



RESEARCH CENTRE OF THE  
ATHENS UNIVERSITY OF  
ECONOMICS AND BUSINESS

46 Kefallinias Street, 112 51 Athens  
Tel: +30 210 8665350, 8665.360  
Fax: +30 210 8676265  
E-mail: seminars@rc.aueb.gr  
Web: www.kek.aueb.gr

THE RESEARCH CENTRE OF THE  
ATHENS UNIVERSITY OF ECONOMICS AND BUSINESS

**PRESENTS THE 22<sup>ND</sup> SERIES OF THE EXECUTIVE SEMINAR**

# SHIPPING DERIVATIVES AND RISK MANAGEMENT

## Thursday 22<sup>nd</sup> and Friday 23<sup>rd</sup> April 2010

Launched in January 2004 (1<sup>st</sup> Series)

### SEMINAR LEADERS:

**PROFESSOR MANOLIS G. KAVUSSANOS, Ph.D.**

Athens University of Economics and Business

Department of Accounting and Finance

E-mail: mkavus@aueb.gr

Web: www.aueb.gr

**ASSISTANT PROFESSOR ILIAS D. VISVIKIS, Ph.D.**

Academic Director MBA in Shipping

ALBA Graduate Business School

E-mail: ivisviki@alba.edu.gr

Web: www.alba.edu.gr

with

Panayotis Bachtis, OW Bunker Malta Ltd. and

Filimon Antonopoulos, Marfin Egnatia Bank

- Identify all sources of potential business risks to your company
- Examine and compare traditional and modern methods of risk management
- Explore the latest derivative products used in shipping, including FFAs and freight options
- Analyze the effect of fluctuations in freight rates, bunker prices, interest rates, foreign exchange rates and vessel value prices
- Cover analytical and practical applications of hedging risks

**REGISTRATION PERIOD**  
Until 19/04/2010

## ■ AIMS AND OBJECTIVES OF THE SEMINAR

The aim of this seminar is to provide high quality education in the areas of derivatives and risk management in shipping. It comes as a response to the increasing calls for education in this area by the shipping industry. The highly volatile / risky business environment that companies in the industry operate in makes it imperative for them to identify the sources of risk that they face, but also to know how to deal with them effectively. Implementing risk management strategies in the increasingly sophisticated and competitive environment companies operate in our days, can often make the difference between being able to stay in business or not. It can give these companies a comparative advantage over the intense competition that they face in the sector.

Both traditional methods of risk management and more recent derivatives tools, introduced relatively recently in the finance industry, are extended to the shipping industry through this unique seminar. The education seminar is based on the experience and high quality work of the two instructors. More than ten years' pioneering work is embedded in the seminar, which brings market participants to the forefront of developments in the areas of risk management and derivatives in shipping.

A number of developments in the area have been instituted by the instructors, who have a deep understanding of the issues involved, with years of teaching experience at all levels of education. Moreover, it is the 22<sup>nd</sup> time, since its inception in January 2004, that this internationally unique seminar will be exposed to the industry, essentially having the market practitioners verifying its high quality, applicability and relevance to the business problems they face. Previous venues of the seminar in various forms include Greece (Piraeus, Athens), Italy (Milan), Holland (Rotterdam), UK (London), Germany (Hamburg), Turkey (Istanbul), Malaysia (Kuala Lumpur), and Singapore.

It has established itself as the world-leader on shipping derivatives education. It combines the academic rigor with the practical knowledge, in offering essential skills and guidance to company personnel wishing to implement shipping derivatives for risk management purposes. It reflects all recent developments in the area of shipping derivatives, by continuous reviewing and updating of its curriculum. Practical examples with real data, covering every aspect of risk in shipping are presented, hands on simulations, exercises and discussions are part of the seminar in these, deliberately held, small round-table groups, which facilitate interaction between its members.

