UBC SAUDER SCHOOL OF BUSINESS

ROBERT H. LEE GRADUATE SCHOOL

COURSE BAFI 520: EMPIRICAL FINANCE

Program: MBA
Course Outline

COURSE INFORMATION

Division: Finance

Term/period: Winter Term 2

Instructor: Jack Favilukis

Email: jack.favilukis@sauder.ubc.ca

Phone: 604.822.9414

Office hours: by appointment

Teaching Assistant: Julian Vahl

Email: julian.vahl@sauder.ubc.ca

Office hours: by appointment

Credit value: 1.5

Section number: 001

Class meeting times:

Lecture: Tue 2-4pm, Thu 2-4pm (Mar 5 – Apr 4)

Tutorial: Tue 12pm-2pm (only some weeks)

Classroom location: ANGU-132

Pre-requisites: BAFI 502, BAFI 511

Course website: https://students.canvas.ubc.ca/

BRIEF COURSE DESCRIPTION

This course focuses on applying the main concepts of finance theory established in prior core finance courses to actual financial data. Financial markets provide vast amounts of data that can be highly informative for practical financial decision making. In this course, you will familiarize yourself with financial data sources and with methods for accessing them. Next, you will learn to use financial data to extract decision-relevant information. Finally, you will learn to interpret financial information using finance theory. This course relies on Excel – the standard tool in the financial industry to analyze data – for financial analysis.

COURSE GOALS & LEARNING OBJECTIVES

Students will be able to:

- *Access data from financial data providers, for example, Bloomberg, Capital IQ, CRSP, Compustat, Thomson REUTERS Datastream, and EDGAR.*
- *Use Excel to process, summarize, and describe the data and to conduct statistical inference using, for example, basic statistics, pivot tables, lookup tables, and regressions.*
- *Understand current and historical facts about fundamental financial markets variables that are relevant for financial decision-making, for example, the market risk premium, P/E ratios, default probabilities, and term structure of government bond yields.*
- *Use financial data and finance theory to make investment and corporate finance decisions.*
- *Critically evaluate information from the business press and applied finance journals.*

COURSE MATERIALS & REQUIREMENTS

Lecture notes

COURSE BAFI 520: EMPIRICAL FINANCE

Program: MBA

Course Outline

Lecture notes will be posted on the course website before each lecture. You should bring the notes with you to the lectures. After the lectures, you should go over the notes again. We will occasionally update the notes to refine the arguments based on the discussion in class, clarify questions from class, give additional references, and provide up-to-date examples or data.

Spreadsheets

Excel spreadsheets will be available on the course website. These spreadsheets implement models covered in class using data from financial markets. Understanding the spreadsheet exercises is critical. Students should make themselves familiar with the principles underlying the calculations and will be expected to adapt and extend them in a variety of contexts. Students are expected to use the Wayne Deans Investment Analysis Centre and other course resources to populate spreadsheets with data from financial markets databases.

Reading materials

Berk, DeMarzo, and Stangeland, 2015, Corporate Finance, Third Canadian Edition Plus NEW MyFinanceLab with Pearson eText -- Access Card Package, ISBN: 9780133552683. From now on "BDS Corporate Finance 3/E". Note that the fourth edition of this book is on the way. There are two purchase options:

1) Buy the regular hardcopy textbook with access to MyFinanceLab with e-text.

2) Buy only MyFinanceLab and have access to the full e-text.

Additional reading

The Economist, Financial Times, Wall-Street Journal, New York Times relevant for class topics.

ASSESSMENT SUMMARY

Course grade will be a weighted average of five marks with the following weights:

Final exam	*35%*
Valuation team assignment	*30%*
Performance evaluation team assignment	*30%*
Participation	*5%*

ASSESSMENT DESCRIPTION

Final exam

There will be a two-hour final exam. The exam will be closed book. You will be allowed to bring in a hand written, double sided cheat sheet that fits on a standard sized piece of paper.

Common policy for all team assignments

For team assignments, you may form groups of 2 or 3 students. You may work in different groups for each team assignment. The due dates on all team assignments will be agreed in class and will be strictly enforced. In no cases, no matter how exceptional the circumstances, can an assignment be accepted after solutions have been made available.

