Global Financial Conditions and Policy Choices for Small Open Economies

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Are Countries Losing Control of Domestic Financial Conditions?

(Based on GFSR Ch3, April 2017)

Motivation

- To what extent can countries steer domestic financial conditions amid greater financial integration?
- Renewed interest in the question in policy and academic circles.
- Concern: with a greater role of global factors driving domestic asset prices and credit…
- …policymakers may have little room to influence domestic financial conditions in line with domestic objectives (see, for example, Rey 2016).

Financial Conditions

- Financial conditions broadly reflect how easy it is to obtain financing.

- Monetary policy “works its magic through its effect on financial conditions” (Dudley 2010). Many transmission channels, financial frictions, heterogeneous agents…

- FCIs have been proven useful in predicting downside risks to GDP growth.

Role of Global Factors

- Examine changing role of global factors in affecting domestic financial conditions for a large sample of AEs and EMs.

- FCIs spill over via various channels—FX changes typically not enough to offset them...

- High degree of FCI co-movement does not necessarily imply a loss of control—may be optimal given real linkages.

Estimating Financial Conditions

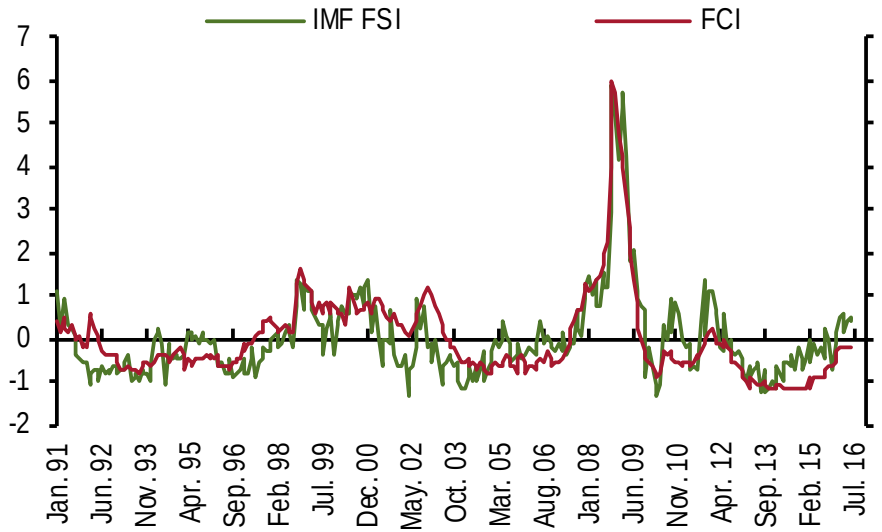
- FCIs estimated using a Time Varying Parameter Factor Augmented VAR model (Koop and Korobilis 2014).
- Jointly models financial and macroeconomic conditions.
- Model aims to distinguish "financial shocks" from endogenous reflection in financial variables of past economic activity that itself predicts future activity—empirically difficult.
- Can be somewhat more confident that spillovers reflect mainly "non-fundamental shocks."
- Monthly FCIs: 43 AE & EM (~1990-2016) using 10 financial variables (e.g., selected spreads, equity/house price returns, equity volatility, credit growth…)

U.S. FCI

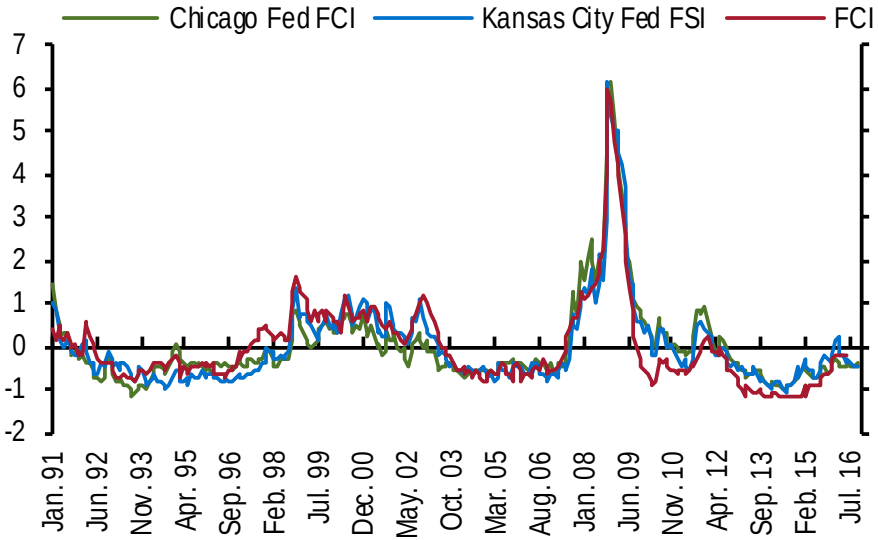
United States: Financial Conditions Indices

(Standard deviations)

1. IMF Financial Stress Index versus Financial Conditions Index



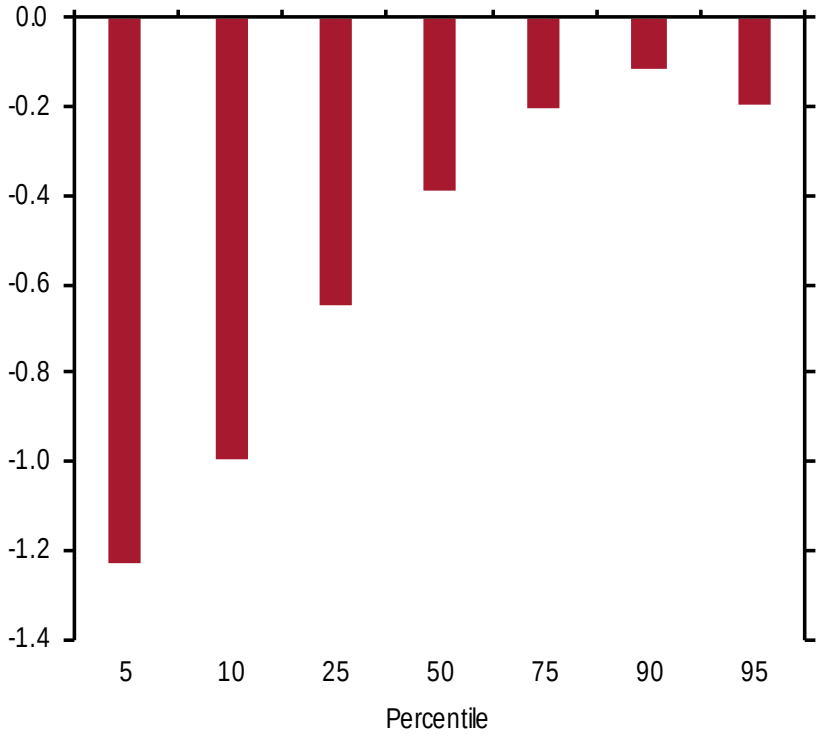
2. Financial Conditions Indices



Sources: Federal Reserve Bank of Chicago; Federal Reserve Bank of Kansas City; IMF, Global Data Source database; and IMF staff estimates.
Note: FCI=Financial Conditions Index; FSI=Financial Stress Index.

