Annie Soyean Lee

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References

Charles M. Engel (Chair)
Donald D. Hester
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Education

PhD, Economics, University of Wisconsin-Madison, 2022 (expected)

MA, Economics, Seoul National University, 2016

BSc (with First Class Honours), Economics, London School of Economics and Political Science, 2012

Research Fields

International Economics, Macroeconomics, Finance

Research Papers

"**Why Do Emerging Economies Borrow in Foreign Currency? The Role of Exchange Rate Risk**"
(Job Market Paper) (link)

Abstract: Borrowing in foreign currency has historically induced a large currency mismatch on emerging economies' balance sheets, leading to financial instability and economic crises. Nonetheless, emerging market sovereigns still borrow a substantial amount in foreign currency. Moreover, we find empirically that emerging market sovereigns borrow even more in foreign currency when exchange rate volatility is higher, precisely when it is riskier for them to do so. This paper builds a quantitative sovereign default model with a risk-averse sovereign and risk-averse international investors, where the optimal currency composition of external sovereign borrowing is the outcome of a risk-sharing problem between the borrower and lenders. Emerging economies choose to bear exchange rate risk and borrow in foreign currency because international investors charge a high exchange rate risk premium on emerging market local currency debt. Moreover, the required premium on local currency debt is higher when exchange rate volatility increases, further dissuading emerging economies from borrowing in local currency. The estimated model with high risk aversion of lenders quantitatively matches well the foreign exchange risk premium, the relative borrowing cost in local currency over foreign currency, and the currency composition of external public debt. The model also performs well quantitatively in accounting for positive comovements between the foreign currency share of external public debt and exchange rate volatility, and the relative borrowing cost in local currency over foreign currency and exchange rate volatility. A counter-factual exercise shows that exchange rate stabilization results in a welfare gain to the emerging market sovereign of 0.35% measured in consumption equivalents.

"**Implications of Infrequent Portfolio Adjustment for International Portfolio Choices**" (link)

Abstract: This paper helps unravel the long-standing equity home bias puzzle by building a model in which an agent infrequently adjusts her portfolio holdings of home and foreign equities. As real exchange rate returns are volatile, an investor who invests in foreign equities and holds on to her portfolio holdings for a long duration is likely to drift away from an optimal allocation. The agent, taking infrequent adjustment into account ex-ante, lowers her demand for foreign equities, generating home bias in equities. The introduction of the euro into various European countries and the enlargement of euro area in subsequent years provide a natural environment in which to validate the implications of the model. We empirically document that European countries experience lower equity home bias after adopting the euro as cross-border equity investment within the euro area entails no nominal exchange rate risk. When the levels of real exchange rate volatility are calibrated to match the average levels for European countries in the euro area and outside the euro area, the model can match the difference in levels of equity home bias between European countries experienced after the introduction of the euro.

"**Liability Dollarization and Exchange Rate Pass-Through**"
with Junhyoung Kim (link)

Abstract: With Korean firm-level and aggregated industry-level data, we explore a balance sheet channel through which an exchange rate shock translates into domestic producer prices; we are the first to explore this channel both empirically and theoretically. Exploiting a large devaluation episode in Korea in 1997, we document that a sector with higher foreign currency debt exposure prior to the crisis experienced a larger price increase. Building a heterogeneous firm model with working capital and financial constraints, we study the transition path upon unexpected exchange rate depreciation. Upon unexpected depreciation, firms with high foreign currency debt exposure face tighter working capital and financial constraints, which reduces investment and increases costs of production and prices. The model matches qualitatively and quantitatively the observed marginal effect of the short-term foreign currency debt ratio on the sectoral price changes. The model with the *balance sheet channel* only can explain around 17% of the variation in price changes during the crisis. We also find that the interaction of strategic complementarity in firms' price setting and heterogeneity in foreign currency debt holdings across firms within an industry play an important role in amplifying the price increase.

"**Carry Trade and Precautionary Saving of Foreign Currency Debt: Evidence from Korean Firms**"
with Steve Pak Yeung Wu (link)

Abstract: The substantial increase in global corporate debt over the past decade has revived macro stability concerns of foreign currency liability in emerging countries. Due to data unavailability, there is limited understanding of how the debt proceeds are used. We empirically study the use of proceeds of debt issuance in different currencies at different maturities using a firm-level dataset from Korea, which provides information on the currency denomination of both assets and liabilities of firms. First, we find strong evidence of a carry trade and a precautionary saving behavior when firm issues short-term foreign currency (FC) debt. We further identified the carry trade motive by showing that the same increase in short-term FC liability without current cash inflow does not associate with an increase in local currency liquid assets. Second, we find that local currency debt financing supports a corporate finance pecking order prediction: an increase in investment and a fall in liquid assets. Third, we find that motives of carry trade and precautionary saving are stronger when the interest rate differential and exchange rate volatility are high, respectively. Sectors that are financially dependent or export exposed amplify to the response.

"**Geography of cross-border portfolio investments and ICT diffusion**," *International Review of Economics & Finance*, 45, pp.540-552, 2016. (Master Thesis)

Work in Progress

"Distributional Consequence of Liquid Bonds" with Charles Engel

"Currency Choice in Trade, Foreign Currency Debt, and Exchange Rate Pass-through"
with Junhyong Kim and Saiah Lee

Teaching Experience

Fall 2017, Fall 2018, Spring 2019	Measurement in Economics, ECON310, Teaching Assistant
Spring 2017, Spring 2018	Introduction to Microeconomics, ECON101, Teaching Assistant
Fall 2016	Introduction to Macroeconomics, ECON102, Teaching Assistant

Presentations

2021	Minnesota-Wisconsin International/Macro Workshop Fall, Minnesota-Wisconsin International/Macro Workshop Spring, Western Economic Association International (WEAI) 2021 Virtual Conference
2019	Economics Graduate Student Conference in St. Louis (ESGC), International Monetary Fund, Minnesota-Wisconsin International/Macro Workshop Fall, North American Summer Meeting 2019 (NASMES 2019), Midwest Macroeconomics Meeting

Fellowships and Awards

2021	Dorothy Rice Dissertation Fellowship, University of Wisconsin-Madison
2020	Robock Scholarship in Empirical or Experimental Economics, University of Wisconsin-Madison
2018, 19	Juli Plant Grainger Summer Research Fellowship, University of Wisconsin-Madison
2018	Juli Plant Grainger Teaching Assistant Scholarship, University of Wisconsin-Madison
2013-15	Brain Korea 21 (BK21) Program Fellow in Economics, Seoul National University
2010	Economics Examiners Prize, London School of Economics and Political Science

Previous Employment

2019-Present	Research Assistant to Professor Charles Engel, University of Wisconsin-Madison
2019	Ph.D. Intern, Fund Internship Program, International Monetary Fund
2013-2016	Research Assistant to Professor Soyoung Kim, Seoul National University
2011-2012	Undergraduate Research Program, Professor Danny Quah, London School of Economics
2011	Summer Analyst, HSBC London, UK

Services

2019-20	Co-organizer of the Finance, Macro, and International (FMI) Student Workshop
2018-19	Representative, Wisconsin Economics Graduate Organization

Additional Information

Language: English (fluent), Korean (native), Mandarin (basic)

Programming: LaTeX, Fortran, Matlab, Stata

Citizenship: Republic of Korea