COURSE BAFI 520: EMPIRICAL FINANCE

Program: MBA

Course Outline

The course will use peer evaluations (iPeer) as part of the assessment of the team assignments. Working in high-performing teams is not a given, it is a result of commitment, communication and trust. Working in teams will continue to be a critical process in any corporate or organizational context. Teamwork brings both challenges and opportunities. Getting comfortable with both giving and receiving feedback is a key skill that should be developed now to be used for the rest of your professional careers.

Using iPeer, students will offer evaluations of their peers' role and contributions as team members. A good team member is open to feedback from their peers, learns from it, and adjusts course where relevant. For feedback to be meaningful, it must be timely and specific. Average numerical score and comments without evaluator names will be shared with each student. This feedback on your performance should be used to enhance your individual performance in teams in the future

The instructor will look at the peer evaluations and decide whether to make adjustments to individual grades. If your team is dissatisfied with your work, effort and input, then you will be asked for a paper trail on your contributions and then the instructor will decide whether or not to reduce your grade; no individual is entitled to the team grade unless they have contributed significantly to the work submitted.

Valuation team assignment: Scout24 AG Purchase by Private Equity & Subsequent IPO

The project is a re-enactment of the Scout24 AG purchase by private equity investors and its subsequent Initial Public Offering ("IPO") completed in October 2015. While focused on valuation, the assignment concerns the role of leverage in private equity transactions, as well as the main aspects of the IPO process.

Performance evaluation team assignment: International diversification using Fidelity's FNORX, BlackRock's MDGCX, and Vanguard's VINEX funds

In this assignment, students will assess the performance of three well-known equity mutual funds. To accomplish this goal, students will perform a multi-factor analysis using the most commonly used asset pricing models.

Participation

Please make every effort to attend the lectures and come well prepared. Feel free to ask questions or contribute to lecture discussions at any time. I also encourage you to provide feedback about how to improve the course. In every aspect, I will adhere to the "Academic Integrity" policy of the Sauder School of Business. I will also respect and follow "Academic Misconduct Policy & Procedures" of UBC.

SCHEDULE
Schedule is tentative. All or a subset of topics/activities will be covered as time permits.

Class#	CLASS TOPICS	ACTIVITIES / READINGS	ASSIGNMENTS / DELIVERABLES
Class 1 **March 5**	***Valuation*** *Corporate financial statements. Free cash flows. Economic value drivers and link to multiples. Economic profit-based valuation approach.* *Reference: "BDS Corporate Finance 3/E"*	*Valuation of a high growth company at the IPO stage.* *Data: Corporate financial statements data from Bloomberg, Capital IQ, and Compustat North America. Corporate filings data available through the U.S. Securities and*	

COURSE BAFI 520: EMPIRICAL FINANCE

Program: MBA
Course Outline

	chapters 7, 9.1, 9.2, 12.6, 22, 23.2, and 23.3.	*Exchange Commission's (SEC) EDGAR online system.*	
Class 2 **March 7**	***Valuation*** *Discounted cash flow (DCF) valuation. Adjusted present value (APV) and weighted average cost of capital (WACC) valuation approach.*	*Valuing Microsoft using DCF*	
Class 3 **March 12**	***Valuation*** *Valuation using multiples derived from comparable companies. Valuation using characteristic regressions.*	*Finding comparable firms to form basis for valuation. Estimating common valuation multiples using regression analysis. Valuing Microsoft using Multiples Approach. Valuing Caterpillar using characteristic regressions.*	
Class 4 **March 14**	***Asset pricing models and performance evaluation*** *Mutual funds overview. Decomposing fund returns and risk. Market model: regression analysis to obtain assets' alphas, betas, and R-squares.* *Reference: "BDS Corporate Finance 3/E" chapters 12.1-12.4 and 13.*		
Class 5 **March 19**	***Scout24 Assignment guest lecture***	*Bruce Hilland will present the results of the Scout24 assignment and discuss general market trends*	*Valuation team assignment: Scout24 AG Purchase by Private Equity & Subsequent IPO.* ***Due before March 18, 2019 11:59pm.***
Class 6 **March 21**	***Asset pricing models and performance evaluation*** *Multi-factor models. Fama-French 3-factor model: SMB and HML factor loadings. Momentum. Performance*	*Value vs. growth investing. Evaluation of funds' performance. Choosing benchmarks for evaluating funds' performance. Empirical evidence on performance.* *Data: Mutual funds return data from Bloomberg and the Center*	

