

Estimate of Risk of Privatized Social Security Should be based on Far More Information than Just Historical Stock and Bond Returns

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Abstract: All of the explanations for the equity premium puzzle I have seen in the literature are based on the demand side; trying to find utility functions for a representative investor, and ex-ante probability distributions for returns, that would explain investors demanding such high average returns for stocks relative to bonds. I suggest a supply side explanation: The long run supply curve for corporate stock may simply be extremely long and flat, and consistently about 5 ½ percentage points in return higher than the premium bonds supply curve, even at stock quantities as high as the entire national savings rate. Why? I posit that stock might simply allow a firm to create more wealth with an investment dollar than bonds, and this is because of the flexibility of stock. Firms are able to invest in high return long run projects when they raise money with stock that they sometimes cannot when money is raised from bonds due to the short run constraints of having to make interest payments and satisfy bond covenants. In addition, firm managers may just stubbornly refuse to use more than a small historically stable proportion of debt financing even with a large equity premium, as debt increases their personal risk. The article also discusses other aspects regarding the risk and return of potential privatized social security stock accounts.

Konstantin Magin, in his article, "Why Liberals Should Enthusiastically Support Social Security Personal Accounts" (Magin, 2007), uses data on the past returns of a highly diversified stock portfolio going back to 1870 to support the argument that such a portfolio is of reasonably low long run risk, and much higher expected return than U.S. government bonds. The stock portfolio has a 6.6% historical average real return, while the historical average real return on 1 year U.S. Government bonds was only 1.03%.¹

It has certainly been noticed by economists that historically, going back even as far as 200 years, U.S. stocks have greatly outperformed U.S. government (as well as private) bonds, even, it seems to many, when adjusting for their risk.² This is called in the field, "the Equity Premium Puzzle". Although this phenomenon has persisted with notable stability for at least 200 years³,

¹ In data compiled by Yale Economist Robert Shiller from 1871 to 2004, available at: <http://www.econ.yale.edu/~shiller/data.htm>.

² For a detailed exposition with U.S. asset data from 1802-2001, see Siegel, 2002.

³ Ibid.

there is still not a strong consensus among economists that the premium on stocks has, in fact, been excessive given the ex-ante risk.

But even if we assume that stocks have greatly outperformed U.S. government bonds in *risk-adjusted* returns historically, can we expect this to continue, especially if we privatize social security? Dr. Magin notes, "To be sure, past performance is no guarantee of future results.", but then he follows with a statement that I think has great potential to mislead, "But history remains our best guide."

It is a cornerstone of statistics, and logical, that the more information is *correctly* incorporated in a forecast, the more accurate (on average) that forecast will be. It would not make sense to only base a forecast as important as this one on past data, and not even all substantially relevant past data, only past data on stock and bond returns.

There is a great deal of additional information we can add to our forecast to make it more accurate – information on economics and human behavior, information on how the present is different from the past, and how we can expect the future to be different from the present. A key specific in this regard is that if social security is privatized, causing trillions in additional stock buying every decade, this will be a huge break from the past.

There will be a substantial increase in the demand for stocks. As we know from basic economics, *all other things equal*, when demand increases, price *usually* increases. What we could see happen with stocks is that once a plan privatizing stocks is approved, stock prices will increase substantially in anticipation of all of the buying that will occur. Several months later, once the program gets up and running, citizens will be buying stocks for their social security accounts at inflated prices.

If the price of a share of a company goes up only because of a demand increase, where nothing at all has improved in that companies future earnings, then you are essentially paying a higher price, *for no higher a stream of future earnings*, which means that the return on the price you paid has gone down. So, when demand increases from a move to stock accounts instead of social security checks, we would expect returns on stocks to decrease over what they were in the past when there weren't trillions of dollars demanding stocks for social security accounts. However, note that at the beginning of this paragraph I said that, "price *usually* increases", emphasizing the word "usually". There are exceptions, especially over the long run. For example, when demand for VCRs increased in the 1980s, it allowed for greater scale in manufacturing, and a *decrease* in price over the long run.

