



Policy Responses to Rising Macroeconomic Challenges

SEPTEMBER 21, 2022

Presentation at the G20 Global Financial
Stability Conference 2022, Seoul, Korea

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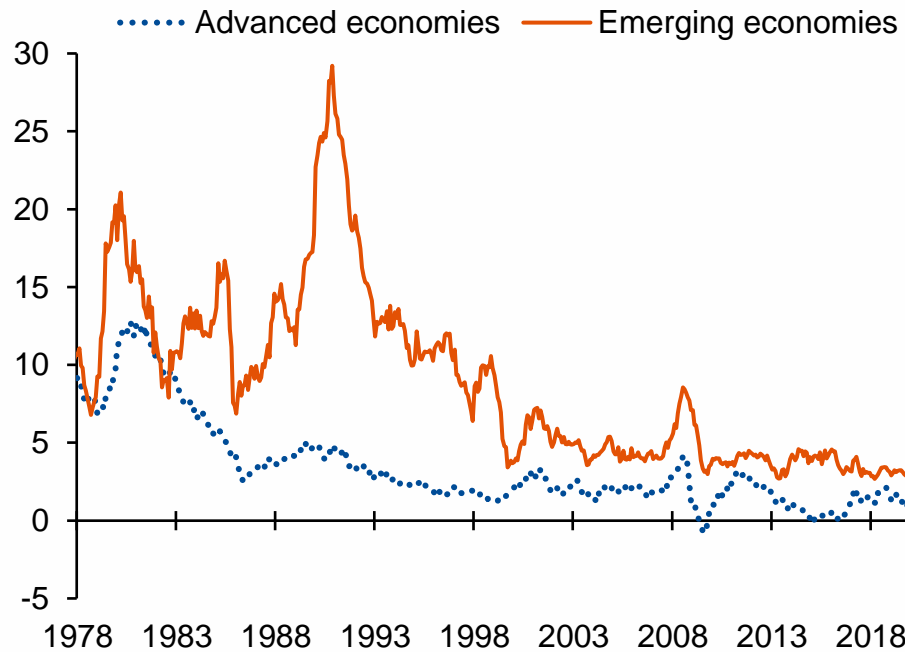
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Macroeconomic challenges

High inflation is broad-based, global, and—to a certain extent—unexpected

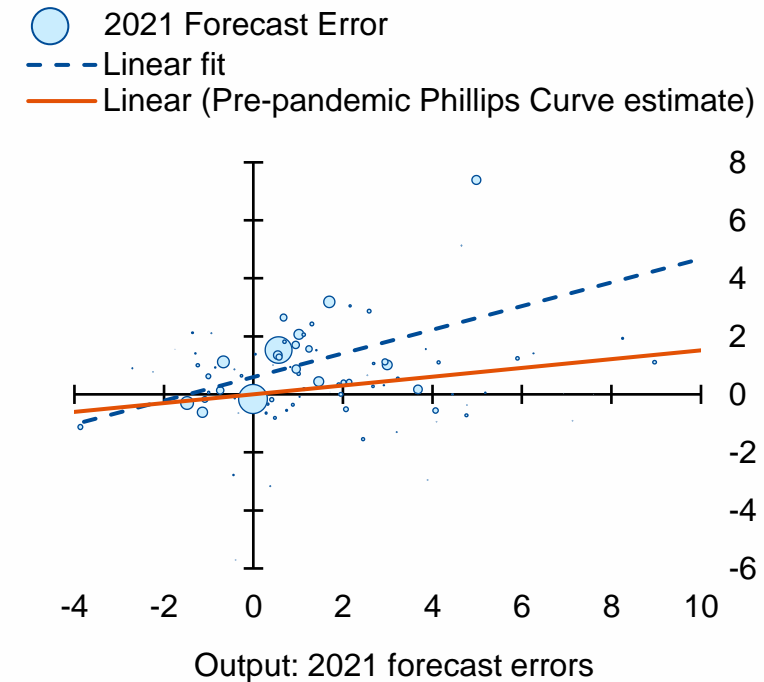
Headline inflation (Percent, year-on-year)



Sources: Haver, OECD, and IMF staff calculations.
Note: Median of year-on-year headline inflation rates across AEs and EMs.

IMF forecasts underpredicted core inflation

Core inflation: 2021 forecast errors (Percent)

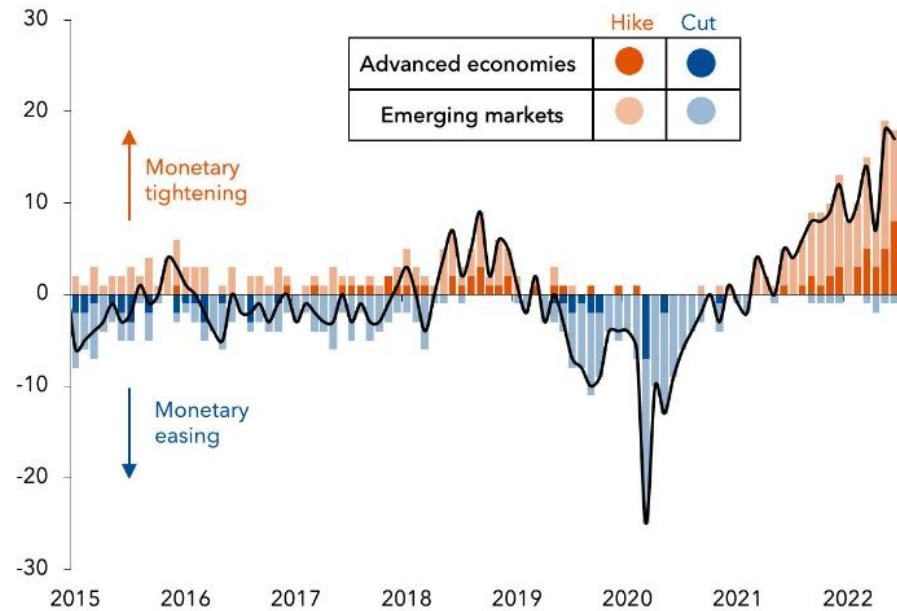


Sources: IMF WEO, IMF staff calculations.
Note: Size of bubble indicates purchasing-power-parity GDP. Forecast errors relative to January 2021 WEO projections.

Resulting in central bank hiking policy rates in sync, although some divergence remains, ...

