

PhD course in Sustainable Finance

Instructor:

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Time:

Monday, August 21, 12.00 – 13.30 and 14.30 – 16.00 in classroom U006

Tuesday, August 22, 11.00 – 12.30 and 13.30 – 15.00 in classroom U006

Wednesday, August 23, 10.00 – 11.30 and 12.30 – 14.00 in classroom U006

Thursday, August 24, 10.00 – 11.30 and 12.30 – 14.00 in classroom U006

Friday, August 25, 10.00 – 11.30 and 12.30 – 14.00 in classroom V001

Grading:

Grades will be based on class participation, an exam, and a term-paper.

Course material:

The course is based on a set of slides as well as academic papers.

Course description:

This PhD course provides an introduction to the dynamic and fast expanding research area of sustainable finance. After a general introduction and overview, we will start by discussing data and measurement related issues. In doing so, we will cover common ways of quantifying the environmental, social, and governance (ESG) profiles of firms, challenges with current data and measurement approaches, and zoom in on the important topics of ESG reporting standards and disclosure requirements. The second part of the course will focus on the abundant research concerned with the financial performance implications of ESG. We will consider performance issues from both the firm and the investor perspective. The third part of the course will address the topic of greenwashing and more generally institutional investor behavior when it comes to ESG

and sustainability considerations. We will also tackle the question of whether sustainable finance has a real world impact. The fourth part will provide an introduction to of climate finance related topics. In the fifth part of the course, we will study ESG and sustainability considerations in other asset classes (e.g., fixed income or private equity). Time permitting, we will discuss a couple of “hot” topics in current sustainable finance research.

Course Outline

0. Introduction and overview
1. Data, measurement, and disclosure
2. Financial performance implications of ESG
3. Institutional investor behavior, greenwashing, and real impact of sustainable finance
4. Climate finance and carbon issues
5. ESG in other asset classes (e.g., fixed income, private equity, or real estate)
6. Current “hot” topics

Reading list

Required reading marked with as **(*) Author, A.B., 2023.....**:

Part 0: Introduction and overview

Surveys and “big picture” papers

Edmans, A., 2023. The end of ESG. *Financial Management*, 52(1), pp.3-17.

Edmans, A., 2023. Applying economics—not gut feel—to ESG. *Financial Analysts Journal* forthcoming

Edmans, A. and Kacperczyk, M., 2022. Sustainable finance. *Review of Finance*, 26(6), pp.1309-1313.

Gibson Brandon, R and P Krueger (2023), *The Role of Institutional Investors as Responsible Investors*, LTI Report 2, CEPR Press. (Available here: <https://cepr.org/voxeu/columns/institutional-investors-and-responsible-investing>)

Gillan, S.L., Koch, A. and Starks, L.T., 2021. Firms and social responsibility: A review of ESG and CSR research in corporate finance. *Journal of Corporate Finance*, 66, p.101889.

Hong, H. and Shore, E.P., 2022. Corporate social responsibility (No. w30771). National Bureau of Economic Research.

Larcker, D.F., Tayan, B. and Watts, E.M., 2022. Seven myths of ESG. *European Financial Management*, 28(4), pp.869-882.

Liang, H. and Renneboog, L., 2021. Corporate social responsibility and sustainable finance. In *Oxford Research Encyclopedia of Economics and Finance*.

Matos, P., 2020. ESG and Responsible Institutional Investing Around the World: A Critical Review. CFA Institute Research Foundation Literature Reviews, May.

Rau, P.R. and Yu, T., 2023. A survey on ESG: investors, institutions and firms. *China Finance Review International*.

Starks, L.T., 2021. Environmental, social, and governance issues and the financial analysts journal. *Financial Analysts Journal*, 77(4), pp.5-21.

(*) Starks, L.T., 2023. Presidential Address: Sustainable Finance and ESG Issues—Value versus Values. *The Journal of Finance*.

The Economist, 2022, The Economist - Special Report ESG Investing (see <https://econ.st/3YcVUXS>)

Regular papers

Bauer, R., Ruof, T. and Smeets, P., 2021. Get real! Individuals prefer more sustainable investments. *The Review of Financial Studies*, 34(8), pp.3976-4043.

Bonnefon, J.F., Landier, A., Sastry, P.R. and Thesmar, D., 2022. The moral preferences of investors: Experimental evidence (No. w29647). National Bureau of Economic Research.

