Tomas Sörensson, KTH 2021-01-20/

# Course plan ME2090 Corporate Valuation

The course consists of lectures, guest lectures, and model construction supported by seminars, and with a technology-based company as the valuation project. The aim of the lectures is to provide theoretical knowledge about different models and how they can be used, as well as guidance in practical model construction. The guest lecturers mainly intend to give an insight in how firms in the finance industry, and consultants work. Main fields of study that are treated are:

- Cash-flow models
- Models for comparing values.
- Strategic and financial analysis of technology-based companies.

#### Intended learning outcomes \*

After passing the course, the students should be able to:

- 1. explain and discuss the latest theory within the area of valuing companies,
- 2. explain what a discounted cash flow valuation and a multiple valuation are, and give an account of, and analyze the differences between these valuation models,
- 3. explain and discuss which factors influence the value of a company,
- 4. design and construct a valuation model for companies in Excel with all necessary functions,
- 5. value a company with the discounted cash flow model by using the model that is built in Excel, based on an advanced strategic and financial analysis of a technology-based company, and supported with a multiple valuation,
- 6. write a valuation report meeting the professional standards of the financial market,
- 7. in a completed valuation, in a correct way account for the practical problems that are associated with a valuation of companies.

# Teachers

Associate Professor Tomas Sörensson, Course Director and Seth Bernström, Director, KPMG Corporate Finance, Stockholm

# **Reception for students:**

Tomas Sörensson, Mondays 1500-1700.

# Examiner

Tomas Sörensson

# **Content and Structure**

The course contains lectures, guest lectures, and computer labs/seminars. We will post and update the schedule at Canvas together with other course documents.

# Pedagogical method

This course has a clear pedagogical approach. The approach builds on personal experience as a Corporate Finance professional, using standards applied in the industry, and from benchmarking other top universities' valuation courses, mostly American universities.

The design of the course means learning by doing. Each student will do a valuation of a listed company by using a valuation model built in Excel, with data from the Annual Report and other sources. Lectures and seminars with personal feedback will be given to support this work.

Even if participation in lectures is not mandatory, it will be very difficult to pass the course without active participation in lectures and seminars.

In other words, the course has to be followed in the pace given by the schedule. If the required preparations before seminars are not prepared as instructed, no feedback could be given. Since the exam contains a valuation by using the above mentioned model and writing a valuation report prepared during the course it is necessary to actively participate during the course.

# **Course Literature**

Koller, Goedhart, and Wessels, 2020, Valuation Measuring and Managing the Value of Companies. Seventh edition, University edition. John Wiley & Son.

Or, Koller, Goedhart, and Wessels, 2015, Valuation Measuring and Managing the Value of Companies. Sixth edition, University edition. John Wiley & Son.

Sörensson, Tomas, 2011, The Equity Risk Premium on the Swedish Stock Market, working paper, KTH-Royal Institute of Technology, Stockholm

During the course distributed articles and material.

# Other material

Some extra material used in lectures and seminars related to building the valuation model could be distributed during lectures and seminars or posted at the course homepage.

# Course homepage

We use Canvas for the course homepage.

#### Reference Literature

Course book ME2064/ME1311 is recommended. Finansanalytikernas rekommendationer, sista upplagan, Finansanalytikers förening, Stockholm (for explanations in Swedish)

# Eligibility

Student has to have passed basic course in Industrial Economics and Organization, pass in one of the courses ME2311 Finance, ME2064 Finance and Control in Industrial Organizations, or ME2721 Corporate Finance and Markets.

# Grading

# Grading scale \*

A, B, C, D, E, FX, F

# Examination \*

- SEM3 Seminar, 2.0 credits, Grading scale: P, F
- TEN2 Exam, 4.0 credits, Grading scale: A, B, C, D, E, FX, F

The requirement for the final grade is P for SEM3 and a grade E or higher for TEN2

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

Grades build on active participation in seminars, a written exam covering the literature and a take home exam in the form of a complete valuation of a company. Seminars (SEM3) and guest lectures are mandatory.

