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**Disclosures of expected credit losses around  
the beginning of a crisis:  
Evidence from European banks during the  
COVID-19 pandemic**

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## Abstract

The International Accounting Standards Board (IASB) and Financial Accounting Standards Board (FASB) have recently adopted expected credit loss models for the loan loss provisioning of banks. The new regulations are a response to the 2008-09 financial crisis and the widespread view that loan loss provisions were “too little, too late” under the former incurred credit loss model. The expected credit loss model represents a more forward-looking approach and is designed to shift loss recognition to a much earlier stage of the economic cycle. We use a small sample of large European banks that provide sufficiently detailed disclosures of their provisioning choices under the new International Financial Reporting Standard (IFRS) 9 regulation prior to the COVID-19 crisis to examine whether banks had built up sufficient capital buffers at the onset of the crisis. Our evidence indicates that banks’ loan loss provisioning under the new expected credit loss model was lower in the period immediately before the crisis than it would have been under an incurred loss model (largely because of reversals). Therefore, the increase in loan loss recognition during the crisis was even larger, potentially amplifying procyclical effects and leading the European Central Bank to practice regulatory forbearance. The effect results from the exogenous nature of the pandemic, which banks did not consider in their internal loss estimates when determining expected credit losses. Increased reporting discretion in banks’ estimation procedure further augments the effect.

*JEL classification:* G01, G21, G28, K23, M40, M41, M48

*Key Words:* Bank Accounting, Bank Disclosure, Corona Crisis, Covid-19, Expected Credit Loss Model, Financial Crisis, IFRS 9, Incurred Loss Model, Loan Loss Disclosures, Loan Loss Provisions, Procyclicality

# 1. Introduction

Bank regulators and politicians have blamed loan loss provisioning rules and, in particular, the incurred credit loss (ICL) model for banks' delayed recognition of credit losses and its procyclical effects on bank lending during the 2008-09 financial crisis (Basel Committee on Banking Supervision, 2009, 2015; G20 Summit Declaration, 2009). In response to this political pressure, the Financial Accounting Standards Board (FASB) and International Accounting Standards Board (IASB) have recently adopted expected credit loss (ECL) models for the loan loss provisioning of banks (see Hashim et al., 2016, for an overview). The ECL model represents a more forward-looking approach and is designed to shift loss recognition to a much earlier stage of the economic cycle (e.g., Novotny-Farkas, 2016). However, the outcome is ambiguous because the forward-looking approach comes at the cost of providing banks with substantially higher levels of discretion in measuring loan loss provisions and designing the underlying models – at least, this is the lesson from the evidence on banks' reporting incentives in the recognition of loan losses (e.g., Laeven and Majnoni, 2003; Beatty and Liao, 2011; Bushman and Williams, 2012; Costello et al., 2018; Kim, 2021; Wheeler, 2021) as well as the adoption of model-based capital regulation with the Basel 2 directives (e.g., Behn et al., 2016). The current COVID-19 pandemic is the first crisis under which the new rules have been put to the test, providing an opportunity to explore which effect prevails.

While the FASB's Accounting Standards Update (ASU) 2016-13 was set to become effective right at the onset of the crisis<sup>1</sup>, the IASB regulation (International Financial Reporting Standard [IFRS] 9) has been in effect since financial year 2018, giving banks the opportunity to build up a sufficient level of available loan loss reserves to absorb credit losses during the crisis. The reporting practice of international banks under the IFRS 9 regulation prior to and at the beginning of the crisis thus provides an excellent laboratory to examine this question. In particular, we use granular loan loss disclosures to assess the impact of the ECL model on bank equity and earnings in the periods from the adoption of the standard in 2018 to the beginning of the crisis in 2020. If banks did not build up more reserves during the upturn until the end of 2019 than they would have under the former ICL model, the ECL approach potentially amplifies procyclical effects by triggering large loan loss provisions at the very beginning of a contraction, thereby deteriorating the lending capacity of banks (Huizinga and Laeven, 2019). Such an effect from under-reserving is particularly likely in a sudden crisis such as the COVID-19 pandemic that is exogenous to prior lending decisions and the regular credit cycle in the banking industry (Abad and Suarez, 2018; Borio and Restoy, 2020).

To isolate the impact of the ECL model, we exploit the three-stage feature of the IFRS 9 regulation. Stage 3 of the model still requires the occurrence of an observable loss event (e.g., a past-due event) and thus introduces the same probability threshold for loss recognition as the former ICL model under International Accounting Standard (IAS) 39. The additional provisioning required by the new ECL approach relates to stages 1 and 2. Stage 1 covers all loans with external or internal investment-grade status as well as non-investment-grade loans that have not experienced any significant increase in credit risk since initial recognition. Stage 2 covers all loans with non-investment-grade status that have experienced such a significant increase in credit risk (the SICR criterion). For both stages, IFRS 9 requires the recognition of expected credit losses either over a 12-month horizon (in stage 1) or over the remaining lifetime of the loan (in

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<sup>1</sup> ASU 2016-13 was originally intended to become mandatory in 2020. However, as part of the Coronavirus Aid, Relief, and Economic Security (CARES) Act (signed into law on March 27, 2020) banks were given the option to delay adoption.

stage 2). These two stages thus represent the key difference between IFRS 9's ECL model and the former ICL model.

In the first step, we systematically screen the loan loss disclosures of a sample of the 40 largest European financial institutions. We identify 27 European banks that provide some disclosure of their loss provisioning in all five quarterly reports from Q1-19 until Q1-20. Among these sample banks, we observe substantial heterogeneity in the degree of detail in these disclosures. We classify the sample banks according to their separate reporting of the three impairment stages introduced by IFRS 9. We include banks that provide no disclosure of their use of the impairment stages at all in the *No Details* category (14 banks), those that show changes in their loan loss allowances (LLAs) (but not in their loan loss provisions [LLPs]) in the *Limited Disclosures* category (5 banks) and banks that show changes in both LLPs and LLAs by stages in the *Detailed Disclosures* category (8 banks). Albeit small, our sample of banks in the *Detailed Disclosures* and *Limited Disclosures* categories represents a large and relevant cross-section of the European banking sector, covering approximately 23% of the total assets of the universe of European banks included in the SNL Financial (S&P Global Market Intelligence) database, based on Q1-20 data.

In a second step, we hand-collect quarterly data on the use of the three IFRS 9 impairment stages for loan loss provisions and allowances for the sample of 13 banks that provide these disclosures. We track the use of the three stages and the corresponding impact on equity and earnings over the period of five quarters until the onset of the COVID-19 pandemic in 2020-Q1. We document that on average, banks do not seem to have used stages 1 and 2 of the new IFRS 9 ECL model to build up sufficient LLAs in the quarters leading up to the outbreak of the COVID-19 crisis. In contrast, our evidence suggests a significant reversal of previously recognized credit losses even as late as Q4-19. When the crisis materialized in Q1-20, LLPs and LLAs in stages 1 and 2 increased significantly, while stage 3 changes were more modest than those in previous quarters.

Contrary to regulatory intentions, our evidence suggests that banks failed to adequately anticipate the adverse outcomes of the COVID-19 crisis for their loan portfolios under the new ECL model and that consequently, the IFRS 9 ECL model seems to have amplified procyclicality at the outset of the COVID-19 crisis. We interpret our descriptive findings to be consistent with the following views. First, the ECL model relies on the assumption that banks are able to anticipate future credit losses based on the incorporation of forward-looking evidence. However, in a sudden and exogenous downturn such as the COVID-19 crisis, our results show that this assumption is unlikely to be met and that anticipatory effects from the ECL model are too small to provide a meaningful buffer once the crisis sets in (López-Espinosa and Ormazabal, 2021). Second, evidence from the financial crisis 2008 suggests that the IAS 39 rules were not binding constraints for loan loss accounting at the time and that managers lacked proper incentives to ensure timely loss recognition (Bischof et al., 2021). Giving managers even more discretion in the internal estimation of expected credit losses, the ECL model is unlikely to change this misalignment of incentives. Third, we also find evidence for regulatory forbearance in the COVID-19 crisis, which has likely shaped the reporting behavior of at least some of our sample banks. The observation that bank supervisors such as the European Central Bank (ECB) decide to publicly interfere and downplay the required magnitude of credit loss estimates underscores that banks did not build up a sufficiently high buffer of loan loss reserves during the upturn.

