Ehsan Mahdikhani

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Personal and Academic Information

University:	Stockholm School of Economics
Department/Program:	Finance
Year Entered PhD Program:	2020
Expected Graduation:	2026
Faculty Recommender:	Prof. Per Strömberg, Stockholm School of Economics

Research Interests

- Innovation, Private Equity, Entrepreneurial Finance, Agency Conflicts

Research Projects

The Agency Cost of Debt and Firm's Innovation
Supervisors: Prof. Per Strömberg and Prof. Ramin Baghai
This paper examines the impact of the agency cost of debt on a firm's innovation activities, using debtholders who also hold equity as a proxy. I find that firms with reduced agency costs undertake fewer innovative projects, yet receive more future citations for their patents and have higher market values for their patents, likely due to reduced business risk and internal fund reallocation.

Moral Hazard and Exploration in Private Equity (Job Market Paper)
Supervisors: Prof. Per Strömberg and Prof. Ramin Baghai
I analyze the factors shaping private equity firms' portfolio allocation across industries using a dynamic agency model. The model captures the trade-off between exploration and exploitation while considering moral hazard and learning effects. The findings suggest that high exploration costs discourage diversification, while moral hazard reduces both exploration incentives and investment intensity, offering insights into PE firms' strategic choices and capital allocation efficiency.

Motivation for Attending ERBC

Attending the NBER Entrepreneurship Research Boot Camp is an invaluable opportunity for me to deepen my understanding of the literature surrounding innovation and entrepreneurial finance, which is crucial for positioning my job market paper within the current academic debate. My research has already benefited from early insights, and my supervisor has strongly encouraged my participation, believing that it will significantly enhance my work and academic profile. Moreover, the chance to obtain direct feedback from leading scholars and to network with peers is instrumental for refining my research and preparing for the job market next year.

I also wish to note that while the NBER covers travel and lodging for the boot camp, I am fully prepared to contribute to any remaining expenses should partial funding be offered, given the substantial benefit this opportunity provides to my research and career.

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Education

2020-2026 **Ph.D. in Finance**, *Swedish House of Finance, Stockholm School of Economics*, Stockholm, Sweden

2020-2022 **M.Res. in Finance**, *Swedish House of Finance, Stockholm School of Economics*, Stockholm, Sweden

2017-2020 **M.Sc. in Business Administration (Finance)**, *Graduate School of Management and Economics, Sharif University of Technology*, Tehran, Iran

2013-2017 **B.Sc. in Industrial Engineering**, *Sharif University of Technology*, Tehran, Iran

Research Interests

- Corporate Finance
- Private Equity
- Innovation
- Entrepreneurial Finance

Working Papers

March 2022 - **The Agency Cost of Debt and Firm's Innovation**
Swedish House of Finance, Stockholm School of Economics, Stockholm, Sweden.
Under the Supervision of **Prof. Per Strömberg** and **Prof. Ramin Baghai**.
This paper examines the impact of the agency cost of debt on a firm's innovation activities, using debtholders who also hold equity as a proxy. It finds that firms with reduced agency costs undertake fewer innovative projects, yet receive more future citations for their patents and have higher market values for their patents, likely due to reduced business risk and internal fund reallocation.

January 2023 - **Breaching the Chinese Wall: Cross-Market Information Flow Following Financial Institution Mergers**, *Joint paper with Navid Akbaripour*
Swedish House of Finance, Stockholm School of Economics, Stockholm, Sweden.
Under the Supervision of **Prof. Per Strömberg** and **Prof. Ramin Baghai**.
This study examines the influence of institutional investors owning both debt and equity on post-merger equity market performance in financial institutions. It finds that such investors achieve higher returns, particularly when they access private information through mergers and when firms include private information covenants in their loan agreements post-merger.

Work in Progress

October 2024 - **Moral Hazard and Exploration in Private Equity**
Swedish House of Finance, Stockholm School of Economics, Stockholm, Sweden.
Under the Supervision of **Prof. Per Strömberg** and **Prof. Ramin Baghai**.
I analyze the factors shaping private equity firms' portfolio allocation across industries using a dynamic agency model. The model captures the trade-off between exploring new industries and investing in familiar sectors while considering moral hazard and learning effects. The findings suggest that high exploration costs discourage diversification, while moral hazard reduces both exploration incentives and investment intensity, offering insights into PE firms' strategic choices and capital allocation efficiency.

