

Mathieu Fournier

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Current Appointments

Senior Lecturer | UNSW School of Banking and Finance | 10/2022 – Present

Director | KPMG | 10/2017 – Present

Canadian Derivative Institute Research Fellow | 09/2021 – Present

Past Appointments

Associate Professor | HEC Montreal | 05/2020 – 09/2022

Director of HEC Montréal Trading Lab | 09/2016 – 05/2020

Assistant Professor | HEC Montreal | 05/2014 – 05/2020

Quantitative Analyst | National Bank - FX Trading Desk | 2012

Teaching assistant | Rotman school of management | 2010 – 05/2014

Lecturer | Rotman school of management | Fall 2012

Lecturer | HEC Montréal | Fall 2008

Education

Ph.D. in Finance | Rotman School of Management – University of Toronto | 08/2009 – 11/2014

- **Dissertation:** Essays in Volatility Modeling and Option Pricing
- **Advisor:** Peter Christoffersen (Chair) | **Committee:** Redouane Elkamhi, Christian Gouriéroux, Chayawat Ornthanalai and Jason Wei

M.Sc. in Finance | HEC Montréal – Université de Montréal | 08/2007 – 08/2009

- **Thesis:** Option Replication with Transaction costs: An Empirical Comparison of Stochastic Volatility Models and Rebalancing Strategies
- **Advisors:** Pascal François and Lars Stentoft

B.Com. in Finance | John Molson School of Business – Concordia University | 08/2003 – 08/2007

Honors & Awards

HEC-McGill 2018 Winter Conference

- Best Discussion Award

Rotman School of Management

- Capital Market Graduate Fellowship PhD (2010, 2011, and 2012)

HEC Montréal

- Summa Cum Laude – Highest GPA of Graduating Class (2009)
- Best Finance M.Sc. Thesis Award (2009)
- Excellence Scholarship (2008)
- Graduate Honour List (2008)
- Great Distinction Scholarship: M.Sc. & PhD Program (2008)

John Molson School of Business

- Undergraduate Distinction (2007)
- Beta Gamma Sigma Member (2007)

Research Interests

- Empirical and theoretical asset pricing
- Financial modeling of asset returns, volatilities, and return dependence
- Predictable patterns in returns and trading strategy
- Derivatives and risk management
- Financial frictions and market incompleteness

Refereed Research Publications

- ***The factor structure in equity options*** (with P. Christoffersen & K. Jacobs)
• *The Review of Financial Studies, Volume 31, Issue 2, February 2018.*
- ***A Tractable framework for option pricing with dynamic market maker inventory and wealth*** (with K. Jacobs)
• *The Journal of Financial and Quantitative Analysis, 55(4), June 2020.*
- ***Beta risk in the cross-section of equities*** (with A. Bolorforoosh, P. Christoffersen, & C. Gouriéroux)
• *The Review of Financial Studies, Volume 33, Issue 9, September 2020.*
- ***Option-based estimation of co-skewness and co-kurtosis risk premia*** (with P. Christoffersen, K. Jacobs, & M. Karoui)
• *The Journal of Financial and Quantitative Analysis, Volume 56, Issue 1, February 2021.*

Working Papers

- ***The Low-minus-high portfolio and the factor zoo*** (with D. Andrei, & J. Cujean)
- ***Can a structural credit risk model explain option prices?*** (with H. Doshi, J. Ericsson, and S. B. Seo)
- ***Conditional risk premia in the cross-section of option returns*** (with K. Jacobs, and P. Orłowski)
- ***Understanding the comovement between corporate bonds and stocks: The role of default risk*** (with A. Dickerson, A. Jeanneret, and P. Mueller)

Seminars and Conference Proceedings

The factor structure in equity options (* denotes co-authors' presentations)

- European Finance Association, (Lugano, Suisse), 2014.
- Sixth Annual SoFiE Conference, (Singapore, Singapore), 2013*.
- University of Chicago, Booth, (Chicago, US), 2013*.
- New York University, NYU, (New York, US), 2013*.
- University of Maryland, (Washington, US), 2013*.
- University of Lausanne, EPFL, (Lausanne, Suisse), 2013*.
- Zurich University, (Zurich, Suisse), 2013*.
- Miami University, (Miami, US), 2013*.
- IFSID Conference on Structured Products and Derivatives (Montréal, Canada), 2012*.
- Northern Finance Association, (Niagara Falls, Canada), 2012.
- Optionmetrics Users Conference (New York, US), 2012.
- Getulio Vargas Foundation, (Rio de Janeiro, Brésil), 2012*.
- Laval University, (Québec, Canada), 2012.
- IFM2 Mathematical Finance Days (Montréal, Canada), 2011.

