Sílabo

1F0107 - Análisis y Gestión de Riesgos

I. Información general

Nombre del Curso: Análisis y Gestión de Riesgos
Código del curso: 1F0107
Departamento Académico: Finanzas
Créditos: 5
Horas Teoría: 4
Horas Práctica: 2
Periodo Académico: 2023-01-PRE
Sección: A
Modalidad: Presencial
Idioma: Inglés
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II. Introducción

Risk analysis and management is a process to identify and take actions in relation to potential economic adverse events that may affect the firms strategy and results. Risk management is a function of managers **risk preferences** that will affect the business strategy. The course is designed to focus in the most recent risk analysis techniques, with emphasis on corporate **hedging strategies**. The course will also cover applications to managing a portfolio of financial assets.

III. Logro de aprendizaje final del curso

Students will acquire proficiency in identifying corporate exposure to market risks and incorporate the results in the decision-making process of the firm.

Students will learn to interpret input and output financial models parameters in order to ensure the model mathematics and data are correct.

Students will learn a wide array of hedging strategies and their applications to risk management.

IV. Unidades de aprendizaje

Learning Unit 1: Introductory Topics

Logro de Aprendizaje / propósito de la unidad:
Understand the risk management framework and main derivative tools for corporations

Contenidos:
Content:

- Exposure Management Framework
- Review of Basic Structures: Forwards, Swaps and Options

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Learning Unit 2: Risk Analysis

Logro de Aprendizaje / propósito de la unidad:
Understand the main tools to dimension corporate market risks

Contenidos:
Content:

- Scenario Analysis
- VAR, Monte Carlo

Learning Unit 3: Risk Management

Logro de Aprendizaje / propósito de la unidad:
The student should be able to understand the main balance sheet exposures of a company and take actions through certain tools based on a risk tolerance level

Contenidos:
Content:
- Interest Rate Exposure
- FX Exposure
- Commodities Exposure
- Credit Exposure

V. Estrategias Didácticas

Review and discussion of articles on current financial markets topics

Individual contribution to general topics through several communication tools

Case Studies class discussion

VI. Sistemas de evaluación

Nombre evaluación	%	Fecha	Criterios	Comentarios
1. Mid Term Exam	20	05/10/2021	Theoretical understanding and capacity to apply own points of iew to topics covered on the first half of the course.	

2. Engagement	30		Measures the level of engagement through class participation, research for specific topics, pre or post class reflections.	Assignments Score will account for 50% of your grade. Your assignment grade will be determined by the formula: 25%*(Case Study 1 + Case Study 2 + Exam1 + Exam 2). Class Participation: Active participation, short assignments, punctuality and class assistance will account on up to 2 points of your Case Study average score.
3. Exam 1	15		Mostly theoretical framework understanding. Some discussion topics.	
4. Exam 2	15		Mostly theoretical framework understanding. Some discussion topics.	
5. Final Exam	20	30/11/2021	Theoretical understanding and capacity to apply own points of iew to topics covered othrough the course.	

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VII. Cronograma referencial de actividades

Unidades de aprendizaje	Contenidos y actividades a realizar	Recursos y materiales	Evaluaciones
Semana 1: del 20/03/2023 al 25/03/2023			
• Learning Unit 1: Introductory Topics	**Topics:** - Exposure Management FrameworK - PD -Review of Basic Structures: Forwards, Swaps and Options		
Semana 2: del 27/03/2023 al 01/04/2023			
• Learning Unit 1: Introductory Topics	**Topics:** -Interest Rate Exposure 1 -PD -Interest Rate Exposure 2		
Semana 3 con feriados el jueves 06, viernes 07 y sábado 08: del 03/04/2023 al 08/04/2023			
• Learning Unit 1: Introductory Topics	**Topics:** - Interest Rate Exposure 3 - PD - FX Exposure 1		
Semana 4: del 10/04/2023 al 15/04/2023			
• Learning Unit 1: Introductory Topics	Topics: - Monte Carlo		

Unidades de aprendizaje	Contenidos y actividades a realizar	Recursos y materiales	Evaluaciones
	- PD - VAR 1		
Semana 5: del 17/04/2023 al 22/04/2023			
• Learning Unit 1: Introductory Topics	Topics: -Var 2 -Exam 1 -FX Exposure 2		• Exam 1
Semana 6: del 24/04/2023 al 29/04/2023			
• Learning Unit 2: Risk Analysis	**Topics:** -FX Exposure 3 -PD -Commodity Exposure 1		
Semana 7: del 01/05/2023 al 06/05/2023			
• Learning Unit 2: Risk Analysis	Topics: - Commodity Exposure 2 - PD - Review		
Semana 8 de exámenes parciales: del 08/05/2023 al 13/05/2023			
	Mid Term Exam		• Mid Term Exam
Semana 9: del 15/05/2023 al 20/05/2023			
• Learning Unit 2: Risk Analysis	Topics: - Credit Derivatives 1 - PD - Credit Derivatives 2		

Unidades de aprendizaje	Contenidos y actividades a realizar	Recursos y materiales	Evaluaciones
Semana 10: del 22/05/2023 al 27/05/2023			
• Learning Unit 2: Risk Analysis	**Topics:** - Credit Derivatives 3 - PD - Credit Derivtives 4		
Semana 11: del 29/05/2023 al 03/06/2023			
• Learning Unit 3: Risk Management	**Topics:** -Exam 2 - PD - Credit Derivatives Structures		• Exam 2
Semana 12: del 05/06/2023 al 10/06/2023			
• Learning Unit 3: Risk Management	Topics: - Credit Derivatives Structures - PD - Group Presentations		
Semana 13: del 12/06/2023 al 17/06/2023			
• Learning Unit 3: Risk Management	Topic: - Credit Exposure 1 - PD - Credit Exposure 2		
Semana 14: del 19/06/2023 al 24/06/2023			
	Topics: - Credit Exposure 3 - PD - Exposure Structuring		

Unidades de aprendizaje	Contenidos y actividades a realizar	Recursos y materiales	Evaluaciones
Semana 15 con feriado jueves 29: del 26/06/2023 al 01/07/2023			
	Topics: -Appropriateness and Behavior -PD -Appropriateness and Behavior		
Semana 16 de exámenes finales: del 03/07/2023 al 08/07/2023			
			• Final Exam

VIII. Referencias bibliográficas

Obligatoria

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Gregory, J (2012). *Counterparty Credit Risk and Credit Value Adjustment: A Continuing Challenge for Global Financial Markets, 2nd Edition*. West Sussex, UK: John Wiley y Sons.

Gunter Meissner & John W. y Sons (2014). *Correlation Risk Modeling and Management*. New York: John W. y Sons.

Hull, John C. (1991). *Introduction to Futures and Options Markets*. New Jersey: Prentice Hall.

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Veronesi, P (2010). *Fixed Income Securities*. : .

Wilmott, P (). *Paul Wilmott Introduces Quantitative Finance*. : .

Wystup, U (). *FX Options and Structured Products*. : .