

Discussion of

ARGEMmy

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Federal Reserve Bank of Chicago

Quantitative Approaches to Monetary Policy in Open Economies

FRB of Atlanta, May 15 2009

Summary of the Paper

Sets-up a small open economy (SOE) DSGE model for Argentina with numerous frictions and shocks

Inference using Bayesian methods

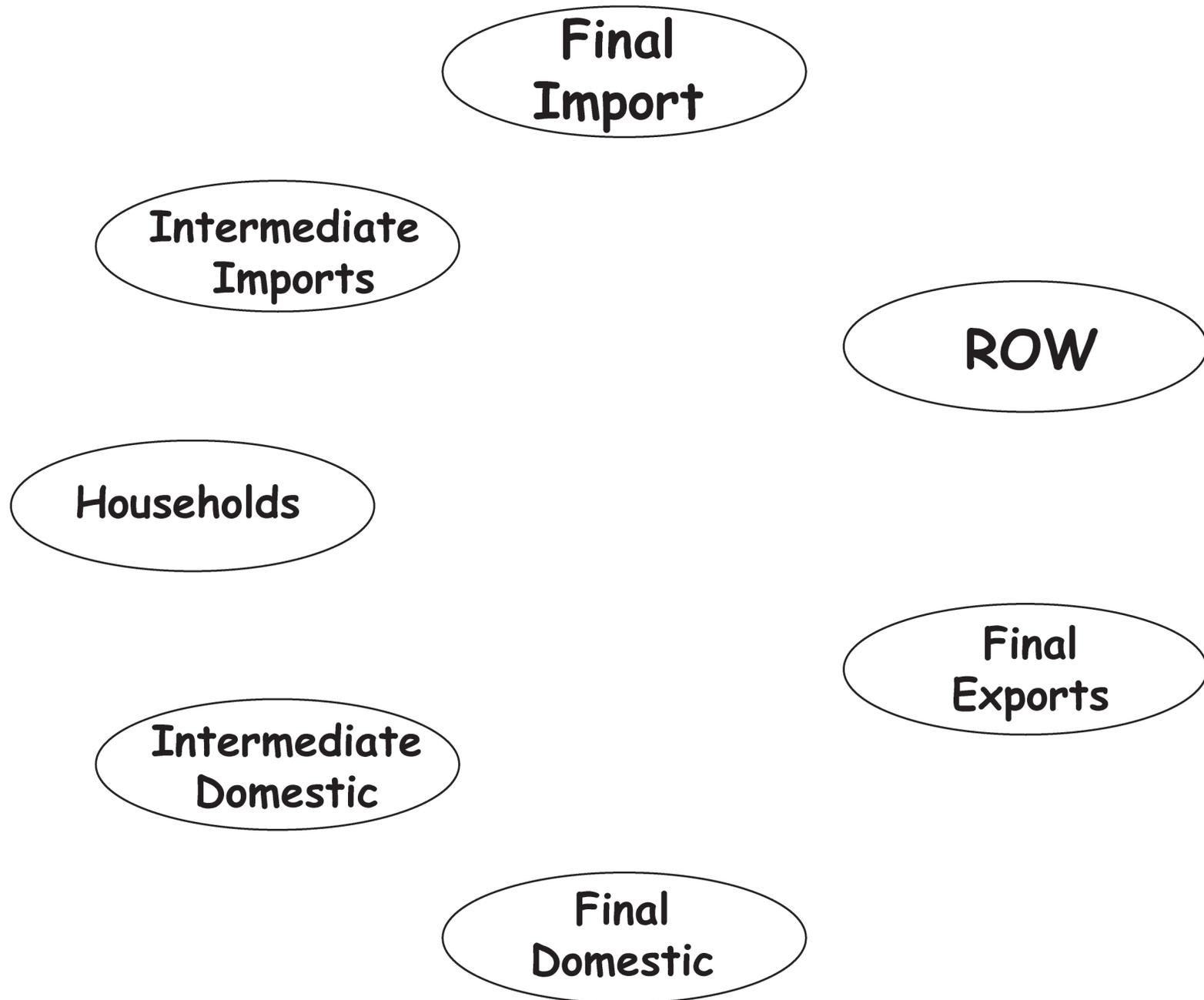
Compares welfare under optimal policy using domestic interest rates and/or depreciation rate as policy instruments

Conclusion: managed exchange rate regime (MER) using both delivers substantially higher welfare than PER and FER

