

International Risk Spillovers: Implications for Emerging Markets' Monetary Policy Frameworks

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International Risk Spillovers

Kalemli-Ozcan (2019): U.S. monetary policy spills-over to EMs via changing risk sentiments of international investors

Risk sentiments are affected from U.S. policy (global risk-aversion) and EM specific risk \Rightarrow EMs are more risk-sensitive

Channels of International Risk Spillovers

- Global banks' funding costs and balance sheets (lender side)
- EM-Domestic banks funding costs (lender side)
- EM-Corporate balance sheets' weakness/strength due to un-hedged USD debt (borrower side)

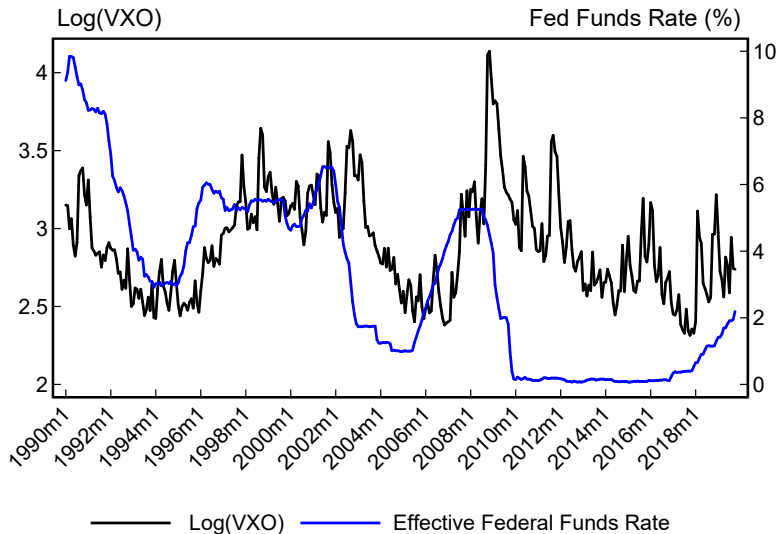
⇒ **UIP risk premia can be a good barometer of international risk spillovers**

⇒ **EM policies should aim at smoothing the UIP risk premia—role for flexible exchange rates**

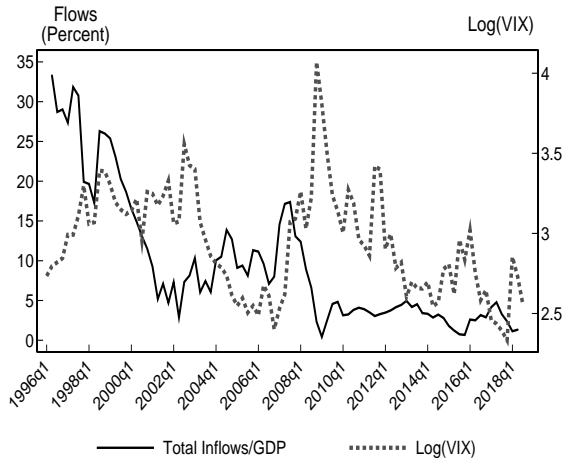
Global Financial Cycle and International Risk Spillovers

- Rey (2013), Miranda-Agrippino and Rey (2020, 2021):
⇒ common global factor linked to risk aversion explaining risky asset prices and capital flows, important role of U.S. monetary policy
- Bruno-Shin (2018); Cartens and Shin (2020):
⇒ role of USD borrowing in balance sheets when governments borrow in local currency but banks and corporates in USD.
- Kalemli-Ozcan (2019), di Giovanni et al. (2020):
⇒ transmission to EMs via banks' funding conditions, capital flows, and local lending rates; all linked to UIP risk premia

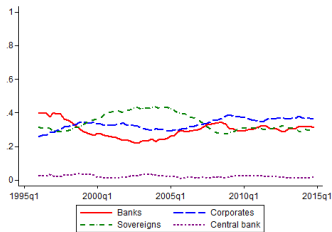
U.S. Monetary Policy and Investors' Risk Sentiments (+)



