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## Preface

This is the second volume of the Paris-Princeton Lectures in Mathematical Finance. The goal of this series is to publish cutting edge research in self-contained articles prepared by well known leaders in the field or promising young researchers invited by the editors. Particular attention is paid to the quality of the exposition, and the aim is at articles that can serve as an introductory reference for research in the field.

The series is a result of frequent exchanges between researchers in finance and financial mathematics in Paris and Princeton. Many of us felt that the field would benefit from timely exposés of topics in which there is important progress. René Carmona, Erhan Cinlar, Ivar Ekeland, Elyes Jouini, José Scheinkman and Nizar Touzi will serve in the first editorial board of the Paris-Princeton Lectures in Financial Mathematics. Although many of the chapters in future volumes will involve lectures given in Paris or Princeton, we will also invite other contributions. Given the current nature of the collaboration between the two poles, we expect to produce a volume per year. Springer Verlag kindly offered to host this enterprise under the umbrella of the Lecture Notes in Mathematics series, and we are thankful to Catriona Byrne for her encouragement and her help in the initial stage of the initiative.

This second volume contains three chapters. The first one is written by Tomasz Bielecki, Monique Jeanblanc and Marek Rutkowski. It reviews recent developments in the *reduced form* approach to credit risk and offers an exhaustive presentation of the hedging issues when contingent claims are subject to counterparty default. The second chapter is contributed by Tomas Bjork and is based on a short course given by him during the Spring of 2003 at Princeton University. It gives a detailed introduction to the geometric approach to mathematical models of fixed income markets. This contribution is a welcome addition to the long list of didactic surveys written by the author. Like the previous ones, it is bound to become a reference for the newcomers to mathematical finance interested in learning how and why the geometric point of view is so natural and so powerful as an analysis tool. The last chapter is due to José Scheinkman and Wei Xiong. It considers dynamic trading by agents with heterogeneous beliefs. Among other things, it uses short sale constraints and overconfidence of groups of agents to show that equilibrium prices can be consistent with speculative bubbles.

It is anticipated that the publication of this volume will coincide with the *Third World Congress* of the Bachelier Finance Society, to be held in Chicago (July 21-24, 2004).

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