Empirical results for expected credit losses of G-SIBs during COVID-19

Brouwer, Tristan; Huttenhuis, Job; ter Hoeven, Ralph

Published in:
Maandblad voor Accountancy en Bedrijfseconomie

DOI:
10.5117/mab.95.75980

MAB MAANDBLAD VOOR ACCOUNTANCY EN BEDRIJFSECONOMIE

Maandblad voor Accountancy en Bedrijfseconomie 95(11/12) (2021): 381–396
DOI 10.5117/mab.95.75980

Research Article

Empirical results for expected credit losses of G-SIBs during COVID-19. The proof of the pudding is in the eating

Tristan Brouwer, Job Huttenhuis, Ralph ter Hoeven

Received 30 September 2021 | **Accepted** 16 November 2021 | **Published** 16 December 2021

Abstract

This study examines the provision for credit losses and its disclosures for Global Systemically Important Banks (G-SIBs) in connection to the COVID-19 crisis. We find a profound difference in the increase of the provision for credit losses between banks that report under IFRS and US GAAP. For banks that report under US GAAP, the provision for credit losses more than doubles, while it increases by only 32 percent for banks that report under IFRS. This difference becomes even more striking when considering that the increase for IFRS-reporting banks is partly attributable to increased lending activities. This study further finds that European auditors are more likely to issue a Key Audit Matter (KAM), than auditors of US banks, and that these KAMs specifically relate to COVID-19 in the financial year 2020. Furthermore, IFRS-reporting banks disclose more information on expected credit losses than banks that report under US GAAP. Moreover, we find that European banks disclose relatively more information regarding the impact of COVID-19 than banks reporting under US GAAP.

Relevance to practice

This study provides a comprehensive analysis of the provision for credit losses of G-SIBs. The research provides insights on how the provision for credit losses has developed in times of a crisis. In addition, this study shows what the effect is of switching from an incurred loss model to an expected credit loss model. The study also offers best practices for the disclosures of the provision for credit losses.

Keywords

ECL, Expected Credit Loss, Provision for Credit Losses, Loan Loss Provision, IFRS 9, IFRS 7, ASC 326, Financial Instruments, G-SIBs, Banks

1. Introduction

On 1 January 2018 the International Financial Reporting Standard (IFRS) 9 - Financial Instruments, published by the International Accounting Standards Board (IASB), became effective. The introduction of this new standard was a response to the global financial crisis of 2008. The main criticism of the old International Accounting Standard (IAS) 39 - Financial Instruments, was that the provision for credit losses was '*too little, too late*' and increased procyclicality (López Espinoza et al. 2021). IAS 39 stipulated an 'incurred' credit loss model. The provision for credit losses was only recognized once a credit event manifested. This caused the provision for credit losses to not be a reliable estimate of the future credit risks related to assets not in default. In addition, the incurred credit loss model also increased procyclicality because a bank will recognise losses in economic downturns which will decrease the lending activity which, in turn, will lead to deeper recessions in the economic downturns (BCBS

2021). In IFRS 9, the IASB endeavoured to resolve this criticism by forming the provision for credit losses based on expected credit losses (ECL) instead of incurred credit losses. In the United States of America, the Financial Accounting Standards Board (FASB) introduced Accounting Standards Committee (ASC) 326, Financial Instruments - Credit Losses, with the same goal as the IFRS 9. ASC 326, Financial Instruments - Credit Losses also requires expected credit losses to be the basis of the provision for credit losses. The 2020 US GAAP financial reports are the first financial statements that determine loan loss provisions based on the ECL principle.

In late 2019 the COVID-19 virus emerged and quickly spread across the world. To prevent the virus from spreading, lockdowns were imposed together with other measures that were harmful for the economy[1]. The imposed measures increased the likelihood that clients of banks were unable to repay their loans. This is the first crisis since the ECL framework became effective and offers the opportunity to examine the ECL framework empirically, for the circumstances it was designed for. Hence, as the proof of the pudding is in the eating, this study will examine the application and disclosures of the ECL-model under the IFRS and US GAAP reporting frameworks and will analyse the transfer from an incurred credit loss model to an expected credit loss model.

This study will add to the existing literature in several ways. To our knowledge we are the first to report on the impact of COVID-19 on the provision for credit losses. Although there is early research on the switch from an incurred loss model to an expected credit loss model (e.g. López Espinoza et al. 2021), this stream of empirical research has only incorporated the switch from IAS 39 to IFRS 9. This study will add to the existing literature by also describing the impact of the switch from ASC 310 to ASC 326. Lastly, most academic research on the topic of expected credit losses is centred around statistical analyses. This article will contribute to this stream of research by describing the impact of COVID-19 on expected credit losses and incorporating the quality of the disclosures regarding expected credit losses. Prior research indicates that during the financial crisis the disclosures regarding loss provisions were relatively sparse (Bischof et al. 2021). This study will therefore also examine the quality of the disclosures under the COVID-19 pandemic.

The article is structured as follows; in Section 2 the credit loss provision stipulations under IFRS and US GAAP are summarized, along with the connection with academic research. In Section 3 the data and the sample of this study are described. The outcomes of our empirical analyses on expected credit losses are described and analysed in Section 4. Subsequently, Section 5 analyses the disclosures related to expected credit losses and offers best practices to the reader. This study is concluded by Section 6, in which we provide concluding remarks and give recommendations to further improve the quality of financial reporting.

2. Credit loss provision

The provision for credit losses is, for annual reports based on IFRS, determined by IFRS 9 (IASB 2020).[2] Under US GAAP credit losses are determined by ASC 326 (FASB 2020). Both accounting standards require banks to determine *expected* credit losses, which have replaced the *incurred* credit loss models of IAS 39 and ASC 310 as of 1 January 2018 for IFRS[3], and 1 January 2020 for US GAAP[4], respectively. The expected credit loss approach has been introduced as response to criticisms of the incurred loss model in IAS 39 and ASC 310 (López Espinoza et al. 2021). Those criticisms included the concerns that the model in IAS 39 overstated interest revenue in periods before a credit loss event occurred, that it delayed the recognition of credit losses and was complex due to its multiple impairment approaches (IFRS 9 BC5.83). The incurred loss methodology is therefore procyclical, which leads to deeper recessions in economic downturns (BCBS 2021). The ECL methodology will reduce the procyclicality of the provision for credit losses and will be more predicative of future bank risk (Agénor and Zilberman 2015; López Espinoza et al. 2021). In addition, Chae et al. (2019) show that the (C)ECL methodology (see next section) recognises losses earlier relative to incurred losses methodology in all the scenarios examined.

For banks, the ECL of IFRS 9 is mainly applicable to debt instruments that are financial assets measured at amortised cost, measured at fair value through other comprehensive income and loan commitments. The ECL is determined based on a three stages approach. In stage 1 the ECL is calculated for a twelve-month period. If a significant increase in credit risk (SICR) is observed or financial instruments are credit impaired, a lifetime ECL is required. These financial instruments are for determination of ECL referred to as stage 2 and 3, respectively. ASC 326 refers to determination of *Current* Expected Credit Losses (CECL). The main difference compared to IFRS 9, is that always a lifetime (C)ECL should be determined. As a result, US GAAP requirements do not include the determination of a significant increase in credit risk. Under both approaches, forward-looking information is considered for the calculation of the (C)ECL. Although the new ECL methodology will reduce procyclicality, research shows that the ECL approach in addressing procyclicality may also be less than hoped (Covas and Nelson 2018; BCBS 2021). Prior research shows that the ECL model under IFRS 9 is more procyclical than under ASC 326 (Krüger et al. 2018; Buesa et al. 2019). This is due to the '*cliff effect*'[5] that is present under IFRS 9 (Kund and Rugilo 2018). Several studies show that the provision for credit losses will increase substantially when the methodology is changed from an incurred loss model to an expected loss model (Abad and Suarez 2018; Gaffney and McCann 2018; Ertan 2019; Löw et al. 2019). In addition, López Espinoza et al. (2021) find that in situations of adverse credit conditions, the ECL model results in a significant increase in provisions for credit losses. It is

therefore expected that the provision for credit losses will increase substantially due to the impact of COVID-19.

Both the IASB and FASB do not prescribe a certain methodology to determine (C)ECL and recognize the judgmental character of the estimate. As a result, the introduction of the (C)ECL models in IFRS and US GAAP was complemented by more extensive disclosure requirements, as outlined in IFRS 7 - Financial Instruments Disclosures and ASC 326 respectively.[6] Moreover, institutions such as the European Securities and Market Authority (ESMA 2020b) and the US Securities and Exchange Commission (SEC 2020) have asked banks to elaborate in their disclosures on (C)ECL to enable users of financial statements to understand the nature and risks of the portfolio, methodology and judgments applied. In addition, after the occurrence of COVID-19, the ESMA has issued statements encouraging banks to further include disclosures on assumptions and judgments, financial risk concentrations, impact of debt moratoria and explanation of the movements in the credit loss provision (ESMA 2020c). Breeden (2018) shows that a key factor in determining procyclicality of the ECL methodology is the choice of the methodology by the bank's management, rather than the macroeconomic conditions. It is therefore of utmost importance that the methodology and assumptions used in the ECL-calculation are disclosed (Barnoussi et al. 2020).

