

8. IWP-Wissenschaftsforum

The Effect of Covid-19 on Loan Loss Provisions and Earnings Management of European Banks



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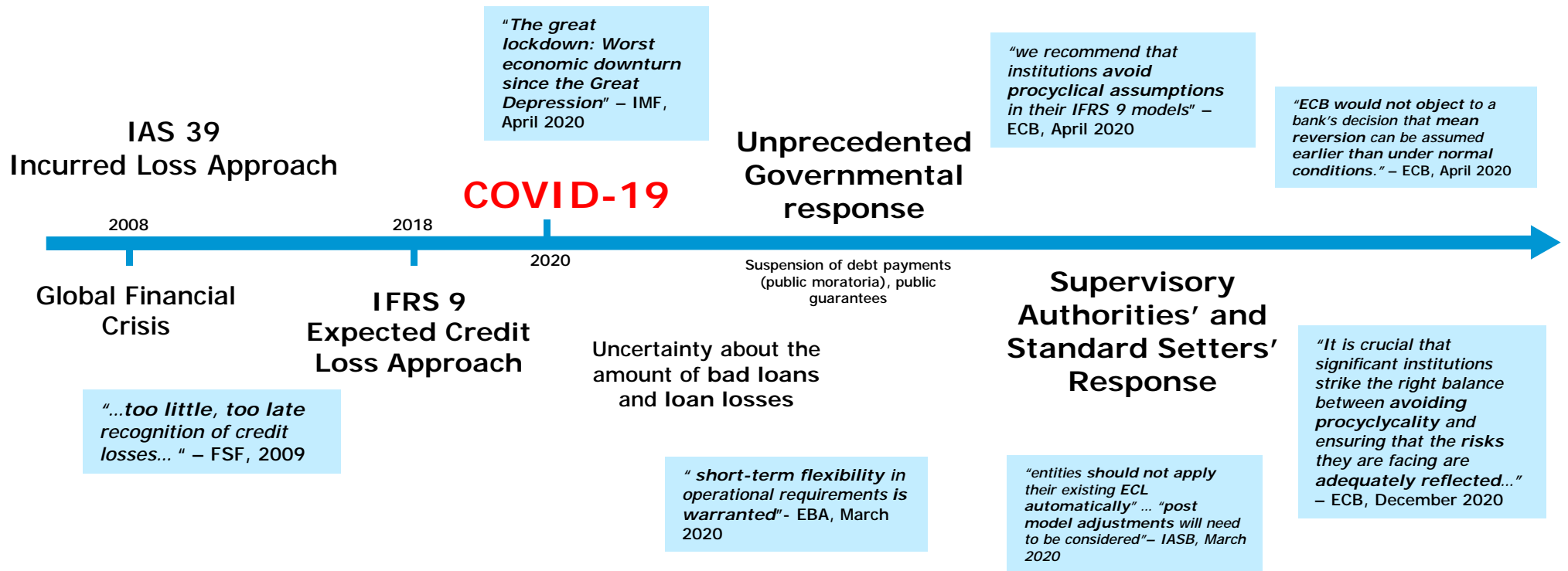
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Research Question

How does Covid-19 affect loan loss provisions (LLP) and earnings management (EM) of European Banks?

Motivation



Hypothesis Development

§ Banks' reporting incentives:

- § Pressure to meet market expectations (Burgstahler & Dichev, 1997)
- § Convince the market of the profitability of their loans – achieve a certain industry benchmark. However, market appears to forgive poor performance in cases of adverse economic conditions (Rajan, 1994).
- § LLP – a key and important accrual that explains much of the variability in the total accruals of a bank.
 - § Highly discretionary because it involves estimates of future losses.
- § Banks use LLP to manage earnings and capital (Beatty & Liao, 2014; Beatty et al., 1995; Collins et al., 1995; Anandarajan et al., 2007).

IFRS 9

- § Laxer accounting rules increases the manager's incentives to engage in EM (Ewert and Wagenhofer, 2005).
- § Analogously, the transition to ICL at the time of IFRS adoption reduced EM (Gebhardt and Novotny-Farkas, 2011).

H1: Under IFRS 9 banks use loan loss provision to manage earnings.

COVID-19

- § Enhanced uncertainty & flexibility
- § When reporting environment permits discretion → optimal disclosure policy: either "big bath" (in cases of bad news) or earnings smoothing (in cases of good news) (Kirschenheiter and Melumad, 2002).
- § Income smoothing through LLPs only during high-growth and stagnant periods (Agarwal et al., 2007).

Hypothesis Development (continued)

EBA's Monitoring Report from November 2021 on IFRS 9 Implementation by EU institutions:

"Different practices observed between institutions, which is something inherent to the flexibility embedded in the IFRS 9 standard."

