

I propose, with the aid of a few charts, to summarize here, by the use of simplifying charts I have brought along, the key methodological and quantitative results of this study. However, we must first be concerned with the question of relevance.

Professor Cootner has shown that one cannot meaningfully discuss prices without considering profitability. Likewise, one must consider the risk/return pattern formed by the economy as a whole before any particular industry's profitability can properly be evaluated. Therefore, the body of research I am here to discuss today is a general investigation of risks and returns in all American industry.

I would like to underscore this point, that the first part of our presentation is addressed to the overall pattern of risk and return in the economy as a whole. It defines the measures that can be applied to various industries. The results and implications of this analysis have been accepted for publication in the *Harvard Business Review*.

I, too, as did Professor Cootner, do not appear before you as an expert on the drug industry. My expertise concerns the measurement of relations between risk and rate of return. Other witnesses will discuss the specific nature of the risks faced by the drug industry. I can, however, say that our research has established a valid measure of the industrial risk/return pattern for the American industry. Further, based on our investigation, there is no reason to conclude that the drug industry's performance in the statistical sense is out of line with the statistical relationships we have measured.

Attached to my statement are three charts which illustrate the philosophy and methodology we have followed in measuring the risk/return relationship. They show how our risk measure concentrates on the uncertainty or lack of predictability of marginal profits and, further, how the economy's actual risk/return pattern can be econometrically quantified and the position of individual industries isolated and evaluated. I, therefore, with the aid of these charts, propose now to summarize the findings which are spelled out in detail in the written document. As Professor Cootner indicated, it is my task to show that one can meaningfully use statistical theory and econometric analysis to quantify the risk/return pattern; that is, to raise the argument from one of mere beliefs and contentions to quantified results and competing hypotheses.

But before comparisons between competing industries can be performed, it is necessary to specify definitions of the terms upon which we want to compare industries.

Therefore, we have to define for this study two important concepts. The first is a definition of rate of return, which can be applied across many diverse industries: industrial as well as financial; those engaged in manufacturing basic necessities as well as those engaged in manufacturing of luxuries.

More difficult, however, is the construction of some measure of the risk environment which can measure the impact of, without isolating the individual courses of uncertainty and lack of predictability within the wide spectrum of American industries.

May I emphasize that point, Senator. We do not at this stage in the study try to say why each industry, one by one, for the 59 industries we have studied, is risky. We construct a statistical surrogate, a measure which corresponds through the force of our theory and measurements