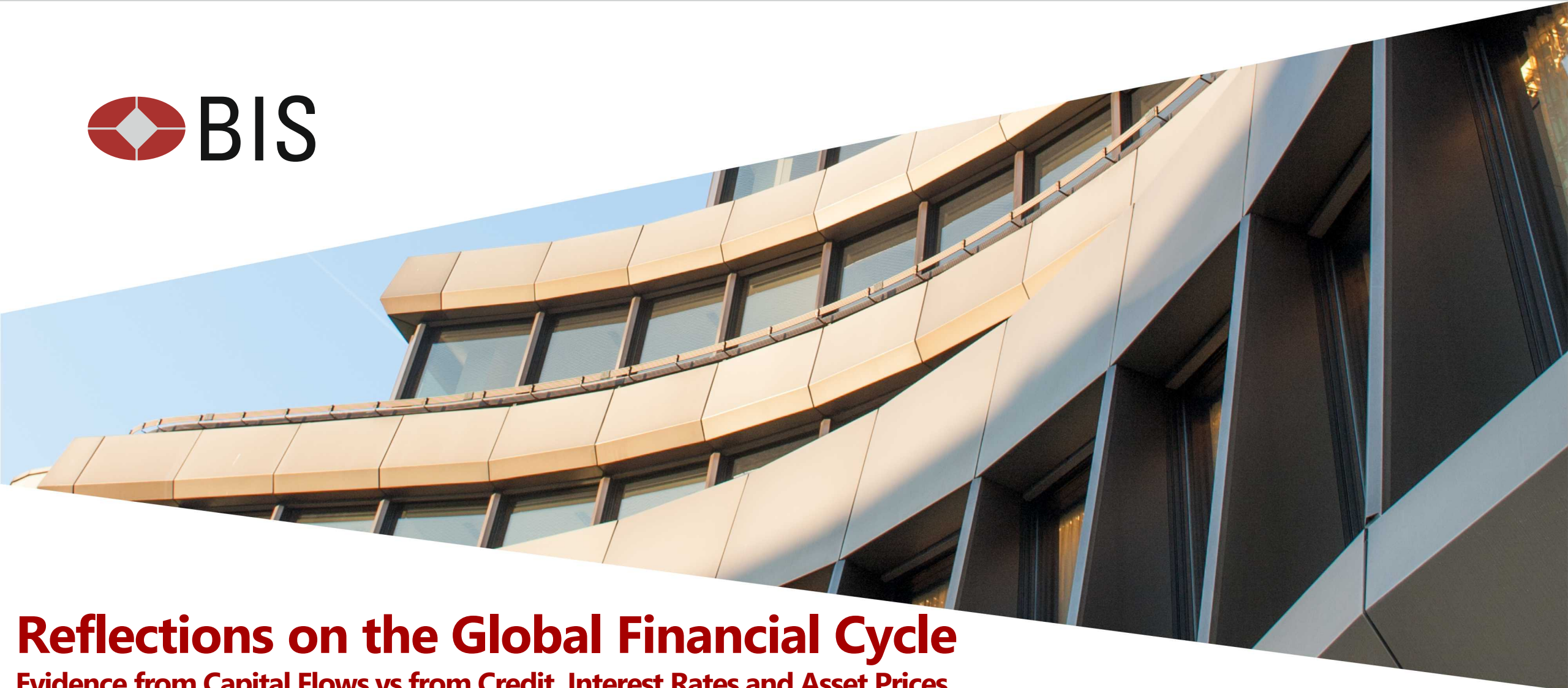




Reflections on the Global Financial Cycle

Evidence from Capital Flows vs from Credit, Interest Rates and Asset Prices

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(based on joint work with Eugenio Cerutti and Andrew K Rose)

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Disclaimer: The views presented here are those of the author and do NOT necessarily reflect the views of the Bank for International Settlements

Much interest in Global Financial Cycle (GFCy) But how important is the GFCy and for what?

