

Master of Science in Sustainability Management

SUMA PS5445 Impact Finance for Sustainability Practitioners

Summer Session D

Monday & Wednesday, 6:10-8:00pm

3 credits

Instructor: Bhakti Mirchandani, Lecturer, bmirchandani@gmail.com, 917-549-4758
Office Hours: By appointment before class, 2929 Broadway, 5th Floor
Response Policy: Email is my preferred mode of communication. Students can expect a response within 24 hours, 7 days a week.

Course Overview

This course provides a detailed analysis of seven impact investing tools and their policy contexts. Impact investing is investing with the goal of social and environmental impact in addition to financial return. The seven tools are private equity; environmental, social, and governance (ESG) integration; mergers and acquisitions; mission investments; social impact bonds; green bonds; and crowdfunding. The course will cover the impact investment process from deal sourcing through closing and monitoring to exit. This includes the due diligence and documentation process. These seven tools 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; and evolving crowdfunding regulation. The topics will be examined through a combination of lectures and classroom discussion. Students will gain exposure to a range of impact finance areas from small specialist impact investment firms to large mainstream investors that either sign the UN Principles for Responsible Investment or establish impact investing groups. The broad overview of financial concepts and the impact of the policy environment on market evolution will benefit students pursuing careers in nonprofit, business, or public administration. For students targeting ESG or impact investing careers, technical skills in transactions spanning the capital structure and phases of investment and in ESG integration and climate-related financial disclosure should provide near-term benefit to potential employers.

Through a combination of readings, class discussion and projects, students will hone their transaction evaluation, financial instrument structuring, and policy analysis skills within the context of impact investing. As an early innovator in social finance, dating back 17 years, the instructor provides students with a practical toolkit, honed primarily through making mainstream financial institutions and products more beneficial to a broader range of stakeholders.

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

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

Learning Objectives

By the end of this course, students will be able to:

- 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

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Readings

Required Readings

- Leena Rao. "How Goldman Sachs and BlackRock are Leading the Way on Impact Investing," *Fortune*. October 18, 2016. 1 page. Available via: <http://fortune.com/2016/10/18/impact-investing-mpw-summit/> 9.
- Brad Swanson. "The Role of International Capital Markets in Microfinance." *Developing World Markets*. 2007. Pages 1-17. Available via <http://www.dwmarkets.com/wp-content/media/pdf-international-capital-markets.pdf>.
- 2016 Annual Impact Investor Survey. Global Impact Investing Network. Pages 4-29. Available via: https://thegiin.org/assets/2016%20GIIN%20Annual%20Impact%20Investor%20Survey_Web.pdf.
- Bodie, Kane, Marcus. *Investments*. 10th Edition. McGraw-Hill. 2013. Chapters 2-3. Pages 28-91. Focusing on bold text and call-out boxes should suffice (i.e., skim).
- Goldman Sachs Impact Investing. 3 pages. Available via: <http://www.goldmansachs.com/what-we-do/investing-and-lending/impact-investing/>.
- Goldman Sachs Social Impact Bonds. 2 pages. Available via: <http://www.goldmansachs.com/our-thinking/pages/social-impact-bonds.html>.
- Goldman Sachs Capital for Women Entrepreneurs. 4 pages. Available via: <http://www.goldmansachs.com/citizenship/10000women/capital-for-women-entrepreneurs/>
- Unitus Group overview. 2 pages. Available via: <http://unitus.com/group/>
- Unitus Group impact. 2 pages. Available via: <http://unitus.com/impact/>
- The Rise Fund (TPG fund in partnership with Elevar Equity and Bridgespan Group) overview. 7 pages. Available via: <http://therisefund.com/>
- Books: Bodie, Kane, Marcus. *Investments*. 10th Edition. McGraw-Hill. 2013. Chapters 14-16. Pages 445-556. Focusing on bold text and call-out boxes should suffice (i.e., skim).
- "Tunisian American Enterprise Fund (TAEF) Evaluation Final Evaluation Report 2018." USAID. January 29, 2018. Pages 17-45 (skim). Available via: <https://banyanglobal.com/wp-content/uploads/2018/02/TAEF-Final-Evaluation-Report.pdf>
- "The Enterprise Funds in Europe and Eurasia: Successes and Lessons Learned." USAID. September 12, 2013. 34 pages. Available via: https://www.usaid.gov/sites/default/files/documents/1863/EE_Enterprise_Funds-LessonsLearned.pdf.
- Books: Bodie, Kane, Marcus. *Investments*. 10th Edition. McGraw-Hill. 2013. Chapters 18-19. Pages 591-677. Equity Valuation Models and Financial Statement Analysis. Focusing on bold text and call-out boxes should suffice (i.e., skim).
- Tunisian American Enterprise Fund 2016 Annual Report. Pages 4-13. Available via: <http://www.taefund.org/ar2016/wp-content/uploads/2017/09/Annual-report-2016-.pdf>.
- "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. Available via: <https://www.akingump.com/images/content/9/7/v4/974/376.pdf>.
- <https://www.axial.net/forum/primer-structure-private-equity-firms/>. Pages 1-3.
- Official UN Principles for Responsible Investment website. 7 pages. Available via: <https://www.unpri.org/about>.
- *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. Available via: <https://www.unpri.org/news/pri-launches-esg-integration-guide-for-equity-investors>.
- "Field Assistance Bulletin No. 2018-01: Interpretive Bulletins 2016-01 and 2015-01." US Department of Labor. April 23, 2018. Available via: <https://www.dol.gov/agencies/ebsa/employers-and-advisers/guidance/field-assistance-bulletins/2018-01>. Pages 1-3.
- "Interpretive Bulletin 2015-01: Interpretive Bulletin Relating to the Fiduciary Standard under ERISA in Considering
- Craig Bitman and Michael B. Richman. "DOL Issues New Guidance on Economically Targeted Investments." Morgan Lewis LawFlash. November 05, 2015. Pages 1-3. Available via: <https://www.morganlewis.com/pubs/dol-issues-new-guidance-on-economically-targeted-investments>
- Dominic Barton and Mark Wiseman. "Focusing Capital on the Long-Term," *Harvard Business Review*. January-February 2014 issue. Pages 1-11. <https://hbr.org/2014/01/focusing-capital-on-the-long-term>

