The Case for Mutual Fund Management

by John B. Armstrong

EXPERIENCED PROFESSIONAL MANAGEMENT is said to be one of the primary advantages that mutual funds offer to the average investor.[1] There are many ways of evaluating the results achieved by mutual fund managements. Some studies provide a highly favorable picture of these results. Others have indicated results which are not so favorable. The purpose of this article is to analyze the long-term performance records of leading mutual funds, in an effort to appraise the extent to which mutual fund shareholders have benefitted from the accomplishments of the fund managers.

Leading common stock funds have shown better long-term results than the Dow-Jones Industrial Average. The most typical method of appraising a mutual fund's results is by comparing the percentage change in its net asset value per share (adjusted for income dividends and capital gains distributions paid) over any given period, with a similar figure for the Dow-Jones Industrial Average.[2] The method is recommended by its simplicity; the comparison is recommended by the fact that the Dow-Jones Industrial Average is surely the index of stock market behavior with the greatest following among the investing public (although perhaps few investors fully understand it).

It is apparent that the conclusions derived from this method of comparison will vary with (a) the mutual fund selected, and (b) the period of time chosen. Therefore, as a preliminary observation, the following two principles appear necessary for a fair comparison: First, the mutual fund portfolio should bear some similarity to the Dow-Jones Industrial Average. In other words, the Fund's portfolio should be composed primarily of a diversified list of common stocks. The common stock funds alone, not the bond or preferred stock funds, the industry type funds, nor the balanced funds (composed of varying percentages of common stocks, preferred stocks and bonds), should be compared with a common stock market average—if an evaluation of the fund's management is sought. Second, the period of time for the comparison should be sufficiently long to cover a wide varity of economic and stock market conditions, in order to make the test a sound one. Such a period will also serve to limit the effect of short-term circumstances which might have an unwarranted effect (favorable or unfavorable) on the performance of either the fund or the Average.

Table I utilizes both of these principles. It compares the results of the four oldest diversified common stock funds with the results of the Dow-Jones Industrial Average from Jan. 1, 1930, to Dec. 31, 1959. These four pioneer mutual funds are also among the largest in the industry today, accounting for about 15% of the assets of all mutual funds. The 30-year period, in addition to covering all or most of the record of each fund, was, to say the least, a challenging one—including the depression of the early 30's, World War II and Korea, inflation, and political and economic change on perhaps an unparalled scale. The total percentage gain (including both appreciation and income) of each investment in this period was as indicated in *Table I*.

Table I

	% Appreciation	% Income	Total % Increase[3]
Fund A	+ 348%	205%	+ 553%
Fund B	+ 233%	109%	+ 342%
Fund C	+ 157%	114%	+ 271%
Fund D	+ 478%	193%	+ 671%
Average	+ 304%	155%	+ 459%
Dow-Jones Industrial Average	+ 174%	133%	+ 307%

Table I shows that three of the four funds provided a greater total percentage increase than the Dow-Jones Average, and the average performance of the funds was 152 percentage points greater. Certainly this is a significant indication of good long-term performance relative to the Average. It should, of course, be recognized that common stock prices in general were substantially higher at the end of this period than the beginning; that the total percentages include income as well as appreciation; that these funds differ in their investment objectives; and that the figures can not be considered as a representation of future results.

The four funds in *Table I* were selected in order to provide a long-term comparison, and were the only major common stock funds in business throughout the entire period. That these funds provide a fair representation of the performance of common stock mutual funds in general is indicated by the fact that their average performance over the past five years has been generally comparable to that of the average common stock mutual fund. According to Arthur Wiesenberger & Co. —the New York Stock Exchange firm well-known for its authoritative statistical comparisons of mutual funds —and publishers of the widely used "Investment Companies" manual, the average performance (computed as in *Table I*) of 55 common stock funds with unrestricted investment policies over the past five years (1955-1959) was virtually identical with the average of the four funds shown in the foregoing comparison.

