International Competition Network
Mergers Working Group
Analytical Framework Sub-Group
Annex for Issue Paper for 2002 Naples Conference
Description of Analytical Framework under United States Merger Law[1]

I. Institutional Background

Mergers under United States law are investigated and evaluated primarily by the two federal antitrust enforcement agencies, the Antitrust Division of the Department of Justice and the Federal Trade Commission.

The United States has a "substantial lessening of competition" test. Mergers are prohibited if their effect may be "substantially to lessen competition, or to tend to create a monopoly " "in any line of commerce . . . in any section of the country." Clayton Act §7, 15 U.S.C. § 18. Mergers may also be challenged under the Sherman Act, 15 U.S.C. § 1 or the Federal Trade Commission Act, 15 U.S.C.§ 45; the analytical framework would be the same.

The two agencies analyze mergers using the analytical framework contained in the HORIZONTAL MERGER GUIDELINES issued by the agencies.[2] The GUIDELINES reflect the analytical framework of analysis of horizontal mergers under United States merger law.[3] The ensuing discussion primarily uses the language of the GUIDELINES to explain the substantive test employed in United States merger law.

The vast majority (95-98%) of mergers notified to the agencies are cleared within the first 30 days of review. Of those not cleared in the first 30 days, many are cleared following additional investigation. In some cases, the merging firms restructure the transaction to resolve competitive concerns or abandon the transaction to avoid a challenge. A few transactions are challenged and litigated.[4]

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[1]This Annex, summarizing relevant features of United States merger law, is prepared in the format specified by the Analytical Framework Subgroup.

[2]U.S. Department of Justice and Federal Trade Commission, HORIZONTAL MERGER GUIDELINES (1992, revised 1997), hereinafter, "GUIDELINES."

[3]Non-horizontal mergers are analyzed under the framework of the NON-HORIZONTAL MERGER GUIDELINES, originally issued as Section 4 of the "U.S. Department of Justice Merger Guidelines," June 14, 1984 (All other sections of the 1984 Merger Guidelines have been superseded by the "HORIZONTAL MERGER GUIDELINES" issued April 2, 1992, and revised April 8, 1997, by the U.S. Department of Justice and the Federal Trade Commission.) There are also guidelines for joint ventures and similar arrangements. Federal Trade Commission and U.S. Department of Justice, ANTITRUST GUIDELINES FOR COLLABORATIONS AMONG COMPETITORS (2000).

[4]Federal Trade Commission and U.S. Department of Justice, Annual Report to Congress, Fiscal Year 2000, pursuant to Subsection (j) of Section 7A of the Clayton Act, Hart-Scott-Rodino Antitrust Improvements Act of 1976 (2001).

If the agency responsible for reviewing a merger determines that it is appropriate to challenge it and seek to block it before it occurs, the agency must ask a federal court of general jurisdiction preliminarily to prevent the merger. For a final decision on the merits of a merger, the Department of Justice proceeding is a trial before the court; the Federal Trade Commission proceeding is an administrative trial within the agency; in either case, the decision may be appealed to the federal appellate courts.

If the agency decides to challenge a merger, it knows that it may have to go to court to convince a federal judge, by a preponderance of the evidence after an evidentiary hearing, that the merger may substantially lessen competition. This means that the agency knows that its witnesses will be exposed to cross-examination before an independent fact-finder. Knowing that the agency may have to prove its case to an independent fact-finder disciplines its decisionmaking.

II. Substantive Test

What is the goal of the merger control law, i.e., what is the harm to be prevented or problem to be cured?

The goal of the antitrust laws is to protect competition, not competitors. *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*, 429 U.S. 477, 488 (1977). The unifying theme of the Guidelines is that mergers should not be permitted to create or enhance market power or to facilitate its exercise.

Market power to a seller is the ability profitably to maintain prices above competitive levels for a significant period of time. In some circumstances, a sole seller (a "monopolist") of a product with no good substitutes can maintain a selling price that is above the level that would prevail if the market were competitive. Similarly, in some circumstances, where only a few firms account for most of the sales of a product, those firms can exercise market power, perhaps even approximating the performance of a monopolist, by either explicitly or implicitly coordinating their actions. Circumstances also may permit a single firm, not a monopolist, to exercise market power through unilateral or non-coordinated conduct -- conduct the success of which does not rely on the concurrence of other firms in the market or on coordinated responses by those firms. In any case, the result of the exercise of market power is a transfer of wealth from buyers to sellers or a misallocation of resources.

Market power also encompasses the ability of a single buyer (a "monopsonist"), a coordinating group of buyers, or a single buyer, not a monopsonist, to depress the price paid for a product to a level that is below the competitive price and thereby depress output. The exercise of market power by buyers ("monopsony power") has adverse effects comparable to those associated with the exercise of market power by sellers. In order to assess potential monopsony concerns, the Agency[5] will apply an analytical framework analogous to the framework of these Guidelines.

[5]As explained in the Guidelines, the term "Agency" is used therein and in this paper to refer to the Department of Justice and the Federal Trade Commission.

While challenging competitively harmful mergers, the Agency seeks to avoid unnecessary interference with the larger universe of mergers that are either competitively beneficial or neutral. In implementing this objective, however, the Guidelines reflect the congressional intent that merger enforcement should interdict competitive problems in their incipiency.