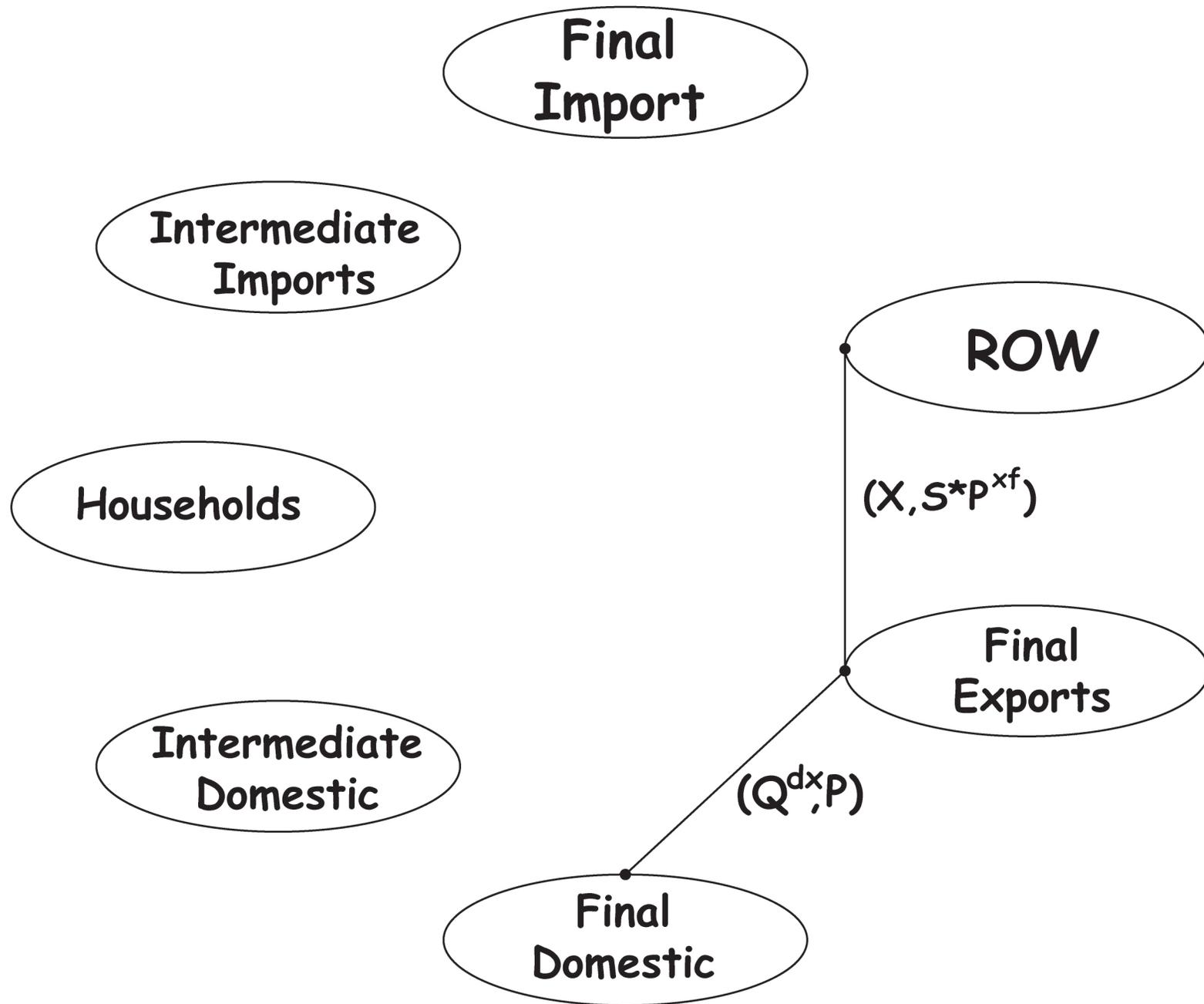
Outline

1. Quick review of model structure
2. Hard work is done. Some questions regarding
 - transmission mechanisms
 - contribution of shocks
 - inference
3. Discussion of "two rules" view

