Comments on the 2010 Proposed Horizontal Merger Guidelines

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I. The Proposed Horizontal Merger Guidelines Appropriately Shift the Focus of Merger Analysis

The proposed Horizontal Merger Guidelines ("Proposed Guidelines") appropriately shift the focus of merger analysis in five principal ways.

- First, the Proposed Guidelines describe an approach that emphasizes empirical analysis and the various types of evidence that the U.S. Department of Justice (DOJ) and the Federal Trade Commission (FTC) (collectively, "the Agencies") will consider in evaluating competitive effects. This approach clarifies that the evaluation of the likely competitive effects of a proposed transaction depends crucially on facts and other evidence that are specific to the merging parties and the markets at issue.

- Second, the Proposed Guidelines reflect a shift towards direct competitive effects analysis and away from market definition as the first step in a merger review. This is particularly important in analyses of differentiated products mergers. This shift towards an analysis of competitive effects eliminates what we view to be distortions induced by an emphasis on relevant market definition—an inefficient allocation of resources devoted to defining relevant markets and too much weight given to market shares and concentration.

- Third, the Proposed Guidelines recognize that the competitive effects of a merger potentially extend beyond price effects to include effects on innovation, product variety, product quality, and service, all of which, along with price, are determinants of consumer welfare.

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- Fourth, the Proposed Guidelines are useful because they reflect actual agency practice and approaches to merger review. By helping merging parties and their counsel more accurately evaluate the antitrust risks of a particular transaction and prepare the analyses needed to help the Agencies evaluate the competitive effects of a proposed transaction, the Proposed Guidelines are practical and informative.

- Fifth, the illustrative examples in the Proposed Guidelines are particularly valuable. They add to the transparency by describing the principles underlying the Proposed Guidelines and how those principles are likely to be applied.

II. Suggestions for Further Revisions

Our suggestions on how the Proposed Guidelines could be further revised or clarified fall into four categories: (a) whether market shares can be used to evaluate the degree of substitutability across products or firms, (b) whether the sufficiency of new entry as a source of competitive discipline normally requires evidence that the entrant has at least the scale and strength of one of the merging parties, (c) whether it is appropriate to analyze customers' responses to a small but significant and non-transitory increase in price ("SSNIP") based on an increase in value-added prices, and (d) whether cost savings and output-enhancing efficiencies are properly integrated into the competitive effects analysis rather than being treated separately in a subsequent step.

A. The Proposed Guidelines Should Caution Against Basing Diversion Ratios on Market Shares When the Strong Underlying Assumptions Required for Such an Approach Have Not Been Validated

The Proposed Guidelines properly focus on the diversion ratio as one of key variables in an analysis of the potential unilateral effects of a differentiated products merger (see Section 6.1). Diversion ratios are best estimated using data on actual consumer purchasing behavior. In the absence of such data, it may be possible to make inferences regarding diversion ratios from other types of information (e.g., consumer surveys and "win-loss" data), although care must be taken when attempting to make such inferences.

We strongly urge that the Proposed Guidelines explicitly make the point that it is not reliable to base diversion ratios on market shares when the assumptions of the market share approach have not been checked for consistency with the facts that describe the nature of consumer demand in the markets at issue. Statements such as "[m]arket shares of different products in narrowly defined markets are more likely to capture the relative competitive significance of these products, and often more accurately reflect competition between close substitutes"[1] will encourage the use of market shares to estimate diversion ratios without careful attention paid to whether the strong assumptions underlying this approach are valid in a given situation.

[1] Proposed Guidelines, Section 4.

The economic literature on econometric consumer demand estimation has concluded decisively that, in fact, market shares—and the associated logit model of consumer demand and its underlying "independence of irrelevant alternatives" (IIA) assumption—often imply unreasonable patterns of substitution between products.[2] Conclusions about unilateral effects drawn from unreasonable substitution patterns would themselves be unreliable. The following quotes illustrate the consensus in the economics literature.

- "An implication of the [logit model] is that all cross elasticities are equal…This property is not plausible in some choice situations…models satisfying [IIA] yield implausible conclusions when there are strong contrasts in the similarity of the alternatives…" -- Daniel McFadden, "Econometric Models of Probabilistic Choice," in *Structural Analysis of Discrete Data with Econometric Applications* (Charles F. Manski and Daniel McFadden, eds., 1981), pp. 222-223.)

- "[T]he logit model produces unreasonable substitution patterns." -- Steven Berry, "Estimating Discrete-Choice Models of Product Differentiation," *RAND Journal of Economics*, 25 (1994), p. 250.

- "[T]he logit demand model makes the [IIA] assumption, which implicitly restricts the demand structure by constraining the pattern of demand substitution between products…the logit demand system makes the assumption of *identical* cross-price elasticities for all products with respect to a given product." -- Jerry A. Hausman and Gregory K. Leonard, "Economic Analysis of Differentiated Products Mergers Using Real World Data," *George Mason Law Review*, 5 (1997), p. 322.