Hiking peak

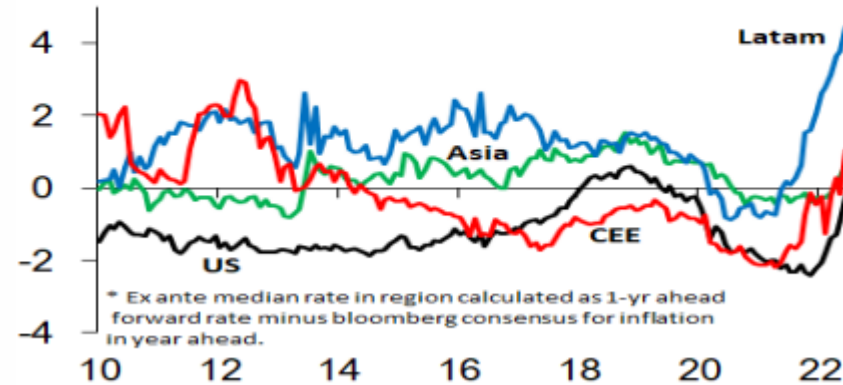
The number of central banks hiking interest rates has increased dramatically in recent months as inflation rose to fresh highs.
(number of central banks, absolute value)



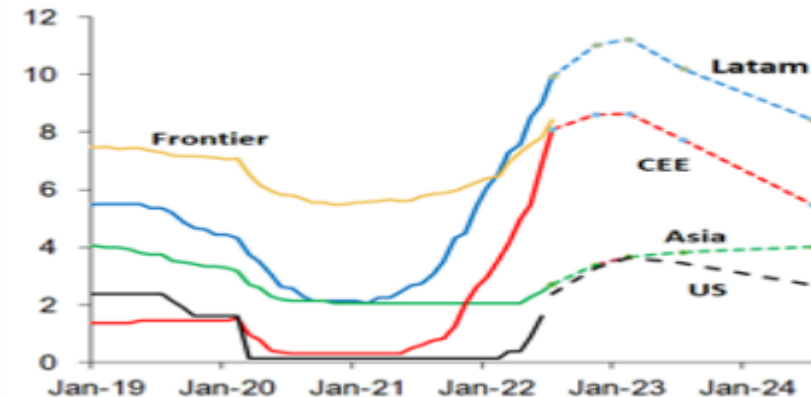
Sources: Bloomberg, and IMF staff calculations
Note: The AE sample consists of Australia, Canada, Czech Republic, Japan, New Zealand, Norway, Sweden, Switzerland, the United Kingdom, the United States, and the countries in the European Union (under ECB jurisdiction). The EM sample consists of Brazil, Chile, Colombia, Mexico, Peru, India, Indonesia, Malaysia, Philippines, Thailand, Hungary, Poland, Romania, South Africa, Turkey, Pakistan, Croatia, Russia, Ukraine, Egypt, and Ghana.



Short-term Real Rates (ex ante 1-yr rates, percent)



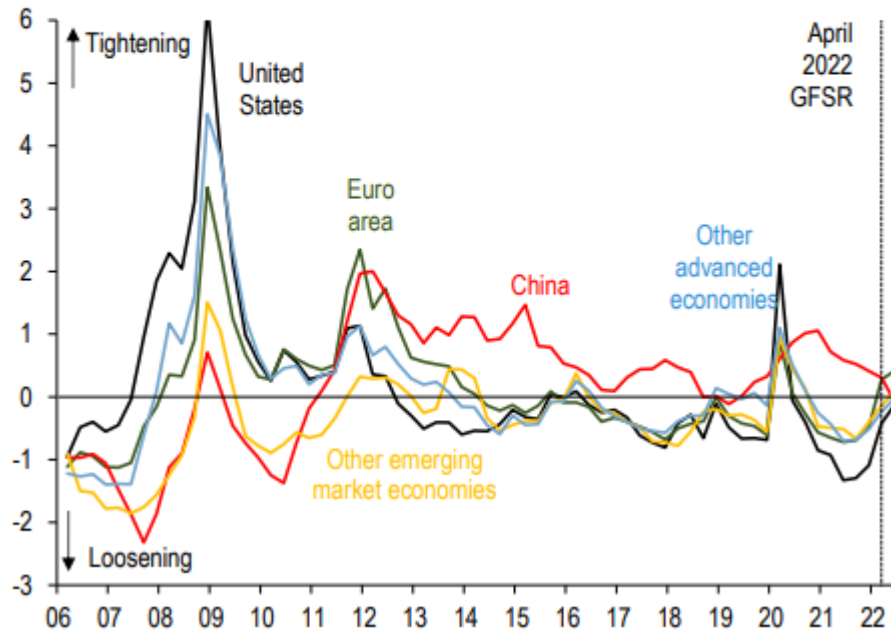
Historical and market-implied Policy Rates across Regions (percent)



... and a broad tightening of financial conditions

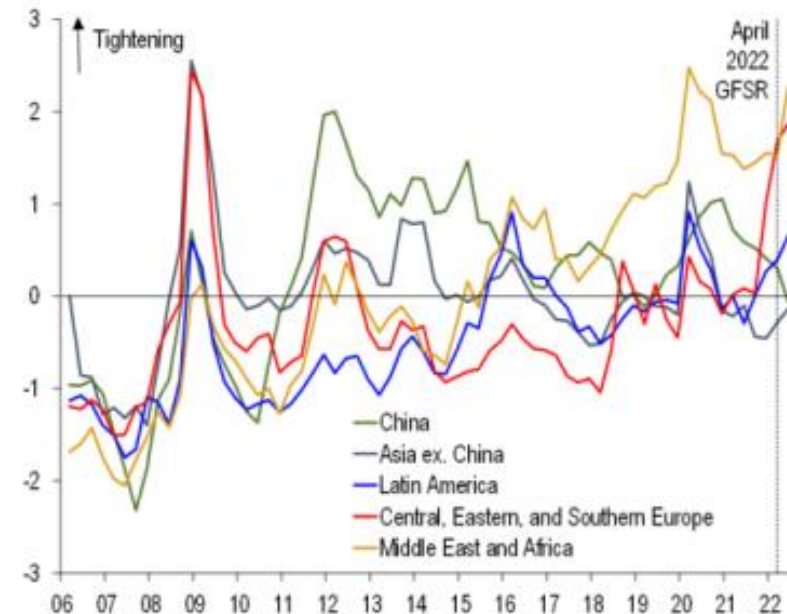
Financial conditions in AEs and EMs have tightened further, except in China...

1. Financial Conditions (Standard deviations from the mean)



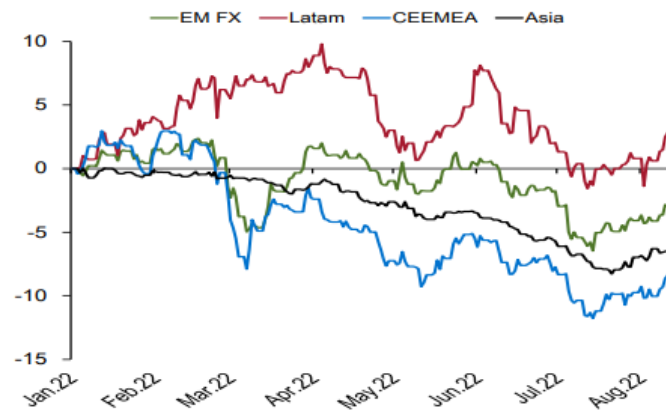
... and in some EMs they have reached levels not seen since March 2020.

