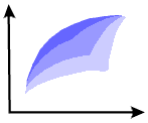
Efficient Frontier



An Online Journal of Practical Asset Allocation

Edited by William J. Bernstein
and Susan F. Sharin

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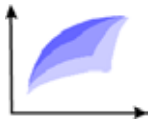

William J. Bernstein

Margin of Safety in the Asset-Class Era

Earlier in the year, editorial duties led me to reread Benjamin Graham's *The Intelligent Investor*. This lighter, more colloquial version of Graham's massive classic, *Security Analysis*, was aimed at the small investor and had the added advantage of a more current perspective—the heretofore most recent (fourth) edition was written in 1970-1971 and published just before the old master died in 1976.

No concept is more associated with Graham than the "margin of safety": that extra cushion of value which minimizes the probability of underperforming the default option of the prudent, risk-averse investor—the high-grade corporate bond.

For starters, one needs to realize that Ben Graham's definition of risk is couched only in the very long term. For him, what we today would consider risk—the day-to-day volatility of the market—connoted *opportunity*. Short-term turbulence was none other than the wise investor's manic-depressive old friend Mr. Market, one day willing to take inflated shares off the investor's hands, the next, offering to sell them back cheaply.

Graham's analytic strength lay in the humanities, not mathematics. His intuitive grasp of history told him that from time to time, the economy went south in a big way, causing large numbers of companies to fail. "Fair-weather investor" was one of the most grievous insults "The Dean" could hurl. The true test of any strategy was how well it weathered storms:

> . . . the margin of safety is counted on to protect the investor against loss or discomfiture in the event of some *future* decline in net income . . . most fair-weather investments, acquired at fair-weather prices, are destined to suffer when the horizon clouds over—and often sooner than that . . . The danger of growth-stock investing lies precisely here. For such favored issues the market has a tendency to set prices that will not be adequately protected by a *conservative* projection of future earnings.

Stock purchases were best made in the foulest of weather. For Graham, nirvana was a company with no debt selling at a market cap less than the amount of bonds it could safely issue, should it so desire. Nineteen seventy-one was definitely a fair-weather year, but even then, Graham was able to find one such gem—National Presto—selling for three times before-tax earnings.

Fortunately for Graham, he had never heard of Kahneman and Tversky or Thaler and Benzarti. He did not care (although he surely knew) that human beings intuitively experienced risk in the short term and that his description of risk was as feasible for most people as successful dieting or perfect communism.

Here's how Graham's margin of safety worked. First, he would not even look at a stock unless it possessed a clean balance sheet, with current assets more than twice current liabilities and earnings more than three or four times annual bond and preferred obligations. Next, earnings had to be reasonably stable and preferably growing. (Earnings growth was merely a nice

freebie for Graham; realizing that it usually didn't persist, he never paid up for it.) If such a stock could be found selling at eleven times earnings, then it offered the shareholder an earnings yield of 9%. If high-grade bonds yielded 4%, then the stock offered a 5% annual advantage over the bond. Over ten years, this annual cushion grew to 50%.

That 50% advantage provided as fool-proof a margin over the safe bond as any reasonable investor could demand in the world of stocks; to come out behind the bond, the already undervalued security would have to fall a great deal more. Graham allowed that this did happen often enough, but surely, if one could own a list of, say, twenty such issues, the odds of aggregate failure should approach zero.

The Intelligent Investor contains many small pleasures for the informed modern reader, and none is as great as Graham's foreshadowing much of the modern finance literature, especially the efficient market hypothesis. Even the first editions of the book, written decades before Eugene Fama shook the world with his demonstration of the random nature of security prices, display an intuitive sense that it was nearly impossible for the average analyst to successfully pick stocks. The reason was simply that he was buying and selling mainly from other analysts. Graham was the first to realize that as analytic techniques improved, the competition got that much keener and the job only harder.

The first index funds, available only at the institutional level, were brought out just as Graham was scouring the galleys. If a list of twenty stocks lowered the chance of failure to acceptable levels, then surely the entire market would increase the margin of safety that much more. As Graham surveyed the opportunities facing the buyer of stocks in 1971, he was discouraged; it was impossible to put together an adequate list of stocks that met his criteria. He fell back on his usual advice to hold perhaps 50% of a portfolio in high-quality equity issues, sheepishly admitting that while such a list came nowhere near providing a margin of safety, perhaps times had changed and that the margin could no longer be obtained.

In the years since the publication of *The Intelligent Investor*, stocks became historically cheap two more times—in 1974 and 1982—each time selling at around eight times earnings, or at an earnings yield of about 12%. By Graham's definition, on neither occasion did this provide an adequate margin of safety, i.e. at least 5% more than the yield of long-term corporate bonds. (Corporates yielded about 8% in 1974 and an astonishing 14% in 1982.) Yet, these were both excellent times to buy stocks, and in 1982, bonds as well.