The foregoing figures have been presented to show

1. Footnotes are at end of article.

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that common stock mutual funds can successfully meet the test of "outperforming the averages." This does not mean that the test is a fair one, however. The purposes of market averages and of mutual funds are by no means the same. On the one hand, a market average is a representative cross-section of stocks, designed to reflect the behavior of the market. A mutual fund, on the other hand, is an integrated investment program, designed to achieve a specific investment objective, or series of objectives. Thus, it may well be immaterial to show that a given fund does or does not outperform the market averages.

A mutual fund seeks certain definite mutual goals: long-term growth of capital, capital gains, conservation of capital, current income, future income, or perhaps some combination of two or more of these goals. Thus, in appraising the results of the fund's management, the Financial Analyst should attempt to ascertain whether the fund has achieved its stated objectives, rather than whether or not it has outperformed the Dow-Jones (or any other) Average. The principal weakness of this approach to performance via objectives is that mutual fund objectives cannot be stated with the precision that will enable the Analyst to differentiate between for example, a slightly more aggressive fund and a slightly more conservative fund. For this reason, an auxiliary statistical tool may well be required in order to relate a mutual fund's performance to its objectives and policies. One of the most significant tools of this character is the measurement of a fund's "volatility."

Volatility simply measure the percentage increases and decreases in a fund's asset value per share in rising and falling markets, relative to the percentage changes in common stocks in general. Arthur Wiesenberger & Co. used the Dow-Jones Industrial Average for a series of such volatility measurements. The Wiesenberger firm computed the percentage rise and fall of major mutual funds during each of eight stock market rises, and each of eight stock market declines, from the June, 1950, market high to Dec. 31, 1956. These changes were then related to the percentage rises and falls of the Dow-Jones Industrial Average in this period.[4] If a fund rose and fell exactly the same amount as the Dow, it received a volatility rating of 1.00, for example. The average volatility of 64 common stock funds tabulated by Wiesenberger was 0.89, and 52 of the 64 common stock mutual funds for which volatility figures were furnished had a rating of below 1.00. We would therefore expect these funds to increase less than the Dow in a rising market and decrease less in a falling market. In short, the volatility ratings demonstrated statistically that common stock mutual funds as a group were less volatile (i.e., more conservative) than the Average, and hence should not automatically be compared with it.[5]

Applying the volatility figures shown in Wiesenberger's "Investment Companies—1957" to the four funds whose long-term performance achievements were shown in *Table I,* it will be noted that only one of these funds had a higher volatility than the Dow-Jones Industrial Average, as shown in *Table II.*

Table II

	Volatility
Fund A	0.80
Fund B	1.11
Fund C	0.99
Fund D	0.76
Average	0.91

Table II shows that these four funds had an average fluctuation only about 91% as great as the Dow (i.e., they were 9% less volatile). Since the volatility period (1950-1956) is admittedly a short segment of the 30-year period shown earlier, the two sets of figures cannot properly be combined or integrated. However, they indicate a probability that the long-term mutual fund performance results shown in *Table I* are even more outstanding on a relative basis (i.e., related to volatility) than on an absolute basis.

For a fair conclusion, however, we should test both volatility and performance over a comparable period, and select funds with volatility similar to the Dow-Jones Average. *Table III* compares the performance of all funds which have both (a) performance records published by Wiesenberger for the 10 years, 1950-1959, and (b) volatility ratings in excess of 0.90 for the period 1950-1956 (when publication of the figures was discontinued).

