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PITFALLS IN MERGER ANALYSIS: THE DIRTY DOZEN

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INTRODUCTION

The modern Merger Guidelines, drafted early in the Reagan Administration and clarified in three revisions, represent a structured approach to evaluating the competitive effects of any horizontal merger that is used by the Department of Justice (DOJ) and the Federal Trade Commission (FTC).[1] The Guidelines articulate the analytical framework that the enforcement agencies apply to determine whether a merger is likely to substantially lessen competition. By focusing on the economic interests of the various actors in the marketplace, the Guidelines predict if a merger is likely to create or enhance market power or facilitate its exercise, and if so whether this anticompetitive effect would be offset by efficiencies. Information for the Guideline analysis is gathered through a detailed industry study, during which antitrust enforcers survey a wide range of industry participants, review internal documents of the merging parties and, on occasion, undertake statistical market analyses. While reasonable people can differ on the need for antitrust enforcement (i.e., can government regulators actually protect competition better than unfettered market rivalry), conceptually the Merger Guidelines represent a commitment to an economic basis for antitrust policy.[2]

Over the years, a number of implementation problems or pitfalls have been observed, creating the potential for inappropriate applications of the Guidelines. Some of these pitfalls can be linked to the limited nature of the changes in the Guidelines in response to improved understanding of competition, while others stem from the failure of the merger analyst to understand the spirit of economic analysis implicit in the Guidelines and their revisions.[3]

Various application problems with the Merger Guidelines are discussed in a series of twelve points with the earlier entries focusing on points that have been partially addressed by revisions in the Guidelines. Each point is developed in detail below, with a brief introduction followed by an exposition of the actual application pitfall. Federal court merger decisions are then used to illustrate each pitfall. The examples in which the judge (or judicial panel) artfully avoids the pitfall are all relatively easy to present, with quotes taken directly from the decisions. On the

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* United States Federal Trade Commission & KPMG Economic Consulting Services. The analyses and conclusions set forth in this paper are those of the authors and do not necessarily represent the views of the Federal Trade Commission, the individual Commissioners, any Commission Bureau or KPMG or any of its members. The list of pitfalls is based (with minor adjustments) on the authors' preface to *The Economic Analysis of Mergers* by Malcolm B. Coate and A. E. Rodriguez (1997). We would like to thank Jeffrey Fischer and Clyde Crews for helpful comments on earlier drafts of this paper. Email: <mcoate@ftc.gov> and <armandorodriguez@kpmg.com>.

1. *See* U.S. DEP'T OF JUSTICE, MERGER GUIDELINES NO. 1069, Antitrust Trade Regulation Report, (1982); U.S. DEP'T OF JUSTICE, MERGER GUIDELINES NO. 1169, Antitrust Trade Regulation Report, (1984); U.S. DEP'T OF JUSTICE AND FTC, HORIZONTAL MERGER GUIDELINES NO. 1559, Antitrust Trade Regulation Report (1992); U.S. DEP'T OF JUSTICE AND FTC, HORIZONTAL MERGER GUIDELINES NO. 1806, Antitrust Trade Regulation Report (1997) [hereinafter GUIDELINES].

2. *See generally* DOMINICK ARMENTANO, THE INDEPENDENT INSTITUTE, ANTITRUST AND MONOPOLY: ANATOMY OF A POLICY FAILURE (1982). The Competitive Enterprise Institute generally opposes antitrust enforcement. *See* Clyde W. Crews, *Antitrust Policy as Corporate Welfare*, CEI ANTITRUST REFORM PROJECT (July 1997).

3. For a more direct approach to the same question, see William Landes & Richard A. Posner, *Market Power in Antitrust Cases*, 94 HARV. L. REV. 937, 937-96 (1981).

other hand, examples in which the court falls for a pitfall are not necessarily available, because the relevant issues are not always carefully developed in the trial or the courts have steered clear of the particular pitfall.[4] Overall, this paper further clarifies the Guidelines to focus merger analysis on the key question of whether a merger is likely to substantially lessen competition.

Pitfall 1: Assuming High Concentration Causes Competitive Problems

As written, the Merger Guidelines state that a transaction which increases the Herfindahl index by 100 points to a level over 1800 is likely to create or enhance market power (i.e., the ability to maintain price above the competitive level for a significant period of time).[5] Earlier versions of the Guidelines even noted that a merger, which significantly increased concentration above 1800, would be challenged in all but extraordinary circumstances.[6] Although the current Guidelines observe that this market power presumption may be overcome by other factors, the actual wording suggests that concentration numbers alone raise serious issues.

It is important to understand that the market power presumption, associated with the critical Herfindahl index, lacks empirical support.[7] Instead, the Herfindahl cutoffs appear to be based on the case law from the 1960s and 1970s.[8] A review of more recent court cases suggests that, at best, an argument can be made for a relevant Herfindahl cutoff around 2400.[9] More importantly, while no decision overturns the anticompetitive presumption associated with a concentrated market, few decisions give real weight to the assumption that oligopolistic concentration warrants competitive concerns.

The antitrust agencies do not appear to be enforcing a merger policy defined by the critical Herfindahl index of 1800 (with a 100 point change).[10] A study of FTC cases has shown that enforcement action is unlikely until the Herfindahl exceeds

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4. In making a decision, courts are generally bound by the record of the trial. If the respondents fail to produce evidence sufficient to allow the judge to reject the pitfall, an erroneous decision is almost guaranteed. Thus, a number of the judicial "errors" may be the responsibility of the respondents.

5. The Herfindahl index is computed by squaring the share of each firm in the market and then summing the result to obtain an index that can range from almost 0 to 10,000. Mergers in relatively unconcentrated industries and those that generate very small increases in the Herfindahl index are not considered anticompetitive and, hence, are tolerated by the enforcement agencies. In effect, the Herfindahl analysis creates a "safe harbor" for some mergers, immune from antitrust investigation.

6. *See* Benjamin Klein, *Market Power in Antitrust: Economic Analysis After Kodak*, 3 SUP. CT. ECON. REV. 43, 71-85 (1993).

7. *See, e.g.*, Duncan Cameron & Mark Glick, *Market Share and Market Power in Merger and Monopolization Cases*, 17 MANAGERIAL & DECISION ECON. 193 (1996).

8. For more details on the specific cases, see Donald I. Baker & William Blumenthal, *The 1982 Guidelines and Preexisting Law*, 71 CAL. L. REV. 311 (1983). The Herfindahl index is closely related to the four-firm concentration ratio discussed in these cases. For example, an industry comprised of 5 firms, each with a 20 percent share, would have a Herfindahl of 2000; in contrast the four firm concentration ratio would be 80.

For either the four-firm concentration ratio or the Herfindahl index, the basic theory implies the higher the structural index (and the fewer the number of firms that compete in the market), the more likely collusive conduct is to occur. Thus, the concept is based on a very simple oligopoly theory in which the number of competitors affects the performance of the market.

9. *See* Malcolm B. Coate, *Economics, the Guidelines and the Evolution of Merger Policy*, 37 ANTITRUST BULL. 997, 1009-24 (1992).

10. From 1989 through almost the end of 1996, only three of 106 overlaps involved in 47 Department of Justice cases (in which data were available) involved a market with Herfindahls under 1800. *See* Testimony of Richard Gilbert before Public Service Commission of Wisconsin (Sept. 1996).

2400 and the change exceeds 500.[11] Of 67 high Herfindahl, high change cases, only 17 were closed after a more detailed review of the competitive concerns, while 50 ended in enforcement action. Thus, while very high Herfindahls remain associated with enforcement actions, the Guidelines' cutoffs are of little use.

The basic belief that market share generates competitive concerns is grounded in the case law. In fact, almost all merger litigation cases cite the Supreme Court's decision in *U.S. v. Philadelphia National Bank*,[12] where the Court ruled that concentration establishes a presumption of a competitive problem. In particular, the post-merger share of 30 percent, coupled with the 59 percent share of the two leading firms was thought to represent a threat to competition.[13] The Supreme Court clarified its position in *U.S. v. General Dynamics*,[14] suggesting that the presumption of an anticompetitive effect was rebuttable. For example, evidence suggesting the market shares of the merging parties significantly overstated their likely future competitive position was accepted as sufficient to rebut the presumption. During the 1980s, the weight given to concentration (i.e., the Herfindahl index) has declined as administrative, district, and appellate courts developed analyses for rebutting the concentration-based presumption.[15] To be sure, almost any merger decision declining to issue an order in a concentrated market could be used as an example of the courts avoiding this problem. Two recent decisions, one focusing on entry into movie theaters and the other clearly mandating a broad competitive analysis of a mining equipment market, merit special attention.

