

# MANAGING CAPITAL FLOWS: WHAT CAN BE DONE?

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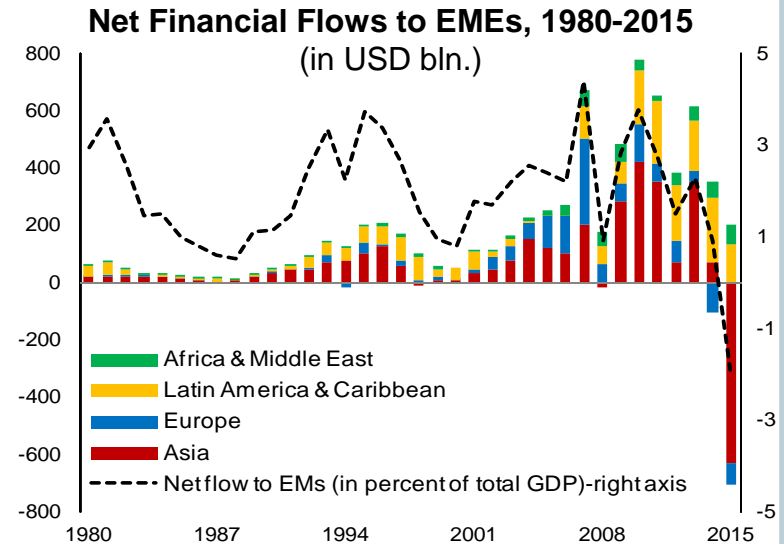
**Central Europe's Growth Perspectives in a "New Normal" World**

**Warsaw, October 14, 2016**

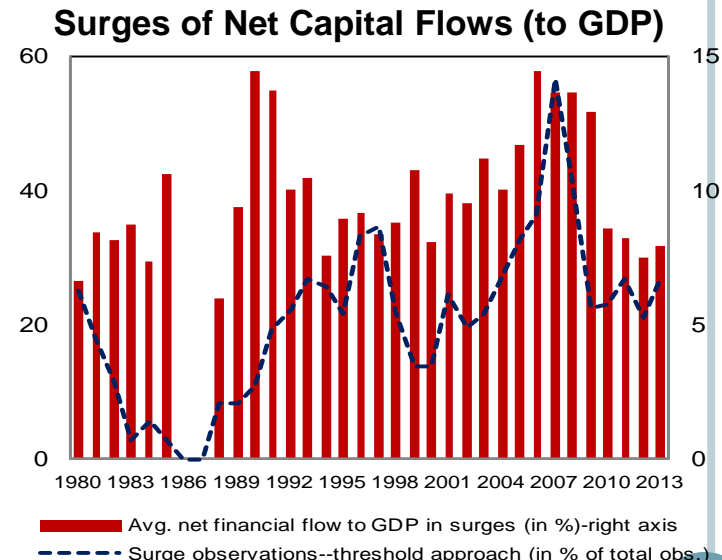
\* This paper draws on joint work with Atish R. Ghosh and Mahvash S. Qureshi. The views expressed in this presentation are those of the presenter and do not necessarily represent those of the IMF or IMF policy.

# RISING FREQUENCY OF SURGES & CRASHES

- Inflow surges to EMEs have been increasing in frequency and magnitude
- Regions experiencing largest surges also tend to subsequently experience the largest drop in net flows—heightening the challenge of managing volatility on the up and downsides
- Latin America prior to the 1980s debt crisis
- Asia in the runup to the 1997-98 financial crisis
- Emerging Europe prior to the 2008 GFC
- Surges have become more frequent—the share of surge observations rose from about 10 pct. in the 1980s to over 30 pct. in 2000s



Source: IMF's WEO database. Net financial flows exclude reserve assets. Figures for 2015 are provisional. Net flow in percent of GDP is average across countries.



Source: Ghosh et al. (JIE, 2014). Sample=53 EMEs (1980-2013). Surges defined as net capital flow (in % of GDP) observations in the top 30<sup>th</sup> percentile of a country's distribution and in the top 30<sup>th</sup> percentile of the full sample's distribution.

