Macroprudential Policy during COVID-19: The Role of Policy Space

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Macropru, COVID-19 and "Space"

- Macroprudential policy (MP) more widely used since 2008
- COVID—a chance to evaluate during a major "risk-off" shock
  - Are the tools being used as intended?
  - Is their use coordinated with other tools?
- Insights:
  - MP tools used countercyclically and more than in past
  - Role of building policy space *ex ante*
  - Not yet incorporating interactions and spillovers with other tools

4 Sections

I. Measuring the MP stance

II. MP policy and stress

III. Policy space and MP policy

IV. Conclusions

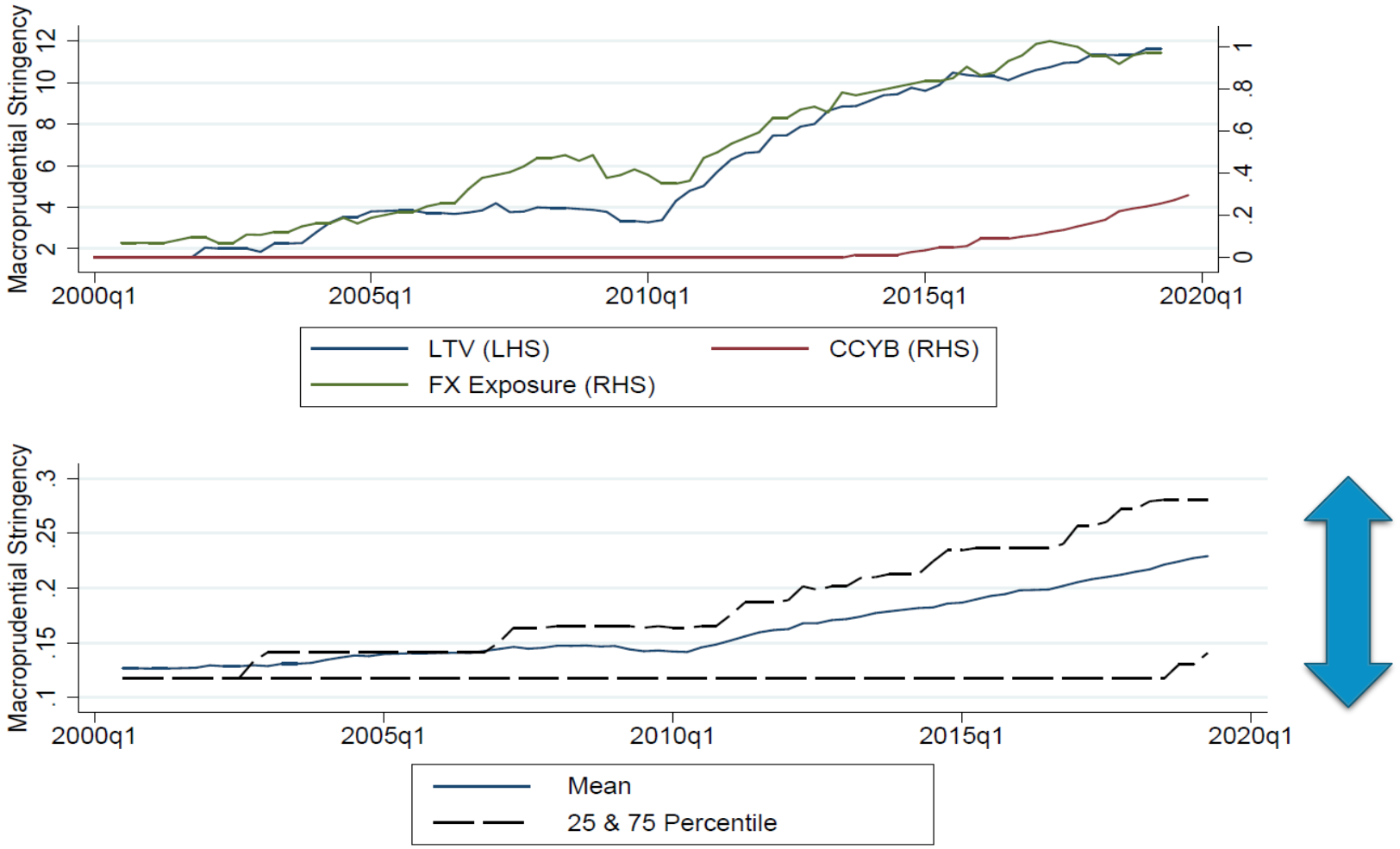
Measuring the MP Stance

- **Extensive work since 2008**
  - Cerutti et al (2017), Shim et al (2013), Kuttner and Shim (2016), Edge and Liang (2017), Ahnert et al (2021)
  - **Alam et al. (2019)—changes pre-COVID**
  - **IMF Policy Tracker (2020)—changes during COVID**

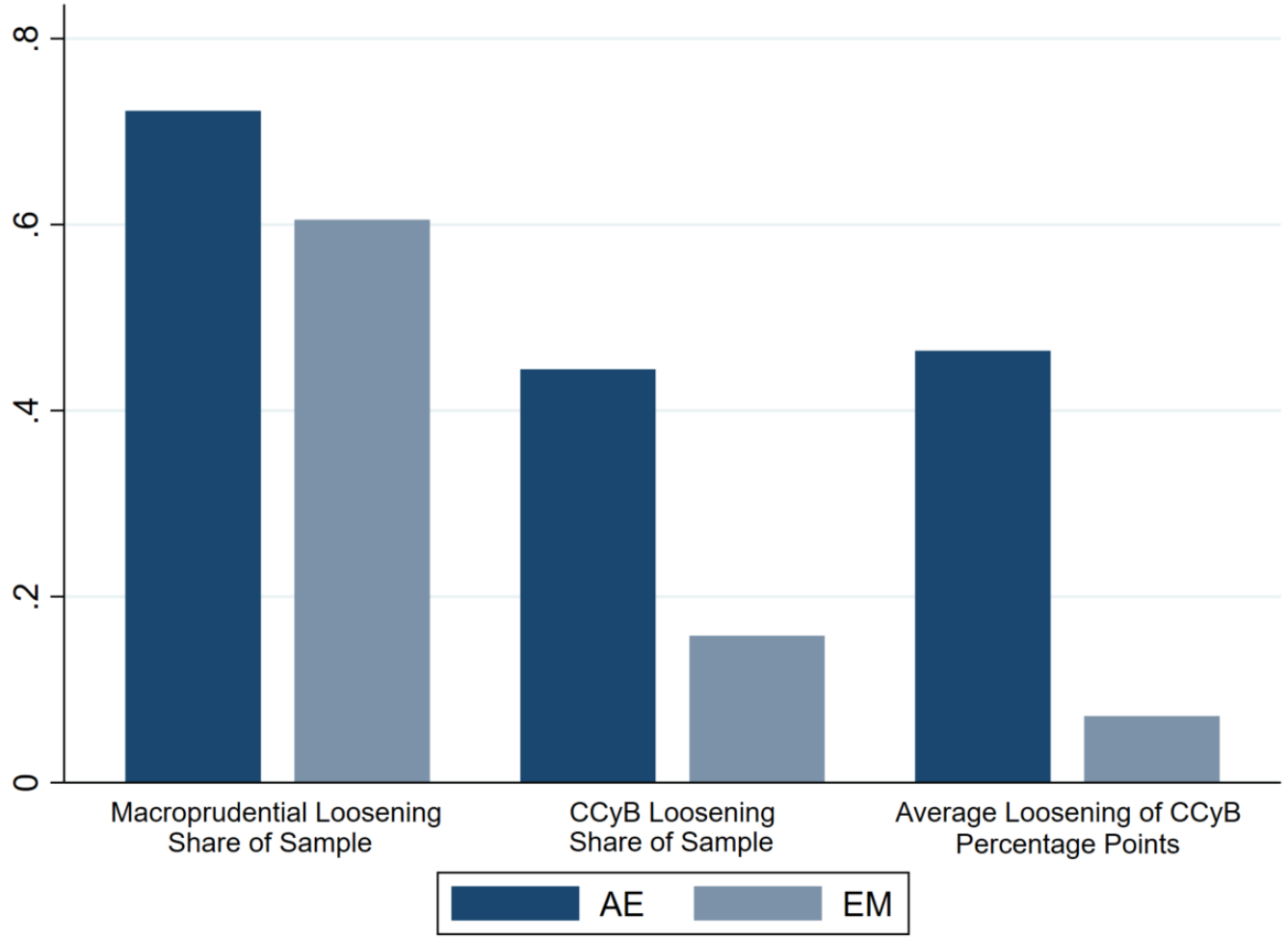
- **BUT challenges remain….**
  - Intensity, not recent changes
  - Comparability across countries