In *Syufy v. United States*,[16] the Ninth Circuit Court of Appeals focused on entry:

> If there are no significant barriers to entry, however, eliminating competition will not enable the survivors to reap a monopoly profit; any attempt to raise prices above the competitive level will lure into the market new competitors able and willing to offer their commercial goods or personal services for less.[17]

In *United States v. Baker Hughes*,[18] the importance of a full merger analysis was reinforced by the Appeals Court for the District of Columbia (including future Supreme Court Justices Thomas and Ginsburg). Judge Thomas wrote "[t]hat the government can establish a prima facie case through evidence on only one factor, market concentration, does not negate the breadth of the analysis."[19]

Thus, Judge Thomas would require a full competitive analysis that moves beyond concentration and addresses all the other factors that influence the likely competitive effect of a proposed transaction.

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11. *See* Malcolm B. Coate, *Merger Enforcement in the Reagan/Bush FTC*, *in* THE ECONOMICS OF THE ANTITRUST PROCESS 135-51 (1996).

12. 374 U.S. 321 (1963).

13. *See id.* at 364-65.

14. 415 U.S. 486, 508 (1974).

15. *See* Coate, *supra* note 9, at 1023-24.

16. 903 F.2d 659, 664 (9th Cir. 1990). While the bulk of the decision focused on Syufy's lack of monopsony power over movie distributors, the basic insight also applies to monopoly.

17. *Id.* at 664.

18. 908 F.2d 981 (D.C. Cir. 1990).

19. *Id.* at 984. Judge Thomas also noted the market share statistics were volatile and shifting, because the overall market was minuscule. The sale of one additional unit would shift share between two and five percent. *See id.* at 986.

Unfortunately, a few court decisions have accepted the proposition that concentration is likely to raise competitive concerns. In *Consolidated Gold Fields v. Anglo American Corp.*,[20] the Second Circuit held:

> A post acquisition Minorco would give Anglo and the Oppenheimer family control of 32.3 % of that market. That percentage is above the 30 % held by the Supreme Court to trigger a presumption of illegality in *Philadelphia National Bank*. It is certainly sufficient to satisfy the appellee's burden of showing the likelihood of success on the merits.[21]

In effect, this decision accepted the Guidelines' numbers as establishing a presumption of the merger's adverse impact on competition. While the respondent retained some ability to offer evidence to rebut the anticompetitive presumption associated with the Herfindahl of 1223 (with a change of 488), the structure of the decision came close to accepting an inappropriate prohibition against mergers in relatively concentrated markets.

Overall, it is important to remember that the basic principle of the Guidelines only proscribes mergers when the weight of the evidence suggests that the transaction is likely to substantially lessen competition. Herfindahls, standing alone, do not truly address this question. Thus, these statistics are only useful to create safe-harbors and exclude transactions from further analysis.

Pitfall 2: Accepting Simplistic Structural Analyses of Collusion

The analysis of the likelihood of post-merger collusion under the Merger Guidelines follows traditional oligopoly theory which explores the conditions necessary for firms to coordinate their actions and behave in a less than competitive manner.[22] The most recent version of the Guidelines suggests that the likelihood of collusion depends on: (1) the capability of a group of firms to reach an agreement on terms of coordination that are profitable to its members; and, (2) the ability of the group of firms to both detect deviations from such an agreement and punish any firm found to be violating the agreement.

Historically, analysts have evaluated long "laundry lists" of structural and behavioral factors linked to these questions,[23] while the evaluation of the likely competitive effect of a merger was significantly influenced by the level of concentration. More recently, simple game theory models of competition—which typically predict a relationship between price and the number of competitors—have been advanced as relevant for competition policy.[24] The Guidelines highlight a few

20. 871 F.2d 252 (2nd Cir. 1989) (subsequent history omitted).

21. *Id.* at 260.

22. For a discussion of theories of oligopoly, see Carl Shapiro, *Theories of Oligopoly Behavior*, *in* HANDBOOK OF INDUSTRIAL ORGANIZATION 330-414 (Richard Schmalensee & Robert Willig eds., 1989).

23. *See generally* RICHARD A. POSNER, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE (1976); ROBERT H. BORK, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF (1978).

24. One could argue whether the standard Cournot model represents a unilateral or collusive effect model. While the mathematical structure of the model is unilateral, the model could represent the coordination associated with tacit collusion. Moreover, the tacit collusion could occur at an earlier stage of the "game" in which all the firms agree to play Cournot. For a brief discussion of the model, see Robert Willig, *Merger Analysis, Industrial Organization Theory and the Merger Guidelines*, *in* BROOKINGS PAPERS ON ECONOMIC ACTIVITY (MICROECONOMICS) 281-312 (Martin N. Bailey and Clifford Winston eds., 1991).

structural factors such as the availability of market-related information, the historical pricing patterns, and the heterogeneity of the product as particularly important in oligopoly theory. Merger analysts, however, are not required to explain how a model of collusion would be applicable to the market before concluding that a merger is likely to substantially lessen competition.[25]

In recent years, experience has shown that detailed competitive analyses of concentrated industries generally suggest that markets are competitive for almost any level of concentration short of monopoly, especially when the products are differentiated.[26] While issues such as market information, pricing behavior and product heterogeneity remain relevant, their effects should be integrated into an overall theory of market performance. Given that market mechanisms evolve to preserve competition, the merger must adversely affect these mechanisms to create a competitive concern.

Competitive analysis of the likelihood of post-merger collusion should reveal how competition actually works in a market and then predict if the merger will have any effect on the dynamics of the industry. A taste of this approach appears in the Guidelines. The analysis examines whether the elimination of the only maverick firm[27] present in the competitive arena would allow the remaining firms to coordinate their activity.[28] Although not stated, the same analysis implies that a merger between two firms in a concentrated market will not affect competition if a maverick firm remains to discipline the market.

Other market mechanisms exist to preserve competition. For example, the threat of technical innovation may drive competition. A merger between the leading firm and a fringe firm with the newest and best technology could cement the position of the leading firm and allow for some type of collusive price leadership. On the other hand, a merger between two large competitors could have no effect on competition if innovative firms drove the competitive process.

Another example involves the power of big or sophisticated buyers. If the evidence suggests that large buyers maintain competition (through their ability to negotiate discount prices and then compete with the downstream firms), a merger would need to undercut this dynamic to lead to higher prices. A merger that aggregated most of the excess capacity in the hands of one supplier might reduce buyer power sufficiently to lead to an anticompetitive effect. Overall, the requirement for specific evidence on ease of collusion, and, thus, the probability of competitive harm, is likely to significantly reduce the scope of collusion-based merger enforcement.

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25. A Cournot model, in which each firm sets output assuming its rivals will hold their output fixed, could provide a theoretical foundation. Based on such a model, evidence suggesting the market is currently performing in a less than competitive manner (as predicted by the model) could be used to support the hypothesis that a merger further reducing the number of independent competitors would be anticompetitive.

26. *See* David T. Scheffman, *Ten Years of Merger Guidelines: A Retrospective, Critique and Prediction*, 8 REV. OF INDUS. ORG. 173 (1993).

27. A "maverick" firm is one with the incentive and ability to price independently of its rivals.

28. *See* GUIDELINES, *supra* note 1, at 21-22.

In a number of recent decisions, the courts have recognized that mergers in concentrated markets may not generate collusive outcomes. For example, in *United States v. Archer-Daniels-Midland*,[29] the court found:

> This court finds and concludes that price collusion among HFCS [high fructose corn syrup] suppliers would be very difficult to administer and would provide incentives to cheat... In sum, the defendants have made an adequate showing by their evidence of other factors sufficient to overcome the government's prima facie case based on statistical concentration....[30]

Likewise, courts have recognized buyer power as able to keep markets competitive. For example, in *United States v. Country Lake Foods, Inc.*,[31] the court noted that large buyers "declared that a substantial increase in milk prices would prompt them to aggressively negotiate a reduction or to seek a substitute or replacement supplier of fluid milk."[32]

Moreover, in *Federal Trade Commission v. R.R. Donnelley & Sons, Inc.*,[33] the court noted, "[h]ere the evidence demonstrates that even if these [printing] customers constituted a separate market, their own size and economic power and the other characteristics of the 'market' may make any anti-competitive consequences very unlikely."[34]

The "laundry list" approach to evaluating the likelihood of post-merger collusion can also be illustrated with court decisions. Of particular interest are the Federal Trade Commission's administrative decisions in *In re B.F. Goodrich*[35] and *In re Occidental Petroleum, Corp.*,[36] both evaluating competition in the Polyvinyl Chloride (PVC) market in the mid 1980s.[37] In the *B.F. Goodrich* case, the Commission concluded that the market would remain competitive after a merger that raised the Herfindahl, based on practical production, from roughly 967 to 1079.[38] Subsequently, in *Occidental*, the Commission ordered a divestiture for a merger that raised the Herfindahl, based on operating capacity, from 1147 to 1305.[39] The Commission claimed that new information suggested that the PVC market was characterized by product homogeneity instead of heterogeneity, cost similarity instead of dissimilarity (due to changes in product mix), and relatively price inelastic demand instead of price elastic demand. Thus, the overall weight of the structural evidence had shifted to suggest that the second merger would cause a competitive problem. However, Commissioner Owen's dissent highlighted the

