GLOBAL FINANCE AND GROWTH
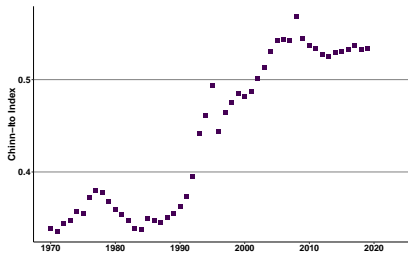
Abhijit Banerjee (MIT) and Atif Mian (Princeton)
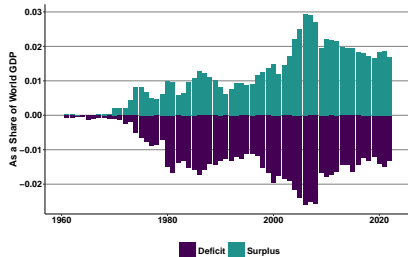
INTRODUCTION

- Since 1980, two broad concurrent global phenomena
    1. The rise of global finance
    2. Productivity convergence due to faster growth in poorer and less capital-intensive countries

- Is there a link between the two?

THE RISE OF GLOBAL FINANCE
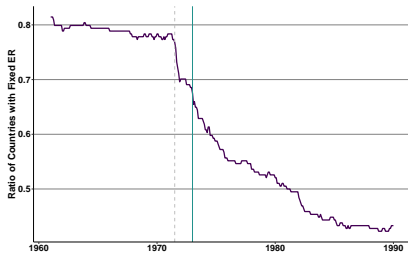

(a) Capital Account Liberalization

(b) Cross-Border Flows

THE RISE OF GLOBAL FINANCE

(a) Share of Countries with Peg
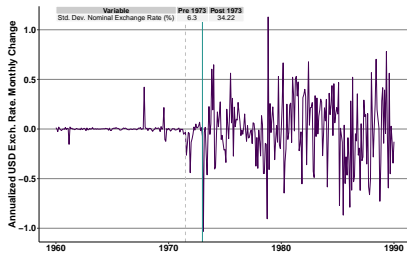
(b) Exchange Rate Volatility

THE RISE OF GLOBAL FINANCE
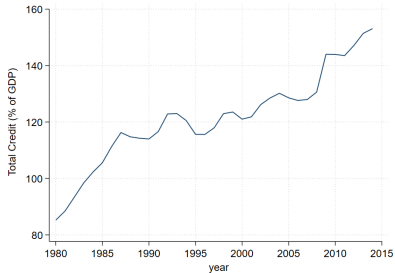
(a) Total Credit to GDP

(b) GFC Factor

RISE IN GLOBAL GROWTH
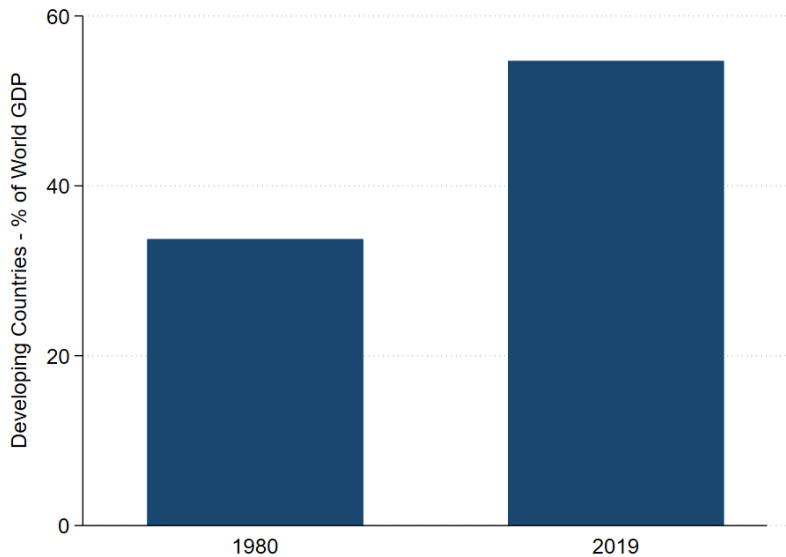
A LINK BETWEEN GLOBAL FINANCE AND GROWTH?

