

The Epistemic Spectrum

(The September, October and November newsletters are adapted from a speech given by Bill Berg, Sigma's president, on September 23 at the fall retreat of The Financial Planning Association of Oregon and Southwest Washington. This month, we discuss the concept of the relationship of knowledge to investing.)

We have now surveyed the problems with market timing (the September newsletter, available at www.sigmainvestment.com) and the dangers of supposed market expertise (the October newsletter). So how are we to proceed? What is the appropriate mix of knowledge and action on one hand and humility and patience on the other? Enclosed is a picture of a spectrum or continuum that represents knowledge about the financial markets. On one end, we have investors who start with the assumption that you cannot know anything about investing in a way that will allow you to enjoy returns in excess of a market index. Let us call this the "Sergeant Schultz" wing, named after the *Hogan's Heroes* guard, who constantly claimed "I see nothing; I know nothing." On the other side of the spectrum are those who believe they see everything and know everything.

Most Wall Street strategists fall in this latter category, confidently opining on the future of the economy, the financial markets, specific sectors and individual stocks. There appears to be little accountability for these predictions- nobody seems to remember that the strategists may have been seriously wrong over the years. Consider the reverence accorded to certain talking heads that were leading the lemmings off the cliff at the height of the technology boom a few years ago. This shows why I will never be a good talking head; if followers of my advice had lost, oh, 70 percent of their money, I think I would be chagrined enough to lay low and not share my opinions with the world for

awhile. However, here these celebrities are, opining away, bold as brass.

How much do we know, and how much do we think we know about potential future returns on investments? If you think you know nothing, you should not be engaging in tactical asset allocation – there is no point to it. If you think you know something about future returns on investments, though, you should act to exploit your advantage. Our problem is therefore part of the branch of philosophy known as epistemology, the study of the nature of knowledge, its presuppositions and foundations, and its extent and validity. As investment advisers, we clearly want to know as much as we can about the likely direction of the markets if it results in better performance for our clients; but just as clearly, thinking we know more than we actually do is dangerous and will probably result in worse performance for our clients.

I believe that fundamental to our profession are three elements: (1) where we *actually* are situated on this epistemic spectrum; (2) where we *think* we are situated; and (3) the size of the gap between where we think we are and where we actually are. Now, when you start thinking of the investment world in terms of our epistemic spectrum, it raises several questions. The first question raised in my mind is whether I was pronouncing the word “epistemic” correctly. As it turns out, I was not. I was pronouncing it with a short middle “e,” as in “systemic,” while it actually should be pronounced with a long middle “e,” as in “E-Bay.” It is enough of a \$64 word that I looked it up in the dictionary and discovered the correct way to say it. Of course, that immediately raises the question of how many words I am mispronouncing, perhaps even in this talk, that I am so sure of that it never occurs to me to look them up. This is perhaps the most critical question raised by the spectrum – what do we “know” that is not so? This is the “knowledge” that creates the most destruction to investor portfolios.

Why do liars prosper on Wall Street? Because the illusion that someone can predict the future is more important to many investors than making money.

Behavioral finance professors tell us that most people think they know more than they actually know, or at least people present themselves as being more knowledgeable than they really are. Clients and prospects often reward advisers for this “mistake” for behavioral reasons – they take comfort in the confidence of the adviser, and do not necessarily remember the

times he or she has been wrong. This is why the talking heads can get it wrong so often but still be invited back to make more predictions. Investors love to believe that somebody somewhere knows it all and is pushing all the right buttons and pulling all the right levers. The notion that we cannot know the future is terrifying to most people – and the illusion that someone can know the future is clearly more important to many investors than making money

Forget the talking heads or advisers – most of us generally are over-confident as well, thinking we know more than we actually do. Do you really believe that your insight that there is a big future in biotechnology, or that “they’re not making any more real estate” is not already priced into the market? Were you alone in your views in the late 1990s that this Internet thing was going to be big? This overconfidence is a mistake, and it is a major reason many investors and their advisers destroy portfolio values. On the spectrum, you want reality to be as far to the right as possible – you want to know everything you can know about future market returns. Unless your objective is selling financial product rather than making a wise investment, however, you do not want to go farther. You do not want to think you know more than you actually know.

This gets us back to our questions – what can you know, and how can you know it? Our answer at Sigma is that you *can* know some things about future market returns, but the paradox is that what you can know is unlikely to be palatable to most investors or their advisers. I have already given you two examples (in the October newsletter) – you should be buying stocks when there is a recession and earnings growth is down, but lightening up when the economy is booming and earnings growth is rapid. This runs counter to human nature, so few people can actually follow that method. Most of the opportunities we see for tactical asset allocation center on the notion of reversion to the mean – the idea that there is a somewhat constant level for some measurement, and deviation from that constant will likely be followed by a snap-back towards the constant.

Go back to the beginning of the twentieth century and run a statistical trend line through the Dow Jones Industrial Average total return index. You will find that the index has had a long-run annual total return of just under 10 percent. When the index is significantly above the trend line, expected future returns fall to a little over 5 percent; when the index is significantly below the trend line, expected future returns rise to over 20 percent. In other words, good returns tend to be followed by bad returns, and vice versa. This long run tendency may take decades to develop, so you do not need to rush out of my presentation to call your broker on this one.