Our paper contributes to the accounting literature in three ways. First, we provide descriptive evidence on the economic implications of the ECL model. Recent literature examines the

informational consequences of loan loss provisioning under the ECL versus ICL models (López-Espinosa and Ormazabal, 2021; Wheeler, 2021) and, similarly, the fair value versus ICL models (Blankespoor et al., 2013; see McDonough et al., 2020, for an overview). These studies attribute generally positive effects to the use of ECLs and fair values. Prior literature has also examined the procyclical effects of loan loss provisioning (Laeven and Majnoni, 2003; Beatty and Liao, 2011; Bushman and Williams, 2012; Kim, 2020; Bischof et al., 2021). We add to these studies by providing descriptive evidence that is based on a direct proxy for the accounting difference between the two models, i.e., the use of the first two stages of the IFRS 9 impairment model. Tracking this measure over time enables us to shed light on how banks failed to build up sufficient loss reserves prior to the crisis, meaning that the ECL approach in fact amplified the triggering of loan loss provisions at the onset of the crisis. This finding is at minimum inconsistent with the regulatory intentions to reduce the procyclical effects of loan loss provisioning.

Second, we add to the literature on the adoption effects of IFRS 9. Onali and Ginesti (2014) find an overall positive market reaction to events that increased the likelihood of IFRS 9 adoption. Ertan (2019) reports changes in banks' lending behavior around the initial adoption of IFRS 9. We provide evidence on the origins of banks' loan loss provisions under IFRS 9's new ECL model. In particular, we document that expected credit losses in stages 1 and 2 of the model even had an income-increasing effect prior to the crisis, while the largest part of recognized credit losses during this time comes from loans for which an observable loss event had already incurred, i.e., for which an impairment would also have been triggered under the former ICL model.

Third, we document loan loss disclosure practices by international banks. A thorough understanding of the reporting effects of an ECL model hinges on the transparency of the accompanying disclosures. However, our findings suggest that at least internationally, these loan loss disclosures are very heterogeneous, with only a few banks providing full disclosures for all three impairment stages. This finding supports earlier evidence on the heterogeneity of bank disclosures (e.g., Jorion, 2002; Nier and Baumann, 2006; Bischof and Daske, 2013).

## 2. Expected Credit Losses: Institutional Background and Regulatory Intentions

### 2.1 Effects of Loan Loss Provisioning during a Crisis

On average, more than 70% of the assets held by European banks are loans measured at amortized cost (Fiechter and Novotny-Farkas, 2017). Especially since the 2008 financial crisis, there has been a controversial debate about the adequate approach to the recognition of credit losses for these loan portfolios. As the lending behavior of banks is inherently procyclical (e.g., Rajan, 1994), regulators have increasingly viewed loss provisioning as a means to counter this effect. During a cyclical upswing, banks tend to lend more against poorer collateral and at lower risk premia, which increases the risk of their portfolios. In business cycle downturns, the magnitude of the loan loss provisions, which lower profitability and regulatory capital, depends on the buffer of loan loss reserves that banks previously recognized during the upturn. If this buffer is too low, banks can be forced to further cut their lending during a cyclical downturn, potentially amplifying the adverse economic consequences of the crisis.

From a financial stability view, loan loss provisioning should therefore have a countercyclical effect, allowing banks to anticipate future credit losses and sufficiently recognize loan loss reserves when they build up their portfolios during good times. In practice, however, the effect is constrained by both accounting rules and managerial incentives. IAS 39 was the relevant accounting standard before and during the financial crisis and, under its ICL model, did not require the recognition of loan losses before the realization of a loss event, typically an effective borrower default (Gebhardt, 2008). Moreover, the ICL model provided bank management with substantial reporting discretion in the timing of loss recognition (e.g., Bushman and Williams, 2012).

Evidence thus shows that banks actually decreased their loan loss reserves in periods leading up to the financial crisis instead of building up their reserves to absorb the looming losses (e.g., Huizinga and Laeven, 2012; Balasubramanyan and Madias, 2015). Then, right when banks' equity positions were already down during the crisis, a substantial spike in loss provisioning impacted bank earnings in a procyclical fashion (Dugan, 2009). Consequently, the G20 and many regulators have identified the delayed recognition of credit losses during the financial crisis of 2008 as one major weakness in accounting standards (e.g., Basel Committee on Banking Supervision, 2009; Dugan, 2009; Financial Crisis Advisory Group, 2009; Financial Stability Forum, 2009, G20 Summit Declaration, 2009), prominently describing banks' provisioning behavior as "too little, too late". Moreover, they identified delayed provisioning for loan losses, lagging prevailing market expectations during the crisis, as another procyclical factor that allegedly exacerbated the impact of the financial crisis on banks (Basel Committee on Banking Supervision, 2015; Bischof et al. 2021).

### 2.2. Expected Credit Loss Model under IFRS 9

Reacting to the growing pressure for reforms, the IASB finalized its new IFRS 9 *Financial Instruments* in 2014, replacing large parts of IAS 39 *Financial Instruments: Recognition and Measurement* for the first time in fiscal year 2018. With this new standard, the IASB substituted the IAS

39 ICL model with a more forward-looking ECL model for all financial instruments held at amortized cost or at fair value through other comprehensive income.<sup>2</sup> Provisions for credit losses according to the former ICL model require “objective evidence” for impairment, and IAS 39.59 lists examples of such “trigger events” (e.g., a past-due event or a renegotiation). By their nature, these loss events occur relatively late and typically well after internal estimates of a borrower’s default probability begin to deteriorate. The incurrence of a trigger event is no longer a necessary condition for initial loan impairment under the IFRS 9 ECL model (Novotny-Farkas, 2016). The ECL model explicitly requires the use of forward-looking information and leading macroeconomic indicators in the internal estimation of default probabilities and expected losses that determine banks’ loan loss provisioning decisions (Basel Committee on Banking Supervision, 2015).

However, IFRS 9 introduces some modifications to a full ECL model (e.g., Novotny-Farkas, 2016; European Systemic Risk Board, 2017). In particular, banks have to classify financial assets that are subject to impairment testing into three stages. The required estimates of expected credit losses vary over these three stages. At contract inception or purchase, all instruments start at stage 1, with the exception of assets that are already credit impaired on initial recognition. The instruments remain at this stage as long as they have an internal or external investment-grade rating. Instruments with non-investment-grade status drop out of stage 1 when they experience a significant deterioration in the borrower’s credit risk (in comparison to the credit risk level at initial recognition). At stage 1, the loan loss provisions cover only the 12-month ECL.

Once a “significant deterioration in credit quality” occurs, instruments with non-investment-grade status are classified in stage 2. Only at this point does IFRS 9 require the recognition of lifetime ECLs. Therefore, there is an immediate and sharp increase (a “cliff effect”) in the amount of loan loss provisions for instruments that move from stage 1 to stage 2 (e.g., Hashim et al., 2016; Novotny-Farkas, 2016). The loss events used to determine loan impairment under IAS 39’s ICL model continue to play a role under IFRS 9. The occurrence of such an event now triggers the shift to stage 3. However, the stage 3 classification affects the recognition of interest income only and prescribes identical impairment rules to those for stage 2, i.e., the recognition of lifetime ECLs. It is still a plausible presumption that stage 3 provisions largely overlap with the provisioning under the former ICL model, given that the shift to stage 3 relies on exactly the same criteria as the triggering of loan impairments did under IAS 39 (Novotny-Farkas, 2016). In contrast, the loan loss provisioning in stages 1 and 2 clearly follows from new requirements introduced by the IFRS 9 ECL model and represents the most reliable indicator of differences in the accounting effects of these two regulations (Ertan, 2019).

### **2.3. Expected Credit Loss Model during the COVID-19 Crisis**

If the ECL model under IFRS 9 is successful in inducing banks to anticipate a larger fraction of credit losses from a future crisis and increase loan loss provisioning during upturns, we should be able to observe a meaningful impact of stage 2 provisions on the overall level of loan loss reserves during these periods. Stage 2 impairments require the full amount of lifetime expected credit losses (unlike the 12-month horizon for stage 1 impairments) and are recognized before the actual loss event that requires a transfer to stage 3 (largely equivalent to the trigger under

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<sup>2</sup> For a detailed review of the process leading to the final IFRS 9 standard and a reflection on the different solutions adopted by the IASB and the FASB in implementing an ECL model in their impairment rules for financial instruments, see Hashim et al. (2016). Additionally, Harrison and Sigee (2017) provide an assessment of the IFRS 9 ECL model from a practical perspective.

the previous ICL model under IAS 39). Banks' use of stage 2 provisions is therefore key to the new ECL model meeting the regulatory objectives.

