

Understanding the Technical Market Indicators

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In general, Analysis of Investment securities can be broadly classified into two categories as Fundamental Analysis and Technical Analysis. Fundamental Analysis involves making investment decisions based on examination of the economy, an industry, and the target company that lead to an estimate of intrinsic value for an investment or security, which is compared to the prevailing market value of the security. In contrast, technical analysis involves examination of the past market data such as security prices and trading volume, which leads to the estimate future price trends, and therefore investment decision. In the market, major investment firms employ both fundamental and technical analysts to provide investment analysis and advice. And most investment managers complement technical analysis with fundamental analysis to make a well informed investment decision. Therefore, whether an investor is a fan of fundamental analysis or technical analysis, it is vital to understand the basic philosophies and reasoning backing technical approaches.

Unlike fundamental analysts, technical analysts do not spend their time in attempt to estimate the intrinsic value of a stock to see if its overvalued or undervalued relative to the market price, but would rather spend their time on market based activity like security's past prices and trading volumes. Technicians base their analysis primarily on four basic assumptions:

- The market value of a security, good, or service is determined solely by the interaction of its demand and supply.
- The demand and supply of the security are governed by many rational and irrational factors like opinions, moods, and guesses; including economic variables.
- The prices of securities and the overall value of the market move in trends, which persists for a considerable period of time.
- The actual price shifts in the demand and supply can be observed in the market place sooner or later.

Technical Analysis implements many different trading rules that may be grouped into major ideologies or philosophies. Not all the trading rules that would be discussed below will be used by all technicians to analyze an investment security or the economy, but a certain subset would be used to come up with a well defined analysis based on what ideology or philosophy an analyst would believe in. Primarily technical trading rules can be classified into four different groups that are: Contrarian-Opinion Rules, Follow the Smart Money, Momentum Indicators, and Stock Price and Volume Techniques. The first group includes trading rules used by technicians or analysts who like to trade against the crowd using contrary-opinion signals. The second group believes that smart and sophisticated investors know what they are doing, so they suggest on “jumping on the bandwagon” while there is time. The third groups of technicians use Momentum Indicators to make decision on the direction of the market. Lastly, the fourth group employs a variety of price and volume based indicators which also includes the Dow Theory.

Contrarian-Opinion Rules

Technical Analysts that rely on Contrarian-Opinion indicators assume that the majority of investors in the market are wrong as the market approaches peaks and troughs. Therefore, this group of technicians tries to determine when the majority of investors are either strongly bullish or bearish and then trade in the opposite direction. There are six major contrarian-opinion indicators that are followed by the contrarians is explained below.

1. Mutual Fund Cash Positions: Mutual Funds hold some part of their portfolio in cash for a variety of reasons. Either they need cash to liquidate share redeemed by mutual fund holders or to invest in potential profitable securities. Another important reason why a portfolio manager or an investment officer would hold large portion in cash is that he might be bearish on the market and does not see any profitable investments to invest in the near future. In this context, Mutual fund's cash ratio is a ratio of cash as a percentage of total assets in the portfolio. The percentage of cash would usually range from 4% to 11%, which would be reported in monthly presses or Barron's. When the cash ratio reaches closer to 11% or more is when fund managers see troughs in the markets where no profitable opportunities seems to appear, but Contrary-Opinion technicians believe that fund managers are usually wrong at peaks and troughs, so it a buying opportunity for these technicians. When the cash ratio reaches the low point of 4% or less, contrary opinion technicians see it as a selling opportunity while fund managers see it as a buying opportunity.

2. Credit Balances in Brokerage Accounts: Credit Balances in brokerage account result when investors sell their stocks and leave the cash proceeds with their brokers or brokerage accounts, expecting to invest in the near future. While the contrarian technicians or technical analysts view these credit balances as potential purchasing power, a decline in these balances are considered bearish because it indicates lower purchasing power as the market approaches peak. The credit balances are usually reported by SEC and the NYSE in Barron's.

3. Investment Advisory Opinions: The bearish sentiments index is used to indicate the level of bearish sentiment among investment advisors. If more than 60% of investment advisory services are bearish, then contrarians are bullish on the market. And if less than 20% of the investment advisors are bearish, then investment advisors in general are relatively bullish, so contrarians are bearish and sell in the market.

