

**Lecture 1  
Objectives**

**The Basic Principle of Technical Analysis – The Trend**

- Define the term “trend”
- Explain why determining the trend is important to the technical analyst
- Distinguish between primary, secondary, short-term and intraday trends
- Discuss some of the basis beliefs upon which technical analysis is built

**History of Technical Analysis**

- The creation of market indices by Charles Dow
- The impact that academic theory and fundamental stock market analysis have had on the development and use of technical analysis
- The impact that data availability and computer power have had on the development of technical analysis

**An Overview of Markets**

- The market characteristics required for investors to use technical analysis
- The types of markets in which technical analysts can be used
- The differences between informed, uninformed, and liquidity market players
- The differences between price-weighted, market capitalization weighted, and equally weighted averages

**Dow Theory**

- A brief history of the development of Dow Theory and the major contributors to this development
- The three Dow Theory hypotheses presented by Rhea
- Theorems of Dow Theory
- The three types of trends – primary, secondary, and minor – of Dow Theory
- The concept of confirmation in Dow Theory
- The role of volume in Dow Theory
- The criticisms of Dow Theory

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**Reading**

**Master Textbook**

Technical Analysis: The Complete Resource for Financial Market Technicians **2nd Edition**  
*Charles D. Kirkpatrick and Julie R. Dahlquist* (FT Press, Pearson Education, 2011)  
*Chapters 1-6; pp. 3-87*

**Additional Reading**

Technical Analysis of the Financial Markets  
*Murphy, John*, pages 1-35, 59-61

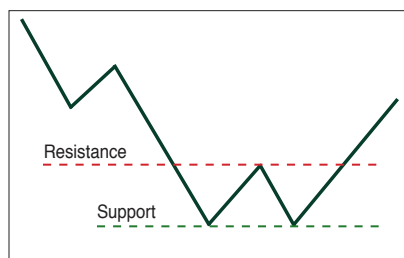
Technical Analysis of Stock Trends, 7th Edition  
*Edwards, Robert & Magee, John*, pages 13-57

Technical Analysis Explained  
*Pring, Martin*, pages 4-7, 31-41

**Chart 1**  
Viewing the Company versus the Stock



**Chart 2**  
Support and Resistance



**Chart 3**  
Walt Disney Co. - Daily H,L,C



**Chart 4**  
Merck & Co. - Daily H,L,C



## What is technical analysis – analysis of price action

- The top half of the circle is the place where you find the answers to fundamental analysis. What are the earnings? What multiple is the company able to carry? What are the strengths of the company's management, etc.? This is the most traditional approach to investing used by most people. Using ONLY this approach, no matter how well, misses half the picture. The technical side of the circle can help in making a more balanced decision. (Chart 1)
  - Price. Technicians refer to this as momentum because the price of a stock is always moving – be it up, down or sideways.
  - Volume. This is the number of shares bought and sold or what technicians also called “the flow of funds.” Money is always either flowing into (bullish) accumulation or out of (distribution) a given stock.
  - Psychology. Here we try to determine investor sentiment. Are they feeling positive about a stock or the market or is psychology negative. The difference between comparing fundamentals and the stock price is crucial.

### Technical discoveries [Chapter 1, pages 3-7]

- Humans behave in similar manner to past behavior in similar circumstance – not necessarily rationally – history repeats (Chart 2)
- Prices are determined by supply and demand – based on expectations (don't buy a stock unless expect it to rise in price). Expectations result from decisions, and decisions are based on information (usually past history and maybe accurate or not), emotion (greed, fear, and hope) and bias (behavioral finance)
- Prices thus discount all information – fundamental, technical and psychological – difference sources, different interpretation, and different reasons for trading stock today.
  - A specialist who's job is to stabilize the price of X.
  - A mutual fund that desires to accumulate shares of X because it believes company X earnings will improve rapidly and soon.
  - A group of investors acting on the fact that the stock of X has risen in the past.
  - A pension fund that already owns shares of X and believes the current price is too high.
  - An estate that owns shares of X and must sell them to raise cash.
  - A hedge fund that is attempting to trade the shares of X but has no opinion about the prospects for X as a company
- Prices trend, not in a straight line, as information and expectations change – most important aspect of technical analysis. Jump on and ride, “trend is your friend,” “don't buck the trend” most successful methods attempt to catch the trend early and ride it for its length.
- Prices occasionally develop acknowledged patterns
- Patterns and trends are fractal in time and size.
- Other assumptions and requirements
- Freely traded markets – minimum of restrictions on transacting
- Substitutable and identical
  - Structure
  - Vehicle
- Liquidity
  - Many buyers and sellers
  - Spread - small

### Types of technicians

- Predictive – names of famous technicians – Murphy, Acampora, Roth, Prechter, etc.
- Reactive – act when signs are right – set up and action, profit personally or for clients
  - Portfolio Managers – more for timing
  - Hedge Fund and CTA Managers
  - Long-term and short-term players – not strictly for trading
  - Usually not in the public eye – don't need it to sell fund shares, etc.
  - Currency traders – almost 90% by some estimates
  - Commodities traders – 40-70%
  - Commodities hedge operations –oil companies, grain companies, etc.
  - Individuals – for timing, screening, and checking validity of investment advice.

