12th Annual International Conference on

Real Options
Theory Meets Practice

Organized by
Real Options Group and
PUC-Rio, Brazil

In cooperation with
Bank of Cyprus Chair/University of Cyprus
Northwestern University
and University of California at Los Angeles

Main Sponsors
Petrobras, Brazil
McKinsey & Company

July 10 - 12, 2008
Rio de Janeiro, Brazil
Program Sessions Summary Guide

DAY 1 - THURSDAY, JULY 10

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00-8:25</td>
<td>Registration</td>
</tr>
<tr>
<td>8:30-9:20</td>
<td>Welcome &amp; President’s Address</td>
</tr>
<tr>
<td>9:30-10:20</td>
<td>Portfolio Applications</td>
</tr>
<tr>
<td>11:00-12:15</td>
<td>Competition and Strategy Games</td>
</tr>
<tr>
<td>12:15-1:50</td>
<td>Luncheon Keynote Address by Tom Copeland (MIT)</td>
</tr>
<tr>
<td>2:00-3:15</td>
<td>Investment Theory</td>
</tr>
<tr>
<td>4:00-5:15</td>
<td>Theoretical Issues</td>
</tr>
<tr>
<td>5:25-6:15</td>
<td>Panel Discussion: Innovation, Corporate Strategy &amp; Contracting</td>
</tr>
<tr>
<td>6:20-7:30</td>
<td>Networking Reception</td>
</tr>
</tbody>
</table>

DAY 2 - FRIDAY, JULY 11

<table>
<thead>
<tr>
<th>Time</th>
<th>Track I</th>
<th>Track II</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30-9:00</td>
<td>Registration</td>
<td>Registration</td>
</tr>
<tr>
<td>9:00-10:15</td>
<td>Conceptual Issues</td>
<td>9:00-10:15 Valuing Petroleum Investments</td>
</tr>
<tr>
<td>10:45-12:00</td>
<td>R&amp;D/Innovation</td>
<td>10.45-12:00 Volatility Estimation</td>
</tr>
<tr>
<td>12:00-1:30</td>
<td>Luncheon Guest Lecture Address by Octavio A.F. Tourinho (BNDES)</td>
<td></td>
</tr>
<tr>
<td>1:30-2:45</td>
<td>Case Applications</td>
<td>1:30-2:45 Tax Effects, Valuation &amp; Policy Issues</td>
</tr>
<tr>
<td>3:15-4:30</td>
<td>Infrastructure/Policy Issues</td>
<td>3:15-4:30 Regulatory Access &amp; Incentives</td>
</tr>
<tr>
<td>4:40-5:30</td>
<td>Panel Discussion: Current State, Challenges and Future Prospects</td>
<td></td>
</tr>
</tbody>
</table>

DAY 3 - SATURDAY, JULY 12

Excursion – Networking

Talk about Brazilian Economy & Financial System
Program Sessions

DAY 1 – THURSDAY, JULY 10

8:00 – 8:25 Registration

8:30 – 8:45 Welcome

8:45 – 9:20 President's Address
L. Trigeorgis (U. Cyprus & President, Real Options Group)
On Multinationality Options and Performance

9:30 – 10:20 Portfolio Applications
Chairperson: J. Kensinger (U. North Texas)
A. Chen (Southern Methodist U.), J. Conover and J. Kensinger (U. N. Texas), Private Equity Acquisitions as Real Options Portfolios
N. Ferreira (McKinsey & Co), The Value of Land as Portfolio of Planting Flexible vs. Inflexible Crops

10:20 – 11:00 Morning Coffee Break

11:00 – 12:15 Competition and Strategy Games
Chairperson: D. Paxson (Manchester Business School, UK)
M. Goto (Waseda U.), R. Takashima (U. Tokyo), M. Tsujimura (Ryukoku U.) and T. Ohno (Waseda U., Japan), Entry and Exit Decisions Under Uncertainty in a Symmetric Duopoly
A. Azevedo and D. Paxson (Manchester Business School, UK), New Technology Adoption Games: An Application to the Textile Industry
M. Nishihara (Osaka U.) and T. Shibata (Tokyo Metropolitan U.), Real Options, Debt Financing and Competition

