

## Digital Investing

Fall 2021

B8429

Tuesdays 5:40 pm – 8:55 pm

WJW 208

Professor Jonathan Knee

Hours: 4-5pm on Tues

Office: 312 Uris

Phone: 212-857-3158

[Knee@Evercore.com](mailto:Knee@Evercore.com)

Professor Jeremy Philips

General Partner, Spark Capital Growth

Phone: 917-243-4200

[jeremy@sparkcapital.com](mailto:jeremy@sparkcapital.com)

TA: Rishi Ratan

Phone: 516-652-2236

Email: [RRatan22@gsb.columbia.edu](mailto:RRatan22@gsb.columbia.edu)

The course is designed to introduce business students to the application of investing concepts and disciplines to digital businesses. We will cover a wide range of digital business models in companies at a variety of stages of development.

The course is organized around major digital business models and industry verticals. After the introductory sessions, each week will closely examine a leading digital company (or companies) within the model/vertical at issue, as well as an emerging digital competitor. The analytical framework will be reflected in an Investment Committee Memorandum template that will serve as a basis for class discussion. The template incorporates the key decision-making variables.

The first half of each class will focus on the overall sector identified and leading company example. Discussion during this portion will typically revolve around a business school case and focus on a list of identified “key questions”. The second half will include Investment Committee Memo presentations by two student groups on the alternative digital business examined. Some sessions will include participation of relevant leading digital investors or executives who will provide perspective and feedback on student presentations.

In addition to weekly readings, the textbook for the class is *The Platform Delusion: Who Wins and Who Loses in the Age of Tech Titans (TPD)* by Jonathan Knee. In addition to the cases, the reading assignments for class combine chapters of the book with relevant background materials on the general sector and specific companies studied. Grading is based on

- Final examination (40%)
- Class participation and attendance (25%)
- Group presentations (20%)
- Homework (15%)

**Final Exam.** The purpose of the final exam is to test your ability to apply the concepts taught in the class to a real investment. The exam will ask students to complete an Investment Committee Presentation on a specific investment proposal based on information provided. The exam will be a 5 day take home distributed

following the final class session and due at midnight on Sunday. Exam may make use of any outside materials, but must be based on individual work.

**Class participation and attendance.** Participation encompasses responsiveness to “cold call” questions, overall engagement including any in-class polls or quizzes, and attendance. The Key Questions identified for each class are likely sources of cold call questions.

**Group Presentations.** The class will be divided into 14 (fourteen) groups. The groups’ composition will be confirmed by the TA on the day following the second class (September 16<sup>th</sup>). Groups will be randomly assigned with an effort made to evenly distribute students with investing/banking backgrounds.

During the course of the semester each group will make one ten minute Investment Committee Memo presentation in which they defend their investment thesis (through a seven slide PowerPoint presentation) to the class. All group members will receive the same grade. The substance and delivery of the presentation together will represent the presentation portion of the overall class grade.

**Homework.** For the seven classes in which investment presentations are made, students must submit a 1 page answer to a question contrasting the incumbent and insurgent covered that week. Students making group presentations do not need to submit homework for that session. The specific homework question for each week is included on the syllabus.

## Syllabus

### September 7, 2021 Introduction to Strategy and Industry Structure

#### Topics:

1. What the course is about and how it works
2. Competitive Advantage
3. Strategy and Industry Structure
4. Impact of Digital on Industry Structure and Competitive Advantage

#### Reading:

- TPD Introduction, Chapters 1-3, Intro to Part II (through page 63)
- Jonathan Knee, “Platform’ is the latest buzzword to beguile investors”, Financial Times. July 27, 2021

#### Key Questions:

1. What is the logical connection between strategy and investing?
2. What are the key categories of potential sustainable competitive advantage?
3. What is the impact of the digital ecosystem and “platform economics” on the availability of competitive advantage?
4. When are network effects likely to lead to "winner take all" markets?

### September 14, 2021 Intro to Valuation

#### Topics:

1. Investment Committee Presentation Template review
2. External/relative valuation methodologies
3. Internal/absolute valuation methodologies

**Reading:**

- Alex Immerman and David George, "When Entry Multiples Don't Matter", Andreessen Horowitz, Aug. 18, 2020

**Speaker:**

- Michael J. Mauboussin, Head of Consilient Research, Counterpoint Global (confirmed)

**Key Questions:**

1. What are the sources of advantage exhibited in the most resilient digital franchises?
2. What makes discounted cash flow valuation particularly challenging for early stage digital growth investing?
3. What are the biggest pitfalls of relying on market multiples in general and revenue multiples in particular?
4. What valuation metrics and methodologies are most often used in assessing digital businesses and which should be?

