

# **Marc Dordal i Carreras**

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## **CURRENT AFFILIATIONS**

#### Assistant Professor of Economics

2021-Present

Hong Kong University of Science and Technology (HKUST)

# **EDUCATION**

EDUCATION	
PhD in Economics University of California – Berkeley Thesis advisor: Y. Gorodnichenko (UC Berkeley)	2021
MRes in Economics, Finance and Management	2013
Universitat Pompeu Fabra	2013
MSc in Economics and Finance	2012
Barcelona Graduate School of Economics	2012
BS Economics (LLICENCIATURA)	2011
Universitat Pompeu Fabra	2011
Universitat I Unipea Paura	

## PEER-REVIEWED JOURNAL PAPERS

- 1. M. Dordal i Carreras, O. Coibion, Y. Gorodnichenko, J. Wieland, "Infrequent but Long-Lived Zero Lower Bound Episodes and the Optimal Rate of Inflation", Annual Review of Economics Vol. 8, 497-520 (2016).
  - VOX EU, CEPR Policy Portal Article.

Countries rarely hit the zero lower bound (ZLB) on interest rates, but when they do, these episodes tend to be very long-lived. These two features are difficult to incorporate jointly into macroeconomic models using typical representations of shock processes. We introduce a regime-switching representation of risk

premium shocks into an otherwise standard New Keynesian model to generate a realistic distribution of ZLB durations. We discuss what different calibrations of this model imply for optimal inflation rates.

## **POLICY PAPERS**

1. <u>M. Dordal i Carreras</u>, HKUST SBM, HSBC, "e-HKD Pilot Programme", *Policy Papers*, (2023).

The e-HKD Pilot Programme is a key component of the HKMA's three-rail approach in paving the way for a possible implementation of a retail central bank digital currency (CBDC). The pilot programme enables HKMA's collaboration with the industry to examine innovative use cases and maximise Hong Kong's readiness for a potential e-HKD. The Hongkong and Shanghai Banking Corporation Limited (HSBC) was one of the institutions selected to participate. Collaborating with the Hong Kong University of Science and Technology (HKUST), HSBC sought to explore possible e-HKD every-day payment use cases, focusing on programmability as a value-add feature of digital currency as well as payment rail efficiency. HSBC and HKUST constructed a one-week pilot on the HKUST campus, which included 148 students and 5 merchants. See: e-HKD Pilot Programme Phase I Pilot Factsheet and e-HKD Pilot Programme Phase I Report.

# **WORKING PAPERS**

1. M. Dordal i Carreras, M. Hoelzlein, J. Orben, "Efficiency, Risk and the Gains from Trade in Interbank Markets", Working Paper, (2023).

We propose a model of the financial sector that captures complex relationships between highly heterogeneous agents in the market for loanable interbank funds and develops the bank-to-bank component of the macroeconomics financial transmission channel. Financial institutions trade funds due to heterogeneous capacity to provide liquidity, but trade is subject to frictions and uncertainty. The model provides a tractable framework to study the trade-off between efficiency and volatility in the financial sector, and its contribution to business cycles fluctuations.

2. S. Joo Lee, M. Dordal i Carreras, "Self-fulfilling Volatility, Risk-Premium, and Business Cycles", Working Paper, (2023).

This paper demonstrates that in macroeconomic models with nominal rigidities, a global solution exists that supports an alternate equilibrium where traditional Taylor rules give rise to self-fulfilling aggregate volatility and excess risk-premium. Within the rational expectations framework, we establish that individually optimal, path-dependent consumption strategies can generate endogenous volatility in a self-fulfilling manner, propelling the entire economy into crises (booms) characterized by elevated (reduced) aggregate risk. This outcome stems from the inability of traditional policy rules to target the expected return on aggregate wealth, which comprises not only the policy rate but also the market risk-premium; the latter ultimately determining the degree of households' intertemporal substitution. We then propose a "generalized" Taylor rule that targets both risk-premium and asset prices, and outline the necessary conditions to reestablish determinacy and attain what we term as the ultra-divine coincidence: the simultaneous stabilization of inflation, output gap, and the risk-premium.

3. S. Joo Lee, M. Dordal i Carreras, "A Unified Theory of the Term-Structure and Monetary Stabilization", Working Paper, (2023).