- **Our approach: intensity of MP stance**
  - 3 measures of intensity
    - Level of CCyB: ESRB and BIS data
    - Level of LTV ratio: Alam et al. (2019)
    - Index of FX stance: our calculation using Alam et al. (2019)
  - Each measure scaled and equally weighted
  - See Bergant and Forbes (2021), Chari et al. (2021)

MP Stance (pre-COVID): New Measure

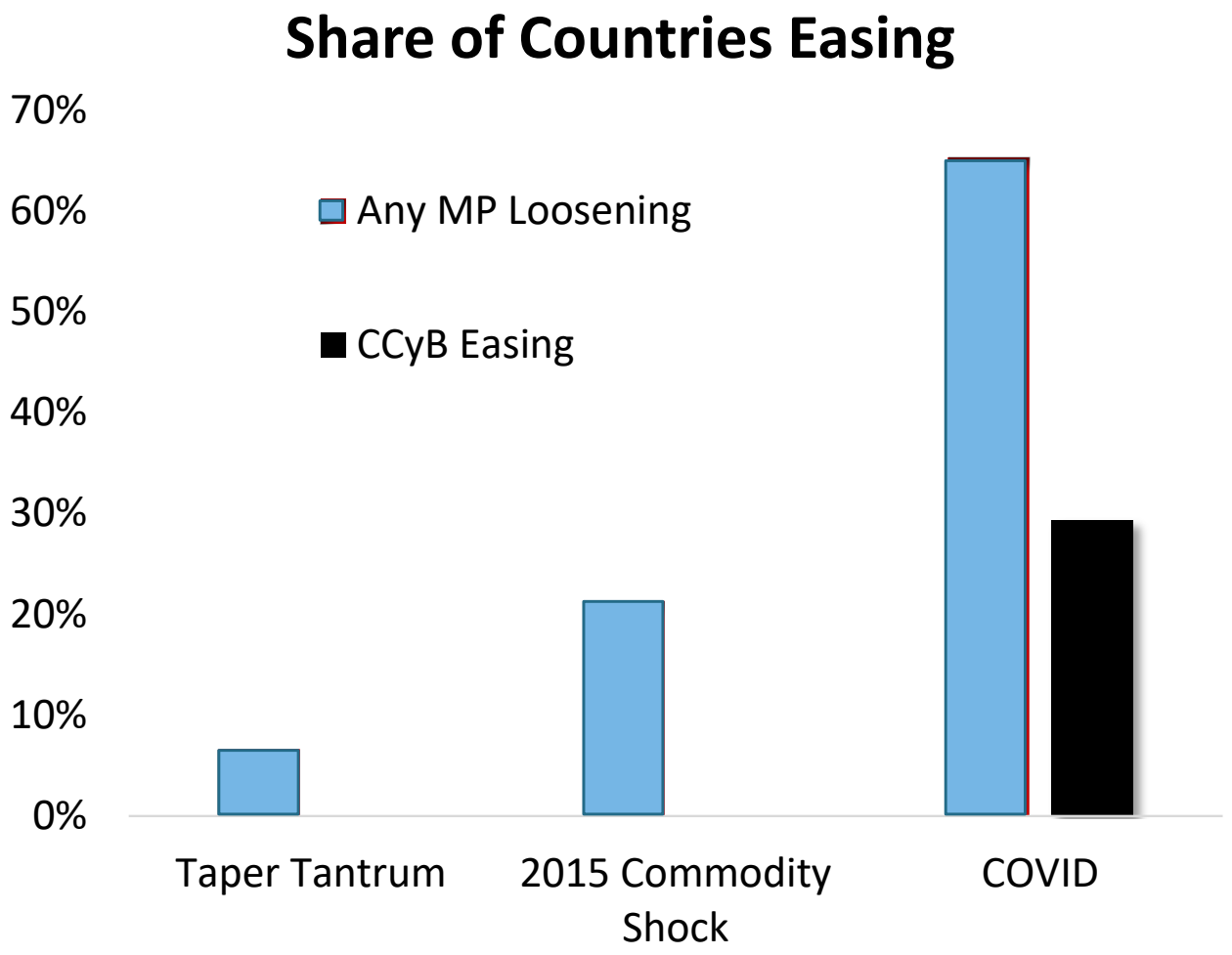


