Peer Feedback in Econometrics II

14.6.2018

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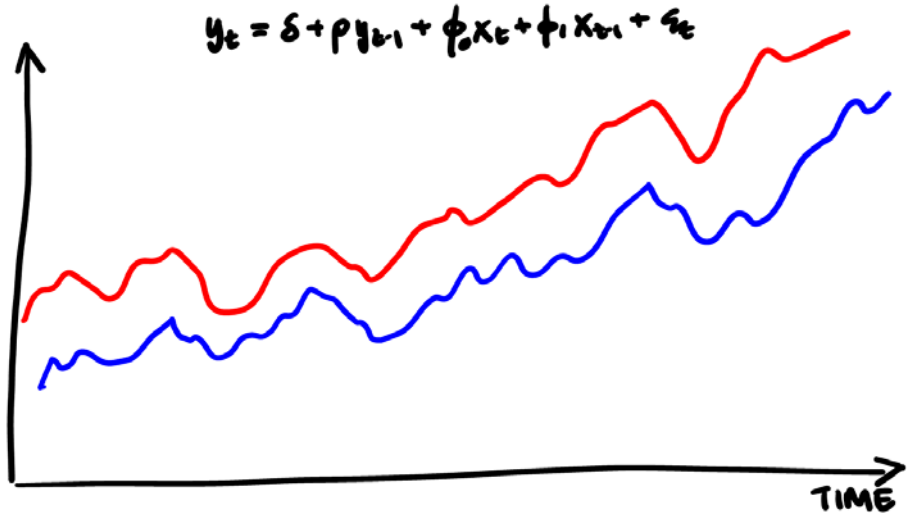
I teach Econometrics II, a mandatory
3. year BA-course with 80/250 students.
The course teaches statistical methods
to Economics students.

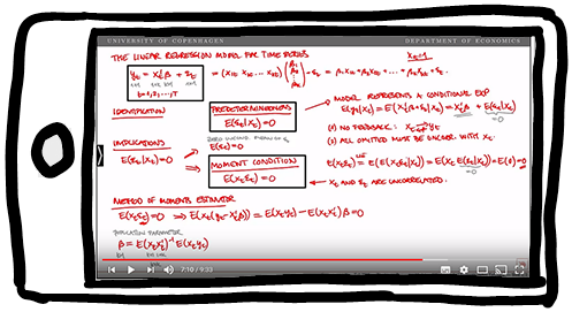


Over the last years, we have completely restructured the teaching and the structure of the course.

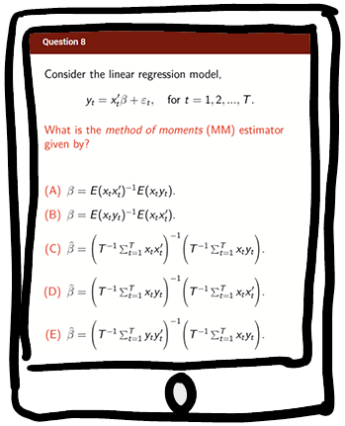
Focus on active learning and problem based teaching

