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ACADEMIC EMPLOYMENT

Assistant Professor of Economics (tenure-track)   2021-Present
Hong Kong University of Science and Technology (HKUST)

EDUCATION

Ph.D. in Economics   2021
University of California – Berkeley
    Thesis Committee: Yuriy Gorodnichenko (chair), Andrés Rodríguez-Clare, Christina Romer
    Credential ID: 211KOAXWM9SX Show Credential

Visiting Graduate Student   2014
Columbia University

M.Res. in Economics, Finance and Management   2013
Universitat Pompeu Fabra

M.Sc. in Economics and Finance   2012
Barcelona Graduate School of Economics

B.S. Economics (LLICENCIATURA)   2011
Universitat Pompeu Fabra

PREVIOUS APPOINTMENTS

Research Assistant with Prof. Yuriy Gorodnichenko   2016
University of California – Berkeley

Research Assistant with Prof. Antonio Ciccone   Summer 2011
Universitat Pompeu Fabra

Research Assistant with Prof. Libertad González Luna   2010-2011
Universitat Pompeu Fabra

RESEARCH INTERESTS

Macroeconomics, Finance, Banking, Fiscal and Monetary Policy, Economic History.

PEER-REVIEWED PAPERS

1. <u>M. Dordal i Carreras</u>, 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. S. Joo Lee, <u>M. Dordal i Carreras</u>, "A Unified Theory of the Term-Structure and Monetary Stabilization", *Working Paper, Reject and Resubmit for Journal of Money, Credit and Banking* (2024).

   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.

2. <u>M. Dordal i Carreras</u>, M. Hoelzlein, J. Orben, "Efficiency, Risk and the Gains from Trade in Interbank Markets", *Working Paper, submitted* (2024).

   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.

3. <u>M. Dordal i Carreras</u>, S. Joo Lee, "Higher-Order Forward Guidance", *Working paper* (2024).

   This paper develops a business cycle model with endogenous financial volatility at the Zero Lower Bound (ZLB), highlighting forward guidance as a key mechanism for coordinating market behavior and improving welfare. We show that central banks can reduce excess volatility by credibly pledging future stabilization, or alternatively, by withholding such pledges to direct the economy toward favorable outcomes with lower volatility, revealing a trade-off. We also find that partial uncertainty about future policy dominates strict commitments. Finally, fiscal measures that promote risky asset investments can boost economic activity at the ZLB by increasing aggregate household financial wealth.

4. S. Joo Lee, <u>M. Dordal i Carreras</u>, "Self-fulfilling Volatility and a New Monetary Policy", *Working Paper, submitted* (2024).

   We demonstrate that macroeconomic models with nominal rigidities feature multiple global solutions supporting alternative equilibria traditionally overlooked in the literature. In these equilibria, conventional Taylor rules give rise to self-fulfilling aggregate volatility, propelling the economy into crises (booms) characterized by elevated (reduced) aggregate risk. This outcome stems from the inability of conventional rules to target the expected growth rate of output, which is determined not only by the policy rate but also by the strength of the precautionary savings channel. We propose a new policy rule that targets both conventional mandates and aggregate volatility, reestablishing determinacy and achieving full stabilization.

5. <u>M. Dordal i Carreras</u>, S. Joo Lee, Z. Qi, "Endogenous Firm Entry and the Supply-Side Effects of Monetary Policy", *Working Paper, submitted* (2024).

   We present a model of business cycles with endogenous firm entry. In our framework, short-term supply shifts driven by new firm entries become a crucial factor in driving the economy's response to shocks, regardless of whether those shocks originate from the 'supply' or 'demand' blocks. Specifically, an uptick in aggregate demand triggers a cycle of increased firm entry, thereby enhancing aggregate supply and, in turn, further boosting demand through greater purchases of equipment by new entrants. Monetary policy becomes especially powerful, as it simultaneously impacts aggregate demand and the entry decisions of financially constrained firms. This effect is particularly noticeable in economies with a significant potential for new firm entries. Our analytical approach characterizes equilibrium firm entry as a function of the 'policy room', a sufficient statistic related to the effectiveness of monetary policy interventions in both the model and the data.

