

## TOWARDS A BETA PERFORMANCE

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After each bear market the casualty gaps first to be filled are those left by fund managers. New faces, with naturally different and sophisticated investment techniques, will appear as prospective "stewards of other peoples money". Legislative controls have been added. The market place has been revamped but have the basic issues really changed?

A.J. MacQuillan writing in Jassa, February 1972 suggests that the conservative portfolio manager was not one of those casualties and that the solid adherence to basic fundamentals has seen to it that he continued to succeed when the investment efforts of those around him were showing negative results. If, then, this pattern will be repeated into the future and indeed there is strong and persuasive argument that such will be the case, how does the discerning investor, at the outset, make a choice from the array of investment management services available. It is not just a matter of differentiating the good from the bad, but also the best from those better.

With much of what was without control now controlled, with even greater demand for fuller information on investment matters (in many more cases recognition of such demand) and a widespread community desire to avoid the past mistakes, it is only to be expected that a greater emphasis will be imposed on the quality of money management.

No matter when these changes in emphasis occur, indeed whether they occur or not, let the portfolio manager prepare himself to be judged on his activities. Like it or not it is in this direction that the pointer is moving. Performance, whatever that term may really mean, is under examination.

National Times Financial Editor, Malcolm Wilson issued the preliminary warning on March 4th to all "unsuspecting Australian investment managers". His article reveals that the level of scrutiny is already on an official basis in the United States.

Concepts are often lifted from other areas and applied willy-nilly to the local scene without a full appraisal of the basic principles. This results in traumatic experiences for all concerned. So it could be with the "beta" and "kappa" coefficients. What may be believed to be an effective measure of fund performance operating in a small sample of a very large and active trading board could prove to be a quite ineffectual and downright misleading measure under different fundamental conditions.

Certainly study these measures, but do not fall into the trap of adopting any one of them before a thorough study of the basic assumptions inherent in the construction of these coefficients.

Emerging from such a study should be a coefficient or coefficients which would provide satisfactory measures of performance of a portfolio manager operating in the local market. For each class of investment there is conceivably a performance standard. This standard may have an empirical base, it may be theoretically contrived or it may be simply constructed, in desperation, from the average of known human endeavours. Whatever that standard be, it would be wise to remember that either it is the averaging result of a variety of different investment objectives or it is theoretically based on one objective and could be used to judge performance of a variety of objectives.

This does suggest that comparisons are possible only in those cases where objectives are identical and for the same class of investment.

Therefore a "beta" coefficient or a "kappa" one has limited use. What is needed is a whole range of coefficients. One to measure performance for a fixed interest security portfolio with objective (a) which will be a different measure from that for another similarly constituted portfolio but with objective (b). Another entirely different range of coefficients would measure, say equity investment performance. If the portfolio consists of 80% gilt edged stock and

20% equity it is poor management to perform well for equity but badly for the remainder of the investments.

Before proceeding to definition of an acceptable criterion of performance, examination of those established already is desirable. Inadequacies of applying a criteria acceptable in another economic climate, without adjustment to the local condition, is ignored for the moment.

It is quite clear from the comments by American authors that there is no overwhelming acceptance there of any measure at the moment, but there is a determination to find one.

A research project commissioned by the Bank Administration Institute of Illinois, to develop an improved way of measuring performance of pension funds and pension fund manager, presented its findings in December 1968. The major recommendations were as follows:

1. The performance of pension funds should be measured in two dimensions: rate of return and risk.
2. Rates of return should be based on income and on changes in the market value of assets held. Both the time-weighted rate of return and the internal rate of return should be computed. The time-weighted rate of return measures the results of investment decisions made by a fund manager. It is not affected by decisions about the timing and amounts of cash flows decisions which the fund manager typically does not make. The internal rate of return measures a fund's total investment performance, regardless of the source of decision making, and is helpful in determining the adequacy of the fund to meet its obligations. Rates of return should be expressed as annual rates, compound annually. In those instances in which the fund's value is not known at the time of every cash flow, the time-weighted rate can be estimated with a high degree of accuracy by either of two methods: the linked internal-rate-of-return method with monthly fund valuations or the regression method with quarterly fund valuations.
3. Rates of return should be calculated for calendar quarters as well as for longer periods of time. Performance comparisons for longer periods are the more important comparisons.
4. Until future research indicates a better way, it is recommended at the outset that the degree of risk taken in a fund be estimated by calculating the mean absolute deviation of the time-weighted rate of return. Such calculation should be based on quarterly rates of return beginning with the start of the process of systematic evaluation.
5. To make comparisons more meaningful, individually administered funds should be divided into three groups: pension funds excluding partitioned funds; partitioned pension funds; and profit-sharing funds. For each group the following categories should be established and comparisons be made only within these categories:

Funds for which the trustee is solely responsible  
 Funds for which the trustor is solely responsible  
 Funds for which the trustor and trustee are jointly responsible  
 Funds whose trustees are required to maintain a specified ratio of equities to nonequities.  
 All other

In addition, commingled funds should be analyzed separately with individual categories for equity funds, fixed income funds, mortgage funds, special situation funds, and balanced funds.

By 1969 Merrill Lynch, Pierce, Fenner & Smith Inc. had sponsored academic research and jointly with their own analysts the basic thinking on the "beta" coefficient was developed. The "beta" coefficient purports to measure the relative volatility of a stock or portfolio compared to the market as a whole, or expressed differently, the degree of risk inherent in an investment

decision. Once measured the return in risk relationship is compared with a model situation to determine whether or not the portfolio manager has obtained a return commensurate with the risks undertaken. The philosophy inherent in this coefficient is that the higher the risk the greater, on average, the rate of return. It is worthy of note that implicit in this concept is that risk is measured from a point in the past and not the present. The risk is fixed at the time of investment decision.

Recently Conrad W. Thomas the senior member of a Los Angeles firm of financial consultants, questions, in Barron's 7.2.1972, the basic concepts leading to the development of the "beta" coefficient as a suitable measure. He disagrees with the assertion "it is probably impossible to measure risk in a security of portfolio at a given point in time".

Mr. Thomas' definition of risk, so clearly expressed, is worthy of quotation:

"It is possible to measure risk at any time desired, provided current price is considered. This is the factor which has apparently eluded the beta boys and other theoreticians, including those of the SEC and the Bank Administration Institute. No volatility gauge alone is a complete measure of risk. It is obvious that the higher the current price of a given stock, the greater its risk. This applies not only when considering the purchase of a stock at a particular time, but also to every stock in the portfolio, regardless of the price at which it was purchased. In fact, the better the stock has acted - the higher its current price - the riskier it is to hold. A practical measure of risk should therefore vary with current prices. Betas do not.

With these facts in mind, we can now define risk, at least as it applies to trading in securities. Risk is exposure to possible loss due to a drop in price, and it depends both upon price variability and the current price of the stock. (Risk is not, as the BAI would have it, "the degree of uncertainty in future security values : such a definition fails to distinguish between risk and opportunity)."

Risk now becomes the addition of two components, i.e. range variability plus current price factor. Range variability is defined as the price range divided by the average price of that range and current price factor as the deviation of the current price from the average price. Whilst there is no quarrel with the separate definitions, it is most debatable that the addition of these two factors produces a meaningful indicator of risk at a given point of time. The Thomas factor or as he prefers to call it, "the kappa coefficient" is such that irrespective of the width of the range, the risk factor when the current price is at the top end of the range will always be three times that when current price is at the other end. Assuming that the price range has been correctly determined to remove the influence of factors which could distort the true position then one would have expected the risk to be zero at the bottom of the range and infinite at the top. This factor must surely have a debilitating effect on the relative judgements between stocks of significant risk difference.