"Covid-19 pushed IFRS 9 models outside their boundaries thereby increasing the use of overlays leading to more divergence in terms of the materiality of the impact in the final ECL amount."

"The impact on ECL varied across institutions."

H2: During the Covid-19 pandemic banks use more earnings management through loan loss provisioning than before Covid-19.

Sample

- § Firm-quarterly & consolidated data from 2018 Q1 until 2021 Q3
- § 92 Banks
- § 25 European Countries



Analysis & Results I

§ Discretion in LLPs

$$LLP_{i,t} = \alpha + \beta_1 LLA_{i,t-1} + \beta_2 NPL_{i,t-1} + \beta_3 Loans_{i,t-1} + \beta_4 \Delta NPL_{i,t} + \beta_5 \Delta Loans_{i,t} + \epsilon_{i,t}$$

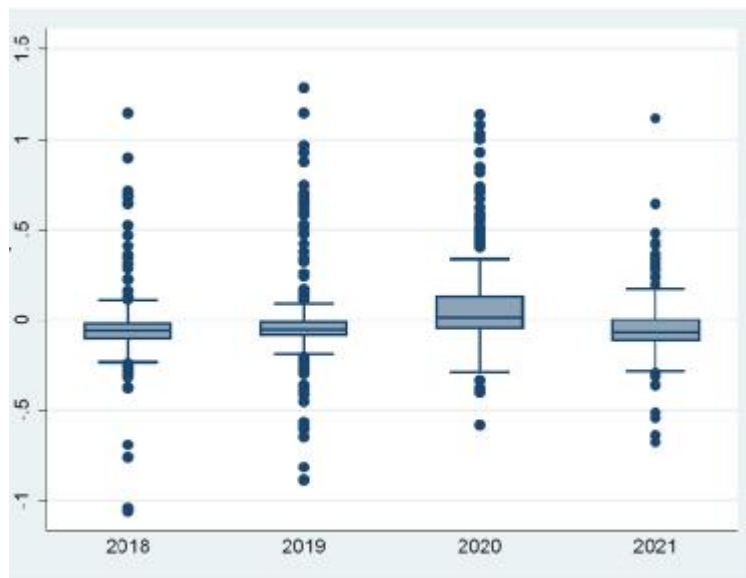


FIGURE 6.1: Discretionary LLPs over Years

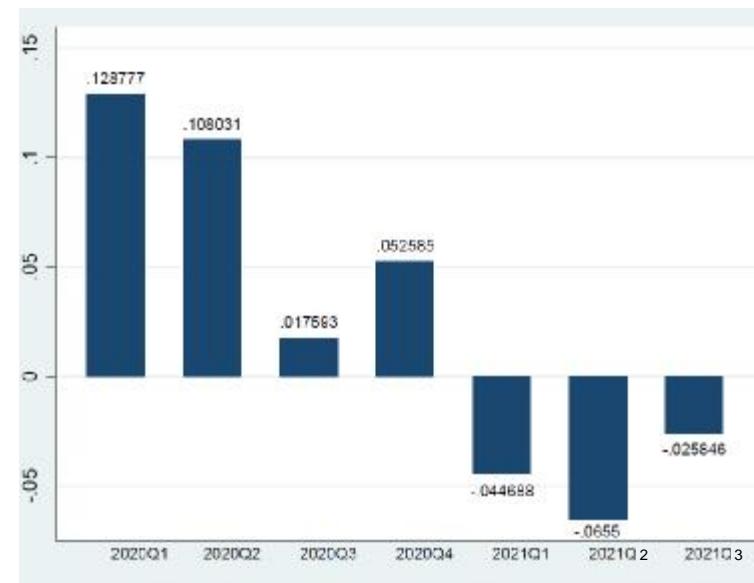


FIGURE 6.2: Discretionary LLPs over Year-Quarters during Covid-19

Analysis & Results II

§ Earnings management

$$\begin{aligned}
 LLP_{i,t} = & \alpha + \beta_1 \text{COVID19} + \beta_2 \text{LoanStg1}_{i,t-1} + \beta_3 \text{LoanStg2}_{i,t-1} + \beta_4 \text{LoanStg3}_{i,t-1} \\
 & + \beta_5 \Delta \text{LoanStg1}_{i,t} + \beta_6 \Delta \text{LoanStg2}_{i,t} + \beta_7 \Delta \text{LoanStg3}_{i,t} + \beta_8 \Delta \text{NPL}_{i,t+1} \\
 & + \beta_9 \Delta \text{SYCDS}_{i,t} + \beta_{10} \text{NEBTLLP}_{i,t} + \beta_{11} \text{RegCap}_{i,t-1} + \beta_{12} \text{Size}_{i,t} \\
 & + \sum \text{Firmfixedeffects} + \epsilon_{i,t}
 \end{aligned}$$