For banks, considerations to include additional quality disclosure could highly relate to stakeholder and signalling theory (Spence 1973; Freeman 1984; Gelb and Zarowin 2002; Ntim et al. 2013; Bischof et al. 2021). Following the stakeholder theory, banks can provide additional information to inform their stakeholders, such as their lenders and clients but also supervisors and governments on the quality of their asset portfolio and the robustness of the bank. Signalling theory states that banks can also send signals to their stakeholders by disclosing information, which conveys an underlying message. Banks can signal their robustness and future profitability to stakeholders to appear as a healthy bank. Leventis et al. (2012) find that banks in distress send more signals than healthy banks. In addition, Beaver et al. (1989) used signalling theory to describe their finding: by reporting a higher provision for credit losses, managers send a signal to the market that the bank's earnings power can withstand the negative impact of the increased costs due to the increased provision for credit losses. Due to COVID-19, banks face more distress and therefore we expect that banks will send signals to their stakeholders.

3. Data

The sample of this study consists of the Global Systemically Important Banks (G-SIBs) as published by the Financial Stability Board as per November 2020.[7] This list consists of 30 international banks that are considered to be '*too big to fail*'. The Basel Committee on Banking Supervision (BCBS) has constructed a calculation methodology to determine which banks should be labelled as G-SIBs.[8] The criteria that are part of the assessment are the size, interconnectedness, substitutability, complexity and cross-jurisdictional activity. Hence, our sample covers the most influential banks in the world. For the 30 G-SIBs, the annual reports of the years 2018, 2019 and 2020 are part of our sample. Two banks were omitted because the annual reports over 2020 were not available as per 27 August 2021, the closing date of our sample. The excluded banks have a reporting period ending on 31 March 2021. After excluding these two (Japanese) banks, the last remaining Japanese bank was excluded for comparability purposes. As a result, there are no banks with J(apanese) GAAP accounting principles in the sample. Hence, the sample consists of 27 banks covering three years. Reference is made to Appendix 1, for the list of G-SIBs that are part of our sample.

Most of the banks have their year-end on 31 December. However, for Canadian banks the financial year ends on 31 October. The annual reports of these banks are counted towards the year closest to 31 December. Table 1 presents the reporting framework of the research sample. The table shows that there are two major reporting frameworks present among the G-SIBs, namely IFRS and US GAAP, where IFRS is the dominant reporting framework.

Table 1. Overview of reporting frameworks.

Reporting standard	Count
IFRS	18
US GAAP	9
Total	**27**

In Table 2 the descriptive statistics of the sample are presented. This table shows that over the years, the total assets have grown substantially. The growth is accompanied by higher net interest that is earned. Banks also acquired higher capitalisation as is indicated by the (average) increasing CET1 ratio.[9] The bank with the lowest CET1 ratio in 2018 (Goldman Sachs) increased from 6.4% in 2018 to 13.6% in 2020. The ECL provision and ECL as percentage of total equity also increased. This may indicate that the credit risk increased. However, there is a large disparity between the largest and smallest banks. The banks differ in the way they earn revenue. While some banks earn revenue from (net) interest, other banks are focussed on advising clients or managing their assets. Because of this large disparity between the banks, we will present relative figures instead of absolute amounts in the remainder of this study.

Table 2. Descriptive statistics of the sample in million USD.

Year	Amount of annual reports examined		Balance Sheet Total	Total Equity	Net Interest Income	Notional loans ECL portfolio	ECL provision	ECL as percentage of Total Equity	CET1 ratio
2018	27	Average	1,737,545	128,170	25,814	840,470	14,941	11.7%	12.6%
		Maximum	4,023,912	338,479	83,170	2,072,640	71,271		16.9%
		Minimum	244,626	24,737	2,671	25,789	67		6.4%
2019	27	Average	1,836,256	133,873	26,067	890,788	15,759	11.8%	12.9%
		Maximum	4,311,972	383,257	86,918	2,345,011	79,212		16.4%
		Minimum	245,610	24,431	2,566	26,309	74		8.8%
2020	27	Average	2,119,456	151,519	28,547	1,009,188	22,061	14.6%	13.6%
		Maximum	5,122,468	446,960	99,356	2,861,062	96,966		17.4%
		Minimum	314,706	26,200	2,200	27,925	126		10.5%

4. Quantitative analysis on expected credit losses

In this section we will provide a more detailed analysis of the increase of the provision for credit losses in our research period covering reporting years 2018, 2019 and 2020. The provision for credit losses is calculated over the gross carrying amount of the financial instruments, which is referred to as the notional amount of a financial instrument in this study. Table 3 depicts the provision for credit losses as a percentage of the notional amount. This table shows that there was barely an increase in the relative expected credit losses from 2018 to 2019. In 2020 the increase in relative expected credit losses was substantial and this is consistent with our expectation. Due to the COVID-19 crisis, the likelihood of default increased, and this results in a higher (relative) provision for credit losses. Table 3 also shows that the increase is more substantial for the retail portfolio of banks than the corporate portfolio. During the COVID-19 crisis, governments rolled out support measures for the businesses that were hit the hardest.[10] These support measures decrease the likelihood of the banks suffering a loss, given that the governments provide guarantees for certain loans or provide aid in the form of subsidies to the customers of the banks. Similar support measures were (almost) not existent for natural persons. The larger relative provision for credit losses for the retail portfolio is therefore as expected.

Table 3. Provision for credit losses as a percentage of notional amount.

Year	N	Percentage ECL of notional Retail	Percentage ECL of notional Corporate	Percentage ECL of notional
2018	27	1.39%	1.38%	1.39%
2019	27	1.33%	1.40%	1.37%
2020	27	1.90%	1.77%	1.80%

There are large differences between the relative provision for credit losses between banks. Next to the difference in revenue sources, as explained in the previous section, differences in the application of the credit loss model between IFRS and US GAAP are also an important factor. In Section 2, it was mentioned that under IFRS there are three stages where only the lifetime expected credit loss is calculated for the instruments that belong to stage 2 or stage 3. However, large parts of the loan portfolios fall under stage 1, where only a twelve-month expected credit loss is calculated. Table 4 depicts the relative provision for credit losses for the subset of banks that report under IFRS. For the years 2018 and 2019 the relative provision for credit losses is considerably higher than the average relative provision for credit losses as stated in Table 3. The difference is observed because banks that report under IFRS needed to measure their provision for credit losses on the ECL methodology as of 2018, while banks that report under US GAAP measure their provision based on incurred credit losses in 2018 and 2019.

Table 4. Provision for credit losses as a percentage of notional amount for banks that report under IFRS.

Year	N	Percentage ECL of notional Retail	Percentage ECL of notional Corporate	Percentage ECL of notional
2018	18	1.61%	1.69%	1.65%
2019	18	1.53%	1.68%	1.61%
2020	18	1.73%	1.84%	1.76%

The increase in the relative provision for credit losses in 2020 is less profound for banks that report under IFRS. One reason for this might be that the IASB (IASB 2020a) issued a document in which it stated that if a bank grants a customer a payment holiday, this should not automatically result in a significant increase in credit risk (SICR). Granting a payment holiday does therefore not automatically mean that the instrument is transferred to

stage 2. This interpretation of SICR was also echoed by several European regulatory bodies. In addition, the ECB recommended that banks avoid 'excessively procyclical effects when applying the IFRS 9 international accounting standard' (ECB 2020). Since loans on which debt moratoria are granted can remain under stage 1, the provision for credit losses formed on these instruments may only cover twelve months instead of the entire lifetime of the instrument. The differences in provisions are also caused by different characteristics of the issued loans. The retail portfolio of European banks mainly consists of mortgages. The collateral on these loans decreases the likelihood that the bank suffers a loss, especially in times of increasing housing prices, and therefore requires a lower expected credit loss. The increase in the relative provision in credit losses in 2020 is therefore less substantial than under Table 3.

