

INDICATORS OF VULNERABILITY IN LATIN AMERICA

Second half of
2022

International Economics
and Euro Area Department

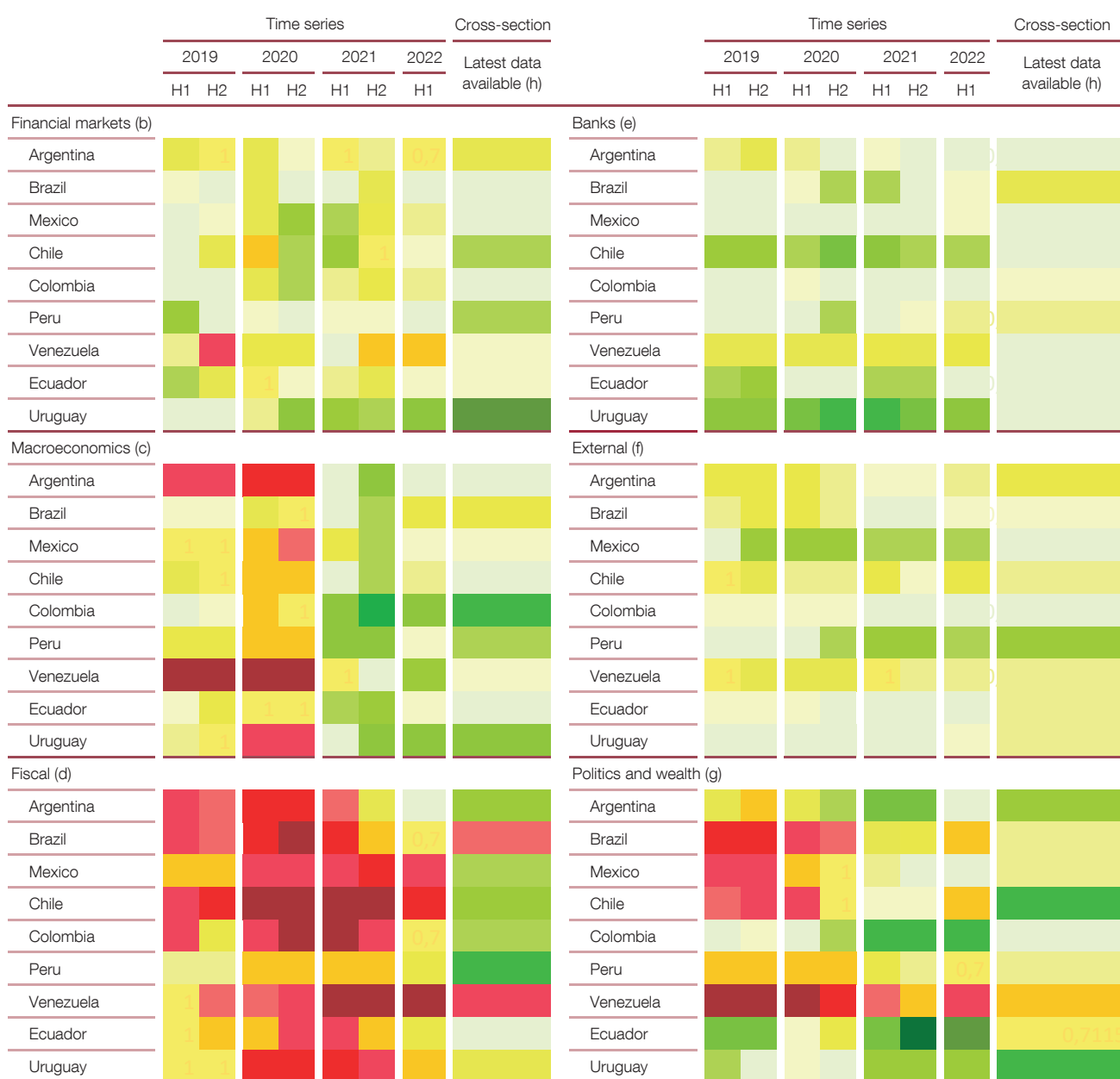
BANCO DE **ESPAÑA**
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Table 1