- Traditional models suggest - yes
    - Better access to international capital boosts growth

- Today
    - Hard to find evidence in support of this view

    - In fact, unbridled access to global finance seems to pose dangers for growth in developing countries

    - Why? - Finance is a two-edged sword

    - What are the lessons for policy?

SIMPLE CROSS-COUNTRY DIAGNOSTICS

- Focus on less-developed countries that were sufficiently far from frontier productivity in 1980

- Which of these were successful in "catching up", and what role did global finance play?

- Weigh countries by winsorized population in 2000, but winsorize at 5%

- Building on and pulling together a number of earlier papers

RELATED LITERATURE

- **Lucas Puzzle:** Gourinchas and Jeanne (REStud 2013), Alfaro, Kalemli-Ozcan and Volosovych (JEEA 2014)

- **Theory and Evidence on Macro-Pru / Capital Controls:** Erten, Korinek, Ocampo (JEL 2021), Das, Gopinath and Kalemi-Ozcan (2022), Klein (2012) and Magud et al (2011)

- **Global Financial Cycle:** Rey (JH 2015), Miranda-Agrippino and Rey (REStud 2021), Aizeman, Chinn, and Ito (working paper)

- **Dual role of finance** Rodrik and Subramanian (2009), Mian, Sufi and Verner (QJE 2017 and JF 2020), Verner and Mueller (REStud forthcoming)

VOLATILITY AND GROWTH IN LDCS

WHAT TYPE OF VOLATILITY IS MOST DANGEROUS?

	$\overline{\Delta y}^{1980-2019}$					
	(1)	(2)	(3)	(4)	(5)	(6)
Var$(\Delta y)^{1980-2019}$	-0.0407***					
	(0.0109)					
Log Real GDP per capita, 1980						
Variance Share GFC						
Var$(\widehat{\Delta y^{GFC}})$						
Var$(\hat{\epsilon}^{GFC})$						
Sample	Less Developed					
Sectoral Shares						
R^2	0.173					
N	94					

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

WHAT TYPE OF VOLATILITY IS MOST DANGEROUS?

	(1)	(2)	(3)	(4)	(5)	(6)
			$\overline{\Delta y}^{1980-2019}$			
$\mathrm{Var}(\Delta y)^{1980-2019}$	-0.0407***					
	(0.0109)					
Log Real GDP per capita, 1980		-1.063***				
		(0.200)				
Variance Share GFC						
$\mathrm{Var}(\widehat{\Delta y^{GFC}})$						
$\mathrm{Var}(\widehat{\epsilon^{GFC}})$						
Sample	Less Developed	Less Developed				
Sectoral Shares						
R^2	0.173	0.390				
N	94	94				

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

WHAT TYPE OF VOLATILITY IS MOST DANGEROUS?

	$\overline{\Delta y}^{1980-2019}$					
	(1)	(2)	(3)	(4)	(5)	(6)
Var$(\Delta y)^{1980-2019}$	-0.0407***		-0.0424**			
	(0.0109)		(0.0139)			
Log Real GDP per capita, 1980		-1.063***	-1.084***			
		(0.200)	(0.157)			
Variance Share GFC						
Var$(\widehat{\Delta y^{GFC}})$						
Var$(\hat{\varepsilon}^{GFC})$						
Sample	Less Developed	Less Developed	Less Developed			
Sectoral Shares						
R^2	0.173	0.390	0.579			
N	94	94	94			

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

WHAT TYPE OF VOLATILITY IS MOST DANGEROUS?