Table III

	10-Year % Appreciation	10-Year % Income	10-Year Total Performance 1950-1959[6]	Volatility 1950-1956
Fund 1	+ 281%	70%	+ 351%	1.11
Fund 2	+ 342	80	+ 422	1.11
Fund 3	+ 418	69	+ 487	1.11
Fund 4	+ 329	68	+ 397	1.09
Fund 5	+ 366	54	+ 421	1.08
Fund 6	+ 320	61	+ 381	1.06
Fund 7	+ 263	90	+ 353	1.05
Fund 8	+ 282	54	+ 336	1.04
Fund 9	+ 232	71	+ 303	1.04
Fund 10	+ 548	65	+ 613	1.03
Fund 11	+ 286	67	+ 353	.99
Fund 12	+ 250	83	+ 333	.99
Fund 13	+ 342	62	+ 404	.98
Fund 14	+ 219	79	+ 298	.97
Fund 15	+ 261	63	+ 324	.94
Fund 16	+ 245	59	+ 304	.94
Fund 17	+ 221	71	+ 292	.93
Fund 18	+ 201	69	+ 270	.91
Average 18 Funds	+ 300%	69%	+ 369%	1.02
Dow-Jones Industrial Average	+ 239%	94%	+ 333%	1.00

Table III shows that the average performance of these funds was 36 percentage points in excess of the performance of the Dow-Jones Industrials. It is notable that the Dow-Jones Average had a better performance record than only *one* of the 13 funds with volatility in excess of .97. Thus, it is apparent that fund performance, while it depends in a large measure on fund volatility, has been outstanding.

It is unfortunate that volatility figures, such as those shown, are no longer readily available. Nevertheless, such figures were clearly a forward step in enabling the Analyst to make a preliminary judgment as to which

funds should, and which funds should not, be expected to outperform the Dow-Jones Industrial Average.

Regardless of the use of volatility or similar figures, however, it should be recognized that the purpose of testing a fund's performance against a market average is to ascertain performance relative to "the market," rather than to "a market average." Individual market averages, each with their own unique characteristics, often will give unusual and indeed unrepresentative performance—especially over short periods. By reason of the wide usage of the Dow-Jones Industrial Average in making performance comparisons with mutual funds, we are thus confronted with this question: How effectively does this particular market average represent general market action?

The Dow-Jones Industrial Average Relative To Other Market Averages

In an effort to ascertain the accuracy of the Dow-Jones Industrial Average in reflecting the action of "the market," *Table IV* compares the performance of this average over the past 10 years to the performance of other stock market indicators.

Table IV

	Percent Appreciation Ten Years 1950-1959[7]
Dow-Jones 30 Stock Industrial Average	+ 239%
1. Dow-Jones 65-Stock Composite Average	+ 205
2. Standard & Poor 425 Stock Industrial Index	+ 291
3. Standard & Poor 500 Stock Composite Index	+ 257
4. Moody's 125 Stocks Industrial Average	+ 274
5. Securities & Exchange Commission 265 Stock Index	+ 212
6. National Quotation Bureau Over-the-Counter Index	+ 209
7. New York Times 50 Combined Stocks	+ 210
8. New York Herald Tribune 100 Stock Average	+ 91
Average of 8 Indices and Averages	+ 218%

It is very difficult to say which of the *Table III* averages was "best"—i.e., was most representative of market action in the past decade. Each index has its own individual characteristics which affect its performance. For example, the Dow-Jones Industrial Average is based on the market price per share of 30 securities, and one-half of its weight is in the 10 higher-priced stocks, with the other half in the 20 lower-priced stocks. The Standard & Poor Indices give the largest amount of weight to stocks with the largest aggregate market value (i.e., market price per share times number of shares), with the result that 15 stocks provide about one-half of the weight of the Industrial Index, the remaining one-half being provided by the other 410 stocks.[8] The New York Times 50 stock average is composed of 25 rails and 25 industrials, although rails represent only perhaps 3% of the market value of all listed securities today.[9] The Herald Tribune Average has a large "cash position," since, when a stock is split, the original share is kept in the average and the split shares are, in effect, sold and kept in the average as cash.

Without debating the merits of any of these procedures, two conclusions appear clearly established by *Table IV*: First, that market averages can be a dangerous instrument for evaluating investment management results, by reason of their vastly differing results in measuring the same market. And second, that the Dow-Jones Industrials have provided an above average performance relative to other market barometers over the past decade. Thus, irrespective of other considerations such as volatility, objectives, etc., the Dow represents a very difficult "par," and the ability of the average mutual fund in *Table I* and in *Table III* to beat this par by a significant amount, over a 30 year period and a 10 year period respectively, represents outstanding achievements indeed.