FCIs helps signal downside GDP risks

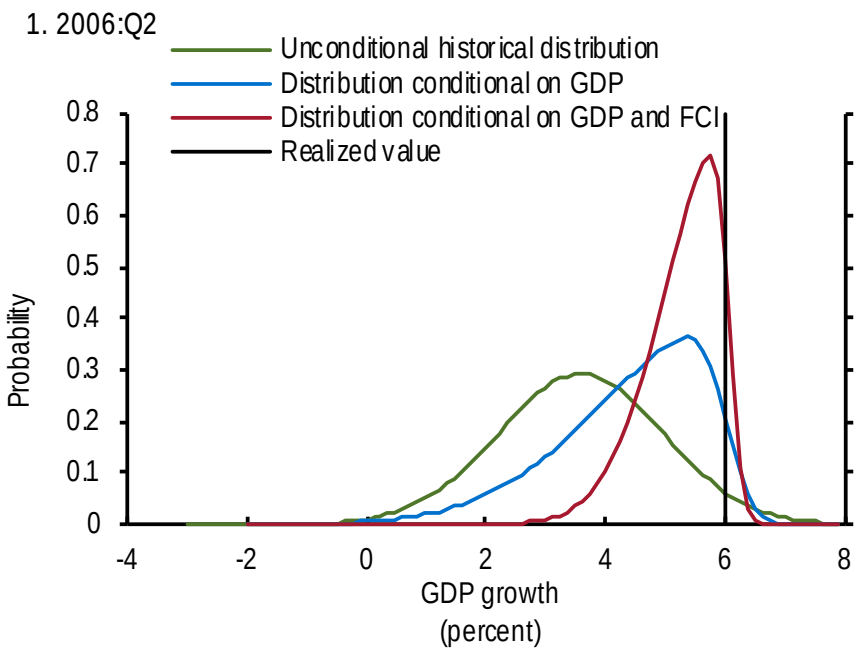
Future GDP Growth and Financial Conditions: Quantile Regressions

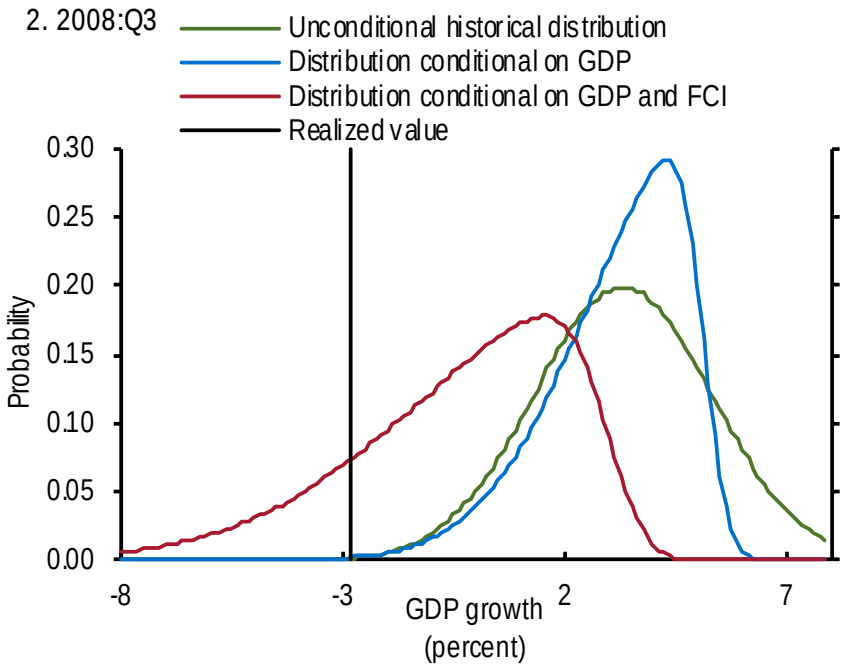


Source: IMF staff estimates.
Note: The figure shows the sensitivity of future growth to financial conditions at various quantiles. For all countries in the sample, growth at the one-year-ahead horizon across selected quantiles is regressed against countries' financial conditions indices.

