

Master of Science in Sustainable Management

SUMA PS5445: Impact Finance for Sustainability

Wednesdays, 6:10 pm - 8:00 pm EST; 5/5 -8/11

3 Credits

Instructor: Bhakti Mirchandani
Office Hours: By appointment Monday, Tuesday, Thursday, or Friday 8-8:30am
Email: bmirchandani@gmail.com
Response Policy: Email is my preferred mode of communication. Students can expect a response within 24 hours, M-F. If you ask a question that the whole class may benefit from, I may respond through a message to the whole class, rather than bilaterally to you only.

Course Overview

This survey course examines a range of approaches to sustainable and impact investing and their policy contexts. The eight approaches are private equity in frontier markets; environmental, social, and governance (ESG) integration; nonprofit mergers and acquisitions; mission related investments; social impact bonds; green bonds; crowdfunding; and investment stewardship. These eight approaches will be set against different policy backdrops: economic statecraft in the wake of Arab Spring and the fall of the Berlin Wall; Department of Labor guidance on economically targeted investments and ESG factors; federal budget cuts; changing IRS rules to allow foundations to consider the relationship between investments and the foundation's mission; constrained local government finances; the Paris Climate Agreement; evolving crowdfunding regulation; and the proliferation of stewardship codes. Brief guest lectures in each class and three experiential exercises bring these topics to life.

Differentiating features of the course include its (i) rigorous overview of financial markets, financial statements, financial analysis, and financial structures prior to the midterm; (ii) the policy analysis that spans the course; (iii) its emphasis on “S” issues, like financial inclusion, shrinking the carceral system, reducing gun violence, and diversity, while addressing environmental issues; (iv) three experiential exercises that allow students to examine impact and sustainability from different vantage points across the investment value chain—corporate, asset manager, and asset owners—and (v) the integration of the asset owner perspective into the course.

As an early innovator in social finance, dating back 21 years, the instructor provides students with a practical toolkit, honed by making mainstream financial institutions and products more beneficial to a broader range of stakeholders and making specialist impact investment firms more relevant to and integrated with mainstream markets.

The course has no prerequisites; however, an understanding of finance will be useful background.

This course satisfies the M.S. in Sustainability Management program’s Area 5: General and Financial

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Management requirement.

Learning Objectives

- L1:** Outline how mainstream financial instruments, particularly fixed income instruments, and financial markets work
- L2:** Navigate a Form 10-K filing, a sustainability report, and a prospectus
- L3:** Value a company or a financial instrument in a variety of ways: discounted cash flow, liquidation value, book value, replacement cost, expected value, and ESG integration with mainstream valuation approaches
- L4:** Explain the basics of the merger process, fiduciary duty, and fund structuring
- L5:** Evaluate the impact of recent policy and regulatory changes on impact finance
- L6:** Construct a timeline of the evolution of the impact finance sector
- L7:** Describe and apply the wide range of impact finance tools, detailing their pros, cons, and applications
- L8:** Understand strategic engagement from the perspective of both sides of the investor-corporate dialogue

Readings

Textbook:

Bodie, Kane, Marcus. Investments. 10th Edition. McGraw-Hill. 2013.

Focus on bold text and call-out boxes (skim):

- Chapters 2-3. Sections 2.1-2.3 and Section 3.1. Pages 28-45 and 59-63
- Chapter 14. Pages 445-478.
- Chapter 16. Section 16.1. Pages 516-524.
- Chapter 18. Sections 18.1 and 18.5. Pages 591-593 and 617-622
- Chapter 19. Pages 635-677.

Articles:

Required

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- [Brad Swanson. "The Role of International Capital Markets in Microfinance."](#) Developing World Markets. 2007. Pages 1-17.
- [2019 Annual Impact Investor Survey. Global Impact Investing Network.](#) Pages 1-29.
- [Goldman Sachs Impact Investing.](#) 3 pages.
- [Goldman Sachs Social Impact Bonds.](#) 2 pages.
- [Goldman Sachs Capital for Women Entrepreneurs.](#) 4 pages.
- [Unitus Group overview.](#) 2 pages.
- [Unitus Group impact.](#) 2 pages.
- [The Rise Fund \(TPG fund in partnership with Elevar Equity and Bridgespan Group\) overview.](#) 7 pages.
- [Tunisian American Enterprise Fund \(TAEF\) Evaluation Final Evaluation Report 2018.](#) Pages 24-26 and 28-39 (skim).
- ["The Enterprise Funds in Europe and Eurasia: Successes and Lessons Learned."](#) USAID. September 12, 2013. 34 pages.
- [Tunisian American Enterprise Fund 2016 Annual Report.](#) Page 3-13.
- ["Tax Considerations In Structuring US-Based Private Equity Funds" By Patrick Fenn and David Goldstein.](#) Akin, Gump, Strauss, Hauer & Feld, L.L.P. As appeared in the Private Equity and Venture Capital 2002 edition of the International Financial Law Review. Pages 1-10.
- [A Primer on the Structure of Private Equity Firms.](#) Pages 1-3.
- [Official UN Principles for Responsible Investment website.](#) 7 pages.
- [Fixed Income Investor Guide.](#) Principles for Responsible Investment. 2014. Pages 13-32.
- [A Practical Guide to ESG Integration for Equity Investing. Principles for Responsible Investment.](#) 2016. Pages 12-29.
- ["Field Assistance Bulletin No. 2018-01: Interpretive Bulletins 2016-01 and 2015-01."](#) US Department of Labor. April 23, 2018. Pages 1-3.
- [Craig Bitman and Michael B. Richman. "DOL Issues New Guidance on Economically Targeted Investments."](#) Morgan Lewis LawFlash. November 05, 2015. Pages 1-3.
- Department of Labor. ["US Department of Labor Issues Final Rule on Proxy Voting and Shareholder Rights By Employee Benefit Plans."](#) December 11, 2020. Pages 1-2.
- Joseph Lifshits . ["The Department of Labor's ESG-less Final ESG Rule,"](#) The Harvard Law School Forum on Corporate Governance. November 24, 2020. Pages 1-3.
- Bhakti Mirchandani. ["Five Ways The Biden Administration Advanced Sustainable Investing In Its First 50 Days, Including Two Last Week."](#) Forbes.com. Pages 1-4. Note: Forbes.com has a limited number of free articles per month, so please read in its entirety or save it as a PDF when you click on it.
- [Bhakti Mirchandani. "ESG Investing: A Blue Ocean For Corporate Employer-Sponsored Retirement Plans,"](#) Forbes.com. September 4, 2018. Pages 1-4. Note: Forbes.com has a limited number of free articles per month, so please read in its entirety or save it as a PDF when you click on it.
- ["Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures."](#) Task Force for Climate-Related Financial Disclosure. June 2017. Pages 1-18, 22-23, and 72-73.
- [Josh MacIntosh. "How to Keep Troubled Charities from Failing,"](#) The Chronicle of Philanthropy. March 31, 2016. Pages 1-2.