2. Financial Condition in EMs (Standard deviations from the mean)

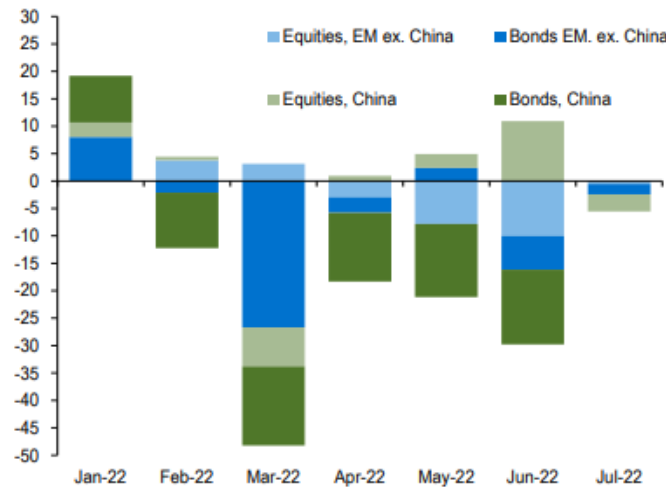


EM currencies have depreciated against the USD and capital outflow pressures increased

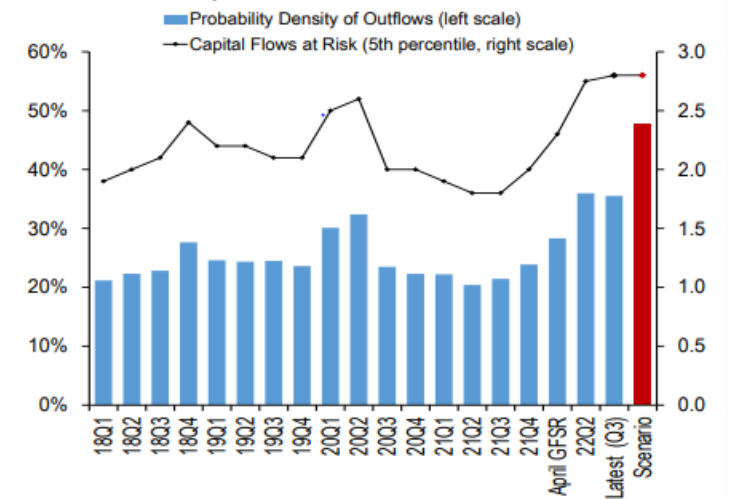
EM Regional Currencies
(percent change versus USD)



Local Currency Bond and Equity Flows
(US billions, monthly)

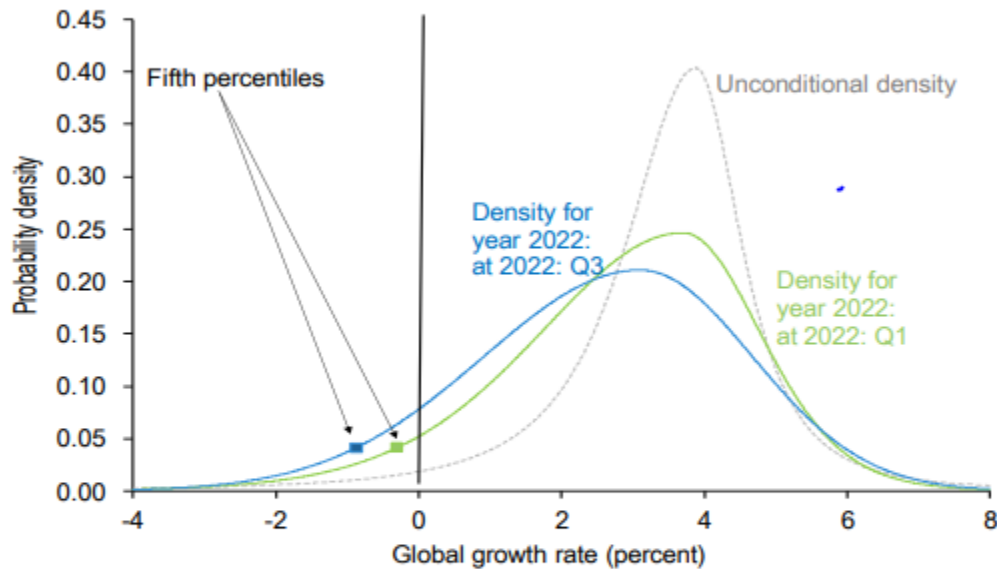


Capital Flows at Risk (probability density, left scale; 5th percentile; percent of GDP, downside scenario in red)

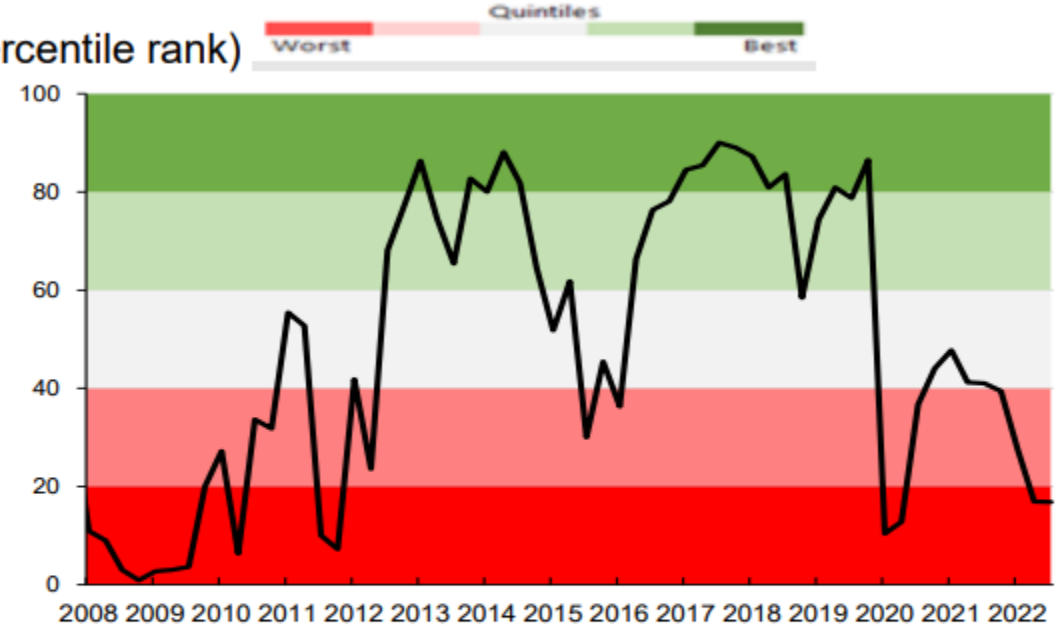


Global Growth-at-risk is squarely skewed to the downside and high compared to historical norms

1. Near-Term Growth Forecast Densities
(Probability density)



2. Near-Term Growth-at-Risk Forecasts
(Percentile rank)



Sources: Bank for International Settlements; Bloomberg Finance L.P.; Haver Analytics; IMF, International Financial Statistics database; and IMF staff calculations.