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29. 781 F. Supp. 1400 (S.D. Iowa 1991).
30. *Id.* at 1423.
31. 754 F. Supp. 669 (D. Minn. 1990).
32. *Id.* at 673.
33. 1990-2 Trade Cas. (CCH) ¶ 69,239 (D.D.C. August 27, 1990).
34. *Id.* at ¶ 64,855.
35. 110 F.T.C. 207 (1988).
36. 115 F.T.C. 1010 (1992).
37. The *Occidental* matter settled prior to review by an appellate court so no further judicial analysis is available. It is also interesting to note that the *Occidental* case was pre-dated by the Commission's unsuccessful preliminary injunction action to enjoin Occidental's initial acquisition of two PVC plants. *See* Fed. Trade Comm'n v. Occidental Petroleum Corp., 1986-1 Trade Cas. (CCH) ¶ 67,071, (D.D.C. Apr. 29,1986).
38. *See B. F. Goodrich*, 110 F.T.C. at 311.
39. *See Occidental*, 115 F.T.C. at 1244-45.

relative heterogeneity of PVC, the remaining cost differentials and the differences in price elasticity among the various end-use segments.[40] Therefore, a reasonable case could be made that the conditions that led to a competitive market evaluation in *B.F. Goodrich* had not changed significantly a few years later in *Occidental*. Without a clear theory to explain how a collusive outcome would evolve following a merger in the PVC market, it would appear that the initial *B.F. Goodrich* opinion was appropriate and the bulk of the Occidental transaction should have been allowed.

In summary, a collusion theory should be able to explain how a merger will generate competitive concerns before the Guidelines infer an oligopoly problem from the change in market structure. Economic theories of collusion, whether ad-hoc or based on game theory analysis, are not relevant unless their implications for current market performance can be validated with actual evidence.

Pitfall 3: Setting Too High a Standard for Efficiencies

The Guidelines recognize an efficiency defense for an otherwise anticompetitive merger, but suggest that relevant efficiencies be demonstrated by the available evidence and be specific to the transaction under review.[41] Many analysts have advocated a strong evidentiary standard that has proved almost impossible to meet.[42] In the past, the Guidelines mandated that efficiency evidence had to be clear and convincing, with no alternative mechanism available to achieve the cost savings in a less anticompetitive manner.[43] Such a strict policy significantly downgraded or even effectively repealed the efficiency defense.

Recent developments in the world economy highlight the importance of general merger efficiencies and bring into question whether efficiencies should be held to such a high standard.[44] The 1997 revision of the efficiency section in the Merger Guidelines attempts to address these concerns.[45] Efficiencies now need only be substantiated such that the Agency can verify, by reasonable means, their likelihood and magnitude. Moreover, efficiencies are considered relevant, unless practical alternative mechanisms to accomplish efficiencies can be identified.

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40. *See id.* at 1283-89.

41. Examples of efficiencies that could be demonstrated by the available evidence include economies of scale from more efficient production runs, transportation cost savings from changes in location of production and economies of scope from better integration of manufacturing assets. Examples of merger-specific efficiencies include scale economies that represent the best way of loading a plant, transportation cost savings due to a specific reallocation of production schedules and economies of scope that exploit particular types of reorganizations only available to the merger partners.

42. For a discussion of the various suggestions, see Donald G. McFetridge, *The Efficiencies Defense in Merger Cases*, *in* THE ECONOMICS OF THE ANTITRUST PROCESS 89-116 (Coate and Kleit eds., 1996). On the other hand, evidence on enforcement decisions suggests that efficiency considerations have affected FTC decisions *See* Coate, *supra* note 11.

43. *See* GUIDELINES, *supra* note 1, at 30.

44. *See* Robert Pitofsky, *Proposals for Revised United States Merger Enforcement in the Global Economy*, 81 GEO. L.J.195, 218-22 (1992).

45. The revised Guidelines note that the government will consider efficiencies in other markets that are inextricably linked to the merger, as well as savings that only affect prices in the long run. For a discussion of the evolution in the Guidelines' efficiency standard from 1982-1992, see Steve Stockum, *The Efficiencies Defense for Horizontal Mergers: What is the Government's Standard*, 61 A.B.A. ANTITRUST L.J. 829 (1993).

It is still unclear whether the same standard of proof is used for both efficiencies and anticompetitive effects. Merger analysis, by its prospective nature, requires predictions of likely economic effects. In general, a relaxed probability (i.e., more likely than not) standard is used for these predictions, and this standard of proof may fall short of the "reasonable" and "practical" rules advanced for efficiencies. A requirement for "reasonable" substantiation of likely adverse competitive effects or a mandate for "practical" evidence on barriers to entry could imply that few if any mergers raise serious competitive concerns. To further level the playing field, efficiencies should be evaluated with the same probability standard currently used to predict adverse competitive effects.

A number of courts have been receptive of efficiency claims. In *Country Lake Foods*,[46] the court accepted "the testimony of the persons involved in the milk processing industry that some efficiencies are achieved by an increase in volume. . . ."[47] A similar conclusion was made in the preliminary injunction hearing on *Occidental*. "The proposed acquisition will result in several significant procompetitive efficiencies that will increase PVC manufacturing capacity, thereby resulting in higher quality, lower cost products for consumers."[48]

Other courts have applied a tougher standard to efficiency claims. The Eleventh Circuit rejected hospital efficiencies in *Federal Trade Commission v. University Health*.[49] "Here, however, the appellees have failed to introduce sufficient evidence to demonstrate that their transaction would create significant efficiencies in the relevant market."[50]

A review of the relevant district court decision suggests that the judge understood the limitations of the efficiency evidence and explicitly accepted only a few cost savings. The court, however, expected significant savings in a probabilistic sense, in much the same way another court would expect anticompetitive effects from a merger in a concentrated market. Thus, by requiring a high level of proof, the *University Health* ruling appears to set a significant burden of proof for an efficiencies defense which does not exist for anticompetitive effects.

On balance, it seems difficult to justify a different standard of proof for merger-related efficiencies and anticompetitive effects. An analyst would be well advised to apply the same basic probability decision rule to efficiency and anticompetitive effects.

Pitfall 4: Focusing on the Responses of Inframarginal Entities

The Merger Guidelines base their criteria for analysis of market definition, competitive effects, and entry on the hypothetical responses of various customers and firms. For example, a product market is rejected if a sufficient number of customers would switch to substitutes, a cartel fails if a sufficient number of firms increase output, and entry is likely if new firms can profitably enter the market in a timely manner. Of course, the relevant information must be obtained from

46. 754 F. Supp. 669 (D. Minn. 1990).
47. *Id.* at 680.
48. *Occidental*, 1990-2 Trade cases at ¶ 67,071.
49. 938 F.2d 1206 (11th Cir. 1991).
50. *Id.* at 1222.

marginal firms that are likely to change their actions in response to market opportunities. General surveys of industry participants may gather information from inframarginal (not at the margin for change) firms and, thus, be of little use in merger analysis.

The basic principles of the competitive analysis mandate that the relevant information be gathered from the marginal players in the market (that is from firms that are relatively close to changing a market decision in response to variation in prices and terms of trade). For example, the fact that a majority of customers will not switch is not generally relevant as long as a sufficient number of customers will switch to another product to defeat a price increase.[51] Likewise, even if some firms would follow a collusive price increase or refrain from entry, a price increase could still be defeated by procompetitive actions from the marginal firms.

In general, it is difficult to identify marginal customers or firms without surveying all the significant parties. Thus, a costly time-consuming investigation is required, with the analysis focusing on the marginal players once they have been identified. In other cases, it may be possible to identify the marginal customers or firms and focus the investigation. For example, some customers may have relatively low switching costs or certain entrants may be able to exploit economies of scope. Once the marginal entities are identified, the Guidelines' analysis turns on their responses to the hypothetical questions. Information that inframarginal market participants will not respond to the hypotheticals is irrelevant.

In some cases, the evidence suggests that no individual customer, competitor, or potential entrant is likely to undertake a procompetitive action, but aggregate effects are still possible. For example, if a number of customers are relatively unlikely to switch to suppliers outside the market (or firms relatively unlikely to enter the market) it is necessary to conclude that the probabilities are not independent before rejecting the hypothesis of a competitive response.[52] If the probabilities of procompetitive action are independent, then a procompetitive effect can be inferred as long as a large number of players simultaneously evaluate the competitive action, although few firms will actually undertake the action.[53]

A number of court decisions have explicitly rejected analysis based on plaintiff surveys of customers or firms unlikely to respond to noncompetitive behavior.[54] For example, in *United States v. Calmar*,[55] the court rejected the evidence presented by the DOJ:

51. For an analysis that focuses on the ability of marginal customers to defeat a price increase, see C. Harris Barry & Joseph J. Simons, *Focusing Market Definition: How much Substitution is Necessary*, 12 RES. L. & ECON. 207-26 (1989).

52. Although the Guidelines do not directly address the likelihood of actual entry, evidence showing specific firms will enter the market strongly supports ease of entry.

