CHAPTER 2 - MARKET DEFINITION[1]

OVERVIEW

1.1 This Chapter discusses the treatment of market definition in the merger guidelines of twelve jurisdictions (the "Guidelines").[2] The first section briefly summarizes the role of market definition in the analysis of the competitive effects of mergers and references a brief historical overview. The remaining sections review the main features of the Guidelines.

I. MARKET DEFINITION AS AN ANALYTICAL AND DISCIPLINARY TOOL

a) Why Market Definition?

1.2 The principal, if not exclusive, goal of merger control in these twelve jurisdictions is the identification and prevention of transactions that create or enhance market power.[3] Market power is variously defined in the relevant jurisdictions but a definition that might be viewed as common to all would be the ability of the merged firm, or of the firms remaining in the market after the merger, to profitably raise prices significantly above (or reduce output significantly below) competitive levels (or otherwise to reduce rivalry). The objective (and challenge) of merger control is to prevent those mergers that do pose such a threat while not impeding those that do not.

1.3 Market power might best be reflected by (i) the elasticities of demand (the percentage change in quantity demanded of the product or services concerned in response to a 1 percent change in its price) and of supply (the percentage change in quantity supplied in response to a 1 percent change in price) faced by sellers of the product in question or (ii) by the residual demand curve of the merged firm.[4] In other terms, the question of whether a transaction creates or enhances market power could be resolved if one could calculate whether post-closing the merged firm could significantly raise prices without suffering sufficient reduction in demand to make the price increase unprofitable. For example, the question of whether a merger creates unilateral market power can be answered by calculating the merging firms' residual elasticities of demand and the extent of the premerger substitution between the firms. However, the complex measurement of variables that affect demand and supply usually require a range of reliable market data that is frequently unavailable.[5] Moreover, these calculations are more likely relevant in unilateral effects cases (where the issue is whether the transaction creates a firm that can exercise market power on its own) rather than in coordinated effects cases (where the issue is whether the firms remaining post-transaction will be able to exercise market power collectively because of the change in market structure caused by the transaction).

1.4 Of course, there are other ways to attempt to evaluate whether a transaction may lead to market power. One can examine internal documents and interview knowledgeable personnel at the merging firms and at those firms' customers, suppliers, competitors, etc.[6] Indeed, it is now widely recognized that the input of affected economic actors should be obtained wherever there is a need for a serious inquiry into the market power issue. On the other hand, without an analytical framework guiding this inquiry and the evaluation of the material obtained, this undertaking may be unproductive in evaluating the economic issues posed by a transaction.

1.5 In short, there is frequently not enough reliable data to calculate elasticities and insufficient documentary or other direct evidence standing alone to determine with confidence whether a transaction is likely to significantly reduce competition. An analytical framework is therefore necessary to focus and guide the inquiry.

1.6 The most widely used proxy for the determination of the possible existence of market power is market share, e.g., the percentage of total sales (or some other measure) of the product to be held by the merged firm and the distribution of the remaining share among its rivals. To calculate market share presupposes the definition of a market and the identification of the firms participating in it. The goal of the market definition process is to ensure that these calculations correspond as closely as possible to market realities.

1.7 In many cases, then, market definition is a first step in the process of evaluating whether a transaction creates market power as it allows the calculation of market share and of concentration indices based on sales, production, or capacity. These calculations, in turn, give at least an indication, however imperfect or rebuttable, of whether a post-transaction dominant firm or oligopoly can raise prices above the competitive level or otherwise reduce competition.

1.8 While it is important to recognize the value of market definition as a flexible analytical tool, it is equally important to understand its limitations both in capturing market dynamics and in answering the ultimate issue of whether the transaction will create or enhance market power. Most of the Guidelines recognize explicitly (e.g., U.K. (CC) Guidelines) or implicitly (e.g., Finland, New Zealand, the EC, and the U.S.) that market definition is not an end in itself but a useful discipline in many cases.

b) Evolution of the Concept

1.9 While the Clayton Act (the U.S. statute prohibiting anticompetitive transactions) had since 1914 prohibited any transaction the effect of which "may be substantially to lessen competition," there is little in the legislative history that interprets this term and, as with the Sherman Act, the courts and enforcement agencies were left to give meaning to vague statutory language.[7] The use of market definition as an analytical tool in merger cases was not introduced in U.S. courts until the late 1940's.[8] By the late 1950's and early 1960's, however, product and geographic market definition was playing a central role in U.S. merger analysis, and yet there were no standards guiding the process.

1.10 In 1968, in the first set of merger guidelines issued by the U.S. Department of Justice ("DOJ"), market definition was included as a formal first step in the evaluation of the competitive effects of a merger.[9] But guidance on how to define a market was at a minimum confusing and was severely criticized at the time by a presidential task force.[10] Even in the early 1980's, there was no consensus on a sensible way to define markets and frequent criticism of how the enforcement agencies and the courts defined markets, e.g., their conclusions on market definition were often thought to be designed to achieve a pre-ordained result of prohibition.[11] In 1980, a Harvard professor and former Assistant Attorney General in charge of the DOJ's Antitrust Division said that the case law on market definition was "a bloody mess."[12]

1.11 The 1982 DOJ Merger Guidelines addressed this situation and formalized a methodological approach to market definition that had evolved through the preceding decade. The then-head of the Antitrust Division, Stanford Professor William H. Baxter, was committed to bringing economic rigor to the process. The effort was successful and over time, the "smallest market principle" and the "small but significant non-transitory increase in price" (SSNIP) test (see below) have become, with some variations in subsequent guidelines of other countries, the predominant analytical tool in merger analysis.