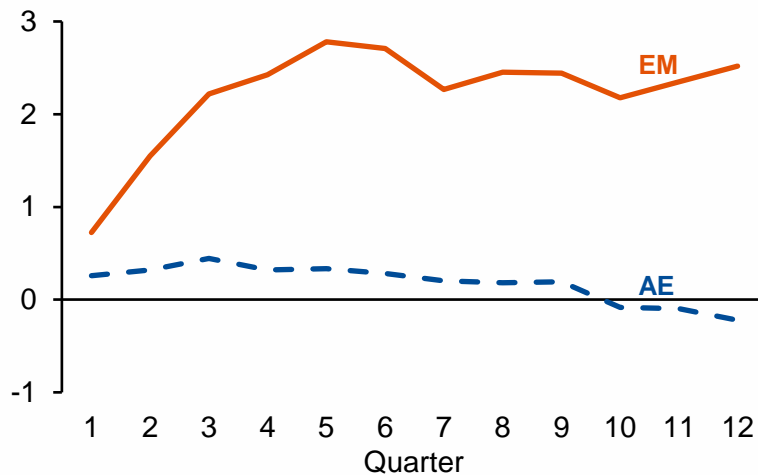
Note: Forecast density estimates are centered around the IMF World Economic Outlook (WEO) forecasts for 2022, as at 2022:Q1 and 2022:Q3, respectively. The latter reflects the current available estimate of Q3 forecast for 2022. To gauge downside risks over time, in panel 2, the black line traces the evolution of the 5th percentile threshold (the growth-at-risk metric) of near-term growth forecast densities. The color of the shading depicts the percentile rank for the growth-at-risk metric, from 1991 onward. See the April 2018 *Global Financial Stability Report* for details.

Risks are more acute for EMs

- Tradeoffs worse: pass-through of commodity price and exchange rate changes higher
- De-anchoring of inflation expectations a bigger risk
 - ▶ Central bank independence less secure

Exchange rate shocks have a larger effect on price levels in EMs

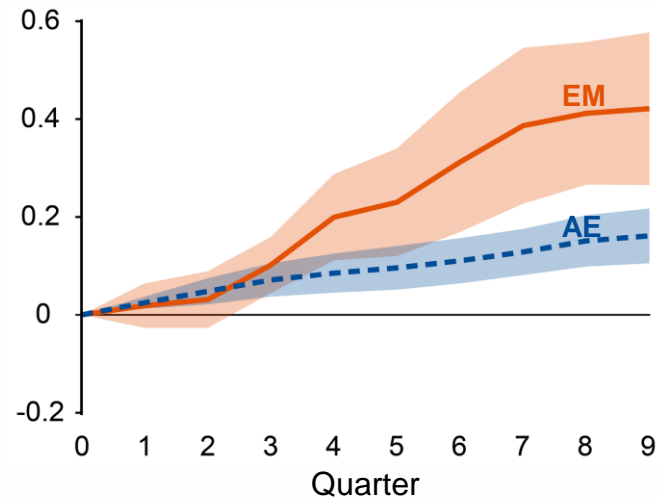
CPI responses to an exchange rate shock (Percent)



Source: Brandao-Marques, Gornicka, and Kamber (forthcoming).

Oil price shocks have a larger effect on price levels in EMs

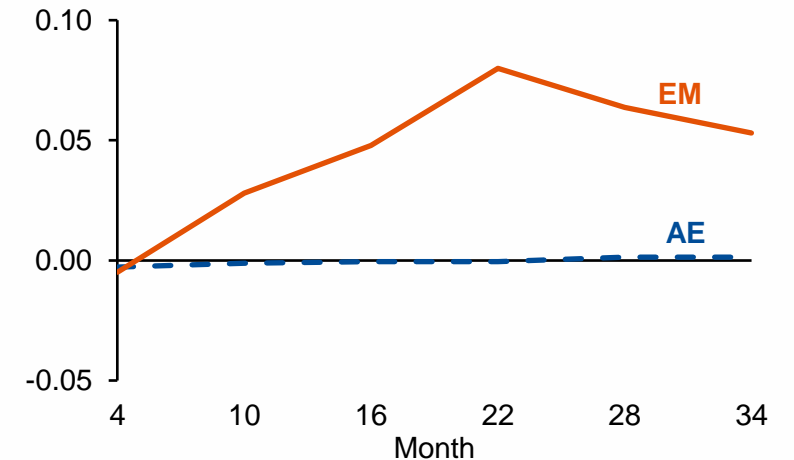
Core CPI responses to an oil price shock (Percent)



Source: Baba and Lee (forthcoming).
Note: Sample covers European EMs and AEs.

Debt surprises in EMs boost inflation expectations, not in AEs

Impact of debt surprises on 3-year-ahead inflation expectations (Percent, quarter-on-quarter, annual rate)



Sources: Brandao-Marques and others (forthcoming), Consensus Forecasts, IMF WEO, IMF staff calculations.

Policy responses

What should central banks do?

- In AEs and EMs, central banks need to act resolutely to bring inflation back to target.
- Monetary policy needs to be tightened to ensure that inflation expectations are anchored, credibility is preserved, and unwarranted market volatility is avoided.
- Clear communication is crucial: central banks should indicate that they will “stay the course” and maintain tight policy as long as inflation remains high.
- Fiscal policy should support monetary policy, which in some countries may require a change in the fiscal stance.
- The complexity of policy trade-offs in a context of frictions may in some cases warrant the use of other policy tools, as explored in the IMF’s Integrated Policy Framework.