How (if at all) does the substantive test take account of:
a) effect on competition in relevant markets?

The agencies assess whether the merger, in light of market concentration and other factors that characterize the market, raises concern about potential adverse competitive effects. A merger may diminish competition by enabling the firms selling in the relevant market more likely, more successfully, or more completely to engage in coordinated interaction that harms consumers. Lessening of competition through coordinated interaction is discussed in section 2.1 of the GUIDELINES and in III.B.2.a *below.* A merger may diminish competition even if it does not lead to increased likelihood of successful coordinated interaction, because merging firms may find it profitable to alter their behavior unilaterally following the merger by elevating price and suppressing output. Lessening of competition through unilateral effects is discussed in section 2.2 of the GUIDELINES and in II.B.2.b *below.*

How (if at all) does the substantive test take account of:
b) public interest issues (e.g. employment, national champions)?

The United States antitrust agencies do not employ a "public interest" test in analyzing mergers. "The unifying theme of the Guidelines is that mergers should not be permitted to create or enhance market power or to facilitate its exercise. . . . While challenging competitively harmful mergers, the Agenc[ies] seek[] to avoid unnecessary interference with the larger universe of mergers that are either competitively beneficial or neutral." GUIDELINES 0.1

For many years, a United States regulatory agency for the airline industry applied a public interest test in the specific case of mergers in the airline industry. After 40 years of experience with that test, it was generally not viewed as useful or necessary, and the separate test was eliminated when the airline industry was deregulated. Since 1989, mergers in the industry have been governed by the ordinary application of the antitrust laws. *See* Civil Aeronautics Board Sunset Act, 49 U.S.C. § 1551(a)(7). Certain regulatory agencies still employ a public interest test in reviewing mergers under other non-antitrust statutes.

How (if at all) does the substantive test take account of:

c) efficiency gains?

First, the law takes account of efficiency gains by employing a standard under which mergers do not need formal approval of the government -- rather, all mergers are lawful unless they violate the statute. Thus, "[w]hile challenging competitively harmful mergers, the Agenc[ies] seek[] to avoid unnecessary interference with the larger universe of mergers that are either competitively beneficial or neutral." GUIDELINES 0.1

Second, as the Guidelines describe, the agencies undertake a specific analysis of efficiencies issues. In 1997, the Department of justice and the Federal Trade Commission revised a portion of their joint Horizontal Merger Guidelines to clarify how the agencies analyze claims that a merger is likely to lower costs, improve product quality, or otherwise achieve efficiencies. The revisions make clear that the agencies will take efficiencies into account as part of their analysis of the competitive effects of the merger. The revisions also provide explicit guidance on issues such as: how the agencies determine if the claimed efficiencies are properly attributable to the merger; what the parties must do to substantiate their efficiencies claims; the circumstances, as a practical matter, in which the agencies are likely to find efficiencies claims persuasive; and the limited circumstances under which consideration will be given to out-of-market efficiencies and to in-market efficiencies that are not expected to have short-term, direct effects on prices. Efficiencies are discussed in section 4 of the GUIDELINES and in III.B.4, *below.*

How (if at all) does the substantive test take account of:
d) benefits to consumers?

In the United States, the agencies take an economically driven, consumer welfare approach to merger review whereby the agencies evaluate the likely net effect of a transaction on price and output. The analytical approach to merger review recognizes consumer benefits by pursuing merger enforcement only against mergers likely to be harmful, while otherwise relying on market forces to operate (including through lawful mergers) to benefit consumers. "While challenging competitively harmful mergers, the Agenc[ies] seek[] to avoid unnecessary interference with the larger universe of mergers that are either competitively beneficial or neutral." GUIDELINES 0.1

How (if at all) does the substantive test take account of:

e) failing firms?

The agencies assess whether, but for the merger, either party to the transaction would be likely to fail, causing its assets to exit the market. The theory is that "[a] merger is not likely to create or enhance market power or to facilitate its exercise, if imminent failure of one of the merging firms would cause the assets of that firm to exit the relevant market. In such circumstances, post-merger performance in the relevant market may be no worse than market performance had the merger been blocked and the assets left the market." GUIDELINES 5.0 *See* III.B.5, *below*, for a description of the analytical steps in applying this principle.

Are there any quantitative measures for determining an outcome (e.g. HHI, or market share level that implies dominance or absence of dominance)?

After market participants have been identified and market shares measured, then market concentration is assessed. Market concentration is a function of the number of firms in a market and their respective market shares. As an aid to the interpretation of market data, the Agency will use the Herfindahl-Hirschman Index ("HHI") of market concentration. The HHI is calculated by summing the squares of the individual market shares of all the participants. Unlike the four-firm concentration ratio, the HHI reflects both the distribution of the market shares of the top four firms and the composition of the market outside the four firms. It also gives proportionately greater weight to the market shares of the larger firms, in accord with their relative importance in competitive interactions.

The Agency divides the spectrum of market concentration as measured by the HHI into three regions that can be broadly characterized as unconcentrated (HHI below 1000), moderately concentrated (HHI between 1000 and 1800), and highly concentrated (HHI above 1800). Although the resulting regions provide a useful framework for merger analysis, the numerical divisions suggest greater precision than is possible with the available economic tools and information. Other things being equal, cases falling just above and just below a threshold present comparable competitive issues.

