

CIRC Symposium Series 2026-2027

Accounting for Credibility: Fiscal-Monetary Interactions and the Credibility of Central Bank Mandates

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We develop a model for fiscal and monetary policy determination in the tradition of Sargent and Wallace (1981). Ex-ante, the government has incentives to delegate monetary policy to a central bank with an inflation targeting mandate.

Ex-post, however, the government faces temptations to revoke the mandate to generate seigniorage revenues. The likelihood that the government will adhere to its commitment depends on shocks to fiscal fundamentals and the costs of reneging on the mandate. The economy endogenously transitions between a “monetary-dominant” regime where monetary policy adheres to its commitment and a “fiscal-dominant” regime where the fiscal

authority interferes with monetary policy. These two regimes sharply differ in their implications for the comovement of inflation and debt-to-GDP ratios. We use the model as a measurement device to interpret the fiscal and monetary history in Colombia, Chile, and the U.S.

A Self Iterative Machine-Learning Finite Element Analysis Framework for Snap-fit Geometry Optimization

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This study introduces an automated framework for optimizing snap-fit metasurfaces, whose adhesion and mechanical performance depend on feature geometry. Machine learning proposes promising designs, while finite element analysis provides initial training data and verifies new designs, feeding results back into the model. The findings show that strategically adding accurate FEA feedback during learning can improve optimization more effectively than greatly expanding the initial dataset, making the approach useful when simulation data are limited.

Friday, October 16, 2026
11:30 am - 1 pm
Wegmans Hall 1400



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