Anatomy of Ship Finance

11-16 July 2021
Jesus College · Cambridge

Organised by

Cambridge Academy of Transport

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Course Programme

Anatomy of Ship Finance
11-16 July 2021
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Course Leaders
Rob Heijliger · Former Head of Transportation Finance, Asia · ING Commercial Banking

Sunday 11 July

Welcome and Preview of Seminar **1445-1500**

During this introductory session, the aims of the programme will be reviewed leading into the scene setting session that follows. The Ship Finance Business Game and the week's lectures will be previewed.

INTRODUCTION & PRINCIPLES OF SHIP FINANCE

Session 1
Introduction to Ship Finance **1500-1630**

The aim of this lecture is to provide a broad overview which will "set the scene" for the many detailed lectures provided by experts during the week. The lecture will outline the various types of financing available to the shipowner from governmental and private sources and explain their relevance to owners considering either newbuilding or second hand tonnage acquisitions. Concentrating on the commercial debt market, a detailed description will be given of the various risks considered and analysed by the commercial banker when faced with a loan application.

The impact on shipping finance and world trade of the Basle Accord will also be addressed. The Accord dictates the capital adequacy ratios of the banks in most of the World's major trading countries and lays down more severe debt/equity ratios than has been common in recent decades. In addition, the lessons learned by the finance community during the shipping crisis which began in late 2008 will be considered prior to the application of the Basel 3 Accord in 2019.

Session 2
Where Does the Money Come From? **1645-1815**

Norton Rose Fulbright carry out an annual Transport Survey which highlights the issues upon which the shipping industry is focusing or which are causing it concern. The session will provide a brief overview of the main findings of the Survey and then look at the financing issues which the shipping industry is currently facing and the different types of finance that are available.

Madingley Tour **1830-1915**

A local Cambridge guide will take the group into parts of Madingley Hall which are not open to the Public, and along-the-way give some insight into the rich history surrounding the Hall and the Estate which goes back over a thousand years.

RISK MANAGEMENT WORKSHOP

Monday 12 July **Session 3**

Daily Review **0815-0830**

Session 4

Identifying Risk Factors in Shipping Debt **0830-1000**

Lending money for ship purchases is a risky business. Vessel value risk, the most obvious, is but one of many risks facing the shipowner and his financier. In this workshop session, participants will group into small teams to identify as many risks as possible that a bank could encounter during the term of a shipping loan. Teams will also be asked to suggests ways that each identified risk might either be lessened or removed entirely.

Session 5

Does Regulation Eliminate Risk or Minimise Opportunity **1015-1115**

Banking has changed considerably in recent years, particularly since the financial crisis following the collapse of Lehman Brothers in 2008. Ten years on has brought with it an increase in political and regulatory intervention in the activities of banks and other financial institutions. The main thrust of today's regulatory controls is to create a financial resilience to enable banks and other financial institutions to withstand any future major financial shocks.

This session will focus on:

- Risk categories with special regard to shipping
- How shipping risk sits alongside a banks other products risk spectrum
- Governance and other enhanced supervisory controls
- Stress testing a bank's portfolio
- Tools used to measure a bank's capital usage
- Portfolio management
- Fraud
- Sanctions
- KYC (Know Your Customer)
- AML (Anti-Money Laundering)
- AB&C (Anti-Bribery & Corruption)
- Geopolitical risks
- Basle 1, 2 and 3, the latter of which will be phased in in 2019, and their impact on shipping finance

Session 6

Cash Flow Analysis **1130-1245**

This lecture will review how a cash flow analysis is carried out and how financial risks can be quantified, focusing on the practical use of cash flow analysis in support of loan/investment decisions. It will review cash flow forecasting methodology and the practicalities of developing input assumptions including:

1. OPEX - Operating Expenses
2. Freight rates
3. Scrap values
4. Operating days per annum
5. Repair and maintenance costs

One of the most important reasons for a cash flow analysis of a transaction is to be able to undertake "what if" assessment of the deal. Shipping is a volatile business and few financial deals are immune to the vagaries of the spot market. The better deals, however, are robust enough to withstand these fluctuations without threatening the fabric of the transaction.

