



IFRS 9 Loan Loss Accounting for Cooperative Financial Institutions

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The [International Accounting Standards Board](#)'s International Financial Reporting Standard ([IFRS 9 Financial Instruments](#)) sets the international accounting standard applicable to impaired financial assets, including loans made by cooperative financial institutions—such as credit unions, cooperative banks, savings and loan cooperatives, caisses populaires, etc.—to their members. IFRS 9 is scheduled to take effect starting January 1, 2018. Early phase-in of IFRS 9 is also permitted.

IFRS 9 is an “expected loss” methodology, and will replace the currently applicable “incurred loss” IAS 39 *Financial Instruments: Recognition and Measurement* standard. Expected credit loss methodologies seek to estimate lifetime credit losses that are likely to occur, whereas incurred loss methodologies focus on what credit losses have occurred already. Expected credit loss methodologies create larger loan loss reserves because they include estimates of future losses that have not yet been incurred as an economic matter.

IFRS 9 uses what is frequently called the “Three Bucket Approach” where the institution’s loan book is reserved for using three phases of credit deterioration:

1. **Bucket 1** : For loans without signs of credit impairment, i.e. loans never in arrears ≥ 30 days. Bucket 1 recognizes expected losses within the next 12 months.
2. **Bucket 2**: For loans that have signs of credit impairment—i.e. the loan has been in arrears for ≥ 30 days at least once (even if later cured)—but have not met the criteria for Bucket 3. Bucket 2 recognizes lifetime expected losses.
3. **Bucket 3**: For loans with serious credit impairment as well as large exposures with a history of arrearage. Bucket 3 recognizes lifetime expected losses.

This guide provides a mathematical representation of IFRS 9’s application to Allowance for Loan Loss (ALL) accounting in the context of a non-complex cooperative financial institution. In Buckets 1 and 2, loans of a similar purpose and collateral—such as unsecured signature loans to consumers, credit cards, new or used auto loans, residential mortgages, business loans, and so forth—are grouped into “Sub-Buckets” and reserved for collectively. In Bucket 3, each problem loan and its collateral are assessed individually. Institutions using the IFRS 9 standard would establish as many Sub-Buckets (or assessments of individual loans) as necessary within each Bucket to represent accurately the types of loans it holds.

IFRS 9 also allows institutions to use a practical expedient and omit discounting the value of future cash flows to determine their present value.¹ Omitting rate of discount (i.e. the time value of money) significantly reduces IFRS 9 calculations’ compliance burdens.

¹ International Accounting Standards Board, *IFRS 9: Financial Instruments*, ¶ B5.5.35 (July 2014) (“An entity may use practical expedients when measuring expected credit losses if they are consistent with the principles in paragraph 5.5.17.”), available at <http://www.ifrs.org/current-projects/iasb-projects/financial->



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Bucket 1—for loans without signs of credit impairment, i.e. loans never in arrears ≥30 days:

As noted above, Bucket 1 loans are broken into particular Sub-buckets based on collateral type and loan purpose (e.g., unsecured closed-end consumer credit, unsecured open-end consumer credit, residential real estate mortgages, chattel mortgages such as new or used auto loans, business loans, etc.) and a collective reserve amount is determined on a Sub-bucket-wide basis.

Bucket 1 uses a 12-month lookout period for expected losses, which is calculated by multiplying: (a) the percentage chance of a loan going from fully-performing to written-off within the next 12 months, by (b) the expected lifetime losses on similar loans, also expressed as a percentage. This means multiplying a fraction by a fraction.

IFRS 9 has a rebuttable presumption that a loan in arrears for 30 days or more has experienced credit deterioration.² Unless this presumption is rebutted, loans in Bucket 1 that are in arrears by ≥30 days are moved to: (i) Bucket 2 or (ii) to Bucket 3 if the loan is one of the institution's largest exposures (such as, for example, any of its 10 largest loans and/or loans with a face value greater than 5% of the institution's total unimpaired regulatory capital). Once moved out of Bucket 1, the loan can never return to Bucket 1 even if the arrearage is cured.

An institution's Bucket 1 ALL reserve can be represented by the following equation:

$$R_1 = \sum_{j=1}^n d_j (e_j(B_j))$$

Where:

R_1 = reserve amount for Bucket 1 in the current reporting period.

d_j = % of loans in Sub-bucket "j" of Bucket 1 expected to be subject to write-off within 365 days of the reporting date, based on historical losses.

e_j = % expected lifetime loss on loans in Sub-bucket "j" of Bucket 1.

B_j = total face value of loans in Sub-bucket "j" of Bucket 1.

