SPA/20/03 July 2020

SEACEN POLICY ANALYSIS

WE NEED TO TALK ABOUT IFRS 9: REGULATORY OVERLAYS TO ECL PROVISIONING IN THE TIME OF COVID-19

Glenn Tasky

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The ***SEACEN Policy Analysis:*** **We Need to Talk about IFRS 9: regulatory overlays to ECL provisioning in the time of COVID-19** reflects the analysis and views of SEACEN staff and do not represent the views of its member central banks and monetary authorities.

Notes:

The SEACEN Centre recognizes "China" as People's Republic of China; "Hong Kong, SAR" as Hong Kong, China; and Korea as "Republic of Korea".

FOREWORD

This paper is the fourth in a series of publications titled SEACEN Policy Analysis. The series is intended to provide in-depth analysis of topical policy issues in macroeconomics, monetary policy, financial stability, and payments systems, with a particular emphasis on contextualizing these issues to the SEACEN stakeholder space. The papers look at the contours of cutting-edge issues that arise with ever-changing macroeconomic environments and technological possibilities and focus more on policy options than on more technical analysis such as econometric modeling.

The current paper, "We Need to Talk about IFRS 9: Regulatory Overlays to ECL Provisioning in the Time of COVID-19"" authored by Glenn Tasky, SEACEN's Director of Financial Stability and Supervision / Payment and Settlement Systems, discusses the significant challenges banks and their regulators face in applying the new methodology during the pandemic.

The accounting standard setters, in the aftermath of the 2007-09 GFC, adopted a more forward-looking loan valuation framework based on a more forward-looking method called expected loss provisioning (ECL) to address procyclicality and to enhance transparency of the financial statements. However, the full implementation of IFRS 9 may amplify the distress in the financial system under the current exigencies of COVID-19. Therefore, as part of the regulatory policy response to support the real economy and to preserve financial stability during the COVID-19 shock, the prudential authorities will have to apply such accounting standards as ECL more flexibly. In particular, for effective banking supervision during the current crisis, regulatory authorities need reliable and consistent information across the banks in their jurisdictions on the magnitude of possible loan losses, at individual banks and for the system as a whole. The realization of tail risks from the pandemic makes the determination of such loan losses even more complex, at a time when the attention of bankers is being stretched thin by responding to the needs of their borrowers while monitoring their capital and liquidity adequacy. To this end, there may be a case for applying regulatory overlays to the accounting rules to simplify and ease the calculation burden on banks and their regulators while maintaining the same degree of stringency.

I wish to emphasize that the views expressed in this and all issues of the SEACEN Policy Analysis series are those of the author and do not represent the views of SEACEN's member, associate member, and observer central banks and monetary authorities.

It is indeed a very difficult time as the world tackles this unprecedented health crisis and its toll on human lives along with its economic and financial consequences. At the SEACEN Centre, we are adopting a flexible strategy to adjust to the new realities by providing online learnings of the pandemic, while carrying out policy analysis of the responses on the macroeconomic, monetary, and financial front. We stand ready to provide assistance to members in building and strengthening their capacity as we adjust to the "new normal."

Mangal Goswami
Executive Director
The SEACEN Centre

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ABSTRACT

The paper highlights the operational complexities and challenges of the Impairment section of International Financial Reporting Standard 9, "Financial Instruments," and explains how those complexities and challenges are even more acute when accounting for expected credit losses during the COVID-19 pandemic. The analysis also suggests some possible "regulatory overlays" to IFRS 9, in the form of additional prescriptive guidance and data supplied by the banking supervisor, to promote greater uniformity across banks and operational simplification in the accounting of loan-loss allowances. Matters such as the difficulties of determining when a significant increase in credit risk has occurred and the specification of scenarios to take into account future macroeconomic and sectoral conditions are discussed, with practical solutions offered that regulators may elect in their jurisdictions.

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Executive summary

The worldwide COVID-19 pandemic has threatened the health of tens of millions of people around the world and has caused much suffering and many deaths already. Without an effective treatment or a vaccine and none on the horizon, the level of economic activity has dropped precipitously as entire economies have shut down, against a backdrop of enormous uncertainty as to how fast people can safely return to work, shop, travel, dine out, and be entertained.

The significant drop in the level of economic activity, in turn, has raised the specter of high and rising levels of non-performing loans (NPLs), necessitating heavy increases in the level of loan-loss allowances (LLA)[1]. The need for higher LLA, in turn, requires provisions to be made, decreasing bank profits directly and bank capital indirectly. In such extreme cases, increases in required LLA are so massive that it can potentially deplete bank capital entirely.[2]

In response to this situation, jurisdictions worldwide have enacted many measures to assist borrowers to continue to make their required payments or to postpone the making of these required payments (payment holidays). Sometimes government guarantees of loan repayments are offered, lessening banks' levels of credit risk. Whether participation is mandatory or voluntary on the part of the banks or the borrowers, these measures will, at least temporarily, clamp down the expected increases in NPLs and concomitant increases in LLA. At the same time, banks around the world, together with their regulators, are struggling to adapt to the new method of calculating LLA, the Expected Credit Loss (ECL) method, that was introduced via IFRS 9 in 2014. This Policy Analysis presents issues and options for central banks, monetary authorities, and stand-alone bank supervision and regulation authorities (collectively, regulatory authorities or RAs) in using regulatory overlays to smooth the path towards IFRS 9 adoption in the face of the pandemic, and to suggest a method by which regulatory backstops to IFRS 9 calculations of LLA can be avoided. In summary, this Policy Analysis will argue that:

- **Implementation of IFRS 9 in the current context is both too complex and not prescriptive enough, potentially leading to wide variations in the amount of LLA among banks with similar portfolios. The pandemic makes certain demands of IFRS 9 even more difficult to meet. In other words, IFRS 9 may amplify the distress in the financial system under the current exigencies of COVID-19.**
- **Paradoxically, the pandemic may be a convenient backdrop for RAs to require that LLAs for all loans be calculated using a lifetime ECL, in place of the prescribed Stage 1—Stage 2—Stage 3 process under IFRS-9.**
- **Moving to lifetime ECL may obviate regulatory backstops to LLA calculations.**
- **RAs may elect to prescribe a definition of default that harmonizes accounting and regulatory definitions and provides clarity to individual banks grappling with their own definitions.**

1. The author thanks Dr. Mangal Goswami, Executive Director, The SEACEN Centre, for helpful comments, and Ms. Masyitah Rosmin, Research Associate, The SEACEN Centre, for painstakingly reviewing the draft for clarity and consistency. As this is a Policy Analysis document not subject to peer review and the responses of banks and their regulators to the rapidly-evolving COVID-19 pandemic, and the impact of such responses, are not fully known at the time of this writing, conclusions and recommendations may evolve over time.

This Policy Brief uses the term "loan loss allowances" (LLA) instead of other terms such as valuation allowances, loan loss reserves, or provisions, to denote the contra-asset or liability on a bank's balance sheet (a stock indicator). The term "provisions" will be used in this Policy Brief only to denote the expense item on a bank's profit and loss statement (a flow indicator) that is debited to increase the formed LLA. Many jurisdictions, unfortunately, use the term "provisions" to denote both the balance sheet and profit and loss statement items, creating some confusion.

2. S&P (2020, p. 1) forecasts that banks worldwide will suffer $2.1 trillion in credit losses in 2020 and 2021.

- **RAs may elect to demand that banks provide them with their "present value of expected future cash flows" calculations in place of the black-box modeling output that banks supply to their supervisors.**
- **RAs may elect to provide banks in their jurisdiction with the macroeconomic and sectoral assumptions, taking into account various scenarios under COVID-19, ranging from deep economic recession to the trajectory of recovery including various levels of government support and other policy support measures. representing forward-looking assessment.**
- **RAs should, if they have not already done so, insist that banks under their supervision, collect and present to them historical loss experiences on different types of loans in a standard format.**

RAs worldwide have issued statements to their banks encouraging a flexible approach to the application of IFRS 9 impairment accounting during the pandemic, without "watering down" the standard in any way. They have advised banks to take a "long-long-run" view of the macroeconomy and carefully distinguish among their borrowers to identify those businesses that have long-run viability.