GROUP PHOTOGRAPH **1300**

Session 7
Valuing Ships **1415-1545**

Any public offering or debt finance requires a valuation to be placed on a ship or fleet. This valuation is particularly important in a major placing where the value of the fleet will appear in a "prospectus", the accuracy of which is covered by numerous stock exchange regulations in the major financial centres. Although important, it is not only for major stock market flotations that ship valuation is sought. This session will:

- review the many uses to which valuations are put
- show how a valuation is undertaken
- highlight the factors that need to be taken into account in preparing a valuation
- point out the many pitfalls that threaten the accuracy of a valuation, and
- discuss the problems which may arise during and as a consequence of the valuation of a ship or fleet.

Session 8
Finance for New Construction **1600-1700**

During the past five decades, a considerable volume of financing for ship purchases has been concluded with government assistance. Most usually these transactions were for newbuildings and in particular newbuildings from shipyards located in the country providing the financial assistance. In the early days of Japan's expansion as a shipbuilding powerhouse, many of these schemes were put in place to protect the yards operating in high cost countries, for example in Europe. As a consequence of what appeared to be unbridled government interference with the workings of a "free" market, the OECD stepped in to lay down some ground rules.

That, of course, is all history. Today, the main movers of shipbuilding activity are Korea and China, and it will not be a surprise to learn that these two governments also offer financial incentives to bolster their shipbuilding industries. This session will consider the types of funding available and how the financial package is structured. While there are many advantages to taking cheap money, shipowners must also recognise that there are also disadvantages.

SHIP FINANCE BUSINESS GAME

Session 9
Business Game Handouts and Assignments **1715-1815**

In anticipation of the three day Business Game that the participants will begin shortly, this session will provide a brief overview of what to expect and hand-out the various documents which form the backbone of the Game.

The Game is divided into five rounds, each representing consecutive years in the evolution of the Game, with the current year being Year 1. During each round the Bank or Shipping Company will enter into loan agreements with an opposite Owner or Bank, and have the freedom to choose whichever opposite team they so decide. Following the conclusion of a mutually acceptable loan agreement, Teams will complete the Loan Term Sheet and pass the details of the agreement to John Doviak who will enter the relevant figures into the Game Model spreadsheets. In the case of shipowners, any sale and purchase transactions and chartering decisions will also have to be recorded.

At the end of the session representing a single year, with transaction details correctly entered, the Game model will provide an accurate summary of all the bank and shipowning companies finances. At each of these successive stages, the model will have incorporated the latest "Market Factors" for the year being analysed. Market factors for each successive year include freight rates, vessel values, interest rates and scrap prices. On the basis of each year's results, banks and owners will then decide what actions they wish to take in the following year. After all five rounds of the Game are completed, the final position of the banks and owners will be revealed, with the winner in each category being the team that has achieved the best return on (starting) equity.

Tuesday 13 July **Session 10**
Daily Review **0815-0830**

TOOLS OF THE TRADE

Session 11
Marine Insurance: What Lenders and Investors Should Know? **0830-1000**
Shipping has many risk factors and a number of these have already been mentioned earlier in the course. Included amongst these risks are:

- Exchange rates
- Bunker prices
- Interest rates
- Sale & Purchase markets
- Freight rates
- Economic issues

Missing from this list, and perhaps the hidden risk from the perspective of a banker or investor lending to a shipowner, is insurance. Most shipowners are likely to have three forms of cover:

- Hull & Machinery Insurance (H&M) to cover mainly physical losses to the asset (the hull and its machinery)
- Protection & Indemnity (P&I) for liability risks, and
- War Risk Insurance to cover losses which are excluded from the above two basic policies

Following a brief review of how each of these insurances work and the risks that each covers, the session will look at how the expected cover for losses can go wrong. It is for this reason that two other forms of insurance exist:

- Mortgagees Interest Insurance (MII), and
- Mortgagees Additional Perils (Pollution)

How each of these works, their relationship with owners' main insurance policies and the protection they provide to lenders will be explained.