53. Actions are independent if the choice of one party is not related to the choices of the other parties. For example, sequential rolls of dice are independent events. Note the probability a single die will come up a six is 16.7 percent, however, the probability that at least one six will come up in six rolls is 66.5 percent.

54. No clear example of a court highlighting the likelihood of an action based on evidence of a number of marginal firms each maintaining a small, but independent probability of undertaking a procompetitive action could be found.

55. 612 F. Supp. 1298 (D.N.J. 1985).

> The testimony reflected in part the inertia of any manufacturer to change its methods or sources of supply. It did not reflect the choice which would be made by new users of dispensing devices entering the market for the first time, an event which must occur with great frequency.[56]

Likewise, in *Donnelley*,[57] the court dismissed the implications of testimony of a few printing customers saying, "isolated segments with isolated customers do not make for a separate product market."[58]

The court made a similar observation in *United States v. Mercy Health Services*:[59]

> The government's case in general makes the mistake of relying too heavily on past conditions in the hospital industry and discounts the effects of outreach efforts, the emphasis that regional hospitals place on expanding their service areas and the willingness of managed care enrollees to make changes in their health care for financial reasons.[60]

Unfortunately, courts have not always been willing to focus on marginal consumers or firms. In *Bon-Ton Stores, Inc. v. May Deptartment Stores, Co.*,[61] the court stated: "I am persuaded, however, by the testimony of the plaintiffs' witnesses who stated that there is a 'core customer' of department stores who tends to shop for women's clothing mostly, if not exclusively, at traditional department stores."[62]

The court did not appreciate the fact that this core shopper would have little effect on the market. Department stores are forced to set prices to capture marginal customers who consider department stores, specialty shops, and upscale mail order as substitutes, as well as customers who consider an even broader range of retailers in making their purchase decisions.

In conclusion, a merger analyst must focus on the limited number of customers or firms likely to undertake a procompetitive action in response to a price increase and determine if that group is large enough to affect the marketplace. Naive surveys of the hypothetical reactions of market participants offer little insight into the evaluation of a merger's competitive effects.

Pitfall 5: Misapplying the Five Percent Market Definition Price Test

The Merger Guidelines base market definition on an analysis of hypothetical customer responses to a significant and nontransitory price increase on the part of all the firms offering products in the potential market.[63] Although a five percent price increase is suggested as the usual standard, it would be incorrect to accept this level in all cases. For example, in some situations, market rigidities suggest that

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56. *Id.* at 1304.
57. *F.T.C. v. R.R. Donnelley & Sons, Corp.*, 1990-2 Trade Cas. (CCH) ¶ 69,239 (D.D.C. Aug. 27, 1990).
58. *Id.* at ¶ 69,854.
59. 902 F. Supp. 968 (N.D. Iowa 1995).
60. *Id.* at 978.
61. 881 F. Supp. 860 (W.D.N.Y. 1994).
62. *Id.* at 872.
63. *See* GUIDELINES, *supra* note 1, at 4-10.

customers will not switch among suppliers, much less products, in response to a five percent price increase test.

To properly apply the Guidelines' analysis, the hypothetical must be validated. In particular, it is necessary to be sure that customers will switch to other products in the same potential market in response to a price increase. If customers appear unwilling to switch to a rival's product, then the magnitude of the price increase or structure of the question would have to be changed to obtain a meaningful market definition result. An adjustment may be needed for either (or both) of the product and geographic market definition questions.

The Guidelines' hypothetical must be adjusted to overcome any relevant switching costs that preclude a firm's customers from switching to alternative products already in the market in order to generate useful information. For example, customers may make long term commitments to a particular input that can only be changed when their products are reformulated. In this case, the hypothetical can focus on the reformulation decision when customers can consider numerous other products. Alternatively, a five percent price increase may be insufficient to induce the customer to incur switching costs (possibly because the input is a small share of total cost). Thus, either a higher price increase would be relevant in the Guidelines' hypothetical, or the basic question would have to be reformulated to address some type of non-price competition that affects the customer's competitive choices.

The misapplication of the five percent standard was highlighted in a recent DOJ case. In *United States v. Engelhard, Corp.*,[64] the court rejected the Guideline analysis associated with firms not switching for a five percent price increase, because the evidence showed that many customers would not switch suppliers. As the court held:

> When the cost of reformulation is also taken into consideration, the Plaintiff's 5%-10% test betrays itself. The record is replete with examples of customers who purchased attapulgite exclusively from Engelhard or exclusively from Floridin. In many of these cases, simply changing GQA suppliers would require product testing and potential reformulation.[65]

Given that this pitfall is only relevant to a narrow situation (i.e., misusing the Guidelines' hypothetical to construct an artificially small market), no good examples could be found in which a court incorrectly accepted such a market. At best, one could argue that some of the hospital merger decisions concluded that customers would not travel to distant alternatives without clearly showing that customers would switch among the local hospitals on the basis of price.[66] If market rigidities suggested no switching would occur, the market definition test would need to be generalized. For example, the focus of the question could be changed to address quality-related competitive considerations.

The Merger Guidelines use switching costs and other market rigidities to allow the analyst to define antitrust markets for merger analysis. However, it is important

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64. 1997-1 Trade Case ¶ 71,773 (M.D. Ga. 1997).
65. *Id.* at 1468.
66. *See, e.g.*, F.T.C. v. Univ. Health, 938 F.2d 1206, 1224 (11th Cir. 1991).

to calibrate this methodology to ensure that the analysis does not create artificially narrow markets.

Pitfall 6: Downplaying Substitution in Market Definition

The Guidelines' price hypothetical defines a technique to evaluate the impact of demand-side competition on market definition.[67] If all the possible substitution relevant to a hypothetical price increase is not incorporated in the analysis, the procedure could generate inappropriately narrow markets. This problem is a particular concern if customers have numerous alternatives to their current consumption choices.

A proper application of the Merger Guidelines starts by listing the potential classes of substitutes for the product of the merger partners from the least to most likely.[68] Then, the hypothetical is applied sequentially, starting with the most likely alternative and if necessary, moving on to other classes of substitutes. The Guidelines' algorithm accepts a demand side market definition if a "small, but significant and nontransitory price increase" would not be defeated by customers switching away from the narrow market.[69] On the other hand, if the price increase would appear unprofitable, the bounds of the potential market are increased to incorporate the alternative and the procedure is repeated.[70] In applying the hypothetical, it is vital to consider all substitution in response to a price increase, not just substitution to the closest alternative. Under some circumstances, the closest alternative will capture basically all the lost sales, while in other cases, sales may be lost to many different alternatives.[71]

In each hypothetical analysis, it is important to ensure that the lack of substitution is due to demand characteristics of the product in question, not any endogenous limit on capacity. The Guidelines' hypothetical implicitly assumes all interested consumers have the option to purchase the substitute product at current market terms and conditions. For example, in a naive analysis, Canada would almost always be excluded from United States geographic markets, because the Canadian firms would usually lack the excess capacity to defeat a price increase. However, a hypothetical analysis would include Canada (by assuming an infinite supply elasticity) when customers express a willingness to substitute to Canadian firms and exclude Canada when customers generally reject Canadian products. It is even possible to claim customers should benefit from any scale-related advantages generated by a hypothetical increase in demand caused by the

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67. *See* GUIDELINES, *supra* note 1, at 6. "Specifically, the Agency will begin with product produced or sold by each merging firm and ask what would happen if a hypothetical monopolist of that product imposed at least a 'small but significant and nontransitory' increase in price." *Id.*

68. *See* Jerry A. Hausman et al., *A Proposed Method of Analyzing Competition Among Differentiated Products*, 60 A.B.A. ANTITRUST L.J. 889, 891 (1992). In some cases, it may be necessary to determine if the products of the merger partners actually compete by considering a market defined by one product and testing whether a product class including the merger partner's product constrains price.

69. *See* GUIDELINES, *supra* note 1, at 7. The Agency generally will consider the relevant product market to be the smallest group of products that satisfy this test.

70. *See id.* "This process successive iterations [of the price increase test] will continue until a group of products is identified. . . ." *Id.*

71. This pitfall could be characterized by a "hyphen test" implying product market definitions requiring numerous hyphens are unlikely to represent relevant markets due to the various sources of potential substitution.

anticompetitive price increase. Thus, if Canadian firms could lower prices in response to the increase in demand, this factor should also be considered.

Market definition often plays a crucial role in merger analysis, so plaintiffs have been known to advocate artificially narrow markets.[72] For example, in *Pennsylvania v. Russell Stover*, the State of Pennsylvania alleged a "branded-gift-boxed-chocolates-sold-nationally-through-chains-drugstores-and-mass-merchants" market.[73] Without actually defining the appropriate market, the court reported: "The Plaintiff's difficulty in delineating the relevant product market is understandable in light of the wide variety of product substitutes and customer outlets for the purchase of those products."[74] The overall discussion seemed to suggest that the court understood that the total number of customer alternatives doomed any attempt to construct a narrow market.

