



DEALING WITH UNPREDICTABLE CHANGE

Advanced Freight Modelling and Trading

**Two day training course for shipping
and finance professionals**

London 18-19 June

Singapore 2-3 July

London 22-23 October



VOLATILITY

Whether you run a trading desk, are a risk manager, trade FFAs or invest in the shipping markets, the level of complexity you face is growing day by day. Understanding how to measure and manage freight rate volatility and explore the options available to the shipping professional are becoming increasingly important.

As the freight derivatives market grows in sophistication, so does the range of strategies used by owners, charterers and traders.

This advanced two day module focuses on modelling freight rate dynamics and pricing options on freight. It discusses issues which are relevant to shipping market practitioners such as constructing forward curves on freight, modelling freight rate volatility as well as hedging and trading strategies using freight options.

The course aims to provide delegates with both a theoretical foundation as well as practical hands-on experience. The course is delivered as a mixture of lectures and workshops by two of the shipping industry's most respected academics.

This course is aimed at a range of individuals including, shipping company executives, freight derivative brokers, market analysts, commodity traders with an active exposure to freight as well as financial market players who want to know more about the complex freight markets.

Participants will come away from the course with a thorough understanding of how to model the physical freight market and use options on freight.

volatility

“The degree of unpredictable change”

The course leaders

The course leaders, **Dr Amir Alizadeh** and **Dr Nikos Nomikos** of the Centre for Shipping, Trade & Finance at Cass Business School in London, are both internationally recognised academics in the fields of shipping and commodity finance and risk management. Their theoretical and applied research work has been published in leading academic and professional journals and they also provide consultancy services to the industry on different aspects of commodity and shipping risk management.

Course methodology and materials

The course will be presented through a mixture of lectures, presentations, group discussions, case studies and computer-based exercises. Full and comprehensive study notes will be provided which will offer a valuable source of reference during and after the course.





risk

“The range of possible outcomes”

OPTIONS RISK

Day One

Modelling and Trading Shipping Freight

- **Characteristics of Shipping Freight Markets**
- **Spot Freight Rate Dynamics**
 - Mean reversion
 - Seasonality
 - Volatility and correlation
- **Relationship Between Spot and Time-charter Markets**
 - Time-charter rate formation and risk premia
 - Implied forward rates
- **Forward Freight Agreements (FFAs)**
 - Exchange traded vs OTC
 - Pricing, trading and hedging
 - Technical analysis and trading strategies
- **Constructing and using Freight Forward Curves**
 - Forward curve models
 - Efficiency and predictive power
- **Modelling Freight Rate Volatility**
 - Historical volatility
 - Time varying volatility
 - Stochastic volatility
 - Implied volatility
- **Value at Risk (VaR)**
 - VaR methodologies
 - Applications to shipping markets
 - Back-testing and stress-testing risk models

Day Two

Pricing and Trading Options in Shipping

- **Freight Options**
 - Mechanics of freight option markets
 - Trading strategies with freight options
 - Caps/floors/collars*
 - Protective calls/puts*
 - Bull/bear spreads*
 - Straddles/strangles*
- **Writing and Hedging Options on Freight**
 - Risk management of options
 - Option sensitivities (the Greeks)
- **Pricing Options in Freight Markets**
 - Closed form solutions
 - Binomial and trinomial trees
 - Numerical methods and simulation
- **Real Options**
 - Real Option Analysis (ROA)
 - Key option value drivers*
 - Different types of real options
 - The option to abandon/expand/ contract*
 - Option to choose (spot vs time charter)*
 - Option to lay up*
 - Real options and ship valuation
 - Real options and extended Net Present Value (ENPV)*
 - Real option valuation*

options

“The right, but not the obligation, to exercise a contract on or before a future date”