The Construction of the DJIA

The Dow-Jones Industrial Average is widely used and widely known, but rarely understood. Probably few investors, or indeed Financial Analysts, realize that the Dow-Jones Industrial Average has *never* had a divisor of 30—i.e., at no time in its existence were the prices of 30 stocks added together and divided by 30 to produce the average for the day. The Dow-Jones Average was originally composed of 20 stocks, and was converted to a 30-stock average in 1928 by the addition of 10 stocks, and a change in the divisor to 16.67.

The method of construction of the Dow involves changing the divisor when substitutions or changes are made in order to keep the Average at the same level before and after the change. As a result of this procedure, the divisor for the Dow-Jones Industrial Average has gradually declined over the years, and is 3.659 currently. The aggregate market value of the 30 Dow-Jones stocks is at this writing about $2,270, which figure, divided by the foregoing divisor, results in the reported level of about 620 in the average. Thus, the average price of the 30 stocks is some $75 a share, far less than $620 which might be indicated by the Average.

The effect of this process of changing the divisor, in the case of a stock split, is to retain one share of the new stock, sell the additional share or shares acquired through the split at the current market price, and reinvest the cash proceeds of the sale in all 30 stocks, in ratio to the current market price of each. This unusual procedure would be quite uncharacteristic—if indeed it were even possible—for an individual investor to duplicate. It reduces the weight of stocks which split, at the same time increasing the weight of stocks which appreciate in price.

It is often said that the Dow-Jones Industrial Average is "unmanaged." Few statements could be more misleading. It is managed in accordance with its objectives —just as is a mutual fund. Whereas a mutual fund aims for growth or income, etc., the Dow-Jones Industrial Average aims to be representative of the general market, and is changed accordingly. Since 1928, for example, there have been 28 changes in the composition of the Dow, and 49 stock splits or dividends that have required adjustment in the average. The only stock whose position in the Dow-Jones Average has not been altered

(through substitution or split) in the last 32 years is International Nickel. As an indication of the substantial changes that have taken place in the Dow, an examination of the four new stocks added to the Average in 1959 may be helpful:

1. Anaconda replaced American Smelting.
2. Swift replaced Corn Products, which had been preceded by Drug, Inc. and Mack Truck.
3. Owens-Illinois Glass replaced National Distillers, which in turn had been preceded by United Aircraft, International Shoe, and Texas Gulf Sulphur.
4. Aluminum Company of America replaced National Steel, in the position previously held by Coca Cola, Hudson Motor, Curtiss Wright, and Wright Aeronautical.

Thus, for better or for worse, the Dow-Jones Industrial Average is a *managed* average in the truest sense of the word.

Buying the Average vs. Mutuals

The unique construction of the Dow Average has, in certain periods, provided this Average with a performance unrepresentative of the market in general.[10] When its performance appears to lag the market, there is little comment. However, when the Dow-Jones has an outstanding performance, the critics of mutual funds are quick to say that investors should not buy mutual funds but instead should "buy the Average."

Even if we were to both disregard the differences in mutual fund objectives and grant that the long-term performance of comparable mutual funds had failed to surpass the Average (contrary to the figures shown in *Tables I* and *III*), this argument appears to be fallacious on practical grounds. To buy only 10 shares of each stock in the Dow-Jones Average would currently require about $22,700, or about three times the average investor's holdings of mutual fund shares. The commission costs and odd-lot fees would be high for small purchases;[11] the bookkeeping considerable; and keeping such an investor's holdings on the same basis as the Dow, after a stock split or substitution, would in fact be impossible (in the absence of any fractional shares). Furthermore, such an investor would lack all of the conveniences supplied by mutual funds, including custodianship of portfolio securities; ease of income tax reporting; opportunity to accept dividends; and distributions in additional shares; plans for accumulating shares; and plans for monthly cash withdrawals, etc.