Production Side of ARGEMmy



Production Side of ARGEMmy



Asset Side of ARGEMmy

Government

ROW

Households

**Central
Bank**

**Intermediate
Domestic**

Banks

Asset Side of ARGEMmy

Government

ROW

Households

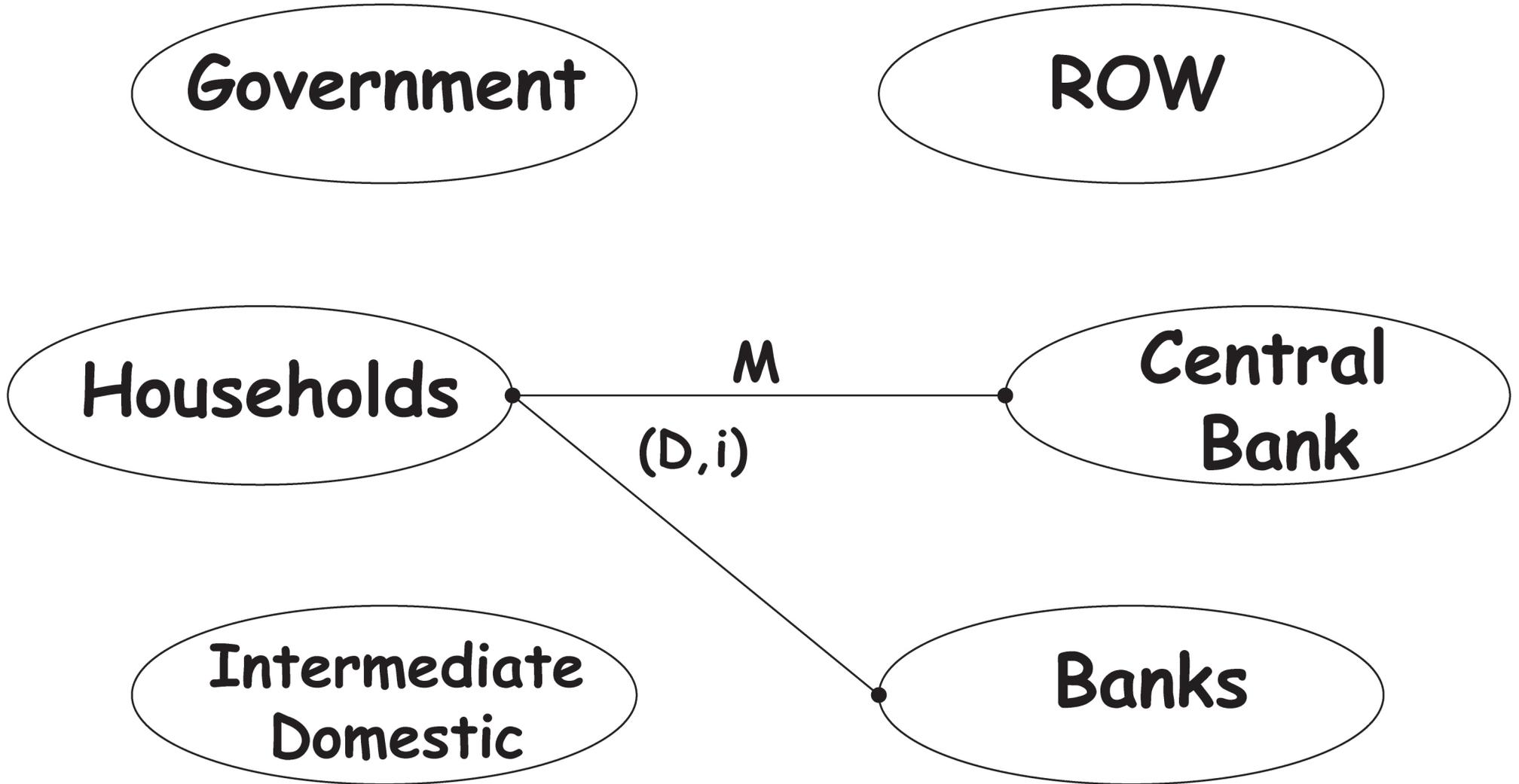
M

**Central
Bank**

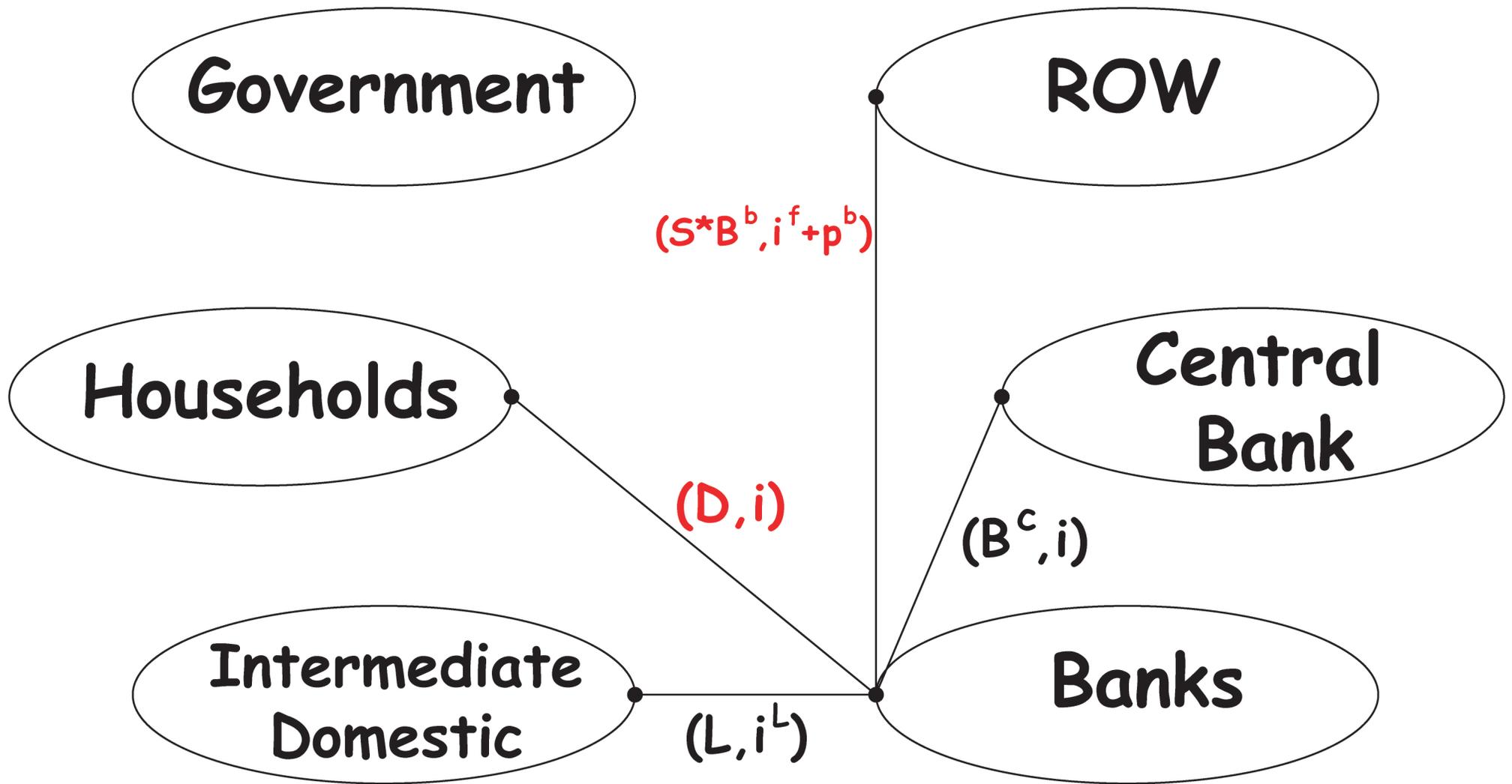
(D, i)