[instruments-a-replacement-of-ias-39-financial-instruments-recognition/Pages/Financial-Instruments-Replacement-of-IAS-39.aspx](#)

² *Id.* at ¶¶ 5.5.11, B5.5.19-B5.5.21.



Bucket 2—Loans with Signs of Credit Impairment But Have Not Met the Criteria for Bucket 3:

In Bucket 2, loans are broken into particular Sub-buckets based on collateral type and loan purpose (e.g., unsecured open-end consumer credit, real estate mortgages, new or used auto loans, business loans, etc.) and a collective reserve amount is determined on a Sub-bucket-wide basis.

An institution's Bucket 2 ALL reserve can be represented by the following equation:

$$R_2 = \sum_{h=1}^n e_h(B_h)$$

Where:

R_2 = reserve for Bucket 2 in the current reporting period

e_h = % expected lifetime loss on loans in Sub-bucket "h" of Bucket 2

B_h = total face value of loans in Sub-bucket "h" of Bucket 2

IFRS 9 does not address specific time limits for moving a loan from Bucket 2 to Bucket 3 per se; rather, IFRS 9 requires a loan be moved to Bucket 3 once it becomes seriously impaired. All available material information about the borrower's creditworthiness should be considered, including the number of days the loan has been in arrears.

IFRS 9 does include a rebuttable presumption of "default" after 90 days in arrears,³ and the Basel Committee on Banking Supervision proposed in April 2016 to set a limit of a maximum 90 days in arrears before a loan is considered "non-performing."⁴

In the IFRS 9 framework, if the Basel Committee's proposed approach to "non-performing" loans is finalized, this would mean that the maximum number of days of arrearage before it is mandatory to move loan from Bucket 2 to Bucket 3 is:

- When the loan is in arrears by ≥ 90 days.

A loan from Bucket 2 that is moved to Bucket 3 can return to Bucket 2 if it is cured.

³ *Id.* at ¶ B5.5.37.

⁴ Basel Committee on Banking Supervision, *Prudential treatment of problem assets – definitions of non-performing exposures and forbearance – Consultative Document* (2016), available at <http://www.bis.org/bcbs/publ/d367.pdf>.



Bucket 3—Loans with Serious Credit Impairment and Impaired Large Exposures:

Bucket 3 is for any loan that becomes seriously impaired, such as in the case of long-term arrearage, as well as for the institution's largest exposures that are in arrears. Each problem loan in Bucket 3 is analyzed individually.

The value of any collateral should also be assessed on a case-by-case basis, as well as the legal and practical aspects of safekeeping, repossession, or foreclosure.

While the IFRS 9 standard does not address the details of how an institution should determine its large exposures per se, a reasonable approach would be for an institution to place a loan in arrears in Bucket 3 if that loan is one of the institution's largest loans overall and/or if the loan amount represents a face value of more than a specified percentage of the institution's total regulatory capital.

For this guide, as explained above, the illustrative parameters selected based on similar regulatory standards now in existence are the institution's 10 largest loans (if they are in arrears more than 30 days) as well as any loan in arrears with a face value that is more than 5% of the institution's regulatory capital.

If a loan in Bucket 3 has its arrearage cured, it can return to Bucket 2 unless it is a large exposure. Large exposures with a history of credit impairment remain in Bucket 3 even if the arrearage is cured.

An institution's Bucket 3 ALL reserve can be represented by the following equation:

$$R_3 = \sum_{k=1}^n e_k(B_k)$$

Where:

R_3 = reserve for Bucket 3 in the current reporting period
 e_k = % expected lifetime loss on loans Loan "k" of Bucket 3
 B_k = total face value of Loan "k" of Bucket 3

Any loan that is seriously impaired or is an impaired large exposure should be included in Bucket 3.

As noted above, cooperative financial institution regulators typically establish guidance setting a maximum number of days in arrears after which it is mandatory to adjust the treatment of the loan for accounting purposes.



The criteria for Bucket 3 inclusion based on the Basel Committee’s proposed definition of “non-performing exposure”⁵ and the “rebuttable presumptions” of IFRS 9⁶ would be:

- I. Loans that are ≥ 90 days in arrears (unless later cured); and
- II. Any loan in arrears ≥ 30 days if it is one of the institution’s largest 10 loans and/or the loan is $\geq 5\%$ of the institution’s total unimpaired regulatory capital (these loans stay in Bucket 3 even if cured).

Establishing Expected Loss Percentages:

The reserve equations, above, anticipate the institution calculating expected lifetime loss percentages on its loans based on historical losses as well as potentially other factors such as any macroeconomic events that would be likely to have a material effect on the repayment of the loans in question.

