Global Transmission of FED Hikes: The Role of Policy Credibility and Balance Sheets

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[a]Disclaimer: The views are ours and do not represent views of IMF/OECD

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4. **Why this time is different?**

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   $\Rightarrow$ High dollar debt (weak balance sheets via currency mismatch)
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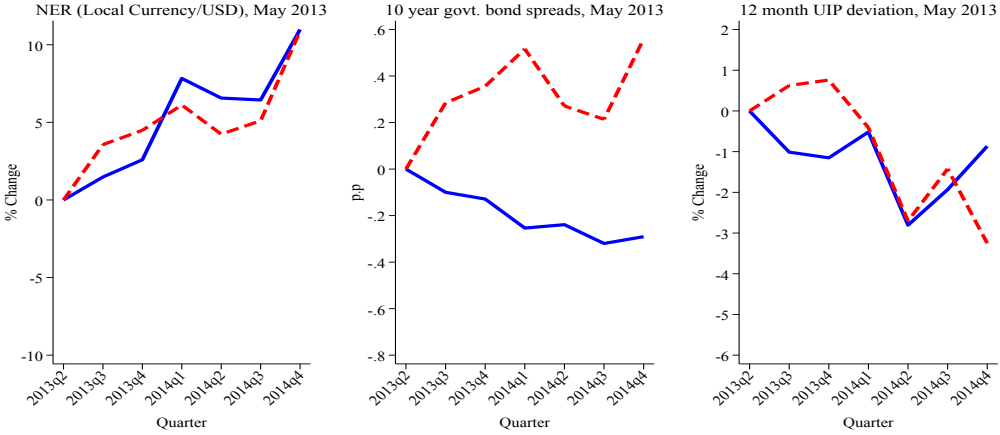
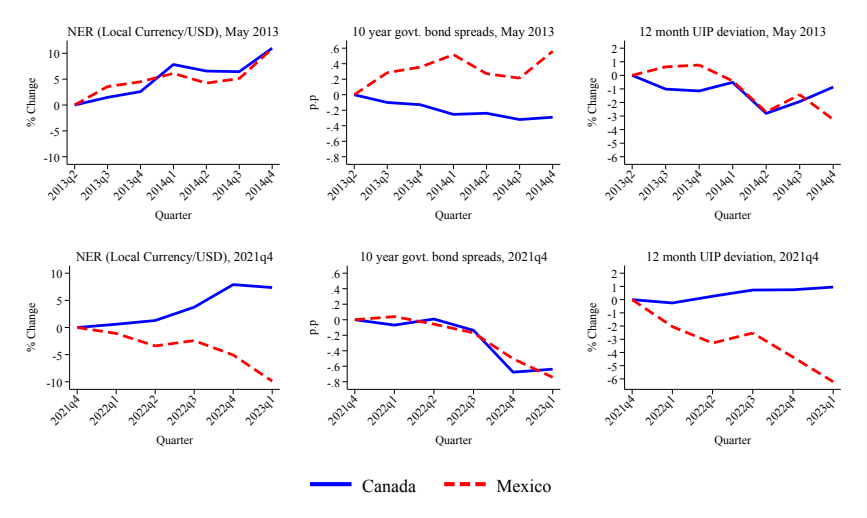
4. 2022–2023 EM resilience: comes from $\downarrow$ dollar debt and $\uparrow$ monetary policy credibility since risk premia did not increase as much as before

Narrative

Mexico and Canada: Taper Tantrum—Exchange Rates and Spreads



Mexico and Canada: Taper Tantrum and Now—Exchange Rates and Spreads



Data

Monetary Policy Credibility and FX Debt

Using a narrative approach ala Romer and Romer'89, Unsal et al.'22 develop IAPOC:

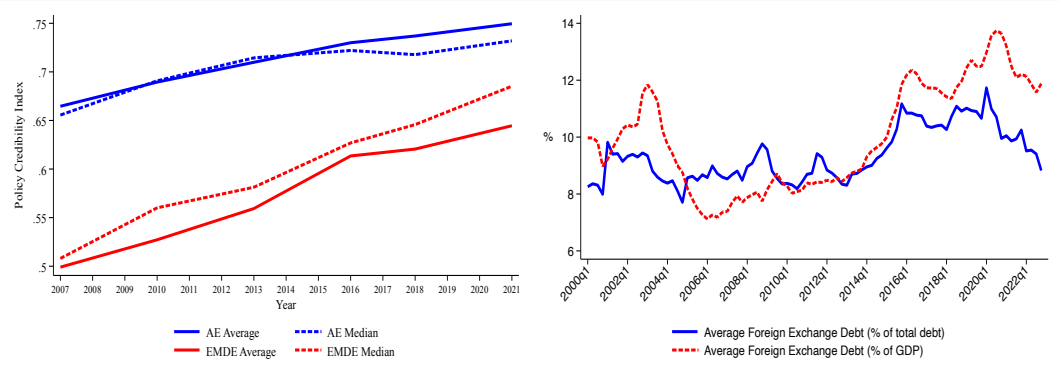
Key difference: Moves away from exchange rate or monetary policy classifications towards a comprehensive assessment of monetary policy practices in:

1. (IA) Independence and Accountability
2. (PO) Policy and Operational Strategy
3. (C) Communications

FX debt of corporates and households (BIS):

- Real exposures (vs. estimates based on current account/NFL)
- Financial sector is regulated to hedge in EM
- EM governments increasingly borrow in local currency