February 2023 - **Unlocking the Mystery: Do Banks Ease Credit Checks for Enhanced Social Signaling?**
Swedish House of Finance, Stockholm School of Economics, Stockholm, Sweden.
Under the Supervision of **Prof. Per Strömberg** and **Marieke Bos**.
In this study, while controlling for income and other demographic factors, I aim to examine whether the bank predominantly extends green car loans to individuals exhibiting signs of impulsiveness. Specifically, I seek to determine if there is a tendency for the bank to offer the so-called green car loan to individuals with lower credit score in comparison to those offered regular car loans.

References available upon request. Hyperlinks in the text provide access to some additional resources.

May 2024 - **How Fast Is Index-Based Investing Rising Outside the U.S.?**
Swedish House of Finance, Stockholm School of Economics, Stockholm, Sweden.
Joint work with **Bo Becker** and **Rüdiger Fahlenbrach**.

Research Experience

Since 2021 **Research Assistant** for Bo Becker and Adrien d'Avernas, Swedish House of Finance.

2020 **Forecasting Market Liquidity by Dynamic Arrival Rates of Informed and Uninformed Trades**, *Master's Thesis*
Graduate School of Management and Economics, Sharif University of Technology, Tehran, Iran.
Under the Supervision of **Prof. Farshad Haghpanah** and **Prof. Shiva Zamani**.
Proposing a dynamic econometric microstructure model of trading, and investigating how the dynamics of trade composition interact with the evolution of market liquidity, market depth, and order flow.

2019 **States of TSE and Momentum profits**
Testing overreaction theories of short-run momentum and long-run reversal in the cross section of stock return in the stock market across all stocks between 2000 and 2018. Results show that macroeconomic factors are unable to explain momentum profits.

Scholarship, Awards and Honors

Since 2022 BFI Ph.D. Program Scholarship, Swedish House of Finance.

2021 **Ranked 1^{st}** among all Economics and Finance Ph.D. students at SSE and SU in the joint Econometrics and Macroeconomics courses offered through SDPE.

2020 - 2022 Scholarship for PhD studies, study grant from Stockholm School of Economics.

2019 **Ranked 1^{st}** among Finance M.S. students of the Graduate School of Management and Economics, Sharif University of Technology.

2013 - 2019 B.Sc. and M.Sc. Scholarship, Sharif University of Technology..

2013 **Ranked 55^{th}** (Top 0.01%) in Iran's Nationwide University Entrance Examination among over 300,000 participants, Mathematics & Physics Major.

Teaching Experience (as Teaching Assistance)

Stockholm School of Economics

2024 & 2025	Corporate Finance in Global Firms (MSc)	Lecturer: Diogo Mendes
2024 & 2025	Investment Management (BSc)	Lecturer: Mehran Ebrahimian
2023	Topics in Asset Pricing (BSc)	Lecturer: Mehran Ebrahimian
2022	Advanced Investment (BSc)	Lecturer: Mehran Ebrahimian

Sharif University of Technology

2020	Risk Management (MSc)	Lecturer: Shiva Zamani
2020	Investment (MSc)	Lecturer: Farshad Haghpanah
2020	Corporate Finance (Executive MBA)	Lecturer: Masoud Talebian
2020	Financial Econometrics (MSc)	Lecturer: Ali Ebrahimnejad
2019	Financial Engineering (MSc)	Lecturer: Shiva Zamani
2019	Corporate Finance (MSc)	Lecturer: Masoud Talebian

Presentations

2024 Norwegian School of Economics
2023 Stockholm School of Economics
2022 Stockholm School of Economics

Language & Technical Skills

Languages	*English (Fluent), Swedish (Elementary), Persian (Native)*
Programming	*R, Python, Stata, MATLAB, LaTeX*

References available upon request. Hyperlinks in the text provide access to some additional resources.