Future Growth Distributions and FCIs

Probability Distributions of 1-year ahead GDP Growth

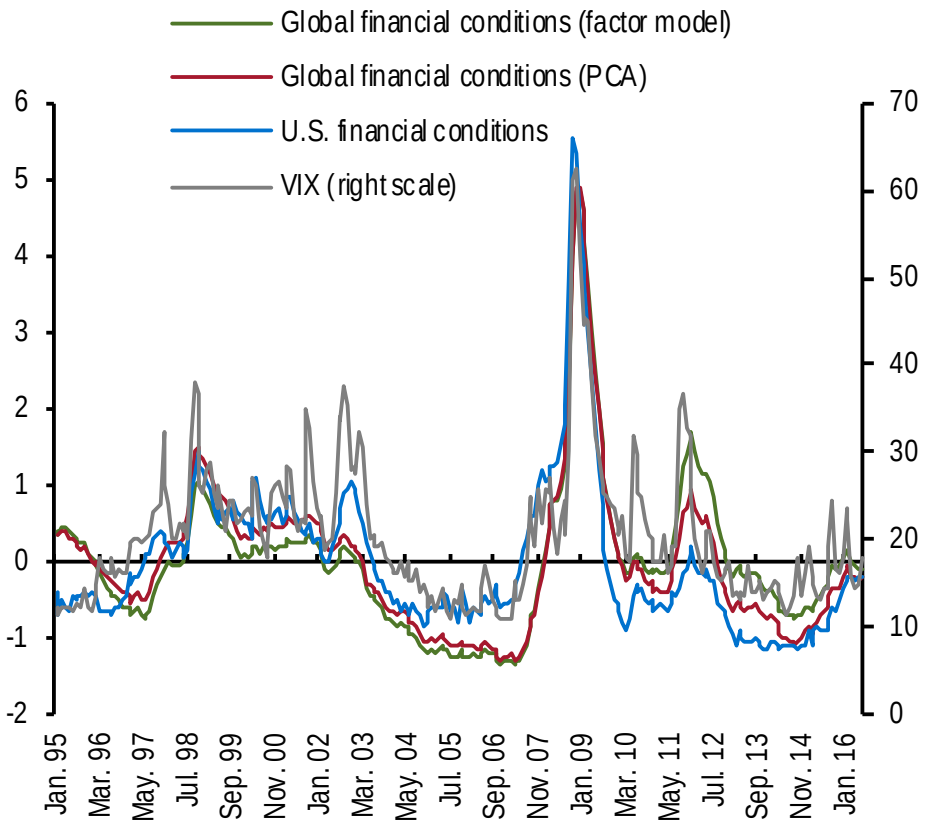




Source: IMF staff estimates.
Note: FCI=Financial Conditions Index.

Global Financial Conditions

Single Global Factor, U.S. FCI, and the VIX

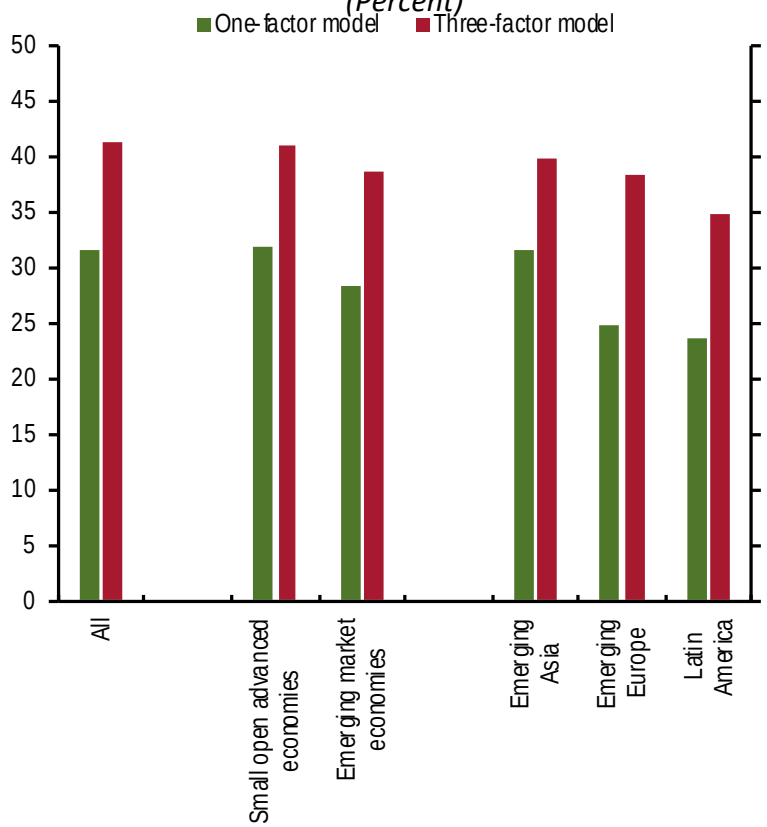


Sources: Haver Analytics; IMF staff estimates.

Global Financial Conditions: Share of FCI Fluctuations Explained

Variance Accounted for by One- and Three-Factor Models

(Percent)

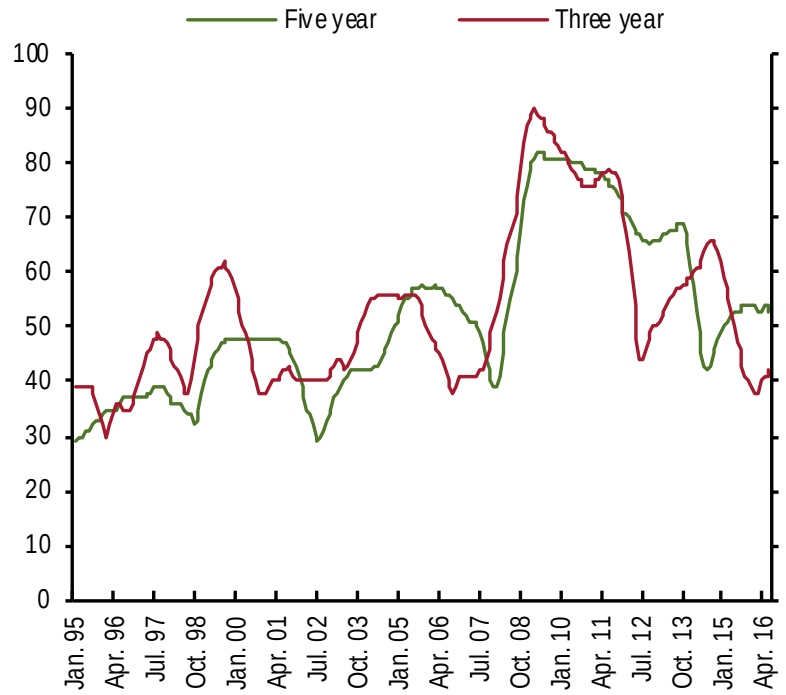


Source: IMF staff estimates.

Importance of Global Financial Conditions: Broadly Stable

Variance Attributable to Global Financial Conditions, 1995–2016

(Percent)



Source: IMF staff estimates.

Country Characteristics and Global Financial Conditions

Determinants Influencing the Sensitivity of Domestic Financial Conditions to the Global Financial Conditions

Variable	Expected Sign	Estimated Sign	Significance
Direct Effect of U.S. FCI	+		
Interaction with:			
FDI Linkages with the U.S.	+		
Portfolio Linkages with the U.S.	+		
Banking Linkages with the U.S.	+		
Trade Linkages with the U.S.	+		
Trade Openness	+		
Financial Openness	+		
Exchange Rate Flexibility	–		
Financial Development	–		
Rule of Law	–		

Source: IMF staff estimates.
Note: FCI=Financial Conditions Index. This table summarizes panel regressions where countries' domestic FCIs are regressed against a measure of the global financial conditions (U.S. FCI), various country characteristics, and their interactions. Regressions include country fixed-effects terms, and standard errors are clustered at the country level; *,**,*** denote that estimated coefficients are statistically significant at the 10, 5, and 1 percent levels, respectively.

