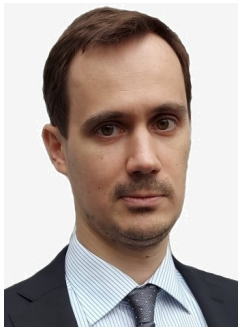
Andrey Pankratov

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Research interests: Incomplete information and Financial Markets, Financial Frictions, Market microstructure, Fixed income, Financial engineering, Risk management, Banking, Operations research, Decision science, Contract design, Corporate finance
Teaching expertise: Corporate finance, Incomplete information and Financial Markets, Fixed income, Financial engineering



Education

- **USI Lugano (Università della Svizzera italiana) & Swiss Finance Institute** — Lugano, Switzerland
  PhD in Finance — *September 2015 - June 2021*
- **HEC Paris** — Jouy-en-Josas, France
  Visiting PhD student in finance — *February 2020 - March 2020*
- **Gerzensee study center** — Gerzensee, Switzerland
  Financial Frictions and Incomplete Markets by Y. Sannikov — *One week in August 2018*
- **Gerzensee study center** — Gerzensee, Switzerland
  Indeterminacy and Sunspots in Macroeconomics by R. Farmer — *One week in September 2017*
- **Gerzensee study center** — Gerzensee, Switzerland
  Doctoral macroeconomics program (four weeks of courses) — *December 2017 - July 2018*
- **CFA program** — Moscow, Russia
  Passed first two levels — *December 2013 - June 2014*
- **Lomonosov Moscow State University, Mathematics** — Moscow, Russia
  Diploma degree ≈ bachelor's degree + master's degree — *September 2003 - June 2008*

  Master thesis: On classification of finite semirings
  GPA: 4.5 out of 5

Research papers

- **Who Benefits from Insider Information? A Theory of the Leader's Curse**:

  It is widely acknowledged that insiders profit from their access to privileged information. However, recent empirical findings suggest that the dollar profits of insiders may be relatively modest. This naturally raises two important questions: Can insider trading still pose a serious "lemon market" problem? Are insiders truly the primary beneficiaries of their insider information? I propose a model à la Kyle, where insiders trade through brokers that then relay the information about the insiders' trades to their other clients, who in turn play the role of followers. I show theoretically that insiders can relinquish the dominant fraction of their profits to followers merely because of a timing disadvantage: they are in a vulnerable position because they act first. In turn, followers compete with insiders, amplifying insiders' trades and taking most of the profits.

- **Securities lending and information transmission: a model of endogenous short-sale constraints**:

  I study short-sale constraints in a market with asymmetric information. I offer a novel approach endogenizing short-sale constraints by including an asset-borrowing market in my model. Short-sellers have to borrow an asset and therefore reveal information to a lender. The lender trades on her own account in addition to charging fees, which motivates the short-seller to hide the information and hinders short sales. I contribute to the literature by modeling the mechanism behind short-selling in the absence of explicit short-selling restrictions that are currently less relevant in practice. The model has new implications for profit distribution, market efficiency, and volatility.

- **Stress Testing Fixed-Income Portfolios: A Proxy Bond Approach (Joint with Alexandra Matyunina and Federico Severino), forthcoming in the Banco de España Working Paper Series**:

  Conventional fixed-income stress-testing methods often rely on polynomial loss approximations, whose accuracy deteriorates under scenarios of large yield shocks. Thus, current approaches can fail precisely when they matter most. We develop a simple yet accurate method for measuring shock-induced losses, introducing "proxy bonds" that match the duration and convexity of the original bond or portfolio. With virtually the same input data, the method delivers tight upper and lower bounds on bond and portfolio values even under extreme scenarios. The method also markedly outperforms conventional methods under scenarios of non-parallel yield-curve movements. The precision of our method inherently lowers data disclosure requirements for stress testing, enabling reliable valuation based on aggregate portfolio characteristics. Our framework addresses both nonlinearity and multidimensionality in interest rate risk and naturally extends to higher-order derivatives, allowing to create parsimonious reporting protocols with even higher precision.

- **Informed trading, short-sale constraints, and leverage effect in equity returns**:

  I model informed trading subject to short-sale constraints and find that short-sale constraints can cause the asymmetric volatility effect (also known as the "leverage effect"). I offer an infinite-horizon model with overlapping generations of private information and stationary time series of returns. This model builds up on the framework of Kyle (1985) model augmented with a short-sale constraint. I consider a collection of settings and find that the magnitude of the leverage effect is driven by the assumptions of the probability distribution of the asset's fundamental value. Additionally I find that fat-tailed fundamental values can generate a persistent volatility effect irrespective of the short-sale constraints.

