
ICN Merger Working Group: Analytical Framework Subgroup

PROJECT ON MERGER GUIDELINES: MERGER GUIDELINES WORKBOOK

**PRELIMINARY DRAFT FOR DISCUSSION -- PREPARED BY
THE OFFICE OF FAIR TRADING AND IRISH COMPETITION AUTHORITY**

Prepared for the fourth ICN annual conference in Bonn

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PREFACE

Following work carried out by the Mergers – Analytical Framework Subgroup for the first ICN conference in Naples in 2002 and for the second and third ICN conferences in Merida (2003) and Seoul (2004),¹ delegates at the Seoul conference expressed a wish to develop a 'checklist' to help guide competition assessment of mergers.

This project is the response to that request. The final document will contain a checklist of topics which the authors of new or revised merger guidelines may wish to cover, with an explanation as to why those topics have value in merger assessment and suggestions as to how those topics might be assessed in practice. In addition, it may well be that the completed Workbook is of particular use to those who have not yet developed merger guidelines or who have taken the decision not to develop such guidelines. For them, it is expected that the Workbook will represent a useful sourcebook on a framework for analyzing the competition effects of mergers.

For the conference in Bonn, the team has compiled a preliminary draft of the merger guidelines workbook. The document presented to this conference contains five of the anticipated eight worksheets covering market definition, market structure and concentration, unilateral effects, coordinated effects; and entry and market expansion. Worksheets on efficiencies, the failing firm defence and vertical mergers will be developed and added to the document over the next year.

As the workbook has developed, the team has encouraged input and feedback on its contents from jurisdictions for whom this Workbook is primarily intended. Such involvement is critical to its success. Going forward we are seeking to mobilize even further input by holding workshops where the completed workbook will be put to the test against hypothetical cases. Additionally, we are seeking to include case studies for each worksheet and would welcome contributions of relevant examples from jurisdictions. Following stringent testing, the final document will be presented in 2006 to the ICN's fifth annual conference in South Africa.

¹ The Analytical Framework Subgroup (the Subgroup) has prepared two previous papers: an issues paper 'The Analytical Framework for Merger Control' was prepared for the Naples conference (the Issues paper), and it reported on a merger guidelines project at the Merida and Seoul conferences (the Guidelines project paper). These two papers are available on the ICN website.

As noted above, this project builds on work completed for ICN's Naples, Merida and Seoul conferences. That work sought to draw out the common ground between merger guidelines in various jurisdictions, as well as key points of difference. The focus on guidelines reflects their importance to both domestic and international merger control. Domestically, sound merger guidelines are important because they root merger control analysis in sound economics. Measured against these standards, pro-competitive (or efficiency-enhancing) mergers are allowed to proceed, and only anti-competitive mergers are prohibited or allowed only subject to conditions.²

As more and more jurisdictions adopt merger control regimes, a common understanding of the basis for and content of merger guidelines is an important tool in improving consistency of analysis and decision-making across national borders, and in reducing legal uncertainty for firms placed in that situation.

This guide has been put together under the Chairmanship of the UK Office of Fair Trading and Irish Competition Authority with helpful input from core contributors in Mexico and South Africa.

As chairs of the ICN's Analytical Framework for Mergers Subgroup, we are most grateful to all who have contributed their time and expertise to this report. Our particular thanks go to the teams at the OFT and Irish Competition Authority that have worked on this project – Simon Priddis, Simon Pritchard, Clare Kendall and Ted Henneberry.

Sir John Vickers
Chairman
UK Office of Fair Trading

Mr. John Fingleton
Chairman
Irish Competition Authority

² For present purposes, we can leave open the substantive test underpinning merger control regimes: some regimes use a consumer welfare test and some rely on total welfare. Certain regimes also include broader public interest criteria.

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CHAPTER I – INTRODUCTION

Objectives

- 1.1. The aim of this Workbook is to be a user-friendly, practical manual to help assess mergers by posing key questions the investigating authority will wish to address when considering a merger's potential effect on competition. Of course the merger laws that apply in different jurisdictions are not all identical. But competition assessment is a core element – if not the core element – of merger review, and we hope that the Workbook will be of correspondingly wide usefulness.
- 1.2. We hope that this Workbook will become a 'well-thumbed' tool for jurisdictions new to or in the early years of merger control as well as a useful guide for companies and their advisers on criteria applied by authorities in the competition assessment of mergers. Accordingly, everyday language is used whenever possible to make the Workbook widely accessible. Where technical terms are used, explanations are given. We hope that the document will also be available in French and Spanish.

Content

- 1.3. The merger guideline checklist project follows on from the comparative study of merger guidelines discussed at the ICN's second annual conference in Merida in 2003. That project – and the accompanying Guidelines project paper – was finalised for the 2004 conference in Seoul. Topics investigated included market definition, unilateral effects, coordinated effects, barriers to entry and efficiencies. In its conclusions, the Guidelines project paper identified that – notwithstanding differences in the precise wording of various substantive merger test – there are relatively few fundamental differences among the available merger guidelines and they have a great deal in common.³

³ The Seoul paper concentrated its review on 12 sets of guidelines/guidance published around the world. More generally, the project identified 26 jurisdictions that publish guidelines on the substantive analysis of mergers under their laws. Some jurisdictions, such as the United States of America, have more than one agency that can carry out merger reviews, and in some of these jurisdictions, each agency publishes its own guidelines/guidance.

- 1.4. This project seeks to build on the findings of the Guidelines project paper, drawing together common approaches to problems and seeking to elicit best practice in formulating an analytical framework for the competition assessment of mergers. This continues the Subgroup's focus of inquiry on merger guidelines since the inaugural ICN conference in Naples in 2002.
- 1.5. Chapter 2 defines and discusses some of the key concepts used in the competition assessment of mergers and Chapter 3 places some of this in context by considering the different types of mergers that may arise. The eight worksheets in Chapter 4 are the core of this Workbook, providing detailed guidance on how to examine the different elements of merger assessment. Chapter 5 contains some concluding thoughts and Chapter 6 provides a glossary of terms and suggestions for further sources, including ICN-related material.
- 1.6. The worksheets in Chapter 4 are not confined to horizontal merger assessment, but will also cover vertical merger assessment. Within each of these segments, we have endeavored to address each of the key topics for merger assessment. However, we have been conscious of the underlying objectives of this Workbook: it is not intended to be a textbook on merger assessment, nor a global review of the various approaches to topics in merger review.
- 1.7. The focus of each Worksheet is on first principles, their rationale and practical application. The final version of this document will contain a further resources section for readers wishing to pursue individual topics to a more detailed level. In the assessment of any merger, it is possible that competition issues will arise that are not clearly envisaged by this Workbook. In such cases, it is intended that this guidance be used as a framework for competition assessment and that it be interpreted in a flexible but principled manner. The guidance reflects current common legal and economic thinking which, by its nature, is continuously evolving. As case law and economic techniques of competition assessment develop, this Workbook could be revised to reflect such developments.

CHAPTER 2 – CONCEPTS AND CORE PRINCIPLES

- 2.1. The two basic questions in merger review are:
- (a) which transactions are subject to review under merger control laws; and
 - (b) what is the substantive legal test against which mergers should be assessed?
- 2.2. This Workbook answers question (b). The focus here is on substantive assessment of actual transactions. For further guidance on other issues, see the ICN guidance on Notifications and Procedures in Merger Assessment.

What is the substantive legal test against which mergers should be assessed?

- 2.3. A key starting point for any set of guidelines is to explain how the relevant national law translates into a competition test. In particular, it is important to explain how a competition authority expects to identify when a merger gives rise to competition concerns.
- 2.4. Commonly, competition is seen as a process of rivalry. When effective, that competitive process compels firms to win customers by offering a better deal than their rivals, and so enhancing consumer welfare. Consumer welfare depends on a range of factors, including price, output, quality, variety and innovation. In most jurisdictions, the core purpose of merger review is to protect competition, so that mergers do not lead to harm to consumers.
- 2.5. Most mergers don't harm competition. Some may be pro-competitive because they positively enhance levels of rivalry and/or lower costs and lead to innovation. Many others are competitively neutral, for example because sufficient post merger competition will remain to ensure that competition continues to discipline and incentivise the commercial behaviour of the merged firm. However, where rivalry is substantially weakened and there is no off-setting fall in costs which would be passed

on to consumers e.g. in the form of lower prices, competition authorities generally have the responsibility to intervene.