- Cerutti, Claessens and Rose (CCR, 2019) examined observable *commonality* in capital flows using dynamic factors and “fundamentals”
 - Extract common dynamic factors (following Miranda Agrippino-Rey)
 - Attribute *all* commonality to GFCy to establish upper bound for GFCy
 - Ignore correlated shocks, eg due to commodity price movements, sunspots, contagion
 - Add furthermore to the regressions “known fundamentals”
 - Then compare R^2 s of regressions with common factors
- Did this many ways
 - Time spans
 - Sets of countries (advanced/emerging/both)
 - Capital flows: 2 directions (in/out); 4 major types (FDI/debt/equity/credit)
- Found little explanatory power: typically less than 25%

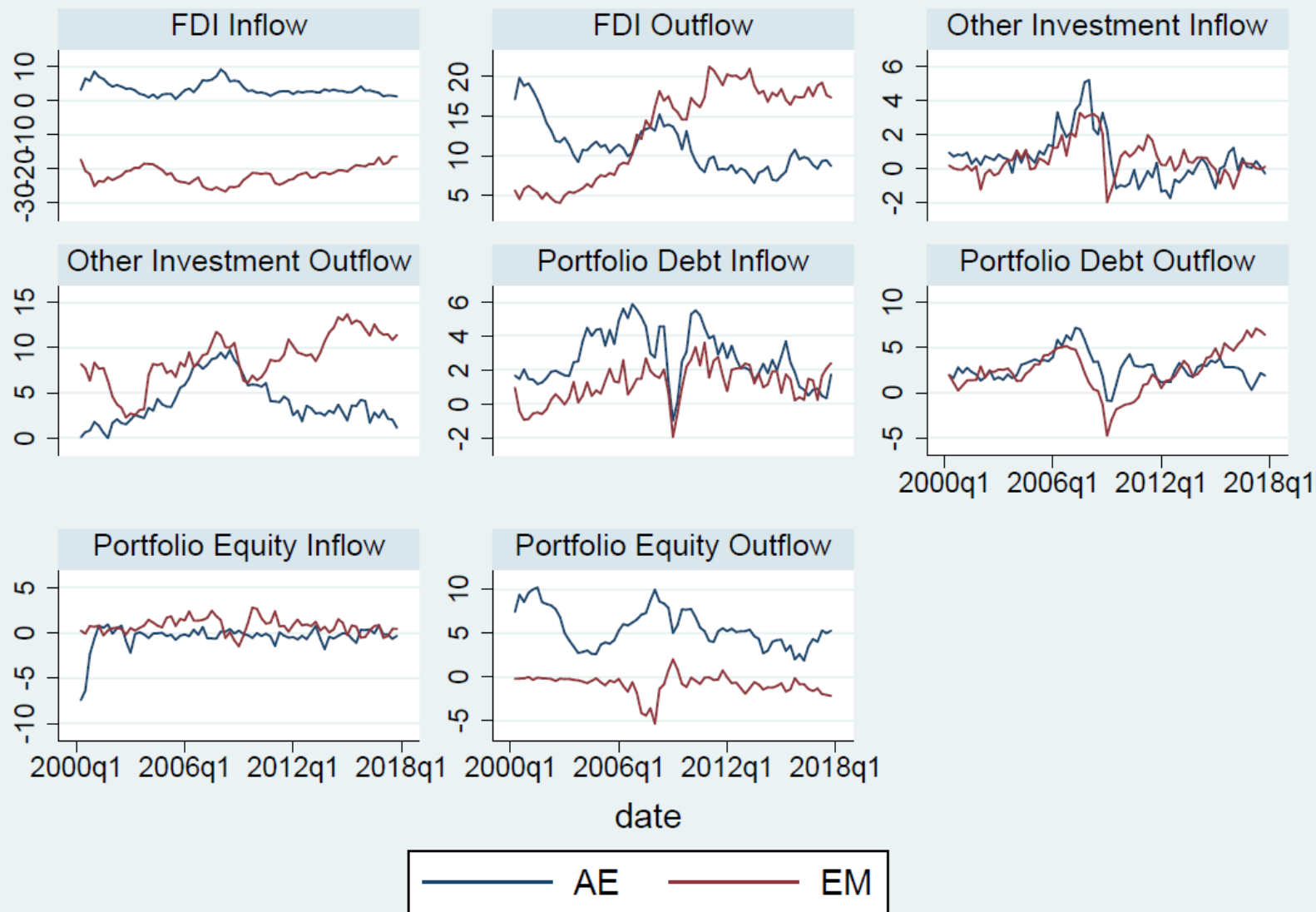
Recap: CCR's model(s) and proxies for GFCy