1.12 The twelve Guidelines under discussion in this paper were adopted between 1991 (Canada) and 2003 (U.K. (CC) Guidelines), and in all of them market definition plays a central role in the assessment of mergers – in some of these jurisdictions the role of market definition has been approved by the highest judicial authorities.[13] Most of these Guidelines have also adopted some form of the SSNIP test or its equivalent.

1.13 It is important to understand, however, that as critical a step as market definition may be in most cases, it should not be confused with the overall objective – the evaluation of the likely competitive effects of a merger. Several Guidelines explicitly recognize the subsidiarity of market definition to the assessment of the competitive effects of a merger.[14] For example, the Irish Guidelines make clear that market definition is not a required step in all instances.

> [T]he approach to market definition…is not mechanical, but rather a conceptual framework within which relevant information can be organised. In particular, it will not always be necessary for the Authority to reach a firm conclusion on market definition. This will be the case, for example, where it is clear that the merger does not raise competition concerns on any reasonable definition of the market. Alternatively, the Authority may not

define a market if the transaction clearly gives rise to adverse competitive effects.[15]

Nonetheless, the recognition that market definition is only a means to an end does not negate the need for the adoption of sensible and transparent guidelines on this issue in all jurisdictions enforcing merger control. Also, to the extent that a jurisdiction's market definition methodology introduces analytical rigor and discipline into the evaluation of the market power issue, it can add enormous value to the process. The conceptual breakthrough represented by the SSNIP test, for example, contributed not only to the market definition process but also to the fuller understanding of what constitutes market power and what does not.[16]

c) The Relationship of Market Definition to the Applicable Substantive Standard

1.14 At the risk of overgeneralization, the Guidelines of the twelve jurisdictions in question appear to reflect two different standards for evaluating a merger: in seven of the Guidelines a transaction is likely to be deemed unlawful if it leads to a substantial lessening of competition ("SLC") while five of the Guidelines ask whether it leads to a strengthening of "dominance."[17] There appears to be a broad consensus on the value of sound market definition as a framework for the application of either standard and a majority of the Guidelines use similar concepts and tools (with varying degrees of detail and explanation) to define markets irrespective of the substantive test employed.

1.15 The question arises whether market definition is more important in applying one or the other substantive standard. Under an SLC standard, market definition (at least in a coordinated interaction case) is likely to be highly useful to the analysis because the likelihood of coordinated effects turns on the number of rivals, the availability of substitutes, the distribution of share, and the existence of excess capacity and of detection and punishment mechanisms, etc. On the other hand, market delineation under a dominance standard would seem less important: evidence that the firm has significant market power, e.g., margin data, together with evidence of significant substitution between the production of the merging firms might provide significant evidence regarding competitive effects without the need to define a market.[18] It might seem, therefore, that market definition would be less critical in the Guidelines of jurisdictions operating under a single firm dominance standard. If anything, however, the opposite seems to be true. This may be because some authorities implementing a dominance standard operate under legal standards that are perceived to require a finding of a certain minimum market share before dominance can be established, and perhaps because these authorities have underemphasized evidence of the firms' residual demand elasticity.

1.16 In any event, regardless of the applicable substantive standards, market definition is a key component of merger analysis and the analysis of marginal substitution that underlies it also focuses consideration of the market power question.

II. PRODUCT MARKET DEFINITION

a) Demand-side substitutability

1.17 In virtually all of the Guidelines, the process of defining the product market begins with the identification of the goods or services supplied by the merging firms. The next step is to identify the goods or services that may be considered by customers to be practical substitutes to these goods or services (demand side substitutability). Some of the Guidelines state explicitly that these products must be economic or "close" substitutes. The goal of demand-side analysis is to identify and include in the market only those substitutes whose prices and other characteristics constrain the ability of the merging firms and their rivals from raising prices or reducing output.

1.18 Most of the Guidelines cite a mixture of qualitative and quantitative criteria to assist in identifying products that are "in" or "out" of the demand side of the market. Some use descriptive, largely static criteria such as "physical characteristics" and "end use." Similarity in price is also used as an indication of whether products may be close substitutes. The perceptions of market participants of the role of the product is also included in some Guidelines. These criteria are useful in excluding many products from consideration but alone cannot answer the question of economic substitutability, i.e., the extent to which a product or products would be included in market definition because its pricing constrains the ability of the merged firm to raise the price or reduce output of the product in question.

1.19 Only seven of the Guidelines seem to take account of qualitative factors that go beyond physical properties, end uses, and industry perceptions.[19] For example, switching costs, e.g., the costs borne by a buyer switching from one product to another, are referenced in only six of the Guidelines.[20] Only three of the Guidelines refer to the concept of a "chain of substitution" that may exist in certain consumer products (autos, furniture, clothing, etc., see below).[21] Also, the idea of comparing the movement of prices of the products in issue over time to determine if there are similarities is also contained in only a minority of the Guidelines. The economic concept of price discrimination (see below) is referenced in only seven of the Guidelines despite the fact that it may be outcome-determinative in at least some cases.[22] To be sure, these concepts are not affirmatively rejected in any of the Guidelines, and may well be used frequently in those jurisdictions. In any event, the twelve Guidelines differ significantly in the breadth and depth of the relevant factors employed in the market definition exercise.

b) The SSNIP test

1.20 Eight of the Guidelines explicitly adopt the SSNIP test.[23] The objective of the test, according to the Canadian Guidelines, is to identify

> the smallest group of products and smallest geographic area in relation to which sellers, if acting as a single firm (a 'hypothetical monopolist') that was the only seller of those products in that area, could profitably impose and sustain a significant and nontransitory price increase above levels that would likely exist in the absence of the merger.[24]

1.21 As noted in the introduction, the SSNIP test has been widely accepted as the tool to implement the "hypothetical monopolist" test for market definition. The test is designed as a sometimes rough but often useful way to probe the boundaries of the product and geographic markets.