- 2.6. It is implicit in the description above that basic merger analysis relies on understanding the effect that a merger may have on the expected state of competition in a market⁴ The central concept of any competition test is therefore a comparison of the prospects for competition with and without the merger, to better answer whether the merger itself makes a substantive difference. The key to the analytical process is addressing what would have happened to competition absent the merger. The competitive situation without the merger is sometimes known as the **counterfactual**.
- 2.7. In most cases, the best guide to the counterfactual is considered to be the prevailing conditions of competition. However, imminent changes in the structure of competition may need to be accounted for in order to reflect as accurately as possible the nature of rivalry without the merger. Examples of such circumstances may include imminent entry or exit from the market or committed expansion plans by existing competitors. There may be changes to the regulatory structure of the market such as liberalisation or tighter environmental constraints that will change the nature of competition. Where one of the parties to a merger is a genuinely and irredeemably failing firm, pre-merger conditions of competition might not prevail even if the merger were prohibited.⁵

⁴ Guidance on the application of economics to each component of merger assessment is discussed in Chapter Four of this manual.

⁵ This is the basis for the failing firm argument and is discussed in more detail in Chapter Four.

CHAPTER 3 – TYPES OF MERGER

- 3.1. Before considering the core topics that should be covered by merger guidelines, it is first important to understand the types of mergers that may arise. Absent this, it is difficult to provide – in merger guidelines – a coherent framework to explain how they will be analysed. This chapter therefore sets the scene for the more detailed consideration of core topics provided in Chapter 4.
- 3.2. There are, broadly speaking, three types of merger: horizontal, vertical and conglomerate mergers.

Horizontal mergers

- 3.3. A horizontal merger is one between parties that are close enough competitors to be placed in the same economic market: for example, two suppliers of sugar. It is the overlap between activities of the merging parties that directly leads to harm to – or loss of – competition.
- 3.4. The focus of analysis is on evaluating how the competitive incentives of the merging parties and their rivals might change as a result of the merger. A merger may affect entry barriers and buyer power. The merging parties may themselves make efficiency gains and in some circumstances this may increase competition within an industry. It is the competition authorities' job to ensure that the merged entity is not likely to be able to raise prices or reduce output profitably or otherwise restrict choice or innovation.
- 3.5. There are two conceptually distinct means by which a horizontal merger might impact on competition (although a merger may raise both type of concern):
- **Unilateral effects** – also known as **non-coordinated effects** – arise where, as a result of the merger reducing competition between the parties, the merged group can profitably raise price. This could occur even if rival firms keep their prices

constant. Alternatively, rival firms may also find it profitable to react to this higher price by raising their own prices – in this way, the final market equilibrium might involve more firms than just the merged entity charging higher prices.

- **Coordinated effects** arise where the merger increases the probability that, post merger, firms in the same market may tacitly or explicitly coordinate their behaviour to raise prices, reduce quality or restrict output.

Vertical mergers

- 3.6. Vertical mergers are mergers between firms that operate at different but complementary levels in the chain of production and/or distribution. This occurs where an upstream firm (e.g. a supplier of computer microchips) merges with a downstream firm (e.g. a PC manufacturer). In purely vertical mergers there is no direct loss in competition as is in the case in horizontal mergers because the parties' products did not compete, and as such there is no change in the level of concentration in either relevant market.
- 3.7. Vertical mergers are often efficiency-enhancing largely because they involve complementary products or services. Product A is a complement to B if a higher price for A reduces the demand for both A and B. (thus, if PC prices rise, demand for PCs will fall, and so will demand for microchips). Even so, vertical integration may still give rise to competition concerns. A key question is whether the vertical merger is expected to force rivals from the market or raise barriers to entry in a manner that lessens competition. This is usually referred to as market foreclosure and may be invoked through practices such as refusal to supply or facilitating price discrimination that raises rivals' costs.
- 3.8. For example, say that a major sugar producer also owns one of the two national sugar distribution networks (i.e. is vertically integrated). It acquires the only other distributor that distributes sugar from other producers. In this context, there may be a vertical foreclosure concern if (i) the transaction would allow the merged entity to deny rival sugar suppliers access to the downstream retail markets by stopping the acquired distributor from handling their products and (ii) rival sugar producers could not vertically integrate into distribution also.

3.9. Additionally, vertical mergers may increase the ability and incentive of parties to collude in the market. Vertical merger concerns are likely to arise only if market power exists or is created in one or more markets along the supply chain or where there is already significant vertical integration.

3.10. The fundamental questions to be considered when assessing vertical mergers are:

- What is the theory of competitive harm;
- Is there pre-existing market power at one or more levels of the supply chain;
- Would the parties' economic incentives to engage in a foreclosure strategy change as a result of the merger?

Each of these is explained in greater depth later in this guide.

Conglomerate mergers

3.11. Conglomerate mergers involve firms that operate in different product markets. Merger review here is controversial, as commentators disagree on whether such mergers ever result in competition concerns sufficient to justify intervention.⁶

3.12. Proponents of conglomerate theories of harm argue that in a small number of cases, usually where the products acquired are complementary to those of the acquiring firm, potential harm may arise by way of what is sometimes called 'portfolio power'. Portfolio power is said to arise where a merger that does not increase concentration in any one market brings together a strong position in several markets. For example a firm with 70% share in pasta and 0% in ready-made pasta sauces unites with a firm with 70% in pasta sauces but no presence in pasta. The theory is that market power is created because the firm is better able to leverage its products by tying, bundling or other means, in other words, obliging supermarkets, for example, to stock exclusively both its pasta and pasta sauces. Critics of conglomerate theories might argue that non-merger antitrust law (e.g. monopolization, abuse of dominance laws) could address such harm if it arose.

3.13. It is of course true that, because of the products involved, any one transaction may raise issues under more than one of the headings above. Indeed, in some of the

⁶ [Accordingly, it is not presently intended to cover this area in a separate worksheet; a guide to further reading will be provided in Chapter 6.]

most complex transactions, competition authorities need to address multiple issues and theories of harm in the same case.

CHAPTER 4 – MERGER GUIDELINES WORKSHEETS

4.1. When complete, this chapter will contain the various merger guideline worksheets. Each worksheet covers an individual topic, of which there will be eight.

- A. Market definition
- B. Market structure and concentration
- C. Unilateral effects
- D. Coordinated effects
- E. Market entry and expansion
- F. Efficiencies
- G. Failing firms
- H. Vertical mergers

4.2 This preliminary draft contains worksheets A to E listed above. Each of these worksheets is organized in the same way. They begin with a brief discussion of the place of the topic in merger control, followed by a summary of the relevant economic principles that underpin that part of the competition assessment. The core purpose of each Worksheet is to provide analytical guidance on what questions an authority might ask itself at that stage of the assessment, and how information and evidence that it has collected might be interpreted. Where appropriate, guidance is also provided on how to avoid common pitfalls.

CHAPTER 4: WORKSHEET A – MARKET DEFINITION

Introduction

- A.1. Proper examination of the competitive effects of a merger rests on a sound understanding of the competitive constraints under which the merged firm will operate. The principal constraints under which the merged firm will operate are initially identified with the help of market definition. It is essential to note that market definition is not an end in itself, but rather a step which helps in the process of determining whether the merged entity possesses, or will post-merger possess market power.
- A.2. In some cases it may be clear that on any sensible market definition the merged firm will not possess any market power. In that case it may not be necessary to establish which of the candidate market definitions is correct. Indeed decisions published by established merger regimes commonly comment that it is not necessary to come to a firm conclusion on the scope of the relevant market since the merger does not appear to harm competition on any reasonable definition, including the narrowest possible definition.

Economic rationale and principles

- A.3. Market definition is important for two main reasons:
- First, the exercise of defining markets provides a useful analytical framework in which to organise the analysis of competition. Firms in the relevant market offer the most immediate and direct competition to the merged entity.⁷ In this sense, market definition sets the stage on which competition takes place. For example it enables us to assess the respective positions of the merged entity's rivals and, when considering

⁷ This point is directly relevant to one of the most serious pitfalls of market definition. It is easy to assume that, if included in the scope of a relevant market, a rival product represents a perfect competitive constraint on the product(s) of the merging parties. This may not be the case, so care is needed to avoid overstating the extent of competition between firms inside a 'relevant market'. In the same way, suppliers outside the scope of the relevant market represent a less direct competitive constraint, but totally discounting them can be wrong.

the possibility that new competitors might enter the market, it is of course necessary to identify the market being entered.

- Second, market shares⁸, the most widely used proxy for the determination of the absence or possible existence of market power, can be calculated only after the scope of the market has been defined. As an *initial* indicator, when the combined post-merger market share of the merged entity is expected to be high, competition concerns might arise.

- A.4. A market generally includes a group of products which compete with one another within a geographic area. When conducting market definition analysis, it is generally practical to describe the relevant product market first, and then to define the relevant geographic market. The starting position for identifying the scope of competition involves identifying products which are substitutable from the point of view of customers. Substitutability includes whether the product can technically serve the same purpose, and whether it will do so in a way that is cost-effective enough for sufficient customers to consider it a realistic economic alternative. As an extreme example, passengers could rent a helicopter rather than take an inter-city bus, but this will not be an economic substitute to bus travel.
- A.5. The scope of the market is often not always obvious. Does a manufacturer of colas compete in the market for cola-flavoured drinks, the market for fizzy drinks, the market for soft drinks, the market for non-alcoholic beverages or some other collection of products? Its market share could vary significantly depending on which definition is used but market shares cannot be measured until the question is resolved.
- A.6. A common way of looking at this problem is to apply the 'hypothetical monopolist' test to the overlapping product and geographic region in question. An explanation of how to apply this test is given below.