Students must prepare for lectures

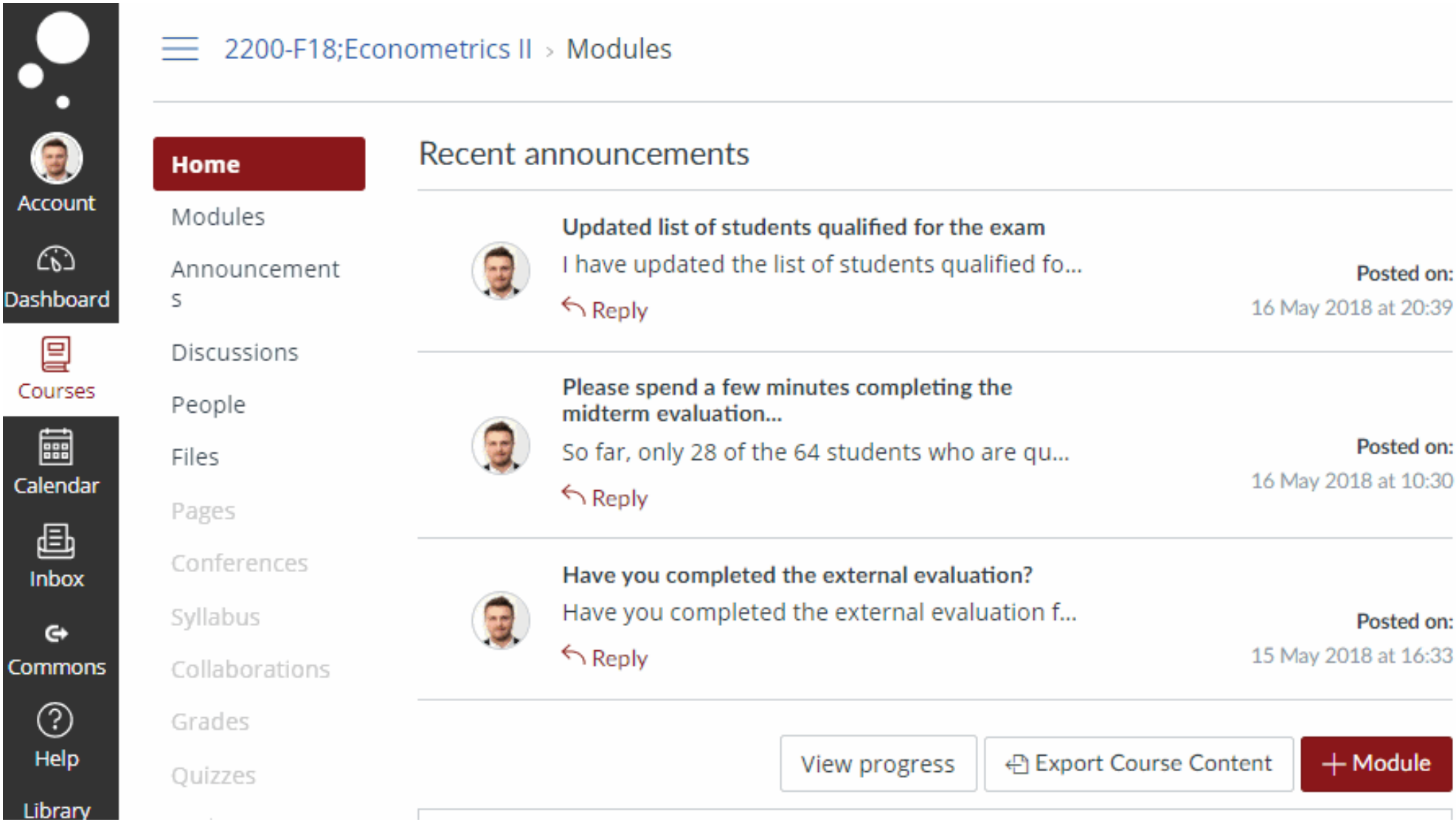
Read 10 pages in lecture note.



Watch a 10-minute video with derivations, explanations, and interpretation of one topic.



