Expected Credit Loss (Forward-Looking Information)

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Contents

Foreword

The purpose of this discussion paper is to provide guidance on incorporating more forward-looking information into the modelling of expected losses under MFRS 9 Financial Instruments. This paper covers common sources of more forward-looking information and helps identify what type of information is relevant to the entity.

The discussion paper also looks at how to identify the mathematical relationship between more forward-looking information and historical loss rates to generate a more predictive tool to calculate expected losses.
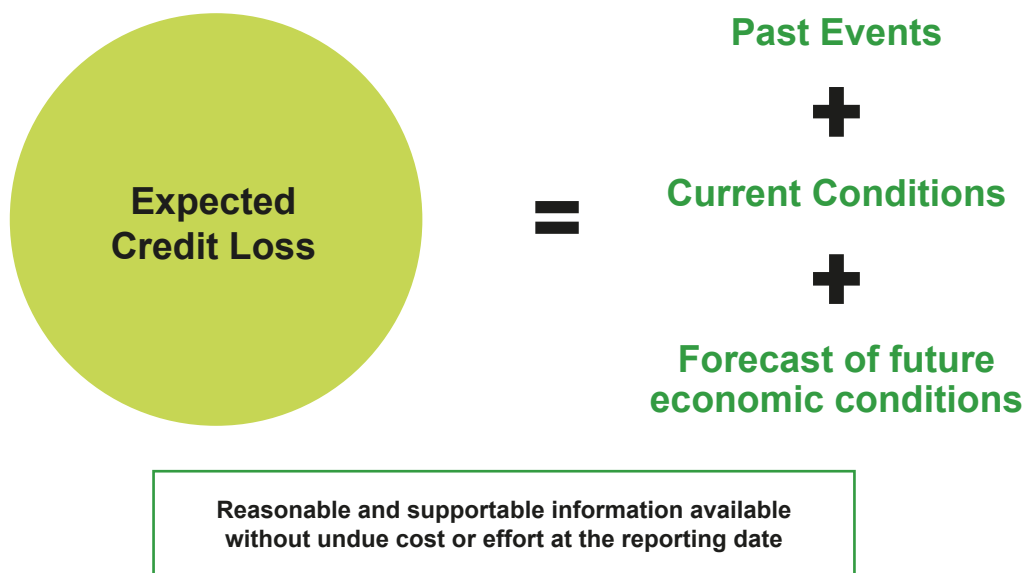
Finally, we include some useful worked examples based on the above analysis.

1.0 Introduction

MFRS 9 Financial Instruments introduced three separate approaches for measuring and recognising Expected Credit Loss (ECL):

i. The 'simplified approach' which applies to trade receivables, without a significant finance component contract assets and lease receivables.

ii. The 'general approach' which applies to all financial assets classified at amortised cost or fair value through other comprehensive income for debt (other than those that fall in (iii) below) as well as issued loan commitments and financial guarantees that are within the scope of the new requirements.

iii. The 'purchased or originated credit impaired approach' which applies to financial assets that are credit impaired at initial recognition.

One of the most complex aspects of ECL impairment is the need to incorporate forward-looking information and, in particular, to consider the effect of multiple forward-looking scenarios.

Expected Credit Loss **=** **Past Events** **+** **Current Conditions** **+** **Forecast of future economic conditions**

Reasonable and supportable information available without undue cost or effort at the reporting date

Forward-looking information

In accordance with MFRS 9 Financial Instruments **B5.5.2**, lifetime ECL is generally expected to be recognised before a financial instrument becomes past due. Typically, credit risk increases significantly before a financial instrument becomes past due or other lagging borrower-specific factors (for example, modification or restructuring) are observed. Consequently, when **reasonable and supportable information** that is **more forward-looking** than past due information is **available without undue cost or effort**, it must be used to **assess changes in credit risk**.