Section 1: Background

As is well known in accounting, auditing, and banking supervision circles, the final step in the completion of International Financial Reporting Standard 9, "Financial Instruments," was completed in July 2014 with the issuance of the section on expected credit losses (ECL). For banks and other financial institutions for which lending is the primary business (collectively, "banks"), the ECL section is undoubtedly the most important, as it fundamentally changes the method of setting loan-loss allowances (LLA)[3].

The ECL method of setting LLA has its origins in the Great Financial Crisis (GFC), during and after which it was determined that banks systematically overvalued loans (and other assets) on their balance sheets. The overvaluation of loans led to unrealistic reporting of bank capital, which allowed banks to take excessive risks undetected by regulatory radar. LLA were shown to be inadequate, as many banks posted large, surprise loan losses that pushed them down below minimum capital requirements and, sometimes, into insolvency. The reason was that LLA were set according to formulae that looked back into the past, not adequately taking into account either current conditions (macroeconomic, sectoral, and borrower-specific) or expected future conditions.

IFRS 9 was adopted by most jurisdictions around the world, with the notable exception of the United States, where in spite of a harmonization effort conducted by the International Accounting Standards Board (IASB) and the U.S. Financial Accounting Standards Board (FASB), the resulting standard (Accounting Standard Update No. 2016-13, "Financial Instruments – Credit Losses," Topic 326, June 2016) contains some key differences from IFRS 9. However, the motivation and philosophy behind IFRS 9 and ASU 2016-13 are the same: that the valuation of loans on the balance sheet of banks should include an LLA that reflects a forward-looking estimate of ECL.[4] (The U.S. standard is known as a "current expected credit loss" or CECL requirement.)

As a result, banks on all continents, big and small, internationally-active or purely domestic, are grappling with the challenges of IFRS 9 or some other ECL standard. Many banks and their auditors are estimating that IFRS 9 will result, or has already resulted, in an increase in required LLA of 25 percent or more. Some medium-size banks have estimated that the administrative costs of implementing IFRS 9 will ultimately be in the range of EUR 5 million or more, requiring between 11 and 25 additional skilled

3. IFRS 9 consists of the following topics: Classification and Measurement of Financial Assets, Classification and Measurement of Financial Liabilities, Derecognition of Financial Assets and Financial Liabilities, Expected Credit Losses, Hedge Accounting, and Disclosures (which were announced along with IFRS 9 but are contained in IFRS 7). This Policy Analysis covers only ECL.

4. Unlike their counterparts in most other jurisdictions, bank regulatory authorities in the United States have a long history of intervening in the development of U.S. Generally Accepted Accounting Principles (GAAP) when they significantly affect banks.

personnel.[5] Many challenges are being reported, the most important being data and infrastructure, modeling, reporting, internal controls and governance, ongoing analytics, and a lack of qualified personnel. Although most banks in most jurisdictions prepared their annual audited financial statements in conformity with IFRS 9 starting in 2018, banks in some jurisdictions are still in transition, and some banks (besides U.S. banks) are not even following IFRS 9 and have no plans to be.[6]

In the European Union (EU), IFRS 9 was adopted as official policy on 22 November 2016 (Commission Regulation 2016/2067, published in Official Journal of the European Union, L323, Vol. 59, 29 November 2016). However, the EU banking standard-setters, the European Banking Authority (EBA) and European Central Bank (ECB, for only the 19 members of the euro area) had been preparing for IFRS 9 for a long time.

Following the Basel Committee's initial statement on the subject, "Guidance on credit risk and accounting for expected credit losses" (18 December 2015), the EBA issued "Guidelines on credit institutions' credit risk management practices and accounting for expected credit losses (EBA/GL/2017/06 of 12 May 2017). EBA also issued "Guidelines on the application of the definition of default under Article 178 of Regulation (EU) No. 575/2013" on 28 September 2016; a "Report on results from EBA impact assessment of IFRS 9" on 10 November 2016; "First observations on the impact and implementation of IFRS 9 by EU institutions" on 20 December 2018, and "EBA roadmap for IFRS 9 deliverables" on 23 July 2019.

Knowing its importance and its impact, RAs the world over have been working feverishly with their banks and the accounting and auditing professions in their jurisdictions to attempt to ensure a smooth and consistent adjustment to IFRS 9 provisioning. And just at the time that the standard was either fully adopted or well along the way of adoption in most jurisdictions, the COVID-19 pandemic struck.

The pandemic introduced a level of complexity and uncertainty never before seen in the development or application of any accounting standard. In the words of the Basel Committee on Banking Supervision (2020),

> There are high levels of uncertainty currently surrounding the forward-looking information relevant to estimating expected credit losses (ECLs) and to applying the IFRS 9 assessment of significant increases in credit risk (SICR)... At present, information available that is both reasonable and supportable on which to assess SICR and to measure ECL is limited…[R]elief measures to respond to the adverse economic economic impact of Covid-19…should not automatically result in exposures moving from a 12-month ECL to a lifetime ECL measurement… While estimating ECL, banks should not apply the standard mechanistically and should use the flexibility inherent in IFRS 9, for example to give due weight to long-term economic trends.

Given this complexity and uncertainty, additional guidance from RAs is desirable. This Policy Analysis also describes some other possible, non-COVID overlays that RAs may elect to simplify the application of the standard. ***Now, more than ever, high-quality and consistent application of accounting standards is the basis for effective and consistent application of regulatory capital requirements. Poor implementation of an ECL model is likely if supervisory guidance is not provided to banks, particularly under the stressed environment of COVID-19.***

Section 2: Complexity of IFRS 9

IFRS 9 is well-intentioned, though exceedingly complex. Much expense has been incurred by banks on accountants, auditors, consultants, attorneys, and other professionals to help them through the transition, and this expense is particularly acute for small banks.

5. Ertan (2019, p. 31) notes that "in keeping with the idea that the ECL model requires significantly more effort, I find a relative increase in affected banks' audit fees. I note that these costs may be a lower bound because this estimation omits several other categories of relevant expenditures, such as the full-time employees diverted to the IFRS 9 transition or the external consultants and experts hired for the ECL implementation."

6. For example, small or non-publicly-traded banks in Austria, Belgium, Germany, Ireland, Italy, the Netherlands, and Spain follow national accounting standards, not IFRS.

Indeed, a recent academic study (Ertan, 2019, p. 12) has noted that a majority of banks "lack clarity on how to implement the new regulation and what impact it will have on their business."

There are several dimensions of this excessive complexity:

- Auditors have said (perhaps self-interestedly) that banks must consider a "wide range of scenarios" in calculating LLA.
- These scenarios require a broad range of inputs, including GDP growth, interest rates, employment, and asset prices.
- The transition from 12-month ECL to lifetime ECL (described below) when a "significant increase in credit risk" on a loan is likely to have occurred is extraordinarily complex.
- Supreme importance is given to the concept of "default," but default is not defined in the Standard.
- There is no effective proportionality for smaller or less complex banks.[7]

That last point deserves special emphasis. In recent years, there has been considerable emphasis on proportionality in nearly all aspects of banking supervision and regulation. However, as this Policy Analysis unfolds, it will attempt to make clear that in matters crucial to the calculation of LLA – such as the development of numerous macroeconomic and sectoral scenarios and projecting the evolution of cash flows under each scenario, including scenarios in which the borrower fails to repay all or part of the loan, there is simply no proportionality that is applicable, short of discarding IFRS 9 entirely in favor of a prudential backstop such as the Standard-Watch-Substandard-Doubtful-Loss schema.

