

## **FINA 527: Fundamentals of Investments I, MScFA Spring 2005**

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**Class time:** Wednesdays, 7.00 – 10.20 p.m.  
Location: Vinson Room, Pacific Place Conference Centre, 5/F, One Pacific Place, 88  
Queensway, Admiralty

**Course website:** to be advised.

**Course description:** This course is designed to introduce students to the theory and practice of portfolio management and financial asset pricing, with an emphasis on equities. We will discuss how to construct efficient portfolios, the Capital Asset Pricing Model (“CAPM”) and its critics, multifactor asset pricing models, stock valuation with the CAPM and derivatives such as options and futures. The course will consist of lectures as well as interactive class discussions of applications of the theory.

**Prerequisites:** elementary economics and statistics. We will review some of the most important concepts very briefly in the first session, but you will need to be comfortable with the statistical concepts of mean, variance, covariance and those underlying univariate regression, together with the economic notions of risk, return and risk aversion.

**Reading material:** The principal textbook is *Investments*, 6<sup>th</sup> edition, by Bodie, Kane and Marcus, (“BKM”), published by McGraw-Hill. Supplemental readings will be available on the course website and handed out in class.

**Assessment:** You will be assessed on your performance in a mix of written reports and problems, participation in class discussions and a final exam. For the purposes of preparing written work and for class discussions, I recommend that you form into groups of 5 (or fewer) and collaborate. Such groups are quite good at punishing free riders, but if you have serious problems with an individual not contributing, let me know and I will deal with your complaints in confidence. I will give guidance on how to succeed in the written exercises and class discussion.

- Written exercises and reports: 30%
- Class participation and discussions: 20%
- Final exam: 50%

### Preliminary course outline

Date	Topics	Reading	Discussions and exercises
2 <sup>nd</sup> February	<ul style="list-style-type: none"> <li>• Course outline</li> <li>• Financial assets and capital markets</li> <li>• Concepts review</li> <li>• Rates of return</li> </ul>	<ul style="list-style-type: none"> <li>• BKM chapters 1-3 and 6</li> </ul>	
16 <sup>th</sup> February	<ul style="list-style-type: none"> <li>• Diversification</li> <li>• Efficient portfolios</li> </ul>	<ul style="list-style-type: none"> <li>• BKM chapters 7-8 and 25</li> </ul>	<ul style="list-style-type: none"> <li>• Guidance on problem set</li> </ul>
23 <sup>rd</sup> February	<ul style="list-style-type: none"> <li>• CAPM</li> <li>• Multifactor asset pricing models</li> </ul>	<ul style="list-style-type: none"> <li>• BKM chapters 9-11</li> <li>• Fama and French</li> <li>• Buffett versus beta</li> </ul>	<ul style="list-style-type: none"> <li>• Problem set due</li> </ul>
2 <sup>nd</sup> March	<ul style="list-style-type: none"> <li>• Stock valuation and the dividend discount model</li> </ul>	<ul style="list-style-type: none"> <li>• BKM chapters 18-19</li> </ul>	<ul style="list-style-type: none"> <li>• Guidance on Ameritrade case and on Buffett versus beta discussion</li> </ul>
9 <sup>th</sup> March	<ul style="list-style-type: none"> <li>• Efficient markets hypothesis</li> </ul>	<ul style="list-style-type: none"> <li>• BKM chapters 12-13</li> </ul>	<ul style="list-style-type: none"> <li>• Ameritrade discussion and case report due</li> <li>• Buffett versus beta discussion</li> </ul>
16 <sup>th</sup> March	<ul style="list-style-type: none"> <li>• Derivatives</li> <li>• Hedging with forwards and futures and basis risk</li> <li>• Options, option strategies and volatility</li> </ul>	<ul style="list-style-type: none"> <li>• BKM chapters 20-23</li> </ul>	<ul style="list-style-type: none"> <li>• Hand out exercise on product evaluation</li> </ul>
23 <sup>rd</sup> March	<ul style="list-style-type: none"> <li>• Financial product and performance evaluation</li> <li>• Review</li> </ul>	<ul style="list-style-type: none"> <li>• BKM chapter 24</li> </ul>	<ul style="list-style-type: none"> <li>• Product evaluation discussion and report due</li> </ul>
30 <sup>th</sup> March	Exam		

## **Cases, discussions, exercises and exams**

### **Problem set**

The problem set asks you to think about portfolio diversification and constructing efficient portfolios. The main task will be to use Excel software and real data on national stock market returns across countries to construct mean-variance efficient portfolios, with and without constraints on leverage and short selling. Answers will be due at the end of class on 23<sup>rd</sup> February.

### **Ameritrade case**

You are asked to use the materials supplied in this case to carry out a present discounted cash flow valuation of Ameritrade Inc, a US online brokerage firm. Issues include which discount rate to apply and how to estimate future earnings. Your report should take the form of an analyst's research note, recommending a buy, sell or neutral position with respect to the stock. Because your clients have limited attention spans, your note must be no more than five double spaced pages, including all spreadsheets, tables and graphs. We will discuss the case in class on 9<sup>th</sup> March, with your case report due at the end of class. I will provide some guidance on 2<sup>nd</sup> March.

### **Buffett versus beta**

You are asked to think about the comments made by Warren Buffett in his 1993 annual letter to shareholders regarding the shortcomings of efficient markets theory. Be prepared to contribute to a short class discussion on 9<sup>th</sup> March. The discussion is intended to test your understanding of the CAPM and dividend discount model by thinking about these models' limitations in the context of Buffett's remarks – and how his criticisms may be unfair.

### **Financial product evaluation**

You are asked to write a short note to a client advising whether or not to invest in a guaranteed principal equity investment product sold by a bank to retail investors. The exercise will draw on the whole course, and cover issues such as rates of return, portfolio diversification, options and leverage and management fees. Be prepared to hand in your note (which should be no more than five pages, as before) at the beginning of class on 23<sup>rd</sup> March and to participate in a discussion.

### **Exam**

There will be an exam on 30<sup>th</sup> March. Calculators are allowed and the exam itself will contain all the formulas you should need to answer the questions. No other aids are permitted.

### **Feedback and professor-student interaction**

Please give me feedback at the end of classes or via email, or come to my office hour. Can you understand me? What can we do better? What was useful or interesting? This and future courses will benefit greatly from your comments.

I will always be happy to answer questions on the topics covered in class. However, some questions require quite lengthy answers, and it may not be a suitable use of everybody's time

for me to compose answers via email. Therefore, if you have a question, if possible please ask it in class, discuss it with your colleagues or come to my office hour. If you ask me via email, I may not reply but instead bring up the issue in class.