2.0 Sources of forward-looking information

The list below is for reference only and is not exhaustive:

Forward-looking information	Example	Source (Link)
General industry conditions (MFRS 9 B5.5.5)	i. Gross Domestic Product (GDP)	GDP and Industry GDP: *https://www.bnm.gov.my* *https://tradingeconomics.com* Forecast COVID-19 GDP: *https://www.bnm.gov.my* *https://www.bloomberg.com*
	ii. Consumer Price Index	*https://www.dosm.gov.my (Mar'20)*
	iii. Import and Export Statistics	*http://www.matrade.gov.my*
	iv. Purchasing Manager Index (PMI)	*https://tradingeconomics.com*
	v. Overnight Policy Rate	*https://www.bnm.gov.my*
Unemployment rate (MFRS 9 B5.5.52)	i. Unemployment Rate	*https://www.dosm.gov.my* Forecast COVID-19 unemployment rate: *https://tradingeconomics.com* *https://www.theedgemarkets.com*
Property price (MFRS 9 B5.5.52)	i. House Price Index	*http://napic.jpph.gov.my*
Commodity prices (MFRS 9 B5.5.52)	i. International Commodity Price	*https://tradingeconomics.com*

3.0 Identifying forward-looking information relevant to the entity

An entity may have different customer or debtor portfolios with different credit risk characteristics. Hence, the entity is required to select the relevant indices to be used in the ECL calculation as illustrated in the example below.

Industry	Manufacturing & Retail		
Customer ABC	Export	Wholesaler	End User
Forward-looking information	Customer's country GDP growth rate	Unemployment rate	Not applicable as the goods sold to customer are settled on cash terms.

Notes:

When incorporating forward-looking information such as macroeconomics forecast, in the calculation of ECL, the management should consider the relevance of the information and the availability of the information for each specific financial instrument. This is because forward-looking information that is relevant for one financial instrument may not be relevant, or as relevant, for other financial instruments as it depends on specific drivers of credit risk.

4.0 Forward-looking information – Linear and non-linear relationship

Linear relationship

Linear relationship is a relationship of direct proportionality that, when plotted on a graph, traces a straight line. In linear relationships, any given change in an independent variable will always produce a corresponding change in the dependent variable. For example, a linear relationship between production hours and output in a factory means that a 10% increase or decrease in hours will result in a 10% increase or decrease in the output.

Based on the example below, the entity may consider unemployment rate as a relevant source of forward-looking information with a linear relationship as a 1%-point increase in unemployment rate resulted in a 5%-point increase in historical loss rate proportionately.

Year	1	2	3	4	5	6
Unemployment Rate (%)	3.20	3.40	3.20	3.10	2.90	2.80
Historical Loss Rate (%)	4.00	5.00	4.00	3.50	2.50	2.00
Difference between Unemployment Rate (A)	0.20	0.20	0.10	0.20	0.10	-
Difference between Historical Loss Rate (B)	1.00	1.00	0.50	1.00	0.50	-
Difference between Historical Loss Rate / Difference between Employment Rate (B/A)	5.00	5.00	5.00	5.00	5.00	-

Unemployment Rate and Historical Loss Rate

Legend: Unemployment Rate (%)   Historical Loss Rate (%)

4.0 Forward-looking information – Linear and non-linear relationship (continued)

Non – linear relationship

Based on the example below, the entity may consider the unemployment rate as a relevant source of forward-looking information with a non-linear relationship as historical loss rate increased when the unemployment rate increased. As shown in the calculation below, when the unemployment rate increased from 3.20% to 3.40%, the historical loss rate had increased significantly by 3.2%-point.

Year	1	2	3	4	5	6
Unemployment Rate (%)	3.20	3.40	3.20	3.10	3.00	2.80
Historical Loss Rate (%)	4.80	8.00	4.80	3.80	3.00	2.00
Difference between Unemployment Rate (A)	(0.20)	0.20	0.10	0.10	0.20	-
Difference between Historical Loss Rate (B)	(3.20)	3.20	1.00	0.80	1.00	-
Difference between Historical Loss Rate / Difference between Employment Rate (B/A)	16.00	16.00	10.00	8.00	5.00	-

Unemployment Rate and Historical Loss Rate

Legend: Unemployment Rate (%) — Historical Loss Rate (%)

5.0 Non relevant forward-looking information

Based on the example below, the entity is not advised to incorporate this forward-looking information into the ECL calculation as the information has no co-relationship.