Session 12
Fundamentals of Leasing **1015-1045**
With the exception of some very high valued assets financed within tax heavy markets, leasing has never been a main provider of funds for ship acquisition. However, it does have its place in the plethora of funding methods available to an owner and should be included in a study of the ship finance sector. The session will therefore cover the following topics:

- types of lease and why lessees use leases
- how tax leasing works
- history of leasing
- alternatives to leasing
- leasing versus chartering
- why would lessees choose finance over operating leases
- leasing and ship finance today

Session 13
Business Game Briefing **1100-1300**
Having received the Game documentation the previous evening, this final briefing session is intended to allow questions arising amongst the teams to be answered.

Time should also be set aside for each team to meet and consider its financing strategy at the outset of the Game

Session 14
Key Factors Regarding Security in Debt structures **1400-1530**
Any debt transaction is accompanied by a wealth of documentation which is intended to clearly spell-out the relationships between the parties and to provide protection for the lender. This session will review recent developments, highlighting the following:

1. Structure of security
2. Implications of flag for mortgagees
3. Mortgage requirements and registration; dual registration problems
4. Insurances, reinsurance's, brokers and captives
5. Earnings, charter-parties, pooling
6. Covenants; subordination of second mortgages; events of default
7. Priority of maritime liens; pollution claims
8. Impact of insolvency laws; risks for owners and mortgagees
9. Work-outs and enforcement
10. Asset sales

Session 15
Business Game: Investment Decisions - 1 January 2020 **1545-1815**

Wednesday 14 July

Session 16
Daily Review **0815-0830**

Session 17
Business Game: Investment Decisions - 1 January 2021 **0830-1030**

PROBLEM LOANS

Session 18
Repossession: A Banker's View **1030-1130**
There has been considerable talk in the market about foreclosures and loan restructurings. But it appears to be the case that the current shipping crisis has not seen the same level of bankruptcies as in the previous major shipping crisis of the mid-1980s. None-the-less, problem loans exist and it is how the lender identifies and then deals with a borrower who is on the ropes which will be addressed.

This session will therefore focus on the consequences of the recent shipping recession which began with the collapse of the freight markets at the end of 2008. Lenders, especially the commercial banks, were exposed to the risks of the markets as the valuations of their shipping portfolios fell in parallel with the charter markets. Traditionally, banks could enforce their mortgage and repossess the ship. But the dynamics of the banking market well outside the control of the shipping sector have had a significant impact on the action (or some would say, inaction) of the banks.

How do shipowners view the pressures exerted upon them by their lenders; what is the market practice for dealing with shipowners unable to pay as contracted; what are the signs of an owner in trouble? These and other issues will be covered during this session.

Session 19
How to Spot a Loan Going Wrong **1145-1300**
All loans carry with them a risk, and it is to the covenant package that a banker looks to for protection in the event that the transaction turns sour. What actually happens before, during and after a creditor exercises any lien or other authority is a mystery to most borrowers and lenders - and most hope never to go through such an experience.

For any lender to the industry, monitoring the owner's financial movements and vigilance for tell-tale signs that something may be amiss are extremely important. With over 30 years experience of the industry and a history of assisting banks when time are tough, the speaker will give a personal account of the areas to watch for when a loan begins to go wrong. Any relationship banker does not enter into a loan agreement expecting it will go wrong, but some of the biggest failures were also the deals that looked brilliant on paper at the time of their signing. Early action often reduces the risk so knowledge of what to look for is a critical skill in the banker's armoury.

