

Economics and Portfolio Strategy

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HOW LONG CAN YOU RUN - AND WHERE YOU ARE RUNNING?*

Faith in the long run is the most powerful force that drives investment decisions. Investors would be lost if they had no sense of the long run. The long run is a benchmark that helps us to understand the short run, where nothing ever stands still. The long run defines high versus low. The long run establishes our normal portfolios and the choices we make about deviations from normal. Whatever its shortcomings as a meaningful sample, the long run is our firmest support as we peer into the darkness that lies ahead.

My purpose here is to explore with you precisely what it is that we are doing when we employ the long run as a benchmark or when - as now occurs with increasing frequency - we conduct asset allocation exercises on the assumption that, over the long run, stocks are the premier investment class. When we begin to dig into the deeper meanings embedded in this process, we shall see that the whole issue is hobbled by a bunch of logical and troublesome inconsistencies.

The problem defined

The most famous comment about the long run was Keynes's quip that in the long run we are all dead. Keynes was really arguing that, in a system that is naturally volatile and characterized by uncertainty, most of us simply do not have the time on earth required for economic and financial variables to regress to their long-run means. We are inevitably trapped into the short run.

The difficulty arises because the long run is not a homogeneous state of the world, a smooth and straight line into the future. The long run is the average of a set of heterogeneous states of the world. We have no reason to expect that what lies ahead in our own lifetimes is going to match precisely the average experience that the so-called long run represents. Any realistic life expectancy for this audience is less than the seventy years defined as the long run by Ibbotson Associates since 1926 or the even longer run as defined by Jer-

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emy Siegel in his fascinating book, *Stocks for the Long Run*, where the story jumps off from 1800.

This line of analysis leads to a series of interesting questions. Which of these heterogeneous states of the world out of the past are going to be the ones that we have to deal between now and retirement or our ultimate demise? And what happens if we decide to reject as inappropriate to our own future one or another of these heterogeneous time periods? Why do we make those rejections? If the long run past is chock full of experiences that have no significance for today's world, then how meaningful is that long-run average anyway? *Why are we fussing around with all those long-run data in the first place?*

I shall return to these questions, but first I am going to simplify the matter. One lesson from the long run finds broad acceptance, with opposition only from nuts or ivory-tower professors who write complex equations: in the long run, stocks will provide higher returns than bonds. The longer the run, the less the uncertainty that surrounds that prediction. In the long run, the argument runs, stocks are a riskless investment.

Really?

The consequences of heterogeneity

A very large proportion of the vaunted superiority of equity returns over bond returns - the equity risk premium - is accounted for by just 32 years out of the entire sample that convention defines as the long run. I refer to the period from 1950 to 1981. Here is how the facts stack up:

- ◆ From 1950 to 1981, the nominal return on long-term bonds averaged only 2.3% a year. The real return on bonds was actually negative in 18 out of those 32 years.
- ◆ Meanwhile, stocks averaged 12.4% a year. That huge difference provided an annual equity risk premium of a thousand basis points.
- ◆ Take those 32 years out of Siegel's history since 1800, and the equity risk premium shrivels to only 304 basis points. Furthermore, the standard deviation in that risk premium was a wild 1655 basis points. Bonds outperformed stocks 43% of the time.

Now, we know that 1950-81 was an era in which inflation came in above expectations, year after year after year, with only brief interruptions. If the past has any lessons at all to teach us, therefore, this means that *stocks are superior investments with a high degree of certainty only in those environments when bonds are getting killed.*

Is a 32-year period like 1950-81 likely to repeat any time soon? The answer to that question is obvious: it was a period that followed two decades of appalling travails. We may still have occasions when inflation outruns expectations and bonds get hit, but a three-decade span in which bonds return only 2% a year has about as low a probability right now

as any outcome I can think of. But if that is the case, then the equity premium we can expect is going to be a lot closer to zero than to a thousand basis points.

