

# CAPITAL IDEAS

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## The \$20 Bill Tale

The following is a legendary joke we have often heard, particularly among those who propose that markets are *inefficient* (enabling clever investors to outperform the market by exploiting mispriced securities):

A financial economist and passionate defender of the Efficient Markets Hypothesis (EMH) are walking down the street one day with a friend.

The friend stops him and says, "Look, there's a \$20 bill on the ground!"

The economist replies, "There can't be. If there were a \$20 bill on the ground, somebody would have already picked it up."

Of course it never hurts to enjoy the humorous side of things, but in this case the standard joke represents a misleading analogy. The following revised joke perhaps doesn't make as rapid a presentation at a cocktail party, but we feel it more accurately depicts the irony of the EMH:

A financial economist, and passionate defender of the Efficient Markets Hypothesis (EMH), is walking down the street with a friend.

The friend stops and says, "Look, there's a \$20 bill on the ground!"

The economist replies, "Hey, this must be our lucky day. How often do you come across a \$20 bill lying in the street? After all, the occurrence is so rare that it would be foolish for an individual to invest significant time or effort searching for more of them; the investment would highly likely be a poor one. I personally am unaware of anyone who has struck it rich combing for treasure with metal detectors. Say, we'd better grab it quickly, because it won't be there for very long."

True enough, by the time the learned economist had finished his speech and looked back to where the \$20 bill had been, it was gone.

What the first version of the joke fails to relate is that an efficient market does *not* mean that there can't be proverbial \$20 bills (or undiscovered mispriced securities) lying around.

Instead, they are a rare and essentially lucky find, there are a host of highly educated and trained experts already trying to track them down, and their availability is usually brief. Facing these odds, the rewards are highly unlikely to exceed the costs of trying to find and quickly claim them.

To stretch the analogy further, even if someone discovered a certain area that contained lots of \$20 bills - imagine a multi-millionaire deciding on a whim to sprinkle money from a penthouse window - there would probably quickly be much competition in claiming the lucky find, again reducing the likelihood of achieving an appropriate return on any "investment." Similar logic explains one of the EMH's fundamental tenets: In a competitive financial environment, successful trading strategies tend to self-destruct because they are self-limiting. When they are discovered, we can expect them to be eliminated by the very act of exploiting the strategy.

Economics professors Dwight Lee and James Verbrugge of the University of Georgia explained the power of the efficient markets theory as follows:<sup>1</sup>

The efficient markets theory is practically alone among theories in that it becomes more powerful when people discover serious inconsistencies between it and the real world. If a clear efficient market anomaly is discovered, the behavior (or lack of behavior) that gives rise to it will tend to be eliminated by competition among investors for higher returns ... (For example) If stock prices are found to follow predictable seasonal patterns ... this knowledge will elicit responses that have the effect of eliminating the very patterns that they were designed to exploit ... The implication is striking. The more empirical flaws that are discovered in the efficient markets theory the more robust the theory becomes. (In effect) Those who do the most to ensure that the efficient market theory remains fundamental to our understanding of financial economics are not its intellectual defenders, but those mounting the most serious empirical assault against it.

In summary, while the markets may not be perfectly efficient (it is possible to find the occasional unclaimed \$20 bill), a prudent investment strategy is to behave as if they were. Investors who accept the EMH as fundamental to their investment strategy don't have to spend their time chasing the very few mispriced securities that might occur. Instead they can focus their efforts on defining and incorporating an appropriate amount of risk within their asset allocation, capturing as much of the market returns as possible given their risk tolerances, and minimizing the costs of their efforts that might otherwise detract from returns. On the other hand, if they do happen to run across a lucky \$20 bill during their travels, they are still encouraged to pocket it!

<sup>1</sup> Dwight Lee and James Verbrugge, **The Efficient Market Theory Thrives on Criticism.** *Journal of Applied Corporate Finance*, Spring 1996.