

ENV 1707H F
**“Environmental Finance and Sustainable Investment:
Risk Mitigation and Emerging Opportunities“**

FALL 2009 Course Outline
Instructors: Jane Ambachtsheer
Susan McGeachie

Time:	Tuesday 4:15 – 6:15
Place:	RT 142
Background:	Environmental finance and responsible investing are fast-emerging fields. They involve the application of new and established financial market instruments and practices to the management of environmental issues, and the incorporation of environmental, social and governance (ESG) factors into asset management. Banks, insurance companies, pension funds, venture capitalists, financial services companies, corporations and governments are becoming increasingly engaged on the topic in order to manage risks and capitalize on new opportunities. This course explores the growing materiality of ESG factors on the bottom line financials, using real case examples of how various firms and investors are driving and responding to this relatively new strategic area. An in-depth knowledge of financial markets is not required.
Career Applicability	Students leaving the course will be able to apply their new knowledge to a variety of career paths. The following professions and/or fields have required expertise in the area of environmental finance and/or sustainable investing: <ul style="list-style-type: none">- Financial analyst, portfolio manager, financial product development- Investment and management consultant- Sustainability staff (especially for firms in high impact sectors such as oil & gas, forestry, chemicals, metals and mining and utilities)- Commodities trader- Venture capitalist, private equity or real estate investor- Credit and insurance risk analysts- Investor relations, public relations, communications- Not-for-profit executives
Objectives & Scope:	The objective of the course is to provide students with a firm grounding in range of basic issues at stake in environmental finance and sustainable investing and an awareness of their current application around the world. The course will examine how established practices, procedures and tools from within the mainstream financial market are being adapted to integrate ESG criteria, in the pursuit of financial performance goals from both an investor and corporate perspective.
Reading Materials	Each week has a small number of required readings as well as suggested background resources. The recommended course text book is Sustainable Investing: The Art of Long-Term Performance. Edited by Cary Krosinsky and Nick Robins; 2008.

ENV 1707 F: Lecture Topics & Readings

Week 1 September 8

Introduction to Environmental Finance

Instructor: S. McGeachie

Guest Speaker: Stefan Reichenbach, Environmental Markets, ThomsonReuters

- Background and history of environmental finance
 - Emissions trading
 - Weather markets
- The changing face of corporate risk management
- Project finance
- The role of regulators
- The launch of environmental markets (U.S. SO_x, NO_x)
- Emissions trading introduction
- Key drivers and players

Suggested Resources:

Environmental Finance: www.environmental-finance.com

U.S. Environmental Protection Agency's Clean Air Markets <http://www.epa.gov/airmarkets/>

Emissions Marketing Association (<http://www.emissions.org/>)

Cantor Environmental Brokerage (www.emissionstrading.com)

Week 2: September 15

Regulated & Voluntary Carbon Markets

Instructor: S. McGeachie

Guest Lecturer: Gerry Rocchi, GreenPower Action

- Responsible energy management
- Kyoto Protocol
- EU ETS and the role of the CDM & JI
- Carbon footprinting
- Internal abatement projects
- Renewable energy sourcing
- Buying and selling offsets
- Offset funds
- Green corporate tax incentives
- Greening Canada Fund

Required reading: Sustainable Investing, Chapter 5: Observations from the Carbon Emissions Markets: Implications for Carbon Finance

Suggested Resources:

GreenPower Action www.greenpoweraction.com

Incentives to Go Green: www.pwc.com/ca/greenincentives

Environmental Finance : www.environmental-finance.com

Week 3 September 22

Enterprise Risk Management: Managing Weather-Related Risk

Instructor: S. McGeachie

Guest Lecturer: Daniele Poiega, Structured Products, PricewaterhouseCoopers

- Enterprise risk management (ERM) – basic principles
- Integrating sustainability in ERM processes
- Climate change impacts: physical & operational
- Hedging climate change-related risk: insurance, weather derivatives, catastrophe bonds

Required reading: Carbon Finance, Chapter 8: Adapting to Adverse and Severe Weather

Suggested Resources:

The Finance of Climate Change, Chapter 14: Weather Derivatives and Carbon Emissions Trading

Environmental Finance : www.environmental-finance.com

Weather Risk Management Association <http://www.wrma.org/>

Week 4 September 29

Banking and Insurance

Instructor: S. McGeachie

Guest Lecturer: (Banking and Insurance panel)

