

Stock Price Behavior and Market Efficiency

Chapter 8

One of the Funny Things about the Stock Market



One of the funny things about the stock market is that every time one man buys, another sells, and both think they are astute..

– William Feather

Technical Analysis

Technical analysis

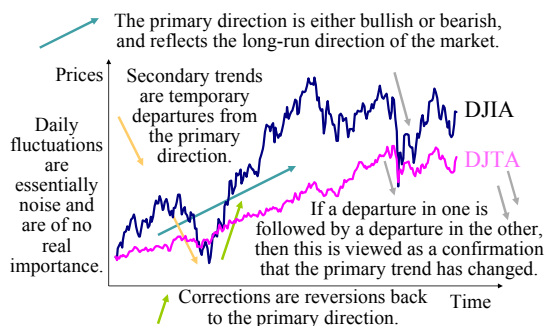
Techniques for predicting market direction based on (1) historical price and volume behavior, and (2) investor sentiment.

- Technical analysts essentially search for bullish (positive) and bearish (negative) signals about stock prices or market direction.

Dow Theory

- The Dow theory is a method of interpreting and signaling changes in the stock market direction based on the monitoring of the Dow Jones Industrial and Transportation Averages.
- The Dow theory identifies three forces:
 - ① a primary direction or trend,
 - ② a secondary reaction or trend, and
 - ③ daily fluctuations.

Dow Theory



Support and Resistance Levels

- A *support level* is a price or level below which a stock or the market as a whole is unlikely to go, while a *resistance level* is a price or level above which a stock or the market as a whole is unlikely to rise.
- Resistance and support areas are usually viewed as psychological barriers - bargain hunters help “support” the lower level, while profit takers “resist” the upper level.

Support and Resistance Levels

- A “breakout” occurs when a stock (or the market) passes through either a support or a resistance level.

Technical Indicators

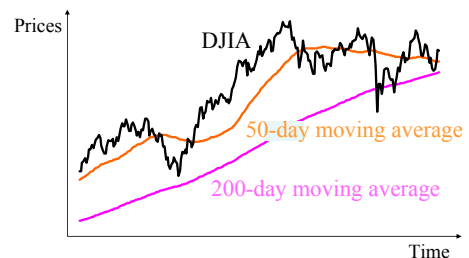
Notes:

- The “advance/decline line” shows, for some period, the cumulative difference between advancing and declining issues.
- “Closing tick” is the difference between the number of shares that closed on an uptick and those that closed on a downtick.
- “Closing arms” or “trin” (trading index) is the ratio of average trading volume in declining issues to average trading volume in advancing issues.
- “zBlock trades” are trades in excess of 10,000 shares.

Charting

- *Moving average charts* are average daily prices or index levels, calculated using a fixed number of previous days’ prices or levels, updated each day.
- Since the price fluctuations are smoothed out, such charts are used to identify short- and long-term trends, often along the lines suggested by Dow theory.

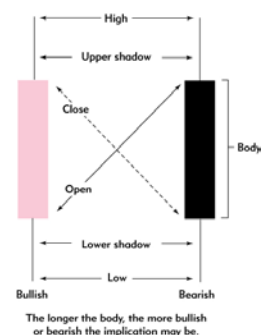
Charting



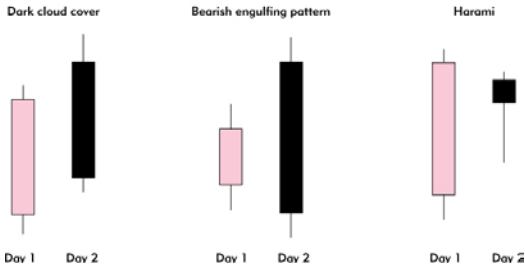
Charting

- A *hi-lo-close chart* is a bar chart showing, for each day, the high price, low price, and closing price.
- A *candlestick chart* is an extended version of the hi-lo-close chart. It plots the high, low, open, and closing prices, and also shows whether the closing price was above or below the opening price.

Charting



Charting



Charting

- *Point-and-figure charts* are a way of showing only major price moves and their direction.
- A “major” upmove is marked with an “X,” while a “major” downmove is marked with an “O.” A new column starts every time there is a change in direction.