Which brings us to the current date. By Graham's reckoning, we're well up the proverbial creek, with stock earnings yields more or less equal to the long-corporate rate of about 5%—*no* margin of safety at all. One can finesse Graham's formulation by using expected stock returns, which at present are about 7% nominal (5% long-term earnings growth plus a generous 2% dividend assumption), which offers a 2% annual margin of safety.

Is 2% per year an adequate margin when the risk of Chapter 11 is spread over the entire market? Certainly a question that reasonable people might bruit about. I would answer in the affirmative, because I think that in the very long term, long bonds are more risky than stocks due to their exposure to future inflation. To eliminate the inflation risk to bonds, one has to shorten maturities down to a yield of about 2%-3%, by which point even Graham might admit that a proper margin is now present.

Clearly, though, it's not 1971, let alone 1974, any more. We've traveled only part way back from the Wizard-of-Oz market of the late 90s.The real question facing today's investor is whether we'll ever fully return to Kansas.

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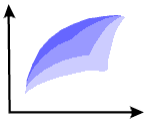

William J. Bernstein

Insider Trading Drag

Every so often, if I'm lucky, I have an original idea. More often than not, however, I'm merely a translator, decoding financial jargon into plain English, trading off the fact that most financial economists can't write their way out a paper bag. Once in awhile, a reader pitches me an idea that is so clever I just have to steal it. Such was the case a few months ago, when Joel Bickford, an investment advisor from Santa Rosa, CA, pointed out to me one of the perverse consequences of insider trading.

The average mutual-fund investor underperforms his mutual fund by buying high and selling low. For most fund investors, this amounts to about 4%-5% per year. The typical "hot fund" customer—your Janus or Van Wagoner investor—puts himself as much as 10%-20% behind the eight ball. More depressingly, even the average Vanguard or DFA investor loses about 1%-2% of traction per year. The data on hedge-fund investors is sketchier, but they don't appear to do much better. However, someone out there *is* making excess profits.

Who, then, is taking the other side of these awful trades? Corporate insiders are the most likely suspects. This is actually consistent with the architecture of the efficient market hypothesis—after all, only its strong form, which has about as many believers as Saddam's ex-information minister, excludes profiting from nonpublic information.

That said, benefiting from inside information is a tough row to hoe. Besides worrying about changing one's wardrobe to an orange or striped motif, one must brave ferocious nonsystematic risk. Realistically, at any given time, one cannot be an insider in enough companies to obtain even a soupçon of diversification. Since the company involved is most often the perpetrator's major source of income, unsystematic risk is yet further increased. While insider sales may lessen financial risk, they also greatly increase the chance of making their executor a guest of the state. Want to run a mutual fund, a hedge fund, or even a private portfolio based on inside information? Lotsa luck; you can cadge Ivan Boesky for advice on just how it's done.

Mr. Bickford's particular insight is that the more clever a stock analyst, the more likely she is to take the other side of an insider's trade. Let's assume that on day zero, an efficiently priced stock is selling at $40 per share. Further assume that the next day, positive information about the company's earnings prospects becomes available to, and only to, the company's highest officers and were that information to become public, the stock would sell at $50 per share.

The insiders buy, but because of their limited trading power, the price rises only to $45. The perceptive analyst, who has done hundreds of hours of painstaking research, "knows" that the stock is only worth $40 and so sells—to the insiders. The noise trader, on the other hand, excited by the price rise, buys. When the information becomes public, the price rises to $50, benefiting both the insider and the noise trader, but hurting the analyst.

Such a scenario has two consequences. First, as has been noted by the behavioralists, the relatively slow, incomplete execution on information (both public and nonpublic) provides an underlying rationale for the momentum effect. And second, as suggested by Mr. Bickford, this "insider-trading drag" strikes hardest at the most competent, hard-working analysts, who are

by definition most sensitive to deviations from fair value. Noise traders are benefited, and indexers are unaffected.

If this theory holds water, security analysis is not simply wasted effort, it is downright counterproductive, even without transactional costs. In such a hall-of-mirrors world, it may actually benefit the analyst to act opposite her best ideas, since the most persistent deviations from fair value may indicate the incomplete execution of insider trading. This dynamic holds only for those who trade individual securities; at the level of the entire market, there are no insiders. On rare occasions, when asset-class valuations do get out of hand in either direction, it is all the intelligent investor can do to simply stay the course. If he is possessed of extraordinary fortitude, allocations can be judiciously adjusted opposite to the era's conventional wisdom.

