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On what economic grounds should horizontal mergers be challenged?

The U.S. Department of Justice Merger Guidelines direct federal antitrust policy toward mergers. We here examine the rationale for challenging horizontal mergers as stated in the Merger Guidelines. We also examine the criterion used by the Merger Guidelines to measure the welfare effects of horizontal mergers. We find that both the Department's rationale and its criterion for challenging such mergers suffer from a singular lack of empirical or theoretical support. We then describe how to judge the welfare effects of horizontal mergers beginning with the assumption that firms behave "noncooperatively."

The Merger Guidelines' rationale and criterion for challenging horizontal mergers

The Merger Guidelines have one primary rationale for challenging horizontal mergers: that increases in market concentration make cartel formation and other forms of explicit collusion more likely. As noted by a DOJ economist, "it is clear that collusion — in fact, explicit collusion — is the mechanism with which the DOJ Guidelines are concerned." Werden, *Market Delineation Under the NAAG Merger Guidelines: Realities or Illusions?*, 35 *Clev. St. L. Rev.* 403 (1987). Consider the Guidelines' discussion of the ability of small or fringe firms to expand output in response to a price increase. "Collusion is less likely to occur if small or fringe sellers in the market are able profitably to increase

**R. Preston McAfee
and
Michael A. Williams**

output substantially in response to a 'small but significant and nontransitory' increase in price and, thus, to undermine a cartel." U.S. Department of Justice, 1984 Merger Guidelines, 4 Trade Reg. Rep. (CCH) at 20,563. The Guidelines contain many more such references to "cartels" and "collusion."

The Guidelines' criterion for measuring the welfare effects of horizontal mergers is the Herfindahl Index, which is simply the sum of the squared market shares of all the firms in a market. The Guidelines state that a horizontal merger is likely to be challenged if: (1) the post-merger Herfindahl is between 1000 and 1800 and the change in the Herfindahl caused by the merger is more than 100 or (2) the post-merger Herfindahl is above 1800 and the change in the Herfindahl caused by the merger is more than 50. The Guidelines also state, however, that such a merger is unlikely to be challenged if entry is easy.

The Guidelines then ask whether there are market factors that cause the Herfindahl Index to understate or overstate a merger's likely competitive significance. Such factors may include, for example, changing market conditions, such as new technologies, and the financial condition of the merging firms. Finally, the Guidelines examine a host of other factors "as they relate to the ease and profitability of collusion." One such other factor is

Professor McAfee is the Rex G. Baker, Jr. Professor of Political Economy at the University of Texas; Mr. Williams is a Senior Associate at Analysis Group, Inc. Both Professor McAfee and Mr. Williams have served as economists for the Antitrust Division of the Department of Justice. The following article is adapted from their co-authored longer piece entitled "The Department of Justice Merger Guidelines: A Critique and a Proposed Improvement," which appeared in 16 Pepperdine Law Review 1069.

Bertrand model of oligopoly, the competitive price exists regardless of the number of firms.)

Evaluating the welfare effects of horizontal mergers with a rationale and criterion based on noncooperative firm behavior

Evaluating the welfare effects of horizontal mergers with noncooperative models of firm behavior is an area of active research. See Farrell, J. and Shapiro, C. (1990), "Horizontal

Mergers: An Equilibrium Analysis," 80 *American Economic Review* 107; see also McAfee, R. and Williams, M. (1988), "Horizontal Mergers and Antitrust Policy," *Economic Analysis Group Discussion Paper 88-7, U.S. Department of Justice*. These early research efforts, which primarily assume Cournot firm behavior, have already paid benefits. There now exist criteria based on noncooperative models of firm behavior that can evaluate the welfare effects of horizontal mergers in several different types of markets. We expect that the use of such criteria will spread considerably in the coming years.