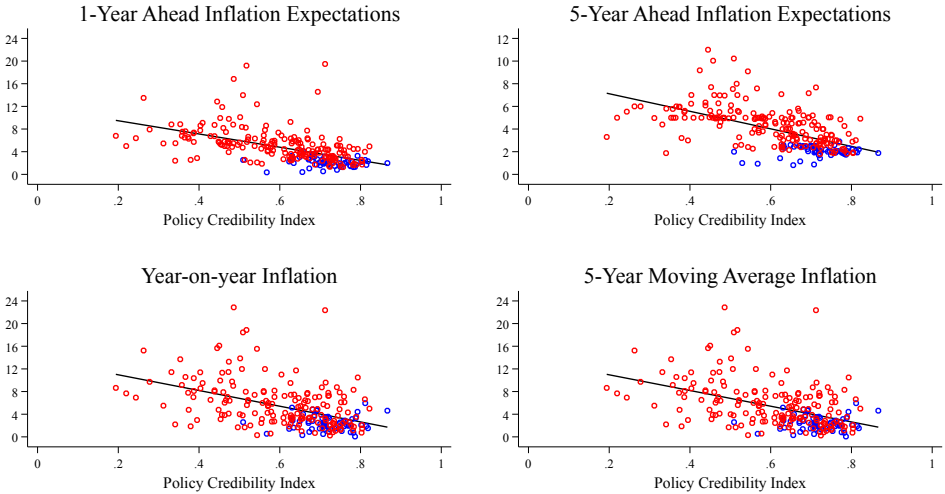
Monetary Policy Credibility and FX Debt



(a) Policy Credibility

(b) Non-financial private sector FX Debt

Monetary Policy Credibility and Inflation Expectations



Results

Local Projections Framework

Quarterly frequency (1990q1–2023q1, 70 countries, 55 EMDE)—IAPOC: 35 EM, FX debt 15 EM.

Historical: 1990q1–2019q4. Recent: 2021q1–2022q4.

$$y_{c,t+h} = \alpha_{c,h} + \beta_h \hat{i}_t^{US} + \gamma Z_{c,t} + \underbrace{\sum_{i=1}^{\rho} \eta_i W_{c,t-i}}_{\text{lagged controls/dep.var.}} + \varepsilon_{c,t+h} \quad (1)$$

$$y_{c,t+h} - y_{c,t-1} = \alpha_{c,h} + \beta_h \hat{i}_t^{US} + \gamma Z_{c,t} + \underbrace{\sum_{i=1}^{\rho} \eta_i W_{c,t-i}}_{\text{lagged controls/dep.var.}} + \varepsilon_{c,t+h} \quad (2)$$

$\hat{i}_t^{US}$: U.S. MP Shock

Y: Macro/Finance variables (GDP, exchange rate, policy rate, inflation, UIP, capital flows)

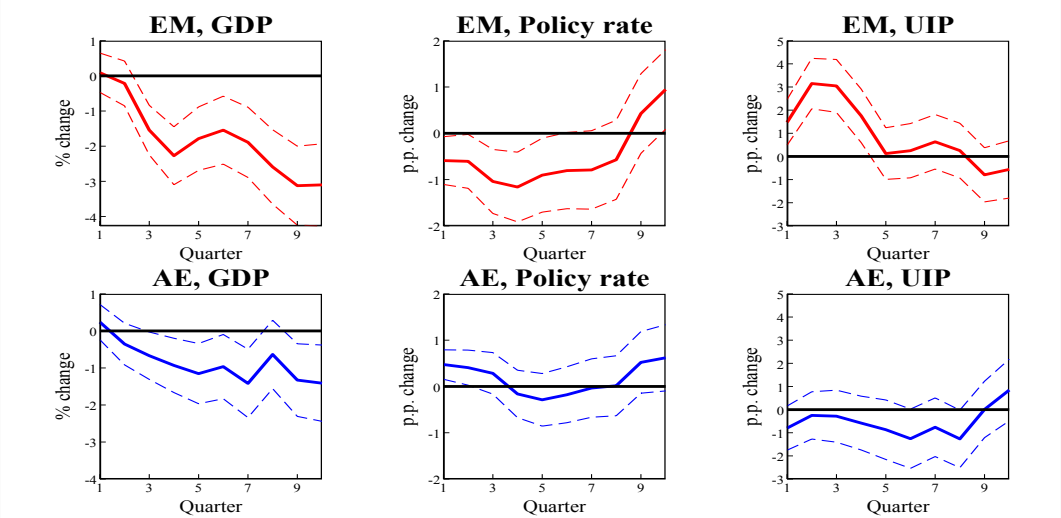
Z: Controls (openness, reserves, current account, growth differentials, interest rate differentials)

How to Measure U.S. Monetary Policy Shocks?

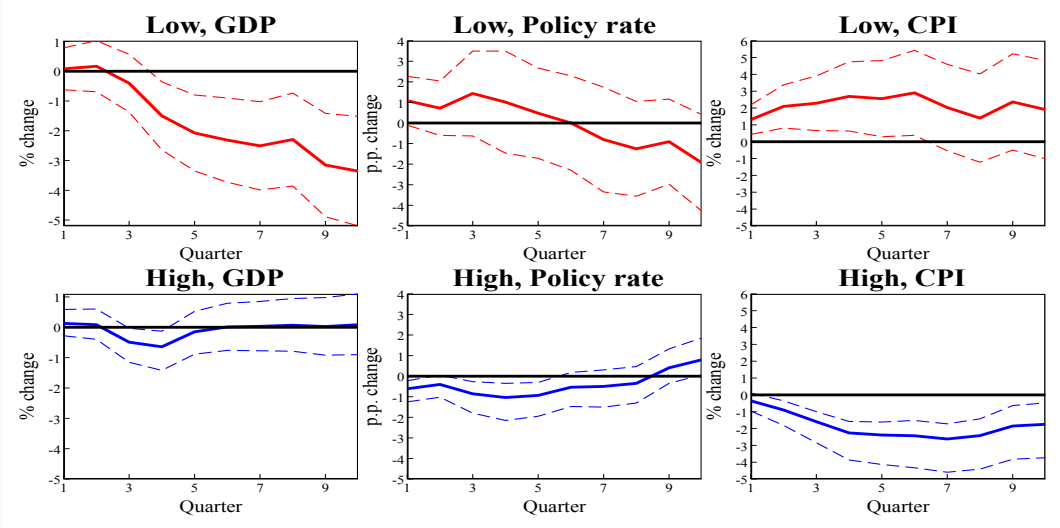
- We follow the macro literature to measure exogenous MP shocks.
    - Quarter averages of monetary policy shocks from Gertler and Karadi'15— changes in 3-month FED Fund Futures (FF4) in a 30-minute window, weighted by share of remaining days in the month.

