Dr. MARIO MILONE *July 2021*

mmilone@ucsd.edu
milonemario@gmail.com
+1 (858) 333 2510
www.mariomilone.org
Male – French

Professional Experience

Assistant Professor of Accounting, UCSD – Rady School of Management, *2019–Present*
Visiting Researcher, Imperial College Business School, *2018–2019*
Temporary Lecturer (ATER), Université Paris Dauphine, *2016–2018*
Research Assistant, Imperial College Business School *2015–2018*
Research Intern, Laboratoire de Recherche en Informatique (LRI), *2011, 5 months*
Software Designer Summer Intern, Tokyo *2010*

Education

Ph.D. in Finance, Université Paris Dauphine, *2018*
Dissertation Title: *"On the Costs and Externalities of Intermediation"*
Committee: Gilles Chemla (Advisor), Denis Gromb, Kathy Yuan, Christopher Hennessy, Jérôme Dugast

Visiting Student, Harvard University, *2013–2014*
Sponsor: Oliver Hart

M.Res. in Finance, Université Paris Dauphine, Ranked 1^{st}, *2012*
M.Res. in Artificial Intelligence, Université Paul Sabatier, Toulouse, Ranked 2^{nd}, *2011*
M.Eng. in Computer Science, Institut National des Sciences Appliquées (INSA), Toulouse *2011*
Exchange Student, Hong Kong University, *2009–2010*

Research Interests (Theory and Empirical)

Accounting, Managerial Accounting
Financial Intermediation, FinTech, Corporate Finance, Finance Theory
Big Data, Machine Learning, Structural Estimations, Empirical Finance

Working Papers

Using Machine Learning to Measure Conservatism (with Jeremy Bertomeu, Edwige Cheynel and Yifei Liao)

Machine learning can help improve empirical proxies of conservatism by detecting patterns consistent with the data beyond the standard linear regression techniques assumed in the prior literature. Using a neural network approach, we demonstrate that the fit of differential timeliness almost doubles incorporating non-linearities and interactions absent in prior literature. The model offers the promise of reducing noise in measurements and designs more powerful tests to assess theories of conservatism. We further show that the machine-learning measures exhibit (a) fewer economically anomalous observations, (b) have economic associations consistent with the literature, and (c) less unexplained year-over-year instability. The measure reveals expected trends toward a secular decline in conservatism in the US. In simulations, we show that, while existing measures perform honorably even in the presence of a complex data-generating process that they were not designed to capture, proxies based on machine learning methods are the most robust to misspecification, feature less attenuation bias, and reduce the incidence of false negatives and positives.

Assessing Transit Rents (with Katrin Tinn)

Trading frictions due to inevitable transportation costs are fundamentally different from those due to rent extraction by transit countries. We propose a theoretical and empirical methodology to disentangle these two types of costs and assess the presence and global magnitude of a hold-up problem. We construct a new measure of distance based on a global network of the most likely trade routes. While transportation costs make all countries worse off, rent extraction benefits transit countries. Further, we show that in general equilibrium, countries that are neither landlocked nor transit countries bear a large share of the cost of distortions due to rent extraction. While free trade agreements with transit countries do not appear to mitigate the problem, customs unions do.

Smart Lending

This paper shows that a data-based screening technology can increase the cost of financial intermediation. The use of data in the screening process reduces the acquisition of soft information by traditional lenders, which harms constrained borrowers further. Additionally, groups in which fewer borrowers were financed in the past are under-represented in the data, leading to a cross-sectional difference in screening efficiency. Screening is more efficient for borrowers with greater historical lending data. When traditional and technological lenders coexist, the borrowers about whom data can provide precise information raise funds from technological lenders while those with less informative historical data choose traditional lenders who can make up for the lack of hard data-based information by acquiring soft information. The intermediation cost is increased by the existence of technological lenders. I identify conditions under which traditional lenders benefit from restricting their own access to data-processing technology when competing against the technological lender.