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- "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. Available via: <https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-TCFD-Annex-062817.pdf>.
- Josh MacIntosh. "How to Keep Troubled Charities from Failing," The Chronicle of Philanthropy. March 31, 2016. Pages 1-2. Available via: <https://www.philanthropy.com/article/Opinion-How-to-Keep-Troubled/235914>
- Dana Yankowitz Elliot and Evan C. Hollander. "Navigating a Nonprofit Corporation through Bankruptcy," Nonprofit Quarterly. April 29, 2014. Pages 1-2. Available via: <https://nonprofitquarterly.org/2014/04/29/navigating-a-nonprofit-corporation-through-bankruptcy/>
- 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. Available via: http://www.americanbar.org/publications/blt/2014/06/02_boyd.html.
- Dylan Roberts, George Morris, John MacIntosh, and Daniel Millenson. Risk Management for Nonprofits. Oliver Wyman and SeaChange Capital Partners. March 2016. Pages 1-16. Available via: <http://seachangeap.org/wp-content/uploads/2016/03/SeaChange-Oliver-Wyman-Risk-Report.pdf>
- Bhakti Mirchandani. "How to Save a Nonprofit: The Care Steps Required in Mergers and Acquisitions," Nonprofit Quarterly. June 20, 2017. Pages 1-2. Available via: <https://nonprofitquarterly.org/2017/06/20/how-to-save-a-nonprofit-mergers-acquisitions/>
- IRS Notice 2015-62: Investments Made for Charitable Purposes. 4 pages. Available via: <https://www.irs.gov/pub/irs-drop/n-15-62.pdf>
- Celia Roady and Matthew Elkin. "IRS Provides Guidance on Mission-Related Investments by Private Foundations," Morgan Lewis. September 29, 2015. Pages 1-2. Available via: <https://www.morganlewis.com/pubs/irs-provides-guidance-on-mission-related-investments-by-private-foundations>
- "Mission-Related Investing: Legal and Policy Issues to Consider Before Investing," MacArthur Foundation. March 1, 2013. Pages 3-22. Available via: https://www.macfound.org/media/article_pdfs/Mission-Related_Investing.pdf
- Bhakti Mirchandani. "Ford Foundation MRI Investment a Historic Challenge to Other Funders," Nonprofit Quarterly. May 9, 2017. Pages 1-7. Available via: <https://nonprofitquarterly.org/2017/05/09/lets-get-ready-first-board-meeting-historic-ford-foundation-mri-announcement/>.
- "Investing for Social Gain: Reflections on Two Decades of Program-Related Investments." Ford Foundation. December 1991. Pages 1-57. Available via: <http://efc.issuelab.org/resource/investing-for-social-gain-reflections-on-two-decades-of-program-related-investments.html>. Please skim.
- "Investment Policy Statement." F.B. Heron Foundation. August 11, 2016. 13 pages. Available via: <http://www.heron.org/engage/publications/investment-policy-statement>. Please skim.
- 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. Available via: <http://projects.iq.harvard.edu/files/siblab/files/social-impact-bonds-a-guide-for-state-and-local-governments.pdf>
- 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. Available via: <http://www.frbsf.org/community-development/files/rikers-island-first-social-impact-bond-united-states.pdf>
- 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. Available via: <https://nonprofitquarterly.org/2015/08/07/what-we-learned-from-the-failure-of-the-rikers-island-social-impact-bond/>.
- "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. Available via: <http://www.governor.ny.gov/news/governor-cuomo-announces-new-york-first-state-nation-launch-pay-success-project-initiative>.
- Books: Bodie, Kane, Marcus. Investments. 10th Edition. McGraw-Hill. 2013. Chapter 5. Risk, Return, and the Historical Record. Pages 117-167. Focusing on bold text and call-out boxes should suffice (i.e., skim).
- The Paris Agreement Summary: Climate Focus Client Brief on the Paris Agreement III. Climate Focus. 28 December 2015. 6 pages.
- Green Bond Principles, 2016: Voluntary Process Guidelines for Issuing Green Bonds. International Capital Market Association. 16 June 2016. 7 pages.