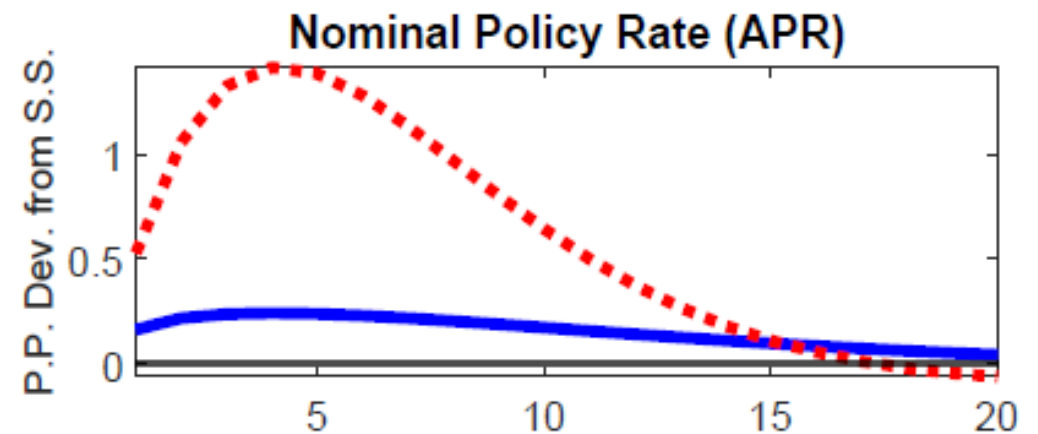
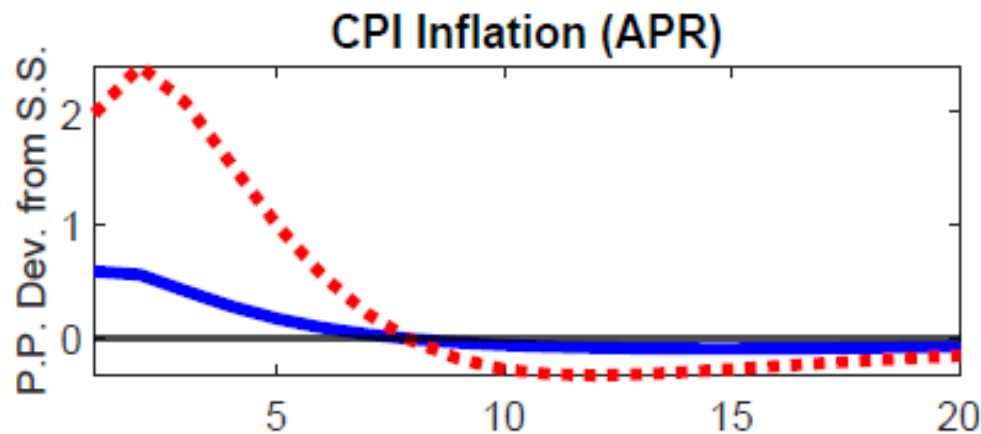
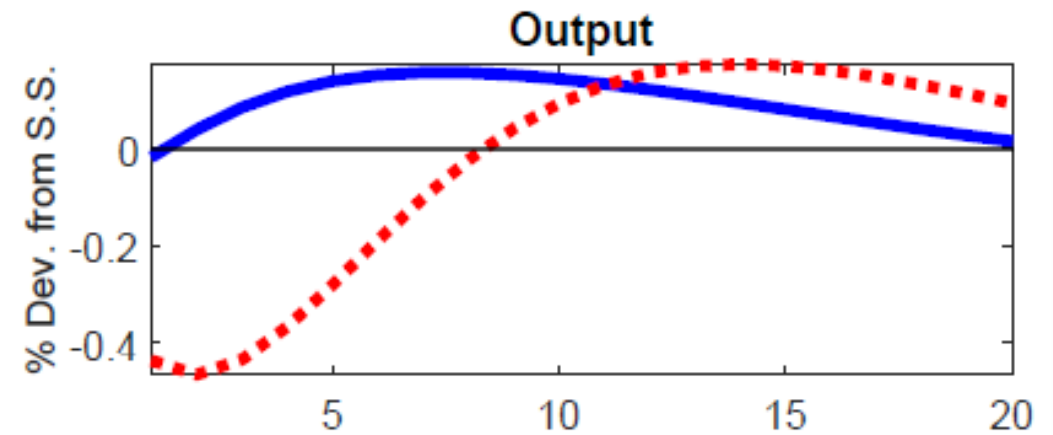
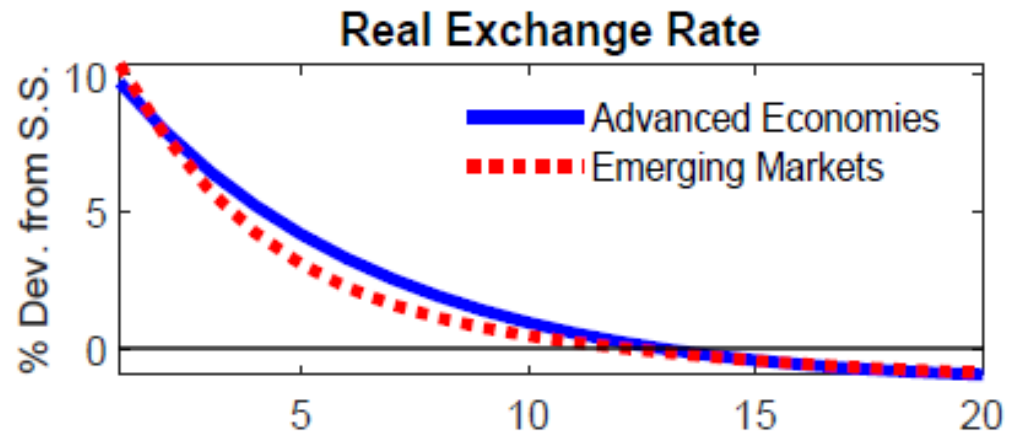
Other Tools: Integrated Policy Framework (IPF)

- The IPF shows that in the presence of vulnerabilities, using additional tools can help ease trade-offs for certain shocks. Key frictions in many EMs are:
 - **Shallow markets** can cause excessive exchange rate volatility
 - **FX mismatches** can give rise to contractionary depreciations and expansionary appreciations
 - **ER pass-through** to inflation can be high and persistent in EMs
- Conceptual and quantitative IPF models feature these real-world vulnerabilities, which matter for policy, and reflect that volatile capital flows are a key concern in EMs
- When frictions are present, FXI, MPMs, and CFMs can enhance monetary autonomy, improve financial and price stability, reduce output volatility