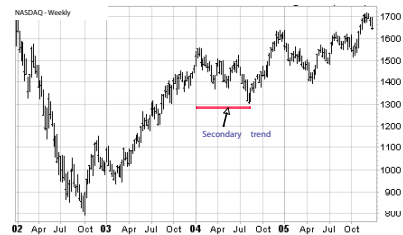
**Chart 5**  
S&P 500 Index - Monthly H,L,C



**Chart 6**  
S&P 500 Index - Weekly H,L,C



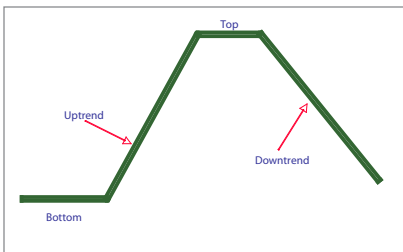
**Chart 7**  
NASDAQ 100 Index - Weekly H,L,C



**Chart 8**  
DJIA - 1896 and present

May 26, 1896	Current Dow Jones Industrial Average
American Sugar	IBM
American Tobacco	Alcoa
Chicago Gas	American Express
Dairying & Cattle Feeding	AT&T
General Electric	Bank of America
Laclede Gas	Boeing
National Lead	Caterpillar
North American Company	Chevron
Tennessee Coal & Iron	Cisco Systems
U.S. Leather plc.	Coca-Cola
U.S. Rubber American Cotton Oil	E.I. du Pont de Nemours
	Exxon Mobil
	General Electric
	Hewlett-Packard
	Home Depot
	Intel
	ISMI
	Johnson & Johnson
	JP Morgan Chase
	Kraft Foods
	McDonald's
	Merck
	Microsoft
	Pfizer
	Procter & Gamble
	Travelers
	United Technologies
	Verizon
	Walt Disney
	Walmart Stores

**Chart 9**  
Dow Theory and the Ideal Marketplace



## Methods

- Fundamental – earnings, balance sheets, management, etc. – usually divided into Value and Growth studies difference between market price and perceived value.
  - Advantages
    - appears logical
    - relationship between growth and stock price
    - relationship between value and stock price
    - Lots of information available
    - Theories of price to book, price to sales, have merit.
  - Pitfalls
    - wrong information – real estate prices recently
    - inability to assimilate information correctly – examples of factors that can affect the price of a stock.
- Fundamentals – economy, industry, company
- Politics – subsidies, taxes, regulations,
- Money – availability, cost, exchange rates
- Rumor
- Random events
- No account for psychology of the markets or analysts.

## Technical Analysis – study of prices

### Advantages (Charts 3, 4) [Chapter 1, pages 3-7]

- Technical analysis is completely self-contained and accuracy and timeliness of data is assured.
- Don't need to forecast the future, only need to identify the trend and ride it until it ends.
- Risk can be defined.
- The question of timing, of determining specific entry and exit points, is almost purely technical.
- Indicators can be tested statistically against actual market history and indicators approached in a systematic, scientific manner.
- Can be used in all freely traded securities markets.
- Analyst can generalize rather than being held to specific industries or groups
- Saves time for quick overlay of all markets
- Can be tailored to different time dimensions and is not limited to any. Short or long.
- Can include precisely defined, tested, and objective signals thus removing the subjective, emotional bias and consequent stress, ego, opinion and forecast. Allows clear decisions.
- Eliminates the quantification of multiple, inexact, and often untrue variables.
- Chartist can rotate attention and capital to take advantage of rotational nature of the markets.
- By interpreting the direction of stocks, commodities, and interest rates, can be used as economic indicators
- Gets right to the point – price is what one profits from, not earnings, prospects, stories, etc.

