Universitat de les Illes Balears

Syllabus

Subject

Subject / Group	21202 - Financial Economics / 60
Degree	Double Degree in Business Administration and Tourism - Second year
	Double degree in Business Administration and Law - Second year
	Degree in Mathematics - Fourth year
	Degree in Business Administration - Second year
	Double degree in Business Administration and Law (2013 syllabus) - Second year
Credits	6
Period	1st semester
Language of instruction	English

Professors

Lecturers	Office hours for students					
	Starting time	**Finishing time**	**Day**	**Start date**	**End date**	**Office / Building**
Gonzalo Lozano Arnica	10:30	11:30	Monday	13/09/2019	28/02/2020	DB101
Responsible						
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Context

The purpose of markets is trade. If we look up for examples we will usually think first in markets where things, in a broad sense, change hands simultaneously. In financial markets, however, trade is not simultaneous: one agent gives financial resources to the other agent taking part in the trade, in exchange for an expected stream of payments, more or less uncertain and more or less far into the future. This non-simultaneity in contrast with the simultaneity of 'normal' markets is the characteristic trait of financial markets. Obviously it is possible to say that in the moment of trade the agent that gives the resources receives a financial asset. It is true: for the purpose of financial economics, a financial asset is simply the claim over the mentioned expected stream of payments. It can take many forms: shares of listed companies, Treasury bills, mortgages from the point of view of banks, etc., with varied patterns of payments and levels of risk.

Future is therefore one key element of any financial asset and the future is always uncertain. Consequently, risk is the most salient aspect of financial assets and, given that agents are risk averse, they have to be rewarded for bearing it. Having said that we have met the two main concepts that are at the heart of any problem that financial economics is interested in : risk and return. In others words: the measurement and management of financial risks, and the level of return that should reward risk bearing are the drivers of that part of economics devoted to the study of financial markets and financial decisions.

Financial Economics does not cover the entire field of financial economics. The choice of the title is justified because it is devoted to the most central concepts and problems of finance, that is to say, the measurement of risk and the trade-off between risk and return. The course centers around stocks and the stock market as approached by investors becuase in the stock market the risk appears in a specially transparent and straightforward way

Document automatically generated at 1440:03 of 11/11/2019

Syllabus

The course is divided in five parts. In Part1, *Risk and return*, the return a random variable is discussed and two parameters proposed as measures of risk and reward: the variance and the expectation. Each asset enters the investmente decision as a random variable. Several random variable each one representing an asset, should be combined in a portrfolio. This is the central issue of Part 2, *Stock portfolios*. When moving from individual stocks to portfolios of stocks, new concepts of risk appear -like systematic and non-systematic risk- and new measures are necessary. This is the framework developed by Markowitz in the fifties that is still very much with us as the basis of modern finance. From accepting it, far reaching consequences related to fundamental aspects of financial decisions follow, e.g. the valuation of investment projects or the measurement of fund managers performance.

Markowitz's mean-variance analysis is a normative proposal; basically advises to diversify in order to eliminate as much as possible of non-systematic risk. Part 3, *The Capital Asset Pricing Model*, pushes forward the Markowitz ideas so as to answer the following question: What would happen in the market with respect to risk-return trade-off if every investor would follow the advice of Markowitz and would select their portfolios with the mean-variance criterion? In other words, what would be the relationship between risk and expected return in equilibrium? Although this fundamental question refers to the buying side of the market, i.e. the investors, the answer is relevant for the markets as a whole. For example, the firms that issue shares to fund their activities; the behaviour of investor is absolutely relevant to them given that investors are the source of funds. Another example are fund managers; if there is a model providing a 'fair' return given the level of risk, assessing the performance of managers becomes extremely easy.

Part 4, *Stock valuation*, puts together the most basic idea studied in *Introduction to Financial Markets and Operations,* the idea of discounting, with the risk adjusted return. Part 4 proposes a fundamental model of stock valuation based on the discount of expected dividends.

One of the issues that discusses Part 3 is the measuremente of fund managers performance: managers can do well o badly. And the market as a whole? Is the stock market doing a good job in determining stock prices? In other words, do prices reflect at any moment the fundamental factors that determine stock values? If relevant new information on the prospects of a public company appears, does the stock price moves accordingly? These questions are to be found together in financial economics under the title of 'market efficiency'. Part 5, *Market efficiency*, is devoted to the genesis of the hypothesis of market efficiency; to different levels of efficiency the market could possibly posses and to the consequences that derive from those different levels of efficiency; and, finally, to some recent events in the history of financial markets like the so called 'technology bubble'. Part 5 deals also with collective invesTment: mutual funds, ETFs, SICAVS.

Requirements

Essential

To have passed the subject:

* Introduction to financial markets and operations
Mathematical and statistical skills as acquired in the subjects Matemáticas and Análisis de Datos Económicos.

Recommended

To have taken the following subjects:

* Matemáticas

Document automatically generated at 1440:03 of 11/11/2019

Syllabus

* Análisis de Datos Económicos.