- Historic liabilities and lender/insurer due diligence
- Lending policies (credit risks)
- Environmental products (environmental funds, carbon credit funds, green mortgages)
- Financing an environmentally responsible economy

Required reading: Environmental Finance: *An Environmental Sub-prime Crisis?* **Hand out in previous week**

Suggested Resources:

Sustainable Finance and Banking: The Financial Sector and the Future of the Planet, Jeucken, Marcel (DBW HC 79.E5J4813 2001) www.sustainability-in-finance.com

Risks Returns and Responsibility, Association of British Insurers, 2005

http://www.abi.org.uk/Display/File/364/Risk_rewards_and_responsibility_1204_RISKS.pdf

Environmental Bankers Association www.envirobank.org

Week 5 - October 6

Stakeholders and ESG Disclosure

Instructor: S. McGeachie

Guest Lecturer: Julie Desjardins, Desjardins Consultants

- Who are corporate stakeholders?
- Stakeholder consultations
- Materiality
- Reputation Management
- Quantitative vs qualitative information
- GRI, GHG Protocol etc.
- Sustainability and market expectations
- Liability issues
- Responsibility for environmental reporting

- April 9, 2009 MPP resolution (Laurel Broten) re. OSC guidance on disclosure (consultations currently underway)

Required reading: Building a Better MD&A – Required Climate Change Disclosures
<http://www.cica.ca/research-and-guidance/mda-and-business-reporting/mda-publications/item12846.pdf>

Suggested Resources:

OSC Staff Notice 51-716 – Environmental Reporting

Climate Change: A Hot Topic for Chartered Accountants <http://www.cica.ca/climatechange/item10130.pdf>

Week 6 October 13

Water Finance

Instructor: S. McGeachie

Guest Lecturer: TBD

- An introduction to the emerging field of “water finance”
 - Policy perspectives
 - Corporate and investment risks and opportunities
 - Private equity and public infrastructure

Required reading: Sustainable Investing, Chapter 8: Water

Suggested Resources:

Canadian Water Treatment Magazine www.watertreatment.ca

WWF UK: *Water Footprint*

http://www.wwf.org.uk/what_we_do/safeguarding_the_natural_world/rivers_and_lakes/water_footprint/

Week 7 October 20

MIDTERM EXAM (covering Weeks 1 – 6)

Week 8 October 27

Introduction to Responsible Investing (RI)

Instructor: J. Ambachtsheer

- In depth discussion of “responsible investment” and its application
- Evolution of “ethical”, “socially responsible” and “responsible” investment
- Discussion of stakeholders: (pension funds, consultants, asset managers, etc.)
- Fiduciary duty and responsible investment
- UN Principles for Responsible Investment: Development of the Principles (launched in 2006), current status (500+ signatories, \$18 trillion assets under management), obligations and activities of signatories
- RI and the Global Financial Crisis

Required reading:




1. Sustainable Investing: Introduction, Chapters 1 and 16.
2. UN Principles for Responsible Investment: review website and read *PRI Report on Progress, 2009* (www.unpri.org/report09)

Suggested resources:

There are a variety of relevant publications on the UNEP FI home page.

<http://www.unepfi.org/publications/investment/index.html>

The two listed below relate directly to fiduciary duty and RI, and one containing RI case studies.

-  [Fiduciary responsibility – Legal and practical aspects of integrating environmental, social and governance issues into institutional investment](#) (1.0 MB | 101 pages)
-  [A legal framework for the integration of environmental, social and governance issues into institutional investment](#) (1 MB | 154 pages)
-  [Responsible Investment in Focus: How leading public pension funds are meeting the challenge](#) (1.0 MB | 85 pages)

This is the Mercer responsible investment team home page www.mercerLC.com/ri

3. www.sristudies.org (This website lists many studies about performance of responsible investment)

Week 9 November 3

RI performance and integrating ESG factors within investment valuation

Instructor: J. Ambachtsheer


Guest Lecturer: Martin Grosskopf or Rachel Davies, Acuity

- Integrating ESG factors into fundamental investment analysis
- An investors perspective on the ESG issues impacting financial value
- Climate change – the ultimate environmental finance issue
- Who is making the link? Analysts, asset managers, pension fund trustees, WBCSD, UNEP
- Case studies of ESG factors within investment valuation
- Review of academic studies on ESG/ RI/SRI performance