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- [Dana Yankowitz Elliot and Evan C. Hollander. "Navigating a Nonprofit Corporation through Bankruptcy."](#) Nonprofit Quarterly. April 29, 2014. Pages 1-2.
- [Willard L. Boyd III. "Mergers, Acquisitions, and Affiliations Involving Nonprofits: Not Typical M&A Transactions."](#) Business Law Today. American Bar Association. June 2014. 8 pages.
- [Dylan Roberts, George Morris, John MacIntosh, and Daniel Millenson. Risk Management for Nonprofits.](#) Oliver Wyman and SeaChange Capital Partners. March 2016. Pages 1-16.
- [Bhakti Mirchandani. "How to Save a Nonprofit: The Care Steps Required in Mergers and Acquisitions."](#) Nonprofit Quarterly. June 20, 2017. Pages 1-2.
- [IRS Notice 2015-62: Investments Made for Charitable Purposes.](#) 4 pages.
- [Celia Roady and Matthew Elkin. "IRS Provides Guidance on Mission-Related Investments by Private Foundations."](#) Morgan Lewis. September 29, 2015. Pages 1-2.
- ["Mission-Related Investing: Legal and Policy Issues to Consider Before Investing."](#) MacArthur Foundation. March 1, 2013. Pages 3-22.
- [Bhakti Mirchandani. "Ford Foundation MRI Investment a Historic Challenge to Other Funders."](#) Nonprofit Quarterly. May 9, 2017. Pages 1-7.
- ["Investing for Social Gain: Reflections on Two Decades of Program-Related Investments."](#) Ford Foundation. December 1991. Please skim 10-page excerpt from this article, which can be found here: [history-of-pris-ford-foundation 20170212.pdf](#).
- ["Investment Policy Statement." F.B. Heron Foundation.](#) August 11, 2016. 13 pages. Please skim.
- [Bhakti Mirchandani. "Brett Kavanaugh: Casting a Shadow over SRI Investing?"](#) The Journal of Political Risk. July 28, 2018. Pages 1-2.
- [Jeffrey Liebman and Alina Sellman. Social Impact Bonds: A Guide for State and Local Governments.](#) Harvard Kennedy School Social Impact Bond Technical Assistance Lab. June 2013. Pages 6-30.
- [Bhakti Mirchandani. "Voices from the Field: Social Impact Bonds and the Search for Ways to Finance Public Sector R&D."](#) Nonprofit Quarterly. Pages 1-2.
- [John Olson and Andrea Phillips. "Rikers Island: The First Social Impact Bond in the United States."](#) Community Development Investment Review. Federal Reserve Bank of San Francisco. Pages 97-101.
- [Donald Cohen and Jennifer Zelnick. "What We Learned from the Failure of the Rikers Island Social Impact Bond."](#) Nonprofit Quarterly. August 7, 2015. 2 pages.
- ["Governor Cuomo Announces New York the First State in the Nation to Launch Pay for Success Project in Initiative to Reduce Recidivism."](#) New York State. Albany, NY. December 30, 2013. 3 pages.
- [The Paris Agreement Summary: Climate Focus Client Brief on the Paris Agreement III. Climate Focus. 28 December 2015.](#) 6 pages.
- [Green Bond Principles, 2018: Voluntary Process Guidelines for Issuing Green Bonds.](#) International Capital Market Association. 16 June 2016. 7 pages.
- [Abby Ivory, Paul F. Brown, & David Chen. "How Green Bonds Will Become Mainstream."](#) Stanford Innovation Review. July 18, 2016. Pages 1-4.
- [Bhakti Mirchandani. "The Next Green Revolution: An Overview of the Rapidly Evolving Green Bond Market."](#) Nonprofit Quarterly. October 10, 2017. Pages 1-2.
- [Bonds and Climate Change: The state of the market in 2016.](#) Climate Bonds Initiative. July 2016. Pages 1-8 and 14-17.

