Impact of Brexit on Emerging Markets: a quantitative check

Though we would claim to be among those who really believed a vote in favor of Brexit was much more likely than expected, it is only now that we assess the potential implications. Our first analytical angle is to go through quantitative measures and construct composite indicators reflecting the ex-ante vulnerability on one side, the transmission from Brexit on the other.

The research across more than 40 EM shows that South Africa, Egypt but also Turkey, Brazil and the Czech Republic are among the most sensitive countries, with both currency and growth being potentially affected, while conversely, the Philippines, India and Taiwan would register more muted impact.

Brexit and global scenarios

We briefly presented our initial reactions to the vote in favor of Brexit in a recent document (Hot Topic, June 24), and our current analysis on the global picture and implication can be summarized through two broadly plausible scenarios for 2016H2 and 2017:

What so far remains our "central scenario" is one of *Financial Containment*: despite the short-term financial stress, market tensions are contained due to massive central bank intervention and the realization that the impact on the UK economy would be strong but temporary; in parallel, sustainable domestic demand would ensure resilience in others mature countries. "Real" transmission effects are moderate.

The second plausible scenario is one of renewed, intense and broader *Financial Contagion*: central banks' interventions are ineffective in a context of almost generalized market overvaluations, and self-reinforcing spirals take place between declines in market prices (except for "safest instruments"), loss in confidence, economic contraction and systemic financial tension. This triggers a collapse in household and corporate confidence and much tighter financial conditions for corporates. We would then have the conditions for a major financial shock with systemic implications.

At this juncture, equity and bond markets seem either to believe strongly in our first scenario (cf. UK equity markets back to their pre-referendum level) or start to be deluded by the idea that the Brexit vote may not imply the actual exit from the EU. A fundamental point is that institutional and financial uncertainty will be lasting.

### EM: measuring transmission and initial vulnerability

In this context, we provide here a comprehensive "screening" exercise on more than 40 important Emerging Markets (EM) that aims initially to have a structured view on their sensitivity to UK economic and financial developments.

Our traditional approach in assessing the impact of an exogenous shock on EM is to combine their *initial vulnerability* (i.e. how fragile were they before the Brexit vote) with a measure of *transmission* channels and impact from the exogenous shock to individual economies. In the case of Brexit, we include trade transmission (exports to the UK as a proportion of total exports and GDP), remittances (amount of funds transferred from the UK to EM by non-residents working in the UK), as well as banking and financial relations (exposure of UK banks, FDI and portfolio positions from UK-based investors). We complement this "static" approach by applying a GVAR model[1] where we induce a shock in UK growth and financial markets and quantify global macro effects.

The chart below show the countries with highest combined sensitivity (measured on a scale from 1: low sensitivity to Brexit, to 5: strong sensitivity), as well as the contribution from transmission factors on one side, initial vulnerability on the other. Among "key EM", South Africa, Brazil, Turkey, Saudi Arabia, the UAE and Russia appear highly sensitive, though mostly because of high ex ante vulnerability in the case of Brazil and Turkey. Among smaller EM, Egypt, Pakistan, Sri Lanka and to a lesser extent Vietnam are identified as very sensitive. Interestingly, only the Czech Republic among Central and Eastern European (CEE) countries appear in the top 15.

Score for EM sensitivity to Brexit consequences
from 1= very low sensitivity to 5= very high sensitivity

■ Initial vulnerability   ■ Transmission
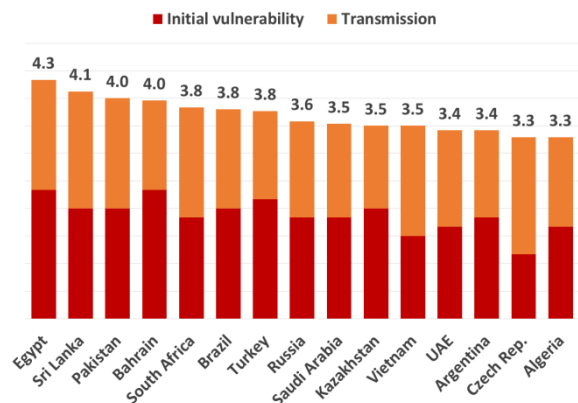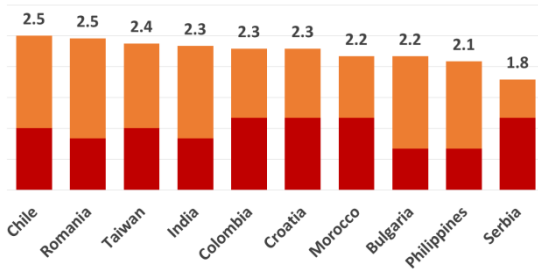
Source: TAC ECONOMICS

At the other end of the spectrum, countries that appear as much less impacted by a shock triggered by the Brexit: the Philippines, Chile, Morocco, Taiwan as well as some CEE countries (Croatia, Romania, Serbia) and perhaps more surprisingly India would be moderately affected.