Complete an online review quiz with 5-10 multiple choice questions on key topics.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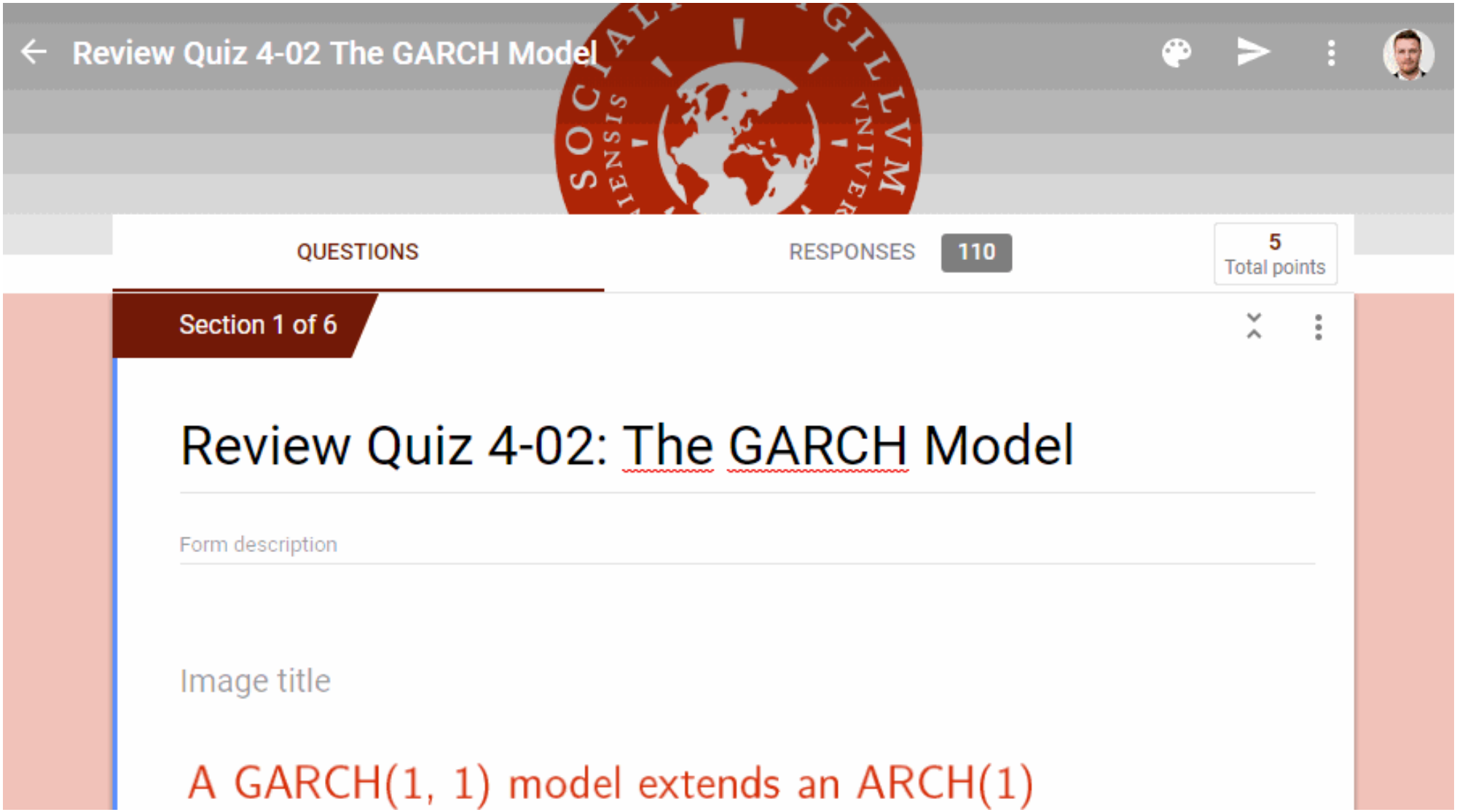
Review Quiz 4-02: The GARCH Model (5 questions)

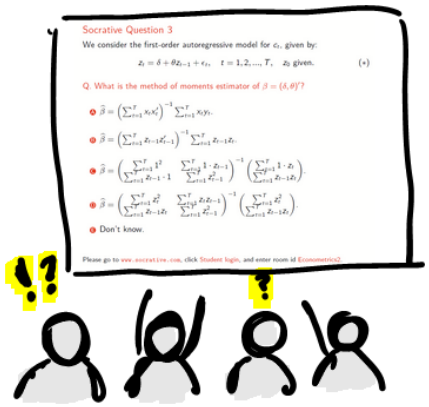
Review Quiz 4-02: The GARCH Model

A GARCH(1, 1) model extends an ARCH(1) model...

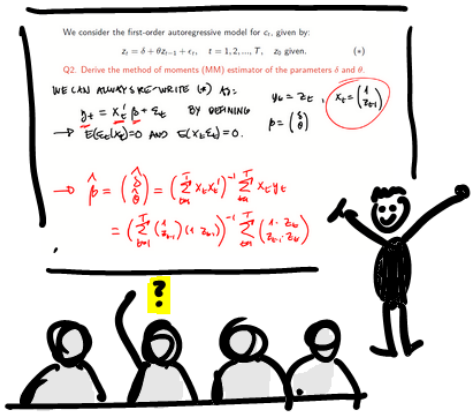
(A) By adding ε_{t-2} to the specification of σ_t^2.