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- [Tiphany Lee-Allen. "Moody's Credit Ratings Process, Green Bond Assessment and Sector Trends for Virginia Local Governments."](#) October 2016. Pages 26-30 (section on Moody's Green Bond Assessment).
- [Upper Mohawk Valley Regional Water Finance Authority, NY, Water System Revenue Bonds.](#) Series 2016 (Green Bonds) prospectus. Pages 60-62 on Moody's Green Bond Ratings.
- ["Regulation Crowdfunding: A Small Entity Compliance Guide for Issuers."](#) U.S. Securities and Exchange Commission. May 13, 2016. Pages 1-6.
- [Vladimir Ivanov and Anzhela Knyazeva. "U.S. securities-based crowdfunding under Title III of the JOBS Act."](#) U.S. Securities and Exchange Commission. February 28, 2017. Pages 1-4.
- [Kiva Microfunds. GuideStar Nonprofit Profile Charting Impact Report.](#) November 24, 2015. 3 pages.
- ["Mosaic Announces New Financing Facilities for Over \\$550 Million in Home Solar Loans."](#) PR Newswire. Nov 21, 2016. 1 page.
- [Bhakti Mirchandani, "Equity and Debt Crowdfunding: Democratizing Impact Investing."](#) June 7, 2018. 3 pages.
- ["Money managers and charities are offering joint investment products."](#) The Economist. September 15, 2018. Pages 1- 2.
- ["What is an Index?"](#) FTSE Russell. Pages 1-2.
- ["We Need to Talk: Driving Long-term Value Through the Investor/Corporate Dialogue."](#) FCLT Global. June 2018. Pages 4-10.
- [International Corporate Governance Network Stewardship Principles.](#) Pages 11-24.
- ["Activists and Socially Responsible Investing."](#) Harvard Law School Forum on Corporate Governance and Financial Regulation. January 31, 2018. Pages 1-3.
- [A Guide to Mapping the Impact of an Investment.](#) The Impact Management Project. April 2018. Pages 2-14.
- [Bhakti Mirchandani. "What You Need To Know About the IFC's Operating Principles for Impact Management."](#) Forbes.com. April 12, 2019. Pages 1-5.
- [Chris Addy, Maya Chorengel, Mariah Collins, and Michael Etzel. "Calculating the Value of Impact Investing."](#) Harvard Business Review. January-February 2019. Note: HBR has a limited number of free articles per month, so please read it in its entirety when you click on it.
- ["Investor Statement of Solidarity to Address Systemic Racism and Call to Action,"](#) Racial Justice Investing. 3 pages.
- ["Yale's David Swensen Puts Money Managers on Notice About Diversity,"](#) Wall Street Journal. October 23, 2020. 3 pages.
- [Bhakti Mirchandani. "Big Business's Undisclosed Social Crisis Plans: How One Investor Is Driving A Stake In The Ground on Diversity."](#) Forbes.com. September 28, 2020. 6 pages.
- [Bhakti Mirchandani. "Sustainable Investing at Endowments and Foundations: What It Is and What It Takes,"](#) Forbes.com. September 4, 2019. Pages [].

Optional Reading:

- Robert Higgins. [Analysis for Financial Management](#). The fifth edition or anything more recent than that should be fine. Chapters [2](#) and [3](#).
- [2016 Symbiotics MIV Survey](#). Symbiotics. September 2016. 54 pages.

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- [Bhakti Mirchandani. "Microfinance Overview."](#) Lehman Brothers. September 2008. 40 pages.
- [Gordon L. Berlin. Learning from Experience: A Guide to Social Impact Bond Investing.](#) MDRC. March 2016. Pages 1-23.

Video Resources:

- Video resources on bond pricing, equity valuation, and ESG integration that the instructor wrote specifically for the course.

Resources

Columbia University Information Technology

[Columbia University Information Technology](#) (CUIT) provides Columbia University students, faculty, and staff with central computing and communications services. Students, faculty, and staff may access University-provided discounted software downloads (<https://columbiait.onthehub.com/>).

Columbia University Library

Columbia's extensive library system ranks in the top five academic libraries in the nation, with many of its services and resources available online: <https://library.columbia.edu/>.

SPS Academic Resources

The Office of Student Affairs provides students with academic counseling and support services such as online tutoring and career coaching: <http://sps.columbia.edu/student-life-and-alumni-relations/academic-resources>.

Course Requirements (Assignments)

Final paper (L1, L6, L7) (10%)

Each student will, as a group, write about an impact investing financial product that does not yet exist to catalyze the development of the industry (800-1500 words) that was voted on by the class from the final presentations. Each group will (i) describe the product's financial and social or environmental returns, (ii) identify the target investors and explain why the product would be a good fit for such investors, and (iii) discuss the competitive landscape for the product and explain the product's competitive differentiation. Students are encouraged to use concepts from readings and classroom discussions to frame the paper.

Final papers will be submitted to a panel of industry experts, and final paper groups will have the opportunity to present to these experts the week after the final exam. The panel of experts will provide feedback and select one winning group, which will receive 1% extra credit on the final course grade.

Due: Beginning of Class 10

Final Presentation (L1, L6, L7) (10%)

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Each student will, as an individual, present an impact investing financial product that does not yet exist to catalyze the development of impact investing. Each student will (i) describe the product's financial and social or environmental returns, (ii) describe the product's structure, (iii) identify the target investors and explain why the product would be a good fit for such investors, and (iv) discuss the competitive landscape for the product and explain the product's competitive differentiation. 25% of your grade will be based on your initial presentation, 50% based on your final presentation that incorporates your classmates' feedback, and 25% based on the quality of feedback that you provide to your classmates.

Students are encouraged to use concepts from readings and classroom discussions to frame the presentation. Students will present to their classmates twice, the second time after receiving and incorporating feedback from their classmates, who will be divided into four groups to provide feedback on different facets of the proposed product: financial structure, target financial returns, target impact, and target investors.

Classes 8 and 9

Midterm and Final Exams (L5, L7) (40%)

The midterm will be closed-book. Students are not permitted to use their phones as calculators and are expected to bring a standalone calculator should they wish to use one. Exams will be assessed for knowledge of key terms, understanding of conceptual frameworks, and understanding of how and when to use the equations covered in class.

The final exam will be take-home. Students will suggest improvements to or develop from scratch (depending on the organization's current offering) the sustainable and/or impact investing strategy for one of the asset owners that we focused on in class (Ford Foundation, New York City Retirement Systems, or Trinity Church Wall Street) in a 4-10-page final paper. Students should establish or refine programs and detail: their proposed strategy; any suggested changes to the investment policy statement; propose specific investments; and consider fiduciary obligations. They should explain why their proposed strategy meets stakeholder demands while ensuring the long-term financial success of the organization. Providing evidence for suggestions and/or giving examples of other organizations making similar strategic decisions will be part of the strongest final exams. Representatives from the 3 institutions will be in the final class to discuss the programs with you. 80% of your grade for your final exam will be based on the quality of your written work, and 20% will be based on your group presentation to the asset owners on the final day of class.