⁸ 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. This is discussed in further detail under the market structure and concentration chapter (worksheet B) of this manual.

⁹ There is an argument that the competitive price should be used rather than the prevailing price, due to the possibility the merged entity was exercising market power pre-merger – this issue is known as the cellophane fallacy. However, the prevailing price is nearly always the appropriate price to use, and is the benchmark referred to in nearly all Merger Guidelines.

A.7. It should be emphasised that defining a market with mathematical precision is rarely possible. The relevant market is in practice no more than an appropriate frame of reference for analysis of the competitive effects. It is essential to have constant awareness of this throughout the merger assessment process. It is not the case that products should be viewed as being either one extreme or the other such that they are either,

- in the market, and therefore a perfect 100% substitute for any other product in that market or
- out of the market, and therefore offering zero substitutability or constraint on products in the market.

This position is often referred to as the 0-1 fallacy. However, in reality, a spectrum of constraints may exist which need to be built into the analysis. Nevertheless, the conceptual framework of market definition is important as it provides an intellectually disciplined tool with which to gather and assess evidence on the sources of competitive constraints that face the merged entity and its rivals.

The product market

A.8. As mentioned above, market definition focuses on the empirical question of substitutability of products and services from the point of view of customers; the same can be applied to competitors.

A.9. When assessing product market scope, demand side substitutability assesses the extent to which customers could and would switch among substitute products in response to a change in relative prices.

A.10. Supply side substitutability examines the extent to which suppliers of alternative products could and would switch their existing production facilities to make alternative products in response to a change in relative prices.

Steps to assessing demand side substitutability

- A.11. The market definition process starts by considering a relatively narrow candidate market definition. This is most likely to be the product or service which the merging parties both supply.
- A.12. The next step is to apply the **hypothetical monopolist test**. Consider a hypothetical firm that is the only supplier of the product or group of products common to the merging parties. The question to be answered is whether a monopoly supplier (the hypothetical monopolist) of these products could maximise its profits by consistently charging higher prices.
- A.13. This test is also commonly referred to as the **SSNIP test** where 'SSNIP' stands for '**s**mall, but **s**ignificant **n**on-transitory increase in **p**rice' i.e. a significant price increase maintained over time. If the hypothetical monopolist would be prevented from imposing a small, but significant non-transitory increase in price because of substitutability by customers to other products, these products should be added to the scope of the candidate market and the test applied again.¹⁰ By repeating the process, a point can eventually be reached where a hypothetical monopolist supplying the products or services in question could achieve market power, by maintain prices above prevailing levels.¹¹ This point is (usually) the relevant product market.
- A.14. In practice, in many cases, there may be insufficient available data to conduct a full SSNIP test (see below): in such cases, application of the SSNIP test is more likely to be conceptual rather than actual. In other words, the application of the test may be more of a framework for analysis than a strict working of a mathematical SSNIP test.
- A.15. One question is the size of price increase that should be applied in a SSNIP test: how big is 'small but significant'? A previous study conducted by the Analytical Framework Subgroup of the ICN compared the size of price increases applied by different jurisdictions for the SSNIP test. The most common benchmark used was found to be 5 per cent with the upper limit

¹⁰ In some cases the competitive price may be more appropriate rather than the prevailing price. This issue and its implications, commonly known as the cellophane fallacy is discussed more fully below.

¹¹ Substitutability by suppliers to the production of alternative products is also relevant to the SSNIP test. This is explained under the supply side substitutability section of this chapter.

generally being 10 per cent. In high volume, low margin products it may be appropriate to apply a smaller price increase. It is generally accepted as sensible to apply a price rise of between 5 and 10 per cent.

- A.16. A further issue of importance is the price used as the basis for the hypothetical question. The prevailing price is generally used, because merger review typically focuses on whether the merger will lead to higher prices than pre-merger levels, and not whether pre-merger prices are 'ideal' from a competition policy perspective. However, in a merger between firms which already possess market power (perhaps through coordination) prices may already be above competitive levels. In such a situation a further price increase may lead to a significant number of customers switching to alternatives that would not otherwise be considered as reasonable substitutes. The application of the SSNIP test erroneously suggests that these alternative products should be included in the product market even though they would not have been seen as substitutes had the competitive price level been used as the starting point for the test. This problem is known as the **cellophane fallacy**.¹²
- A.17. As a guide, most jurisdictions use prevailing prices, though some may depart from this where it is believed likely to create this problem
- A.18. Following the price rise, customers may switch some of their purchases from the product in question to other substitutes. It is not necessary for all customers, or even the majority, to switch. The important factor is whether there is enough volume of purchases from 'marginal' price-sensitive customers likely to be switched is large enough to prevent a hypothetical monopolist profitably sustaining prices, say, 5 to 10 per cent above competitive levels.
- A.19. One other potential fallacy is the **captive customer** fallacy. A well-known example relates to bananas. It may be that elderly consumers and parents buying for their infants are less sensitive to increased banana prices because of a banana's characteristics (can be eaten without teeth, the peel protects from disease etc.). However, the fact that some group of customers are

'captive' and will not switch does not indicate whether there are sufficient marginal customers that are price-sensitive and would switch to other foods. Often, the threat of losing these marginal customers will 'protect' the captive customers from price increases, especially if there is a single 'market price'.

A.20. Things may be different if suppliers do have the ability to distinguish between customer groups when setting pricing decisions (e.g. if prices are individually negotiated with customers in an intermediate or wholesale goods market) and can prevent re-sale between those groups. With due caution, it may be appropriate to consider market definition under conditions of price discrimination, where the market would relate to a particular class(es) of customer.

A.21. A final important issue is whether the undertaking could **sustain** prices sufficiently above prevailing (or in exceptional cases competitive) levels. Customers may take time to respond to a sustained rise in the price of the focal product. As a rough rule of thumb, it is generally accepted that if substitutability takes longer than one year, the products to which customers eventually switched would not be included in the same market as the focal product. Products to which customers would switch within a year without incurring significant switching costs are more likely to be included in the relevant market. However, the relevant time period in which to assess switching behaviour may be significantly shorter than one year: for example, in industries where transactions are made very frequently. A case by case analysis of switching is therefore appropriate.

Investigative techniques used in assessing demand side substitutability

A.22. Of course in order to conduct the hypothetical monopoly test and be clear about the scope of the market, it is necessary to obtain evidence on possible substitutability. Information required will vary from case to case. The following sources may be of help during the process:

- Evidence on product characteristics may provide useful information. Where the objective characteristics of products are very similar and their intended

¹² This fallacy is named after the Du Pont case in the United States (US v El Du Pont de Nemours & Co [1956] 351 US 377). The product at issue was cellophane wrapping paper.

uses the same, this suggests that the products are close substitutes. However, the following caveats should be noted. First, even where products apparently have very similar characteristics and intended use, switching costs and brand loyalty may affect how substitutable they are in practice. Second, just because products display similar physical characteristics, this does not necessarily mean that customers would view them to be close substitutes. For example, customers may not view commuter rail travel during off peak times to be a close substitute for rail travel at peak times. Third, products with very different physical characteristics may be close substitutes if, from a customer's point of view, they have a very similar use.

- It may be helpful to request from undertakings involved in the merger (or indeed other firms active in the market) their commercial strategies and other internal documents such as internal communications, public statements, studies on consumer preferences, market research, advertising plans, general marketing plans or business plans. These may indicate which products the undertakings believe to be the closest substitute to their own products and may also provide information on which companies they consider to be their competitors.
- Customers and competitors can be interviewed. In particular, customers can be asked directly about their historical buying patterns, how they have responded to previous price rises and how they are likely to react to a hypothetical price rise, although because of the hypothetical nature of this last question, answers may need to be treated with a degree of caution. Survey evidence might also provide information on customer preferences that would help to assess substitutability: for example, evidence on how customers rank particular products, whether and to what extent brand loyalty exists, and which characteristics of products are the most important to their decision to purchase. Some care is needed here to ensure that responses are obtained from a truly representative sample. For example, it is useful to obtain evidence from customers of the merging parties and customers of competitors. Real care is needed in analyzing the views of competitors, since their self-interest may lie in undermining a merger that may increase the level of competition that they face.