Review Quiz 4-02 The GARCH Model
QUESTIONS
RESPONSES 110
5
Total points
Section 1 of 6
Review Quiz 4-02: The GARCH Model
Form description
Image title
A GARCH(1, 1) model extends an ARCH(1)

Students are activated during lectures



Complete Socrative quizzes with peer discussion reviewing key concepts covered in video.



Work on mini-exercises guiding them through theoretical problems, while I give feedback.

Listen to mini-lectures.

Socrative Question 3

We consider the first-order autoregressive model for c_t, given by:

$$z_t = \delta + \theta z_{t-1} + \epsilon_t, \quad t = 1, 2, ..., T, \quad z_0 \text{ given.} \qquad (*)$$

Q. What is the method of moments estimator of $\beta = (\delta, \theta)'$?

- (A) $\widehat{\beta} = \left(\sum_{t=1}^{T} x_t x_t'\right)^{-1} \sum_{t=1}^{T} x_t y_t.$
- (B) $\widehat{\beta} = \left(\sum_{t=1}^{T} z_{t-1} z_{t-1}'\right)^{-1} \sum_{t=1}^{T} z_{t-1} z_t.$
- (C) $\widehat{\beta} = \begin{pmatrix} \sum_{t=1}^{T} 1^2 & \sum_{t=1}^{T} 1 \cdot z_{t-1} \\ \sum_{t=1}^{T} z_{t-1} \cdot 1 & \sum_{t=1}^{T} z_{t-1}^2 \end{pmatrix}^{-1} \begin{pmatrix} \sum_{t=1}^{T} 1 \cdot z_t \\ \sum_{t=1}^{T} z_{t-1} z_t \end{pmatrix}.$
- (D) $\widehat{\beta} = \begin{pmatrix} \sum_{t=1}^{T} z_t^2 & \sum_{t=1}^{T} z_t z_{t-1} \\ \sum_{t=1}^{T} z_{t-1} z_t & \sum_{t=1}^{T} z_{t-1}^2 \end{pmatrix}^{-1} \begin{pmatrix} \sum_{t=1}^{T} z_t^2 \\ \sum_{t=1}^{T} z_{t-1} z_t \end{pmatrix}.$
- (E) Don't know.

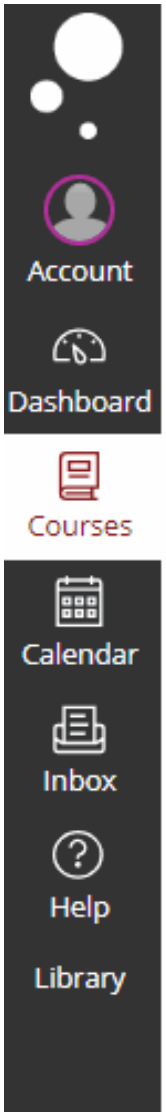
Please go to www.socrative.com, click Student login, and enter room id Econometrics2.

Students solve theoretical problems during exercises

Videos explain general principles, but typically in a slightly different context.

I and the teaching assistants provide feedback and review solution to key steps.

Detailed written solution provided afterwards.



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Exercise 8: Theoretical Exercises on the ARCH Model

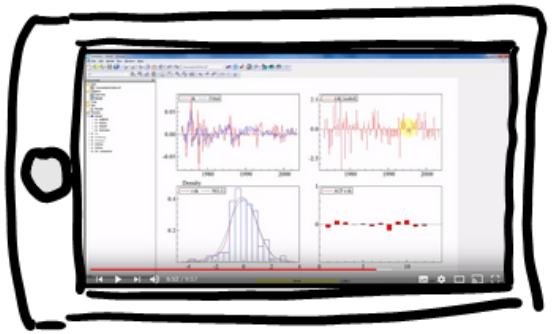
Note that all three exercise classes take place in room CSS 35.3.13 on the third floor of building 35.

We work through the derivations of the autoregressive conditional heteroskedasticity (ARCH) model.