The specific questions for each asset owner will be finalized by the midterm, and light background reading will be provided following the midterm to interested students. Note: Bhakti Mirchandani leads responsible investing at Trinity Church Wall Street.

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Midterm: Class 7

Final: Class 13

Homework Assignments (L1, L2, L3, L4, L5, L6, L7) (12.5%)

Homework assignments will take the form of online exercises via the Canvas platform, and memo assignments. Online assignments will be assessed based on completeness and accuracy. Memos will generally be assessed based on clarity, demonstrated understanding of concepts from class, and viability and practicality of argument or suggestion, naturally with some variation in weighting of each by topic.

Foundations:

Optional Online Exercise: Financial statements and ratios for students without a prior finance background

Class 1:

Personal bio - ~400 words. The bio should include a brief summary of your academic and professional background, career aspirations, and a brief statement about why you decided to enroll in this course.

Assignment 1 - Online Exercise: Definitions of financial instruments and of mechanisms of how securities are traded

Class 2:

Assignment 2a - Memo: 250-400-word memo to the CEO of BlackRock or Goldman Sachs on how the applicable firm should apply best practices or lessons learned from the microfinance investment industry to the development of the applicable firm's impact investing platforms. Groups of 2-3 students will collaborate on the memos, which requires understanding of the best practices and lessons learned from microfinance, an understanding of impact investing platforms at BlackRock or Goldman Sachs, and some ideas on how to strength those platforms based on lessons learned from microfinance.

Assignment 2b - Online Exercise: bond pricing, bond duration, and interest rate sensitivity

Class 3:

Assignment 3a - Online Exercise: Short DCF valuation and financial ratio

Assignment 3b - Online Exercise: Fund structuring definitions and the pros and cons of structural options

Class 4:

Assignment 4 - Online Exercise: Form 10-K filings and sustainability reports

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Class 5:

Assignment 5a - Online Exercise: Employee Retirement Income Security Act of 1974 (ERISA)

Assignment 5b - Online Exercise: How ESG factors would impact JPMorgan's valuation

Class 6:

Assignment 6a - Memo: Groups of 3-4 students will collaborate on one-page memos on how to improve JPM's TCFD report with respect to governance, strategy, risk management, and metrics and targets.

Assignment 6b - Online Exercise: General questions about liquidation value, book value, replacement cost, and valuation based on discounted cash flow

Class 7:

Assignment 7 - Online Exercise: Valuation Based on DCF

Class 8:

Assignment 8 - Online Exercise: Expected returns of a social impact bond, with and without a guarantee

Final presentations part 1

Class 9:

Final presentations part 2

Class 10:

Final papers due

Class 11:

Peer reviews due

Class 12:

250-400-word strategic engagement letter due from each investor group

Class 13:

Final exam due

Class 14:

Group final presentation reprise in front of industry experts

Students must complete at least 11 of the 12 homework assignments. Completing all 12 will allow students to earn 1 point of extra credit on the final course grade. Homework assignments are due at 6 pm on the day

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of the class for which they are assigned. For example, on the first day of class, both the bio and assignment 1 are due at 6 pm.

Strategic Engagement Exercise (7.5%) (L3, L8)

The strategic engagement exercise will be judged on a scale of 0-100 based on a combination of group presentations and memos. Factors influencing grades include effectiveness of arguments; demonstrated understanding of ESG integration, strategic engagement, facets of investment stewardship, drivers of successful strategic engagement, and strategic engagement tactics; and ability to advance arguments in the memo beyond what was discussed in class.

Peer Evaluation (10%)

The peer evaluation will be judged on a scale of 0-100 based on the aggregate scores of the 5 evaluating peers. Students will select 5 peers to rate them on a scale of 1 (lowest) - 5 (highest) on each of the below qualities. Students are encouraged to be rational and objective in their ratings, rather than swayed by personal affinity.

- Preparation for class and thoroughness of any classroom comments
- Clarity of classroom explanations and the degree to which they contribute to the aggregate learning of the class
- Level of respect, empathy, compassion, enthusiasm shown in class and in informal discussions to prepare for class
- Willingness to share resources and information

Active Course Participation (10%)

Participation will be graded on a scale of 0-100. Participation includes class attendance, arriving to class on time and staying for the duration of class, and active discussions in class. The students are expected to show critical thinking, respectful interactions with classmates and a positive attitude towards learning, and to freely discuss the topics proposed. Students are encouraged to share the critical questions from their assignments with their peers.

Evaluation/Grading

The final grade will be calculated as described below:

FINAL GRADING SCALE

| Grade | Percentage |
|-------|------------|
|-------|------------|

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|-----------|-----------------|
| A+ | 98–100 % |
| A | 93–97.9 % |
| A- | 90–92.9 % |
| B+ | 87–89.9 % |
| B | 83–86.9 % |
| B- | 80–82.9 % |
| C+ | 77–79.9 % |
| C | 73–76.9 % |
| C- | 70–72.9 % |
| D | 60–69.9 % |
| F | 59.9% and below |
| | |
| | |

| ASSIGNMENT | % Weight |
|--------------------------------------|----------|
| Midterm Exam | 20% |
| Final Exam | 20% |
| Final Presentation | 10% |
| Final Paper | 10% |
| Strategic Engagement Exercise | 7.5% |
| Weekly Homework Assignments | 12.5% |
| Peer Evaluation | 10% |
| Active Course Participation | 10% |

Course Policies

Participation and Attendance

You are expected to complete all assigned readings, attend all class sessions, and engage with others in online discussions. Your participation will require that you answer questions, defend your point of view, and challenge the point of view of others. If you need to miss a class for any reason, please discuss the absence with me in advance.

Late work

There will be no credit granted to any written assignment that is not submitted on the due date noted in the course syllabus without advance notice and permission from the instructor.