For banks that report under US GAAP, the lifetime expected credit loss (as per financial year 2020) is calculated for all financial instruments in scope. The provision for credit losses will therefore by definition be larger than under IFRS for a similar case. In table 5 the relative provision for credit losses is depicted for the subset of banks that report under US GAAP. The effect of the transition from an incurred loss methodology to an expected credit loss methodology in 2020 is clearly visible with the relative provision for credit losses increasing substantially. The table shows that the increase in the provision for the retail portfolio is larger than the increase in the provision for the corporate portfolio. This is also due to the characteristics of this portfolio. For the banks that report under US GAAP, the main part of the retail portfolio consists of credit card debts. For this debt category, there is no collateral, and this increases the expected credit loss.

Table 5. Provision for credit losses as a percentage of notional amount for banks that report under US GAAP.

Year	N	Percentage ECL of notional Retail	Percentage ECL of notional Corporate	Percentage ECL of notional
2018	9	0.96%	0.78%	0.88%
2019	9	0.94%	0.83%	0.89%
2020	9	2.25%	1.62%	1.88%

Table 6 provides insight in how the provision for credit losses has developed year-over-year. The table also includes the change of the notional amount. The change in provisions from 2018 to 2019 is minimal. The change from 2019 to 2020 is, however, substantial. The change in expected credit losses increases more than the change in notional amount and this signals an increase in credit risk that banks face. There is a large difference between the increase in expected credit losses between banks that report under US GAAP and IFRS. As mentioned earlier, this can be explained by the implementation of expected credit losses in 2020 for US GAAP and a different methodology between IFRS and US GAAP in calculating the expected credit losses. It is remarkable to observe that the average notional amount did not increase for the banks that report under US GAAP in 2020. For the banks that report under IFRS, which are mainly European banks, the notional amounts did grow. This can be partially attributed to the Targeted Longer-Term Refinancing Operations (TLTRO) III that the European Central Bank announced at the beginning of the pandemic.[11] As recognition for providing credit to businesses, banks are offered favourable interest rates under the TLTRO III programme.

The difference between the increase in the provision for credit losses is profound. For banks that report under IFRS the increase is not that substantial. Banks that report under US GAAP saw their provision for credit losses double on average. This observation is contradicting the results on procyclicality of Buesa et al. (2019), which show that the ECL model under ASC 326 should be less procyclical than the ECL model under IFRS. The increase in provision for credit losses under US GAAP can be attributed to the switch from an incurred loss model to an expected credit loss model and the difference in calculating expected credit losses for financial instruments. When banks that report under IFRS, transferred from the incurred loss methodology to the expected loss methodology, the provision for credit losses increased by approximately 20 percent (Huttenhuis et al. 2019; López Espinoza et al. 2021). In addition, it was expected that the move from the incurred loss methodology to the expected loss methodology for banks that report under US GAAP would increase the provision for credit losses by approximately 30 percent (Marlin 2020). The observed increase in the provision for credit losses is therefore much larger than what was initially anticipated. Recognizing a large provision for credit losses can however also send a strong signal to investors, consistent with the signalling theory (Beaver et al. 1989). If a bank recognizes a large provision for credit losses and is still able to maintain a reasonable CET1 ratio, this could be perceived as a signal that the bank is stable.

The European regulators urged European banks to carefully consider whether a significant increase in credit risk has occurred. European regulators requested a 'holistic approach' in the ECL staging assessment (ESMA 2020a) and thereby were not actively stressing early

Table 6. Change in the provision for credit losses compared with prior year.

Year	N	ECL change compared with prior year	Change in notional compared with prior year	ECL change compared with prior year - US GAAP	Change in notional compared with prior year - US GAAP	ECL change compared with prior year - IFRS	Change in notional compared with prior year - IFRS
2018/2019	27	4%	6%	8%	2%	2%	7%
2019/2020	27	56%	13%	105%	-1%	32%	16%

lifetime expected loss recognition. The consequence of this 'call for care' is that loans remain under stage 1 and the provision for credit losses only increases marginally. Whilst under US GAAP lifetime ECL is determined, banks did not receive similar call for care considerations by their regulators in the United States and this could therefore also contribute to the differences observed. Potentially, the European regulators were also taking into account the effect that large increases of loss provisions could have on the stability of financial markets given the unprecedented circumstances caused by the pandemic. Barnoussi et al. (2020) state that this intervention of the ESMA might also result in more failures by not providing objective information about expected losses.

However, it should also be noted that the ECL model is tested in a period of large liquidity in the markets. Which is different compared to the situation of the global financial crises in 2008 which resulted in a critical evaluation of the incurred loss model. But it goes without saying that the COVID-19 crisis increases credit risks of bank's loan portfolios in general. And as the proof of the pudding is in the eating, the application and outcome of the ECL-model is therefore assessed in times it was designed for.

For an outside stakeholder, it will be hard to judge whether all risks faced by the banks are reflected fairly in the credit loss provision. Banks can though provide detailed information, as explained by the stakeholder theory, in their disclosures that assist users in this judgement. These disclosures will be discussed in Section 5.

Another factor that influences the magnitude of the provision for credit losses, is the maturity of the loan portfolio. Table 7 depicts the relative provision for credit losses per maturity bucket. This table only takes the banks that report under IFRS into account, because not all information regarding the maturity of the loan portfolio is available for banks that report under US GAAP. Banks are divided into maturity buckets based on which proportion of the loan portfolio has a larger maturity than five years. If the portion of loans with a maturity larger than five years is less than 20 percent, the banks fall in the short maturity category. If the portion is higher than 50 percent, the banks fall in the long maturity category. Banks with a portion between 20 and 50 percent fall in the medium maturity category.[12] Table 7 shows that the longer the maturity of the loan portfolio, the higher the relative provision for credit losses is. The table also shows that at each maturity bucket the provision for credit losses increases from 2019 to 2020. The increase in the provision for credit losses due to the pandemic is therefore consistent across all maturity buckets.

Table 7. Provision for credit losses as a percentage of notional amount based on the maturity of the loan portfolio.

Year	N	Short maturity of loan portfolio (≤20%)	Medium maturity of loan portfolio (20<x<50%)	long maturity of loan portfolio (≥50%)
2018	18	1.12%	1.73%	2.15%
2019	18	1.14%	1.50%	2.26%
2020	18	1.25%	1.68%	2.39%

*percentages are calculated as portion of loan portfolio which is ≥ 5 year

The auditor of the bank must concur with the expected credit loss model and the results which are recognized as provision for credit losses. The auditor can place additional emphasis on certain topics that were most important to the audit of the financial statements and can therefore inform stakeholders on the potential difficulties in understanding the provision for credit losses. For banks in the United States these topics are referred to as Critical Audit Matters (CAMs)[13] and for the other banks in our sample these are Key Audit Matters (KAMs).[14] The difference between the two audit matters is that the former is developed by the Public Company Accounting Oversight Board (PCAOB)[15] and the latter is developed by the International Auditing and Assurance Standards Board (IAASB).[16] The definition of CAMs and KAMs differ slightly, but can be roughly interpreted the same, as topics where an auditor places additional emphasis on during an audit. In the remainder of this study the two are set equally to each other and referred to as KAMs.

In 2020, the provision for credit losses was a topic that was under scrutiny. The increased uncertainty leads to more dispersed data that is fed into the ECL-models. Research has shown that there is no connection between the provision for credit losses and auditor-client economic bond (Kanagaretnam et al. 2010; Campa and Donnelly 2019). It is expected that the auditor will place more emphasis on the provision for credit losses due to the increased uncertainty and will share an independent view on the models and assumptions that are used by the banks. The KAMs in the auditor's report can therefore offer additional information to outside stakeholders. Table 8 shows the amount of KAMs related to the provision for credit losses. For all banks that report under IFRS, the auditor has raised a KAM related to the provision for credit losses. For most of the banks that report under US GAAP, the auditor has raised a KAM related to the provision for credit losses. It was expected that auditors raised a KAM for the provision for credit losses, given that the new expected credit loss methodology was implemented in 2020 for the US GAAP reporting banks. The banks for which no KAM was raised, State Street and Morgan Stanley, have a low provision for credit losses compared to other similar-sized banks.

In prior research it was found that for European banks only 73 percent of the auditors raised a KAM at the implementation of IFRS 9 (Huttenhuis et al. 2019). Therefore, during the pandemic the auditors have placed more emphasis on auditing the provision for credit losses than at the implementation of the new methodology in the financial statements of 2018. The increased uncertainty due to the pandemic and risks associated with the provision for credit losses may be the reason for this increase in auditors' emphasis. Table 8 also shows in how many KAMs the pandemic is mentioned as a source of uncertainty to the provision for credit losses. For banks that report under

Table 8. KAM on provision for credit losses for the financial year 2020.