MP: Adjustments during COVID



Source: IMF Policy Tracker, BIS and ESRB

More Widely Used



Source: Alam et al. (2019), BIS and ESRB

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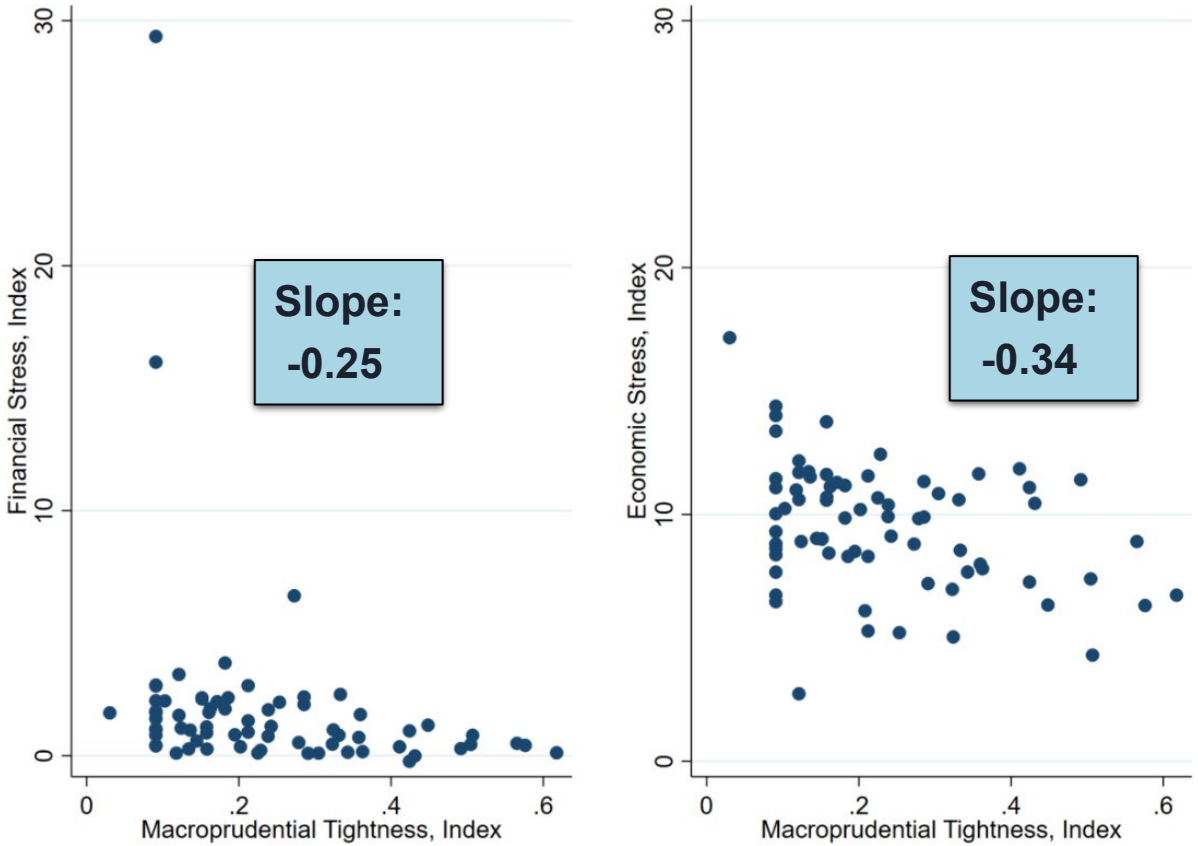
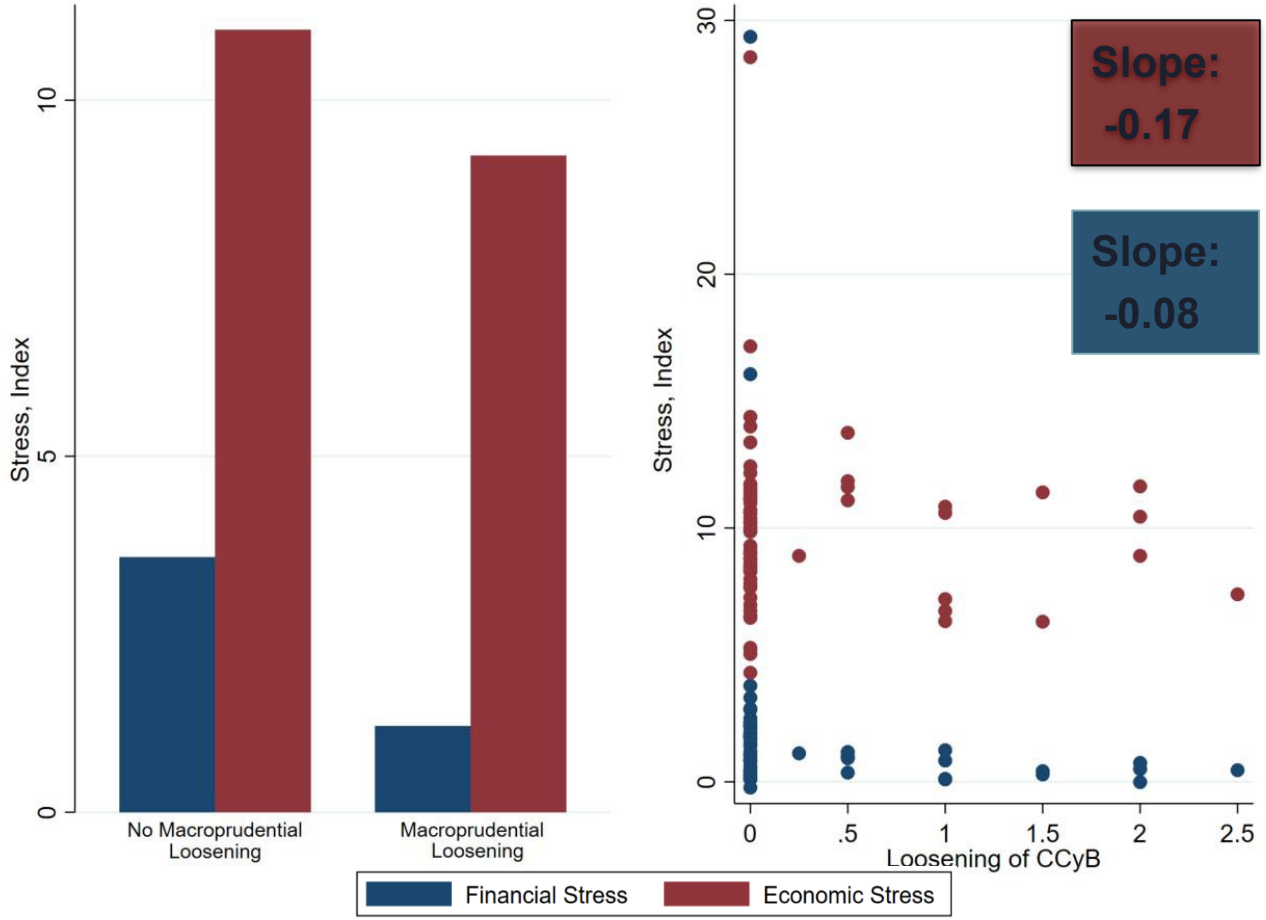
Pre-COVID MP Stance & Stress



Notes: The *Financial Stress* index is an equally weighted combination of changes and percent changes from end-2019 to the "peak stress" in the first half of 2020 for sovereign CDS spreads (5-year, US$) from Bloomberg, and if this is not available, from the EMBI+ bond index. The *Economic Stress* index is the change in each country's forecast 2020 real GDP growth between January and June, according to the IMF's World Economic Outlook updates.

