

FIN 394 Financial Strategies (Energy Focus)

Monday & Wednesday 2:00 – 3:30pm, RRH 5.420

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and

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Office Hours:

Titman: After class or by appointment, CBA 6.266

Butler: CBA 2.244 MW 5:00pm – 6:30 pm (and by appointment)

Weitzner: After class or by appointment, CBA 5.334AA

Description: This course is primarily focused on the initiation, evaluation, financing and hedging of major investments with a focus on the energy industry. The theory behind these decisions will be featured but practical issues involving application of the concepts will be emphasized, including scenario analysis and simulation.

Key questions addressed include:

What are the relevant risks of the investment and can the firm hedge these risks?

How can the investment be financed, and how does financing contribute to its value?

Is there flexibility in the way that the investment can be implemented, and how does this flexibility contribute to value?

Does the investment exploit the firm's existing comparative advantages, and does it create new comparative advantages that will generate valuable opportunities in the future?

Pre-requisites: Before starting the class students should have a good understanding of the following material:

Basic valuation concepts, you should understand how to estimate free cash flows, determine discount rates and perform basic simulation and sensitivity analyses (e.g. chapters 1-7 in Titman and Martin)

Familiarity with certainty equivalent cash flows and how they relate to forward prices (e.g. Chapters 9-13 in the Grinblatt and Titman)

Understand the Modigliani and Miller theorem : why corporate taxes create a preference for debt financing, and how financing affects the cost of capital. (e.g. chapters 14-17 in the Grinblatt and Titman)

Valuation of forwards, futures and commodity options including the Black-Scholes and binomial option pricing models (e.g Chapters 11-13 of Titman and Martin)

Requirements: The class consists of lectures and case discussions. You should form groups consisting of approximately 4 students each for the purpose of writing up and discussing the cases. Each group will be required to turn in a 3 page executive summary of their analysis along with the appropriate exhibits that provides more details about their work. Each student is expected to be actively involved in the case discussions. If for any reason you are not adequately prepared to contribute to the discussion in a class, please let me know before class and I will not call on you.

Guest speakers: When we have guest speakers, the appropriate dress is business casual.

Readings: Valuation: The Art and Science of Corporate Investment Decisions, (Titman and Martin) and Case Packet (download from Xanedu and HBS). We will post lecture notes and other readings on Blackboard.

Grades: 60% case discussion and write-ups, 25% exams, 15% participation

Tentative Schedule (all dates but Exam are subject to change)

Points	Meeting	Date	Topic
	1	29-Aug	Class Preview; Energy Economics
		3-Sep	Labor Day
	2	5-Sep	Energy Economics (EXXON)
	3	10-Sep	Energy Economics
	4	12-Sep	Energy Economics
	5	17-Sep	Energy Economics
	6	19-Sep	Single Well Model
	7	24-Sep	Oil and Gas Valuation
	8	26-Sep	Real Options
	9	1-Oct	TBD
	10	3-Oct	Real Options
10	11	8-Oct	<i>Case: MW Petroleum</i>
	12	10-Oct	<i>Case: MW Petroleum</i>
	13	15-Oct	Real Options / valuing a power plant
	14	17-Oct	Real Options / Strategic Options
10	15	22-Oct	<i>Case: CEPA</i>
	16	24-Oct	<i>Case: CEPA</i>
	17	29-Oct	Risk Management
	18	31-Oct	Risk Management
10	19	5-Nov	<i>Case: Risk Management at Apache</i>
	20	7-Nov	Capital Structure
10	21	12-Nov	<i>Case: Calpine Corporation</i>
	22	14-Nov	Ownership Structures
	23	19-Nov	Exam
		21-Nov	<i>Thanksgiving</i>
25	24	26-Nov	TBD
	25	28-Nov	<i>Case: Financing Mozal Corporation</i>
10	26	3-Dec	Top 10 Lessons from Class
	27	5-Dec	Rob Jones: Shell MLP
10	28	7-Dec	Alternative Energy Presentations
		10-Dec	Last Day of Class
15			Participation
100			Class Total