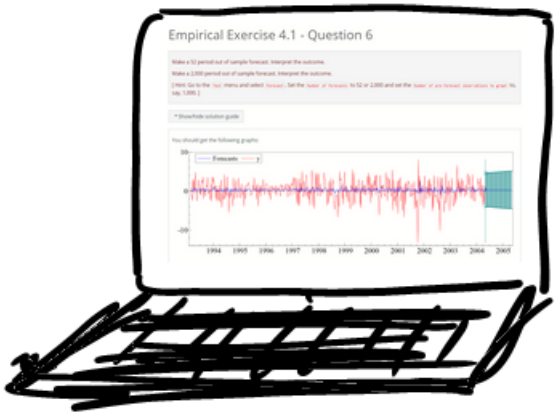
Learning goals:

- Give a precise definition and interpretation of the concept of autoregressive

Students solve empirical problems during exercises

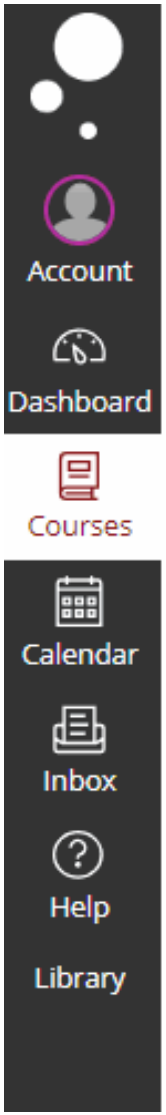


Screencast videos explain how to use the statistical software.



I and the teaching assistants provide feedback and review solution to key steps.

Teaching assistants provide focused feedback on the difficult steps.



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MONDAY, APRIL 16

Exercise 9: Empirical Exercises 4 on the ARCH Model

You will work actively with Empirical Exercises 4 on ARCH models.

Learning goals:

- ✓ Estimate ARCH and GARCH models and interpret the results

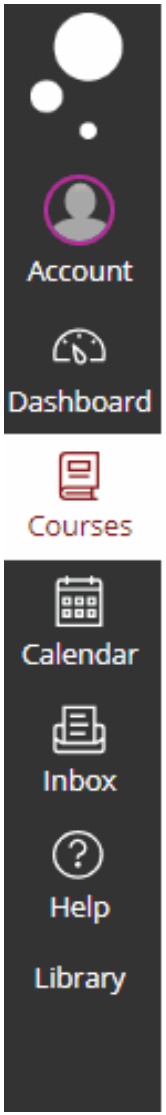
Resources:

- Empirical Exercises 4: The ARCH Model.

Five assignments with peer feedback

Five assignments with peer feedback

Portfolio exam based on three of the assignments



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I have updated the list of students qualified f...
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Posted on:
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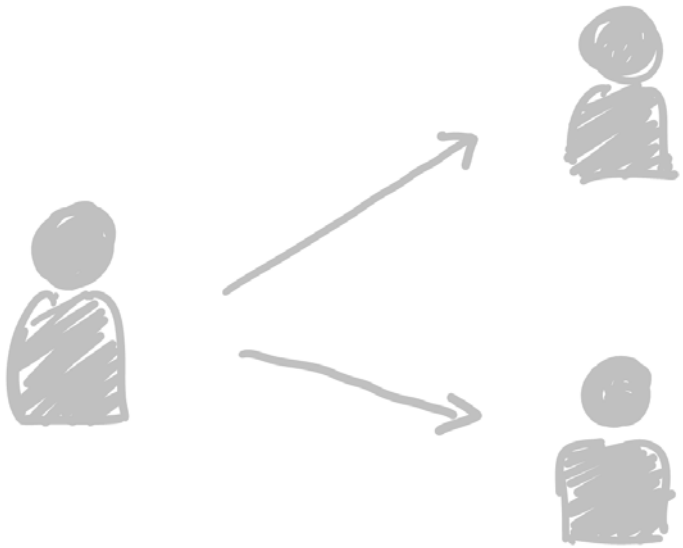
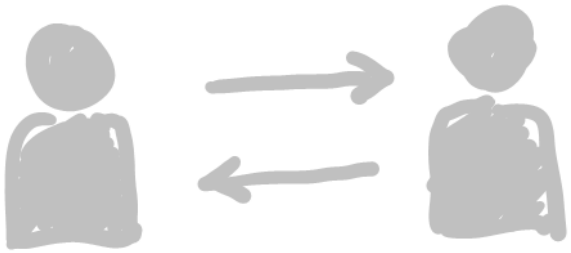


After handing in an assignment, each student must provide written feedback to two peers.