A Tractable framework for option pricing with dynamic market maker inventory and wealth

- American Finance Association, (San Francisco, US), 2016.
- Swiss Finance Institute HEC Lausanne, (Lausanne, Suisse), 2014.
- University of Toronto, Rotman, (Toronto, Canada), 2014.
- HEC Montréal, (Montréal, Canada), 2014.
- Bank of Canada, (Ottawa, Canada), 2014.
- Northern Finance Association, (Ottawa, Canada), 2014.
- IFM2 Mathematical Finance Days (Montréal, Canada), 2013.
- IFSID Conference on Structured Products and Derivatives (Montréal, Canada), 2013.

Option-based estimation of co-skewness and co-kurtosis risk premia

- American Finance Association, (Boston, US), 2015*.
- Seventh Annual SoFiE Conference, (Toronto, Canada), 2014*.
- Northern Finance Association, (Lake Louise Canada), 2014.
- Bank of Canada, (Ottawa, Canada), 2014*.

When the options market disagrees

- Northern Finance Association, (Mont-Tremblant, Canada), 2016.
- The Financial Intermediation Research Society FIRS, (Lisbon, Portugal), 2016*.
- Midwest Finance Association, (Atlanta, US), 2016*.
- IFSID Conference on Structured Products and Derivatives, (Montréal, Canada), 2015*.

Beta Risk in the Cross-Section of Equities

- UNSW (Sydney, Australia), 2019.
- Eurofidai (Paris, France), 2018.

- European Finance Association (Warsaw, Poland), 2018.
- 10th SoFiE Conference, (New York, US), 2017.
- Swiss Finance Institute, (Lausanne, Switzerland), 2017.
- OptionMetrics User Conference, (New York, US), 2016.
- University of Toronto - Rotman, (Toronto, Canada), 2016.
- McGill University, (Montréal, Canada), 2016.

The low-minus-high portfolio and the factor zoo

- American Finance Association, (San Diego, US), 2020*.
- Northern Finance Association, (Vancouver, Canada), 2019.
- Baruch College, (New York, US), 2019*.
- Bank of Canada, (Ottawa, Canada), 2019*.
- McGill University, (Montreal, Canada), 2019*.
- Tilburg University, (Tilburg, Nederland), 2019*.
- Deutsche Bundesbank, (Frankfurt, Germany), 2019*.
- Goethe University, (Frankfurt, Germany), 2019*.

Conditional risk premia in the cross-section of option returns

- Canadian Derivative Institute (CDI) Conference, (Montréal, Canada), 2021*.
- 13th SoFiE Conference, (San Diego, US), 2021.
- CREST École Polytechnique, (Paris, France), 2020.
- Kepos Capital, (New York City, US), 2020.
- HEC Montréal, (Montréal, Canada), 2020.
- McGill University, (Montréal, Canada), 2020.

Can a structural credit risk model explain option prices?

- Tsinghua Finance Workshop (Tsinghua, China) 2019*.
- McGill University (Montréal, Canada), 2019*.
- Tremblant Workshop (Mont-Tremblant), 2020*.
- ITAM/HEC Cancun Derivatives Workshop (Cancun, Mexico), 2020
- Virtual Derivative Workshop series, (Virtual), 2021*.
- University of Oklahoma, (Oklahoma, US), 2021*.
- Southern Methodist University, (Dallas, US), 2021*.
- Bloomberg conference, (US), 2022*.

Understanding the comovement between corporate bonds and stocks: The role of default

- Virtual Derivative Workshop, (Virtual), 2022.
- Northern Finance Association, (Virtual), 2021.
- 10th ITAM Finance conference, (Virtual), 2021.
- HEC Montréal (Montréal, Canada), 2020*.
- Warwick Business School (Warwick, UK), 2021*.
- Tremblant Workshop (Mont-Tremblant, Canada), 2020*.
- 37th International Conference of the French Finance Association (AFFI) (Nantes, France), 2021*.

- 10th ITAM Finance Conference (Mexico, Mexico), 2021.
- Northern Finance Association (Waterloo, Canada), 2021.

Conference Discussions

Why Does Options Market Information Predict Stock Returns? (D. Muravyev, and N. Pearson)

- Cancun Derivatives Workshop (Cancun, Mexico), 2022

What Interbank Rates Tell Us About Time-Varying Disaster Risk. (H. Doshi, and S. B. Seo).