ΔMP & Stress during COVID



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Does Policy Space Matter?

$$\Delta \boldsymbol{MP_{i,t}} = \beta \cdot PS_{i,t-1} + \gamma \cdot ST_{i,t} + \delta \cdot CC_{i,t-1} + \varepsilon_{i,t}$$

- Each country *i (75 countries, 37 AE)*
- Over pandemic window *t* (2020 Q1-Q2)
- $PS_{i,t-1}$: policy space at end-2019
- $ST_{i,t}$: financial, economic & health stress
- $CC_{i,t-1}$: other controls

- $\Delta \boldsymbol{MP_{i,t}}$:
  - **any change in any MP (probit)**
  - **any change in CCyB (probit)**
  - **magnitude of change in CCyB (OLS)**

Yes: MP Space Matters

	Loosen MP (dummy)		Loosen CCyB (dummy)		Loosen CCyB (pp change)	
MP Index or CCyB Level	5.677***	5.810***	3.728**	4.562***	0.674***	0.685***
	(1.921)	(1.960)	(1.568)	(1.585)	(0.0939)	(0.0854)
Stress Variables						
Financial	-0.0953	-0.160	-0.340*	-0.148	-0.00213	-0.00107
	(0.0605)	(0.115)	(0.201)	(0.297)	(0.00170)	(0.00367)
Economic	-0.0184	-0.0198	0.0426	0.0226	-0.00327	-0.0194
	(0.0676)	(0.0705)	(0.0922)	(0.0935)	(0.0136)	(0.0154)
Health	-0.0292	-0.0250	0.0241	0.0127	0.0262*	0.0225*
	(0.0615)	(0.0596)	(0.0586)	(0.0644)	(0.0156)	(0.0120)
Other Country Characteristics						
Fixed ER		0.232		0.791*		0.112
dummy		(0.441)		(0.449)		(0.0724)
Institutional		-0.0491		-0.0638		0.00461
quality		(0.0636)		(0.0671)		(0.00917)
Trade		0.0128		-0.247		-0.111*
openness		(0.399)		(0.341)		(0.0617)
Commodity		-0.0768		-0.00391		-0.0532**
dependence		(0.135)		(0.134)		(0.0239)
Credit		-0.00765		0.0731		-0.0190
rating		(0.0848)		(0.0942)		(0.0136)
Income per		0.218		0.386		0.135*
capita (log)		(0.402)		(0.368)		(0.0774)
Observations	***69***	***67***	***69***	***67***	***65***	***63***
Adj. R-squared	***0.230***	***0.258***	***0.212***	***0.253***	***0.804***	***0.832***

Does OTHER Policy Space Matter?

$$\Delta MP_{i,t} = \beta \cdot PS_{i,t-1} + \alpha \cdot OPS_{i,t-1} + \gamma \cdot ST_{i,t} + \delta \cdot CC_{i,t-1} + \varepsilon_{i,t}$$

Addition:

- **Fiscal:** general government gross debt (as % of GDP)
- **Monetary:** central bank policy rate
- **FX intervention:** ratio of FX (as % of GDP)
- **Capital Controls:** index of controls on capital inflows or outflows

No: Other Policy Space Does NOT Matter

	Loosen Macroprudential Policy (dummy)	Loosen CCyB (dummy)	Loosen CCyB (pp change)
Policy Space			
MP Index or	4.950**	4.084**	0.714***
CCyB Level	(2.410)	(1.744)	(0.0984)
Fiscal	0.00198	0.00456	0.00114
Space	(0.00533)	(0.00655)	(0.00121)
Monetary	0.112*	-0.0134	0.000131
Space	(0.0646)	(0.108)	(0.00267)
FX Reserves	0.00978	0.00973	-0.00256*
Space	(0.00897)	(0.0102)	(0.00132)
CFM	1.656*	-1.082	0.202*
Space	(1.003)	(0.765)	(0.105)
Stress Variables *(included, coefficients in paper)*			
Other Country Characteristics *(included, coefficients in paper)*			
Observations	***58***	***58***	***54***
Adj. R-squared	***0.325***	***0.269***	***0.870***

