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| **Title** | **Fixed Income Analysis** |
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| **Lecturer** | **Leilei Tang** | Tutors | Leilei Tang |
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|  | Code | AG937 | Semester | 2 | Weeks | 6 – 11 | Credits | 10 |  |
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|  | **Assessment** |  | Examination | 70% |  | Coursework |  |  | Test | 30% |  |
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|  | Finance | Option |  | Int. Banking & Fin. | Option |  | Investment & Fin. | Option |  | Int. Accounting & Fin. | Option |  |
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## CLASS AIMS

While fixed income securities (bonds) have been traded for a far longer time than equities it is only in more recent times that the trading volume of these instruments has exceeded that of equities in many of the economies with highly developed capital markets.  The bond markets for the last 25 years or so have been characterised by rapid innovation and the range of bonds now being traded is quite diverse.  Any graduate of a M.Sc. programme in Finance is expected to be familiar with the nature of valuation of bonds.  This class will put the M.Sc. courses at Strathclyde in a position to provide students with the opportunity to analyse. bonds and the markets in which they are traded in more depth than is possible at the moment.

## LEARNING OUTCOMES

The class provides opportunities for students to develop and demonstrate knowledge, understanding and skills in the following areas:

**i) Knowledge Based Outcomes:**

On completion of the class students will be able to:

* Develop a good understanding of the nature of bonds and the markets in which they are traded.
* Develop an appreciation of the role of bonds in meeting the financing needs of governments and companies.
* Derive and explain the valuation of bonds and the rate of return on bonds.
* Explain the term structure of interest rates – why the required rate of return on bonds may differ according to the maturity of bonds
* Assess the sensitivity of bond prices to interest rate changes, using duration and convexity measures.
* Differentiate between Government bonds and corporate bonds.
* Provide an appreciation of innovation in the bond markets and instruments related to bonds in developed in recent years, such as credit default swaps.
* Explain the impact of the convertibility of some corporate bonds into the equity of the issuing company
* Understand the role of international bonds and the influence of international interest rates on domestic interest rates.

 **ii) Skills Outcomes:**

On completion of this class students should be able to demonstrate that they can:

* Develop an ability to deal with problems that require forecasting outcomes in the context of incomplete information and uncertainty.
* Analyse the differences in interest rates on bonds of different maturities.
* Take into account the possible links between interest rates and equity returns.

**TEACHING AND LEARNING**

Teaching will be by three contact lecture hours per week for 5 weeks, given as one two hour lecture and a one hour workshop a week. Students will be expected to undertake both independent and directed learning, by reading the relevant chapters in the recommended texts in advance of classes, and attempting the workshop questions beforehand, and by working through some additional questions in workshops. The basic analysis of the valuation of bonds and other fixed income securities is introduced in the Principles of Finance class and the structure and operation of the fixed income markets are covered in the International Financial Markets and Banking class.  This class will develop the analysis in more depth and develop the practical application of the analysis.

**ASSESSMENT**

The class test will account for 30 per cent of the final mark, it will take the form of multiple choice questions and be have a duration of one hour. The final examination will account for 70 percent of the assessment, it will take two hours in duration and will contain both quantitative and essay questions. The final examination will take place in the April/May diet of examinations. Any reassessment will be via a re-sit exam that will be in the same format as the initial exam and will take place in the June/July resit diet. The assessment will focus on a knowledge and understanding of the determination of interest rates and the market valuation of bonds.

**READING**

Z. Bodie, A. Kane and A.J. Marcus, "Investments", 11th Global Edition, McGraw Hill, 2018.

Fredrick Mishkin and Stanely Eakins “Financial Markets and Institutions” 9th Global Edition Pearson 2018

Frank, J., Fabozzi, "Bond Market, Analysis and Strategies", 8th edition, Pearson, 2013.

These will be supplemented by papers and web-based readings.

## LECTURE PROGRAMME

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| **Session** | **Indicative Lecture Title/Subject/Content** |
| **1** | Nature of bonds and bond markets and the determination of interest rates. |
| **2** | Valuation of bonds and determination of bond yields. Sensitivity of bonds to the variability of interest rates, use of duration and convexity. |
| **3** | The term structure of interest rates, and international influences on interest rates. |
| **4** | Analysis and valuation of corporate bonds. Bond ratings and credit risk.  |
| **5** | The valuation of callable and convertible bonds, credit default swaps and innovation in the bond markets. |