Session 20
Business Game: Investment Decisions - 1 January 2022 **1400-1530**

Thursday
15 July

Session 21
Daily Review **0815-0830**

Session 22
Business Game: Investment Decisions - 1 January 2023 **0830-1015**

ALTERNATIVE FINANCE

Session 23
Private Equity & Hedge Funds: What's the Deal **1030-1130**

Private equity has a fickle relationship with shipping, although it must be said that virtually all shipowners will have some equity position in their fleets. However, the private equity we are considering in this session is new money coming in to the industry from non-traditional sources. These investors will only be attracted in to shipping investments when the market conditions and the future prospects align in such a way as to suggest a significant return on the investment. They are unlikely to be long-term players in the business, but their investment horizon is generally much longer than a hedge fund which often moves in and out of markets relatively quickly.

While the investor profile of hedge funds and private equity funds may look similar, it is the focus of the investments that are likely to determine how best to describe the fund. A hedge fund will look to a variety of investments which are liquid – thus allowing more scope for frequent entries and exits to suit the fund managers perception of opportunities. Private equity funds will generally acquire whole companies or a substantial stake in the companies hoping to influence its future trading success. During the session, the lecturer will:

- describe private equity from a maritime perspective
- draw a distinction between hedge funds and private equity
- provide some examples from real life and what has been seen in practice

Session 24
Using FFAs to Ease Commercial Risk **1145-1245**

Ship Owners and Charterers face many different types of risk, one being the volatility of the freight market. Traditionally this risk was covered by booking physical cover for forward dates, an efficient but not a very flexible solution. During the past two decades a number of financial instruments have been introduced to the international shipping industry, specifically FFAs and Futures. Freight Futures were traded on the Baltic International Freight Futures Exchange, but these have now been completely displaced by the FFA contracts. BIFFEX closed its doors to business in the early part of the decade.

This session will consider the freight risk exposure and elaborate on the following:

- Derivatives in general
- What are Shipping Derivatives - FFAs and Options
- Reasons for using derivatives

To help in understanding how these tools can be applied in the day-to-day running of a shipping company, several practical examples will be provided.

Session 25
Business Game: Investment Decisions - 1 January 2024 1330-1445

PERSPECTIVES ON THE SHIP FINANCE SCENE

Session 26
Current Issues Facing the Container Lines 1500-1600

Are mergers and acquisitions back on the container industry agenda? This question will be examined in the wake of a 10 year lull of such activity and the staggering fact that container shipping remains remarkably fragmented, with the top five operators accounting for less than half the global market.

This presents considerable opportunity for further consolidation. The speaker was a contributing researcher in the Drewry White Paper on “Consolidation in the Liner Industry” and will highlight a number of the outcomes of the research. Here is just one extract from the study which should give financiers hope and concern:

> “The financial pressure on the industry players, and in particular on weaker carriers, is intensifying daily as rates plumb new depths. Consolidation may be a route to survival for some, allowing lines to combine to create scale and to realise synergies....The benefit to the industry as a whole is considerably greater if lines pursue growth through acquisition rather than continuing to build new and larger tonnage, which the industry does not need. On the other hand, consolidation as a strategy for individual shipping lines entails considerable risk that the targeted benefits will not be achieved. Much depends on how effectively the task of consolidating the two businesses is managed.”

Against this background, the speaker will develop a picture of the container business today highlighting the following:

- What is ‘container shipping’ and how does it sit alongside “liner shipping”?
- Who are the main players in the container industry?
- Financial performance of the container lines
- The ‘laws’ of supply and demand and their brutal application to container freight rates
- The drive for scale economy in the container industry
    - Vessel size
    - Alliances
    - Mergers and Acquisitions

Session 27
Asset Based Lending: Lessons from the Airline Industry 1615-1715

Shipping and aviation share two characteristics in common: the high value of assets and their mobility. Thus it might be thought that the tools of the finance trade used in one would apply to the other. While there is a certain degree of similarity in debt based transactions, aviation, on the global scale, has moved to more lease based structures whereas 70% of shipping assets are funded through bilateral or syndicated debt.