The stock market is not a natural science, but a reflection of human nature.

You can see this reversion to the mean another way by looking at a rolling 10-year average annual total return for the S&P 500 index over the same century's worth of data. The pattern of going above and below the long run return of about 10 percent is not a perfect sine wave, but it is close.

There was a big bull market that ended in 1929, a decline into the 1930s, another big bull market going into the 1960s, a decline into the 1970s, and another big bull market into 2000. These relatively gentle, broad sweeps of advances and declines do not look random to me – but most investors lack the patience to take advantage of these general long-run trends.

Many fundamental measures of stock market valuation show similar trends – in fact, it matters little whether you are looking at price to sales, price to earnings, price to cash flow, price to dividends or about 40 other measures, the chart looks the same. The market was cheap in the early 1950s, became expensive in the 1960s, became very cheap in the 1970s and early 1980s, and became massively expensive in the late 1990s. Looking at stock prices relative to the revenues of the underlying businesses, when the market is expensive, it projects returns below three percent; when the market is cheap, it projects returns more than four times higher.

Investor sentiment follows a similar pattern. If we look at the percentage of household wealth invested in the stock market, we find that households did not own many stocks in the early 1950s. They invested heavily in stocks in the late 1960s, however, when stocks were expensive relative to underlying business fundamentals. Investors lost their fascination with stocks in the 1970s and early 1980s, when stocks were very cheap relative to business fundamentals. They became enthralled with stocks again in the 1990s, when valuations were at all-time expensive levels. I hate to extrapolate from a small sample of only two major market cycles, but following the last timeline, we will not reach the point of maximum disgust by investors until 2014.

This pattern is the crux of my point on asset allocation – the stock market is not a natural science, in which you do tests in a scientific laboratory and get the same result again and again if you repeat the test. Instead, the financial markets are reflections of human nature and psychology, and there are recurrent patterns of boom and bust, of euphoria and disgust, and

undervaluation and overvaluation. Investor perceptions of the same industry can change dramatically with very little change in underlying reality. Are semiconductor stocks glamorous or not? In the early 1990s, investors treated them as stodgy, heavy cyclicals – if it costs \$1 billion to build a new factory, you are no more glamorous than Alcoa. By the late 1990s, they were the sexiest stocks on Wall Street. Then, everyone hated real estate investment trusts. Investors thought real estate was a defunct concept – with the Internet, it mattered little whether you were in the wilds of Wyoming or in midtown Manhattan. In a virtual world we are all connected, and you can work anywhere. REITs *declined* in 1998 and 1999 while the rest of the market was soaring. Now, real estate investment trusts are the sexiest stocks on Wall Street, despite us being more interconnected by the Internet than ever before, because ... well, I am not sure why.

We would rather be excessively humble than excessively arrogant in investing.

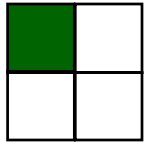
At Sigma, we approach the markets with the initial presumption that the markets are efficient, that whatever you know is already in the market price – so we *start* at the Sergeant Schultz side of the spectrum.

This is where the pure index investors are, and it is a respectable place to be. At least you are not pretending to know more than you actually know. We depart from the pure indexers, though, when we look at evidence and conclude that we can know something about future market returns. If you have a coin that comes up heads 55 percent of the time, it makes no sense to us to bet on tails as a 50-50 proposition. We believe we can see some opportunities based upon valuation analysis and a belief that there is an element of reverting to the mean at work. We are quite humble about our ability to detect such opportunities, though – we do not want to fall into the common trap in our profession of claiming to know more than reality would suggest. Of course, there is also the possibility that a cyclical change we are betting on turns into a secular change, so we always keep in mind that we can be wrong. We cautiously tiptoe out from the left side of the spectrum, carefully defining our portfolio tilts towards areas of relative value, and continuously re-examining our assumptions.

Our goal is to do what we can to enhance returns but not think we know more than we actually know. We would rather be excessively humble than excessively arrogant. Excessive humility risks missing some opportunities; excessive arrogance, an epidemic on Wall Street, risks portfolio destruction. You can see this approach does not do much for our marketing effort – most of the bets we make are not of the variety that appeal to most investors or, for that matter, their advisers. By our method of portfolio management, we are not getting our clients excited about the tactical asset allocation decisions we are making. We just hope that our clients can look back and say, “You know, those guys were making some pretty good decisions.” It is hardly the riverboat gambler type of impressive derring-do. It is more like having that coin that comes up heads 55 percent of the time, and then just sitting down and flipping that coin repeatedly.


So there it is – hardly an automatic road to wealth, hardly a way to hit the road with a marketing plan to sign up new accounts, hardly even a way to sound impressive at a cocktail party. We believe, however, that it is a form of applied common sense – to decide what it makes sense to do, and then to do it, but do no more.

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The SIGMA Epistemic Spectrum

What We Actually Know

We want to move as far this direction as possible ... 

Index Investing - Sgt. Schultz: "I know nothing"  **Wall Street strategists: "I know everything"**

 ... without exceeding reality

**Reality
Humility
Morality**



**What We Think We Know
or
How We Present Ourselves**

**Pretense
Arrogance
Immorality**