Heatmap of vulnerability indicators (a)



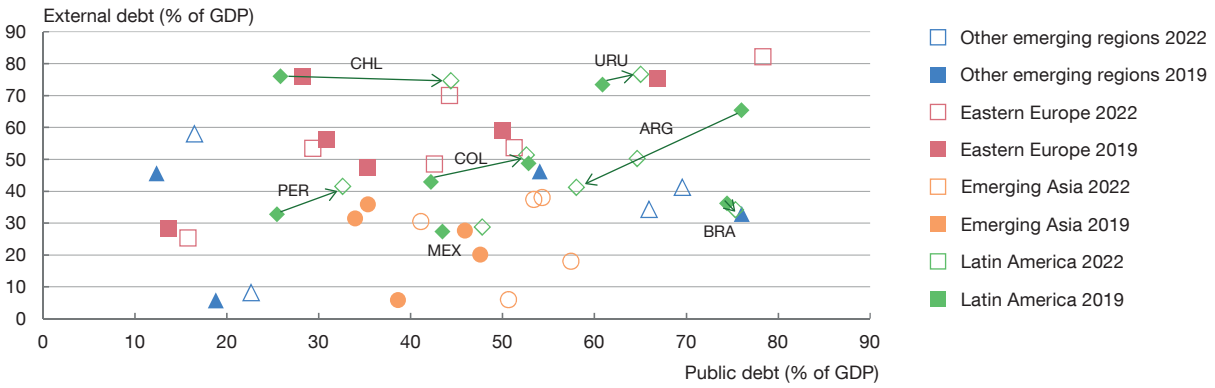
SOURCE: Alonso, Irma, and Luis Molina. (2021). "A GPS navigator to monitor risks in emerging economies: the vulnerability dashboard". Documentos Ocasionales - Banco de España, 2111. <https://www.bde.es/ff/webbde/SES/Secciones/Publicaciones/PublicacionesSeridas/DocumentosOcasionales/21/Files/do2111e.pdf>.

- a** The risk level is shown with shades of green (associated with lower levels of vulnerability), yellow (medium vulnerability) and red (variables in the highest risk percentiles).
- b** Sovereign spread (level and quarterly change) and quarterly change in stock market index and exchange rate.
- c** Change in GDP and industrial output, inflation rate and change in GDP per capita.
- d** General government balance and gross public debt (% of GDP).
- e** Real change in credit and deposits, loan-to-deposit ratio, non-performing loans in portfolio, banks' net foreign assets, banks' equity index, interest rate on banks' external debt, qualitative indicators (BICRA/IHS Markit), short-term interbank rate and loan rate minus deposit rate.
- f** Current account balance, direct and portfolio investment inflows, external debt, short-term external debt and external debt service, and international reserves.
- g** IHS Markit political risk indicator, geopolitical risk index and GDP per capita.
- h** June 2022.