Direct measures of risk sentiments: VIX, EBP (Gilchrist and Zakrajšek'12), the RORO index (Chari, Stedman and Lundbland'20)

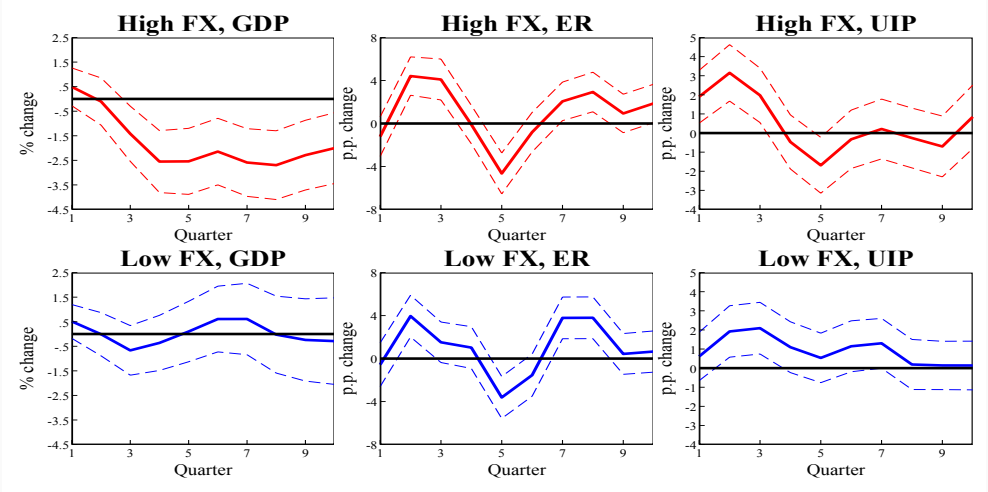
International Transmission of FED Hikes: Worse Effects for EM



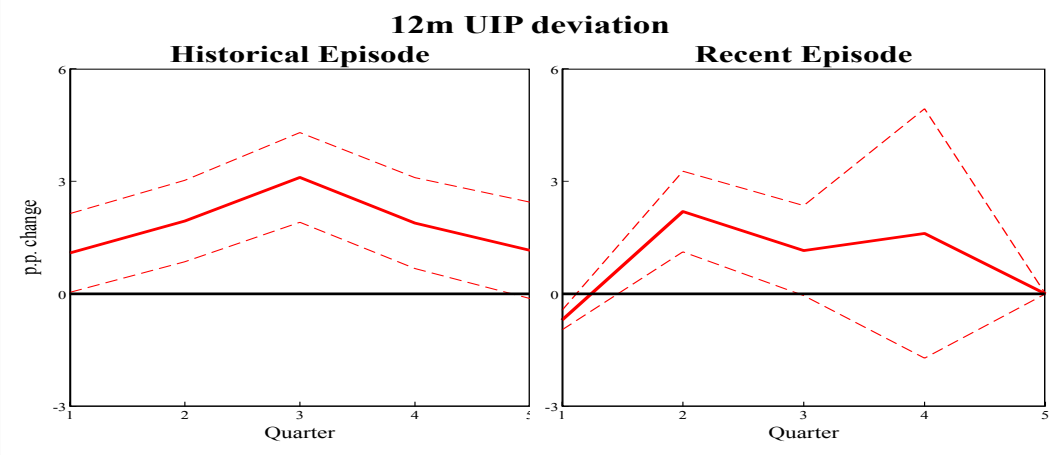
International Transmission: Worse Effects for Countries with Low Credibility



International Transmission: Worse Effects for Countries with High FX Debt



International Transmission of FED Hikes: Risk Premia (UIP)—Then and Now



UIP deviation: $(\text{i-i}^{US}) - (Expected\Delta(E))$; $E = local/USD$ Exchange Rate

Conclusion and Policy Implications

Takeaways..

- The archetypal EM crisis was in 1997-98/02. As the FED raised rates, pulling capital back to the U.S., Thailand's currency peg broke, leading to a panic that spread to South Korea, Indonesia, Brazil, Russia, Turkey, Argentina, and to LTCM.
- A decade later, in 2013, there was an EM sell-off when FED signalled tightening.
- 2022–2023: This time it is different.
- **We show that**: Financial channel of the international transmission was less strong this time around, relative to historical episodes, due to improved monetary policy credibility and lower FX debt.
- Lower FX debt and higher credibility means lower risk premia, which is at the heart of the financial channel.

..End with a Quote

Gita Gopinath, FDMD, IMF, September 2023, South Africa:

"In the current 'high for long' environment, global financial conditions for EMs can be expected to remain challenging. Despite sharply raising U.S. rates, EMs have demonstrated resilience. Though inflation in EMs rose, inflation expectations remain anchored. These outcomes owe much to the improvements many EMs made to their policy frameworks and financial sectors during last decades. Central bank independence, inflation targeting, exchange rate flexibility, and regulation of their financial sectors all played a critical role."

