

The Stock Market for Physicists

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Disclaimers

I have never taken a course in economics or finance.

I am not a stockbroker.

I don't know what stocks to buy or sell, and I don't know whether the market is going up or down.

What follows is advice of a very general nature.

What I learned from Warren Buffett

Warren Buffett has said many times that he can't predict the short-term rises and falls of the prices of stocks.

So I don't try, and you probably shouldn't either.

In the short term, the market is a voting machine; in the long term, it is a weighing machine.

History suggests that the long-term trend of prices is up.

Buffett also said:

People should buy shares of an index fund such as the one that tracks the S&P 500, which is the average price of all the shares of the 500 largest corporations.

An easy way to do this is to buy shares of the exchange-traded fund (ETF) with ticker symbol SPY.

Use a discount broker

Fidelity, Schwab and TDAmeritrade (now part of Schwab) let one buy and sell shares of corporations at no charge.

Fidelity lets one buy “slices” of shares. For example, one can buy one-tenth of a share of SPY for about \$44.

TDAmeritrade has real humans who actually answer the phone late at night and on weekends.

“Full-service” brokers offer bad advice and charge big fees.

What I learned from Peter Lynch

Peter Lynch has encouraged people to keep track of the products that they like and to consider buying shares in the corporations that make those products.

What I learned about stocks from Roy Glauber

Roy Glauber once explained to me that the people who manage big mutual funds and huge private fortunes can't invest in small corporations.

The reason, he said, is that if these people invested one percent of the capital they manage in a small corporation, the shares would double or triple as soon as they committed the first fraction of the one percent. So they study and buy shares of large corporations and leave small firms to ordinary investors.

Also the value of a billion-dollar corporation can increase by a factor of 100, but the value of a trillion-dollar corporation cannot.

So for big gains, one should stick to small corporations.

Physicists have special advantages

Every physicist is good at numbers. That is a huge advantage.

Every physicist understands technology. That is a huge advantage.

As a student of physics and as a working physicist, you occasionally will encounter a product that is amazingly useful and available at a reasonable price. If the product is made by a small corporation, you should consider buying shares in it.

Examples

Intel

Google

Apple

Alnylam

Netflix

Nvidia

BioNTech and ModeRNA

A final thought on how to control inflation and deflation

Inflation is caused by too little supply and too much demand; deflation is caused by too much supply and too little demand.

Higher interest rates reduce future supply; lower interest rates increase future supply. So raising interest rates to slow inflation and lowering them to reverse deflation act in the wrong ways on future supply. They also act too slowly because they don't directly affect demand.

Congress should give the Federal Reserve Bank the power to raise and lower the payroll tax. That would affect demand immediately.

And, in the interest of fairness, the payroll tax should apply to one's entire income, not just to the first \$160,200.