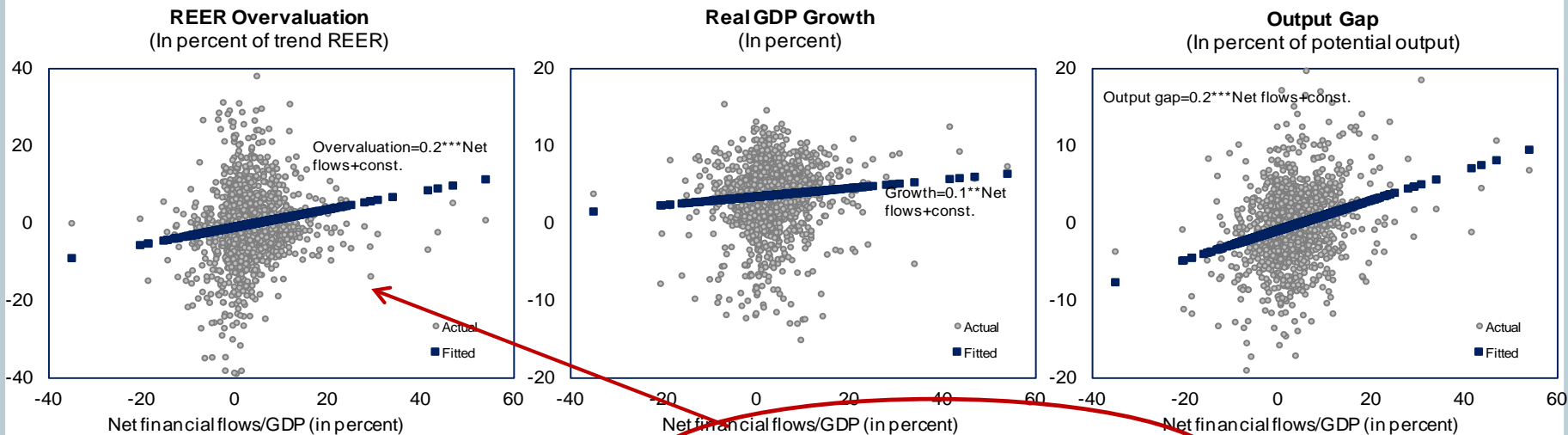
# SURGES: DRIVEN BY PUSH & PULL FACTORS

- Surges are synchronized globally—suggesting that common factors are at play
- But even in times of global surges, not all EMEs are affected—so pull factors must also be relevant
- Most surges are liability-driven (driven by foreign investors) rather than asset-driven (by sale of residents' assets abroad and repatriation of proceeds)
- Recent research finds
  - **Push factors** such as US real interest rate, global risk aversion, commodity prices explain global synchronization
  - **Pull factors** such as real GDP growth, external financing need, capital account openness, institutional quality also matter

