Discussion of "Dollar Shortages and Central Bank Swap Lines"

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Summary of the Paper

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- Methodology: Quantitative global macroeconomic model, where a shock to availability of dollar funds in EMEs ("sudden stop") have real effects.

- Main Finding: An uptake of swap lines in line with the maximum set by the Federal Reserve would help cushion around 20% of the hit to macro variables predicted by the model.

Outline of the Discussion

1. Empirical evidence:
   - Identification of swap line shocks.
2. Model:
   - What might explain in the model that an uptake matching that observed during the Covid-19 pandemic has only marginal effects?
   - Parametrization of the model, confounding effects, missing channels?
3. Additional questions and comments.

Swap Line Announcements

- 11 swap line events (focus only announcement with news exclusively related to swap lines), 14 affected currencies, sample period covering 2008 to 2021.

Date	Time (EST)	Affected currencies
12/12/07	10:00:00	EUR, CHF
3/11/08	8:30:00	EUR, CHF
5/2/08	9:15:00	EUR, CHF
7/30/08	8:45:00	EUR, CHF
9/18/08	3:00:00	EUR, CHF, JPY, GBP, CAD
9/24/08	1:00:00	AUD, SEK, DKK, NOK
9/26/08	11:00:00	EUR, CHF
9/29/08	10:00:00	EUR, CHF, JPY, GBP, CAD, AUD, SEK, DKK, NOK
10/13/08	2:00:00	EUR, CHF, JPY, GBP
10/28/08	17:00:00	NZD
10/29/08	15:30:00	BRL, MXN, KRW, SGD
2/3/09	10:00:00	AUD, BRL, CAD, DKK, GBP, EUR, KRW, MXN, NZD, NOK, SGD, SEK, CHF
6/25/09	12:00:00	AUD, BRL, CAD, DKK, GBP, EUR, KRW, MXN, NZD, NOK, SGD, SEK, CHF
5/9/10	9:15:00	CAD, GBP, EUR, CHF
12/21/10	9:00:00	CAD, GBP, EUR, CHF, JPY
6/29/11	9:00:00	CAD, GBP, EUR, CHF
10/31/13	2:00:00	CAD, GBP, EUR, CHF, JPY
3/15/20	17:00:00	CAD, GBP, EUR, CHF, JPY
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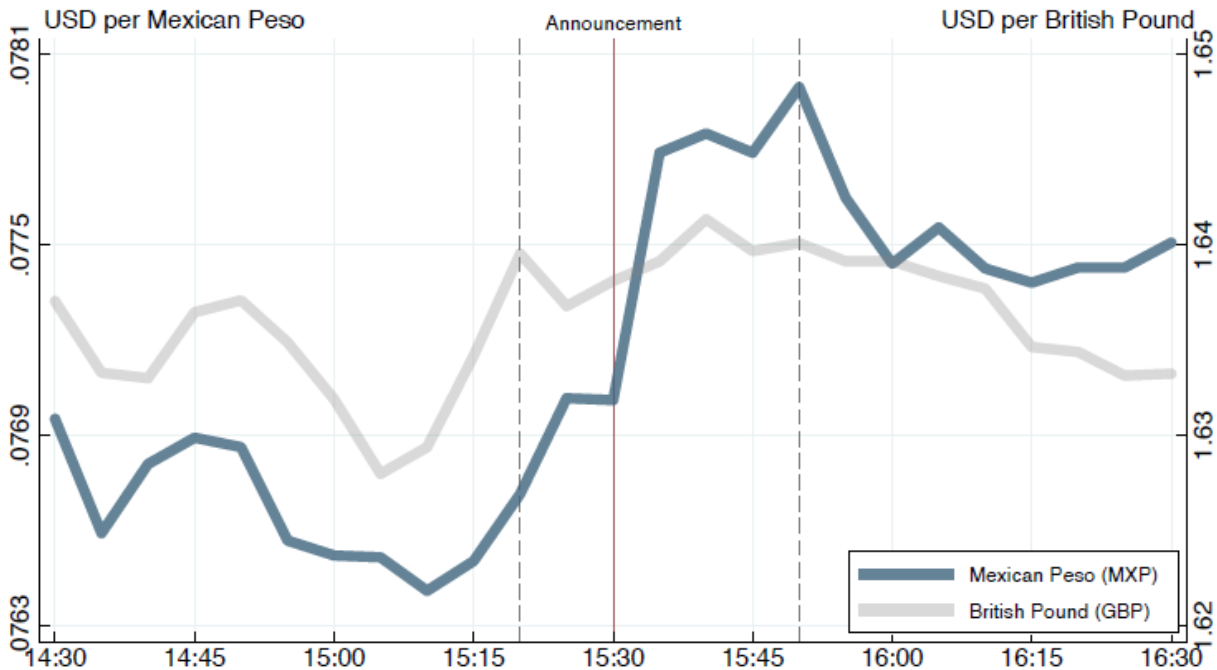
6/16/21	14:00:00	AUD, BRL, DKK, KRW, MXN, NOK, NZD, SGD, SEK