	LLP	Pre-Covid LLP	Post-Covid LLP
COVID19	0.109 (6.15)**		0.089 (5.18)**
LoanStg1	0.000 (0.29)	0.000 (0.01)	0.011 (1.99)
LoanStg2	-0.003 (0.90)	-0.006 (0.74)	0.012 (1.74)
LoanStg3	-0.000 (0.13)	0.001 (0.14)	0.008 (0.82)
Δ LoanStg1	-0.001 (0.78)	0.001 (0.53)	0.004 (1.51)
Δ LoanStg2	0.002 (0.41)	-0.021 (1.71)	0.023 (3.97)**
Δ LoanStg3	0.003 (0.63)	0.003 (0.32)	0.013 (1.56)
Future Δ NPL	0.004 (0.99)	0.002 (0.27)	0.004 (0.63)
Δ SYCDS	0.050 (2.54)*	-0.063 (1.27)	0.055 (2.40)*
NEBTLLP	0.161 (2.92)**	0.193 (2.20)*	0.144 (3.16)**
RegCap	0.128 (0.46)	0.739 (1.60)	0.220 (0.79)
Size	-0.070 (0.52)	-0.062 (0.31)	-0.216 (1.35)
Cons	0.879 (0.44)	-0.861 (0.34)	1.931 (0.77)
R ²	0.14	0.16	0.23
N	719	340	379

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

Analysis & Results III

§ Cross-Country differences on Covid-19 response measures (weak vs. strong)

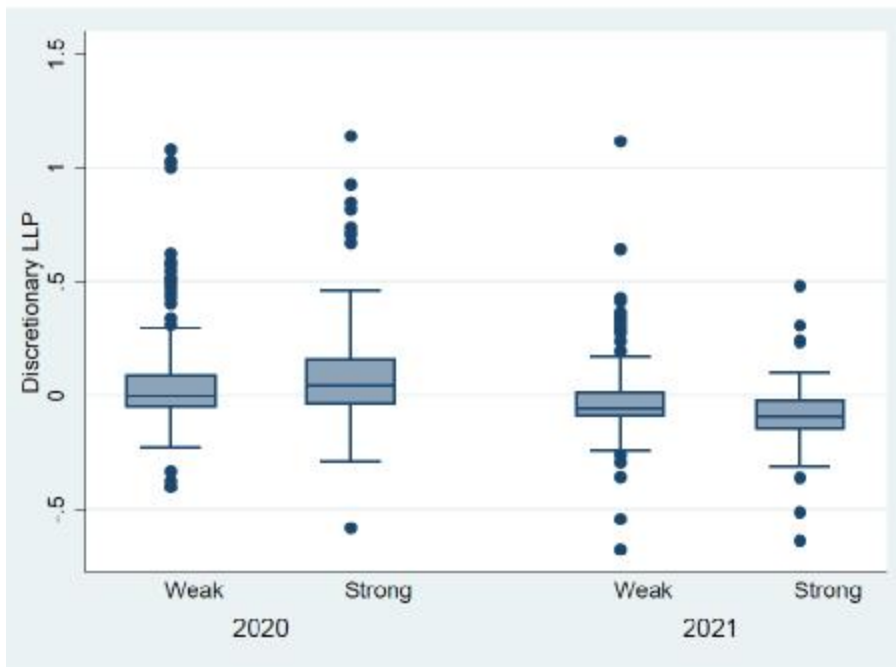


FIGURE 6.3: Discretionary LLPs by Different Covid-19 Response Measures

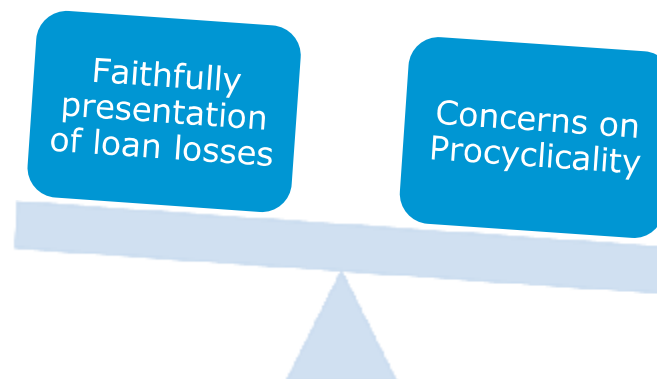
$$LLP_{i,t} = \alpha + \beta_1 COVID19_{i,t-1} + \beta_2 LoanStg1_{i,t-1} + \beta_3 LoanStg2_{i,t-1} + \beta_4 LoanStg3_{i,t-1} + \beta_5 \Delta LoanStg1_{i,t} + \beta_6 \Delta LoanStg2_{i,t} + \beta_7 \Delta LoanStg3_{i,t} + \beta_8 \Delta NPL_{i,t+1} + \beta_9 Loans_{i,t-1} + \beta_{10} \Delta SYCDS_{i,t} + \beta_{11} NEBTLLP_{i,t} + \beta_{12} RegCap_{i,t-1} + \beta_{13} Size_{i,t} + \sum Firmfixedeffects + \epsilon_{i,t} \quad (6.7)$$

