Introduction

For 15 years, the EU's merger control system, unlike most others in the world, offered only minimal possibilities for taking efficiency gains into account as a mitigating factor that might offset the anti-competitive effects of a merger. This changed in January 2004, when the EU Council of Ministers adopted a new merger regulation that for the first time explicitly recognizes the possibility of an efficiency defence. Shortly afterwards, the European Commission published its first guidelines for the assessment of horizontal mergers, explaining how it intends to apply the new regulation. In Part VII of the guidelines, the Commission outlines how efficiencies will be incorporated into merger appraisals.

What are the pros and cons of the efficiency defence? How do other merger control systems deal with efficiencies? What impact will the change in policy have on merging companies and the economy as a whole? How can the investigation process be organized to accommodate the analysis of efficiency gains? What are the main theoretical and practical problems which arise when anti-competitive effects have to be weighed against efficiency gains and how can they be resolved? This book aims to answer these questions or at least to indicate fruitful lines of further enquiry.

Although the old merger regulation included 'the development of technical and economic progress' among the criteria to be considered in the appraisal of mergers, it also stipulated that such progress could be taken into account only if it was to the consumer's advantage and if it did not form an obstacle to competition. The latter condition was generally viewed as allowing very little scope for efficiency arguments. Indeed, the Commission was sometimes criticized for regarding efficiencies as an aggravating factor, rather than an extenuating one. Many economists and business representatives argued in favour of revising the regulation to include an explicit provision which would allow the Commission to take account of the beneficial effects of efficiencies either on total welfare (the preference of many economists) or on consumer welfare. The proponents of the efficiency defence could point to the fact that almost all other merger control systems make such a provision or a more general provision for a 'public interest' defence. Some opponents, such as the German competition authority, argued that dominant firms have no incentive to pass efficiency

benefits on to consumers. Others feared that the introduction of an efficiency defence would open the door for 'industrial policy' considerations to the detriment of consumers. Another objection was that, since the Commission would have access to very little independent information relevant to the assessment of efficiency gains, it would be easy for merging companies to pull the wool over the Commission's eyes.

The new regulation and the Commission's guidelines attempt to meet the main objections of the opponents of the efficiency defence. As a safeguard against the infiltration of industrial policy considerations, the regulation makes it clear that the relevant efficiencies are those which are passed on to consumers. The claim that dominant firms have no incentive to pass on cost savings is, of course, an exaggeration. However, the guidelines stress that the incentive for the merged entity to pass on efficiency gains to consumers is related to the competitive pressure from the remaining firms on the market and potential entry. In particular, the Commission states that it is highly unlikely that a merger leading to a monopoly or near-monopoly could be cleared on efficiency grounds. To address the problem of asymmetric information, the guidelines lay down the principle that efficiency claims must be verifiable and list the types of supporting evidence which are most likely to be considered credible.

In principle, the new regulation and the Commission's guidelines represent an important shift in European merger control policy as far as efficiencies are concerned. However, the practical impact of the changes will depend on the extent to which merging companies, when faced with the threat of a prohibition decision, are willing to make efficiency claims and able to substantiate them.

This volume brings together work on the subject of merger efficiencies undertaken by staff of the European Commission and three studies carried out on behalf of the Commission by academic consultants. All three of those studies have contributed to the policy-making process leading up to the adoption of the new regulation and the guidelines. Two of these studies (Chapters 3 and 4) were completed before the Commission made its proposal for a new regulation and the third was submitted before the Commission adopted its horizontal merger guidelines.

Chapter 1 is a general survey of statistical data on M&A and merger control activity since 1991. It provides the overall context for the specific discussion of efficiencies in the following chapters. The chapter starts by outlining the recent history of merger activity in the former fifteen-member EU (EU15) and in the New Member States. There are marked differences between countries in the intensity of M&A activity (the level of activity relative to the size of the economy). These disparities are not easy to explain as they result from a combination of numerous factors, such as the

structure of share ownership, legal systems and stock exchange rules. As far as cross-border M&A are concerned, the main determinant of the level of activity between any pair of countries is the size of the countries, although proximity and historical or cultural ties are also important factors. When comparing EU15 and the New Member States, we observe marked differences between the two groups of countries, both in the temporal evolution and in the sectoral structure of M&A. With the exceptions of Malta and Cyprus, the New Member States have only recently made the transition to market economies and the development of M&A activity in these countries has been determined to a large extent by the progress of privatization. Cross-border M&A have played a very important role in the transition to capitalism in the Central and Eastern European countries, by providing not only much-needed capital but also managerial and technical expertise.