12:15 – 1:50 Luncheon Keynote Address by Tom E. Copeland (MIT)
Financial and Real Options: My Complements and Your Substitutes

2:00 – 3:15 Investment Theory
Chairperson: T.E. Copeland (MIT)
M. Schnetzer (Adliswil) and L. Taschini (U. Zurich, Switzerland), Entry and Exit Decisions with Implementation Delay: A Probabilistic Approach
F.A.L. Aiube and E.A.H. Tito (Petrobras and PUC-Rio), Evaluating Cash Holdings as Real Options: An Application for a Commodity Producer in an Emerging Market
S. Scatasta (CEER, Germany) and J. Wesseler (Wageningen U., The Netherlands), *Real Options and the Adoption of Transgenic Crops*

3:15 – 4:00  **Afternoon Coffee Break**

4:00 – 5:15  **Theoretical Issues**  
*Chairperson: S. Sodal (Agder U., Norway)*

R. Adkins (U. Salford) and D. Paxson (U. Manchester, UK), *The Tourinho Model of Defering Oil Extraction: Neglected Nugget or a Receding Relic*

J. Azevedo-Pereira (ISEG R.M. Lupi), G. Couto (U. Acores) and C. Nunes (Instituto Superior Técnico, Portugal), *On the Optimal Timing of Relocation*

R. Adkins (U. Salford) and D. Paxson (U. Manchester, UK), *An Analytical Real Options Replacement Model with Depreciation*

5:25 – 6:15  **Panel Discussion**  
**Innovation, Corporate Strategy and Contracting**  
*Moderator: Dean Paxson (Manchester Business School, UK)*

Panelists Include:  
Francesco Baldi (ENEL, Italy)  
Luiz Brandao (PUC-Rio, Brazil)  
Tom Copeland (MIT)  
Marco A.G. Dias (Petrobras, Brazil)  
John Kensinger (U. N. Texas, USA)  
Scott Mathews (The Boeing Company, USA)  
Martin Pergler (McKinsey & Co, USA)  
Sergio Ramos (Kaiser Associates, Brazil)

6:20 – 7:30  **Networking Reception**  
*Sponsored by ROG, Petrobras and McKinsey & Company*
DAY 2 – FRIDAY, JULY 11

8:30 – 9:00  Registration

9:00 – 10:15
I. Conceptual Issues
Chairperson: J. Kensinger (U. N. Texas)

S.B. von Helfenstein (Braver PC, USA), Acquisitions, Creative Destruction and Taxes: Applications of Real Options in Economic Systems

M-C. Beaulieu and W.R. Sodjahin (U. Laval, Canada), When do Announced IPOs are Completed?

H. Suzuki, M. Goto and T. Ohno (Waseda U., Japan), Brand Choice and Purchase Incidence

II. Valuing Petroleum Investments
Chairperson: M.A.G. Dias (Petrobras and PUC-Rio, Brazil)

A. Fathi and K. Bilel (U. Sfax, Tunisia), Valuing an Option to Defer an Oilfield Development by Simulation: An Application in Tunisia

A.M. Marques (Petrobras), M.A.G. Dias (Petrobras and PUC-Rio) and R.M. da Silva Montezano (IBMEC – Rio, Brazil), Valuing the Option to Delay a Petrochemical Project: An Application in Brazil

C. Bastian-Pinto, L.E.T. Brandao (PUC-Rio) and M de Lemos Alves (TIM Participacoes S.A., Brazil), Valuing the Switching Flexibility of the Ethanol-Gasoline Flex Fuel Car

10:15 – 10:45 Morning Coffee Break

10:45 – 12:00
I. R&D/Innovation
Chairperson: F. Baldi (ENEL, Italy)

F. Baldi (Enel, Italy) and L. Trigeorgis (U. Cyprus), Strategic Patent Leveraging under Uncertainty: An Option Games Approach