A number of distinguished industry speakers have contributed to the seminar in the past, bringing state-of-the-art professional experience to it. Past industry speakers have come from Clarksons Securities Ltd. (London), Navios Maritime Holdings Inc, Freight Investors Services (FIS), O.W. Bunker Malta Ltd, International Maritime Exchange (IMAREX), FreightMetrics, SoftMAR, Marfin Egnatia Bank and Swiss Mar SARL.

## ■ WHO CAN PARTICIPATE IN THE SEMINAR

Attending the seminar does not require a university degree, even though it is desirable. It requires common sense. Company personnel from all sectors of the shipping industry with an interest in risk management are welcome.

The seminar can be attended and has been attended in the past by: Shipowners and CEOs, Treasurers and CFOs, managing directors, ship operators, ship managers, chartering managers, operations managers, charterers and other management personnel of shipping companies, shipbrokers, maritime lawyers, accountants, financial analysts, naval architects, bankers, shipping fund investors, traders, risk and asset managers, oil traders, as well as postgraduate students.

Company activities of past participants include: Dry-bulk and wet-bulk shipping, container shipping, cruise lines, passenger shipping, ship registers, shipbroking, banks, fund managers, auditing firms, industrial and energy firms, and financial/brokerage firms.

## ■ EDUCATIONAL METHODOLOGY – MATERIAL GIVEN

Educational techniques employed include presentations, guest lectures by distinguished invited professionals, Q&A sessions, simulation / trading games and focus group discussions. Lively discussions between presenters and participants, who have come from almost all sectors of the industry, help clarify the issues involved.

Full lecture notes are provided. Furthermore, extra handouts may be given by the instructors, which may include exercises, published studies in academic and practitioner journals, etc.

**“Analyze and learn how to manage all sources of business risks in maritime operations”**

**Experience  
the practical  
application  
of risk  
management  
techniques  
in shipping"**

## DURATION AND STRUCTURE OF THE SEMINAR

The first session (**Intermediate, 22/04/2010**) introduces delegates to the concept of business risks and risk management techniques in the shipping industry. The sources of economic risks in the industry emanating from fluctuations in freight rates, bunker prices, interest rates, foreign exchange rates, and vessel value prices are identified, and traditional and modern management methods are examined. Freight futures and FFAs constitute a major part of the course. Analytical, practical examples of hedging risks are presented in every case.

The second session (**Advanced, 23/04/2010**) covers the hedging positions of bunker prices, interest rates, foreign exchange rates, and vessel value prices, amongst others. Advanced examples and methodologies of hedging risk through shipping derivatives are presented in every case. Pricing and hedging issues of derivative products, as well as strategies for their practical implementation, are part of the seminar. Techniques for identifying profitable market opportunities are also presented, with practical examples for taking advantage of these opportunities included. Finally, an advanced analysis of options contracts is given.

## CERTIFICATE OF ATTENDANCE

All seminar participants will receive a Certificate of Attendance by the Research Centre of the Athens University of Economics and Business (AUEB).

## SEMINAR FEES

NUMBER OF PARTICIPANTS FROM THE SAME COMPANY	DISCOUNT (%)	INTERMEDIATE	ADVANCED	BOTH
1		€500	€800	€1,200
2-3	10%	€450	€720	€1,080
4-5	15%	€425	€680	€1,020
6+	20%	€400	€640	€960

**Discounts are offered as follows:**

**10% discount for:**

- Employees of companies that have sent participants before to the seminars
- Members of Mediterranean Cargo Vessels Shipowners Union
- Members of Hellenic Shipbrokers Association (HSA)
- Members of Women's International Shipping and Trading Association (WISTA) Hellas

**50% discount for:**

- Students
- Participants wishing to attend the seminars again

Seminar fees cover the training, the lecture material, the venue, the audiovisual equipment, and the light buffet and refreshments provided.



## /// IN-HOUSE COMPANY TRAINING

The seminar can also be delivered in-house by the instructors, tailored-made to the exact needs and requirements of the company.

