“The Great Lockdown: pandemic response policies and bank lending conditions”

By C Altavilla, F Barbiero, M Boucinha and L Burlon (ECB)

Discussed by Catherine Casanova (SNB)
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Outline

Did policy measures in the euro area (EA) affect bank capacity to lend after the Covid shock?

Did the joint implementation of measures amplify their impact?

Focus

ECB's **liquidity-providing** operations (TLTROs)

Capital relief (macro- and micro-prudential buffers)

Find

- **Policies** had a significant **standalone** impact on bank capacity.
- **Complementarities** between funding and preservation of bank capital for loan origination.
- **Real** effects: TLROs + capital relief increased firm employment.

Claimed Contribution

For EA, first to analyse **monetary policy** measures taken after Covid shock.

Overall impression

- Very topical and relevant paper
- Fantastic data: granular and cross country.

Comments

- Conceptually
  - Different phases
  - Capacity + *Willingness*
- Technical: general + specific

Conceptual Comment I: Phases of lending in EA

(Falargiarda and Köhler-Ulbrich, 2021)

Phase 1 (March-June 2020)

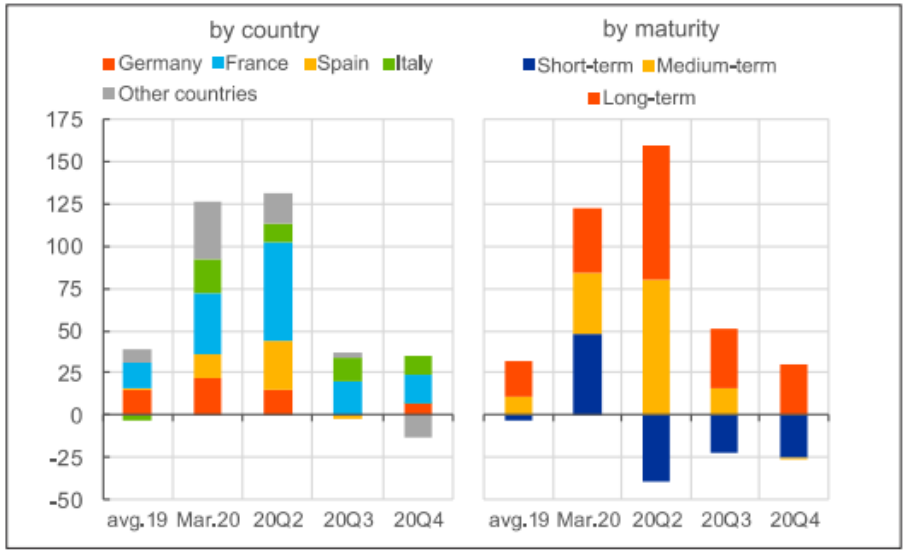
- Surge in **demand** for liquidity => **credit lines**, short-term loans
- Historically **low rates** and favourably **lending** conditions
- **Policy** measures:
  - March: PEPP, TLTRO II
  - April: eased collateral requirements and national guarantee schemes, moratoria
  - June: regulatory relief

Phase 2 (June-December 2020)

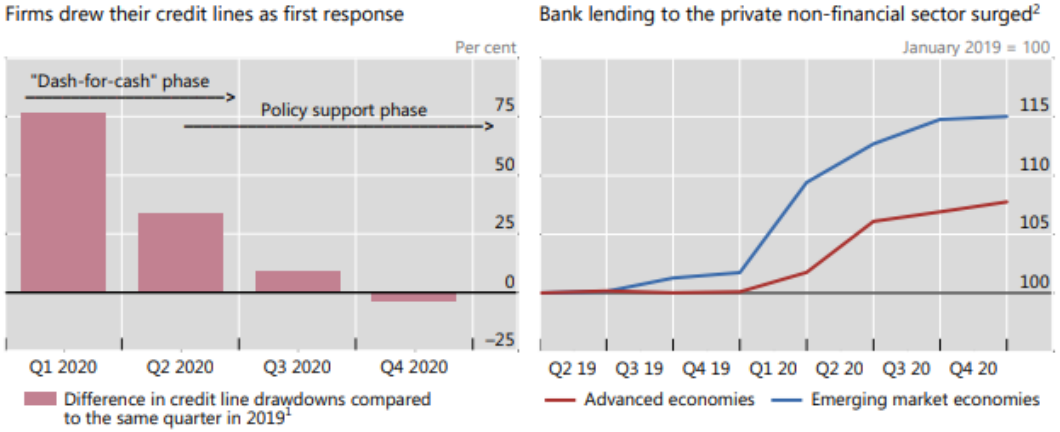
- **Liquidity** needs abated
- **Tighter** credit standards, partly counteracted by policy support
- Key role of guarantee schemes
- Medium and long-term loans

=> Does this match your findings: increase in Q3+Q4?