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- Abby Ivory, Paul F. Brown, & David Chen. "How Green Bonds Will Become Mainstream," Stanford Innovation Review. July 18, 2016. Pages 1-4. Available via: https://ssir.org/articles/entry/how_green_bonds_will_become_mainstream.
- Bhakti Mirchandani. "The Next Green Revolution: An Overview of the Rapidly Evolving Green Bond Market," *Nonprofit Quarterly*. October 10, 2017. Pages 1-2. Available via: <https://nonprofitquarterly.org/2017/10/10/next-green-revolution-overview-rapidly-evolving-green-bond-market/>.
- Bonds and Climate Change: The state of the market in 2016. Climate Bonds Initiative. July 2016. Pages 1-8 and 14-17. Available via: <https://www.climatebonds.net/files/files/CBI%20State%20of%20the%20Market%202016%20A4.pdf>
- 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). Available via: <http://www.vgfoa.org/2016%20Fall%20Conference/Presentations/3-3;50%20Tiphany%20Lee-Allen.pdf>
- 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. Available via: <https://emma.msrb.org/EP949045-EP736109-EP1137774.pdf>.
- "Regulation Crowdfunding: A Small Entity Compliance Guide for Issuers." U.S. Securities and Exchange Commission. May 13, 2016. Pages 1-6. Available via <https://www.sec.gov/info/smallbus/secg/rccomplianceguide-051316.htm>
- 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. Available via https://www.sec.gov/dera/staff-papers/white-papers/RegCF_WhitePaper.pdf.
- Kiva Microfunds. GuideStar Nonprofit Profile Charting Impact Report. November 24, 2015. 3 pages. Available via: <http://www.guidestar.org/report/chartingimpact/588499868/kiva-microfunds.pdf>
- "Mosaic Announces New Financing Facilities for Over \$550 Million in Home Solar Loans." PR Newswire. Nov 21, 2016. 1 page. Available via <http://www.prnewswire.com/news-releases/mosaic-announces-new-financing-facilities-for-over-550-million-in-home-solar-loans-300366120.html>.

Required Videos

- Michele Berger. "Impact Investing and Private Foundations: New Guidance from the IRS and Its Implications for the Field." Webinar hosted by Mission Investors Exchange and the Council on Foundations. Available via <http://www.cof.org/event/impact-investing-and-private-foundations-new-guidance-irs-and-its-implications-field>. 57 minutes.
- Rep. Todd Young delivers opening statement on behalf of the committee majority at Social Impact Bond hearing At a Ways and Means subcommittee hearing on social impact bonds and his Social Impact Bond Act. Video available via: <https://www.youtube.com/watch?v=LRV5f7WcyVE>. 4 minutes.