1.22 The SSNIP is an iterative process beginning with the narrowest possible product definition (or geographic area) and querying whether a "hypothetical monopolist" (i.e., a firm controlling the entire output of the product (or geographic area) as defined) could profitably maintain a SSNIP. If the SSNIP would be profitable then the next closest substitutes are added to the product group (or the geographic area is expanded) and the process is repeated. This process continues until a set of products (or geographic area) is found where a "hypothetical monopolist" would be unable to profitably impose a SSNIP.

> To illustrate, consider a proposed merger between two companies manufacturing prescription sleeping pills. If a single firm controlling all brands of prescription sleeping pills would find it profitable to impose a small but significant and nontransitory increase in price (SSNIP) for at least one of the brands sold by the merging parties, then prescription sleeping pills constitute a relevant product market. If not, then the next-best substitute, e.g., non-prescription sleeping pills, is added to the candidate relevant market and the test is repeated.[25]

1.23 The test may seem easier to use in industrial input markets where the number of buyers is relatively small (i.e., many if not all can be interviewed) and where the buyers routinely consider substitution choices. But there can be difficulties in applying the test in the industrial context because a customer's response to a hypothetical question might not provide reliable evidence of what actually would occur when relative prices change. The test can also be difficult to use in highly differentiated products (especially consumer goods) because reliable customer surveys are not always available and because customers have non-monetary reasons for their purchasing decisions. On the other hand, when data suitable for estimating demand elasticities are available for differentiated consumer products (e.g., Neilson data, grocery chain data, etc.) and for commodities, applying the hypothetical monopolist test can be relatively straight-forward.

1.24 In any event, while the SSNIP test has become synonymous with market definition in many jurisdictions, the Guidelines of some (e.g., Finland, Japan, and Romania) do not refer to the test at all. This seems unfortunate because, as noted above, the SSNIP test has introduced some discipline into what otherwise can be an unwieldy and open-ended inquiry. In other terms, the core concepts of demand and supply side elasticity that the SSNIP test represents should be a part of a sound merger control system, whether embedded in the market definition methodology or elsewhere in the analysis.

1.25 Two difficult issues raised by the use of the SSNIP test are (i) the prices to be used as the basis for the hypothetical question (i.e., assuming the price of the product were X, if X rose by 5%, would you switch to another product?) and (ii) the appropriate price increase to be postulated. The treatment of these issues in the Guidelines is outlined below.

Base price under the SSNIP test

1.26 Using an appropriate base price for the SSNIP test is fundamental. The base price affects whether customers would switch to alternative products (and other firms switch to producing these products) in response to a price increase and thus affects the delineation of the "smallest" market in which to measure share and then to evaluate the market power issue. The base price also affects the "critical loss" analysis of a transaction, i.e., the maximum reduction in quantity sold that a hypothetical monopolist would find profitable.[26]

1.27 Seven of the Guidelines discuss the base price to be used for the SSNIP test.[27] These Guidelines generally suggest that the "prevailing market price" be used.[28] Four of them (i.e., EC, Ireland, New Zealand, and the U.K. (CC) Guidelines) state that where the prevailing price does not appear to be the competitive price, a competitive price should be substituted. The Guidelines of several jurisdictions (e.g., the EC and New Zealand) allude to possible reasons why the prevailing price is not the competitive price but do not advise how to determine the appropriate base price.[29]

1.28 The danger of using an inappropriate price for defining markets is illustrated by a 1950's U.S. monopolization case. The U.S. Supreme Court concluded that a producer of cellophane did not have market power due to the strength of substitutes for cellophane. But the Court failed to recognize that these products were only good substitutes for cellophane at the monopoly prices of cellophane already charged by the defendant, i.e., at a competitive price for cellophane, these products were not economic substitutes. (Because of the product involved, the error made by the Court has become known as the "cellophane fallacy"[30] – the Australian, U.K. (CC) Guidelines, and U.K. (OFT) Draft Guidelines expressly refer to the case.)

1.29 Where the prevailing price is well above the competitive level but the likely future price is significantly closer to the competitive level (due to, for example, a likely reduction in the effective degree of coordination), using the prevailing price as the SSNIP base price may lead to erroneous assessments of the effects of the merger: where the merging firms both produce the same (or nearly the same) products it will tend to understate the actual competitive effect of the transaction by including in the market products that will not be fact substitutes for the merging firms' products at the lower likely future price. On the other hand, where the merging firm's products are only good substitutes at the (higher) prevailing price, it will tend to overstate the potential competitive effect of the transaction. In short, identifying and utilizing the "correct" base price for purposes of the SSNIP test is important to the market definition analysis and for evaluating the competitive effects of the transaction.

1.30 Four of the Guidelines discuss the possibility of using prices that would prevail in the future absent the merger when they can be predicted with reasonable reliability.[31] The Australian Guidelines indicate that future prices absent the merger are the most appropriate base price for application of the SSNIP test because those prices most accurately reflect the prices customers would actually use in their switching decision absent the merger.[32] No methodology is suggested for selecting the appropriate future price. The Irish, U.K. (OFT) Draft Guidelines, and U.S. Guidelines each give the example of a change in regulation as an event that may predictably change prices.

1.31 It is useful to consider two distinct purposes for using a base price: the first is assessing what products and firms would limit the ability of the merging firms to increase price post merger. The second is assessing whether one or both of the merging firms have (significant) market power prior to the merger in order to evaluate whether one of the firms may already have a dominant position. For the first purpose, using the likely future price as the base price to delineate such substitutes seems appropriate. For the second purpose, avoidance of the cellophane fallacy would appear to entail using as a "base" price the competitive level.

