

Subject Description Form

Subject Code	LGT5160
Subject Title	Derivatives and Risk Management in Shipping
Credit Value	3
Level	5
Normal Duration	1-semester
Pre-requisite / Co-requisite/ Exclusion	Nil
Role and Purposes	<p>The growing trend of globalization and internationalization increases a wide array of risks to enterprises. Thus, more and more enterprises are entering into risk management practices for their business as management realizes that often the survival of enterprises amongst competitors is largely and highly dependent on the effective management of risks that they face. This is particularly true and important for shipping industry as the high volatility and cyclicity in freight rates, bunker prices, vessel values, foreign exchange rates, interest rates etc. make risk management a vital issue and take a central role in the effective strategic management of enterprises.</p> <p>Shipping derivatives have been developed as one of the most effective tools to manage risks in a flexible manner and with positive repercussions in a number of directions. If managed effectively, the use of shipping derivatives is not solely for the risk management of negative risks, but also for enhancing investment opportunities of positive risks in shipping.</p> <p>This subject is designed to provide students with a full and complete understanding and knowledge of how shipping derivatives can be used in the day-to-day management of both negative risks for risk management and positive risks for investment purposes, through both traditional and derivatives strategies, emanating from fluctuations in freight rates, bunker prices, vessel prices, scrap prices, interest rates, and foreign exchange rates in the shipping industry.</p>
Subject Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> a. understand and analyze the basic sources of business risks and traditional risk management strategies at both the investment and operational level in shipping, b. deal with and comprehend the practical applications of various types of derivatives products for managing typical risks in shipping, c. make rational decisions to use derivatives for risk management and investment purposes as compared with traditional methods of risk management, and d. be familiar with derivatives and risk management in shipping to a level that is adequate for continued self-enhancement of knowledge and practical applications of the subject.

Subject Synopsis/ Indicative Syllabus	<p>This subject is designed to cover the following modules and key topics in the shipping industry:</p> <ol style="list-style-type: none"> 1. Fundamentals of shipping risks, 2. Risk management strategies in the shipping industry, 3. Development, growth and mechanics of derivatives markets, 4. Principles and practices of derivatives, 5. Freight derivatives and risk management, 6. Bunker price derivatives and risk management, 7. Vessel value and derivatives and risk management, and 8. Foreign exchange and interest rate derivatives and risk management.
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Teaching/Learning Methodology	<ol style="list-style-type: none"> 1. Lectures are used to cover, introduce and explain all the key concepts, principles, practices and practical applications of the modules and key topics of this subject in details. 2. To strengthen the students' knowledge of the practices and practical applications of derivatives, guest instructor will be invited to deliver at least one lecture. 3. Tutorials are highly interactive to include discussions, case studies, quiz questions, and students' group presentations and discussions. Students are expected to actively participate and involve in the tutorials to share their experiences, and what they have learned and the insights that they have obtained from the lectures.
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Assessment Methods in Alignment with Intended Learning Outcomes	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>1. Individual essay assignment</td> <td>25%</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td></td> <td></td> </tr> <tr> <td>2. Group presentation</td> <td>25%</td> <td></td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td></td> <td></td> </tr> <tr> <td>3. Examination</td> <td>50%</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td>100 %</td> <td colspan="6"></td> </tr> </tbody> </table>							Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c	d			1. Individual essay assignment	25%	✓	✓	✓	✓			2. Group presentation	25%		✓	✓	✓			3. Examination	50%	✓	✓	✓												Total	100 %						
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<p>Explanation of the appropriateness of the assessment methods/tasks in assessing the intended learning outcomes:</p>																																																													
<p><u>Coursework (50%) – a combination of academic learning and practical applications: individual essay assignment and group presentation</u></p>																																																													

	<ol style="list-style-type: none"> 1. Individual essay assignment: essay in 2,500 words on selected topics in Derivative and Risk Management in Shipping. 2. Group presentation and discussion to examine a case study to display and demonstrate the students' ability to apply the practical applications that the students have acquired in the subject to which the case study is linked. <p><u>Examination (50%)</u>: 3-hour examination testing students' analytical, integrative thinking and knowledge, and practical applications in Derivative and Risk Management in Shipping.</p>	
Student Study Effort Expected	Class contact:	
	<ul style="list-style-type: none"> ▪ Lectures / Tutorials 	39 Hrs.
	Other student study effort:	
	<ul style="list-style-type: none"> ▪ Private studies ▪ Preparation for lectures and tutorials/class discussions ▪ Preparation of coursework and final examination 	87 Hrs.
	<ul style="list-style-type: none"> ▪ Total student study effort 	126 Hrs.
Reading List and References	<p><u>Main Reference Books</u></p> <ol style="list-style-type: none"> 1. Kavussanos, M.G and Visvikis, I.D. (2006). <i>Derivative and risk management in Shipping</i>. London, UK: Witherby Publishing. 2. Alizadeh, A.H. and Nomikos, N.K. (2009). <i>Shipping derivative and risk management</i>. Hampshire, UK: Palgrave Macmillan. 3. Gray, J. (1990). <i>Shipping futures</i>. London, UK : Lloyd's of London Press. 4. Gray, J. (1986). <i>Financial risk management in the shipping industry</i>. London, UK: Fairplay Publications. 5. Kavussanos, M.G and Visvikis, I.D. (2011). <i>Theory and practice of shipping freight derivatives</i>. London, UK: Risk Books. 6. Cockett, N. (1997). <i>Neil Cockett on bunkers – practical guides</i>. London, UK: LLP, pp. 237 – 259. 7. Arnold, G. (2012). <i>Modern financial markets and institutions</i>. Essex, UK: Pearson Education Limited. 8. Chisholm, A.M. (2010). <i>Derivatives demystified: A step-by-step guide to forwards, futures, swaps and options</i>, 2nd Edition. West Sussex, UK: John Wiley & Sons. 	

9. Sundaram, R.K. and Das, S.R. (2011). *Derivatives: Principles and Practices*. NY: McGraw-Hill Irwin.

Main Reference Journals

1. Journal of Futures Markets
2. Maritime Policy and Management
3. Transportation Research Part E, Logistics and Transportation Review
4. International Journal of Forecasting
5. Journal of Derivatives and Hedge Funds (formerly Derivatives Use, Trading and Regulation)
6. Review of Derivatives Research
7. Journal of Banking and Finance
8. Journal of Finance
9. Marine Money
10. CFA Digest