The speaker who has experience in both sectors will present her views on the advantages and disadvantages of the differing finance methods when applied to shipping and aviation. Perhaps shipping has something to learn? Along the way, the following issues may be addressed:

- Valuation of different asset classes. How aviation appraisers are confident in providing future values.
- Remarketing opportunities
- Residual value determination

- Characteristics of aircraft leasing.....dry/wet and responsibilities under operating/finance leases. This contrasts with ship leasing in practice.
- Borrower types: The role of operating lessors.
- Supply demand differences
- Regulatory differences
- Technical and maintenance requirements
- Investor interest. Why is equity more available and sustainable in aviation
- Why does aviation appeal to a broader range of financial products?

Will Big Shipowners Change the Way They Finance their Fleet Growth **Session 28 1730-1830**

Large shipowners rarely go to the market for a single investment, even when it may appear so. Generally they will have a fleet investment plan that requires more than a single loan agreement. So how do they source the huge sums of money they may need when they are on an investment spee.

There are large companies and large companies. What do we mean by this? Companies such as Maersk or Anangel Shipping are clearly in the private (ie non-state) owned sector. COSCO on the other hand represents one of the few largely state-owned enterprises which in size can compete with the largest of the privately owned fleets.

As the speaker has experience working for owners from these two distinct extremes of the large shipowning sector, he will give a personal view of how the funding possibilities differ. State-owned fleets may have more political constraints, but they may also have the ear of the political masters who will determine state investment policy. Is this an advantage in an industry like shipping where markets have a tendency to deliver feasts and famines. Let’s wait to hear what the speaker has to say.

Friday 16 July

Business Game: Results **Session 29 0900-0930**

Shipping Market Outlook – The Final word **Session 30 0930-1045**

The shipping market operates within the framework of a supply/demand mechanism which means that future earning levels depend as much on how the industry manages supply as on the growth of demand for ships. This session looks at the various factors which determine freight market earnings and discusses the directions and drivers that will emerge. The session will consider:

- Demand drivers for shipping
- Supply-side developments
- Earnings for the different sectors of shipping
- Newbuilding prices
- Second-hand prices
- Where are opportunities to be found in the medium term.

View from an Independent Ship owner **Session 31 1100-1215**

The Fifth Tom Leaner Memorial Annual Lecture

In presenting the Inaugural Lecture in honour of Lloyd’s List's former editor, Tom Leander in 2016, Ravi Mehrotra chose as his theme a question of deep concern to all shipowners: what will be the future of shipowning?. His previous chosen title of the “Fourth Industrial Revolution and How it will Effect World Shipping Due to Supply Chain Disruption” presented an opportunity to recall how it is that shipping has grown to the enormous size it is today and question whether we should expect this growth to continue in the future.

In this the Fifth Annual Memorial Lecture, does Ravi see some “light at the end of the tunnel?

Consider:

– What is The Fourth Industrial Revolution? After the Industrial Revolution of steam engine, diesel engine and internet & IT sectors now we are again at a cross roads of the Fourth Industrial revolution whose aim is Long Term Gains in efficiency and productivity
– Fourth Industrial revolution is presently in progress, taking the help of Digital Technolgies, Nano Technologies, Robotics, Artificial Intelligence and 3D printing but the main focus is on how to clean up our atmosphere by lowering carbon emissions
– Like previous Industrial Revolutions this will also be life changing and disruptive to the normal way of doing what we were doing previously
– But one thing is certain the long term growth in manufacturing and shipping is over. Maybe a few hiccups (volatility) on the way before these two sectors become part of the current supply chain
– The main objective of Fourth Industrial Revolution is to clean up and eliminate and lower the cost of doing things
– The current low growth in shipping for last ten years even after the lowering of oil prices is an example of this decline
– In an Industrialized world it is not feasible to retain developed and underdeveloped world separately. Slowly all this has to equalize including the labour costs. The methods to equalize those costs will be different between the advanced world and the developing worldThe Fourth Industrial revolution is presently taking place based on Digital and Nano Technologies, Robotics, Artificial Intelligence and 3D printing and a few more areas. All these will effect shipping

Conclusion **1215-1230**

Programme content and lecturers subject to change.