



# Course program and reading list

Semester 8 Year 2024

**School:** Arison School of Business MBA

## Sustainable Finance

**Lecturer:**

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<b>Course No.:</b>	<b>Course Type :</b>	<b>Weekly Hours :</b>	<b>Credit:</b>
25241	Lecture	4	2

<b>Course Requirements :</b>	<b>Group Code :</b>	<b>Language:</b>
Final Paper	1202230	English



### Course Description

What is sustainable finance?

Sustainable finance is the process of taking environmental and social considerations into account when making investment decisions in the financial sector, leading to a more sustainable future for the planet and mankind. Environmental considerations might include climate change mitigation and adaptation, as well as the environment more broadly, for instance, the preservation of biodiversity and pollution prevention. Social considerations could refer to issues of income inequality, inclusiveness, labour relations, investment in human capital and communities, as well as human rights issues.

The course provides a perspective of how to separate the ideology and science when addressing sustainability. For this, one needs to gain a grasp of the historical, political, scientific, and most importantly, economic perspective of sustainable finance. As financial economists, we try to understand whether there are contradictions between maximizing

equity (firm) value and sustainability. Issues of sustainability are inherently related to externalities – for example, if a firm pollutes and emits CO<sub>2</sub> the air, it creates a negative externality. The normative questions are therefore, is "How (and if) such externalities are accounted for in the financial markets? And whether firms and corporations should do something if markets do not do their job of pricing the externality?" We learn about Coase Theorem, implicit versus explicit contracts, and we discuss theoretical claims and empirical evidence of when other aspects of human behavior may intervene in corporate decision-making and affect sustainability. We further dwell into the particularities aspects in economics to better understand the pitfalls in dealing with issues such as climate change, income inequality, and other societal issues – and try to understand the complexity of finding a solution to these problems that are based on scientific knowledge and economic thought.

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## Course Goals

- Understand the economics behind sustainable finance as well as its cultural/historical aspects.
  - Understand the intuition that is delivered in Coase Theorem.
  - Understand why most CSR aspects are accounted for in the shareholder primacy framework.
  - Understand what is meant by explicit versus implicit contracts and what type of firms should be controlled by government and what should be controlled by the private sector.
  - Understand how maximization of firm value is different from maximization of shareholder value.
  - Understand the measurement of ESG, its benefits, and its pitfalls.
  - Understand the basic science behind climate change and how the world is trying to deal with it.
  - Know about the impact investing phenomena.
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## Grading

Participation in lectures is **required**.

During this course, you can expect at least 5 hours of out-of-class work weekly for adequately reviewing knowledge learned in class in preparation for final quiz.

Assessment summary

**Quiz: 50%** - A multiple-question quiz of one hour will be conducted at the end the course (40 multiple questions). It will include questions that are all related to the material in the slides and discussed in class. This is a close-book quiz, you are only allowed to have a calculator – nothing else (no cheat sheet and no smart phone). An example of a mock quiz with solution is provided on the Moodle. The quiz can only be done if **you attend the**

**class in person.** If you do not attend the last class, due to a legitimate reason that can be supported by evidence and approved by the TA; for example, because you are sick or in service, then a make-up quiz will be performed at a future date.

**Project: 50%** – Projects are done in groups of 6-7. You are allowed to choose your group. If you struggle to form a group, email TA for assistance. The common theme of all projects is that they include a 10-page written report (1.5 spacing font 12) and a 10-minute power presentation, which is followed by a Q&A session of five minutes. Most projects are presented in the last meeting. If you wish to present early please contact me, we may have 1-2 presentation in week 2-5. The rest in week 6.

#### Sustainability Finance Project Instructions

**Objective:** The objective of the sustainability finance project is to encourage students to explore new perspectives of sustainability finance, while maintaining academic rigor, provide a data analysis of sort, or provide practical recommendations. Your project should offer a fresh perspective, innovative ideas, or an alternative viewpoint on a topic.