Reporting framework	N	KAM on ECL	Percentage of total	KAM on COVID-19 and ECL	Percentage of total
IFRS	18	18	100%	16	89%
US GAAP	9	7	78%	2	22%

IFRS almost all auditors discuss the impact of the pandemic, except for the auditors of two Chinese banks. The auditors of the banks that report under US GAAP do not see the pandemic as an important influence on the provision of credit losses, reflected by the lower percentage of KAMs that relate to the pandemic. Rather, the transfer from the incurred credit loss model to the expected credit loss model is often described as KAM.

5. Analysis of expected credit loss disclosures

To assess the quality of the portfolio and ECL coverage, the disclosures on the provision for credit losses are of utmost importance to stakeholders (Barnoussi et al. 2020). Disclosures detail the assumptions that management has made in the calculation of the expected credit losses. Stakeholders can verify whether the assumptions that management applied align with their own and can possibly determine the impact of changing these assumptions. To judge the quality of the disclosures on expected credit losses, this study has compiled a list of criteria based on IFRS guidance, prior research and best practices. The disclosures regarding expected credit losses of the G-SIBs are inspected and rated whether the disclosures meet the requirements set in the criteria. The complete set of criteria is included in Appendix 2. In the remainder of this section the notable findings are discussed.

The first notable finding is criterion number 7: "*Disclosure regarding what is defined as a significant increase of credit risk*". All banks that report under IFRS disclose what they define as a SICR. Contrarily, the banks reporting under US GAAP do not disclose this element. As mentioned earlier, this is due to the different methodologies used under both reporting frameworks. Under IFRS the SICR definition is needed to decide when an instrument is moved from stage 1 to stage 2. Under US GAAP there is however no staging and therefore no SICR definition is needed.

The provision for credit losses under IFRS needs to be determined as "*an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes*".[17,18] The calculation of expected credit losses therefore needs to incorporate multiple scenarios and these scenarios should be probability weighted. The disclosure of the weights will reflect the assumptions used by management in the calculation of the expected credit loss. The results of criterion number 13: "*Disclosure of weight of each scenario*" show that only half of the banks explicitly state the probabilities that are used in the calculation. Banks that report under IFRS do mention the weights more often (61%) than banks that report under US GAAP (22%). The weights that are used in the calculation are not stationary throughout time and therefore the disclosure provides valuable information. The disclosure of HSBC, as shown in Figure 1, provides insight into the assumptions of the baseline scenario and the accompanying weight used for this scenario. HSBC also published these tables for the other scenarios, but these are not presented in this study for the sake of brevity. The tables in the annual report provide a comprehensive overview of the assumptions used in each scenario and the accompanying weights for each scenario on a disaggregated geographical level.

It is important for stakeholders to be able to assess the assumptions used in the calculation of expected credit losses and to analyse the sensitivity of the provision for credit losses when assumptions change. Disclosures that include sensitivity analyses are therefore important and this is also accentuated by regulatory bodies (AFM 2020; ESMA 2020a/b). This study examined three criteria with respect to sensitivity analyses. The criteria outline whether a sensitivity analysis is performed (criterion number 14), the reason for performing the sensitivity analysis (criterion number 15) and the methodology used in the sensitivity analysis (criterion number 16). The results show that slightly more than half of the banks perform a sensitivity analysis. The reasons and methodology of the sensitivity analyses are less often disclosed. The difference between the reporting frameworks is also profound. Banks that report under IFRS perform sensitivity analysis more often and disclose the reason and methodology more often as compared to banks that report under US GAAP. The disclosure of ING, as shown in Figure 2, sets out the methodology used in the sensitivity analysis, the reason why the sensitivity analysis is performed and the outcomes of the sensitivity analysis. The disclosure also incorporates the impact of the pandemic which adds valuable bank specific information.

Economic cycles impact the instruments that banks hold in their portfolios. Loans originated during booming economic times could be at risk during downturn times when residential and corporate borrowers could suffer from the worsened conditions. It can therefore be insightful to disclose the origin of the instruments in the portfolio to judge the credit quality of the instruments. One way to disclose this is to provide loan origination tables. Criterion number 19: "*Quantitative disclosures on loan origination*" measures these disclosures. For banks that report under US GAAP such disclosures are required for certain instruments according to ASC 326-20-50-6. In our sample only one bank disclosed these *'vintage'* tables in an unambiguous way. Figure 3 shows the consumer loan origination table of Wells Fargo. In the table the 'days past due' (DPD) is compared against the origination year for the main consumer loan product of Wells

Figure 1. Best practice of disclosure of scenario weights: HSBC Holdings plc Annual Report and Accounts 2020, p. 128. https://www.hsbc.com/-/files/hsbc/investors/hsbc-results/2020/annual/pdfs/hsbc-holdings-plc/210223-annual-report-and-accounts-2020.pdf

The following table describes key macroeconomic variables and the probabilities assigned in the consensus Central scenario.

Central scenario 2021–2025

	UK	US	Hong Kong	Mainland China	Canada	France	UAE	Mexico
	%	%	%	%	%	%	%	%
GDP growth rate								
2020: Annual average growth rate	(11.0)	(4.1)	(6.4)	2.0	(6.1)	(9.7)	(6.3)	(9.7)
2021: Annual average growth rate	4.9	3.8	4.3	7.8	5.0	5.9	3.0	3.7
2022: Annual average growth rate	3.1	2.9	2.9	5.3	3.1	2.9	3.6	2.5
2023: Annual average growth rate	2.4	2.4	2.6	5.2	2.4	2.2	3.9	2.4
5-year average	2.8	2.7	2.9	5.6	2.9	2.9	3.4	2.6
Unemployment rate								
2020: Annual average rate	4.6	8.3	5.8	3.9	9.6	7.9	3.1	5.4
2021: Annual average rate	6.9	6.7	5.0	4.1	7.9	10.0	2.7	5.3
2022: Annual average rate	5.8	5.8	3.9	4.2	6.8	9.1	2.6	4.7
2023: Annual average rate	5.4	4.9	3.8	4.1	6.5	8.8	2.7	4.5
5-year average	5.6	5.3	4.0	4.0	6.8	9.0	2.7	4.6
House price growth								
2020: Annual average growth rate	2.3	6.0	(0.8)	2.3	5.7	4.4	(11.6)	5.5
2021: Annual average growth rate	(2.1)	4.0	(2.2)	4.7	2.1	(0.5)	(9.8)	3.4
2022: Annual average growth rate	0.9	4.3	2.4	5.7	2.0	4.1	(1.3)	5.0
2023: Annual average growth rate	3.0	4.0	5.2	5.0	3.1	4.1	2.6	4.6
5-year average	1.9	4.0	2.3	4.7	2.7	2.8	–	4.2
Short-term interest rate								
2020: Annual average rate	0.3	0.7	1.2	3.2	0.8	(0.4)	1.0	5.7
2021: Annual average rate	0.1	0.3	1.0	2.9	0.5	(0.5)	0.8	4.5
2022: Annual average rate	0.1	0.3	1.1	3.0	0.6	(0.5)	0.8	4.7
2023: Annual average rate	0.1	0.4	1.2	3.1	0.8	(0.5)	0.9	5.2
5-year average	0.2	0.5	1.3	3.1	0.8	(0.5)	1.0	5.2
Probability	40	65	70	80	70	40	65	65

Figure 2. Best practice of sensitivity analysis: ING Groep N.V. Annual Report 2020, p. 140. https://www.ing.com/Investor-relations/Financial-performance/Annual-reports.htm

Analysis on sensitivity (*)

The table below presents the analysis on the sensitivity of key forward-looking macroeconomic inputs used in the ECL collective-assessment modelling process and the probability-weights applied to each of the three scenarios. The countries included in the analysis are the most significant geographic regions, in terms of both gross contribution to reportable ECL, and sensitivity of ECL to forward-looking macroeconomics. Accordingly, ING considers these portfolios to present the most significant risk of resulting in a material adjustment to the carrying amount of financial assets within the next financial year. ING also observes that, in general, the Wholesale Banking business is more sensitive to the impact of forward-looking macroeconomic scenarios.

The purpose of the sensitivity analysis is to enable the reader to understand the extent of the impact on model based reportable ECL from the upside and downside scenario. The table does not include any management adjustments, except for the overlay for time lag in defaults of €394 million as at 31 December 2020.

In the table below the Real GDP is presented in percentage year-on-year change, the unemployment in percentage of total labour force and the house price index (HPI) in percentage year-on year change.

While the table does give a high-level indication of the sensitivity of the outputs to the different scenarios, it does not provide insight into the interdependencies and correlations between different macroeconomic variable inputs. On total ING level, the unweighted ECL for all collective provisioned clients in the upside scenario was €2,770 million, in the baseline scenario €3,082 million and in the downside scenario €4,362 million compared to €3,276 reportable collective provisions currently accounted for (including time lag overlay, excluding other management adjustments).