Appendix

Contribution to Literature

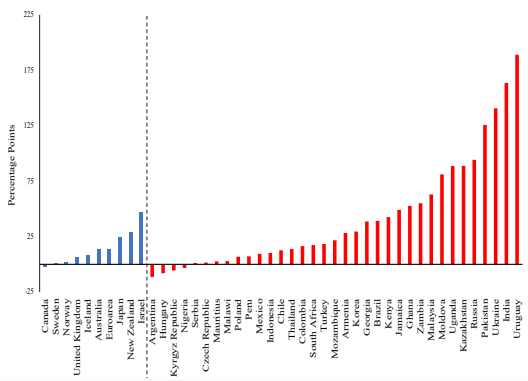
Two key channels of international monetary policy transmission:

1. Trade channel (smooth/benign)—Mundell-Fleming expenditure switching
2. Financial channel (adverse effects)— Alejandro'83; Calvo, Leiderman and Reinhart'93; Rey'13; Bruno and Shin'15; Kalemli-Ozcan'19; Obstfeld and Zhou'22; Fukui, Nakamura, and Steinsson'23; De Leo, Gopinath, Kalemli-Ozcan'23

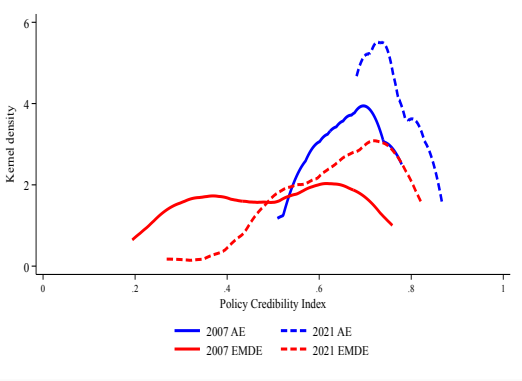
EMDE vulnerabilities to external shocks:

1. Endogenous choice of **exchange rate regime/trilemma**
   ⇒ Linked to monetary policy credibility; peg is another nominal anchor
   ⇒ Floating rates can be shock absorbing or propagating (Nurkse'44; Friedman'53)
   ⇒ IT can help with external financial shocks (Mishkin and Schmidt-Hebbel'07; Bems. et al.'21)
   ⇒ Within the sample of floats/managed floats/ITs, how does monetary policy credibility work?
2. **Original Sin**: Cannot borrow in own currency—Eichengreen and Hausmann'99
   ⇒ Migrated from sovereigns to corporates—Du and Schreger'16; Carstens and Shin'21; IMF'22.
   ⇒ Importance of corporate FX debt

Improvement in Monetary Policy Credibility

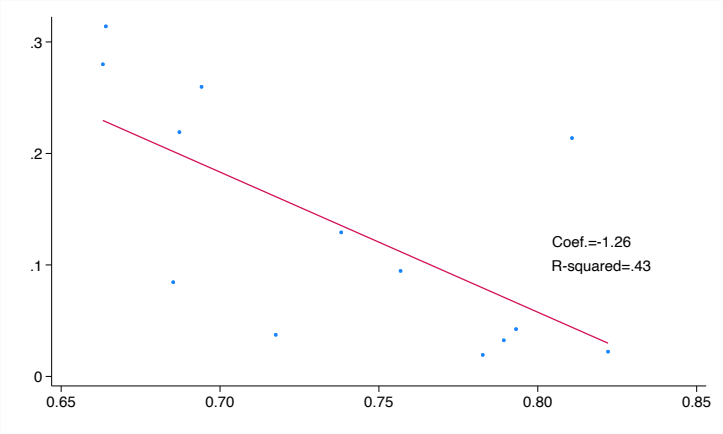


(c) Change in Policy Credibility, 2007-2021



(d) Distributions

Policy Credibility and FX Debt are Negatively Correlated

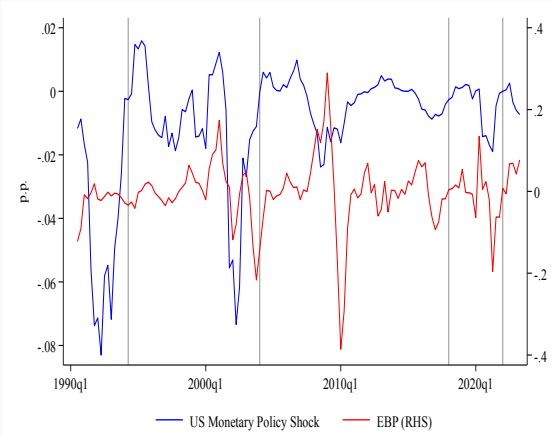


Notes: This figure shows the correlation between the policy credibility index (x-axis) and the FX debt (y-axis). Coefficient β, significant at 5%, and R^2 from OLS estimates $FXdebt_c = \alpha + \beta * IAPOC_c + \epsilon_c$ are reported.

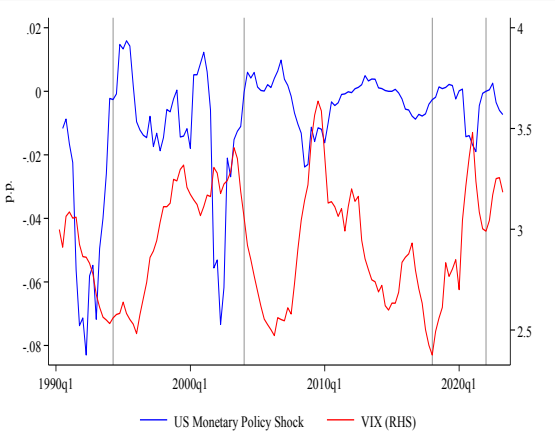
Recent US MP hikes

Date	Increase (basis points)	Level (%)
July 27, 2023	25	5.25-5.50
May 4, 2023	25	5.00-5.25
March 23, 2023	25	4.75-5.00
February 2, 2023	25	4.50-4.75
December 15, 2022	50	4.25-4.50
November 3, 2022	75	3.75-4.00
September 22, 2022	75	3.00-3.25
July 28, 2022	75	2.25-2.50
June 16, 2022	75	1.50-1.75
May 5, 2022	50	0.75-1.00
March 17, 2022	25	0.25-0.50