	$\overline{\Delta y}^{1980-2019}$					
	(1)	(2)	(3)	(4)	(5)	(6)
Var$(\Delta y)^{1980-2019}$	-0.0407***		-0.0424**	-0.0421**		
	(0.0109)		(0.0139)	(0.0134)		
Log Real GDP per capita, 1980		-1.063***	-1.084***	-1.129***		
		(0.200)	(0.157)	(0.154)		
Variance Share GFC				-0.0364**		
				(0.0124)		
Var$(\widehat{\Delta y^{GFC}})$						
Var$(\hat{\epsilon}^{GFC})$						
Sample	Less Developed	Less Developed	Less Developed	Less Developed		
Sectoral Shares						
R^2	0.173	0.390	0.579	0.619		
N	94	94	94	94		

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

WHAT TYPE OF VOLATILITY IS MOST DANGEROUS?

	$\overline{\Delta y}^{1980-2019}$					
	(1)	(2)	(3)	(4)	(5)	(6)
$\text{Var}(\Delta y)^{1980-2019}$	-0.0407***		-0.0424**	-0.0421**		
	(0.0109)		(0.0139)	(0.0134)		
Log Real GDP per capita, 1980		-1.063***	-1.084***	-1.129***	-1.136***	
		(0.200)	(0.157)	(0.154)	(0.155)	
Variance Share GFC				-0.0364**		
				(0.0124)		
$\text{Var}(\widehat{\Delta y^{GFC}})$					-0.183*	
					(0.0769)	
$\text{Var}(\widehat{\varepsilon}^{GFC})$					-0.0258**	
					(0.00820)	
Sample	Less Developed	Less Developed	Less Developed	Less Developed	Less Developed	
Sectoral Shares						
R^2	0.173	0.390	0.579	0.619	0.607	
N	94	94	94	94	94	

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

WHAT TYPE OF VOLATILITY IS MOST DANGEROUS?

	$\overline{\Delta y}^{1980–2019}$					
	(1)	(2)	(3)	(4)	(5)	(6)
$\text{Var}(\Delta y)^{1980–2019}$	-0.0407***		-0.0424**	-0.0421**		
	(0.0109)		(0.0139)	(0.0134)		
Log Real GDP per capita, 1980		-1.063***	-1.084***	-1.129***	-1.136***	-0.782**
		(0.200)	(0.157)	(0.154)	(0.155)	(0.285)
Variance Share GFC				-0.0364**		
				(0.0124)		
$\text{Var}(\widehat{\Delta y^{GFC}})$					-0.183*	-0.140
					(0.0769)	(0.0725)
$\text{Var}(\hat{\varepsilon}^{GFC})$					-0.0258**	-0.0355*
					(0.00820)	(0.0148)
Sample	Less Developed	Less Developed	Less Developed	Less Developed	Less Developed	Less Developed
Sectoral Shares						✓
R^2	0.173	0.390	0.579	0.619	0.607	0.701
N	94	94	94	94	94	90

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

GROWTH AND EXPOSURE TO GFC
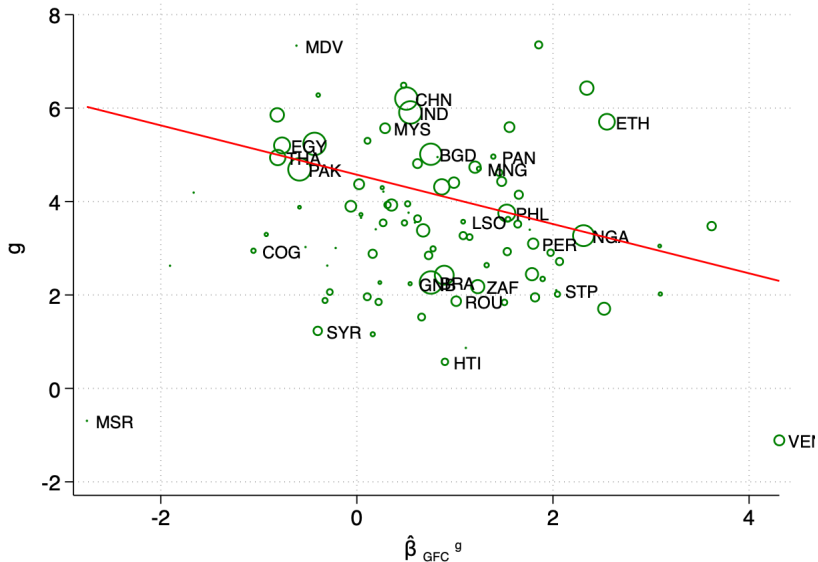
ROBUSTNESS CHECKS

