

From: Andrew G. Biggs, Social Security Analyst, The Cato Institute; former staff member, President's Commission to Strengthen Social Security.

To: Those Interested in Social Security Reform

Date: July 23, 2002

Re.: Personal accounts in a down market

Recent declines in stock values have prompted many opponents of personal retirement accounts to claim vindication. A falling stock market, they argue, shows that only a traditional government-run, defined benefit Social Security program can provide adequate retirement security. As Senate Majority Leader Tom Daschle (D-SD) put it on July 12:

"After what's happened in the stock market the last few weeks, we think it's a terrible idea...Imagine if you were retiring this week, with most major stock indexes hitting five-year lows."

Moreover, many claim that rising stock values during the 1990s were the fuel behind public support for personal accounts. If so, a declining market would presumably dampen enthusiasm for reform.¹

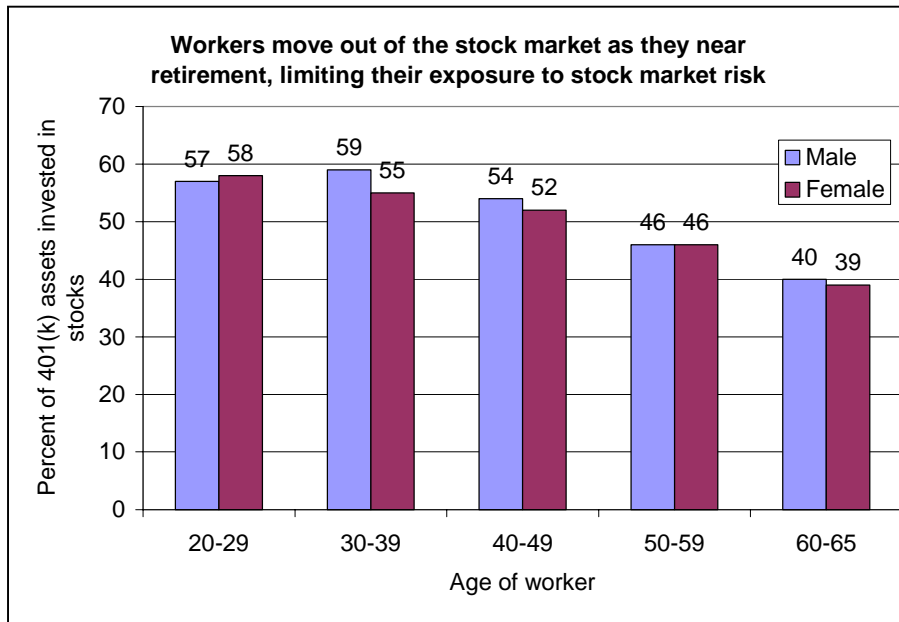
The purpose of this memo is to outline the issues that would face workers with personal accounts retiring today, or in any other down market. The evidence will show that long-term market investment, while hardly risk-free, bears little resemblance to the "meltdown" scenarios painted by many account opponents.

Personal account opponents implicitly assume that workers with accounts would be short-term investors without any non-stock diversification. In fact, neither is the case. In the real world, the combination of diversification and long time horizons reduces the risks that a short-term market drop could substantially impact workers' retirement incomes.

The strength in diversification

Financial advisors recommend that investors move from a predominantly stock-based portfolio when they are young to fixed-income investments such as bonds as they near retirement. A common rule of thumb is that the percentage of stocks in a worker's portfolio should equal "100 minus your age," such that a 20-year-old would begin his working life with 80 percent of his savings going into stocks and retire at 65 with just 35 percent in equities.

¹ Most polling, however, indicates that this is not the case. Personal control over retirement savings is the primary reason the public supports personal accounts; higher returns and increased retirement benefits appear to play lesser roles. Moreover, overall public support for personal accounts remains high in most polls.

