This paper presents the results of a long term (1910-1965) analysis of B.H.P. which, inter alia, throws some light on last year's controversy between Mr. Shepherd and the company's Board.

The analysis indicates that the company's shares were not a particularly good investment before the mid 1950's. Until then the rate of growth of dividends was insufficient to maintain their purchasing power. From 1955 to 1965, however, annual dividend income rose appreciably faster than retail prices, and the figures suggest that recent complaints about B.H.P. as an investment reflect unfortunate timing (buying at the peak in 1961 and 1962) rather than the failure of the Board to meet the reasonable expectation of shareholders.

During the period covered the nature of the company changed completely. 1910 was selected as a starting point so as to include the last few years in which it was concerned purely with mining activities. This allows an examination to be made of the transition period in which mining pursuits were slowly overshadowed by an interest in, and a commitment to, integrated steelmaking.

The paper is in two parts.

The first is short term in its approach, and contains an examination of rates of return for annual investments made at monthly intervals from 1947 to 1965.

The second part is based on an examination of the long-term growth of a share-holding which was increased by the bonus-element of each new issue. It focuses on the dividend income going to the imaginary holder of these shares. A description of the assumptions made, and an explanation of the calculations used, will be found in the Appendix. This approach obviously results in a study which is historic and descriptive in nature, and not predictive; we have been concerned primarily with the cash returns coming to shareholders during various periods of the last 55 years.

**PART I**

**Short Term Returns**

This part of the analysis has been applied only to the period 1947-1965, a period during which B.H.P. was a market leader. It throws some light on the risk attaching to short-term investment. The method used was to calculate the return obtained by a shareholder who purchased a parcel of shares, held them for 1 year, and then sold them. Rates of return have been calculated in this manner for investments made at monthly intervals from January, 1947, to December, 1964. Investments made over 18 years have therefore been examined, and as investments made in each month of each year have been analysed, a total of 216 rates of return have been calculated. Means and standard deviations are recorded in Table I.

A plot of these rates of return is shown in Graph 1. Each value is plotted on the date on which the shares are sold. It therefore indicates the rate of return received on a purchase of shares held over the previous 12 months.

The net rate of return, \( R \), is given by:

\[
R = \frac{\text{Selling Price} \times \text{Dividends received}}{\text{Buying Price}} - 100
\]

The plot on Graph 1 is of gross, not net, rate of return. The gross rate is equal to \( R + 100 \).

The distributions, in the form of histograms, are shown for the 216 one-year periods in Figure 1. In addition to a distribution of the returns for the entire 18 years, a breakdown into smaller periods has been provided to allow the making of between-period comparisons. The 18 years have been broken into two periods of 9 years, and 5 periods of 4 years, with some overlap for the first two periods. Table
shows the periods used, and the mean rates of return and standard deviations for each period. The differences between the means of periods 2 and 3, and periods 5, 6, 7 and 8 are all statistically significant at the 95% level of confidence. The mean net return for the whole period, 10.2%, of its own, has little significance. As indicated by the standard deviation, the distribution is broad. Of the 216 rates determined, 67 were negative (i.e., investment for a 12 months' period produced a loss) and 149 were positive. The highest return, 70.8%, came from buying in October, 1958, when shares were traded at 46/6d. A year later, they could be sold at 71/-. Purchases made in the months of September, 1958, through to May, 1959, all yielded rates of return in excess of 60%. The lowest returns came from investing in May, 1951, and December, 1961; both yielded negative returns of 27%.

The most prominent feature of the post-war returns is the very large differences between the returns in the 1947-56 period and those in the 1956-65 period. The mean rates of return are 3.3% and 17.1% respectively, and the standard deviation of the former is almost half that of the latter. The differences can be visually assessed by examining histograms A and B. Histogram A, describing the first of the two periods, covers a range of 60%, with a concentration of values around the mean. Histogram B is markedly different — the range covered is 110%, with no prominent centre to the distribution — hence a standard deviation of 24.9. All rates of return in excess of 30% — and there are 32 of them (approximately 21% of the total) — fall in this latter period. Referring to the data from which histograms E and F were produced, it is evident that the majority of returns of over 30%
come in the years '56, '57, '58 and '59.