For these intended effects to occur, certain prerequisites must be met. First, banks need to be able to collect and correctly interpret all relevant forward-looking information. Second, on the basis of this information, bank managers must actually exercise their discretion in such a way that future credit losses will be anticipated earlier through loan loss provisions. If these prerequisites are not met, there is a possibility of procyclicality becoming even greater than before due to the greater responsiveness of ECLs to changes in aggregate economic conditions. For example, if banks are unable to anticipate imminent adverse changes in the economic environment early enough, the ECL approach potentially amplifies procyclical effects by triggering large loan loss provisions in anticipation of future loan losses and thereby deteriorating the lending capacity of banks at the very beginning of a contraction (Abad and Suarez, 2018; Ertan, 2019). This adverse effect is potentially amplified by the cliff effect described above (see section 2.2), i.e., the transfer from a provision covering only 12-month ECLs (in stage 1) to lifetime ECLs (in stage 2), which is likely to impact a large part of the loan portfolio under the ECL approach for provisioning in the early phases of a crisis (e.g., Harrison and Sigee, 2017; Cohen and Edwards, 2017).

In addition, it is evident that the earlier recognition of loan losses under the ECL model increases the discretion that bank managers have in their loan loss accounting (Gebhardt and Novotny-Farkas, 2011). This reliance on management judgment plausibly introduces incentive problems, tempting managers to engage in earnings and capital management and systematically underestimate future credit losses (Benston and Wall, 2005; Dugan, 2009; Cohen and Edwards, 2017; European Systemic Risk Board, 2017). These incentive problems can also counteract the benefits of a timelier recognition of credit losses, e.g., in capital allocation decisions and the fostering of market discipline (Barth and Landsman, 2010).

The COVID-19 crisis provided the first crisis setting to put European banks' loan loss accounting under the new ECL model to the test. In particular, we examine the following questions: Did bank managers anticipate future credit losses by using the first two IFRS 9 impairment stages for their loan portfolios during the quarters leading up to the crisis? Consequently, did the ECL model lead to less procyclical loan loss accounting and less volatility in bank earnings than under the counterfactual ICL model scenario?



## 3. Data

### 3.1. Sample

We use the universe of European banks covered by SNL Financial (S&P Global Market Intelligence) as the starting point of our sample selection process.<sup>3</sup> We exclude all banks that do not report in each quarter (our unit of analysis). From the remaining banks, we form a small subsample comprising the 15 largest banks in terms of total assets as of the first quarter of 2020 (Q1-20); see Table 1 Panel A for the full sample. We expect these largest banks to provide the most detailed loan loss disclosures. We download the quarterly reports of the 15 banks from the investor relations websites for the five quarters from Q1-19 to Q1-20. If included in the quarterly reports, we hand-collect information on LLPs and LLAs by IFRS 9 impairment stage. We enrich the quantitative data with qualitative information about the impact of the COVID-19 crisis on the loan loss accounting of the sample banks. Such qualitative information provides additional insights into banks' perspectives on the crisis and its accounting implications.<sup>4</sup>

In our initial sample, we observe significant differences in the degree of detail in the quarterly loan loss disclosures. In particular, these differences pertain to the availability of loan loss accounting information by IFRS 9 impairment stage. While banks headquartered in northern European countries (e.g., Denmark, Germany, Norway and Sweden) appear to commonly provide detailed information on LLPs or LLAs by IFRS 9 impairment stage, their southern European counterparts (e.g., banks from France, Italy and Spain) usually provide information on LLPs or LLAs as the sum over the three impairment stages only. Since our interest lies in the loan loss information separated by IFRS 9 impairment stages and to keep hand collection of data manageable, we expand our initial sample by focusing on northern European banks among the 40 largest European financial institutions, measured by total assets as of Q1-20 (based on SNL Financial data). Our final sample includes 27 banks, of which 26 are among the 30 largest European banks.

### 3.2. Loan Loss Disclosures by European Banks

In their quarterly reporting, the sample banks typically differentiate between LLPs and LLAs for the asset categories measured in terms of *amortized cost (AC)*, *fair value through other comprehensive income (FVOCI)*, and *off-balance-sheet exposure (OBS)*. We focus our analysis on disclosures relating to the *amortized cost* category and on banks that provide details for the category of "loans and advances to customers". While the analyzed reports show a high level of consistency in the reporting practices of the sample banks, we cannot entirely rule out the possibility that different banks use accounting discretion to define the "loans and advances" category differently. However, given the concentration of our sample on the largest European banks, we assume the differences in the application of the disclosure rules to be negligible (Bushman, 2014).

We document that of the 27 sample banks, 14 banks provide information neither on LLPs nor on the total change in LLAs by IFRS 9 impairment stage. Five banks report only the total change in LLAs by impairment stage, and eight banks report both LLPs and changes in LLAs by impairment stage. We classify the first group of banks as providing *No Details*, the middle group as banks as providing *Limited Disclosures*, and the latter banks as providing *Detailed Disclosures*. Panel A of Table 1 provides an overview of the sample banks and their respective classifications.<sup>5</sup>

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<sup>3</sup> IFRS 9 is mandatory for European banks from 2018, whereas the equivalent FASB rules for US banks became effective only from 2020 for listed institutions and from 2021 for all others. Therefore, an extension of our sample to include US banks would illustrate little in terms of the effect of the ECL model at the outset of the COVID-19 crisis.

Banks in the *Detailed Disclosures* category typically provide a full reconciliation of the change in LLAs by impairment stage and do not report the LLPs directly by impairment stage. The reconciliations allow us to closely approximate LLPs for each impairment stage, as the change in LLAs includes LLPs and other credit risk changes such as foreign exchange adjustments. We estimate LLPs by stage as the sum of the net effect of remeasurement of expected credit losses during the quarter and the net effect of transfers into other impairment stages.

Banks in the *Limited Disclosures* category report the total change in LLAs by impairment stage without providing full reconciliations that would enable us to estimate LLPs by stage. While we acknowledge that LLPs separated by IFRS 9 impairment stages provide the most direct insights into the accounting effects of the ECL model, we use the total change in LLAs by stage as the most reasonable proxy. To support our choice, we calculate the Pearson correlation coefficient between the LLPs and the change in total LLAs by IFRS 9 impairment stage for those banks for which we have both sets of information. We find a high correlation of >90% for all three stages (stage 1: 94%; stage 2: 98%; stage 3: 91%).

Together, banks in the *Detailed Disclosures* and *Limited Disclosures* categories cover approximately 23% (9% and 14%, respectively) of the total assets of the universe of European banks included in the SNL Financial (S&P Global Market Intelligence) database, based on Q1-20 data. Albeit small, our sample thus represents a large and highly relevant cross-section of the European banking sector. Panel B of Table 1 provides descriptive statistics separately for the full sample, banks in the *Detailed Disclosures* category, and banks in the *Detailed Disclosures* and *Limited Disclosures* categories together.

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<sup>4</sup> For example, Erste Bank (Austria) reports that the “COVID-19 pandemic ... [is] likely to affect [its group] financial performance and position, including potentially significant impacts for expected credit losses”. The bank, however, did not change its risk assessment for Q1-20, stating that “due to high uncertainties in the economic environment reasonable estimates of financial effects cannot be currently made” and that the “bank ... will recognise the related effects as the situation becomes clearer throughout 2020” (Interim Report Q1-20 p. 25).

<sup>5</sup> We provide an example excerpt of the loan loss disclosures from banks’ reports for each group in the Appendix.

Table 1: Sample Overview and Classification of Loan Loss Disclosures

**Panel A: Sample & Disclosure**

Institution Name		LLP by stage	LLA by stage	Disclosure
ABN AMRO	NL	No	No	No Details
Bank of Ireland	IE	No	No	No Details
Barclays	UK	No	No	No Details
BBVA	ES	No	No	No Details
BNP Paribas	FR	No	No	No Details
Commerzbank	DE	No	Yes	Limited
Credit Agricole	FR	No	No	No Details
Credit Suisse	CH	No	No	No Details
Danske Bank	DK	Yes	Yes	Detailed
Deutsche Bank	DE	No	Yes	Limited
DNB	NO	Yes	Yes	Detailed
Erste Bank	AT	Yes	Yes	Detailed
Handelsbanken	SE	Yes	Yes	Detailed
HSBC	UK	No	No	No Details
ING	NL	No	Yes	Limited
Intesa Sanpaolo	IT	No	No	No Details
Jyske Bank	DK	Yes	Yes	Detailed
KBC	BE	No	Yes	Limited
Lloyds	UK	No	No	No Details
Nordea	SE	Yes	Yes	Detailed
Royal Bank of Scotland	UK	No	No	No Details
Santander	ES	No	No	No Details
SEB	SE	Yes	Yes	Detailed
Standard Chartered	UK	No	No	No Details
Swedbank	SE	Yes	Yes	Detailed
UBS	CH	No	Yes	Limited
UniCredit	IT	No	No	No Details
# Yes		8 (29.6%)	13 (48.1%)	
# Limited Disclosures				5 (18.5%)
# Detailed Disclosures				8 (29.6%)