# WHAT DO SURGES DO?

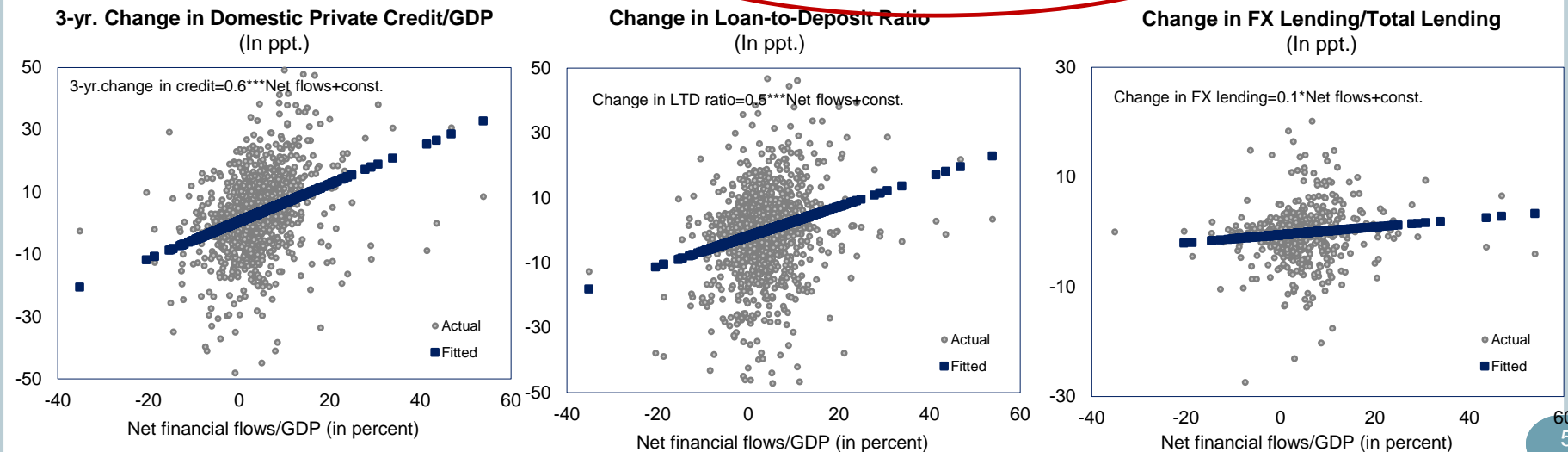
# SURGES LEAD TO MACRO & FIN STAB RISKS

## Macroeconomic imbalances



*10ppt. increase in net flows to GDP increases overvaluation by 2 ppt.*

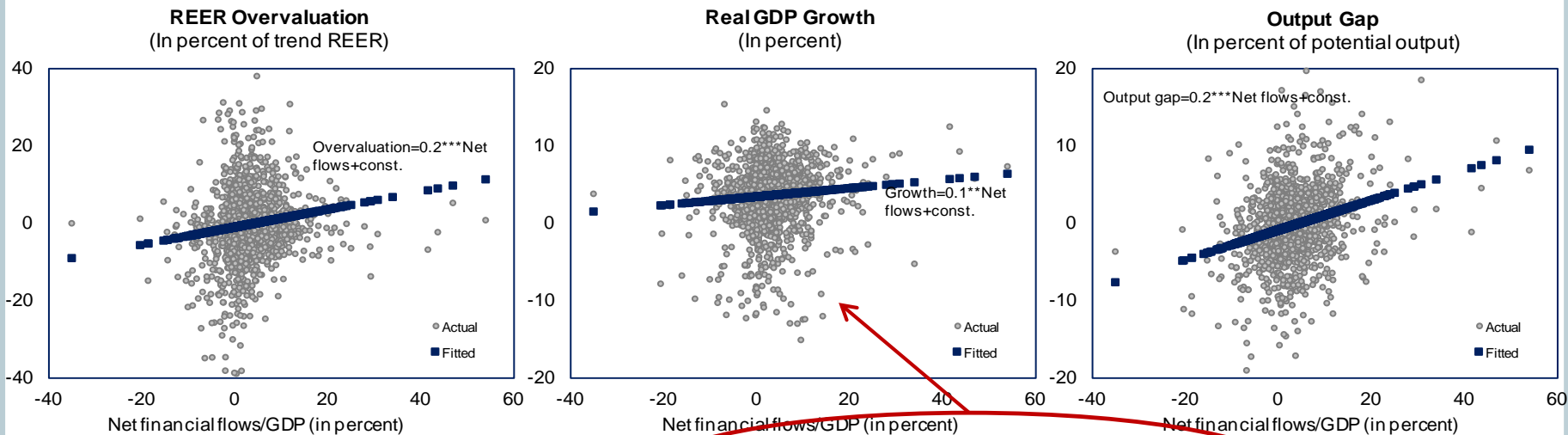
## Financial vulnerabilities



Note: Net financial flows (to GDP) are lagged one period.