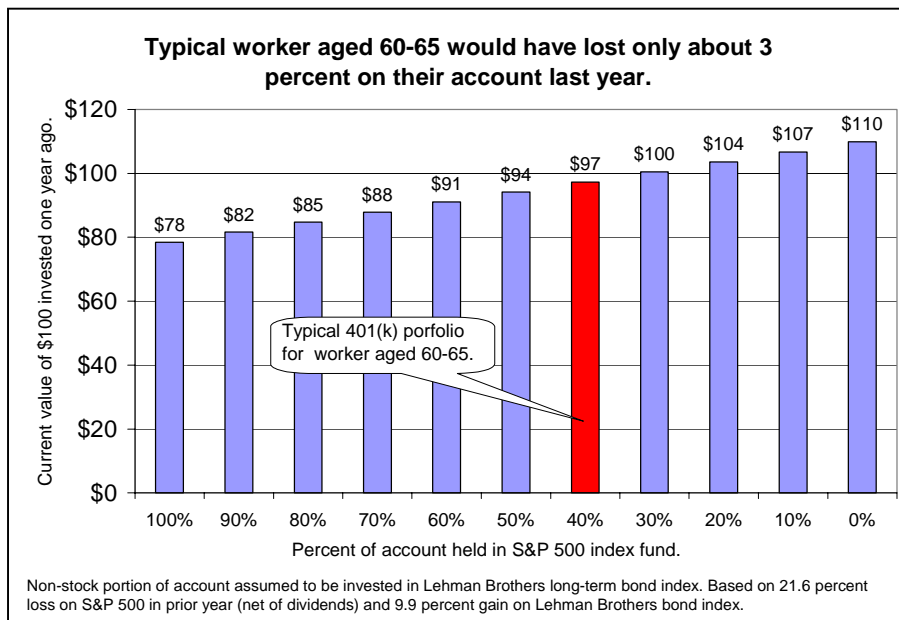


Statistics from 401(k) plans show that most workers stick reasonably close to these guidelines. The average worker aged 60-65 years old keeps about 40 percent of his 401(k) assets invested in stocks and 60 percent invested in fixed-income assets such as bonds. A younger worker, by contrast, reverses the mix to 60-40 in favor of stocks.²

To illustrate the impact of life cycle investing, imagine a 65-year-old average-wage worker retiring today. One year ago he had \$100,000 in his personal account, allocated 40 percent to stocks and 60 percent for bonds. What would his account be worth today?

Believe it or not, despite truly awful stock market returns in the past year, his account balance would be virtually unchanged. The loss of 21.6 percent on the stock portion of his portfolio would be almost matched by the 9.9 percent gain on the larger bond portion, for a total year-end loss of just 3.25 percent.

In other words, if he had started the year with \$100,000 in his account, he would have ended with \$97,288. This loss would reduce his monthly retirement income by only around \$15.



Moreover, a typical low-income worker aged 60-65 has only 23 percent of his 401(k) invested in equities. *This low-income worker would have made money last year, earning a return of 2.6 percent as*

² Robert L. Clark, Gordon P. Goodfellow, Sylvester J. Schieber, and Drew A. Warwick, "Making the Most of 401(k) Plans: Who's Choosing What and Why," in ed. Olivia S. Mitchell, P. Brett Hammond, and Anna M. Rappaport, *Forecasting Retirement Needs and Retirement Wealth* (Philadelphia: University of Pennsylvania Press, 2000), pp. 95-138.

gains from the bonds in his portfolio outweighed losses in the stock market.

Any investor prefers to make money than to lose it. But these results show that even the poor stock market results of the past year would have had only a small impact on a typical worker holding a personal retirement account.

Stocks for the Long Run

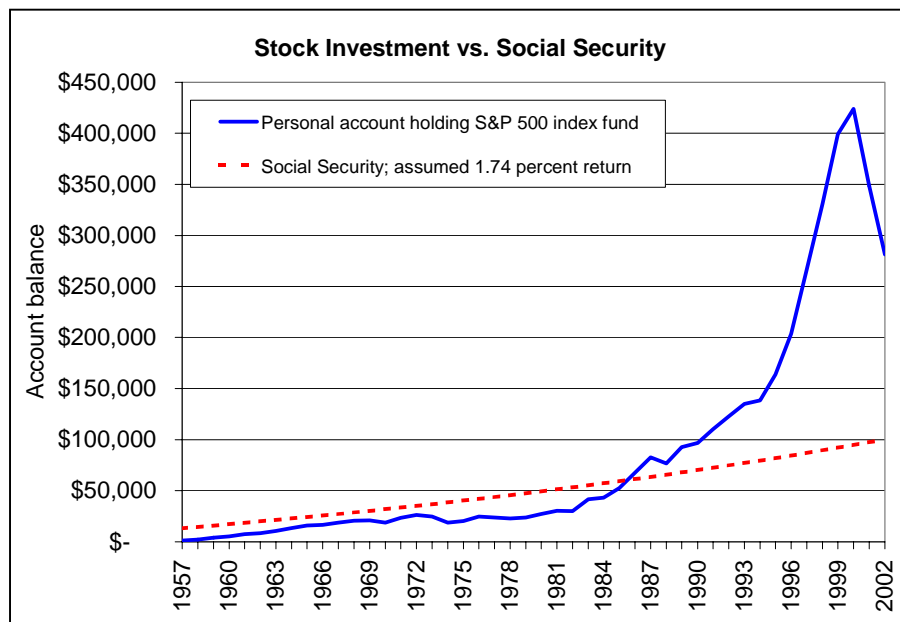
Of course, what really matters for personal accounts isn't how they would have performed over the last year, or over any single year. For retirement investment, what matters is where you start and where you end up. What happens in between is much less important. Retirement investing is about the long run, and over the long run stocks have been remarkably safe investments.