Swap Line Surprises

- Computing the percentage change in the spot price between 10 minutes prior and 20 minutes after the shock for each **affected** currency.
  - On 29 Oct 2008 at 15:30 (NY time) the Fed announced a new swap line with Banco the Mexico



Comments and Suggestions on the Empirical Strategy

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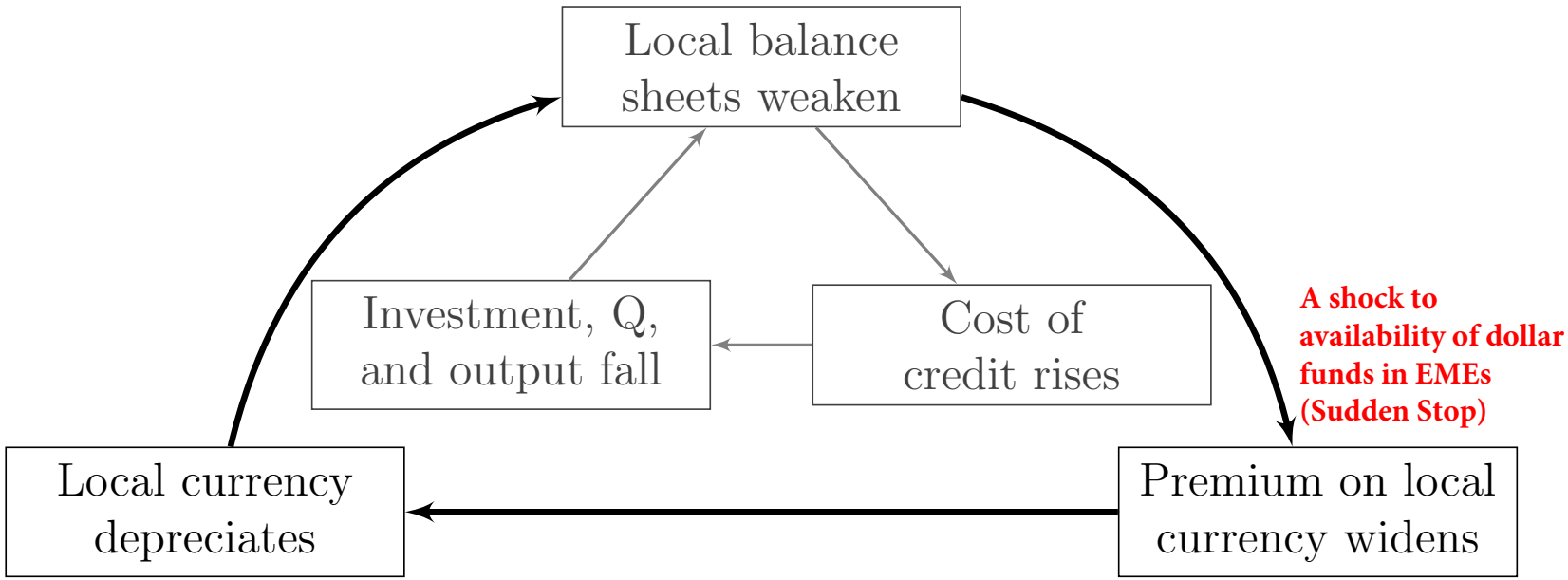
- How is the constructed swap line shock series look like? Is it picking up a lot variations across time and across currencies?
- Currencies are pre-selected based on the announcement. Compute surprises in affected currencies relative to unaffected ones.
- Use cross-section of HF responses to validate the model mechanisms.
  - Lenel and Kekre (2025): HFI approach, 8 announcements, broader asset prices.
  - Exchange rates react differentially across countries according to their degree of exposure to the dollar factor. Swap line surprises reduce investors' required compensation to bear a unit of exposure to the dollar factor.
  - Akinci and Queralto (2024): The net benefits of liquidity provision policies are increasing in the stress in credit markets induced by the shock. Do exchange rates react differentially across countries according to the stress in credit markets in the face of swap line surprises?