Giglio, S., Maggiori, M., Stroebel, J., Tan, Z., Utkus, S. and Xu, X., 2023. Four facts about ESG beliefs and investor portfolios (No. w31114). National Bureau of Economic Research.

(*) Hartzmark, S.M. and Sussman, A.B., 2019. Do investors value sustainability? A natural experiment examining ranking and fund flows. The Journal of Finance, 74(6), pp.2789-2837.

Heeb, F., Kölbel, J.F., Paetzold, F. and Zeisberger, S., 2023. Do investors care about impact?. The Review of Financial Studies, 36(5), pp.1737-1787.

Riedl, A. and Smeets, P., 2017. Why do investors hold socially responsible mutual funds?. The Journal of Finance, 72(6), pp.2505-2550.

Part 1: Data, measurement, and disclosure

Data and measurement

ESG

(*) Berg, F., Fabisik, K., & Sautner, Z. (2021). *Rewriting history II: The (un) predictable past of ESG ratings. European Corporate Governance Institute–Finance Working Paper, 708(2020), 10-2139.*

(*) Berg, F., Koelbel, J. F., & Rigobon, R. (2022). *Aggregate confusion: The divergence of ESG ratings. Review of Finance, 26(6), 1315-1344.*

(*) Berg, F., Heeb, F. and Kölbl, J.F., 2022. *The economic impact of ESG ratings. Available at SSRN 4088545.*

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.

Christensen, D.M., Serafeim, G. and Sikochi, A., 2022. Why is corporate virtue in the eye of the beholder? The case of ESG ratings. *The Accounting Review*, 97(1), pp.147-175.

Gibson Brandon, R., Krueger, P., & Schmidt, P. S. (2021). ESG rating disagreement and stock returns. *Financial Analysts Journal*, 77(4), 104-127.

Larcker, D.F., Pomorski, L., Tayan, B. and Watts, E.M., 2022. ESG ratings: A Compass without direction. Rock Center for Corporate Governance at Stanford University Working Paper.

Other recent measures: Biodiversity, EU Taxonomy

Garel, A., Romec, A., Sautner, Z. and Wagner, A.F., 2023. Do Investors Care About Biodiversity?. *Swiss Finance Institute Research Paper*, (23-24).

Giglio, S., Kuchler, T., Stroebel, J. and Zeng, X., 2023. Biodiversity Risk (No. w31137). National Bureau of Economic Research.

Hoepner, A.G., Klausmann, J., Leippold, M. and Rillaerts, J., 2023. Beyond Climate: The Impact of Biodiversity, Water, and Pollution on the CDS Term Structure

Hoepner, A.G. and Schneider, F.I., 2022. EU green taxonomy data—a first vendor survey. *The Economists' Voice*, 19(2), pp.229-242.

Karolyi, G.A. and Tobin-de la Puente, J., 2023. Biodiversity finance: A call for research into financing nature. *Financial Management*.

Sautner, Z., Yu, J., Zhong, R. and Zhou, X., 2022. The EU taxonomy and the syndicated loan market. Available at SSRN 4058961.

General ESG

Bénabou, R. and Tirole, J., 2010. Individual and corporate social responsibility. *Economica*, 77(305), pp.1-19.

Hart, O. and Zingales, L., 2017. Companies Should Maximize Shareholder Welfare Not Market Value. *Journal of Law, Finance, and Accounting*, 2(2), pp.247-275.

Disclosure

Christensen, H.B., Hail, L. and Leuz, C., 2021. Mandatory CSR and sustainability reporting: Economic analysis and literature review. *Review of Accounting Studies*, 26(3), pp.1176-1248.

Christensen, H.B., Hail, L. and Leuz, C., 2019. Economic Analysis of Widespread Adoption of CSR and Sustainability Reporting Standards (Working paper version of Christensen et al 2021; available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3315673)

Christensen, H.B., Hail, L. and Leuz, C., 2019. Economic Analysis of Widespread Adoption of CSR and Sustainability Reporting Standards: Structured Overview of CSR Literature (available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3313793)

Krueger, P., Sautner, Z., Tang, D.Y. and Zhong, R., 2023. The effects of mandatory ESG disclosure around the world. *European Corporate Governance Institute–Finance Working Paper 754*

Part 2: Financial performance implications of ESG

Meta studies

Atz, U., Van Holt, T., Liu, Z.Z. and Bruno, C.C., 2023. Does sustainability generate better financial performance? review, meta-analysis, and propositions. *Journal of Sustainable Finance & Investment*, 13(1), pp.802-825.

