LEE KONG CHIAN SCHOOL OF BUSINESS  
Year 2008/09 Term 3A

FNCE204 – ANALYSIS OF FIXED INCOME INVESTMENTS

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COURSE DESCRIPTION

This course examines in detail the fixed income securities (non-equity) market, which comprises instruments such as treasury (government), municipal, and corporate bonds. Instruments such as convertible bonds and various forms of securitizations will also be covered.

The course is designed to help you understand the aspects of modern theory of finance and how these developments can be translated into prudent practices.

The course begins with the overview of the fixed income market (global, regional and local); the growing importance and influence as an instrument for financing for corporations/institutions, governments and supranational agencies; and definition/characteristics of a fixed income instrument. We will then delve into the basics of bond valuation (fixed income mathematics) and explore the relationship between bond prices, yields, and risks (bond price volatilities). With this foundation, we will examine bond volatility and the concept of duration. Next, we shall discuss the determinants of the general level of interest rates and the term structure of interest rates, as well as explore the relationship between the term structure and bond prices in general.

In the latter part of the course, we will explore the concept of risk management and then examine specific instruments such as government bonds, securitizations (such as Mortgage-Backed (MBS), Asset-Backed Securities (ABS) and Collateralized Debt Obligations (CDO)), and other fixed income instruments.

In addition to the theories of fixed income, the course also aims to provide participants with an understand of how investment banks originate, underwrite and trade these instruments, as well as how these origination efforts relate to the sales and marketing of other products and services sold to clients.
PREREQUISITES

Please refer to the Course Catalogue on OASIS for the most updated list of pre-requisites / co-
requisites for this particular course.

Do note that if this course has a co-requisite, it means that the course has to be taken together
with another course. Dropping one course during BOSS bidding would result in both courses
being dropped at the same time.

RECOMMENDED TEXT AND READINGS

Author: Frank J. Fabozzi
Publisher: Prentice Hall
ISBN 0-13-243626-4

Additional readings will be assigned. Students are expected to keep abreast of current
developments in the Asia-Pacific region by reading leading business dailies/weeklies like the
Asian Wall Street Journal, Far Eastern Economic Review, The Economist, Business Times and
Business Week.

ASSESSMENT METHOD

Class Quiz: 25%
Final Quiz: 30%
Group Project/Presentation: 35%
Class Participation: 15%

Format for the quizzes and exams will be open book/notes.

The Group Project will be focused on discovering the different segments of the bonds market
globally. Topics and subject matter covered will be flexible and would be dependent on the
interest of the group. Each group will be given 15 minutes to present their findings. There will
be a 5-minute Q&A session. The objective of the project is learning through each other’s
research effort.

OPTIONAL ASSIGNMENT

There is an assignment on immunization that is both interesting and useful to do. I am happy to
provide guidance to anyone who is keen to take a crack at the assignment. However, this will not
form part of the course grades.

COURSE METHODS

The course will be taught utilizing a combination of practice questions from the end of text, case
studies and quizzes to help internalize concepts learnt.

At the same time, references will be made to real life examples to ensure the
connection to the real world. CALCULATOR
Any financial calculator with NPV and IRR function keys. Examples include: Hewlett Parkard 17B-II, 12C, 10B and Texas Instruments BAIII PLUS.

Despite the pervasive use of Excel, the financial services industry still uses these calculators. As such, it pays to invest in one of these.

These will be used extensively in class and is the only thing you will be allowed in the exams (since no laptops are allowed in quizzes and final exams).

### CLASS SCHEDULE

<table>
<thead>
<tr>
<th>Session</th>
<th>Topic and Assignments</th>
<th>Readings</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction to Fixed Income Securities</td>
<td>Chapter 1 &amp; 7 (relevant parts only)</td>
</tr>
<tr>
<td>2</td>
<td>Determinants of the General Level of Interest Rates Term Structure of Interest Rates</td>
<td>Chapter 5</td>
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<tr>
<td>3</td>
<td>Concept of Risk and Credit Ratings Credit Enhancement Non-conventional bonds</td>
<td>Chapter 7</td>
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<tr>
<td>4</td>
<td>Primary Market Issues including, Bond Refinancing, Debt Origination and Underwriting External speaker: Bill Streeter Managing Director &amp; Head of Global Infrastructure &amp; Project Finance Asia Pacific Fitch Ratings</td>
<td>Chapter 7</td>
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<tr>
<td>5</td>
<td>Fixed Income Mathematics</td>
<td>Chapters 2 &amp; 3</td>
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<tr>
<td>6</td>
<td>Bond Price Volatility I: PVBP &amp; YV of a Price Change &amp; Hedging</td>
<td>Chapter 4</td>
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<tr>
<td>7</td>
<td>Bond Price Volatility II: Duration, Immunization and Convexity</td>
<td>Chapter 4</td>
</tr>
<tr>
<td>8</td>
<td>Preparation for class quiz (no class session)</td>
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<td>9</td>
<td>* Short class quiz I (only until topics covered in session 6) – 25% of the total grade Special Topics – Bloomberg as an analytical tool in fixed income &amp; fixed income trading</td>
<td>Session notes</td>
</tr>
<tr>
<td>10</td>
<td>Analysis of Bonds With Embedded Options Analysis of Convertible Bonds</td>
<td>Chapter 17 Chapter 19</td>
</tr>
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| 11 | Special Topic – Risk Management For Credit Risk
|    | Special Topic - Securitizations (Mortgage-Backed (MBS), Asset-Backed Securities (ABS) and Collateralized Debt Obligations (CDO)) | Selective parts of Chapter 29 |
| 12 | Buffer…to catch up with the topics… (we shall see if we need this slot. Else, this free slot will be for your group presentation and final quiz preps) |  |
| 13 | Group presentations (for all groups)  
As agreed in class, all presentations will be done during this session. It will be equivalent to two sessions. Hence please be prepared to stay till about 7pm… |  |
| 14 | Final quiz – 30% of the total grade (2 hours) |  |
The book explains and analyses all aspects of the bond and money markets and is both an introduction for newcomers and an advanced text for experienced market practitioners and graduate students.