European Union (EU) competition law has reached an age of maturity. In its fifth decade of effective enforcement it looks very different in many aspects from the frail newborn that came to life in 1962, after a long gestation process of four years, following the enactment of the competition law provisions of the Treaty of Rome. Perceived as a centralizing and liberalizing tool in the able hands of the European Commission, EU competition law has grown up to become an instrument at the disposal of the National Competition Authorities (NCA) and national courts of the EU Member States, contributing largely to their emancipation from national centres of power and the development of a true competition law culture in Europe. EU competition law has successfully incorporated sophisticated economic thinking in the design and implementation of competition rules.

The *corpus* of jurisprudence produced each year by the European and national courts as well as the decisional practice of the European Commission and NCAs illustrate the immense success of the competition law ‘enterprise’ in Europe. The influence of EU competition law on the competition law regimes of emergent jurisdictions as well as on the debate over global convergence of competition law rules constitutes an additional indication of the important progress accomplished so far in creating a legal framework that promotes competition and the public interest in general.

We thought that these achievements should be celebrated by the compilation of a volume examining critically all the different dimensions of EU competition law and its evolution, enabling practitioners and students to comprehend how substantive rules have been interpreted through time and how the sophisticated institutional system implementing these rules has been put in place incrementally during the last five decades. For this reason we commissioned a number of chapters from leading academics and practitioners in this field of law in order to provide the reader with a comprehensive analysis on the latest developments but also a critical comment that would hopefully sustain the mist of time.

This volume is dedicated to the analysis of the procedural, evidential and general enforcement framework of EU competition law, in particular Articles 101 and 102 of the Treaty on the Functioning of the European Union (TFEU) and EU merger control. It would be an understatement to stress the importance of an optimal institutional framework in the implementation of competition law rules. The enforcement system
incurs a continuous process of incremental changes, which has significant implications for the way competition law rules are implemented. This, in turn, affects the interpretation of these substantive law provisions, as additional institutional capacities and capabilities are added to the system. For example, it makes no sense to adopt an economically oriented effects-based approach if the rules of evidence are unable to cope with the challenges of a systematic use of economic evidence in competition law proceedings.

From this perspective, the contribution of Ioannis Lianos and Christos Genakos on the way econometric evidence is assessed in EU competition law provides particularly significant insights (Chapter 1). Competition authorities and litigants worldwide have increased the use of economic quantitative methods and economic expert witnesses as a means to produce and support evidence in merger and antitrust cases. The application of quantitative techniques has arisen naturally from the need to answer the central questions of competition law analysis, such as market definition and market structure issues, analysis of pricing and non-pricing behaviour by firms, quantification of damages and efficiencies and dynamic issues of entry and product reallocation. Lianos and Genakos’ chapter aims, on the one hand, to briefly describe the main aspects of the most commonly used quantitative techniques in competition law, and on the other hand, to quantify their use and to codify the European Commission’s opinion on the techniques utilized. The chapter explores the substantive legal framework for the assessment and evaluation of this quantitative evidence in EU competition law by the European Commission and the courts, in particular topics relating to the standard of proof and evidential cogency and the interaction between the different concepts of causation in law and econometrics. The chapter also provides a unique empirical examination of the probative value of different kinds of econometric evidence, by performing for the first time a quantitative analysis of the opinion of the European Commission for the particular techniques used and their average evidential weight.

The following three contributions focus on public and private enforcement in EU competition law.

Arianna Andreangeli notes how the modernisation of the enforcement of EU competition law has routinely been associated with the idea of its ‘decentralization’, namely with the application of Articles 101 and 102 TFEU by national competition authorities and national courts (Chapter 2). The modernization of the existing EU administrative machinery has also had a wide-ranging impact on the investigation and sanctioning powers enjoyed by the European Commission. A question, however, emerges as to whether these more pervasive investigation powers are
adequately counterbalanced by the existing standards of due process. This question arguably appears to be even more compelling in view of the more recent developments occurring in the area of human rights’ protection within the EU and in particular of the impact that the human rights provisions in the TFEU is likely to have in this context.