As noted above, most workers diversify their investments between stocks and bonds, moving out of equities as they approach retirement. Personal account opponents, however, often assume that workers have their entire account invested in stocks, maximizing their risk in the event of a market decline.

If that's what account opponents insist on, let's see what it would mean.

The accompanying chart uses a male worker earning the average annual wage of \$35,000 and retiring in 2002. It assumes that he deposited 3 percentage points of his wages into a personal account investing only in the S&P 500 stock index. Compared to this is the notional "wealth" he would have accumulated from putting the same amount of money into the current system.³

The return from Social Security is assumed to be 1.74 percent annually above inflation. This is the return the Social Security Administration projects that a single male retiring today can expect



from his Social Security payroll taxes. This estimate includes all retirement, survivors and disability benefits.

As the chart shows, even with the recent stock market decline, a worker investing only in stocks would receive benefits 2.8 times higher than had he "invested" the same amount of money in the current program.

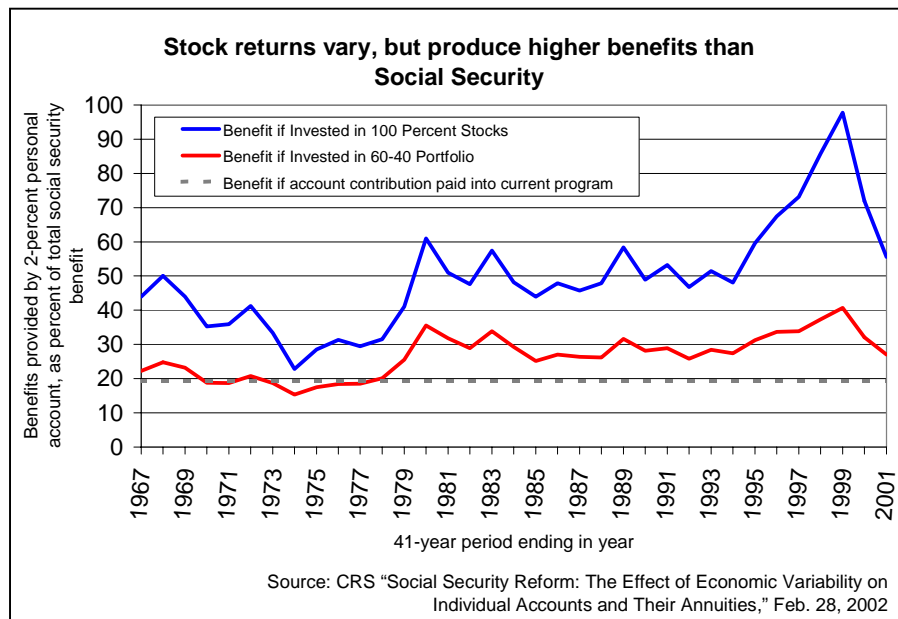
Put another way, the recent decline in stock prices means the worker's

³ This notion of Social Security wealth is helpful in comparing the monthly retirement benefits the current system could produce relative to personal accounts. However, contributions to Social Security do not produce wealth in a conventional sense. Unlike a personal account, a worker could not pass on the money paid into Social Security, nor does he have legal ownership or control over it.

personal account would be worth the same today as it was worth in 1997. But that worker's Social Security "savings" would be worth today only what the personal account was worth in the late-1980s. It would take a much larger decline than the one we have seen for a personal account to be a worse "deal" than the current program.

Some might argue that under reform plans from the President's Commission, personal accounts must earn higher returns for a worker with an account to receive increased total retirement benefits. That is true: the Commission's three reform models assume benefit offset interest rates of 3.5, 2, 2.5 percent, respectively, rather than the 1.74 percent rate utilized in the chart. Nevertheless, even with the highest offset interest rate of 3.5 percent, a worker retiring today would have more than double the money in his account needed to break even.

The Congressional Research Service took a more wide-ranging look at the issue of market risk and personal retirement accounts. The following chart shows the results. The gray dotted line represents the percentage of total Social Security benefits provided by 2 percentage points of payroll taxes paid into the system. The blue and red lines show the percentage of total benefits that could be paid if that



same 2 percentage points of payroll had been invested in a personal account holding either 100 percent stocks or 60 percent stocks-40 percent bonds. Any time the personal account line is above the Social Security line, a worker retiring in that year would have been better off with a personal account than by remaining in the current system.