### Disadvantages

- Must learn methods
- By itself does not account for the fundamentals
- Using both now call “fusion” analysis

### History [Chapter 3, pages 23-32]

- Very old – known in Japanese rice market in 1700s
- Origin – no insider information
- Became more formalized as data became more reliable – tape, newspapers

**Chart 10**  
Dow Theory Three Trend Types



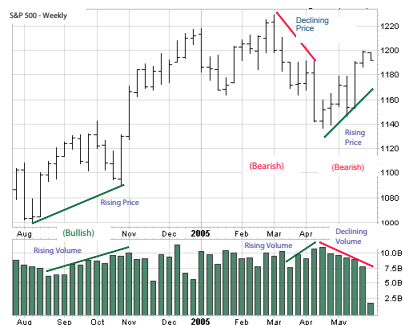
**Chart 11**  
Dow Theory of "Confirmation"



**Chart 12**  
Confirmation Between S&P 500 and Russell 2000



**Chart 13**  
Volume Confirmation



- Beginning with the Dow Theory – construction of market averages
- In 1920s – many practitioners of chart patterns and trends
- In 1960s – computer allowed faster computation and better testing of methods
- Today:
  - Instant information, low commissions, graphics software, automatic execution.
  - Enhanced study of short-term price action.
  - Behavior remains the same.
  - Found that prices are not necessarily random, but are not perfectly predictable either.

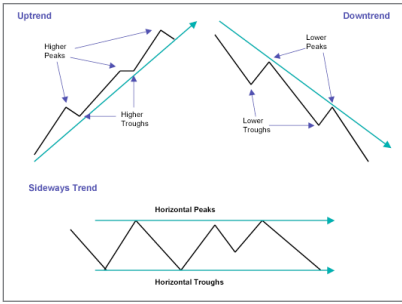
## Markets

- Organized
  - Direct Search
  - Brokered – does the searching for a fee
  - Dealer – willing to take a position, saves search costs
  - Auction – all pricing information is centralized
- Contracts – depend on terms of delivery, differences in leverage, liquidity,
  - Cash, also known as the “spot” market
  - Futures (also forward market) – expirations
  - Options – expirations – volatility calculation
- Players
  - Informed
  - Noise or uninformed
  - Liquidity
- Averages
  - Price-Weighted – DJIA
    - All components weighted by their current price, bias toward high priced components (Charts 5, 6, 7)
  - Market capitalization weighted – S&P
    - Weighted by number of shares times price, bias toward highly capitalized components
  - Equally weighted, geometrically weighted
    - Weighted by the change in each component.

## Dow Theory (Chart 8) [Chapter 6, pages 75-87]

- Originated as means of anticipating the economy – not the stock market
- Charles Dow died in 1902.
- William Peter Hamilton – editor from 1902 to 1929.
- Robert Rhea – formalized the “Dow Theory” in 1932
- Statistical tests have demonstrated that Hamilton’s interpretations were significant.
- Hypotheses (Chart 9)
  - Model of market cycle – not precise, requires interpretation – uses daily market closes.(Chart 10)
  - Primary trend is inviolate – cannot be manipulated – therefore should be the primary focus of investors
  - Averages discount everything
  - Dow Theory is not infallible – hedge clause – but suggests that not a mechanical system and requires considerably more study.
- Theorems [Chapter 6, page 78]
  - “Normal market is one that never happens”
    - Primary trend – several years – bull or bear market
    - Secondary trend – three weeks to three months – very deceptive – runs counter to primary trend. Sometimes corrects as much as 66% of the primary trend. Question is when does the secondary trend become a primary trend?

**Chart 14  
The Trend**



**Chart 15  
DJIA & DJTA - Weekly H,L,C**



**Chart 16  
Trend lines from Top to Top and Bottom to Bottom**



**Chart 17  
Daily and Hourly CNET Networks**



- Minor trend – daily fluctuations
- Mini trend today with electronic assistance – intraday fluctuations (Chart 11)
- Economic rationale – concept of confirmation
  - Industrial and Rail Averages
  - One must confirm the other – goods manufactured must be shipped.
  - Today services have become larger than industry and theory may need adjustment (Chart 12)
  - Some compare market sectors such as the Russell 2000 (small caps) to S&P 500 or DJIA (large caps) (Chart 13)
- Volume – important but not significant. Declining volume can be a sign of an impending change in direction. – must be related to the price behavior.
- Markets trend – most important

**Trend (Chart 14) [Chapter 2, pages 9-21]**

- Direction of prices – up, down or sideways
  - Up – Uptrend:
    - Higher peaks, higher troughs
    - Buyers more enthusiastic than sellers (Chart 15)
  - Down – Downtrend:
    - Lower peaks, lower troughs
    - Sellers more enthusiastic than buyers
  - Sideways – trading range, congestion area :
    - Peaks and troughs at same level (roughly)
    - Buyers and sellers in equilibrium
    - Often a pattern forms in a congestion area.
    - Identification
- Regression line (Charts 16, 17)
- Connect peaks and troughs
  - Any two connected creates a line
  - More touches to the line, the more powerful the trend
  - The more powerful the trend, the more important it is when broken.
  - Length of interest

**Criticisms of Dow Theory [Chapter 6, pages 85]**

- Lags tops and bottoms – not recognized until long after they have occurred.
- Different trends are not strictly defined.