Optional Readings

- 2016 Symbiotics MIV Survey. Symbiotics. September 2016. 54 pages. Available via: <http://symbioticsgroup.com/wp-content/uploads/2016/09/Symbiotics-2016-MIV-Survey-Report.pdf>.
- Bhakti Mirchandani. "Microfinance Overview." Lehman Brothers. September 2008. 40 pages. Available via: http://wokai.typepad.com/my_weblog/files/microfinance_overview_080904.pdf.
- Gordon L. Berlin. *Learning from Experience: A Guide to Social Impact Bond Investing*. MDRC. March 2016. Pages 1-23. Available via: https://www.mdrc.org/sites/default/files/Learning_from_Experience_SIB.pdf.

Resources

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: <http://library.columbia.edu/>. Library staff also works one-on-one with students.

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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 (due at the start of Class 11): Each student will, as an individual, choose one of the two topics below:
 - An impact investing policy recommendation for the Trump administration (800-1500 words). Examples of policy recommendation topics for this paper include: changes to tax treatment of impact investments and use of impact investing to solve national or global problems. Policy recommendations should identify and clarify the policy issue, share relevant background, outline any options, provide analysis of any options and other factors considered in the recommendation, and most importantly, make the recommendation itself. Students are encouraged to use concepts from readings and classroom discussions to frame the paper (L5, L7).
 - An impact investing product or structure to catalyze the development of the industry (800-1500 words). Each student will (i) describe the product's social and financial 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 or structure and explain the product's competitive differentiation. Students are encouraged to use concepts from readings and classroom discussions to frame the paper. (L1, L6, L7)
- Module 1 and 2 Exams
 - Class 7
 - Class 12
- Homework Assignments
Homework assignments will take the form of problem sets, online exercises via the Canvas platform, and memo assignments. (L1, L2, L3, L4, L5, L6, L7). Students must complete the homework assignments for at least 11 of the 12 classes.

Class 1:

- 400-word personal bio. 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 (ungraded).
- Online Exercise: definitions of financial instruments and of mechanisms of how securities are traded

Class 2:

- 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
- Problem Set: bond pricing, bond duration, and interest rate sensitivity

Class 3:

- Problem Set: Short DCF valuation and financial ratio
- Online exercise: Fund structuring definitions and the pros and cons of structural options

Class 4:

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

Class 5:

- Online Exercise 1: Employee Retirement Income Security Act of 1974 (ERISA)
- Online Exercise 2: How ESG factors would impact JPMorgan's valuation

Class 6:

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- Online Exercise: General questions about liquidation value, book value, replacement cost, and valuation based on discounted cash flow, as well as accretion/dilution
- Memo: One-page memo on what JPM's disclosure under TCFD should look like

Class 8:

- Online Exercise 1: M&A process
- Online Exercise 2: Pros and cons of an affiliation structure vs. a full merger

Class 9:

- Memo: 250-400-word policy recommendation to the Secretary of Treasury explaining whether the approach described in IRS Notice 2015-62 should be sustained or repealed
- Online Exercise: Expected returns of a social impact bond, with and without a guarantee

Class 10:

- Online Exercise 1: Green bond terminology and Moody's assessment methodology
- Online Exercise 2: Prospectuses

Peer Evaluation: students will select 5 peers to rate them on a scale of 1 (lowest) - 5 (highest) on each of the below qualities. If students write their final papers with a partner, that partner must be included in the 5 peers. 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

Evaluation/Grading

- Module 1 and Module 2 exams (20% each, for a total of 40%): The exams will cover the first and second halves of the course, respectively. 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.
- Final Paper (20%): The midterm paper will be judged on a scale of 0-100, and students will have two options for topic.
 - The first will be evaluated as a policy proposal. The policy proposal should explain the policy issue, the relevance to sustainability, outline and analyze options, and any impact on Federal, state, or local budget. Approximately one-third of the evaluation will be based on the clarity of the written work and approximately one-third based on the viability of the proposal. Students are encouraged to discuss potential topics with the instructor(s) beforehand. Instructor comments will be returned with the graded work.
 - The second will be evaluated as a product proposal. The product proposal should include a description of the relevance of the product or structure to sustainability, its competitive landscape, its financial or social returns or projections, its target investors and beneficiaries and explanation of why the product or structure is a good fit for them. Approximately one-third of the evaluation will be based on the clarity of the written work and approximately one-third based on the demonstrated understanding of the impact investing landscape. Students are encouraged to discuss potential topics with the instructor(s) beforehand. Instructor comments will be returned with the graded work.
- Weekly Homework Assignments (20%): Problem sets and online assignments will be assessed based on completeness and accuracy. Memos will be assessed based on clarity, relevance, and demonstrated understanding of concepts from 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. Please see previous section for details.