- Regressand: capital flows (% GDP) by direction/type/country
- GFCy Regressors:
 - [Direct] Eight fundamentals 1) VIX; 2) real GDP growth rate; 3) nominal policy rate; 4) real policy rate; 5) TED spread; 6) yield curve slope; 7) REER change; and 8) M2 growth
 - [Indirect] Two factors for relevant capital flow (advanced/emerging), matched by direction/type of capital flow
- Use *common* (across countries) and *country-specific response* to regressors

$$\text{CAPFLOW}_{d,e,i,t} = \sum \beta^j \text{USFUND}_t^j + \sum \gamma^k \text{FAC}_{d,e}^k + \{\varphi_i\} + \varepsilon_{d,e,i,t}$$

$$\text{CAPFLOW}_{d,e,i,t} = \sum \beta_l^{j,s} \text{USFUND}_{t-s}^j + \sum \gamma^k \text{FAC}_{d,e}^k + \{\varphi_i\} + \varepsilon_{d,e,i,t}$$

Common factor in various capital flows

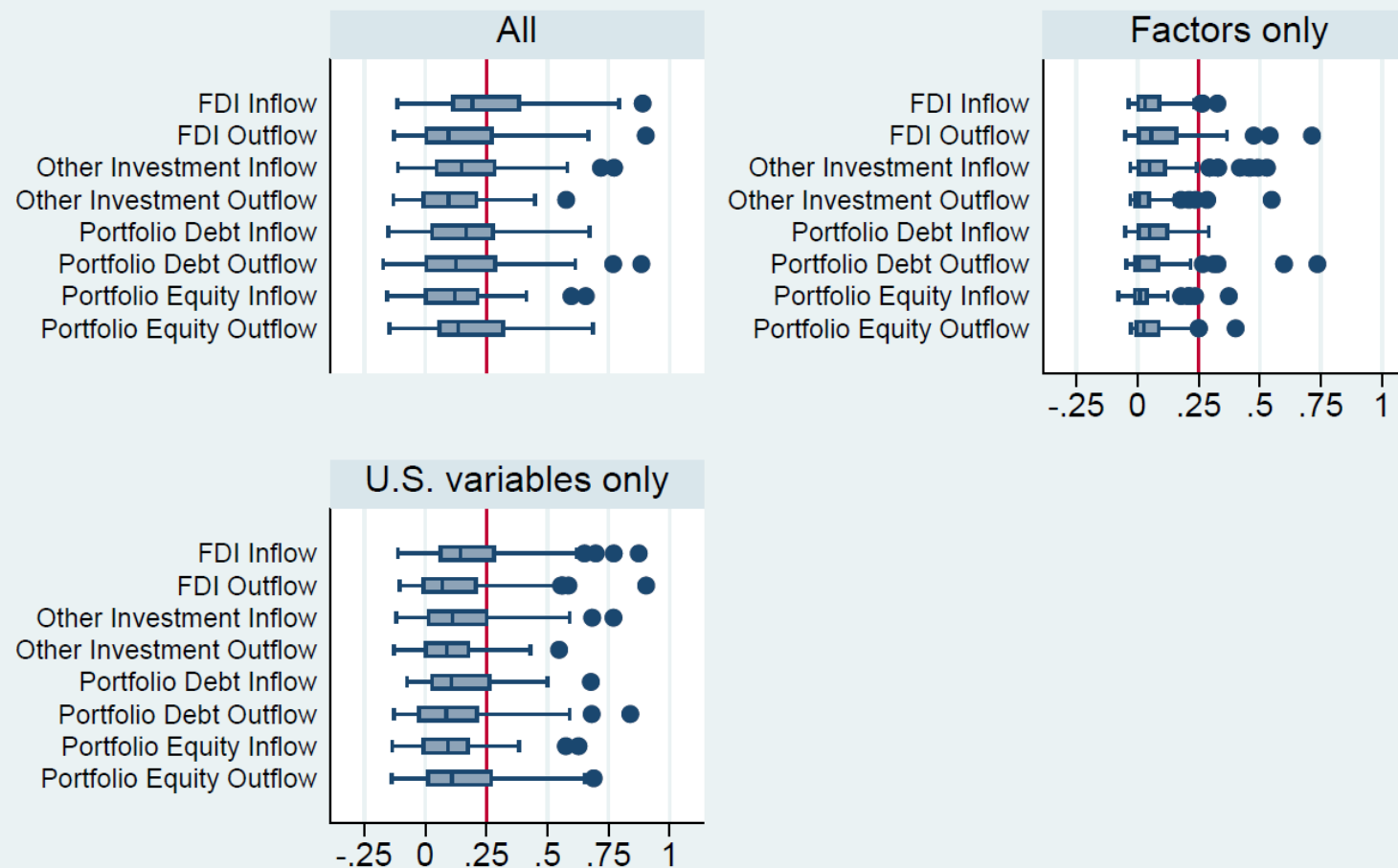


(National) Capital Flow Equations showed small quantitative importance of GFCy

- Estimates for 63 small countries
- 2 directions and 5 types of capital flows
 - Hence many (598) equations estimated
- Summarised via histograms of $\bar{R}^2$
 - Standard measure, small degree of freedom penalty compared to R^2
- Box plots cover (25th, 75th) percentile of $\bar{R}^2$ statistics
 - Median marked with vertical bar
 - Whiskers extend to “adjacent values”, extrema within 150% interquartile range
 - Outliers marked individually
 - .25 **red** vertical line helps keep track

GFCy and Capital Flows (2000Q1-2017Q4)

Box-Plots of Adjusted R2s



8 contemporary US vars, Adv + EM dynamic factors, intercept; small countries, 2000Q1-2017Q4

Should we thus forget about the GFCy? Not necessarily, given other transmission channels