Monetary Policy Shocks and Risk Premia Shocks



(e) EBP



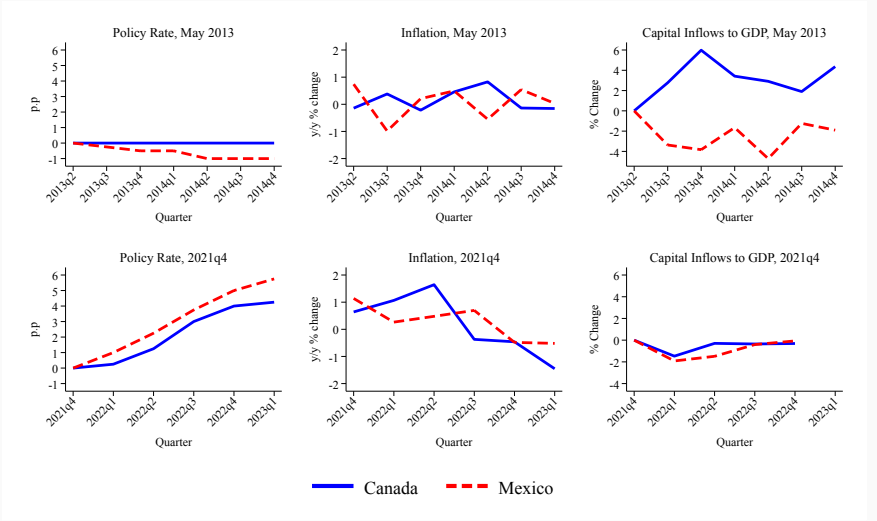
(f) VIX

Country Sample

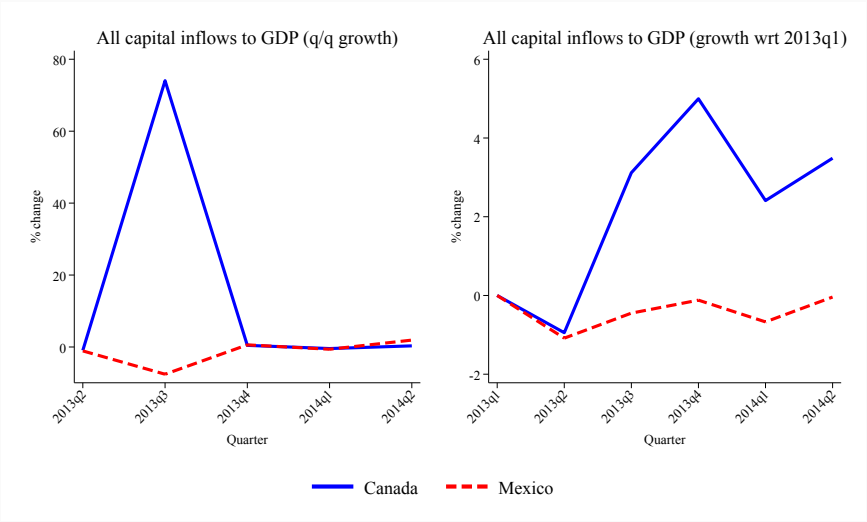
Albania	Czech Republic*	Israel*	Mongolia	Serbia*
Argentina*$	Denmark	Italy	Morocco	Singapore
Armenia*	Dominican Republic	Jamaica*	Mozambique*	Slovak Republic
Australia*	Euro Area*	Japan*	New Zealand*	South Africa*$
Azerbaijan	Ecuador	Kazakhstan*	Nigeria*	Sweden*
Belarus	Egypt Arab	Kenya*	Norway*	Switzerland
Bolivia	Germany	Korea*$	Pakistan*	Tanzania*
Brazil*$	Ghana*	Kyrgyz Republic*	Paraguay	Thailand*$
Bulgaria	Guatemala	Latvia	Peru*$	Tunisia
Canada*	Hungary*	Malaysia*$	Philippines*$	Turkey*$
Chile*$	Iceland*	Malta	Poland*	Uganda*
Colombia*$	India*$	Mauritius*	Romania	United Kingdom*
Costa Rica	Indonesia*$	Mexico*$	Russian Federation*$	Uruguay*
Croatia	Ireland	Moldova*	Rwanda*	Zambia*

Note: We follow the IMF 2000 World Economic Outlook country groups classification. Because we measure U.S. monetary policy spillovers, we drop the U.S. * indicates that we have the monetary policy credibility index (IAPOC) for this country. $ indicates that we have the direct measure of FX debt exposure of the private sector for this country. Red text indicates a country is an emerging market. Blue text indicates a country is a low income/developing country.

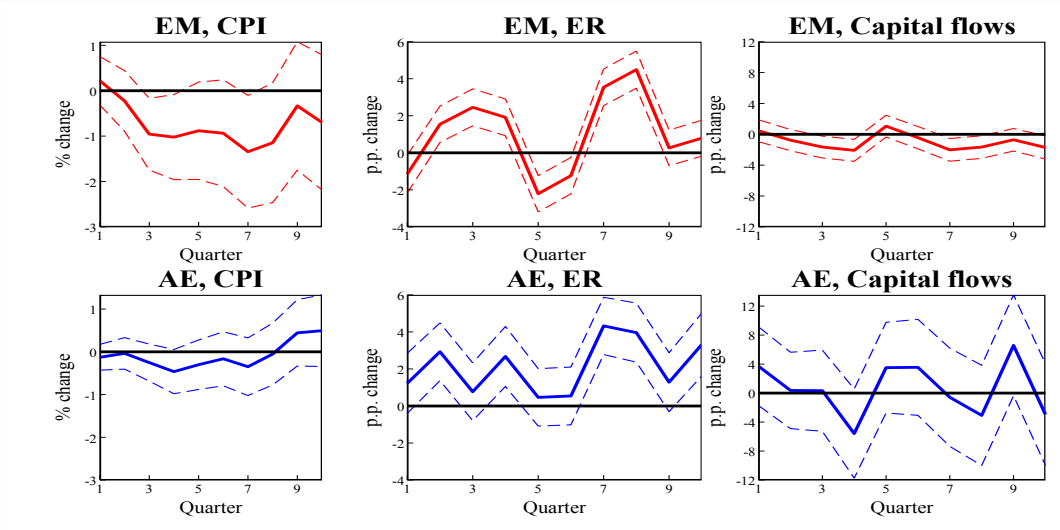
Mexico and Canada: Taper Tantrum and Now—Policy, Inflation, and Capital Flows