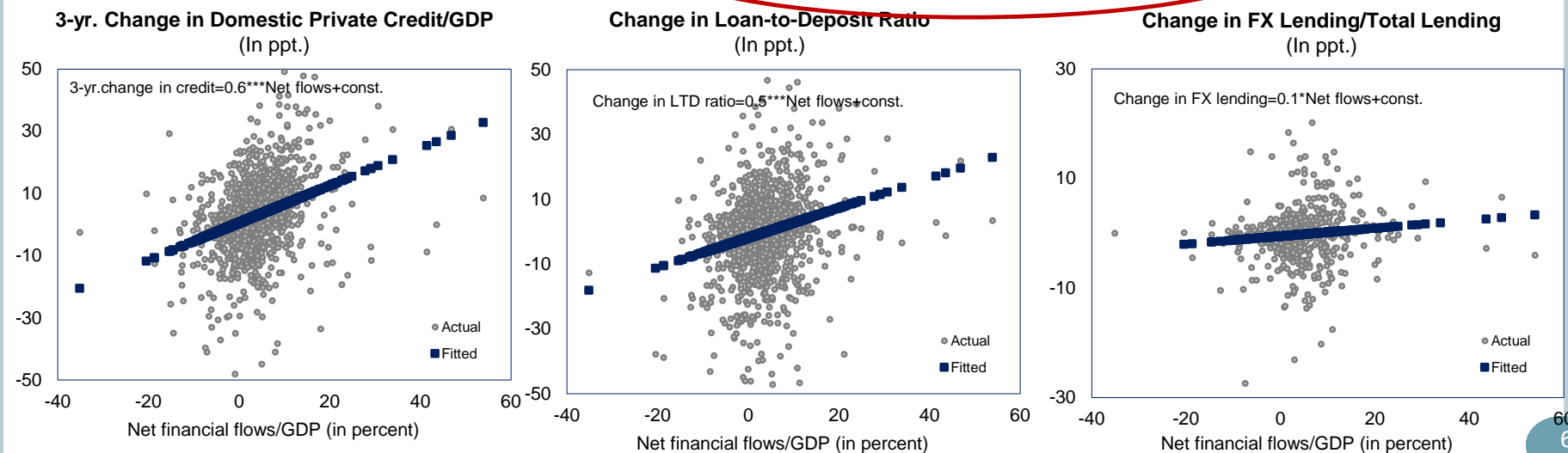
# SURGES LEAD TO MACRO & FIN STAB RISKS

## Macroeconomic imbalances



*10ppt. increase in net flows to GDP  
increases real GDP growth by 1 ppt.*

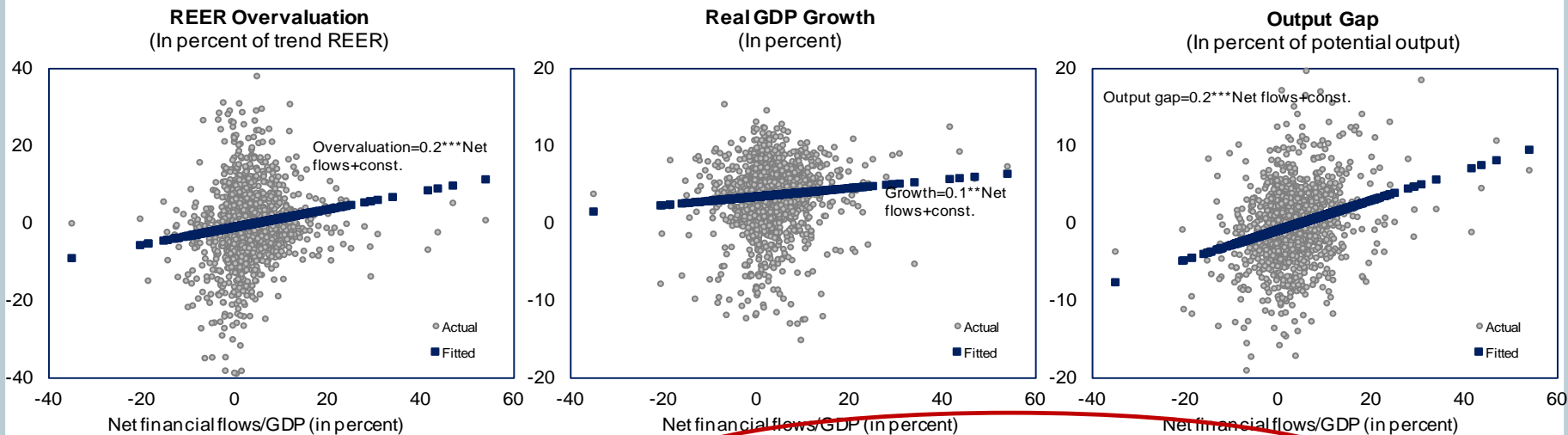
## Financial vulnerabilities



Note: Net financial flows (to GDP) are lagged one period.

