

Syllabus

Subject

Subject / Group	21202 - Financial Economics / 60
Degree	Degree in Business Administration - Second year Double Degree in Business Administration and Tourism - Second year Double Degree in Business Administration and Law - Second year Degree in Mathematics - Fourth year
Credits	6
Period	First semester
Language of instruction	English

Professors

Lecturers	Office hours for students					
	Starting time	Finishing time	Day	Start date	End date	Office / Building
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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 because in the stock market the risk appears in a specially transparent and straightforward way

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 investment decision as a random variable. Several random variable each one representing an asset, should be

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combined in a portfolio. 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 measurement of fund managers performance: managers can do well or 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 move 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 possess 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



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- * 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: ex post 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

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- * 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 performance 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. Discussion of papers and news, and work with real data to get a better understanding of the link of models and reality.	11
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	Assessment of practical and theoretical learning	Medium group (M)	Assessment of the conceptual understanding and the capacity for applying concepts and models by doing exercises and by solving numeric and nonnumeric problems.	1
Assessment	Final exam	Large group (G)	General assessment, both of the theoretical understanding and the practical application of concepts and models. Conventional exams taking place in a normal room.	1

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Modality	Name	Typ. Grp.	Description	Hours
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. The tests will take place in a computer room through Moodle questionnaires.	4

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

Assessment elements

- * Continuous assesment
 - * ECQ1 to ECQ10: 0,1 marks each, 1 mark in all
 - * ECP1, 4 mk
 - * ECP2, 4 mk
 - * ECP3, 2 mk
- * Finals
 - * EFTA (TA: Tramo Alto, Upper Marks), 4 mk
 - * EFREC1 (REC: Recuperación Evaluación Continua, Retake CA), 8 mk
 - * EFREC2, 10 mk

Continuous Assesment (CA)

Marks obtained in questionnaires (ECQ1 a ECQ10) and in exams (ECP1, 2 y 3) are added up.

If marks obtained in any of the exams (ECQ1, ECQ2... ECQ10, ECP1, ECP2 o ECP3) do not reach a minimum, they are not added up.

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If the total marks obtained in ECQ1 to 10 and in exams ECP1 to 3 is equal or higher than 5, the course is passed with a maximum of 6 marks. If not, there will be two retake exams of CA covering almost all (1st retake) or all (2d retake) the course.

Examen Final Tramo Alto (EFTA, Final Exam for Upper Grades)

It is optional and would add up to 4 marks to the marks obtained in CA or in the retakes. It can be take only after passing the course.

Marks are added from the passed level on: if EFTA is "passed", Marks(EFTA) = 0; si EFTA es "excellent", Marks(EFTA) = 4. But, if EFTA es "very bad", the corse final grade will be set to 5.

To stress the importance of continuous assesment, if any of Notas(ECP_) = 0, then Nota(EFTA) will be subtracted 1 mark. If the result would make Nota(EFTA) 0, Nota(EFTA) will be set to 0.

Retake exams (EFREC1 y EFREC2)

If the course is not passed through CA, all the marks from CA get lost -second order details will be explained during the course-. If this is the case, students can take an exam common to all students that have not passed. There will be two opportunities, and students can take any of them or both. Retake exams cover almost all (1st retake) or all (2d retake) the course. If EFREC2 is taken and EFREC1 is not, Nota(EFREC1) is set to 0. Passing one of those exams (5 marks out of ten), the course is passed.

The marks obtained in the retake exam do not translate directly into the course grade. The course grade will take into account the marks obtained both in EFREC1 and in EC1, EC2 and EC3, or, eventually, the marks obtained both in EFREC2, in EFREC1 and in EC1, EC2 and EC3 (Maximum grade attainable: 6:

If EFREC2 is taken and EFREC1 is not, Nota(EFREC1) will be set to 0.

Complete information will be given at the begining of the course.

Frau en elements d'avaluació

In accordance with article 33 of Academic regulations, "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".

Assement of practical and theoretical learning

Modality	Assessment
Technique	Objective tests (retrievable)
Description	Assessment of the conceptual understandig and the capacity for aplying concepts and models by doing exercises and by solving numeric and nonnumeric problems.
Assessment criteria	Students that get a grade 5 or higher out of 10 pass the course with a maximum grade of 6. Students failing to get at least 5 marks, have to take the final exam EFREC1 and/or EFREC2. Students getting at least 6 points can take a the final exam for high grades (EFTA). "Assement of practical and theoretical learning" and "Assesmente in AI" are exactly the same thing and should be considered in aggregate.

Final grade percentage: 10%

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Final exam

Modality	Assessment
Technique	Extended-response, discursive examinations (non-retrievable)
Description	General assesment, both of the theoretical undstanding 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. It is voluntary. It is rquired a minimum of 5 marks from continuous assesment or, eventually, from continuous assesment and retake exam together.

Final grade percentage: 40%with a minimum grade of 5

Assesment in AI

Modality	Assessment
Technique	Objective tests (retrievable)
Description	Assessment of the conceptual undstandig 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 questionnaires.
Assessment criteria	Students failing to get at least 5 marks, have to take the final exam EFREC1 and/or EFREC2. Students getting at least 6 points can take a the final exam for high grades (EFTA). "Assesment 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
Princeton, NJ : Princeton University Press, c2000

Other resources

MORNINGSTAR





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<http://www.morningstar.es/>

Yale University,

Financial Markets, by Robert Shiller,

<http://oyc.yale.edu/economics/econ-252-11>

MIT

Finance Theory 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/>