**Intermediate
Domestic**

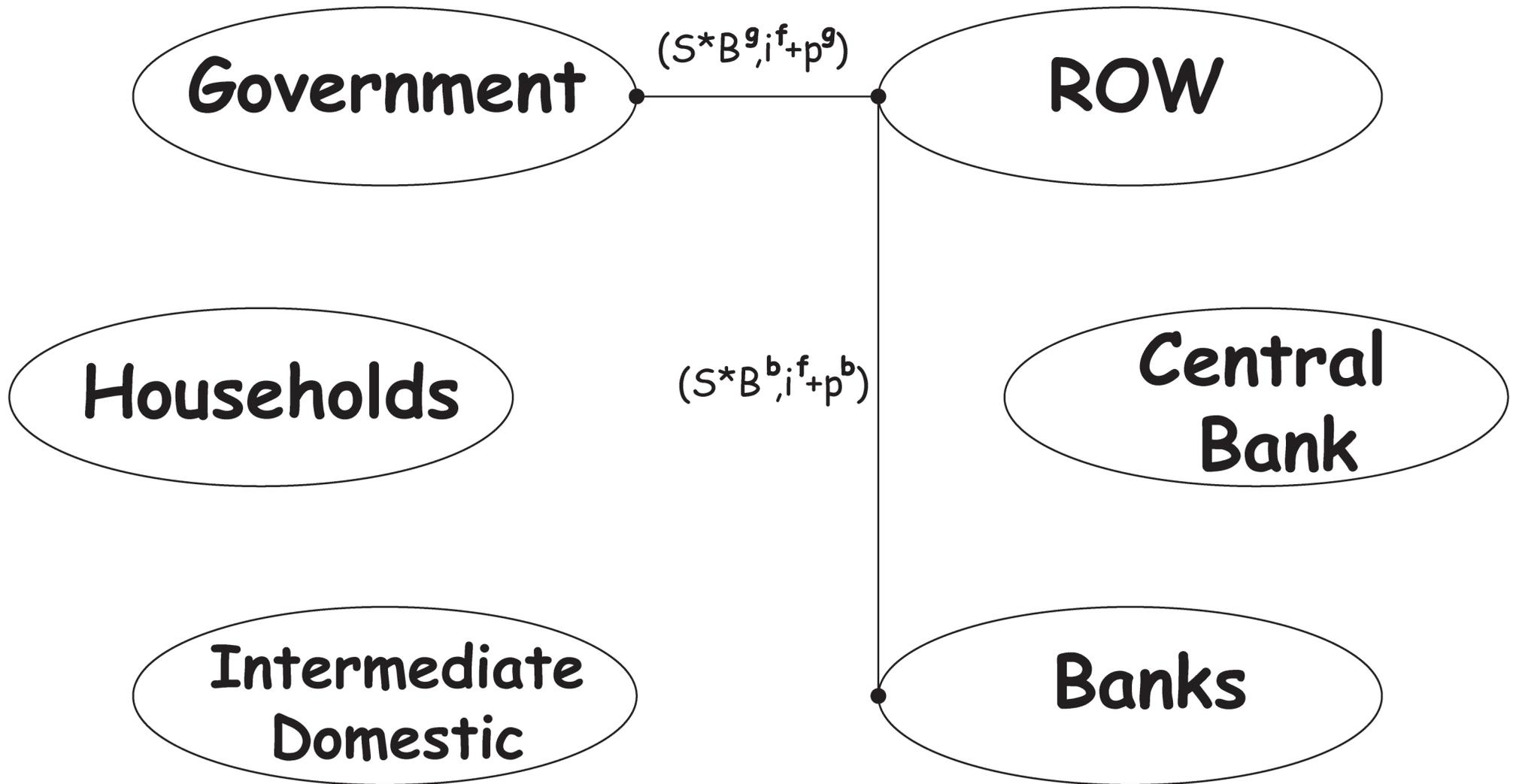
Banks



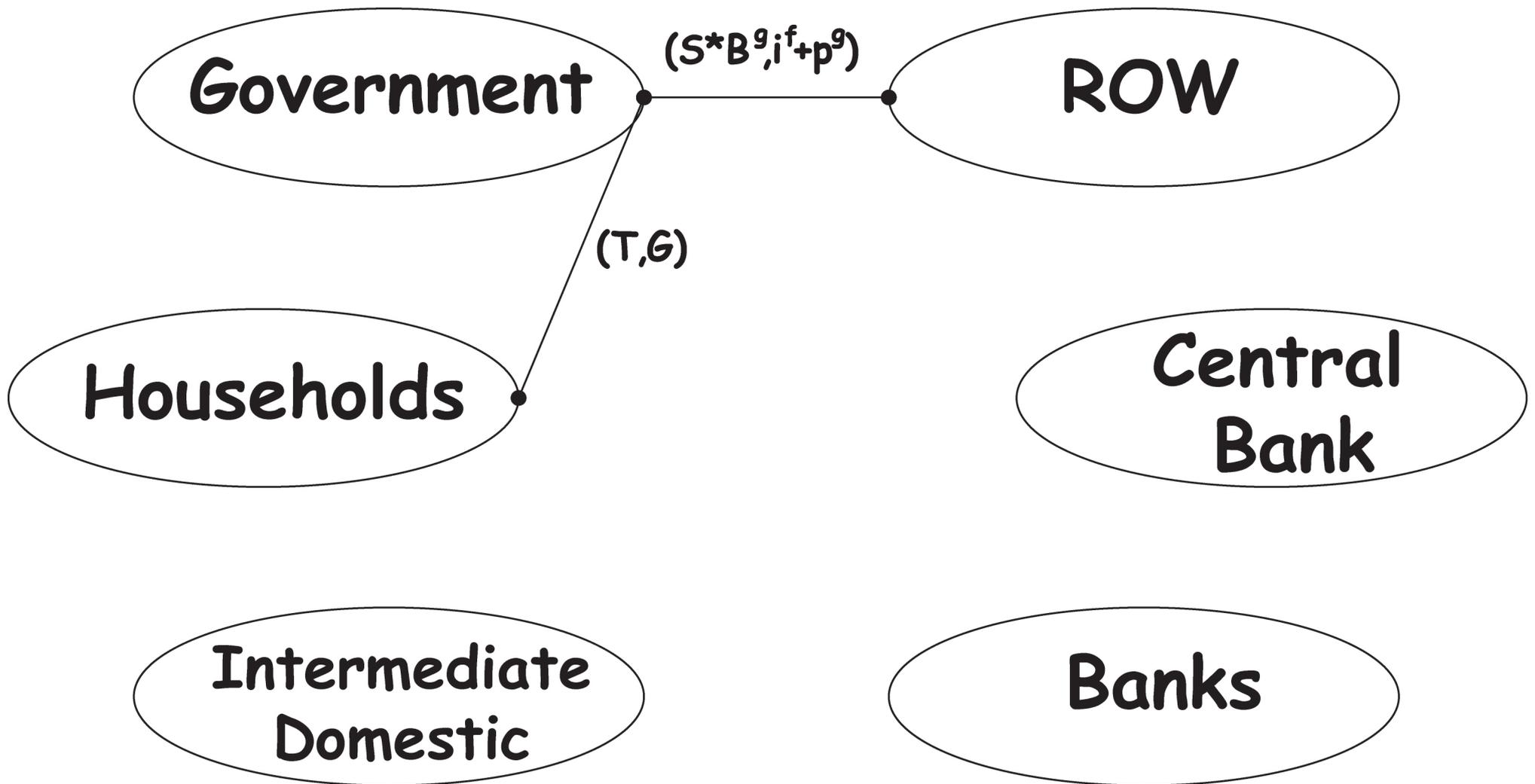
Asset Side of ARGEMmy



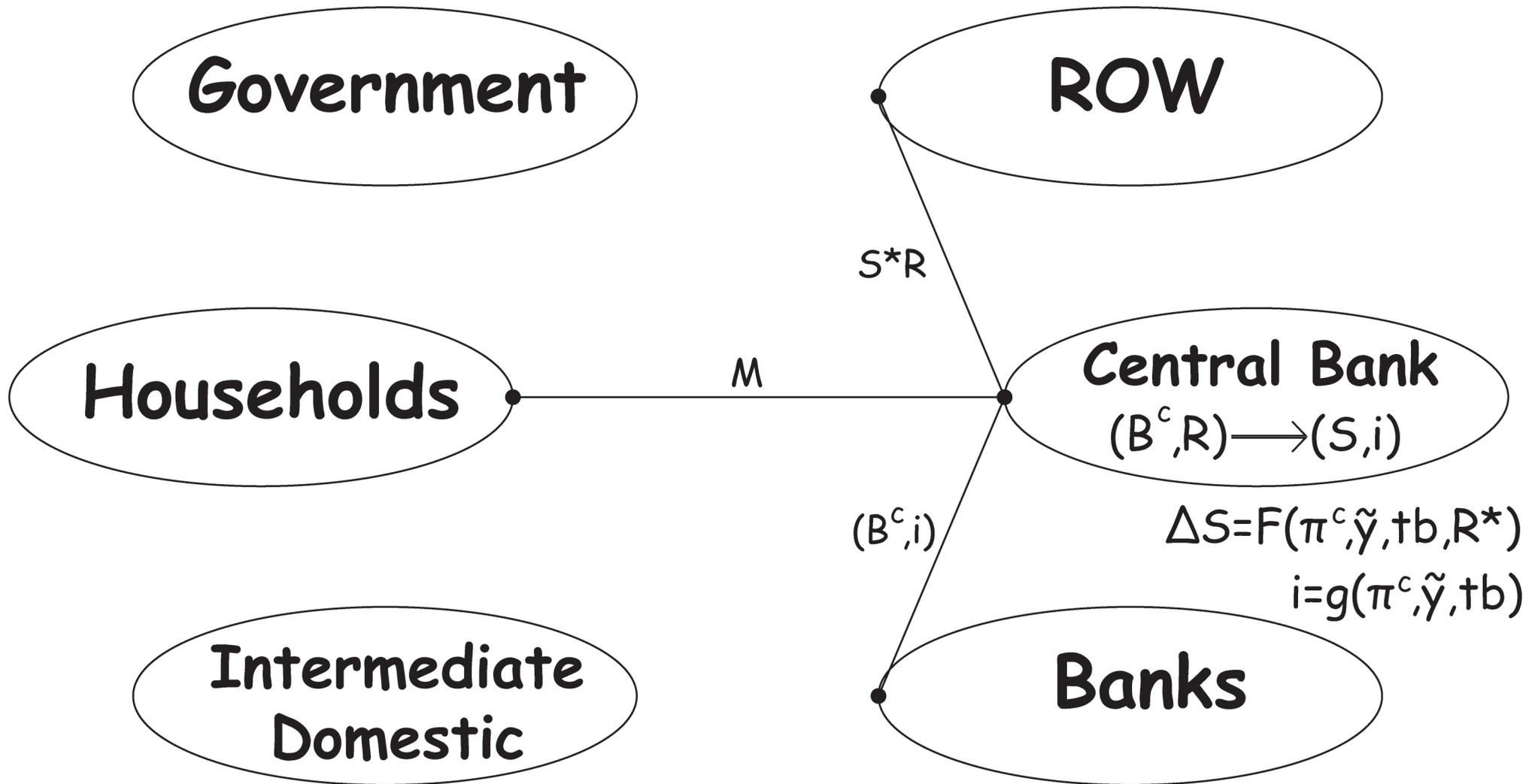
Asset Side of ARGEMmy



Asset Side of ARGEMmy



Asset Side of ARGEMmy



2. Optimal Policy

Replaces simple instrument rules for $u_t = (i_t, \delta_t)$ with $u_t = F(k_t, \lambda_t)$
s.t. minimize loss function

Result: $L_t^{0,j} / L_t^{0,MER} > 10 \quad j = PER, FER$

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Great...but difficult to grasp intuition behind **optimal policy**

- need interpret 2×61 coefficients
- welfare differences coming from which variable(s), mechanism(s) and shock(s)?

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Perhaps analyze impulse response functions (IRFs) and variance decompositions using **instrument rule(s)** instead, to describe interplay between