Size of price increase under the SSNIP test

1.32 A 5 % price increase is the most popular benchmark for the SSNIP test. One jurisdiction, Australia, refers only to a "relatively small percentage increase." The Canadian, U.K. (CC) Guidelines, and U.S. Guidelines indicate that a larger or smaller price increase may be used where the application of 5% increase would not reflect market realities, though none provide much guidance on how to determine when this is the case. Ireland uses a 5-10% increase as a base. The EC refers to a 5-10% range and Brazil to a 5, 10 or 15% price increase depending upon the circumstances. Most of the guidelines acknowledge that no single percentage is correct in every case. For example, the U.K. (OFT) Guidelines 1998 refer to the 5-10% test as a "rough guide." Also, as a practical matter, enforcement agencies have from time to time used a price increase as low as 2% in assessing possible supply responses (especially in defining geographic markets – see below) in high-volume, low margin products such as petrol or groceries. The U.S. Federal Trade Commission, for example, has used price increases lower than 5% when evaluating the likely supply responses of relatively distant suppliers of gasoline when defining local or regional geographic markets for their products. Also, the 5% test is a market definition standard, not the standard for the magnitude of post merger price increase that is unacceptable. That might be as little as 1 or 2% -- depending on the circumstances.[33]

1.33 Several Guidelines (e.g., New Zealand and the U.K. (CC) Guidelines) also acknowledge that there are markets in which the SSNIP test is not normally used because it cannot produce useful information. For example, in so-called bid markets like building or highway construction contracts, there is generally no prevailing or competitive price on which to base the test. The relevant market is generally defined by reference to those firms capable of bidding and the issue is whether the transaction reduces the number of bidders, say, from 4 to 3. The same approach probably applies to most transactions in defense industries.

c) Supply-side substitutability

1.34 Firms not currently selling a product in competition with that of the merging firms but that could readily do so within a short period of time in reaction to a price increase can constrain the exercise of market power just as effectively as consumers on the demand side switching to alternative products. On the other hand, for supply substitutes to be considered an effective competitive constraint, suppliers must be able to switch production to the relevant product in a short time period without incurring significant additional costs or risks. The SSNIP test is employed in many of the Guidelines to determine what supply substitutes to include in the market.

1.35 Most of the Guidelines in one form or another acknowledge the importance of the supply-side in determining the issue of whether a transaction would create market power. A majority of the Guidelines use supply-side substitution in defining the boundaries of relevant markets.[34] (A notable exception is the U.S.; see below). In addition, while the Brazilian, EC, Finnish, Irish, Japanese, and Romanian Guidelines indicate a preference for demand-side substitutability factors, supply-side factors may also be considered if they are as effective a constraint on the hypothetical monopolist as demand-side substitutes.

1.36 Some Guidelines establish an express hierarchy between demand-side and supply-side factors: markets must be defined "primarily from the standpoint of consumers" (Ireland) because demand is considered "the most immediate and effective disciplinary force" (EU). Others simply mention demand-side and supply-side factors in turn.[35] However, all the Guidelines that provide for the inclusion of supply substitutes in the relevant market put conditions on their inclusion. These conditions generally relate to the time within which the supplier can in fact respond with a product competitive with that of the merging firms and the cost (investment) needed to respond.

1.37 In order to be considered at the market definition stage, the Brazilian, Canadian, Irish, New Zealand, and the U.K. Guidelines state that the response should generally occur within a year of the price rise. All of these Guidelines acknowledge that the exact time period will in each case depend on the nature of the market and specific circumstances of the case. The EC, Finnish, and Romanian Guidelines do not specify a time period but instead use the words "short term," "quickly," and "reasonable period," respectively.

1.38 The U.K. (OFT) Guidelines 1998 and Irish Guidelines add a practical consideration: supply substitutes will be included in the relevant market only if the units of output are sufficiently homogeneous to be meaningfully brought into market share calculations.[36] Otherwise, supply responses will be considered elsewhere in the analysis.

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The UK Authorities also include supply substitutes in the relevant market if there are similar products and/or operating in adjacent areas.

1.39 In sum, while there is a broad consensus on the importance of supply substitutes to market definition, the Guidelines differ concerning at what stage in the market power analysis it is to be utilized: the market definition stage, as part of the entry analysis, or in the assessment of competitive effects.

1.40 For example, the U.S. Guidelines generally define relevant markets only on the basis of demand-side factors. Where producers can virtually instantaneously and costlessly switch production, markets under the U.S. Guidelines may, for convenience, include supply side substitutes. Otherwise, consideration of supply-side factors is generally given only at subsequent stages of the process when additional market participants or credible entrants are identified. Several advantages, e.g., a clearer understanding of market power and more "sensible" market shares, are said to result from not including supply substitutability as part of market definition.[37] In any event, the factual question of whether a firm or firms on the supply side will respond to a price increase depends upon a complex set of issues, i.e., production capability and flexibility, contractual commitments to (and customer relations with) current customers, margins on current products, etc. Also, because of these often complex issues, determining demand-side substitutability is generally (though not always) less difficult than determining supply-side substitutability. The U.S. Guidelines seem to imply that it is more efficient to complete the demand-side task and then take account of the (normally) more complex and time-consuming questions presented by the supply side.

