CHINESE MONETARY POLICY—

DISCUSSION OF TWO PAPERS BY SPIEGEL ET AL.

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*The views expressed in this presentation are those of the presenter and do not necessarily represent those of the IMF or IMF policy.

Common Theme: Targets and Instruments

- Each paper sets out to address a separate feature of post-GFC Chinese monetary policy
- Both papers explore the central bank's use of multiple instruments to achieve its multiple welfare objectives
  - The first considers sterilization and monetary expansion in response to external shocks (i.e., shocks to the foreign interest rate and export demand)
  - The second considers reserve requirements and the policy rate in response to internal shocks (i.e., shocks to productivity and public spending)
- Both papers develop DSGE models to capture specific characteristics of the Chinese economy
  - The calibrated models are used to compare welfare across policy regimes

Sterilization and Monetary Expansion

A Valuable Contribution: Endogenizing Sterilization

- Under the peg, the CB decides on the extent of FX purchases (with the residual absorbed by the private sector) and the split between bond issuance (sterilization) or monetary accommodation
- The central bank's decision trades off the cost of sterilization against the benefit (for inflation) of lower monetary expansion
- Endogenization of the sterilization decision is a valuable contribution
  - The trilemma literature has focused on whether monetary autonomy is possible given the ER regime and capital controls
  - Under a peg (the assumption in this paper), controlling the money supply is achieved at a cost—it is not a "free lunch"
  - The cost should be modeled and implications for instrument use derived
  - The paper shows that if the domestic interest rate is above the foreign interest rate, the central bank will not fully sterilize capital inflows and will accept higher inflation as a result

How Much to Absorb and How Much to Sterilize?

- Is the real distortion the portfolio adjustment cost of the private sector?
  - Who should absorb the inflows depends on the portfolio adjustment cost
- Much of the discussion in the paper is related to the subsequent sub-problem of how much the central bank decides to sterilize out of the inflows that it has decided to absorb
  - Foreign investors cannot hold Chinese assets, so sterilization by the CB simply causes a transfer of wealth between the CB and the Chinese private sector, with the losses of the former having their mirror in the gains of the latter
  - Welfare costs are zero in the special case of lump-sum taxes/transfers
- Lump-sum taxes/transfers are ruled out in the model, so the CB's financing of sterilization losses generates a reduction in welfare
  - Should not this welfare cost be small in the kind of model the authors use?

Did Sterilization Costs Drive Accommodation?

- The authors cite the evolution of Chinese monetary policy post-GFC
  - The crisis pushed the US interest rate below the Chinese interest rate; as the model predicts, money supply and inflation rose
- But other reasons for monetary loosening beyond sterilization costs
  - China itself was severely struck by the GFC, and was undertaking fiscal and monetary expansion to stimulate domestic activity and prevent deflation
  - 2010 IMF Article IV Staff Report: *"The central bank's loosening of monetary policy in response to the global financial crisis served to support growth and mobilize the resources needed to finance a surge in investment"*
- Therefore, greater monetary expansion was the central bank's policy intention, rather than a side-effect of sterilization costs
- More evidence for the paper's mechanism should be provided
  - Have the PBC's sterilization decisions evolved in the way the model predicts over a longer time period (i.e., sterilization positively related to the US rate)?

Welfare Increases with External Liberalization

- Under the calibrated parameters, welfare can be improved by moving away from the peg and capital controls
- Moving to a flexible ER regime achieves large welfare gains
  - ER flexibility stabilizes the fluctuation in exporters' FX revenues in response to shocks and removes the central bank's obligation to absorb those revenues
  - Therefore, consistent with the trilemma, the central bank can implement an independent domestic monetary policy without needing to resort to sterilization
- Reducing capital account restrictions also raises welfare
  - The private sector faces lower costs of portfolio adjustment, and can more easily absorb a portion of exporters' FX revenues
  - Therefore, the central bank faces less pressure to absorb the FX revenues itself through either sterilization or monetary expansion, and domestic monetary policy can be more independent

But Is the Model Well-Suited for Welfare Analysis?