Charting

Stock Price Information					
Date	Price	Date	Price	Date	Price
July 2	\$50	July 13	\$55	July 25	55
July 3	51	July 16	56	July 26	56 X
July 5	52 X	July 17	54 O	July 27	58 X
July 6	51	July 18	54	July 30	60 X
July 9	54 X	July 19	54	July 31	54 O
July 10	54	July 20	53	August 1	55
July 11	56 X	July 23	52 O	August 2	52 O
July 12	55	July 24	54 X	August 3	50 O

Point-and-Figure Chart		
60		X
58		X
56	X	X
54	X	O
52	X	O
50		O

Charting

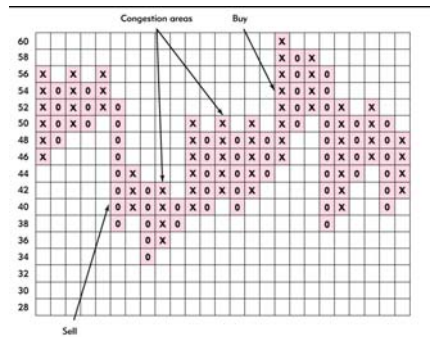
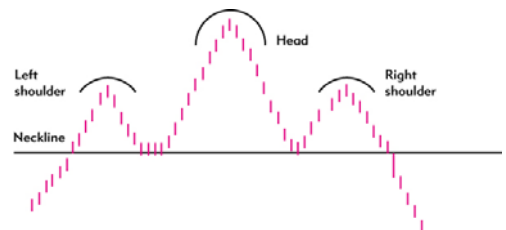


Chart Formations

- Once a chart is drawn, technical analysts examine it for various formations or pattern types in an attempt to predict stock price or market direction.
- One example is the *head-and-shoulders formation*.
 - When the stock price “pierces the neckline” after the right shoulder is finished, it’s time to sell.

Chart Formations



Other Technical Indicators

- The “odd-lot” indicator looks at whether odd-lot purchases are up or down.
- Followers of the “hemline” indicator claim that hemlines tend to rise in good times.
- The Super Bowl indicator forecasts the direction of the market based on whether the National Football Conference or the American Football Conference wins. A win by the National Football Conference is bullish.

Market Efficiency

Market efficiency

Relation between stock prices and information available to investors indicating whether it is possible to “beat the market.” If a market is efficient, it is not possible, except by luck.

Efficient market hypothesis (EMH)

Theory asserting that, as a practical matter, the major financial markets reflect all relevant information at a given time.

What Does “Beat the Market” Mean?

- The *excess return* on an investment is the return in excess of that earned by other investments having the same risk.
- “*Beating the market*” means consistently earning a positive excess return.

Forms of Market Efficiency

Weak-form efficient market

A market in which past prices and volume figures are of no use in beating the market.

Semistrong-form efficient market

A market in which publicly available information is of no use in beating the market.

Strong-form efficient market

A market in which information of any kind, public or private, is of no use in beating the market.

Why would a Market be Efficient?

- Even relatively small performance enhancements can be worth tremendous amounts of money (when multiplied by the dollar amount involved), thereby creating the incentive to unearth relevant information and use it.

Are Financial Markets Efficient?

- Market efficiency is very difficult to test.
- There are four basic reasons for this:
 - ① The risk-adjustment problem.
 - ② The relevant information problem.
 - ③ The dumb luck problem.
 - ④ The data snooping problem.

Are Financial Markets Efficient?

- Nevertheless, three generalities about market efficiency can be made:
 - ① Short-term stock price and market movements appear to be difficult to predict with any accuracy.
 - ② The market reacts quickly and sharply to new information, and various studies find little or no evidence that such reactions can be profitably exploited.
 - ③ If the stock market can be beaten, the way to do so is not obvious.

Some Implications of Market Efficiency

If markets are efficient ...

- ... security selection becomes less important, as the securities will be fairly priced.
- ... little role exists for professional money managers.
- ... it makes little sense to time the market.

Stock Price Behavior and Market Efficiency

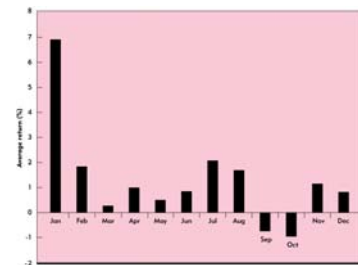
- The *day-of-the-week effect* refers to the tendency for Monday to have a negative average return.

*Average Daily S&P 500 Returns by Day of the Week
July 1962 - December 1994
Dividends Not Included*

Weekday:	Mon	Tue	Wed	Thu	Fri
Avg return:	-.078%	.035%	.098%	.026%	.063%

Stock Price Behavior and Market Efficiency

- The *January effect* refers to the tendency for small stocks to have large returns in January.



Stock Price Behavior and Market Efficiency

- On October 19, 1987 (Black Monday), the Dow plummeted 500 points to 1,700, leaving investors with about \$500 billion in losses. The market lost over 20% of its value on a record volume of 600 million shares traded.
- NYSE circuit breakers are rules that kick in to slow or stop trading when the DJIA declines by more than a preset amount in a trading session.