In other cases, the analysis has not been as well developed. In *Tasty Baking Co. v. Ralston Purina*, the judge advanced a somewhat narrow "individually-wrapped-single-serving-snack-cake-or-pie-usually-delivered-directly-to-retailers" market.[75] After evaluating a number of specific alternatives, the court wrote: "The foregoing illustrates the variety of arguments, each essentially uncontradicted by defendants, that support finding plaintiffs likely to prove that snack cakes and pies are the relevant product market."[76]

Although the evidence may have suggested that any one alternative could not defeat a snack cake and pie price increase, the question remains open whether the substitution to all the possible alternatives would render the price increase unprofitable. If so, a broader market would be required for the merger analysis.

In summary, it is necessary to consider all the demand-side substitutes, including the possible switching to products inside and outside of the alternative market under review in a Guidelines' analysis. A sequential consideration of market alternatives is likely to generate artificially narrow markets, unless consumer decision making is also sequential.

Pitfall 7: Failing to Match the Product with the Geographic Market

The Merger Guidelines sequentially address the relevant market issues, first focusing on product market and then on geographic market. As long as the procedure is carefully followed, the Guidelines' construct generates reasonable results. However, it is possible to ignore the limitations implicit in the product market when evaluating the geographic market. This could leave the analyst with a fatal mismatch between the relevant market definitions.

Consistency in market definition requires a careful investigation. The analysis needs to carry over the exact product market definition to the hypothetical geographic market analysis and then apply the hypothetical price analysis. On occasion this can be easier said than done, because the initial evaluation of the product and geographic market evaluation may have occurred simultaneously. If the

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72. No example was found for the capacity-limitation variant of the pitfall.
73. 1993-1 Trade Case (CCH) ¶ 70,090 (E.D. Pa. 1993).
74. *Id.* at ¶ 70,091.
75. 653 F. Supp. 1250, 1257-58 (E.D. Pa. 1987).
76. *Id.* at 1260.

implicit product market used in the geographic market analysis was not accurate, it would be necessary to reconsider the particular geographic market.

A more sophisticated concern involves the need to consider all the sales lost to a price increase in evaluating a potential geographic market definition. If a particular product market barely passes the profitability test, a broad geographic market could be required to ensure the price increase would not be defeated by imports. On the other hand, a product market that generates little defection to substitute products may support a smaller geographic market.

Correctly linking the definition of product and geographic market has caused complications in some court cases. In *United States v. Long Island Medical Center*,[77] the DOJ argued for a relatively localized anchor hospital market basically limited to Queens and Nassau Counties. In rejecting the argument, the court found a general acute-care inpatient hospital services product market and two geographic markets; the first one (for primary and secondary care) was found in Queens and Nassau Counties. The other geographic market (for tertiary care) added Manhattan and western Suffolk County to the core market of Queens and Nassau.[78] The court then highlighted its understanding of the need to match product and geographic market. "Once the existence of two geographic markets is established, the relevant product market also must be revised."[79]

This revision led the analysis to focus only on primary and secondary care, excluding the tertiary care that could mandate some type of anchor hospital product market, because that relevant market did not raise competitive concerns.[80]

Other court cases did not link the two aspects of the market together as successfully. In *Consolidated Gold Fields v. Anglo American Corp.*,[81] the district court identified the market as mined gold in the free world. The court's justification for the geographic market was: "communist sales react precisely opposite to increases in gold prices, leading to the logical conclusion that those [communist] sources should not be included in any definition of the market."[82]

While this observed relationship was no doubt true, it was not relevant for the mined gold market. During the Cold War, increases in the price of gold were often linked to instability in the free world, while decreases indicated the expectation of a more stable future. Thus, the masters of the "evil empire" had no reason to attempt to stabilize the free world by selling gold and forcing the price back down. On the

77. 983 F. Supp. 121, 125 (E.D.N.Y. 1997).

78. *See id.* The structure of the anchor argument seemed based on the need to offer an anchor hospital for a network of community hospitals to be acceptable to managed care providers. The analysis supporting this distinction between anchor and community hospitals appeared based on customer testimony, with little description of the key services required for anchor status. Equating anchor status with tertiary care would suggest a relatively broad geographic market.

79. *Id.* at 142.

80. The analysis in *United States v. Mercy Health Services*, 902 F. Supp. 968 (N.D. Iowa 1995), may have confused the product and geographic market analysis, this time generating a broad market. Evidence that customers traveled to distant hospitals, or did not travel from rural hospitals to Dubuque, Iowa, may have been relevant only to specific medical conditions, with complex tertiary procedures evaluated in a broad market, and simple conditions analyzed in a local market. A set of indications for which the Dubuque area represented the relevant geographic market may also have existed. Without such detailed evidence, the court could only find the broad market.

81. 698 F. Supp. 487, 503 (S.D.N.Y. 1988).

82. *Id.* at 493.

other hand, if a mined gold cartel were to restrict quantity in an attempt to force the price up (a fact situation that never occurred), the opportunity for short run profit could be overwhelming, given the lack of offsetting political pressures.

Market definition analysis must match the correct relevant product market to the appropriate relevant geographic market in order to define a useful construct for competitive analysis. A mismatch between the product and geographic market may lead to an enforcement mistake.

Pitfall 8: Basing a Unilateral Theory Only On Market Share

The Guidelines present an anticompetitive "unilateral" theory in which the consummation of a merger would allow the firm, acting alone (i.e., unilaterally), to raise the price of one or more of its products.[83] Assuming the products are differentiated and therefore the dominant firm model is not relevant, the Guidelines highlight a competitive concern if the post-merger share of the acquiring firm exceeds 35 percent.[84] Empirical simulation models exist that generally predict a price increase from any horizontal merger in a differentiated product market, with the concern tending to increase with the combined market share of the merging parties.[85] Overall, discussions of unilateral effects theories have created the misimpression that the Merger Guidelines have imposed almost a *per se* prohibition against mergers that create a firm with a share of over 35 percent.[86]

In reality, anticompetitive effects are not a foregone conclusion in a differentiated product market. The type of product differentiation clearly matters, with differences in the market structure pointing to specific theories of anticompetitive effect. Thus, the structure of competition in the differentiated market must be evaluated to determine the likelihood that a specific merger would cause a unilateral anticompetitive effect.

A number of different models for product differentiation exist and the analyst must apply the appropriate model to obtain a reasonable prediction of the likely

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83. For an overview of unilateral theories, see Drew Fudenberg & Jean Tirole, *Noncooperative Game Theory for Industrial Organization: An Introduction and Overview*, *in* HANDBOOK OF INDUSTRIAL ORGANIZATION 261-327 (Richard Schmalensee & Robert Willig eds., 1989).

84. *See* GUIDELINES, *supra* note 1, at 24. Products are considered differentiated if material differences exist among the products offered for sale in the market. For example, products can be offered for sale at different physical locations, products can offer different attributes to consumers or products can differ with respect to quality. Products that are not differentiated are considered homogeneous, in effect almost perfect substitutes for consumers. The dominant firm model represents a unilateral effects theory for a homogeneous product, because the dominant firm can set price, taking the expected responses of the competitive fringe as given. *See* Dennis W. Corlton & Jeffrey M. Perlott, MODERN INDUSTRIAL ECONOMICS 180 (1990).

85. *See* Gregory J. Werden & Luke Froeb, *The Effects of Mergers in Differentiated Products Industries: Logit Demand and Merger Policy*, 10 J.L. ECON. & ORG. 407 (1994). The logit model defines a particular demand structure in which the various differentiated products are substitutes for at least some consumers. A merger between two firms with a symmetric distribution of market share generates more concern than a merger between a large and small firm, holding the combined share of the firms constant.

86. Although the Guidelines qualify this inference, no clear analytical technique is presented with which to implement the qualification. For a discussion that questions the relevance of the Guideline's 35 percent share standard, see William Blumenthal, *Thirty-one Merger Policy Questions Still Lingering After the 1992 Guidelines*, 38 ANTITRUST BULL. 513 (1993). More recent discussion of the unilateral effects theories can be found in Christopher Vellturo, *Evaluating Mergers with Differentiated Products*, 11 ANTITRUST 16 (1997), and Jonathan B. Baker, *Unilateral Competitive Effects Theories in Merger Analysis*, 11 ANTITRUST 21 (1997).

competitive effect of a merger.[87] The models generally differ with respect to how consumers are assumed to choose among the various differentiated products in response to a price increase on the consumer's initial product choice. For example, if the differentiated products tend to serve specific classes of customers, market share is not really relevant.[88] Instead, the specific attributes of particular products are important, with a merger between the only two substantial firms that serve a specific set of customers potentially causing concern. A standard Guideline analysis would then have to be undertaken to determine if other firms could reposition their product offerings to replace the lost competition.[89] Another type of product differentiation structure results in a random distribution of customers and hence product choices.[90] In this case, it is possible for share to be relevant, however, it is important to determine how competitive the various alternatives really are. If customers could switch to a number of other products at relatively low cost, the potential for anticompetitive pricing is strictly limited. Likewise, if other firms can introduce differentiated products to replace competition lost in a merger, any attempt to raise price may prove unprofitable.[91]

Abstracting from the dominant firm model, few court cases have addressed a unilateral effects model. The DOJ's challenge to Gillette's acquisition of Parker Pen represents one example.[92] The competitive concern was focused on premium fountain pens, a product area in which both the merging partners held significant positions. In rejecting the preliminary injunction, the *United States v. Gillette* court held:

> [D]efendant's evidence (as well as much of the record of the plaintiff) demonstrates that there is great competition between premium fountain pens and other modes of writing. Therefore, even though some customers would be captive to price increases in the premium fountain pen industry, the significant competition in the premium writing instrument market renders premium fountain pen price increases unprofitable.[93]

In effect, the court found that customers would be willing to switch to other products in the broad market and defeat the price increase.