Skills

Specific

* CE1 (CB1) Poseer y comprender conocimientos del área de estudio de la administración y la dirección de empresas a partir de la base de la educación secundaria general, a un nivel que, si bien se apoya en libros de texto avanzados, incluye también algunos aspectos que implican conocimientos procedentes de la vanguardia de la administración y la dirección de empresas.
* CE2.1.3 Saber utilizar diversos instrumentos técnicos de análisis financiero, y asimilar conocimientos sobre el funcionamiento de los mercados financieros nacionales e internacionales para ser capaz de analizar una empresa en su entorno.
* CE2.2.3 Integrarse en cualquier área funcional de una empresa u organización mediana o grande y desempeñar con soltura cualquier labor de gestión en ella encomendada, especialmente todas aquellas relacionadas con la economía financiera y las finanzas corporativas.
* CE2.3.3 Preparar la toma de decisiones financieras o con aspectos financieros en empresas y organizaciones, especialmente en los niveles operativo y táctico.

Generic

* CG4 Capacidad para usar habitualmente una variada gama de instrumentos de tecnología de la información y las comunicaciones.
* CG7 (CB5) Haber desarrollado aquellas habilidades de aprendizaje necesarias para poder emprender estudios posteriores con un alto grado de autonomía.

Basic

* You may consult the basic competencies students will have to achieve by the end of the degree at the following address: http://www.uib.eu/study/grau/Basic-Competences-In-Bachelors-Degree-Studies/

Content

Range of topics

Part 1. Return: risk and reward
* Stock return
* The realized return: expost return
* Return as a random variable (I): expected return and variance
* Return's probability distribution
* Average return over several periods
* Return: risk and reward
* More about return's probability distribution
* A stock and the market: characteristic line

Part 2. stock portfolios
* Stocks and portfolios: two stocks
* A stock and the risk free asset
* Stocks and portfolios: three stocks. The Minimum Variance Set
* Computing the MVS

Document automatically generated at 1440:03 of 11/11/2019

Syllabus

* The Minimum Variance Set and the riskless asset
* Property 1 of the MVS
* Property 2 of the MVS

Part 3. Risk and return in equilibrium: The Capital Asset Pricing Model
* The Capital Asset Pricing Model
* Other versions of the CAPM
* Measurement of portfolio perfomance with the CAPM
* Empirical tests of the CAPM
* The single index model

Part 4. Stock valuation
* Financial markets and stock markets
* A fundamental model of stock valuation
* Incorporating inflation to the valuation model
* Stock and bond returns
* Price to Earnings Ratio (PER)
* PER and other multiples: applications

Part 5. Market efficiency

* Some history
* Stock market efficiency
* Collective investment
* Mutual funds, SICAVs, exchange traded funds (ETFs)

Teaching methodology

In-class work activities (1.8 credits, 45 hours)

Modality	Name	Typ. Grp.	Description	Hours
Theory classes	Lectures	Large group (G)	Theory. Examples and exercises in order to link theory and reality.	22
Practical classes	Exercises, discussions and practice with real data	Medium group (M)	Exercise solving to gain understanding of the operation of the models in order to work with real data.	11
			Discussion of papers and news, and work with real data to get a better understanding of the link of models and reality.	
Laboratory classes	Computer room classes	Medium group (M)	Exercise solving with computer to gain understanding of the operation of the models in order to work with real data.	6
Assessment	Final exam	Large group (G)	General assesment, both of the theoretical undestanding and the practical application of concepts and models.	1
			Conventional exams taking place in a normal room.	
Assessment	Assesment in AI	Medium group (M)	Assessment of the conceptual undestandig and the capacity for aplying concepts and models by doing exercises and by solving numeric and nonnumeric problems.	4
			The tests will take place in a computer room through Moodle questionaires.	

Document automatically generated at 1440:03 of 11/11/2019

Syllabus

Modality	Name	Typ. Grp.	Description	Hours
Assessment	Assement of practical and theoretical learning	Medium group (M)	Assessment of the conceptual undestandig and the capacity for aplying concepts and models by doing exercises and by solving numeric and nonnumeric problems.	1

At the beginning of the semester a schedule of the subject will be made available to students through the UIBdigital platform. The schedule shall at least include the dates when the continuing assessment tests will be conducted and the hand-in dates for the assignments. In addition, the lecturer shall inform students as to whether the subject work plan will be carried out through the schedule or through another way included in the Aula Digital platform.

Distance education tasks (4.2 credits, 105 hours)

Modality	Name	Description	Hours
Group or individual self-study	Self-study	Study, readings, reflection and discussions. Diverse materials, like news, audio links, and others, as well as problems and their solutions,will be link in the Moodle site of the subject during the course.	105

Specific risks and protective measures

The learning activities of this course do not entail specific health or safety risks for the students and therefore no special protective measures are needed.

Student learning assessment

Continuous assmt.