Required Reading: Sustainable Investing, Chapter 2 (Sustainable Equity Investing: The Market-Beating Strategy) and Chapter 4 (Sustainability Analysis)

Suggested Resources

1. *Finance and the Environment in North America* www.ec.gc.ca/cei/
 2. *New Alpha Source for Asset Managers: Environmentally-Enhanced Investment Portfolios.* http://www.sristudies.org/bib_gl2.html
 3. UNEP Finance Initiative: <http://www.unepfi.org/publications/investment/index.html>
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Three papers in “materiality series. Most recent, 2009,”  [Executive Summary: The materiality of climate change -- How finance copes with the ticking clock](#) (54 KB | 10 pages), 2004 with “[The Materiality of Social, Environmental and Corporate Governance Issues to Equity Pricing](#)”, and 2006 “[Show Me The Money: Linking Environmental, Social and Governance Issues to Company Value](#),”

4. *The SD Effect – Translating Sustainable Development into Financial Valuation Measures*
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Week 10 November 10

Aligning incentives, time horizons and investment outcomes

Instructor: J. Ambachtsheer

- Principal agent theory
- Pension funds as universal owners
- Investment time horizons and problem of short termism
- Externalities
- Systemic risk management – the global financial crisis vs. climate change

Required reading and supporting info to be finalised

1. Investor statement on climate risk (link to follow)
2. Tragedy of the commons
3. Universal Ownership: Exploring Opportunities and Challenges (April 2006) (<http://www.mercerIc.com/uoreport>).
4. The Economics of Short-Term Performance Obsession, Alfred Rappaport, Financial Analysts Journal, Volume 61 Number 3 2005
5. Potentially chapter from Bogel

Week 11 November 17

Active Ownership and Investor Collaboration

Instructor: J. Ambachtsheer

- Proxy voting, growth of resolutions on ESG factors, shareholder engagement
- Growing instance of regional and global collaboration by investors
- Focus on climate change in 3 regions (US, Europe, Australia/NZ)
- Council of Institutional Investors, International Corporate Governance Network, Enhanced Analytics Initiative, Extractive Industries Transparency Initiative, and other examples

Required Reading: Sustainable Investing, Chapter 3 (Investors: A force for sustainability)
TBD – post 2009 proxy season analysis

Required reading:

1. Investor statement on climate risk (link to follow)
2. Canada Pension Plan Investment Board policy on Responsible Investment (2006)

Suggested Resources:

1. ICPM collaboration paper “Identifying and Mobilizing Win-Win Opportunities for Collaboration ...”(http://www.rotman.utoronto.ca/userfiles/departments/icpm/File/June%202007/1_Guyatt_Identifying%20and%20Mobilizing%20Win-Win%20Opportunities%20for%20Collaborabtion_June%202007(1).ppt#1)”
 2. ISS website (<http://www.issproxy.com/>)
 3. The New Capitalists, Stephen Davis, John Lukonmik
 4. International Corporate Governance Network (<http://icgn.org>)
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Week 12 – November 24

Cleantech Venture Capital and Government Catalysts for Cleantech

Instructor: J. Ambachtsheer

Potential guest speakers: Nick Parker (Cleantech Venture Captial) or Andrew Heintzman (Investeco)

- Introduction to “cleantech” – review of global market size, characteristics, number of funds, performance, etc.
- Review of “green” financial stimulus and other related policy drivers of cleantech
- New environmental technologies as investments/what to look for in investment opportunities
- Real estate – increasingly important role of energy efficiency in RE investing

Required reading:

Required Reading: Sustainable Investing, Chapters 7 (Clean energy opportunities), 10 (Sustainable and responsible property investment) and 11 (Private equity: Unlocking the sustainability potential)

Suggested Resources:

1. <http://cleantech.com>. See in particular the abstract from “*Cleantech Venture Investing: Patterns and Performance*” and the “In the News” section for a listing of recent related articles about clean technology investments and developments.
 2. Review academic real estate publications on:
<http://www.fdewb.unimaas.nl/finance/?page=member&id=198&extra=publications>
 3. www.investeco.com
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Week 13 December 2

Emerging areas and global outlook: Fixed income, microfinance and green real estate

Instructor: J. Ambachtsheer

- RI fixed income strategies (corporate and sovereign debt)
- Green bonds
- Microfinance – its growing relevance as institutional investment
- Discussion of future trends and the future of financial markets

Required reading: Sustainable Investing, Chapters 9 (Fixed income and microfinance), 13 (China), 14 (India), 17 (The global agenda) and 18 (Conclusion)

Course wrap-up and review (weeks 8-13)

Week 14 December 8

Final Exam, Covering Weeks 8 - 13 (in class)

Note: Guest lecturers subject to change.