General Standards. In evaluating horizontal mergers, the Agency will consider both the post-merger market concentration and the increase in concentration resulting from the merger. Market concentration is a useful indicator of the likely potential competitive effect of a merger. The general standards for horizontal mergers are as follows:

a) Post-Merger HHI Below 1000. The Agency regards markets in this region to be unconcentrated. Mergers resulting in unconcentrated markets are unlikely to have adverse competitive effects and ordinarily require no further analysis.

b) Post-Merger HHI Between 1000 and 1800. The Agency regards markets in this region to be moderately concentrated. Mergers producing an increase in the HHI of less than 100 points in moderately concentrated markets post-merger are unlikely to have adverse competitive consequences and ordinarily require no further analysis. Mergers producing an increase in the HHI of more than 100 points in moderately concentrated markets post-merger potentially raise significant competitive concerns depending on the factors set forth in the competitive effects analysis of the Guidelines.

c) Post-Merger HHI Above 1800. The Agency regards markets in this region to be highly concentrated. Mergers producing an increase in the HHI of less than 50 points, even in highly concentrated markets post-merger, are unlikely to have adverse competitive consequences and ordinarily require no further analysis. Mergers producing an increase in the HHI of more than 50 points in highly concentrated markets post-merger potentially raise significant competitive concerns, depending on the factors set forth in the competitive effects analysis of the Guidelines. Where the post-merger HHI exceeds 1800, it will be presumed that mergers producing an increase in the HHI of more than 100 points are likely to create or enhance market power or facilitate its exercise. The presumption may be overcome by a showing that factors set forth in the competitive effects analysis of the Guidelines make it unlikely that the merger will create or enhance market power or facilitate its exercise, in light of market concentration and market shares.

Please comment on the extent to which your analysis is forward looking, and takes account of temporal effects?

The analytical framework is forward-looking. The agencies employ a five-step analytical process of assessing market concentration, potential adverse competitive effects, entry, efficiency and failure as a tool that allows the Agency to answer the ultimate inquiry in merger analysis: whether the merger is likely to create or enhance market power or to facilitate its exercise.

Moreover, as noted below, the analytical framework entails explicit consideration of "changing market conditions" because "recent or ongoing changes in the market may indicate that the current market share of a particular firm either understates or overstates the firm's future competitive significance." Thus, "the Agency will consider reasonably predictable effects of recent or ongoing changes in market conditions in interpreting market concentration and market share data." GUIDELINES 1.521

III. Analytical steps

Please describe in detail the analytical steps that leads to advice or decision.

The GUIDELINES describe a five-step analytical process that is employed in determining whether to challenge a horizontal merger.

1. First, the Agency assesses whether the merger would significantly increase concentration and result in a concentrated market, properly defined and measured.

2. Second, the Agency assesses whether the merger, in light of market concentration and other factors that characterize the market, raises concern about potential adverse competitive effects.

3. Third, the Agency assesses whether entry would be timely, likely and sufficient either to deter or to counteract the competitive effects of concern.

4. Fourth, the Agency assesses any efficiency gains that reasonably cannot be achieved by the parties through other means.

5. Finally, the Agency assesses whether, but for the merger, either party to the transaction would be likely to fail, causing its assets to exit the market.

Each of these steps is described in greater detail below.

How do you assess market definition; market power; barriers to entry and expansion; the ability of customers to switch products; their ability to resist price rises (buyer power)?

Each of these issues is addressed below.

How do you assess market definition?

See III.A.1.a-b, *below*.

How do you assess market power?

See III.A.1.d-e, III.B.2-3, *below*.

How do you assess barriers to entry and expansion?

See III.A.1.c.ii, III.B.3, *below*.

How do you assess the ability of customers to switch products and their ability to resist price rises (buyer power)?

The ability of customers to switch products is a defining factor in identifying the relevant market. *See* III.A.1.a-b *below*.

A. Definition of Markets and Assessment of Concentration

1. Market Definition and Measuring Concentration: "First, the Agency assesses whether the merger would significantly increase concentration and result in a concentrated market, properly defined and measured."

A merger is unlikely to create or enhance market power or to facilitate its exercise unless it significantly increases concentration and results in a concentrated market, properly defined and measured. Mergers that either do not significantly increase concentration or do not result in a concentrated market ordinarily require no further analysis.

The analytic process described here ensures that the Agency evaluates the likely competitive impact of a merger within the context of economically meaningful markets - - i.e., markets that could be subject to the exercise of market power. Accordingly, for each product or service (hereafter "product") of each merging firm, the Agency seeks to define a market in which firms could effectively exercise market power if they were able to coordinate their actions.

Market definition focuses solely on demand substitution factors -- i.e., possible consumer responses. Supply substitution factors -- i.e., possible production responses -- are considered elsewhere in the Guidelines in the identification of firms that participate in the relevant market and the analysis of entry. If the process of market definition and market measurement identifies one or more relevant markets in which the merging firms are both participants, then the merger is considered to be horizontal.

a. Product Market Definition

The Agency will first define the relevant product market with respect to each of the products of each of the merging firms.