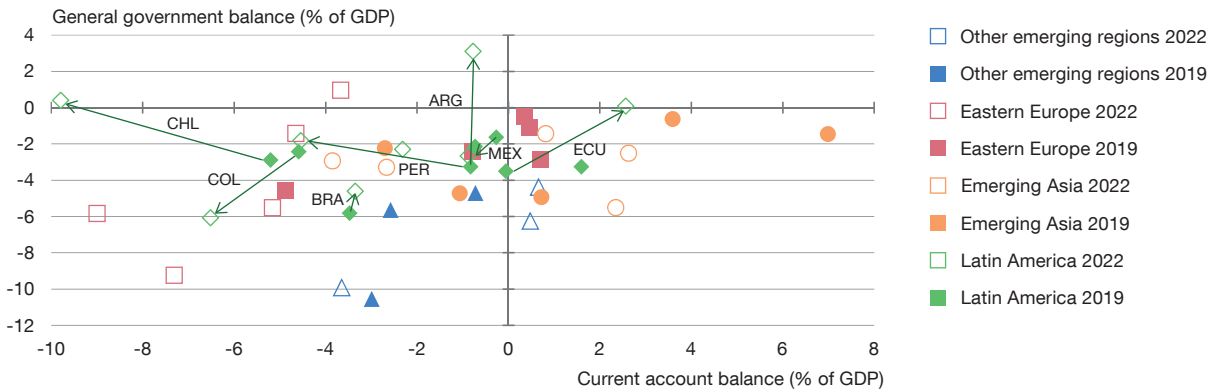
Chart 1

Public debt has risen and the current account balance has worsened in some countries in the region

1.a Vulnerabilities: stocks (a)



1.b Vulnerabilities: flows (a)



SOURCES: Refinitiv and national statistical offices.

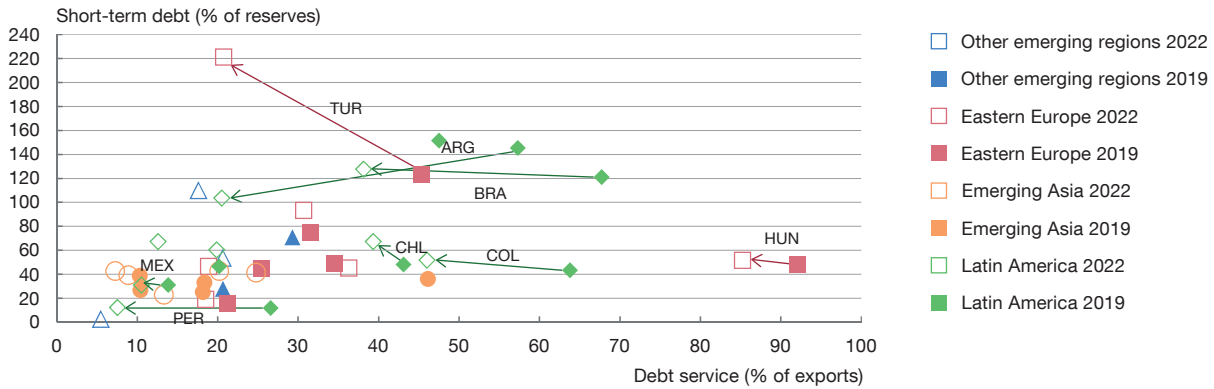
a Comparison of pairs of each variable from end-2019 and 2022 Q3 (latest data available for all countries).



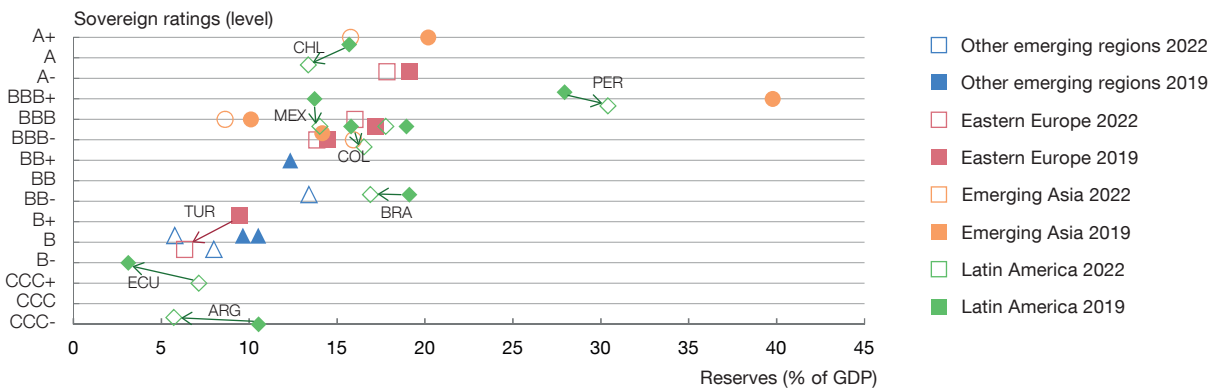
Chart 2

Levels of short-term debt have remained stable and debt servicing has reduced, although some buffers (international reserves) have worsened

2.a Vulnerabilities: sustainability (a)



2.b Vulnerabilities: resilience (a)



SOURCES: Refinitiv and national statistical offices.

