

## A Biased Random Process

**Portfolios heavy  
with  
under-  
performing  
stocks almost  
never  
outperform the  
market.**

**Ignat's Law**

**Almost all stocks  
fluctuate randomly  
but many exhibit a  
bias either up or  
down. This bias can  
exist for long periods  
of time but it is  
unpredictable.**

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The process that determines stock prices is random but it can also exhibit a bias. The randomness means that the output of the process is unpredictable. The bias of the process determines whether the stock is trending up or down or is trendless.

Experience shows that the proportion of up days versus down days over a period of time for a stock is usually close to 50/50. So a trend is not determined by the proportion of the up days versus the down days but by the difference in the magnitudes of the up days versus the down days. When investors and traders are willing to buy a stock they will be willing to pay up for the stock on the up days and on down days, sellers will not have to accept as much of a reduction in price to sell if there are plenty of willing buyers. This produces the bias in the process that shows up as a trend in the price of the stock over time.

Experience shows that the bias of the process can change at any time. It can change in direction and in strength. It is a characteristic of stock price movements that the short-term bias in the process will strengthen and weaken in alternating waves as the short-term movement goes up and down.

It appears that the factor of randomness actually means that stock prices are unpredictable by any means. Quantitative methods, technical analysis and fundamental analysis all seem to lack the ability to predict future stock prices.

Once the idea of randomness and unpredictability has been

accepted, why would anyone use charts of stock prices? The answer is that stock price charts record and measure the bias that is present in the process at that time. More importantly, when the bias of the system changes, it will show up on the stock chart.

The stock chart is not used to predict the future but to show the bias of the process that is producing the price changes. This is the true purpose of stock charting. Long-term stock charts show the bias that has persisted over a long period of time. The long-term bias is considerably more important than the short-term bias and it is much more likely to persist. It takes time and significant changes in the process to produce a long-term change in the bias. The trend of a stock price is nothing more than an indication of the bias in the system.

The simple fact is that investors cannot predict the future bias of the process. Since the future bias of the system cannot be predicted, the only way the investor can know when the bias changes direction is by watching a chart of the stock's price. There are well understood methods to damp out the influence of the short-term, minor fluctuations in order to focus on the long-term bias. There are also well established methods to remove the influence of the overall market. A chart constructed according to these methods shows the bias in the stock price that is specific to that individual stock. These methods do not make the stock price predictable, but make the recognition of the bias in the system easy and more reliable.

There is a major difference between predicting the future bias of the system and recognizing when the bias changes direction.