Histogram G provides interesting information on the last 4 years. Annual rates of positive return have not exceeded 20%. On the other hand, negative returns of over 20% have not been uncommon. It is the only one of the post-war 4-year periods examined in which losses out-number gains, and this is certainly a major reason behind many of the recent shareholders’ criticisms. An obvious comment which can be made, but which unfortunately does not help frustrated shareholders, is that after a performance such as that found in the previous period, where the mean return for the 4 years was 35%, a reversal of this nature should not have been unexpected. It would also seem unlikely that shifting dividend rates marginally upwards would affect prices sufficiently to make very much of a difference to the shareholder’s position. Though any improvement would be better than none at all, it is difficult to envisage small upward price movements as significantly easing the pain of those who bought in the periods of high prices in the early sixties.

The evidence presented and to be presented in Part 2 is sufficient to indicate that much of last year’s outcry against the company’s dividend policy was based on an understandable but emotional reaction to a situation in which shareholders’ capital was depreciating. To attribute this state of affairs solely to the company’s directors was unrealistic. A more analytical examination of the circumstances indicates that, in the short-term over the last decade, shareholders have made some substantial profits. It is only during the last five years, following the high share values of the 1959-61 period, that the trend has been reversed.

TABLE 1

<table>
<thead>
<tr>
<th>Period</th>
<th>Timespan</th>
<th>Mean Return</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Buying in JAN. '47 — Selling JAN. '48 To Buying DEC. '64 — Selling DEC. '65</td>
<td>18 yrs.</td>
<td>10.2%</td>
</tr>
<tr>
<td>2.</td>
<td>Buying in JAN. '47 — Selling JAN. '48 To Buying DEC. '55 — Selling DEC. '56</td>
<td>9 yrs.</td>
<td>3.3%</td>
</tr>
<tr>
<td>3.</td>
<td>Buying in JAN. '56 — Selling JAN. '57 To Buying DEC. '64 — Selling DEC. '65</td>
<td>9 yrs.</td>
<td>17.1%</td>
</tr>
<tr>
<td>4.</td>
<td>Buying in JAN. '47 — Selling JAN. '48 To Buying DEC. '50 — Selling DEC. '51</td>
<td>4 yrs.</td>
<td>9.2%</td>
</tr>
<tr>
<td>5.</td>
<td>Buying in JAN. '49 — Selling JAN. '50 To Buying DEC. '52 — Selling DEC. '53</td>
<td>4 yrs.</td>
<td>3.1%</td>
</tr>
<tr>
<td>6.</td>
<td>Buying in JAN. '53 — Selling JAN. '54 To Buying DEC. '56 — Selling DEC. '57</td>
<td>4 yrs.</td>
<td>11.1%</td>
</tr>
<tr>
<td>7.</td>
<td>Buying in JAN. '57 — Selling JAN. '58 To Buying DEC. '60 — Selling DEC. '61</td>
<td>4 yrs.</td>
<td>35.6%</td>
</tr>
<tr>
<td>8.</td>
<td>Buying in JAN. '61 — Selling JAN. '62 To Buying DEC. '64 — Selling DEC. '65</td>
<td>4 yrs.</td>
<td>-5.4%</td>
</tr>
</tbody>
</table>

APPENDIX

Rates of Return:

Rates were calculated for every annual period, taken at monthly intervals, from January, 1947, to December, 1965.

It was assumed that all shares were sold at the end of each 12 month period at current market prices. The rate was calculated by expressing the total of the sale of stock and the dividends received in the year as a % of the cost of purchase. Brokerage was allowed for in both buying and selling.

It was also assumed that all shares purchased at the beginning of each 12 month period were purchased “ex rights”.

It should be noted that because books were not always closed for dividend payments in the same month, some 12 month periods produced only a single dividend payment to the investor, while others produced three payments.