---

[1] GVAR (Global Vector Auto Regressive) models provide global modelling framework for the quantitative analysis of different shocks and channels of transmission mechanisms. GVAR models combine time series, panel data, and factor analysis techniques to address a wide set of economic and financial issues and measure transmission from exogenous shocks on a global scale.

Score for EM sensitivity to Brexit consequences
from 1= very low sensitivity to 5= very high sensitivity

■ Initial vulnerability   ■ Transmission

| Chile | Romania | Taiwan | India | Colombia | Croatia | Morocco | Bulgaria | Philippines | Serbia |
| 2.5 | 2.5 | 2.4 | 2.3 | 2.3 | 2.3 | 2.2 | 2.2 | 2.1 | 1.8 |

Source: TAC ECONOMICS

The next chart plots the 40+ countries across the two components of our measures (transmission, vertical axis, and initial vulnerability, horizontal axis). The "high sensitivity" countries are mostly those in the upper right quadrant where both indicators are poor; We note indeed that most CEE countries are in the upper-left area where transmission is strong, but compensated by low initial vulnerability; in a similar position, we also find Malaysia, Thailand and Israel: for all those countries, a marked deterioration in UK economic condition would "test" resilience capabilities.

**Brexit: Initial vulnerability vs Transmission factors**
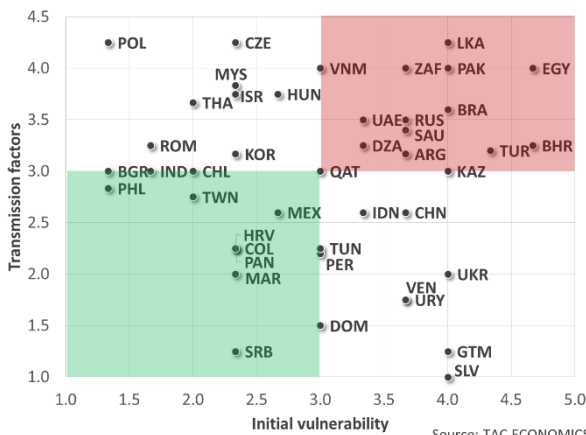
Source: TAC ECONOMICS

Conversely, countries in the bottom right quadrant of the chart, especially those close to the upper area (e.g. Kazakhstan, Qatar, Indonesia, China) have modest transmission factors, but their initial vulnerability implies that they could be caught in substantial and "indiscriminate" capital outflows and market pressure.

EM: immediate market reactions and overall sensitivity to Brexit

A final point in our quantitative review is a simple confrontation of market movements[2] since the Brexit vote (called immediate market reaction) and the overall sensitivity as computed in the previous steps. Countries that are either in the green (lower-left) or red (upper-right) quadrant have registered market moves broadly commensurate with their overall sensitivity to the Brexit.

Brexit: Sensitivity vs Immediate market impact
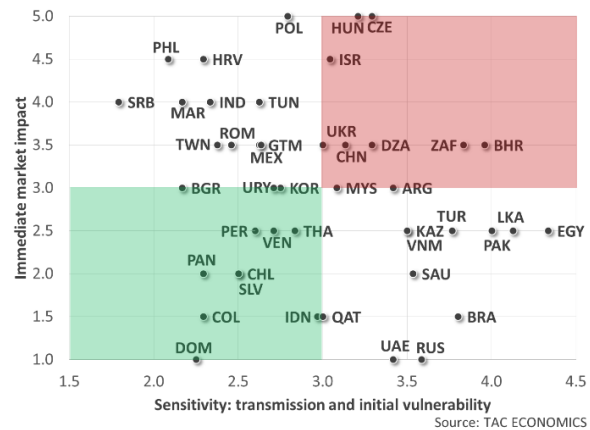
Source: TAC ECONOMICS

Conversely, countries in the not-colored quadrant suggest imbalanced or unstable market reaction: for those in the upper-left area, market declines appear to have been excessive (particularly for the Philippines or India, to some extent for Poland); in the bottom-right area are countries where sensitivity is high but market reactions were more muted: this suggests further caution ahead on such countries and markets (Russia, Brazil, Egypt), particularly if the crisis in the UK gets more intense.

---

[2] We compute a composite index retracing changes in exchange rates against the USD and changes in CDS rates, between June 23 and June 29.