- A significant factor in determining whether substitution takes place is whether customers would incur costs in substituting products. High switching costs relative to the value of the product will make substitutability less likely. The cost of switching may be established by questioning customers on any past experiences of switching.
- For reasons not connected to costs, patterns in price changes can be informative. For example, two products showing the same pattern of price changes, for reasons not connected to costs or general price inflation, would be consistent with (although not proof of) these two products being close substitutes. Pricing data may be obtained from the merging parties and from competitors. However, prices correlations may occur for other reasons, and accordingly should be used with some care.
- Evidence that a relatively large proportion of customers had switched to a rival product in response to a relatively small price rise in the product in question would provide evidence that these two goods are close substitutes. Equally price divergence over time, without significant levels of substitutability, would be consistent with the two products being in separate markets. One way to monitor this would be to look at pricing data over time and see whether the volumes of the respective products diverge in response to a price shock in one of the goods.
- Evidence on own or cross price elasticities of demand may also be examined if it is available. The own price elasticity of demand measures the rate at which demand for a product (e.g. the focal product) changes when its price goes up or down (the sensitivity of demand to changes in price). The cross price elasticity of demand measures the rate at which demand for a product (e.g. a rival product) changes when the price of another product (e.g. the focal product) goes up or down. In reality it generally difficult to find such information. It may be calculated by obtaining pricing and sales data from the parties and competitors. Alternatively companies may have conducted their own internal research on such matters which may be requested.

- Evidence on the price-concentration relationship may also be informative. Price-concentration studies examine how the price of a product in a distinct area varies according to the number (or share of supply) of other products sold in the same area. These studies are useful where data are available for several distinct areas with varying degrees of concentration. For example, if observations of prices in several geographic areas suggest that when two products are sold in the same area, prices are significantly lower than when they are not, this might suggest that the two products are close substitutes (provided that it is possible to distinguish this from the effect of other factors which might explain the price differences). It should be noted that obtaining reliable pricing and sales information for such studies may be difficult.

Steps to assessing supply side substitutability

- A.23. If prices of product X rise, undertakings that do not currently supply that product might be able, at short notice and without incurring substantial sunk costs, to switch from production of product Y to supplying product X. If this occurs sufficiently quickly and with sufficient scope, it may prevent a hypothetical monopolist from profitably sustaining prices 5 to 10 per cent above competitive levels. This form of substitutability is carried out by suppliers and hence is known as **supply side substitutability**.
- A.24. Supply side substitutability can be thought of as a special case of entry which is discussed in section D of this document and indeed a number of jurisdictions conduct supply side analysis as an integral part of the entry assessment rather than as part of defining the market. In the case of supply side substitutability entry occurs quickly (with a maximum time limit of from six months to a year, depending upon the sector), effectively (on a scale large enough to affect prices), and without the need for substantial sunk investments. Supply side substitution addresses the questions of whether, to what extent, and how quickly, undertakings would start supplying a market in response to a hypothetical monopolist attempting to sustain supra-competitive prices.

A.25. As with assessing demand side substitutability, establishing whether supply side switching is likely to occur evidence on possible substitutability needs to be obtained. The following sources may be of assistance in compiling this evidence:

- During the investigation process, companies that may have been identified by the parties or by the case team as potential suppliers might be asked whether substitutability was technically possible, about the costs of switching production between products, and the time it would take to switch production. The key question to ask potential suppliers is whether it would be profitable to switch production, given a small (e.g. 5 to 10 per cent) price increase above competitive levels.
- Potential suppliers might also be asked whether they had spare capacity or were free or willing to switch production. Undertakings may be prevented from switching because all their existing capacity was tied up, for example they may be committed to long term contracts. There might also be difficulties obtaining necessary inputs or finding distribution outlets. Undertakings may be unwilling to switch production from an existing product to a new one, if producing the former product is more profitable than the latter.
- Although potential suppliers may be able to supply the market, there may be reasons why customers would not use their products, so the views of customers might also be sought. In this regard, the points made above regarding caution when sampling the views of customers are equally applicable here.

A.26. Guidelines will almost certainly need to address the point that supply-side substitutability relies on strict criteria. Candidate suppliers that do not meet these criteria should not be ignored. Guidelines should sensibly note that such suppliers may well merit further attention as part of the consideration of new competitors entering the market (see worksheet D below).

Other factors that may be relevant in defining the relevant market

- A.27. In many cases a market may have already been investigated and defined in previous cases or by another competition authority. Additionally, the same merger may be being examined by other jurisdictions. Sometimes earlier definitions or approaches of other competition authorities can be informative when considering the appropriate product or area although care should be taken as the conclusions on these cases may not always be applicable to the merger in question.
- A.28. First, markets are dynamic and hence competitive conditions change over time. In particular, innovation may make substitutability between products easier or more difficult and so change the market definition.
- A.29. Secondly, a product market definition that concerns an area outside of your country may not necessarily apply to an area within your country if the purchasing behaviour of customers differed significantly between those two areas.
- A.30. Third, behaviour of an undertaking with market power can affect market definition. For example, suppose an earlier investigation had defined a market to be relatively wide because of the scope for both demand side and supply side substitutability. A dominant undertaking in that market might raise customer switching costs or foreclose some possibilities of supply side switching. If so, this might affect the appropriate definition of the relevant market.
- A.31. When markets contain differentiated products (products differentiated by brand, quality, etc) it may be difficult to define the market exactly. Moreover, some products may be in the same market yet may be much closer substitutes for each other than other products also in the market. In differentiated product markets, therefore, market definition will need to be supported by rigorous analysis of competitive effects.

The geographic market

- A.32. The geographic market is the area where a hypothetical monopolist could profitably impose a small but significant and non-transitory increase in price. Geographic markets are defined using the same processes as those used to

define product markets. The geographic market may be local or regional, national, continent wide or even worldwide.

A.33. As with the product market, in assessing the appropriate geographic market, the objective is to identify substitutes which are sufficiently close that they would prevent a hypothetical monopolist of the overlapping product or service in one area from profitably sustaining prices 5 to 10 per cent above competitive levels. The process starts by looking at a relatively narrow area. In merger cases a good starting point is the most direct overlapping area of their operations. The hypothetical monopolist test is applied to this area and repeated over wider geographic areas until the hypothetical monopolist would find it profitable to sustain prices 5 to 10 per cent above competitive levels.

Imports

A.34. When considering whether the geographic market should be defined more widely than national, data on imports may be informative. Significant imports of a product may indicate that the market is wider than national. However, a word of warning. The presence of imports in a territory will not always mean that the market is international. In order to import on a larger scale and hence provide a sufficient constraint on domestic suppliers, international suppliers may require a presence in the country or substantial investments in establishing distribution networks or branding their products in the destination country.

A.35. Conversely, a lack of imports does not necessarily mean that the market cannot be international. The potential for importers to enter a country may place an important constraint on domestic suppliers preventing price rises.

A.36. Additionally the following information may be relevant to the assessment:

- Transport costs in relation to the value of the product may also be an important factor. The higher the relative value of a product, the more likely customers are to travel further in search of cheaper supplies.

- Whether there are any import duties or anti-dumping quotas that may limit the geographical scope of a relevant market by raising prices charged by suppliers from outside of a particular jurisdiction.
- For consumer products geographic markets are often very narrow. For example in purchasing groceries consumers are constrained by the distance that they are able to travel. For wholesaling and manufacturing markets, customers may be in a better position to switch between suppliers in different regions providing transport costs are not too high.
- Whether there exist any language barriers that may prevent cross border trade.
- Whether it is necessary for companies to have a presence in the country where its customers are located to have a full understanding of national legal or regulatory requirements. This may particularly be the case where financial products and services are involved.
- Whether there is a requirement for national or regional regulatory clearance. This for example may be relevant in the case of chemical products (such as pharmaceuticals or insecticides). The need to obtain regulatory clearance may prevent easy importation and exportation of products and hence the geographic scope would be national.
- It may be helpful to look at the geographic supply of current participants in the market and question why the scope is currently limited to this and whether the potential exists for this to be expanded easily.

CHAPTER 4: WORKSHEET B – MARKET STRUCTURE AND CONCENTRATION

- B.1. After defining a market, it is possible and usually appropriate to consider the level of concentration within it. This a useful screen for assessing whether a merger is likely to be unproblematic.
- B.2. For example, if A and B merge, the market shares of A, B and each of their rivals can give an indication of whether the loss of A vs. B competition is important (generally more likely the greater the increment in market share) or, conversely, whether there is sufficient surrounding competition such that this 'loss' is relatively unimportant. Other concentration data can be an indicator of competitive pressure within that market: broadly speaking, the fewer the number of firms in a market, the more likely the loss of an independent firm will amount to the loss of an important competitive constraint on the remaining firms (absent other factors considered in later worksheets below).
- B.3. This worksheet explains the main measures of market concentration and gives guidance on how to interpret these. Subsequent worksheets explain how to complete the assessment of possible issues arising from mergers in more concentrated markets
- B.4. Key aggregation indicators used in assessing competitive effects include market shares, concentration ratios and the Herfindahl-Hirschman Index (HHI). Each of these is discussed below. It is essential to note that each of these measures may be used as an *initial* indicator of *potential* competition concerns,¹³ but will not be determinative in themselves. Further investigation of the wider dynamics of the market is always essential. In other words, further investigation beyond these quantitative indicators, including a detailed analysis of unilateral and/or coordinated effects, is always required before any conclusions can be reached.

