

by each of the averages to points substantially below their major highs; then an advance by each of the averages of some minimum magnitude that does not surpass their previously established highs. (Again, the required minimum varies from Dow theorist to Dow theorist.) Finally, each average must decline from this second top to a new cyclical low.

Table 3 presents a record of major Dow Theory buy and sell signals from 1897 to 1967. Needless to add, this is but one of the versions of Dow Theory signals which have been developed over the years. Other analysts have used different signal parameters (mainly pertaining to the required magnitude of the intermediate moves by the industrial and transportation averages) and have consequently derived different signal dates as well.

TABLE 3
DOW THEORY SIGNALS

Bull Markets	Bear Markets
June 28, 1897 - Dec. 16, 1899	Dec. 16, 1899 - Oct. 20, 1900
Oct. 20, 1900 - June 1, 1903	June 1, 1903 - July 12, 1904
July 12, 1904 - Apr. 26, 1906	Apr. 26, 1906 - Apr. 24, 1908
Apr. 24, 1908 - May 3, 1910	May 3, 1910 - Oct. 10, 1910
Oct. 10, 1910 - Jan. 14, 1913	Jan. 14, 1913 - Apr. 9, 1915
Apr. 9, 1915 - Aug. 28, 1917	Aug. 28, 1917 - May 13, 1918
May 13, 1918 - Feb. 5, 1920	Feb. 5, 1920 - Feb. 6, 1922
Feb. 6, 1922 - June 20, 1923	June 20, 1923 - Dec. 7, 1923
Dec. 7, 1923 - Oct. 23, 1929	Oct. 23, 1929 - May 24, 1933
May 24, 1933 - Sep. 7, 1937	Sep. 7, 1937 - June 23, 1938
June 23, 1938 - Mar. 31, 1939	Mar. 31, 1939 - July 17, 1939
July 17, 1939 - May 13, 1940	May 13, 1940 - June 15, 1944
June 15, 1944 - Aug. 27, 1946	Aug. 27, 1946 - May 14, 1948
May 14, 1948 - Nov. 9, 1948	Nov. 9, 1948 - Oct. 2, 1950
Oct. 2, 1950 - Aug. 31, 1953	Aug. 31, 1953 - Feb. 4, 1954
Feb. 4, 1954 - Oct. 1, 1956	Oct. 1, 1956 - May 2, 1958
May 2, 1958 - Mar. 3, 1960	Mar. 3, 1960 - Oct. 10, 1961
Oct. 10, 1961 - Apr. 26, 1962	Apr. 26, 1962 - Nov. 9, 1962
Nov. 9, 1962 - May 5, 1966	May 5, 1966 - Jan. 11, 1967

(Source: Harvey A. Krow, *Stock Market Behavior*, Random House, 1969, p 42.)

Although many analysts have attempted to use the Dow Theory for prediction purposes, its primary function is to identify the present trend of the market, not forecast its future. If the Dow Theory does have a forecasting role to play, it is in predicting the future course of the United States economy. It has a good record in this regard primarily because expectations of future changes in corporate earnings and general business conditions are important factors in current common stock price valuations.

Of course, the companies whose stocks comprise the industrial and transportation averages account for a very significant portion of the total production and movement of goods in the nation's economy. The merger of the two stock price averages into a single integrated system has long been thought to provide an accurate stock market barometer. Primarily because of the difficulties of deriving objective signals, it is overrated. Despite its failings, a pervasive cult has grown up around the Dow Theory over the years and many Wall Street analysts follow the theory on a continuing basis. It should come as no great surprise, then, that when a consensus Dow Theory signal attracts attention in the press, stock prices often temporarily respond to the buying (or selling) pressures induced by the rush of the many Dow Theory adherents into the marketplace. As a consequence, the theory is probably worth noting if for no other reason than to keep abreast of what the Dow theorists are doing. On the basis of rigorous and objective analysis it is not possible to assign any significant forecasting value to the theory.

Although no work has yet been published on the subject, it is quite possible that the Dow Theory's market record could be considerably enhanced by extending the rules to include the Dow Jones Utility Average. (Since the utility average was first calculated in 1929 the original inventor of the theory did not have the average available for inclusion in his system.) Stock prices usually respond to sharp interest rate swings — and utility stocks are particularly interest rate

sensitive. There are two primary reasons for this. First, utilities borrow large sums of money to finance plant expansion and the interest paid on such loans can have a major impact on their profitability. Second, utility stocks are relatively conservative investments often purchased mainly for their dividend yield, and constitute an alternative investment medium to corporate bonds. Thus their price fluctuations are closely attuned to those of interest bearing securities. Because of this dual interest rate sensitivity, utility stocks frequently lead the broad market, and incorporation of the Dow Jones Utility Average into a Revised Dow Theory might well improve the market prediction record. As it stands today, however, the existing Dow Theory is more a historical curiosity as one of the earliest attempts at technical stock market analysis and less a useful forecaster of future market price trends.