When compared to the sensitivity analysis of 2019 the macroeconomic inputs are substantially different, as at that time no assumptions with respect to the possible consequences of the spread of the coronavirus had been incorporated. The macroeconomic inputs used in the 2020 sensitivity analysis reflect that, after declining sharply in 2020, a bounce back in Real GDP is expected in 2021 and 2022. Furthermore the downside scenario has an increased downward skew, reflecting the continuing uncertainty related to the impact of Covid-19.

Fargo, the residential mortgage. This table offers insight into the origination of the credit quality. Furthermore, stakeholders can link the origination year to a certain collateral quality of the underlying house to the mortgage as house prices for instance might have increased, thereby increasing the quality of the collateral and thereby lowering the loss given default. It would be valuable if banks incorporate such tables for their main products they issue. Judgment should be applied for which products and potentially relevant underlying collateral, these vintage tables add relevance.

to capture the risks that have not been incorporated in the ECL calculation. The use of management overlays is therefore highly judgmental. Although most banks disclose that they have applied a management overlay in the calculation of the provision for credit losses, the management overlay is seldomly quantified. Figure 5 shows the disclosure of Standard Chartered on the applied management overlay. The disclosure is brief but does offer valuable insights into how management overlay is formed and on which portfolios this overlay is applied.[20] The disclosure states that the management overlay is applied after

Figure 3. Best practice of loan origination disclosure: Wells Fargo & Company Annual Report 2020, p. 155. https://www08.wellsfargomedia.com/assets/pdf/about/investor-relations/annual-reports/2020-annual-report.pdf

Table 4.10: Consumer Loan Categories by Delinquency Status and Vintage (1)

(in millions)	Term loans by origination year 2020	2019	2018	2017	2016	Prior	Revolving loans	Revolving loans converted to term loans	Total
December 31, 2020									
Residential mortgage – first lien									
By delinquency status:									
Current-29 DPD	$ 53,298	43,297	14,761	24,619	30,533	67,960	6,762	1,719	242,949
30-59 DPD	111	76	36	67	79	750	52	66	1,237
60-89 DPD	88	10	6	12	13	305	56	68	558
90-119 DPD	232	11	5	8	7	197	26	33	519
120-179 DPD	3	4	1	3	5	151	17	29	213
180+ DPD	3	1	4	11	15	758	21	145	958
Government insured/guaranteed loans (2)	215	639	904	1,076	2,367	25,039	—	—	30,240
Total residential mortgage – first lien	53,950	44,038	15,717	25,796	33,019	95,160	6,934	2,060	276,674

The provision for credit losses increased substantially during the pandemic, as was discussed in Section 4. For stakeholders it is important to gain insight into where this increase is stemming from. In the assessed criteria, criterion number 25: "*Disclosure on development of ECL*" assesses the disclosure on the changes of the provision for credit losses compared to prior year. Most of the banks that report under IFRS disclose this information (83%), but only two banks (22%) that report under US GAAP disclose this. Figure 4 shows the movement schedule for the provision for credit losses of Deutsche Bank. The table is split into the four categories (the three stages supplemented by the 'purchased or originated credit impaired assets'/POCI stage 3[19]) and this makes it more understandable where the movements are stemming from. The qualitative disclosures regarding the changes in the three stages provide additional insights. Together with the exposure tables (which are not included in figure 4 for the sake of brevity), the user of the financial statements is able to derive a good understanding of the movements that have occurred.

The last items of the assessed criteria are specifically focused on disclosures regarding the impact of COVID-19. Table 9 shows the results of these criteria. The first notable finding is that the use of management overlays is limitedly disclosed. Management overlays are an input of an expert judgment in the provision for credit losses, taking account for Post Model Adjustments (PMAs). The PMAs are applied to correct for issues that are found in the models, either due to inputs or to validations.

Almost all banks disclose the debt moratoria granted to certain portfolios and the exposure to these portfolios. The impact of the debt moratoria on the definition of SICR is also disclosed by most of the banks and some banks refer to the guidance that has been issued by the IASB (IASB 2020a). The last three criteria in Table 9 oversee the disclosures regarding the inputs to the calculation of expected credit losses. Most banks (67%) disclose the impact of the pandemic on the inputs. Banks also use different scenarios and assign different weights to these scenarios. There are also banks that only update the scenarios but do not disclose whether the weights that they assign to the scenarios have been changed. Adhering to identical weights does provide consistency in how the provision for credit losses is determined, however, for severe adverse situations we encourage banks to articulate why weights have not (or have) changed. HSBC has even included an additional scenario for an adverse impact if the pandemic will sustain into the future. The final criterion assesses how accurate the model is in terms of staging and especially the timely identification of a significant increase of credit risk situation. After all, this was the core to transfer from an incurred loss model to an expected loss model. Hence the proof of the pudding. For banks

Figure 4. Best practice of ECL movement disclosure: Deutsche Bank Annual Report 2020, p. 80. https://investor-relations.db.com/files/documents/annual-reports/Annual_Report_2020.pdf

	Dec 31, 2020				
	Allowance for Credit Losses[3]				
in €	Stage 1	Stage 2	Stage 3	Stage 3 POCI	Total
Balance, beginning of year	**549**	**492**	**3,015**	**36**	**4,093**
Movements in financial assets including new business	(44)	309	1,348	72[4]	1,686
Transfers due to changes in creditworthiness	77	(125)	49	N/M	0
Changes due to modifications that did not result in derecognition	N/M	N/M	N/M	N/M	N/M
Changes in models	0	0	0	0	0
Financial assets that have been derecognized during the period[2]	0	0	(781)	0	(781)
Recovery of written off amounts	0	0	58	0	58
Foreign exchange and other changes	(38)	(28)	(75)	31	(110)
Balance, end of reporting period	**544**	**648**	**3,614**	**139**	**4,946**
Provision for Credit Losses excluding country risk[1]	33	184	1,397	72	1,686

[1] Movements in financial assets including new business, transfers due to changes in creditworthiness and changes in models add up to Provision for Credit Losses excluding country risk.
[2] This position includes charge offs of allowance for credit losses.
[3] Allowance for credit losses does not include allowance for country risk amounting to € 5 million as of December 31, 2020.
[4] The total amount of undiscounted expected credit losses at initial recognition on financial assets that are purchased or originated credit-impaired initially recognised during the reporting period was € 50 million in 2020 and € 0 million in 2019.

Allowance for credit losses against financial assets at amortized cost subject to impairment increased by € 853 million or 21 % in 2020 mainly driven by Stage 3:

Stage 1 allowances remained roughly stable with a slight decrease of € 5 million or 1 %.

Stage 2 allowances increased by € 156 million or 32 % due to the update of the macroeconomic outlook.

Stage 3 allowances increased by € 702 million or 23 % driven by new defaults across business divisions and the increase against the existing POCI loan portfolio.

Our Stage 3 coverage ratio (defined as Allowance for credit losses in Stage 3 (excluding POCI) divided by Financial assets at amortized cost in Stage 3 (excluding POCI)) amounted to 34 % in the current fiscal year, compared to 40 % in the prior year.

that report under US GAAP, staging is not applicable but most banks that report under IFRS (83%) disclose what the transfer from stage 1 to stage 3 has been. In IFRS 7-Financial Instruments Disclosures[21] it is required to provide a movement schedule of the provision for credit losses, but it is not required to disclose the transfers between stages. Most banks do disclose these transfers as part of their movement schedule and therefore this is considered a high percentage.

Finally, this study has investigated the attention for COVID-19 in the financial statements. Following Vergoossen and Van Beest (2020), the attention has been measured as the total occurrences of 'COVID-19' or 'corona'. Table 10 shows that the financial statements that have been issued by European banks place more emphasis on disclosures regarding to COVID-19. The average, maximum and minimum number of occurrences in the financial statements are higher than in Asia and North America. The Chinese banks disclose the least amount of information regarding the COVID-19 impact, as detailed by the low average and maximum number of words. The Canadian banks (which report under IFRS) have more attention to the impact of COVID-19 than their counterparts in the United States, as detailed by the higher average number of words. The low number of occurrences in the financial statements issued by Chinese banks and banks from the United States is in part caused by the more standardized disclosures that these banks issue each year.

Table 9. Disclosure elements regarding COVID-19 for the financial year 2020.