7. IFRS 9 does contain a few "practical expedients" that are available to all banks and do not necessarily offer proportionality. First, there is the "low credit risk exception," which states that for a loan that is deemed to be of low credit risk upon origination, there is no need to monitor for a possible SICR. Next, there are the "rebuttable presumptions" that default is deemed to happen when a loan becomes 90 days past due and a SICR has occurred when a loan becomes 30 days past due. There are some other simplifications applicable to leases and trade receivables, but again, these are not geared towards smaller and less complex banks.

Section 3: General observations about the introduction of IFRS 9 methodology

These observations will be familiar to any RA staff member who has been involved in the implementation of IFRS 9 in his/her jurisdiction, but they still form a useful foundation for the analysis to be presented later in the paper:

- The big shift in moving to IFRS 9 is using credit risk management systems and data for financial reporting purposes. In other words, it is an externalization of an internal process.
- In all the ECL literature, there are three basic rules that ECL must follow. ECL must 1) be an unbiased and probability-weighted amount determined by evaluating a range of possible outcomes; 2) take into account the time value of money; and 3) reflect reasonable and supportable information about past events, current conditions and forecasts of future economic conditions.
- The LLA in an accounting sense should be equal to the ECL. In turn, the ECL is the difference between the loan's gross carrying amount (usually the outstanding principal balance) and the present value of estimated future cash flows, discounted at the original effective interest rate (EIR). In standard accounting terms, the amortized cost of the loan is adjusted by the LLA to determine the net carrying amount. (In some of the literature, the LLA is called an "impairment provision," or "impairment loss," but as explained in footnote 2 above, this Policy Analysis will use the term "LLA" for the balance sheet item.)
- Although most of the literature on determining ECL focuses on a Probability of Default / Loss Given Default (PD/LGD) method, ***the Basel Committee has stated that the use of this method is not required.***
- The ECL calculation method selected should be proportional to the size and complexity of the bank (but tellingly, neither IASB nor accountants or consultants have explained publicly how it can be "proportional"). Banks must accept, however, that any method is going to be somewhat complex and require informed judgment.

- Another acceptable method is a "credit loss rate method." The use of this method requires several steps: 1) the segmentation of the loan portfolio into useful sub-categories; 2) the calculation of annualized historical net write-offs for each sub-category; 3) the adjustment of these historical loss rates to account for changes from historical conditions to conditions at the reporting date along with reasonable and supportable forecasts. This last step is known as converting historical loss rates to "lifetime loss rates."

- ***If banks have not begun calculating annualized historical net write-offs, RAs may elect to require them to begin, using as much historical data as they currently possess. Historical data are required to implement IFRS 9 properly.*** A suggested calculation method for annualized historical net write-offs is provided in an appendix to this document.

- ***RAs may elect to also require banks to submit their data on annualized historical net write-offs, so that the RA can produce a system-wide summary data set.***

- Banks must accept that LLA under IFRS 9 must be established for all loans, including new loans. The assumption of a nil ECL is not valid, as there is at least some probability of default, however small, for any loan. Indeed, IFRS 9 even contemplates the rare situation where a loan could be considered "impaired" at origination.

- Banks must also accept that ***the influence of collateral in the LLA calculation will be significantly reduced*** if it takes years for the banks to repossess and sell collateral of a defaulted borrower. The reason is that in a discounted cash flow calculation, money to be received from the sale of collateral years into the future will have a very low present value today.

Section 4: Difference between 12-month ECL and lifetime ECL in IFRS 9

As previously mentioned, a major intended result of IFRS 9 is the recognition of possible loan losses at a much earlier stage, and in more accurate amounts, than before. To this end, IFRS 9 makes a distinction between two types of ECL, based on two forward-looking horizons. The first is the ECL arising from events that may occur over the next 12 months, and the second is the ECL arising from events that may occur over the remaining lifetime of the loan. For any loan, except those with a remaining time to maturity less than 12 months, it is clear that there is a greater total likelihood of unfavorable events happening, leading to loan losses, over the longer period than over the shorter period. ***Accordingly, lifetime ECL is expected to be higher than 12-month ECL***.

To many observers, the reason for two different time horizons during which negative events could happen -- 12-month ECL and lifetime ECL – may seem difficult to understand. The rationale for this distinction is that banks can, and should, compensate themselves for higher and higher levels of credit risk when the loan is originated by setting higher and higher interest rates. If, during the life of the loan, the level of credit risk increases, the bank, normally, cannot compensate itself again by simply raising the interest rate (though some banks often give themselves this right in the loan documents). The only other way of taking the higher credit risk into account is by raising LLA. Moving from a 12-month ECL calculation to a lifetime ECL calculation is the method that has been chosen by IASB to accomplish that increase in LLA when credit risk has increased.

However, it is interesting to note that FASB has rejected this approach for CECL in the United States. CECL is always lifetime ECL, even at the moment the loan is originated. It can fluctuate, of course, as the level of credit risk increases or decreases over the life of the loan, but the time horizon over which events may occur that give rise to loan losses is always considered to be the entire remaining time to maturity or repayment of the loan. The FASB approach is undoubtedly simpler to administer. This approach may also avoid a misunderstanding which is likely to arise in the IFRS approach: the 12-month ECL is not the losses that could occur over the next 12 months, but the losses that could occur ***over the lifetime of the loan, because of events that could happen over the next 12 months.***

Section 5: Significant increase in credit risk: a designation subject to significant application challenges

According to IFRS 9, the switch from calculating 12-month ECL to lifetime ECL is supposed to occur when there has been a "significant increase in credit risk" (SICR) since origination. Denoted as a movement from "stage 1" to "stage 2," this requirement has been one of the most difficult to define and to administer, because it cannot usually be quantified and requires the application of judgment. Moreover, it can be evaded by banks, and this evasion may be difficult to detect by either the external auditor or the RA.

Banks may also misinterpret the meaning of 12-month and lifetime ECL, as explained above. They may also incorrectly infer that adequate collateral would make this judgment call unnecessary, when in reality, collateral is irrelevant, unless the presence of collateral affects the borrower's behavior (for example, by decreasing the incentives to default on a mortgage).

When COVID-19 appeared and economies began to shut down, the plethora of payment holidays, payment moratoria, loan reschedulings, and loan restructurings that were seen in many jurisdictions – some required by governments or RAs, and some allowed by them but at the discretion of the banks – led to myriad difficult questions in a bank's decision about whether a SICR has taken place. Although accounting and regulatory interpretations are still evolving, generally, however, as Coelho and Zamil (2020, p. 5) have noted, a SICR is not deemed to have taken place if the payment holiday is general and is offered to a wide range of borrowers rather than tailored to the circumstances of a specific borrower.

On the other hand, tailored payment holidays, including those where payments are actually forgiven or stretched out over an atypically long period instead of merely rescheduled, do raise concerns that a SICR has occurred. In those cases, the bank must record an expense right away and look for signs that the borrower is not complying with the modified loan terms. If that determination is not possible because the payments are pushed too far into the future, then the presumption must be that a SICR has occurred.

Many suggested indicators of a SICR have been identified, but the best way for the bank to decide is to ask a series of questions about the loan:

- If the bank had the right, would it renegotiate this loan at a higher interest rate?
- Is the bank now requiring more collateral on new loans similar to this one?
- Has the borrower been downgraded by an external credit rating agency?
- Has the borrower been downgraded in the internal credit risk rating system?
- Has the loan been transferred to a watch list or a specialist problem credit team?
- Have expected future cash flows deteriorated?
- Does the bank expect to have to modify or restructure the terms of this loan?
- Is there a current or expected future deterioration in the macroeconomic outlook that will negatively affect this borrower?
- Is there a current or expected future deterioration in the outlook for the economic sector in which this borrower operates?
- Is the borrower past due by 30 days or more on any of its required payments?
- If the borrower is an individual or small business, has there been a decline in the credit score, much higher use of a credit card, negative equity in a mortgage, or a major life event such as death of a family member, unemployment, bankruptcy, or divorce?