- The policy recommendations to float and remove capital account restrictions are not surprising
  - The model does not embed any rationale for the peg and the capital account restrictions ever having been optimal from the Chinese perspective
  - Which raises the question of whether the Ramsey optimization problem is realistically formulated in the first place
- Models embedding a rationale for the peg and/or capital account restrictions may generate different policy recommendations
  - If a peg was imposed to support a growth model based on positive externalities in the export sector, then removing the peg may be welfare-decreasing
  - If capital account restrictions were imposed to mitigate the risk of large and sudden crisis-time outflows, then removing them may be welfare-decreasing
- To tackle welfare issues, DSGE models should incorporate in some manner the underlying motivations behind China's past decisions

Reserve Requirements and the Policy Rate

Reserve Requirements as "Industrial Policy"

- Two sectors: state-owned and private-owned (SOEs and POEs)
  - Both sectors have firms of different productivity levels, with the SOE sector having lower average productivity than the POE sector
  - Banks lend to the SOE sector and shadow banks lend to the POE sector
  - Financial frictions as in Bernanke, Gertler and Gilchrist (1999)
- The SOE sector benefits from a government guarantee, which has both steady-state and cyclical effects
  - Steady-state: SOE sector faces a lower interest rate than the POE sector, and it becomes excessively large relative to the POE sector
  - Cyclical: the standard BGG financial accelerator mechanism operates only in the POE sector, amplifying shocks
- Reserve requirements apply only to banks, not to shadow banks
  - Reserve requirements raise the relative cost of financing to the SOE sector, so they reduce the relative size of the SOE sector

RRs Fulfil Both Structural and Cyclical Roles

- In steady state, RRs should target the optimal size of the SOE sector
  - As RR increases, the less-productive SOE sector shrinks and the more-productive POE sector grows, so overall TFP increases
  - However, total output decreases, because the POE sector's growth is not able to fully offset the shrinkage of the SOE sector (bankruptcy losses?)
  - The optimal RR balances the TFP and output effects
- To cushion aggregate cyclical shocks, use RRs alongside policy rate
  - For example, in response to a positive government spending shock, the policy rate should be increased for several periods to contain the increase in inflation
  - But when the interest rate increases, the POE sector reduces its leverage, and contracts more than the SOE sector does
  - So during these periods, RR should optimally be increased in order to rebalance the economy toward the POE sector
- Joint use of RRs and policy rate allows CB to stabilize the macro-economy while also keeping sizes of the two sectors in balance

Is the Taxonomy in the Paper Realistic?

- Shadow banks often used to circumvent sectoral lending restrictions
  - So shadow banks may not be financing good POEs, but instead overcapacity sectors and real estate
  - Increase in RRs would increase size of POE sector, but also shift SOE borrowing from safe to risky forms of finance—which has welfare costs
- Shadow and formal banking are connected through interbank market
  - Banks may provide liquidity to shadow banks (less now than before, given the new and tighter regulations)
  - Increase in RRs would reduce shadow lending and thereby shrink the more efficient POE sector (which would co-move with the less efficient SOE sector)
- And RRs may be used for different reason entirely: to stabilize inflows —reducing money supply and contracting both SOE and POE sectors
- If RRs are used for macro management, then they are a substitute for policy rates rather than a complement
  - China has at times simultaneously increased RRs and the policy rate
  - This use of RRs may reflect a desire to dampen the needed increase in the policy rate rather than to offset sectoral distortions

Welfare Results and Optimal Sector Size

- The welfare results are related to the ability of RRs to shrink the SOE sector to its optimal size
- The paper takes government guarantees for the SOE sector as given
  - Could both sectors be put on an equal footing by removing guarantees from the SOE sector? (Or by providing guarantees to both sectors?)
  - Under which circumstances would the CB find it optimal to set RRs to 100 percent and shut down the SOE sector completely?
- The paper should explain whether/how the unorthodox household labor supply equation helps to pin down the optimal SOE sector size
  - An assumed preference for always allocating some labor to both sectors?
- The oscillations in the RRs and policy rate should be explained
  - When both instruments are used together, the simulations deliver oscillating policy paths, which are counter-intuitive

Conclusion

Two Elegant Contributions to A Topical Debate

- Both papers make commendable progress in expanding our understanding of Chinese monetary policy, using DSGE tools
- In the literature, there is as yet little consensus on:
  - The welfare-cost ranking of various imperfections in the Chinese economy
  - The welfare objectives that Chinese policymakers have had in the past and/or should have in the future
  - The assignment of instruments between internal and external purposes
- Happily, the papers help to build an analytical infrastructure which will allow systematic answering of these questions over time