Computational Finance
and its
Applications
FIRST INTERNATIONAL CONFERENCE ON
COMPUTATIONAL FINANCE AND ITS APPLICATIONS

COMPUTATIONAL FINANCE 2004

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Computational Finance
and its
Applications

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Preface

This book contains the edited version of the papers presented at the first International Conference on Computational Finance and its Applications, held in Bologna in 2004. The Meeting brought together professionals and academics from the scientific community in the fields of financial engineering and computational intelligence in finance.

Finance is today a very complex field. In particular, financial markets often provide clear insights on the functioning and trends of the economy as a whole. Financial Markets are therefore extremely dynamic and they are closely monitored by important institutions both in the private and public sectors. Key players in the market are companies such as investment banks, hedge funds etc., which are closely regulated and monitored by institutions such as the Fed in the US or the FSA and the Bank of England in Great Britain.

Because of the interests at stake in the financial markets, the investment in terms of technology and research is very high in absolute terms, particularly compared to other fields of research. Therefore, the time between when a new piece of research is produced and when it is applied in practice has been decreasing progressively, with investment banks prepared to invest heavily both in research start-up companies and academic institutions.

Several new technologies and methodologies have been therefore applied to finance in recent years, moving from traditional approaches only to new and intelligent techniques.

Finance is therefore an area where the collaboration between professional institutions, such as investment banks, and the research community is very strong. This 1st International Conference on Computational Finance and Applications was called because of the current interest and ever-increasing development work taking place in the field of computational finance. This book contains many high quality contributions reporting advances in the field and focussed on the following areas:

- Trading strategies
- High frequency financial data
- Time series analysis and forecasting
- Expert systems and decision support
- Risk management
- Credit risk
• Derivatives pricing
• Advanced computing and simulation

This volume would not have been possible without the help of the members of the International Scientific Advisory Committee, led by Marco Costantino of the Royal Bank of Scotland Financial Markets in the UK, whose work is gratefully acknowledged. Their help in reviewing the papers has been essential in ensuring the high quality of this volume.

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