Financial Linkages and Development Matter

Determinants Influencing the Sensitivity of Domestic Financial Conditions to the Global Financial Conditions

Variable	Expected Sign	Estimated Sign	Significance
Direct Effect of U.S. FCI	+	+	***
Interaction with:			
FDI Linkages with the U.S.	+	+	**
Portfolio Linkages with the U.S.	+	–	
Banking Linkages with the U.S.	+	–	
Trade Linkages with the U.S.	+	+	
Trade Openness	+	+	**
Financial Openness	+	+	
Exchange Rate Flexibility	–	+	
Financial Development	–	–	**
Rule of Law	–	–	

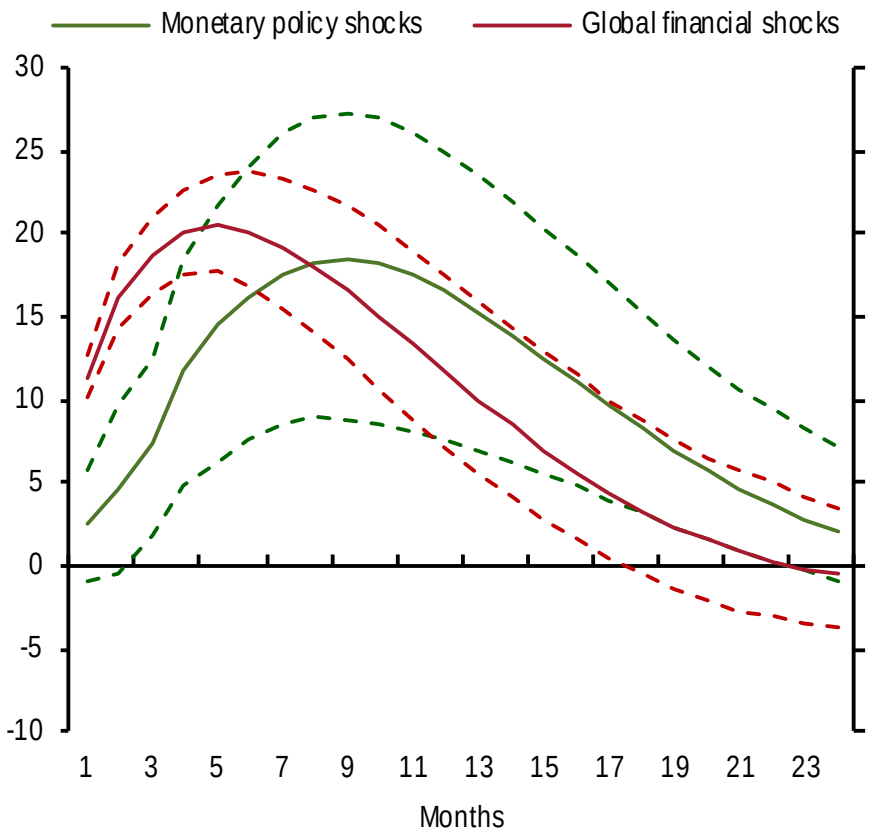
Source: IMF staff estimates.
Note: FCI=Financial Conditions Index. This table summarizes panel regressions where countries' domestic FCIs are regressed against a measure of the global financial conditions (U.S. FCI), various country characteristics, and their interactions. Regressions include country fixed-effects terms, and standard errors are clustered at the country level; *,**,*** denote that estimated coefficients are statistically significant at the 10, 5, and 1 percent levels, respectively.

Can Countries Steer Financial Conditions Amid Globalization?

- VAR models: Assess relative impact of global financial vs. monetary policy shocks on domestic FCIs.
- What share of FCI variation can be explained by monetary policy?
- Exercises applied only to countries with flexible exchange rate regimes.
- Baseline (panel) VAR: Y=[FCI* ΔIP ΔCPI FCI POL]'

Response of Domestic FCIs to Shocks

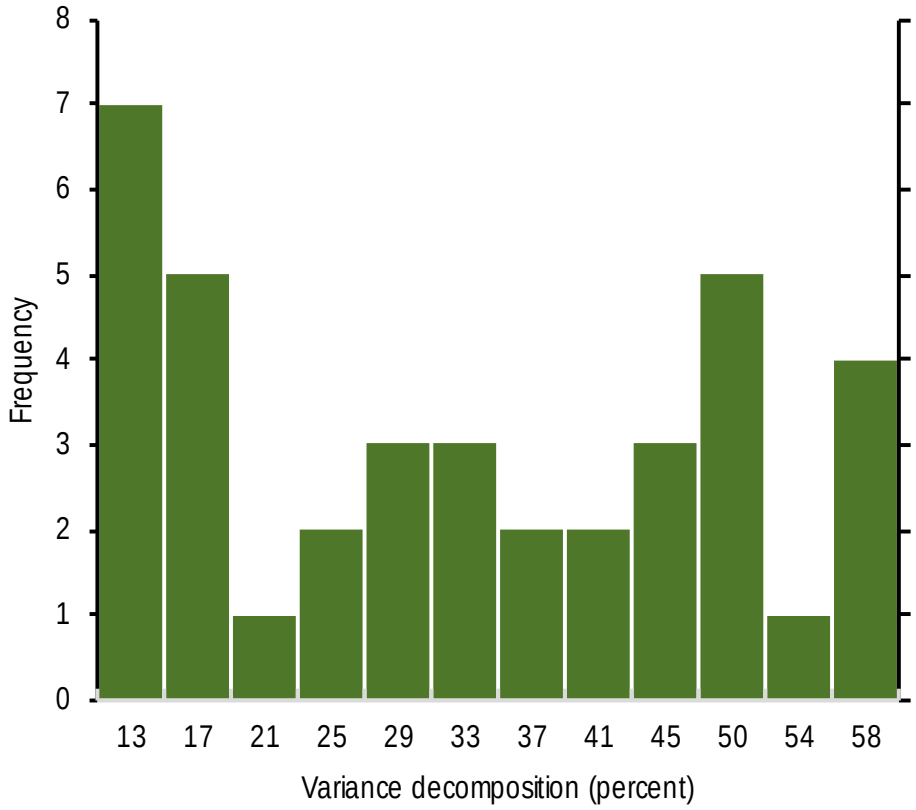
(Percent standard deviations)



Source: IMF staff estimates.

