

The drug firms in the sample differ substantially in their average rates of return. Consequently, intraindustry dispersion is large. Each drug firm, however, has relatively stable earnings over time so that the standard deviation measurement about each firm's own mean is small. Aerospace firms have earnings that vary substantially both about the industry average and about their own means. Correcting for trend and autocorrelation, however, results in relatively stable earnings for each firm's own mean. Thus, the intraindustry measure of dispersion overstates the risk exposure of firms in both of these industry groups and makes estimates of risk for the constituent firms dependent upon the meaningfulness of the industry groupings.

In short, the two measures of risk exposure yield disparate results for the industry groups with the highest rates of return. The choice of an appropriate measure of risk exposure is crucial for studies of risk-comparable profits.

As a risk measure, intraindustry dispersion presents several problems. For instance, if rates of return for firms in an industry such as drugs differ substantially, an intraindustry dispersion measure will indicate a substantial degree of risk even if each firm's rate of return is stable from year to year. Conceiving risk to be the difficulty in forecasting rates of return, such a method could greatly overstate the inability of existing firms to predict their future profits.

If all firms in an industry produce similar products, compete in the same markets and, in general, face exactly the same demand and supply conditions, the intraindustry dispersion measure is perfectly appropriate. With broad industry definitions, such as those used in this paper, the constituent firms are usually differentiated—while each firm shares some common elements of risk with the other firms in its group, its peculiarities create some special risk conditions. Treating each industry group as a unit, as the intraindustry dispersion measure does, obscures these firm differences. Computing the standard deviation of profits from the firm's own mean permits the industry-risk effects to be treated separately as a residual after accounting for the elements of risk peculiar to each firm in the group.

In sum, the firm-temporal dispersion measure described in Sec. II appears to have a sounder theoretical base than the intraindustry approach to risk exposure. Nonetheless, it should be noted that the concept of risk differs somewhat between the two measures. The latter is directed toward measuring the risk of entry into an industry, while the former treats risk more generally in terms of the uncertainty of forecasting future rates of return.

V. CONCLUSIONS

Perhaps the most important conclusion is implicit. With some reasonable assumptions, significant and instructive measurements of the relationship between risk and the rate of return can be obtained. The model described in this paper permits characteristics of earnings distributions to be used in evaluating risk exposure and its influence on profits. Application of the model to a sample of firms indicates that mean rates of return are importantly affected by risk exposure as defined here. Firms with large standard deviations have higher mean profit rates, while firms with positively skewed distributions have lower profit rates. The latter are apparently risk-averse and like the chance of "long-shots."

Another conclusion, relating to the method of computing measures of risk exposure, emerges. The firm-temporal-dispersion measure appears to have a sounder theoretical rationale than the alternative intraindustry-dispersion measure. A choice between these measures attains considerable importance, as they yield widely different results for the industry groups with the two highest average profit rates—drugs and aerospace. Selection is influenced by the underlying concept of risk; the intraindustry dispersion approach relates to the risk of entry, while a more general concept of risk seems more appropriate for analysis of the influence of risk on corporate rates of return. For many industry groups, adjusting nominal profit rates for risk exposure results in considerably lower risk-adjusted profit rates. This is not true, however, of the drug and aerospace groups. Their risk premiums are very low, and they also have the highest risk-adjusted rates of return. The explanation for such profit patterns, therefore, must be sought in factors other than risk.