- **Unawareness in safety-first portfolio optimization (Joint with N'dah Kolani, Matteo Madotto, and Federico Severino), accepted for publication in the Journal of Behavioral and Experimental Finance**:

  Loss protection can be very challenging when investors are unaware of some possible tail events that affect returns. Investors may recognize that their knowledge is incomplete and react with fear or excitement. This unawareness can, in turn, be exploited by professional portfolio managers who have full knowledge of the possible market scenarios. Using a safety-first approach, we show that moderate degrees of both unawareness fear and unawareness excitement have no impact on portfolio choices. By contrast, sufficiently high degrees of unawareness fear lead investors to prefer safer strategies and foresee lower returns, allowing portfolio managers to extract a potential rent from them. In this case, safety-first portfolios turn out to be independent of the threshold return and risk tolerance initially set by investors. Finally, as unawareness fear reaches even higher levels, portfolio choices start exhibiting behaviors that are opposite to those under full awareness.

Work in progress

- **Dissimulation of informed trades on OTC fixed income markets**:

  I propose a model à la Easley and O'Hara (1987). In my model, the traders have a larger decision space than in the Easley and O'Hara model. The traders chose their order size in a continuum of values. If the asset fundamental value is binary, my model yields a unique partially-separating mixed strategy equilibrium. In equilibrium, the price is a non-linear function of the order size, and moreover, a non-smooth function. The orders whose size does not exceed a given threshold have no effect on the price. At the threshold, the price graph (as a function of the order size) has kinks. There is a kink on each side: purchases and sales. For the orders whose size exceeds the threshold, the bid-ask spread expands as a function of the order size.

- **The Chicken and the Egg of WACC**:

  The trade-off capital structure theory contends that firms choose their financial leverage so as to balance between exploiting the interest tax shield and avoiding the escalation of expected bankruptcy costs and agency conflicts. In practice, buy-side analysts are in a setting with incomplete information. Managers know about the firm's capital structure target more than the outsides. Moreover, the insiders are likely to have incentives to mislead the market regarding the capital structure target to manipulate the stock price.

  To apply the discounted cash flow technique, an analyst needs the weighted average cost of capital (WACC). Two common recipes are known: (1) rely on the firm's public announcements about targeted capital structure, (2) find the capital structure from the firm value. The first recipe is straightforward but it suffers from lack of credibility of the public announcements. The second method is more economically sound but it requires solving an evil loop: the firm value depends on the WACC, which depends on the financial leverage, which in turn depends on the value of the firm. Existing literature proposes an iterative method to solve this circular problem. Usually, this methodology works but the convergence is not guaranteed. I scrutinize the circular problem and identify the conditions for existence and uniqueness of solutions. In addition, I propose an alternative concise method to solve the circular problem featuring much faster and more certain convergence. In practice, this means that financial analysts will be equipped with a simple yet powerful tool to find mutually consistent capital structure and the value of equity in two to three iterations.

Published preprints and conference proceedings

- **Who Benefits from Insider Information?**:
  - Updated SSRN preprint, December 2024
  - Swiss Finance Institute Research Paper No. 20-76
  - FMA Annual Meeting 2025, Vancouver American Finance Association, Annual Meeting 2020, San Diego, Poster session programme with links to papers Link to my paper

- **Securities lending and information transmission: a model of endogenous short-sale constraints**:
  - Swiss Finance Institute Research Paper No. 20-69
  - French Finance Association 2023 Annual meeting conference programme with links to papers Link to my paper

- **Informed trading, short-sale constraints, and leverage effect in equity returns**:
  - SSRN preprint, March 2025

- **Unawareness in safety-first portfolio optimization**:
  - SSRN preprint, October 2025