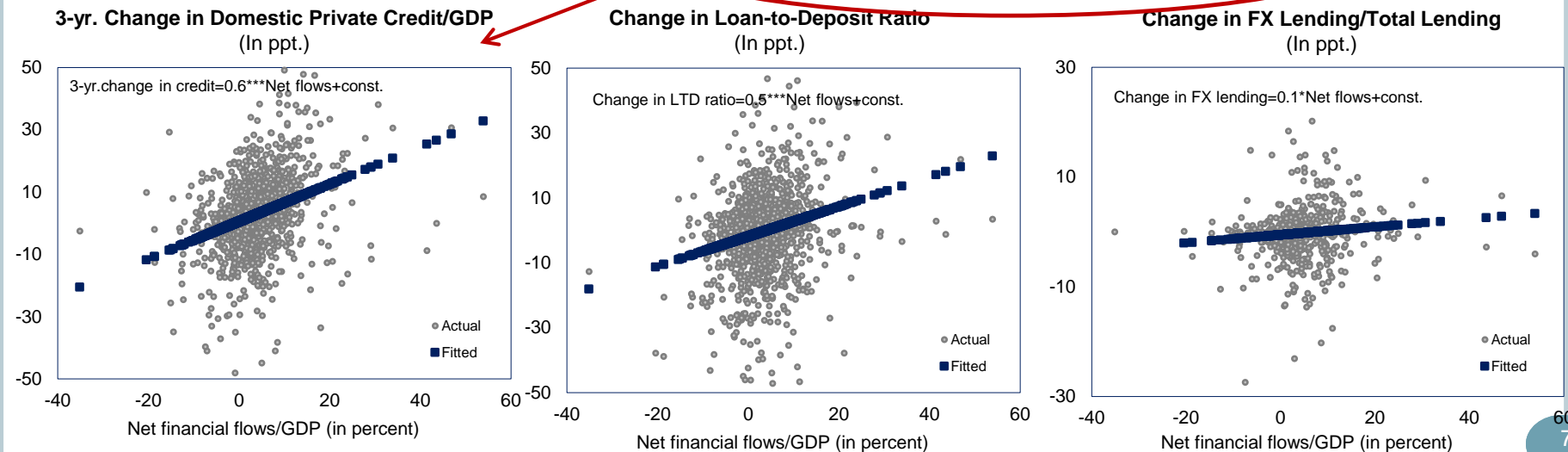
# SURGES LEAD TO MACRO & FIN STAB RISKS

## Macroecconomic imbalances



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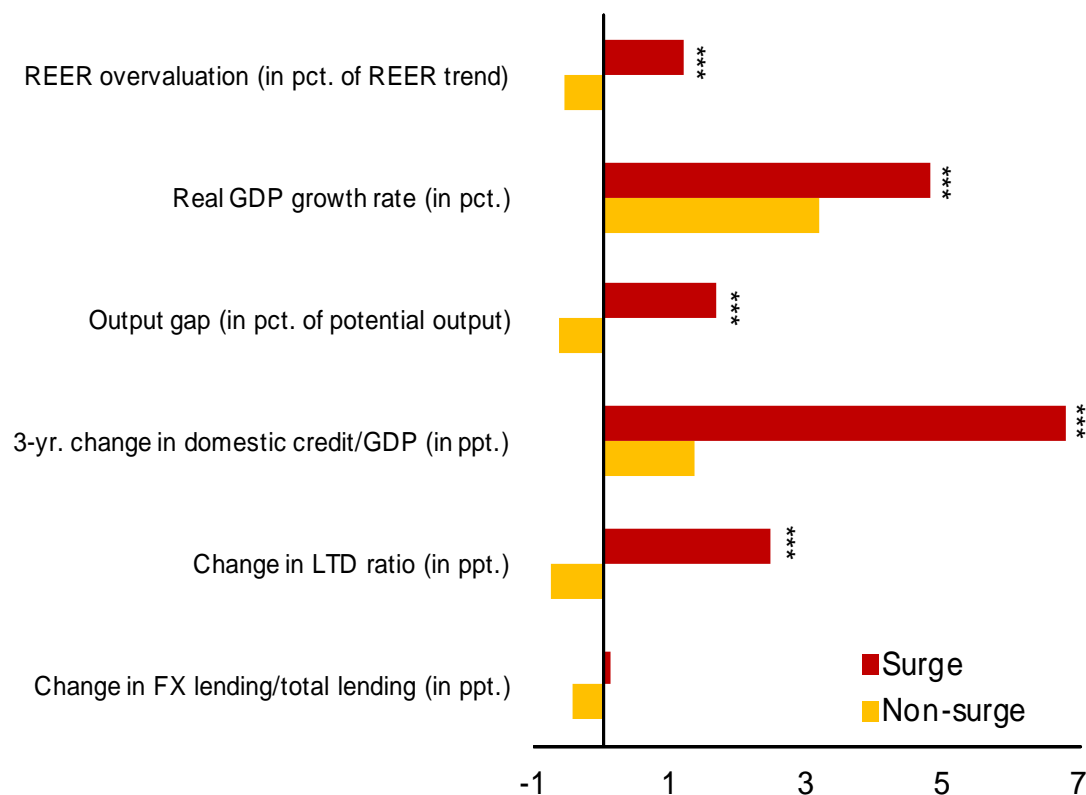
*10ppt. increase in net flows to GDP increases rate of credit expansion by 2 ppt. per yr.*



Note: Net financial flows (to GDP) are lagged one period.

# SURGES DIFFER FROM NORMAL TIMES

## Macroeconomic and Financial Vulnerabilities in Surges vs. Non-Surges



Note: \*\*\* indicates difference between the means of the two groups (surges, non-surges) is statistically significant at the 1 percent level.



# NOT ALL FLOWS EQUAL IN TERMS OF RISKINESS

- Other investment (banking) and portfolio flows are more prone to creating macroeconomic and financial vulnerabilities than FDI flows
  - Within portfolio flows, debt flows are more prone to overvaluation, while equity flows are more expansionary (Blanchard, Ostry, Ghosh & Chamon, AERP&P, 2016)
- Liability flows are more expansionary and prone to creating financial vulnerabilities than asset flows
  - For example, 10 percent of GDP  $\uparrow$  in liability flows  $\uparrow$  real GDP growth rate by about 1 ppt., while a corresponding increase in asset flows  $\uparrow$  growth by 0.5 ppt.
- Some types of flows thus seem “safer” than others—cyclical as well as structural tools needed (Ostry et al., JIE, 2012)