Miscellaneous

2021-2022 Ph.D. representative, Swedish House of Finance

2017-2019 Student representative, Sharif University of Technology

References

- **Per Strömberg**, Professor of Finance, Swedish House of Finance, Stockholm School of Economics, Stockholm, Sweden. Email: per.stromberg@hhs.se
- **Ramin Baghai**, Associate Professor of Finance, Swedish House of Finance, Stockholm School of Economics, Stockholm, Sweden. Email: ramin.baghai@hhs.se
- **Mehran Ebrahimian**, Assistant Professor of Finance, Swedish House of Finance, Stockholm School of Economics, Stockholm, Sweden. Email: mehran.ebrahimian@hhs.se

References available upon request. Hyperlinks in the text provide access to some additional resources.

Research Essay

Ehsan Mahdikhani *NBER ERBC 2025 Applicant*

My current research centers on understanding the interplay between agency conflicts and firm innovation, with a specific focus on private equity and venture capital contexts. Under the supervision of Prof. Per Strömberg and Prof. Ramin Baghai, I have defined my research agenda in this area and developed two main research projects that I am deeply committed to pursuing.

The first paper, "*The Agency Cost of Debt and Firm's Innovation*", investigates how mitigating the agency cost of debt influences a firm's participation in innovative activities. While a substantial body of literature exists on the impact of corporate indebtedness on innovation, much of it has overlooked the specific influence of agency costs. By addressing this gap, I aim to isolate and understand how reducing debt-equity conflicts can shape corporate innovation strategies, thereby contributing to a deeper understanding of financial decision-making related to innovation. In this study, I employ a unique methodology that uses the presence of debtholders who also hold equity as a proxy for a mitigation of agency costs. The results reveal that firms with diminished agency costs tend to undertake fewer innovative projects compared to their counterparts. However, these firms experience a higher number of future citations for their patents, and the average market value of their patents is increased. I posit that this phenomenon is due to a reduction in business risk and the reallocation of internal funds, which together enhance the quality of innovation. This work has not only affirmed my commitment to empirical research in innovation but also emboldened me to challenge prevailing notions about the interplay between agency costs and innovation and how capital structure influences firms' investment strategies.

My potential job market paper, "*Moral Hazard and Exploration in Private Equity*", examines the strategic decision-making processes of private equity firms as they allocate their portfolios across industries. I develop a dynamic agency model that captures the trade-off between exploration and exploitation. The model incorporates moral hazard between general and limited partners, as well as learning from past investments, endogenizing both industry allocation and the capital commitments of limited partners. The analysis reveals that firms with high opportunity costs of exploration remain industry-specialized, while those that choose to explore must consider fund management costs, learning intensity, and exploration expenses. Moreover, moral hazard reduces both exploration incentives and subsequent investment intensity. These findings offer valuable insights into the strategic portfolio choices of private equity and venture capital firms, and I plan to extend the analysis with structural estimation to examine counterfactual and equilibrium effects as well as to quantify the social surplus lost in the VC industry due to moral hazard.

Attending the NBER Entrepreneurship Research Boot Camp would be invaluable for several reasons. First, it offers an intensive environment where I can immerse myself in the extensive literature on entrepreneurial finance, innovation, and private equity, helping me better position my work within the existing academic debate. Second, the opportunity to receive direct feedback from leading scholars in this field will provide critical insights to refine my theoretical framework and empirical analyses. Additionally, engaging with peers and established researchers in one location will expand my network and enhance my academic perspective, all of which are crucial as I approach the job market next year. Moreover, my supervisor has strongly encouraged my participation in this boot camp, recognizing its potential to significantly advance my research and career trajectory. I am also prepared to cover any remaining expenses should partial funding be available, as I view this opportunity as an essential investment in my academic and professional future.

Overall, the boot camp perfectly aligns with my research interests and career aspirations. It will not only deepen my understanding of private equity and entrepreneurial finance but also help sharpen the positioning of my job market paper and foster collaborative opportunities that are critical for a successful academic career.

Per Strömberg
SSE Centennial Professor of Finance and Private Equity
Swedish House of Finance, Stockholm School of Economics
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During 2025: BP Centennial Visiting Professor of Finance, London School of Economics.

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Stockholm February 9, 2025

To Whom It May Concern:

I am writing this letter to support Ehsan Mahdikhani's application to attend the NBER Entrepreneurship . Ehsan is a top PhD-student who has already produced some very interesting research in corporate finance. This course would be great for his continued professional development, as he is currently working on issues relating to entrepreneurial finance and venture capital (which I predict will be his job market paper).

