Emerging markets and exchange market pressures: Analysis across primary commodity groups

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Abstract

Short-term sensitivity between exchange market pressure and domestic and external factors is a critical component of macroeconomic sustainability in emerging markets that are dependent on primary commodity exports. Across commodity groups and top exporters, volatility transpires via currency pressures, interest rates, and domestic credit cycles, feeding into social costs for structurally weaker economies. In this paper dynamic panel studies are supplemented by a panel vector autoregression model. Results accentuate concerns over economic diversification, speculative capital flows, and the uncertainty of the “new normal”. Exchange-rate pegs lead to a drain in international reserves as the terms of trade deterioarte following post-price peaks and foreign exchange constraint worsens.

Methods and Data

Baseline: \( EM_P = \alpha + \beta_0 EM_G + \beta_1 EM_E + \epsilon_2 \) \( EM_P \) – measure of the volume of intervention necessary to achieve any desired exchange rate target.

\( EM_G \) defined \( EM_G = \frac{\sum{GDP} - \sum{ORES}}{GDP} \) (2) Extensions (e.g., Alizenman & Hutchison, 2012; Kleaassen & Jager, 2011; Tannet, 2002) add interest rate differentials, deflating FX reserves by monetary base, or by the standard deviations.

Domestic factors (DM): monthly domestic industrial index (MPCI), domestic lending rate (LR), and the bid-ask spread for the USD expressed in local currency (BIDASK).

EX factors: ten-year US Treasury bond with constant maturity (T10), volatility index (VIX), and individual commodity spot process (OIL, SUGAR, ORES).

Approach: dynamic panel studies focus on the direction of associate changes due to endogenities. Followed up by panel var.

Data: monthly from January 2000 to September 2015. Data sources: IMF-IFS, WB GEM, St. Louis FRED, OANDA, UNCTAD.

Results and pVAR

Panels w/extensions to (1). Consistency in DM for Sugar & Ores EMP; lacking in Fuels due to PX rate pegs. FX factors built up vs. weak fin. deepening in Sugar vs. Ores. BIDASK may be due to temporary policy in post-GFC. Negative shock to MPCI in CDC reverses investor perceptions, leading to FX loss + currency pressures. Commodity exhaustibility plays minimal role but FX Res loss as volatility (VIX) rises and prices drop (Table 4). pVAR analysis of EMP and decomposing DM and EX impulses for FXCHG and RESCHG effects – much diversity due to macro policy.

Discussion and Conclusions

EMP – association with primary commodity prices for the top exporting nations. Resilience based on FX accumulation and CB interventions (Mon Policy gauge). Domestic lending rate reflects the risks of forced depreciation. Strong association with global liquidity access (short-term VIX and long-term T10) vs. FX constraint.

For weak peg FX or float: changes in TO have implications for debt sustainability. At risk: ability to tap FX markets for public/private borrowers at lower rates.

References (select)