All of the explanations for the equity premium puzzle I have seen in the literature are based on the demand side; trying to find utility functions for a representative investor, and ex-ante probability distributions for returns, that would explain investors demanding such high average returns for stocks relative to bonds, rather than bidding those returns down. But I suggest a supply side explanation (not to be confused with the academically discredited "supply side 'economics'", which is analogous to alchemy⁴). The long run supply curve for corporate stock may simply be extremely long and flat, and consistently about 5 ½ percentage points in return higher than the premium bonds supply curve, even at stock quantities as high as the entire national savings rate.

Why would this be? I posit that stock might simply allow a firm to create more wealth with an investment dollar than bonds, and this is because of the flexibility of stock. Firms are able to invest in high return long run projects when they raise money with stock that they sometimes cannot when money is raised from bonds due to the short run constraints of having to make interest payments and satisfy bond covenants.

With stock the firm has greater flexibility to take large projects which may make little or no money for years, which may even lose money for years, but which *overall* will be very high return due to long run profits. There are many areas where short run constraints (often undue ones) greatly decrease optimization. This is true of business. It's true of politics, and it's also true of academia (unfortunately, very true.).

Warren Buffet, arguably the most successful investor in history, constantly attributes his success to unusual efforts and willingness to avoid short term constraints, so that he can choose the projects, within companies he controls, and in buying stock, that offer the highest NPV (overall gain considering everything relevant, not just short and medium run profits). For example, in discussing his use of insurance company funds rather than debt to finance projects, he writes in his Berkshire Hathaway statement of business principles, "...they are liabilities without covenants or due dates attached to them. In effect, they give us the benefit of debt — an ability to have more assets working for us — but saddle us with none of its drawbacks."⁵.

If my supply side hypothesis is true, or true to a large enough extent, then we could expect to continue to see stock returns outperform bond returns by large margins over the long run, but this hypothesis has not yet been explored in the literature.

⁴ For a well written de-bunking, accessible to laymen, see Krugman, 1994.

⁵ Berkshire Hathaway Owner Related Business Principles, #7, page 3, at <http://www.berkshirehathaway.com/ownman.pdf>.

