

COLUMBIA BUSINESS SCHOOL

Entrepreneurial Finance

Finance B8345
Summer 2023
July 10-14 2023
9:00 AM – 5:00 PM
Geffen 590

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COURSE OVERVIEW

“Entrepreneurship” is a popular focus of discussion among businesspeople, financiers, economists, and policymakers. At a macro level, economists and policymakers have increased their attention to entrepreneurial enterprise because of its importance to economic growth, the significance of entrepreneurial businesses in job creation, and the role of business owners in aggregate saving and wealth accumulation. Today on the demand side, many M.B.A. students want to start their own businesses or be part of emerging businesses, while on the supply side, other M.B.A.s are interested in participating directly in the growth of venture capital and private equity.

What, then, is “entrepreneurial finance”? The second term is easier to define. We know that Finance studies encompass valuation and the allocation of resources, risk, liquidity, and information. Indeed, topics in finance related to valuing cash flows, assessing the cost of capital, choosing among suppliers of funds, and aligning incentives for value maximization are at least as important for entrepreneurial firms as for more established firms. In particular, new and growing firms likely face “financing constraints” on growth and difficult decisions about financial contracting; while present-day financial decisions may have a profound influence on the available range of future options and choices.

Defining entrepreneurship is less straightforward. Consistent with many popular characterizations of entrepreneurs, the noted Harvard economist Joseph Schumpeter summarized an entrepreneur as follows:

“To act with confidence beyond the range of familiar beacons and to overcome that [social] resistance requires aptitudes that are present only in a small fraction of the population and that define the entrepreneurial type...” (*Capitalism, Socialism, and Democracy*, New York: Harper and Row, 1942, page 132.)

Whoa! Actually studying entrepreneurship requires a narrower focus. The economic concept corresponding most to topics we discuss in this course as “entrepreneurial finance” was articulated by Chicago economist Frank Knight who argued that entrepreneurs must address problems of raising capital and bearing risk in addition to identifying and pursuing opportunity. [Frank H. Knight, *Risk, Uncertainty, and Profit*, New York: Houghton Mifflin, 1921.] Throughout the course, we will emphasize such financial management decisions of entrepreneurial firms.

We define an entrepreneur as the person who puts the pieces together, identifies the new opportunity, connects the dots, and brings about change. Entrepreneurship may take place in small start-ups as well as large established firms. The entrepreneur may be the inventor, the financier, the manager, or somebody else entirely, and their relative value-added to the deal may shift accordingly. We will explore the implications of this dichotomy in detail in this course. The capital market for financing such entrepreneurs – and private equity investing more generally – differs fundamentally from capital markets considered in standard corporate finance: First, start-ups are young, mostly unprofitable companies, with

short operating histories and little capital. Young firms face exceptionally high degrees of uncertainty, constraining financing and creating difficult decisions about financial contracting, keeping in mind that today's financial decisions may have implications for future opportunities and choices. Second, available capital markets for privately held companies are predominantly "deal markets" where terms and valuations are negotiated on a case-by-case basis, where investors can add value and are actively involved with the companies they finance. Throughout the course, we emphasize financial opportunities and decisions of entrepreneurs and private equity investors investing in these entrepreneurs.

The course uses a two-pronged approach to the study of entrepreneurial finance. First, we will analyze principles of corporate finance, valuation, and coordination and control of firms, with an eye toward developing the tools and concepts of entrepreneurial financial management. Second, we will use cases on firms at different stages of their life cycle to illustrate how these tools and concepts may be applied in practice. In following these two approaches, we will examine the case dynamics and decisions from the viewpoint of both the entrepreneur and that of the investors to understand their motivations, objectives, and considerations. Entrepreneurial Finance and Private Equity investing are intrinsically linked. As an entrepreneur, you cannot negotiate effectively without understanding the investor's overriding objectives. As an investor, you cannot evaluate a potential opportunity without appreciating the entrepreneur's perspective.

