

Investment analysts frequently make mention of the fact that drug profits may be adversely affected by factors that will increase price competition and thereby erode high profits. The most frequent reference of this sort is the observation that anything threatening to increase the use of generic drugs as opposed to brand name drugs threatens high profits. An analysis by *Value Line* of the possible effects of "medicare" on drug profits is typical of investment analysts' views on the subject. After explaining that "medicare" very probably would increase drug sales, *Value Line* concluded that drug profits would not go up by a corresponding amount because,

"Hospitals and institutions usually, wherever possible, buy generic name drugs rather than brand names in order to reduce costs. *The most profitable business for the drug manufacturers is that which comes through drugstores, where drugs are prescribed on a brand name basis.*"¹⁶ [Emphasis added.]

This observation, of course, is concerned with how medicare might affect competition because of the increasing use of generic drugs; it is not explaining profits associated with risks. In sum, there is no reason to conclude, on the basis of advice being given investors by investment analysts, that the drug industry is a uniquely risky industry. On the contrary, the generally glowing reports of investment analysts suggest that large drug companies should have little difficulty obtaining adequate capital should they choose to go into the market for it. Actually, however, their profits are so large that drug companies seldom need go to the capital market for equity capital. And there is no reason to expect that drug companies would have difficulty getting adequate capital even if they enjoyed profit rates comparable to most other American industries.

But perhaps this is a too prosaic approach to the problem. Let us, therefore, turn to the Conrad-Plotkin-Markham-Cootner "econometric" explanation of high profits in the drug industry.

Conrad-Plotkin study of risk and profit rates

My comments today concerning the Conrad-Plotkin analysis will be limited to an evaluation of the testimony presented to this Committee last month. Arthur D. Little, Inc., has promised to provide us with the underlying data used in their analysis. With your permission, we will provide a brief supplemental memorandum to the Committee should we have any additional observations after reviewing these data.

You will recall that Conrad and Plotkin attempted to test the hypothesis that the level of an industry's profit rate is positively correlated with the degree of risk faced by firms within the industry. In other words, the more risky an industry, the higher its average profits.

The concept of risk in investment decision making theory refers to situations where it is impossible to predict with certainty the outcome of particular economic events. The presence of uncertainty is assumed to affect investors' decisions. A common assumption is that investors must be paid a "risk premium" if they have an aversion to assuming risks. "Risk aversion" has been an underlying assumption in a number of recent theoretical works, particularly in the area of portfolio selection and monetary theory.¹⁷ However, the assumption of "risk aversion" is not a universal economic law. One need only view the crowds at the race track paying for the privilege of taking a gamble to infer that some persons regard risk taking as furnishing positive rather than negative satisfaction. These individuals may be viewed as "risk lovers." As a group, these risk lovers lose money at the race track. This is also the case with persons gambling in commodity futures markets.

In order to explain why individuals will both purchase insurance to guard against large losses and undertake gambles with remote probabilities of achieving high returns, Friedman and Savage have argued that the same individual may be both a risk averter and a risk lover.¹⁸

This, in a nut shell, is what risk aversion theory is all about. But note two important points. First, the size of the risk premium is an empirical question. The theory tells us nothing about the amount of the premium, nor even whether it is

¹⁶ "Medicare: Bad for the Drug Makers?", *The Value Line Investment Survey*, Edition 4, February 12, 1965, p. 426.

¹⁷ See H. M. Markowitz, *Portfolio Selection*, John Wiley and Sons, New York, 1959, and James Tobin, "Liquidity Preference as Behavior Towards Risk," *Review of Economic Studies*, February 1958.

¹⁸ M. Friedman and L. J. Savage, "Utility Analysis of Choices Involving Risk," *Journal of Political Economy*, Vol. 56, August 1948, pp. 279-304.