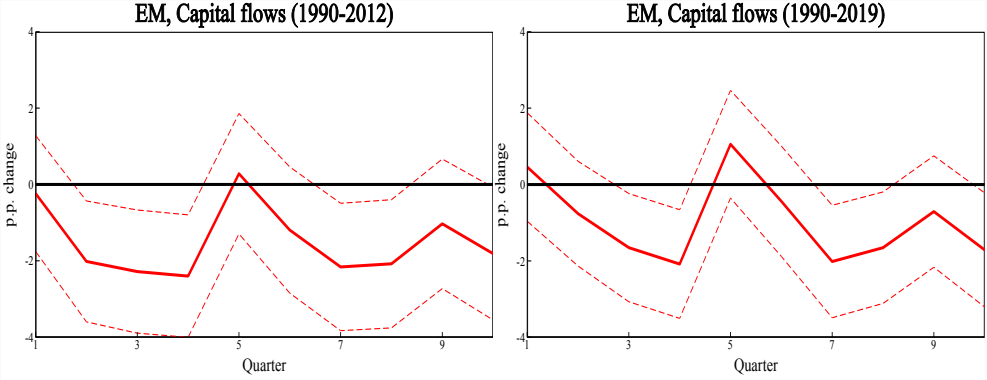
Mexico and Canada: Capital inflows to GDP during Taper Tantrum



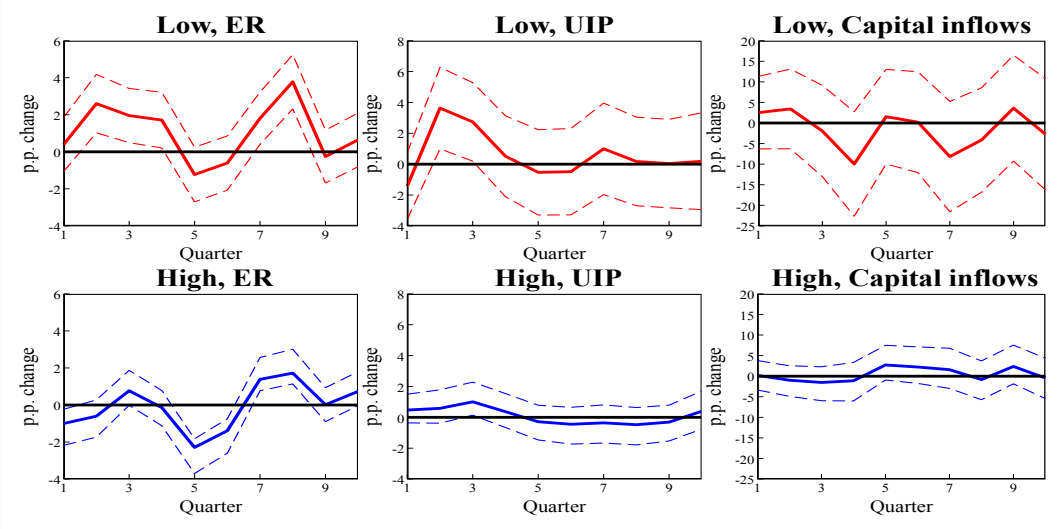
International Transmission: Inflation and Exchange Rates in EM vs. AE



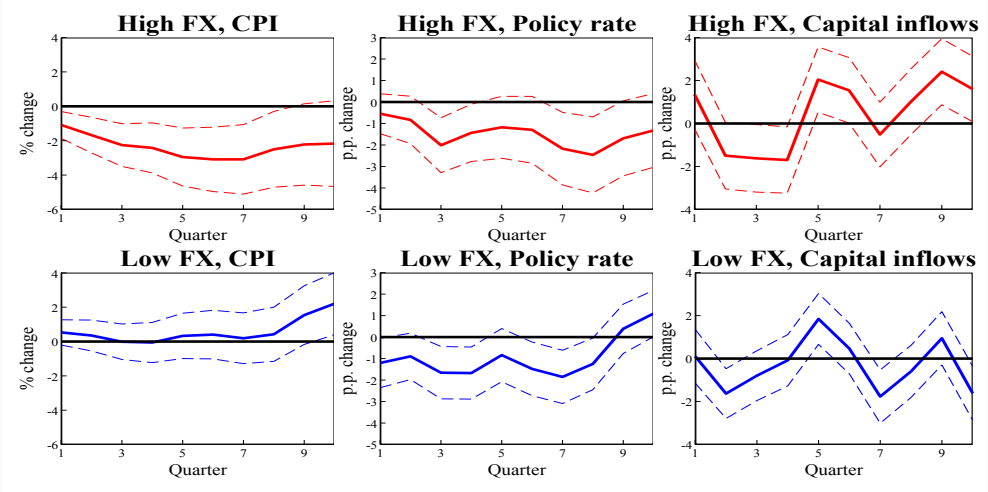
Capital outflows were stronger during early periods