6. M. Dordal i Carreras, S. Joo Lee, "The Spatial Transmission of US Banking Panics: Evidence from 1870-1929", *Working Paper, submitted* (2024).

   We study the propagation of localized banking panics across the United States, employing digitized state-level balance sheet data on the National Banks for the 1870-1929 period. Geographically localized panics result in the robust spillover outside the state borders where they originate, leading to moderately persistent credit contractions and the accumulation of liquid assets. We provide a tractable model illustrating a key trade-off: while interbank markets, e.g., the pyramidal reserve structure of the banking system during the National Banking Era, allow banks to access cheaper funding, they spread the effects of panics throughout the country as observed in the data.

7. M. Dordal i Carreras, K. Kawaguchi, S. Jin, H. Guo, "Consumer Perceptions and Willingness to Adopt rCBDCs Before and After the e-HKD Pilot", *Working Paper* (2024).

   This study investigates the public's perception of retail Central Bank Digital Currency (rCBDC) and identifies the factors influencing its adoption. Conducted in collaboration with a prominent bank in Hong Kong, this research involved a hands-on experience with a prototype e-HKD payment system, a hypothetical version of the rCBDC for Hong Kong.

8. M. Dordal i Carreras, C. Xiang, "Gender Gap, Structural Change and Female Comparative Advantage: A Quantitative Analysis of China", *Working Paper* (2024).

   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.

IN PROGRESS

1. M. Dordal i Carreras, K. Kawaguchi, S. Jin, "Informational Experiment on Consumer's Perception of Central Bank Digital Currency as Liquidity Assets", *In Progress* (2024).

2. M. Dordal i Carreras, O. Coibion, Y. Gorodnichenko, C. Howes, "What Do We Learn From Reading Every FOMC Transcript?", *In Progress* (2024).

RESEARCH GRANTS, HONORS, AND AWARDS

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

- Doctoral Completion Fellowship, UC Berkeley (2019).

- Bank of Spain Study Grant, Bank of Spain (2016).

- BEHL 2nd Year Student Mentored Fellowship, Berkeley Economics History Laboratory (2015).

- "La Caixa" Foundation Scholarship for graduate studies and research in the USA, "La Caixa" Foundation (2012).

- Teaching Assistantship Grant, Economics and Business Department, Universitat Pompeu Fabra (2011).

- Award to the top ten academic transcripts of the cohort, Economics and Business Department, Universitat Pompeu Fabra (2011).

- Collaboration Grant, Spanish Ministry of Education (2010).

REFEREE

Journal of Monetary Economics ($\times 3$); The Review of Economics and Statistics; Pacific Economic Review.

M.PHIL. THESIS ADVISOR

Yueqi Wu; Hongwei Zou; Kehui Leng; Chen (Cassie) Xiang.

M.PHIL. THESIS COMMITTEE MEMBER

Yueqi Wu; Kehui Leng; Hongwei Zou; Qichao Wang; Minjie Ding; Jinyuqi Huang; Chen (Cassie) Xiang.

PH.D. STUDENT SUPERVISION

- Zhenghua QI (co-supervisor), webpage.

- Chen (Cassie) XIANG (main supervisor), webpage.

- Hongwei ZOU (main supervisor).

- Yueqi WU (co-supervisor).

PH.D. THESIS COMMITTEE MEMBER

Zhenghua QI (forthcoming); Xiang SHI; Ding DONG; Jun YU; Hei Chun (Alvin) LO.

TEACHING

@ HKUST, Economics Dept.:
- Spring 22, Fall 22-24: Econ 2123 Macroeconomics.

- Fall 21-24: Econ 5250 Macroeconomic Theory I.

- Fall 22, Summer 24: ECON 6980-R1 (UG/M.Sc. Research project advisor).

SERVICE AND LEADERSHIP

- Member, Postgraduate Committee, Economics Department, *HKUST* (2023-Present).

- Co-organizer, Macro Reading group and Research Postgraduate Student Workshop, *HKUST* (2022-Present).

