A Simple Formula for Common Stock Investment

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Mr. Schneider's analysis of market performance of two stock groups within Dow Jones Industrial Index discloses that those stocks selling highest in relation to their past average prices (the "Dear Group") performed better than those stocks selling lowest in relation to their past performance (the "Cheap Group") from 1914 to 1931; but that in "New Deal Era" from 1932 to 1948 this situation was reversed. Concludes latter period's trend will continue, and selection of "Cheap Stock Group" will offer simple and dependable key to successful stock selection.

One of the primary problems of common stock investment has been the determination of some central value about which market prices could be expected to fluctuate in the future. One approach to this problem has been based upon the use of the past average price of the Dow, Jones Industrial Stock Average. Thus several formula-timing plans have been geared to the price record of this Industrial Stock Index. Under these the investor is instructed to purchase stocks when the Index is selling sufficiently below its previous five-or-ten-year average price, and to sell when the Index is somewhat above the past average.


Henry S. Schneider

The purpose of our research was to test this criterion of past average price, not as applied to the Dow, Jones Industrial Average itself, but to the individual stocks within the Index. For purpose of testing we decided to select two groups of stocks, each comprising roughly one-sixth of the number in the Index. The first group consisted of the stocks selling highest in relation to their past average prices, and the second group consisted of those selling lowest in relation to their past average prices. We called the two groups "Dear" and "Cheap" respectively. For our dates of selection we used year-end prices in all cases. The past average price of each stock was usually taken as the mean of the annual highs and lows for five years prior to the date of selection. (In earlier years the five preceding year-end prices were averaged.) The period of testing covered the 35 years 1914 through 1948. In each year of this period we selected the two groups of stocks, and then tested the market performance of each group against the Average itself as shown by the prices of one, two, and three years later.

Illustration of the Method of Testing

Our method of testing was very simple and I shall illustrate by starting in the year 1914. We first computed the 1910-1914 average price for each stock in the Index; we then took the market prices of the individual stocks in the Index as of Dec. 31, 1914, and divided each by its own past five-year average price. The resulting percentages were arrayed in numerical order ranging from the highest to the lowest. The top one-sixth of the stocks were chosen for the Dear Group and the bottom one-sixth as the Cheap Group. We then measured the percentage price movement of the Dear Group, Cheap Group, and the Industrial Average itself one year, two years, and three years later, as though one share of each stock had been purchased on Dec. 31, 1914 and then sold out on Dec. 31, 1915, 1916, or 1917. In 1915 we followed the same procedure as the above in selecting the two groups of stocks; only this time we used 1911-1915 average prices and 1915 year-end prices. The same was done in all subsequent years through 1948. Thus three tests were made from the groups in

Continued on page 36

*A paper presented by Mr. Schneider at the Round Table on Investments, Benjamin Graham, Chairman, before the American Finance Association, Chicago, Dec. 29, 1950.

Dealer-Broker Investment Recommendations and Literature

It is understood that the firms mentioned will be pleased to send interested parties the following literature:

Brief in Support of the Missouri Pacific Reorganization Plan—Gammack & Co., 40 Wall Street, New York 5, N. Y.

Electric and Gas Utility Common Stocks—Under excess profits tax—Study—Newburger, Loeb & Co., 15 Broad Street, New York 5, New York.

Equipment Trust Certificates—Semi-annual appraisal—Stroud & Co., Inc., 123 South Broad Street, Philadelphia 9, Pa.

Also available is a semi-annual appraisal of **City of Philadelphia Bonds.**

Mercantile Stocks—Analysis—Dreyfus & Co., 50 Broadway, New York 4, N. Y.

Over-the-Counter Index—Booklet showing an up-to-date comparison between the thirty listed industrial stocks used in the Dow-Jones Averages and the thirty-five over-the-counter industrial stocks used in the National Quotation Bureau Averages, both as to yield and market performance over an eleven-year period—National Quotation Bureau, Inc., 46 Front Street, New York 4, N. Y.

