Deep Risk

The inhabitant of any city could order on his phone, sipping his morning coffee in bed, the various products of the whole world, and in such quantity as he sees fit, and reasonably expect their early arrival on his doorstep. He could at the same moment and by the same means adventure his wealth in the natural resources and new enterprise of any quarter of the world. He regards this state of affairs as normal, certain, and permanent, except in the direction of further improvement, and any deviation from it as aberrant, scandalous, and avoidable.

It sounds like I'm describing our modern world of on-demand ease and affluence where there's an app for everything. Only the above aren't my words, and they aren't modern[1]. They're from John Maynard Keynes in 1919, describing the world before two unexpected world wars broke out and the lights went out in London. It's clear that risk exists regardless of our awareness.

But what is risk?

Ask one hundred different investors the question, you're likely to get one thousand different answers.

Is it the price moving against you? Is it a company you own going bankrupt? Is it not being able to pay your mortgage? Is it your brother-in-law making easier money in the market than you?

Academics wielding advanced statistics have their own approach, called Modern Portfolio Theory. Harry Markowitz won a Nobel Prize for assuming that prices of securities move around at random, like gas molecules in a beaker. The historical mean-variance[2] of price movements tells you what to expect in the future. The more the price moved around in the past, the riskier the investment. This model is nice in that one can perform lots of mathematical wizardry to construct a portfolio with "known" quantities of risk and reward. You can take a batch of investments that wiggle around and construct an "efficient frontier" where you get to choose your dosage of risk and reward. At least that's the theory taught in business schools.

When people have tried to use these concepts to actually invest, the false precision engenders overconfidence and blindspots[3]. The future often doesn't fit your back squiggles. Maybe a global pandemic or a government default wasn't in your historical dataset and all your correlations cease to apply? Oops.

1 I only updated "London" to "any city," "telephone" to "on his phone,' and "tea" to "coffee."
2 Mean-variance is a fancy term for average change.
3 Funny enough, Markowitz never used Modern Portfolio Theory in his own portfolio.

People have taken these clever ideas and naturally added leverage to goose the returns. It works great, until it spectacularly blows up in their faces. You have to be incredibly intelligent to lose billions of dollars. (See: Long Term Capital Management)

What if the world of insurance offered clues to a better way to assess risk?

William J. Bernstein penned a delightful little book called *Deep Risk*. In just fifty pages, he moves beyond the mean-variance of Markowitz and instead uses history as a framework to transform investment risk into an insurance problem.

Bernstein identifies three primary variables:

1. What are the historical probabilities of a risk occurring?
2. What are the consequences of the risk?
3. What are the costs to insure against the risk?

Bernstein points out that risk isn't one dimensional[4]. It's more accurately described as an integral of:

[Size of Loss of Real Capital] x [Duration of Loss of Real Capital]

For example, a sudden 50% loss of real capital that was stationary for ten years, then miraculously recovered, would count twice as much as one which gradually lost 50% the first five years, then recovered over the next five.

Next Bernstein splits risk into two flavors: shallow and deep.

Shallow risk is the loss of real capital for a short period of time, which Bernstein classifies as within several years. (This advice isn't for day traders.) If a company like Berkshire were to drop 20% tomorrow, it's a reasonably safe bet that it would recover within a decade.

Deep risk is the permanent loss of real capital. You never recover.

An apt simplification is that shallow risk deprives you of sleep. Deep risk deprives you of sustenance.

"What are the chances the person born today is going to have 7-8% growth and no big wars or trouble for 70 years? I'd say they're almost zero… I don't think it's going to be as easy for the next generation as it was for me."
-- Charlie Munger, February 2020

4 More accurately it's an area under the curve of depth of loss multiplied by duration.

What is Safer: Stocks or Bonds?

The conventional wisdom is that bonds are safer than stocks. The subtle answer is it depends on the timeline. Bonds do tend to squiggle less over the short term. However, the potential for permanent loss is quite real. The developed world is likely blinded by the dramatic drop in interest rates over the last 40 years[5]. As a relevant proxy, the price of a home mortgage in the U.S. has fallen from roughly 20% to 3%. Most of us have only experienced declining interest rates. Yet low rates aren't etched on any tablet.

If your grandparents had purchased the "safe" government bonds of Japan and Germany during World War II, they would have suffered a permanent -95% loss. Their pieces of paper became worthless.

Had they purchased ownership of businesses in those same countries at that time, their stocks would have experienced a -90% hit, but they fully recovered within ten years. Deep vs. shallow risk in action.