Unilateral effects have not been used successfully in a merger challenge. Of course, the entire approach is similar to the discredited submarket analysis of the

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87. *See* Hausman et al., *supra* note 68, at 889-90.

88. *See* James A. Keyte, *Market Definitions and Differentiated Products*, 7 ANTITRUST 19 (1993).

89. It would be important to note that a competitor could introduce a new brand to compete in the effected niche and need not give up its existing customers.

90. *See* Werden & Froeb, *supra* note 85, at 40.

91. *See* GUIDELINES, *supra* note 1, at 24. A third approach to product differentiation would abstract from the focus on variety and highlight the implications of differentiation for product quality. While it is possible that quality differentiation will give rise to a continuous spectrum of quality offerings (and firms would have only a few close competitors) it is also possible that quality differentiation will lead to a couple of specific quality levels dominating the market. For example, branded products may or may not compete with generic substitutes, although each brand could be a good substitute for the other brands. Thus, a branded product could be effectively homogeneous (for marginal consumers) with other branded offerings. Unilateral effects are then limited to dominant firm behavior and thus are only of interest when the market share approaches the monopoly level.

92. *See* United States v. Gillette, 828 F. Supp. 78 (D.D.C. 1993).

93. *Id.* at 85.

1960s.[94] Instead of applying the Guidelines to find an adverse competitive effect in a segment of the market, a court could conclude that the products in which the merging firms are alleged to have unilateral market power comprise a submarket and then apply standard merger analysis. Although the concept of a submarket is still found in many legal opinions, the decisions are often crafted as finding a market or submarket. As the court noted in *Community Publishers v. Donrey*:[95]

> But the emerging consensus of antitrust scholars and case law seems to be that the term 'submarket' is unnecessary. Whether you call it a submarket or a broad product market, it is still the relevant market for antitrust purposes and must be marked by reasonable interchangeability and cross-elasticity of demand.[96]

Thus, while the concept of a submarket may remain in the antitrust literature, its meaning appears linked to that of an antitrust market. Use of the term "submarket" to establish a niche market in which a unilateral effects story could be based only on concentration is not appropriate.

Although a fully-developed unilateral effects analysis can define an appropriate anticompetitive theory, the application of the analysis must be customized to the type of differentiation relevant to the market. This implies that the competitive evaluation of a merger must go well beyond market share and fully develop information on the potential competitive responses to the unilateral effect of concern.

Pitfall 9: Requiring Evidence on Actual Entry

The Merger Guidelines base entry analysis on a hypothetical study of investment opportunities.[97] However, the analysis first determines if the new entry would be timely.[98] Although the importance of scale economies and sunk costs are emphasized, the Guidelines' approach can easily evolve into a survey of expected market decisions.[99] Given that the surveyed firms are not actively studying entry, the firms are unable to appropriately respond to hypothetical questions concerning the likelihood of their entry. A lack of interest in entry could erroneously be taken as supporting the hypothesis that entry is unlikely in response to an anticompetitive price increase.[100]

This response problem is the specific issue the Guideline structure was designed to avoid. Instead of asking for intentions, the Guidelines focus on relevant

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94. For example, POSNER, *supra* note 23, at 129, observes that the submarket concept "deprive[s] any market-share statistics of their economic significance" by excluding good substitutes on both consumption and production from the analysis, because other products in the submarket are better substitutes.

95. 1995-1 Trade Cas. (CCH) ¶ 71,049 (W.D. Ark. June 30, 1995).

96. *Id.* at n.9.

97. *See* GUIDELINES, *supra* note 1, at 26.

98. *See id.*

99. *See* Scheffman, *supra* note 26. Of course, if firms reported they would enter the market, this evidence would strongly suggest that entry is likely in response to a noncompetitive price increase. For example, in *F.T.C. v. Promodes*, 1989-2 Trade Cas. (CCH) ¶ 68,688 (N.D. Ga. Apr. 14, 1989), the court dismissed an FTC challenge of a grocery store merger because of evidence on actual entry.

100. *See generally* WILLIAM J. BAUMOL ET AL., CONTESTABLE MARKETS AND THE THEORY OF INDUSTRY STRUCTURE (1982); Richard Gilbert, *Mobility Barriers and the Value of Incumbency*, *in* HANDBOOK OF INDUSTRIAL ORGANIZATION 475-535 (Richard Schmalensee & Robert Willig eds., 1989).

information and then deduce the answer on ease of entry from the weight of the evidence.[101] In other words, the Guidelines seek to infer the answer to the question of whether a firm "could profitably" enter from factual responses of actual and potential market participants.[102]

The Guidelines define a sophisticated model of entry which incorporates data on both market structure and expected competitor behavior into a qualitative profitability algorithm.[103] Information on sunk costs and minimum viable scale are crucial to the Guideline analysis, along with data to determine if the entrant could profit from entry at minimum viable scale.[104] The first stage of the entry analysis must identify sunk costs to show the market is not contestable (since contestable markets have no sunk costs, entry must be considered likely in response to any opportunity).[105] For markets with sunk costs, the analysis then focuses on the minimum viable scale using data on the size of the existing firms and technological requirements.[106] Next, additional information on growth and other potential sales opportunities are collected to complete the analysis. Under current Guidelines, entry is assumed profitable if the new firm could enter with an efficient plant and quickly capture the market share necessary to maintain the operation at minimum viable scale.[107] The share analysis would start with an assumption of a five percent base share and then add a portion of the available growth in sales, the business potentially available from any large buyer, and the likely accommodation from existing firms.[108] The Guidelines are unclear on the time horizon that should be used for the share analysis, but either a few years or a product introduction schedule that matches the historical facts in the industry would seem reasonable. If the entrant could load its efficient-scale plant, entry could profitably occur and anticompetitive pricing would be unlikely. The actual entry intentions of potential entrants do not enter the analysis. As long as the entry is profitable, it is assumed that some firm will enter.[109]

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101. *See* GUIDELINES, *supra* note 1, at 27.

102. *See id.* As applied to entry, the terms "could" and "would" have caused an immense amount of confusion. "Could" is often taken to represent a physical possibility, while "would" is sometimes interpreted to reflect an actual decision in entry (i.e., the pitfall). An economic use of the term "would" should revolve around the profitability of the entry decision. Thus the term "could profitably" could be used interchangeably with "would" or "would likely" in entry analysis.

103. *See* GUIDELINES, *supra* note 1, at 25-30.

104. For a more detailed discussion of entry, see Malcolm B. Coate & James A. Langenfeld, *Entry Under the Merger Guidelines, 1982-1992*, 38 ANTITRUST BULL. 557 (1993). The Guidelines' term "sunk costs" is defined as investment that cannot be recovered through the deployment of the assets outside the market and "minimum viable scale" is the smallest scale at which average costs equal the pre-merger price.

105. *See* GUIDELINES, *supra* note 1, at 28-29.

106. *See id.*

107. *See id.*

108. If the evidence suggests that the incumbent firms would adjust their output to allow an entrant to capture additional share, this output restriction is described as accommodation. *See* GUIDELINES, *supra* note 1, at 29. For example, if the incumbents face constant returns to scale, they may find it profitable to reduce production to allow the entrant into the market, while at the same time maintaining the competitive price.

109. As noted in pitfall 4, entry is likely even if the probability of entry for every single potential entrant is small, as long as a number of entrants exist and the probabilities of entry are independent. The Guideline focus on likelihood of entry tends to rule out the possibility that the entry probabilities are independent (i.e., entry is unlikely because it is unprofitable).

Entry analysis has played a crucial role in a number of court decisions.[110] While the cases generally predate the 1992 revision of the Guidelines, their analysis recognized the importance of studying hypothetical rather than actual entry. In *United States v. Waste Management*,[111] the court observed that "[t]he fact that such entry has not happened more frequently reflects only the existence of competitive entry-forestalling prices."[112]

Similarly, in *Baker Hughes*,[113] the court rejected the need to show actual entry or identify expected entrants, stating that "[a] defendant cannot realistically be expected to prove that new competitors will 'quickly' or 'effectively' enter unless it produces evidence regarding specific competitors and their plans."[114]

Other decisions illustrate the pitfall of demanding evidence on actual entry. For example, in *Tasty Baking*,[115] the court noted, "[d]efendants presented no significant evidence that existing producers will enter these relevant markets as new competitors within the foreseeable future, so I find plaintiffs likely to prove that the existing market shares provide a meaningful basis on which to evaluate the future significance of the acquisition."[116]

A similar finding was made in *California v. American Stores*.[117] "According to the defendants, supermarkets in California can be opened rapidly and without obstacles in response to any opportunity to earn a good level of return. Yet, defendants have produced no evidence of such an occurrence."[118]

By highlighting the lack of actual entry, both these cases failed to evaluate the entry response to an anticompetitive price increase. Moreover, the cases did not specify the barriers to entry that support their inference that entry is unlikely to defeat a price increase. Without any structural evidence, the entry intentions of potential competitors are of little value.