Dollar Shortage Shock



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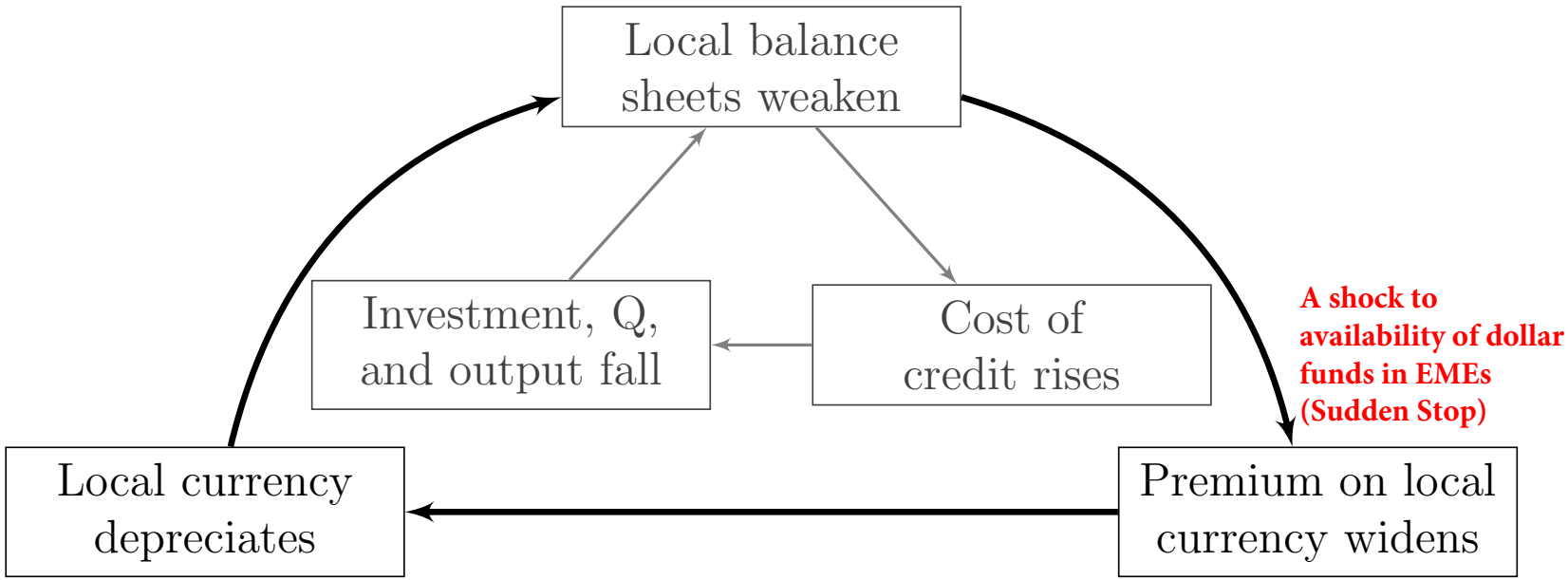

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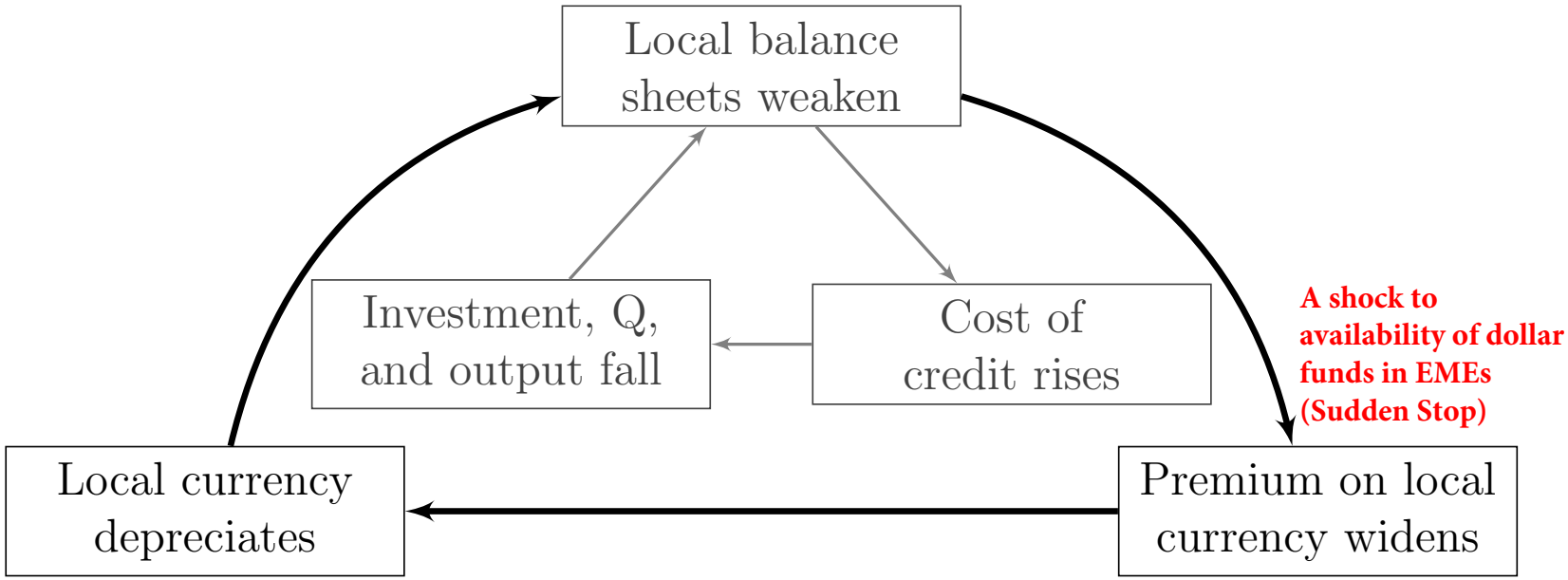
- Shock is a sharp increase in the cost of accessing dollar funding markets.
- Calibration: An increase of CIP deviations between the US dollar and the Korean won by 215 bps between the pre-stress period and the peak of the stress.