Absent price discrimination,[6] the Agency will delineate the product market to be a product or group of products such that a hypothetical profit-maximizing firm that was the only present and future seller of those products ("monopolist") likely would impose at least a "small but significant and nontransitory" increase in price. That is, assuming that buyers likely would respond to an increase in price for a tentatively identified product group only by shifting to other products, what would happen? If the alternatives were, in the aggregate, sufficiently attractive at their existing terms of sale, an attempt to raise prices would result in a reduction of sales large enough that the price increase would not prove profitable, and the tentatively identified product group would prove to be too narrow.

Specifically, the Agency will begin with each product (narrowly defined) 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, but the terms of sale of all other products remained constant. If, in response to the price increase, the reduction in sales of the product would be large enough that a hypothetical monopolist would not find it profitable to impose such an increase in price, then the Agency will add to the product group the product that is the next-best substitute for the merging firm's product.

In considering the likely reaction of buyers to a price increase, the Agency will take into account all relevant evidence, including, but not limited to, the following:

(1) evidence that buyers have shifted or have considered shifting purchases between products in response to relative changes in price or other competitive variables;
(2) evidence that sellers base business decisions on the prospect of buyer substitution between products in response to relative changes in price or other competitive variables;

[6]Product market definition in the presence of price discrimination requires particular analysis. *See* GUIDELINES 1.12.

(3) the influence of downstream competition faced by buyers in their output markets; and
(4) the timing and costs of switching products.

The price increase question is then asked for a hypothetical monopolist controlling the expanded product group. In performing successive iterations of the price increase test, the hypothetical monopolist will be assumed to pursue maximum profits in deciding whether to raise the prices of any or all of the additional products under its control. This process will continue until a group of products is identified such that a hypothetical monopolist over that group of products would profitably impose at least a "small but significant and nontransitory" increase, including the price of a product of one of the merging firms. The Agency generally will consider the relevant product market to be the smallest group of products that satisfies this test.

In general, the price for which an increase will be postulated will be whatever is considered to be the price of the product at the stage of the industry being examined. In attempting to determine objectively the effect of a "small but significant and nontransitory" increase in price, the Agency, in most contexts, will use a price increase of five percent lasting for the foreseeable future. However, what constitutes a "small but significant and nontransitory" increase in price will depend on the nature of the industry, and the Agency at times may use a price increase that is larger or smaller than five percent.

b. Geographic Market Definition

For each product market in which both merging firms participate, the Agency will determine the geographic market or markets in which the firms produce or sell. A single firm may operate in a number of different geographic markets.

Absent price discrimination,[7] the Agency will delineate the geographic market to be a region such that a hypothetical monopolist that was the only present or future producer of the relevant product at locations in that region would profitably impose at least a "small but significant and nontransitory" increase in price, holding constant the terms of sale for all products produced elsewhere. That is, assuming that buyers likely would respond to a price increase on products produced within the tentatively identified region only by shifting to products produced at locations of production outside the region, what would happen? If those locations of production outside the region were, in the aggregate, sufficiently attractive at their existing terms of sale, an attempt to raise price would result in a reduction in sales large enough that the price increase would not prove profitable, and the tentatively identified geographic area would prove to be too narrow.

In defining the geographic market or markets affected by a merger, the Agency will begin with the location of each merging firm (or each plant of a multiplant firm) and ask what would happen if a hypothetical monopolist of the relevant product at that point imposed at least a "small but significant and nontransitory" increase in price, but the terms of sale at all other locations

[7]Geographic market definition in the presence of price discrimination requires particular analysis. *See* GUIDELINES 1.22.

remained constant. If, in response to the price increase, the reduction in sales of the product at that location would be large enough that a hypothetical monopolist producing or selling the relevant product at the merging firm's location would not find it profitable to impose such an increase in price, then the Agency will add the location from which production is the next-best substitute for production at the merging firm's location.

In considering the likely reaction of buyers to a price increase, the Agency will take into account all relevant evidence, including, but not limited to, the following:

(1) evidence that buyers have shifted or have considered shifting purchases between different geographic locations in response to relative changes in price or other competitive variables;
(2) evidence that sellers base business decisions on the prospect of buyer substitution between geographic locations in response to relative changes in price or other competitive variables;
(3) the influence of downstream competition faced by buyer in their output markets; and
(4) the timing and costs of switching suppliers.

The price increase question is then asked for a hypothetical monopolist controlling the expanded group of locations. In performing successive iterations of the price increase test, the hypothetical monopolist will be assumed to pursue maximum profits in deciding whether to raise the price at any or all of the additional locations under its control. This process will continue until a group of locations is identified such that a hypothetical monopolist over that group of locations would profitably impose at least a "small but significant and nontransitory" increase, including the price charged at a location of one of the merging firms.