As you can see, for workers retiring before the late 1970s, Social Security provided about

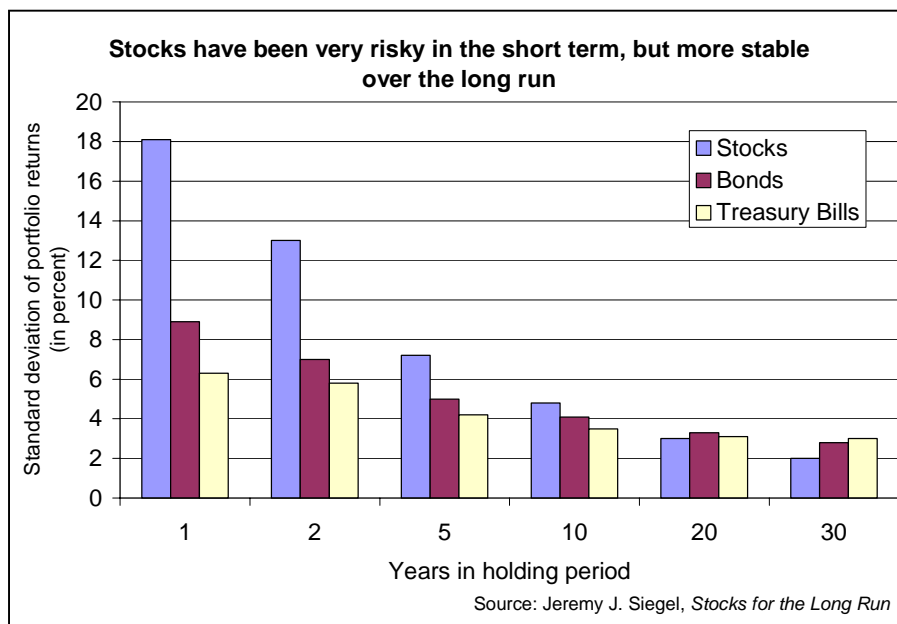
as good a deal as a 60-40 portfolio. Partly this is because stock returns during that period were relatively weak and partly because Social Security paid higher returns in earlier years. While low market returns in the future are possible, the current Social Security program can never again pay returns similar to those received during the 1970s and before.

From the late 1970s onward, no individual – including individuals retiring today – would have been worse off with a personal account than by remaining in the current program. *All workers would have received higher benefits by investing in personal accounts, even if their account contained a high proportion of bonds, and many workers would have received much higher benefits.*

Long-Run Market Risk

Another way to consider stock market risk is to compare the variations in returns over various holding periods. The following chart, adapted from *Stocks For the Long Run* by Wharton School finance professor Jeremy Siegel, shows the standard deviation of returns for stocks, bonds and treasury bills held for different periods of time. The standard deviation measures how much individual instances tend to vary from the average for its group. (If a sample had a standard deviation of zero, for instance, it would mean that every value in the group was exactly the same.)

In the short run, the standard deviation of stock returns is very high, showing that that stocks have indeed been very risky. The return in one year could be very different from the return in another year. Fixed income investments, by contrast, have lower standard deviations and hence



lower risk.

Over the long term, however, the standard deviation of stock returns has fallen. That is to say, the return from holding stocks for, say, 20 years does not vary so much, regardless of which 20 year period of American history you chose. For 30-year periods, the standard deviation of returns is lower still.

Moreover, for long holding periods the

standard deviation of stock returns is actually lower than for bonds or treasury bills. That is to say, in a certain sense at least, stocks were *less* risky over the long term than bonds.

Worst-Case Scenarios

Personal account opponents are quick to point that that while stocks have high *average* returns,

The promise of guaranteed protection against poverty cannot be “averaged out” if some people feast on the rewards of a rich stock account while others cannot afford to eat. Social Security is supposed to be there for everyone, regardless of whether they have good luck or know how to manage investments.⁴

Hence, reform opponents are justified in demanding we look not just at the average returns available from personal accounts but how people would fare if they experienced low returns over their lifetimes.

