

"INVERTED THINKING LEADS US TO STOCK-PICKING"

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The efficient market theory suggests that while investors are not clairvoyant, they are rational, informed, and unbiased. Based on these conditions, one can expect that the current stock price is the best estimate of the true value for a security. However, studies in behavioral finance confirm that these assumptions frequently do not coincide with reality. Furthermore, a recent book gives a different set of organizational criteria that must be present in order for a group, such as the investors that form the stock market as a whole, to make wise decisions. We have never ascribed to the efficient market theory in its stronger forms. We believe there are select opportunities to add value through active investing.

Life can only be understood backwards, but it must be lived forwards.

-Soren Kierkegaard

The great mathematician Carl Jacobi, after a long struggle with a problem, changed his approach and soon found his answer. Having seen the power of this thought process, he often advised, "when in trouble, invert, always invert." One commencement speaker picked up on this mental trick, and told the graduating class how to have a miserable life. For instance, he advised that if they wanted to be unsuccessful, they should never try to learn from great thinkers that have come before; they should try to discover everything themselves. The audience soon understood the types of behavior the speaker believed they should avoid, and were easily able to invert, and "back into" the types of behavior he believed would prove rewarding in life. Jacobi's mental habit of thinking problems through forward and backward should be useful for everyone.

The Efficient Market Theory Stated

In the 1960s, building on the work of Harry Markowitz and others, Eugene Fama proposed the efficient market theory. Since competition in the stock market is so intense, "rational profit maximizers" will quickly impound new information into stock prices such that, at any point in time, the market price is the single best estimate of the value of an enterprise. Because news arrives randomly, stock prices will follow a "random walk." Investors, therefore, should utilize an index approach and forgo trying to beat the market. This theory rests on a circular argument. Only through the efforts of active investors can market efficiency be expected. But as long as some investors seek opportunities and bring about efficiency, others can "free ride" and still trust that market prices are unbiased.

In addition, efficient market theory believed that since investors are risk-averse, they must receive a premium to reward them for bearing greater risk (uncertainty). Vast amounts of data have been collected that seemingly support the efficient market theory. The records of professional managers, on average, have failed to beat the market. Furthermore, over long periods of time, stocks have outperformed corporate bonds, which have outperformed government bonds and inflation, but each has only done so with more volatility.

Here Come the Behavioralists

The ethos of hard science dictates that a theory that has been tested, supported by evidence and seems to explain an observed phenomenon be upheld until a competing theory either disproves the original theory or better explains the phenomenon. Some researchers, unconvinced by the correctness of the efficient market theory, began delving on the border between economics and psychology, a field that came to be termed "behavioral finance." Thinking through the problem backwards using cleverly designed experiments, they found evidence refuting the validity of many of the assumptions on which the efficient market theory rests, and proposed different descriptions of reality. Amos Tversky and Daniel Kahneman (Kahneman shared the 2002 Nobel Prize in Economics for this work, which Tversky surely would have shared had he not passed away in 1996) found that people demonstrate the following:

Loss Aversion – People are not always risk averse. In the realm of losses, they exhibit risk-seeking behavior. For instance, in experiments, when people were offered a sure \$85,000 or an 85% chance of \$100,000 or a 15% chance of receiving nothing, the majority of respondents chose the sure \$85,000 even though each has the same expected value. This is consistent with risk aversion. But when the same people were offered the choice between a certain loss of \$85,000 and an 85% chance of losing \$100,000 and a 15% chance of losing nothing, the majority chose the gamble rather than the certain loss, exhibiting risk-seeking behavior. It is often said that the market hates uncertainty. However, the finding

above recalls Mark Twain's comment "a wife does not so much object to her husband gambling, she mostly objects to him losing."

Mental Accounting – People tend to organize their decisions in separate mental accounts. For instance, researchers constructed the following two scenarios:

Scenario 1: You have paid \$20 for a play ticket. Upon arriving at the theatre you discover that you have lost the ticket. Would you pay \$20 for another ticket?

Scenario 2: You have decided to see a play that costs \$20 per ticket. Upon arriving at the theatre you discover that you have lost a \$20 bill. Would you still pay \$20 for a ticket?

In one study, only 46% of respondents answered yes in scenario 1, while 88% of those same respondents answered yes to scenario 2. That people construct "mental accounts," whereby the account for a theatre ticket is down \$20 in scenario 1 but not in scenario 2, is the most likely explanation.