## Panel B: Sample Distribution

Full Sample	Mean	SD	P25	P50	P75
Total Assets (€m)	865,908	681,062	329,443	730,923	976,246
Return on Assets	0.1%	0.5%	-0.1%	0.2%	0.4%
Return on Equity	1.6%	7.3%	-3.1%	4.1%	5.8%
Tier 1 Ratio	16.8%	2.2%	15.1%	17.0%	18.6%
Sub-sample: Detailed Disclosures					
Total Assets (€m)	330,822	164,210	258,443	290,278	381,522
Return on Assets	0.1%	0.4%	-0.2%	0.3%	0.4%
Return on Equity	2.1%	6.7%	-3.5%	5.4%	6.2%
Tier 1 Ratio	18.3%	1.7%	17.8%	18.7%	19.3%
Sub-sample: Detailed + Limited Disclosures					
Total Assets (€m)	530,805	395,244	279,565	329,443	600,394
Return on Assets	0.1%	0.3%	-0.1%	0.3%	0.4%
Return on Equity	2.3%	6.1%	-3.1%	5.0%	6.0%
Tier 1 Ratio	17.5%	2.0%	15.8%	17.8%	18.7%
<i>% of total European bank assets covered by SNL</i>					
Sub-sample: Detailed Disclosures				8.9%	
Sub-sample: Detailed + Limited Disclosures				23.1%	

The table summarizes information about loan loss disclosures and sample statistics. Panel A presents information on the loan loss disclosures from the quarterly reporting of 27 European banks in 2020-Q1. We distinguish between the separate reporting of loan loss provisions by the IFRS 9 impairment stages and the separate reporting of the total change in loan loss allowances by IFRS 9 impairment stages. The total change in loan loss allowances includes loan loss provisions and other changes in credit risk such as foreign exchange adjustments. Of the 27 banks, 14 banks neither provide information on loan loss provisions nor on the total change in loan loss allowances by impairment stages. 5 banks only report the total change in loan loss allowances by impairment stages and 8 banks report both loan loss provisions and changes in loan loss allowances by impairment stages. We classify the first group of banks as having *No Details*, the middle group as *Limited*, and the latter as *Detailed*. Panel B provides summary statistics for banks characteristics, separately for all 27 European banks, the *Detailed* group, and the *Detailed* and *Limited* group together. We obtain information on *Total Assets*, *Return on Assets*, *Return on Equity*, and *Tier 1 Ratio* in Q1-2020 from SNL (S&P Market Intelligence). We show the coverage of the sample (in terms of total assets) relative to the sum of total asset data provided by SNL for the European banking industry.

## 4. Recognition of Expected Credit Losses at the Beginning of the COVID-19 Crisis

### 4.1. Evidence from Banks with Detailed Loan Loss Disclosures

Provisioning for loans in stages 1 and 2 constitutes the key difference between the new ECL model under IFRS 9 and the former ICL model under IAS 39, while impairments in stage 3 of the ECL model largely correspond to impairments under the ICL model (Novotny-Farkas, 2016). Therefore, we use this difference, i.e., loan loss provisioning in stages 1 and 2, as our proxy for the relative effect of the ECL model at the beginning of the COVID-19 crisis. Loan loss provisioning right at this point is crucial in the assessment of the potential procyclicality of the new model. Mitigation of procyclicality through earlier recognition of future credit losses was a key intention of regulators with the adoption of the new ECL model (Financial Stability Forum 2009; Basel Committee on Banking Supervision, 2011; European Commission, 2016). Accordingly, in line with this regulatory intention, we should expect banks to increase their LLPs, especially those in stages 1 and 2, during the quarters leading up to the outbreak of the COVID-19 crisis in Europe in the first quarter of 2020.<sup>6</sup>

We first examine the provisioning behavior of sample banks with detailed disclosures before the outbreak of the crisis. Figure 1 shows quarterly LLPs by IFRS 9 impairment stage as a proportion of total LLAs in the respective stage. The share of stage 1 LLPs in stage 1 LLAs is, on average, negative for each quarter in 2019 and ranges from approximately -18.9% (Q2) to -1.1% (Q1). The average share of stage 2 LLPs in stage 2 LLAs follows a similar pattern but ranges only from approximately -4.0% (Q4) to +3.0% (Q3). These negative figures indicate that the reversal of loan loss provisions exceeded the recognition of new loan losses in these two stages. Both the relative average of stage 1 LLPs and stage 2 LLPs are still considerably negative (at -9.4% and -4.0%, respectively) for Q4-2019, the quarter when the first information about the risks associated with the outbreak of the virus in Asia became public and immediately before the first major European COVID-19 outbreak. In contrast, stage 3 LLPs are, on average, relatively stable and positive for the quarters throughout 2019, ranging from +5.2% (Q1) to +8.0% (Q3) of stage 3 LLAs.

Figure 2 documents a similar pattern when we scale quarterly LLPs at each stage by total LLPs for the quarter. Again, reversals exceed new loan losses in stages 1 and 2. More precisely, the sum of the average shares of stage 1 and stage 2 LLPs is negative for each quarter leading up to the outbreak of the COVID-19 crisis in Europe so that stage 3 LLPs constitute, on average, more than 100% of total LLPs for the respective quarter (between +106.9% [Q1] and +142.6% [Q2]).

The results in Figures 1 and 2 consistently show that the ECL model had no significant impact on banks' loan loss provisioning before the outbreak of the COVID-19 crisis. If anything, the results indicate that the impact of stages 1 and 2 of IFRS 9's new ECL model reduced total loan loss recognition because of relatively high loss reversals in the periods immediately before the crisis. Overall, total loan loss recognition in these periods was almost entirely shaped by impairments in stage 3, which is exactly the stage at which loan impairments already would have been required under IAS 39's ICL model.

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<sup>6</sup> The following timeline depicts the initial outbreak of COVID-19 in Europe. Dec. 31, 2019: The WHO reports a number of pneumonia cases in the Wuhan region, thereby confirming rumors that had surfaced throughout December about a novel virus in that geographic area. Jan. 30, 2020: The WHO declares a global health emergency. Feb. 14, 2020: First European death from COVID-19 in France. Feb. 23, 2020: Major surge in cases in Italy. Mar. 17, 2020: Ban on nonessential travel from outside the EU (<https://www.nytimes.com/article/coronavirus-timeline.html>, retrieved Feb 8, 2021).

We next examine how the negligible magnitude of recognized loan losses in stages 1 and 2 prior to the crisis relates to banks' loan loss provisioning right at the beginning of the crisis. Figure 1 shows a substantial increase in banks' loan loss provisioning for Q1-20. At this point, the increase is particularly pronounced for stage 1 and stage 2 LLPs. The share of stage 1 LLPs in stage 1 LLAs increases from -9.4% for Q4-19 to +22.7% for Q1-20. The share of stage 2 LLPs in stage 2 LLAs rises by a similar magnitude of approximately +29.8% from -4.0% (Q4) to +25.8% (Q1). For the same period, stage 3 LLPs increase only from +7.5% to +11.5% of total stage 3 LLAs.

Figure 2 supports this finding and shows a significant increase in stage 1 and stage 2 LLPs for the first quarter of 2020. In particular, the share of stage 1 LLPs in total LLPs increases from -21.1% for Q4-19 to +7.5% for Q1-20. Stage 2 LLPs, on average, now account for more than +35.6% of total LLPs for Q1-20 in comparison to -0.9% for Q4-19. The average share of stage 3 LLPs in total LLPs drops sharply from +122.0% for Q4-19 to +57.0% for Q1-20.

Taken together, the results in Figures 1 and 2 indicate that our sample banks significantly increased their recognition of expected credit losses, especially those in stage 2, once the crisis began but not in the periods before. This is consistent with banks perceiving the COVID-19 crisis as a relevant event that adversely affected the credit risk of their loan portfolios. However, when we combine the results for the beginning of the crisis with the results for the precrisis period, the overall evidence suggests that the sample banks, on average, failed to anticipate the economic consequences of the COVID-19 crisis for their loan portfolios and to build adequate reserves before the onset of the crisis. This finding is inconsistent with the regulatory objective of achieving timelier provisioning behavior and less volatility in profits by requiring banks to recognize ECLs at all times, considering past events, current conditions, and reasonable forecasts of future economic conditions. Indeed, once a crisis begins, the ECL model has a much more adverse impact on bank profits than the ICL model under IAS 39 if future expected credit risks are not anticipated before the crisis onset. The ECL model obliges banks not only to consider losses already incurred at the beginning of the crisis but also to anticipate the additional losses from this crisis, potentially even amplifying procyclicality.<sup>7</sup> This catch-up effect, which arises from the failure to anticipate loan losses, and the corresponding impact on bank profits are in clear contrast to the anticyclical effects that regulators intended to achieve when they introduced the ECL model under IFRS 9.