	Post-Covid LLP	Weak LLP	Strong LLP
LoanStg1	0.012 (1.98)	0.005 (0.90)	0.041 (1.48)
LoanStg2	0.017 (2.25)*	0.006 (0.43)	0.053 (2.00)
LoanStg3	0.013 (1.36)	-0.011 (0.89)	0.057 (1.95)
$\Delta LoanStg1$	0.003 (0.94)	0.001 (0.24)	0.011 (0.81)
$\Delta LoanStg2$	0.028 (4.40)**	0.020 (2.98)**	0.041 (2.73)*
$\Delta LoanStg3$	0.014 (1.43)	0.011 (0.76)	0.022 (0.40)
Future ΔNPL	0.007 (1.15)	0.004 (0.69)	0.014 (0.94)
Loans	0.005 (1.05)	0.005 (0.73)	0.010 (1.09)
$\Delta SYCDS$	0.063 (2.45)*	0.035 (0.80)	0.135 (3.35)**
NEBTLLP	0.135 (3.06)**	0.030 (0.17)	0.164 (3.52)**
RegCap	0.138 (0.50)	0.532 (1.99)	0.086 (0.15)
Size	-0.305 (3.67)**	-0.380 (2.83)**	-0.762 (2.62)**
Cons	6.380 (2.90)**	3.983 (1.88)	8.222 (1.23)
R ²	0.19	0.14	0.27
N	379	224	155

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

Conclusion

- § The high amount of uncertainty and the high flexibility created a convenient environment for EM.
- § The financial distress – being more amplified in countries with strong Covid-19 response – made banks more inclined to manage earnings.
- § Open questions:
 - § Does the temporary relief outweigh its consequences, especially in the long term?
 - § Are forward-looking provisions more informative?





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Thank You!

Backup

§ Covid-19 Response measures by Countries

§ Database: European Centre for Disease Prevention and Control (ECDC)

Country	Min	Max	Mean	Med	SD	Indicator
Austria (Banks:4)	2	27	12.79	10	8.73	Strong
Belgium (Banks:1)	4	15	9	8.5	4.43	Strong
Bulgaria (Banks:1)	4	18	9.8	8	5.40	Weak
Cyprus (Banks:3)	2	17	10.33	10	5.56	Strong
Czechia (Banks:2)	1	35	14.45	15	12.59	Strong
Denmark (Banks:6)	1	18	10.30	11	6.52	Strong
Estonia (Banks:1)	9	9	9	9	.	Strong
Finland (Banks:4)	2	16	6.5	5	4.70	Weak
Germany (Banks:2)	2	17	10.11	12	6.13	Strong
Greece (Banks:4)	1	15	7.52	6	5.73	Weak
Hungary (Banks:1)	3	17	7.83	6.5	5.19	Weak
Iceland (Banks:2)	4	15	8.4	9	3.10	Strong

Italy (Banks:6)	4	24	10.7	8	6.92	Weak
Netherlands (Banks:2)	1	22	11.57	11	7.41	Strong
Norway (Banks:30)	1	13	6.27	4	4.88	Weak
Poland (Banks:7)	8	17	11.84	12	3.18	Strong
Portugal (Banks:1)	1	18	8.67	9.5	6.09	Strong
Slovenia (Banks:1)	10	23	15.6	14	5.32	Strong
Spain (Banks:5)	1	17	6.84	2	7.33	Weak
Sweden (Banks:2)	3	8	5.5	5.5	2.07	Weak
United Kingdom (Banks:4)	8	16	11	9	3.77	Strong
Total	1	35	8.43	8	6.14	Strong

Notes: The table presents statistics of Covid-19 response measures implemented by the countries' governments during the pandemic. It shows the number of Covid-19 responsive measures that were in force during the period 2020-2021. Countries are indicated to have a strong/weak Covid-19 response policy if the median number of Covid-19 response measures implemented by the country is higher/lower than the median number of Covid-19 response measures implemented by all countries throughout the pandemic.