In principle, we can think of a "life cycle" of entrepreneurial financial decisions comprised of stages of identifying opportunity, marshaling resources, executing the business decisions, and "harvesting" success. In practice, entrepreneurial finance is not a linear process though this life cycle, and most of the cases we examine will necessarily involve considering multiple stages of the life cycle. As a further dimension, both economists and private equity practitioners describe the need to think simultaneously about four "success factors": *people*, *opportunity*, *context*, and the *deal*. Our case analyses will follow this general framework.

While the teaching notes emphasize general principles and tools, class cases will cover firms in many different industries and settings including those outside the United States. The sequence of course cases will not only permit us to illustrate applications of the principles and tools; but will facilitate going beyond the instant situations to discuss similarities and differences in the practice of entrepreneurial finance across industries and across countries.

While we do not use a textbook in class, you may want to consult as references: *Fundamentals of Entrepreneurial Finance*, by Marco da Rin and Thomas Hellmann (Oxford University Press, 2020); and *The Venture Capital Cycle*, by Paul Gompers and Josh Lerner (MIT Press, 1999).

Module 1: Identifying and Capturing Opportunity

While the standard DCF approach is a valuation workhorse and provides a fundamental definition of economic value, it is unfortunately woefully inadequate for evaluating entrepreneurial companies, due to their short operating histories, lack of financial data, and a shortage of comparable companies. Instead, we present the VC-method, which combines coarse quantitative information with a detailed qualitative ("People-Opportunity-Context-Deal") assessment of the opportunity.

Additionally, we discuss and value two types of real options that are prominent in entrepreneurial finance: (1) growth options and (2) staged investments.

Keywords: Discounted Cash Flows ("DCF"); Top-down vs. bottom-up projections; Venture capital method; Pre- and post-money valuations; People-Context-Opportunity-Deal; real options; growth options; milestones and staged financing.

Cases: Technical Data Corporation Business Plan, Technical Data Corporation, Telewizja Wisla, and Fast Ion

Module 2: Doing Deals

The deal is the allocation of the value and control of the venture between the entrepreneur and investors. A good deal must be a win-win; it must leave everybody better off; and it must properly align the incentives of everybody involved.

The value of the venture is an important starting point. However, the allocation of this value depends on the price of the financing, which in turn depends on the bargaining positions of the entrepreneur and investors. This raises the important issue of whether the inventor or the financier is in a better position to capitalize on the value of the venture. In other words, “who own the idea?”

We build an understanding of term sheets and the convertible preferred shares typically used when financing start-ups. Through a series of cases with companies, different situations and with different types of investors with different motivations, we develop our understanding of the purposes of the various terms, when they are appropriate and how to view them from the perspectives of the entrepreneur and the venture investor. And, we will do a classroom negotiation to simulate and learn from the “real” conditions of a term negotiation.

Keywords: Term sheet; convertible (participating) preferred shares; liquidation preference; friends and family financing; angel investors; corporate governance; venture capital; strategic investors; control versus ownership; outside options (second-best alternatives, “best alternative to a negotiated agreement”).

Cases: MuMate, Circles, *Parenting Magazine*

Module 3: Private Equity

Before coming to exit, we integrate entrepreneurial finance with the economics of venture capital and private equity investing. To understand the motivations of these investors, we need to understand their performance, compensation, and the legal structure of the general partner and its underlying funds. This includes the motivations and decision process of the limited partners – typically large institutional investors – from which the private equity investors raise capital.

Keywords: Limited partnership; partnership agreement; general and limited partners; management fees; carried interest; waterfall; early/late carry; clawback; private equity governance model.

Module 4: Exit

Finally, for entrepreneurial finance, we turn to exit decisions, studying exit through sale of the venture or through an initial public offering. We consider decisions of both entrepreneurs and financiers in the exit.

Keywords: Exits and liquidity events; initial public offering; and acquisition.

Cases: ArthroCare and Special Case Studies

COURSE REQUIREMENTS AND GRADING

This course requires substantial preparation. For case discussion to be a meaningful experience, classroom participation is essential, and each student should be prepared such that he or she can both “open” a case analysis and contribute meaningfully to the ongoing flow of class discussion. Pre-class discussion in groups is encouraged, particularly on cases. Study questions will be also be provided for your guidance with each case assigned.