If the answer to any of these questions is yes, then a SICR is likely to have occurred. Although this list and variants of it have become standard in the IFRS 9 literature, some of the indicators refer to actions that the bank takes, rather than characteristics that the borrower exhibits. This reliance on prior actions by the bank could lead to an odd situation, in which the bank ***avoids*** taking necessary action (such as downgrading the borrower or transferring the loan to a problem credit team) because then it would have to calculate ECL on the stricter lifetime horizon than the less severe 12-month horizon.

In addition, there is little or no consistency in fixing the magnitude of significance. In PD terms, should the "significance" threshold be an increase in PD in terms of basis points, or in terms of percentages? The accounting literature seems to have settled on percentages; however, PwC (2017, p. 29) shows increases in lifetime PD that are considered significant in terms of basis points.

Accordingly, to avoid the complexity of differentiating between 12-month ECL and lifetime ECL, and to avoid the subjectivity and potential inconsistency among the banks in defining a SICR, RAs, in consultation with the audit/accounting chamber in their jurisdictions, may elect to offer the simplified option that banks are to calculate lifetime ECL for all loans, including newly-originated ones. In this way, the distinction between Stage 1 and Stage 2 would disappear.

Although this recommendation may seem to contradict the requirements of IFRS 9, there is in fact a long tradition of banking regulatory authorities adopting accounting rules that are more conservative than those applying to firms other than regulated banks. implementation of IFRS 9 is turning out to be complicated enough, and this simplification would eliminate one possible major source of incomparability among the financial statements prepared by the banks. Moreover, as previously mentioned, there is precedent for this approach, as it is the one practiced in the United States.

It should be noted that the IASB in its notes on the evolution of IFRS 9 stated that it had considered requiring lifetime ECL for all loans, but decided against it because of "operational challenges" in estimating the full expected cashflows for every instrument. However, this reasoning is not persuasive, and IASB offered no hint about what these operational complexities might be. Full expected cashflows must be estimated in calculating 12-month ECL as well. Lifetime ECL simply requires a different time horizon for when the "point of default" can occur – any time over the life of the loan.[8] Indeed, IASB simply asserts, without any evidence, that calculating lifetime ECL is somehow significantly more complex than calculating 12-month ECL. What's more, the determination of when a SICR has, or has not, occurred, leads to operational challenges of its own.

IASB also objected to requiring lifetime ECL at origination for another reason: that loans may be carried at significantly below fair value at the time of origination, a gap that would be more acute the longer the tenor of the loan and the higher the PD at origination. However, this argument is also not compelling. Although conditions vary across time and across jurisdictions, very few loans are originated with a high-enough PD to make a significant difference. As for very long-term loans, the "point of default" (if it can be pinned down at some time in the future) is likely to happen within the first two or three years, making the resulting LLA not much different from that which would be calculated under 12-month ECL. Moreover, IASB never stated what the harm would be to the users of financial statements even if a newly-originated loan carried a substantial LLA.

For its part, the Basel Committee in 2015 tried to lay down supervisory expectations as to how and when a SICR should be declared, intending perhaps to simplify and clarify the exercise. However, that guidance goes on for six single-spaced pages, with long, densely-worded paragraphs, and is hardly reassuring to banks. Consider the following passage:

> "The IFRS 9 approach to impairment assessment and measurement is demanding in its requirements for data, analysis, and use of experienced credit judgment, particularly regarding whether an exposure has suffered a significant increase in credit risk…banks will need to implement systems that are capable of handling and systematically assessing the large amounts of information that will be required to judge whether or not particular lending exposures or groups of lending exposures exhibit a SICR…The range of information that will need to be considered in making this determination is wide. In broad terms, it will include information on macroeconomic conditions, and the economic sector and geographical region relevant to a particular borrower or group of borrowers with shared credit risk characteristics, in addition to borrower-specific strategic, operational, and other characteristics."[9]

8. There are problems, too, in specifying a "point of default" any time during the life of the loan, as Appendix 2 points out.

9. Basel Committee, 2015, p. 26

Taking into account all of these challenges, plus the added challenges of measuring ECL in the COVID-19 environment, a regulatory overlay to IFRS 9 that would mandate all loans being evaluated at lifetime ECL would seem to provide operational simplification, rather than greater operational complexity.

Furthermore, in light of COVID-19, the economies of most countries seem to be in a state in which, for any loan, a default, if it occurs, will be much more likely to occur in the next 12 months than at some other future point in the life of the loan. And given that losses would still need to be calculated over the entire life of the loan on the basis of a default within the next 12 months, it would seem that requiring lifetime ECL for all loans would not result in a significant increase in the necessary LLA.

There is also evidence from a recent academic study (Buesa et al., 2019, p. 30) that lifetime ECL models give results that are more severe in terms of necessary LLA but less procyclical than 12-month ECL models. In their words,

> Under US GAAP [which mandates lifetime ECL], since future expected losses are fully provisioned from inception, the realized impact on P&L instead tends to be anticipated and smoothed out in time. The US GAAP therefore seems more likely to reduce the procyclical effects of credit quality deterioration. However, the level of provisions is much higher under US GAAP than under IFRS 9. Therefore, the lower procyclicality of US GAAP seems to come at the cost of holding a larger stock of provisions.[10]

In a study that argues that IFRS 9 will have a positive impact on financial stability, ESRB (2017, p. 31) also concludes that lifetime ECL from origination potentially makes the impairment standard less procyclical than shifting from 12-month to lifetime ECL.[11]

A final argument in favor of lifetime ECL concerns the popularity of so-called "prudential backstops" to the calculation of LLA. These backstops predate IFRS 9 (and even its predecessor, IAS 39) and have their origin in the "loan classification and loan-loss allowances" regimes that spread through the world in the 1990s, largely driven by multilateral development banks and teams of international banking supervision advisors. In these regimes, loans are assigned to (usually) five classification categories (the most common names for which are standard or pass, special mention or watch, substandard, doubtful, and loss). These regimes, often required by law or regulation, are simplified versions of an internal credit risk rating system based on PD ranges and have fewer categories. For each category, a rigid percentage of the outstanding principal balance (less some percentage of the value of the collateral, in some jurisdictions) is required as a general or specific LLA. (In the most common variation, the percentages are 0%, 2% (general), 20% (specific), 50% (specific), and 100% (specific or complete write-off).[12]

A question arises: if RAs require lifetime ECL, is there any need then for the traditional prudential backstop of a loan-classification and LLA regime? Could RAs then simply accept the accounting LLA without any regulatory adjustments?

10. The authors (p. 8) do agree with IASB on a possible drawback to lifetime ECL, previously noted: undervaluing riskier loans. "The CECL approach, by frontloading all the future expected losses, implies the recognition of a significant amount of day-one losses. This also reduces comparability among portfolios and institutions since riskier loans will present higher initial losses, while their net present value is not lower if risk premiums are correctly set." In other words, if credit risk is properly taken into account in setting the interest rates and payment schedule (possibly requiring faster repayment of principal than on less risky loans), then a simple present value calculation would yield the same result for two loans that differ in riskiness, yet the riskier loan would have LLA established against it from the very beginning that is quite a bit higher than against the less risky loan.