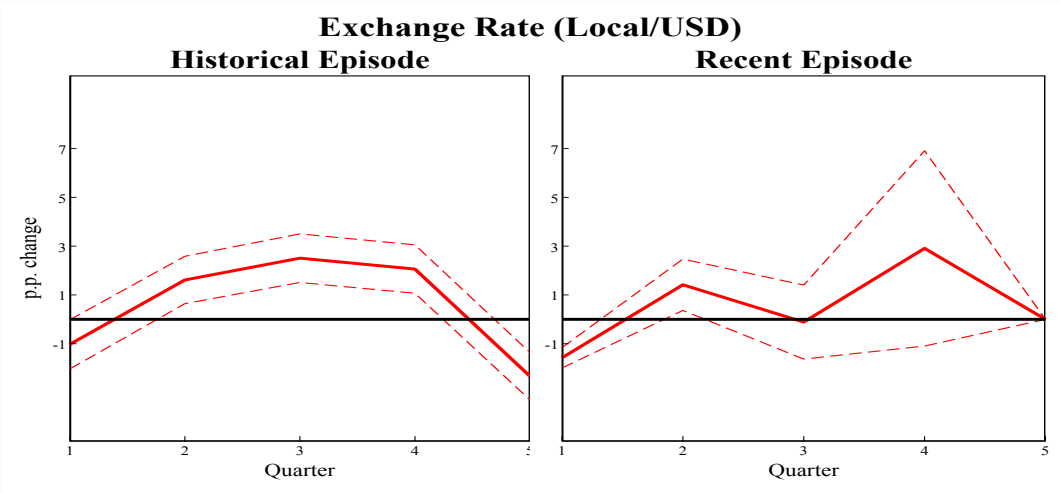
The Role of Policy Credibility—Other Variables



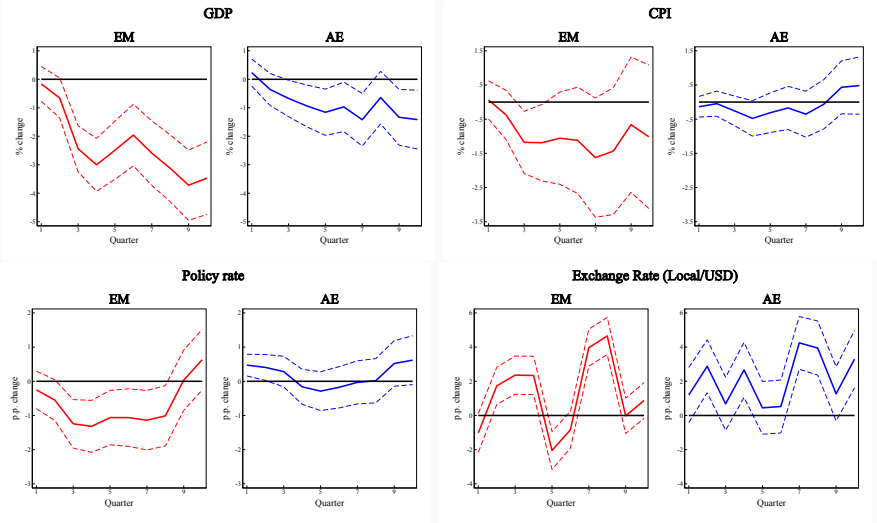
The Role of Balance Sheet Weakness via Currency Mismatch—Other Variables



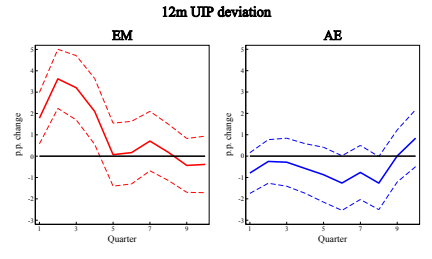
Exchange Rates: Historical vs Recent Episode

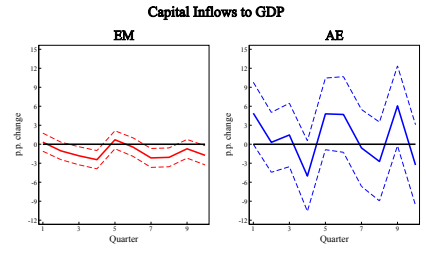


Robustness for Policy Credibility: Reduced Sample of Countries (1/2)

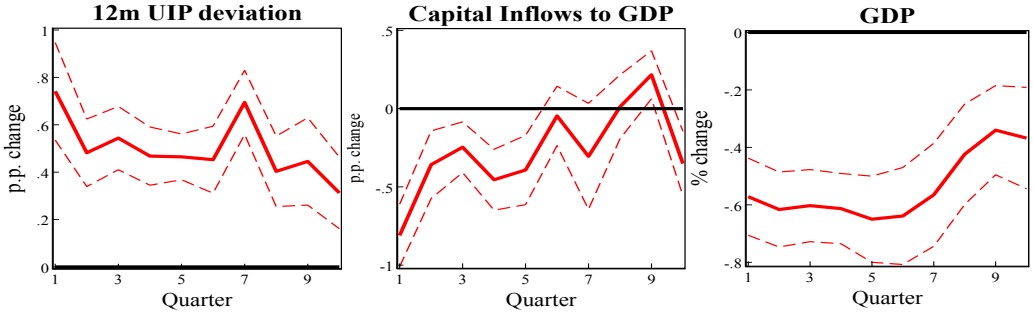


Robustness for Policy Credibility: Reduced Sample of Countries (2/2)

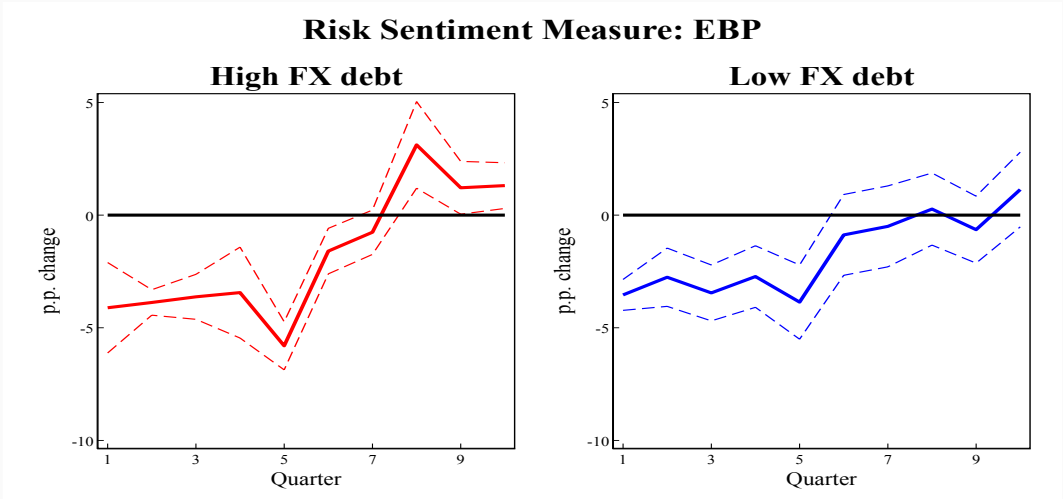




International Transmission of Risk-Off Shocks in EM: VIX



International Transmission of Risk-Off Shocks to Capital Flows: The Role of FX Debt