1.41 In any event, there are probably very few cases in which the calculation of market share(s) under the U.S. approach will differ from the calculation under the approach that includes supply-side responses in market definition.[38] This is because the U.S. guidelines provide for the inclusion in the market share calculation of all market "participants," which includes firms not currently producing the product if they are "uncommitted entrants." These are firms whose supply response to a price increase in the products of the merging firms would likely occur within one year "without the expenditure of significant sunk costs...."[39]

1.42 Also, even those Guidelines that include supply responses in market definition exclude products of potential suppliers at the market definition stage if substantial time or investment impediments exist. Most of those Guidelines then consider these suppliers in the assessment of whether their entry into the relevant market would counter the creation or exercise of market power. The Australian, Brazilian, Canadian, EC, Finnish, and U.K. Guidelines consider whether switching to the production of the relevant product requires significant new investment or a significant amount of time (typically more than a year). Some of these Guidelines refer to the considerable investment required, for example, by the construction or adaptation of facilities, research and development, and significant impediments related to technology, marketing, and distribution.

1.43 As noted above, in Ireland, producers of supply substitutes that exercise an immediate competitive constraint but whose units of output cannot meaningfully be added into market share calculations are considered at the competitive effects stage. Supply-side factors that exercise a longer-term competitive constraint are considered as entry effects.[40]

1.44 In any event, the choice of which stage to consider supply-side substitutability should not change the outcome on the market power issue:

> Some competition authorities prefer to define markets solely on the demand-side, leaving supply-side issues to the analysis of new entry. In practice both approaches should produce the same conclusions on the question of market power, provided that supply-side issues are examined at some point…Defining markets on the supply-side can allow early determination that an undertaking has no market power, thus avoiding the need for further analysis.[41]

Perhaps the optimum guideline on supply-side substitutability would be early consideration of supply responses that would be immediate (or nearly so) and with no or little investment. This would allow for early resolution of cases where supply side substitutability alone answers the market definition (and market power) question. In all other cases, the supply side would be considered later in the process, i.e., after the market is defined on a demand side basis only.

III. GEOGRAPHIC MARKET DEFINITION

1.45 The geographic market definition process starts with the identification of the geographic area where the merging parties offer the overlapping product and seeks to identify other areas from which customers could purchase these products should the sellers raise prices post-transaction. The language of the Australian Guidelines is typical of most Guidelines:

> Starting with the geographic area supplied by the merged firm, each geographic market is gradually expanded to incorporate sources of supply to which consumers would turn and firms which supply, or would supply, the relevant product into that area in the event of a significant price rise.[42]

1.46 As with both the demand and supply dimensions of product market definition, the SSNIP test plays a key role in the demand and supply dimensions of geographic market definition. Customers are asked if they would look outside the hypothetical geographic market if prices within that market rose and suppliers outside of the market are asked if they would sell into it if prices rose. This iterative process is completed and the geographic market defined when the hypothetical monopolist in an area can raise prices profitably without too many customers looking beyond that area or without too many out-of-area suppliers entering that area in response. In some cases, because of the availability of shipments and transportation cost data (particularly if that data is available over a period of changing economic conditions), the SSNIP test may operate with less friction in the geographic dimension than in the product market dimension.

1.47 Some of the Guidelines refer generally to the test of applying a hypothetical price increase to define geographic boundaries:

> The Commission will seek to define the geographical extent of a market to include all of the relevant, spatially dispersed, sources of supply to which buyers can turn should the prices of local sources of supply be raised.[43]

Others are more specific in their reference to the SSNIP test:

> The Authority delineates the geographic market for each relevant product, to be a region where a hypothetical monopolist of the product in the region could profitably impose a small but significant and non-transitory increase in price, holding constant the conditions of sale for all products produced elsewhere.[44]

1.48 Indeed, eight of the Guidelines (Finland, Germany, Japan and Romania excepted) refer to the SSNIP test. One of the Guidelines notes at the outset a relationship between the value of the product and the dimension of the geographic market:

> Generally, the higher the value of the product to be purchased, in absolute terms or relative to total buyer expenditure as appropriate, the more likely are buyers to travel and shop around for the best buy, and the wider the geographic extent of the market is likely to be.[45]

1.49 While most Guidelines contemplate the possibility of local (i.e., "infra-national") markets, only five of the Guidelines expressly refer to the possibility of an international market.[46] Other Guidelines do not seem to exclude the consideration of foreign competition[47] but indicate that it will be taken into account as part of the competitive assessment rather than at the market definition stage.[48] This would seem to complicate the analysis unduly, especially the calculation of market share. Moreover, it would seem more sensible for enforcement agencies and courts to adopt (as a "best practice" perhaps) a presumption that national boarders are not relevant when determining the boundaries of an economically sensible geographic market.

1.50 Some Guidelines refer to qualitative factors to assist in defining the relevant geographic market. For example, the EC and Romanian Guidelines refer to an area where the conditions of competition are "sufficiently homogeneous." The EC takes particular note of the process of market integration in the Union and the need to recognize artificial national barriers to trade that are in the process of being dismantled and thus may affect the scope of the geographic market going forward.[49]

IV. VERTICAL INTEGRATION, THE TEMPORAL DIMENSION, AND OTHER ISSUES

1.51 The Australian Guidelines explicitly add a so-called functional dimension to market definition:

> Delineation of the relevant functional market requires identification of the vertical stages of production and/or substitution which comprise the relevant arena of competition. This involves consideration of both the efficiencies of vertical integration, commercial reality and substitution possibilities at adjacent vertical stages. [50]

The purpose of this unusual feature is apparently to consider whether products produced or sold at several levels by vertically integrated firms, or by firms at another level of distribution than the merging firms, should be included in the relevant market because the exercise of market power at one stage of distribution can be constrained by firms at an adjacent level of distribution. Several other Guidelines (New Zealand, U.K.) discuss vertical integration in the market definition context but in more general terms, e.g., the U.K. (CC) Guidelines state that "conditions in downstream and upstream markets may affect the assessment of demand-and-supply-side substitution …"[51]