The "smallest market" principle will be applied as it is in product market definition. The price for which an increase will be postulated, what constitutes a "small but significant and nontransitory" increase in price, and the substitution decisions of consumers all will be determined in the same way in which the are determined in product market definition.

c. Identification of Firms That Participate in the Relevant Market

Once defined, a relevant market must be measured in terms of its participants and concentration.

i. Current Producers or Sellers. The Agency's identification of firms that participate in the relevant market begins with all firms that currently produce or sell in the relevant market. This includes vertically integrated firms to the extent that such inclusion accurately reflects their competitive significance in the relevant market prior to the merger. To the extent that the market definition analysis indicates that used, reconditioned or recycled goods are included in the relevant market, market participants will include firms that produce or sell such goods and that likely would offer those goods in competition with other relevant products.

ii. Firms That Participate Through Supply Response. In addition, the Agency will identify other firms not currently producing or selling the relevant product in the relevant area as participating in the relevant market if their inclusion would more accurately reflect probable supply responses. These firms are termed "uncommitted entrants." These supply responses must be likely to occur within one year and without the expenditure of significant sunk costs of entry and exit, in response to a "small but significant and nontransitory" price increase. If a firm has the technological capability to achieve such as uncommitted supply response, but likely would not (e.g., because difficulties in achieving product acceptance, distribution, or production would render such a response unprofitable), that firm will not be considered to be a market participant.[8]

d. Calculating Market Shares

After the participants in the relevant market are identified, then market concentration is measured. The Agency normally will calculate market shares for all firms (or plants) identified as market participants based on the total sales or capacity currently devoted to the relevant market together with that which likely would be devoted to the relevant market in response to a "small but significant and nontransitory" price increase. Market shares can be expressed either in dollar terms through measurement of sales, shipments, or production, or in physical terms through measurement of sales, shipments, production, capacity, or reserves.

Market shares will be calculated using the best indicator of firms' future competitive significance. Dollar sales or shipments generally will be used if firms are distinguished primarily by differentiation of their products. Unit sales generally will be used if firms are distinguished primarily on the basis of their relative advantages in serving different buyers or groups of buyers. Physical capacity or reserves generally will be used if it is these measures that most effectively distinguish firms. Typically, annual data are used, but where individual sales are large and infrequent so that annual data may be unrepresentative, the Agency may measure market shares over a longer period of time.

In measuring a firm's market share, the Agency will not include its sales or capacity to the extent that the firm's capacity is committed or so profitably employed outside the relevant market that it would not be available to respond to an increase in price in the market.[9]

e. Concentration and Market Shares.

After market participants have been identified and market shares measured, then market concentration is assessed. Market concentration is a function of the number of firms in a market and their respective market shares. As an aid to the interpretation of market data, the Agency will use the Herfindahl-Hirschman Index ("HHI") of market concentration. The HHI is calculated by summing the squares of the individual market shares of all the participants. Unlike the four-firm concentration ratio, the HHI reflects both the distribution of the market shares of the top four firms and the composition of the market outside the four firms. It also gives proportionately

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[8] The competitive significance of supply responses that require more time or that require firms to incur significant sunk costs of entry and exit will be considered in entry analysis.

[9]Price discrimination markets and markets involving foreign firms may require particular analysis. *See* GUIDELINES 1.42, 1.43.

greater weight to the market shares of the larger firms, in accord with their relative importance in competitive interactions.

The Agency divides the spectrum of market concentration as measured by the HHI into three regions that can be broadly characterized as unconcentrated (HHI below 1000), moderately concentrated (HHI between 1000 and 1800), and highly concentrated (HHI above 1800). Although the resulting regions provide a useful framework for merger analysis, the numerical divisions suggest greater precision than is possible with the available economic tools and information. Other things being equal, cases falling just above and just below a threshold present comparable competitive issues.

i. General Standards. In evaluating horizontal mergers, the Agency will consider both the post-merger market concentration and the increase in concentration resulting from the merger. Market concentration is a useful indicator of the likely potential competitive effect of a merger. The general standards for horizontal mergers are as follows:

a) Post-Merger HHI Below 1000. The Agency regards markets in this region to be unconcentrated. Mergers resulting in unconcentrated markets are unlikely to have adverse competitive effects and ordinarily require no further analysis.

b) Post-Merger HHI Between 1000 and 1800. The Agency regards markets in this region to be moderately concentrated. Mergers producing an increase in the HHI of less than 100 points in moderately concentrated markets post-merger are unlikely to have adverse competitive consequences and ordinarily require no further analysis. Mergers producing an increase in the HHI of more than 100 points in moderately concentrated markets post-merger potentially raise significant competitive concerns depending on the factors set forth in the competitive effects analysis of the Guidelines.

c) Post-Merger HHI Above 1800. The Agency regards markets in this region to be highly concentrated. Mergers producing an increase in the HHI of less than 50 points, even in highly concentrated markets post-merger, are unlikely to have adverse competitive consequences and ordinarily require no further analysis. Mergers producing an increase in the HHI of more than 50 points in highly concentrated markets post-merger potentially raise significant competitive concerns, depending on the factors set forth in the competitive effects analysis of the Guidelines. Where the post-merger HHI exceeds 1800, it will be presumed that mergers producing an increase in the HHI of more than 100 points are likely to create or enhance market power or facilitate its exercise. The presumption may be overcome by a showing that factors set forth in the competitive effects analysis of the Guidelines make it unlikely that the merger will create or enhance market power or facilitate its exercise, in light of market concentration and market shares.

ii. Factors affecting the Significance of Market Shares and Concentration. The post-merger level of market concentration and the change in concentration resulting from a merger affect the degree to which a merger raises competitive concerns. However, in some situations, market share and market concentration data may either understate or overstate the likely future competitive significance of a firm or firms in the market or the impact of a merger. The following are examples of such situations.