¹³ In jurisdictions where an agency must challenge a merger in a judicial court, this may take the form of a rebuttable presumption.

Use of concentration measures

- B.5. There are a number of measures of market concentration. If the merger can be dismissed as being unproblematic under any measure then one can usually assume that it would not be detrimental to consumers. Data on market shares may be collected from a number of sources including trade associations, customers or suppliers and market research reports.
- B.6. It is of critical importance that the gathered data give a good indication of how competition works in a given market. Production volumes and sales volumes may be indicative of market power where goods are homogenous (where no product differentiation exists). Capacity or reserves may also be used (for example where the product concerned is a trade commodity and production capacity therefore represents the best indication of competition strength) and in bidding markets, the number of credible bidders may be used. It may be necessary to adjust current market shares to reflect expected or reasonably certain future changes, such as firms likely to exit from the market or the introduction of additional capacity.
- B.7. It may be difficult to obtain figures on which to conduct concentration calculations based on the defined economic market. It is likely that statistics will not be collected on this basis, for example figures available by product may have to be aggregated to the relevant product market and many statistics are collected on a national basis whereas this may not be the geographic market identified.
- B.8. In the majority of instances therefore it is rare to have access to data that has been compiled on an independent basis and it will be necessary to ask the parties to compile and provide estimates of these. It is essential to ask the parties how the data has been compiled, what sources have been used and what assumptions have been made in doing so. It is helpful to test the accuracy of these estimates with customers and competitors when conducting third party questioning.

Measures of concentration

Market shares

- B.9. Market shares measure 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.
- B.10. The main relevant market share will be the combined share of the merging or merged parties. It is also helpful to compare this with those of other market players. If there are players to whom customers can switch their demand in response to an increase in the merged entity's prices this may act as a competitive constraint post merger.
- B.11. Mergers creating a high market share (for the merging firms alone, or along with other significant suppliers) are those that are most likely to result in competition issues. It is generally the case that mergers with an insignificant combined market share may be dismissed more quickly.

Concentration ratios

- B.12. Concentration Ratios measure the aggregate market share of a small number (usually three (C3) or four (C4)) of the leading firms in a market. They are absolute measures of concentration and take no account of differences in the relative size of the firms that make up the leading group. By way of example the C3 ratio in a market where the three largest firms within that market each have shares of 15 per cent would be 45 per cent.

Herfindahl-Hirschman Index (HHI)

- B.13. The HHI measures market concentration, but takes account of the differences in the size of the market participants. The HHI is calculated by summing the squares of the market shares of all the firms engaged in the market. The increase in HHI (or delta) can be calculated by subtracting the market's pre-transaction

HHI from the expected post-transaction HHI.¹⁴ [Insert step by step example] Both the absolute level of the HHI and the change in the HHI as a result of the merger can provide an indication of whether a merger is likely to raise competition concerns. In some cases, the merger of smaller firms will increase the HHI but the merger may allow the merged firm to compete more effectively with its bigger rivals.

- B.14. It is frequently the case that it is not possible to calculate HHI for the entire market because not all participants' shares are known. In such cases it may be considered more appropriate to use another concentration measure or calculate and evaluate only the incremental delta. Alternatively, provided that shares of the majority of market participants are known the HHI can be approximated if share data for the smaller firms is not known.
- B.15. Although it is difficult to generalize as to whether one measure of concentration is superior to another, HHI data arguably provides richer and less arbitrary information than concentration ratios as it provides information relating to the whole of the market rather than just the largest firms accounting for the relative sizes of the larger firms and avoiding arbitrariness (for example if C4 is used then a merger between the fifth and sixth largest firms may result in no change in the index, whereas a merger between the fourth and tenth largest would).

Interpreting concentration data

- B.16. There is no simple answer as to how high (or low) concentration measures need to be to prompt (or dismiss) concerns about the impact of a merger on competition. The project conducted by the Analytical Framework subgroup last year comparing merger guidelines across a number of countries found that some jurisdictions do include the use of 'safe harbours' (a threshold concentration measure below which a merger will not be challenged) when assessing mergers. The benefits of safe-harbours include conserving the resources of competition

¹⁴ Thus, a market comprising firms a, b, c and d will have an HHI of $a^2+b^2+c^2+d^2$. The delta in this market resulting from a merger between firms a and b can be calculated as $((a+b)^2+ c^2+d^2) - (a^2+b^2+c^2+d^2) = 2ab$.

authorities for use in cases which are more likely to result in consumer harm and increasing the predictability of merger control. However safe-harbours are generally based on market share or concentration data which depend crucially on market definition, which (as discussed in worksheet A) is not an exact science and often raises some very difficult issues.

- B.17. Even where market shares appear reasonably low, for example below 25 per cent, problems may still arise. Consider this example where the postmerger HHI is 6,352 and the delta is 280: A (14 per cent share) merges with B (10 per cent), leaving only two suppliers, the merged entity AB (24 per cent) and C (76 per cent). This example shows that HHI data perhaps better highlight that this merger reduces from 3 to 2 the number of suppliers in a highly concentrated market. Alternatively, where the merging firms (say, with 20 per cent and 15 per cent shares) are the two largest in a fragmented market (say, all other suppliers are 3 per cent or less) or where they have some characteristic that is not enjoyed by the other players in the market, such as a national presence, competition concerns may arise even with relatively low shares.
- B.18. In some markets contracts may be awarded infrequently and a one-year snapshot of supply may not reflect the true position of companies within that market. In such cases it is important to obtain data based on supply over a number of years, say five years. In any case in conducting the assessment it is helpful and telling to assess variations in the market over time not least because volatile shares may reflect constant innovation in a market as firms try to get ahead of each other and hence suggest effective competition within the market.
- B.19. As a guide when assessing the HHI, a market with a post merger HHI in excess of around 1800 may be considered to be highly concentrated, and any market with a post merger HHI in excess of 1000 as concentrated. In a highly concentrated market, a merger with a delta in excess of 50 may give rise to potential competition concerns. In a concentrated market, a merger with a delta in excess of 100 may give rise to potential competition concerns. Further investigation into the other constraints at work is always necessary.

B.20. It should also be noted that these HHI indicators, though used by many agencies, are not used by all, and there may be variation across agencies. They should be used only as one possible set of indicators, therefore, and not be presumed to be an agreed set of figures. And again, as noted further investigation into the dynamics of competitive constraints at work is always necessary, as addressed in the following worksheets.

CHAPTER 4: WORKSHEET C – UNILATERAL EFFECTS

Introduction

- C.1. The previous worksheet considered ways to measure the impact of mergers on the level of concentration in a particular market. This worksheet explains possible anti-competitive effects arising from mergers where indicators suggest that markets are more concentrated. The focus of competition analysis is on evaluating how the competitive incentives of the merging parties and their rivals might change as a result of the merger.
- C.2. Key to the assessment of mergers is the comparison of prospects for competition in a market with and without the merger. The competitive situation without the merger is known as the 'counterfactual'. The counterfactual is generally the prevailing conditions of competition although it may be necessary to take into account likely and imminent changes in the structure of competition¹⁵ in order to reflect as accurately as possible the nature of rivalry without the merger.
- C.3. There are two conceptually distinct means by which a horizontal merger might be expected to be detrimental to competition: unilateral effects and coordinated effects. Unilateral effects are the subject of this worksheet. Coordinated effects are discussed in worksheet D.

¹⁵ Examples may include whether the acquired firm is failing and about to exit the market (an aspect that is discussed in Worksheet G) or where there may be changes to the regulatory structure of the market such as liberalisation or tighter environmental constraints.

Economic rationale

- C.4. Unilateral effects, also known as 'non-coordinated effects', refer to the situation where the anti-competitive effects of the merger flow from independent or non-coordinated action by market participants. In particular, unilateral effects arise where, as a result of the merger, the merged firm finds it profitable to raise price, or reduce output or quality as a result of the loss of competition between the merging parties.
- C.5. Specifically, if the parties' products are relatively close substitutes, a pre-merger price increase in party A's products would result in customers diverting their purchasing to B's products, which would be cheaper, or represent better value for money,. If this 'diversion' effect from A to B is significant, then the price increase will be unprofitable (because A will lose more via 'lost profit' on lost sales than it would gain on increased profit on sales that it keeps at the higher price.) Post merger, these profits lost to B will no longer be lost, but be kept or 'internalised' by the merged entity, AB. It therefore has an incentive to raise price because it need not be concerned about losing sales and thus profits to B. In addition, the firm may find it profitable to raise also the price of the acquired products, since it will recapture some of the lost sales through higher sales of its original products (in other words, retain business that pre-merger would have diverted from B to A).
- C.6. Other firms in the market may also find it profitable to raise their prices because the higher prices of the merged firms' products will cause some customers to want to switch demand to rival's products therefore increasing rivals' demand. Once all firms have reacted independently to reach their own profit-maximising price after the merger, the price 'equilibrium' in the market will have been raised.
- C.7. The central economic question when assessing unilateral effects is whether, after the merger, sufficient customers switch to products of the merged firms competitors such that in the event of a price increase the merged firm would lose sufficient sales to make that price increase unprofitable. The other firms in the market will not have an incentive to raise price post-merger if the merged firm itself has no incentive to do so.