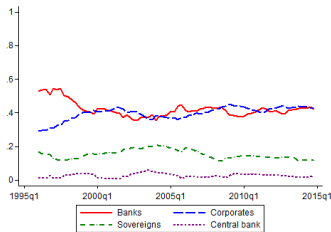
Investors' Risk Sentiments and EM Capital Inflows (-)



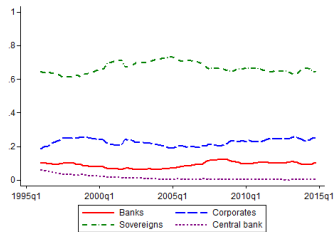
Capital Flows by Sector: Important Role of Banks and Corporates for EMs



Emerging Markets, Total



Emerging Markets, Loans



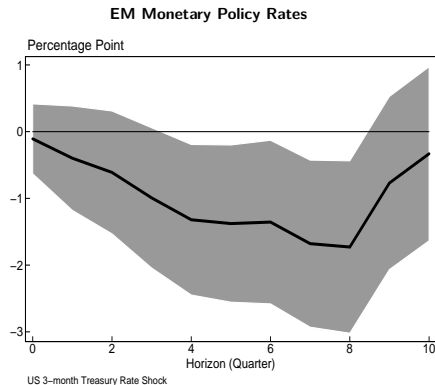
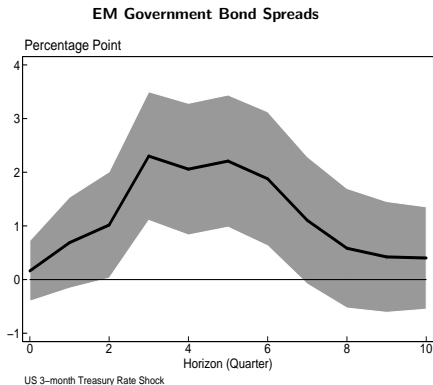
Emerging Markets, Bonds

U.S. Monetary Policy, EM Monetary Policy and Risk Premia

U.S. monetary policy shocks, EM Spreads and Ineffective Monetary Policy

Surprise \uparrow in U.S. policy rate (changes in Fed Funds Futures in 30-min window):

EM short-term spreads increase in spite of the domestic monetary policy easing



UIP Risk Premium as a Barometer for Risk Spillovers

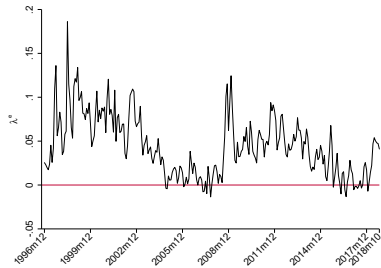
Define the UIP premium for 'domestic' economy where 'foreign' is always the U.S.

$$\underbrace{\lambda_{t+h}^e}_{\text{UIP Premium}} = \underbrace{(i_t - i_t^{US})}_{\text{IR Differential}} + \underbrace{(s_t - s_{t+h}^e)}_{\text{ER Adjustment}} \quad (\text{where } s \text{ in LC/\$})$$

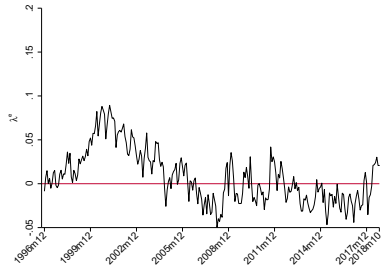
Five Facts About the UIP Premium

1. UIP holds on average in AE, **but not** in EM.

Emerging Markets



Advanced Economies

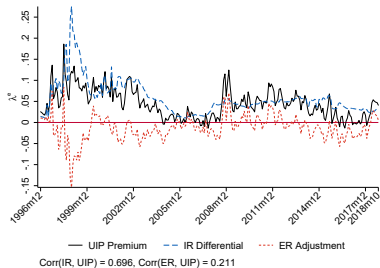


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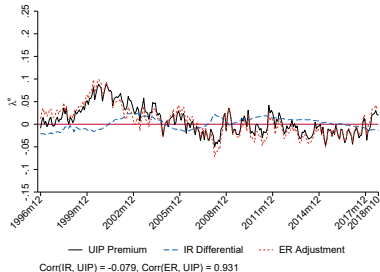
1. UIP holds on average in AE, **but not** in EM.