As antitrust accepts more sophisticated models of entry, it is important to focus on the correct question of what the entrant could profitably do rather than the hypothetical responses of readily identifiable firms.[119] By applying the Guideline

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110. For an interesting commentary, see Jonathan B. Baker, *The Problem With* Baker Hughes *and* Syufy: *On the Role on Entry in Merger Analysis*, 65 ANTITRUST L.J. 353 (1997). Baker considers these court decisions to focus on the uncommitted nature of entry and thus they are not relevant to the Guideline's evaluation of committed entry. He notes that attempts to discuss the courts' analysis in terms of committed entry tend to suggest a misplaced focus on "could enter" rather than "would enter". An alternative explanation would involve the DOJ failing to show barriers to entry in either case, thus mandating a finding of easy entry. Guidelines-based analysis of likelihood of entry may lead to a barrier to entry, but the government must address the issue through the construct of the case law.

111. 743 F.2d 976 (2d Cir. 1984).

112. *Id.* at 983.

113. 908 F.2d 981 (D.C. Cir. 1990).

114. *Id.* at 987.

115. 653 F. Supp. 1250 (E.D. Pa. 1987).

116. *Id.* at 1264.

117. 697 F. Supp 1125 (C.D. Cal. 1988), *rev'd* 872 F.2d 837 (9th Cir. 1989), *rev'd in part*, 110 S. Ct. 1853 (1990), *vacated in part* April 18, 1991.

118. *Id.* at 1132.

119. Of course, an analysis could still be based on barriers to entry. For example, in almost all hospital mergers, the courts note that state certificate of need (CON) regulation either precludes or delays entry such that no new hospitals can enter the market in the relevant time period. However, it is the CON, not the expected actions of potential competitors, that is determinative.

techniques, the analyst can obtain a reasonable answer to the hypothetical entry question.

Pitfall 10: Substituting Complaints or Hot Documents for Analysis

The Guidelines define a construct for predicting the competitive effect of a merger.[120] However, it is possible that an analyst will substitute uncritical acceptance of customer complaints or "hot documents" for evidence of likely anticompetitive effects.[121] While interview or documentary evidence is useful in confirming the Guideline's conclusions of likely anticompetitive effects, a myopic focus on interviews and documentary evidence would dramatically devalue merger analysis.

All of the Guidelines' questions are designed to elicit information on the marketplace that is then integrated into a model of the merger's expected competitive effect. Information from customers or documents can be very useful in answering these questions. However, the overall concern of the customer or the conclusion of the "hot document" is not in and of itself enough.

Customer complaints may really address tangential market effects of the merger such as post-merger strategies that disadvantage the affected customer. Alternatively, the customer may also be a competitor of the merging firms at another vertical level and thus be interested in blocking the transaction. Hot documents may also be misleading since they could be written by junior analysts or based on mistaken industry assumptions. Documents written by investment bankers are even more suspect, because they are designed to sell the business in question. Overall, the implications of interview or documentary evidence must be studied and reconciled with the results of the standard Guideline analysis. Some disagreements are likely to be settled by revising the conclusions on key Guideline factors, while other disagreements can only be resolved by rejecting the interview or documentary evidence as unreliable.

Customer complaints have often played an important role in litigation, although some courts have identified problems associated with such a narrow focus. For example, in *F.T.C. v. Butterworth Health*,[122] the court addressed evidence suggesting that a group of customers would be adversely affected by the merger, "[t]he thrust of the FTC's case in this regard is artificially and misleadingly narrow. It focuses on and unduly emphasizes adverse consequences the merger might have for a very limited segment of hospital care customers; recipients of primary and acute care inpatient hospital services purchased by managed care organizations at discounted rates."[123]

On the other hand, a number of courts have accepted documents as conclusive on issues such as market definition when more analysis might have generated different findings. For example, in *Tasty-Baking*,[124] the court highlighted relevant

120. *See* GUIDELINES, *supra* note 1, at 18-25.

121. A "hot document" refers to an incriminating internal document uncovered in an investigation. For example, a memo predicting a post-merger price increase would be considered a hot document.

122. 946 F. Supp. 1285 (W.D. Mich. 1996), *aff'd*, 121 F.3d 708 (6th Cir. 1997).

123. *Id.* at 1300 n.5.

124. 653 F. Supp. 1250 (E.D. Pa. 1987).

documents, "[m]ost significantly, however, it {the snack cake and pie market} reflects positions taken in documents prepared by Ralston, Continental, Borden's Drake division before this litigation began."[125]

A similar finding was made in *American Stores*.[126] "In fact, the State has presented evidence that defendant's own marketing documents focus on supermarket shoppers and competition from other supermarkets and do not evaluate convenience stores, gasoline service stations etc. as competitors."[127]

Neither of these decisions addressed the subtle differences between marketing and antitrust issues. The marketing-based business plans are almost always directed at the closest competitors whose day-to-day or month-to-month actions affect the viability of the business. Antitrust is also interested in more distant competitors that could affect the profitability of a price increase. For example, boxed baked goods and candy likely affect the demand for snack cake, while convenience stores clearly have some effect on supermarkets. Evaluating the magnitude of these effects requires detailed analysis beyond the level of a short run planning document.

Overall, it is important to remember that the Guidelines set up a structure for gathering, as well as evaluating, broad-based information on the competitive effects of mergers. Merger analysis should not degenerate into a customer opinion poll or a simple search for a "hot document."

Pitfall 11: Considering Guidelines Issues Sequentially

The Merger Guidelines are designed to predict whether a price increase is profitable.[128] The analysis must consider the lost sales to other goods outside the product market, to manufacturers from outside the geographic market, to fringe expansion within the market, to independent pricing by direct competitors and to entry or expansion that requires expenditures of sunk costs.[129] However, a naive reading of the Guidelines could result in the sequential application of the relevant questions, with the analyst only attempting to obtain information sufficient to address each issue and then move on to the next question.

This type of analysis would be wrong, because the answer to whether a small, but significant and nontransitory price increase would be profitable depends on all the relevant Guideline factors.[130] Hence, the Guidelines' price question mandates a final analysis which considers all the relevant issues in a simultaneous manner.

The overall evaluation should be relatively easy. Based on the initial market definition analysis, the lost sales from a noncompetitive price increase could be estimated. Next, the level of sales lost to fringe expansion and competition from firms in the market could be identified. Third, the level of new entry expected in the two-year horizon could be predicted. While it is obvious that timely and likely large-scale entry would usually defeat a price increase, it is possible that small

125. *Id.* at 1258.

126. 697 F. Supp. 1125 (C.D. Cal. 1988).

127. *Id.* at 1129.

128. *See* GUIDELINES, *supra* note 1, at 3.

129. *See id.*

130. *See* Robert D. Brogan, *Simultaneity and the Merger Guidelines*, 21 J. REPRINTS FOR ANTITRUST L.& ECON. 423 (1992).

entrants could defeat a price increase in combination with all the other factors. If reasonable estimates of these effects can be made, it is possible to determine if an anticompetitive price increase is profitable. Efficiencies should also be addressed in the final analysis.

While most court decisions rejecting merger injunctions generally highlighted one (or more) individual reasons for concluding a merger was not likely to affect competition, the simultaneous nature of the analysis has been addressed in at least one matter. In *F.T.C. v. Echlin Manufacturing Co.*,[131] the FTC reported: "In the instant case, several important factors diminish the significance of market shares as a surrogate measure of the merging firms' market power."[132]

These factors included rebuilt products affecting the demand for new products (a market consideration), the limitation on the firm's power to control price or quality due to the use of resellers (a competitive effects issue), and the ease of entry.

A reasonable argument can be made that a simultaneous analysis of the competitive issues should have been undertaken in *F.T.C. v. Staples*.[133] Although the judge found a narrow market, a likely unilateral effect, difficulties associated with entry and limited efficiencies; a complete analysis would also have to show that an adverse effect on price was probable. For example, enhanced competition from mail order and traditional outlets, customer switching to narrow line office-supply discounters, the remaining rivalry between Staples and Office Max, the anticipated entries by U.S. Office Products and WalMart and the likelihood of at least some efficiencies exert competitive pressures. All or some of these factors could support an inference of continued competition when their competitive effects are considered together.