Other financial variables (“FCIs”) can also be exposed to the GFCy

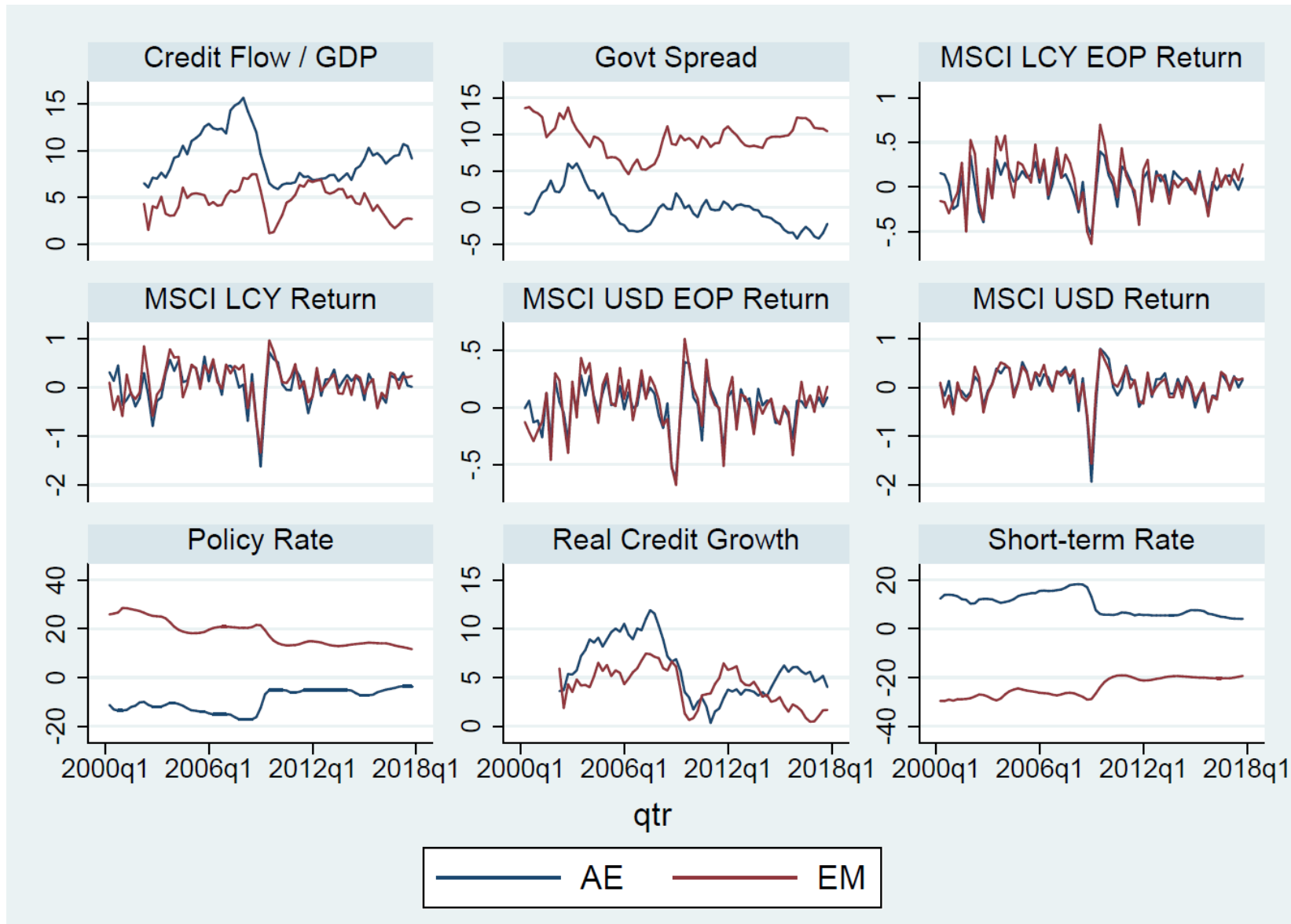
- Interest rates: policy rates and government bond spreads
- Asset prices: MSCI returns in USD or Local Currency (EOP or average)
- Domestic credit: flows and growth rates
- Domestic house prices

Use same methodology as for capital flows for both Q and P

$$X_{e,i,t} = \sum \beta_i^j \text{USFUND}_t^j + \sum \gamma^k \text{FAC}_t^k + \varphi_i + \varepsilon_{e,i,t} \quad \text{for each type } e, \text{ country } i, \text{ period } t$$