We develop a New-Keynesian framework that incorporates the term-structure of financial markets and emphasizes the active role of the government and central bank's balance sheet size and composition. We

demonstrate that financial market segmentation and the household's endogenous portfolio reallocation are crucial features for accurately understanding the effects of Large-Scale Asset Purchase (LSAP) programs. Our micro-foundation based on imperfect information about expected discounted asset returns readily accommodates varying degrees of market segmentation across asset classes and maturities, based on estimable asset demand elasticities. The central bank's bond purchases across maturities serve as a major determinant of the level and slope of the term-structure, and yield-curve-control (YCC) policies that actively manipulate long-term yields are highly effective in terms of stabilization during both normal times and at the ZLB. However, YCC policies also increase the durations of ZLB episodes, consequently placing the central bank in a position where the short-term rate becomes a less useful policy tool.

## **IN PROGRESS**

1. M. Dordal i Carreras, C. Xiang, "Gender Gap, Structural Change and Female Comparative Advantage: A Quantitative Analysis of China", *In Progress*, (2023).

This paper presents a theoretical framework to reconcile the declining female labor force participation (FLFP) rate and the diverging gender gap in workforce participation in China with the expansion of the service sector and with the increasing female comparative advantage in the market sectors. We argue that two factors jointly shape the trajectory of FLFP rate and gender gap in labor force participation: (i) the interaction between structural change and female comparative advantage dynamics, and (ii) the change of female comparative advantage in the market sectors relative to home production. The framework predicts that FLFP rate drops when women have comparative advantage in diminishing sectors and vice versa, and that a rise in female comparative advantage in the market sectors narrows gender differences in labor force participation.

- 2. <u>M. Dordal i Carreras</u>, S. Jin, K. Kawaguchi, E. L.-C. Lai, P. Wang, "Evaluating CBDC's Impact on Payment Method Usage", *In Progress*, (2023).
- 3. M. Dordal i Carreras, O. Coibion, Y. Gorodnichenko, C. Howes, "What Do We Learn From Reading Every FOMC Transcript?", *In Progress*, (2023).
- 4. <u>M. Dordal i Carreras</u>, S. Joo Lee, A. Carruthers, "Empirical Estimation of Bond Market Segmentation", *In Progress*, (2023).
- 5. M. Dordal i Carreras, S. Joo Lee, "A Higher-Order Forward Guidance", In Progress, (2023).

### **RESTING WORK**

1. M. Dordal i Carreras, S. Joo Lee, "The Spatial Transmission of US Banking Panics", Resting Work, (2021).

### RESEARCH GRANTS

#### Principal Investigator

• Research Grants Council, Early Career Scheme (ECS), Project #: 26603022, "Fed "Influencers": How individual characteristics and charisma affect FOMC policy decisions", Funding: HK\$854,550, Date: 2023-2025.

## **CONFERENCES, EVENTS & SEMINARS ORGANIZED**

- Speaker, "East Asia Macroeconomics Conference", CUHK, (2023).
- Speaker, "Asia Meeting of the Econometric Society AMES Singapore", NTU, (2023).
- Co-organizer, "HKUST/Jinan Joint Macro Workshop, 6th and 7th editions", *HKUST and Jinan University*, (2022-2024).
- Discussant, "HKUST/Jinan Joint Macro Workshop, 5th edition", HKUST and Jinan University, (2021).
- Co-organizer, "Cryptocurrencies, Blockchains and the Digital Economy", HKUST, Center for Economic Policy, (2022).
- Co-organizer, "Central Bank Digital Currencies: Implementation, Applications and Challenges", HKUST, Center for Economic Policy, (2022).

## **REFEREE**

Journal of Monetary Economics; The Review of Economics and Statistics; Pacific Economic Review.

# PH.D. STUDENT SUPERVISION

- Chen (Cassie) XIANG (main supervisor), webpage.
- Zhenghua QI (co-supervisor), webpage.

## PH.D. THESIS COMMITTEE MEMBER

Xiang SHI (job market candidate); Jun YU; Hei Chun (Alvin) LO.

#### **TEACHING**

- @ HKUST, Economics Dept.:
  - Spring 22, Fall 22: Econ 2123 Macroeconomics.
  - Fall 21, 22: Econ 5250 Macroeconomic Theory I.

### SERVICE AND LEADERSHIP

- Member, Postgraduate Committee.
- Co-organizer, Macro Reading group and Research Postgraduate Student Workshop.
- M. Dordal i Carreras, Kohei Kawaguchi, Edwin L.C. Lai, "Estimating demand for e-HKD and assessing its impacts on Hong Kong economy", Research Assessment Exercise, (2026).