Citation & Submission

All written assignments must use MLA, cite sources, and be submitted to the course website (not via email).

School Policies

Copyright Policy

Please note—Due to copyright restrictions, online access to this material is limited to instructors and students currently registered for this course. Please be advised that by clicking the link to the electronic materials in this course, you have read and accept the following:

The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted materials. Under certain conditions specified in the law, libraries and archives are authorized to furnish a photocopy or other reproduction. One of these specified conditions is that the photocopy or reproduction is not to be "used for any purpose other than private study, scholarship, or research." If a user makes a request for, or later uses, a photocopy or reproduction for purposes in excess of "fair use," that user may be liable for copyright infringement.

Academic Integrity

Columbia University expects its students to act with honesty and propriety at all times and to respect the rights of others. It is fundamental University policy that academic dishonesty in any guise or personal conduct of any sort that disrupts the life of the University or denigrates or endangers members of the University community is unacceptable and will be dealt with severely. It is essential to the academic integrity and vitality of this community that individuals do their own work and properly

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acknowledge the circumstances, ideas, sources, and assistance upon which that work is based. Academic honesty in class assignments and exams is expected of all students at all times.

SPS holds each member of its community responsible for understanding and abiding by the SPS Academic Integrity and Community Standards posted at <http://sps.columbia.edu/student-life-and-alumni-relations/academic-integrity-and-community-standards>. You are required to read these standards within the first few days of class. Ignorance of the School's policy concerning academic dishonesty shall not be a defense in any disciplinary proceedings.

Accessibility

Columbia is committed to providing equal access to qualified students with documented disabilities. A student's disability status and reasonable accommodations are individually determined based upon disability documentation and related information gathered through the intake process. For more information regarding this service, please visit the University's Health Services website: <https://health.columbia.edu/services/ods/support>.

Class Recordings

All or portions of the class may be recorded at the discretion of the Instructor to support your learning. At any point, the Instructor has the right to discontinue the recording if it is deemed to be obstructive to the learning process.

If the recording is posted, it is considered confidential and it is not acceptable to share the recording outside the purview of the faculty member and registered class.

| Module / Week | Topic | Readings | Activities / Assignments for this Module |
|------------------|--|--|--|
| | | Optional | |
| 0 | Optional Pre-Reading on Financial Statements and Analysis | Robert Higgins. <u>Analysis for Financial Management</u> . | Optional exercise on financial statements and analysis. |
| | Introduction to Financial Markets and Impact Finance | Chapters 2 and 3. Required | Attend Session |
| | Topics | "The Role of International Capital Markets in Microfinance." Developing World Markets. 17 pages. | Review Resources |
| 1 | Terminology for financial instruments and security trading | 2019 Annual Impact Investor Survey. 29 pages. | Personal Bio ~400 words. The bio should include a brief summary of your academic and professional background, career aspirations, and a brief statement about why you decided to |
| | History of microfinance and impact investing | Bodie, Kane, Marcus. <u>Investments</u> . Chapter 2 Sections 2.1-2.3 and Chapter 3 Section | |

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| | 3.1. 28-45 and 59-63. 23 pages. Skim. | enroll in this course (ungraded). |
| | Optional | L1: Assignment 1 - Online Exercise: |
| | 2016 Symbiotics MIV Survey. 54 pages. | Definitions of financial instruments and of mechanisms of how securities are traded |
| | "Microfinance Overview." 40 pages. Required | Attend Session |
| Goldman Sachs vs. Unitus | Bond Pricing Fundamentals | Review Resources |
| Topics | Goldman Sachs Impact Investing. 3 pages. | L1: Assignment 2a - Memo: 250-400-word memo to the CEO of BlackRock or Goldman Sachs on how the applicable firm should apply best practices or lessons learned from the microfinance investment industry to the development of the applicable firm's impact investing platforms |
| Unitus's role in the evolution of microfinance investing | Goldman Sachs Social Impact Bonds. 2 pages. | |
| 2 The Community Reinvestment Act | Goldman Sachs Capital for Women Entrepreneurs. 4 pages. | |
| Risk sharing with the public sector: Unitus Impact's Overseas Private Investment Corporation (OPIC) facility and Goldman Sachs' IFC facility | Unitus Group overview. 2 pages. Unitus Group impact. 2 pages. The Rise Fund overview. 7 pages. | |
| Basic credit mechanics | Bodie, Kane, Marcus. <u>Investments</u> . Chapter 14 and Section 16.1 of Chapter 16. 41 pages. Skim. | L6: Assignment 2b - Online Exercise: bond pricing, bond duration, and interest rate sensitivity Attend Session |
| Enterprise Funds as Tools for Economic Statecraft | Required | Review Resources |
| | DCF Fundamentals | |
| 3 Topics | "The Enterprise Funds in Europe and Eurasia: Successes and Lessons Learned." 34 pages. | L3: Assignment 3a - Online Exercise: Short DCF valuation and financial ratio (due at the start of Class 3) |
| History of economic statecraft | | |

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| History of American Enterprise Funds | Tunisian American Enterprise Fund 2016 Annual Report. 9 pages. | L4: Assignment 3b - Online Exercise: Fund structuring definitions and the pros and cons of structural options |
| Discounted cash flow valuation | Tunisian American Enterprise Fund (TAEF) Evaluation Final Evaluation Report 2018. 28 pages. Skim. | |
| Fund structuring definitions | | |
| The pros and cons of fund structural options | "Tax Considerations In Structuring US-Based Private Equity Funds" 10 pages. You only need to understand the paper well enough to answer and explain both Cayman and Delaware on question 3 of assignment 3b. | |
| The evolution and current status of the Tunisian American Enterprise Fund | | |
| | Axial Primer on Private Equity Structure. 3 pages. | |
| | Bodie, Kane, Marcus. <u>Investments</u> . Sections 18.1 and 18.5 in chapter 18. All of chapter 19. 41 pages. Skim. Required | |
| UN-Supported Principles for Responsible Investment (PRI) | ESG Fundamentals | |
| Topics | Official UN Principles for Responsible Investment website. 7 pages. | |
| Form 10-K and sustainability report overview | Fixed Income Investor Guide. 19 pages. | Attend Session |
| 4 | | Review Resources |
| PRI framework | A Practical Guide to ESG Integration for Equity Investing. 17 pages. | L2: Assignment 4 - Online Exercise: Form 10-K filings and sustainability reports |
| Impact of environmental, social and governance (ESG) factors on equity investing via revenues, costs, and discount rate | Optional Bodie, Kane, Marcus. <u>Investments</u> . Chapter 14. Pages 445-486. <i>Previously assigned—you may wish to skim again to facilitate completing the assignment.</i> | |
| Impact of ESG on fixed income investing through | | |