(a) Changing Market Conditions. Market concentration and market share data of necessity are based on historical evidence. However, recent or ongoing changes in the market may indicate that the current market share of a particular firm either understates or overstates the firm's future competitive significance. For example, if a new technology that is important to long-term competitive viability is available to other firms in the market, but is not available to a particular firm, the Agency may conclude that the historical market share of that firm overstates its future competitive significance. The Agency will consider reasonably predictable effects of recent or ongoing changes in market conditions in interpreting market concentration and market share data.

(b) Degree of Difference Between the Products and Locations in the Market and Substitutes Outside the Market. All else equal, the magnitude of potential competitive harm from a merger is greater if a hypothetical monopolist would raise price within the relevant market by substantially more than a "small but significant and nontransitory" amount. This may occur when the demand substitutes outside the relevant market, as a group, are not close substitutes for the products and locations within the relevant market. There thus may be a wide gap in the chain of demand substitutes at the edge of the product and geographic market. Under such circumstances, more market power is at stake in the relevant market than in a market in which a hypothetical monopolist would raise price by exactly five percent.

B. Analysis of Likely Competitive Effects of the Merger

2. Evaluation of Potential Adverse Competitive Effects: "Second, the Agency assesses whether the merger, in light of market concentration and other factors that characterize the market, raises concern about potential adverse competitive effects."

Other things being equal, market concentration affects the likelihood that one firm, or a small group of firms, could successfully exercise market power. The smaller the percentage of total supply that a firm controls, the more severely it must restrict its own output in order to produce a given price increase, and the less likely it is that an output restriction will be profitable. If collective action is necessary for the exercise of market power, as the number of firms necessary to control a given percentage of total supply decreases, the difficulties and costs of reaching and enforcing an understanding with respect to the control of that supply might be reduced. However, market share and concentration data provide only the starting point for analyzing the competitive impact of a merger. Before determining whether to challenge a merger, the Agency also will assess the other market factors that pertain to competitive effects, as well as entry, efficiencies and failure.

a. Lessening of Competition Through Coordinated Interaction

A merger may diminish competition by enabling the firms selling in the relevant market more likely, more successfully, or more completely to engage in coordinated interaction that harms consumers. Coordinated interaction is comprised of actions by a group of firms that are profitable for each of them only as a result of the accommodating reactions of the others. This behavior includes tacit or express collusion, and may or may not be lawful in and of itself.

Successful coordinated interaction entails reaching terms of coordination that are profitable to the firms involved and an ability to detect and punish deviations that would undermine the coordinated interaction. Detection and punishment of deviations ensure that coordinating firms will find it more profitable to adhere to the terms of coordination than to pursue short-term profits from deviating, given the costs of reprisal. In this phase of the analysis, the Agency will examine the extent to which post-merger market conditions are conducive to reaching terms of coordination, detecting deviations from those terms, and punishing such deviations. Depending upon the circumstances, the following market factors, among others, may be relevant: the availability of key information concerning market conditions, transactions and individual competitors; the extent of firm and product heterogeneity; pricing or marketing practices typically employed by firms in the market; the characteristics of buyers and sellers; and the characteristics of typical transactions.

Certain market conditions that are conducive to reaching terms of coordination also may be conducive to detecting or punishing deviations from those terms. For example, the extent of information available to firms in the market, or the extent of homogeneity, may be relevant to both the ability to reach terms of coordination and to detect or punish deviations from those terms. The extent to which any specific market condition will be relevant to one or more of the conditions necessary to coordinated interaction will depend on the circumstances of the particular case.

It is likely that market conditions are conducive to coordinated interaction when the firms in the market previously have engaged in express collusion and when the salient characteristics of the market have not changed appreciably since the most recent such incident. Previous express collusion in another geographic market will have the same weight when the salient characteristics of that other market at the time of the collusion are comparable to those in the relevant market.

In analyzing the effect of a particular merger on coordinated interaction, the Agency is mindful of the difficulties of predicting likely future behavior based on the types of incomplete and sometimes contradictory information typically generated in merger investigations. Whether a merger is likely to diminish competition by enabling firms more likely, more successfully or more completely to engage in coordinated interaction depends on whether market conditions, on the whole, are conducive to reaching terms of coordination and detecting and punishing deviations from those terms.

b. Lessening of Competition Through Unilateral Effects

A merger may diminish competition even if it does not lead to increased likelihood of successful coordinate interaction, because merging firms may find it profitable to alter their behavior unilaterally following the acquisition by elevating price and suppressing output. Unilateral competitive effects can arise in a variety of different settings. In each setting, particular other factors describing the relevant market affect the likelihood of unilateral competitive effects. The settings differ by the primary characteristics that distinguish firms and shape the nature of their competition.

i. Firms Distinguished Primarily by Differentiated Products. In some markets the products are differentiated, so that products sold by different participants in the market are not perfect substitutes for one another. Moreover, different products in the market may vary in the degree of their substitutability for one another. In this setting, competition may be non-uniform (i.e., localized), so that individual sellers compete more directly with those rivals selling closer substitutes.