Preferred Stocks cumulative as to dividends and free of Pennsylvania Personal Property Taxes—Tabulation—Newburger & Co., 1342 Walnut Street, Philadelphia 7, Pa.

Puts & Calls—Explanatory pamphlet—Thomas, Haab & Botts, 50 Broadway, New York 4, N. Y.

* * *

Bank of America N. T. & S. A.—Memorandum—Floyd A. Allen Co., 650 South Grand Avenue, Los Angeles 17, Calif.

Burlington Mills Corp.—Memorandum—Shearson, Hammill & Co., 14 Wall Street, New York 5, New York.

Also available is a memorandum on **M & M Wood Working Co.**

Central & Southwest Corporation—Analysis—Kidder, Peabody & Co., 17 Wall Street, New York 5, New York.

Collins Radio Co.—Memorandum—Lee Higginson Corp., 231 South La Salle Street, Chicago 4, Illinois.

Continental Copper & Steel Industries—Analysis—Dansker Brothers & Co., Inc., 511 Fifth Avenue, New York 17, N. Y.

Continental Sulphur & Phosphate Corp.—Memorandum—Beer & Co., Gulf States Building, Dallas 1, Texas.

Also available is a memorandum on **General Sulphur Corp.**

Cummins Engine Co.—Memorandum—A. G. Becker & Co., 120 South La Salle Street, Chicago 3, Illinois.

International Hydro Electric Co.—Memorandum—Josephthal & Co., 120 Broadway, New York 5, N. Y.

Jones & Laughlin—Bulletin—Bache & Co., 36 Wall Street, New York 5, N. Y.

Kaiser Steel Corporation—Analysis—Cohu & Co., 1 Wall Street, New York 5, N. Y.

Kerr-Addison Gold Mines, Ltd.—Analysis—James Richardson & Sons, 347 Main Street, Winnipeg, Man., Canada, and Royal Bank Building, Toronto, Ont., Canada.

Kold Hold Manufacturing Co.—Memorandum—Goulet & Co., 25 Broad Street, New York 4, N. Y.

Missouri Pacific Railroad Co.—Analysis—Smith, Barney & Co., 14 Wall Street, New York 5, N. Y.

Morris Paper Mills—Memorandum—Swift, Henke & Co., 135 South La Salle Street, Chicago 3, Illinois.

Outlook for Fire Insurance Stocks—Data—Laird, Bissell & Meeds, 120 Broadway, New York 5, New York.

Philadelphia Electric Company—Analysis—Walston, Hoffman & Goodwin, 265 Montgomery Street, San Francisco 4, Calif.

Also available is a report on **Harbor Plywood Corp.**

Riverside Cement Company—Card memorandum—**Lerner & Co., 10 Post Office Square, Boston 9, Mass.**

Ultrasonic Corporation—Analysis—L. H. Rothchild & Co., 52 Wall Street, New York 5, N. Y.

Union Bag and Paper Corporation—Analysis—Hayden, Stone & Co., 25 Broad Street, New York 4, New York.

U. S. Thermo Control—Analysis—Raymond & Co., 148 State Street, Boston 9, Mass.

Also available is an analysis of **Simplex Paper.**

COMING EVENTS
In Investment Field

Jan. 15-16, 1951 (Point Clear, Ala.)
National Association of Securities Dealers, Inc., Meeting of Governors and Election of Officers at the Grand Hotel.

Feb. 4, 1951 (Houston, Tex.)
Board of Governors of Association of Stock Exchange Firms winter meeting.

Feb. 6-7, 1951 (San Antonio, Tex.)
Board of Governors of Association of Stock Exchange Firms winter meeting.

Feb. 8-9, 1951 (Dallas, Tex.)
Board of Governors of Association of Stock Exchange Firms winter meeting.

Feb. 21, 1951 (Philadelphia, Pa.)
Investment Traders Association of Philadelphia Winter Banquet.

May 30, 1951 (Dallas, Tex.)
Dallas Bond Club annual Memorial Day outing.

June 11-14, 1951 (Jasper Park, Canada)
Investment Dealers Association of Canada Convention at Jasper Park Lodge.