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- **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 freely discussing the topics proposed. Students are encouraged to share the critical questions from their assignments with their peers.

FINAL GRADING SCALE

Grade	Percentage
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
Module 1 and 2 Exams	40%
Final Paper	20%
Weekly Homework	20%
Active Class Participation	10%
Peer Evaluation	10%

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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. As detailed above, students will rate the performance and contributions of their classmates along several dimensions to encourage teamwork. 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 format, 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 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: <http://health.columbia.edu/services/ods/support>.

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Course Schedule/Course Calendar

Class	Topics and Activities	Readings and Videos (due on this day) ¹	Assignments (due on this date)
1	<p>Introduction to Financial Markets and Impact Finance</p> <p>Topics</p> <ul style="list-style-type: none"> Terminology for financial instruments and security trading History of microfinance and impact investing <p>Activities</p> <ul style="list-style-type: none"> 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 	<p>Required</p> <ul style="list-style-type: none"> "How Goldman Sachs and BlackRock are Leading the Way on Impact Investing," 1 page. "The Role of International Capital Markets in Microfinance." Developing World Markets. 17 pages. 2016 Annual Impact Investor Survey. 15 pages. Bodie, Kane, Marcus. <u>Investments</u>. Chapters 2-3. 63 pages. Skim. <p>Optional</p> <ul style="list-style-type: none"> 2016 Symbiotics MIV Survey. 54 pages. "Microfinance Overview." 40 pages. 	<ul style="list-style-type: none"> 250-400-word personal bio L1: Online exercise on definitions of financial instruments and of mechanisms of how securities are traded 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.
2	<p>Goldman Sachs vs. Unitus</p> <p>Topics</p> <ul style="list-style-type: none"> Unitus's role in the evolution of microfinance investing The Community Reinvestment Act Risk sharing with the public sector: Unitus Impact's Overseas Private Investment Corporation (OPIC) facility and Goldman Sachs' IFC facility Basic credit mechanics 	<p>Required</p> <ul style="list-style-type: none"> 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 overview. 7 pages. Bodie, Kane, Marcus. <u>Investments</u>. Chapters 14-16. 111 pages. Skim. 	<ul style="list-style-type: none"> L1: Short problem set on bond pricing, bond duration, and interest rate sensitivity L6: 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 Students should come to class prepared to compete in Oxford-style debate on the relative pros and cons of Goldman Sachs' work in impact investing vs. that of Unitus, a nonprofit focused

¹ Please note that readings and videos are listed in the order in which you will encounter them (by category) in this course, starting on page 1

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	<p>Activities</p> <ul style="list-style-type: none"> • Lecture • Discussion • Oxford-style debate 		<p>on poverty alleviation that created a number of very successful specialist organizations.</p>
3	<p>Enterprise Funds as tools for Economic Statecraft</p> <p>Topics</p> <ul style="list-style-type: none"> • 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 <p>Activities</p> <ul style="list-style-type: none"> • Lecture • Discussion 	<p>Required</p> <ul style="list-style-type: none"> • "The Enterprise Funds in Europe and Eurasia: Successes and Lessons Learned." 34 pages. Skim. • Tunisian American Enterprise Fund 2016 Annual Report. 9 pages. • Tunisian American Enterprise Fund (TAEF) Evaluation Final Evaluation Report 2018. 28 pages. Skim. • "Tax Considerations In Structuring US-Based Private Equity Funds" 10 pages. • Axial Primer on Private Equity Structure. 3 pages • Bodie, Kane, Marcus. <u>Investments</u>. Chapters 18-19. 86 pages. Skim. 	<ul style="list-style-type: none"> • L3: Short DCF valuation and financial ratio problem set due at the start of Class 3 • L4: Short online exercise on fund structuring definitions and the pros and cons of structural options • 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
4	<p>UN-Supported Principles for Responsible Investment (PRI)</p> <p>Topics</p> <ul style="list-style-type: none"> • 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, 	<p>Required</p> <ul style="list-style-type: none"> • Official UN Principles for Responsible Investment website. 7 pages. • <u>Fixed Income Investor Guide</u>. 19 pages. • <u>A Practical Guide to ESG Integration for Equity Investing</u>. 17 pages. <p>Optional</p> <ul style="list-style-type: none"> • Bodie, Kane, Marcus. <u>Investments</u>. Chapter 14. Pages 445-486. Previously assigned—you may wish to skim again to facilitate completing the assignment. 	<ul style="list-style-type: none"> • Short online exercise on Form 10-K filings and sustainability reports • Students should come to class prepared to discuss how ESG factors affect revenues, costs, and discount rate broadly