- Northern Finance Association (Calgary, Canada), 2020

Higher-moment risk. (N. J. Gormsen & C. S. Jensen).

- American Finance Association, (San Diego, US), 2020.

Self-fulfilling asset prices. (A. Zentefis).

- HEC-McGill Winter Conference (Sunshine, Canada), 2019.

The pricing kernel is U-shaped. (T. Sichert).

- American Finance Association, (Atlanta, US), 2019.

Very Noisy Option Prices and Inferences Regarding Option Returns. (J. Duarte, C.S. Jones, J. L. Wang)

- Conference on Derivatives and Volatility (Chicago, US), 2019.

Market maker inventory, bid/ask spreads, and the computation of option implied risk measures. (B. Eraker & D. Osterrieder)

- HEC-McGill Winter Conference (Sunshine Village, Canada), 2018.
- Best Discussion Award.

Systematic liquidity and leverage. (B. Kahraman & H. Tookes)

- HEC-McGill Winter Conference (Ferne, Canada), 2017.

Hiding behind writing: Communication in the offering process of mortgage-backed securities.

(H. H. Zhang, F. Zhao & X. Zhao)

- 27th Conference on financial economics and accounting CFEA (Toronto, Canada), 2016.

The price of the smile and variance risk premia. (P. Gruber, C. Tebaldi & F. Trojani)

- European Finance Association (Oslo, Norway), 2016.

Why do option returns change sign from day to night? (D. Muravyev & N. Xuechuan)

- IFSID Conference on Structured Products and Derivatives, (Montréal, Canada), 2015.

The term structure of CDS spreads and sovereign credit risk. (P. Augustin)

- Northern Finance Association (Ottawa, Canada), 2014.

Mortgage risk and the yield curve. (A. Malkhozov, P. Mueller, A. Vedolin, & G. Venter)

- IFSID Conference on Structured Products and Derivatives, (Montréal, Canada), 2012.

Research Grants and Funding:

Canadian Derivative Institute Research Fellow

- CDI Subvention. Amount: 50 000 \$

Conditional risk premia in the cross-section of option returns: CDI Subvention

- CDI Subvention. Amount: 10 000 \$

Can a structural credit risk model explain option prices?

- CDI Subvention. Amount: 10 000 \$

Beta Risk in the Cross-Section of Equities

- CDI Subvention. Amount: 60 000 \$

The factor structure in equity options

- CDI Subvention. Amount: 40 000 \$

FQRSC – Canadian Young Researcher Establishment Grant

- Canadian Government Subvention. Amount: 39 600 \$

Refereeing Activities

The Journal of Finance, The Review of Financial Studies, Management Science, The Journal of Financial and Quantitative Analysis, Review of Finance, Review of Asset Pricing Studies, Journal of Financial Econometrics, Journal of Banking and Finance, Journal of Financial Markets, Journal of Business and Finance, Journal of Credit Risk, North American Journal of Economics and Finance.

Scientific Committees

CDI, EFA, & NFA conferences.

Other Information

Citizenships/Immigration Status: French & Canadian Citizenship, and Permanent Resident of Australia

Languages: French (Mother Tongue), English (Fluent)

Ph.D. Thesis Committee

- **Antoine Noel:** Derivatives, information transmission and informed trading.
- **Denada Ibrushi:** Three Empirical Essays on Asset Pricing.
- **Ali Abolghasemi:** Asset Prices in Granular Economies.
- **Ella Dias Saraiva-Patelli:** Essays on Investors' Expectations and Asset Prices.

M.Sc. Student Supervision

- **Aldriche-Chirlet Moussavou:** The modeling of convenience yield in the commodity market.
- **Yan Geng:** Equity risks and the cross-section of stock returns.
- **Gabriel Bédard:** Implementation of liquidity risk assessment measures for fixed income strategies.
- **Jihane Guennoui:** Implementation of monitoring analytics for private placement portfolios.
- **Dominic Bouchard:** The Pricing, replication, and hedging of TSX-VIX Futures using stochastic volatility models.
- **Rémi Galarneau-Vincent:** The pricing of the yield curve: US high yield corporate yield curve and the sovereign yield curve of emerging countries.
- **Tom Imbernon:** Application of the Heston model for pricing equity derivatives based on Monte-Carlo methods.
- **Alexis Gosselin Masson:** Risk factors and risk premia in equally weighted portfolios of emerging countries.
- **Zhu Yanfang:** Downside risk in Chinese ADRs – Co-supervised with Pascal François.