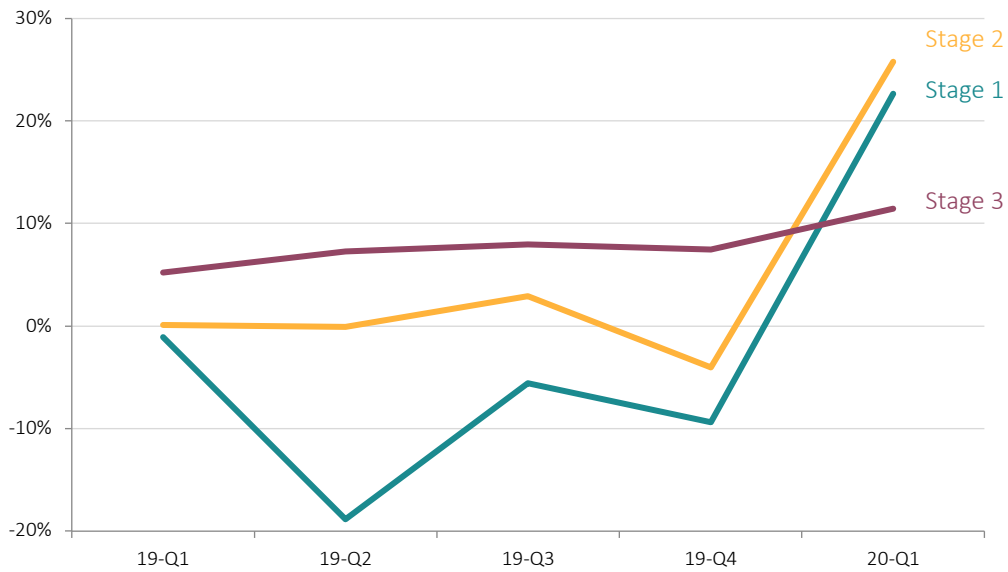
To also assess the relative impact of the ECL model on bank profitability, we estimate the average quarterly adjusted return on assets (ROA). The idea of the adjusted ROA is to reflect an ROA that is unaffected by the stage 1 and stage 2 impairment losses recognized as LLPs, i.e., the IFRS 9 impact. We calculate the adjusted ROAs by adding the stage 1 and stage 2 LLPs scaled by total assets to ROA and compare the adjusted figures with the reported ROAs.

Figure 3 documents that the adjusted and reported quarterly ROA trends are similar and are close in magnitude to those in the precrisis quarters. However, for Q1-20, at the beginning of the crisis, the stage 1 and stage 2 LLPs account for more than 50% of the reported ROAs. The results in Figure 3 are thus consistent with the evidence provided in Figures 1 and 2. Stage 1 and stage 2 LLPs appear to have played a minor role before the crisis but had a noticeable impact on banks' profitability right at the start of the crisis.

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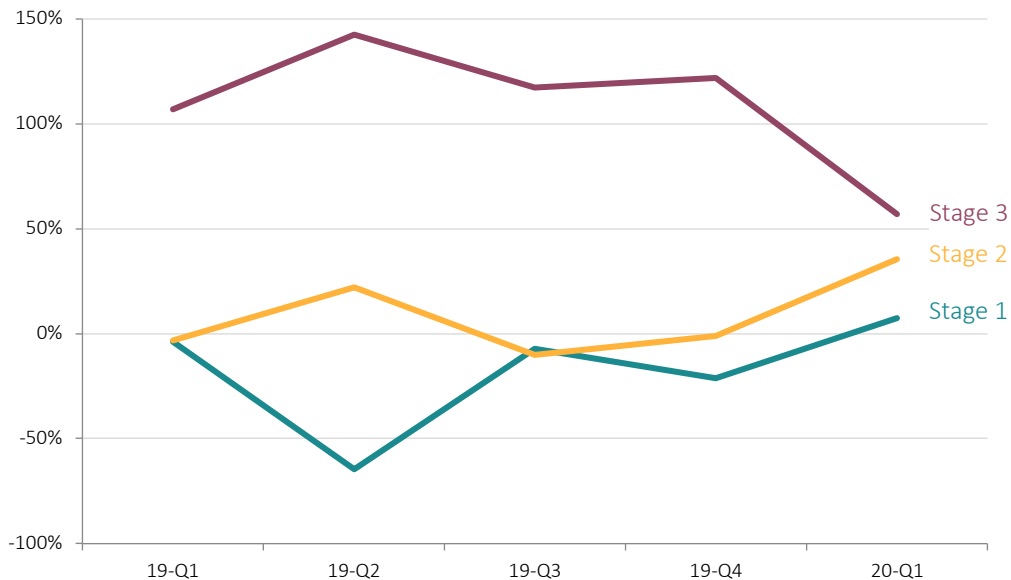
<sup>7</sup> This is well illustrated by the provisioning behavior of UniCredit in Q1-20. The bank recognized total loan loss provisions of €1.3 billion, of which €0.4 billion reflected "underlying LLPs" (i.e., the "underlying cost of risk, excluding the additional impairments for the IFRS 9 macro scenario LLPs update"), with the remainder relating to the update of the "macro scenario", i.e., to the immediate consequences of the COVID-19 crisis (Consolidated Interim Report Q1-20 p. 7).

Figure 1: LLPs scaled by total LLA (based on detailed disclosers)



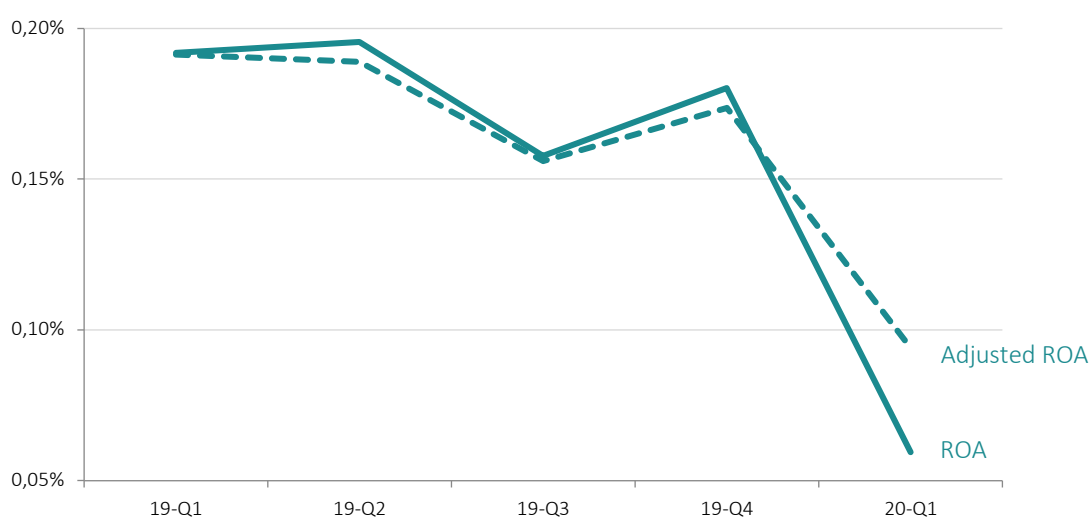
The figure plots the quarterly loan loss provisions by IFRS 9 impairment stages scaled by the respective stage-wise loan loss allowances for the sub-sample of banks with *Detailed Disclosures* from 2019-Q1 to 2020-Q1. The solid black line shows the stage 1 loan loss provisions as a share of stage 1 loan loss allowances. The dashed black line shows the stage 2 loan loss provisions as a share of stage 2 loan loss allowances. The dotted black line shows the stage 3 loan loss provisions as a share of stage 3 loan loss allowances.

Figure 2: LLPs by stage scaled by total LLP (based on detailed disclosers)



The figure plots the quarterly loan loss provisions (scaled by total loan loss provisions) by IFRS 9 impairment stages for the sub-sample of banks with *Detailed Disclosures* from 2019-Q1 to 2020-Q1. We exclude observations with small denominators that result in values larger than 300%. The solid black line shows the stage 1 loan loss provisions as a share of total loan loss provisions. The dashed black line shows the stage 2 loan loss provisions as a share of total loan loss provisions. The dotted black line shows the stage 3 loan loss provisions as a share of total loan loss provisions.