11. ESRB argues that IFRS 9 promotes financial stability by requiring all participants (banks, their securities markets, and their regulators) to be continually focused on changes in the macroeconomic and sectoral outlooks and adopt appropriate corrective actions. It also may have the effect of encouraging banks to hold additional capital against the eventuality that economies will suddenly turn down and higher LLA will be suddenly required. Huizinga and Laeven (2019) argue that all methodologies of setting LLA are inherently procyclical, except for the brief experiment in the early 2000s with "dynamic provisioning" – building up LLAs during booms and drawing them down during busts.

12. European supervisors, for the most part, do not use prudential backstops.

The answer is probably yes, but with some caveats (see section below on Adjustments of banks' LLA by RAs). With more conservative lifetime ECL applied to all individual loans and portfolios (implying the merging of Stage 1 and Stage 2), then there would be only two categories of loans – performing and non-performing (or unimpaired and impaired), which would also achieve a convenient blending of accounting and regulatory reporting definitions.

Section 6: Discounted cash flows: getting back to basics

At its essence, the calculation of LLAs using the ECL method appears deceptively simple. As stated in a Grant Thornton publication (2019, p. 26):

> **Guidance note:** Credit losses are defined as the difference between all the contractual cash flows that are due to an entity and the cash flows that it actually expects to receive ('cash shortfalls'). This difference is discounted at the original effective interest rate (or credit-adjusted effective interest rate for purchased or originated credit-impaired financial assets).

The complications arise in actually denoting the monthly cash flows going forward, over the life of the loan, under the hundreds of possible scenarios, each with its own probability of occurring. As PwC (2017, p. 32) states:

> The ECL is determined by projecting the PD, LGD, and EAD for each future month and for each individual exposure or collective segment. These three components are multiplied together and adjusted for the likelihood of survival (i.e., the exposure has not prepaid or defaulted in an earlier month). This effectively calculates an ECL for each future month, which is then discounted back to the reporting date and summed. The discount rate used in the ECL calculation is the original effective interest rate or an approximation thereof.

If the loan is secured, a further complication arises in that assumptions must be made about the value of the collateral, and assumptions must also be made about the time at which it is likely to be repossessed and sold (which may be different times). The collateral values themselves, in turn, will likely vary across the scenarios. Even the timing of repossession could vary across scenarios as well – in the current COVID-19 situation, for example, bankruptcy courts could be clogged, and borrowers in many jurisdictions could take advantage of that situation to seek stay orders preventing the banks from repossessing.

As Huizinga et al. (2019, p. 16) put it,

> …in practice banks need to use complex statistical models that take into account various probability-weighted scenarios as based on forward-looking macroeconomic information to calculate expected credit losses under IFRS 9. This introduces considerable additional accounting discretion over credit impairment provisions.

The point of this analysis is not to discredit the discounted cash flow method, but to encourage RAs in their examination and supervision of the banks to ask for detailed printouts of the expected cash flows on a sample of the loans and require the bank to work back from these cash flows to the scenarios, and then to the assumptions underlying these scenarios. ***Under no circumstances should an RA simply accept the calculations of a bank as the result of some "black box" modeling. Careful study of the mechanics of the calculations could reveal that PDs, if they are used, are too low or collateral valuations are too high, resulting in underestimation of the ECL.***

Section 7: Use of macroeconomic and sectoral scenarios

One area where RAs can greatly assist the banks and promote greater consistency in the application of IFRS 9 is by providing macroeconomic and sectoral scenarios. Banks can then take these scenarios, calculate ECL for each, and then produce a weighted average, where the weight is the probability of each scenario. To meet the requirements of the standard in normal times, there should be three macroeconomic scenarios: a most probable scenario, a stressed case, and a more optimistic case.[13]

13. As previously noted, Ertan (2019, p. 11) comments that auditors have said banks must consider a "wide range of scenarios" in calculating loan losses.

For each sector, the three macroeconomic scenarios can be combined with three sectoral scenarios (also specified by the RA) in a matrix, such as the following:

	Stressed Sectoral	Most Prob Sectoral	Optimistic Sectoral
Stressed Macro			
Most Prob Macro			
Optimistic Macro			

In each cell, the probability of each of the two scenarios (macro and sectoral) corresponding to that cell can be multiplied to determine the probability of that combination happening together. ***RAs may elect to provide the banks with these probabilities, as well as estimates of the probability of default (PD) and loss given default (LGD) associated with each combination.*** (Banks can provide the exposure at default, EAD, on their own.) Although banks must be required to calculate their historical loss experience, it is unlikely that the historical loss experience will be long enough to have occurred through each of these nine combinations.[14]

COVID-19, however, makes scenario analysis much more complicated. There are dozens of possible scenarios, representing combinations of different trajectories of 1) the progression of the virus; 2) the response of authorities and the general public in the form of shutdowns, social distancing, and staying away from travel, retail, and entertainment venues; 3) the level of economic activity resulting from these responses (the so-called V-shaped, U-shaped, W-shaped recoveries, etc.); and 4) the feedback response from the authorities on measures of additional liquidity and solvency support for individuals and households. Each of these dozens of possible scenarios will have a probability attached – and that's not even considering the differential impact across sectors.

In such a situation, it is not enough for RAs simply to leave scenario analysis completely to the discretion of each individual bank. In that regard, some of the pronouncements of RAs in various jurisdictions have fallen somewhat short of the mark.

For example, an excellent joint issuance of the RAs located in the United Arab Emirates acknowledged the problem, but then still left the development of scenarios up to the banks (emphasis in original):

> [T]he Regulators recognize the high degree of uncertainty surrounding the economic consequences of the Covid-19 crisis and therefore the challenges of constructing meaningful and accurate economic forecasts at this point in time. In addition, the UAE economy is materially dependent on the performance of the global economy, therefore the evolution of Covid-19 related government policies implemented throughout the world will also impact the UAE economic forecasts. Consequently, and in order to avoid excessive disparity amongst banks and finance companies' macroeconomic forecasts, banks and financial companies are not expected to incorporate the updated forecasts into ECL until **September 1, 2020**. Subsequent to this date, banks and finance companies should follow their existing process for the production of economic scenario forecasts. Furthermore, in light of the exceptional circumstances, banks and finance companies are required to establish dedicated crisis-focused governance, in order to (i) undertake benchmark analyses using relevant sources, (ii) seek the view of economists and subject matter experts, (iii) ensure that key macro factors driving ECL are still relevant for the present circumstances and (iv) adjust the economic forecasts iteratively, as new information becomes available.[15]

This guidance is entirely sound, but in the time of COVID-19, when there are pressures on banks to react to crisis situations almost every day, many of these tasks (particularly those mentioned in the last sentence of the paragraph above) could well be performed much more easily by the RAs on behalf of the banks, with the banks receiving these forecasts and benchmark analyses for their use in calculating ECL.

14. In practice, many more than nine possible scenarios can be used for a given sector. PwC (2017, p. 34) has five scenarios – base, upside, downside, downside2, and downside 3 – for each of four macroeconomic variables – interest rates, unemployment rate, house price index, and domestic GDP. It can easily be understood that COVID-19 complicates this setting of scenarios quite substantially.

15. "Joint guidance," 2020, page 8

In summary, the very large number of possible future macroeconomic and sectoral conditions that are plausible under the unpredictable COVID-19 environment argues powerfully that RAs may elect to give banks these macroeconomic and sectoral scenarios with the associated probabilities for all combinations, to alleviate operational burdens on banks and promote greater consistency in application.