"Aha!" you will snap back. "Over the past fifteen years, inflation has fallen short of expectations almost every year and we still made a potfull in the stock market." To which I would reply that the bond market had its own goodies over the past fifteen years (1982-1996), so that the equity risk premium has averaged only 310 basis points. Perhaps more important, the standard deviation around that average risk premium was 1150 basis points. The risk premium of 310 basis points was only 29% of what it had been in the preceding thirty years and only 36% of what it had been from 1926 until 1981. Does that justify the notion that stocks are a sure thing over the long run? Sure enough even for blood money like Social Security?

I might add that the past fifteen years have about as little likelihood of repeating themselves as the thirty years that preceded them. Bond yields fell by about a thousand basis points - ten percentage points - from 1981 to 1996. With bond yields today in single digits, a fall of a thousand basis points is a mathematical impossibility. In economic terms, a decline that enormous in bond yields would occur only at the end of an extended period in which inflation had come in consistently higher than expected and had worsened almost every year. But we just ruled that one out as extremely unlikely in the foreseeable future.

Then what?

Let us see where all of this has led us. We have placed very low odds on a replay of 1951 to 1980. As a consequence, we have placed very low odds on a replay of 1981 to 1996. If we still believe that the long run has something important to tell us, this leaves us with the 150 years of experience that led up to 1950. That's a pretty long run and worth examining in some detail.

Here are some facts about those fifteen decades, all derived from Siegel:

RATES OF RETURN, 1802 to 1950 (% per annum)

	<u>Inflation</u>	<u>Bonds</u>	<u>Stocks</u>	<u>Risk premium</u>
Mean	0.7	4.8	7.9	3.1
Std devn	6.5	3.8	18.3	17.8

Interesting table! Yes, stocks were the superior investment over this very long run, but with a high degree of uncertainty during periods of time shorter than 150 years. Furthermore, bonds provided positive nominal returns far more frequently than stocks. Indeed, stocks beat bonds only 57% of the time. I can go further. Twenty-nine out of the 86 years in which stocks were the preferred investment were bunched into just three periods that were widely separated in time: the 1830s, 1860-72, and the 1920s. Excluding those three periods, stocks outperformed bonds only 27% of the time. Does all this provide a resounding vote for owning stocks "in the long run"?

"Aha!" you will shout back at me once again. "What kind of relevance can there be in those 150 years of ancient history, when the entire U.S. economic and financial systems bore almost no resemblance to the world as we know it today?"

I gladly yield the point. But look where that leaves us. We have almost zero expectation of a replay of a three-decade span like 1950-81. We have almost zero expectation of a replay of a fifteen-year span like 1981-96. Now we have decided that we also want to reject any expectation of a replay of a real long run like the 150 years from 1800-1950. Then I ask once again: *If no period in the past is appropriate to what we think the future will be like, why are we fussing around with all those long-run data in the first place?*

The long run and the dividend yield

An additional problem with reliance on the long run results from today's low dividend yields, especially the dividend yields on equity mutual funds. Follow this arithmetic:

Bought one share of S&P 500 at end of 1948	\$ 23
Sold that share at end of 1996	<u>741</u>
Capital gain	\$ 718
Total dividends received	<u>269</u>
Total return on investment of \$23	\$ 987
Total annual compound return	8.1%

But the Ibbotson data report a compound return over that time period of 12.9% a year. Whence the difference? The yawning gap of nearly 500 basis points between my calculation and the Ibbotson figures results from the Ibbotson assumption that you are reinvesting that dividend flow of \$269 back into the market. That is no minor matter. Over 48 years, 12.9% compounds to nearly \$8000, or *eight times* what you would have earned by spending instead of reinvesting your dividends.

The dividend yield on the S&P from 1948 to 1995 averaged 3.9%. I need not remind you that the current yield is below 2%. For investors in equity mutual funds, which means primarily the growing crowd of individual investors plowing their future pension reserves into 401(k) plans, the yield is less than 1%, because managing mutual funds costs real money.