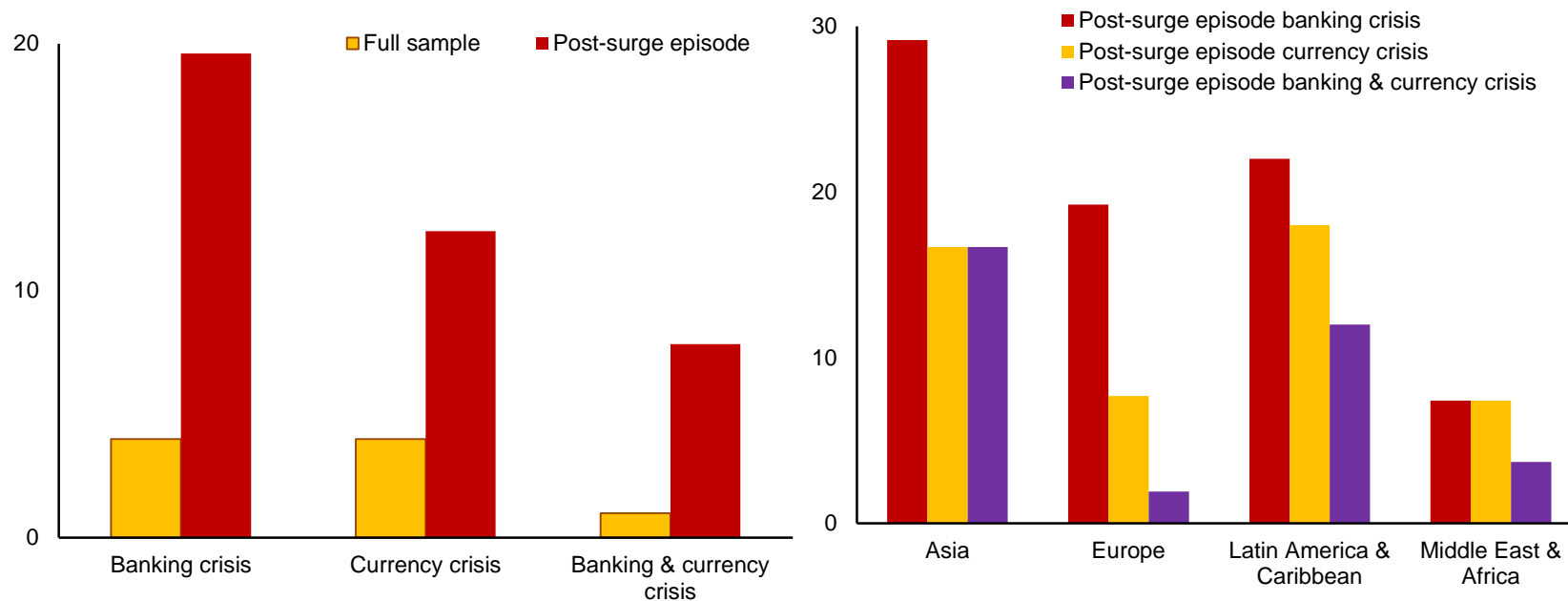
# SURGES APPRECIABLY RAISE CRISIS RISK

- Increase in net financial flows of 5 percent of GDP raises crisis prob. by about 1 percentage point (unconditional crisis prob. in the sample: 4 pct.)
- Main factors contributing to increase in crisis likelihood:
  - Change in domestic credit (in percent of GDP)
  - Currency overvaluation
- Crisis likelihood by type of flow:
  - Portfolio and other investment flows significantly ↑ crisis prob., but not FDI
  - Within portfolio flows, debt more likely to cause a financial crisis than equity
- NOT all surge episodes end in crisis
  - Several EMEs (Brazil, India, South Africa, and Turkey) received large capital inflows in the runup to GFC, and did not suffer a subsequent banking crisis
  - While some (e.g., Russia and Ukraine) did experience a banking crisis
  - Overall, of several (about 30) EMEs that had an inflow surge in the run up to the GFC, only 5 experienced a financial crisis in 2008–09

# WHAT CAUSES CRASHES?

# LIKELIHOOD OF POST-SURGE CRISIS

## Banking and Currency Crisis Probability (In percent)



Note: Post-surge crisis probability is defined as a (banking/currency) crisis within two years after a surge episode ends; see Ghosh, Ostry, Qureshi (AER, 2016).

# SOFT-LANDING OR CRASH?

- Crash: banking or currency crisis occurring within two years of surge end (Ghosh, Ostry, Qureshi, AERP&P, 2016)
  - Unconditional crash probability in the sample: 20 percent
- Changes in both global and domestic conditions are strongly associated with how surge episodes end
  - **Global:** US interest rate, commodity prices, and global risk aversion
    - For instance, predicted crisis probability increases by 7ppt. if US real interest rate rises by 100 bps (relative to no change in interest rates at all)
  - **Domestic:** Crash probability is higher when the surge experiences...
    - Greater credit expansion, economic overheating, currency overvaluation
    - Smaller stock of foreign exchange reserves
    - Smaller share of FDI inflows (predicted crisis prob. is 12ppt. lower if surge predominantly FDI driven)
    - Higher debt inflows/accumulation of bank foreign liabilities (predicted crisis prob. is 11ppt. higher if surge predominantly debt inflow driven)