**September 21, 2021**

**Intro to Investing**

**Topics:**

1. Intro to Types of Investing
  - Stage
  - Style
2. Investment Committee Presentation Template deep dive

**Reading:**

- Michael Mauboussin and Dan Callahan, Public to Private Equity in the United States: A Long-Term Look, Morgan Stanley Investment Management, August 4, 2020.
- Michael Mauboussin and Dan Callahan, "Total Addressable Market," Credit Suisse, Sept. 1, 2015

**Speaker:**

- Deven Parekh, Managing Director, Insight Partners (confirmed)

**Key Questions:**

1. Why is greater "persistence" of returns exhibited by venture firms than by later stage private equity firms?
2. What are the differences in investment criteria applied by venture and private equity firms and how do these relate to differences in their overarching investing objectives?

3. How should the concept of Total Addressable Market be used in assessing investing opportunities?

**September 28, 2021**

**Digital Investing in Practice**

**Topics:**

1. Digital Metrics and Methodologies
2. Slack Investment Committee Memo
3. Sources of Digital Success and Failure

**Reading:**

- Michael Porter, Strategy and the Internet, Harvard Business Review, March 2001
- W. Bryan Arthur, Increasing Returns and the New World of Business, Harvard Business Review, July 1996

**Speakers:**

- Eric Hippeau, Managing Director, Lerer Hippeau Ventures (confirmed)
- Ben Spero, Managing Director, Spectrum Equity (confirmed)
- Mark Colodny, Managing Director and Head of TMT, Warburg Pincus (confirmed)

**Key Questions:**

1. What are some key cost and revenue drivers of any credible business model?
2. Why are understanding breakeven economics so critical for understanding both the financial and strategic prospects of a business?
3. What is the best way to estimate potential "steady state" profit margin of an early stage business?
4. Why is understanding unit economics a critical component to the investing process?  
Is there a difference between direct costs and variable costs? Does it ever make sense to invest in a business with negative unit economics?

**October 5, 2021**

**Content Companies (Professor Knee)**

**Incumbent:**

- New York Times

**Insurgent:**

- Dotdash

**Key Questions:**

1. What are the sources of competitive advantage for the online NYT product and are these different from the historic print product?

2. At the time of the case, the New York Times had just sold its local "regional media group" but still owned The Boston Globe. What do you think were the competitive advantages of these properties relative to the core NYT product and their respective online potential?
3. How big do you think the NYTimes digital business can be and what do you think its profit margin will be at scale?
4. What does this mean for how big and profitable the Huffington Post and Business Insider can be?
5. Are there other companies about which financial information is available that you would use as benchmarks to help answer questions 3 and 4?

**Reading:**

- TPD Chapter 3
- Vineet Kumar et al., "The New York Times Paywall", Harvard Business School Case, Jan. 31, 2013 (9-512-077)
- Justin Fox, "A New Golden Age of Media", The Atlantic, April 16, 2014
- Edmund Lee, "Digital Media: What Went Wrong," New York times, Feb. 1, 2019
- Dotdash background info

**Homework Question:**

- What is the primary difference between NYTimes and Dotdash business models and which is more resilient?

**IC Question:**

- IAC is seeking a 20% minority investment in Dotdash as a precursor to taking it public. At what pre-money valuation would you recommend participating?

**Speaker:**

- William Bardeen, Senior Vice President, New York Times (confirmed)
- Neil Vogel, CEO, Dotdash (confirmed)

**October 12, 2021**

**Wearables (Professor Knee)**

**Incumbent:**

- Fitbit

**Insurgent:**

- Mirror

**Key Questions:**

1. Is Fitbit primarily a hardware or a software company? Does it have a competitive advantage and, if so, does it relate to the hardware or software aspect of its business?
2. How do you think about Fitbit's TAM? Which market segments do you view as most attractive from a potential growth and potential profitability perspective?

3. What are the three biggest risks associated with an investment in Fitbit?

**Reading:**

- TPD Chapter 6
- Regina E. Herzlinger, Christine Snively and Sarah Mehta, Fitbit, Harvard Business School case, January 17, 2017 (9-317-007)

**Homework Question:**

Which deal – Google-Fitbit or Lululemon-Mirror – makes more sense?

**IC Question:**

- Should you vote to accept Lululemon's offer to buy Mirror for \$500 million?

