Ph.D. Course at Aarhus University

The social value of financial-market information

Instructor: Philip Bond (University of Washington)

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Office hours: By appointment (schedule via email)

Number of ECTS: 5

Description and Objectives

This PhD course examines financial markets as mechanisms for aggregating dispersed information, starting from the basic question of the economic value of that aggregation. Rather than treating price efficiency as an end in itself, the course studies how informational efficiency interacts with risk sharing, how firms and governments can use market prices when making real decisions, and when the information embedded in prices improves welfare. The course concludes by examining whether atomistic agents internalize negative externalities stemming from their actions in large markets.

Course Format

The course consists of three intensive teaching days with five two-hour lecture sessions, followed by a written project and a mandatory online oral presentation/discussion. The lectures are based on specific theoretical papers on the social value of information produced by financial markets. The aim is to provide course participants with an understanding of the key themes and questions associated with the topic, to prepare them to understand research in this area, and to enable them to pursue further research, either through empirical projects that build on the theoretical foundations or by further advancing the theory.

Expected Workload

The course corresponds to 5 ECTS, equivalent to an expected total workload of approximately 125-150 hours. The workload is distributed across lectures, preparation, reading, independent project work, and the final oral component as follows:

Activity	Estimated workload
Lecture participation: five two-hour sessions over three teaching days	10 hours
Preparation for lectures and reading of required papers	50-60 hours
Independent written project, including formulation of research question, reading, analysis, and writing	55-70 hours
Preparation for and participation in final online oral presentation/discussion	10-15 hours

Total expected workload: approximately 125-150 hours.

Course Requirements

For course participants to receive credit for the course, they must submit the start of an independent project related to the course theme. The project should normally be approximately 10-15 standard pages, excluding references and appendices. The theme is broad, and there is considerable flexibility in how to approach the project. One possible approach is to take one of the papers from the reading list and extend it by introducing a perturbation that is interesting, at least a priori. Students may use generative AI to facilitate this exercise, but they are responsible for checking the work carefully and for being able to explain and defend the submitted material.

In addition to the written submission, participants must take part in a short online oral presentation/discussion of their project as an integrated part of the course assessment. The oral component will be organized by the course coordinator as a scheduled online session shortly after the written deadline. The format is a brief presentation followed by discussion with the instructor. The purpose is to give students practice in communicating their ideas clearly and to verify their understanding of the submitted project. Students may use up to three slides; this is a hard limit.

Assessment is pass/fail and is based on participation in the teaching sessions, the written project submission, and the oral presentation/discussion. The deadline for submitting the written project is three weeks after the course's last class, i.e., Friday, August 28. Further details regarding the online oral session will be announced at the start of the course.

Course Schedule

The course runs over three teaching days, followed by a written project period and a final online oral presentation/discussion. The papers that are tentatively planned for the course are listed, along with other related papers, in the Reading List below. The definitive set of papers will be announced a few days before the start of the course.

Wed, August 5, 2:00pm-4:00pm: Foundations: Aggregation of Information; Risk sharing in markets

Thurs, August 6, 10:00am-12:00pm: Using information from markets to make decisions

Thurs, August 6, 2:00pm-4:00pm: Using information from markets to make decisions

Friday, August 7, 10:00am-12:00pm: Aggregation and welfare

Friday, August 7, 2:00pm-4:00pm: Market power and social responsibility

Friday, August 28: Deadline for written project submission

Shortly after August 28: Final online oral presentation/discussion (scheduled by the course coordinator and announced at course start)

Course Materials

Lecture notes and required papers will be distributed to participants.

Reading List

The following is a list of readings for each of the course's topics.

August 5

Diamond, D. W., and R. E. Verrecchia. 1981. Information aggregation in a noisy rational expectations economy. Journal of Financial Economics 9: 221–235.

Schlee, E. E. 2001. The value of information in efficient risk-sharing arrangements. American Economic Review 91: 509–524.

Hellwig, M. F. 1980. On the aggregation of information in competitive markets. Journal of Economic Theory 22: 477–498.

Hirshleifer, J. 1971. The private and social value of information and the reward to inventive activity. American Economic Review 61: 561–574.

August 6

Bond, P., I. Goldstein, and E. S. Prescott. 2010. Market-based corrective actions. Review of Financial Studies 23(2): 781–820.

Bernanke, B. S., and M. Woodford. 1997. Inflation forecasts and monetary policy. Journal of Money, Credit and Banking 29(4, Part 2): 653–684.

Bond, P., and I. Goldstein. 2015. Government intervention and information aggregation by prices. Journal of Finance 70: 2777–2812.

Banerjee, S., B. Breon-Drish, and K. Smith. 2025. Feedback effects and systematic risk exposures. Journal of Finance 80(2): 981-1028.

Bresnahan, T., P. Milgrom, and J. Paul. 1992. The real output of the stock exchange. In Output Measurement in the Service Sectors, ed. Z. Griliches, 195–216. Chicago: University of Chicago Press.

Bond, P., I. Goldstein, and A. Edmans. 2012. The real effects of financial markets. Annual Review of Financial Economics 4: 339–360.

Paul, J. M. 1992. On the efficiency of stock-based compensation. Review of Financial Studies 5(3): 471–502.

Axelson, U., and I. Makarov. 2023. Informational black holes in financial markets. Journal of Finance 78(6): 3099–3140.

August 7

Bond, P., and D. García. 2022. The equilibrium consequences of indexing. Review of Financial Studies 35(7): 3175–3230.

Kaufmann, M., P. André, and B. Kőszegi. 2024. Understanding markets with socially responsible consumers. Quarterly Journal of Economics 139(3): 1989–2035.

Diamond, D. W. 1985. Optimal release of information by firms. Journal of Finance 40: 1071–1094.

Verrecchia, R. E. 1982. Information acquisition in a noisy rational expectations economy. Econometrica 50: 1415–1430.

Kawakami, K. 2017. Welfare consequences of information aggregation and optimal market size. American Economic Journal: Microeconomics 9: 303–323.

Pavan, A., S. Sundaresan, and X. Vives. 2026. (In)efficiency in information acquisition and aggregation through prices. Working paper.

Kurlat, P., and L. Veldkamp. 2015. Should we regulate financial information? Journal of Economic Theory 158: 697–720.