

Why The Random Walk Is Mostly Wrong, Most Of The Time

**Portfolios heavy
with
under-
performing
stocks almost
never
outperform the
market.
Ignat's Law**

**"The trend is your
friend."**

**Old Wall Street
aphorism**

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It can be demonstrated that the random walk is mostly wrong, for most stocks, most of the time. A simple review of the statistics for a large number of stocks makes this conclusion inescapable.

The academic community declares that stocks move around in what is referred to as a random walk. This is because the random walk results from movement that is close to 50/50, up or down, and the step sizes for the random walk are equal. If a drunk staggers around a lamppost with random steps that are equal in magnitude and these steps have a 50/50 probability of being to the right or the left, the drunk will most likely end up back at the lamppost.

Why does this not apply to the movement of stocks? And if it doesn't apply, what are the implications for investors?

First of all, the analysis of a large number of stocks shows that their daily movements are close to 50/50, up versus down. This appears to be true over a long period of time. So why is the random walk wrong?

It appears that the movements of stocks do not fit the requirement of the random walk because the step sizes are different. Again, statistical analysis of a large number of stocks shows that the average daily per cent change in price can be very large in the positive direction or very large in the negative direction. These are the results of measuring daily price changes for one year time periods. This appears to be true over many different periods of time for most stocks.

This data indicates that stock prices tend to move in long-term trends that can persist for long periods of time. If a trend is present in the stock price data, it indicates that the stock price can move far away from the lamppost of the random walk model. It is not because the percentage of up days versus down days is

different from a 50/50 relationship, but because the average percentage changes are very different. Sometimes the difference is strongly positive and sometimes it is strongly negative. But in either case, there is a trend that will carry the stock far away from its initial position, the lamppost.

The statistical analysis of a large number of stocks indicates that about one third of all stocks show large positive daily per cent price differences, one third show large negative differences and another third show small or zero differences. This work indicates that about a third of all stocks show strong up trends, another third show strong down trends and another third show weak trend movement or no trend movement at all. With two thirds of all stocks showing strong trend movement it is clear that the random walk model of stock price movement is wrong for a majority of stocks. It may be correct for those stocks with little or no trend movement, but that is a minority of all stocks. To try to make it appear that the random walk model applies to all stocks is clearly wrong.

It is also true that these statistics change over time. Some stocks have trends that persist, but no trend lasts forever. Trend movements change in magnitude and direction.. The stock market seems to be very dynamic but the proportion of stocks in up trends and the proportion in downtrends seems to be relatively constant over time..

This implies that the random walk model of stock price movements is mostly wrong, for most stocks, most of the time. The random walk applies to the movements of no more than one third of all stocks at any point in time. The other two thirds of all stocks are trending, either up or down, and that is true almost all the time.

The random walk model is used to discredit technical analysis but that seems to be totally misplaced. The trend following methods of technical analysis seem to apply to most stocks, most of the time. The random walk appears to be a strictly academic construct that does not fit with reality and it primarily applies to stocks with only limited profit potential.

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