Chapter 1 also examines the available statistical information on mergers which have been subject to merger control procedures at EU level, in the Member States and in the USA. It looks at the numbers of mergers examined by the competition authorities, the sectors concerned and the outcome of the procedures. The percentage of M&A transactions covered by the EU merger regulation, although rising, is very small by comparison with the percentage of mergers scrutinized by the competition authorities of the largest Member States and the USA. Of the mergers notified under the regulation, a relatively small proportion (about 6 per cent) is subject to in-depth investigation and less than 1 per cent have been forbidden. Consequently, it does not seem that the merger regulation imposes an excessive burden on companies. However, the impact of the regulation varies between sectors. Sectors characterized by large companies and extensive cross-border trading or ownership links are the prime targets of the regulation. These are sectors such as chemicals, electrical equipment, telecommunications and financial services.

The last section of Chapter 1 examines the data on the merger wave of the 1990s in EU15 and the USA. The aim of this comparison is to see whether the wave behaviour of merger activity yields any general lessons about the motivation of mergers, in particular the role played by prospective efficiency gains. We find a striking contrast between the EU and the USA in the ways in which the merger wave developed. In the USA, the wave started and finished earlier and rose much higher. Moreover, almost every sector in the USA was strongly affected by the wave, whereas in EU15 most of the growth occurred in telecommunications and business services while manufacturing was largely unaffected and distribution and financial services responded relatively weakly. Gugler et al. (2002) have argued persuasively that merger waves are not caused by a generalized need for restructuring but rather by the interaction of stock market conditions and

the private interests of company managers. However, as far as EU15 is concerned, the very large sectoral disparities in the growth rates of M&A activity do seem to suggest that sectoral shocks, such as privatization and liberalization of the network industries, may have been an important determinant of European M&A activity. To the extent that mergers enabled firms to adjust to such shocks, there is some reason to believe that the merger wave may have yielded efficiency gains in Europe.

In Chapter 2, Ilzkovitz and Meiklejohn give an overview of the economic and political arguments in favour of an efficiency defence. If the aim of competition policy is to maximize either total welfare or consumer welfare, a merger appraisal that is restricted to the anti-competitive effects, taking no account of productive efficiency gains, is clearly incomplete. The review of the empirical literature by Röller et al. (Chapter 3) shows that, although the average efficiency gain from mergers may be zero or even negative, the variance is very wide: some mergers yield very substantial efficiencies. Important welfare gains may therefore be forgone if the merger control system disregards effects on productive efficiency. From the political point of view, Chapter 2 examines the pressure to include efficiencies or international competitiveness in European merger control criteria. In some major cases there has been intensive lobbying, stressing industrial policy aspects of the cases. The authors argue that, without an explicit legal provision, clearly delimiting the scope of the efficiency defence, there is a danger that the Commission could be led into making unclear compromises between the objectives of competition policy and those of industrial policy.

The authors then survey the treatment of efficiencies by national competition authorities in the USA, Canada and the EU Member States, noting that most jurisdictions accept efficiency defences, some have vague 'public interest' provisions and a few take account of international competitiveness. The next section of the chapter discusses the choice of the welfare standard. This is a fundamental question that must be decided if provision is made for an efficiency defence. If the total welfare standard is applied, all efficiency gains can be taken into account, even if they only accrue to the merged entity and are not in any way passed on to customers. The consumer surplus standard, on the other hand, requires that the efficiency gains must be passed on to consumers at least to the extent that the consumer is no worse off after the merger than before. An intermediate position adopted in Canada takes account of both consumer and producer surplus but gives a greater weight to the former. On balance, the authors conclude that, for both legal and economic reasons, the case for the consumer surplus standard is strongest.