4. Over the Counter (OTC) versus NYSE Volume: This ratio of trading volume is considered a measure of speculative activity in the market. Over-the-counter issues are more speculative than the New York Stock Exchange issues, and speculative trading increases at market peaks. If the ratio of the OTC volume to NYSE volume is increasing, it signal an increased speculation in the market and fund manager are bullish; therefore the contrarians are bearish on the market who believe the opposite of fund manager. In contrast, if the ratio is decreasing, then fund managers are bearish, but contrarians are bullish.

5. Chicago Board Options Exchange Put-Call Ratio: Contrary-opinion technical analyst's use put options (a put option gives a holder a right to sell a stock at a specified price during a given period of time) as a signal of bearish attitude. A higher put-call ratio indicates a bearish attitude for investors (fund managers), while technical analysts consider it as a bullish indicator. Usually the put-call ratio fluctuated between 0.60 - 0.40 and has typically been substantially less than 1 because investors tend to be bullish and avoid selling short or buying put options.

6. Futures Traders Bullish on Stock Index Futures: Some contrarian-opinion analysts track the relative number of futures traders who are bullish. It is said that when more than 70% of index futures speculators are bullish, while the contrarians become bearish. And when less than 30% of speculators are bullish, then contrarians become bullish.

Following the Smart Money Rules

Technical Analysts group a small number of indicators to see what the smart or sophisticated investors are doing and bet along with them against the dumb investors. The indicators below are to measure what traders are actually doing with their hard earned capital.

1. Confidence Index: The Confidence Index is published by Barrons, which measures the ratio of Average Yields of 10 top-quality bonds to the average of Dow Jones Average of 40 Bonds or a larger cross section of bonds. (When speaking about bonds, one should keep in mind of the inverse relationship between the price and yield of bonds. In other words, if yields of bonds increase then the prices of bonds fall and vice versa.)

$$\text{Confidence Index} = \frac{\text{Average Yields of 10 top quality bonds}}{\text{Dow Jones Average of 40 Bonds (broader section of bonds)}}$$

During periods of high confidence, investors are willing to invest in lower quality bonds (denominator in the formula above) for the added yield, which causes a decrease in the average yield for the large cross section of bonds relative to the yield on high grade bonds. Therefore, the confidence index or ratio will increase. On the contrary, when investors are pessimistic about the market, they avoid investing in low quality bonds, which increases the yield spread between high quality and average bonds, which in turn causes the Confidence index to decline. In short, the confidence index increases when the traders are optimistic about the market and decreases when the traders are pessimistic about the market.

2. T-Bill –Eurodollar yield spread or “TED”: The TED is a popular measure in the market of the investor attitude or confidence on a global basis which is the spread between T-bill yield and Eurodollar rates. What this indicator tries to convey to investors is that in times of international crisis the spread between the T-bill and Eurodollar widens because smart money investors put their money into safe-havens like US T-bills, which causes the decline in the TED ratio. Many investors contend that shortly after the TED spread decreases, there follows trough in the market.

3. Debit Balances in Brokerage Accounts: The increase in debit balances in brokerage accounts indicate that knowledgeable investors are borrowing funds from their brokers to make investments with borrowed funds. Smart investors generally borrow from the brokers when they express confidence in the market and see some profitable investment opportunity to capitalize from borrowed funds. Although, Barrons published a monthly data on margin debt, it does not include borrowing when investors borrow from sources like banks.

Momentum Indicators

In addition to Contrary Opinion indicators and Smart Money indicators, most technical investment analysts use momentum indicators to make decision about the aggregate market.

1. Breadth of Market or Market Breadth: Market Breadth is a technique used by technicians in an attempt to gauge the overall market directions. Market Breadth is also popularly known as Advance-Decline ratio or index that analyses the number of companies advancing in prices relative to the number of companies declining in prices on a given day. Most investors use Dow Jones or S&P 500 index to see the direction of the market or to see if the market is doing well on a particular day. But we must also understand that these above mentioned indices (DJIA or S&P 500) are just a subset of the largest firm’s advances or declines in the market but not the overall market. But to overcome this challenge of the shadow of the above indices, one can use the Advance- Decline ratio. The Advance-Decline ratio takes into account all the issuers on the NYSE and categories into Advances or Decline or Unchanged. This ratio or market breadth is used to evaluate what is really happening in the market.