The simultaneous analysis of all merger related issues is crucial to determining if a merger is likely to substantially lessen competition. While it is possible that a particular case will turn on only one issue, other cases can only be correctly evaluated by weighing all the effects together.

Pitfall 12: Naively Balancing Efficiencies and Anticompetitive Effects

The current Guidelines advance a consumer welfare standard for merger policy, but are vague on exactly how to integrate efficiencies into the analysis.[134] Some policy makers have suggested a simple price test, with the evidence required to show that prices will fall before an otherwise anticompetitive merger should be allowed.[135] This requires significant efficiencies to reduce a firm's costs so much that the firm's optimal price actually falls, even though the merger increases the

131. 105 F.T.C. 410 (1985).

132. *Id.* at 476-77.

133. 970 F. Supp. 1066 (D.D.C. 1997). The version of the Pitfalls printed in Malcolm B. Coate and A. E. Rodriguez, *The Economic Analysis of Mergers* (1997), was used in the cross examination of the Plaintiff's expert Rick Warren-Boulton during the Staples trial.

134. *See* GUIDELINES, *supra* note 1, at 30.

135. *See* Robert H. Lande, *The Rise and (Coming) Fall of Efficiency as the Ruler of Antitrust*, 3 ANTITRUST BULL. 429 (1988).

level of market power.[136] Such an approach minimizes the consideration of efficiencies and is unlikely to be appropriate. Others, such as Williamson, advocate a more classical cost-benefit (or social welfare) test in which a firm's resource savings are balanced against the deadweight losses of monopoly.[137]

Under almost any policy goal, efficiencies deserve more consideration than offered by the price test. For example, consumers are likely to obtain a share of the industry profits through their ownership of stock in the monopoly and therefore a narrow focus on price does not even maximize total consumer welfare. Moreover, a share of firms' efficiency savings are taxed away by the government, implicitly resulting in lower taxes for consumers. Finally, the dynamic and likelihood issues are not addressed by the simple price test. Efficiencies often generate benefits in the long run, while anticompetitive effects are often transitory. Likewise, even in a static analysis, the probability of efficiencies may be greater than the likelihood of an anticompetitive effect. Overall, some generalization of the naive price test appears required for an optimal merger policy.

A number of alternatives should be considered to give efficiencies more weight in the overall evaluation. First, a standard other than the price test could be considered without adopting the alternative social welfare goal.[138] In fact, any weighted average of the price standard and the social welfare standard could be used, with merger policy becoming more permissive as one moves towards maximizing social welfare. Second, a probability-based approach to the efficiency analysis can be used. As one clear motivation of mergers, efficiencies are often closely analyzed by firms before the merger is proposed. It is often reasonable to conclude that efficiencies are more likely to occur than anticompetitive effects. Thus, the real tradeoff is between a lower price if the transaction generated efficiencies and no anticompetitive effect, and a higher price for those cases in which both efficiencies and anticompetitive effects occurred. A policy that incorporates these two effects would allow some potentially anticompetitive mergers to occur, due to the clear efficiencies in situations in which the anticompetitive effects did not occur. A third approach would focus on dynamic

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136. *See* Alan A. Fisher & Robert H. Lande, *Efficiency Considerations in Merger Enforcement*, 71 CAL. L. REV. 1580 (1983). This approach adds another parameter, the pass through, which must be estimated to complete the analysis. If the efficiencies are imitated by other firms, pass through rates would approach 100 percent.

The pass-through debate raises an interesting problem with the degree of market power held by the firm. If the firm competes in a relatively competitive market, little pass-through would be observed, while if the firm has significant market power a large share of any savings would be passed through. For a detailed discussion of this point, see Paul L. Yde & Michael G. Vita, *Merger Efficiencies: Reconsidering the Passing-on Requirement*, 64 ANTITRUST L.J. 735 (1996).

137. *See* Oliver Williamson, *Economies as an Antitrust Defense: The Welfare Tradeoffs*, 58 AM. ECON. REV. 18 (1968). The resource savings are defined by the per-unit cost savings multiplied by the number of units on which the savings are achieved. The deadweight loss of monopoly is defined by the loss in consumer surplus suffered by those customers willing to buy the product at competitive prices, but not interested in purchasing the product at the monopoly price. If costs are constant, it is approximated by one-half the monopolistic price increase multiplied by the number of customers lost to the monopoly price increase.

138. Roberts and Salop present a model that considers a weighted average of the consumer welfare and social welfare standard for different assumptions on the ease of imitation by other firms. Although the calculations are based on artificial equilibriums, the results highlight the sensitivity of the required efficiencies to the assumptions of the model. *See* Gary Roberts & Steven Salop, *Efficiencies in Dynamic Merger Analysis*, *in* WORLD COMPETITION LAW AND ECONOMICS (1996).

efficiencies related to future competition. In this case, the tradeoff would be between potentially higher prices in the current period and lower prices in future periods. As long as competitive conditions suggest that the anticompetitive effect would be short-lived, the dynamic efficiencies are likely to dominate a tradeoff. All of these changes could be implemented without abandoning the price test concept.

The courts have given little attention to the efficiency standard, possibly in response to the Supreme Court's 1967 *United States v. Procter and Gamble*[139] decision which concludes "possible efficiencies cannot be used as a defense to illegality in section 7 merger cases."[140] However, a controversial trend exists in hospital cases, with the acceptance of the argument that non-profits will pass on all the cost savings to consumers.[141] In *United States v. Carilion Health System*,[142] the court found that "Defendants' board of directors could be expected to help insure that savings realized from the affiliation will be passed on to consumers."[143]

Likewise, in *Butterworth Health*,[144] the court wrote, "[t]his [the efficiencies] is, by any account, a substantial amount, and represents cost savings that would in view of the defendants' nonprofit status and the Community Commitment invariably be passed on to consumers."[145]

While these decisions do not accept the social welfare standard, they do define a relatively permissive price standard in which price effects are directly offset by efficiencies.

In contrast, the court in *University Health*[146] reports, "[t]hus, evidence that a proposed acquisition would create significant efficiencies benefiting consumers is useful in evaluating the ultimate issue—the acquisition's overall effect on competition."[147]

The ruling seems to adopt a narrow consumer welfare standard, with the merging firms required to produce evidence on the efficiencies, their merger-specificness and the likelihood that savings will be passed on to final consumers. As such, the ruling limits the relevance of efficiencies in merger analysis and biases enforcement against potentially efficient mergers.

In conclusion, a number of approaches to balancing efficiencies against anticompetitive effects exist and are all superior to the narrow consumer welfare focus on the post-merger price. Even if the final analysis does not apply a complete cost-benefit trade-off, more detailed consideration of efficiencies is appropriate.

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139. 386 U.S. 568 (1967).

140. *Id.* at 579.

141. The non-profit ownership of many community hospitals creates an additional complication for antitrust enforcers. The traditional approach assumes that the hospital is "captured" by stakeholders (i.e., physicians or administrators) with monopoly profits used to benefit special interests. An alternative approach would model non-profit ownership as a consumer cooperative and therefore even a monopolist hospital would price at the competitive level. An analysis directly balancing efficiencies and anticompetitive effects represents a compromise between these two approaches.

142. 707 F. Supp. 840 (W.D. Vir. 1989).

143. *Id.* at 846.

144. 946 F. Supp. 1285, 1301 (W.D. Mich. 1996).

145. *Id.*

146. 938 F.2d 1206, 1222 (11th Cir. 1991).

147. *Id.*

CONCLUSION

This paper presents and illustrates a dozen pitfalls in the application of the Merger Guidelines. As the court cases highlight, these problems can be found in recent merger analyses. However, the pitfalls can generally be avoided by careful adherence to the spirit of the Merger Guidelines. As long as the analytical focus remains on the proposed merger's economic effects, competition policy should generate reasonably efficient results.

The enforcement agencies have made progress in addressing the first three pitfalls during the 15 years after the 1982 publication of the modern Merger Guidelines. The Guidelines have been revised to downplay the role of concentration in merger analysis and it is an "open" secret that the agencies apply Herfindahl screens based on numbers more like 1800-3000 than 1000-1800. Moreover, the 1992 revision of the Guidelines increased the detail necessary to base a merger challenge on a theory of collusion. Finally, the 1997 revision of the Guidelines' efficiency section made it easier to advance efficiency arguments in merger analysis. Of course, some room for improvement still exists in each of these areas.

Pitfalls 4-11 generally require more careful analysis rather than any specific change in the Guidelines. Although mistakes could occur in any particular case, no systematic change in the Guidelines is needed. If a marginal improvement is desired, the simultaneous analysis required to determine if a merger is likely to enhance market power or facilitate its exercise could be explicitly instead of implicitly recognized in the introduction and discussed in detail in a new conclusion for the Guidelines.

Finally, the Guidelines could be generalized to explore Pitfall 12, the need to balance efficiency and anticompetitive effects. Here the argument is more for reform than clarification, since the current Guidelines seem to focus on a narrow measure of consumer welfare. Even if the full social welfare standard is not adopted, some intermediate compromise would prove superior to a naive focus on price.