Technical Analysis

Chapter 16
Charles P. Jones, Investments: Analysis and Management,
Ninth Edition, John Wiley & Sons
What is Technical Analysis?

- Use of published market data for analysis of both aggregate stock prices and individual stocks
- May produce insight into the psychological dimensions of the market
- Used by investors and investment advisory firms
- Oldest approach to stock selection
Technical Approach

• Prices move in trends determined by changing attitudes of investors
• Identify change in trend at an early stage and maintain investment posture until evidence indicates otherwise
• Market itself is own best source of data about trends
  – Data includes prices, volume, and technical indicators
Technical Approach

• Technicians believe it is extremely difficult to estimate intrinsic value and to obtain and analyze information consistently
  – Market data indicates forces of demand and supply
  – Record of investor mood that can be detected and is likely to continue
Tools For Technical Analysis

• Use of graphs, charts, and technical trading rules and indicators

• Price and volume primary tools of the pure technical analyst
  – Chart is most important mechanism for displaying information
  – Volume data used to gauge market condition and to assess its trend
The Dow Theory

• Based on three types of price movements
  – Primary move: a broad market movement that lasts several years
  – Secondary moves: occurring within primary move
  – Day-to-day moves: occurring randomly around primary and secondary moves

• Bull (bear) market refers to upward (downward) primary move
The Dow Theory

• Bull market occurs when successive rallies penetrate previous highs
  – Declines remain above previous lows
• Bear market occurs when successive rallies fail to penetrate previous highs
  – Declines penetrate previous lows
• Secondary moves called technical corrections
  – Day-to-day “ripples” minor importance
Charting Price Patterns

- Prices changes can be recognized and categorized
- Support price level: significant increase in demand is expected
- Resistance price level: significant decrease in demand is expected
- Treadline: identifies a trend or direction
- Momentum: speed of price changes
Charting Price Patterns

- **Bar Chart**
  - Vertical bar’s top (bottom) represents the high (low) price of the day

- **Point-and-Figure Chart**
  - Compresses price changes into small space
    - Areas of “congestion” identified
  - X (O) used to indicate significant upward (downward) movement
Moving Averages

• Used for analyzing both the overall market and individual stocks

• Used specifically to detect both the direction and rate of change
  – New value for moving average calculated by dropping earliest and adding latest observation to the average
  – Comparison to current market prices produces buy or sell signal
Relative Strength

• Ratio of price to index or past average price over some period
  – Ratios plotted to form graph of relative price across time
  – Rising (falling) ratio indicates relative strength (weakness)
  – What if overall market is weak?
  – What if stock declining less quickly that the market?
Breadth Indicators

• **Advance-Decline Line**
  – Measures the net difference between number of stocks advancing and declining
  – Plot of running total across time is compared to a stock average to analyze any divergence
    • Divergence implies trend changing

• **Number hitting new highs (lows)**

• **High trading volume regarded as bullish**
Sentiment Indicators

- Short interest is number of stocks that have been sold short
- Short interest ratio =
  - Total short interest/Ave. daily volume
  - Indicates number of days needed to “work off” the short interest
- Many technicians take a high short interest ratio as a bullish sign
  - Short interest figures may be distorted
Opinions of Investment Advisory Services

• Bearish sentiment index
  – Ratio of advisory services bearish to total number with an opinion
  – When at 60% (15%), the DJIA goes from bearish to bullish (bullish to bearish)
  – Advisory services assumed wrong at extremes
    • Do services follow trends rather than forecast them?
Mutual Fund Liquidity

• Based on contrary opinion
• Mutual funds, viewed like odd-lotters, assumed to act incorrectly before a market turning point
  – Low liquidity implies funds fully invested (bullish) and market is near or at peak
  – High liquidity implies funds are bearish
    • Considered a good time to buy
CBOE Put/Call Ratio

- Speculators buy calls (puts) when stock prices expected to rise (fall)
- Rise (fall) in ratio of put option purchases to call option purchases indicates pessimism (optimism)
  - Buy (sell) signal to a contrarian
  - Extreme readings (below .7 or above .9) convey trading information
Testing Technical Strategies

• What constitutes a fair test of a technical trading rule?
  – Risk considerations
  – Including transaction and other costs
  – Consistency in performance
  – Out-of-sample validation

• Filter rule tests
  – Trades made when price change greater than predetermined filter
Conclusions About Technical Analysis

• Thorough tests of technical analysis have failed to confirm their value, given all trading costs and the alternatives, such as a buy-and-hold strategy

• Several interpretations of each technical tool and chart pattern are not only possible but usual
  – Art or science?
Conclusions About Technical Analysis

• Strong evidence exists suggesting that stock price changes are weak-form efficient
• Impossible to test all techniques of technical analysis
• Technical analysis remains popular with many investors
END