# /// SEMINAR CONTENTS

## Session A

### INTRODUCTION TO RISK MANAGEMENT AND SHIPPING DERIVATIVES

#### 1. BUSINESS RISKS IN THE SHIPPING INDUSTRY AND RISK MANAGEMENT STRATEGIES

- 1.1. The Concept of Risk in Shipping
- 1.2. Sources of Risk in the Shipping Industry
- 1.3. Risk/Return Trade-Offs in Shipping
- 1.4. Sectoral Segmentation of the Shipping Industry
- 1.5. Examination of Vessel Value and Earning Volatilities
- 1.6. Examination of Time-Varying Volatilities of Voyage and Time-Charter Rates
- 1.7. Seasonality and Fluctuations in Shipping Freight Contracts with Different Maturities
- 1.8. Use of Derivatives for Risk Management in Shipping

#### 2. FUTURES AND FORWARD CONTRACTS

- 2.1. Futures Contracts
  - Short-, Long- and Cross-Hedges
  - Futures Trading Strategies
  - Basis and Basis Risk
- 2.2. The Mechanics of Futures Trading
  - Daily Cash Settlement (Mark-to-Market)
  - Margin Requirements
  - The Clearing House
- 2.3. Forward Contracts
  - Positions of a Forward Contract
  - Examples of Forward Contracts
  - Credit Risk Associated with Forward Contracts and Credit Derivatives
- 2.4. Similarities and Differences between Futures and Forward Contracts
- 2.5. The Economic Functions of Futures and Forward Contracts

#### 3. OVERVIEW OF FREIGHT DERIVATIVES

- 3.1. The Baltic Exchange Indices
- 3.2. The BIFFEX Contract
  - Contract Specifications
  - The Problems of the Contract and the Revisions of the BFI
  - Developments since BIFFEX
- 3.3. An Introduction to the FFA market
- 3.4. Freight Futures
  - Trading at IMAREX Market
  - Trading at NYMEX Market
- 3.5. "Hybrid" Freight Forwards
  - Trading at LCH.Clearnet Market
  - Trading at SGX Market
- 3.6. Freight Derivatives Trading Process
- 3.7. Trading Steps for New (and Potential) Users
- 3.8. Where we are Currently and Where we May Be in the Freight Derivatives Market

#### 4. FORWARD FREIGHT AGREEMENTS (FFAs)

- 4.1. The Concept of FFAs
- 4.2. The Mechanics of FFAs
- 4.3. The Major Players – Who is using the Market
  - The Dry-Bulk Trades
  - The Tanker Trades
- 4.4. The Uses of FFA Contracts in Shipping Practice
- 4.5. Practical FFA Trading Examples
  - The Shipowners Hedge
  - The Charterer Hedge
  - Period T/C Trip Hedge
  - 12-Months Period T/C Hedge
- 4.6. Tanker Freight Derivatives
- 4.7. Benefits and Issues of FFA Trading
- 4.8. Main Findings of Academic Research

## Session B

### ADVANCED SHIPPING DERIVATIVES TRADING AND STRATEGIES

#### 1. RISK MANAGEMENT IN SHIPPING OPERATION AND VESSEL PRICES

- 1.1. Bunker Rate Hedging
  - Forward Bunker Agreements
  - IMAREX and SGX Bunker Futures
  - Energy Futures Contracts
  - Bunker Swap Contracts
  - Bunker Options Contracts
- 1.2. Bunker Price Risk Trading Simulation Game
- 1.3. Second-Hand Vessel Price Hedging
  - The Second Hand (S&P) Market
  - The Baltic Sale & Purchase Assessments (BSPAs)
  - The Sale & Purchase Forward Agreements (SPFAs)
  - An SPFA Trading Example
- 1.4. Baltic Demolition Assessments (BDAs)
- 1.5. Interest Rate and Forex Rate Hedging
  - Definitions and Contract Characteristics
  - Examples of Interest Rate Hedging
  - Examples of Forex Rate Hedging