Damien Gerard moves on to examine the implications of the decentralization of EU competition law, by looking to the operation of the European Competition Network (ECN), formed in order to enhance the cooperation between the Commission and the various National Competition Authorities (NCAs) in the EU Member States (Chapter 3). The constitution of the ECN should be seen as part of a reform process that sought to strengthen the position of NCAs and to associate them more closely with the application of competition rules and principles, with a view to ensuring the effective application of EU competition law in an enlarged Union and an integrated market. Gerard identifies the various driving forces that have prompted the switch towards a network model in the enforcement (and design) of EU competition policy. He then examines the institutional contours of the ECN and provides an account of the rules governing its operation. The chapter offers insights on the parallel enforcement of EU antitrust principles by several NCAs and the management of the cooperation mechanisms relied upon in cross-border investigations, raising concerns on the effectiveness of the decentralization process, legal certainty and due process.

Assimakis Komninos’ contribution on private enforcement completes the analysis of the various forms of enforcement in EU competition law (Chapter 4). National courts play a key role in the enforcement of EU competition law and private litigation of competition law cases is on the rise. Komninos examines the nature and objectives of private antitrust enforcement in EU competition law and the evolution of EU law on civil antitrust remedies, from the first cases of the Court of Justice of the European Union declaring the right to damages in EU competition law violations, to the most recent initiatives of the European Commission promoting private antitrust enforcement. The chapter then delves into the analysis of specific issues raised in private enforcement, such as rules on standing and passing-on, causation, characterization of damages, quantification of harm, binding effect of infringement decisions in follow-on damages cases, collective claims – class actions, access to evidence and the interaction between private enforcement and leniency programmes.

The procedural aspects of merger control are investigated in a separate contribution by Nicholas Levy (Chapter 5). Levy notes that unlike many systems of merger control, the principal legal instruments of EU merger control – the Merger Regulation and the Implementing
Regulation – contain detailed rules on the EU’s jurisdictional remit, the manner in which concentrations should be notified, the timetable for reviewing reportable concentrations and rendering an array of different decisions, the circumstances in which fines may be imposed, and the rights of notifying and third parties. In addition, the Commission has adopted a series of Notices on an array of jurisdictional, substantive and procedural issues that codify the Commission’s decisional practice, and take account of relevant judgments of the EU courts. The chapter describes certain of the more important procedural rules contained in the Merger Regulation, as well as various administrative practices developed by the Commission over the past 20 years and the important changes that have occurred following the intensive judicial review of the European Commission’s merger decisions by the European Court.

The next two chapters move from procedural rules to the analysis of issues arising from the sanctions of anti-competitive infringements and, more broadly, competition law remedies in Europe.

Damien Geradin, Christos Malamataris and John Wileur provide a critical analysis of the EU competition law fining system (Chapter 6). The fines imposed by the European Commission on undertakings for infringements of Articles 101 and 102 TFEU have risen significantly over the last 20 years. According to Geradin, Malamataris and Wileur, the evolution of the general level of corporate fines in the EU seems to be in great part due to the Commission’s desire to increase deterrence. However, the high level of recidivism in the EU casts doubt on the effectiveness of the imposition of increasingly high corporate fines. Without denying the importance of corporate fines, the authors suggest that additional types of sanctions and incentives may have to be introduced to ensure the effective enforcement of EU competition law. The chapter provides a description of the methodology used by the Commission to calculate the level of antitrust fines, before discussing the types of sanctions and incentives required for the effective enforcement of EU competition law. The boundaries of parental liability and the relationship between public and private enforcement are also thoroughly explored.

The fragmentation of EU competition law enforcement in various institutions and legal provisions (Articles 101, 102 TFEU, merger control) have led to the development of ad hoc remedial action without this being backed up by a solid theory of competition law remedies. The chapter by Ioannis Lianos aims precisely to fill this gap by providing the first systematic theoretical analysis of competition law remedies in Europe, including conduct and structural remedies, voluntary and coercive remedies, in the areas of merger control and antitrust (Chapter 7). Lianos challenges the optimal enforcement theory that seems to have so far provided the intel-
lectual backbone of the remedial action of EU competition authorities, although this influence has not been exercised in a systematic and uniform way in all cases. For Lianos, such theory does not provide an adequate understanding of the remedial discretion of competition authorities and consequently the necessary boundaries of such discretion. The chapter provides a novel analytical framework integrating both economic and legal principles, taking the view that although deterrence (and economic efficiency) constitutes an important objective of EU competition law, this should be achieved in the context of established legal understandings of the concept of remedy. More specifically, Lianos examines the impact of the economic approach on the linkage between the competition law wrong and remedies as the foundation for an economically inspired but still respectful to legal tradition concept of remedial discretion in EU competition law.