1.52 Transactions involving vertically integrated firms raise the issue of whether production of a relevant product consumed internally by a market participant ("captive production") should be considered in the product market or whether only production sold to the "merchant market" should be included. The Guidelines that refer to this issue generally follow the principle that captive capacity or production will be included in the market only if it can be demonstrated that it would be profitable for the supplier to forego captive use and sell into the merchant market in response to a SSNIP of the product in the merchant market. For example, the U.K. (OFT) Draft Guidelines note that "The OFT may take into account captive capacity or production where that capacity or production could be readily and profitably switched to the free market."[52] Under the U.S. Guidelines, the products of vertically integrated firms are included in the relevant market "to the extent that such inclusion accurately reflects their competitive significance in the relevant market prior to the merger." This standard would seem to leave the issue open to development on a case by case basis.[53]

1.53 The U.K. (OFT) Guidelines 1998 offer a third dimension for market definition (in addition to product and geographic markets)—the temporal market, i.e., peak and off-peak services and seasonal variations in products.[54] The temporal factor may narrow the market definition by, for example, excluding off-peak rail tickets from the market where they are not viewed as substitutes for peak rail tickets by customers. While the U.K. (OFT) Guidelines 1998 explicitly set out this factor, it seems to be implicit in most Guidelines of the other jurisdictions that consider demand-side substitutability.

Price Discrimination

1.54 As noted previously, seven Guidelines reserve the possibility of defining markets of a subset of customers who are "captive" in the sense that, unlike others, they would not, or could not economically, switch to another product or to a supplier outside of a geographic area in response to a price increase.[55] Price discrimination (used here in its economic sense) can occur in both the product dimension (e.g., business travelers with a high value on certain departure and arrival times) and in a geographic dimension (e.g., customers without access to modes of transportation available to others). This concept of price discrimination is variously treated in the Guidelines that address it. For example, the Finnish Guidelines do not refer to the term "price discrimination" but do contemplate that "separate markets" may exist where certain customers must pay higher prices than others:

> The difference between various groups of customers and the differences between the prices of goods can have a bearing on the market definition. There can be separate markets, for example, if the goods are clearly sold at

different prices and on different conditions to different groups of customers, even though the physical characteristics and the intended use of the goods would indicate that they belong to the same market.[56]

Other Guidelines refer to “targeted” or “captive” customers to whom the relevant product is sold at higher prices because of the ability of sellers to price discriminate against them.[57] Price discrimination would seem an important (even outcome-determinative) concept in some cases and its absence from some Guidelines, while not necessarily indicating it is not a feature of market analysis in those jurisdictions, is notable.

1.55 It might also be noted that the ability of a firm to price discriminate among its customers, i.e., to charge customers according to how they individually or as members of sub-sets of customers, value the firm’s product, can also be evidence of market power, especially with respect to those customers paying relatively more for the product than other customers.

Chains of Substitution

1.56 Three of the Guidelines discuss “chains” or “links” of products or geographic areas that may in combination constitute a relevant market under certain conditions despite the fact that they are not direct substitutes.[58]

1.57 The U.K. Guidelines take as an example the automobile market where a relatively inexpensive small car may not be viewed as a close substitute for a large luxury car (at least not according to a SSNIP test) but where nonetheless both cars may be in the same relevant product market.[59] This is because there are many models in between the two models at the opposite ends of the quality spectrum, and a rise in price of the most inexpensive small car might affect the demand and supply of cars adjacent to it in size and price, which will in turn affect conditions in cars adjacent to them, and so on until the “ripple” effect extends over the entire car market. This concept may also be helpful in service markets (e.g., ocean cruises where the cheapest room is not seen as a close substitute in a market definition sense for the most expensive stateroom but where they are in fact linked in a continuous chain of price and quality). In any event, most Guidelines do not address this important concept.

1.58 In the geographic dimension, one can think of a series of petrol stations strung out along a highway. The stations at the opposite end of the road may not be substitutes for most drivers but the pricing at each may be affected by the others. This is because the pricing at each station affects the price at the next closest station, which in turn affects its closest station, until a "chain" effect is established that may, as an economic matter, place all the stations on the highway in the same relevant geographic market.

V. HOW TRANSPARENT ARE THE GUIDELINES?

1.59 The Guidelines give valuable guidance to merging companies in defining markets. While some are quite general and others very detailed, they all describe generally the underlying principles and criteria for market definition and provide a list of factors and evidence that the authorities will rely on in defining the relevant market. Some Guidelines also summarize the process of defining markets. Some Guidelines do not provide guidance on the process and presumably defer to the agencies, courts, and practitioners to apply the principles on a case-by-case basis.

1.60 Case-law is cited in three of the Guidelines. The Australian and New Zealand Guidelines contain frequent citations and quotations from cases that support certain propositions. This reference to case law guides the reader to important cases on market definition and sometimes quotes the language from the decision. The Japanese Guidelines provide many illustrative examples of past cases involving market definition in a wide variety of industries. This approach can be useful as it offers the benefit of practical examples. Other Guidelines (e.g., the EC and the U.S.) seek to identify core issues and basic criteria in a shorter format without frequent examples or citations of case law. This approach has the advantage of emphasizing core legal and economic principles to be applied in all cases.[60] The two most recent draft Guidelines (Ireland and the U.K. (CC) Guidelines) focus on core principles and do not cite case-law.

1.61 A balance needs to be struck, it seems, between guidelines that contain a limited number of well-defined but broadly applicable principles and those that are so detailed as to carry the potential to confuse the reader or to appear to reflect inflexibility in dealing with what can be enormously complex and varied circumstances. In all cases, scope must remain for additional learning about how real-life markets operate and how they can be defined, measured, and understood by competition enforcement authorities, by the courts, and by lawyers and economists advising clients.

