



Course and Examination Fact Sheet: Autumn Semester 2020

9,164: Fixed Income Instruments

ECTS credits: 2

Overview examination/s

(binding regulations see below)

Decentral - Written examination (100%, 60 mins.)

Examination time: term time

Attached courses

Timetable -- Language -- Lecturer

[9,164,1.00 Fixed Income Instruments](#) -- Englisch -- [Suess Stephan](#)

Course information

Course prerequisites

'Fixed Income Instruments' is an advanced derivatives class. The lectures 'Financial Markets', 'Quantitative Methods', and 'Derivatives' are recommended. We expect students to be familiar with e.g. Black-Scholes and binomial option pricing.

Learning objectives

Students are given the theoretical foundations of fixed income derivatives modeling. Students will learn valuation models for interest rate derivatives. In addition, students learn the implementation concepts at trading desks.

Course content

The course provides an in-depth introduction to interest rate derivatives and the corresponding pricing models, such as

-Black's model

-Equilibrium models (Vasicek model, Cox/Ingersoll/ Ross model)

-No-arbitrage models

-Hull/White model

-LIBOR Market Model

Students will be up-to-date on models from theoretical, as well as practitioner/trading perspectives.

Course structure

Lecture	Subject
1	Overview on interest rate derivatives and term structure models Black's model Equilibrium models (Vasicek model, Cox/Ingersoll/ Ross model)
2	No-arbitrage models (Hull and White model) LIBOR Market Model Applications of the LIBOR Market Model
tbd	Exam

Course literature

- Slides on StudyNet



- Hull, J. C. (2012): Options, Futures, and Other Derivatives. 8 th ed., Prentice-Hall, chapters 28-31:
 - "Interest rate derivatives: The standard market models"
 - "Convexity, timing, and quanto adjustments"
 - "Interest rate derivatives: Models of the short rate"
 - "Interest rate derivatives: HJM and LMM"
- Additional material declared during class

Additional course information

In the case of the President's Board having to implement new directives due to the SARS-CoV-2 pandemic in AS2020, the course information listed above will be changed as follows:

- The course is conducted online via Zoom.
- The recordings of the course are available for 30 days.
- The lecturer informs via StudyNet on the changed implementation.

The examination information listed below would be changed as follows:

- The written examination will be cancelled and replaced by oral examinations via Zoom.

For additional questions, please contact

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Examination information

Examination sub part/s

1. Examination sub part (1/1)

Examination time and form

Decentral - Written examination (100%, 60 mins.)

Examination time: term time

Remark

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Examination-aid rule

Open Book

Students are free to choose aids but will have to comply with the following restrictions:

- All the pocket calculators that are not of the Texas Instruments TI-30 series are explicitly inadmissible.
- In addition, any type of communication, as well as any electronic devices that can be programmed and are capable of communication such as electronic dictionaries, notebooks, tablets, mobile telephones and others, are inadmissible.
- Students are themselves responsible for the procurement of examination aids.

Supplementary aids

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Examination languages

Question language: English

Answer language: English



Examination content

The exam is based on the presentations in class, including the compulsory readings.

Examination relevant literature

The covered literature consists of the compulsory reading material.

Please note

Please note that only this fact sheet and the examination schedule published at the time of bidding are binding and takes precedence over other information, such as information on StudyNet (Canvas), on lecturers' websites and information in lectures etc.

Any references and links to third-party content within the fact sheet are only of a supplementary, informative nature and lie outside the area of responsibility of the University of St.Gallen.

Documents and materials are only relevant for central examinations if they are available by the end of the lecture period (CW51) at the latest. In the case of centrally organised mid-term examinations, the documents and materials up to CW 42 are relevant for testing.

Binding nature of the fact sheets:

- Course information as well as examination date (organised centrally/decentrally) and form of examination: from bidding start in CW 34 (Thursday, 20 August 2020);
- Examination information (regulations on aids, examination contents, examination literature) for decentralised examinations: in CW 42 (Monday, 12 October 2020);
- Examination information (regulations on aids, examination contents, examination literature) for centrally organised mid-term examinations: in CW 42 (Monday, 12 October 2020);
- Examination information (regulations on aids, examination contents, examination literature) for centrally organised examinations: two weeks before the end of the registration period in CW 44 (Thursday, 29 October 2020).