3 Yields, P/E's and Other Trivia

The relationship between price and value is clear, but is exceedingly difficult to measure. While price can be observed with certainty, no one can ever be sure what constitutes true value. Although it may be impossible to objectively determine current value, in the light of hindsight it is clear that price does tend to revolve around it. Consequently, several indicators have been developed which purport to measure value and thereby provide a reference point for the relationship of price to value. The logic is simple: if the market is undervalued, buy; if the market is overvalued, sell.

Dividend Yield. Long the most popular of valuation measures, the dividend yield is calculated by dividing the indicated dividend rate for the next twelve months by current price. This figure can be calculated for any market average, or most meaningfully, for all stocks in aggregate. In

this century common stocks have provided an average annual dividend yield of about 4½%, ranging from a low of 2½% to a high of 8%. At times investor enthusiasm has been so great that the market has accepted a much lower dividend yield than normal. When yields are very low, stock prices are, by definition, high, and frequently overvalued as well. The market, then, has nowhere else to go but down, so it is not surprising that, historically, a low market yield has usually been followed by declining prices. Conversely, when the marketplace is rife with pessimism, investors demand a much higher than normal dividend yield to induce them to buy stocks. Since an excessively high yield means that stock prices are abnormally low relative to dividends and are undervalued, the market frequently responds to such situations by climbing higher.

A simple test of the dividend yield as a forecaster of future stock prices is presented in Table 4. Shown are the one year market returns which have ensued from various Dow Jones Industrial Average dividend yield intervals since 1941.

TABLE 4

DIVIDEND YIELDS AND STOCK PRICES (1941 - 1975)

D. J. I. A. Dividend Yield	S&P 500 Index One Year Later	Probability of Rising Prices
Under 3%	-10.1%	0%
3.0% - 4.0%	+ 2.0%	59%
4.0% - 6.0%	+ 11.4%	72%
6.0% - 7.0%	+ 15.0%	87%
Over 7.0%	+ 37.8%	100%
35-Year Average	+ 7.7%	68%

During the 35 year period the dividend yield was under 3% only 19 weeks (in mid-1959 and early 1966) and in every case the average ensuing one year market return was sharply negative. The returns curve relatively smoothly up the dividend yield spectrum with exceptionally high returns following yields around 7%. Identical tests over other time frames

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reveal that the indicator is a relatively poor predictor of shorter-term price trends, but an excellent forecaster of long-term trends. Indeed, the dividend yield is without peer in forecasting the market two to five years in advance.

Many technicians have been tempted to specify simplistic cutoff points as buy and sell parameters. For example, one analyst writing in *Barron's* suggested that 3½% is the best sell specification. Other technicians have pinpointed critical points such as 3% or 3.3%. As a general rule, the wisest course is to use these levels only as general areas of relative valuation. Precise cutoff points, based on the last few cycles, somehow always seem to miss by an inch in the next cycle. In this case, an inch is as good as a mile, for an investor would be left stranded waiting for that last fraction.

Price/Dividend Ratio. The normal way to calculate an effective annual dividend yield is to divide the latest twelve months' dividends, or the anticipated dividend rate for the next twelve months, by the current price, with the result expressed as a percent. A few pseudo-sophisticated technicians invert the indicator and calculate it in precisely the opposite fashion, dividing price by dividend. The result is termed a Price/Dividend Ratio and, in effect, measures the number of dollars the market is willing to pay for one dollar of dividends. In reality, the dividend yield and the Price/Dividend Ratio are, for all intents and purposes, identical; one is merely the reciprocal of the other. For example, a yield of 3% is comparable to a Price/Dividend Ratio of 33.3, a 4% yield is comparable to a P/D Ratio of 25, a 5% yield is the mirror image of a P/D Ratio of 20, and so on.