The last section of Chapter 2 examines the practical problems of implementing the efficiency defence. The first problem is the sheer amount of

information needed to evaluate efficiency gains. As this requires a substantial effort on the part of the merging companies and the Commission, it is not practicable to make a thorough efficiency analysis of every notified merger. Following Röller et al. (Chapter 3), the authors therefore propose that, as far as possible, detailed consideration of efficiency claims should be limited to an intermediate class of cases, excluding both those which do not pose any important competition problems and those which, in the absence of efficiencies, would cause such serious harm to competition that no plausible efficiency gains are likely to compensate. When an efficiency defence is taken into consideration, an initial qualitative analysis has to be undertaken in all cases to establish whether the companies' claims are credible and whether the efficiencies could be achieved by means less harmful to competition than the proposed merger. If the merger passes the qualitative tests, a quantitative cost-benefit analysis should be carried out whenever possible. However, some types of efficiencies, in particular improvements in product quality and the creation of innovative products, do not lend themselves to quantitative analysis and the Commission may have to content itself with a rigorous qualitative appraisal. The authors conclude by noting that a number of methodological problems still need to be resolved.

Chapter 3 is an edited version of the report on a study carried out before the review of the merger regulation on behalf of the Commission by Röller, Stennek and Verboven. The aims of the study were to examine the evidence concerning the extent of efficiency gains resulting from mergers and to consider ways in which efficiency gains might be taken into account in EU merger control. The chapter first discusses the theoretical aspects: the types of efficiency gains which can be achieved through mergers, the welfare losses which can result from increases in market power and the problem of balancing the two effects. The next part examines the empirical evidence about the efficiency effects of mergers and comes to the conclusion that, while the average gain is probably close to zero, the dispersion about the mean is very wide. Consequently, failure to take account of efficiency effects may in some cases lead to prohibition of mergers which would lead to substantial welfare gains.

On the basis of their analysis and their knowledge of the practice in various merger control systems, Röller et al. propose a checklist of important factors which should be considered when taking efficiencies into account. In the last part of the chapter, the authors present a 'framework for merger analysis'. They suggest minimizing information costs by adopting a 'sequential approach', which would first assign each merger to one of three classes according to the gravity of its anti-competitive effects. It would be unnecessary to give detailed consideration to efficiency gains in cases where the anti-competitive effects are minor. Where there is very serious

harm to competition, on the other hand, an efficiency defence would be most unlikely to succeed. Consequently, a thorough analysis of efficiencies should only be undertaken in those cases where the foreseeable harm is significant but not overwhelming. The authors then describe ways in which, given an estimate or presumption concerning a merger's effect on prices in the absence of efficiencies, one can estimate the minimum efficiency gain that would be necessary to counteract this effect. After this, they make a series of recommendations concerning the evaluation of the efficiency gains actually brought about by a merger and the chapter concludes by summing up the arguments for and against the efficiency defence.

The treatment of efficiencies in the new merger regulation and horizontal merger guidelines reflects many of the ideas to be found in Chapters 2 and 3 and, in particular, the following:

- Greater weight should be given to variable cost savings than to reductions in fixed costs, since the former have a direct effect on firms' pricing decisions.
- Merger appraisals must take account not only of cost savings but also of improvements in product quality.
- Cost savings that result from anti-competitive reductions in output should not be taken into consideration.
- The analysis should focus on efficiency gains achieved in the market where the competition problems arise.
- The burden of proof of efficiencies should lie entirely on the notifying parties.
- Greater evidential weight should be accorded to pre-merger estimates of efficiencies than to studies carried out after the beginning of the investigation procedure.

Chapter 4, by Stennek and Verboven, examines in more detail the questions of scale economies and pass-on. A general theme throughout the chapter is that efficiency gains, and their pass-on to consumers, may vary widely from merger to merger but in some cases the benefits to consumers may be substantial. For this reason it seems appropriate to allow the merging parties to present an efficiency defence. The authors provide a detailed examination of two main parts of an efficiency analysis: establishing the presence of efficiencies and estimating the extent to which any gains will be passed on to consumers. In the first part the focus is on economies of scale. The authors show that theoretical analysis can define the conditions which determine whether mergers will yield cost savings but they caution that more research is needed to make these conditions fully operational for competition policy purposes. In reviewing the empirical literature, they find evi-