Figure 3: ROA effect of Stage 1 and 2 LLPs



The figure presents the effect of the IFRS 9 impairment stage 1 and 2 loan loss provisions (LLPs) on the return on assets (ROA) for the sub-sample of banks with *Detailed Disclosures* from 2019-Q1 to 2020-Q1. The solid black line shows the average quarterly ROA (as reported). We calculate ROA as earnings before tax (EBT) scaled by total assets. The dashed black line shows the average quarterly adjusted ROA. We calculate the adjusted ROA by adding the stage 1 and 2 LLPs scaled by total assets to ROA.

#### 4.2. Evidence from an Extended Sample with Limited Loan Loss Disclosures

We acknowledge that the results in Figures 1, 2, and 3 are based on a relatively small sample of banks that voluntarily provided extended disclosures of their loan loss provisioning choices. It is plausible that these banks, while being large and systemically relevant in their own right, represent a special subset of the European banking sector, calling the representativeness of the findings into question. Therefore, we re-examine the impact of the ECL model of IFRS 9 on banks' loan loss provisioning before and at the beginning of the COVID-19 crisis with an extended sample. The extended sample includes both banks with detailed disclosures and banks with limited disclosures. While the extended sample allows us to gauge the representativeness of our findings of the more general provisioning behavior of European banks, it restricts us to using the total change in LLAs by IFRS 9 impairment stage (i.e., the net effect after charge-offs) as a proxy for recognized LLPs by stage.

Table 2 presents the relative quarterly changes in LLAs for the extended sample, broken down by the three impairment stages under IFRS 9. For the precrisis quarters of 2019, the average changes in stage 1 and stage 3 LLAs are fairly constant, ranging from -2.3% to +3.4% for stage 1 LLAs from the previous quarter and from -2.1% to +3.3% for stage 3 LLAs from the previous quarter, respectively. With the exception of Q3-19, the relative change in stage 2 LLAs is, on average, negative and decreases monotonically from -0.7% for Q1 to -6.5% for Q4. Table 3 shows similar patterns for the relative share of the stages in total LLAs over time. The shares of stages 1 and 2 gradually decrease for the periods over 2019 from +9.2% to +8.9% and +17.7% to +15.7%, respectively, so that the share of stage 3 slightly increases from +73.1% to +75.4%.

The patterns in the LLAs of the extended sample are similar to the precrisis provisioning behavior observed in the sample of banks with detailed disclosures in section 3.1. They suggest that banks, on average, did not recognize any material loan loss provisions for ECL (i.e., at stages 1 and 2) in advance of the crisis.



For the beginning of the crisis in Q1-20, Table 2 documents a significant increase in the average change in LLAs in stages 1 and 2. Stage 1 LLAs show increases, on average, of +36.9% and stage 2 LLAs of +34.6%. In contrast, the average stage 3 LLAs increase only moderately by +7.9%. Table 3 indicates a similar pattern. Only after the onset of the crisis do the relative shares of stages 1 and 2 increase, on average, from +8.9% to +10.1% and from +15.7% to +18.3%, respectively. Accordingly, the share of stage 3 in total LLAs falls from +75.4% in Q4-19 to +71.6% in Q1-20.

Table 2: Relative change in LLA by stage (based on extended sample)

Stage 1	Mean	SD	P25	P50	P75
19-Q1	3.4%	4.5%	1.3%	3.2%	4.8%
19-Q2	-2.3%	9.6%	-8.1%	1.7%	3.2%
19-Q3	0.0%	8.3%	-1.6%	-0.6%	1.5%
19-Q4	-0.2%	13.9%	-4.4%	-2.8%	-0.1%
20-Q1	36.9%	50.1%	11.8%	20.5%	60.0%
Stage 2					
19-Q1	-0.7%	5.4%	-5.9%	0.0%	4.1%
19-Q2	-4.1%	8.5%	-6.6%	-1.7%	1.6%
19-Q3	0.5%	7.7%	-3.9%	-0.5%	7.4%
19-Q4	-6.5%	9.9%	-13.0%	-4.5%	2.4%
20-Q1	34.6%	29.5%	19.0%	28.4%	42.8%
Stage 3					
19-Q1	0.9%	4.3%	-2.0%	0.1%	1.7%
19-Q2	-2.1%	6.4%	-4.6%	-3.1%	1.5%
19-Q3	3.3%	5.7%	-0.5%	2.6%	7.3%
19-Q4	2.0%	6.5%	-1.1%	-0.4%	2.7%
20-Q1	7.9%	9.4%	2.4%	4.7%	14.9%

The table presents summary statistics for quarterly changes in loan loss allowances by IFRS 9 impairment stages from 2019-Q1 to 2020-Q1. We report the average relative quarterly changes in the loan loss allowances, separately for each stage based on the quarterly reports of the subsample of banks with *Detailed Disclosures* and *Limited Disclosures*:  $\Delta LLA_{t,s} = \frac{1}{13} \sum_{i=1}^{13} \left( \frac{LLA_{i,t,s} - LLA_{i,t-1,s}}{LLA_{i,t-1,s}} \right)$ . The subscript *i* indicates the bank, *t* indicates the reporting period, and *s* indicates the impairment stage (1, 2, and 3).

Table 3: Relative share of total LLA by stage (based on extended sample)

Stage 1	Mean	SD	P25	P50	P75
19-Q1	9.2%	3.1%	7.9%	8.4%	12.1%
19-Q2	9.2%	3.3%	6.9%	9.1%	11.4%
19-Q3	9.0%	3.3%	6.3%	8.4%	11.4%
19-Q4	8.9%	3.1%	7.0%	8.9%	11.3%
20-Q1	10.1%	3.1%	7.7%	10.5%	12.4%
Stage 2					
19-Q1	17.7%	5.7%	14.0%	16.1%	20.1%
19-Q2	17.2%	4.9%	14.8%	15.8%	19.0%
19-Q3	16.8%	4.6%	15.2%	16.1%	18.6%
19-Q4	15.7%	4.9%	13.8%	14.8%	17.9%
20-Q1	18.3%	5.2%	14.4%	17.1%	22.4%
Stage 3					
19-Q1	73.1%	7.1%	66.7%	74.5%	77.7%
19-Q2	73.6%	5.8%	69.4%	73.3%	77.3%
19-Q3	74.2%	5.3%	70.5%	72.5%	77.5%
19-Q4	75.4%	5.6%	71.8%	74.3%	77.3%
20-Q1	71.6%	5.1%	68.8%	70.2%	72.1%

The table provides summary statistics for the share of the individual IFRS 9 impairment stages in total loan loss allowances from 2019-Q1 to 2020-Q1. We report the average share based on the quarterly reports of the subsample of banks with Detailed Disclosures and Limited Disclosures:  $\%LLA_{t,s} = \frac{1}{13} \sum_{i=1}^{13} \left( \frac{LLA_{i,t,s}}{LLA_{i,t}} \right)$ . The subscript  $i$  indicates the bank,  $t$  indicates the reporting period, and  $s$  indicates the impairment stage (1, 2, and 3).

The results from the extended sample provide evidence consistent with banks not having used impairment stages 1 and 2 anticipatorily to provision for the COVID-19 crisis. The results for the small sample of banks with detailed disclosures (see section 4.1 above) appear representative of the more general provisioning behavior of European banks.

Overall, our descriptive evidence suggests that banks, on average, failed to anticipate the crisis in their loan loss accounting. The resulting significant increases in stage 1 and stage 2 LLPs and LLAs in Q1-2020 indicate the considerable impact of the ECL model on banks' provisioning behavior and profits right at the beginning of a crisis. These observed patterns are in clear contrast to regulatory intentions to avoid the considerable increases in loan loss provisions at crisis onset as observed in the financial crisis of 2008-09. The results suggest that the ECL model can even amplify procyclicality at the start of a crisis.

## 5. Discussion

### 5.1. Limited Use of Stages 1 and 2 during the Precrisis Period

The descriptive evidence suggests that on average, our sample banks' use of IFRS 9 impairment stages 1 and 2 was very low in magnitude in the quarters leading up to the COVID-19 crisis. This is in contrast to regulatory intentions to achieve an earlier recognition of future credit losses, particularly through the implementation of these 2 stages under the IFRS 9 ECL model. The high fraction of stage 3 loss reserves largely corresponds to loan loss recognition under the previous IAS 39 ICL model. In the absence of meaningful impairments in stages 1 and 2, however, improved anticyclical effects from an ECL model relative to the effects of an ICL model are not possible. In contrast, our results suggest that the ECL model may even exacerbate procyclicality at the beginning of a crisis because it can lead to substantial reversals of stage 1 and stage 2 impairments during upturns.

