Stockholm Business School

Stockholm University

Syllabus

for course at advanced level

Fixed Income Securities
Räntebärande tillgångar

7.5 Higher Education Credits
7.5 ECTS credits

Course code:	FE4126
Valid from:	Spring 2020
Date of approval:	2013-12-02
Changed:	2019-11-08
Department	Stockholm Business School
Main field:	Företagsekonomi
Specialisation:	A1N - Second cycle, has only first-cycle course/s as entry requirements

Decision

This syllabus was approved by the Academic Dean at Stockholm University School of Business 2013-12-02, revised by the Educational Committee of the Stockholm Business School 2017-11-20. Last revision by the Head of Department, Stockholm Business School, Stockholm University 2019-11-08.

Prerequisites and special admittance requirements

Degree of Bachelor worth at least 180 credits, or admission to Business Studies IV, Extended Course or Business Studies IV, Magister's Course, Master's programme or equivalent.

Course structure

Examination code	Name	Higher Education Credits
4121	Fixed Income Securities	7.5

Course content

This course equips students with the tools required to understand the construction, the pricing and the risks of bonds and fixed income derivatives. The essential building block for understanding fixed income securities is interest rates. Interest rates are paid to the bond holders in the form of coupons, and interest rates are central to the present value concept used for pricing, valuation, and risk measurement. Financial institutions also issue a range of derivatives with different types of interest rates as underlying assets. Students of this course learn how to use such derivatives, including forward rate agreements, interest rate futures, options, and swaps, to manage the interest rate risk of a portfolio. They also learn how interest rates reflect monetary policy. As fixed income securities involve extensive material of quantitative nature, the course includes computer-based exercises as a complement to the concepts covered in lectures.

Learning outcomes

Intended Learning Outcomes

The overall aim of this course is to equip students with the tools required to understand the construction, the pricing and the risks of fixed income securities.

Upon completion of the course, students should fulfil the following outcomes.

Knowledge and understanding

1. Students should understand how and why various features of fixed income securities influence their pricing and risk. This includes both a theoretical understanding and recognition of how technical features influence the practice of pricing and risk management.

Skills and abilities

2. Students should be able to implement scientific methods to quantify and analyse the price and value, as well as the duration and convexity of fixed income securities. Students should also be able to use the fixed income securities to examine the status of market-wide interest rates and to manage interest rate risk.

Judgement and approach

3. Students should be able to critically assess and evaluate the theoretical and empirical issues in fixed income securities and interest rate risk management.

Education

The course consists of a combination of lectures and computer-based exercises and requires a significant portion of self-study on the part of students.

The course workload is 200 hours equivalent to 7,5 ECTS (40 hours per week equivalent to 1,5 ECTS).

The language of instruction and assessment is English.

Forms of examination

Assessment for the course is continuous and carried out throughout the different activities of the course. Each assessment task is weighted in relation to its importance in the overall assessment of the course.

Assessment tasks

The course contains the following weighted assessment tasks

1. Individual final examination: assesses learning outcomes 1, 2, and 3; constitutes 70% of total course points.

2. Quant-quiz I: assesses learning outcomes 1 and 2; constitutes 15% of total course points.

3. Quant-quiz II: assesses learning outcomes 1 and 2; constitutes 15% of total course points.

Grading

After completion of the course, students receive grades on a scale related to the intended learning outcomes of the course. Passing grades are A, B, C, D and E. Failing grade is F.

Each assessment task is awarded 0–100 points. The score for a single assessment task is the number of points multiplied by its percentage weight. The scale for the final grade is tied to fixed score intervals: A: 90-100; B: 80-89; C: 70-79; D: 60-69; E: 50-59; F: less than 50.

Students receiving a passing grade may not retake the final examination or complete a previously not completed assessment task to attain a higher grade. A passing grade may not be turned into a failing grade upon the request of a student.

Students are responsible for completing the course's assessment tasks: that a sufficient amount of points is earned and a passing course grade is obtained. Students who after the first final examination have a score lower than 50, are eligible to the second final examination. The Quant Quiz I and II are only offered once during the course and may thus not be retaken.

If less than 50 course points are obtained, and the course's two final examinations have passed, a grade F is obtained, implying that the entire course must be retaken and that previously acquired course points are forfeited.

Students receiving a passing grade may not retake the final examination or complete a previously not completed assessment task to attain a higher grade. A passing grade may not be turned into a failing grade upon the request of a student.

Students unable to submit an assessment task because of certified medical or other exceptional circumstances are allowed to re-sit a final assessment task or submit a supplementary assignment at the discretion of the course director.

Assessment criteria

Assessment criteria are designed as overall assessments, combined qualitative descriptions of what the student is expected to do in order to demonstrate how well the course's learning outcomes are achieved. The assessment criteria are based upon the general abilities as expressed in the degree objectives of the Higher Education Ordinance (appendix 2, System of Qualifications). The list of abilities below is a compilation of these degree objectives. To pass the course (grade E) students should demonstrate general ability to:

• recall, understand and explain course content, the course subject and its scientific basis and methodology;

• apply course content;

• critically analyse course content;

• problematise course content;

• present and discuss course content in writing.

The following assessment criteria are used to decide to what extent students have demonstrated these abilities and hence fulfil the course's intended learning outcomes, whereby a grading decision can be made. A higher grade-level presupposes the abilities at lower levels.

A (Excellent)
The student demonstrates ability to critically assess and evaluate the content of the course, as well as to transfer and apply theoretical and quantitative insights to new, meaningful contexts.

B (Very Good)
The student demonstrates ability to, from an overarching and coherent perspective of the field, understand and use concepts to explain how different aspects of the course relate to each other. The student also demonstrates strong quantitative skills in assessing prices and risks of fixed income securities.

C (Good)
The student demonstrates ability to critically assess and evaluate the content of the course. Furthermore, the student shows good quantitative skills and good theoretical understanding in assessing prices and risks of fixed income securities.

D (Satisfactory)
The student demonstrates satisfactory understanding of the various features of fixed income securities and the underlying theory of how and why they matter for pricing and risk measurement. Furthermore, the student shows satisfactory quantitative skills in assessing prices and risks of fixed income securities.

E (Sufficient)
The student demonstrates sufficient understanding of the various features of fixed income securities and the underlying theory of how and why they matter for pricing and risk measurement. Furthermore, the student has sufficient skills to quantify risk and pricing, and to assess risk management and market-wide interest rates. Finally, the student demonstrates some ability to critically assess and evaluate the course concepts.

F (Fail)
The student's knowledge, skills and abilities are insufficient, overall or in significant parts.

Interim

If the course is discontinued, or its contents are substantially altered, students have the right to be examined according to this syllabus once per semester for three further semesters.

Limitations

This course may not be included in a degree together with a course, taken in Sweden or elsewhere, of identical or partially similar content.

Misc

Exemption from an assessment task is granted if the student presents a valid reason and a written certification

(such as illness and a medical certificate), whereupon the student may re-sit the assessment task at a later date while maintaining previously acquired course points.

Application for exemption should be submitted to the Director of Studies immediately after, or during planned absences well before, the date when the assessment task is carried out. A granted exemption expires at the end of the immediately following semester.

Required reading

Required Reading

Veronesi Pietro: Fixed Income Securities: Valuation, Risk, and Risk Management. Wiley, 2010. Chapters 1-7.

In addition, academic articles may be assigned by the course director.

Recommended Reading

Hull John C.: Options, Futures, and other Derivatives. 10th edition (global). Pearson Education, 2018. Chapters 1-7.