The enforcement of EU competition law by national courts from various legal systems raises important issues of private international law. The globalization of markets and concomitant impact of anti-competitive activity that is not confined by traditional concepts of nation-state territoriality has also brought forward aspects of jurisdiction and choice of law in competition law disputes, whether in a public, or private, law context. As a result of these developments, Barry Rodger argues that acquaintance with private international law rules has become almost a prerequisite for anyone interested in competition law enforcement in the EU (Chapter 8). The chapter provides a thorough analysis of the jurisdiction rules, located primarily in the Brussels I Regulation and the jurisprudence regarding their application in a competition law context. Furthermore, Rodger notes the considerable complementarity between these jurisdiction rules and the choice of law rules provided specifically for competition law disputes in the Rome II Regulation. His contribution illustrates the importance of the developing relationship between EU competition law and private international law.

The following chapter by Heike Schweitzer notes how a principled and well-functioning regime of judicial review is a fundamental part of the EU’s commitment to the rule of law, and is of particular relevance in the field of EU competition law (Chapter 9). According to Schweitzer, over the last decade, debates have sprung up over whether the European regime of judicial review meets the requirements of due process and adequate protection of the rights of defence. Judicial review has become a matter of intense debate in EU merger control following some seminal case law of the European Courts. Furthermore, the ‘heightened severity of the Commission’s fining practice’ has raised questions as to whether the European regime of judicial review has managed to fully incorporate the
individual rights dimension which has become ever more important over time. Schweitzer’s contribution provides a critical analysis of the function and features of judicial review in EU competition law and discusses the new conceptual framework for judicial review of competition law cases that has emerged in the EU over the last decade.

Moving beyond the implementation of EU competition law, the following chapter, by Katalin Cseres, examines the relationship between EU competition law and national competition laws (Chapter 10). Cseres notes the fundamental change introduced by Regulation No. 1/2003, which established, for the first time, a governance framework for the relationship between EU and national competition laws in the EU. Until then, EU competition law and the competition laws of the Member States had been developing alongside one another with little interaction. The chapter maps out the governance framework laid down by Regulation No. 1/2003 and further developed within the ECN. In analyzing this relationship, Cseres looks at the centripetal and centrifugal effects Regulation No. 1/2003 has had on the substantive and procedural rules as well as the institutions of the Member States’ competition law. The chapter delves into the work within the ECN and takes a critical look at the Commission’s proposal to further harmonize substantive and procedural rules as well as the present voluntary harmonization between the EU and national rules.

The final chapter in this volume, by Yannis Katsoulacos and David Ulph, takes a law and economics perspective and addresses the important question of optimal legal standards and in particular how the optimal standard to be chosen is affected by legal uncertainty and by the penalties imposed by the competition authority for competition law violations (Chapter 11). Katsoulacos and Ulph summarize their important theoretical work on optimal standards and criticize the widely held view that legal uncertainty constrains antitrust authorities to \textit{per se} decision procedures rather than \textit{effects based} procedures. They argue instead that there can be beneficial deterrence effects created by having \textit{effects-based} procedures that are subject to certain types of legal uncertainty and that when these deterrence effects can be further fine-tuned through the setting of appropriate penalties, then \textit{effects-based} decision procedures are always preferable to \textit{per se}.

We hope that the breadth of coverage and the quality of critical analysis provided by this volume will satisfy the various communities of readers that we expect will engage with this work: competition officials, the judiciary, practitioners, academics and graduate students. The contributors have updated their chapters with the most recent legal developments up to 1 September 2012, although some chapters include more recent devel-
opments. The completion of this volume would not have been possible without the important editorial contribution of Andres Palacios Lleras (UCL) and the efficient and diligent assistance of the Edward Elgar Publishing team, and in particular the inspiration of Ben Booth, to whom both editors are grateful.