**Speaker:**

- Brynn Putnam, CEO, Mirror (confirmed)

**October 26, 2021**

**Marketplace Exchange / Businesses (Professor Philips)**

**Incumbent:**

- eBay
- Amazon.com

**Insurgent:**

- 1stdibs

**Key Questions:**

1. What are the key drivers of profitability in eBay's business model?
2. What are the key drivers of profitability in Amazon's retail business model? How does its retail business model interact with that of eBay?
3. In shifting to a retail and platform business model, how successful was Amazon in overcoming barriers to entry in the third-party seller market? What business choices were critical in altering the competitive dynamic?
4. What would you recommend to eBay going forward, and why?

**Reading:**

- TPD Chapter 5, 9
- Ramon Casadesus-Masanell, "eBay, Inc. and Amazon.com (A)(B)", Harvard Business School Case, April 2012 (9-712-405, 9-712-406)
- Hanna Halaburda and Felix Oberholzer-Gee, "The Limits of Scale", Harvard Business Review, April 2014

- Benedict Evans, "Why Amazon Has No Profits (And Why it Works)", [ben-evans.com](http://ben-evans.com), September 5, 2014

**Homework Question:**

- How significant is the actual or potential competitive threat to 1stdibs from eBay or Amazon?

**IC Question:**

- One of 1stDibs early investors has offered to sell you its stake at a small discount to the current market price. Should you participate?

**Speaker:**

- David Rosenblatt, CEO, 1stdibs (Confirmed)

**November 9, 2021**

**Travel (Professor Philips)**

**Incumbent:**

- Trip Advisor

**Insurgent:**

- TripActions

**Key Questions:**

1. What's appealing about TripAdvisor for consumers and hotel owners? How does the company balance competing interest?
2. What's TripAdvisor's business model? How does its monetization model compare to other sites with user generate content, such as Yelp?
3. Why is TripAdvisor so much better known for its hotel reviews than its restaurant reviews? Does the restaurant category represent a big opportunity for the company?
4. Can TripAdvisor replicate its success in its core business in other categories—such as China, vacation rentals, and in flights? What does the competitive landscape look like in these areas?
5. How should the CEO prioritize the company's growth options?

**Reading:**

- TPD Chapter 10, 11.
- Jeffrey Rayport, Spencer Rascoff, Susie Ma, "TripAdvisor: An Itinerary for Growth" Harvard Business School Case, November 20, 2019. (Case 820-039)

**Homework Question:**

- What is the difference between the primary competitive threats to Trip Advisor and TripActions?

**IC Question:**

- TripActions is seeking a final pre-IPO investment to fund its latest growth initiatives. At what valuation would u participate?

**Speaker:**

- Ariel Cohen, CEO, TripActions

November 16, 2021

**On-Demand Economy (Professor Philips)****Incumbent:**

- Uber

**Insurgent:**

- Lyft

**Key Questions:**

1. What benefits to consumers did Uber originally offer versus taxis and limousine services?
2. What forms of competitive advantage does Uber have? How strong are they? Are they local, national, or global?
3. Is regulation a competitive advantage in the taxi / ride-sharing business? Who does it help?
4. How big is Uber's addressable market? Can they continue to expand into new businesses? What advantages do they bring in delivering meals, etc?

**Reading:**

- TPD Chapter 12
- Youngme Moon, "Uber: Changing the Way the World Moves," Harvard Business School Case, Jan. 4, 2017 (9-316-101)
- Bill Gurley, "How to Miss by a Mile: An Alternative Look at Uber's Potential Market Size", Above the Crowd, July 2014
- Aswath Damodaran, "Uber Isn't Worth \$17 Billion", FiveThirtyEightEconomics, June 18, 2014
- Clayton Christensen et al., What is Disruptive Innovation? Harvard Business Review, December 2015

**Homework Question:**

- Which is a better business, Uber or Lyft, and why?

**IC Question:**

- You have been offered a significant stake in Lyft at a slight discount to the current price. Should you participate?

**Speaker:**

- Brian Roberts, CFO, Lyft (confirmed)

November 23, 2021

**B2B/SaaS (Professor Knee)**

**Incumbent:**

- Salesforce.com

**Insurgent:**

- Blackline

**Key Questions:**

1. What is the right way to think of the relative cost to an smb customer of a SaaS and an enterprise solution? On a per user basis, what is the difference between the cost of an SMB SaaS customer and a large enterprise customer?
2. What are the respective sources of competitive advantage for SaaS and enterprise software businesses?
3. What are the respective margins for SaaS and enterprise software businesses? Which do you think is a better business?
4. Which do you think is more likely -- that Salesforce.com successfully moves into larger enterprises or that Oracle successfully moves into the SMB market?
5. What is the right product and sales strategy for Oracle in the SMB market?