Friede, G., Busch, T. and Bassen, A., 2015. ESG and financial performance: aggregated evidence from more than 2000 empirical studies. *Journal of sustainable finance & investment*, 5(4), pp.210-233.

Regular papers

Albuquerque, R., Koskinen, Y. and Zhang, C., 2019. Corporate social responsibility and firm risk: Theory and empirical evidence. *Management Science*, 65(10), pp.4451-4469.

Baker, M., Egan, M.L. and Sarkar, S.K., 2022. How Do Investors Value ESG? (No. w30708). National Bureau of Economic Research.

Berg, F., Koelbel, J.F., Pavlova, A. and Rigobon, R., 2022. *ESG confusion and stock returns: Tackling the problem of noise* (No. w30562). National Bureau of Economic Research.

Cuñat, V., Gine, M. and Guadalupe, M., 2012. The vote is cast: The effect of corporate governance on shareholder value. *The journal of finance*, 67(5), pp.1943-1977.

(*) Derrien, F., Krueger, P., Landier, A. and Yao, T., 2022. ESG news, future cash flows, and firm value. Swiss finance institute research paper, (21-84).

Dunn, J., Fitzgibbons, S. and Pomorski, L., 2018. Assessing risk through environmental, social and governance exposures. *Journal of Investment Management*, 16(1), pp.4-17.

Edmans, A., 2011. Does the stock market fully value intangibles? Employee satisfaction and equity prices. *Journal of Financial economics*, 101(3), pp.621-640.

(*) Flammer, C., 2015. Does corporate social responsibility lead to superior financial performance? A regression discontinuity approach. Management science, 61(11), pp.2549-2568.

Hong, H. and Kacperczyk, M., 2009. The price of sin: The effects of social norms on markets. *Journal of financial economics*, 93(1), pp.15-36.

Hoepner, A.G., Oikonomou, I., Sautner, Z., Starks, L.T. and Zhou, X., 2018. ESG shareholder engagement and downside risk.

Krueger, P., Metzger, D. and Wu, J., 2023. The sustainability wage gap. Swedish House of Finance Research Paper, (20-14), pp.21-17.

Krüger, P., 2015. Corporate goodness and shareholder wealth. *Journal of financial economics*, 115(2), pp.304-329.

Lins, K.V., Servaes, H. and Tamayo, A., 2017. Social capital, trust, and firm performance: The value of corporate social responsibility during the financial crisis. *the Journal of Finance*, 72(4), pp.1785-1824.

(*) Pástor, L., Stambaugh, R.F. and Taylor, L.A., 2021. Sustainable investing in equilibrium. Journal of Financial Economics, 142(2), pp.550-571.

(*) Pástor, L., Stambaugh, R.F. and Taylor, L.A., 2022. Dissecting green returns. Journal of Financial Economics, 146(2), pp.403-424.

(*) Pedersen, L.H., Fitzgibbons, S. and Pomorski, L., 2021. Responsible investing: The ESG-efficient frontier. Journal of Financial Economics, 142(2), pp.572-597.

Servaes, H. and Tamayo, A., 2013. The impact of corporate social responsibility on firm value: The role of customer awareness. Management science, 59(5), pp.1045-1061.

Van der Beck, P., 2021. Flow-driven ESG returns. Swiss Finance Institute Research Paper, (21-71).

Part 3: Institutional investor behavior, greenwashing, and real impact of sustainable finance

Institutional investors and ESG

Barko, T., Cremers, M. and Renneboog, L., 2021. Shareholder engagement on environmental, social, and governance performance. *Journal of Business Ethics*, pp.1-36.

Bolton, P., Li, T., Ravina, E. and Rosenthal, H., 2020. Investor ideology. *Journal of Financial Economics*, 137(2), pp.320-352.

Chen, T., Dong, H. and Lin, C., 2020. Institutional shareholders and corporate social responsibility. *Journal of Financial Economics*, 135(2), pp.483-504.

He, Y., Kahraman, B. and Lowry, M., 2021. ES risks and shareholder voice. *Review of Financial Studies*, forthcoming.

(*) Dimson, E., Karakaş, O. and Li, X., 2015. Active ownership. *The Review of Financial Studies*, 28(12), pp.3225-3268.

Dimson, E., Karakaş, O. and Li, X., 2021. Coordinated engagements. *European Corporate Governance Institute–Finance Working Paper*, (721).