# WHAT CAN COUNTRIES DO?

# IT'S REALLY IMPORTANT TO MANAGE THE SURGE WELL

- Capital flows bring risks, while growth/risk-sharing benefits of full liberalization are hard to identify in the data (unbundling is important)
- Global push factors (which are largely exogenous for recipient countries) are important determinants of surge and crash risk:
  - Countries therefore need latitude to adopt “insulation” policies
  - Policies may be countercyclical or structural, especially to improve the composition of inflows
- During surge and/or normal times, a range of policies seem salient:
  - Exchange rate management/FXI, macroeconomic policies, macroprudential measures, and capital controls all have a role to avoid macro and financial-stability imbalances
  - Structural policies also needed to improve mix of flows in favor of FDI and equity (less debt)

# NO GENERAL CASE FOR MACROPRU VS CONTROLS

- Sometimes macroprudential measures are superior (Jeanne, 2012)
  - When all borrowing is risky (credit boom), no need to discriminate between domestic and foreign lenders
  - Optimal policy is tax on domestic borrowing
- But other times, controls may be the best response (Ostry et al., 2011)
  - When external borrowing is the source of distortions, authorities should discriminate against resident-nonresident transactions
  - Optimal policy is capital controls
- When borrowing is channeled through unregulated financial sector, broad restrictions on foreign borrowing work better (Ostry et al., 2012)
- There is uncertainty regarding how each tool operates
  - Several macroprudential measures are de facto capital controls
  - Road-testing both measures still at an early stage
  - Circumvention risks apply to both sets of measures
  - Which could argue for simple rules, e.g., limits on leverage or open FX positions
- In practice, employ both instruments if use of each has convex costs



# EFFECTIVENESS OF RECENT CAPITAL CONTROLS

- Brazilian residency-based measures and tax on FX derivatives
  - Shifted composition of inflows (lower portfolio debt flows)—Benelli et al. (2014); Baumann and Gallagher (2015)
  - Reduced currency appreciation pressures, and increased MP autonomy—Baumann and Gallagher (2015); Chamon and Garcia (2016)
  - Reduced bond inflows and foreign investors' bond portfolio allocation—Lambert et al. (2013) and Forbes et al. (2016)
- Korean currency-based measures
  - Reduced banks' short-term foreign borrowing and maturity mismatches—IMF (2012); Kim (2013)
  - Reduced volatility of cross-border bank flows—Bruno and Shin (2014)
- Cross-country evidence: Inflow controls/FX-related measures
  - Reduced net/gross inflows (Ahmed and Zlate, 2015); bond and bank inflows (Bruno et al., 2015)
  - Reduced financial fragilities (Forbes et al., 2015; Zhang and Zoli, 2016)
    - Not much impact on macro variables (ER, net capital flows, interest rate differential)—Forbes et al. (2015)

# ROLE FOR POLICY COOPERATION?

# POLICIES MAY NEED TO BE COORDINATED GLOBALLY

“But such control will be more difficult to work...by unilateral action than if movements of capital can be controlled *at both ends*.”

John Maynard Keynes

“Almost every country at one time or another, exercises control over the inflow and outflow of investments, but without the cooperation of other countries such control is difficult, expensive, and subject to considerable evasion.”

Harry Dexter White



# FOUR IMPLICATIONS FOR POLICY ADVICE

- *Capital controls should not substitute for warranted external adjustment*
  - Inflow controls should invite scrutiny when exchange rate is undervalued (exceptions: learning-by-doing? Financial stability?)
- *Capital controls should not be used to exploit market power*
  - Same as any monopolist/monopsonist
  - Far fetched? Think of other policies (e.g., monetary policy) affecting flows
- *Capital controls imposed to offset genuine domestic externalities may require source-recipient country coordination (convex costs)*
  - Such coordination requires source countries to take into account impact of their policies on others (Sweden/Latvia; USA)
  - May benefit source countries even if at first blush looks costly for them
- *Capital controls imposed for genuine domestic externalities may require coordination among borrowers to prevent capital control wars*
  - Would involve lowering controls in response to generalized surges
  - Would be in their own interests—right cost-benefit balance of controls