- "As a result of [the IIA] property, [logit] models necessarily predict that a change in the attributes of one alternative [e.g., price]…changes the probabilities of the other alternatives proportionately, such that the ratios of probabilities remain the same. This substitution pattern can be unrealistic in many settings… [I]dentification of the correct substitution pattern is an empirical issue, and the IIA property of logit…imposes a particular substitution pattern rather than allowing the data analysis to find and reflect whatever substitution pattern actually occurs." -- David Brownstone and Kenneth Train, "Forecasting New Product Penetration with Flexible Substitution Patterns," *Journal of Econometrics*, 89 (1999), p. 110.

- "[T]he logit model greatly restricts the own- and cross-price elasticities…" -- Aviv Nevo, "Mergers with Differentiated Products: The Case of the Ready-to-Eat Cereal Industry," *RAND Journal of Economics*, 31 (2000), p. 402.

[2] Carl Shapiro's November 9, 1995 speech titled "Mergers with Differentiated Products," which was given before the American Bar Association and International Bar Association while he served as the Deputy Assistant Attorney General for the Antitrust Division of the U.S. Department of Justice, points out correctly that using shares to estimate diversion ratios is appropriate only if "none of the brands in the market are especially 'close' to or 'distant' from each other." As well, in a 1996 article, Shapiro points out that using shares to estimate diversion ratios is appropriate only if all lost sales "are captured by other brands in the market, and if all brands are 'equally close' to each other" (see Carl Shapiro, "Mergers with Differentiated Products," *Antitrust Magazine*, Spring 1996, at page 25 and footnote 11).

- "The major analytical criticism of the logit model is that it embodies the restrictive assumption of the Independence of Irrelevant Alternatives...This is a highly restrictive assumption that clearly will not be valid in many instances" -- Daniel Hosken, Daniel O'Brian, David Scheffman, and Michael Vita, "Demand System Estimation and Its Application to Horizontal Merger Analysis", 2002 FTC Working Paper #246 (as published in *Econometrics: Legal, Practical, and Technical Issues,* American Bar Association Section of Antitrust Law (2004)).

- "It is known that the pure logit model…imposes strong restrictions o[n] the pattern of substitutability." -- Marc Ivaldi, Bruno Jullien, Patrick Rey, Paul Seabright, and Jean Tirole, "The Economics of Unilateral Effects," Interim Report for DG Competition, European Commission, November 2003.

- "[IIA] imposes significant restrictions on the substitution patterns between products" -- Gregory K. Leonard and J. Douglas Zona, "Simulation in Competitive Analysis," *Issues in Competition Law and Policy*, American Bar Association Section of Antitrust Law.

- "…the [logit] model imposes severe limitations on own- and cross-price elasticities…we recommend strongly against using [logit] models in situations where we must learn something about substitution patterns (e.g., for merger simulation)" (pp. 477-478) -- Peter Davis and Eliana Garcés, *Quantitative Techniques for Competition and Antitrust Analysis* (2010).

B. For Entry to be Sufficient, the Entrant Does Not Need to Have the Scale and Strength of One of the Merging Firms

Because entry is an important component of the competitive process, it makes sense for merger analysis to consider the potential for entry to maintain competitive conditions post-transaction. In general, entry refers to competition the merged firm would face from suppliers that do not currently compete in the relevant market, but would do so if the merged firm were to attempt to raise prices post-transaction. Section 9 of the Proposed Guidelines describes how the Agencies would consider entry that is induced by the merger. In many ways, there is little change from the 1992 Horizontal Merger Guidelines. Indeed, the Proposed Guidelines maintain the current "timely, likely, and sufficient" framework for evaluating whether entry in response to a post-merger price increase would occur.

However, on the issue of whether entry is likely to be sufficient to discipline supracompetitive pricing post-merger, the proposed analysis raises the standard in a way that is not economically justified. Specifically, the Proposed Guidelines state in Section 9.3 that "[t]he Agencies normally look for reliable evidence that entry will be sufficient to replicate at least the scale and strength of one of the merging firms." The potential problem is that requiring the scale of entry to be at least the size of one of the merging firms generally will be too stringent a standard because it is likely to require a demonstration that post-merger prices will fall below pre-merger levels.

From an economic perspective, the appropriate standard for the sufficiency of entry is not whether competition would replace the "scale…of one of the merging firms" but whether the scale of entry would be large enough to replace the output lost as a result of the posited post-merger output reduction. If entry can replace this posited reduction in output, then the scale of entry would be such that prices would remain at pre-merger levels post-transaction. If entry is required at the "scale…of one of the merging firms," the scale of entry would generally result in prices being pushed below pre-merger levels post-transaction.[3]

If the Agencies' competitive concern results from a belief that the parties will, post-merger, remove all of one of the merging firm's pre-merger output from the relevant market, a standard that entry must replace the "scale…of one of the merging firms" makes good sense. In our experience, however, this is rarely, if ever, the basis for the competitive concern. Competitive concerns raised by the Agencies typically are motivated by a concern about a posited post-merger output reduction that is a *portion* of the total output in the relevant market, which is, in turn, a portion, but less than all, of the output of one of the merging firms.

