Learning Objectives

1. Course Information
2. Course Outline
3. Assessment
4. Group Project
5. Describing Financial Data

Background Reading

1. “GROUP_PROJECT.PDF”, Handout on course website.

EViews Computer Files

1. stock.wf1
2. zero.wf1
3. amr.wf1
4. hour.wf1
5. bankamerica.wf1
Course Information

- **Coordinator:** Professor Vance L. Martin

- **Prerequisites:**
  - ECON90033 Quantitative Analysis of Finance I or equivalent.

- **Contact:**
  - Lecture: One 2-hour lecture per week.
  - One 1-hour tutorial per week beginning in the **FIRST** week.
  - Tutor consultation times (to be arranged - see course website).
  - On-line tutor (available from the course website).
  - Lecture recordings are available on the website of the course.
Course Information

- **Main Reading:**
  - Lecture Notes
  - Lecture Handouts
  - Articles placed on the website

- **Background Reading:**

- **Prescribed Text:**
  None.

- **Additional Reading:**
Course Information

- **Software and Computers**
  - EViews is available:
    * On campus in tutorial rooms and the Faculty computer lab.
    * Off campus through a link on the course website.

  *Note that it will be necessary to be able to interpret EViews output in the final exam.*
Assessment

- **Key Dates**

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Weight</th>
<th>Due</th>
<th>Where</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test</td>
<td>10%</td>
<td>Week 6</td>
<td>Lecture Theatre</td>
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<tr>
<td>Group Project</td>
<td>20%</td>
<td>Week 9</td>
<td>Submit online</td>
</tr>
<tr>
<td>Final Exam (2 hours)</td>
<td>70%</td>
<td>End of Semester</td>
<td>Exam Room</td>
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- **Calculators**

  Standard ordinary scientific calculators are allowed. Graphic and programmable calculators are not allowed in the exam.

  *Note that calculators may be needed in the final exam.*
## Course Outline

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tr>
<td><strong>Part I: Econometric Tools</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Properties of Financial Data: Review</td>
</tr>
<tr>
<td>2</td>
<td>Linear Regression Models</td>
</tr>
<tr>
<td>3</td>
<td>Maximum Likelihood: Estimation</td>
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<tr>
<td>4</td>
<td>Maximum Likelihood: Testing</td>
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<td>5</td>
<td>Risk and Volatility: Multivariate GARCH</td>
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<tr>
<td>6</td>
<td>Test (held in Lecture of Week 6) worth 10%</td>
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<tr>
<td>7</td>
<td>Factor Models: Principal Components</td>
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<td>8</td>
<td>Factor Models: Kalman Filters</td>
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<td>9</td>
<td>Option Markets: Estimating Black-Scholes</td>
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<tr>
<td>10</td>
<td>Option Markets: Testing Black-Scholes and Extensions</td>
</tr>
<tr>
<td>11</td>
<td>Panel Data Models</td>
</tr>
<tr>
<td>12</td>
<td>Group Project Presentations, Course Review and Exams</td>
</tr>
</tbody>
</table>
Group Project

Details

i Due Thursday of Week 9 by 4.00pm (submit online).

ii Worth 20%

iii Groups sizes can be a minimum of one and a maximum of 6. People do NOT have to be in the same tutorial.

iv AIM: Use the techniques of the course to write a research paper on a topic chosen by the group.

v You need to formulate your own hypotheses, collect the data, undertake empirical analysis and write up the results.

vi The expected length of the research report should be about 10 pages, with the maximum length not exceeding 15 pages, including all graphs and tables.

vii Group decides on the weight allocated to each member of the group (stop free-riders). Any issues please see me!