The exam (TEN2) contains two parts, one written exam and a take home exam. The written exam (grade A-F) is two hours and the take home exam (grade A or E, Fx, and F) is 24 hours. The grade in each of the two parts determines the final grade, see the matrix page 5, the written exam determines the individual grade in combination with the grade on the take home exam. The two exams have to be taken at the same exam week.

The take home exam has to be done in accordance with given instructions. It can be done by two students together or alone. It is recommended to do it in groups of two students.

# Grading

# Seminars (SEMA3)

For obtaining the grade P the participation in seminars is mandatory and active participation in the form of hand-ins before seminars of assignments. One presentation and acting as a discussant at one occasion is required for P. Participation at guest lectures is mandatory. If participation is missing, one or more assignments will have to be handed in to compensate for this.

### Grading of written exam

Rules

For grade E the criteria for grade E should be fulfilled For grade D the criteria for grade D should be fulfilled For grade C the criteria for grade C should be fulfilled For grade B the criteria for grade B should be fulfilled For grade A the criteria for grade A should be fulfilled For grade Fx the criteria for grade E should be possible to fulfill after an extra assignment has been handed in within three weeks and graded with P.

# Grading of take home exam

Rules

For grade E the criteria for grade E should be fulfilled

For grade A the criteria for grade A should be fulfilled

For grade Fx the criteria for grade E should be possible to fulfill after corrections of the take home exam has been handed in within three weeks and graded with E. If not corrected in due time the take home exam has to be retaken again when the written exam is retaken.

### Grading Criteria

### Written Exam

For grade the student is able to

- E explain and discuss basic concepts within the theory for the valuation of companies and discounted cash flow valuation models.
- D and in addition explain and discuss more advanced concepts within the theory for valuing companies and discounted cash flow valuation models and also valuation by multiples.
- C and in addition use these advanced concepts on more complicated issues within the area of valuing companies.
- B and in addition analyze problems within all parts of the course and discuss how these problem could be solved in a real valuation case.
- A and in addition analyze problems within all parts of the course and thoroughly discuss advantages and disadvantages with different methods and how and when each method is appropriate to use in a particular situation depending on the current setting.
- Fx the exam is possible to be corrected to fulfill the criteria for grade E.

#### Take-home exam

The take-home exam is grade A, E, Fx and F.

For grade The student has to fulfill the following

- E The valuation report contains a discounted cash flow valuation with all its features and done according to the instructions given at the exam. For all parts of the valuation, a basic analysis is performed with necessary assumptions and facts in such a way that the reader can follow the reasoning grounded in a logical structure that concludes in a reasonable value for the company. The report also contains a basic connection between the strategic analysis/financial analysis and the data that are used in the valuation. The cash flow valuation is supported with a basic multiples valuation. Some minor errors in the report are accepted.
- A The valuation report contains a discounted cash flow valuation with all its features and done according to the instructions given at the exam. Each part of the report is written with great detail and when it is motivated the report contains an advanced strategic analysis and discussion showing advanced knowledge in valuation of companies. The analysis is built on the data used in the valuation in a convincing way. The report contains well-motivated assumptions for each of the data used in the valuation and facts in such a way that the reader can follow the reasoning with a logical structure that concludes in a reasonable value for the company. The report contains a complete and more advanced multiples valuation. The report ends with a conclusion that summaries the main parts of the valuation. A minor error in the report are accepted.
- Fx the take-home exam is possible to be corrected to fulfill the criteria for grade E.

# NOTICE: If the take home exam is handed in too late, it will not be graded and will get grade F.

Grading ME2090	Individual written exam								
	Grade	Α	В	С	D	Е	Fx	F	
Take home exam	Α	Α	В	С	С	D		F	Final
Group	E	С	С	С	D	Е		F	Grade
	Fx								
	F	F	F	F	F	F	F	F	

#### Ethical approach \*

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.