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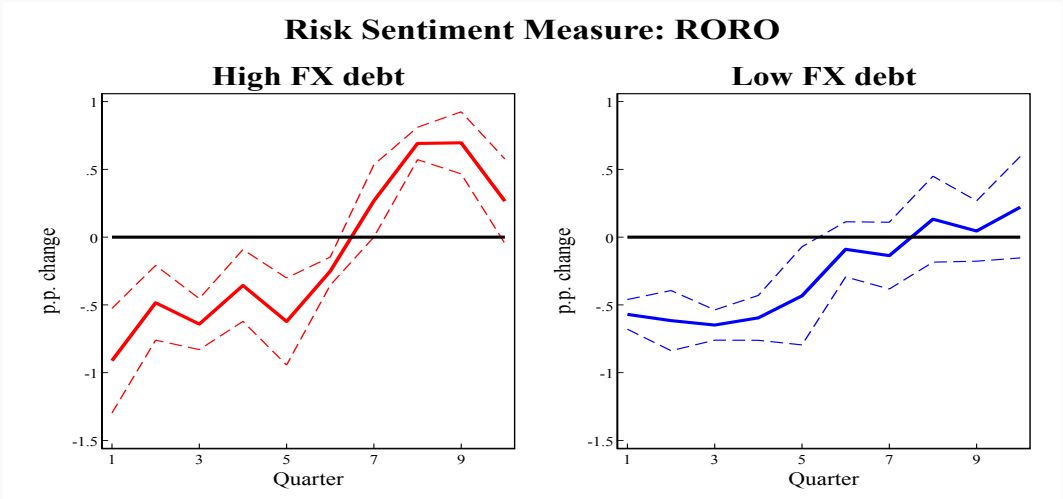
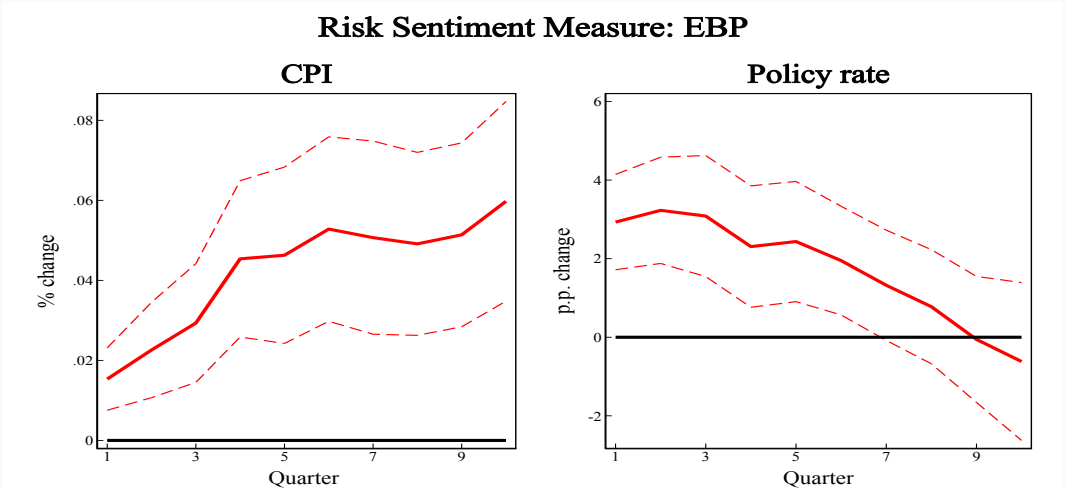


International Transmission of Risk-Off Shocks to Inflation in Low Policy Credibility Countries



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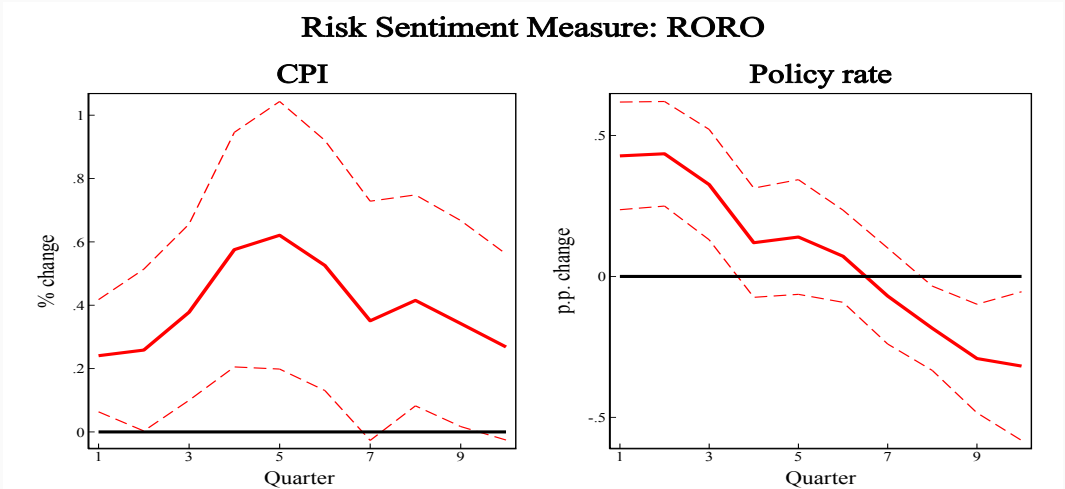

Trade and Financial Channel of U.S. Monetary Policy Transmission