Section 8: Application of a definition of default

IFRS 9 does not define default. However, other standard-setters have defined default, and the Basel Committee has issued a definition of NPL for regulatory reporting purposes. (See Appendix 2 of this Policy Analysis for a fuller discussion.) ***It would be desirable for accountants, RAs, and risk managers to settle on a definition of default that could be used for all purposes – accounting, risk management / Basel II / Basel III, and regulatory reporting. RAs should follow the international standard-setters in their discussions, and align its definitions with the resulting standards, while keeping in mind the advantages of having one definition that fits all purposes.***

IFRS 9 does, however, contain a definition of a "credit-impaired financial asset." Independent of any other definition of NPL, however, that definition is not ve ry meaningful, as it only indicates events or situations, the occurrence of any one of which would have a collective "probability of default" and lead to loan losses. These events and situations include:

- Significant financial difficulty of the borrower
- Breach of contract by the borrower
- The bank grants a concession to the borrower
- The borrower is extremely likely to enter bankruptcy or reorganization

IFRS 9 also has a backup definition of default, in the form of a "rebuttable presumption" that default occurs whenever the borrower is 90 days or more past due on any required payment.

For a borrower that has more than one facility from the same bank, IFRS 9 is silent on the issue of "contagion" – that is, if a borrower is in default on one of the loan facilities, is that borrower in default on all of the facilities provided by that bank? The Basel Committee has stated that contagion does exist for retail loans, but not necessarily for corporate loans. ***RAs may elect to give the banks a specific ruling on when contagion exists and when it does not.***

Section 9: Grouping loans based on similar credit risk characteristics

It is well established that banks do not have to calculate ECL for each and every loan individually. Loans, especially loans to individuals, households, and small businesses (retail loans), can be grouped into portfolios and their ECLs can be calculated on a portfolio basis. Corporate loans are not as homogeneous and can differ considerably in size and risk characteristics, and so are much less often grouped.

The dimensions according to which retail loans are often grouped are the following:

- Credit risk scores
- Loan-to-value ratios
- Type of collateral
- Vintage (when the loan was originated)
- Tenor of loan
- Geographical location of borrower

RAs may elect to provide banks specific guidance on the dimensions according to which they are allowed to group loans and assess ECL on a portfolio basis.

Section 10: Adjustment of banks' LLA by RAs

Although IFRS 9 attempts to standardize the process of setting LLA according to ECL, there are so many points in the ECL determination process where judgment is applied that it hardly gives confidence that banks will apply the rules consistently and obtain consistent estimates. ***On all of the following points where judgment is required, RAs may elect to provide specific guidance:***

- The definition of default (see above)
- How to calculate historical loss experience
- Determining the appropriate historical period over which to calculate loss experience

- How to adjust historical loss experience for current and forecasted conditions
- How to incorporate recoveries into the calculation of loss experience
- How to account for prepayments on loans
- How to group loans based on similar risk characteristics (see above).

Even if RAs do provide specific guidance, there may be times when banks' LLA do not seem adequate. In those cases, RAs can still have input into a correct level of LLA, especially in those cases where the banks do not seem to be pricing their loans to reflect credit risk. Such situations include:

- The borrower has a fragile income stream
- There is little or no loan documentation
- There is limited verification of the financial condition of the borrower
- The bank has provided a very flexible repayment schedule, such as grace periods, interest-only with a large balloon payment at the end, negative amortization, etc.
- The bank frequently reschedules or restructures its loans
- The bank exhibits high rates of credit growth relative to others
- The bank has higher NPLs as a percentage of its total loans relative to others

All of these situations reflect poorly on the bank's credit risk management, and do not inspire confidence in the bank's LLA calculations. In these cases, RAs should take a deeper look into how the LLA was determined and perhaps revise the amount, not simply accepting the statements of the bank's accountants and auditors.

Section 11: Documentation requirements imposed by IFRS 9

Banks everywhere, as mentioned above, must begin immediately, if they have not already done so, to construct a database of historical loss experience on different categories of loans. However, those are not the only documentation requirements that IFRS 9 is imposing on banks. For internal control and internal audit purposes, as well as for bank examiners, banks must keep on record documentation on the following topics, for each loan or portfolio:

- Inputs into the ECL calculation process – historical loss rates, PD and LGD estimates, and economic forecasts
- The expected remaining time to maturity or prepayment, and the likely exposure at default (EAD) if default were to occur, which may be different from today's outstanding principal balance
- The time period over which the historical loss rates were calculated, and whether or not these time periods included a range of economic conditions and default rates
- Circumstances under which the bank might change the measurement method
- The relationship between the amount and type of collateral and LGD
- The bank's policies on write-offs and recoveries

Section 12: Disclosure requirements imposed by IFRS 9 (included in IFRS 7)

Whether banks are publicly traded or not, RAs should require them to disclose a significant amount of information about their LLA calculations to depositors, other creditors, other banks, and the investing public. In conjunction with IFRS 9, IFRS 7 has been amended to include new disclosure requirements, both qualitative and quantitative. This information should be disclosed at least annually.

The qualitative disclosure requirements include:

- Inputs, assumptions, and techniques used for measuring ECL, and any change in techniques that was made during the reporting period
- Inputs, assumptions, and techniques to determine when a significant increase in credit risk has occurred (if that determination is required)
- Inputs, assumptions, and techniques to determine when a loan is credit-impaired
- Policies on write-offs
- Policies on the treatment of collateral and other credit enhancements in measuring ECL

The quantitative disclosure requirements include:

- A reconciliation of beginning-of-period and ending-of period LLA accounts and reasons for any change
- An explanation of the gross carrying amount of total loans and reasons for any change
- The aggregate gross carrying amount by internal credit risk grade
- A summary of write-offs, recoveries, modifications, and restructurings
- Quantitative information about collateral and other credit enhancements

If RAs consider these disclosure requirements to be unnecessary for any banks, because of their small size, lack of participation in the capital market, or any other reason, then at least the information should be provided to the RA for supervisory purposes.

Section 13: Interaction between IFRS 9 and regulatory capital calculations

Since the introduction of Basel II / Basel III and IAS 39, banking regulatory authorities have had to grapple with two methods of determining required LLA – one for risk management purposes and one for accounting purposes. It was hoped that the concurrent development of Basel III and its amendments, together with IFRS 9, would completely harmonize the risk management and accounting methods of determining required LLA. Unfortunately, this has turned out not to be the case.

Indeed, many banks around the world are faced with a "regulatory ECL," calculated according to Basel II / III, that exceeds their "accounting ECL." This "excess expected loss" is deducted in the calculation of Common Equity Tier 1 (CET1) capital. (If, on the other hand, accounting ECL exceeds regulatory ECL, the excess can be included in Tier 2 capital, up to a maximum of 0.6 percent of risk-weighted assets, calculated under the Internal Ratings Based or IRB approach.) There are many reasons for these discrepancies, but one of them is that in periods of recession or slow growth, accounting ECL, which is calculated at an unfavorable "point in time" (PIT) of the cycle, is likely to exceed regulatory ECL, which is calculated on a "through the cycle" (TTC) approach. The opposite is true during booms or periods of fast growth.

The Basel Committee dealt with these issues, and many others, in issuing "The Basel Framework" in January 2019. In it, the Committee codified "transitional arrangements for expected credit loss accounting," in which it made clear that a transitional arrangement for "new" provisions that arose with the adoption of IFRS 9 was appropriate, as long as the transition period was no more than five years. Jurisdictions could allow banks to phase in the impact of (presumably higher) "new" provisions on CET1 over time, rather than take an immediate hit to CET1. Many jurisdictions are still in the middle of this transition period, making the application of IFRS 9 against the backdrop of COVID-19 extraordinarily complex.