Bank loans to firms in EA (Falagiarda and Köhler Ulbrich, 2021)



Bank lending globally (Casanova, Hardy and Onen, 2021)



Conceptual comment II: incentives and interactions of measures

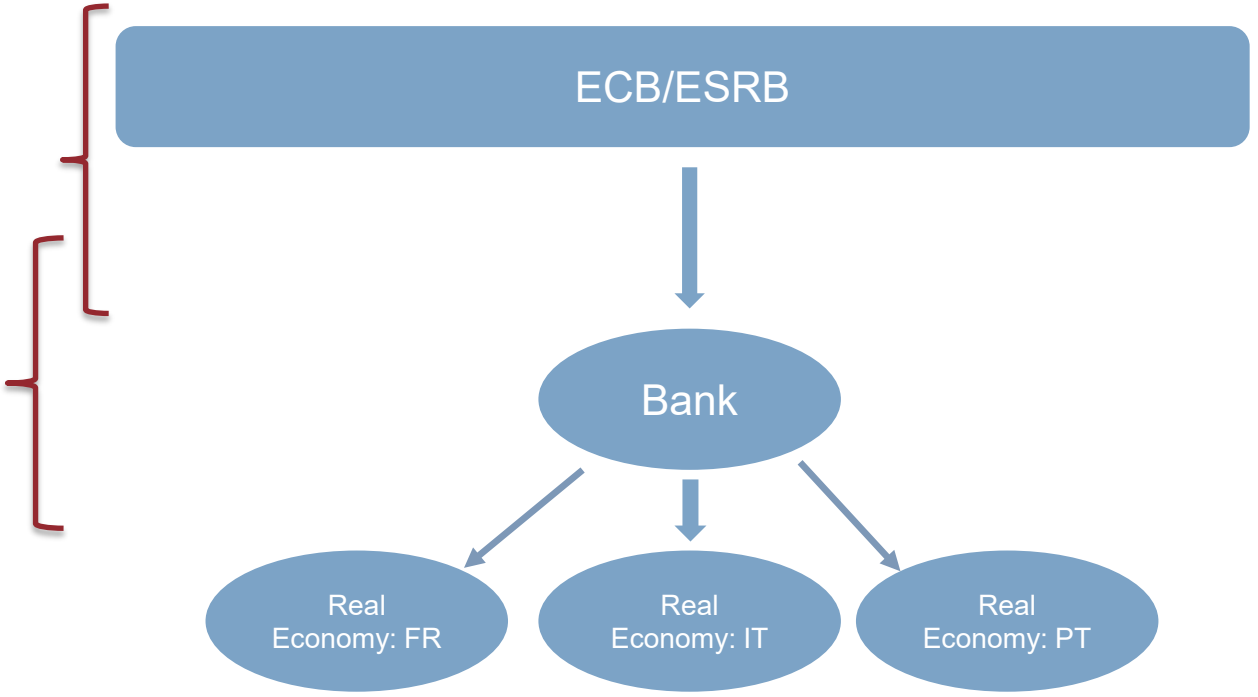
Capacity

Liquidity+Regulatory relief
(EA level)

Willingness + incentives to lend*?*
=> Creditworthiness

Fiscal measures
(national level)