We interpret the failure of banks to adequately anticipate future credit losses in periods leading up to a crisis and the sharp increase in stage 1 and stage 2 impairments at the onset of the crisis to be consistent with the following views. First, for the IFRS 9 ECL model to meet regulatory expectations and decrease procyclicality through earlier provisioning, especially in stages 1 and 2, banks need to be able to adequately anticipate future credit losses. A largely exogenous crisis such as the COVID-19 pandemic, however, cannot be well anticipated by the valuation models underlying the ECL approach. Even if a pandemic scenario is included, the assigned probability is likely too low to meaningfully increase stage 1 and stage 2 impairments.<sup>8</sup> As the provisioning behavior of our sample banks shows, the crisis had to fully materialize in Q1-20 for stage 1 and stage 2 LLPs to increase notably. Instead of anticipating the crisis, most of our sample banks appear to have merely reacted to it. In the case of such anticipation failures, the ECL model potentially exacerbates procyclicality in bank earnings and lending behavior, as it forces banks to recognize all expected credit losses in Q1-20 instead of just the incurred losses at that point in time. The increase in procyclicality can be further amplified by the so-called cliff effect of the IFRS 9 ECL model. Stage 1 impairments are measured based on 12-month ECLs, while stage 2 and stage 3 impairments are recognized with their lifetime ECLs. This implies that at stage 1, which represents approximately 80% of loans held by the average European bank, a substantial fraction of expected lifetime losses is not included in the LLA. In a sudden downturn such as the COVID-19 crisis, the cliff effect thus became particularly pronounced.<sup>9</sup>

Second, a substantial body of prior literature documents the importance of the interaction between incentives and accounting standard changes (e.g., Ball et al., 2000, 2003; Leuz, 2003). In particular, the ICL model does not appear to have been a binding constraint on banks' loss provisioning during the financial crisis of 2008 (e.g., Bischof et al., 2021). In light of this finding, it seems questionable whether managers have proper incentives to recognize loan losses in a timely manner (especially as a result of capital considerations), particularly since the IFRS 9 ECL model provides managers with additional discretion. Consistent with this interpretation, our results imply that managers fail to meaningfully incorporate the crisis scenario in their loan loss

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<sup>8</sup> In his speech on frictions in stress-testing practices highlighted by the financial crisis of 2008-09, Andrew Haldane, chief economist of the Bank of England, refers to this as "disaster myopia" – "agents' propensity to underestimate the probability of adverse outcomes, in particular small probability events" (<https://www.bankofengland.co.uk/-/media/boe/files/speech/2009/why-banks-failed-the-stress-test.pdf>, retrieved 16 March 2021).

<sup>9</sup> These issues are in part overcome by the solution adopted by the FASB in ASU 2016-13 (Topic 326). Under these rules, US banks will always have to provision for current expected credit losses; i.e., the LLA has to cover expected lifetime credit losses at all times. While this approach has been shown in simulations to decrease procyclicality more than the IFRS 9 ECL model, this result comes at the cost of a significant increase in provisions (e.g., Abad and Suarez, 2018).

modeling, even in Q4-19. Even if the full outcomes of the COVID-19 crisis were hardly to be anticipated in Q4-19, a thorough analysis of early indicators and the proper incorporation of these warning signs in the scenarios should have at the very least prevented our sample banks from decreasing, on average, their LLAs in the last quarter before the effective outbreak.

## 5.2. Evidence on Regulatory Forbearance

Bank regulators are tasked with exercising oversight over the banks in their jurisdictions, ensuring compliance with accounting regulations, and taking enforcement actions that range from minor calls for certain improvements up to closure and resolution of banks in cases of noncompliance. However, particularly during times of crisis or general weakness of the banking sector, evidence suggests a systematic failure of bank regulators to impose prompt corrective actions (Bushman and Landsman, 2010). Regulatory forbearance is a mechanism whereby bank regulators deliberately disregard noncompliance with extant rules (e.g., banks' overstatement of assets and regulatory capital) to avoid otherwise necessary interventions in troubled banks (e.g., Kane, 1989; Kroszner and Strahan, 1996; Caballero et al., 2008; Skinner, 2008; Brown and Dinç 2011; Huizinga and Laeven, 2012; Cole and White, 2017; Gallemore, 2021).

In our European setting, the main bank regulator for the large, systemically important banks in our sample is the ECB. At the beginning of the COVID-19 crisis in April 2020, the ECB sent a letter formally expressing its perspective on loan loss provisioning and the ECL model in the context of the crisis to the institutions under its supervision (European Central Bank, 2020). In its letter, the ECB recommended that banks "avoid excessively procyclical assumptions in their IFRS 9 models to determine their provisions" (p.1). It justified this recommendation based on the "context of heightened uncertainty and very limited availability of reasonable and supportable forward-looking information on the impact" of COVID-19 (p.1). Notwithstanding this (undoubtedly) high level of uncertainty, the ECB assured banks that it would not object to any judgment that the economy would rebound to its long-term trend in 2020, effectively allowing banks to assign significant weight to the most optimistic scenario in their models (i.e., an immediate recovery of the economy).

The ECB's recommendations potentially shaped the financial reporting of banks in Europe, as supported, for example, by the behavior disclosed in the Q1-20 reporting of Erste Group Bank AG (Erste). Erste did not include estimations of the financial implications of the COVID-19 crisis in its ECLs but merely qualitatively indicated possible loan loss implications of the crisis and excused the lack of quantitative estimates by referring to the high level of uncertainty in the economic environment. The bank furthermore stated that it did not recalibrate macroeconomic indicators in its ECL model based on forward-looking information available in Q1-20 and would do so only when the uncertainty about the economic context had resolved. Thus, Erste did not even contemplate adverse outcomes of the COVID-19 crisis for its loan portfolio at a time when the pandemic had already materialized. Such a lack of timely provisioning limits investors' ability to assess a bank's condition and its exposure to adverse effects from the crisis. Additionally, with many banks including COVID-19-related scenarios in their macroeconomic models, the ability of investors to compare banks on this dimension is restricted.

Anecdotal evidence from individual banks such as Erste indicates that the ECB actually practiced forbearance during the early months of the COVID-19 crisis and highlights the tensions between accounting rules and supervisory intentions: Indeed, "the aim of accounting is to provide a faithful representation of firms' financial condition, while that of prudential regulation and supervision is to ensure the resilience of banks and the financial system" (Borio and Restoy, 2020, pp. 1-2). In a situation such as the current COVID-19 crisis, at the onset of which the ECL model had

not resulted in the provision of a sufficient capital buffer, forbearance further delays loan loss recognition, resulting in a situation that is remarkably similar to the pattern of loan loss provisions under the ICL model during the 2008-09 financial crisis.

## 6. Conclusions and outlook

Recently, in response to the criticism that the ICL model resulted in delayed recognition of credit losses during the financial crisis 2008-09, the IASB and FASB adopted ECL models for the loan loss provisioning of banks. The ECL model represents a more forward-looking approach and is designed to shift loss recognition to a much earlier stage of the economic cycle. The COVID-19 pandemic provided the first crisis setting to put banks' loan loss accounting under this new regulation to the test. In particular, we examine whether banks had built up sufficient capital buffers under the ECL model at the onset of the COVID-19 crisis. Our results suggest that banks' loan loss provisioning under the new ECL model was lower in the quarters leading up to the crisis than it would have been under the former ICL model. In particular, we find that banks, on average, do not seem to have used stages 1 and 2 of the new IFRS 9 ECL model to build up sufficient LLAs. Only after the crisis materialized did stage 1 and stage 2 LLPs increase sharply, forcing regulators such as the ECB to practice forbearance and be lenient in the enforcement of additional loss recognition.

We interpret these findings as consistent with the view that banks failed to adequately adjust their internal expected credit loss estimates due to the exogenous nature of the COVID-19 pandemic (e.g., López-Espinosa and Ormazabal, 2021). Additionally, increased reporting discretion in banks' estimation procedure further augmented this effect. Overall, the documented patterns are in clear contrast to regulatory intentions to avoid considerable increases in loan loss provisions at the onset of a crisis as observed in the financial crisis of 2008-09. The results suggest that the ECL model can even amplify procyclicality at the start of a crisis.

Our paper's findings are subject to several caveats and should be interpreted as early and descriptive evidence on banks' loan loss provisioning behavior under the new ECL model at the onset of a crisis. Most notably, our inferences are based on the loan loss provisioning choices of a small sample, potentially impeding the generalizability of the findings. The sample, however, represents a relevant cross-section of the European banking sector. Importantly, it allows us to observe and collect sufficiently detailed disclosures of banks' provisioning choices under the new regulation, i.e., loan loss provisions or allowances by IFRS 9 impairment stage. This level of detail is necessary to offer an approximate comparison of the former ICL and the new ECL models.

