deflation. Initially, therefore, a period of under-employment likely in 1974-75 will result in stagflation. Under either Government it is unlikely to be let to go deep enough or long enough to substantially crack this kind of inflation.

Finally, let me try briefly and broadly to focus all this in upon your area - security analysis. What does an outlook such as I have suggested mean for securities - an outlook in which an economy goes some way towards taking the cure and backs off perhaps less than half way through? What does this suggest for the yields required from securities?

Let's first indulge in a little of the game of "what might have been". If the cost-push inflation factor now operating was neither so high nor so resilient, one could see the period of mild economic slackening I have suggested, as but the prelude to a significant turn downward in interest rates - first official rates, then private. In fact, official interest rate downturn would be a substantial part of the policy of getting the monetary base growing again. This would have its effect, of course, throughout the securities market.

That is nice thought. But we must return to what is. Apart from what I think are some notable exceptions (such as certain first-grade areas of the mining market) I think it has to be said that, from an underlying interest rate aspect, the securities market may be headed for the worst of both worlds; thatis, slack, without the underlying bonus relief that would come from the interest rate change downward otherwise accompanying such circumstances. Slow down and economic shake-out are not likely to be prolonged enough or deep enough to allow underlying cost-push inflation to crack. But unless inflation does crack substantially and soon, a new and so far mercifully repressed factor will slither into the process of yield determination - the inflationary expectations factor.

Until now, savers and savings institutions have been prepared to accept nominal yields largely unadjusted for inflation. To the extent that logic has applied in this acceptance, it has been founded on the surmise that inflation at current levels is a very temporary phenomenon - soon to fall again to the point where interest rates at current levels are at least half positive.

But time is running out on such a basis for our yield structure. Unless the community is prepared to accept a catharsis period severe enough to eliminate demand inflation and cut significantly into what is now the more resilient cost-push inflation, then inflationary expectations, among institutional and individual savers alike, must start to take over as the new momentum behind upward pressure on security yields, both official and private sector.

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EVERYBODY OUTPERFORMS THE INDEX

by D.C. Pike and G.D. Ratcliffe

At the recent seminar on Security Analysis held at the University of New England a number of analysts were asked how their funds had performed against the Index. It was not stated which Index, but everybody outperformed it - with one exception.

As most of the major life offices were represented it seemed a little puzzling, at first, why this should be so.

However, upon reflection there may be an answer, or answers. These answers could include,

1. The Analysts were liars

2. The Analysts had found an Index which they outperformed - as "the Index" was not specified

3. The All Ordinaries Index is schizophrenic and its composite markets, Mining and Industrials, may move in different directions at the same time.

4. A complex of factors.

Of these answers we would like to discuss the last two. It is stressed that the observations made apply primarily to large portfolios where there are limited opportunities for switching.

The All Ordinaries Index - "The Index"

The Sydney All Ordinaries is a composite index covering a very wide range of companies and industries. The Index is designed to measure market capitalisation and is not designed as a measure of portfolio management.

As a number of observers have remarked, the All Ordinaries Index has a relatively large proportion of mining or mining oriented stocks in it. Mining shares have shown greater price volatility than industrial shares in recent years.

Investors that do not have a heavy weighting of mining shares in their portfolios are likely to find divergent results between their portfolio and the All Ordinaries Index, especially at those times when the mining shares and the industrial shares are moving in different directions.

To some extent this may be the explanation of the superior performance which the analysts of the life offices attributed to their portfolios in 1973. Their portfolios probably had relatively few mining stocks in comparison to the All Ordinaries Index. As a result when mining stocks fell at a relatively faster rate in 1973 their portfolios did not fall as far. So perhaps due to good fortune rather than good management they outperformed the All Ordinaries Index in 1973.

A Complex of Factors

If a portfolio comprises mainly industrial shares then Index 25 would be a more appropriate Index against which to measure performance. However, it was felt that there may have been some factors inherent in this Index, which caused everybody to outperform it in bull markets and for the Index to outperform everybody in bear markets. Index 25 was, therefore, examined, to establish its characteristics. The Index is a measure of the market capitalisation of a wide range of stocks. Index 25 comprises all the companies in the All Ordinaries Index, excluding Steel and Engineering and the Non-ferrous Metals Index. It covers 14 industries with 178 companies which at 30 November 1973 had a market capitalisation of $8,116M. The capitalisation of the companies provides the basis on which the weights are calculated. In the last bull market Index 25 rose from a low of 107.53 in May 1970 to a high of 179.14 in January 1973, an increase of 66.60%. During the period from May 1970 to October 1971 the Index drifted. It was in the period November 1971 to January 1973 that most of the major price increases took place.

We examined the range of price movements of 135 of the 178 companies, which make up Index 25. Of these companies the average movement from low to high was 141% and the median increase 110%.