- C.8. Unilateral effects can also arise in other frameworks, including in bidding or auction markets, where different firms compete to win orders. The specific model used will vary depending upon the circumstances of the market, but should have a common thread of attempting to assess whether there is any increase in market power as a result of the merger.
- C.9. The anti-competitive effects of a merger may not be limited to price increases. Indeed when a company faces less competition it may have less incentive to produce products of such high quality or may reduce the range of products that it offers. Additionally without competition firms may have less incentive to invest in improving its products and hence innovation may be dampened.

Understanding broader competitive constraints

- C.10. When examining whether there will be non-coordinated effects arising from the merger, the following factors may be considered relevant offsetting factors:
- Low barriers to entry or expansion – Entry by new competitors or expansion by existing competitors may be sufficient in time, scope and likelihood to deter or defeat any attempt by the merging parties to exploit the reduction in rivalry following the merger. This aspect is discussed in detail in worksheet E below. Where buyers are particularly large or powerful they may be also be able to exert this power by threatening to enter into supply themselves or by sponsoring entry by others by covering the costs of entry.
 - The nature of competition within the market – Sometimes buyers choose their suppliers through a bidding process for example through procurement auctions or tenders. In these circumstances, even if there are only a few suppliers, competition might be more intense. This is more likely to be the case where tenders are large and infrequent (so that suppliers are more likely to bid), where suppliers are not subject to capacity constraints (so that all suppliers are likely to place competitive bids), and where suppliers are not differentiated (so that for any particular bid, all suppliers are equally placed to win the contract). In these types of markets, a merged entity might have a high market share at a single point in time. However, if competition at the

bidding stage is effective, this currently high market share would not necessarily reflect market power.

- The merging parties may not be close competitors – In this case pre-merger market shares may not be a good indicator of levels of rivalry between the merging parties, for example their products may be differentiated such that they were never each others closest competitors. Customers will still have the option of switching to the best rival product in the event of a post merger price increase.
- Alternative suppliers exist to whom customers can easily switch – If there are a number of alternative suppliers to whom customers can easily switch because of low switching costs the threat of losing these customers in an event of a post merger price rise may be enough to place a constraint on the merging parties. Conversely, if there are a number of competitors but customers face high switching costs lower shares may not reflect low market power.
- Responsiveness of competitors - Competitors that can react quickly to changes in price, output and quality and which have spare capacity are more likely to place a constraint on the parties post merger.

C.11. It is stressed that this is not a checklist of factors or characteristics that must all be present before unilateral anti-competitive effects can be dismissed. These factors are intended simply as a broad indication of the circumstances in which it may be concluded that the risk of such anticompetitive effects is lower. Equally, the presence of such factors may not on its own be sufficient to alleviate concerns. The weight given to factors needs to be considered within the context of the case.

C.12. Though the profits from unilateral effects are generally captured by the merging parties, rival firms can also benefit from reductions in competitive pressure as a result of a merger. Even if rival firms pursue the same competitive strategies as they did prior to the merger, this can result in their increasing prices in the wake of a merger. In such cases, the firms in the marketplace are not coordinating their competitive behaviour (tacitly or

explicitly); they are simply reacting independently to expected changes in each other's commercial behaviour. Such instances of anti-competitive effects are still termed 'unilateral' by merger analysts since they are based on independent actions of firms. The change in the structure of the market may mean that other firms will behave differently and may react to an increase in prices by raising their own prices.

CHAPTER 4: WORKSHEET D - COORDINATED EFFECTS

Introduction

D.1. A merger may lessen competition by increasing the probability that, post merger, firms in the same market may coordinate their behaviour to raise prices. Such behaviour need not necessarily amount to express coordination (which is prohibited in most jurisdictions by provisions relating to cartels). Given certain market conditions, and without any express agreement, tacit coordination can arise merely from an understanding that it will be in the firms' mutual interests to coordinate their decisions. Coordinated effects may arise where a merger situation reduces competitive constraints in a market, thus increasing the probability that competitors will collude or strengthening a tendency to do so. The main question in analysing coordinated effects should be whether the merger materially increases the likelihood of coordination.

Economic rationale

D.2. Firms have an incentive to maximise their profitability by raising prices, reducing quality or curtailing output. However, in a competitive market a firm will be constrained from doing so by the presence of its competitors. In the normal course of affairs if it were to take such action, it would lose sales to other firms, which would be able to provide the same goods or services to consumers on better terms. However, there is a danger that firms present in a given market may decide not to compete too effectively against one another, so that they can each charge prices above the competitive level, reduce quality or curtail output without being under-cut by their rivals. Such coordination results in a loss of consumer welfare.

D.3. The task is to identify what factors are likely to lead to coordination taking place between firms post-merger. This is a controversial area with which competition agencies and courts have struggled to come to terms over the years, but experience has led to the emergence of some agreement on what conditions are likely to give rise to coordinated effects. These are discussed

below. However, it must be borne in mind that these conditions are merely a starting point and that they must not be applied as a 'checklist'.

Investigative techniques

D.4. In order for coordination to be successful or to become more likely, three conditions must be met or be created by a merger:

- First, the participants in the market must be in a position to bring into line their behaviour, for example, by coordinating on price.
- Second, it must be costly for firms to deviate from coordination; so costly that it will be in every firm's interest to go along with the coordinated behaviour rather than 'cheat' e.g. through its own alternative pricing strategy. (For these incentives to hold, participants may need to be able to detect and possibly 'punish' cheating); and
- Third, the surrounding competitive constraints must be weak. For example, the threat from players 'outside' the common strategy, including possible market entrants, must be too low to destabilise any coordinated behaviour.

In what follows we consider each of these three conditions in turn.

Determining whether each of these three conditions favourable to tacit coordination may be expected to arise in a given case requires an assessment of the structure of the relevant market, its characteristics, and any history of coordination.

Bring behaviour into line

D.5. In order to coordinate firms need to achieve some kind of understanding as to how to do so. This need not involve an explicit agreement on what price to charge, market share quotas, or the quality of products to be attained. Nor is it necessary for the firms concerned to coordinate prices around the monopoly price, or for the coordination to involve every single firm in the market. However, it is sometimes possible for firms to find tacitly a 'focal' point around which to coordinate behaviour. Market transparency, product homogeneity, and stability of the relevant firms are key elements in giving the firms the ability to align on terms of coordination.

D.6. Examples of the evidence often taken into account when determining the extent to which firms are able to align behaviour in a given market include the following:

- Market transparency – the more readily information on firms' competitive offerings (and in particular prices) is available, the easier it will be for firms to observe one another's behaviour and respond accordingly. Determining the extent of such transparency will usually involve finding out how participants on the relevant market (including customers and competitors) obtain details of firms' competitive offerings, and of likely future sales opportunities. If such data is not readily available, as may be the case in a market where prices (and any discounts offered) are not public knowledge, it will be more difficult for firms to monitor one another's behaviour.
- Product homogeneity – the more homogenous products or services are on a given market, the easier it will be for firms to compare their competitors' offerings and respond accordingly. If products are not homogenous, e.g. where each product/service is provided on a 'bespoke' basis, or where many variables are taken into account in determining prices, it will be more difficult for firms to observe trends in their competitors' pricing behaviour. Assessing the level of homogeneity on a particular market will usually require a thorough understanding of the way in which that market works, informed by evidence of past competitive behaviour.

- Stability – if overall demand in a given market is stable and the market is mature, it will be relatively easy for firms to detect movements resulting from a change in competitive behaviour by another firm and respond accordingly. Information on past trends within a market, such as growth in sales, entry and exit by firms, and relative market shares will often provide a good starting point when assessing the current state of a market and its likely future development.
- Existence of 'maverick' firms – if one or more firms in the market is a maverick firm with a history of behaviour different from the majority of firms, the coordinated behaviour may be difficult to sustain. Alternately, if the maverick firm is being acquired by another firm, then the likelihood of coordinated behaviour may rise.

