sales promotion outlays will be the vehicle of the rivalry, and the originally enormous profit margins are whittled down progressively by the necessity of engaging in increasingly extravagant sales promotion campaigns to counter those of one's rivals.

Senator NELSON. Is the ordinary consumer of drugs benefited in any way by this rivalry?

Dr. STEELE. No, I would say the benefit is essentially negative in that rivalry functions in the drug market as a substitute for price competition on the one hand and genuine research advances on the other. When Dr. Console, former medical director of the Squibb Co., testified before the Kefauver hearings, he said the drug industry is an unusually safe industry. Risks are low because if the research department fails to make an advance, the advertising department can substitute its expertise and make the drug appear to be an advance. So in this sense, this rivalry prevents price competition by the ways which Professor Schifrin has just described. And it also confuses the issue regarding drug information and the substantive advantages, if any, made by new drugs.

Senator NELSON. Thank you.

Dr. STEELE. In order to make the greatest profits per drug it is usually necessary to be first in the market, otherwise the advertising cost of wresting the market away from the first (and also heavily advertised) drug is disproportionately great. Hence the motivation to devise new drugs. But at the same time, the new drugs found by others must be rapidly copied, so that the costs of research, both primary and imitative, come to mount up. And the fact that everyone is trying to copy and/or improve everyone else's drugs leads to an overly rapid rate of product obsolescence and an artificially induced "risk" of short commercial life for the average product.

Since many doctors have testified that there is generally no net surplus of advantages over disadvantages for the manipulated molecules, rapid changes in market shares betray motion but not progress. Thus sales promotion and product competition substitute for price competition, and unit profit margins decline not through price reductions but through cost increases. It might even be contended that this route to profit erosion roughly equates risks and rates of return, such that even though the risks are self-created by the seller's own choice of rivalry tactics, they are real risks and only enough will be invested in sales promotion and patent bypassing research to keep the rate of return on investment from dropping below the minimum satisfactory rate relative to the artificial risks built into the market.

One might agree with this analysis and still contend that it would be socially beneficial to alter the market structure so that price competition would be forced upon the sellers and lowered profit margins would become insufficient to support constant devising of new drugs and their rapid copying. Hence the "risks" would decline in direct proportion to the decline in rate of return.

But it is also possible to dissent from this analysis. First, inherent commercial risks in the drug industry are probably lower than in most industries because of the depression-proof character of the industry. Drugs are needed in fair times and foul, and a sick man will buy as many drugs as he needs regardless of his income, right up to the limit of his ability to finance current purchases. Second, drug firms may have come to realize in recent years that the market is practically satu-