Central Bank Swap Lines



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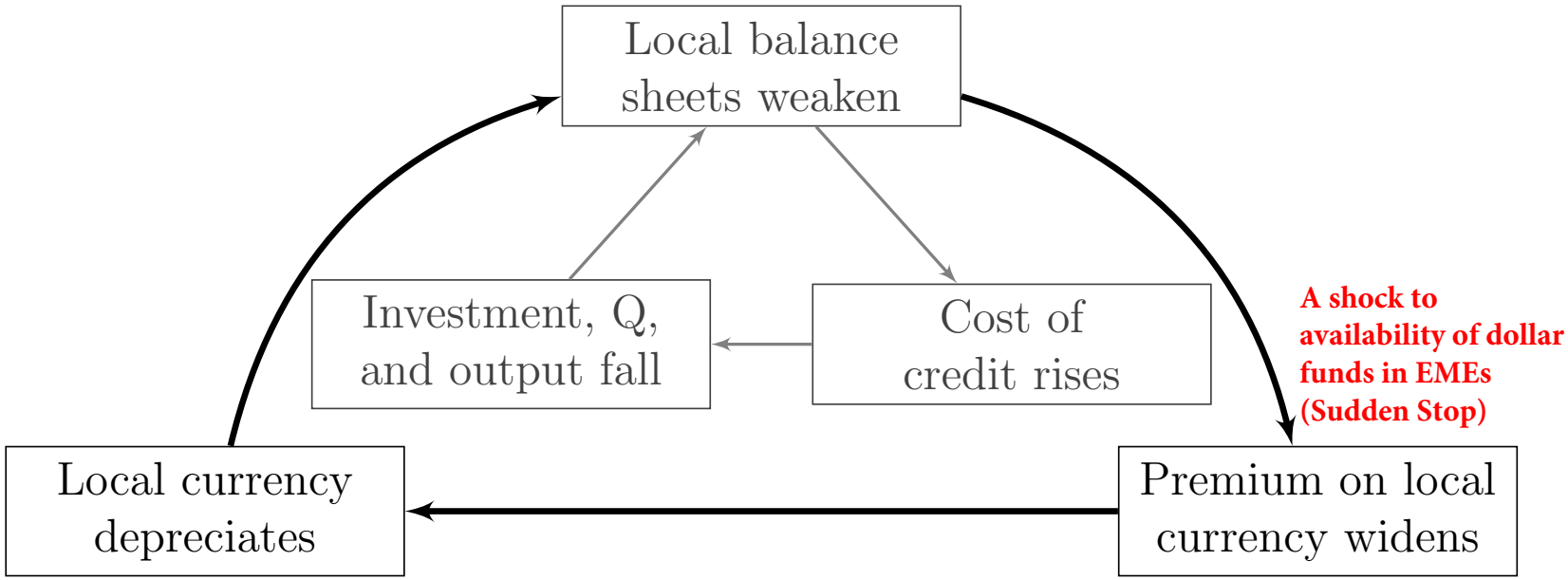