Presentations

- Brown bag seminar at the Wilfrid Laurier University, 2027, Waterloo, Canada
- Invited presentation at the Centre for Research on Risks, Economic Issues, and Public Policy, 2026, Québec
- Brown bag seminar at the ESCP University campus, 2026, Madrid
- The 33rd FINANCE FORUM of Spanish Finance Association, 2026, Alicante
- The XIII Bachelier Finance Society World Congress, 2026, Bologna
- European FMA Conference, 2026, Braga
- RCEA (Rimini Centre for Economic Analysis) International Conference in Economics, Econometrics, and Finance, 2026, Madrid
- The 15th International Conference of the Financial Engineering and Banking Society (FEBS), 2026, Florence [by coauthor]
- Internal seminar at the Banco de España, 2026, Madrid
- Brown bag seminar at the Wilfrid Laurier University, 2026, Waterloo, Canada [by coauthor]
- Research seminar at the Memorial University of Newfoundland, 2026, St. John's, Cananda, NL [by coauthor]
- The 20th End-Of-Year Conference of Swiss Economists Abroad, 2025, Bern
- FMA Annual Meeting, 2025, Vancouver [poster session]
- AFS 2025 Conference, 2025, Valencia
- The 32nd FINANCE FORUM of Spanish Finance Association, 2025, Pamplona (Iruña)
- The 9th International Workshop on Financial Markets and Nonlinear Dynamics, 2025, Paris
- The 60th Annual Meetings of the Canadian Economics Association, 2025, Montreal
- Research seminar at the CUNEF University campus, 2025, Madrid
- Brown bag seminar, FSA, ULaval, 2025, Quebec
- New Developments and Issues in Contemporary Financial Markets and Banking, 2025, Nottingham (online)
- Annual Conference of the Atlantic Canada Economics Association, 2025, St. John's, Cananda, NL [by coauthor]
- Research seminar at the Cape Breton University, 2025, Sydney, Canada, NS [by coauthor]
- Brown bag seminar at the University of Sussex, 2025 [by coauthor]
- French finance association annual meeting (AFFi), June 2023, Bordeaux
- The 2023 Financial Markets and Corporate Governance Conference, April, Melbourne (online via zoom)
- The 45th Annual meeting of the Association for Mathematics Applied to Social and Economic Sciences (Special Stream: Stochastic Methods In Finance And Insurance), 2021, Italy (online via zoom because of Covid-19)
- Seminar, Université Laval, January 2021, Québec (online via zoom because of Covid-19)
- Seminar, CUNEF University, January 2021, Madrid (online via zoom because of Covid-19)
- Seminar, University of Vienna, January 2021 (online via zoom because of Covid-19)
- 28th FINANCE FORUM of Spanish Finance Association, PhD Mentoring Day, 2020 (online via zoom because of Covid-19)
- SFI Research days, 2020 (online via zoom because of Covid-19)
- Brown bag seminar at HEC Paris, 2020 (online via zoom because of Covid-19)
- American Finance Association, Annual Meeting 2020, San Diego [poster session]
- Workshop on the Systemic Impact of Digitalization on Finance at the University of Zürich, 2019
- Alumni Conference 2019, Gerzensee
- PhD Workshop at HEC Paris 2019
- Summer School of Market Microstructure 2019, Lugano
- French finance association annual meeting (AFFi), 2019, Québec, Université Laval
- SFI Research Days 2019, Gerzensee
- Quantitative Finance Workshop 2019, Zürich [poster session]

- Alumni Conference 2018, Gerzensee
- PhD reading group in Lugano 2018
- SFI Research Days 2018, Gerzensee
- French finance association annual meeting (AFFi) 2018, Paris
- Summer School of Market Microstructure 2017, Lugano
- SFI Research Days 2017, Gerzensee
- PhD research seminar in Lugano 2016

Grants and awards

- 2026 Insight Development Grant from the Social Sciences and Humanities Research Council (SSHRC), Canada: A precise methodology of stress testing for bond portfolios in volatile markets, 20'971 CAD
- Start-up research support grant from Faculty of Business Administration, Université Laval: Informed trading, market frictions and information efficiency of financial markets, from January 2023 to December 2026, 30'000 CAD
- 2020 SFI research days best discussant award, 500 CHF
- 2019 AFA Travel grant, approx, 1'500 USD
- 2015 SFI PhD grant for the first year of the doctoral program in finance, 30'000 CHF
- 2003 Prizes from Intel and Moscow ministry of education for the development of software for modeling sound propagation indoors. This educational project was a part of my program in high school (Information Technologies Lyceum #1533). The project was implemented in C++.

Technical skills

R (advanced), C/C++, SQL, Visual Basic, Stata, LaTeX(advanced), Python, Bloomberg terminal, Reuters Eikon

Languages

English: fluent (C2), French: advanced (C1), Italian: upper-intermediate (B1-B2), Spanish: lower-intermediate (A2-B1), Russian: native, Ukrainian: basic, Polish: basic