2. UIP premium relates to **IR diff in EM** & **ER Adj in AE**.

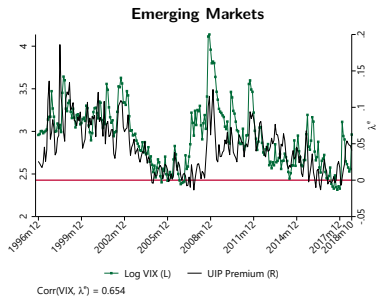
Emerging Markets



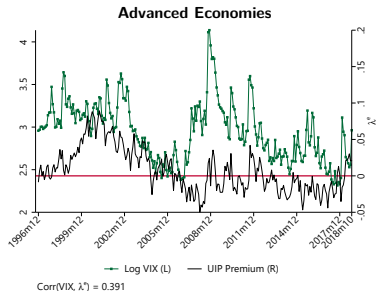
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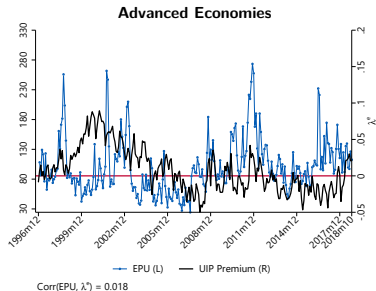
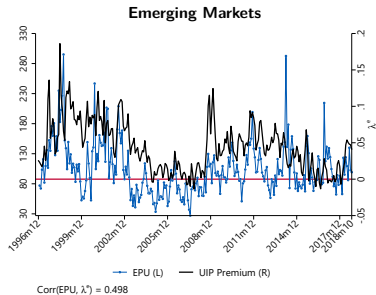
Five Facts About the UIP Premium



1. UIP holds on average in AE, **but not** in EM.
2. UIP premium relates to IR diff in EM & ER Adj in AE.
3. **VIX** and UIP premium comove in both AE and EM.



Five Facts About the UIP Premium



1. UIP holds on average in AE, **but not** in EM.
2. UIP premium relates to IR diff in EM & ER Adj in AE.
3. VIX and UIP premium comove in both AE and EM.
4. Policy uncertainty relates to UIP premium in EM but not in AE.

The Role of Policy Uncertainty, Global Risk and Capital Flows

→ **Regress:**

$$Y_{it} = \gamma_1 \log(\text{Capital Inflows/GDP}_{it-1}) + \gamma_2 \log(VIX_{t-1}) + \gamma_3 \text{EPU}_{it-1} + \mu_i + \varepsilon_{it}$$

where $Y_{it} = \{\text{UIP Premium}(\lambda_{it+h}^e), \text{IR Diff}_{it}, \text{ER Adj}_{it+h}\}$.

→ **Capital flows and variables capturing global and local uncertainty:**

- Country-specific capital flows.
- Global risk perception: VIX.
- Country-specific policy uncertainty: EPU.

The Role of Policy Uncertainty, Global Risk and Capital Flows

	Emerging Markets			Advanced Economies		
	UIP Premium (1)	IR Differential (2)	ER Adjustment (3)	UIP Premium (4)	IR Differential (5)	ER Adjustment (6)
Panel A: Capital Inflows						
Inflows/GDP _{it-1}	-0.005*** (0.001)	-0.005** (0.002)	-0.000 (0.001)	0.019 (0.032)	-0.008 (0.009)	0.027 (0.039)
R ²	0.0016	0.0012	0.0000	0.0020	0.0025	0.0033

- K inflows are **negatively** correlated w/ UIP premium through IR Diffs in EM (1pp ↑ in K inflows associates with 0.5pp ↓ in the UIP premium).

Observations	3287	3287	3287	2209	2209	2209
Number of Currencies	21	21	21	12	12	12
Currency FE	yes	yes	yes	yes	yes	yes

Note: * p < 0.10 ** p < 0.05 *** p < 0.01. Currency-time two-way clustered standard errors in parentheses. 33 currencies, 21 emerging markets, 12 advanced economies. Period 1996m11:2018m12. Capital inflows are measured as changes in gross debt liabilities. The UIP premium and the exchange rate adjustment term are measured using expected exchange rate changes from Consensus Forecast surveys.