VI. POST-SCRIPT

1.62 Since the initial preparation of this chapter in the Spring of 2003, we are aware of two significant additions/updates to merger guidelines in the jurisdictions considered here. In the U.K., the Office of Fair Trade released Mergers -- Substantive Assessment Guidance ("OFT Guidance") in May 2003. Also, the European Commission published Guidelines on the Assessment of Horizontal Mergers Under the Council Regulation on the Control of Concentrations Between Undertakings ("EC Horizontal Guidelines") in February 2004.

1.63 Neither document considers market definition in detail. The OFT Guidance provides a brief discussion of market definition, but refers the reader to the U.K. (OFT) Guidelines 1998 for more detail. The EC Horizontal Guidelines mention market definition as a prerequisite to analyzing competitive effects and references the Commission's Notice on the Definition of the Relevant Market for the Purposes of Community Competition Law.

VII. CHART

1.64 A chart describing the key elements of each jurisdiction's approach to market definition is attached as Exhibit 1.

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2 Australia, Brazil, Canada, Finland, Ireland, Japan, New Zealand, the United Kingdom, and the United States address market definition as part of general guidelines on merger control, whereas the European Commission and Romania have issued specific guidelines on the definition of the relevant market in both non-merger and merger cases. The 'Principles of Interpretation' issued by the German authorities do not include detailed discussion of market definition. For the U.K., three sets of Guidelines were considered: the 1998 Market Definition Guidelines issued by the OFT, the draft guidelines consultation paper issued by the OFT in October 2002, and the Competition Commission guidelines issued in March 2003. These guidelines are referred to as the "U.K. (OFT) Guidelines 1998", the "U.K. (OFT) Draft Guidelines" and the "U.K. (CC) Guidelines", respectively.

3 It is understood that in technical economic terms, all firms, other than in a perfectly competitive market, have some degree of "market power." The term is used here, however, as it is often used in merger analysis, i.e., to mean the ability of a firm or firms post-transaction to reduce competition whether unilaterally or through coordinated interaction.

4 The residual demand curve measures the elasticity of demand faced by the merged firm after all of its competitors' sales of the product in question have been taken into account, i.e., it demonstrates whether the merged firm can profitably increase prices to its customers.

5 "It is only because we lack confidence in our ability to measure elasticities, or perhaps because we do not think of adopting so explicitly economic an approach, that we have to define markets instead." Richard A. Posner, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE (1976), at 125.

6 See, e.g., *FTC v. Staples, Inc*. 970 F. Supp. 1066 (D.D.C. 1997), where the court concluded that the transaction would likely lead to higher prices in significant part because the internal pricing data of the parties demonstrated that prices were lower in cities in which Staples and Office Depot competed than in cities where they did not.

7 In 1950, an amendment to the statute, among other things, added the language "in any line of commerce in any section of the country."

8 See *United States v. Columbia Steel Co.*, 334 U.S. 496 (1948).

9 In 1974, the U.S. Supreme Court held in *Marine Bancorporation* that "determination of the relevant product and geographic markets is a 'necessary predicate'" in merger cases. 418 U.S. at 618.

10 Report of the Task Force on Productivity and Competition, reprinted in 1 J. REPRINTS FOR ANTITRUST L. & ECON. 827 (1969).

11 In the 1960s and 1970s, the federal antitrust agencies and the courts were criticized by, among others, proponents of the so-called Chicago School for "gerrymandering" markets to block transactions in an alleged campaign against corporate "bigness." The term "gerrymandering" refers to efforts by politicians to configure election districts to ensure that their party continues to hold the legislative seats for those areas.

[12] Donald F. Turner, *The Role of the "Market Concept" in Antitrust Law*, 49 ANTITRUST L. J. 1145, 1150 (1980)

[13] "[A] proper definition of the relevant market is a necessary precondition for any assessment of the effect of a concentration on competition.", European Court of Justice, Joined Cases C-68/94 and C-30/95, *France and Others vs. Commission*, 1988 ECR I-1375, para. 143.

[14] "Market definition is a tool to identify and define the boundaries of competition between firms. It serves to establish the framework within which competition policy is applied by the Commission." (I.2) (In addition, the EU Competition Commissioner stated in 2001 that market definition is "a cornerstone of competition policy, but not the entire building...a tool for the competitive assessment, not a substitute for it.") The U.K. (OFT) Draft Guidelines indicate that "market definition is not an end in itself. It is a framework for analysing the direct competitive pressures faced by the merged firm." (3.12). The Australia Guidelines recognize that because market definition is subordinate to the goal of evaluating competitive effects, it is not a rigid exercise: "[T]he linking together of the process of definition of the market and its object implies some flexibility in the former."(5.36).

[15] Irish Guidelines at 2.2.

[16] In *FTC v. Staples, Inc*. 970 F. Supp. 1066 (D.D.C. 1997) the Court relied on direct pricing evidence to demonstrate that an office supply superstore was likely to maintain higher prices where it faced less competition from other office supply superstores even where functionally equivalent products were available from a variety of other retailers.

[17] Australia, Canada, Ireland, Japan, New Zealand, the U.K., and the U.S. use the SLC test and the EC, Finland, Germany, and Romania test for dominance. Brazilian competition law contains tests for both dominance and lessening or restriction of competition.

[18] See Carl Shapiro, *Mergers With Differentiated Products*, ANTITRUST (Spring 1996).

[19] Australian, Brazilian, Canadian, the EC, Irish, U.K. and U.S. Guidelines.

[20] Brazilian, Canadian, the EC, Irish, U.K. and U.S. Guidelines.

[21] Australian, the EC and U.K. Guidelines.