KTH Tomas Sörensson					Schedule ME2090 2021	Preliminary	2020-01-20		
lon	ias Soi	rensson							
Гhis	course	e demands ac	tive par	rticipat	tion fro	m the first to the last day of the course.			
All 1	ectures	s starts 15 m.	past th	e hour		Room( Digital)			
					https	://kth-se.zoom.us/j/63023854013	7th ed.	6th ed.	
W	Week	Date	Time		L/S		Chapter	Chapter	
w3	Wedr	2021-01-20	15:00	17:00	L1	Introduction	1-9	1-7	TS
w3	Frida	2021-01-22	08:00	10:00	L2	Valuation - Overview	1-9	1-7	SB/T
<i>w</i> 4	Mond	2021-01-25	10:00	12:00	L3	Frameworks for valuation,	10	8	TS
ν4	-	2021-01-26				Analyzing performance, data sem1	11-12 (21-22)	9-10 (19-20)	
w4	-	2021-01-27				Forcasting part 1	13 + extra	11 + extra	TS
w5 Tuesd 2021-02-02 15:00 17:00 L6		L6	Guest lecture: Prof. Lars Oxelheim, Lui		TS				
			1	1	1	Macro economics and valuation	Handout		
w5	Wedr	2021-02-03	15:00	17:00	L7	Forecasting part 2, data sem 2	13 + extra	11+ extra	TS
w6	Mon	2021-02-08	09.00	Hand	in ass	gn. 1 for sem 1 at Canvas, as PDF			
w6	Tuesc	2021-02-09	15.00	17.00	L8	Continuing value, Cost of Capital	14, 15	12	TS
w0 w6			13:00			Seminar 1	Own comp*	12	IS SB/T
w0 w6			15:00			Seminar 1	Own comp		TS
w6 w6			13:00			Seminar 1	Own comp		TS
w6			15:00			Seminar 1	Own comp		SB
w6		2021-02-12				Cost of capital, financing, data sem 3		13,29+ extra	
w7	Mon	2021-02-15	09.00	Hand	in ass	ign. 2 for sem 2 at Canvas, as PDF			
w7	Mond	2021-02-15	15:00	17.00	I 10	Multiples 1	18	16	SB
w7		2021-02-16				To be decided	18	16	SB
w7			13:00			Seminar 2	Own comp	10	TS
w7			08:00			Seminar 2	Own comp		SB
w7			10:00			Seminar 2	Own comp		SB
w7		2021-02-18				Seminar 2	Own comp		TS
w7	Frida	2021-02-19	10:00	12:00	L12	Analyzing the DCF value	16-17	14-15	SB
w8	Mond	2021-02-22	10:00	12:00	L13	Writing a valuation report			TS
w8						Used if needed			TS
w8	Frida	2021-02-26	10:00	12:00	L14	Guest Lecture: Christian Kopfer: Analyst Nordea			TS
w9	Mon	2021-03-01	09.00	Hand	in ass	ign. 3 for sem 3 at Canvas, as PDF			
<i>w</i> 9	Wedr	2021-03-03	09:00	12:00	S3a	Seminar 3	Own comp		TS
х9	Wedr	2021-03-03	13:00	16:00		Seminar 3	Own comp		SB
х9	Thurs	2021-03-04	13:00	16:00	S3c	Seminar 3	Own comp		SB
w9	Frida	2021-03-05	10:00	12:00	L15	Preparing for exam			TS
w9	Frida	2021-03-05	13:00	16:00	S3d	Seminar 3	Own comp		TS
						TS = Tomas Sörensson, SB= Seth Bern	ström		
*Ho		r own mode	l availe	ahle at	everv	seminar, since we/you work with you	r valuation me	odel	<u> </u>
						sending it in, and check that it looks g			
		-110 del/1 cp0.				serving to my who encore that it tooks g	- Jut and thell	we vite i DI	
w11	Mond	2021-03-15	10:00	+ 24 h	ours	Take home exam: A Complete Valua		Exam part 1	
						Hand in before Mar 16, at 10.00 at C	anvas as PDF	Exam part 2	
w11	Thurs	2021-03-18	14:00	16:00	Writte	n Exam Digital			
w23	Thurs	2021-06-10	14:00	16:00	Re-ex	am			