Bank asset structure and the risk-taking implications of capital and liquidity requirements

In addition to risky loans, banks hold risky securities that provide uncertain future liquidity. This leads them to choose an asset structure with their desired correlation between liquidity and long term asset returns. We show that liquidity management and risk management concerns lead to a trade-off that creates an inverse relationship between security holdings and aggregate asset risk. Capital requirements mitigate liquidity risk in all future states of the world, thereby reducing the cost of liquidity risk and leading banks to increase aggregate asset risk. Liquidity requirements such as the Liquidity Coverage Ratio (LCR) affect high liquidity shock states and mitigate aggregate asset risk-taking. These results highlight the tension between capital and liquidity regulations in addressing the risk taking incentives of financial intermediaries.

Work in progress

When more information increases uncertainty: A new test of voluntary disclosure theory (with Edwige Cheynel)

Publications

Oliver Hart, La finance vue à travers la théorie des contrats incomplets (with Gilles Chemla)
publié dans Michel ALBOUY, Les Grands Auteurs en Finance, Editions EMS, 2017, p. 529 à 554

Continuous Rapid Action Value Estimates (with M.Sebag, O.Teytaud, A.Couetoux, H.Doghmen and M.Brendel) *3rd Asian Conference in Machine Learning (ACML), 2011*

Consistent Belief State Estimation, with Application to Mines (with O.Teytaud and A.Couetoux)
International Conference on Technologies and Applications of Artificial Intelligence, 2011

Q-Learning with Double Progressive Widening : Application to Robotics (with O.Teytaud and N.Sokolovska)
18th International Conference, ICONIP 2011

Seminars and Conferences

(‡ Presented, † Discussed)

† Dauphine PhD Workshop, *June 2021*

‡ INSEAD Seminar Series, *May 2021*

† FARS Midyear Meeting, *January 2021*

‡ Winter School 2020, Center for Development Economics and Ecnometric Society at the Delhi School of Economics, *December 2020*

† EFA Annual Meeting, *August 2020*

‡ Early Insights in Accounting Webinar, *June 2020*

‡ UCLA/USC/UCI/UCSD Joint Conference, *May 2020*

‡ TILEC-GovReg Workshop on Governance of Big Data and AI, *June 2019*
Tilburg University, Tilburg

† Future of Financial Information, *May 2019*
Stockholm School of Economics, Stocholm

† Oxford NuCamp-Saïd Macro-finance Conference, *April 2019*
University of Oxford, Oxford

‡ Second Toronto FinTech Conference, *March 2019*
Ivey Business School, Toronto

† Second Workshop on Corporate Governance, *June 2017*
ESCP Europe, Paris

† EFA Annual Meeting (43rd), *August 2016*
BI Norwegian Business School, Oslo

† 1st Microstructure Conference, *June 2016*
Université Paris Dauphine, Paris

† 9th Financial Risks International Forum, *March 2016*
Institut Louis Bachelier, Institut Europlace de Finance, Paris

† 8th Annual Hedge Fund Research Conference, *January 2016*
Université Paris Dauphine, Paris

‡ Seminar Presentation - DSF/TI PhD seminar serie, *June 2014*
Timbergen Institute - Amsterdam

Honors and Awards

Best Thesis in Corporate Finance
French Finance Association – 2019

FARS Outstanding Discussion Award
American Accounting Association – 2021

Excellence in Teaching Award
Master in Professional Accountincy, UCSD Rady school of Management – 2021

Teaching Experience

Managerial Accounting, *2019–Present*
Master in Professional Accountancy Program
UCSD, Rady School of Management

Teaching Assistant for Professor Gilles Chemla, *2015–2019*
Imperial College Business School
Advanced Corporate Finance (GMBA, FTMBA, WEMBA)
Mergers & Acquisitions (FTMBA, WEMBA)

Lecturer in Corporate Finance (Master level), *2013, 2016–2018*
Université Paris-Dauphine

Lecturer in Programming for Finance (Master level), *2013*
Université Paris-Dauphine
Topics: VBA

Lecturer in Computer Science (Undergraduate), *2012*
Université Paris-Dauphine
Topics: Programming

Teaching Interests
Accounting; Corporate Finance ; Financial Intermediation ; Investment
FinTech ; Big Data ; Machine Learning for Finance

Languages

Fluent in French, *(mother tongue)*
High proficiency in English, *(TOEIC (925/990), TOEFL IBT (114/120), GMAT (710/800))*
Spanish to be refreshed

Extra-curriculum activities

Graduated in Recorder and Music Theory, Conservatoire de Musique et de Danse du Tarn.
Advanced level in Ballet, Contemporary and Jazz Dance.