IFRS 9 does not address how an institution should make these calculations per se. Many institutions assess their likely expected losses based on a weighted analysis of their historical losses expressed as a percentage of written-off loans’ face values for a particular loan’s purpose/collateral type with a similar level of arrearage over the previous 12 months, 2 years, or 3 years.

As noted earlier, IFRS 9 allows a practical expedient whereby institutions are not required to factor in rate of discount into these calculations.⁷ The below weighted-average loss equations are intended to be illustrations of possible approaches to a 12-month approach, a 2-year weighted historical approach, and a 3-year weighted historical approach.

a. 12-Month Approach:

$$e_x = L_0$$

Where:

e_x = the expected loss percentage for a particular Sub-bucket loan type in Buckets 1 or 2, or to inform the expected recovery on an individual loan in Bucket 3.

L_0 = losses as a percentage of face value incurred on similar loans over the previous 12 months.

⁵ See *id.*

⁶ International Accounting Standards Board, *IFRS 9: Financial Instruments*, ¶¶ 5.5.11, B5.5.19-B5.5.21, B5.5.37 (July 2014).

⁷ *Id.* at ¶ B5.5.35 (“An entity may use practical expedients when measuring expected credit losses if they are consistent with the principles in paragraph 5.5.17.”).



b. 2-Year Weighted Average Approach:

$$e_x = (2L_0 + L_1)/3$$

Where:

e_x = the expected loss percentage for a particular Sub-bucket loan type in Buckets 1 or 2, or to inform the expected recovery on an individual loan in Bucket 3.

L_0 = losses as a percentage of face value incurred on similar loans over the previous 12 months.

L_1 = losses as a percentage of face value incurred on similar loans 12-24 months ago.

c. 3-Year Weighted Average Approach:

$$e_x = (3L_0 + 2L_1 + L_2)/6$$

Where:

e_x = the expected loss percentage for a particular Sub-bucket loan type in Buckets 1 or 2, or to inform the expected recovery on an individual loan in Bucket 3.

L_0 = losses as a percentage of face value incurred on similar loans over the previous 12 months.

L_1 = losses as a percentage of face value incurred on similar loans 12-24 months ago.

L_2 = losses as a percentage of face value incurred on similar loans 25-36 months ago.

c. Calculating Bucket 1's 12-Month Lookout for Loans Without Credit Problems

The above 12 month approach as well as the 2-year and 3-year weighted-average historical loss data equations can also be used to establish the percentage for Bucket 1's 12-month expected loss lookout factor (i.e. factor "d_j" in the Bucket 1 reserve equation, above).

The 12-month lookout factor is Bucket 1's percentage chance for loans without credit problems going from fully performing to fully written-off within the next 12 months.

This factor is typically a low figure since only loans without a history of significant arrearage are included in Bucket 1.

ALL Reserve Equation:

$$ALL_1 = R_1 + R_2 + R_3$$

Where:

R_1 = reserve amount for Bucket 1 for the current reporting period



R_2 = reserve amount for Bucket 2 for the current reporting period

R_3 = reserve amount for Bucket 3 for the current reporting period

ALL_1 = ALL for the current reporting period

Loan Loss Expense (Gain) Equation:

Loan Loss Expense(Gain) = $ALL_1 - ALL_0$

Where:

ALL_1 = ALL for the current reporting period

ALL_0 = ALL for the prior reporting period

Definition of “Write-Off”:

IFRS 9 does not specify the timing of a loan write-off per se. Rather, the standard bases the timing of write-off on the likelihood of recovery on the loan, i.e. that a loan should be written off as soon as possible once collection efforts have been exhausted and no further recovery is likely. Loan losses resulting from write-offs are satisfied out of the ALL.

Cooperative financial institution regulators typically establish a maximum number of days in arrearage after which write-off is mandatory.

The following, based on an analysis of regulators’ write-off requirements under IAS 39, should be considered an illustrative example of the types of maximum periods of arrearage after which a cooperative financial institution regulator would likely require a loan to be written off under IFRS 9:

- i. Maximum 365 days in arrears for loans that are fully secured;
- ii. Maximum 180 days in arrears for loans that are not fully secured; and
- iii. In the case of loans guaranteed by the full faith and credit of a sovereign government, write-off should occur in connection with the definition of “default” upon which the guarantee becomes payable to the institution (these loans are not included in Bucket 1, Bucket 2, or Bucket 3 unless a full recovery becomes questionable based on the creditworthiness of the sovereign guarantee and/or other material information, in which case they are classified in Bucket 2 or 3 based on how long they have been in arrears and whether or not the loan is fully secured).