What would superficially appear to be a more sophisticated argument has recently been suggested, however. This argument is that the mutual fund itself should buy the market average.[12] It would thus (in theory) be big enough to make the changes and adjustments required by the average, and have sufficient resources to diversify on the same basis as a market average, without prohibitive brokerage commissions on "odd-lots." But even this proposal for an "unmanaged fund" has a number of weaknesses. First and foremost, it ignores the fact (demonstrated earlier in this article) that the Dow-Jones Industrial Average has not in fact matched common stock mutual funds with comparable volatility in performance results.

Second, even an unmanaged fund could not be fully invested at all times, since it would have to (as do mutual funds) maintain some "cash position" for possible share redemptions, dividend payments to shareholders, and even perhaps as a buying reserve. A minimum cash position might be estimated at 5%. Thus such a fund's volatility would be about .95, and (by definition) its performance gain in a rising market would be less than that of the very Average it was designed to emulate.

Third, the performance results of such a fund would be reduced by brokerage costs involved in making the frequent changes called for by changes in the market average. If we assume a portfolio turnover of 15% a year, and brokerage commission of 1%, on both purchases and sales, this would reduce performance by 3% every decade. Fourth, such a fund would have operating expenses. Even if there were no management fee, there would be administrative expenses involved in the daily pricing of the shares, some taxes perhaps, custodian fees, auditing fees and dividend paying costs, shareholder's reports, annual meetings, and the other sundry expenses that are a part of doing business. These costs could be considerable and would surely reach a minimum of 4/10 of 1% annually, which is only about one-half the mutual fund average. Putting together these *minimum* assumptions, the performance of a hypothetical "Dow-Jones Industrial Average Fund," rather than attaining the 333% total performance gain for the past 10 years shown in *Table III*, probably would have come closer to a gain of something like 306% as shown in *Table V*.

Table V

Unadjusted Figures—Dow-Jones Industrial Average	
Principal Increase	+ 239%
Income	94%
Total Increase	+ 333%
Adjusted Figures—"Dow-Jones Industrial Average Fund"	
Principal Increase (reduced by 5% cash position and 3% brokerage cost)	+ 220%
Income (reduced by 4/10% of average assets for annual expenses)	86%
Total Increase	+ 306%

Also, of course, it should be pointed out that the idea of an "unmanaged fund" has been tried before, and found unsuccessful. In the early 30's, there was a flurry of investor interest in fixed and semi-fixed trusts (which provided an interest in a list of deposited securities, which either did not change or could be changed only under carefully spelled-out circumstances). Such trusts were responsible for about 40% of the sales of investment trust and investment company shares in 1930, 80% in 1931, and 60% in 1932.[13] However, the percentage thereafter declined to pre-1929 levels (about

5%), and fixed trusts no longer occupy a significant position in the investment company industry. The reason fixed and semi-fixed trusts have not met with investor acceptance is probably as simple as the reason given by the American Institute for Economic Research: "The relative inflexibility of these funds makes them undesirable for the average investor, who usually has neither the time nor the ability to analyze the portfolio securities and ascertain their suitability for his needs . . . ."[14]

CONCLUSION

Mutual funds are peculiarly susceptible to comparisons with the various market averages. Each fund's daily asset value per share, and the amounts of its dividends and distributions are matters of public record. Thus, a fund's accomplishments are removed from the area of hearsay that surrounds the evaluation of investment results of individuals and institutions using other ways of investing. Investment brokers and dealers, bank trust departments, private trustees, and college endowment funds—and indeed most investment managers outside the mutual fund field—do not disclose their results. Thus, from the Security Analyst's standpoint, a mutual fund is an ideal subject to be placed under the microscope of financial appraisal.

For a fair appraisal of a mutual fund's record of investment performance, however, there must be a careful examination of its investment objectives, its investment policies, and its relative volatility. If a valid comparison is to be made of a fund (or indeed, of funds in general) with a market average, full consideration should be given the destination the fund is seeking (as evidenced by its objectives), the route it is following (as evidenced by its policies), and the speed it is going (as evidenced by its volatility). These same considerations, obviously, are equally necessary when comparing mutual funds with one another. Further, the adequacy of the market average itself should be questioned, studied, and tested, in order to ascertain whether it is a valid yardstick and thus a sound instrument for measurement.