Price/Earnings Ratio. Most analysts view the relationship between dividends and stock prices as of merely passing interest. However, fundamentalists view the market's Price/Earnings Ratio with a sense of urgency normally devoted only to higher subjects of ethics and morality. The Price/Earnings Ratio is calculated by dividing current price by the latest 12 months' earnings per share. Dividend yields

and P/E ratios are naturally highly correlated since they both relate a measure of company performance to the same variable . . . the price of the stock. Dividends are, after all, paid out of earnings and, all other things equal, they will move in similar trends. Dividends do have one notable advantage, however: stability. Earnings fluctuate seasonally and to a great extent, even randomly. Company managements seek to moderate these fluctuations by maintaining a dividend payout proportioned to the long run prospects of the company. "Managing" earnings is easy — any good accountant can do it. But distributing cold cash to stockholders requires a hard economic decision — once paid out it is irretrievable.

It can also be argued, persuasively, that in the long run earnings mean nothing to stockholders unless they are ultimately paid out in dividends. A company can go on exclusively reinvesting earnings in future growth only so long. At some point shareholders must receive tangible fruits of the earnings reinvestment if it is to be of any value to them.

Price/Earnings Ratios become distorted during severe economic contractions. Under normal conditions, a persistent decline in prices relative to earnings results in a falling Price/Earnings Ratio. A low P/E, in turn, is generally bullish. The 1930s were an exception. The economic depression was so deep that when the market bottomed out in 1933, earnings had declined even more drastically than stock prices and the Dow Jones Industrial Average's P/E was over 30. A ratio of that magnitude would normally reveal extensive overvaluation of stocks and would be considered extremely bearish. In 1933 the high P/E Ratio merely reflected abnormally low earnings, not excessively high prices. In fact, stock prices were extremely low and undervalued. (In contrast the D.J.I.A. dividend yield accurately reflected the market's undervaluation by rising to over 10%.)

Thus, while the Price/Earnings Ratio may be a fairly good yardstick of the relative prices of common stocks, it is generally inferior to the dividend yield as a market forecasting tool.

Book Value. Still another interesting measure of relative value is the relationship between common stock prices and company net worth. Net worth, or book value, per share is calculated by adding up all of a company's assets (things owned), subtracting all of its liabilities (things owed), and dividing by the number of common shares outstanding. The statistic is a theoretical measure of what a company is worth. If the price of a stock is far below its book value per share, the stock is considered undervalued and should be purchased. Conversely, when the Price/Book Value Ratio is high, a stock may be significantly overvalued and should be sold (all other things being equal, of course).

The problem with this approach is that "net worth" may not represent what a company is in fact worth. After all, an asset is only worth what one can get out of it. If a company has a high asset value but never earns any money nor pays any dividends to its stockholders, it is worth very little to the stockholders. Furthermore, book values are often extremely artificial, reflecting only what company managements and accountants wish to put into them. Companies which are absolutely identical in all other respects can have drastically different balance sheets and hence, book values, simply as a result of accounting gimmickry. What is true for individual companies is, by extension, also true for the market. The relationship between market indexes and aggregate book values has therefore always been an extremely erratic one, and predictions of future changes in the former from current levels of the latter is a risky undertaking.

Q-Ratio. In an inflationary environment, book values are understated because the real values of assets rise. Economists call this actual value "replacement value." Stock price divided by replacement value yields the Q-Ratio. While superior to indicators that merely use book value, it is almost impossible to calculate, and is of greater interest to theoreticians than to practicing investors.

Conclusion. Of the four fundamental indicators — yield, P/E, book value, and Q-Ratio — the first is by far the best.

4 Leading Economic Indicators

Stock prices usually fluctuate in response to changing *anticipations* of economic events which affect the welfare of companies, not in response to the events themselves. Historically, the stock market has demonstrated an ability to presage the economy by six to twelve months. Traditionally declining well in advance of economic contractions and turning up prior to the start of economic expansions, the market is an acknowledged leading indicator of the general economic cycle.

A few analysts argue that the stock market might even be too good a predictor of the economy. (As economist Paul Samuelson once observed, "The market has predicted nine of the last four recessions.") And occasionally it does indeed go off on its own seemingly mad and irrational tangents. When this occurs, such as in 1961 and '62, it reacts to correct its own excesses. But most of the time it maps economic swings remarkably well and has a respectable forecasting record.

Numerous other economic series also exhibit leading characteristics. The National Bureau of Economic Research (NBER) has developed several dozen series which tend to lead the economy at cyclical turning points. From the overall list of these leading indicators, they have focused on a select eleven (one of which is the stock market), which seem to provide better economic forecasts than all the others. These eleven indicators, listed in Table 5 (page 18), compose what is often termed the NBER "short list."