We see vast opportunities for future empirical research related to this topic. First, as the COVID-19 pandemic evolves, more information on banks' loan loss provisioning behavior under the ECL model during a crisis will become available. With the implementation of an ECL model in the US, international comparisons can provide insights into the role of the institutional framework of banking supervision. Second, potential heterogeneity in banks' loan loss provisioning behavior is an interesting avenue that may allow us to shed light more explicitly on the role of discretion and managerial incentives under the new rules. Last, the responses and measures taken by bank regulators during the COVID-19 crisis provide ample room for studying the economic outcomes of regulatory forbearance.

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## Appendix

Table 4: Effect of the change in LLA on the ROA (based on extended sample)

	Mean ROA	Mean Adj. ROA	Difference	% Difference
	(1)	(2)	(3) = (1) - (2)	(3)/(1)
19-Q1	0.161%	0.162%	-0.1 bps	-0.3%
19-Q2	0.173%	0.170%	0.3 bps	1.9%
19-Q3	0.147%	0.147%	0.0 bps	-0.3%
19-Q4	0.147%	0.144%	0.4 bps	2.7%
20-Q1	0.054%	0.083%	-2.9 bps	-52.9%

The table presents the effect of the IFRS 9 impairment stages 1 and 2 on return on assets (ROA) for the subsample of banks with *Detailed Disclosures* and *Limited Disclosures* from 2019-Q1 to 2020-Q1. We compute the effect of the impairment stages 1 and 2 as the change in total loan loss allowances that is attributable to these two stages. Column (1) shows the average quarterly ROA. We calculate ROA as earnings before tax (EBT) scaled by total assets. Column (2) shows the average quarterly adjusted ROA. We calculate the adjusted ROA by adding the stage 1 and 2 change in LLAs scaled by total assets to ROA. Column (3) presents the level difference between the ROA and the adjusted ROA. Column (4) presents the relative difference between the ROA and the adjusted ROA as a percentage.

## Exemplary excerpts from the quarterly loan loss disclosures

### Ex. 1: Detailed Disclosure

#### Reconciliation of total allowance account

(DKK millions)

	Stage 1	Stage 2	Stage 3	Total
<b>ECL allowance account as at 1 January 2019</b>	<b>1,601</b>	<b>5,450</b>	<b>14,118</b>	<b>21,170</b>
Transferred to stage 1 during the period	797	-711	-87	-
Transferred to stage 2 during the period	-358	1,073	-714	-
Transferred to stage 3 during the period	-35	-553	587	-
ECL on new assets	266	1,182	2,463	3,911
ECL on assets derecognised	-328	-1,187	-2,972	-4,487
Impact of net remeasurement of ECL (incl. changes in models)	-613	745	1,388	1,520
Write-offs debited to the allowance account	-	-5	-799	-804
Foreign exchange adjustments	4	22	93	120
Other changes	-18	-55	-44	-117
<b>ECL allowance account as at 31 December 2019</b>	<b>1,316</b>	<b>5,963</b>	<b>14,033</b>	<b>21,313</b>
Transferred to stage 1 during the period	297	-276	-21	-
Transferred to stage 2 during the period	-157	443	-286	-
Transferred to stage 3 during the period	-4	-413	417	-
ECL on new assets	101	516	785	1,401
ECL on assets derecognised	-108	-473	-1,107	-1,687
Impact of net remeasurement of ECL (incl. changes in models)	51	2,175	2,440	4,666
Write-offs debited to the allowance account	-	6	-210	-204
Foreign exchange adjustments	-19	-112	-180	-311
Other changes	-5	-311	253	-64
<b>ECL allowance account as at 31 March 2020</b>	<b>1,471</b>	<b>7,518</b>	<b>16,124</b>	<b>25,113</b>

The movements on the allowance account are determined by comparing the classification and amount in the balance sheet at the beginning and the end of the period. The table above excludes the allowance account of DKK 4 million (31 December 2019: DKK 4 million) relating to bonds at amortised cost or fair value through other comprehensive income (all in stage 1). For further information on the decomposition of the allowance account on facilities in stages 1-3 under IFRS 9, see the notes on credit risk.

The excerpt is taken from the Q1-20 interim report of Danske Bank (p. 50). It is representative of the disclosures provided by the banks in the sub-sample providing detailed disclosures. The disclosures provided allow to both calculate the quarterly loan loss provisions by IFRS 9 impairment stages and the total change in the loan loss allowance by stages.

## Ex. 2: Limited Disclosure

ING Bank: Stock of provisions <sup>1)</sup>			
in € million	31 Mar. 2020	31 Dec. 2019	Change
Stage 1 12-month ECL	458	490	-31
Stage 2 Lifetime ECL not credit impaired	1,131	881	250
Stage 3 Lifetime ECL credit impaired	3,459	3,273	186
Purchased credit impaired	3	1	2
<b>Total</b>	<b>5,052</b>	<b>4,645</b>	<b>407</b>

<sup>1)</sup> At the end of March 2020, the stock of provisions included provisions for loans and advances to central banks (€4 million), loans and advances to banks (€8 million), financial assets at FVOCI (€8 million), securities at amortised cost (€8 million), provisions for loans and advances to customers (€4,998 million) and provisions for contingent liabilities (credit replacements) recorded under Provisions (€26 million).

The excerpt is taken from the Q1-20 press release of the ING Bank (p. 19). It is representative of the disclosures provided by the banks in the sub-sample providing limited disclosures. The disclosures provided allow to discern the total change in the loan loss allowance by IFRS 9 impairment stages.

## Ex. 3: No Details

(in millions)							First quarter 2020
	Banks	Residential mortgages	Consumer loans	Corporate loans	Other loans	Total loans and advances	Off-balance
<b>Balance at 1 January 2020</b>	<b>5</b>	<b>140</b>	<b>298</b>	<b>1,982</b>	<b>6</b>	<b>2,431</b>	<b>16</b>
Transfer to stage 1		-2	-3	-7		-12	
Transfer to stage 2		9	12	79		100	4
Transfer to stage 3		14	16	63		93	
Remeasurements <sup>1</sup>	-2	-31	9	664	-1	639	192
Changes in risk parameters	1	23	7	73		104	3
Originated or purchased	2	1	6	10		19	2
Matured or sold loans		-4	-5	-13		-23	-2
<b>Impairment charges (releases) on loans and advances</b>		<b>9</b>	<b>42</b>	<b>870</b>	<b>-1</b>	<b>919</b>	<b>199</b>
Write-offs		-4	-21	-333		-359	
Unwind discount / unearned interest accrued				8		8	
Foreign exchange and other movements			-1	-27		-28	
<b>Balance at 31 March 2020</b>	<b>5</b>	<b>145</b>	<b>317</b>	<b>2,499</b>	<b>5</b>	<b>2,971</b>	<b>215</b>
Impairment charges (releases) on loans and advances		9	42	870	-1	919	199
Recoveries and other charges (releases)		-5	-10	-9		-23	16
<b>Total impairment charges for the period<sup>2</sup></b>		<b>4</b>	<b>32</b>	<b>861</b>	<b>-1</b>	<b>896</b>	<b>215</b>

<sup>1)</sup> Remeasurements represents the current year change of expected credit loss allowances mainly attributable to changes in volumes such as partial repayments and changes in the credit quality of existing loans remaining in their stage.

<sup>2)</sup> The impairment charges for the period excludes charges (releases) for financial investments held at FVOCI 31 December 2020: EUR 0 million (31 December 2019: EUR 0 million).

The excerpt is taken from the Q1-20 interim report of the ABN AMRO Bank (p. 22). It is representative of the type of information provided by many banks in the sub-sample showing no detailed disclosures. While there is considerable heterogeneity in this sub-sample, we classified banks in this category if we are not able to discern at least the total change in their loan loss allowances by IFRS 9 impairment stages.

## Collaborative Research Center

This project is part of the SMART Research Initiative “Covid-19 and Beyond” of the Collaborative Research Center TRR 266 Accounting for Transparency. The project relates to the TRR 266 project “A09 Voluntary Disclosures” led by Jannis Bischof.

The TRR 266 Accounting for Transparency is a trans-regional Collaborative Research Center funded by the German Research Foundation (Deutsche Forschungsgemeinschaft – DFG). Our team of more than 80 dedicated researchers examines how accounting and taxation affect firm and regulatory transparency and how regulation and transparency impact our economy and society. We intend to help develop effective regulation for firm transparency and a transparent tax system. Naturally, we also ensure transparency of our own research.



## Contact information

We look forward to your suggestions and an exciting discourse on our research results. Please feel free to contact us.



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