The very significant difference between the Index 25 increase of 66.6% and the unweighted increase suggests a need for caution in using a composite index such as Index 25 as a measure of portfolio performance.

We feel there are two major reasons why composite indices such as Index 25 tend to flatten out extremes of market movement. The features we noted in the 1971-73 period were,

1. The Cancelling Out Effect

In the final 12 months of the 1970-71 bear market, all industry groupings were not moving in the same direction. The Transport, Electrical and Automotive Indices were moving upward, as were the Brewers (although the Food, Drink and Tobacco Index, which includes Brewers was still moving down). At the same time Banks, Trades and Services, Textiles, Building and Construction were moving sideways. Broadly speaking all the other indices were moving down and their weighting was sufficient to give Index 25 a slight downward drift in 1971. Thus, because the Index contains stocks, some of which are going up and some which are going down, it does not reflect the extreme low points of individual industrial groupings. This cancelling out effect can also be noted at the top of the boom with some industries "topping out" as others were still moving to new highs. e.g. Other Finance and Transport topped out in 1972, earlier than the other Indices.

2. Market Weighting

The heaviest industry weightings in Index 25 were, in order, Food Drink and Tobacco, Banks, Chemicals Paper and Glass, and Trades and Services. The average percentage increases from low to high in share price for these industries were: 132%, 111%, 85% and 179%, respectively. As can be seen three out of the four industries had rises below the average for 135 companies of 141%.

In addition to three of the four industry groupings with the heaviest industry weightings showing a lesser increase than the unweighted average increase, many of the largest companies tended to rise by less than the average. The ten largest industrial companies, by market capitalisation, (as at 30 November 1973), rose in price by an average of 128%. This is below the average of 141% for the companies which comprise Index 25. The top five rose by only 112% and these 5 companies accounted, statistically, for 21% of the rise in Index 25. Their below average performance weighted by their very heavy capitalisation caused a dampening effect on the industry performance and thus on the Index as a whole.

As an example, Mutual Acceptance did well during the last bull market with a rise of approximately 153%. Its impact, however, is less in terms of the index, when compared to a stock like C.S.R., which rose only 62%, but had both a much higher market capitalisation and a larger industry weighting.

At 20 November 1972, the market capitalisation of Mutual Acceptance was $40,028,160 while C.S.R.'s was $425,951,240. At the same time the weighting of the companies' industries within Index 25 was .040 for Other Finance and .239 for Food Drink and Tobacco.

The very marked divergence between the extent of the rise in Index 25 (66%) and an average increase of 141% in the sample of companies makes the comparison of performance against a composite Index questionable.

Because of the construction of Index 25 and other Composite Indices we feel they are not suitable for measuring portfolio performance. These Indices may, however, be a useful measure when trying to impress others with one's superior financial skills during a bull market.

The reason for "superior" performance to the index revolves around portfolio construction. If a portfolio were constructed with a weighting exactly the same as the index it would perform the same as the index. Most portfolios are not constructed exactly the same as the index. The greater their weighting in a particular industry grouping the greater is the magnification of the cancelling out effect and the index weighting effect that has been mentioned previously. Other things being equal, the fewer stocks in a portfolio the greater the liklihood of outperforming the Index in a bull market. Conversely the more stocks in a portfolio the greater the liklihood of achieving an improvement similar to that of the index. It follows that in a bear market a "concentrated" portfolio is likely to be outperformed by the market index and a widely diversified portfolio is more likely to show superior performance relative to the index. So, in part, the superior performance that is reported by Mutual Funds in times of bull markets is a result that one might expect.

However, this type of "superior" performance in bull markets reflects a portfolio weighting with emphasis on certain industries, so that the upward movement is not "flattened" by divergent movements of industry groupings. Assuming no switching in the portfolio, when the bear phase of the market sets in there will be a tendency for the portfolio, with its weighting to certain industry groupings, to fall faster than the index. The superior performance then becomes inferior. Everybody outperforms the index, but only some of the time.

Table I lists the industries which comprise Index 25. The companies we examined had average and median increases during the 1972-73 bull market as stated in the Table. Also we have listed the highest and lowest percentage increase recorded by the companies in each industry.

TABLE I

	% inc. (highest)	% inc. (lowest)	Average inc.%	Median inc.%
Banking	187	68	111	107
Finance	160	86	137	142
Transport	173	82	110	100
Retailers	460	69	179	147
Media, Other Services	206	60	119	102
Food, Drink Tobacco	438	32	132	119
Textiles and Clothing	483	55	165	113
Chemicals, Paper, Glass	180	46	85	84
Builders' Suppliers	480	58	171	169
Property and Construction	400	88	238	217
Electrical	186	44	100	91
Automotive	233	39	123	112
Fuel Light Power	100	67	84	84

Index 25 rose from 107.97 to 179.14, an increase of 65.93%. As can be seen from Table I there is a considerable divergence between the experience of the average of individual companies and Index 25.