insurance should be only 8.5% of the original investment, assuming a risk-free real rate equal to 1% (the historical average) and a 30 year holding period. If we use the current risk free rate on 10 year Treasuries, roughly 2%, the cost falls to only 2.7% of the initial investment. The cost of insurance falls over longer holding periods, which would be appropriate if we were considering a person in his 20s or 30s putting money in a private social security account.

Of course, such insurance does not exist, but these figures still provide an intuitive way to value the cost of the risk borne. The fact that the value of this put option (insurance) is low gives us a metric for how important a consideration it is. Things that are cheap are, by definition, not very valuable. Hence adding a guarantee against the possibility of a decline in real value of a long-term equity portfolio is not very valuable.

These premia seem inconsequential when compared with the 98% chance that a diversified portfolio will more-than double in 30 years and the 48.62% percent chance that it will increase by 500% or more.

One cautionary note is that these calculations all assume that investments are made in well diversified portfolios that move with the overall market. Those worried about risk are justified in requiring that private accounts be invested in such portfolios.

Economists' Voice December, 2007



is no guarantee of future results. But history remains our best guide.

Thoughtful economists on both the left and the right should support—indeed, should be enthusiabout—Social astic Security "privatization." On the right, economists should be enthusiastic because Social Security privatization limits government power and enhances individual choice. On the left, economists should be enthusiastic because private accounts invested in diversified

portfolios of equities promise extremely high returns at extremely low risk. The poorer half of Americans deserve to enjoy the benefits of these investments that make the wealthier half wealthier still.

Letters commenting on this piece or others may be submitted at submit.cgi?context=ev.

NOTE

1. I'm very grateful to Brad DeLong for his very helpful comments and suggestions that made this work possible.

REFERENCES AND FURTHER READING

Black, Fisher and Myron Scholes (1973) "The Pricing of Options and Corporate Liabilities," Journal of Political Economy, 81(3):637–54.

Fama, Eugene F. and Kenneth R. French (1988) "Permanent and Temporary Components of Stock Prices," Journal of Political Economy, 96(2):246–73.

Guiso, Luigi, Michael Haliassos, and Tulio Jappelli (2003) "Household Stockholding in Europe: Where Do We Stand and Where Do We Go?" Economic Policy, 18(36):123–70. (Reporting that half of American households do not have equity investments either direct or indirect.)

CONCLUSION

The high average returns and low long-run risks of diversified investments in stocks are historical facts. To be sure, past performance

Brought to you by | University of California - Berkeley
Authenticated | 169.229.32.136 -3Download Date | 11/16/12 8:20 PM

Economists' Voice December, 2007

Poterba, James M. and Lawrence H. Summers (1988) "Mean Reversion in Stock Prices," Journal of Financial Economics, 22(1):27–59.

Siegel, Jeremy (2007) "The Future for Investors," Yahoo Finance, March 28.

http://finance.yahoo.com/print/expert/article/futureinvest/27711.

Siegel, Jeremy (2002) *Stocks for the Long Run*, 2nd ed. New York: McGraw-Hill.

Siegel, Jeremy (1995) "The Nifty-Fifty Revisited: Do Growth Stocks Ultimately Justify Their Price?" The Journal of Portfolio Management, 21(4):8–20.

Smetters, Kent (2003) "Is the Social Security Fund Worth Anything?" NBER Working Paper 9845. http://www.nber.org/papers/w9845.

Smith, Edgar L. (1924) *Common Stocks as Long Term Investments*. New York: Macmillan.



Brought to you by | University of California - Berkeley
Authenticated | 169.229.32.136 -4Download Date | 11/16/12 8:20 PM

Economists' Voice December, 2007