June 15, 1951 (Philadelphia, Pa.)
Investment Traders Association of Philadelphia Summer Outing and Dinner at the Manufacturers Golf and Country Club, Oreland, Pa.

Oct. 12, 1951 (Dallas, Tex.)
Dallas Bond Club annual Columbus Day outing.

Nov. 25-30, 1951 (Hollywood Beach, Fla.)
Investment Bankers Association Annual Convention at the Hollywood Beach Hotel.

Smith, Barney Co. Admits Winfield Perdun


Winfield H. Perdun

Smith, Barney & Co., 14 Wall Street, New York City, members of the New York Stock Exchange and other leading exchanges, announce the admission of Winfield H. Perdun to general partnership in the firm. Mr. Perdun's admission to Smith, Barney & Co. was previously reported in the "Chronicle" of Dec. 21.

Continued from page 8

A Simple Formula for Common Stock Investment

each year of selection (except, of course, for 1947 and 1948).

Results of Study: Two Periods

After preliminary study, we divided the results of our tests into two periods: (1) Pre-New Deal Era (1914-1931), and (2) New Deal Era (1932-1948). The reason for this division was the strikingly different results obtained in the two periods. For we found that during the 1914-31 period the Dear Group performed considerably better than either the Cheap Group or the Dow, Jones Industrial Average. But with the advent of Roosevelt, the situation was reversed and the Cheap Group turned in by far the best performance, consistently as well as in the aggregate. For purposes of presentation I have broken down the results for each period into two groups: (1) the aggregate percentage pluses and minuses for each group for the one, two, and three year tests, and (2) the number of tests in which the Cheap or the Dear Groups did 5% (or more) better than the Dow, Jones Average, 5% (or more) poorer, and the same as the Dow, Jones Industrial Average. Dividend receipts and commissions are excluded from our figures.

Comparison of the Two Periods

In the first period the advantage shown by the Dear Group appears not only in the better aggregate percentage gains, but impressively also in the number of separate favorable performances as against unfavorable ones. The Cheap Group presents an almost exactly reverse picture in comparison with the Dow, Jones group as a whole. When we move on into the second period the transformation is extraordinary. The aggregate percentage results of the Cheap Group are now far in the lead. More striking still is the fact that in only one test out of 48 did the Cheap Group perform more than 5% worse than the Average; while in no less than 34 tests it beat the Average by more than 5%. Such consistently favorable behavior could hardly be the result of chance. Evidently it stems from some underlying advantage enjoyed by the Cheap Group in the past 15 to 17 years. What can this advantage be, and why was it conspicuously absent in the 1914-1931 period?

A Possible Explanation

The following is advanced as a tentative explanation of these rather perplexing market phenomena. Let us assume that the Dow, Jones list consists of 30 large companies, with considerable variations in their quality and apparent long-term prospects, but all possessing the characteristic of resiliency—i.e., the power to recover from adversity. Assume further that the average price-earnings ratios reflect accepted views as to differences in quality. (We suggest that these assumptions properly describe the Dow, Jones list as it has been constituted since 1932). It might be expected then that the relative price behavior of the individual issues would follow a pattern similar to that of the market as a whole—which means that favorable developments or prospects would tend to receive an exaggerated response on the upside, and conversely for unfavorable ones. In due course these exaggerations would be corrected. In the aggregate the issues that had gone up more than the market as a whole would be found to have advanced too far, and they would lose ground, relatively, in subsequent years. Similarly, those that had lagged behind the market would prove to have overemphasized their unfavorable factors; thus they would subsequently advance more than the market as a whole. The relative action of our Cheap Stocks and Dear Stocks between 1932 and 1948 would seem to conform to this hypothesis.

