<u>The International Monetary Transmission Mechanism</u>

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Discussants: Şebnem Kalemli-Özcan, Jón Steinsson

Gabriel Chodorow-Reich opened the discussion. He noted that some illustration of raw variation would be helpful to see before the VAR analysis on the international impact of a US monetary policy shock. Furthermore, he highlighted two significant contractionary outliers in the Bauer-Swanson monetary policy shock data: one at the peak of the US business cycle before the Great Recession (2007Q4) and one coinciding with the Lehman Brothers collapse (2008Q3). He remarked that these outliers helped him understand the quick reaction of GDP to monetary policy shocks in the VAR results. He suggested that the authors try excluding these outliers given the nature of the shocks, noting that, amongst other things, there was a considerable trade collapse around these events that was not just caused by US monetary policy.

Şebnem Kalemli-Özcan responded to concerns over the sample period highlighted in Chodorow-Reich's comments and Jón Steinsson's discussion. She noted that while the main sample for the VAR covers 2006-2019, the authors repeat the analysis with data from the 1990s, and the only result that changes is the policy rate response. She added that her recent BPEA paper contains further robustness checks, and the policy rate response remains the only change throughout.

Supplementing Kalemli-Özcan's response, Lawrence Christiano confirmed they achieved the same results when starting the sample period in 1990.

Jordi Galí expressed concerns over the use of exogenous monetary policy shocks. While he emphasized that there was nothing technically wrong with the paper's approach, he cautioned against interpreting certain episodes with changing interest rates as being the result of exogenous monetary policy shocks. In particular, the recent rise in interest rates in the US cannot be interpreted as an exogenous monetary policy shock because interest rates clearly responded to developments in the economy (a Fed response to higher inflation). Endogenous variations in U.S. policy rates may have very different implications for other countries' exports from exogenous monetary policy shocks. He concluded by noting that some of the model's results could possibly be captured by the most basic small open economy model with a low elasticity of substitution between domestic and foreign goods.

Laura Alfaro followed up with a comment regarding the elasticity of substitution between domestic and foreign goods. She noted that the paper's sample period coincides with the development of global value chains, meaning that countries need to import in order to export. She noted that this connection eliminates the expenditure switching effect seen in small open economy toy models of the 1960s and 70s and explains the observed collapse of trade. She furthered her point with the example of Mexico, noting that it is fully integrated with the US, with all trade being intermediated through multinational enterprises. She also offered Mexico as an example to explain the limited evidence for FX intervention by emerging market economies: In Mexico, 60% of exchange rate transactions involve foreign

agents or occur on derivatives markets, so it is unsurprising that these transactions are absent from capital flows.

Lawrence Christiano responded, noting that needing imports to produce exports is already built into their model. Following up on comments about the elasticity of substitution, he agreed that it is an interesting parameter. However, he noted that they gave the model complete freedom for this parameter and likely cannot get much more out of it.

Adrien Auclert continued the discussion with three points. First, he commented that the paper's exchange rate results provide direct evidence for an uncovered interest rate parity (UIP) mechanism. He remarked that this was his first time seeing the Dornbusch overshooting mechanism in action. Next, he noted that the paper finds that the trade channel dominates the dollar debt channel in transmitting a US tightening to the rest of the world. He suggested that the authors should also consider a real income channel, which could be incorporated into their model with a low elasticity of substitution and two agents. Finally, he suggested that the interaction between dollar debt and UIP frictions might explain why dollar debt does not matter in the model. He recommended that the authors remove the UIP friction and re-run the model to see if the trade channel still dominates.

Finally, Lawrence Christiano closed the discussion by thanking the discussants for their insightful comments. In response to Kalemli-Özcan's discussion, he noted that they plan to extend the paper to consider other implications of financial market frictions, including, for example, bankruptcy rates, equity markets, and spreads for risky borrowers. He clarified that the paper's results support the existence of a Global Financial Cycle but suggest that it is merely a symptom rather than a cause of global co-movement: The co-movement of asset prices worldwide is caused by the contraction of imports, not due to supply effects.