As a consequence, the total return to be earned by today's investors - at least until the market revalues current dividends downward - is going to be almost entirely dependent on capital appreciation. Hence, total return will be far more dependent on the market's valuation of retained earnings than at any time in the past. History suggests that uncertainty is greater when the reinvestment process is largely in the hands of business managers rather than in the pockets of the shareowners. If such is the case, then the inherent unreliability of returns "over the long run" is even greater than it would be otherwise.

A new look for bonds?

Meanwhile, the correlation between bond and stock returns introduces another element of unreliability to the relationship between the two asset classes over the long run.

The relationship is far from stable, but it has an interesting history. The high correlation that seems so customary to the current generation of investors - the coefficient of correlation since 1979 is equal to 0.66 - is purely a creature of modern times, as we can see in the following table:

BOND AND STOCK RETURNS:

Coefficient of correlation,
Selected 20-year periods

1802-1820	0.60
1821-1840	0.32
1841-1860	0.33
1861-1880	0.22
1881-1900	0.14
1901-1920	0.10
1921-1940	0.14
1951-1970	0.02
Average	0.23

According to this history, the long-run tendency has been toward a *decline* in the correlation between bond and stock returns, against which the more recent experience appears to be a startling aberration. This aberration is probably a result of the extended sequence of inflation surprises and murders in the bond market. If that is correct, the environment that most of us anticipate - a situation where unpleasant inflation surprises are inevitable but transitory - should lead to a significant reduction in the bond/stock correlation.

I take that as good news. If the equity risk premium is going to be smaller than it was in the halcyon days of the years from 1950 to 1980, and if the correlation between the two asset classes is going to decay at the same time, the role of bonds in the portfolio acquires an entirely different character from the target of opportunity that it has provided in the more recent past. Bonds can then resume their traditional role of portfolio diversifier and stabilizer as well as offering returns that, risk-adjusted, are fully competitive with equity returns.

That's a long run I could snuggle up to.

Leaving us where?

The structure of my analysis leaves my own position clear. While we can learn from the long run about how bonds and stocks respond to changing environments and to each other, the long run can tell us perilously little about what kinds of environments lie ahead. On that point, I maintain, we have to accept uncertainty rather than fighting it: we must rely more on judgment than on econometric models. I agree with Nobel Laureate Kenneth Arrow that "Our knowledge of the way things work, in society or in nature, comes trailing clouds of vagueness. Vast ills have followed a belief in certainty."

The analysis also supplies a profoundly important conclusion.

Until 1950, most conservative investors were convinced that bonds were the superior asset, and surely the less risky asset, and they had 150 years of history to support their view. No wonder that it took nearly thirty years to shake them loose from that certainty in a world where inflation was rapidly becoming endemic and the #1 economic problem.

Now we stand at a juncture where about fifty years of history support the view that stocks are the superior asset and, over the long run, surely the less risky asset. That view is being held with increasing tenacity, to a point where a major bear market has become almost impossible to visualize: even concerned experts warn us about it but are unable to define its likely source or its moment of arrival.

When that unhappy day finally arrives, as arrive it must, how long and how deep will that bear market have to be before it shakes equity investors loose from the assurance that stocks are a riskless investment over the long run? Indeed, until a bear market has run that long and that deep, the conviction will persist even though stock returns may well produce only a modest and irregular risk premium over bond returns. It might even grow stronger!

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Addendum to "Stock/Bond Risk Perceptions"

Two readers have suggested variations on the themes in our report of February 1. We tried them both with no alteration in the basic conclusions. In the first case, we substituted the ratio of bond yields to stock yields in place of the point spread. The fit was a lot looser: investors who measure differences in expected returns by this method apparently prefer the absolute numbers to the ratio. In the second case, we substituted intermediate-term bonds in place of long-term bonds. No difference that mattered, and the fit was looser, but the distortion as of the most recent date was smaller than in our original work.

We see no reason to alter our conclusion that the markets are facing either a continued (or higher) elevation of stock market volatility or an increase in interest rates - or both.

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