Quality Differentials Established Early

Why did not this explanation hold good for the earlier years? We suggest the following as the reason. During 1914-1931 the market was gradually establishing those wide quality-differentials which have been so prominent a feature of common stocks ever since the New Era bull market of the late 1920s. In 1914 the dividend yields and earnings multipliers for our large companies were rather homogenous; but as time went on, the "good stocks" —meaning particularly those with favorable earnings trends — became valued more and more generously vis-a-vis the "lower quality" issues. This bias in favor of the quality issues was an accelerating affair; its result was to favor the good stocks in the market year after year, even though they had already outperformed the rest of the list. This bias continued through the great depression culminating in 1932. In those years the quality issues appeared to justify the favor previously accorded them, because they showed better resistance to the hard times.

We suggest finally that the quality differentials had been fully established by 1932, so that the bias in favor of the good stocks was now completely reflected in their prices. From then on the basic element of **fluctuation** reasserted itself: good stocks, like good markets, went up, too high; unpopular stocks, like unpopular markets, went down too far.

If our explanation is a sound one, we would conclude that the performance in the 1932-1948 period is more likely to be duplicated in future years than that of 1914-1931. Our method of selecting "Cheap Stocks"—or something similar thereto — might therefore prove to offer both an extremely simple and a reasonably dependable key to successful stock selection.

Some Additional Observations

Dividend income has been left out of account in our calculations in order to save time and trouble. It is almost certain that the Cheap Stocks would return at least as high a dividend yield as the dear ones over any protracted period of years. The relationship between the results on a one-year basis and those on a two-and-three-year basis involves some peculiarities of the arithmetic of percentage figures. It is not necessary to go into these, because our essential comparisons are based on the same number of years' holdings for the cheap group as against the dear group.

It may be of interest to add some figures which cover two periods in which the general stock-price level did not show a significant net change—thus excluding the factor of secular trend from our comparisons. Only the one year tests are presented.

(a) 1914-1931 (Dow-Jones Average was 55 on Dec. 31, 1917 and 60 on Dec. 31, 1932).

	Aggregate Pluses & Minuses
Cheap Group	— 30%
Dear Group	+191%
Dow-Jones Average	+ 71%

(b) 1936-1947 (Dow-Jones Average was 180 on Dec. 31, 1936 and 177 on Dec. 31, 1948).

	Aggregate Pluses & Minuses
Cheap Group	+115%
Dear Group	+ 15%
Dow-Jones Average	+ 25%

Conclusion

We venture the conclusion that this study yields sufficiently definite and impressive results to offer something of tangible value to investment policy. Many additional investigations of the same type remain to be made, of course, before the ideas set forth may be considered as fully explored. However, there comes a point when action in accordance with the indicated results becomes preferable to further investigation.

In closing this paper I would like to thank Mr. Menko Rose, Mr. Walter Schloss, and Mr. Bernard Werner for their help on some of the computations, and Mr. Benjamin Graham for his advice and suggestions.

(1) Pre-New Deal Results (1914-1931)

(A)	Total Percentage Pluses and Minuses		
	One-Year Tests (18) %	Two-Year Tests (18) %	Three-Year Tests (18) %
Cheap Group:			
Total of plus years	+168	+464	+469
Total of minus years	—198	—254	—276
Grand Total	— 30	+210	+193
Dear Group:			
Total of plus years	+378	+507	+592
Total of minus years	—187	—252	—238
Grand Total	+191	+255	+354
Dow-Jones Industrial Average:			
Total of plus years	+244	+431	+487
Total of minus years	—173	—221	—227
Grand Total	+ 71	+210	+260

(B)	Dear Group	Cheap Group
Number of tests in which group did 5% (or more) better than Dow-Jones Average	31	13
Number of tests in which group did 5% (or more) poorer than Dow-Jones Average	17	27
Number of tests in which % movement was similar to Dow-Jones Average (remaining tests)	6	14
Total number of tests	54	54

(2) New Deal Results (1932-1948)

(A)	Total Percentage Pluses and Minuses		
	One-Year Tests (17) %	Two-Year Tests (16) %	Three-Year Tests (15) %
Cheap Group:			
Total of plus years	+425	+570	+754
Total of minus years	— 51	— 54	— 47
Grand Total	+374	+516	+707
Dear Group:			
Total of plus years	+250	+330	+406
Total of minus years	— 90	—129	—134
Grand Total	+160	+201	+272
Dow-Jones Industrial Average:			
Total of plus years	+239	+335	+417
Total of minus years	— 74	— 87	—74
Grand Total	+165	+248	+343