Example: FXI in Quantitative IPF Model

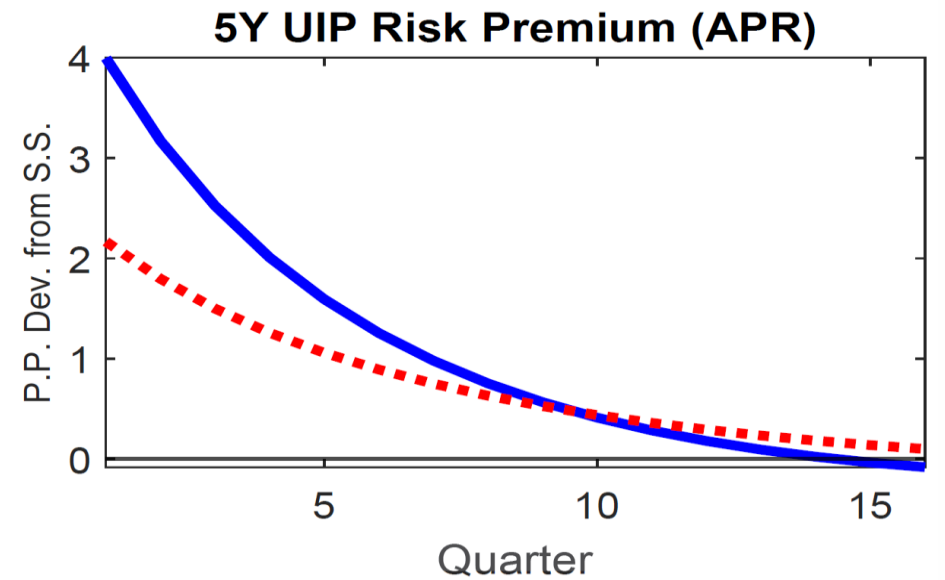
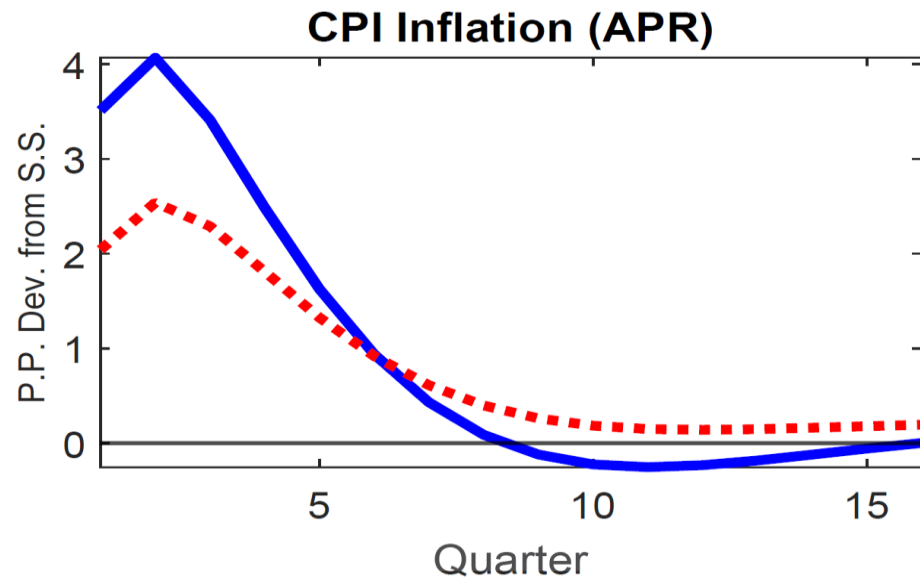
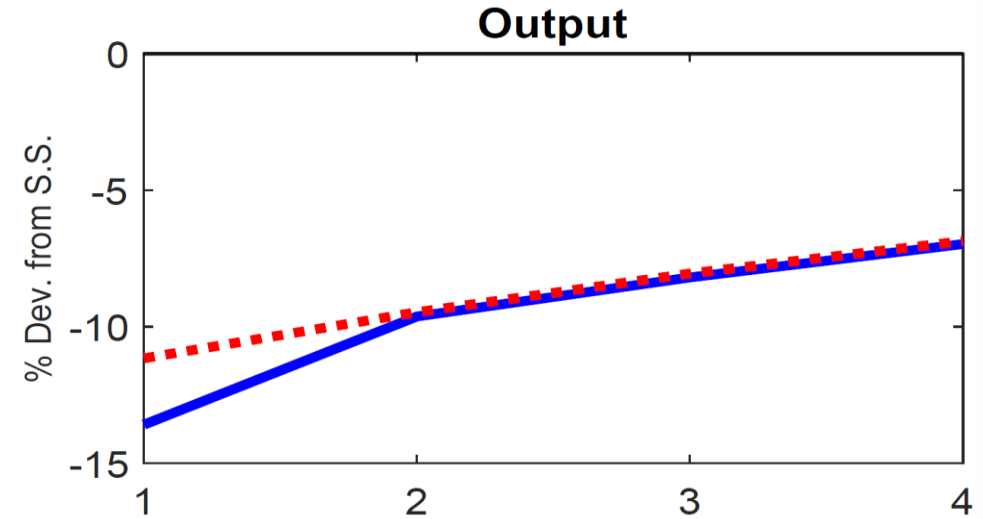
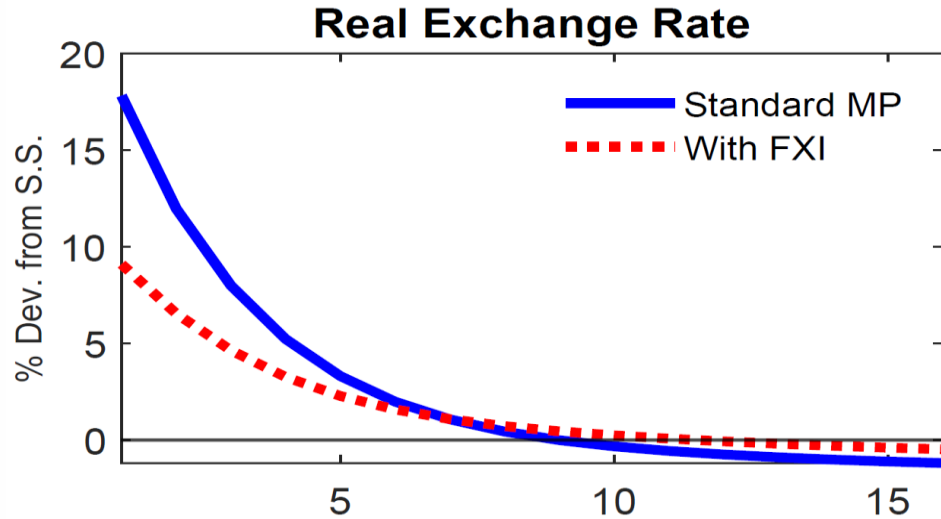
- Empirically-oriented New Keynesian open economy model
 - Similar to models typically used by central banks
 - Combines nominal rigidities with weakly anchored inflation expectations
 - Accounts for adverse effects of “sudden stops” and international policy spillovers
 - Parameter values informed by ongoing estimation efforts on AE and EME data
- Large depreciations pose challenges, particularly in EMEs:
 - Can trigger a tightening of financial conditions
 - Unfavorable policy trade-offs because of weak anchoring of inflation expectations

Monetary Tradeoff in AEs vs EMs



Effects of FXI in a Vulnerable Economy

Crisis scenario paired with decline in global risk tolerance with and without FX intervention



FXI Should be Used Sparingly

- The findings do not rationalize indiscriminate use of FXI
 - FXI is appropriate only where frictions are identified and shocks are large.
 - FXI should not be used to maintain a misaligned exchange rate, or to substitute for warranted macroeconomic adjustment
 - No substitute for deep markets, healthy balance sheets, and strong institutions
- Weigh potential negative impacts on central bank transparency/credibility and long-term consequences (e.g., for market development)
- Central banks should be mindful of their reserves levels and avoid running down reserves quickly, especially as adverse conditions may persist for an extended time