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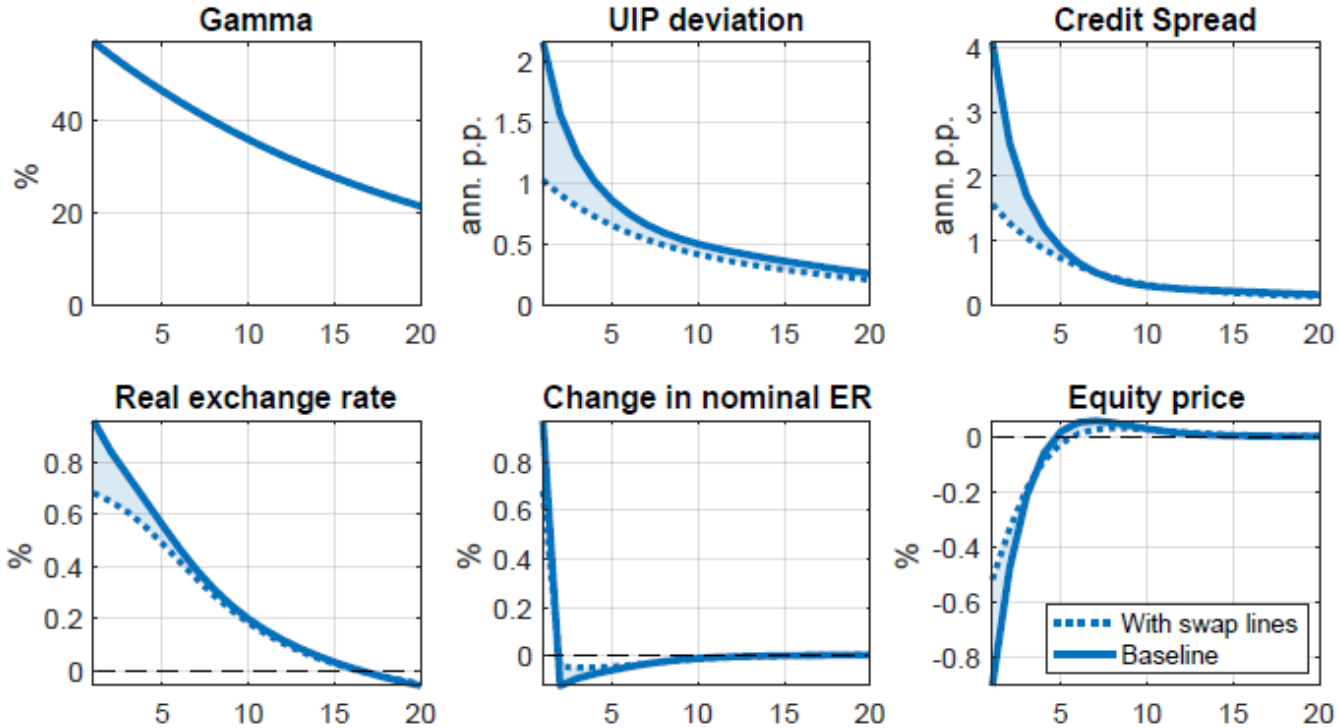
- In this environment, provision of dollar liquidity to illiquid borrowers can help dampen the downward spiral.
- The question is how much?