Disclosure elements	Total Count	Percentage	Count IFRS	Percentage	Count US GAAP	Percentage
ECL post model adjustment (Management Overlay) is explained	15	56%	10	56%	5	56%
Debt moratoria (payment holidays) granted and effect on Financial statement is explained	24	89%	15	83%	9	100%
Impact of debt moratoria on SICR definition is disclosed	13	48%	13	72%	0	0%
Disclosure regarding the exposures subject to the payment moratoria	15	56%	12	67%	3	33%
Change of inputs (and forecasting) in ECL models compared with prior years	18	67%	13	72%	5	56%
Have the different scenarios (and their weights) used in the ECL calculation changed, compared to prior year	16	59%	12	67%	4	44%
Dislcosure regarding movements from Stage 1 to Stage 3	15	56%	15	83%	0	0%

Figure 5. Best practice of management overlay disclosure: Standard Chartered Annual Report 2020, p. 228. https://av.sc.com/corp-en/content/docs/standard-chartered-plc-full-year-2020-report.pdf

Management overlay - COVID-19

As at 31 December 2020, the Group held a $359 million management overlay relating to uncertainties as a result of the COVID-19 pandemic that are not captured by the models, $197 million of which relates to Corporate & Institutional Banking and Commercial Banking and $162 million to Retail Banking. The overlay has been determined after taking account of the PMAs reported on page 225 and is re-assessed quarterly. It is reviewed and approved by the IFRS9 Impairment Committee.

Banks in Europe tailor their disclosures more to the events that occurred during the year and this specific information provides a better background to the users of the financial statements. The European regulator also urges to provide more informative disclosures, as is signalled through the enforcement priorities published by the ESMA (ESMA 2014). The pressure from the regulator could therefore be an explanation for the difference in disclosure quality.

Table 10. Number of COVID-19 or corona occurrences in the 2020 financial statements.

Region	N	Statistic	Total	IFRS	US GAAP
Europe	13	Average	243	245	220
		Maximum	410	410	220
		Minimum	80	80	220
Asia	4	Average	55	55	N/A
		Maximum	101	101	N/A
		Minimum	21	21	N/A
North America	10	Average	102	168	85
		Maximum	208	208	205
		Minimum	2	128	2

6. Conclusion

In this study the provision for credit losses and its accompanying disclosures were investigated. The difference in the increase of the provision for credit losses between the reporting frameworks is profound. For banks that report under IFRS the increase is not that substantial. Banks that report under US GAAP determined a provision for credit losses which doubled on average. This difference can in part be attributed to the switch from an incurred loss model to an expected credit loss model under US GAAP as per financial year 2020 and partly to the difference in calculating expected credit losses. The increase for banks that report under US GAAP can be interpreted as a signal about the robustness of the bank. The results also indicate that the longer the maturity of the loan portfolio, the higher the relative provision for credit losses is. Furthermore, the increase in the provision for credit losses due to the pandemic is consistent across all maturity buckets.

The auditors of banks that report under IFRS have all raised a KAM related to the provision for credit losses. The auditors of banks that report under US GAAP have raised a KAM for most of the banks. For banks that report under IFRS almost all auditors discuss the impact of the pandemic in the respective KAM on the provision for credit losses, except for the auditors of two Chinese banks. The auditors of the banks that report under US GAAP do not assess the pandemic as an important influence on the provision of credit losses, reflected by the low percentage of KAMs related to the pandemic. The KAMs issued by the auditors of banks that report under US GAAP mostly relate to the transfer from an incurred loss model to an expected credit loss model.

For the calculation of expected credit losses only half of the banks explicitly state the probabilities that are used in the calculation. Banks that report under IFRS do mention the weights more often (61%) than banks that report under US GAAP (22%). The disclosures regarding sensitivity analysis show that only a slight majority of the banks includes a sensitivity analysis in the financial statements. The reasons for the key assumptions used and the methodology applied are less often disclosed. In our sample there was only one bank that reported vintage tables, although this is a requirement under US GAAP. These tables can provide valuable information on the credit quality of the loan portfolio and can increase the information usefulness of the financial statements. One recommendation is therefore to incorporate these tables in the disclosures on financial instruments. The disclosure regarding the movements of ECL will also add value to the financial statements. For banks that report under IFRS the majority (83%) disclose this information but only two banks (22%) from our sample that report under US GAAP disclose this information.

The results show that most banks report that a management overlay is used in the calculation. This management overlay is however seldomly quantified. It is therefore difficult to assess what the impact of the management overlay is on the provision for credit losses. The debt moratoria granted (89%) and the exposure to these portfolios (56%) are disclosed by most of the banks. The impact

of the debt moratoria on the definition of SICR and the impact of the pandemic on the inputs is also disclosed by most of the banks (72% and 67%, respectively). For the calculation of the provision of credit losses banks use different scenarios and assign different weights to these scenarios. There are however banks that only update the scenarios but do not update the weights that they assign to the scenarios. Finally, the transfer from stage 1 to stage 3 has been disclosed by most banks (83%). Given that this disclosure is not a requirement, this highlights pro-activity from banks.

This study has investigated multiple aspects of the (disclosure for the) provision for credit losses. It was shown that the difference between the provision for credit losses has increased between European banks and their counterparts from the United States. This is partly caused by the European regulators' 'call for care' in assessing significant increases in credit, hence, to not transfer loans too swiftly from stage 1 to stage 2. Such a message was not given by the regulators in the United States. The question can also be asked to what extent the actual risks that the European banks faced are expressed in the provision for the credit losses, because the European regulators were promoting a holistic approach and not really stressing the importance of early recognition of losses as a pivotal feature of the expected credit loss model. If the proof of the pudding is in the eating, then for European banks it appears that due to diet impulses the pudding appears to be mainly untouched. Where it should also be noted that the ECL model is tested in times of large liquidity in the markets. Which is different compared to the situation of the global financial crises in 2008 that caused the IASB to reconsider the incurred credit loss model and introduce an expected credit loss model.

The conclusion of this study is that banks that report under IFRS have more insightful disclosures related to their counterparts that report under US GAAP. European banks place most emphasis on disclosures regarding COVID-19 and the Chinese banks disclose the least amount of information regarding the COVID-19 impact. We do believe that the continuing message that the ESMA provides to the market in its yearly European Common Enforcement Priorities statements, contributes favourably to this outcome. In these statements ESMA encourages listed companies to provide entity-specific disclosures in different areas. Finally, we also hope that this article will encourage efforts in this direction of making company-specific and tailored disclosures which are of key importance in meeting the objective of general-purpose financial reporting: providing useful information to existing and potential investors, lenders and other creditors.

This study has added to the existing literature in several ways. To our knowledge this was the first study to report on the impact of COVID-19 on the provision for credit losses. In addition, this study has added to the existing literature by describing the impact of the switch from ASC 310 to ASC 326. Lastly, this article has contributed to research related to provisions for credit losses by describing the impact of COVID-19 on expected credit losses and incorporating the quality of the disclosures regarding expected credit losses.

We encourage other researchers to perform further research on the impact of COVID-19 on the provision for credit losses. Future research can use different research methodologies (e.g. statistical analyses) to determine the significance of the observed increase in the provision for credit losses. In addition, future research can increase the sample size that has been used in this study, to find consistent results for the industry instead of only the G-SIBs. Finally, future research can investigate the quality of the disclosures and relate this the increase in the provision for credit losses.

- **T.L. (Tristan) Brouwer MSc** is Senior Associate at PwC and (part-time) assistant professor Financial Reporting at the University of Groningen.
- **J.G. (Job) Huttenhuis MSc EMA RA** is Head of Finance at MUFG Bank (Europe) N.V. and (part-time) assistant professor Financial Reporting at the University of Groningen.
- **Prof. dr. R.L. (Ralph) ter Hoeven RA** is partner in the Technical Office of Deloitte Accountants Netherlands and professor Financial Reporting at the University of Groningen.
- The authors wrote this article in a personal capacity.

Notes

1. As evidenced by a reduction of the gross domestic product (GDP) of the global economy of 3.2% in 2020 compared to 2019. Refer to: https://www.statista.com/statistics/268750/global-gross-domestic-product-gdp/. Further reference is made to the data of the Organisation for Economic Cooperation and Development (OECD) for information on GDP developments per country. Refer to https://www.oecd.org/economy/weekly-tracker-of-gdp-growth/
2. "an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes" and taking into account "reasonable and supportable information that is available without undue cost or effort at that date about past events, current conditions and forecasts

of future economic conditions" [IFRS 9, paragraph 5.5.17]. ASC 326 does not prescribe the ECL methodology as explicitly as IFRS 9, however in practice similar assessments are made which are (also) in line with the requirements of US GAAP.