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- contribution of shocks
- constraints on policy

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Determine how well can instrument rule(s) approximate optimal policy

2A. Transmission Mechanisms

1. Characterize trade-offs in stabilizing (π, y, s) from open economy channels, particularly:

- working capital: interest rates directly in mgc
 - implications for π targeting?
- external finance premiums for both banks and gov
 - premiums depend on own level of indebtedness only

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2. Identify transmission of which shocks changes across **simple** vs. **optimized rules**

- variance frontiers
- optimized rules: alternative loss functions

2B. Contribution of shocks

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- variance shares different across horizons/periodicities (JPT)
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2B. Contribution of shocks

1. Posterior variance decomposition analysis
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2. Importance of open economy/foreign shocks
 - SOE DSGEs may not replicate comovement (JP)
 - negligible variance shares: counterfactual
3. Is there exchange rate (terms of trade) disconnect?
 - steep trade-offs with output and inflation

2C. Inference

1. Specifying priors for volatilities of 14 shocks challenging
 - scale issues e.g. Phillips curves
 - useful to simulate prior variance decompositions
2. Identification issues from 14 persistent shocks with 10 observables
 - add output ROW, external finance premium as observables
3. Sensitivity to priors on two crucial parameters
 - ES domestic and foreign goods
 - debt to GDP ratios: currently low?