dence of wide variations in scale economies between industries. In addition, concentration in many industries has reached levels much higher than can be explained by scale economies. Consequently, in merger analysis it is very important to bear in mind that the merging firms may already have exhausted the available economies of scale. The authors suggest a two-step approach to the verification of scale economies. In the first step, the competition authority can use existing econometric evidence to check whether the order of magnitude of the cost saving justifies further investigation of the parties' efficiency claims. If a detailed study is warranted, the authority could commission engineering studies, which are better suited to the analysis of individual cases than econometric studies. The second part of the chapter considers the pass-on of efficiencies to consumers in the form of lower prices. Both the theoretical determinants and the empirical evidence are examined. The authors stress that empirical estimates of the pass-through of industry-wide cost savings are not useful in merger analysis, which has to focus on firm-specific cost savings. Whereas industry-wide cost savings are often fully passed on to customers, the pass-through of firm-specific savings varies widely but is almost always incomplete. The authors conclude that pass-through, like the cost savings themselves, has to be evaluated case by case. Finally, the authors develop a practical method for assessing pass-through and demonstrate its feasibility with a real-life example.

The last chapter is an edited version of the report on a study on synergies and dynamic efficiencies in mergers, carried out for the Commission in 2003 by Motis, Neven and Seabright. This study is a first attempt to come to grips with the difficult question of synergies and dynamic efficiencies, a subject that has hitherto received little attention from economists, since it is much less amenable to formal modelling than static efficiencies. The authors develop an analytical framework for identifying the sources of synergies, as distinct from static or 'technical' efficiencies, in mergers. They argue that true synergies occur in a merger when the parties find ways of combining their assets that enable them to achieve output/cost configurations that would not otherwise be possible. They contend that such recombinations of assets presuppose that at least one of the parties has substantial intangible assets to offer. The authors survey the relevant literature and summarize the empirical work they have undertaken to try to measure the importance of intangible assets in determining the size, variance and distribution of shareholder gains from mergers. The following hypotheses are tested:

- On average, mergers that combine important intangible assets yield higher gains than others.

- However, mergers which aim at synergies through new combinations of tangible and substantial intangible assets are more likely to fail than mergers that aim at merely technical efficiencies or the enhancement of market power.
- The gains from combining important intangible assets are more likely to be merger-specific, that is, associated with particular combinations of firms, than other types of gains from mergers. Auction theory suggests, therefore, that the acquiring firm should obtain a higher share of the gains when substantial intangible assets are involved.

Using an event study methodology, the authors are unable to confirm the first hypothesis but do find some limited support for the other two.

Against the background of their analytical framework and their empirical results, Motis et al. make some valuable recommendations concerning the approach that should be followed by competition authorities when considering an efficiency defence. They acknowledge that synergies are much more difficult to evaluate than technical efficiencies, because they are more complex and surrounded by greater uncertainties. Nevertheless, they argue that competition authorities would be wrong to refuse to consider synergies, since in some cases they offer potential efficiency gains that far exceed what can be achieved through technical efficiencies. Furthermore, synergies are much more likely to be merger-specific than other types of efficiencies. However, they advise that the uncertainties are such that an efficiency defence based on synergies should never be accepted if the anti-competitive effects of the merger are clearly very large. The presence of potential synergies and their nature can best be grasped by asking why the firms have chosen a merger rather than some other arrangement and considering the types of asset that each party brings to the merger. Since true synergies, as opposed to market power effects, cannot be achieved through a mere passive combination of those assets, an efficiency defence is only credible if the firms can show that they have precise plans for their integration. In conclusion, the authors suggest that the analysis of all mergers, regardless of the types of asset involved or the nature of the claimed efficiencies, should start by probing the business rationale. Management should be asked to explain clearly the sources of the shareholder gains that they project, so that the competition authority can form a judgement about the proportion of these gains that are of a kind that can be achieved without significant costs to consumers.

The contributions in this book cover a broad range of issues relevant to the introduction of an explicit efficiency defence in European merger control. They examine the background data on M&A activity and merger

control, the political pressures, the theoretical underpinnings and the empirical findings. Last but not least, they contain a number of valuable practical suggestions for implementing the analysis of efficiencies in merger control. However, further work is still necessary to be able to better identify the conditions under which dynamic efficiencies are more likely to materialize and find some useful criteria in that respect.

Although the studies contained in this volume were carried out on behalf of the European Commission and some of the contributors are employed by the Commission, the views expressed are the authors' own and do not necessarily reflect the Commission's policy line.

REFERENCE

Gugler, K., D. Mueller and B. Burcin Yurtoglu (2002), 'The determinants of merger waves', working paper, University of Vienna.