A merger between firms in a market for differentiated products may diminish competition by enabling the merged firm to profit by unilaterally raising the price of one or both products above the premerger level. Some of the sales loss due to the price rise merely will be diverted to the product of the merger partner and, depending on relative margins, capturing such sales loss through merger may make the price increase profitable even though it would not have been profitable premerger. Substantial unilateral price elevation in a market for differentiated products requires that there be a significant share of sales in the market accounted for by consumers who regard the products of the merging firms as their first and second choices, and that repositioning of the non-parties' product lines to replace the localized competition lost through the merger be unlikely. The price rise will be greater the closer substitutes are the products of the merging firms, i.e., the more the buyers of one product consider the other product to be their next choice.

ii. Firms Distinguished Primarily by Their Capacities. Where products are relatively undifferentiated and capacity primarily distinguishes firms and shapes the nature of their competition, the merged firm may find it profitable unilaterally to raise price and suppress output. The merger provides the merged firm a larger base of sales on which to enjoy the resulting price rise and also eliminates a competitor to which customers otherwise would have diverted their sales. Where the merging firms have a combined market share of at least thirty-five percent, merged firms may find it profitable to raise price and reduce joint output below the sum of their premerger outputs because the lost markups on the foregone sales may be outweighed by the resulting price increase on the merged base of sales.

This unilateral effect is unlikely unless a sufficiently large number of the merged firm's customers would not be able to find economical alternative sources of supply, i.e., competitors of the merged firm likely would not respond to the price increase and output reduction by the merged firm with increases in their own outputs sufficient in the aggregate to make the unilateral action of the merged firm unprofitable. Such non-party expansion is unlikely if those firms face binding capacity constraints that could not be economically relaxed within two years or if existing excess capacity is significantly more costly to operate than capacity currently in use.

3. Entry Analysis: "Third, the Agency assesses whether entry would be timely, likely and sufficient either to deter or to counteract the competitive effects of concern."

A merger is not likely to create or enhance market power or to facilitate its exercise, if entry into the market is so easy that market participants, after the merger, either collectively or unilaterally could not profitably maintain a price increase above premerger levels. Such entry likely will deter an anticompetitive merger in its incipiency, or deter or counteract the competitive effects of concern.

Entry is that easy if entry would be timely, likely, and sufficient in its magnitude, character and scope to deter or counteract the competitive effects of concern. In markets where entry is that easy (i.e., where entry passes these tests of timeliness, likelihood, and sufficiency), the merger raises no antitrust concern and ordinarily requires no further analysis.

The committed entry treated in this Section is defined as new competition that requires expenditure of significant sunk costs of entry and exit. The Agency employs a three step methodology to assess whether committed entry would deter or counteract a competitive effect of concern.

The first step assesses whether entry can achieve significant market impact within a timely period. If significant market impact would require a longer period, entry will not deter or counteract the competitive effect of concern.

The second step assesses whether committed entry would be a profitable and, hence, a likely response to a merger having competitive effects of concern. Firms considering entry that requires significant sunk costs must evaluate the profitability of the entry on the basis of long term participation in the market, because the underlying assets will be committed to the market until they are economically depreciated. Entry that is sufficient to counteract the competitive effects of concern will cause prices to fall to their premerger levels or lower. Thus, the profitability of such committed entry must be determined on the basis of premerger market prices over the long-term.

A merger having anticompetitive effects can attract committed entry, profitable at premerger prices, that would not have occurred premerger at these same prices. But following the merger, the reduction in industry output and increase in prices associated with the competitive effect of concern may allow the same entry to occur without driving market prices below premerger levels. After a merger that results in decreased output and increased prices, the likely sales opportunities available to entrants at premerger prices will be larger than they were premerger, larger by the output reduction caused by the merger. If entry could be profitable at premerger prices without exceeding the likely sales opportunities -- opportunities that include pre-existing pertinent factors as well as the merger-induced output reduction -- then such entry is likely in response to the merger.

The third step assesses whether timely and likely entry would be sufficient to return market prices to their premerger levels. This end may be accomplished either through multiple entry or individual entry at a sufficient scale. Entry may not be sufficient, even though timely and likely, where the constraints on availability of essential assets, due to incumbent control, make it impossible for entry profitably to achieve the necessary level of sales. Also, the character and scope of entrants' products might not be fully responsive to the localized sales opportunities created by the removal of direct competition among sellers of differentiated products. In assessing whether entry will be timely, likely, and sufficient, the Agency recognizes that precise and detailed information may be difficult or impossible to obtain. In such instances, the Agency will rely on all available evidence bearing on whether entry will satisfy the conditions of timeliness, likelihood, and sufficiency.

4. Efficiencies Analysis: "Fourth, the Agency assesses any efficiency gains that reasonably cannot be achieved by the parties through other means."

The analytical steps involved in efficiencies analysis are described as follows:

Competition usually spurs firms to achieve efficiencies internally. Nevertheless, mergers have the potential to generate significant efficiencies by permitting a better utilization of existing assets, enabling the combined firm to achieve lower costs in producing a given quantity and quality than either firm could have achieved without the proposed transaction. Indeed, the primary benefit of mergers to the economy is their potential to generate such efficiencies.