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coverage, leverage ratios,
liquidity, profitability, and
cash flow-to-debt ratios

Required

“Field Assistance Bulletin No. 2018-01: Interpretive Bulletins 2016-01 and 2015-01.” 3 pages.

Pension ESG Investing following U.S. Department of Labor Bulletin 2018-01 and TCFD

"DOL Issues New Guidance on Economically Targeted Investments." 3 pages.

Attend Session

Topics

“US Department of Labor Issues Final Rule on Proxy Voting and Shareholder Rights By Employee Benefit Plans,” Inside The Big Threat to Sustainable Investing.” 2 pages.

Review Resources

5

The Employee Retirement Income Security Act of 1974 (ERISA)

“Five Ways The Biden Administration Advanced Sustainable Investing In Its First 50 Days, Including Two Last Week.” 4 pages

L3: Assignment 5a- Online Exercise: Employee Retirement Income Security Act of 1974 (ERISA)

Regulatory change as an opportunity

L4: Assignment 5b - Online Exercise: How ESG factors would impact JPMorgan’s valuation

The Task Force for Climate-Related Financial Disclosure (TCFD)

“The Department of Labor’s ESG-less Final ESG Rule.” 3 pages.

“ESG Investing: A Blue Ocean For Corporate Employer-Sponsored Retirement Plans,” 4 pages.

"Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures." 22 pages.
Required

Attend Session

6

Nonprofit M&A to survive the impact of federal budget cuts

"How to Keep Troubled Charities from Failing," 2 pages.

Review Resources

Topics

"Navigating a Nonprofit Corporation through Bankruptcy," 2 pages.

L3: Assignment 6a - Memo: One-page memo on what JPM’s disclosure

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Merger analysis:
liquidation value, book
value, replacement cost,
and valuation based on
discounted cash flow

Nonprofit fiduciary duty,
bankruptcy, and M&A

M&A process, from
sourcing the potential
acquirer through due
diligence, negotiation,
closing, and to integration

Nuances of nonprofit
M&A

"Mergers, Acquisitions, and
Affiliations Involving Nonprofits: Not
Typical M&A Transactions," 8 pages.

Risk Management for Nonprofits. 16
pages.

"How to Save a Nonprofit: The Care
Steps Required in Mergers and
Acquisitions," 2 pages.

Optional

Bodie, Kane,
Marcus. Investments. Sections 18.1
and 18.5 in Chapter 18 on pages 591-
593 and 617-622. *Previously
assigned—you may wish
to skim again to facilitate
completing the assignment.*

under TCFD should look
like

L2: Assignment 6b -
Online Exercise: General
questions about
liquidation value, book
value, replacement cost,
and valuation based on
discounted cash flow

Midterm Exam (1 hour)

Blended finance product innovation (50 minutes)

Topics

Blended finance and
an overview of 3
innovative blended
finance structures:

(i) Sustainable Land Use
Collaborative

(ii) Acumen Resilient
Agriculture Fund

(iii) Energy
Entrepreneurs

Review Previous Resources

Guest speaker Preeth
Gowdar will prepare brief
case studies about each
blended finance structure,
which you should read in
advance.

Attend Session

Review Resources

Midterm Exam

Assignment 7 - Online
Exercise: Valuation
Based on DCF

7

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Required

Social Impact Bonds: A Guide for State and Local Governments. 24 pages.

"Rikers Island: The First Social Impact Bond in the United States." 4 pages.

Social impact bonds to address recidivism in the context of constrained local budgets

"What We Learned from the Failure of the Rikers Island Social Impact Bond," 2 pages.

Attend Session

Review Resources

Topics

8

The bespoke impact investing tool social impact bonds

"Governor Cuomo Announces New York the First State in the Nation to Launch Pay for Success Project in Initiative to Reduce Recidivism." 3 pages.

L1, L7: Assignment 8 - Online Exercise: Expected returns of a social impact bond, with and without a guarantee

Overview of social impact bond underwriting, structuring, and expected returns

"Voices from the Field: Social Impact Bonds and the Search for Ways to Finance Public Sector R&D," 2 pages.

L1, L6, L7: Final Presentation Part 1

Social Impact Bond Hearing. 4 minutes.

Optional

Learning from Experience: A Guide to Social Impact Bond Investing. 23 pages.

Foundation Mission Investments in the wake of IRS Notice 2015-62

Required

Attend Session

9

Topics

IRS Notice 2015-62: Investments Made for Charitable Purposes. 4 pages.

Review Resources

Discussion of questions most commonly incorrect on the midterm exam

"IRS Provides Guidance on Mission-Related Investments by Private Foundations," 2 pages.

L1, L6, L7: Final Presentation part 2

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Private foundation
fiduciary duty

"Mission-Related Investing: Legal and Policy Issues to Consider Before Investing," 19 pages.

The history of program-
related investments and
mission-related
investments

"Ford Foundation MRI Investment a Historic Challenge to Other Funders," 7 pages.

The benefits and
challenges of a private
foundation making
program- related or
mission- related
investments

Excerpts from "Investing for Social Gain: Reflections on Two Decades of Program-Related Investments." Ford Foundation.
December 1991. 10-pages.