	$\overline{\Delta y}^{1980-2019}$			$\Delta(\overline{\Delta y})$
	(1)	(2)	(3)	(4)
$\widehat{\beta_{GFC}^{g}}$	-0.53*			
	(0.21)			
$\Delta\widehat{\beta_{GFC}^{g}}$				
$\overline{I/GDP}^{1980-2019}$				
Log Real GDP per capita, 1980				
Sample	Less Developed			
R^2	0.13			
N	94			

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

ROBUSTNESS CHECKS

	$\overline{\Delta y}^{1980–2019}$			$\Delta(\overline{\Delta y})$
	(1)	(2)	(3)	(4)
$\widehat{\beta^g_{GFC}}$	-0.53*	-0.57**		
	(0.21)	(0.20)		
$\Delta\widehat{\beta^g_{GFC}}$				
$\overline{I/GDP}^{1980–2019}$				
Log Real GDP per capita, 1980		-1.10***		
		(0.17)		
Sample	Less Developed	Less Developed		
R^2	0.13	0.54		
N	94	94		

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

ROBUSTNESS CHECKS

	$\overline{\Delta y}^{1980-2019}$			$\Delta(\overline{\Delta y})$
	(1)	(2)	(3)	(4)
$\widehat{\beta^g_{GFC}}$	-0.53*	-0.57**	-0.56**	
	(0.21)	(0.20)	(0.20)	
$\widehat{\Delta\beta^g_{GFC}}$				
$\overline{I/GDP}^{1980-2019}$			0.058**	
			(0.018)	
Log Real GDP per capita, 1980		-1.10***	-1.03***	
		(0.17)	(0.17)	
Sample	Less Developed	Less Developed	Less Developed	
R^2	0.13	0.54	0.60	
N	94	94	94	

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

ROBUSTNESS CHECKS

	$\overline{\Delta y}^{1980-2019}$			$\Delta(\overline{\Delta y})$
	(1)	(2)	(3)	(4)
$\widehat{\beta^g_{GFC}}$	-0.53*	-0.57**	-0.56**	
	(0.21)	(0.20)	(0.20)	
$\Delta\widehat{\beta^g_{GFC}}$				-0.51***
				(0.12)
$\overline{I/GDP}^{1980-2019}$			0.058**	
			(0.018)	
Log Real GDP per capita, 1980		-1.10***	-1.03***	
		(0.17)	(0.17)	
Sample	Less Developed	Less Developed	Less Developed	Less Developed
R^2	0.13	0.54	0.60	0.21
N	94	94	94	94