**Reading:**

- TPD Chapter 14
- David Yoffie et al., "Oracle vs. Salesforce.com", Harvard Business School Case, Sept. 2006 (9-705-440)

**Homework Question:**

- How successful do you think competition from Salesforce against Blackline would be?

**IC Question:**

- You have been offered a significant stake in Blackline at a slight discount to the current price. Should you participate?

**Speaker:**

- Therese Tucker, Founder & Executive Chair, Blackline

November 30, 2021

**P2P Finance (Professor Knee)**

**Incumbent:**

- Lending Club

**Insurgent:**

- Upgrade

**Key Questions:**

1. What are the key dimensions of competition in p2p lending? How are these reflected in the differences in approach taken by Lending Club and Prosper?
2. Does this lend themselves competitive advantages at scale and, if so, what would those advantages be?
3. What is the most critical link in the industry value chain and who has or can get leverage over this economic pressure point?
4. Does Prosper have a first mover advantage? If so, how can it best press that advantage and what if anything can Lending Club do to overcome its apparent disadvantage?
5. What do your thoughts on industry structure suggest about long run profitability of the sector? What comparable might you look to for a view of steady state margin?

**Reading:**

- TPD Chapter 14
- Peter Tufano et al., "Lending Club", Harvard Business School Case, December 2010 (9-210-052)
- William D. Cohan, "Bypassing the Banker", The Atlantic, August 13, 2014

**Homework Question:**

- What is the key lesson that Renaud Laplanche learned from his Lending Club experience that led to the founding of Upgrade?

**IC Question:**

- Upgrade is raising a final pre-IPO funding round. At what valuation would you be willing to participate?

**Speaker:**

- Renaud Laplanche, CEO, Upgrade

**December 7, 2021**

**Wrap-up and Conclusions****ATTENDANCE POLICY**

Students are required to attend each class and first class attendance is mandatory. Students participating remotely must have their video function enabled to be considered present. Students should reach out to the instructor or TA to seek an excused absence (for religious observances; personal, medical, and family emergencies; military service; court appearances such as jury duty). Note that if a category of absence provides a legitimate basis for excuse, if the student has adequate notice it is his/her responsibility to arrange for the class to be taped. Only after the student confirms that the tape has been viewed is an excuse granted.

Unexcused absences will affect your course grade. It is the student's responsibility to confirm the accuracy of attendance records with the TA on an ongoing basis. Attendance is incorporated into participation overall.

In addition, however:

- Students that miss **25%** of their classes (3 unexcused absences) will at most receive a **P for the course grade**
- Students that miss **50%** of their classes (6 unexcused absences) will receive a **F for the course grade**

## **INCLUSION, ACCOMMODATIONS, AND SUPPORT FOR STUDENTS**

At Columbia Business School, we believe that diversity strengthens any community or business model and brings it greater success. Columbia Business School is committed to providing all students with the equal opportunity to thrive in the classroom by providing a learning, living, and working environment free from discrimination, harassment, and bias.

Columbia Business School will make reasonable accommodations for persons with documented disabilities. Students are encouraged to contact the Columbia University's Office of Disability Services for information about registration. Students seeking accommodation in the classroom may obtain information on the services offered by Columbia University's Office of Disability Services online at [www.health.columbia.edu/docs/services/ods/index.html](http://www.health.columbia.edu/docs/services/ods/index.html) or by contacting (212) 854-2388.

Columbia Business School is committed to maintaining a safe environment for students, staff and faculty. Because of this commitment and because of federal and state regulations, we must advise you that if you tell any of your instructors about sexual harassment or gender-based misconduct involving a member of the campus community, your instructor is required to report this information to a Title IX Coordinator. They will treat this information as private, but will need to follow up with you and possibly look into the matter. Counseling and Psychological Services, the Office of the University Chaplain, and the Ombuds Office for Gender-Based Misconduct are confidential resources available for students, staff and faculty. "Gender-based misconduct" includes sexual assault, stalking, sexual harassment, dating violence, domestic violence, sexual exploitation, and gender-based harassment. For more information, see <http://sexualrespect.columbia.edu/gender-based-misconduct-policy-students>.