That doesn't mean stocks are can't-miss propositions. The price you pay still matters. During the 1980s, Japan Inc. was taking over the world. As confidence in Japan's prowess soared, so did their markets. Then what happened? The return for Japanese large cap stocks from 1990-2013, containing many names you know like Toyota and Sony, was -58%. It took you twenty-three years to lose more than half of your money. Such is the importance of initial purchase price. Caveat emptor, Robinhooders.

Bernstein identifies three primary variables:

1. **Severe, prolonged hyperinflation**
   Although stocks tend to get hurt over the short run by inflation surprises, they generally keep their purchasing power. We can't say the same thing for bonds.

   Examples: Weimar Germany, Latin America, Zimbabwe

   Odds of occurrence: Lots of examples of countries losing control over their currencies. On a long enough timeline, it's proved the fate of every currency. The dollar won't be an exception.

   Mitigation: Own a basket of globally diversified equities, CPI-linked Treasures (TIPS), a fixed-rate home mortgage, and some might argue gold or bitcoin.

5 Reminder: the lower the interest rate, the higher the price of a bond. Therefore, the more price appreciation, the lower yield if you buy and hold to maturity.

2. **Severe, prolonged deflation**
   Deflation is usually caused by a collapse due to an economic depression. Terrible for stocks, but generally OK for bonds.

   Examples: Post-1990s Japan, 1930s United States

   Odds of occurrence: Relatively rare in the post-hard-money era, but history says the odds increase following a debt-fueled bubble.

   Mitigation: Cash, bonds, gold.

3. **Confiscation and Taxes**
   Governments are an entity that offers a citizen protection from violence and theft, for a fee. Sometimes the entities press their advantage and confiscate from their citizens. This tends to happen around revolutions.

   Examples: Russia, China, Cuba, Latin America, every conquered nation in antiquity.

   Odds of occurrence: The light version of confiscation happens every two weeks for most people, but full on nationalization is rare. If you think you're exempt as a freedom-loving citizen of the United States, you're sadly mistaken. The U.S. has some of the most draconian capital controls of any country. Moving money out of the U.S. into foreign accounts is quite difficult, exit-taxes are onerous if you renounce citizenship, and reporting requirements are smothering. Foreign banks avoid U.S. clients for a reason.

   Mitigation: Foreign-domiciled assets, plus a possible escape plan.

4. **Devastation**
   Obviously, if you own productive assets that are bombed to smithereens, shattered in an earthquake, or swept away by a flood, you run the risk of permanent loss of capital. Likewise the government you lent money to can be dissolved. The new government won't have much interest in paying you back.

   Examples: World Wars I & II, Fukushima, political revolutions.

   Odds of occurrence: Thankfully, large scale devastation and political upheaval are rare. But they do happen.

   Mitigation: Global diversification, foreign-domiciled assets, insurance.

As you can see, there's no silver bullet that protects you from all four flavors of deep risk. A thoughtfully constructed portfolio that mitigates for the downside while taking advantage of opportunities is your best bet.

A Tale of Two Halves

The second half of the 20th century was quite kind to equity investors. A global basket of equities held from 1949-1999 saw an 8.5% real return. The first half of the century was a different story. That same basket delivered a 2.8% real return from 1899-1949. A ~6% annual gap compounds into massive differences over half a century (more than 15x).

We'll leave it to historians and futurists to set 21st century expectations, but we're at ~5% for the global basket (and ~4% for the U.S.) for the first 20 years. That's with very little in the way of global conflict and plenty of fiscal and monetary intervention adulterating the results.

The lesson is to put your financial house in order where you won't need a Hail-Mary-return-miracle to achieve your goals.

A Note From Lonnie

As many of you know I have decided to exit the money management business. The initial plan was to close down the last remaining account that I managed, The 5505 Fund, by the end of 2020. Once the pandemic began, however, I felt it was best that we return the money to investors as soon as possible. That happened in April and concluded my day-to-day involvement with Farnam Street Investments. I want to express my gratitude to all the clients of FSI. It has been an honor to serve you over the years and I appreciate the trust you placed in me. I enjoyed the job and the responsibility more than any other in my career. After 13 years, it's time for a break. I don't have any immediate plans for the future, but I do hope our paths cross again.

Thank you,
Lonnie

Quick Item

Barring a vaccine miracle, it doesn't look like the FSI Annual Bash is such a great idea for October. It'd be nice to see everyone still, so please reach out to me so we can plan a catch up call or video conference.

As always, we're thankful to have such great partners in this wealth creation journey.

Jake

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