Does MP Space Matter for OTHER POLICIES?

$$\Delta OP_{i,t} = \beta \cdot PS_{i,t-1} + \alpha \cdot OPS_{i,t-1} + \gamma \cdot ST_{i,t} + \delta \cdot CC_{i,t-1} + \varepsilon_{i,t}$$

- Addition: $\Delta OP_{i,t}$: Change in other policies

- **Fiscal:** Δ 2020 fiscal balance in response to COVID (as % of GDP)
- **Monetary**
  - Δ central bank policy rate
  - asset purchases (as % of GDP)
  - Swap line activated (dummy)
- **FX intervention:** reserve use (IMF policy tracker)
- **Capital controls:** not enough used!

No: MP Space Does NOT Matter

		Monetary Stimulus			FX
	Fiscal Stimulus	Policy Rate	QE	Swaps	Intervention (dummy)
	(1)	(2)	(3)	(4)	(5)
Policy Space					
MP Index	-0.463	-1.311	3.279	-0.485	2.600
	(10.66)	(0.999)	(5.290)	(0.459)	(2.450)
Other Policy Space	-0.0789	0.387***	-0.288	0.0360	0.0544***
	(0.0500)	(0.0983)	(0.218)	(0.0311)	(0.0134)
Stress Variables *(included, coefficients in paper)*					
Other Country Characteristics *(included, coefficients in paper)*					
Observations	***37***	***47***	***47***	***44***	***50***
Adj. R-squared	***0.214***	***0.556***	***0.121***	***0.140***	***0.417***

Conclusions

- MP policy being used more often & countercyclically as intended
  - Tighter *ex ante* MP stance ⇔ less "stress"
  - Reductions in MP during COVID ⇔ less "stress"

- Creating space *ex ante* is critical to use MP policy during risk-off shock

- Little coordination between MP tools/space and other policies/space
  - Room for improvement

Ongoing Extensions

- Other policies during COVID-19 and space
- The role of space over time

Fiscal Policy during Covid-19 and Fiscal Space

	EM Interactions				
	AE	EM	Whole Sample	Exclude Japan	Exclude Debt/GDP >100%
	(1)	(2)	(6)	(4)	(5)
Policy Space Variables					
Policy Space	-0.101	0.0682	-0.104***	-0.0963	-0.00427
	(0.0735)	(0.0974)	(0.0228)	(0.0800)	(0.0772)
Policy Space * EM dummy			0.122**	0.111	0.0299
			(0.0534)	(0.0959)	(0.0855)
Stress Variables					
Financial	2.995	-3.053	0.409	0.121	0.0702
	(10.26)	(10.27)	(3.191)	(0.333)	(0.305)
Economic	0.968	-0.645	0.705	0.718*	0.755*
	(1.252)	(1.389)	(0.438)	(0.414)	(0.415)
Health	-0.925*	1.486**	-0.117	-0.0754	0.0358
	(0.506)	(0.673)	(0.399)	(0.371)	(0.316)
Other Country Characteristics					
Fixed ER dummy	0.995	-1.216	-0.898	-0.889	-1.682
	(7.182)	(7.823)	(2.973)	(2.970)	(2.727)
Insitutional quality	0.513	-0.437	0.388	0.357	0.263
	(0.871)	(0.974)	(0.339)	(0.412)	(0.369)
Trade openness	0.315	3.811	-1.702	-1.119	-1.898
	(4.669)	(7.015)	(1.652)	(2.239)	(2.967)
EM dummy			1.052	0.273	-5.335
			(3.970)	(7.036)	(6.518)
Observations	***39***		***39***	***38***	***35***
Adj. R-squared	***0.326***		***0.408***	***0.289***	***0.192***