## THREE INDUSTRIAL STOCK AVERAGES CONTRASTED (by Benj. Graham and Walter Schloss)

## Their Diverse Action Suggests a Clue to Investment Policies.

The use of common stock averages has passed through various stages of development. The original purpose was merely to give a concise picture of how the market as a whole is acting. A study of the behavior of the averages then suggested certain laws of conduct which had been made the basis of the so-called technical forecasts of future action.

More recently efforts have been made to relate the movement of the averages to the earnings and dividends reported by the stocks comprised therein in order to reach certain conclusions as to whether stock prices as a whole seem to be intrinsically too high or too low. (Stephen M. Foster has been a pioneer in this work, concentrating on the relationship between bond yields and the price-earnings ratios of the stocks in Barron's 50-Stock Average).

In this article we propose to approach the averages from still another angle -- namely, to consider closely the relative movement of three representative indexes of industrial common stocks, to note their divergences, and to seek the reasons therefor. The three indexes are respectively, the Dow Jones Industrial Average now covering 30 stocks, The Barron's 50-Stock Average covering 42 Industrials, 4 Rails and 4 Utilities and the larger Standard Statistics' Industrial Average covering 350 stocks. It will be seen that these averages have behaved differently over a ten and a fifteen year period and that the difference in their conduct may be related to the different methods used in maintaining or modifying the issues in the averages and their weighting.

The Standard Statistics' comprehensive average differs from the others not only in the large number of stocks comprised but

also in the fact that, substantially speaking, no change in its composition is made from year to year. Essentially, therefore, it represents the actual movement of a large part of the stock market over a period of time without intervention due to any selective principles. The Dow Jones Average on the other hand, is highly selective to begin with, because it includes only 30 issues; and more than that, it is subject to rather frequent changes designed to maintain its selectivity. (Such changes have been made on 19 dates since the 30-stock average was first adopted in October 1928) In general stocks have been dropped and others a ded to reflect changes in popularity and in the stock market's emphasis as measured by relative volume of trading.

Barron's Average is based upon a policy which is importent respects is diametrically opposed to that of the Dow-Jones Average. In the first place there are practically no changes in the constituent stocks from year to year. But on the other hand, the theory contemplates significant modifications in the cuantities taken of each stock. The general object of these changes is to maintain a rough equality in the current importance of each issue. This should be done by increasing the quantity of stocks which have fallen in price and decreasing the quantity of the stocks which have advanced. While these changes are not being made in accordance with a complete plan of edualization, the general result should be definitely in the direction of adding (i.e buying) stocks which have declined and subtracting (i.e. selling) stocks which have advanced. But contrary-wise the periodic changes in the Dow-Jones Average have consisted mainly of dropping or selling out stocks that have declined in price and substituting more popular stocks which, because of their popularity, had advanced.

It must be pointed out, however, that the characteristics

of Barron's Average, as above described, are more interesting in theory than in their actual application to date. The reason is that Barron's Average has until recently been in something of an experimental stage. Hence it is not possible to follow it back far enough on its present basis to derive a dependable conclusion as to its results. While values may indeed be computed as of dates prior to the first use of the average—in 1930— such comparison would include a large measure of bindsight. Obviously, a list made up in 1935 can easily be so selected as to show up remarkably well when compared with 1925. The fact that the Barron's list includes rails and utilities also prevents useful comparison with the other two averages.

In studying the actual record, therefore, we must confine ourselves to a comparison of the action of the Dow-Jones list and the Standard Statistics averages; but the Dow-Jones list itself provides a separate test of investment policies. Some unexpected and significant results will appear when the Dow-Jones list as of earlier dates are carried forward unchanged and their resulting values compared with the actual Dow-Jones Average, which, of course, reflects the result of changes made from time to time. (See Charts 2 & 3)

Returning to the theory of the three averages, it may fairly be said that in practice though not in purpose they represent — to some extent at least — three different policies or philosophies of investment. The Dow-Jones system undoubtedly corresponds with what the typical investor now tends to do with his common stock portfolio. On the other hand, the Barron's approach corresponds to older ideas of investment policy in which it was considered shrewder to buy things that had some down and to sell things that had gone up. The Standard Statistics Average represents a middle or static course.