For whom does the analytic bell toll? Only for those who understand which melodies contain useful information and what key they are in.

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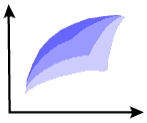

William J. Bernstein

Mamas, Don't Let Your Babies Grow Up To Be Timers

As with the swallows' return to Capistrano, the change in investment season has brought the warble of the full-throated market timer. Freshly aware that stocks can actually *lose money*, the battle cry grows from a burgeoning army of investment advisors and market strategists: "Future stock returns will be low! Only the nimble will survive!"

Now they tell us; just where were these geniuses three years ago, when prices were 50% higher? During the late-nineties bubble, how many of these newly devout timers pointed out that stocks do, from time to time, devastate their owners? Or that there were three twenty-year periods during the last century when real stock returns were nearly zero?

Recently, praise of timing has also come from a highly credible source—Peter Bernstein (no relation). Speaking before a group of analysts in January, he lashed out against the concept of the "policy allocation," such as the hallowed 60/40 stock/bond mix used by most pension pools, and came out in favor of a more opportunistic approach. (Mr. Bernstein discusses his views on the matter in an interview with Kathryn Welling of Weeden & Company.)

The *gravitas* of this famed author and economist makes him difficult to ignore. Back in the Alice-in-Wonderland world of the late 1990s, his voice was one of the few that questioned the relevance of high historical stock returns. Yes, he said, equity has always beaten bonds and bills over the long term, but that was simply because of an anomalously high risk premium that has long since gone the way of disco and the five-cent cigar.

A few samples from Mr. Bernstein's recent remarks:

> . . . we are going to have to learn to live without the crutch of things like policy portfolios.
>
> . . . we've reached a funny position where the long run doesn't work . . . the old long run, she ain't what she used to be . . . the long run here is not necessarily going to bail you out . . . equities are not necessarily going to be the best place in the long run.
>
> . . . you can wake up every morning saying, Well, how does the world feel? It's a much more interesting way to live.
>
> You have to be much more unstructured, opportunistic and ad hoc than you have been in the past . . . I am talking about that dirty word, market timing.

Mr. Bernstein also hammered away at the iron laws of expected returns, which he first wrote about in the 1990s as a voice in the wilderness: historical real per-share earnings growth is minuscule, as is dividend yield. In such a world, a positive equity risk premium is not a sure thing, even over many decades. But he is vague as to what alternative he is proposing beyond waking up in the morning, smelling the coffee, and trading like mad. He offered just one hint:

> . . . you can do the market timing with a lot of quantitative stuff, tactical asset allocation. Wells Fargo, First Quadrant, they're all doing tactical asset allocation on a quantitative basis. If I were going into that, that's how I'd do it.

Now we're getting somewhere. Not only do I like and admire Rob Arnott, chairman at First Quadrant, but this hedge-fund manager possesses another sterling quality: he'll talk to me. So, unable to restrain my curiosity, I rang Rob up and asked him how he does things. The short answer: he focuses on risk-adjusted expected returns. If the expected return of an asset class goes up/down, so does his allocation to it. If its risk goes up/down, his allocation does the opposite. He also pays attention to money supply and a few other parameters, but basically, he's a concave investor: when Mr. Market has been selling hard and long enough to seriously cheapen an asset, he's buying, and when Mr. Market has a prolonged manic break, he'll take the opposite side.

If *that's* market timing, then I too must plead guilty. Sure, I believe in the efficient market hypothesis, but that doesn't translate into ignoring the risks and returns of asset classes *and failing to act accordingly*. In the last days of the bubble, the expected equity risk premium was close to zero, and if you believe that TIPS represent a risk-free asset (some do, I don't), the risk premium was decidedly negative. Today, the expected risk premium (ERP) is probably in the range of about 4%—the difference between the expected stock return and that of 10-year treasuries. Does the prudent investor own more stocks at an ERP of 4% than at an ERP of zero? You bet. How much more? That depends upon the mission; if it's a hedge fund, probably quite a lot. If it's a conservatively managed tax-sensitive account, relatively little. In other words, if you were a 65/35 person in 1999, you might be a 70/30 person now. (Except that now you're four years older, so maybe you'll slip right back to 65/35.)

The rub is that "timing" is an inflammatory six-letter word—a veritable bomb in the staid world of portfolio management, and one that Mr. Bernstein threw with wonderful effect. Its spectrum stretches all the way from large and rapid changes in allocation based on things like macroeconomic parameters, relative strength, volume, sentiment, and overall gut feeling—certifiable behavior, in my opinion—to slow and relatively slight changes in allocations based on valuation and expected return. This latter strategy, involving very small and infrequent policy changes opposite large market moves, more often than not improves overall portfolio performance.