(B)	Dear Group	Cheap Group
Number of tests in which group did 5% (or more) better than Dow-Jones Average	11	34
Number of tests in which group did 5% (or more) poorer than Dow-Jones Average	23	1
Number of tests in which % movement was similar to Dow-Jones Average (remaining tests)	14	13
Total number of tests	48	48

Summary of Results (1914-1948)

(A)	Total Percentage Pluses and Minuses		
	One-Year Tests (35) %	Two-Year Tests (34) %	Three-Year Tests (33) %
Cheap Group:			
Total of plus years	+593	+1,034	+1,223
Total of minus years	—249	— 308	— 323
Grand Total	+344	+ 726	+ 900
Dear Group:			
Total of plus years	+628	+ 837	+ 998
Total of minus years	—277	— 381	— 372
Grand Total	+351	+ 456	+ 626
Dow-Jones Industrial Average:			
Total of plus years	+483	+ 766	+ 904
Total of minus years	—247	— 308	— 301
Grand Total	+236	+ 458	+ 603

(B)	Dear Group	Cheap Group
Number of tests in which group did 5% (or more) better than Dow-Jones Average	42	47
Number of tests in which group did 5% (or more) poorer than Dow-Jones Average	40	28
Number of tests in which % movement was similar to Dow-Jones Average (remaining tests)	20	27
Total number of tests	102	102

Continued from page 11

Truman's Advisers Urge More Production And Consumer Controls

ond, controls can promote economic stability by restraining excessive demand; and third, controls can promote equity in the distribution of goods and services.

"But while controls are useful in promoting these results in a defense program, they may in some degree interfere with them. The outcome depends on how wisely they are used. Thus, it is clear that if the goals are to be achieved, the controls must be geared to the programming of requirements and supply. This will help to indicate clearly the new pattern of resource use which the defense emergency dictates. The nation will then be able to shape the controls more accurately to fulfill their appropriate tasks.

"In particular, controls may interfere with production if they are not applied with great care. It is important to reconcile the imposition of controls with rapid acceleration of some lines of production and with the maintenance and expansion of total production. Actually, controls should be regarded as the handmaiden of production, because even cutbacks of some kinds of goods are ordered to facilitate the production of more of other kinds of goods which are in greater need.

"In the long-drawn-out effort now confronting us, there will be many cases where programs to expedite production and programs to impose restraints complement one another effectively. But there will be other cases — and these will be the hard ones—where to achieve maximum production it is necessary to relax controls at particular points and thereby run the risk of price increases. There is no one rule which will reveal the more desirable of these two alternatives in all cases. Each situation must be handled pragmatically. But it may be safer to run the risk of a minor effect on specific prices than to err on the side of smothering or handicapping our productive genius. In the final analysis, our security depends more on how rapidly we expand our armed strength and productive power than on whether all inflationary forces are rigidly contained over a given period of time.

"This report is not the medium for discussing the details and effectiveness of various controls. That effort is held in abeyance until the January reports transmitted to the Congress by the President.

"But the foregoing discussion points up to this conclusion now: In the worthy desire to be vigorous, we should look where we are going. And we should not too rapidly sacrifice on the altar of automatic conformity the dynamic qualities which thus far have made our industrial system almost as productive as those of all the rest of the world."

Parrish Appoints New Hempstead Managers

The appointments of a new manager and assistant manager of its Hempstead, L. I., office, 243 Fulton Avenue, are announced by Parrish & Co., members of the New York Stock Exchange and other leading stock and commodity exchanges. Raymond W. Oakes was named Manager and Clarence Weekes Campbell was named Assistant Manager of the office. Both men were formerly associated with the Second National Bank & Trust Co., Hempstead, Mr. Oakes as Vice-President and Trust Officer and Mr. Campbell as Assistant Cashier.