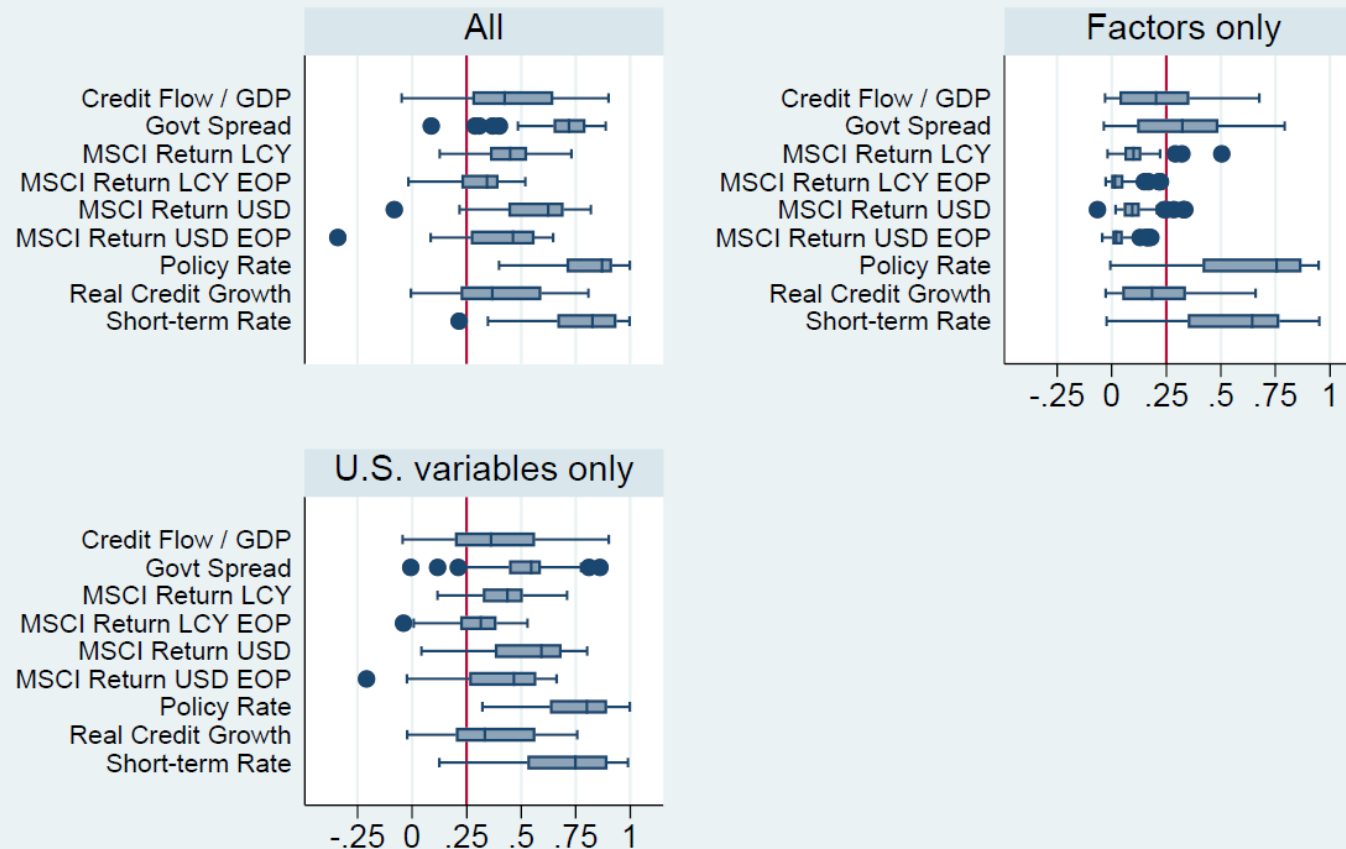
- Estimate again for 63 countries (EM & small AE)
- Due to data availability focus on the period 2000Q1–2017Q4 (as shown for capital flows)

Common factor in various credit, interest rates, and asset prices



GFCy and credit, interest rates, asset prices

Box-Plots of Adjusted R2s (Quarterly)



8 contemporary US vars, Adv + EM dynamic factors, intercept; small countries, 2000Q1-2017Q4