Costly for firms to deviate from coordinated behaviour

- D.7. Though coordination is in the collective interests of the oligopoly, it is often in firms' short-term individual interests to 'cheat' on the coordination by cutting price, increasing market share, or selling outside 'accepted' territories. If coordinated behaviour is to be maintained, any such 'cheating' must be observable directly or indirectly. For tacit coordination to be sustainable the market concerned should therefore be sufficiently transparent that firms can monitor the important terms of competition with a view to detecting cheating in a timely way and responding to it. Firms might have credible ways of 'punishing' any deviation from the tacit coordination, for example, by rapidly cutting prices or expanding output. More generally, it may be sufficient for coordinated behaviour that participating firms have a strong incentive not to deviate from the coordinated behaviour, rather than that there is a particular punishment mechanism.
- D.8. It is difficult to isolate individual criteria which can be used to determine whether the dynamics of a particular market are such as to provide an incentive to firms participating in that market to coordinate their behaviour. Each firm, when trying to maximise its profitability, will have to try to anticipate not only how its customers would react to a change in its behaviour, such as

the announcement of a price rise, but also how its rivals would react. If a firm thinks its rivals would allow it to go ahead with a price rise (to use the same example) then it is more likely to proceed with it. However, if the firm thinks that the price rise would result in it being undercut by its rivals, leading to reduced sales and profitability, the firm is unlikely to go ahead with the price rise. In the former case market conditions seem to provide an incentive to coordination, in the latter they would appear to provide a disincentive. A competition authority seeking to assess how incentives are structured within a particular market will have to gain an in-depth understanding of the competitive dynamics of the market in question in order to understand whether there are incentives to coordinate behaviour. Often past behaviour and even anecdotal evidence (e.g. the experience of a customer dealing with more than one supplier gaining the impression that price rises by one undertaking go unchallenged by competitors) will assist in building up this understanding.

Weak competitive constraints

- D.9. Overall, the conditions of competition in the market should be conducive to tacit coordination in order to sustain the relevant behaviour. Typically, this means that the market should be sufficiently mature, stable and with such limited competition (both actual and potential) that the coordination is not likely to be disrupted. For example, a strong fringe of smaller competitors (or perhaps a single maverick firm) or a strong buyer (with buyer power) might be enough to destabilise the oligopoly and render tacit coordination impossible.
- D.10. In order to determine whether coordinated behaviour in a given market would be sustainable beyond the short term information regarding the following factors is likely to be relevant:
- Market shares of the participants, in the market, on both the supply side and the demand side over a period of years.
 - Details of new entry, including evidence of past entry and likely ease of entry in the future.
 - Details of the evolution of the market over a period of years.

It should be remembered that just because a market has conditions that may facilitate collusion does not mean that a merger will make collusion more likely. Investigation should focus on the specific effect of the merger itself.

Case studies

D.11. The practical application of the conditions set out above can be shown by reference to two cases: UPM-Kymmene OYJ ('UPM')¹⁶, a proposed merger of two suppliers of paper labels, which was abandoned following an application to the courts by the US Department of Justice (DoJ), which thought it was likely that the transaction would give rise to coordinated effects; and DS Smith/Linpac¹⁷, a case in which the UK Competition Commission found that coordinated effects were unlikely to arise despite initial concerns to that effect.

UPM

D.12. UPM was a Finnish producer of forestry and paper products. Its US subsidiary sold label stock, a paper-based material used in the manufacture of labels. UPM entered into an agreement to acquire a competitor, MACTac, which had a share of approximately 20 per cent in the US market for label stock. Post-merger UPM's largest competitor, with 50 per cent of the US market for label stock, would have been Avery. Between them UPM and Avery would have a post-merger share of 70 per cent in the US market for label stock. The picture was further complicated by the fact that UPM supplied Avery with paper, a raw material used in the manufacture of label stock.

D.13. The DoJ intervened in the case and applied to the court for a preliminary injunction prohibiting the completion of the merger pending a more detailed investigation. The DoJ argued that as a result of the merger competition in the US market for label stock would be lessened since UPM and Avery would

¹⁶ *United States of America v. UPM Kymmene OYJ*, Memorandum Opinion and Order of Judge James B. Zagel No. 03 C 2528.

¹⁷ *DS Smith plc and Linpac Containers Limited*, April 2004.

have little incentive to compete with one another and that the two companies, with 70 per cent of the market between them, would find that they had a mutual interest in maintaining prices at a higher than competitive level. The remaining 30 per cent of the market was held by a number of smaller undertakings and these relatively marginal players did not have the economic clout to undercut UPM and Avery. Avery's existing paper supply arrangements with UPM would further lessen any incentive for the two companies to compete.

- D.14. The court found that the remaining competitors all had an incentive to go along with any price increases by UPM and Avery. Even if the remaining competitors wanted to defeat attempts at price increases by the giants they would be unable to expand their own output to a sufficient extent to serve the customers of the giants. The court found that UPM's business interests would be best served by a significant period of lessened competition. The court held that it was probable that price competition would be diminished if the merger went ahead, with the result that consumers would be damaged by paying more than they otherwise would pay. It therefore granted the DoJ's application. UPM subsequently abandoned the transaction.

DS Smith/Linpac

- D.15. DS Smith, a producer of packaging, acquired Linpac, also a producer of packaging. As a result of the merger the number of major corrugated cardboard sheet (sheet) suppliers in the UK was reduced from six to five. The market was relatively concentrated, with the five main suppliers having a share of approximately 75% of the market between them. The merger was referred to the UK Competition Commission amid concerns that coordinated effects might result in a substantial lessening of competition as a consequence of the merger.
- D.16. In assessing the likelihood of coordinated effects in the sheet market the Commission found that competitors would have been able effectively to monitor one another's competitive behaviour as a result notably of highly transparent price announcements. The Commission also found that it would be costly for firms to deviate from coordinated behaviour since other suppliers

would be able to retaliate by increasing output and adjust their prices in response to any such deviation.

D.17. However, the Commission also noted that coordinated effects were only sustainable where competitive constraints from outside the group of major suppliers were weak. Following a detailed investigation, the Commission found that, despite some barriers to entry and expansion, the incentives and ability of current and future competitors to jeopardise the results of any coordination appeared to it to be significant. The existence of a number of fringe players and potential entrants into the market would therefore undermine any coordination between the five main undertakings present on the market. The merger was therefore allowed to proceed.

CHAPTER 4: WORKSHEET E – MARKET ENTRY AND EXPANSION

Introduction

E.1. A merger that materially increases market concentration would not give rise to anti-competitive effects if new firms would enter the market (or existing firms expand) and deter the merging parties from exploiting their position in the market. Entry into the market by new firms, and the threat thereof, may prevent or counteract any attempt by the merging parties or their competitors to profit from the reduction in competition brought about by the merger¹⁸

Economic rationale

E.2. It is common to think of the constraints on competitive conduct within a market arising only from firms already active in that market. This is the sort of competitive constraint assessed by concentration measures of the sort described in Worksheet B. However, it is possible that the constraints posed by firms active in the market might change in the near future. If this were sufficiently likely to happen, that is a consideration the reviewing authority would need to take into account in assessing the competitive effects of the merger.¹⁹ The sorts of changes that a reviewing authority might need to take into account include:

- (a) an increase in the number of competitors active in the market because a new competitor enters the market (new entry);
- (b) an existing competitor, already in the market, becomes a much stronger competitor than before, e.g., because it builds new production capacity (expansion); or
- (c) an existing competitor repositioning an existing product that many customers will want to buy (product repositioning).

¹⁸ As noted in the chapter on market definition, some competition authorities, for example the UK, assess shorter term supply-side responses in the context of market definition.

¹⁹ This is of course one of the reasons why caution is needed with concentration measures of the sort discussed in Worksheet B. In brief, they provide only a 'snap-shot' of a market at a point in time, and so may not reflect the sorts of changes in competitive structure that are discussed in this Worksheet.

E.3. New entry or expansion by competitors can effectively discipline the behaviour of the current market participants. Although competition authorities may adopt different approaches to determine the likelihood of new entry, there is broad agreement that a reviewing authority should only consider that entry/expansion is a real competitive constraint on the merging parties where three conditions are met:

- (a) the entry or expansion is sufficiently likely to occur;
- (b) the anticipated entry or expansion would be of a nature, scale and scope to be a real competitive constraint on the merging parties; and
- (c) the entry or expansion should be likely to occur within a reasonable period of time so that the reviewing authority can take account of it (i.e., it should be timely).

E.4. This section describes how each of the above three conditions (often shortened to the likelihood, sufficiency and timeliness of entry) can be investigated and assessed. Each is considered in turn. In this discussion, the term 'entry' is used to refer to possible entry, expansion and repositioning, as the investigative considerations are similar for all three.