Importance of Global Financial Shocks Varies Across Countries

Variance Decomposition of Domestic FCI Fluctuations Attributable to Global Financial Conditions (Percent)



Source: IMF staff estimates.

Summary

- Analysis extends previous studies by developing a comparable set of FCIs across a large set of AEs & EMs.
- New FCI measure appears to signal downside risks to GDP well.
- Single factor (global financial conditions) accounts for a large share of variation in domestic FCIs around the world.
- However, there is little evidence that the importance of this global factor has increased over the past two decades.

Summary

- Stronger financial linkages increase, while greater financial development attenuate, the sensitivity of domestic FCIs to global financial conditions.
- Although global financial conditions explain around 20-40 percent of the variation in domestic FCIs, there is notable heterogeneity across countries.
- Monetary policy shocks account for about 15 percent of the variation:
- Amid exposure to external factors, changes in the monetary policy stance still matter for domestic FCIs.

Key Policy Implications

- Despite the significant influence of global financial conditions, countries, on average, are still able to steer their domestic financial conditions to a considerable extent.

- However, because domestic financial conditions respond faster and more strongly to global financial shocks than to changes in domestic monetary policies, timely and effective policy reactions may often be challenging.

- Nevertheless, EMs in particular need to guard against risks associated with sharp changes in global financial conditions.

Key Policy Implications

- Macroprudential measures can be used to limit risks from a further buildup of vulnerabilities that increase domestic financial conditions' sensitivity to external financial shocks (IMF 2014).

- Governments can foster financial deepening to enhance resilience to global financial shocks over medium term. Developing local investor base can help dampen the impact of financial shocks.

Increasing Resilience to Large and Volatile Capital Flows: The Role of Macroprudential Policies

Context

- Board paper discussed in July 2017
- Starting point:
  - The IMF's 2012 "Institutional View" on the management and liberalization of capital flows.
  - The IMF's macroprudential framework (Key Aspects and Staff Guidance Note)
- Paper puts these frameworks "side by side"
  - Draws out benefits of using macroprudential policy to manage risks from large and volatile capital flows

Macroprudential Policy: Objectives

- To increase the **resilience** of the financial system to aggregate shocks (IMF, 2013).
  - by **building buffers** that help maintain ability of financial system to provide credit to the economy under adverse conditions
- To **contain the build-up** of systemic vulnerabilities over time (IMF, 2013).
  - by reducing procyclical **feedback** between **asset prices** and **credit**, and containing unsustainable increases in **leverage** and **volatile funding**

Macroprudential Policy Tools and Transmissions

Broad based tools

- e.g. countercyclical capital buffer, leverage ratio caps, macroprudential stress tests

Sectoral tools (household and corporate)

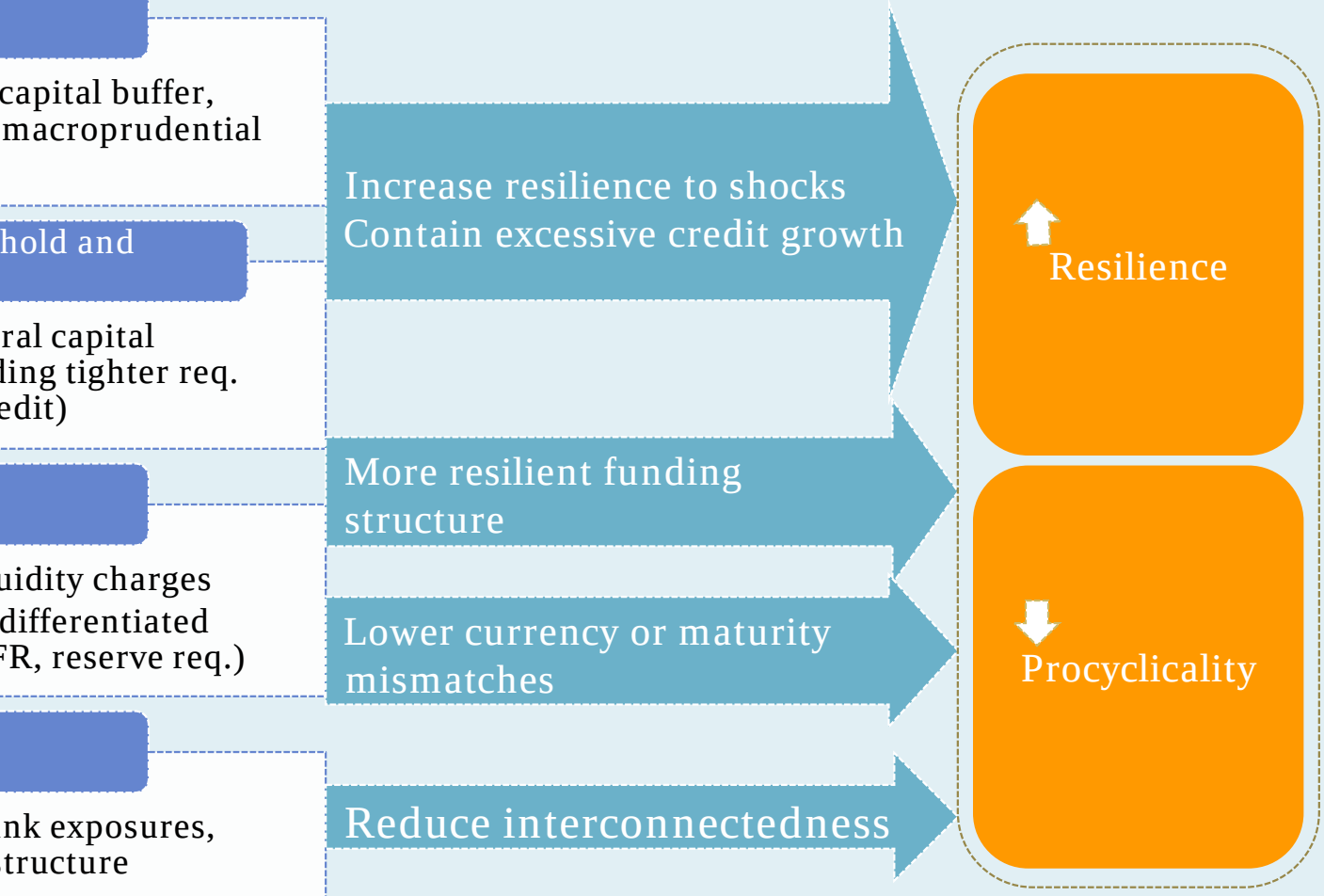
- e.g. LTV, DTI, sectoral capital requirement (including tighter req. for unhedged FX credit)

Liquidity tools

- e.g. NSFR, LCR, liquidity charges
- Including currency differentiated tools (e.g. LCR, NSFR, reserve req.)