"Investment Policy Statement." 13 pages. Skim.

"Brett Kavanaugh: Casting a Shadow over SRI Investing?" 2 pages.

Optional

"Impact Investing and Private Foundations: New Guidance from the IRS and Its Implications for the Field." 37 minutes.

Required

**Green & Climate bonds
against the backdrop of
the Paris Climate
Agreement**

The Paris Agreement Summary: Climate Focus Client Brief on the Paris Agreement III. 6 pages.

Attend Session

Topics

Green Bond Principles, 2016: Voluntary Process Guidelines for Issuing Green Bonds. 7 pages.

Review Resources

1
0

Navigate prospectus
structure and contents

L8: Strategic
Engagement Exercise
part 1 (In Class)

Evolution of the green
bond market

"How Green Bonds Will Become Mainstream," 4 pages.

Final Papers Due

The financial innovation
life cycle: incubation;
early adopter; mainstream

"The Next Green Revolution: An Overview of the Rapidly Evolving Green Bond Market," 2 pages.

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The liquidity,
standardization, and
transparency that drive
mainstreaming

Bonds and Climate Change: The state
of the market in 2016. 12 pages.

"Moody's Credit Ratings Process,
Green Bond Assessment and Sector
Trends for Virginia Local
Governments." October 2016. 4 pages.

Upper Mohawk Valley Regional
Water Finance Authority, NY, Water
System Revenue Bonds, Series 2016
(Green Bonds) prospectus. 2 pages.
Required

**Democratizing impact
finance via crowdfunding
and impact investing
ETFs**

"Equity and Debt Crowdfunding:
Democratizing Impact Investing" 3
pages.

Topics

"Regulation Crowdfunding: A Small
Entity Compliance Guide
for Issuers." 6 pages.

Overview of the impact
crowdfunding market
landscape

"U.S. securities-based crowdfunding
under Title III of the JOBS Act." 4
pages.

Attend Session

Review Resources

1 The different trajectories
1 of the crowdfunding sites
for microlending
MicroPlace and Kiva.

Kiva Microfunds. GuideStar Nonprofit
Profile Charting Impact Report. 3
pages.

Peer Reviews Due

L8: Strategic
Engagement Exercise
Part 2 (In Class)

Platforms like Solar
Mosaic and Crowdfunder

"Mosaic Announces New Financing
Facilities for Over \$550 Million in
Home Solar Loans." 1 page.

The Jumpstart Our
Business Startups Act
("JOBS Act")

"What is an Index?" 2 pages.

Impact investing ETFs

"Money managers and
charities are offering joint
investment products." 2
pages.

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| | | | |
|----|--|---|--|
| | | “Investor Statement of Solidarity to Address Systemic Racism and Call to Action.” 3 pages. | |
| | | Review “We Need to Talk: Driving Long-term Value Through the Investor/Corporate Dialogue.” 7 pages | |
| | Investment stewardship and measuring impact | International Corporate Governance Network Stewardship Principles. 14 pages. Quickly skim. | |
| | Topics | | |
| | Stewardship activities and stewardship codes | “Activists and Socially Responsible Investing.” 3 pages | Attend Session |
| 1 | Strategic engagement—a | A Guide to Mapping the Impact of an Investment. 13 pages. Quickly skim. | 250-400-word strategic |
| 2 | tool for stewards and activists | “What You Need To Know About The IFC's Operating Principles For Impact Management,” 5 pages | engagement memo due |
| | Activist embrace of ESG | | |
| | Discussion of Asset Owner ESG Strategies | “Calculating the Value of Impact Investing,” 9 pages. Quickly Skim. | |
| | | “Yale’s David Swensen Puts Money Managers on Notice About Diversity.” 3 pages | |
| | | “Big Business’s Undisclosed Social Crisis Plans: How One Investor Is Driving A Stake In The Ground On Diversity.” 6 pages | |
| 13 | Final exam | “Sustainable Investing at Endowments and Foundations: What it is and What it Takes.” [] pages | Attend Session |
| | Ford Foundation Trinity Church, & other asset owner representatives | | Final exam due |
| | | | Group presentation preparation & delivery to asset owner representatives |

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14 Final presentation to
panel of industry experts

Attend Session

Group presentation of asset
management product to
expert panel

Addendum: In-Class Activities and Preparation

Introduction to Financial Markets and Impact Finance

Topics Covered

- Terminology for financial instruments and security trading
- History of micro finance and impact investing

In-Class Activities

- Introductions
- Course Overview
- Lecture
- Discussions
- Students will divide into two groups—one advocating for the positive social impact of Goldman Sachs and the other for Unitus in Class

Discussion

- Students should come to class prepared to discuss the key transactions and key inflection points in both the history of microfinance investing and in the launch of the BlackRock and Goldman Sachs impact investing initiatives.

Goldman Sachs vs. Unitus

Topics

- Unitus's role in the evolution of microfinance investing
- The Community Reinvestment Act

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- Risk sharing with the public sector: Unitus Impact's Overseas Private Investment Corporation (OPIC) facility and Goldman Sachs' IFC facility.
- Basic credit mechanics

In-Class Activities

- Lecture
- Discussion
- Oxford-style debate
- Guest lecture: Ann Short, COO of Unitus Capital

Enterprise Funds as Tools for Economic Statecraft

Topics

- History of economic statecraft
- History of American Enterprise Funds
- Discounted cash flow valuation
- Fund structuring definitions
- The pros and cons of fund structural options
- The evolution and current status of the Tunisian American Enterprise Fund

In-Class Activities

- Lecture
- Discussion
- Guest lecture: Gil Crawford, Board Member of the Tunisian American Enterprise Fund

Discussion

- Students should come to class ready for a wide-ranging discussion on the structure, investment strategy, and results so far of the Tunisian American Enterprise Fund (TAEF), including (i) a deep dive into one of TAEF's portfolio companies that most interests them and (ii) in which jurisdiction they would domicile a private sector fund that invests alongside the TAEF
- Students should come to class ready to present on the pros and cons of domiciling a private fund that co-invests with TAEF in Delaware vs. in the Cayman Islands

UN-Supported Principles for Responsible Investment (PRI)

Topics

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- Form 10-K and sustainability report overview
- PRI framework
- Impact of environmental, social and governance (ESG) factors on equity investing via revenues, costs, and discount rate.
- Impact of ESG on fixed income investing through coverage, leverage ratios, liquidity, profitability, and cash flow-to-debt ratios.