CONFERENCES, EVENTS & SEMINARS (* BY CO-AUTHORS)

- **2024 -** IV Winter Workshop, Societat d'Economia Catalana; 2024 European Winter Meeting of the Econometric Society (EWMES 2024), Universitat de les Illes Balears; Econometric Society Australasian Meetings (ESAM2024), Monash University; International Macro History Online Seminar Series (IMHOS - Graduate Institute's Centre for Finance and Development and CEPR)*; London Juniors Finance Workshop (Imperial College London)*; Saïd Business School Finance Jamboree*; 2024 Asia Meeting of the Econometric Society in China (AMES2024-China), Zhejiang University; 7th HKUST/Jinan Joint Macro Workshop; 2024 Asia Meeting of the Econometric Society, East & Southeast Asia (AMES-E/SE) (declined); CREI-UPF Macroeconomics Seminar; 2024 Annual Meeting Society for Economic Dynamics (SED2024)*; 2024 Econometric Society North America Summer Meeting (NASM2024)*; 39th European Economic Association Meeting (EEA-ESEM-2024)*; International Conference on Central Bank Digital Currencies and Payment Systems, HKMA, AoF/HKIMR and HKUST; Center for Economic Policy Brownbag seminar, HKUST.

- **2023 -** Tsinghua School of Economics and Management; East Asia Macroeconomics Conference, CUHK; Asia Meeting of the Econometric Society (AMES Singapore), NTU Singapore; 6th HKUST/Jinan Joint Macro Workshop; 11th Meeting of the Hong Kong Junior Macro Group; Third Catalan Economic Society Conference (CESC); 6th CEBRA Meeting, Abu Dhabi*; Notre Dame Macro Day*; UT Austin - McCombs (finance)*; Oxford (economics department's macro seminar)*.

- **2022 -** 5th HKUST/Jinan Joint Macro Workshop; 5th Meeting of the Hong Kong Junior Macro Group; PAELLA Conference, Notre Dame*; London School of Economics*; Canadian Economics Association Meetings (CEA 2022)*; Oxford Saïd – Risk Centre at ETH Zürich Macro-Finance Conference 2022 (at Oxford)*; The University of Hong Kong (macro)*; Princeton (macro internal)*; Princeton (finance internal)*.

- **2021 -** UC Berkeley (macro lunch, GEMS); PUC Chile*; Federal Reserve Board of Governors (Financial Stability Division and International Finance Division)*; University of Oxford - Saïd (finance)*; The University of Hong Kong (macro)*; NYU - Stern and NYU - Shanghai (finance)*; Bank of Canada*.

- **2020 -** UC Berkeley (macro lunch, GEMS); Notre Dame Macro Seminar*.

CONFERENCE PAPER DISCUSSANT

- The Sixth China International Conference in Macroeconomics (CICM2024), discussant for "A Macroeconomic Model with Bond Market Liquidity" by Huifeng Chang (2024).

- EFG and CUHK(SZ) Joint Macro Workshop on "Expectations, Information Frictions and Economic Policy", discussant for "Inflation Disagreement Weakens the Power of Monetary Policy" by Ding Dong, Zheng Liu, Pengfei Wang, and Min Wei (2024).

- HKUST/Jinan Joint Macro Workshop, 4th edition, discussant for "Flattening of the Phillips Curve: Causes and Their Policy Implications" by Chen Kan (2021).

CONFERENCES & EVENTS LOCAL ORGANIZING ACTIVITIES

- "International Conference on Central Bank Digital Currencies and Payment Systems", *HKMA, AoF/HKIMR and HKUST* (2024).

- HKUST/Jinan Joint Macro Workshop, 6th - 8th editions, HKUST and Jinan University, *HKUST and Jinan University* (2022-2024).

- Hong Kong Junior Macro Workshop, 5th edition, *HKUST* (2022).

- "Cryptocurrencies, Blockchains and the Digital Economy", *HKUST, Center for Economic Policy* (2022).

- "Central Bank Digital Currencies: Implementation, Applications and Challenges", *HKUST, Center for Economic Policy* (2022).

PROFESSIONAL MEMBERSHIP

Econometric Society; American Economic Association; European Economic Association; Societat Catalana d'Economia.

PUBLIC ENGAGEMENT

- Interviwee for CREACCIÓ / Observatori Socioeconòmic d'Osona, El 9 Nou and Osona.com, "El Talent Convidat" (2024). Digital media: Web DOT - Talent Osona, El 9 Nou, Osona.com, CREACCIÓ - Youtube.

- VOX EU.