C. Performing a SSNIP Test Based on Value-Added Prices Focuses the Analysis Too Narrowly

The hypothetical monopolist test remains a key analytical construct for the analysis of market definition. One aspect of the test is the consideration of customer responses to a SSNIP. In Section 4.1.2, the Proposed Guidelines discuss the application of a SSNIP test in circumstances where there is no explicit price that is charged for the merging parties' value-added contribution. Example 8 suggests that, in a merger of two oil pipelines, a SSNIP would be based on the price for transporting oil from one end of the pipeline to another, rather than the price of the oil paid by the oil pipelines' customers at the delivery point. Example 9 is similar. It suggests that in a merger of two computer equipment installers that sell a bundle comprised of computers and computer installation services, the SSNIP would be based on the implicit installation fee only, rather than the price paid by customers for the installed computers.

In economic terms, this approach assumes that the product at issue is the value-added service provided by the merging parties, rather than the end product that is provided by the merging parties. In many cases, however, the value-added service is not actually purchased by customers on a standalone basis in the marketplace. Instead, the product that is actually being purchased is the end product, which, in Examples 8 and 9, is the oil delivered to customers at the end of the pipeline and the installed computer equipment, respectively. In both of the examples given, customers are not able to substitute to sellers of just the value-added service (i.e., the transportation of oil on the pipelines and the installation service only). Instead, customers make their choices from among the end products. Because the value-added service is packaged as part of the end product, the relevant product is that end product, which should be the focus of the analysis.

[3] Prices would remain at pre-merger levels if the entrant were to enter at the scale of one of the merging firms but then choose to produce a level output equal to the posited post-merger output reduction thereby choosing to operate with excess capacity. Even in this scenario, the competitive dynamics post-merger are "over-improved" relative to pre-merger conditions and thus the proposed standard for sufficiency of entry in the Proposed Guidelines is overly stringent.

In addition, focusing the analysis on the value-added service or product would present practical issues. One practical issue is that the approach will complicate any merger involving sellers of intermediate goods, distributors, and even retailers. For example, in an analysis of grocery stores, should the SSNIP test be based on the store's markup for, say, milk, rather than the price of milk? A second practical issue is that empirical data on the value-added product or service will be substantially more difficult to obtain or estimate. A third practical issue is that customers will have more knowledge about the end product and the price that they pay for that, as the end product is the product that is actually being purchased. In general, it is unlikely that interviews or surveys of customers on products or services they do not actually purchase would be informative or reliable.

D. Cost Savings and Output-Enhancing Efficiencies Should be Integrated into the Competitive Effects Analysis

The competitive effects discussion in the Proposed Guidelines should include an integrated assessment of cost efficiencies and output-enhancing activities that affect overall prices or output since these are as much a "competitive effect" of the merger as is any price effect due to reduced rivalry. Indeed, the Proposed Guidelines are already written in a way that makes consideration of efficiencies a natural part of a broader competitive effects analysis. For example, the efficiencies section (see Section 10) contemplates the potential for the merged entity to be a stronger competitor or to create a firm that can offer customers lower prices.

In the end, if the goal of merger review is to protect consumer welfare, a competitive effects analysis that leaves efficiencies for a separate review is flawed in that it implicitly gives lesser weight to the procompetitive role that the merged firm may play in the market post-transaction. It would also be useful for the Proposed Guidelines to discuss explicitly how the Agencies will analyze a transaction in which there is a tradeoff between reduced rivalry and an efficiency. This analysis may be particularly complex in a situation where the efficiency involves increased innovation or an improvement in product quality.

III. Conclusions

By emphasizing the Agencies' actual practice, empirical focus, and emphasis on competitive effects, the Proposed Guidelines are informative and useful. We appreciate the Agencies' efforts to improve transparency and to explain their approach to merger review. We also appreciate the Agencies' commitment to evaluating mergers based on sound legal and economic principles.

There are, however, four areas in which the Proposed Guidelines could be further revised or clarified. They relate to whether market shares can be used to evaluate the degree of substitutability across products or firms, whether the sufficiency of new entry normally requires evidence that the entrant has at least the scale and strength of one of the merging parties, whether it is appropriate to analyze customers' responses to a SSNIP based on an increase in value-added prices, and whether cost savings and output-enhancing efficiencies are properly integrated into the competitive effects analysis rather than being treated separately in a subsequent step.

We hope our observations are useful to you, and we thank you for the opportunity to submit this comment.