#### 2. COST OF CARRY MODEL AND THE PRICING OF FUTURES AND FORWARDS

- 2.1. The Concept of Short Selling
- 2.2. The Cost of Carry Model
- 2.3. The "Fair" (Theoretical Price)
  - Contango Market Example
  - Normal Backwardation Market Example
- 2.4. Pricing Models
  - For Assets with No Income
  - For Assets / Stock Indices with Income
  - For Currencies
  - For Commodities Held for Investment Purposes
  - For Commodities Held for Consumption
  - For Non-Storable Commodities (FFAs)

#### 3. OPTIMAL HEDGE RATIOS AND VALUE AT RISK

- 3.1. Hedge Ratio Determination
  - Hedge Ratio and its Optimal Price
  - Optimal Hedge Ratio
  - Calculation of the Optimal Hedge Ratio
  - Example from the FFA Market
  - Hedging Effectiveness
- 3.2. Value at Risk (VaR) Models for Measuring Risk
  - Graphic Representation of VaR
  - Current use of VaR
  - Application of VaR in Shipping

#### 4. TRADING FREIGHT OPTIONS

- 4.1. Options Markets
  - Options Terminology
  - Payoffs and Profits at Expiration of Calls and Puts
  - An Example with Freight Options
- 4.2. Options Pricing
  - Market and Exercise Price Relationships
  - Intrinsic and Time Values of Options
  - Factors Influencing Options Values
  - Options Pricing Models
  - The Put-Call Parity Relationship
- 4.3. Advanced Option Trading Strategies
  - Directional Strategies
  - Volatility Strategies



## INSTRUCTOR PROFILES



**PROFESSOR MANOLIS G. KAVUSSANOS** (mkavus@aueb.gr) holds a B.Sc. and M.Sc. (Economics) from University of London – Queen Mary College and Birkbeck College, respectively, and Ph.D. (Applied Economics) from City University Cass Business School, London. He has held various academic posts at Cass Business School, including Reader in Shipping Economics and Finance. There, he launched the M.Sc. Program in Trade, Transport and Finance and remained its Director until he joined Athens University of Economics and Business (www.aueb.gr), as Professor of Finance, where he is also the Director of the M.Sc. in Accounting and Finance and of the Research Centre for Finance.

He has also lectured as a visiting professor at Erasmus University, Rotterdam; Antwerp University, Belgium; LUISS University, Rome; University of Piraeus; Cyprus International Institute of Management (CIIM); and Hellenic Open University. He has written extensively in the areas of finance, shipping and applied economics and has been the author of numerous pieces of award winning academic work which has also been presented in both academic and practitioner conferences around the globe and published in top international refereed journals and in invited chapters in collective book volumes. He has published books, edited journal guest volumes, organised international conferences and serves on the editorial board of academic journals.

He has acted as a consultant in finance, shipping, transportation and educational matters in organisations like the Commission of the European Communities, Governmental bodies and other public and private sector companies. He has been included in the Marquis publication "Who is Who in the World" and "Who is Who in Science and Technology". He has developed the area of risk analysis and management in shipping and is the co-author of the book "Derivatives and Risk Management in Shipping".



**ASSISTANT PROFESSOR ILIAS D. VISVIKIS** (ivisviki@alba.edu.gr) holds a B.Sc. in Business Administration from University of Aegean, Greece, M.Sc. in International Financial Markets from University of Southampton, M.Sc. in International Shipping from University of Plymouth, and Ph.D. in Finance from City University Cass Business School, London. His Ph.D. thesis was supported financially by the North Atlantic Treaty Organization (NATO) and the Ministry of Economy and Finance of Greece under the Euro-Atlantic Partnership Council Research Fellowship. He is elected as an Assistant Professor of Finance and is the Academic Director of the MBA in Shipping Program at ALBA Graduate Business School (www.alba.edu.gr), Greece.

He has lectured at Hellenic Open University, Erasmus University, Rotterdam, Cyprus International Institute of Management (CIIM) and University of Piraeus and tutored at City University's Cass Business School in London. His research work has been published in international refereed journals and practitioner magazines, in the areas of finance and shipping, and presented in international refereed academic conferences. He held posts in the Central Securities Depository of Greece, and in the Derivatives Market of the Athens Exchange.