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	<p>profitability, and cash flow-to-debt ratios</p> <p>Activities</p> <ul style="list-style-type: none"> Lecture Discussion on the impact of E and S factors on JPMorgan Valuation 		
5	<p>Pension ESG Investing following U.S. Department of Labor Bulletin 2015-01, which allows consideration of economically targeted investments and ESG factors</p> <p>Topics</p> <ul style="list-style-type: none"> The Employee Retirement Income Security Act of 1974 (ERISA) Regulatory change as an opportunity The Task Force for Climate-Related Financial Disclosure (TCFD) <p>Activities</p> <ul style="list-style-type: none"> Lecture Discussion 	<p>Required</p> <ul style="list-style-type: none"> "Field Assistance Bulletin No. 2018-01: Interpretive Bulletins 2016-01 and 2015-01." 3 pages. "Factors." 2 pages. "DOL Issues New Guidance on Economically Targeted Investments." 3 pages. "Focusing Capital on the Long-Term," 11 pages. "Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures." 22 pages. 	<ul style="list-style-type: none"> L3: Short online exercise on how ESG factors would impact JPMorgan's valuation L4: Short online assignment about ERISA Students should come to class ready to discuss whether ETI and ESG investing are appropriate uses of pensioner capital.
6	<p>Nonprofit M&A to survive the impact of federal budget cuts</p> <p>Topics</p> <ul style="list-style-type: none"> 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 	<p>Required</p> <ul style="list-style-type: none"> "How to Keep Troubled Charities from Failing," 2 pages. "Navigating a Nonprofit Corporation through Bankruptcy," 2 pages. "Mergers, Acquisitions, and Affiliations Involving Nonprofits: Not Typical M&A Transactions," 8 pages. <u>Risk Management for Nonprofits</u>. 16 pages. "How to Save a Nonprofit: The Care Steps Required in Mergers and Acquisitions," 2 pages. 	<ul style="list-style-type: none"> L3: Short online assignment about liquidation value, book value, replacement cost, and valuation based on discounted cash flow, as well as accretion/dilution L2: One-page memo on what JPM's disclosure under TCFD should look like Students should come to class ready to discuss their views on how nonprofit M&A differs from private sector M&A

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	<p>diligence, negotiation, closing, and to integration</p> <ul style="list-style-type: none"> Nuances of nonprofit M&A <p>Activities</p> <ul style="list-style-type: none"> Lecture Discussion 	<p>Optional</p> <ul style="list-style-type: none"> Bodie, Kane, Marcus. <u>Investments</u>. Chapter 18. Pages 591-634. Previously assigned—you may wish to skim again to facilitate completing the assignment. 	
7	Module 1 exam		
8	<p>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</p> <p>Topics</p> <ul style="list-style-type: none"> TBU 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 <p>Activities</p> <ul style="list-style-type: none"> Lecture Discussion Subset of students give short overview of impact investing policy recommendation for mid-term paper 	<p>Required</p> <ul style="list-style-type: none"> IRS Notice 2015-62: Investments Made for Charitable Purposes. 4 pages. "IRS Provides Guidance on Mission-Related Investments by Private Foundations," 2 pages. "Mission-Related Investing: Legal and Policy Issues to Consider Before Investing," 19 pages. "Ford Foundation MRI Investment a Historic Challenge to Other Funders," 7 pages. "Investing for Social Gain: Reflections on Two Decades of Program-Related Investments." 57 pages. Skim. "Investment Policy Statement." 13 pages. Skim. "Impact Investing and Private Foundations: New Guidance from the IRS and Its Implications for the Field." 57 minutes. 	<ul style="list-style-type: none"> L4: Short online assignment about M&A process L4: Short online assignment about pros and cons of an affiliation structure vs. a full merger Students will come to class prepared to discuss the pros and cons of potential PRI and MRI strategies
9	Social impact bonds to address recidivism in the context of	Required	<ul style="list-style-type: none"> L1 and L7: Short online assignment on the expected returns of the social impact