[22] Australian, Canadian, EC, Finnish, New Zealand, U.K., and U.S. Guidelines.

[23] The Finnish, Japanese and Romanian Guidelines do not mention the SSNIP test as an analytical tool to measure substitution. As noted above, the German 'Principles of Interpretation' do not include detailed discussion of market definition.

[24] Canadian Guidelines at 3.1.

[25] See Michael L. Katz and Carl Shapiro, *Critical Loss: Let's Tell the Whole Story*, ANTITRUST (Spring 2003).

[26] Id.

[27] Australia, Canada, the EC, Ireland, New Zealand, the U.K. and the U.S.

[28] For example, "[T]he price to take into account will be the prevailing market price." EC Guidelines at II.19.

[29] The EC Guidelines state, for example, that the prevailing market price might not be appropriate "where the prevailing price has been determined in the absence of sufficient competition". EC Guidelines at II.19. The New Zealand Guidelines state, "Where the Commission considers that prices in a given market are significantly

different from competitive levels, it may be necessary for it to assess the effect of a *ssnip* imposed upon competitive price levels, rather than upon actual prices, in order to detect relevant substitutes." New Zealand Guidelines at 3.6 fn. 23.

30 *United States v. E.I. duPont de Nemours & Co*. 351 U.S. 377 (1956).

31 Australia, Ireland, the U.K. (OFT) Guidelines 1998, and the U.S.

32 "By using the likely future price absent the merger as the relevant base price, the market is defined in a way which is relevant to the conduct at issue, by identifying and including the closest substitutes to the merging firms product(s)." Australian Guidelines at 5.44 fn. 38.

33 See Competitive Impact Statement for *United States v. Vail Resorts, Inc., Ralston Resorts, Inc., and Ralston Foods, Inc.* available at <http://www.usdoj.gov/atr/cases/f1000/1014.htm> ("It was estimated that, if the merger were allowed to take place without any divestiture, there would be an overall average increase in Front Range discounted lift ticket prices on the order of 4%, or about $1 per lift ticket on average to all Front Range customers, with higher price increases at the merging firms' resorts.")

34 The U.K. (OFT) Guidelines 1998 (and EC) uses the paper manufacturing industry as an example of the utility of supply-side substitutability in defining markets. While different types of paper are not demand side substitutes (bond paper vs. copier-grade paper), both are made on the same machines in the same process. The machine can fairly easily and without significant expense be switched from producing one to producing the other. Thus, bond paper and copier paper should be in the same product market.

35 The Japanese Guidelines do not distinguish between supply-side substitutability and market entry but merely list as criteria for market definition some factors that are generally used to identify supply substitution.

36 Irish Guidelines at 2.10; U.K. (OFT) Guidelines 1998 at 3.21.

37 Gregory J. Werden, *Market delineation Under the Merger Guidelines: a tenth anniversary retrospective*, THE ANTITRUST BULLETIN (Fall 1993).

38 Id. at 525.

39 Firms that could respond but would require more time or significant sunk costs ("committed entrants") are considered in the entry analysis, U.S. Guidelines at 1.32.

40 Irish Guidelines at 2.10.

41 U.K. (OFT) Guidelines, 1998 at 3.18.

42 Australian Guidelines at 5.61.

43 New Zealand Guidelines at 3.3.

44 Irish Guidelines at 2.7.

45 New Zealand Guidelines at 3.3.

46 Australian, Canadian, EC, U.K. (CC) Guidelines, and U.S. Guidelines. The Romanian Guidelines also seem implicitly to consider this possibility, although it is not clear whether they are merely stating a hypothetical future development: "[T]he progress in the field of transports and communications and the tendencies of abolishing the barriers and of liberalising the international trade may alter, in time, the limits of the relevant geographic market, going beyond the borders of a country."

47 Although this is not clear in the Japanese Guidelines at 10: "Even if the business area of company extends to foreign countries, the competition to be maintained…is

domestic competition in Japan. Therefore, the main focus of examination will be on the scope of business activities of domestic traders."

48 New Zealand Guidelines at 20: "the Commission, in order to comply with the wording of the Act, is likely to define a national market and then...to consider the extent to which overseas suppliers exercise a competitive constraint on the participants in the domestic market." We understand that this is also the approach of the German authorities ("normative" market vs. "economic" market).

49 EC Guidelines at 32: "A situation where national markets have been artificially isolated from each other because of the existence of legislative barriers that have now been removed will generally lead to a cautious assessment of past evidence regarding prices, market shares or trade patterns."

50 Australian Guidelines at 5.64. The Guidelines note that, for example, a single functional market for the distribution of groceries to the public was defined, reflecting the constraint imposed on the conduct of independent wholesalers by downstream competition between their independent retail customers and the vertically integrated chains. The New Zealand Guidelines also add a functional level (See 3.4).

51 U.K. (CC) Guidelines at 2.35.

52 U.K. (OFT) Draft Guidelines at 3.22.

53 U.S. Guidelines at 1.31.

54 U.K. (OFT) Guidelines 1998 at 5.

55 Australian, Canadian, EC, Finnish, New Zealand, U.K., and U.S. Guidelines.

56 Finnish Guidelines.

57 U.S. Guidelines at 1.12 (product market) and 1.22 (geographic market) ("targeted"); U.K. (OFT) Guidelines 1998 at 3.7 ("captive").

58 U.K. (OFT) Guidelines 1998 at 3.9; Australian Guidelines at 5.55; EC Guidelines at 57-58.

59 U.K. (OFT) Guidelines 1998, at 3.9-3.10.

60 See also W. Blumenthal, *Clear Agency Guidelines: Lessons from 198*2, 68 ANTITRUST L.J. 5 (2000).