**Here are a few random suggestions, but you can choose whatever interests you:**

1. **Government-private partnerships and clean energy** – provide a summary and perspective of the various technologies that are out there for clean energy. What are the key limitations and how government-private partnership may help (or not help) in moving these initiatives forward.
2. **Economic assessment of the most viable clean energy** – provide a risk/return analysis of the various technologies out there for achieving clear-energy.
3. **A case-study of a Company that considers itself as sustainable** – In this project, students will undertake a case study (perhaps an Israeli company or an S&P 500) company to critically assess its sustainability practices. The analysis will focus on how the company addresses negative externalities beyond market mechanisms, the relationship between its initiatives and government regulations, and its response to market frictions or policy inefficiencies. The project aims to provide a comprehensive evaluation of the company's sustainability claims, leveraging data from sustainability reports, ESG ratings, and economic theory.
4. **Sustainability in Cryptocurrency Operations:** Investigate the sustainability aspects of cryptocurrency mining and transactions. This project could propose innovative solutions for reducing the carbon footprint of blockchain technology, such as using renewable energy sources for mining operations or developing more energy-efficient transaction algorithms.
5. **The different ESG rating agencies** – what is the difference between them, and do we need so many? – Provide a deep overview of the ESG ratings, their purpose, and provide your perspective to how this complex industry will evolve
6. **Gender Differences, Religion, and Sustainability:** It seems that there is an inherent conflict between gender equality and religion. Is that so? Investigate the role of gender in sustainable development, analyzing gender disparities in access to resources, decision-making, and participation in sustainability initiatives, and exploring potential strategies for promoting gender equality when liberal values are the core lens through which we consider sustainability.

7. **The scientific community and sustainability.** Currently it seems that academics from different fields approach sustainability differently. For example, professors from accounting and finance tend to focus on whether sustainability is consistent with value maximization, while professors of physics concentrate on the scientific efficiency of combating global warming by finding new technology. Liberal arts professors, on the other hand, may promote a more ideological view of sustainability. Summarize and discuss these issues and provide your viewpoint based on your review of the literature.
8. **Impact Investing in Emerging Economies:** Focus on the role of impact investing in promoting sustainability in emerging economies. This could include a study on how impact investments can be effectively channeled to support sustainable practices in these regions, along with an analysis of the risks and returns associated with such investments.
9. **Sustainable Finance in the Circular Economy:** Research how sustainable finance principles can be integrated into the circular economy model. This project could propose financial instruments or incentives to encourage companies to adopt circular economy practices, such as recycling, reusing, and reducing waste.
10. **Climate Risk Assessment in Financial Portfolios:** Develop a model for assessing climate-related risks in investment portfolios. This could involve creating tools or methodologies for investors to evaluate how climate change might impact their investment decisions and portfolio performance.
11. **Sustainability-Linked Loans and Performance:** Study the effectiveness of sustainability-linked loans, where the interest rate is tied to the borrower's achievement of predetermined sustainability targets. This could involve analyzing their impact on borrowers' sustainability practices and financial health.

Remember, these are just examples to inspire you, you can choose any topic of your liking. You are also free to choose one of these topics or modify them according to your interests and the specific angle you want to explore within the broader themes. It is highly advised to approach the professor or the TA to get their input about the topic you choose.

#### Project Components:

##### 1. Introduction:

Clearly introduce your topic, provide context, and explain its significance within the field of sustainability finance. Clearly state the objective of your project, whether it is to present new research findings or offer practical recommendations.

##### 2. Literature Review:

Summarize and critically analyze existing literature and research on the topic. Identify key theories, methodologies, and findings. Highlight any gaps or limitations in the current knowledge that your project aims to address.

##### 3. Discussion and Recommendations:

Engage in a critical discussion of your findings or opinions. Explain the implications and

practical applications of your research. Provide recommendations for stakeholders, policymakers, or industry practitioners based on your analysis or insights.

#### 4. Conclusion:

Summarize the main findings, insights, and recommendations of your project. Reflect on the significance of your work within the context of sustainability finance.

#### Writing Style and Presentation:

Write your project in an interesting and engaging manner, whether you opt for an academic or opinion piece format. Use clear and concise language, support your arguments with evidence, and maintain a logical flow throughout your project. Use proper citations and references to acknowledge the sources of your information.

Prepare a presentation summarizing the main points of your project. Use visual aids to enhance clarity and engage your audience.