Overconfidence – Numerous studies have shown people are overconfident in their predictions. Furthermore, predictions often are not well calibrated. For instance, when people were asked how confident they were in a certain prediction, respondents who replied 80% or greater were often in error more than 50% of the time. As Herbert Simon declared, humans are only boundedly rational.

Conducting studies involving the U.S. stock market, Werner De Bondt and Richard Thaler published an article in 1985 entitled "Does the stock market overreact?" in which they reported findings that stocks that were the subject of recent bad news were, on average, systematically mispriced as they subsequently outperformed market averages. "Value" investors jumped on this and other studies as justification for their investment approach. Other studies looked at positive earnings "surprises" and relative price strength and concluded the market under-reacts to good news given these stocks outperformance over a 6-12 month time frame. Momentum and some quantitative investors hold up these studies to justify their investment approaches. This might strike some as frustrating and even further proof of efficient markets - sometimes the market overreacts and sometimes it under-reacts (not to mention the possibility that the conclusions in these studies might depend on the time frame over which the analysis was conducted). From our viewpoint, the findings from behavioral finance do produce a more complete picture of reality and can be synthesized with the other findings. Succinctly, we believe that while markets are fairly efficient, they are far from always efficient.

A Mental Checklist

Thoughts on some of these topics were refreshed after reading *The Wisdom of Crowds: Why the Many are Smarter than the Few and How Collective Wisdom Shapes Business, Economies, Societies, and Nations* by James Surowiecki. The basic premise of the book is that under the right circumstances, groups are remarkably intelligent, and are often smarter than the smartest person in them. Instinctively, most people have trouble accepting this thesis, as unruly mobs and other mass hysterias readily come to mind. This doubt is acknowledged upfront in the liner notes to the book, with H. L. Mencken's quote "No one in this world, so far as I know, has ever lost money by underestimating the intelligence of the great masses of the plain people." Surowiecki, however, maintains that Mencken is wrong. He has collected some wonderful examples of groups making extraordinarily accurate predictions under uncertainty, and working together to solve problems of cognition, coordination, and cooperation. He also presents examples of groups making dysfunctional decisions, but is not necessarily troubled by this, wisely pointing out that this is the way the world works. What he does propose, however, is that for a crowd to make wise decisions, it must possess the following characteristics:

- **Diverse** - because it adds perspectives that would otherwise be absent and because it takes away, or at least weakens, some of the destructive characteristics of group decision making such as groupthink and conformity.
- **Independent** - because it keeps the mistakes that people make from being correlated and makes it more likely to have new information rather than the same data with which everyone is already familiar.
- **Decentralized** – because it fosters diversity, encourages independence, and brings specialized knowledge, including what economist Friedrich Hayek termed tacit knowledge, that knowledge which cannot be easily summarized or conveyed.
- **Aggregation** – because some mechanism, such as market prices, must exist to reflect the thinking of the group as a whole, typically through averaging.

Just as an airline pilot uses checklists to ensure a safe takeoff, flight, and landing, we believe this can serve as an effective checklist for an individual to use to gauge the appropriate level of trust to have in the wisdom of crowds.

The Conceit of Stock-Picking

Referring back to the commencement speaker, being conceited would have made his list of behaviors to avoid in life. So we acknowledge that there is a certain conceit in selecting individual stocks and trying to beat the market, and recognize that outperforming the market, after considering all costs, is a formidable challenge. We also believe free markets are the best mechanism available for setting the price of capital and eventually sorting out the truth. Yet, when we apply Surowiecki's pre-conditions for wise crowds to the stock market, we remain skeptical of placing complete trust in stock market prices, and are hesitant to follow a passive index strategy.

Consider the condition of independence. Investors would meet this test if they independently appraise the value of a business based upon their own expectations for the future cash flows of the business and a reasonable required return, and buy or sell only when they spot a compelling investment opportunity. However, if investors engage in the practice of trying to predict what other investors might pay in the near future for a given security (in a process that John Maynard Keynes described as analogous to a beauty contest where the contest winner would be based not on some objective standard of beauty, but on whose picks most closely correspond to the average picks of all competitors), prices can become unhinged from reality. In reality, it is never exclusively one or the other. However we see signs of the latter reflected in very high turnover portfolios. Also, we frequently observe managers "closet indexing," by starting with the current stock price (and by extension the market capitalization) to formulate portfolio position sizes based on small deviations from the index weight. These observations curtail our confidence in perfectly efficient markets, and lend us confidence there will be select opportunities to add value.

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