3A. Two rules: literature

Empirical model: two simple instrument rules

Large literature on monetary policy in open economies:

$$i_t = f(i_{t-1}, \pi_t, y_t, s_t, \delta_t)$$

- exchange rate stabilization with a single instrument rule
- Curdia (08, 09), Batini et al. (08)
- very little response to exchange rate desirable

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Compare welfare losses from single vs. two instrument rules

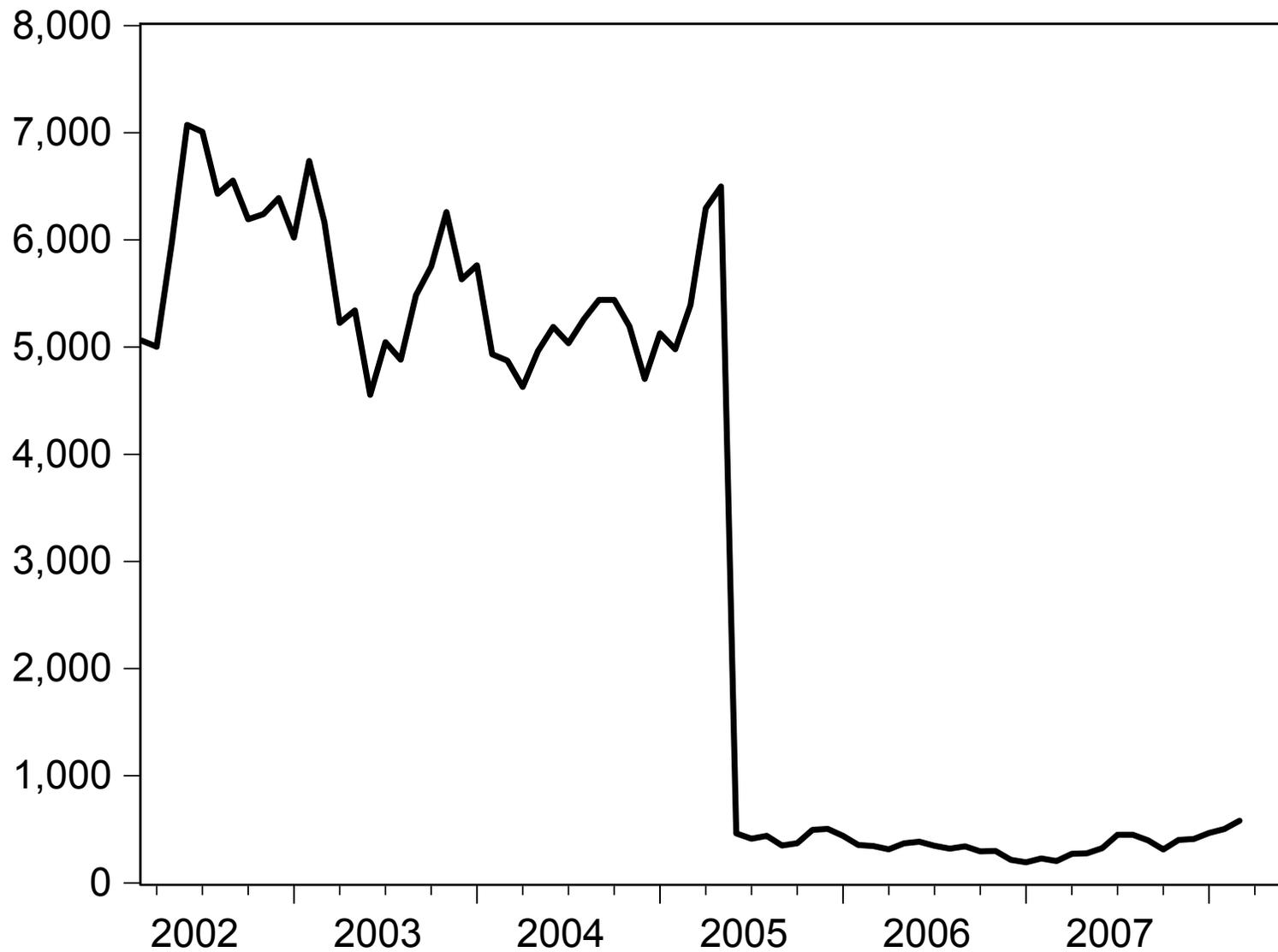
- effectiveness of interest rate defenses, sterilization

3B. Two rules: sudden stops

EMBI suggests 2 regimes, even after floating peso

- Regime 1: limited access to international capital markets

Argentina: Emerging Markets Bond Index (EMBI)



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A single non-linear or two instrument rules may be desirable with sudden stops

- key: credit constraint (close to) binding or not
- Benigno et al.(08): non-linear tax policy

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Shed some light here by considering different calibrations (debt shares, external finance premiums etc.) to approximate 2 regimes

- caveat: will miss anticipation effects

Conclusion

Paper sets-up an impressive and very interesting model

Model can be used to explore number of issues in policy design for EME

Exploring mechanisms and policy tradeoffs can deliver interesting insights