False Hopes

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Most trading strategies has not been tested with sufficient rigor.

This is the perfect investment deal: Each week you will receive a fund manager a recommendation to buy or sell a stock, then say that its price will rise or fall over the next week. If after ten weeks all recommendations have been correct, you will be more than willing to give their money to fund that invests.

After all, there will only be one chance in a thousand that the result is a matter of luck. Unfortunately, this is a kind of well-known scam: the promoter sent 100,000 emails and select an action or any other securities at random.

Half of those who receive the message are told that the stock price will increase, and the other half will fall. After the first week, the 50,000 who received successful recommendation will receive a second email and who received the incorrect information will be deleted from the list.

And so on for ten weeks until the end and just because the law of averages is fulfilled, you must have 98 clients convinced of the genius of the fund manager and ready to entrust their savings. A research article published last year in the Journal of Portfolio Management (Journal of Portfolio Management) notes that this is a classic example of the misuse of statistical theory. Is that if enough tests are done to a group of data-for example, half a million genetic sequences to find a link to a sickness, there are many sequences that seem significant, but most will be the result of chance.

This problem afflicts scientists from many disciplines. There is a statistically significant naturally biased towards reporting results-for example, a medical cure a disease or cancer-causing chemical compound. It is likely that such results are published in academic journals and reach the
front pages of newspapers.

But when other scientists try to replicate testing, the link disappears because the initial result was an atypical random value. It is known that studies refuting previous findings tend to be less publicized.

Faced with this problem, scientists have adopted more stringent statistical tests. Thus, when investigating a subatomic particle called the Higgs Boson, they decided to prove its existence, the results had to be five standard deviations above the average—that testing, a probability of one in 3.5 million.

Financial investigation is highly prone to statistical distortion. The scholars who are engaged in this discipline have to choose many thousands of stocks, bonds and currencies that are traded through dozens of countries, which decades of data are added daily prices. With all this, they can perform verification testing in thousands of correlations to find a few that seem to offer cost-effective strategies.

That article states that most financial investigations performs tests with a standard deviation of two (or "sigma two," according to the jargon) to check whether the results are statistically significant. But this approach is not rigorous enough.

One way to address this difficulty is using testing "out of sample". For example, if you have 20 years of data, it divides into halves; and if a strategy works for the first half, we will have to see if it works for the period that is out of the sample. If not, then the result is fortuitous.

The problem with this kind of testing is that researchers know what happened in the past and may designate their strategies exploiting this advantage: for example, consciously avoiding the stock prices of banks in 2007 and 2008. In addition, dividing the data means fewer observations, making it more difficult to find links that are statistically significant.

Campbell Harvey, one of the paper's authors, says that the only approach was useful sample is ignoring the past and analyze whether the strategy will work in the future. But few investors or fund managers have the required patience; they want a winning strategy now and not in five years.

The conclusions are clear and strong: "Most empirical research in finance, whether published in academic journals or fund managers as a trading strategy, is probably false. This means that half of financial products (that promise big returns) that companies sell is false."

For academics, the lesson is simple. In the future a much more rigorous in order to reduce the number of "false positives" in data analysis is required. And customers need to be more skeptical about the bright trading strategies that try to sell funds.

This will leave many readers wondering how to invest their savings, which is good. Just send us your email address and each month receive a tip on a stock, because we have the strategy to increase its heritage ...