Structural MPP

- e.g. Caps on interbank exposures, changes to market structure



Macroprudential Tools & Capital Flows

- Macroprudential tools can help contain systemic risks from volatile capital flows
  - even when the measures do not target capital flows per se.
  - Can dampen procyclical dynamics between **capital inflows,** asset prices, exchange rates, and credit.
    - by constraining bank leverage
    - by curbing excessive credit to local borrowers (including in FX)
  - Reduce risk of **capital outflows** yielding financial stress
    - by building capital buffers to protect against indirect credit risk from borrowing in FX
    - by reducing volatile wholesale funding (including in FX)

Effectiveness - Synopsis

- Growing evidence that macroprudential policy tools can increase **resilience** (IMF-FSB-BIS 2016),
  - across all macroprudential tools (capital buffers, LTV/DTI, liquidity)
- Ability to contain **procyclical dynamics** between asset prices and credit differs across tools.
  - Borrower-based tools (LTV/DTI) more effective at containing excessive credit than capital tools
  - Effectiveness of some tools limited by
    - Domestic or cross-border leakage (provision of credit by **non-banks or from abroad**)
    - Shift from bank-based towards **market-based funding**

Role of MPMs in Mitigating Systemic Risks Associated with Outflows

- Capital outflows should be handled primarily with macroeconomic, structural, and financial sector policies
  - Outflow controls a last resort: only in crisis situations or when a crisis is imminent
- Potential to relax MPMs: additional tool set to respond to outflow-related risks

Role of MPMs in Mitigating Systemic Risks Associated with Outflows

- Relaxation of MPMs can be considered when (IMF 2014):
  - **Buffers** are in place
  - Outflows are generating **financial stress**
  - Expectation that releasing available buffer(s) will **relieve financial stress** and support provision of credit
- Trade-offs:
  - relaxation can reduce resilience to future shocks, and need to maintain confidence and regulatory minima
  - Building larger buffers ex ante can create policy space

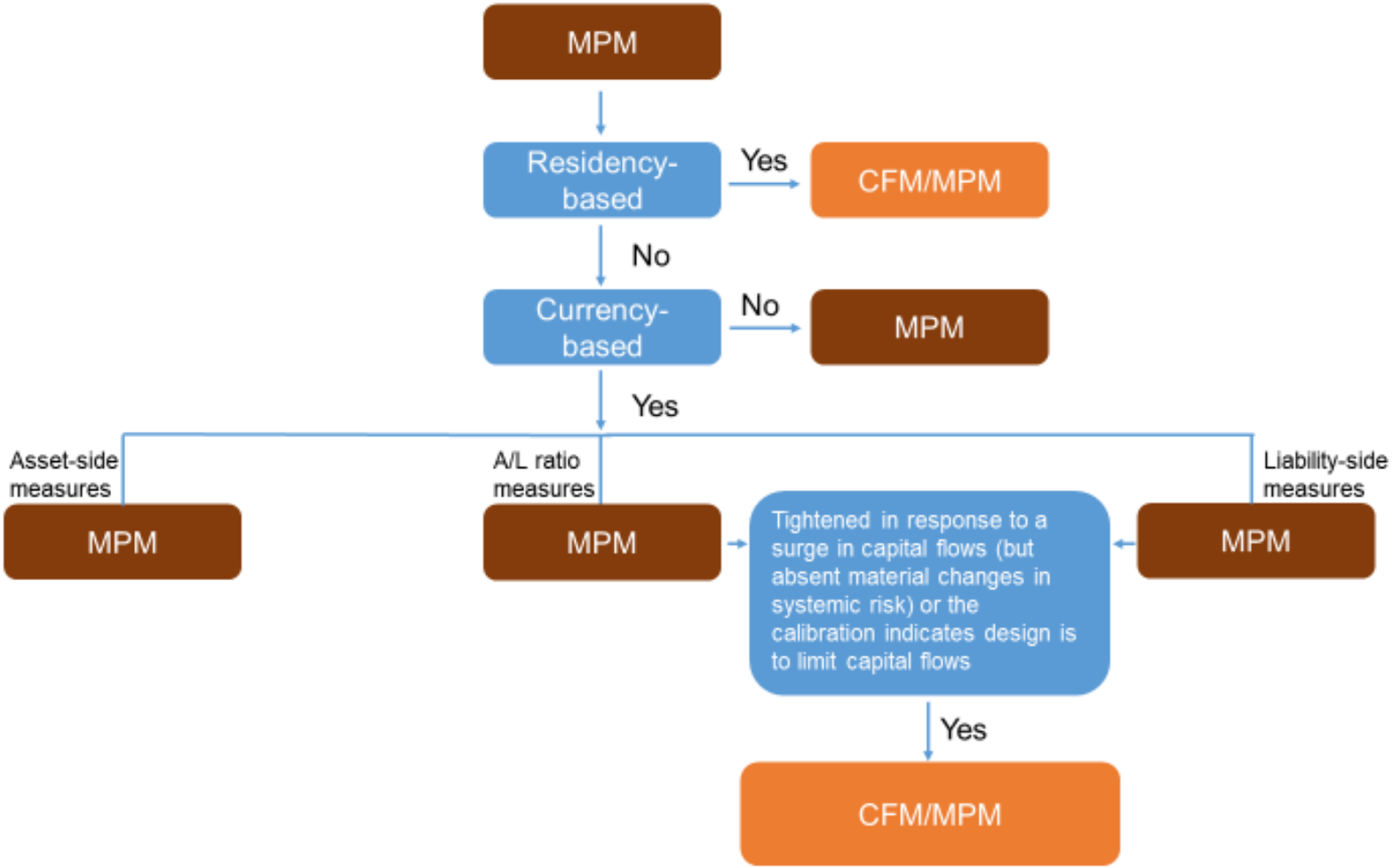
Distinguishing between MPMs and CFM/MPMs