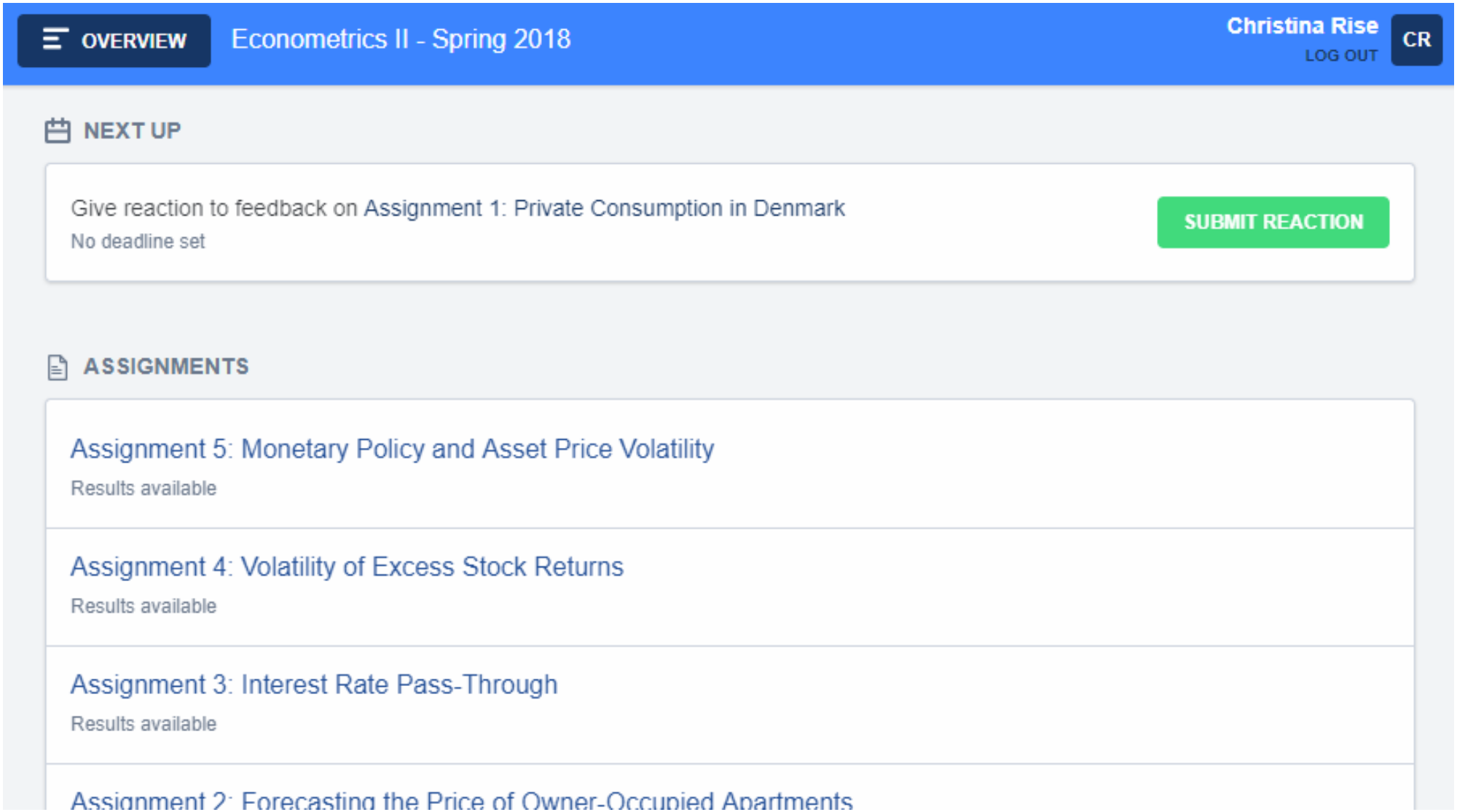
peergrade



Anonymous feedback.

