

European Science Foundation
Standing Committee for Social Sciences (SCSS)

ESF SCSS EXPLORATORY WORKSHOP

**Arbitrage and related topics
Scientific Report**



Paris, France
24-26 June 2003

Convened by: Bernard Cornet

Centre de recherche en Mathématiques Statistiques et Economie
Mathématique (CERMSEM) Université Paris 1, France



Additional support is generously provided by the
Conseil Scientifique, Université Paris 1, Panthéon-Sorbonne



European Science Foundation - SCSS Exploratory Workshop:

Arbitrage and related topics

Paris, France, 24-26 June 2003

1. Executive summary

The organization of the workshop was structured as follows:

Convenor :

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Scientific Organisation :

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Workshop website :

<http://cermse.univ-paris1.fr/arbitrage/paris/lconf1.htm>

The scientific Committee was in charge of the scientific programme. Cuong Le Van was also in charge of the topic *Arbitrage with unbounded trades* and Elyse Jouini of the topic *Arbitrage and finance*.

The local organization was assumed by Jean-Philippe Médecin and Tuyen Ngoc. They manage to find the room for the conference, offices to the visitors, access to internet to the participants, organization of the social events and lunches and coffee breaks. Tuyen Ngoc was also dealing directly with the participants for the hotel reservations and was in charge of the printing an Xerox of the successive versions of the programmes. Jean-Marc Bonnisseau was in charge of the budget of the conference and the preparation of the final scientific report.

2. Scientific content of the event

The conference was organized with 8 sessions: 5 of 2 hours and 3 of 1h20. The communications were about of 40 minutes are and were given by junior researchers (2) and senior researchers (19), so 21 communications altogether, All the communications were dealing with arbitrage, but we can further classify them under the following topics:

- General presentation of arbitrage in economics and finance	1
- Arbitrage in general equilibrium models with unbounded trades	4
- Arbitrage with asymmetric information	2
- Arbitrage and strategies on the financial markets	6
- Arbitrage and the firm's behavior	1
- Arbitrage and decision theory	1
- Arbitrage and economy of time and uncertainty	5

The papers presented at the conference are available as pdf files on the web site of the conference :

<http://cermseminiv-paris1.fr/arbitrage/paris/lconf1.htm>

3. Assessment of the results, contribution to the future direction of the field

This workshop has gathered senior and junior specialists in economics and finance working in the domain of arbitrage theory. The first contribution of the workshop was to provide a forum to researchers of different domains, in which they could present their contributions and interact with the other participants.

We can roughly classify the participants in three different groups – the word “club” was explicitly used by several participants-: economics of time and uncertainty, equilibrium analysis with unbounded trades and finance theory.

Four contributions made clear the relationships between the analysis of arbitrage from the different points of view that have been presented in the workshop.

The other contributions have presented ongoing research with some burning questions in different areas. We can point out two themes which had common subject of interest: influence of market imperfections on the outcome of the market process, and heterogeneity of beliefs (or preferences) of consumer-investors.

We can also remark the need for a complete analysis of the absence of arbitrage opportunity on continuous time markets in a general equilibrium point of view. The influence of expectations and/or asymmetric information on arbitrage is far from being completely clear. This would certainly need probably a modelization of the consumer's behavior beyond the usual Von Neuman-Morgenstern approach.

Following the opinion of participants, we may consider having a second conference on the same subject or having a broader one in the future.

4. Final programme

Tuesday 24th June 2003

09:00 – 09:15

Opening session

Presentation of the European Science Foundation

Miroslav Marcelli

09:15 – 11:15

Session Tu1 Chairperson Frank Page

Arbitrage, finance and general equilibrium theory

Cuong Le Van and Rose-Anne Dana

Equilibrium Theory Beyond Arbitrage

Nicholas Yannelis and Dongchul Won

Arbitrage as Curvature in a Walrasian Dynamics

Gael Giraud

11:15 – 11:30

Coffee Break

11:30 – 12:50

Session Tu2 Chairperson Herakles Polemarchakis

Common Knowledge, Coordination and Rational Limits to Arbitrage

Jean-Pierre Zigrand

Elimination of arbitrage states and price revelation under asymmetric information

Bernard Cornet and Lionel de Boisdeffre

12:50 – 14:30

Lunch at Restaurant Cocagne, 180 rue Jeanne d'Arc, Paris 13ème

14:30 – 17:10

Session Tu3 Chairperson Nicholas Yannelis

Arbitrage and externalities

Cuong Le Van, Frank Page and Myrna Wooders

Money and Price under Uncertainty

Herakles Polemarchakis

Fram Rags to Riches: On Contant Proportions Investment Strategies

Igor V. Evstigneev and Klaus Reiner Schenk-Hoppe

19:00
13ème

Cocktail Party at Maison Internationale, 58 bd Arago Paris

20:30

Concert at Maison Internationale, 58 bd Arago Paris 13ème

Wednesday 25th June 2003

09:00 – 11:00

Session We 1 Chairperson Myrna Wooders

On the existence of financial equilibria with incomplete markets

Filipe Martins da Rocha and Leila Triki

Revisiting Demand and Equilibria in the CAPM

Volker Böhm

Arbitrage, Equilibrium, and Nonsatiation

Nizar Allouch, C. Le Van and F. Page

11:00 – 11:30

Coffee Break

11:30 – 12:50

Session We2 Chairperson Volker Böhm

Unbounded Short Sales with Half Lines in Indifference Surfaces

Myrna Wooders

On the Law of One Price

Jean-Michel Courtault, Freddy Delbaen, Yuri Kabanov, Christophe Stricker

Thursday 26th June 2003

09:00 – 11:00

Session Th1 Chairperson Walter Schachermayer

Heterogeneous beliefs and aggregate consumer

Elyes Jouini and Clotilde Napp

Learning to predict rationally when beliefs are heterogeneous

Jan Wenzelburger

An axiomatic model of non-bayesian updating

Larry Epstein

11:00 – 11:30

Coffee break

11:30 – 12:50

Session Th2 Chairperson Jean-Pierre Zigrand

Dreze criterion in multi-period economies with stock markets

Jean-Marc Bonnisseau and Oussama Lachiri

Generalization of the international model of arbitrage

Patrice Fontaine

12:50 – 14:30

Lunch at la Maison des Sciences Economiques

14:30 – 17:10

Session Th3 Chairperson Larry Epstein

Modeling continuous-time financial markets with capital gain taxes

Imen Ben Tahar and Nizar Touzi

Model Uncertainty and its Impact on Derivative Pricing

Rama Cont

Utility Maximization in Incomplete Financial Markets

Walter Schachermayer

19:30

*Dinner at "Marty"
20 avenue des Gobelins
75005 Paris*



5. Final list of participants

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6. Statistical information on participants

Country	Number of participants	Percentage
France	38	69%
Germany	3	5,5%
UK	3	5,5%
Austria	1	1,8%
Denmark	1	1,8%
Italy	1	1,8%
Cuba	1	1,8%
Korea	1	1,8%
USA	6	11%

	Number of participants	Percentage
Senior Researchers	39	71%
Junior Researchers	16	29%