#### Submission and Evaluation:

Presentation is worth 25%, Written Report 25% (**submitted on last lesson in Word Format, by email**).

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## Learning Outcomes

Detailed information

Topic 1: Introduction – Historical, Scientific, Societal, and Political Perspective

1. History of sustainable finance
2. Shareholders primacy, stakeholders, and society at large
3. The natural sciences versus the social science
4. Science versus ideology
5. Liberal democracy and our values
6. Religion, ethics, and CSR
7. Common law versus civil law
8. Economic reasons for sustainability investing

Topic 2: Coase Theorem and Externalities

1. The traditional view of externalities
2. Coase theorem
3. Property rights implications of Coase
4. Trading pollution
5. Acid-rain and negative externalities
6. Vaccine and positive externalities

Topic 3: CSR Meets Coase ... and Explicit versus Implicit Contracts

1. Liberal and conservative view to CSR
2. The Coasean perspective to CSR
3. Customer CSR
4. Employee CSR
5. Investor CSR
6. CSR concerns of third parties
7. Moral concerns arising from the Coasean analysis
8. The nexus of explicit and implicit contracts
9. The nature of the firms and explicit versus implicit contracts
10. The role of unanticipated contingencies
11. The hold-up problem
12. Government versus private ownership in incomplete contracts

Topic 4: Economic Rationale for Sustainable Finance

1. The measurement problem (Jensen, 2002)
2. A model for clean versus dirty (Hart and Zingales, 2017)
3. The principal-agent problem for choosing projects (Kraus and Rubin, 2010)
4. Does ideology play a role in CSR (Rubin, 2008)
5. CSR as a conflict between shareholder (Barnea and Rubin, 2010)
6. GDP – the focal measure of economic theory
7. Economic efficiency versus fairness
8. Income inequality and growth
9. The science of climate-change

Topic 5: ESG, Climate Change, and Impact

1. What are ESG measures?
2. Do ratings of firms converge (Chatterji et al., 2016)
3. How do investors use ESG?
4. Emission and climate change
5. A brief history on climate change
6. Tragedy of the commons
7. The social cost of carbon (SCC)
8. The IAM (Integrated Assessment Models)
9. Why climate models are difficult to agree on?
10. The European Union Allowance (EUA)
11. Carbon tax
12. Tesla – how does it make money?
13. Impact investing
14. Social Impact Bonds (SIBs) – Pay-for-performance



## Lecturer Office Hours

Office hours (C-324): Sunday 14:30-15:30

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## Teaching Assistant

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## Additional Notes

Amir Rubin conducts research in market-microstructure, corporate-social responsibility, market-efficiency, and corporate governance. He has published in the top-tier economics, finance and accounting journals such as the Journal of Political Economics, Journal of Financial Economics, Review of Finance, Journal of Financial and Quantitative Analysis, Journal of Accounting and Economics, and Management Science. Prior to joining academia Amir worked at the Israeli SEC regulating and supervising mutual fund activity. Information about Amir's research can be found at [www.sfu.ca/~arubin](http://www.sfu.ca/~arubin).

Please note - if there is a change in procedures/guidelines as a result of the war, the syllabus will be updated accordingly.

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## Reading List

### Books and Materials

If you attend the lectures and read the notes of the lecture slides, you will acquire all the essential knowledge needed to grasp the core concepts of the course and do well in the final quiz. However, reading the original sources can provide deeper insights into the material covered. Below, marked with a \*, are articles that may be particularly useful for students who are more committed to their studies.

### **Text books (not required)**

Text 1: Welch, Ivo and Bradford Cornell, 2022, Global Climate Change: The Pragmatist's Guide to Moving the Needle -available free at <https://climate-change.ivo-welch.info/home/>

Text 2: H. Kent Baker, John R. Nofsinger, 2012, Socially Responsible Finance and Investing, Kolb Series in Finance, Wiley.

Text 3: Elsa De Morais Sarmiento and R. Paul Herman, 2021, Global Handbook of Impact Investing, Wiley

### **Topic 1: Sustainability Introduction - Historical, Scientific, Societal, and Political Perspective**

Chapter 2 (text 2): Stakeholder Analysis

Chapter 3 (text 2): Corporate Social Responsibility

Chapter 6 (text 2): International and Cultural Views

Chapter 7 (text 2): Social, Environmental, and Trust Issues in Business and Finance

Harari, Y.N., 2014. Sapiens: A brief history of humankind. Random House.