- MPM: needs to be geared toward containing systemic risk.
- Two conditions:
  1. Identification of a potential source of systemic risk;
  2. Identification of transmission; measure can reasonably be expected to contribute to a reduction in systemic risk
- All relevant information is considered to guide whether an MPM is also a CFM (measure designed to limit capital flows)
  - Context (e.g., whether measure was adopted during a surge),
  - Calibration of the measure (e.g. scope and intensity),
  - Other country-specific circumstances
- Seemingly similar measures could be assessed differently

Thank you

Appropriate use (IV)

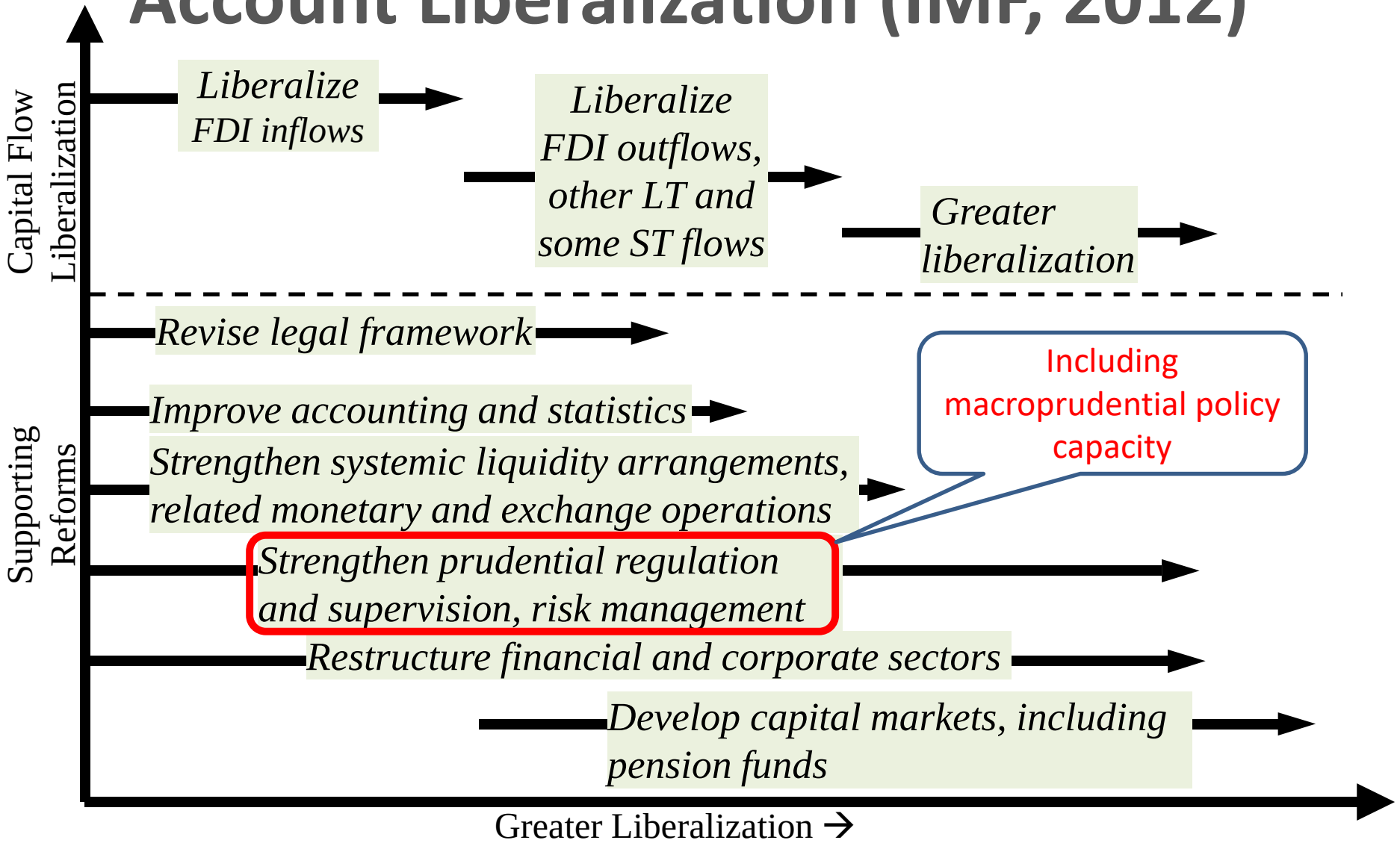
- A MPM can be put in place **pre-emptively** before an inflow surge occurs or **permanently** to limit systemic risk.
  - Can also be tightened in response to increases in risk
- A CFM/MPM may be useful to limit systemic financial risks stemming from a **capital flow surge**, provided that they:
  - are not used as substitute for necessary macroeconomic adjustment
  - are the most effective, efficient, and direct, and least distortive
  - seek to treat residents & nonresidents even-handedly
- A CFM/MPM may be **maintained** until after the capital flow surge abates, but need to keep evaluating usefulness relative to costs
- Key is whether there are alternative measures to address the systemic risk that are not designed to limit capital flows


MPM
Residency-based
Yes
CFM/MPM
No
Currency-based
No
MPM
Yes
Asset-side measures
A/L ratio measures
Liability-side measures
MPM
MPM
Tightened in response to a surge in capital flows (but absent material changes in systemic risk) or the calibration indicates design is to limit capital flows
MPM
Yes
CFM/MPM

What is the Role of Macroprudential Policy in the Process of Liberalization?