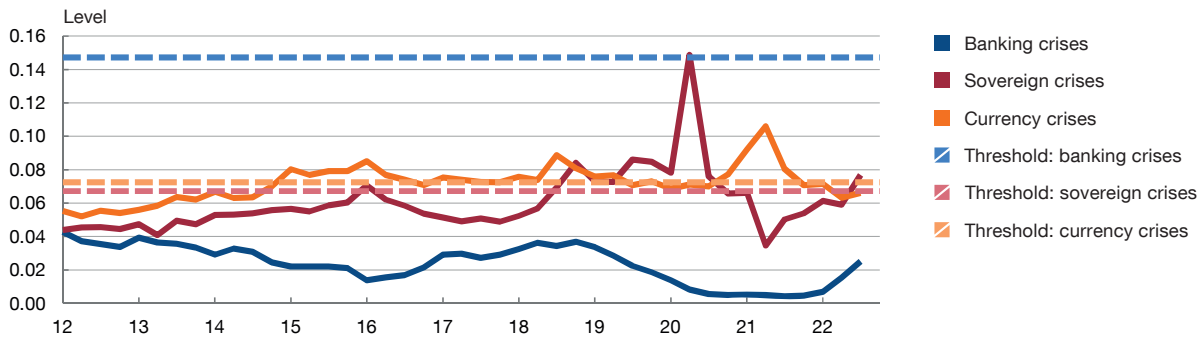
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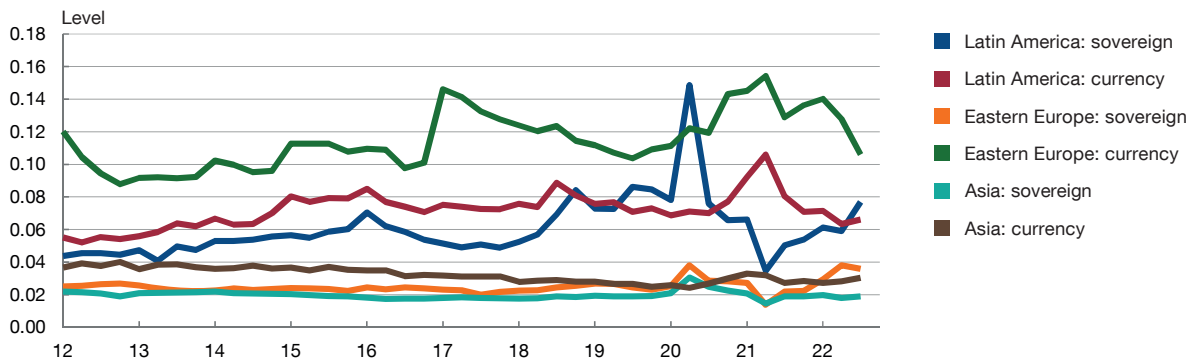
Chart 3

Synthetic vulnerability indicators for the region increased somewhat during 2022

3.a Synthetic vulnerability indicators: Latin America (a)



3.b Synthetic vulnerability indicators: comparison of emerging regions (a)



SOURCE: Banco de España.