3. Canada 1 November 2017, Europe 1 January 2018, China 1 January 2018.
4. Applicable to SEC filers for fiscal years beginning after 15 December 2019. For non-SEC public companies applicable for fiscal years beginning after 15 December 2020. For other companies applicable for fiscal years beginning after 15 December 2022.
5. The cliff effect arises because of the staging that is present under IFRS 9. Once a loan has a SICR, and therefore moves to stage 2, the provision for credit losses will not be calculated with a 12 month ECL, but with a lifetime ECL. This results in a large increase in the provision for credit losses once a SICR has taken place. For a detailed explanation, please refer to BCBS (2021).
6. Reference made to IFRS 7.35 and ASC 326-20-50.
7. For the complete list of G-SIBs that is published by the Financial Stability Board, please refer to: https://www.fsb.org/2020/11/2020-list-of-global-systemically-important-banks-g-sibs/
8. For the calculation methodology, please refer to: https://www.bis.org/bcbs/publ/d296.pdf
9. The CET 1 ratio is defined as the Common Equity Tier 1 (CET 1) capital divided by the risk weighted assets and measures the ability to withstand financial distress.
10. Examples of support measures are the CARES act in the United States. EU countries all set-up their own programmes, were the Dutch Government provided an overview of the multiple measures https://www.rijksoverheid.nl/onderwerpen/coronavirus-financiele-regelingen/overzicht-financiele-regelingen.
11. For the announcement from the ECB, please refer to https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr200312_1~39db50b717.nl.html
12. The robustness of the results have been tested by applying different percentages, such as 40% for the long maturity bucket. The results remained robust after changing these percentages. The choice for these specific percentages is motivated by the bell-shaped distribution. Hence 5 banks in the low maturity bucket, 8 banks in the medium maturity bucket and the final 5 banks in the long maturity bucket.
13. AS 3101.11 describes CAMs as: "A critical audit matter is any matter arising from the audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved especially challenging, subjective, or complex auditor judgment."
14. ISA 701.8 describes KAMs as: "Those matters that, in the auditor's professional judgment, were of most significance in the audit of the financial statements of the current period."
15. The PCAOB is the regulatory body in the United States which oversees the audits of public companies.
16. The IAASB publishes professional standards for the auditing of financial information, which are adopted to local standards in a substantial number of countries.
17. This is set out in IFRS 9.5.5.17 (a).
18. Under US GAAP no method for determining expected credit losses is prescribed. However, the majority of the banks that report under US GAAP follow a similar approach as is prescribed under IFRS.
19. Purchased or originated credit-impaired (POCI) financial assets are already credit impaired at initial recognition. That means that their staging does not start from stage 1 but the originated or purchased assets are immediately categorised as stage 3. These assets have to be distinguished from stage 3 assets that started in stage 1 at the moment of initial recognition. These assets suffer from a credit loss event after initial recognition.
20. Please note that only the first part of the disclosure has been included. The detailed information in the remainder of the disclosure has not been included for the sake of brevity.
21. Refer to IFRS 7.35H.

References

- Abad J, Suarez J (2018) The procyclicality of expected credit loss provisions, CEPR Discussion Paper No DP13135. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3244507
- AFM (Autoriteit Financiële Markten) (2020) In Balans 2020 - De effecten van Covid-19:
- Themaonderzoek naar de toelichting van de effecten van Covid-19 in de halfjaarlijkse financiële verslaggeving 2020.
- https://www.afm.nl/~/profmedia/files/doelgroepen/accountantsorganisaties/2020/afm-in-balans-effecten-covid-19-verslaggeving.pdf?la=nl-NL
- Agénor PR, Zilberman R (2015) Loan loss provisioning rules, procyclicality, and financial volatility. Journal of Banking & Finance 61: 301-315. https://doi.org/10.1016/j.jbankfin.2015.08.035
- Barnoussi AE, Howieson B, Van Beest F (2020) Prudential application of IFRS 9: (Un) Fair Reporting in COVID-19 crisis for banks worldwide?! Australian Accounting Review 30(3): 178-192. https://doi.org/10.1111/auar.12316
- BCBS (Basel Committee on Banking Supervision) (2021) Working Paper 39 The procyclicality of loan loss provisions: a literature review. https://www.bis.org/bcbs/publ/wp39.pdf
- Beaver W, Eger C, Ryan S, Wolfson M (1989) Financial reporting, supplemental disclosures, and bank share prices. Journal of Accounting Research 27(2): 157-178. https://doi.org/10.2307/2491230
- Bischof J, Laux C, Leuz C (2021). Accounting for financial stability: Bank disclosure and loss recognition in the financial crisis. Journal of Financial Economics 141(3): 1188-1217. https://doi.org/10.1016/j.jfineco.2021.05.016
- Breeden JL (2018) CECL procyclicality: It depends on the model. Prescient Models LLC. https://www.prescientmodels.com/articles/CECL-Procyclicality.pdf

- Buesa A, Población FJ, Tarancón J (2019) Measuring the procyclicality of impairment accounting regimes: A comparison between IFRS 9 and US GAAP. ECB Working Paper Series No. 2347. https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2347~35d0728499.en.pdf
- Campa D, Donnelly R (2019) Loan loss provisions in large publicly quoted European banks and auditor independence. International Journal of Auditing 23(2): 245-262. https://doi.org/10.1111/ijau.12158
- Chae S, Sarama RF, Vojtech CM, Wang J (2019) The effect of the current expected credit loss
- standard (CECL) on the timing and comparability of reserves. Finance and Economics Discussion Series 2018-20, Federal Reserve Board, revised June 2019. https://doi.org/10.17016/FEDS.2018.020r1
- Covas F, Nelson W (2018) Current expected credit loss: Lessons from 2007-2009. Bank Policy Institute Staff Working Paper 2018-1. https://dx.doi.org/10.2139/ssrn.3215559
- ECB (European Central Bank) (2020) ECB Banking Supervision provides further flexibility to banks in reaction to coronavirus. Press release, 20 March. https://www.bankingsupervision.europa.eu/press/pr/date/2020/html/ssm.pr200320~4cdbbcf466.en.html
- Ertan A (2019) Expected losses, unexpected costs? Evidence from SME credit access under IFRS 9. Working paper. https://dx.doi.org/10.2139/ssrn.3504708
- ESMA (European Securities and Market Authority) (2014) ESMA sets enforcement priorities for listed companies' financial statements. ESMA/2014/1310. https://www.esma.europa.eu/sites/default/files/library/2015/11/2014-1310_esma_sets_enforcement_priorities_for_listed_companies_financial_statements_final.pdf
- ESMA (European Securities and Market Authority) (2020a) Accounting implications of the COVID-19 outbreak on the calculation of expected credit losses in accordance with IFRS 9. ESMA32-63-951. https://www.esma.europa.eu/sites/default/files/library/esma32-63-951_statement_on_ifrs_9_implications_of_covid-19_related_support_measures.pdf
- ESMA (European Securities and Market Authority (2020b) Public Statement: Implications of the COVID-19 outbreak on the half-yearly financial reports. ESMA32-63-972. https://www.esma.europa.eu/sites/default/files/library/esma32-63-972_public_statement_on_half-yearly_financial_reports_in_relation_to_covid-19.pdf
- ESMA (European Securities and Markets Authority) (2020c) Public Statement, European common enforcement priorities for 2020 annual financial reports, ESMA32-63-1041. https://www.esma.europa.eu/sites/default/files/library/esma32-63-1041_public_statement_on_the_european_common_enforcement_priorities_2020.pdf
- Freeman RE (1984) Strategic management: A stakeholder approach. Pitman (Boston MA).
- Gaffney E, McCann F (2019) The cyclicality in SICR: mortgage modelling under IFRS 9. ESRB Working Paper Series (No. 92): 1-24. https://www.esrb.europa.eu/pub/pdf/wp/esrb.wp92~bf769a68b8.en.pdf
- Gelb DS, Zarowin P (2002) Corporate disclosure policy and the informativeness of stock prices. Review of Accounting Studies 7(1): 33-52. https://doi.org/10.1023/A:1017927530007
- Huttenhuis J, Bout B-J, Ter Hoeven R (2019) IFRS 9 en Europese banken; het eerste toepassingsjaar verslagen. Maandblad voor Accountancy en Bedrijfseconomie 93(11/12): 343-359. https://doi.org/10.5117/mab.93.47100
- IASB (International Accounting Standard Board) (2020a) IFRS 9 and covid-19: Accounting for expected credit losses applying IFRS 9 Financial Instruments in the light of current uncertainty resulting from the covid-19 pandemic.
- https://cdn.ifrs.org/content/dam/ifrs/supporting-implementation/ifrs-9/ifrs-9-ecl-and-coronavirus.pdf?la=en
- Kanagaretnam K, Krishnan GV, Lobo GJ (2010) An empirical analysis of auditor independence in the banking industry. The Accounting Review 85(6): 2011-2046. https://doi.org/10.2308/accr.2010.85.6.2011
- Krüger S, Rösch D, Scheule H (2018) The impact of loan loss provisioning on bank capital requirements. Journal of Financial Stability 36: 114-129. https://doi.org/10.1016/j.jfs.2018.02.009
- Kund AG, Rugilo D (2018) Does IFRS 9 Increase Financial Stability? Working paper. https://dx.doi.org/10.2139/ssrn.3282509
- Leventis S, Dimitropoulos PE, Anandarajan A (2012) Signalling by banks using loan loss provisions: the case of the European Union. Journal of Economic Studies 39(5): 604-618. https://doi.org/10.1108/01443581211259509
- López Espinoza G, Ormazabal G, Sakasai Y (2021) Switching from Incurred to Expected Loan Loss Provisioning: Early evidence. Journal of Accounting Research 59(3): 757-804. https://doi.org/10.1111/1475-679X.12354
- Löw E, Schmidt LE, Thiel LF (2019). Accounting for financial instruments under IFRS 9–First-time application effects on European banks' balance sheets. European Banking Institute Working Paper Series 2019 (48). https://dx.doi.org/10.2139/ssrn.3462299
- Marlin S (2020) CECL working as intended amid COVID-19 crisis, says FASB. Risk.net, 18 March. https://www.risk.net/risk-management/7507111/ceclworking-as-intended-amid-covid-19-crisis-says-fasb (accessed 30 November 2021)
- Ntim CG, Lindop S, Thomas DA (2013) Corporate governance and risk reporting in South Africa: A study of corporate risk disclosures in the pre- and post-2007/2008 global financial crisis periods. International Review of Financial Analysis 30: 363-383. https://doi.org/10.1016/j.irfa.2013.07.001
- SEC (U.S. Securities and Exchange Commission) (2020) Coronavirus (COVID-19), Division of Corporate Finance Securities and Exchange Commission, CF disclosure Guidance: Topic no. 9. SEC (United States of America). covid-19-spotlight.pdf (azureedge.net).
- Spence MA (1973) Job market signaling. Quarterly Journal of Economics 87(3): 355-374. https://doi.org/10.2307/1882010
- Vergoossen RGA, van Beest F (2020) Coronacrisis en de financiele verslaggeving van Nederlandse beursfondsen. Maandblad Voor Accountancy en Bedrijfseconomie 94(11/12): 417-426. https://doi.org/10.5117/mab.94.60124