To ameliorate this complexity and to provide some regulatory relief, the Basel Committee (2020) allows jurisdictions to permit banks to "stretch out" the transition period by adding back to CET1 part, or even all, of the already phased-out amounts of "new" provisions in 2020 and 2021 – in effect, restarting the phase-in period. However, the full amount of these "new" provisions will have to be deducted in the calculation of CET1 by no later than 2024.[16]

In issuing its documents, the Basel Committee recognized that the transition to IFRS 9 likely significantly increased LLA and, consequently, decreased regulatory capital ratios. The Basel Committee also desired to create more of a level playing field between banks using the SA and banks using the Foundation Internal Ratings-Based (F-IRB) or Advanced Internal Ratings-Based (A-IRB) Approaches. The latter two approaches calculate both risk-weighted assets and "regulatory ECL," while the former approach calculates only risk-weighted assets. The SA also allows for a distinction between general LLA and specific LLA, which is not observed in the IRB approaches and does not exist in any of the accounting literature. In the SA, loans are risk-

16. The Committee also allowed the possibility of switching back and forth between the "static" approach to calculating the amount of "new" provisions (keeping the balance sheet frozen at the moment of IFRS 9 adoption) and the "dynamic" approach (allowing the balance sheet to evolve over time), if one or the other approach gives the bank some relief in the ultimate calculation of CET1.

weighted gross of general LLA and net of specific LLA, while in the IRB approaches, loans are risk-weighted gross of all LLA.

In the end, however, the Basel Committee did not introduce a "regulatory ECL" for the SA. If this approach had been adopted, every category of loan, and every risk weight within each category, would have had its own standardized regulatory ECL percentage. These percentages would have been derived by using a fixed LGD, and also using the relevant IRB risk-weight functions to solve for the PD that renders the same risk weight as is currently given in the SA.

Summary and conclusion

The COVID-19 pandemic has accentuated the complexities, vagaries, and unworkable exigencies of IFRS 9. But RAs can greatly assist their regulated institutions in grappling with the application of IFRS 9 in the pandemic context by applying some simple regulatory overlays, as described in this Policy Analysis.

At the time of this writing, many of the economic support programs, special lending programs for households and SMEs, and payment holidays are still in effect. But in most jurisdictions, these programs may well expire in September or later in 2020, and there is currently little information about if, when, and how expansively these programs will be extended. That uncertainty not only complicates existing ECL calculations, but also raises the specter of dramatic increases in non-performing loans and painful individual decisions about whether borrowers previously covered by these measures will immediately experience a SICR or even move to Stage 3 impairment.

Under those circumstances, it will be more important than ever for RAs to have accurate and consistent information across the banks in their respective jurisdictions about probable loan losses. Unfortunately, without modifications such as regulatory overlays, IFRS 9 calculations are unlikely to yield that information with the accuracy and consistency that is demanded for supervisory purposes.

APPENDIX

Appendix 1: Loss experience on different types of loans

As part of risk management, banks and RAs, if not already done, should start developing a quarterly database on loss experience on different types of loans, as well as on the loan portfolio as a whole. The concept of "net credit loss" is important in establishing LLA on a forward-looking basis, and also is an indicator of how well the bank's overall policies of credit risk mitigation, classification, and provisioning are working.

For each type of loan (the loan portfolio should be disaggregated), the bank should collect and store the following data on a quarterly basis:

- Outstanding principal balance of loans written off during the quarter (excluding accrued interest receivable)
- Estimated market value of collateral related to loans written off during the quarter, subdivided into:
  - Collateral already repossessed by the bank
  - Collateral not yet repossessed by the bank
- Specific provisions related to loans written off, debited at the time of write-off
- Cash recoveries related to loans written off during the quarter
- Gain or loss on sale of collateral repossessed by the bank

The net credit loss related to these write-offs, then, would be the outstanding principal balance minus the value of collateral already repossessed, minus specific provisions, minus any cash recoveries on these loans, minus or plus any gain or loss on the sale of the repossessed collateral. (It is to be understood that as the quarters proceed, the quarterly net credit losses on various types of loans will not be a smooth data set, but will be subject to sharp fluctuations. Over time, however, the quarterly figures can be smoothed into a measure of "typical" quarterly losses on each segment of the portfolio.)

Appendix 2: Toward a new definition of "default"

The term "default" or "defaulted" has a long history in financial transactions, and probably will not completely disappear from laws, regulations, policies, and discussions. In financial contracts, the list of clear-cut defaults (such as refusing to pay back some or all of the principal or interest) is often expanded by contractually-defined additional "events of default," possibly including events such as the reorganization of the group of which the borrower is a part, or a downgrading of the borrower by a credit rating agency. "Default" is more appropriately viewed in these contexts as a legal term that serves to enable the lender to repossess collateral, have a say in corporate restructuring, etc.

However, the international banking supervision and accounting standard-setters have reinvented the term "default" to apply in many other situations, not necessarily granting legal rights to the bank, and a "defaulted" loan has implications for the amount of capital that must be held by the bank to cover unexpected losses on that loan. (Expected losses, the calculation of which often depends on the definition of default, must be covered by LLA.) Indeed, in the Basel II/III capital calculations, "probability of default (PD)," "loss given default (LGD)," and "exposure at default (EAD)" are important elements in determining the risk weight under the Internal Ratings-Based (IRB) approach. In the Standardized Approach, a "defaulted" loan also is assigned a higher risk weight under the category of "exposure in default."

Complicating matters, the definition of default or a defaulted loan is not entirely objective, and the various subjective indicators of default used in credit risk management and regulatory capital calculations may differ across jurisdictions, or even within the same jurisdiction for different purposes. A loan may be considered as "defaulted" for these purposes, under some of these subjective indicators when there is still a solid basis to expect that a considerable amount of the principal will be returned. Under other common subjective indicators, it is unlikely that any of the principal will be returned.

For example, under the EU's Capital Requirements Regulation (CRR), modeled after Basel II/III, a default is said to have occurred when ***either*** the borrower is more than 90 days past due on any obligation (180 days in the case of certain obligations), ***or*** the borrower is unlikely to pay the obligation in full, without the bank taking actions "such as" repossessing collateral. Of course, both situations could apply.[1]

There follows a long list of indicators of unlikeliness to pay (so-called "UTP indicators"), which are oddly stated in that they generally refer to actions the bank may take, rather than the actions or financial condition of the borrower. Such actions include the establishment of a specific loan loss allowance, the negotiation of a "distressed restructuring," and the filing by the bank of a bankruptcy petition against the borrower. (The actual placement of the borrower in bankruptcy is curiously also listed as an indicator of unlikeliness to repay, although the bank should have been aware of this possibility much sooner). According to the CRR, then, banks may delay recognition of a loan as defaulted, unless the borrower is actually in bankruptcy, by delaying instigating the above actions, until the overdue loan reaches 91 days past due. This treatment is viewed by some commentators as insufficiently conservative.

Recognizing this situation, the EBA took a step forward in September 2016 with its "Guidelines on the definition of default," referenced above. According to these revised guidelines, which go on for 40 pages (illustrating how the "definition of default" has become a regulatory thicket), the declaration of a borrower as "in default" depends less on the actions of the bank itself and more upon actions or characteristics of the borrower. However, some awkward notions persist, such as the statement that the establishment of a specific loan loss allowance by the bank is a UTP indicator, when conceptually, it should be the other way around.[2]

More fundamentally, all definitions of default, whether used in the calculation of LLA for accounting purposes, used in the calculation of risk-weighted assets for regulatory capital purposes, or used for credit risk management purposes, suffer from a similar malady: the notion of default as an *event,* whereas in reality default is a *process.* To say that there is a "point of default" is a convenient abstraction to be used in models, but it does not describe the more common occurrence of a loan gradually drifting into a state of unlikeliness to pay.

1. The Basel Committee codified in this definition what had been a long-standing, though imperfectly and inconsistently applied, supervisory principle that loan classifications, and therefore LLA, should take into account past-due status *and* the financial condition of the borrower. In the early 2020s, unfortunately, many banks in many jurisdictions still do not take the borrower's willingness and ability to pay into proper account in determining LLA.