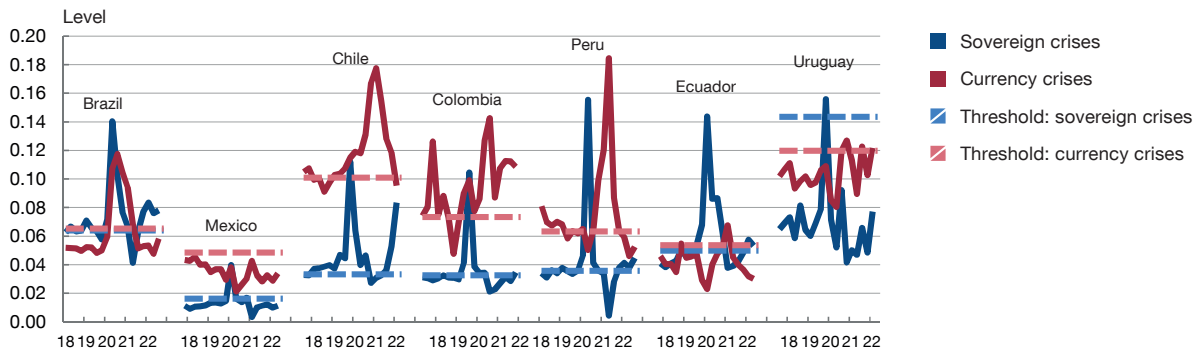
a The synthetic indicators represent the likelihood of being in a vulnerable state, estimated using a logit model for three types of crisis (banking, currency and sovereign) with pre-selected variables that have sent correct signals six quarters before a crisis (threshold of an ROC curve). An increase in a synthetic indicator thus implies an increase in the likelihood of recording a crisis in each of the categories. The regional indicators are the average of the synthetic indicators for eight countries in Latin America (Argentina, Brazil, Chile, Colombia, Mexico, Peru, Ecuador and Uruguay), five in Asia (China, India, Indonesia, South Korea and Thailand), and six in eastern Europe (Czech Republic, Hungary, Poland, Romania, Russia and Turkey).



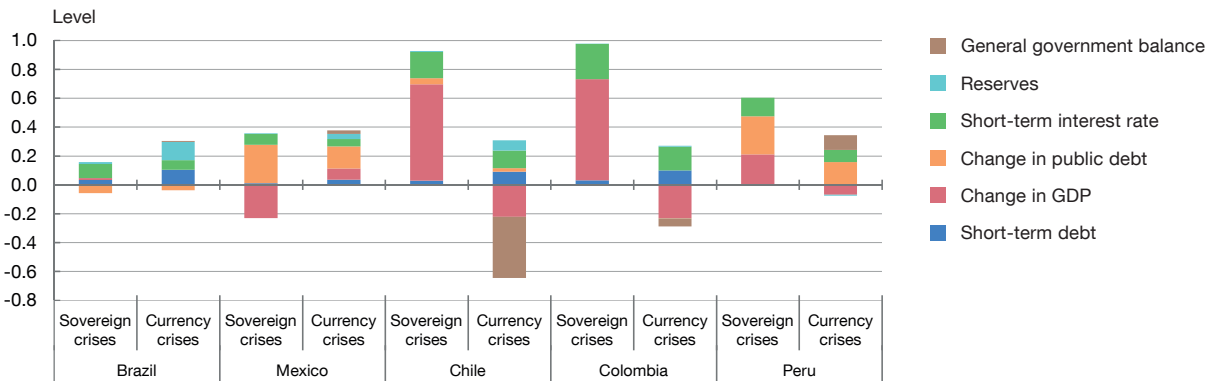
Chart 4

The synthetic vulnerability indicators have behaved heterogeneously across the region

4.a Synthetic vulnerability indicators: Latin America (a)



4.b Contributions to the change in the synthetic vulnerability indicator (b)



SOURCE: Banco de España.

- a The synthetic indicators represent the likelihood of being in a vulnerable state, estimated using a logit model for three types of crisis (banking, currency and sovereign) with pre-selected variables that have sent correct signals six quarters before a crisis (threshold of an ROC curve). An increase in a synthetic indicator thus implies an increase in the likelihood of recording a crisis in each of the categories.
- b Contribution of the factors shown between 2022 Q2 and Q3.