Wadhvani, R.D.G., 1997. Kodak, FIGHT and the definition of civil rights in Rochester, New York 1966–1967. *The Historian*, 60(1), pp.59–75.

## **Topic 2: Coase Theorem and Externalities**

Author, D., 2004, Externalities, The Coase Theorem and Market Return.

\*Friedman, D., 1991, The Swedes Get it Right, Reason Magazine. ([https://siliconflatirons.org/documents/initiatives/IRLEdaytwo/Friedman\\_The\\_Swedes\\_Get\\_It\\_Right.pdf](https://siliconflatirons.org/documents/initiatives/IRLEdaytwo/Friedman_The_Swedes_Get_It_Right.pdf))

\*Rubin, A., 2021, Property rights, externalities, and why it may be optimal to sell license to “not get vaccinated” for Covid-19.

## **Topic 3: CSR Meets Coase .... and Explicit versus Implicit Contracts**

\*Aghion, P. and Holden, R., 2011. Incomplete contracts and the theory of the firm: What have we learned over the past 25 years?. *Journal of Economic Perspectives*, 25(2), pp.181–97.

Grossman, S.J. and Hart, O.D., 1986. The costs and benefits of ownership: A theory of vertical and lateral integration. *Journal of Political Economy*, 94(4), pp.691–719.

Hart, O., 2017. Incomplete contracts and control. *American Economic Review*, 107(7), pp.1731–52.

\*Hart, O., Shleifer, A. and Vishny, R.W., 1997. The proper scope of government: theory and an application to prisons. *The Quarterly Journal of Economics*, 112(4), pp.1127–1161.

\*Miller, R.T., 2013. The Coasean dissolution of corporate social responsibility. *Chap. L. Rev.*, 17, p.381.

\*Zingales, L., 2000. In search of new foundations. *The journal of Finance*, 55(4), pp.1623–1653.

## **Topic 4: Economic Rationale for Sustainable Finance**

Text 1: Chapter 4: Climate science

\*Barnea, A. and Rubin, A., 2010. Corporate social responsibility as a conflict between shareholders. *Journal of business ethics*, 97(1), pp.71–86.



\*Hart, O. and Zingales, L., 2017. Companies Should Maximize Shareholder Welfare Not Market Value. *Journal of Law, Finance, and Accounting* 2, pp.247-274.

Kraus, A. and Rubin, A., 2010. Reducing managers' incentives to cannibalize: Managerial stock options when shareholders are diversified. *Journal of Financial Intermediation*, 19(4), pp.439-460.

Rubin, A., 2006. Diversification and corporate decisions. *Corporate Ownership and Control*, 3(3), pp.209-212.

Rubin, A., 2008. Political views and corporate decision making: The case of corporate social responsibility. *Financial Review*, 43(3), pp.337-360.

\*Rubin, A. and Segal, D., 2015. The effects of economic growth on income inequality in the US. *Journal of Macroeconomics*, 45, pp.258-273.

### **Topic 5: ESG, Climate Change, and Impact**

Text 1: Chapters 1-3

Chapter 14 (text 3): Social Impact Bonds: Promises and Results

Chapter 16 (text 3): The Importance of Measuring in Impact Investing

Chatterji, A.K., Durand, R., Levine, D.I. and Touboul, S., 2016. Do ratings of firms converge? Implications for managers, investors and strategy researchers. *Strategic Management Journal*, 37(8), pp.1597-1614.

Chem Michelle, 2015, Goldman Sachs and Bloomberg Philanthropies' Investment in Prison Reform Failed. Why Do They Consider It a Success? *The Nation*.

\* Pindyck, R.S., 2013. Climate change policy: what do the models tell us?. *Journal of Economic Literature*, 51(3), pp.860-72.

Wang, P., Deng, X., Zhou, H. and Yu, S., 2019. Estimates of the social cost of carbon: A review based on meta-analysis. *Journal of Cleaner Production*, 209, pp.1494-1507.