(*) Dyck, A., Lins, K.V., Roth, L. and Wagner, H.F., 2019. Do institutional investors drive corporate social responsibility? International evidence. *Journal of financial economics*, 131(3), pp.693-714.

Gloßner, S., 2019. Investor horizons, long-term blockholders, and corporate social responsibility. *Journal of Banking & Finance*, 103, pp.78-97.

Starks, L.T., Venkat, P. and Zhu, Q., 2017. Corporate ESG profiles and investor horizons. *Available at SSRN 3049943*.

Gibson Brandon, R and P Krueger (2023), *The Role of Institutional Investors as Responsible Investors*, LTI Report 2, **Chapters 1 and 2**, CEPR Press. (Available here: <https://cepr.org/voxeu/columns/institutional-investors-and-responsible-investing>)

Greenwashing

(*) Andrikogiannopoulou, A., Krueger, P., Mitali, S.F. and Papakonstantinou, F., 2023. Discretionary Information in ESG Investing: A Text Analysis of Mutual Fund Prospectuses..

(*) Gibson Brandon, R., Glossner, S., Krueger, P., Matos, P. and Steffen, T., 2022. Do responsible investors invest responsibly?. *Review of Finance*, 26(6), pp.1389-1432.

(*) Gibson Brandon, R and P Krueger (2023), *The Role of Institutional Investors as Responsible Investors*, LTI Report 2, **Chapter 3**, CEPR Press. (Available here: <https://cepr.org/voxeu/columns/institutional-investors-and-responsible-investing>)

Kim, S. and Yoon, A., 2023. Analyzing active fund managers' commitment to ESG: Evidence from the United Nations Principles for Responsible Investment. *Management Science*, 69(2), pp.741-758.

Impact of ESG investors

(*) Heath, D., Macciocchi, D., Michaely, R. and Ringgenberg, M.C., 2023. Does socially responsible investing change firm behavior?. Review of Finance forthcoming

Kölbel, J.F., Heeb, F., Paetzold, F. and Busch, T., 2020. Can sustainable investing save the world? Reviewing the mechanisms of investor impact. *Organization & Environment*, 33(4), pp.554-574.

Heinkel, R., Kraus, A. and Zechner, J., 2001. The effect of green investment on corporate behavior. *Journal of financial and quantitative analysis*, 36(4), pp.431-449.

Oehmke, M. and Opp, M.M., 2022. A theory of socially responsible investment. Swedish House of Finance Research Paper, (20-2).

Part 4: Climate finance and carbon issues

Surveys and “big picture” papers

Giglio, S., Kelly, B. and Stroebe, J., 2021. Climate finance. *Annual Review of Financial Economics*, 13, pp.15-36.

https://pages.stern.nyu.edu/~jstroebe/PDF/GKS_ClimateFinance_ARFE.pdf

Gasparini, M. and Tufano, P., 2023. The evolving academic field of climate finance. Available at SSRN 4354507.

Hong, H., Karolyi, G.A. and Scheinkman, J.A., 2020. Climate finance. *The Review of Financial Studies*, 33(3), pp.1011-1023.

Stroebe, J. and Wurgler, J., 2021. What do you think about climate finance?. *Journal of Financial Economics*, 142(2), pp.487-498.

Regular papers

Alekseev, G., Giglio, S., Maingi, Q., Selgrad, J. and Stroebe, J., 2022. *A quantity-based approach to constructing climate risk hedge portfolios* (No. w30703). National Bureau of Economic Research.

Atta-Darkua, V., Glossner, S., Krueger, P. and Matos, P., 2023. Decarbonizing institutional investor portfolios: Helping to green the planet or just greening your portfolio. Working paper.

Busch, T., Johnson, M. and Pioch, T., 2022. Corporate carbon performance data: Quo vadis?. *Journal of Industrial Ecology*, 26(1), pp.350-363.

(*) Bolton, P. and Kacperczyk, M., 2021. Do investors care about carbon risk?. *Journal of financial economics*, 142(2), pp.517-549.

Ilhan, E., Sautner, Z. and Vilkov, G., 2021. Carbon tail risk. *The Review of Financial Studies*, 34(3), pp.1540-1571.

(*) Ilhan, E., Krueger, P., Sautner, Z. and Starks, L.T., 2023. Climate risk disclosure and institutional investors. *The Review of Financial Studies*, 36(7), pp.2617-2650.