2. The specific list of "UTP Indicators" includes mainly the establishment of a specific credit risk adjustment (specific LLA), sale of the loan at a loss, distressed restructuring, and bankruptcy of the borrower. Other indicators are as follows:

   (a) a borrower's sources of recurring income are no longer available to meet the payments of instalments;

   (b) there are justified concerns about a borrower's future ability to generate stable and sufficient cash flows;

   (c) the borrower's overall leverage level has significantly increased or there are justified expectations of such changes to leverage;

   (d) the borrower has breached the covenants of a credit contract;

   (e) the institution has called any collateral including a guarantee;

   (f) for the exposures to an individual: default of a company fully owned by a single individual where this individual provided the institution with a personal guarantee for all obligations of a company;

   (g) for retail exposures where the default definition is applied at the level of an individual credit facility, the fact that a significant part of the total obligation of the obligor is in default;

   (h) the reporting of an exposure as non-performing in accordance with [reference to a specific European Commission regulation];

   (i) significant delays in payments to other creditors have been recorded in the relevant credit register;

   (j) a crisis of the sector in which the counterparty operates combined with a weak position of the counterparty in this sector;

   (k) disappearance of an active market for a financial asset because of the financial difficulties of the debtor;

   (l) an institution has information that a third party, in particular another institution, has filed for bankruptcy or similar protection of the obligor

In addition, the theoretical combination of "probability of default" and "loss given default" somehow implies that PD is the antecedent of, or indeed causes, LGD, when the reality is the other way around. Consider the following very simple example of a loan granted in the amount of one million monetary units, with eleven possible outcomes, all of which except the best one would undoubtedly meet any possible definition of default:

Outcome – Borrower pays back:	Proba-bility	Cumulative probability	Outcome x Probability	Cumulative
1,000,000	0.900	0.900	900,000	900,000
900,000	0.030	0.930	27,000	927,000
800,000	0.020	0.950	16,000	943,000
700,000	0.017	0.967	11,900	954,900
600,000	0.010	0.977	6,000	960,900
500,000	0.007	0.984	3,500	964,400
400,000	0.006	0.990	2,400	966,800
300,000	0.004	0.994	1,200	968,000
200,000	0.003	0.997	600	968,600
100,000	0.002	0.999	200	968,800
0	0.001	1.000	0	968,800
Total	1.000		968,800	

In this example, the amount that the borrower is *expected* to repay is 968,800. Subtracting that from the amount she is *obligated* to repay, which is 1,000,000, the Expected Credit Loss is 31,200.[3] Note that the analysis starts with the LGD – the actual outcomes – and then a probability is attached to each possible outcome, which is the opposite of the usual formulation. (The last parameter in the Basel formulation, Exposure at Default, is always 1,000,000 in this example, and LGD is normally expressed as a percentage, not a monetary amount.)

For any given loan, of course, there would be many thousands of possible LGDs, each with its own probability. In that case, what is the utility of speaking about a single PD and LGD? How can we reconcile the standard language with even a simple array of possible LGDs as in the example above? In that example, using the standard formulation with Expected Loss = 31,200,

$$31{,}200 = PD \times LGD \times 1{,}000{,}000$$

Expressing PD and LGD as percentages, there are infinite combinations of the two (such as 5 percent and 62.4 percent, or 10 percent and 31.2 percent) that will make this equation hold. Accordingly, we cannot say that a given loan has a unique PD and a unique LGD.

3. This numerical example also illustrates the concept of "unexpected loss or UL." That concept requires the specification of a "confidence level." Consider the gold-shaded rows. For the first one, where the borrower returns 800,000, the total probability of that outcome plus the two better outcomes is 95 percent. That means that the bank is 95 percent confident that it will not lose more than 200,000. Since Total Loss = Expected Loss + Unexpected Loss, and the Expected Loss is always 31,200 for every possible outcome, the unexpected loss is 168,800. Unexpected loss must be covered by capital, so we may say that the regulatory capital requirement for this loan at a 95 percent confidence level is 168,800. For the second gold-shaded row, where the borrower returns only 400,000, the total probability of that outcome plus all of the better outcomes is 99 percent. That means that the bank is 99 percent confident that it will not lose more than 600,000. In this eventuality, the UL is 568,800. One of the key impacts of COVID-19 is widening the range of possible outcomes on most, if not all, loans – increasing the amount of required regulatory capital, at any confidence level, at the same time as regulatory capital is depleted because of the necessity to form higher LLA.

REFERENCES

Bank of England, Prudential Regulation Authority, 2020. *IFRS 9, capital requirements, and loan covenants (letter),* March.

Bank of England, Prudential Regulation Authority, 2020. *Covid-19: IFRS 9 and capital requirements – further guidance on initial and further payment deferrals (letter),* June.

Basel Committee on Banking Supervision, 2015. *Guidance on credit risk and accounting for expected credit losses,* December.

Basel Committee on Banking Supervision, 2017. *Regulatory treatment of accounting provisions – interim approach and transitional arrangements,* March.

Basel Committee on Banking Supervision, 2020. *Measures to reflect the impact of Covid-19,* April.

BDO IFR Advisory Limited, 2020. "Impairment implications of COVID-19 (IFRS 9 Financial Instruments)," *International Financial Reporting Bulletin 2020/09,* June.

Buesa, A., F. Garcia, J. Tarancon, 2019. "Measuring the procyclicality of impairment accounting regimes: a comparison between IFRS 9 and US GAAP," *European Central Bank Working Paper Series No. 2347,* December.

Central Bank of the United Arab Emirates, Dubai Financial Services Authority of the Dubai International Financial Centre, and the Financial Sector Regulatory Authority of the Abu Dhabi Global Market, 2020. *Joint guidance note to banks and finance companies on the treatment of IFRS 9 expected credit loss provisions in the UAE in the context of the COVID-19 crisis,* April.

Coelho, R. and R. Zamil, 2020. "Payment holidays in the age of Covid: implications for loan valuations, market trust, and financial stability," *FSI Briefs No. 8,* May.

Deutsche Bundesbank, 2019. "IFRS 9 from the standpoint of banking supervision," *Monthly Report,* January.

Ertan, E., 2019. "*Expected losses, unexpected costs?*," December.

European Banking Authority, 2016. *Guidelines on the application of the definition of default under Article 178 of Regulation (EU) No. 575/2013,"* September.

European Banking Authority, 2017. *Guidelines on credit institutions' credit risk management practices and accounting for expected credit losses,"* May.

European Banking Authority, 2018. *First observations on the impact and implementation of IFRS 9 by EU institutions,* December.

European Banking Authority, 2019. *Roadmap for IFRS 9 deliverables,* July.

European Central Bank (Banking Supervision), 2020. *Guidance on the use of forecasts to estimate the ECL during the COVID-19 pandemic,* April.

European Systemic Risk Board, 2017. *Financial stability implications of IFRS 9,* July.

Grant Thornton, 2019. *IFRS example: consolidated financial statements 2019,* December.

Huizinga, H. and L. Laeven, 2019. "The procyclicality of banking: evidence from the euro area," *European Central Bank Working Paper Series No. 2288,* June.

Low, E., L. E. Schmidt, and L. F. Thiel, 2019. "Accounting for financial instruments under IFRS 9 – first time application effects on European banks' balance sheets," *EBI Working Paper Series No. 48,* October.

PwC, 2017. *IFRS 9 for banks: illustrative disclosures,* February.

Restoy, F. and R. Zamil, 2017. "Prudential policy considerations under expected loss provisioning; lessons from Asia," *FSI insights on policy implementation #5,* October.

S&P Global Ratings, 2020. "The $2 trillion question: what's on the horizon for bank credit losses," *Ratings Direct,* July.

Zamil, R., 2020. "Expected loss provisioning under a global pandemic," *FSI briefs No. 3,* April.

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