He has provided consultancy services to private companies in the areas of finance and risk management. He is also the co-author of the book "Derivatives and Risk Management in Shipping". He was the Chairman of the 2007 Annual Conference of the International Association of Maritime Economists (IAME), which was organized for the first time in Athens, Greece during 04 July – 06 July 2007 (www.iame2007.org).

## DERIVATIVES AND RISK MANAGEMENT IN SHIPPING



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Witherby Publishing Limited & Seamanship International, UK

Tel: +44 (0) 1506 463 227, E-mail: info@emailws.com, Web: www.witherbyseamanship.com

Distributor in Greece: TELSTAR, 57 Akti Miaouli, Piraeus, Tel: 210 4293 618

Professor Kavussanos and Assistant Professor Visvikis are the authors of the first book that draws together in a single place and systematically analyzes, measures and proposes strategies for managing all aspects of business risks in the shipping industry, discusses them critically, evaluates their contribution to our knowledge in the subject matter and is written in a way which is accessible to the widest possible audience.

Risk management is particularly important for shipping as the high volatility and cyclicity in rates and prices makes risk management a vital issue and takes a central role in the effective strategic management of business. These risks, if managed effectively, can stabilize cash-flows, with positive repercussions for business in a number of directions. Shipping derivatives have been developed in order to manage risks, emanating from fluctuations in freight rates, bunker prices, vessel prices, scrap prices, interest rates, and foreign exchange rates, more effectively, in a cheaper and more flexible manner. This book is of great value to the shipping business, as to how shipping derivatives can be used in the day-to-day practice of risk management, through both traditional and derivatives strategies, with many thoroughly analyzed practical applications and examples both for risk management and investment purposes.



RESEARCH CENTRE OF THE ATHENS UNIVERSITY  
OF ECONOMICS AND BUSINESS

# /// REGISTRATION FORM

## SHIPPING DERIVATIVES AND RISK MANAGEMENT

Application No.:

### PERSONAL INFORMATION

FULL NAME	PROFESSION
ADDRESS	
HOME TELEPHONE	MOBILE PHONE
E-MAIL	

Intermediate Session (22 April 2010)	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Advanced Session (23 April 2010)	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Will the cost be covered by your company?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
How did you get informed about the seminar?		

### COMPANY DETAILS

FULL NAME	
ADDRESS	
COMPANY REGISTRATION NUMBER / Α.Φ.Μ.	TAX DISTRICT / Δ.Ο.Υ.
CONTACT PERSON FOR PAYMENTS	OFFICE TELEPHONE

I declare that all the above information is correct	DATE	SIGNATURE
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Please return this form by mail or fax.

## COMPANIES PARTICIPATED IN THE SEMINAR

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### /// SEMINAR VENUE

#### HOTEL SAVOY

93, Iroon Polytechniou Ave., 185 36 Piraeus, Greece

Tel: (+30) 210 4284580

Days: 22/04 - 23/04 2010 Time: 09:30 - 17:30

The Research Centre (RC) of the Athens University of Economics and Business (AUEB) reserves the right to postpone or cancel the seminar, for reasons which may be beyond its control. In this case, participants' fees are fully refundable or may be credited to them for participation in the seminar in a future date. Any travel or accommodation expenses incurred by participants are entirely their responsibility and are not covered by RC-AUEB.

### /// REGISTRATION PERIOD

Until 19/04/2010, Monday to Friday 10:00 - 19:00

### /// CONTACT DETAILS

Mr. Petros Kalkanis, Mr. Fragkiskos Gialitakis

RESEARCH CENTRE OF AUEB

46 Kefallinias Street, 11251, Athens, 6th Floor

Tel: (+30) 210 8665371-3, Fax: (+30) 210 8676265

E-mail: petros@rc.aueb.gr, seminars@rc.aueb.gr

Web: www.kek.aueb.gr