Eg guarantees
- liquidity
- low RWs
- avoid other loan defaults

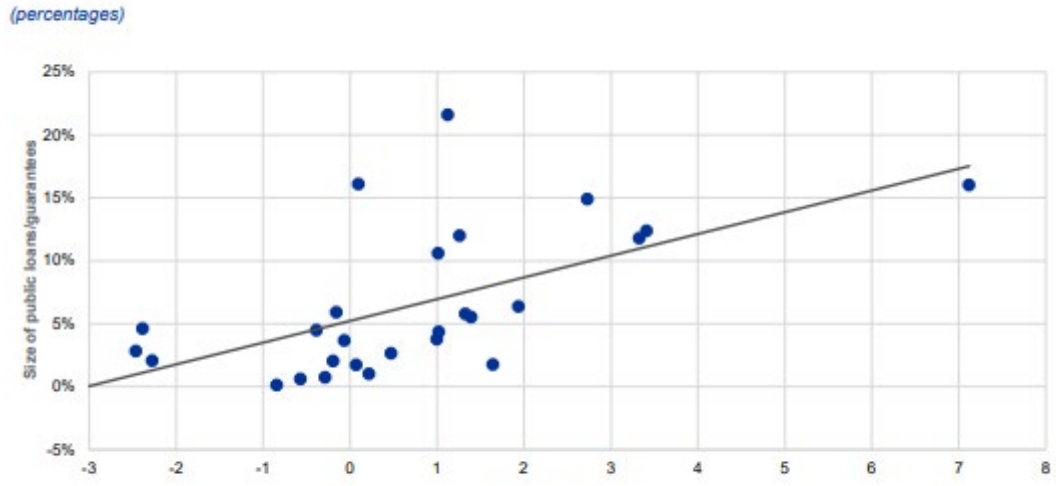


Conceptual comment II: incentives and interactions of measures

⇒ ***correlation*** between lending and fiscal measures *(national level)*

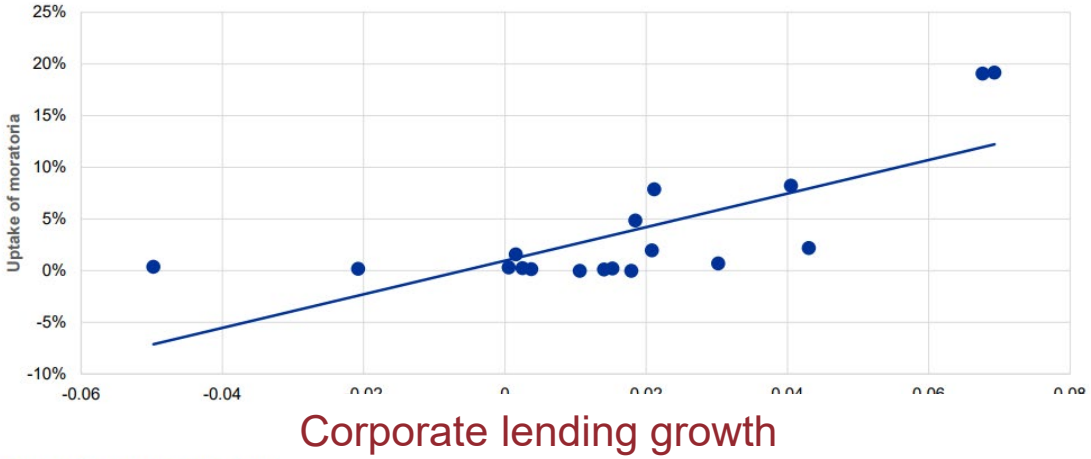
⇒ ***heterogeneity*** across countries

Size of loan guarantees



Sources: Recommendation ESRB/2020/08 [illegible] MNA).
Notes: Announced size (field 1.1.01) of public guarantees and loans as a percentage of 2019 GDP (y-axis). Quarter-on-quarter growth in total MFI lending to NFCs and households ("bank lending") from the first quarter of 2020 to the second quarter of 2020 (x-axis). Based on EU countries (does not cover IS, LI and NO).

Uptake of moratoria



Sources: Recommendation ESRB/2020/8 by 30 Apr. 2021 (reference date: 31 Mar. 2021), ECB MNA, ECB AnaCredit and ESRB calculations.
Notes: Change in NFC gross bank debt ratio (cumulated gross bank debt per firm divided by last available firm balance sheet total) from Feb. 2020 to Feb. 2021 on x-axis. Reported uptake of moratoria for Q1 2021 (field 2.5.10) over 2019 GDP on y-axis. Based on 18 EA countries (CY is excluded). There are gaps in the data reported and results should be interpreted with caution. The underlying granular AnaCredit data still have quality issues and all results should be considered experimental first evidence.

Technical Comments: General

- Large banks operate in ***several*** EA countries
- ***Same set of banks*** for the ***different*** analyses
- Coordinated policies => ***joint*** analysis, focus on ***interactions***
- Fine-tuning of the analysis, exploit data ***granularity***
  - TLTROs + guarantees => firm lending (not mortgages)
  - Moratoria + regulatory relief => firm and HH lending