⁴ Hans Riemer, Campaign for America’s Future/2030 Center, testimony before the President’s Commission to Strengthen Social Security, October 18, 2001

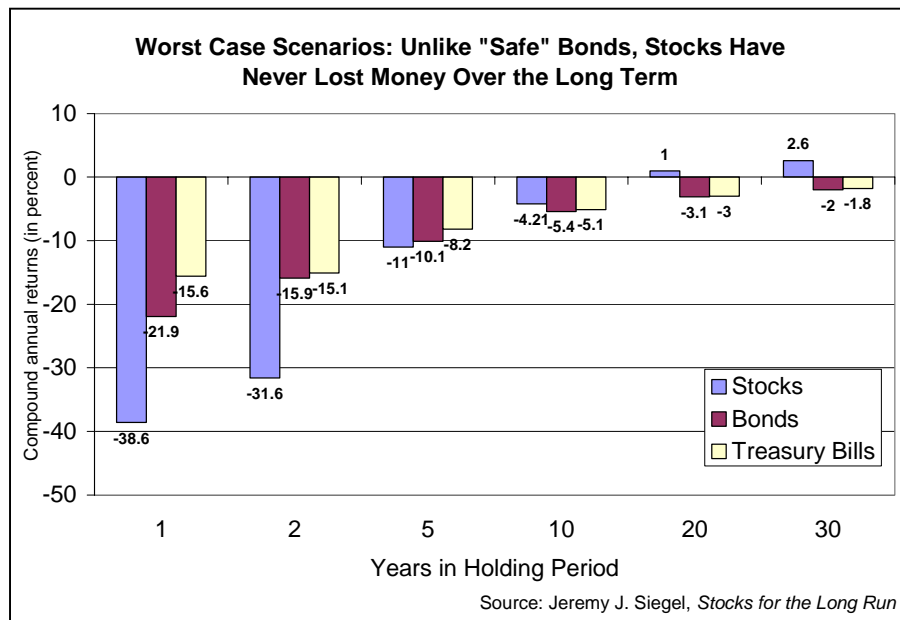
Another way to look at stock investment for personal accounts, then, is to look at the extremes. If you had a personal account and received below-average returns on your investments, how badly would you have fared?

As expected, stocks have often produced large losses in the short term. For instance, over single-year holding periods, the worst performance from stocks in American history was a loss of 38.6 percent. The worst-case for bonds in a single year was a loss of 21.9 percent, for Treasury bills a loss of 15.6 percent.

Over the long term, however, annual gains and losses offset each other. When stocks are held for 10 years, the largest lost was 4.2 percent. Over 20 years or more, stocks have never failed to

produce positive returns, with the worst annual return being 1 percent. Over 30 years, the worst annual return from stocks was a gain of 2.6 percent after inflation.

Bonds actually produced lower worst-case returns over then long run than stocks. The worst 30-year return from bonds was an annual loss of 2 percent; for Treasury bills, a loss of 1.8 percent.



The Brookings Institution's Gary

Burtless simulated personal accounts using historical stock and bond market returns, as if reform had taken place in 1871. Using slightly different methodology, Burtless found that the average worker with a personal account invested solely in stocks would have earned a 6.03 percent annual rate of return on his account (after counting inflation). The worst average return would have been 1.54 percent after inflation, for a worker retiring in 1921. Fully 75 percent of workers would have received annual returns exceeding 5 percent, and 25 percent would have received returns above 7.75 percent annually.

Even a worker retiring in 1933, when the Great Depression had dragged the stock market to its lowest, would still have received a 4 percent average annual return, over twice what today's average worker can expect from Social Security.

Conclusion

Yes, the stock market is risky. Not nearly as risky as Social Security reform opponents claim, but risky nonetheless, and individuals should bear this risk in mind when making investment decisions.

But the hysterical reactions of personal account opponents to stock market declines are wholly overblown. Most workers nearing retirement would have relatively little exposure to stock market risk. Most workers who did have large proportions of their accounts invested in stocks

would be young, with many years to make for today's losses in value. Even workers invested entirely in stocks and retiring precisely when the market had fallen would still have received higher returns than the current Social Security program can produce.

Moreover, experience shows that workers can invest their assets wisely to account for stock market risk. In the 1980s and 1990s, millions of new investors entered the market as employers shifted from traditional defined benefit pensions to employee-controlled defined contribution accounts. Many of these new investors had little experience with stock or bonds, but data shows that generally they have made reasonable decisions on how to allocate their assets as they aged.

Just as importantly, personal accounts give workers the opportunity to stay out of the stock market entirely if they so choose. They could invest only in corporate or government bonds and still receive higher benefits than by staying in the current program. This stands in contrast to plans in which the government itself would invest the Social Security trust fund in the stock market. Not only would this open the fund to political manipulation, but it would make workers and retirees subject to stock market risk, whether they desired it or not.

Personal accounts are voluntary: no worker would be forced to choose one. Moreover, no worker with a personal account would be forced to invest even a penny in the stock market. Given the relative safety of long-run diversified market investment, there is little reason why individual workers should not be allowed to choose.