COURSE BAFI 520: EMPIRICAL FINANCE

Program: MBA
Course Outline

	evaluation metrics. Biases in returns due to survivorship. Applying models to measure performance of funds	*for Research in Security Prices (CRSP).*	
Class 7 **March 26**	***Return predictability*** *Efficient market hypothesis. Asset bubbles. Autocorrelation of returns. Gross, net returns, and log returns. Compounding returns over different horizons. Average arithmetic and geometric returns.* *Reference: "BDS Corporate Finance 3/E" chapter 13.*	*Predicting returns using past returns.* *Data: Return data on broad stock indexes (S&P 500, MSCI Global Equity Indexes, FTSE 100) and on U.S. Treasury securities (Bills, Notes, Bond, Strips, Inflation-protected bonds - TIPS) from the Center for Research in Security Prices (CRSP) and Thomson Reuters Datastream. Case-Shiller house price index.*	
Class 8 **March 28**	***Return predictability***	*Predicting returns using macroeconomic variables. Out of sample predictability.*	
Class 9 **April 2**	***Risk measurement*** *Distribution of returns. Advanced risk-related moments of returns: variance ratio statistics, skewness, kurtosis. Simulation of asset returns and construction of the empirical histogram of returns.*	*Time varying risk and volatility. Value-at-Risk: quantifying risks of investments into a portfolio of securities. Out of sample VaR. Correlation as it relates to VaR.*	
Class 10 **April 4**	***Review***		*Performance evaluation team assignment: International diversification using Fidelity's FNORX, BlackRock's MDGCX, and Vanguard's VINEX funds.* ***Due before April 3, 2019 11:59pm***

KEY REGULATIONS

COURSE BAFI 520: EMPIRICAL FINANCE

Program: MBA

Course Outline

Attendance: As per RHL Regulations on Professionalism, Attendance and Behaviour, students are expected to attend 100% of their scheduled classes. Students missing more than 20% of scheduled classes for reasons other than illness will be withdrawn from the course. Withdrawals, depending on timing, could result in a "W" or an "F" standing on a student's transcript. Students must notify their instructors at the earliest opportunity if they are expected to miss a class due to illness. A medical note from a licensed, local doctor is required if more than 20% of scheduled classes for a course are missed due to illness. Students are required to notify the Student Experience Manager if they are absent from two or more classes due to illness.

Tardiness: As per RHL Regulations on Professionalism, Attendance and Behaviour, students are expected to arrive for classes and activities on time and fully prepared. Late arrivals may be refused entry at the discretion of the instructor or activity lead. Students arriving halfway through a scheduled class, or later, will be treated as absent for that class.

Electronic Devices: As per RHL Regulations on Professionalism, Attendance and Behaviour, laptops and other electronic devices (cellphones, tablets, personal technology, etc.) are not permitted in class unless required by the instructor for specific in-class activities or exercises. Cellphones and other personal electronic devices must be turned off during class and placed away from the desktop. Students who fail to abide by the RHL "lids down" policy will be asked to leave the room for the remainder of the class. Research has shown that multi-tasking on laptops in class has negative implications for the learning environment, including reducing student academic performance and the performance of those sitting around them.

ACADEMIC MISCONDUCT

All UBC students are expected to behave as honest and responsible members of an academic community. Failure to follow appropriate policies, principles, rules and guidelines with respect to academic honesty at UBC may result in disciplinary action.

It is the student's responsibility to review and uphold applicable standards of academic honesty. Instances of academic misconduct, such as cheating, plagiarism, resubmitting the same assignment, impersonating a candidate, or falsifying documents, will be strongly dealt with according to UBC's procedures for Academic Misconduct. In addition to UBC's Academic Misconduct procedures, students are responsible for reviewing and abiding by RHL's policy on Academic Integrity.

STANDARD REFERENCE STYLE

The Robert H. Lee Graduate School uses American Psychological Association (APA) reference style as a standard. Please use this style to cite sources in your work unless directed to use a different style.

LATE ASSIGNMENTS

Late submissions will not be accepted and will receive a zero.

OTHER INFORMATION