The latter concept is a bit difficult to grasp. Think of it this way: even the most devout efficient marketeers rebalance; trimming a portfolio back to policy is nothing more, and nothing less, than a bet on mean reversion. Taking the process one step further and adjusting the policy allocation itself opposite valuation changes is merely a way of amplifying a rebalancing move—"overbalancing," if you will.

It all comes down to predictability. Just how predictive are the usual market strategist staples—sentiment, volume, moving averages, and so forth? Near zero. On the other hand, how predictive is an S&P dividend yield of 1.2% or an average REIT yield of 9%, as we simultaneously saw in 1999? Since we have only one sample of history, we can't know for sure, but I'd be willing to give odds of at least 60/40 in favor of below and above average future returns, respectively. There is, in fact, a mountain of data from the markets of many nations pointing to modest predictive value to such balance-sheet parameters. Over the lifetime of a portfolio, enough judicious allocation changes based on such 60/40 bets almost certainly adds value.

Many investors, at least the ones who could add, shaved back their allocation to large-cap U.S. stocks in the late 1990s—even the normally bullish Jeremy Siegel wrote a delightful piece at the height of the madness in March 2000 entitled "Big-Cap Tech Stocks are a Sucker's Bet." Ten years before that, an even bigger bubble inflated the Japanese stock market to a 67% cap

weighting of the EAFE. Had there been an EAFE index fund over the past fifteen years, it would have been beaten by 92% of actively managed funds, since few active managers were crazy enough to match the Japan-heavy EAFE country mix. This is most certainly not a case against foreign indexing—passively managed European, Pacific Rim, and emerging markets index funds, in general, have blown the doors off their actively managed cousins. (Over the past ten years, for example, both the MSCI-EAFE-Pacific-ex-Japan index and the DFA Pacific Rim Small Company portfolio have beaten all nineteen actively managed Pacific Rim funds—it speaks volumes when both large-cap and small-cap indexed approachs *simultaneously* beat all of the active competition. The same is true in the emerging markets arena.)

Why this disconnect between actively managing policy allocations and actively managing individual security selection? The explanation gets to the difference between market efficiency and rationality. Here are two proposed operating definitions:

- "Efficient": Among a group of similar *securities*, there is no payoff to careful selection.
- "Rational": The existence of reasonable risk premia, relative both to risk-free asset *classes* as well as among risky asset *classes*.

Market irrationality is like pornography: difficult to define, but you know it when you see it. One doesn't have to look very far to find violations which most reasonable investors can agree upon and which can be surprisingly long lasting. A quote apocryphally attributed to Keynes has it that "The market can remain irrational much longer than you can remain solvent." For example, the junk-treasury spread can hover around 300 bp for years, despite a long-term historical junk-bond loss ratio in the 400 bp range. Other asset classes can also become hopelessly overpriced or underpriced, oft times simultaneously, as happened to large-cap U.S. stocks and TIPS in late 1999. The zero ERP that characterized the "new era" made sense only to semi-delusional right-wing financial columnists.

Simply put, although the individual investor will likely come to grief manipulating the selection of individual securities, the judicious adjustment of policy allocations according to expected returns—increasing an allocation slightly when its expected return is very high, decreasing an allocation slightly when it is very low—will *on average* slightly enhance long-term results. This is simply an amplification of normal rebalancing.

Varying allocations—"timing," if you will—is similar to the consumption of alcohol. It can either enhance or degrade portfolio health; it all depends upon the circumstances and the quantity. When partaken in small, infrequent amounts from a concave vessel, its benefits are small but perceptible. When chugged indiscriminately, it is deadly.

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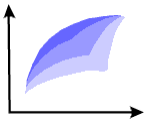

William J. Bernstein

Link of the Month: *economicprincipals.com*

I've recently acquired a new weapon in the household Sunday-morning chicken game of "Who's going to make breakfast?". . . a weekly email newsletter from ex-Boston Globe reporter David Warsh.

David should still have a billet with one of the nation's top dailies, but in the age of Rupert and Clear Channel, there's no room for his schtick: penetrating analysis of the dismal science at its highest levels. Which is sort of strange, if you think about it. Advances in physics, medicine and, heck, even mathematics quickly find their way into the popular media. Not so in economics, whose upper academic and, at times, policy realms remain opaque.

David pierces the veil. No topic is too small or too large to escape his brief, from the politics of the refereeing process in academic journals to what *really* went on behind the scenes at the *New York Times*.

Take a look and sign up. You won't be sorry.

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