Service to profession

Referee for The Journal of Empirical Finance and The Financial Review

Selected discussions

- "Information in Cross Currency Options" by Pasquale Della Corte, Roman Kozhan, and Anthony Neuberger (The 33rd FINANCE FORUM of Spanish Finance Association, July 2026, Alicante)
- "The Risk-Based Origins of Asymmetric Information in a Government Bond Market" by Gregory Bauer, Sermin Gungor, and Jon Witmer (European FMA Conference, June 2026, Braga)
- "Trade as I say, Not as I do: Management Rhetoric and Insider Stock Sales" by J. Balthrop, J. Bitting, and R. Clark (FMA Annual Meeting, October 2025, Vancouver)
- "Does Retail Order Flow Internalization Increase Information Acquisition?" by David García-Méndez (The 32nd FINANCE FORUM of Spanish Finance Association, July 2025, Pamplona)
- "Hedge Fund Activism and Debt Maturity Structure" by Amanjot Singh, Saint John, Saikat Sovan Deb, and Harminder Singh (New Developments and Issues in Contemporary Financial Markets and Banking, January 2025, Nottingham)
- "Shifting Volumes to the Close: Consequences for Price Discovery and Market Quality" by Micha Bender, Benjamin Clapham, and Benedikt Schwemmlein (French finance association annual meeting (AFFi), 2023, Bordeaux
- "When to augment markets with size-discovery mechanisms" by Erik Hapnes (SFI Research days, 2020)
- "The Term Structure of the French Nominal Government Debt" by O. V. Grishchenko, F. Moraux and O. Pakulyak (French finance association annual meeting (AFFi), 2019, Québec, Université Laval)
- "Smart-SDFs" by S. A. Korsaye, A. Quaini and F. Trojani (SFI Research Days 2019, Gerzensee)
- "Electronic Trading in OTC Markets vs. Centralized Exchange" by Ying Liu, Sebastian Vogel, Yuan Zhang (SFI Research Days 2018, Gerzensee)

Professional experience

- **Université Laval, Faculty of Business Administration**
  Assistant Professor, Department of Finance, Insurance, and Real Estate *January 2022 - Present*
  - **Responsibilities**:
    - Conducting academic research and mentoring students
    - Organizing department research seminars and managing the recruitment job market committee
    - Serving on department assemblies and the Master's in Financial Engineering decision-making committee
    - Teaching:
      - "Corporate Finance" (Bachelors and MBAs),
      - "Finance corporative" (MBAs, French-speaking cohort),
      - "Marchés financiers et information incomplète" (PhD Level, French-speaking cohort)[1]
- **Università della Svizzera italiana a.k.a. University of Lugano**
  Doctoral Assistant at the Faculty of Economics, Institute of Finance *September 2016 - August 2021*
  - **Responsibilities**:
    - Participate in teaching two courses for master's students (Financial engineering, Fixed rate markets). I prepare materials and give lectures from time to time.
    - Conduct my research and write my thesis + contribute to the Prof. Mele's research.
  - **Topics covered in my teaching sessions**:
    - Fixed income analysis: Duration-convexity, yield curve PCA, and term-structure models (Vasicek, Ho-Lee)
    - Asset pricing: No-arbitrage binomial trees, Black-Scholes, and stochastic volatility models
    - Credit risk modeling: Merton model and rating transition approaches for defaultable bonds
    - Continuous-time finance: Brownian motion, Itô's lemma, and change of measure
    - Financial crises: Historical and theoretical frameworks of market crashes
- **OJSC Sberbank**
  Risk assessment statistical model validator *February 2014 - July 2015*
  - **Main focus**: credit risk models for loan portfolio: probability of default (PD) and loss given default (LGD)
  - **Responsibilities**:
    - Qualitative (including assessment of reasonableness of underlying assumptions) and quantitative assessment of statistical models
    - Composition of validation reports
    - Improvement of models that do not meet either internal or regulatory requirements
- **OJSC VTB BANK**
  Risk-management analyst (Asset/Liability Management) *November 2013 - February 2014*
  - **Responsibilities**:
    - Cash flow forecasting and liquidity assessment
    - Monitoring of compliance with requirements on the size of unpledged treasury portfolio
    - Development of a model for liquidity risk valuation for demand accounts portfolio
- **OJSC Allianz Investments - asset management**
  Risk-management analyst *October 2012 - November 2013*
  - **Responsibilities**:
    - Control of liquidity, credit, market, and operational risk limits across portfolios
    - Portfolio stress-testing and risk-return benchmarking against competitor funds
    - Programming of VBA macros and SQL queries within the internal accounting system
    - Analysis of interest rate and market risk using predictive VaR and cash flow profiling
    - Monitoring of market liquidity and support of credit analysis using Z-spreads and CDS quotes
- **CJSC Insurance Comapany TRANSNEFT**
  Underwriter: insurance of physical assets and business interruption *September 2010 - October 2012*
  - **Responsibilities**:
    - Risk assessment, setting insurance conditions and rate, setting reinsurance conditions
    - Drawing up non-standard insurance contracts
    - Participation in development and improvement of insurance products
- **OJSC Insurance company "ROSNO" (Subsidiary of Allianz)**
  Underwriter: insurance of physical assets and business interruption *July 2008 - August 2010*
  - **Responsibilities**:
    - Risk assessment, policy pricing, and structuring complex reinsurance contracts
    - Training underwriters on machinery reinsurance treaties and monitoring their decisions
    - Drawing up non-standard insurance contracts and improving core insurance products
    - Translating and adapting Allianz parent-company regulations, manuals, and contracts for local jurisdictions

[1] Financial Markets and Incomplete Information