Students must rate the quality of the feedback they receive.

Students can "flag" problematic feedback for the teacher to comment.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Econometrics II - Spring 2018
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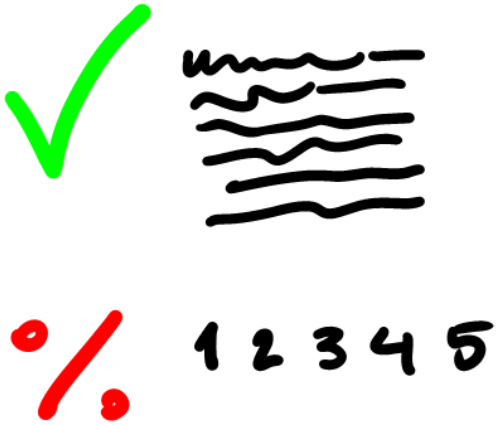
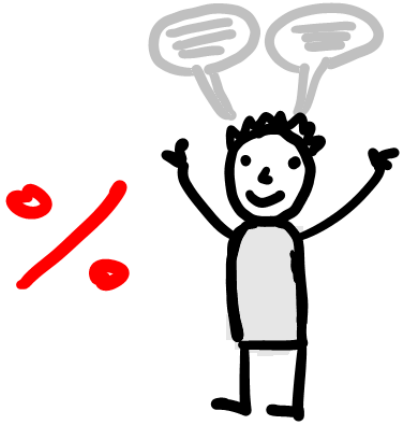
NEXT UP
Give reaction to feedback on Assignment 1: Private Consumption in Denmark
No deadline set
SUBMIT REACTION
ASSIGNMENTS
Assignment 5: Monetary Policy and Asset Price Volatility
Results available
Assignment 4: Volatility of Excess Stock Returns
Results available
Assignment 3: Interest Rate Pass-Through
Results available
Assignment 2: Forecasting the Price of Owner-Occupied Apartments

Written feedback based on rubrics linked to the assessment criteria

Focus on what can be improved.



Only comments. No grading or scores.



No individual feedback from teachers.

S3

The Econometric Theory

Explanation

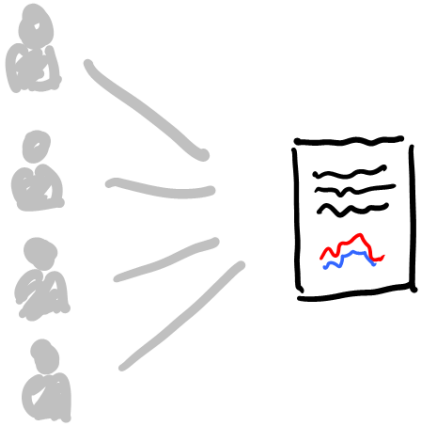
The presentation of the econometric theory should include:

1) A precise definition and interpretation of the model considered and its properties.

2) A precise description of the estimator used. In particular, a precise account for the assumptions used to derive the estimator should be given.

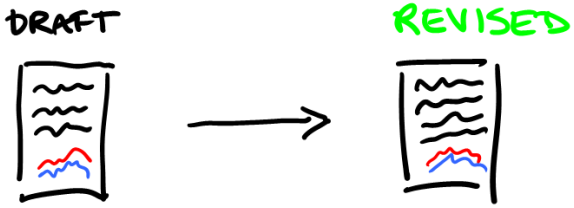
3) A precise presentation of the necessary assumptions for consistent estimation and valid inference. This includes a precise presentation of the null hypotheses, test statistics, and asymptotic distributions used to test relevant hypotheses.