2. Stocks above their 200-day moving average: Technical Analysts most often use moving averages of a stock market index to determine the general trend of the market, which can be upward trending or downward trending or flat with no trends. But to examine an individual stock, an analyst can use a 200-day moving average to see what the market sentiment is for the particular stock evaluated. Media General Financial Services, which was purchased by CenterPoint Data Inc. in 2003, calculates how many stocks are currently trading above their 200 day moving average index, and this indicator is used to see what the general investor sentiment is. When 80% of stocks in the market trade above their 200-day moving average, then it is considered to be overbought and will be subject to negative corrections. And on the other hand, if less than 20% stocks are selling about their 200-day moving average, the market is considered oversold, which means and investor should expect positive corrections in the market.

Stock Price and Volume Technique

1. Dow Theory: Dow Theory was formulated by Charles H. Dow over 100 years ago, that describes stock prices as moving in trends analogous to the movement of water. Dow Theory postulates three different trends as primary or major trends, secondary or intermediate trends, and short-run or minor trend. Charles Dow determined that the primary trend would generally last between one to three years, which are considered to be like tides in the ocean. Secondly, the secondary or intermediate trends generally last between three weeks to three months whose moves are more volatile than the primary trend and move in opposite direction of primary trend. Thirdly, the minor or short-run trend generally runs for less than three weeks which is very volatile than the above two trends and is also considered as noise by many analysts. Although, the minor or short run trends does not make sense when viewed in isolation, but when used along with primary and secondary trend using the big picture, it would be useful to make short term or intraday trades.

2. Upside-Downside Volume: Many technical analysts believe that price changes alone does not tell the whole story in order to gauge the market sentiment or to determine the changes in the supply and demand, therefore they look at Upside-Downside Volume along with price changes to give us the complete picture. Upside-Downside Volume is the ratio between volumes of stocks that increased to the volume of stock that declined.

$$\text{Upside-Downside Volume} = \frac{\text{Volume of Stocks that increased}}{\text{Volume of Stocks that decreased}}$$

If the upside-downside ratio that is above 1.75 or more indicates that the market is overbought and signals a bearish sign. And when the ratio of 0.75 or lower indicates that the market is oversold and signals a bullish sign. This indicator is generally reported by Wall Street Journal on daily basis and by Barrons on weekly basis.

3. Moving Average Lines: It is implied from previous discussions about technical analysis that the stock prices move in trends, and sometimes it gets difficult to observe trends in the time series plot of stock prices due to daily fluctuations in prices. So, analysts use moving averages to smooth out the daily fluctuations in the stock prices to observe the trend. Moving averages can range from 10 to 200 day. Most investors can chart the stock prices using tools in Yahoo finance or Wall Street Journal.

4. Relative Strength: Most technical analysts believe that once a trend begins it would continue until any major event that changes its direction. And sometimes is even more difficult to tell if the trend is stock specific or caused by market movements. In this situation, relative strength index comes in handy to evaluate a specific stock or an industry relative to the market index like S&P 500. Relative Strength Index is computed by dividing price of a particular stock index or an industry index by the market index like S&P 500.

$$\text{Relative Strength Index} = \frac{\text{Stock Price or Industry Index Price}}{\text{Market Index (S\&P 500)}}$$

If the relative strength index is increasing over time, then it shows that the industry or a stock is outperforming the overall stock market, and a technical analyst would expect the ratio to increase over time if not affected by any major event that can cause a change in direction. On the contrary, if the relative strength index is declining over time, then it tells that the particular stock or industry is underperforming the market, which results in a negative trend. Merrill Lynch publishes relative strength charts for industry groups, where investors can look forward for.

In conclusion, we would like to say that understanding and using all the above indicators is not required to perform a complete analysis, but would be recommended to know what each indicator tells us so that we can determine what is happening in the market. The above indicators explained can be used as a supplement to fundamental analysis or find out more about the market direction that are not really explained by leading stock market indices like Dow Jones Industrial Average or Standard and Poor's 500 which consider only a small subset of large firms traded on NYSE. It is recommended not to invest in stock by just using the above indicators because one may interpret it wrong or would not understand the intricacies of analysis, but to consult with a well informed and experienced investment advisor prior to making investment decisions.