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

GROWTH AND EXPOSURE TO GFC: WITHIN COUNTRY
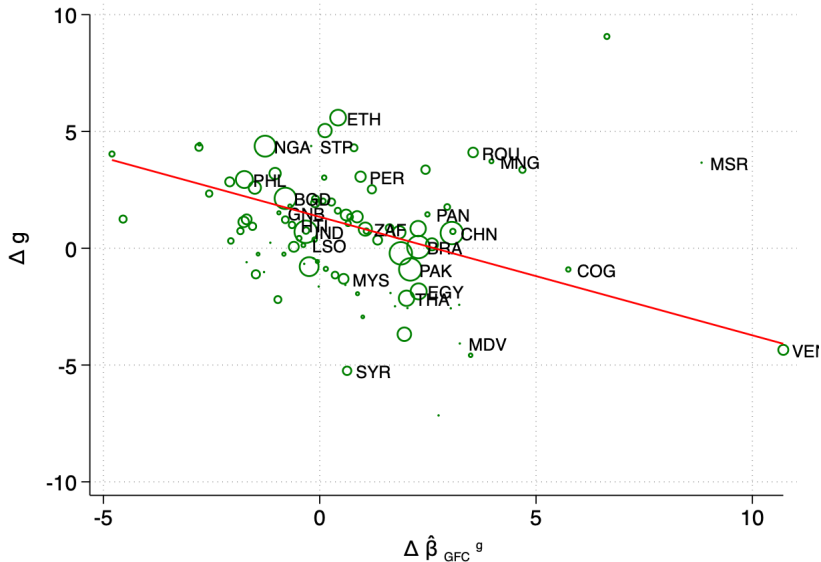
THE GLOBAL FINANCE PUZZLE

$$I \equiv S + CAD$$

- Under Feldstein-Horiaka hypothesis (or Fisher Separathan theorm), S should be orthogonal to I, which then implies regressing I on CAD should give a coefficient of +1

- Alternatively, if capital markets are perfect in the traditional sense of the word, then regardless of domestic S, required investment rate will be determined by marginal borrowing and lending internationally, again giving us a coefficient of +1 on CAD

- But the coefficient is actually -1.25!

THE GLOBAL FINANCE PUZZLE

	$\overline{I/GDP}^{19-2019}$						$\overline{\Delta y}^{1980-2019}$			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
$\overline{CA/GDP}^{1980-2019}$	-1.366***									
	(0.389)									
$\overline{PubFlow/GDP}^{1980-2019}$										
$\overline{PrivFlow/GDP}^{1980-2019}$										
Log Real GDP per capita, 1980										
Sample	Less Developed									
R^2	0.359									
N	94									

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

THE GLOBAL FINANCE PUZZLE

	$\overline{I/GDP}^{19-2019}$						$\overline{\Delta y}^{1980-2019}$			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
$\overline{CA/GDP}^{1980-2019}$	-1.366***									
	(0.389)									
$\overline{PubFlow/GDP}^{1980-2019}$		-0.620*								
		(0.264)								
$\overline{PrivFlow/GDP}^{1980-2019}$			-0.0243							
			(0.388)							
Log Real GDP per capita, 1980										
Sample	Less Developed	Less Developed	Less Developed							
R^2	0.359	0.145	0.0000963							
N	94	90	90							

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

THE GLOBAL FINANCE PUZZLE

	$\overline{I/GDP}^{19-2019}$						$\overline{\Delta y}^{1980-2019}$			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
$\overline{CA/GDP}^{1980-2019}$	-1.366***			-1.429***						
	(0.389)			(0.384)						
$\overline{PubFlow/GDP}^{1980-2019}$		-0.620*			-0.875**					
		(0.264)			(0.297)					
$\overline{PrivFlow/GDP}^{1980-2019}$			-0.0243			0.285				
			(0.388)			(0.692)				
Log Real GDP per capita, 1980				-1.635	-2.718*	-1.566				
				(0.909)	(1.337)	(1.911)				
Sample	Less Developed	Less Developed	Less Developed	Less Developed	Less Developed	Less Developed				
R^2	0.359	0.145	0.0000963	0.409	0.261	0.0311				
N	94	90	90	94	90	90				

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

THE GLOBAL FINANCE PUZZLE

	$\overline{I/GDP}^{19-2019}$						$\overline{\Delta y}^{1980-2019}$			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
$\overline{CA/GDP}^{1980-2019}$	-1.366***			-1.429***			-0.0339	-0.0757		
	(0.389)			(0.384)			(0.0920)	(0.0867)		
$\overline{PubFlow/GDP}^{1980-2019}$		-0.620*			-0.875**					
		(0.264)			(0.297)					
$\overline{PrivFlow/GDP}^{1980-2019}$			-0.0243			0.285				
			(0.388)			(0.692)				
Log Real GDP per capita, 1980				-1.635	-2.718*	-1.566		-1.092***		
				(0.909)	(1.337)	(1.911)		(0.227)		
Sample	Less Developed	Less Developed	Less Developed	Less Developed	Less Developed	Less Developed	Less Developed	Less Developed		
R^2	0.359	0.145	0.0000963	0.409	0.261	0.0311	0.00401	0.410		
N	94	90	90	94	90	90	94	94		