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Panel B: Global Risk						
Inflows/GDP _{it-1}	-0.002*** (0.001)	-0.003** (0.001)	0.001 (0.001)	0.035 (0.027)	-0.003 (0.010)	0.038 (0.035)
Log(VIX) _{t-1}	0.059*** (0.009)	0.038*** (0.013)	0.021** (0.010)	0.035*** (0.013)	0.011*** (0.004)	0.024* (0.013)
R ²	0.1496	0.0525	0.0199	0.0837	0.0590	0.0364

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Panel C: Country-Specific EPU						
Inflows/GDP _{it-1}	-0.001* (0.001)	-0.002** (0.001)	0.001 (0.001)	0.034 (0.027)	-0.003 (0.010)	0.036 (0.034)
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EPU _{it-1}	0.011** (0.004)	0.007*** (0.002)	0.004 (0.003)	-0.004 (0.002)	0.002 (0.001)	-0.005** (0.002)
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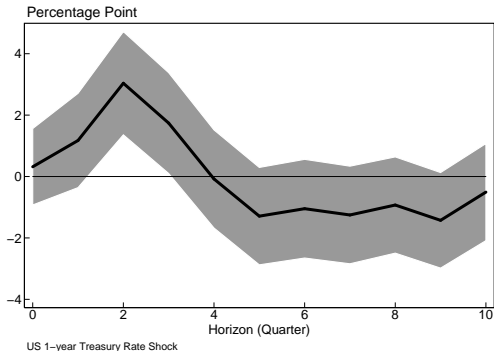
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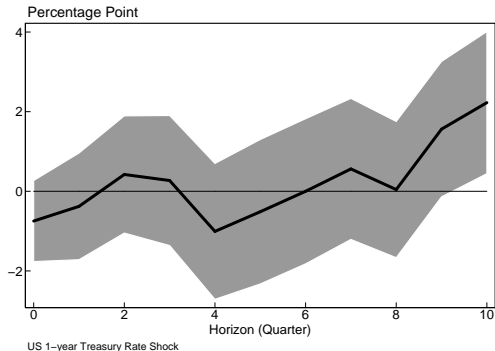
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- Higher policy uncertainty is picked up by expected depreciation in AE (flexible regimes).

Responses of UIP Risk Premia to U.S. Monetary Policy Shocks



(a) Emerging Markets

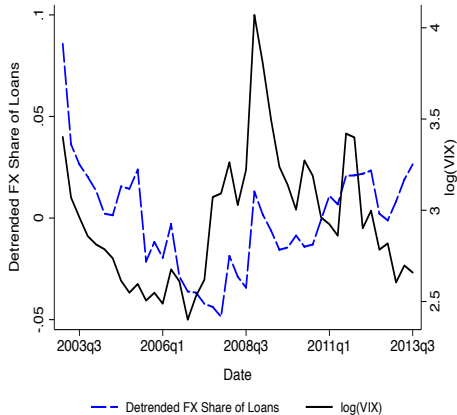


(b) Advanced Economies

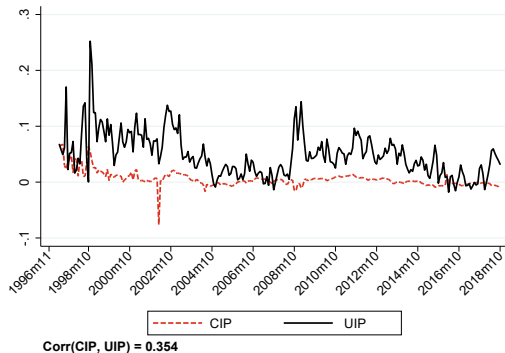
Risk Sentiments vs Arbitrage Frictions

Investors' Risk Sentiments and FX Loans in EMs

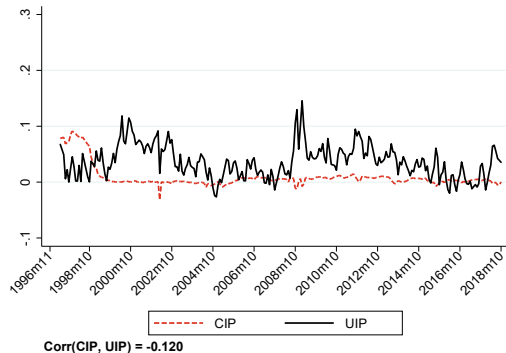
Higher (lower) UIP risk premia on EM currencies \Rightarrow more (less) USD borrowing