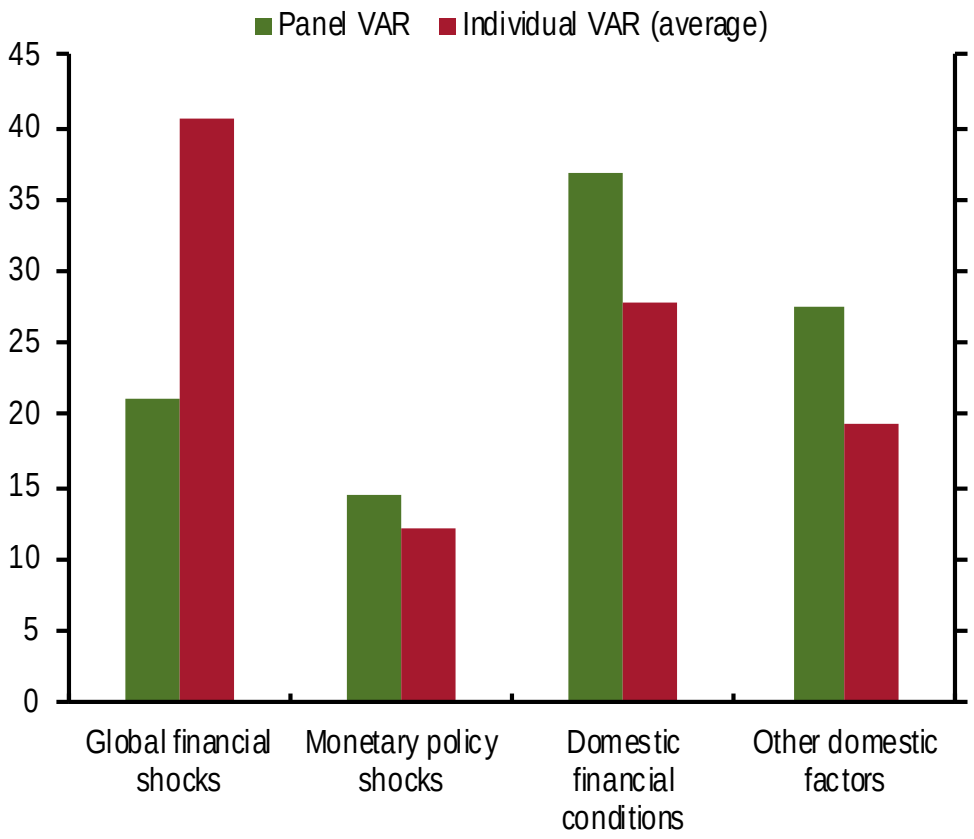
- Capital flow liberalization should be supported by strengthening capacity to use macroprudential tools.
  - along the sequence of steps envisaged under the integrated approach, in particular, in the context of the liberalization of banking and portfolio debt flows
- Capacity to deploy tools effectively requires adequate institutional arrangements and toolkits, and information to assess risks and calibrate policy.
- Where supervisory capacity or data are lacking→caution with further liberalization.

The Integrated Approach to Capital Account Liberalization (IMF, 2012)



Share of Domestic FCI Fluctuations Attributable to Shocks

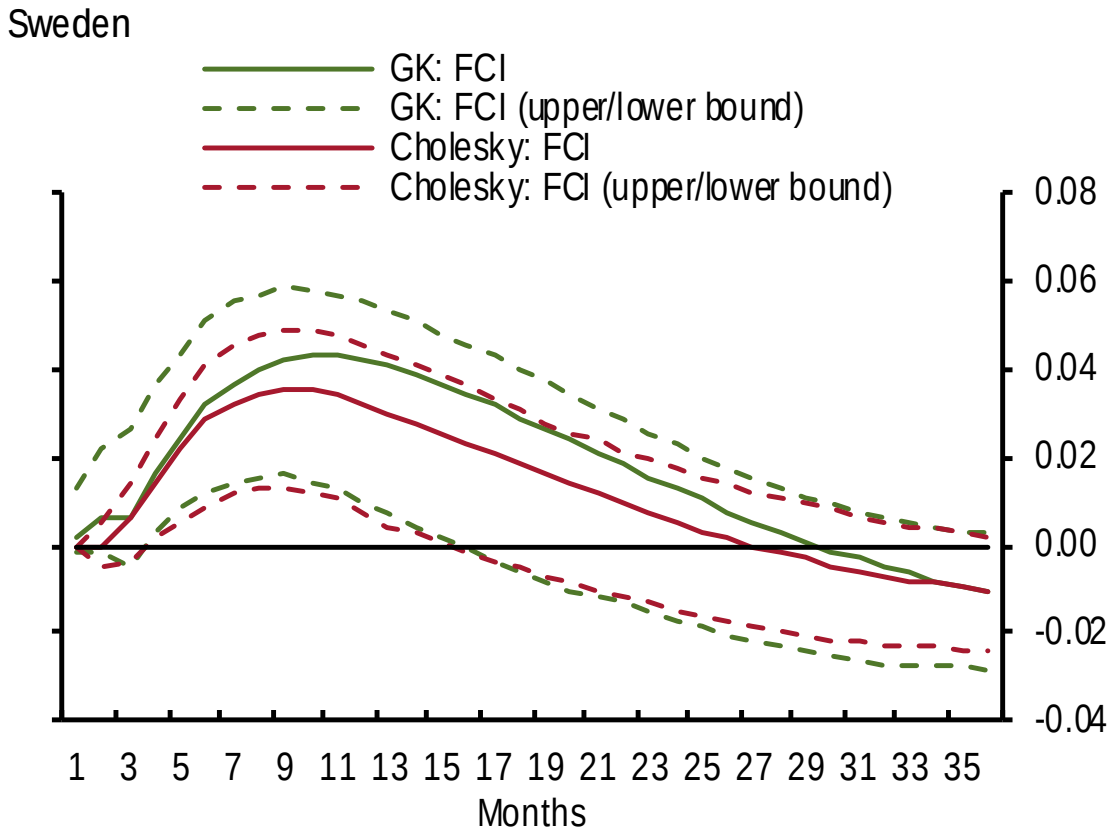
Share of Domestic FCI Fluctuations Attributable to Global Financial and Monetary Policy Shocks (Percent)



Source: IMF staff estimates.

Case Study: Sweden

Selected Economies: Response of FCI to Monetary Policy Shocks
(Standard deviations)



Source: IMF staff estimates.
Note: FCI=Financial Conditions Index; GK= Gertler and Karadi.

MPMs vs CFMs

MPMs

primarily prudential tools to limit systemic risk (IMF 2013, 2014, IMF-FSB, BIS 2016)

- Aim to (i) build resilience, (ii) contain build-up of systemic risk
- Can help limit systemic risk from capital flows even when not designed to limit capital flows
- Policy approach should be well calibrated to contain systemic vulnerabilities based on an assessment of systemic risk
- Prudential tools are precautionary by nature
- A broad range of MPMs may be needed to attain objectives

CFMs

tools designed to limit capital flows (IMF 2012, 2016)

- IV: broad macro policy package to handle capital flows
- CFMs should not substitute for warranted macroeconomic policy adjustment
- CFMs can be appropriate in certain circumstances
- CFMs should be transparent, targeted, generally temporary, and non-discriminatory
- Inflow CFMs only in cap. flow surges
- CFMs on outflows only in (imminent) crisis situations