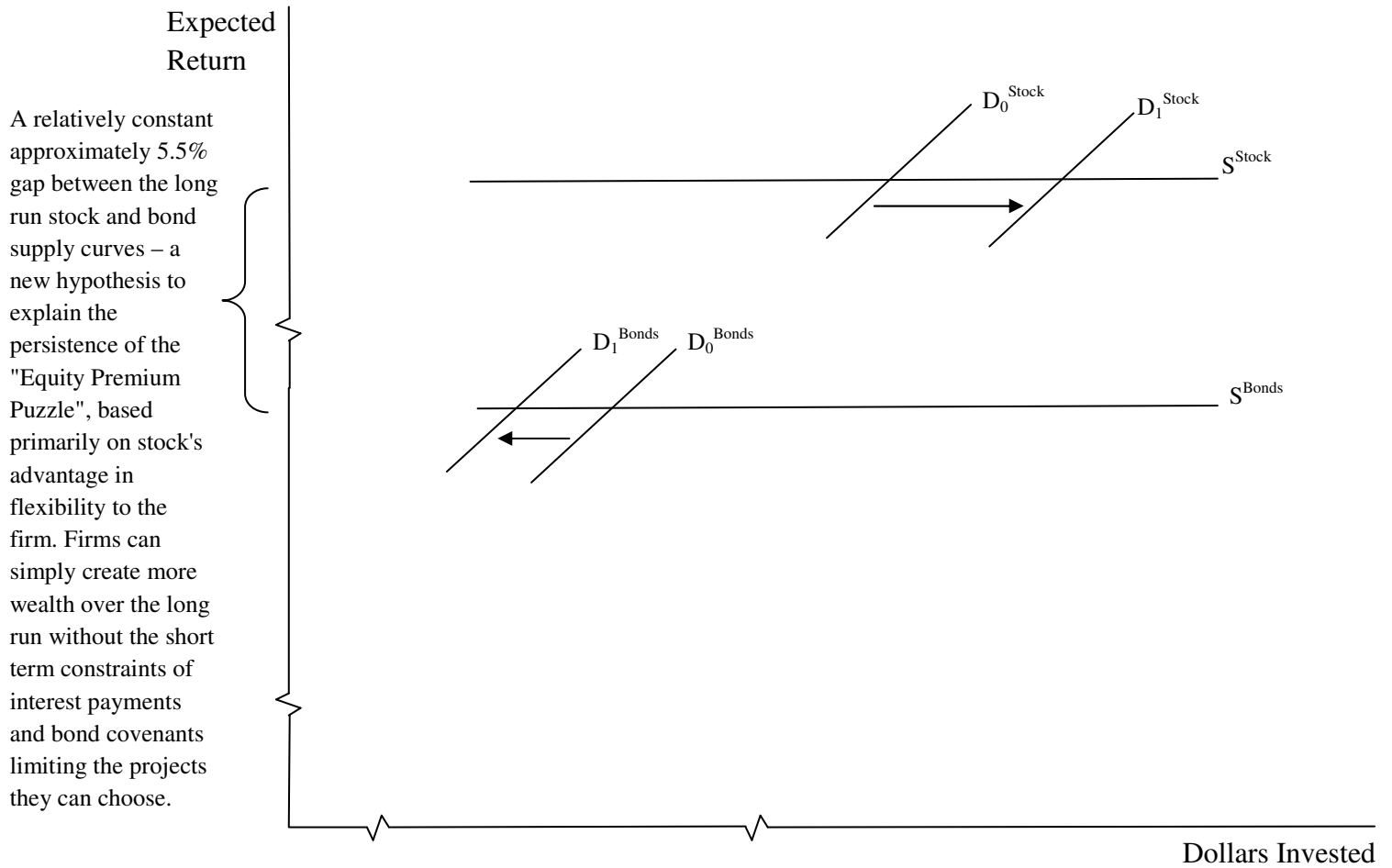
What about what the field has explored? Dr. Magin's article looks at only a small part of the important relevant information, and this makes a diversified stock portfolio look very low risk and high return. But there are esteemed economists who have looked at much more information than this, and done far more extensive analyses, who predict lower risk-adjusted returns for stocks in the future than what we have seen in the past. For example, Elroy Dimson, Paul Marsh, and Mike Staunton of the London Business School, in an extensive book studying global asset returns between 1900 and 2001 write, "Our belief is that historical equity returns have almost certainly exceeded investors' ex-ante risk premium requirements, and also that the required risk premium has itself fallen over time...[We] suggest an alternative, rather lower, estimate of the future risk premium."⁶

It is far from clear that the risk of social security privatization is low, especially when even a small probability of not being able to afford adequate food, shelter, and/or medical care in old age is a big risk. In any case, whatever the risk of stocks, this risk could certainly be lowered dramatically if it were pooled, with great economies of scale, and as a result far lower administration costs, by the government. In other words, if stocks really are such a great deal, why not just have the government buy them directly (the market portfolio only, so it couldn't favor individual companies), as many countries "Sovereign Wealth Funds" are doing today, and the government could then still guarantee its social security payments. The financial insecurity of Americans has already skyrocketed over the last generation⁷; substantially and gratuitously adding to it is the last thing we should be doing.

⁶Dimson, Marsh, and Staunton, 2001, page 9.

⁷ For an in-depth description of the myriad ways, see Hacker, 2006.

Long Run Supply and Demand for Stocks and Bonds



REFERENCES AND FURTHER READING

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