- *Active class participation is an important component of this course, and it will count for **one-third** of your course grade.*

We will also distribute three ungraded problem sets (on valuation, deal terms, and real options). Solutions will be posted on the course website (CANVAS).

Students will be responsible for submitting a two-page memorandum of analysis and recommendation addressed to the major decision maker at the beginning of each case-related class session (one per group). Write-ups are not required for the TDC Business Plan, Lotus, and MuMate cases. Group memoranda are acceptable: No more than five students should be in a group; once formed, groups will work together for the week. You may attach as many numerical calculations as necessary to support the two-page written memoranda of analysis and recommendation.

- *These memoranda grades will count for **one-third** of your course grade. Groups should submit memoranda for all cases; we will record the best five grades.*
- *For the last **one-third** of the course grade, you will have a take-home final examination.*

The final examination will be a take-home case analysis to be prepared on an individual basis and will be available at the end of class, September 3. The exam is due by 5:00pm ET on Tuesday, September 7, 2021.

COURSE MATERIALS AND INFORMATION

Required readings and cases will be made available to you in the casebook. The remainder of the course materials and information—case questions, teaching notes, announcements, case- and current event-specific Web links, and additional handouts—will be found on the course web page on CANVAS. You should plan to check the site regularly, as we will not generally make available hard copies of materials published on the Website.

Additional reading materials are listed in at the end of this syllabus, and more materials are available (and on Reserve) on the CBS Watson library website: <http://guides.library.columbia.edu/entrepreneurship>

For additional optional readings, you can come and see us.

Finally, if you are interested in related courses offered in the Columbia Business School's Entrepreneurship Program, please consult the Program's web page – <https://www8.gsb.columbia.edu/entrepreneurship/>.

ENTREPRENEURIAL FINANCE – SUMMER 2023

Game Plan – SUMMER 2023 (Guest speakers are proposed and thus subject to change)

	Day 1	2	3	4	5
	Monday, July 10	Tuesday, July 11	Wednesday, July 12	Thursday, July 13	Friday, July 14
8:00 – 9:00	8:30-9:00am Group formation	Speakers: Iqram Magdon-Ismail, Alan Patricof, and Ian Sigalow Venmo/Greycroft	Speaker: Matt Burton QED Or Nina Tandon; EpiBone	Speaker: Rob Hayes Messy Exit: Uber	Speaker: Ira Simkhovich- Industry Venture
9:00 – 10:30	Introduction/ Technical Data Corporation Business Plan	Case: TVW	Case: Fast Ion	Case: Circles Speaker: Hugh Merryweather	Speaker: Scott Peters Opus and Growth Catalyst Partners
10:30 – 11:00	<i>Break</i>	<i>Break</i>	<i>Break</i>	<i>Break</i>	<i>Break</i>
11:00 – 12:30	Valuation Models in Entrepreneurial Finance	Speaker: Vinay Nair, Tifin, Fintech Venture Capital and Opportunity	Speaker: Erik Syvertsen Term Sheets: A Primer AngelList	Private Equity and Venture Capital: Growth Equity	Case: ArthroCare
12:30 – 2:30	Lunch and Preparation of TDC	12:30 – 2:00 Lunch and Preparation of ‘What Is the Investment Decision?’	12:30 – 2:30 Lunch and Preparation of MuMate	Lunch and Preparation of Parenting Magazine	12:30 – 1:00 Lunch
					1:00 – 2:30 One-Minute Entrepreneurial Finance
2:30 – 4:00	Case: TDC Who Owns An Idea?	2:00 – 2:30 What Is the Investment Decision?	2:30 – 4:00 Case: MuMate	Case: Parenting Magazine	Bonus: Entrepreneurial Finance Meets <i>Hamilton</i>
		2:30 – 4:00 Real Options			
4:00 – 4:30	<i>Break</i>	<i>Break</i>	<i>Break</i>	<i>Break</i>	Take Home Exam
4:30 – 6:00	Speaker: Kent Collier Reorg Research	Review of Valuation Concepts	Startup Governance and the Board of Directors Matt Blumberg, Bolster	Private Equity and Options for Exit Speaker: Mark Dzialga Brighton Park Capital	