The fate of a 22-year old's retirement savings

Joe McGarrity

Americans – who are 60 years old and have invested 15 percent of their income in the stock market every year – will have earned enough to have a comfortable retirement. These people, on average, would have seen their stock market investments double every 10 years (even after adjusting for inflation). That worked out well for them. But can recent college graduates expect the same stock market returns during their working careers? Of course, the answer to this question hinges on many factors. In this column, I will focus on one: the future growth of America's economy.

Economic growth matters because current stock prices are determined mostly by expected future profits (not by this year's profits). So if the economy stagnates and has no growth, today's stock prices will reflect the profits companies currently expect to earn in the future. And since expected future profits aren't changing, there is no reason for stock prices to change, leaving today's young workers without stock gains to finance their retirements. However, if instead, the economy grows rapidly, then firms can reasonably expect to earn higher profits as time passes, which will cause stock prices to increase over time. In this case, today's young workers will have retirements that can be financed in a large part by their stock returns.

Future stock returns will be heavily influenced by whether the US will experience rapid economic growth. Economists are of two minds on this issue. Professor Robert J. Gordon argues that the rapid growth that England and then the United States experienced between 1870 – 1970 was an aberration. He notes that since 1970, economic growth rates have decreased, and he argues that this decline is likely to continue.

For Gordon, slow economic growth rates are coming because the most productive innovations have already been discovered. According to Gordon, a big innovation allows other innovations to occur, and these other innovations peter out as the economy waits for yet another big innovation to spur smaller spin off innovations that can allow another round of economic growth.

To give some examples: The steam engine led to the invention of trains and steamships. Electric power led to the light bulb and the use of electricity in factories (which powered machines much more efficiently than a steam engine could power them). The invention of personal computers enabled people to create all of the software that we use today. According to Gordon, these were the big ideas that could be discovered, and we may not have any more big ideas left to discover.

And without these big innovations, the economy will grow slowly, if at all. And this in turn will prevent firms from earning ever larger profits that could power ever increasing stock market returns. In this scenario, today's 22-year-old workers won't retire with stock market portfolios as valuable as people had in the past.

While Gordon is a pessimist, Nobel Laureate Joel Mokyr is an optimist. For him, innovation is not analogous to picking the best fruit from a tree first and leaving lower quality fruit for later. Instead, for Mokyr, the tree can continually produce high quality fruit.

You can think about knowledge, from advances in science and from new innovations, as fertilizer that makes the tree grow, which produces new fruit. This new fruit was not available to be picked before the advances in knowledge.

For instance, the new drug Casgevy cures Sickle Cell Disease. This innovation was enabled by a previous innovation, the CRISPR gene editing technology. The CRISPR innovation was only possible after advances in basic science, such as the discovery of the double helix DNA structure of genes. To recap, the advance in basic science allowed an important innovation (the CRISPR technology), which spurred on other advances like the aforementioned drug. There is no reason to believe that these new important innovations, the ones that spur other innovations, will be any less productive than important innovations of the past that also spurred more innovations. All we can say is that important innovations like CRISPR were not attainable 40 years ago.

So which economist is correct? Of course, only time will tell. But my gut tells me that Mokyr is. People in my age group have trouble keeping up with technological advances. They make our heads spin, and we rely on our kids to tell us how new technology works. In my everyday life, I do not see the slow pace of change that would come with Gordon's world view.

If Mokyr is indeed correct, the economy can continue to grow at rates we have seen. This will allow firms to earn larger profits over time, which will allow the value of the stock market to increase over time. This in turn bodes well for the 22-year-old, who is putting his or her retirement savings in the stock market. Of course, other things could derail these future stock market returns, but it probably won't be derailed by slow economic growth caused by the lack of innovation.

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