Financial Effects of Swap lines



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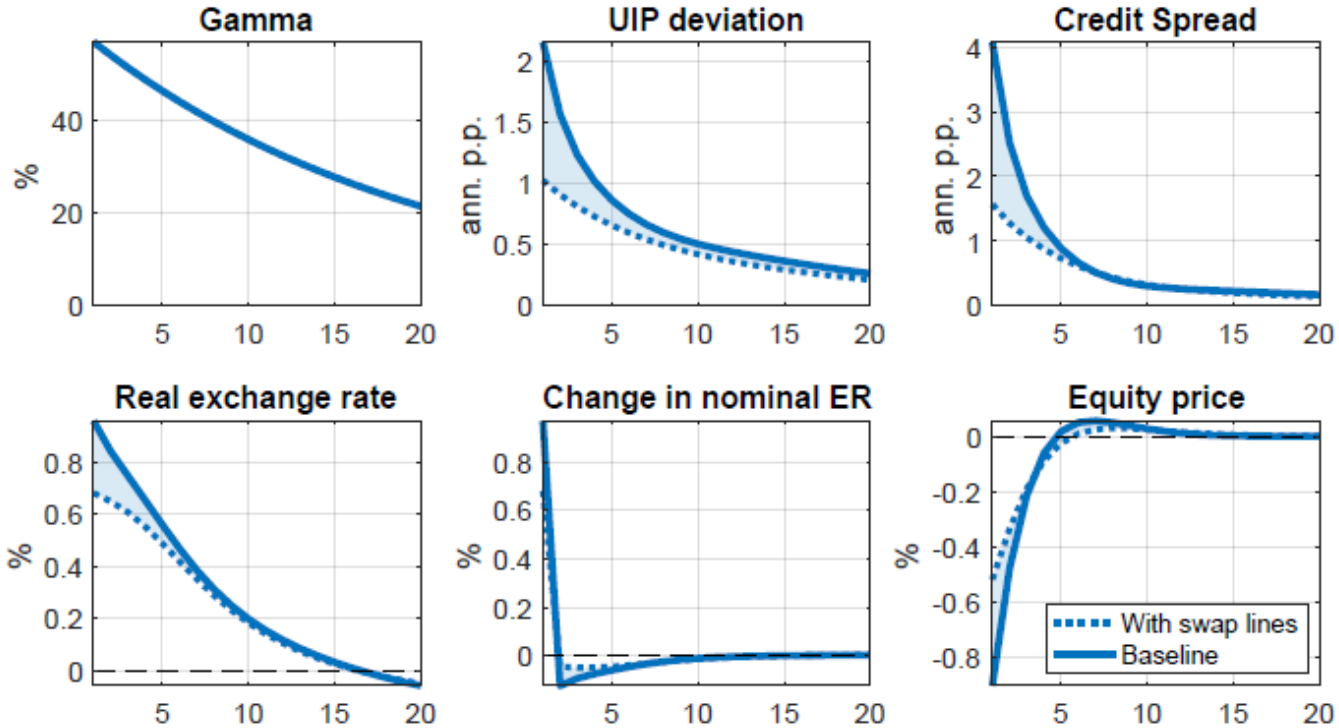
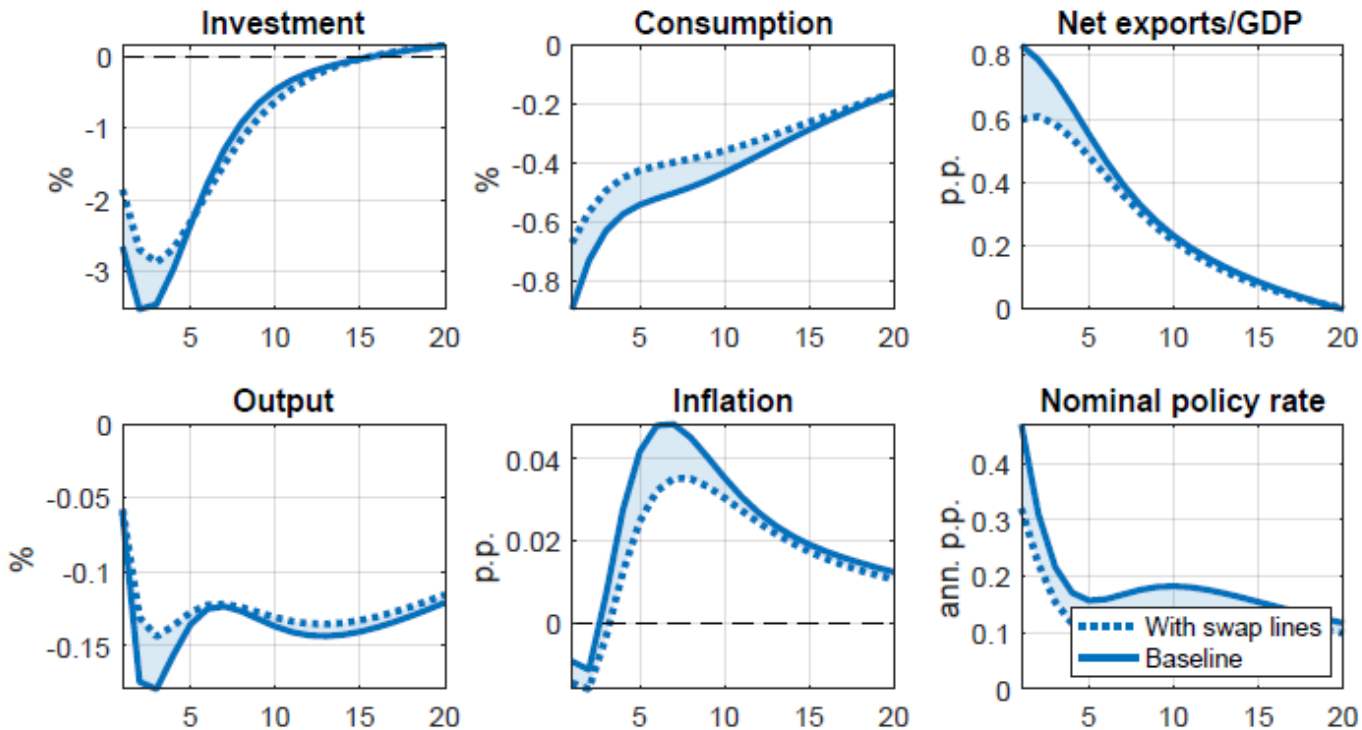