* ECQ1 to 10: 0,1 to 0,2p each, total: 1 to 1,5p.
* ECP1 5p
* ECP2 5p (january)
  * Part 1. 3p, questionaire
  * Prt 2. 2p, conventional

CA: retake

* Prt 1, 7p, quest
* Prt 2. 3p, conv

Exam higher grades (EXTA)

* Value 3p, conv
Maximum grade from ECQ and mandatory EC (ECP1, ECP2-1 y ECP2-2): 7p.

EXTA is optional and determines marks btw 7 and 10.

CA: grading
For each i individually i=ECQ1…10, ECP1, ECP2-1, ECP2-2:

* If No show (NP) or if score less than 25%, grade(i) = 0p

Document automatically generated at 1440:03 of 11/11/2019

Syllabus

* Si score more than 25%, grade(i) = score.
If ECP1, ECP2-1 y ECP2-2 grades are all higher than 0p and the aggregated grades of ECQ1…10, ECP1, ECP2-1 y ECP2-2 (SUMA_TODO) is at least 5p, course is passed: grade_EC = Min (SUMA_TODO, 7p).
Final grade is grade_EC plus, eventually, grade_EXTA.

CA retake
Mandatory EC exams (ECP1, ECP2-1 y ECP2-2) can be retaken, but only as a single exam.
To pass the course with the retake exam it is necessary to score at least 5p.
The final grade after the retake exam takes into account the grade_EC:

* grade_EC_REC = Max [5, grade_EC/2 + grade_REC/2)
Grade_EC_REC is capped at 7p.

EXTA
Once the course is passed in january (CA) or in february (Retake) a voluntary exam can be taken to add until 3p to the final grade.
EXTA adds marks from a score of 35%:

* If score(EXTA)≤35%, then grade_EXTA=0
* If score(EXTA)=65%, then grade_EXTA=1,4
* If score(EXTA)=100%, then grade_EXTA = 3
And correspondingly values inbetween.
If EXTA is taken and graded:

* January: course grade = grade_EC + grade_EXTA
* February: course grade = Max (5, grade_EC/2 + grade_REC/2 + grade_EXTA)

Frau en elements d'avaluació

In accordance with article 33 of Regulation of academic studies, "regardless of the disciplinary procedure that may be followed against the offending student, the demonstrably fraudulent performance of any of the evaluation elements included in the teaching guides of the subjects will lead, at the discretion of the teacher, a undervaluation in the qualification that may involve the qualification of "suspense 0" in the annual evaluation of the subject".

Final exam

Modality	Assessment
Technique	Extended-response, discursive examinations **(non-recoverable)**
Description	General assesment, both of the theoretical undestanding and the practical application of concepts and models. Conventional exams taking place in a normal room.
Assessment criteria	A conventional exam covering both theory and problems that adds up to 3 marks to the final grade.
	It is optional. To take it the student must have passed the course in january or february.

Final grade percentage: 30% with a minimum grade of 3.5

Syllabus

Assesment in AI

Modality	Assessment
Technique	Objective tests **(recoverable)**
Description	Assessment of the conceptual undestandig and the capacity for aplying concepts and models by doing exercises and by solving numeric and nonnumeric problems. The tests will take place in a computer room through Moodle questionaires.
Assessment criteria	Students that get at least 5 marks out of the continuous assesment questionaires and exams, pass the course with a maximun grade of 7.
	Students failing to get at least 5 marks, have to take the recovery exam in february.
	"Assement of practical and theoretical learning" and "Assesmente in AI" are exactly the same thing and should be considered in aggregate.

Final grade percentage: 20%

Assement of practical and theoretical learning

Modality	Assessment
Technique	Objective tests **(recoverable)**
Description	Assessment of the conceptual undestandig and the capacity for aplying concepts and models by doing exercises and by solving numeric and nonnumeric problems.
Assessment criteria	Students that get at least 5 marks out of the continuous assesment questionaires and exams, pass the course with a maximun grade of 7.
	Students failing to get at least 5 marks, have to take the recovery exam in february.
	"Assement of practical and theoretical learning" and "Assesmente in AI" are exactly the same thing and should be considered in aggregate.

Final grade percentage: 50%

Resources, bibliography and additional documentation

Basic bibliography

Javier Estrada
Finance in a nutshell: a no non-sense companion to the tools and techniques of finance
Prentice Hall Financial Times, 2005
Robert A. Haugen
Modern Investment Theory
Englewood Cliffs, N.J : Prentice Hall; London : Prentice Hall International (UK), c1993.
Zvi Bodie, Alex Kane, Alan J. Marcus
Investments
McGraw-Hill/Irwin, c2002

Complementary bibliography

Robert J. Shiller
Irrational exuberance

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Document automatically generated at 1440:03 of 11/11/2019

Syllabus

Princeton, NJ : Princeton University Press, c2000

Other resources

MORNINGSTAR
http://www.morningstar.es/
Yale University,
Financial Markets, byRobert Shiller,
http://oyc.yale.edu/economics/econ-252-11
MIT
FinanceTheory I, by Andrew Lo
http://ocw.mit.edu/courses/sloan-school-of-management/15-401-finance-theory-i-fall-2008/index.htm
http://finance.yahoo.com/

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