

### COURSE INFORMATION

Course title:	Empirical Finance	Credits:	1.5
Course code:	BAFI 520	Class location:	HA 132
Session, term, period:	2019W2, Period 4	Class times:	Lecture: Tue, Thu 14:00 – 16:00 Tutorial: Tue 12:00 – 14:00 (only some weeks)
Section(s):	001	Pre-requisites:	BAFI 502, BAFI 511
Course duration:	Mar 10 to Apr 8, 2020	Co-requisites:	n/a
Division:	Finance		
Program:	MBA		

### INSTRUCTOR INFORMATION

Instructor:	Professor Jack Favilukis	Office location:	HA 867
Phone:	604-822-9414	Office hours:	By appointment
Email:	<a href="mailto:Jack.favilukis@sauder.ubc.ca">Jack.favilukis@sauder.ubc.ca</a>		

Teaching assistant:	TBA
Office hours:	TBA
Email:	TBA

### 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 FORMAT

Class time will be used for a combination of lectures, discussion. Attendance is expected to accomplish the learning objectives below.

### 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.

## ASSESSMENTS

### Summary

<u>Component</u>	<u>Weight</u>
Final exam	35%
Valuation team assignment	30%
Performance evaluation team assignment	30%
Participation	5%
Total	<u>100%</u>

### Details of Assessments

#### 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.

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.

### **LEARNING 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.

### **COURSE-SPECIFIC POLICIES AND RESOURCES**

*Missed or late assignments, and regrading of assessments*

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

*Academic Concessions*

If extenuating circumstances arise, please contact the RHL Graduate School program office as early as reasonably possible, and submit an [Academic Concession Request & Declaration Form](https://webforms.sauder.ubc.ca/academic-concession-rhlee) <https://webforms.sauder.ubc.ca/academic-concession-rhlee>. If an academic concession is granted during the course, the student will be provided options by RHL, or by the instructor in consultation with RHL, per [UBC’s policy on Academic Concession](#).

*Other Course Policies and Resources*

### **POLICIES APPLICABLE TO COURSES IN THE ROBERT H. LEE GRADUATE SCHOOL**

*Attendance*

Excepting extenuating circumstances, students are expected to attend 100% of their scheduled class hours. Absent students limit their own academic potential, and that of their classmates, and cause unnecessary disruption to the learning environment. Students missing more than 20% of the total scheduled class hours for a course (including classes held during the add/drop period) without having received an academic concession will be withdrawn from that course. Withdrawals, depending on timing, could result in a “W” or an “F” standing on the transcript.

*Punctuality*

Students are expected to arrive for classes and activities on time and fully prepared to engage. Late arrivals may be refused entry at the discretion of the instructor or activity lead. Students arriving later than halfway through a scheduled class will be treated as absent for that class.

*Electronic Devices*

Devices such as laptops, tablets, and cell phones are not permitted to be used in class unless directed by the instructor for in-class activities. Students who do not follow the School’s policy in this regard may be required to leave the room for the remainder of the class, so that they do not distract others. Research shows that students’ use of laptops in class has negative implications for the learning environment, including reducing their own grades and the grades of those sitting around them.

### *Citation Style*

Please use the American Psychological Association (APA) reference style to cite your sources.

Details of the above policies and other RHL Policies are available at:

<http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,199,506,1625>

### UNIVERSITY POLICIES AND RESOURCES

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available on the UBC Senate website at <https://senate.ubc.ca/policies-resources-support-student-success>.

### *Academic Integrity*

The academic enterprise is founded on honesty, civility, and integrity. As members of this enterprise, all students are expected to know, understand, and follow the codes of conduct regarding academic integrity. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you should not cheat, copy, or mislead others about what is your work. Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. For example, incidences of plagiarism or cheating may result in a mark of zero on the assignment or exam and more serious consequences may apply if the matter is referred to the President's Advisory Committee on Student Discipline. Careful records are kept in order to monitor and prevent recurrences.

### COPYRIGHT

All materials of this course (course handouts, lecture slides, assessments, course readings, etc.) are the intellectual property of the instructor or licensed to be used in this course by the copyright owner. Redistribution of these materials by any means without permission of the copyright holder(s) constitutes a breach of copyright and may lead to academic discipline. Audio or video recording of classes are not permitted without the prior approval of the Instructor.]

### ACKNOWLEDGEMENT

UBC's Point Grey Campus is located on the traditional, ancestral, and unceded territory of the xwməθkwə'yəm (Musqueam) people, who for millennia have passed on their culture, history, and traditions from one generation to the next on this site.

### COURSE SCHEDULE

(Subject to change with class consultation)

**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 10	<b>Introduction to data analysis</b>	Excel review, computing summary stats, running regressions	
Class 2 March 12	<b>Valuation</b> Corporate financial statements. Free cash flows. Reference: "BDS Corporate Finance 3/E" chapters 7, 9.1, 9.2, 12.6, 22, 23.2, and 23.3.	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 Exchange Commission's (SEC) EDGAR online system.	
Class 3 March 17	<b>Valuation</b> Discounted cash flow (DCF) valuation. Adjusted present value (APV) and weighted average cost of capital (WACC) valuation approach.	Valuing Microsoft using DCF	
Class 4 March 19	<b>Valuation</b> 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 5 March 24	<b>Scout24 Assignment guest lecture</b>	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. <b>Due before March 23, 2020 11:59pm.</b>
Class 6 March 26	<b>Asset pricing models and performance evaluation</b> Multi-factor models. Fama-French 3-factor model: SMB and HML factor loadings. Momentum. Performance evaluation metrics. Biases in returns due to survivorship. Applying	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 for Research in Security Prices (CRSP).	

	<i>models to measure performance of funds</i>		
<b>Class 7</b> March 31	<b>Asset pricing models and performance evaluation</b>		
<b>Class 8</b> April 2	<b>Return predictability</b> <i>Efficient market hypothesis. Asset bubbles. Autocorrelation of returns. Gross, net returns, and log returns. Compounding returns over different horizons. Average arithmetic and geometric returns.</i> <i>Reference: "BDS Corporate Finance 3/E" chapter 13.</i>	<i>Predicting returns using past returns.</i>  <i>Data: Return data on broad stock indexes (S&amp;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.</i>	
<b>Class 9</b> April 7	<b>Return predictability</b>	<i>Predicting returns using macroeconomic variables. Out of sample predictability.</i>	
<b>Class 10</b> April 9	<b>Risk measurement</b> <i>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.</i>	<i>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.</i>	<i>Performance evaluation team assignment: International diversification using Fidelity's FNORX, BlackRock's MDGCX, and Vanguard's VINEX funds.</i>  <b>Due before April 8, 2020 11:59pm</b>