Appendix 1

G-SIBs	Country of incorporation	Reporting standard	Date Year-end	Balance sheet total 2020	ECL 2020
Citigroup	United States	US GAAP	31-12-20	2,260,090	24,956
HSBC	United Kingdom	IFRS	31-12-20	2,984,164	14,707
JP Morgan Chase	United States	US GAAP	31-12-20	3,386,071	30,737
Bank of America	United States	US GAAP	31-12-20	2,819,627	18,802
Bank of China	China	IFRS	31-12-20	3,748,736	63,259
Barclays	United Kingdom	IFRS	31-12-20	1,832,262	11,317
BNP Paribas	France	IFRS	31-12-20	3,056,464	29,601
China Construction Bank	China	IFRS	31-12-20	4,321,677	88,652
Deutsche Bank	Germany	IFRS	31-12-20	1,627,736	6,075
Industrial and Commericial Bank of China	China	IFRS	31-12-20	5,122,468	82,558
Agricultural Bank of China	China	IFRS	31-12-20	4,179,239	96,966
Bank of New York Mellon	United States	US GAAP	31-12-20	469,633	358
Credit Suisse	Switzerland	US GAAP	31-12-20	912,569	1,739
Goldman Sachs	United States	US GAAP	31-12-20	1,163,028	3,874
Groupe BPCE	France	IFRS	31-12-20	1,776,365	16,903
Groupe Credit Agricole	France	IFRS	31-12-20	2,723,637	24,846
ING Bank	Netherlands	IFRS	31-12-20	1,151,199	7,098
Morgan Stanley	United States	US GAAP	31-12-20	1,115,862	835
Royal Bank of Canada	Canada	IFRS	31-10-20	1,219,662	4,234
Santander	Spain	IFRS	31-12-20	1,852,493	29,010
Societe Generale	France	IFRS	31-12-20	1,795,628	14,703
Standard Chartered	United Kingdom	IFRS	31-12-20	789,050	6,613
State Street	United States	US GAAP	31-12-20	314,706	126
Toronto Dominion	Canada	IFRS	31-10-20	1,288,220	6,224
UBS	Switzerland	IFRS	31-12-20	1,125,765	1,211
UniCredit	Italy	IFRS	31-12-20	1,144,052	1,551
Wells Fargo	United States	US GAAP	31-12-20	1,955,163	18,516

Appendix 2

No.	Disclosure elements	Source	Total Count	Percentage	Count IFRS	Percentage	Count US GAAP	Percentage
1	Measurement of ECL is stated	IFRS 9.5.5.17 /IAS 1.117	27	100%	18	100%	9	100%
2	Disclosure of period measuring ECL	IFRS 9.5.5.19 /9B.5.5.38	19	70%	12	67%	7	78%
3	Disclosure regarding methods used to calculate ECL	IFRS 7.35B (a) /7.35G	27	100%	18	100%	9	100%
4	Disclosure regarding assumptions used to calculate ECL	IFRS 7.35B (a) /7.35G	27	100%	18	100%	9	100%
5	Disclosue regarding the credit risk exposure (including commitments and significant credit risk concentrations)	IFRS 7.35B (c) /7.35K (a)	26	96%	18	100%	8	89%
6	Disclosure regarding credit risk exposure and ECL by credit risk grades	IFRS 7.35M	24	89%	17	94%	7	78%
7	Disclosure regarding what is defined as a significant increase of credit risk	IFRS 7.35F (a)	18	67%	18	100%	0	0%
8	Disclosure regarding the definition of default	IFRS 7.35F (b)	23	85%	17	94%	6	67%
9	Geographical split in ECL calculation	Best practice	14	52%	12	67%	2	22%
10	Industry split in ECL calculation	Best practice	10	37%	8	44%	2	22%
11	Dislosure regarding the write-off policy (including expectation of recovery)	IFRS 35F (e)	22	81%	15	83%	7	78%
12	Disclosure number of scenario's (and if so how many).	Huttenhuis, Bout & ter Hoeven (2019)	25	93%	17	94%	8	89%
13	Disclosure of weight of each scenario	Huttenhuis, Bout & ter Hoeven (2019)	13	48%	11	61%	2	22%

No.	Disclosure elements	Source	Total Count	Percentage	Count IFRS	Percentage	Count US GAAP	Percentage
14	Sensitivity analysis performed on ECL/ impairments	AFM (2020) /ESMA (2020)	15	56%	13	72%	2	22%
15	Disclosure for the reasons for the sensitivity	ESMA (2020)	12	44%	11	61%	1	11%
16	Disclsoure on methodology used for sensitivity analysis	ESMA (2020)	11	41%	11	61%	0	0%
17	Disclosure of support measure (forbearance) and impact on ECL	IFRS 7.35F /7.35I	15	56%	12	67%	3	33%
18	Qualitative disclosures regarding risk origination and management	IFRS 7.33	27	100%	18	100%	9	100%
19	Quantitative disclosures on loan origination	Best practice	1	4%	0	0%	1	11%
20	Qualitative disclosure (policy) regarding the collateral held	IFRS 7.35K (b) /7.38 (b)	24	89%	16	89%	8	89%
21	Quantitative disclosure regarding the collateral held	IFRS 7.35K (c)	21	78%	17	94%	4	44%
22	Disclosure regarding collateral held mitigates credit risk	IFRS 7.36 /7.38	22	81%	17	94%	5	56%
23	Disclosure of forward looking information regarding inputs to the calculation (macro-economic information, including source)	IFRS 7.35G	25	93%	18	100%	7	78%
24	Disclosure of deviation of ECL versus booked loss on stage 3 loans	Best practice	14	52%	13	72%	1	11%
25	Disclosure on development of ECL (stemming from notional movement, PD/LGD movement etc)	ESMA (2020)	17	63%	15	83%	2	22%
26	ECL post model adjustment (Management Overlay) is explained	Best practice	15	56%	10	56%	5	56%
27	Debt moratoria (payment holidays) granted and effect on Financial statement is explained	Best practice	24	89%	15	83%	9	100%
28	Impact of debt moratoria on SICR definition is disclosed	Best practice	13	48%	13	72%	0	0%
29	Disclosure regarding the exposures subject to the payment moratoria	Best practice	15	56%	12	67%	3	33%
30	Change of inputs (and forecasting) in ECL models compared with prior years	Best practice	18	67%	13	72%	5	56%
31	Have the different scenarios (and their weights) used in the ECL calculation changed, compared to prior year	Best practice	16	59%	12	67%	4	44%
32	Dislcosure regarding movements from Stage 1 to Stage 3	Best practice	15	56%	15	83%	0	0%