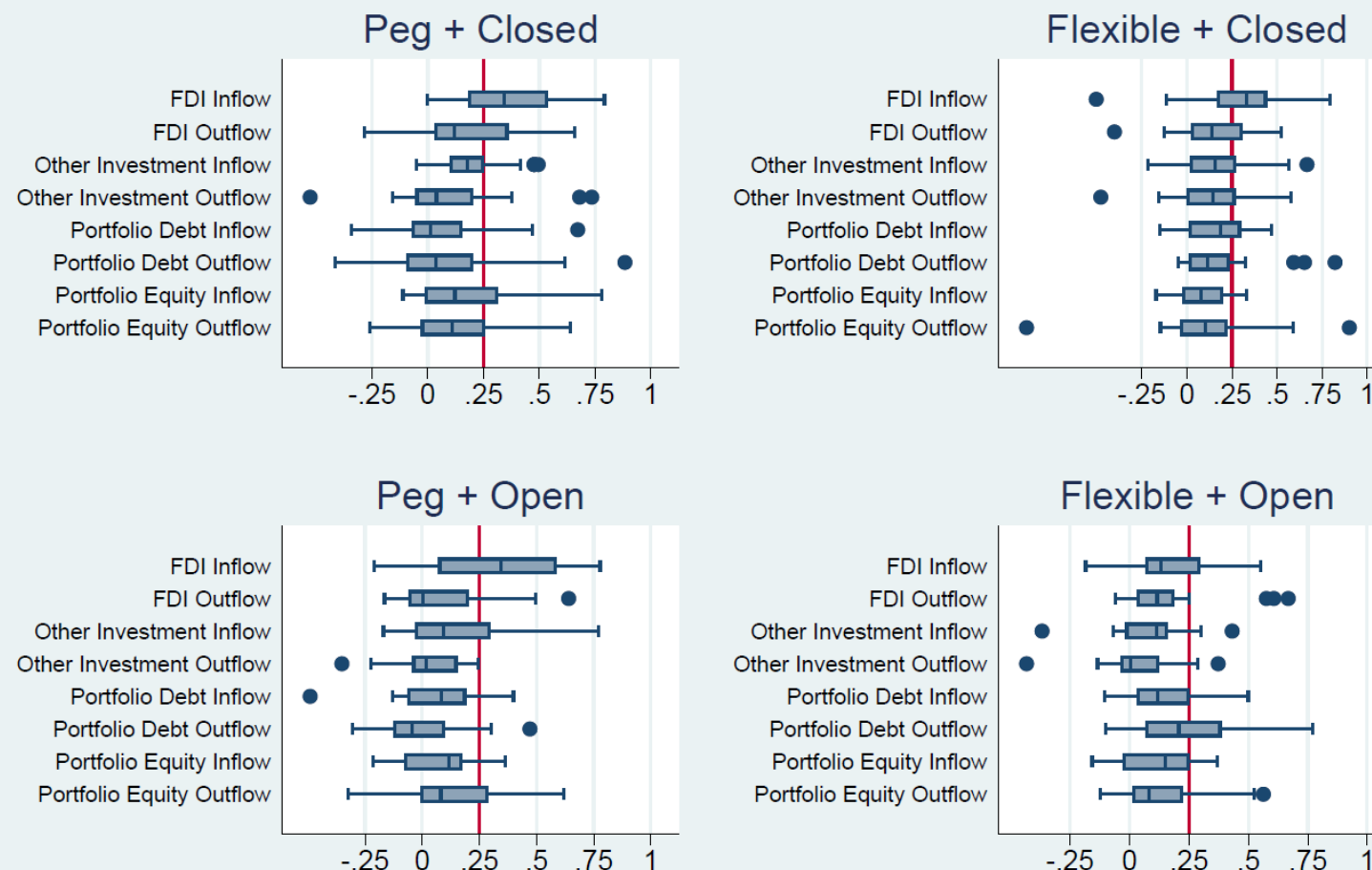
Summary

- Quantifying importance of GFCy = variation explained
 - Low importance for capital flows: *typically* < 25%
 - Larger for interest rates, asset prices, and credit: *between* 50% and 75%
- Need a better understanding of what drives the larger role
 - What are the factors and the transmission channels, eg, common real shocks, forward-looking asset prices, common balance sheets/exposures, risk-on/off, "contagion," role of capital flows, dollar, local exchange rate?
- To help with, beside importance, policy responses to the GFCy
 - Macroeconomic (monetary/fiscal policy), macroprudential, financial regulation and supervision, source country policies