The careful and prudent Financial Analyst, moreover, realizes full well that investing is an art—not a science. This knowledge enables him, paradoxically, to appreciate both (a) the enormous challenges that confront the professional investment managers of mutual funds in their efforts to achieve the fund's stated investment objectives; and (b) the challenge to the Analyst himself to use past performance results to try to ascertain which funds will do the best job of meeting their objectives in the future.

It is clear that even the most assiduous analysis of yesterday's figures cannot foretell what tomorrow may bring—whether the problem is selecting a mutual fund or an individual investment, or forecasting the action of the stock market, or indeed of predicting any event dependent upon the human element. However, the Financial Analyst—and the mutual fund shareholder—can gain confidence from the fact that mutual funds in general have met the test of time, and performed in keeping with their stated policies and goals.

FOOTNOTES

1. A survey published by the National Association of Investment Companies indicates that the primary advantages of investment company ownership are management (indicated by 24% of regular mutual fund account holders); diversification (55%); ready marketability (8%); and convenience (13%). The Mutual Fund Shareholder, National Association of Investment Companies, 61 Broadway, New York, N. Y. (1958), page 27.

2. The usual method of computation is as follows: (change in net asset value per share during the period + income dividends + capital gains distributions) ÷ (net asset value per share at the beginning of the period).

3. The method of computation is the same as described in Footnote 2 above, but it is assumed that all capital gains distributions were paid in the form of additional shares, and that all income dividends were paid in cash (including dividends paid on additional shares acquired). This method places the funds on the same basis as the Dow-Jones Industrial Average which (does not "realize" capital gains). The percentages are based on the January 1, 1930, net asset value per share.

4. For the precise method of computation see: Wiesenberger, Arthur, Investment Companies, 1957, 61 Broadway. New York, N. Y. (1957), page 87.

5. As a further indication of the appropriateness of volatility figures in statistically evaluating mutual fund policies and objectives, it is interesting to note that the average balanced fund shown in the Wiesenberger tabulation had a volatility of 0.62. This figure is a closs approximation of the average percentage of resources such funds normally have invested in common stocks.

6. Performance computations made as described in Footnote 3 above, and using as a base the Jan. 1, 1950, net asset value per share.

7. The percentages in this table do not include dividend income (which is not published for many of the indices). The percentages therefore only include the increase in the level of the index from Jan. 1, 1950, to Dec. 31, 1959. For this reason, the figure for the Dow-Jones Industrial Average includes only the appreciation figure shown in Table III.

8. Storer, Robert W., A Critical Evaluation of Stock Market Indexes, a paper presented at the annual convention of the American Statistical Association, Washington, D. C., Dec. 27, 1959, page 12.

9. Ibid, table 1, page 8.

10. 1959 was a good example of such unrepresentative performance for the Dow-Jones Average. It increased (exclusive of dividends) by 16%, as compared with an average gain of 9% for the other indices shown in Table IV.

11. It is estimated that to diversify among only 20 stocks, based on "round trip" New York Stock Exchange commissions and taxes, the cost would be 15% for $1,000; 14.5% for $2,000; and 10.3% for $3,000. Johnson, Hugh A., Johnson's Investment Company Charts, Buffalo, New York (1959), page XX.

12. Renshaw, Edward F. and Feldstein, Paul J., "The Case For An Unmanaged Investment Company," The Financial Analysts Journal, Volume 16, Number 1, January-February, 1960, page 43.

13. Investment Trusts and Investment Companies, report of the Securities and Exchange Commission, part 2, page 190.

14. Doane, Russell C. and Hills, Edward J., Investment Trusts and Funds from the Investor's Point of View, (Great Barrington, Massachusetts), American Institute for Economic Research, (1959), page 9.