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

THE GLOBAL FINANCE PUZZLE

	$\overline{I/GDP}^{19-2019}$						$\overline{\Delta y}^{1980-2019}$			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
$\overline{CA/GDP}^{1980-2019}$	-1.366***			-1.429***			-0.0339	-0.0757		
	(0.389)			(0.384)			(0.0920)	(0.0867)		
$\overline{PubFlow/GDP}^{1980-2019}$		-0.620*			-0.875**				-0.129**	
		(0.264)			(0.297)				(0.0398)	
$\overline{PrivFlow/GDP}^{1980-2019}$			-0.0243			0.285				0.202***
			(0.388)			(0.692)				(0.0543)
Log Real GDP per capita, 1980				-1.635	-2.718*	-1.566		-1.092***	-1.305***	-1.406***
				(0.909)	(1.337)	(1.911)		(0.227)	(0.248)	(0.173)
Sample	Less Developed	Less Developed	Less Developed	Less Developed	Less Developed	Less Developed	Less Developed	Less Developed	Less Developed	Less Developed
R^2	0.359	0.145	0.0000963	0.409	0.261	0.0311	0.00401	0.410	0.485	0.471
N	94	90	90	94	90	90	94	94	90	90

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

THE GOVERNMENT MORAL HAZARD?

Scatter plot with x-axis "Net Public Flows (1980-2019)" ranging from -5 to 20+ and y-axis "Net Private Flows (1980-2019)" ranging from -15 to 15. Labeled points include STP, MNG, MDV, COG, ROU, PER, CHN, MYS, PHL, PAK, EGY, BGD, NGA, VEN, SYR, HTI, ETH, LSO. A red downward-sloping trend line is drawn through the data.
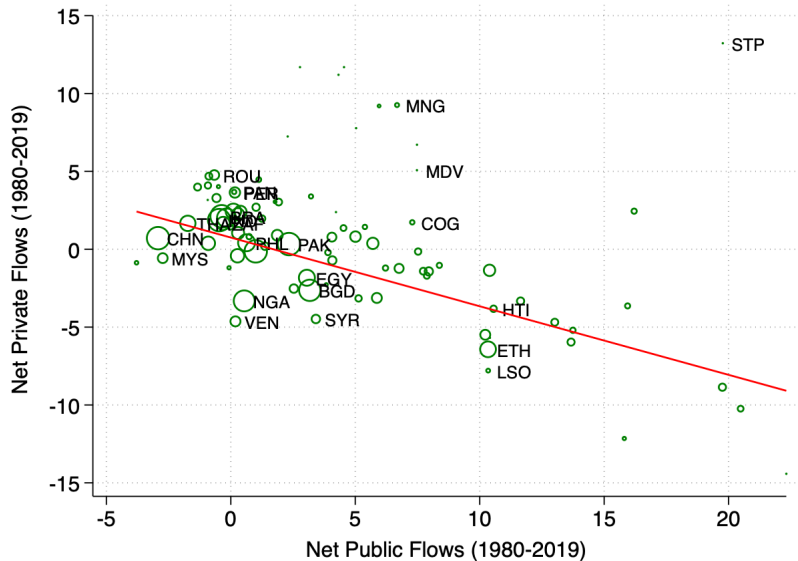
CONCLUDING DISCUSSION

- The developed / less-developed asymmetry

- Volatility is bad for LDCs, but volatility due to GFC ten times worse

- Exposure to global finance has negative growth correlation, LDCs that take advantage of GFC do worse, contrary to the standard growth model

- Finance as a two-edged sword - theory and more evidence

- Policy Lessons