Macroprudential policies

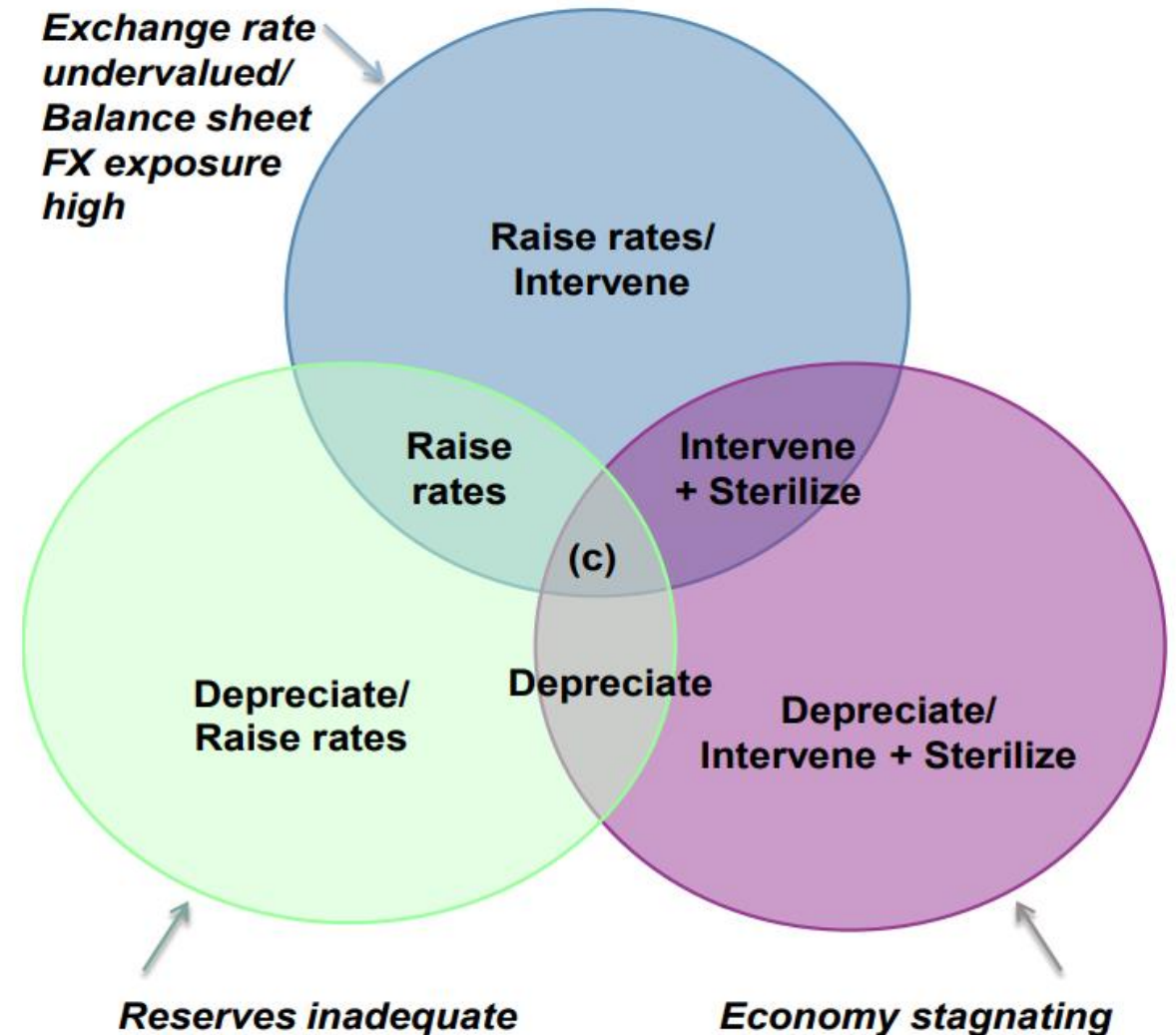
- Countries should build buffers where possible and set macroprudential policy to safeguard financial stability and contain further build up financial vulnerabilities
- Considering country-specific circumstances and the near-term economic challenges, selected macroprudential tools should be tightened as needed to tackle pockets of elevated vulnerabilities
- Given heightened economic uncertainty and the ongoing policy normalization process, authorities need to strike a balance between
 - building additional resilience to adverse shocks
 - avoiding procyclicality and a disorderly tightening of financial conditions

Managing capital outflows

The IMF's Institutional View (IV)—which was recently reviewed—has always recognized that CFMs are part of the toolkit to respond to shocks

When faced with outflows, countries can, introduce temporary outflow CFMs in (imminent) crisis circumstances and/or ease existing inflow CFMs, which can be useful to support—not substitute for—the needed macroeconomic adjustment

The revision of the IV, introduced important policy changes, especially allowing for preemptive CFM/MPMs on inflows, which over time may make countries more resilient to the type of shocks we are observing



The effectiveness of CFMs to manage capital flows could, however, be eroded by the growing adoption of crypto assets

How crypto assets design features create a CFM Challenge

Design features

Borderless nature of transactions and decentralized architecture

Challenge

Infrastructure distributed **across jurisdictions**; some cases involve **no service provider**

Factors amplifying the challenges

Legal and regulatory gaps and lack of institutional coordination

Complex layering

Country 1: Bitcoin



Country 2: Zcash



Country 3: Ether, then fiat

Policy trade off between the need to promote innovation, preserve privacy and mitigating financial integrity risks

Pseudonymity

Identities and residency of crypto asset holders not easily known

Existing protocols not meant for cryptos

Several policies could help ensure continued effectiveness of CFMs in the digital era, but enforcement could be a challenge

Possible measures

- Develop a consistent taxonomy of crypto assets
- Develop fit for purpose crypto asset regulation (trading platforms or wallet provider) and stipulate clear mandates for regulatory bodies
- Develop data capabilities and strengthen the availability, quality, and consistency of data to leverage Regtech and Suptech
- Developing detection techniques as well as global consistent regulations and information sharing frameworks
- Adapting CFM regulations to capture crypto assets

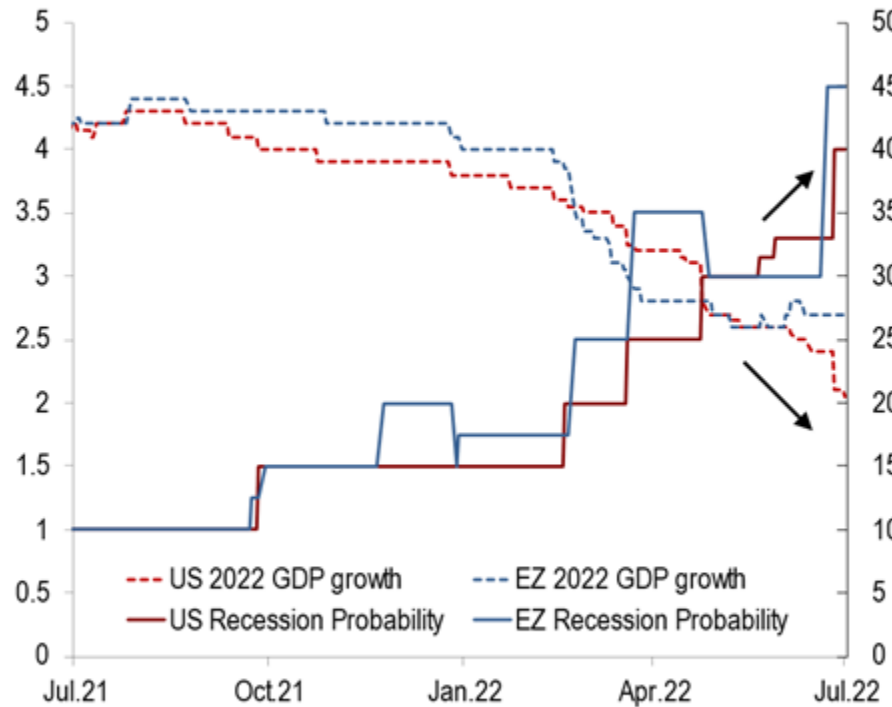
Potential implementation challenges

- Crypto assets run by decentralized software for which there is no legal entity may be difficult to regulate
- Risks posed by decentralized exchanges and privacy coins are difficult to address