Sautner, Z., Van Lent, L., Vilkov, G. and Zhang, R., 2023. Firm-level climate change exposure. *The Journal of Finance*, 78(3), pp.1449-1498.

(*) Krueger, P., Sautner, Z. and Starks, L.T., 2020. The importance of climate risks for institutional investors. *The Review of Financial Studies*, 33(3), pp.1067-1111.

Part 5: ESG in other asset classes (e.g., fixed income, private equity, or real estate)

Private Equity

(*) Barber, B.M., Morse, A. and Yasuda, A., 2021. Impact investing. Journal of Financial Economics, 139(1), pp.162-185.

Fixed Income

Amiraslani, H., Lins, K.V., Servaes, H. and Tamayo, A., 2022. Trust, social capital, and the bond market benefits of ESG performance. *Review of Accounting Studies*, pp.1-42.

Baker, M., Bergstresser, D., Serafeim, G. and Wurgler, J., 2022. The pricing and ownership of US green bonds. *Annual Review of Financial Economics*, 14, pp.415-437.

Berrada, T., Engelhardt, L., Gibson, R. and Krueger, P., 2022. The economics of sustainability linked bonds. *Swiss Finance Institute Research Paper*, (22-26).

(*) Flammer, C., 2021. Corporate green bonds. Journal of financial economics, 142(2), pp.499-516.

Tang, D.Y. and Zhang, Y., 2020. Do shareholders benefit from green bonds?. *Journal of Corporate Finance*, 61, p.101427.

Zerbib, O.D., 2019. The effect of pro-environmental preferences on bond prices: Evidence from green bonds. *Journal of banking & finance*, 98, pp.39-60.

Real Estate

Eichholtz, P., Kok, N. and Quigley, J.M., 2010. Doing well by doing good? Green office buildings. *American Economic Review*, 100(5), pp.2492-2509.

Eichholtz, P., Kok, N. and Quigley, J.M., 2013. The economics of green building. *Review of Economics and Statistics*, 95(1), pp.50-63.

Part 6: Current “hot” topics

Anti ESG

Garrett, D., & Ivanov, I. (2022). Gas, guns, and governments: Financial costs of anti-esg policies. Available https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4123366

Rajgopal, S., Srivastava, A. and Zhao, R., 2023. Do Political Anti-ESG Sanctions Have Any Economic Substance? The Case of Texas Law Mandating Divestment from ESG Asset Management Companies.

Voice and exit and their effects on firms’ actions and cost of capital.

Becht, M., Pajuste, A. and Toniolo, A., 2023. Voice through divestment. European Corporate Governance Institute–Finance Working Paper, (900).

Berk, J. and Van Binsbergen, J.H., 2021. The impact of impact investing.

Broccardo, E., Hart, O. and Zingales, L., 2022. Exit versus voice. *Journal of Political Economy*, 130(12), pp.3101-3145.

Edmans, A., Levit, D. and Schneemeier, J., 2022. Socially responsible divestment. European Corporate Governance Institute–Finance Working Paper, (823).

Gantchev, N., Giannetti, M. and Li, R., 2022. Does money talk? Divestitures and corporate environmental and social policies. *Review of Finance*, 26(6), pp.1469-1508.

Hartzmark, S.M. and Shue, K., 2023. Counterproductive impact investing: The impact elasticity of brown and green firms. Available at SSRN 4359282.

Gormsen, N.J., Huber, K. and Oh, S., 2023. Climate capitalists. Available at SSRN.

Green, D. and Vallee, B., 2023. Can Finance Save the World? Measurement and Effects of Bank Coal Exit Policies. Measurement and Effects of Bank Coal Exit Policies (June 16, 2023).

Hartzmark, S.M. and Shue, K., 2023. Counterproductive impact investing: The impact elasticity of brown and green firms. Available at SSRN 4359282.

Landier, A. and Lovo, S., 2020. ESG investing: How to optimize impact?. HEC Paris Research Paper No. FIN-2020-1363.

Zerbib, O.D., 2022. A sustainable capital asset pricing model (S-CAPM): Evidence from environmental integration and sin stock exclusion. *Review of Finance*, 26(6), pp.1345-1388.

Regulation

Lambillon, A.P. and Chesney, M., 2023. How green is ‘dark green’? An analysis of SFDR Article 9 funds. An analysis of SFDR Article, 9. Available here https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4366889