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	<p>constrained local budgets</p> <p>Topics</p> <ul style="list-style-type: none"> The bespoke impact investing tool social impact bonds Overview of social impact bond underwriting, structuring, and expected returns <p>Activities</p> <ul style="list-style-type: none"> Lecture Discussion Subset of students give short overview of impact investing policy recommendation for mid-term paper 	<ul style="list-style-type: none"> <u>Social Impact Bonds: A Guide for State and Local Governments</u>. 24 pages. "Rikers Island: The First Social Impact Bond in the United States." 4 pages. "What We Learned from the Failure of the Rikers Island Social Impact Bond," 2 pages. "Governor Cuomo Announces New York the First State in the Nation to Launch Pay for Success Project in Initiative to Reduce Recidivism." 3 pages. <u>Investments</u>. Chapter 5. 50 pages. Skim. Social Impact Bond Hearing. 4 minutes <p>Optional</p> <ul style="list-style-type: none"> <u>Learning from Experience: A Guide to Social Impact Bond Investing</u>. 23 pages. 	<p>bond, with and without the guarantee</p> <ul style="list-style-type: none"> L5: 250-400-word policy recommendation to the Secretary of Treasury explaining whether the approach described in IRS Notice 2015-62 should be sustained or repealed Students should come to class prepared to discuss social impact bond success factors
10	<p>Green and climate change bonds against the backdrop of climate change at the Paris Climate Agreement</p> <p>Topics</p> <ul style="list-style-type: none"> Navigate prospectus structure and contents Evolution of the green bond market The financial innovation life cycle: incubation; early adopter; mainstream The liquidity, standardization, and transparency that drive mainstreaming <p>Activities</p> <ul style="list-style-type: none"> Lecture Discussion Subset of students give short overview 	<p>Required</p> <ul style="list-style-type: none"> The Paris Agreement Summary: Climate Focus Client Brief on the Paris Agreement III. 6 pages. Green Bond Principles, 2016: Voluntary Process Guidelines for Issuing Green Bonds. 7 pages. "How Green Bonds Will Become Mainstream," 4 pages. "The Next Green Revolution: An Overview of the Rapidly Evolving Green Bond Market," 2 pages. Bonds and Climate Change: The state of the market in 2016. 11 pages. "Moody's Credit Ratings Process, Green Bond Assessment and Sector Trends for Virginia Local 	<ul style="list-style-type: none"> L1 and L7: Short online assignment on green bond terminology and Moody's assessment methodology L2: Short online assignment about prospectuses Students should come to class ready to discuss labeled green bonds and unlabeled climate-aligned bonds, the components of the green bond principles, and policies for promoting green bond growth

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	of impact investing policy proposal for mid-term paper	Governments." October 2016. 4 pages. <ul style="list-style-type: none"> Upper Mohawk Valley Regional Water Finance Authority, NY, Water System Revenue Bonds, Series 2016 (Green Bonds) prospectus. 2 pages. 	
11	<p>Democratizing impact finance via crowdfunding</p> <p>Topics</p> <ul style="list-style-type: none"> 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") <p>Activities</p> <ul style="list-style-type: none"> Lecture Discussion Subset of students give short overview of impact investing policy proposal for mid-term paper Course Wrap-Up 	<p>Required</p> <ul style="list-style-type: none"> "Regulation Crowdfunding: A Small Entity Compliance Guide for Issuers." 6 pages. "U.S. securities-based crowdfunding under Title III of the JOBS Act." 4 pages. Kiva Microfunds. GuideStar Nonprofit Profile Charting Impact Report. 3 pages. "Mosaic Announces New Financing Facilities for Over \$550 Million in Home Solar Loans." 1 page. 	<ul style="list-style-type: none"> L1, L5, L6, and L7: Final paper due Students should come to class prepared to discuss the history and trajectory of crowdfunding as an impact finance tool
12	Module 2 exam		