Evaluation:

10% Participation

Grades will reflect participation in class discussion, preparedness, and attendance.

20% - Article Assignments (due Weeks 6 & 10, 10% each)

1) Role of Financial Services in Building a Sustainable Economy (10%)

Reflect on the role of our banking sector in building a more environmentally sustainable economy. Do you think our banking sector is doing enough to promote sustainability? What more can the banks do? What are some of the challenges in promoting sustainability that the banking sector faces?

Write up your analysis, maximum one page, and hand in Week 6 (October 13) or email prior to the start of week 6 to S McGeachie.

2) Materiality of ESG factors (10%)

Select an ESG issue which you believe is currently material to the potential performance of a listed Canadian company. Briefly discuss the 3 following considerations:

- Whether this issue is less or more material now vs. in past
- What is the importance of this issue? Describe how and under which circumstances it could impact corporate performance (positively or negatively).
- How could investors be better prepared (if they are not adequately prepared as yet)?

Write up your analysis, maximum one page, and come prepared to discuss with the class on November 10 (week 10). Students are to email their papers to J Ambachtsheer by midnight on November 8. Prepare a professional quality document.

70% - Section Exams (Weeks 7 and 14, 35% each)

Course material will be assessed in two sections. Exam 1 (35%) will focus on material covered in Weeks 1 – 6. Exam 2 (35%) will focus on material covered in Weeks 8 – 13.

A portion of class time in weeks 6 and 13 will be allocated for review of course material in preparation for each exam.

Instructor Information:

Jane Ambachtsheer is a National Partner of Mercer Investment Consulting, based in Toronto. She is Mercer's Global Head of Responsible Investment, and consults to investors in North America, Europe and Australasia on a variety of topics.

In 2000, Jane joined Mercer's London, UK office, transferring to Toronto three years later. Previously, Jane worked for the pension benchmarking firm CEM, in Amsterdam and Toronto.

Jane was consultant to the United Nations through the development of the Principles for Responsible Investment. She is a global advisor to the Carbon Disclosure Project, former Director of the Canadian Social Investment Organisation, and participates in a variety of global industry initiatives. In 2005, Jane was recognised by Global Proxy Watch as one of the top 10 "Architects of Governance" and in 2007 she was identified by Chatelaine Magazine as one of Canada's "Amazing 80 women to watch". She currently sits on the Finance Committee of the Toronto Atmospheric Fund.

Jane holds a Bachelor of Economics and English literature with honours from York University, and a Master of Social Science from the University of Amsterdam. Jane is an adjunct professor and a graduate faculty member at the University of Toronto, and a member of U of T's environmental finance committee

Susan McGeachie is Manager, Sustainable Business Solutions at PricewaterhouseCoopers, where she helps to create solutions for the corporate sector's sustainability-related challenges. Her main work focuses on clients in finance, investor relations, manufacturing, and real estate. Prior to PwC, Susan was a Director with Innovest Strategic Value Advisors where she analysed the environmental, social and governance performance of large cap global stocks for institutional investors, and was the business development practice leader for Canada.

Susan's previous experience includes a role as researcher and advisor at the Schulich School of Business (York University, Canada), where her research focused on the sustainability and competitiveness of Canadian business and industry in the new economy, and an advisor on the financial restructuring of a private Canadian media company. Prior to this, Susan worked for World Wildlife Fund Canada.

Susan is currently an adjunct professor and a graduate faculty member at the University of Toronto, a member of U of T's environmental finance committee, and a director of the Social Investment Organisation, for which she chairs the governance committee. She served as an Associate Fellow with the Institute for Research and Innovation in Sustainability out of York University from 2004 – 2006, and holds an MBA from the Schulich School of Businesses.