Risks and opportunities going forward

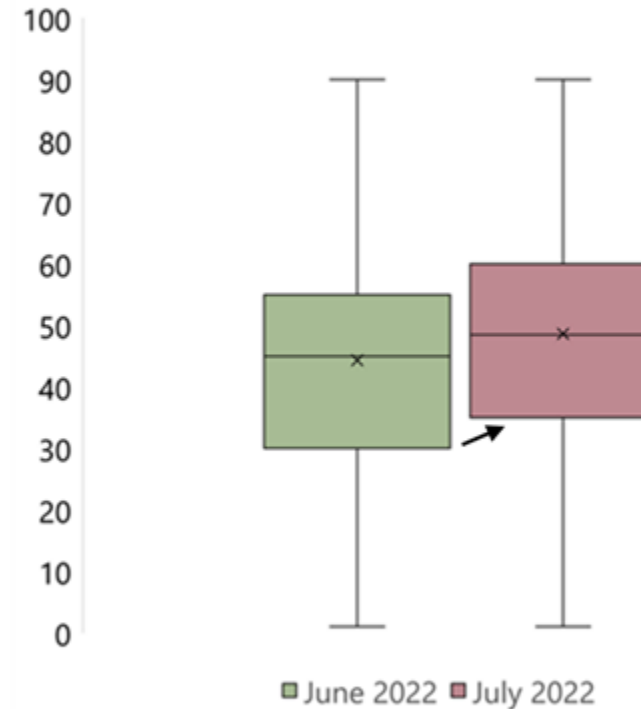
Global recession risk: market participants see a recession as more likely

Macroeconomic survey expectations
(Percent, y/y GDP, recession in N12M)



Source: Bloomberg

Survey replies on US recession probability
(Percent; likelihood of recession in N12M)



Source: WSJ

Notes: June survey published on 06/19, July survey published on 07/16, 6070 responses

Fragmentation risks: Choosing the path of further diversification would have substantial benefits

Figure 4.10. Room to Diversify the Sourcing of Intermediates (Percent)

Substantial home bias in sourcing inputs suggests room for international diversification.

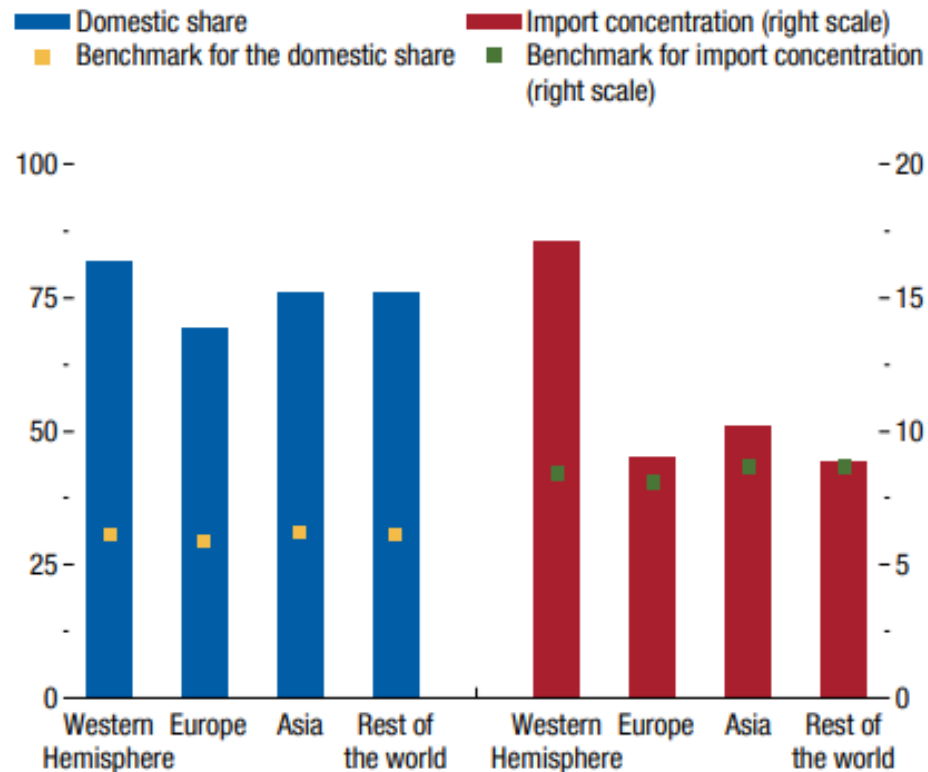
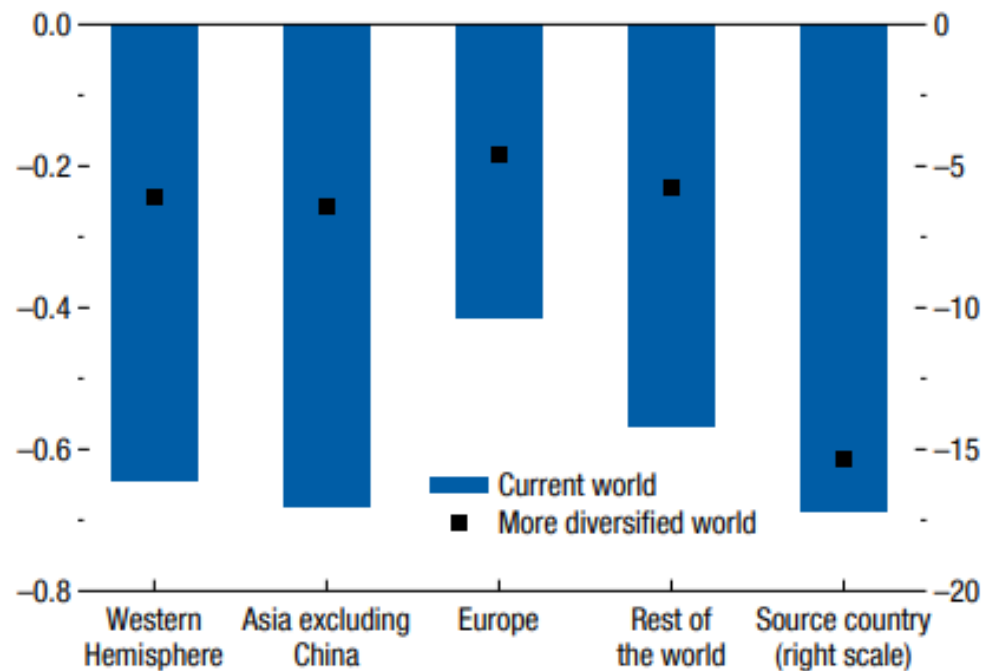


Figure 4.11. Gains from Diversification Following a Supply Disruption in a Large Supplier Country (Percent)

Greater diversification reduces GDP losses by almost half, on average, following a shock to a large input supplier.



Source: IMF staff calculations.

Opportunities: Digitalization with responsible innovation can be a silver lining

Digitalization helped sustain economic activity and boosted e-commerce during the pandemic

We can continue to seize new digitalization opportunities to create new value for industries

We can also ease frictions in cross border payments and promote global trade by further improving the current system of correspondent banks and leveraging new multilateral platforms to trade tokenized money directly across borders

But we must critically examine innovations to ensure that they improve economic welfare