Students receive feedback and can use it to improve their assignments

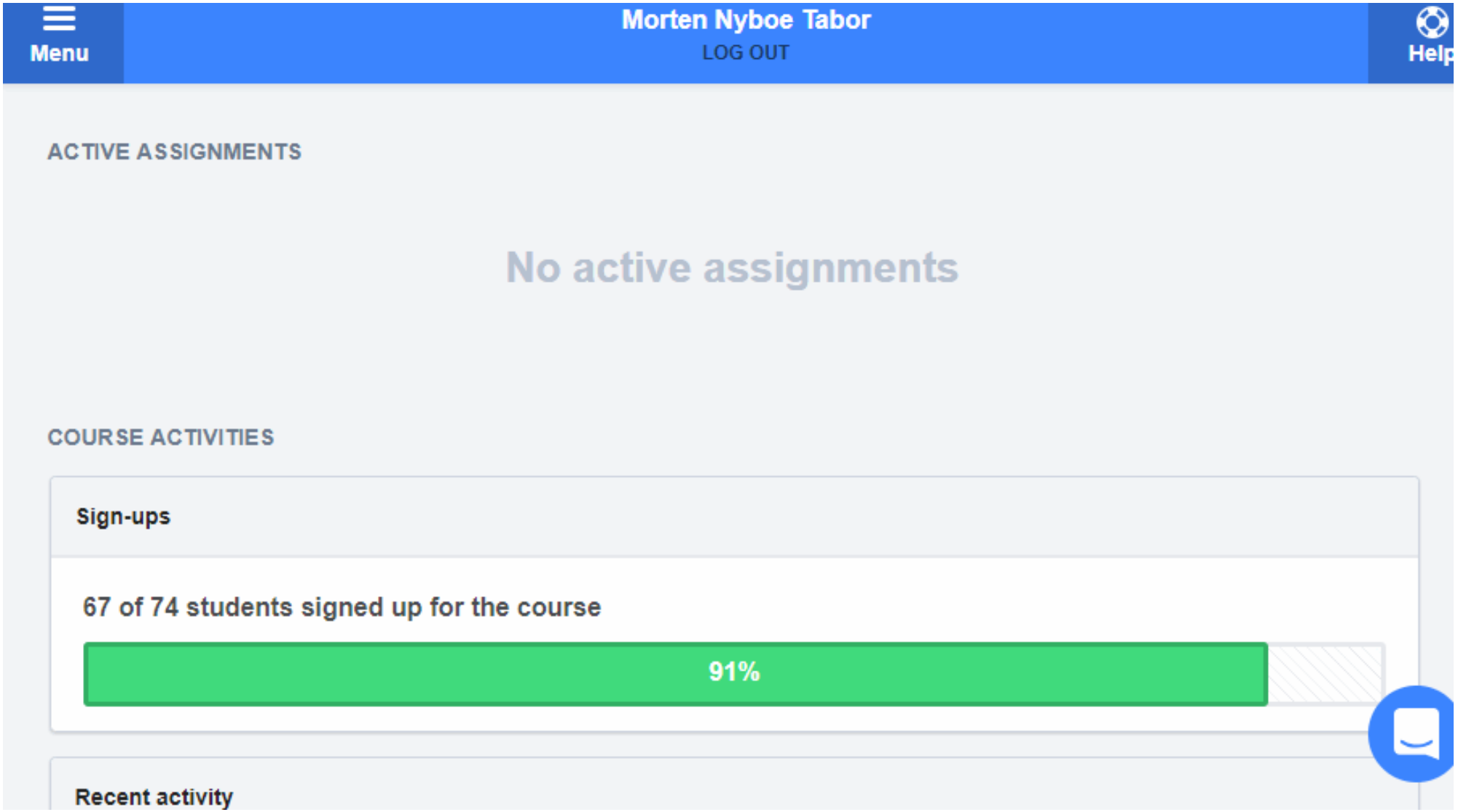


Each assignment receives feedback from four peers.

I follow up with general feedback.



The feedback can be used to improve the assignments for the exam.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Sign-ups
67 of 74 students signed up for the course
91%
Recent activity

Why does peer feedback work in Econometrics II?

Extensive meta-communication about why we do it.

Rubrics with comments only and focus on what can be improved.

Rubrics directly linked to assessment criteria.

Peer feedback embedded in the course structure.

Exam structure ensures that peer feedback can be used.

What have we achieved?

Much higher student engagement.

Greater student motivation from working with real cases.

Improvement in students' ability to write an academic paper.

Students train critical thinking through peer feedback.

Greater student awareness of assessment criteria.

Higher grades and lower failure rate despite assessment based on entire curriculum.

Thanks for your time!

Feel free to contact me for further info.
morten.nyboe.tabor@econ.ku.dk
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