Likelihood of entry

E.5. Entry is likely to occur if it would be profitable. To assess the probability of entry, it is useful to consider the following factors:

- (a) Are there any barriers to entry to the market (or markets) that might make entry unfeasible? A barrier to entry can be described as an advantage enjoyed by an incumbent firm over potential entrants which allows that incumbent persistently to maintain prices above (or lower quality below) competitive levels without new firms entering the market. Broadly, however, barriers to entry can be categorised as:

- Absolute advantages²⁰, such as where government regulations e.g. licensing and intellectual property rights limit the number of market entrants or impose substantial regulatory approval costs.
- Strategic advantages, where the existing established position of the incumbent gives it an advantage over new entrants (also known as first mover advantage) or where the incumbent responds to new entry with aggressive tactics such as by significantly lowering prices or by investing in excess capacity to deter entry. Two important aspects of this include sunk costs, and reputation as a barrier to entry. Where demonstrated reliability is very important to the buyer, this can favour current suppliers.
- Economies of scale can limit the incentive to enter, especially where the fixed costs of entry are sunk as new entrants would be unwilling to take the risk of being unable to recover their sunk costs.²¹ Even with no sunk costs, would scale economies not tend to deter entry in the sense that only large-scale entry would be profitable. In this connection, information on the minimum viable scale needed to enter the market can provide an indication of the sort of investment that a new entrant would need to make in order to compete profitably.
- By comparing the costs of entry with the expected sales income and how long it will take to recover incurred costs, it is possible to learn whether potential entrants will consider that entry is profitable. It is also useful to ask customers whether they face costs in switching to a new supplier as this will impact on the how effectively new entry can be expected to constrain the merging parties' behaviour. The merging parties may be able to provide data on customer gains and losses to determine the level of customer switching in the market.

(b) Is there a history of entry to (and exit from) this market? If it is possible to establish a record of firms entering and exiting the market, that can be sound evidence that entry into the market is possible and may continue.

²⁰ Some jurisdictions describe these as legal advantages.

²¹ Economies of scale enjoyed by incumbent firms arise where average costs fall as the level of output rises.

- What have been the experiences of firms that have in recent years entered or exited from the market? If there is no evidence of any new firm entering, a reviewing authority might be more cautious in relying on evidence about possible new entry. Evidence from similar markets in other countries may be useful.
- As a complement, information about past and expected market growth may also be an indicator as to the likelihood of entry. Generally, in a market that has experienced recent growth which is expected to continue, new entry is more likely. In contrast, a shrinking market where suppliers face increasingly reduced margins can be expected to attract less new entry.
- A note of caution: a lack of entry does not necessarily mean that entry barriers are high. In fact, entry barriers may be low but the market concerned is so competitive that entry is not attractive. Similarly, the mere need to invest in order to enter is not of itself a barrier to entry. On the other hand, the fact that past entry has occurred does not automatically mean entry barriers are low: entry may have been on a small scale or into a specific market niche.

(c) Is there evidence that third parties are currently planning to enter?

Clearly, the best evidence on entry is where third parties confirm that they plan to enter the market to compete with the merged firm. Entry from companies in neighbouring markets may also be possible. Another factor to consider is whether there are large buyers that have in the past or might in the future 'sponsor' new entry, as this would also likely act as a constraint. For example, there are examples of major oil companies sponsoring entry.

E.6. Real world examples often are the best guide to the pitfalls and costs associated with entry and exit from the market. By enquiring about the experiences of recent market participants, it may be possible to confirm any

assumptions that are made about the likelihood of entry. This can also be important because the concept of 'likelihood of entry' is susceptible to arguments concerning 'hypothetical entry'. Just because entry might hypothetically occur, it does not mean that it is likely. Real world examples can help avoid this difficulty.

Sufficiency of entry

E.7. Entry by new firms will generally only exert a competitive constraint on the behaviour of incumbent firms if by capturing a sufficient amount of their sales it successfully prevents incumbents from raising price post merger. Even profitable entry therefore may not be sufficient if it fails to win enough business from existing firms which could still extract increased profits through price rises. Small scale entry into a niche market might not be of sufficient scale to act as a constraint, although each case should be considered on its own facts. When analysing the sufficiency of new entry, therefore, the following questions should be considered:

- (a) Is the new entry so small or isolated that incumbents can nevertheless still raise prices to a significant section of the market? It may be that the new entry is of insufficient scope to effectively compete with the merging parties.
- (b) In a merger between sellers of differentiated products is the new entrant able to provide a product that competes directly with those of the merging parties such that a sufficient number of customers would defeat an attempt by the merging firms to raise prices by switching away? This can often be ascertained by asking customers whether they perceive new entrants' products to be suitable alternatives to that of the merging firms.
- (c) Is the new entry able to respond to the specific anti-competitive concern brought about by the merger?
- (d) Is the new entry able to counteract any localised anti-competitive effects? In some cases, the anti-competitive effect(s) of the merger

might only occur in a distinct location and any new entrants should be able to target their business in the adversely affected area.

- (e) Some analysis of the ease of adding capacity might be considered. For example, consumer inertia or cost factors may make it very difficult to increase output quickly.

Timeliness of entry

- E.8. Profitable entry will only be considered to act as a competitive constraint if it is sufficiently timely and sustainable. Many jurisdictions consider that entry must occur within two years to have a disciplining effect.
- E.9. In this connection, the most persuasive evidence to seek is detail of planned entry by third parties. The merging parties may be able to provide contact details for any potential entrants allowing the competition authority to ascertain when the entrant is likely to start supplying into the market.
- E.10. Although this is the most persuasive evidence, timely entry nevertheless could occur even in the absence of any planned new entrants, and vice versa. However, often we see entry that is not successful, so the mere plan to enter may not be enough evidence. Therefore, an authority might want to seek evidence of customer switching or lead time for production as examples of additional factors to consider.
- E.11. It may also be useful to look at the duration, termination and renewal provisions of clauses in existing sale contracts. If, for example, buyers are tied into five year contracts, it could take a long time for an entrant to capture market share.

Expansion

- E.12. The ability of existing market participants to expand their capacity quickly in response to a price rise by the merging parties can also act as a competitive constraint. The same factors that are considered in the assessment of new entry are also relevant to the analysis of expansion. Rival firms should be asked whether they have expansion plans, whether they face any barriers to

expansion, and the level of costs to be incurred versus increased revenues to be gained.

Case studies

E.13. The role of entry in merger analysis can be readily observed in the following cases:

- (a) ***Skanska/Scancem*** (ECMR, Case IV/M.1157, European Commission decision, 1999, O.J. L183/1)

In assessing the likelihood of entry into the supply of ready-mixed concrete, the Commission took into account that the costs of commencing production were low but also noted that 'there already exists a significant overcapacity on the Swedish market, and the market is not forecast to grow significantly in the near future. A new entrant would also have to consider that Skanska, given its control over the main raw material, cement, would be in an excellent position to affect its possibilities of making a sufficient return on the investment. Moreover, given the already existing overcapacity, and the fact that a ready-mixed plant cannot readily be used to produce other goods, any investment in new production capacity would largely be a sunk cost.' The Commission also observed that as well as being likely and timely, entry needed to be sufficient to counteract the merged entity's market power. It stated that 'the relevant question is not only whether new entry is possible, but also whether it is likely to be on a scale sufficient to restrict Skanska from behaving largely independently of its competitors following the concentration.'

- (b) ***United States v Baker Hughes*** (908 F.2d 981 (D.C.Cir. 1990))

The US Department of Justice (DoJ) unsuccessfully challenged the merger of competing suppliers of custom-built drilling machines for underground mining, with the court clearing the merger on grounds of ease of entry. In arguing for an injunction against the merger, the DoJ pointed to facts suggesting that entry would require significant sunk investments to create a reputation for product quality and reliable

future service, which could not be undertaken quickly or profitably. The court rejected the DoJ's view that entry must be quick and effective to act as a discipline on the grounds that this requirement does not take into account the fact that potential competition never resulting in actual entry can nevertheless exert competitive pressure on the market, and that it imposes on the merging parties the inappropriate burden of proving that entry will definitely occur.

- (c) ***Genus plc/Supersires Ltd*** (OFT's decision on reference under section 33 given on 8 July 2004)

This merger would bring together the two largest suppliers of professional artificial insemination services in Great Britain with a combined share of supply of 80-90%. However, the merger was not expected substantially to lessen competition in the market in part because barriers to entry were considered to be low. Some third parties argued that the presence of Genus was of itself the main barrier to entry as its operations were of a sufficient size to enable it to offer prices below those of any new entrant. The OFT, however, found a history of entry into the market with new entrants winning business from Genus when it was the monopoly supplier, as well as entry in the two years prior to the merger, and evidence of future planned entry.

CHAPTER 5: CONCLUSION

- 5.1 This preliminary draft has laid the foundations of the Merger Guidelines Workbook. It is our intention that when complete, this workbook will be a useful sourcebook particularly for jurisdictions which are new to or are developing merger guidelines.
- 5.2 This preliminary draft covers five of the anticipated eight topics that we will cover. The value of this document relies upon it being accessible to those jurisdictions for whom it is primarily intended. In circulating the draft at this conference we therefore thoroughly encourage input and feedback. In particular we welcome comments on how user-friendly users find each workbook to be and how easy they are to understand. We are also seeking case studies from a range of jurisdiction to illustrate and help explain the points made in the worksheets.
- 5.3 All comments and feedback and case studies are welcome. We look forward to presenting the final document at the ICN's fifth annual conference in South Africa.