Efficiencies generated through merger can enhance the merged firm's ability and incentive to compete, which may result in lower prices, improved quality, enhanced service, or new products. For example, merger-generated efficiencies may enhance competition by permitting two ineffective (e.g., high cost) competitors to become one effective (e.g., lower cost) competitor. In a coordinated interaction context, marginal cost reductions may make coordination less likely or effective by enhancing the incentive of a maverick to lower price or by creating a new maverick firm. In a unilateral effects context, marginal cost reductions may reduce the merged firm's incentive to elevate price. Efficiencies also may result in benefits in the form of new or improved products, and efficiencies may result in benefits even when price is not immediately and directly affected. Even when efficiencies generated through merger enhance a firm's ability to compete, however, a merger may have other effects that may lessen competition and ultimately may make the merger anticompetitive.

The Agency will consider only those efficiencies likely to be accomplished with the proposed merger and unlikely to be accomplished in the absence of either the proposed merger or another means having comparable anticompetitive effects. These are termed *merger-specific efficiencies*. Only alternatives that are practical in the business situation faced by the merging firms will be considered in making this determination; the Agency will not insist upon a less restrictive alternative that is merely theoretical.

Efficiencies are difficult to verify and quantify, in part because much of the information relating to efficiencies is uniquely in the possession of the merging firms. Moreover, efficiencies projected reasonably and in good faith by the merging firms may not be realized. Therefore, the merging firms must substantiate efficiency claims so that the Agency can verify by reasonable means the likelihood and magnitude of each asserted efficiency, how and when each would be achieved (and any costs of doing so), how each would enhance the merged firm's ability and incentive to compete, and why each would be merger-specific. Efficiency claims will not be considered if they are vague or speculative or otherwise cannot be verified by reasonable means.

Cognizable efficiencies are merger-specific efficiencies that have been verified and do not arise from anticompetitive reductions in output or service. Cognizable efficiencies are assessed net of costs produced by the merger or incurred in achieving those efficiencies.

The Agency will not challenge a merger if cognizable efficiencies are of a character and magnitude such that the merger is not likely to be anticompetitive in any relevant market. To make the requisite determination, the Agency considers whether cognizable efficiencies likely would be sufficient to reverse the merger's potential to harm consumers in the relevant market, e.g., by preventing price increases in that market. In conducting this analysis, the Agency will not simply compare the magnitude of the cognizable efficiencies with the magnitude of the likely harm to competition absent the efficiencies. The greater the potential adverse competitive effect of a merger—as indicated by the increase in the HHI and post-merger HHI, the analysis of potential adverse competitive effects, and the timeliness, likelihood, and sufficiency of entry—the greater must be cognizable efficiencies in order for the Agency to conclude that the merger will not have an anticompetitive effect in the relevant market. When the potential adverse competitive effect of a merger is likely to be particularly large, extraordinarily great cognizable efficiencies would be necessary to prevent the merger from being anticompetitive.

In the Agency's experience, efficiencies are most likely to make a difference in merger analysis when the likely adverse competitive effects, absent the efficiencies, are not great. Efficiencies almost never justify a merger to monopoly or near-monopoly.

The Agency has found that certain types of efficiencies are more likely to be cognizable and substantial than others. For example, efficiencies resulting from shifting production among facilities formerly owned separately, which enable the merging firms to reduce the marginal cost of production, are more likely to be susceptible to verification, merger-specific, and substantial, and are less likely to result from anticompetitive reductions in output. Other efficiencies, such as those relating to research and development, are potentially substantial but are generally less susceptible to verification and may be the result of anticompetitive output reductions. Yet others, such as those relating to procurement, management, or capital cost are less likely to be merger-specific or substantial, or may not be cognizable for other reasons.

5. Failing Firm Analysis: "Finally the Agency assesses whether, but for the merger, either party to the transaction would be likely to fail, causing its assets to exit the market."

The analytical steps involved in failing firm analysis are described as follows:

A merger is not likely to create or enhance market power or facilitate its exercise if the following circumstances are met:

1) the allegedly failing firm would be unable to meet its financial obligations in the near future;

2) it would not be able to reorganize successfully under Chapter 11 of the Bankruptcy Act;

3) it has made unsuccessful good-faith efforts to elicit reasonable alternative offers of acquisition of the assets of the failing firm that would both keep its tangible and intangible assets in the relevant market and pose a less severe danger to competition than does the proposed merger; and

4) absent the acquisition, the assets of the failing firm would exit the relevant market.

IV. Lessons

What do you think other countries can learn from your jurisdiction? What are the difficult issues in your experience of applying the substantive test? What, if anything, would you change?

Over the last half century, United States merger analysis has become increasingly well-grounded in economics and it has become more clearly focused solely on protection of consumer welfare. Older views have been rejected as misguided: e.g., seeking protection of competitors, rather than competition; any assumption that there is something inherently undesirable about large firms, including conglomerate firms; restriction of even small increases in market concentration in the absence of evidence of anticompetitive harm; "populist" attempts to preserve a large number of firms merely for the sake of numbers, even though such preservation was unnecessary for effective and efficient competition. Today, United States merger analysis is focused squarely on "whether the merger is likely to create or enhance market power or to facilitate its exercise." GUIDELINES 0.2