Extra slides

Variation by ER regime and capital account Capital flows

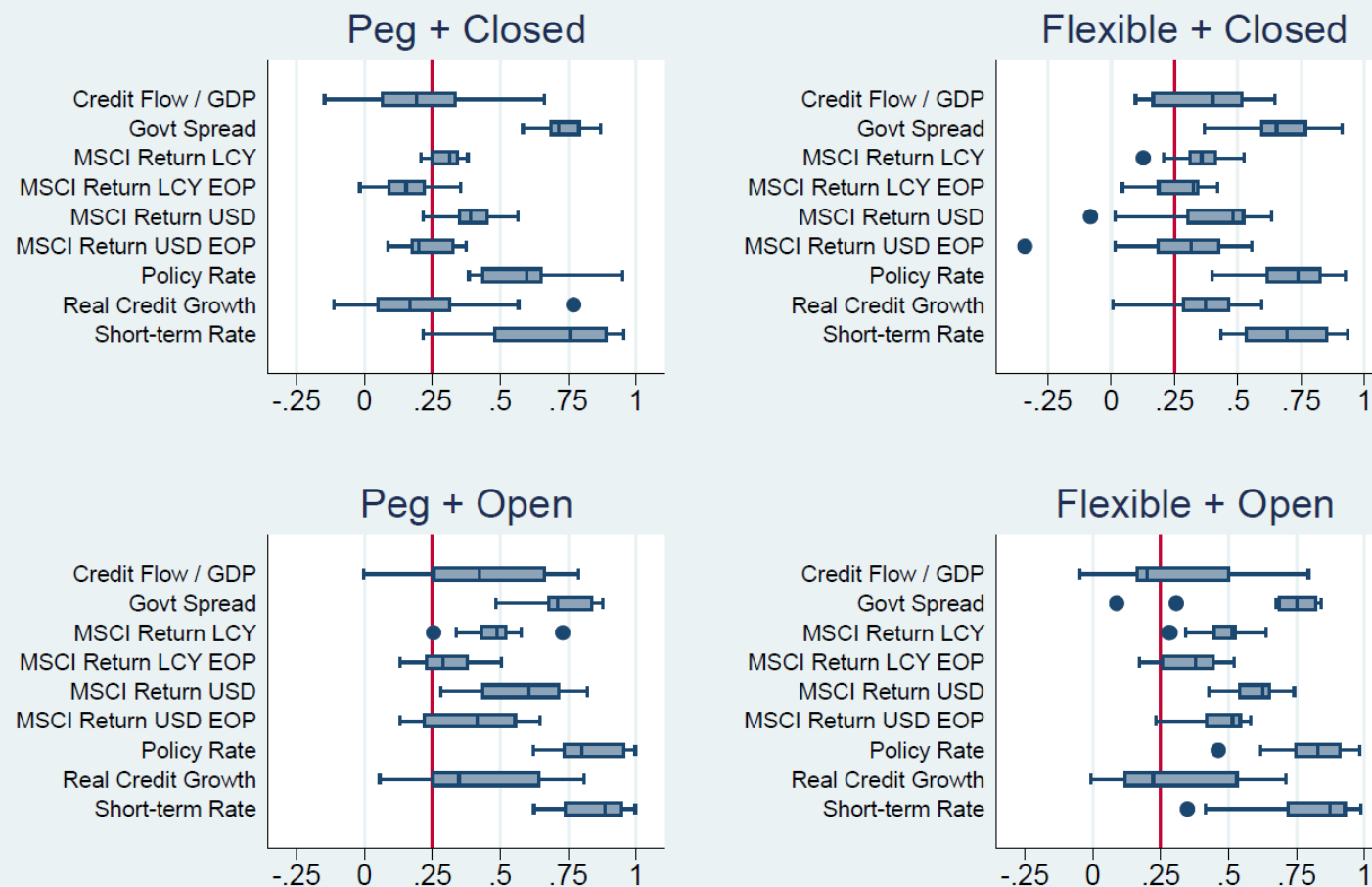
Box-Plots of Adjusted R2s: By FX Regime & Capital Account Openness



8 contemporary US vars, Adv + EM dynamic factors, intercept; small countries, 2000Q1-2017Q4

Variation by ER regime and capital account Credit, interest rate and asset prices

Box-Plots of Adjusted R2s: By FX Regime & Capital Account Openness



8 contemporary US vars, Adv + EM dynamic factors, intercept; small countries, 2000Q1-2017Q4