Perhaps the relationship is:

$$K = x.RV + y.CPF$$

which is really insoluble unless two situations of equal risk can be found.

Possibly the search is for the wrong measure? The whole purpose of seeking a value for the risk undertaken by a portfolio manager is surely to determine the chance of his performance being maintained into the future. Is it not the consistency of performance which is to be measured? The American climate is really seeking to measure consistency almost instantly rather than from an established track record. Maybe there is no instant criterion. Maybe the "beta" revolution will, like most revolutions, result in the demise of a number of innocents, create confusion and achieve no advancement.

The instant criterion suffers from one fundamental weakness if used to judge performance. Past experience evidences that fund performance will decline as the fund size increases. Given then that most successful fund managers will be entrusted with larger funds and in most cases will take the same sorts of risks, the instant criterion becomes misleading. The "Peter Principle" gains strong support from the history of fund management.

Before measuring consistency of performance it is essential to come back to objective. There is no uniform investment objective for all funds. Objectives are often implied but rarely clearly stated.

If a fund aims to "beat the Index" which index is it and by how much is it to be beaten? When capital gain is the aim what per annum percentage is sought? Only when goals are precisely defined can performance be measured and it is only over a period of time that consistency of performance is determined. Does it really matter what type of risks were taken to achieve a goal as long as those risks can be consistently and successfully taken or avoided where necessary to produce a track record of low variability. Variation will occur in performance as indeed it will in any function of risk taking. It is equally measurable in a variety of ways. So let the track record determine the acceptability of a portfolio managers performance but let the record be a series of discrete calibrations such that each interval in performance bears no relation to past or future intervals.

For example, if the investment objective of an equity portfolio is stated as "to beat the Index" what precisely should this mean. The most important implication is that the manager is an equity manager and not a money manager. His task is to show higher results than an index no matter in what direction it moves. What constitutes a higher result. Remember that an investor choosing to invest in, say, weighted proportion to an index will generate income of two types - capital gain (or loss) and dividends. The ensuing comparison must take both items into account. In a market, moving in no specific direction, capital gain, or even prospects of it, may be nil and the only generation of added value may be through dividends. A manager pursuing low yielding stocks for high potential gain may well turn in a bad result when the complete measure is made but still beat an index on capital gain.

What margin above the model performance is regarded as acceptable performance. This the American analysts seek to calibrate. More importantly the number of times there is a positive margin, however large or small, determines performance ability. The intervals of measurement may be quarterly half-yearly or whatever. For each interval the measure starts with cash or cash value and ends with total value generated for both the actual and model experience.

One must expect that on some, hopefully infrequent, occasions the margin is negative.

It could be suggested that adoption of this concept would result in a diminishing race of portfolio managers with established track records. This is not so. Somehow the community manages to issue licences to motor vehicle drivers, medical practitioners, lawyers and to members who have varying levels of intellectual attainments and disciplines and who have, in every case, limited track records of practical experience.

Currently there are no specific disciplines for the portfolio manager, no formal educational patterns to be achieved and certainly no organised collection of human experience in portfolio management. The law of supply and demand becomes the sole determinant.

Portfolio management still remains a most inexact science with subjective judgement as its basic theme. In the land of the blind the one eyed man is king.

#### BOOK REVIEW

#### FRAUD AND WHITE COLLAR CRIME

By F. Oughton (Elek Books) 1971

Some aspects of this short volume are of interest, particularly insofar as company structures are used as part of the modus operandi for money making schemes that step over the border of legality. Subjects covered include phoney insurance, industrial espionage and "consulting" firms, and it is clear that an enormous amount of work goes into the perpetration of financial frauds. Remedies are not discussed except for a suggestion, put up but rejected, that Courts should be assisted in fraud trials by standing panels of qualified accountants, etc. On the whole the book is not very helpful and the subject deserves a much fuller treatment.