We should now be ready to apply the soid test of performance to the two types of investment policy embodied in the Dow-Jones and Standard Statistics averages. -- reserving a study of the Barron's technique for a later article. To do this we have taken two separate periods of time, in order to obtain a double check on our work. The first is the 15% year period from June 30, 1925 to December 31, 1940. The earlier date is taken because the Dow-Jones Average stood at the same price then as at the end of 1940 -- namely 131. The second period comprises the past decade, from December 31, 1930 to December 31, 1940. The appended charts show that the most highly selective average did not fare as well as the more inclusive group. The Dow-Jones 30 stock group -- often referred to as a "blue chip" assortment, and popularly supposed to act much better than the ordinary run of stocks -- is actually found to have declined more than the 350-stock list in the ten year period. Furthermore, during the fifteen year period when it made no progress the other index showed a gain. Before commenting on the significance of these figures some questions should be raised and answered as to their accuracy. In computing results on investments, allowance must be made for dividends received as well as changes in price. Dividends are not reflected in the averages and it may be asked whether their incidence would not affect the overall result. It is manifestly impracticable to compute the dividend return on the 350 Standard Statistics stocks. We do have, bowever, a fairly comprehensive index of common stock dividend yields covering 125 issues and computed monthly by Woody's. With some variations from year to year it will be found that the yield on the large number of stocks is almost identical over a period of time with the yield on the smaller number in the Dow-Jones Average. (R.g., for 1931-1940 the figure was 4.56% for the 125 stocks and 4.69% for the

30 stocks. For all common stocks on the New York Stock Exchange the figure was 4.9%).

It seems fair to conclude, therefore, that the dividend return on the comprehensive Standard Statistics index of 350 issues would not have been much different than the return on the Dow-Jones list, and that therefore, the dividend factor does not affect the conclusions suggested by the market price action alone. An observation should be made, however, to the effect that the Dow-Jones Average suffered somewhat in earlier years from slight distortions in the making of substitutions. However, none of these distortions occurred since 1928 and those since June, 1925 are not very important.

We may return now to the question of the significance of the results we show. They seem very definitely to indicate that the popular method of adding and substracting stocks in the investor's portfolio suffers from the practical handicap that it tends to buy "good stocks" after they have advanced too much and to sell "bad stocks" after they have declined too much. It would seem that it is better to hold on to a portfolio unchanged (Standard Statistics method) than to follow the customary policy of going in for favorites and dropping stocks that have acted badly. (It would be interesting to determine later whether the diametrically opposed plan of lightening up on issues which have advanced and buying more of stocks which have declined — the Barron's Average technique — might not yield still more satisfactory results).

We have a separate confirmation of these conclusions from the behavior of the Dow-Jones Average itself, when we contrast the action of the original stocks in the list with its actual course, which were made in the average from time to time.

back the value of the stocks now on the list to what they would have been in June, 1925 and December, 1930. Here we find that the present list if carried back behaved much better in the market over the past than did either the actual Dow-Jones Average or the Standard Statistics 350 stocks. The reason for this is not far to seek. The various new stocks in the present list were selected precisely because they had done well in the period before the selection. On the basis of hindsight they were very attractive commitments. But our comparison between the subsequent action of the old list and of the list as changed shows that the new stocks did not continue their superior performance after they were selected. This indicates strongly that there is an inherent tendency for the stock market to appreciate the better quality of good common stocks only after this quality has been fully discounted in the market price.

In the view of the writers the three averages have a particular value as tests of different investment policies, because they represent the actual working out of these policies without the benefit of any hindsight or artificial selection to prove a point. It may well be that other studies along these lines could profitably be made, in order to bring forward clearly what are the pitfalls in many accepted theories of common stock investment.