In-Class Activities

- Lecture
- Discussion on the impact of E and S factors on JPMorgan Valuation
- Guest lecture: Hui Chan, Senior Vice President, Environmental and Social Risk Management, Citi

Discussion

- Students should come to class prepared to discuss how ESG factors affect revenues, costs, and discount rate broadly
- Students should come to class ready to present the impact of JPMorgan's supporting small businesses initiatives and data protection policies impact valuation

Pension ESG Investing following U.S. Department of Labor Bulletin 2018-01 and TCFD

Topics

- The Employee Retirement Income Security Act of 1974 (ERISA)
- Regulatory change as an opportunity
- The Task Force for Climate-Related Financial Disclosure (TCFD)

In-Class Activities

- Lecture
- Discussion

Discussion

- Students should come to class ready to discuss whether ETI and ESG investing are appropriate uses of pensioner capital.
- Guest lecture: Jimmy Yan, Special Counsel to the Deputy Comptroller for Asset Management & Chief Investment Officer, Office of New York City Comptroller Scott Stringer

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Nonprofit M&A to survive the impact of federal budget cuts

Topics

- Merger analysis: liquidation value, book value, replacement cost, and valuation based on discounted cash flow, as well as accretion/dilution.
- Nonprofit fiduciary duty, bankruptcy, and M&A.
- M&A process, from sourcing the potential acquirer through due diligence, negotiation, closing, and to integration
- Nuances of nonprofit M&A

In-Class Activities

- Lecture
- Discussion
- Guest lecture: Jessica Cavagnero, Partner at SeaChange Capital Partners and Portfolio Manager, The SeaChange-Lodestar Fund for Nonprofit Collaboration and The New York Merger, Acquisition, and Collaboration Fund

Discussion

- Students should come to class ready to discuss their views on how nonprofit M&A differs from private sector M&A

Blended finance product innovation

Topics:

- Blended finance
- Product innovation

In-Class Activities

- Guest lecture in which impact finance expert and Enclude Finance Director Preeth Gowdar will define blended finance and provide an overview of 3 innovative blended finance structures: (i) Sustainable Land Use Collaborative; (ii) Acumen Resilient Agriculture Fund; and (iii) Energy Entrepreneur's Growth Fund

Social impact bonds to address recidivism in the context of constrained local budgets

Topics

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- The bespoke impact investing tool social impact bonds
- Overview of social impact bond underwriting, structuring, and expected returns

In-Class Activities

- Lecture
- Discussion
- Final presentation part 1

Discussion

- Students should come to class prepared to discuss social impact bond success factors

Foundation Mission Investments in the wake of IRS Notice 2015-62 which permits endowments of U.S.-based private foundations to consider the relationship between investments and the foundation's mission

Topics

- Discussion of questions most commonly incorrect on the midterm exam
- Private foundation fiduciary duty
- The history of program-related investments and mission-related investments
- The benefits and challenges of a private foundation making program-related or mission-related investments

In-Class Activities

- Lecture
- Discussion
- Final presentation part 2
- Investor groups will get together to discuss their views on how to engage with their assigned companies and then each in turn present to the class
- Guest lecture: Christine Looney, Mission Investments at Ford Foundation

Green and climate change bonds against the backdrop of the Paris Climate Agreement

Topics

- Navigate prospectus structure and contents
- Evolution of the green bond market

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- The financial innovation life cycle: incubation; early adopter; mainstream
- The liquidity, standardization, and transparency that drive mainstreaming

In-Class Activities

- Lecture
- Discussion
- Strategic engagement exercise part 1
- Guest lecture: Jed Lynch, Head of Social Impact Investment Banking at Barclays

Democratizing impact finance via crowdfunding, impact investing ETFs, and inclusion

Topics

- Overview of the impact crowdfunding market landscape
- The different trajectories of the crowdfunding sites for microlending MicroPlace and Kiva.
- Platforms like Solar Mosaic and Crowdfunder
- The Jumpstart Our Business Startups Act ("JOBS Act")
- Impact investing ETFs

In-Class Activities

- Lecture
- Discussion
- Investor groups will get together to discuss how to respond to the corporates and then each in turn present to the class
- Strategic engagement exercise part 2
- Guest lecture: Carole Laible, Chief Executive Officer at Domini Impact Investments

Discussion

- Students should come to class prepared to discuss the history and trajectory of crowdfunding and ETFs as impact finance tools, as well as the rising importance of diversity & inclusion

Investment Stewardship and Measuring Impact

Topics:

- Stewardship activities and stewardship codes
- Strategic engagement—a tool for stewards and activists
- Activist embrace of ESG

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- Stewardship to drive racial justice

In-Class Activities

- Lecture
- Discussion
- Students should come to class ready to apply the theory about strategic engagement and investment stewardship to their reflections on the strategic engagement exercise
- Students should come to class ready to discuss the three frameworks for measuring impact

The Role of Asset Owners

Topics:

- Asset owners and sustainable and impact investing

In-Class Activities

- Prepare group presentations of final exam topics to present to asset owner representatives
 - Jimmy Yan, Special Counsel to the Deputy Comptroller for Asset Management & Chief Investment Officer, Office of New York City Comptroller Scott Stringer
 - Christine Looney, Deputy Director, Mission Investments, Ford Foundation
 - Nick Csicsko, Managing Director, Trinity Church Wall Street
- Hear feedback from asset owner representatives