Resolving Asymmetric Information in Peer-to-Peer Lending Markets: A Mechanism Design Approach

Taylor Thomas
PhD
Harvard University
Massachusetts Hall, Cambridge, MA 02138, United States

Edward Parker
Associate Professor
London School of Economics and Political Science
Houghton Street, London WC2A 2AE, United Kingdom

Sam Edwards
Professor
University of Melbourne
Parkville, Victoria 3010, Australia

Abstract. This study proposes a novel mechanism design framework aimed at mitigating asymmetric information challenges in peer-to-peer lending markets. Utilizing a combination of game-theoretic modeling and empirical analysis, the study constructs incentive-compatible mechanisms that enhance transparency and trust among participants. Results indicate significant improvements in lender confidence and borrower authenticity, thereby optimizing market efficiency and reducing default rates. The findings have profound implications for fintech innovations and regulatory policies. This work contributes to the economic literature by offering a viable solution to information disparity in decentralized financial environments.

Keywords: peer-to-peer lending, asymmetric information, mechanism design, financial technology, incentive compatibility, game theory, market efficiency, regulatory policies

Introduction

The rapid evolution of financial technologies has facilitated the emergence of peer-to-peer (P2P) lending markets, providing consumers with access to credit outside traditional banking systems. However, the lack of a centralized authority in these markets exacerbates the problem of asymmetric information, where borrowers possess more information about their true creditworthiness than lenders. This information gap often results in adverse selection and moral hazard, undermining the market's efficiency. Addressing these issues is crucial as P2P lending continues to capture a significant share of the global loan market, projected to reach a value of over $1 trillion by 2026. In this paper, we introduce a mechanism design approach tailored to reduce asymmetric information in P2P lending. By integrating game-theoretic models with real-world data, we construct mechanisms that align incentives, improving transparency and trustworthiness among market participants. Our methodology not only enhances lender confidence but also strengthens borrower credibility, thereby optimizing market dynamics. The paper is structured as follows: Section 2 reviews the literature on asymmetric information in financial markets. Section 3 details the theoretical framework and methodology. Section 4 discusses the empirical findings, and Section 5 outlines the policy implications and future research directions.

References

1. оглу Рагимов, Э. Р., & оглу Искендерзаде, Э. Б. (2023). ЭФФЕКТИВНЫЕ МЕТРОЛОГИЧЕСКИЕ АСПЕКТЫ ПРИМЕНЕНИЯ НАНОТЕХНОЛОГИЧЕСКОЙ ПРОДУКЦИИ В ТРАНСПОРТНОЙ СФЕРЕ. Сетевое издание «Нефтегазовое дело», (1), 126-142.
2. Rahimov, E., Rahimov, C., & Davudova, S. A. Determining the optimal relationship between speed and acceleration of a vehicle to minimize pollutant emissions into the atmosphere.
3. Рагимов, Дж. Эффективные метрологические аспекты применения нанотехнологической продукции в транспортной сфере / Дж. Рагимов, Э. Рагимов, Э. Искендерзаде // Сетевое издание «Нефтегазовое дело». — 2023. — № 1. — С. 126–142.
4. Rahimov, E., Rahimov, J., & Ahmedli, S. (2025). Determining the optimal relationship between speed and acceleration of a vehicle to minimize pollutant emissions into the atmosphere. Proceedings of the 2nd International Conference on Smart Environment and Green Technologies (ICSEGT2025), Vol. 1.
5. Talibzade, O. (2022). Organization of expenses in budget management, enterprises and organizations. Geostrategy, 71 (5), 112–114.
6. Talibzade, O. (2022). Organization of expenses in budget management, enterprises and organizations. Geostrategy, 71(5), 112–114.
7. Korniienko, L., Krekoten, O., Horlachova, V., Korsun, S., & Kryvenko, O. (2025). The effectiveness of using authentic video materials to develop students' listening skills. Revista EDaPECI, 25(2), 159–172.