- LSB (Akinci, Benigno, Queralto (March, 2020)): "Credit spreads tightened and the exchange rate depreciated at an unprecedented speed in the wake of the COVID-19 outbreak in the US: spreads rose 300 basis points and EME currencies fell 15 percent in just a few weeks since late February."
- Estimate EM policy rule for Korea.
- Match model IRs with their empirical counterparts

Real Macro Effects of Swap lines



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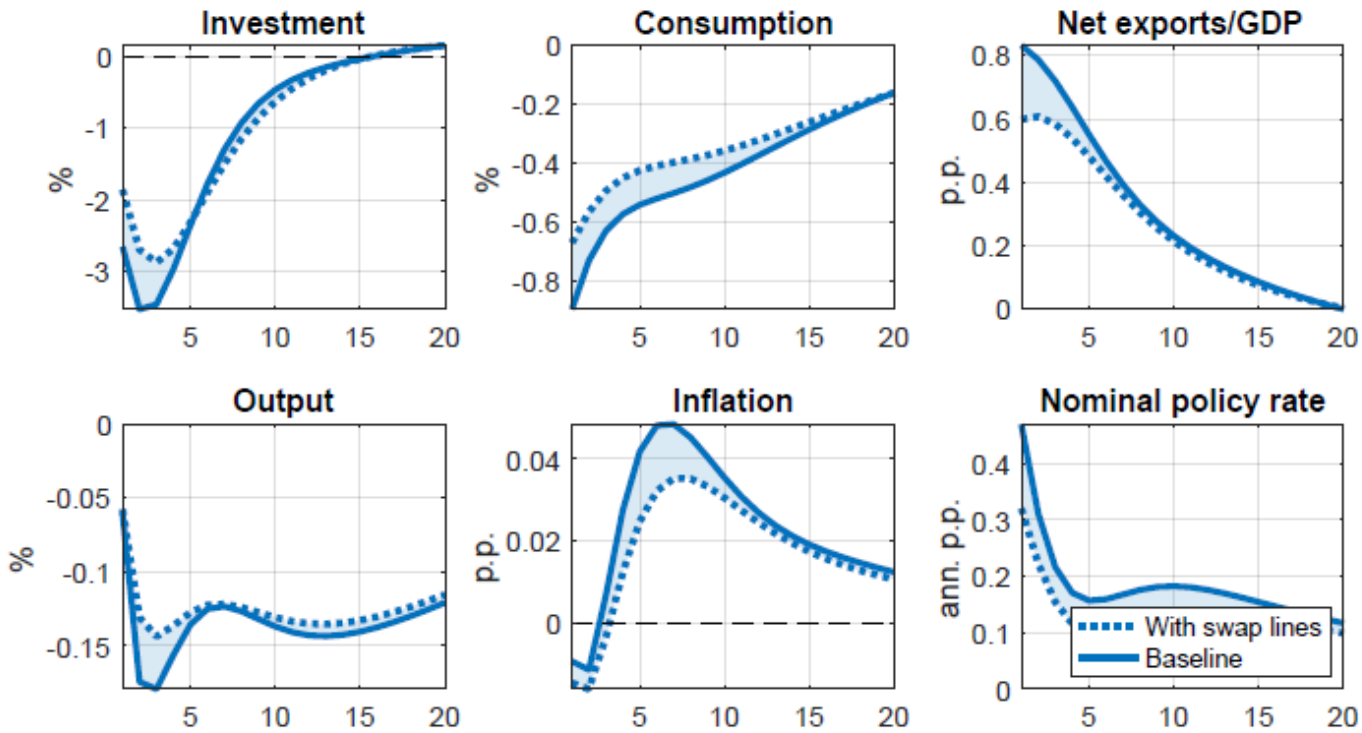
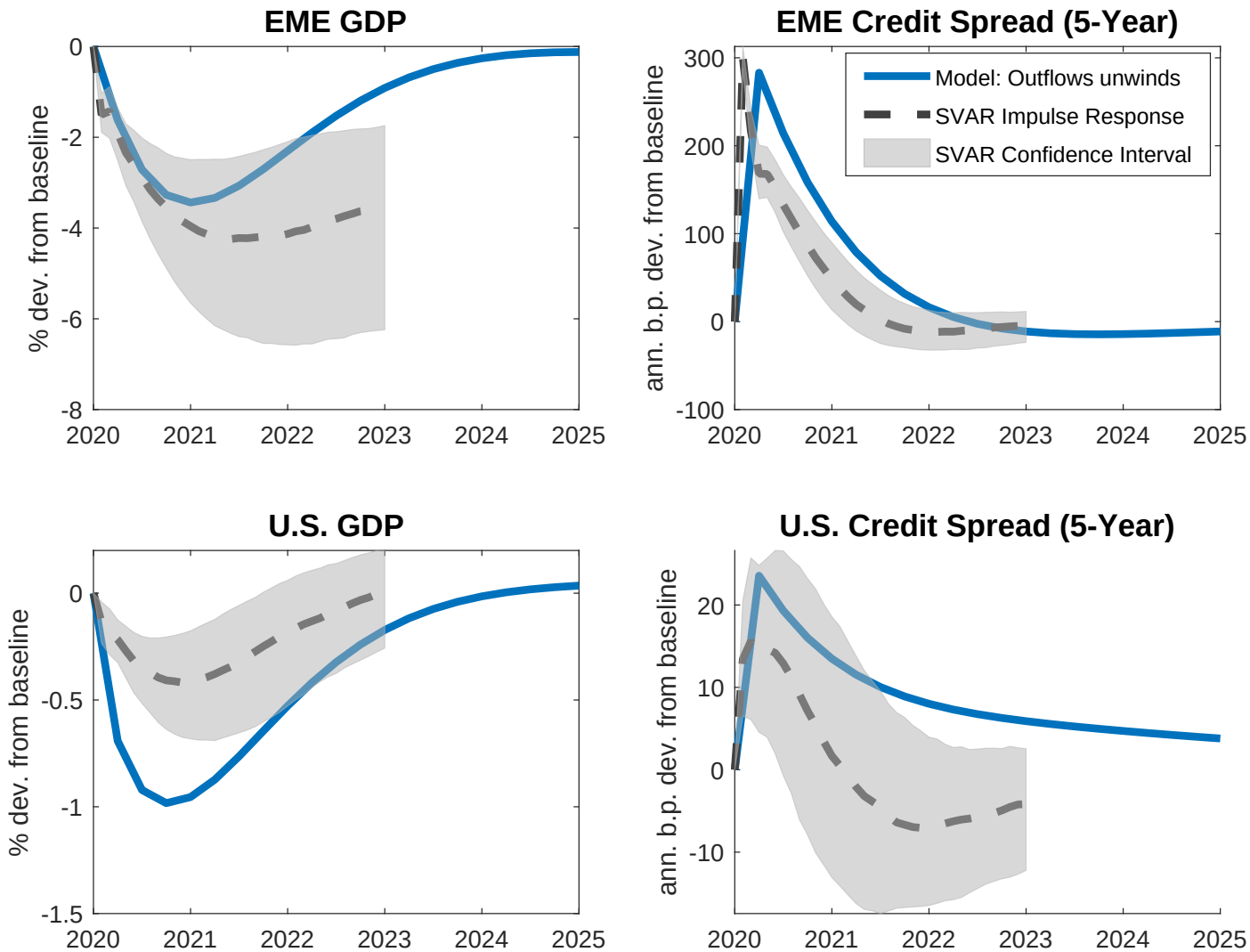


- Calibrate the model to match impulse responses of Korean GDP and Investment to a Sudden Stop shock.
- Too soon to conclude "Marginal and transitory effects on investment and output?"

LSB (Akinci, Benigno, Queralto (March, 2020))



Note: Empirical impulse responses are taken from Groen, Nattinger, and Noble (2020) "Measuring Global Financial Market Stresses", NYFed Staff Report.

Concluding Comments

- Very interesting paper
- Empirical contribution
  - High frequency identification of swap lines surprises, and responses to swap lines shocks of exchange rates, equity prices, credit spreads and CIP deviations.
  - Suggestions: Use cross-section of HF responses to validate the model mechanisms.
- Model contribution
  - Introduce CB swap lines and calibrate the model to the Korean experience
  - Suggestions: Better isolate the effect of swap lines from other policy responses in foreign economies, and tighten the link between the empirical results and the model simulations.
- Look forward to seeing the next version