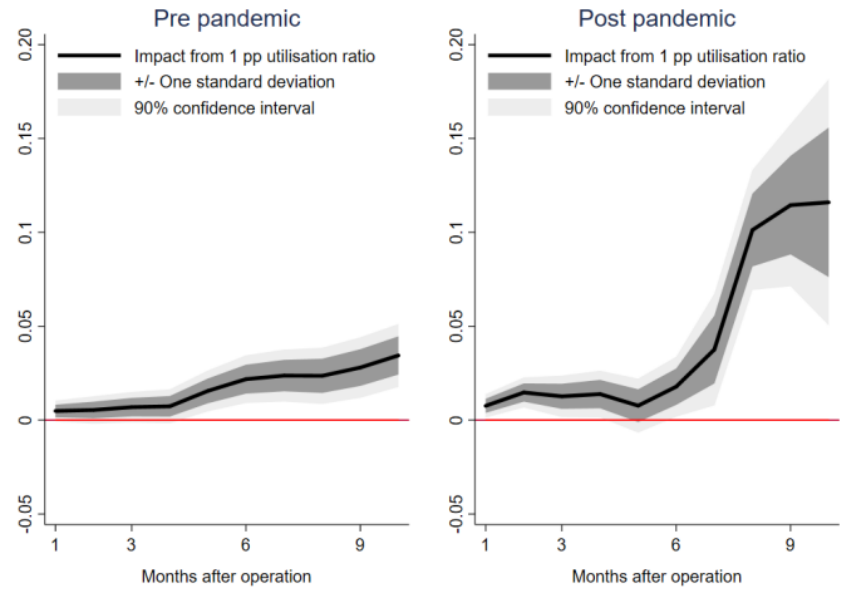
Technical Comments, specific

Specification (1)

- Local projection methods require ***lags*** of the LHS variable.

$$\Delta L^{\tau}_{i,t+h} = \alpha^{\tau}_{c,t,h} + \beta^{\tau}_{h}\text{TLTRO uptake}^{\tau}_{i,t} + \Gamma^{\tau}_{h}X^{\tau}_{i,t-1} + \epsilon^{tau}_{i,t+h} \quad (1)$$

- Both panels in Fig 6 are ***not comparable***.
  - Post pandemic, you just have 10 months of observations, so basically the h=10 is based only on a cross section.



Specification (2)

Your TLTRO-shock =

- ***common*** shock to the term premium (shared across all banks)
- ***idiosyncratic*** shock to bank's ***risk premium***.

$\Rightarrow$Country-by-time fixed effects absorb the common shock.

$$\Delta L^{\tau}_{i,t+h} = \alpha^{\tau}_{c,t,h} + \alpha^{\tau}_{i,h} + \beta^{\tau}_{h}\text{TLTRO shock}^{\tau}_{i,t} + \Gamma^{\tau}_{h}X^{\tau}_{i,t-1} + \epsilon^{\tau}_{i,t+h} \quad (2)$$

Can you compare the different periods?

Pre-Pandemic: Sep 2014-Feb 2020 (7 events)

Post-Pandemic: Mar 2020-Dec 2020 (2 events in March+April)

Technical Comments, specific

Specification (3)

- Now you shift to ***NFC lending***. But capital relief actually addresses ***all types of lending***.
- How can you run this for the ***Pre-pandemic*** period if

$$D^{\tau,mid}_{i,t-1},\ D^{\tau,low}_{i,t-1},\ D^{\tau,high}_{i,t-1}$$

is only defined at Feb 2020?

$$\begin{aligned}\Delta L^{\tau}_{i,t+h} = {} & \alpha^{\tau}_{c,t,h} + \alpha^{\tau}_{i,h} + \delta^{\tau,mid}_{h}\ \text{Capital relief shock}^{\tau}_{i,t} \times D^{\tau,mid}_{i,t-1} + \\ & \delta^{\tau,low}_{h}\ \text{Capital relief shock}^{\tau}_{i,t} \times D^{\tau,low}_{i,t-1} + \\ & \delta^{\tau,high}_{h}\ \text{Capital relief shock}^{\tau}_{i,t} \times D^{\tau,high}_{i,t-1} + \Gamma^{\tau}_{h} X^{\tau}_{i,t-1} + \epsilon^{\tau}_{i,t+h} \qquad (3)\end{aligned}$$

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
		Pre-pandemic				Post-pandemic	
Dependent variable	Loan growth 3 months ahead	Loan growth 6 months ahead	Loan growth 9 months ahead	Loan growth 24 months ahead	Loan growth 3 months ahead	Loan growth 6 months ahead	Loan growth 9 months ahead
Capital relief shock	0.419***	0.889***	1.187***	1.467***	1.779**	3.230***	1.781*
	(0.118)	(0.199)	(0.285)	(0.463)	(0.866)	(1.224)	(1.050)
Capital relief shock (low capital)	0.525**	0.916***	1.316***	0.447	1.766**	2.325**	-0.849
	(0.232)	(0.290)	(0.426)	(0.894)	(0.778)	(1.139)	(1.115)
Capital relief shock (high capital)	0.211*	0.421*	0.558**	-0.174	0.767	2.156**	-0.617
	(0.127)	(0.217)	(0.285)	(0.447)	(0.636)	(0.855)	(0.736)
Controls for bank size and capital buffer	YES	YES	YES	YES	YES	YES	YES
Bank FE	YES	YES	YES	YES	YES	YES	YES
Country-time FE	YES	YES	YES	YES	YES	YES	YES
Observations	14,651	14,534	14,418	11,187	1,684	1,050	420
R-squared	0.264	0.347	0.390	0.579	0.464	0.780	0.898