Ehsan joined our PhD-student in Finance in the fall of 2020 after finishing his MSc from Sharif University of Technology and I am currently his supervisor. He has done very well in his coursework and is well along on his dissertation work. Ehsan's interests span corporate finance, entrepreneurial finance and household finance. He has finished three papers – one sole-authored and two joint – and is currently working on two promising projects in entrepreneurial finance and corporate governance. He should be ready to go on the academic job market this fall.

Ehsan's first paper takes an novel approach to an age-old issue in capital structure research. Following the seminar work of Jensen-Meckling and Myers from the 1970's, there is extensive literature on theories analyzing the incentive conflicts between creditors and shareholders in firms. Since equity receives the upside if the firm succeeds while creditors take the hit if it fails, shareholders and creditors have different preferences for risk. Despite being a well-known argument, empirical evidence on such conflicts is limited, primarily due to the problems of establishing causal relationships since capital structure decisions are endogenous to firm risk. Following a recent paper of Jiang et al, Ehsan takes advantage of the fact that investors sometimes who hold both equity and debt claims in the same firm, which should reduce the presence of incentive conflicts. To get around the endogeneity problems, Ehsan plans uses the merger of asset management firms – where one held equity and the other debt in a given company - as an exogenous shock that should affect risk-taking in their portfolio companies. Ehsan finds that firms with owners that also are lenders engage in fewer innovative projects relative to their peers, but at the same times receive 12% more total future citations to their patents, and that these patents have a higher market value. This suggests that a reduction in debt-equity conflicts can reduce the firm's business risk and lead to a more efficient allocation of the firm's internal funds.

His second paper is joint with his fellow PhD-student Navid Akbaripour and analyzes the effect of joint ownership of a company's debt and equity on investor information. The idea is that an investor who is a lender to a company will have access to information that stockholders do not have, which can be useful for making trading decisions in the company's equity. Using mergers between asset

management companies for exogenous changes in joint ownership of equity and debt, Navid and Ehsan show that joint holders are indeed able to generate a higher return on their trades compared to other shareholders. The result is very robust across different methodologies: it holds both when comparing the trading returns *between stocks* for a *given institution* (where they have some stocks where they also own debt and others where they do not); as well as when comparing the returns *between institutions* when trading a *given stock* (some of whom also own debt in the same firm and others who only own equity). They then provide additional evidence that points towards the information channel being the driver of excess stock trading returns. The excess returns for joint debtholders are significantly higher when the loans contain more informative covenants (e.g. stricter requirements to disclose financial information), and they also show that joint holders are more likely to require such covenants in loan agreements. Even more strikingly, they find that the informativeness of firm's public disclosures seem to go down after one of their larger institutional stockholders also becomes a holder of the firm's debt! I have followed this paper from inception to its current state, and some initial skepticism has turned into unequivocal enthusiasm. I think this is a fantastic paper which belongs in a good academic journal, and I have pushed Navid and Ehsan to submit it to the top finance conferences to get more feedback and exposure.

Navid and Ehsan are also working on a project in household finance together with my colleague Marieke Bos and Arna Olofsson at Copenhagen (who has a PhD from SSE Econ). Using unique transaction-level bank data from Iceland they study the introduction of green loan products and its impact on household behavior and finances. They consider the introduction of an interest rebate for buying a environmentally friendly cars, and find considerable effects on inducing households to acquire such cars, particularly among more affluent individuals residing in areas with more green political support. They then quantify the effects on gasoline usage, emissions, gasoline expenditures and electricity costs.

More recently, Ehsan has increasingly pursued his interest in entrepreneurial finance, and is currently working on a project aiming to understand the trade-offs between a specialized versus a generalist investments in VC. He has developed a theoretical model to understand these trade-offs, built on VC learning about industries over time and how this affects LP-GP relationships. The model has several predictions – building off the main prediction that in general, VC specialization should be increasing over time – and he is now working on taking this model to data.

Finally, Ehsan is working together with Bo Becker on a project that looks at the effect of index funds on M&A markets and the ability of acquirers to succeed in public bids.

In summary, Ehsan is a very promising PhD-student who already has several finished papers and projects that show great promise. I strongly recommend that you admit him to the course. Please let me know if you need any additional information.

Best regards,



Per Strömberg