Importance of investors' risk sentiments vs. arbitrage frictions



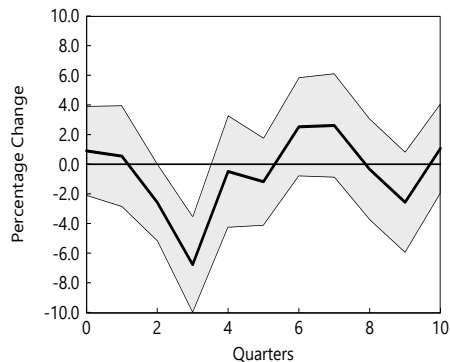
(a) Deposit Rates



(b) Interbank Rates

A Tale of Two Countries

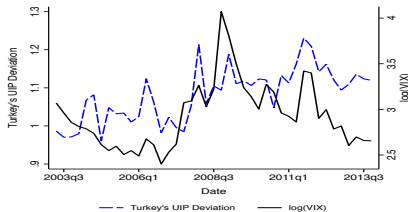
The Case of Chile: Response of UIP Risk Premia to U.S. Monetary Policy



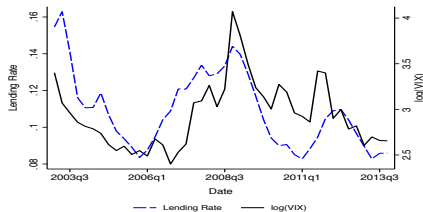
- UIP Premia does not respond to U.S. policy in Chile—as in advanced countries—due to the floating exchange rates
- Floating regime facilitates the implementation of a countercyclical monetary policy by allowing the exchange rate to pick up the risk premia shocks

The Case of Turkey: Full effect of Investors' Risk Sentiments on Local Credit Markets

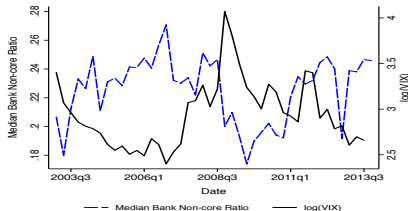
(a) VIX and UIP ($\rho = 0.61$)



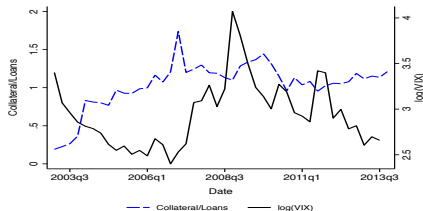
(c) VIX and Lending Rates ($\rho = 0.52$)



(b) VIX and Domestic Banks External Liabilities ($\rho = -0.51$)



(d) VIX and Collateral ($\rho = 0.01$)



Conclusion and Policy Implications

Takeaways

- International risk spillovers constitute a challenge for EM policy makers
- The time-varying UIP risk premium in EM comoves with policy uncertainty (EPU) in addition to global risk (VIX), both linked to risk sentiments of global investors, that are affected from U.S. monetary policy
- Investors' negative sentiments on EM can increase during risk-off periods via their assessment of political risks and monetary policy credibility as reflected in higher interest rates and reduced capital flows, making \Rightarrow EMs more risk-sensitive.
- Global investors **expect and earn excess returns** from EM—can be interpreted as 'inefficient' UIP risk premium—which is also linked to capital flows to EM

What can EMs do?

1. Flexible exchange rates can absorb the UIP risk premia easing the trade-offs for the EM policy makers
2. **Procyclical monetary policy** makes the risk premia worse and **countercyclical monetary policy** is ineffective w/o flexible exchange rates
3. EMs can make use of **countercyclical prudential policies** to reduce the extent of FX debt related balance sheet mismatches
4. For exchange rate volatility not to be detrimental, EMs need credible monetary policy and a developed local financial system that allows access to hedging instruments.

Appendix

Forward Premium and Expected Exchange Rate Changes in EMEs