Technical Comments, specific

Specification 4

- Is the standalone effect of the capital buffer in the table?
- Consider marginal effects evaluated at X=?

$$\Delta L_{i,t-1,t+1} = \alpha_{c,t} + \alpha_i + \beta \text{TLTRO}_{i,t} + \delta \text{Capital Buffer}_{i,t} + \gamma \text{TLTRO}_{i,t} \times \text{Capital Buffer}_{i,t} + \Gamma X_{i,t-1} + \epsilon_{i,t} \quad (4)$$

Dependent variable: Loan growth	(1)	(2)	(3)	(4)
TLTRO uptake*Capital buffer	0.002***		0.001*	
	(0.001)		(0.001)	
TLTRO shock*Capital buffer		0.021***		0.026***
		(0.008)		(0.007)
TLTRO uptake	0.011**		0.019***	
	(0.005)		(0.007)	
TLTRO shock		0.093***		0.104***
		(0.032)		(0.036)
Government guarantees/Loans			-0.004	0.159
			(0.035)	(0.108)
Securities holdings/Assets			0.031	0.207
			(0.031)	(0.317)
Excess liquidity/Assets			-0.064	-0.024
			(0.050)	(0.137)
Deposit ratio			0.017*	-0.421*
			(0.009)	(0.235)
TLTRO funds/Assets			-0.060	-0.205
			(0.049)	(0.183)
Controls for bank size and capital buffer	YES	YES	YES	YES
Country-time FE	YES	YES	YES	YES
Bank FE	NO	YES	NO	YES
Observations	1,887	828	1,374	693
R-squared	0.138	0.343	0.132	0.325

Technical Comments, specific

Table 5 results

- initial raise: credit lines, guarantees uptake, then enough liquidity (Phase 1)
- TLTRO funds (-) contrasts with Fig 6?

Dependent variable	Loan growth 3 months ahead	Loan growth 6 months ahead	Loan growth 9 months ahead	Loan growth 3 months ahead	Loan growth 6 months ahead	Loan growth 9 months ahead
TLTRO shock	0.065	0.118**	0.136***	0.072*	0.126**	0.142***
	(0.039)	(0.050)	(0.041)	(0.041)	(0.054)	(0.039)
Government guarantees/Loans	0.427**	1.057	-	0.360**	1.076	-
	(0.186)	(0.801)		(0.173)	(0.796)	
Securities holdings/Assets	-0.206	-1.368	-0.752	-0.296	-1.439*	-0.990
	(0.504)	(0.864)	(0.749)	(0.504)	(0.844)	(0.818)
Excess liquidity/Assets	0.071	1.063**	-0.099	0.088	1.083**	-0.091
	(0.158)	(0.450)	(0.841)	(0.182)	(0.471)	(0.928)
Deposit ratio				-0.391	-0.094	-0.820
				(0.299)	(0.351)	(0.982)
TLTRO funds/Assets				-0.375**	-0.527***	0.124
				(0.181)	(0.169)	(0.330)
Capital buffer				-0.410	-0.777	-0.088
				(0.428)	(1.237)	(1.123)
Control for bank size	YES	YES	YES	YES	YES	YES
Bank FE	YES	YES	YES	YES	YES	YES
Country-time FE	YES	YES	YES	YES	YES	YES
Observations	640	400	160	616	385	154
R-squared	0.402	0.631	0.758	0.397	0.622	0.743

Thank you for your attention!

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Summary and Conclusions

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Annex

Data

Standalone analysis (349 banks, Sep 2014-Dec 2020)

Bank (>300 banks)

- TLTRO uptake and borrowing allowances (balance sheet statistics, 349 banks)
- Bank-specific capital requirements (SREP by ESM)
- CET1 ratios (from SNL Financial)
- Bank bond yields (from Markit iBoxx)

Policy Shock

Daily changes in bond prices around monetary policy announcements

Approach + Identification

a) Standalone analysis

- Local projection methods to estimate the dynamic effects of exogenous policy shocks
  - shocks =daily changes in bond prices around MP announcements
  - Demand controls: country-by-time fixed effects (also any national policy like guarantees and moratoria)

b) Amplification

c) Real effects (pre-pandemic firm data)