E. Agliardi and R. Agliardi (U. Bologna, Italy), The Fuzzy Value of Patent Litigation

II. Volatility Estimation
Chairperson: G. Sick (U. Calgary, Canada)

T. Haahetela (Helsinki U. Technology, Finland), Volatility and Ambiguity in Simulation-based Volatility Estimation

M.O. Souza and J. Zubelli ((U. Federal Flu-Minense, Brazil), Real Options Under Fast Mean-Reversion Stochastic Volatility

J.C. Dias and J. Pedro Nunes (ISCAC Business School, Portugal), Real Options Under Constant Elasticity of Variance (CEV)
12:00 – 1:30  Luncheon Guest Lecture Address by Octavio A.F. Tourinho (BNDES & UERJ)

1:30 – 2:45
I. Case Applications
Chairperson: L. Brandao (PUC-Rio, Brazil)

M.C. de Azevedo Rabelo Berni (FEAD Minas), J.A. de Sousa Neto (Terra) and H.G. Brasil (Strategor, Brazil), Valuing the Conversion Option of Biodiesel vs. Vegetable Oil: An Application in a Soya Processing Plant in Brazil

S. Verbrugge, D. Colle, P. Demeester (Ghent U., Belgium) and W. De Maeseneire (Erasmus U. Rotterdam, The Netherlands), Valuing the Flexibility in Fiber Deployment Network Planning: An Application to a Belgian Network

M. Heikkila and C. Carlsson (Abo Academi U., Finland), A Fuzzy Real Options Model for (Not) Closing a Production Plant: An Application to Forest Industry in Finland

II. Tax Effects, Valuation and Policy Issues
Chairperson: M.A.G. Dias (Petrobras and PUC-Rio)

M.A.G. Dias (Petrobras and PUC-Rio, Brazil), Tax Effects on Timing, Scale and Learning Options in Petroleum Upstream


P.M. Pimentel, G. Couto (U. Azores) and J. Azevedo-Pereira (U. Técnica de Lisboa, Portugal), High Speed Rail Transport Valuation and Policy Decisions

2:45 – 3:15  Afternoon Coffee Break

3:15 – 4:30
I. Infrastructure/Policy Issues
Chairperson: A. Rodriques (U. Minho, Portugal)

M. Collan (Abo Akademi U., Finland), Strategic and Operational Real Options in Area Development Projects: An Application in Finland

M.J.R. Armada, P. Pereira and A. Rodrigues (U. Minho, Portugal), Optimal Incentives to Public-Private Partnerships for Airport Infrastructure Investments under Market Segmentation: An Application to Portugal

N. Kruger and M. Svensson (Orebro U., Sweden), The Impact of Real Options on Willingness to Pay for Infrastructure Safety Investments: A Survey-based Analysis in Sweden

II. Regulatory Access and Incentives
Chairperson: K. Nordal (Norges Bank, Norway)

G. Sick (U. Calgary, Canada), Real Options and Facilities Access Regulation
G.F. de Braganca, K. Rocha (IPEA) and R.H.R. Moreira (Anatel, Brazil), *Access Regulation of Brazilian Fixed-Line Telephone Operators and the Mark-up on the Cost of Capital*

K. B. Nordal (Norges Bank, Norway), *Evaluating Bank Incentives for Implementation of a Risk-Sensitive Capital Rule*

**4:40 – 5:30  Panel Discussion: Current State, Challenges and Future Prospects**  
*Moderator: Gordon Sick (U. Calgary, Canada)*

**Panelists Include:**  
Luiz Brandao (PUC-Rio)  
Tom Copeland (MIT)  
Marco A.G. Dias (Petrobras, Brazil)  
John Kensinger (U. North Texas)  
Dean Paxson (U. Manchester, UK)  
Sigbjorn Sodal (Agder U., Norway)  
Oliver A.F Tourinho (BNDES & UERJ, Brazil)  
Lenos Trigeorgis (U. Cyprus & ROG)

**5:30 Closing Remarks**

**DAY 3 – SATURDAY, JULY 12**

Excursion – Networking  
Talk about Brazilian Economy & Financial System  
Conference Concludes.