Year	1	2	3	4	5	6
Unemployment Rate (%)	3.40%	3.36%	3.44%	3.10%	2.88%	2.88%
Historical Loss Rate (%)	25	20	15	10	10	5

Unemployment Rate and Historical Loss Rate

Legend: Unemployment Rate (%) — Historical Loss Rate (%)

6.0 Measuring expected credit loss - Single scenario or multiple scenarios

According to the Webcast on IFRS 9: Financial Instrument, the IFRS Transition Resource Group for Impairment of Financial Instruments (ITG) stated that multiple scenarios are relevant when there is a non-linear relationship between forward-looking scenarios and credit losses when measuring ECL.

Forward-looking Information		Non-linear relationship	Multiple scenarios
Credit losses			
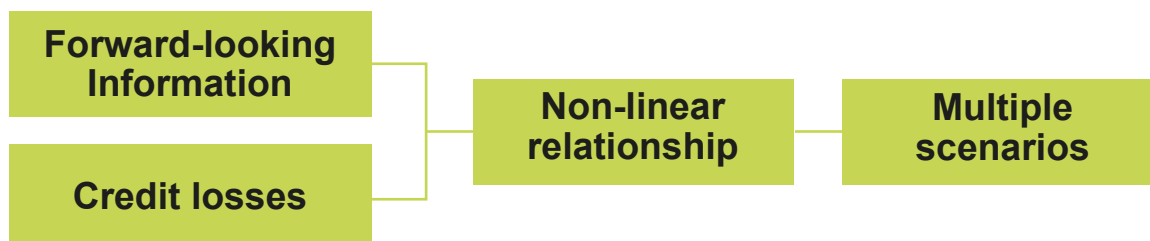
The management may consider the points below to determine the number of scenarios:

Need not necessarily identify every possible scenario – but must consider the risk that a credit loss occurs reflecting both the possibility of a credit loss or no credit loss occurring **(MFRS 9 B5.5.18)**

Neither an estimate of a worst-case scenario nor an estimate of the best-case scenario **(MFRS 9 B5.5.41)**

In some cases, relatively simple modelling without the need for a large number of detailed simulations of scenarios… in others, the identification of scenarios and their estimated probability will probably be needed **(MFRS 9 B5.5.42)**

When there are many possible outcomes, an entity can use a representative sample of the complete distribution **(MFRS 9 BC5.265)**

6.0 Measuring expected credit loss - Single scenario or multiple scenarios (continued)

According to the Webcast on IFRS 9: Financial Instrument, the IFRS Transition Resource Group for Impairment of Financial Instruments (ITG) also clarified the points below:

What IFRS 9 DOESN'T require and the ITG DIDN'T say

You must always use multiple scenarios	You must use three scenarios	You must use "Probability of Default"

7.0 How to determine the weighting for multiple macroeconomic scenarios?

MFRS 9 Financial Instrument did not prescribe the mechanism in determining how to weight the probability of different scenarios. Therefore, the management should apply their judgement based on various facts and circumstances as well as periodically reassess the judgement made.

The management may consider the points below when weighting the probability of scenarios:

Objective and unbiased weighting

Availability of information

Periodical reassessment

8.0 Example for measuring expected credit loss by incorporating forward-looking information (single scenario)

Entity A, a manufacturer, has a trade receivables portfolio of RM30 million in 2019 and operates only in Malaysia. Its customer base consists of a large number of small-sized enterprises, and the trade receivables are categorised by common risk characteristics that are representative of the customers' abilities to pay all amounts due in accordance with the contractual terms. The trade receivables do not have a significant financing component in accordance with MFRS 15.

Entity A uses a provision matrix to determine the ECLs for its trade receivables portfolio. The provision matrix is based on its historical observed loss rates over the expected life of the trade receivables and is adjusted for forward-looking estimates. In this case study, the unemployment rate is expected to rise in the coming year due to a sudden economic downturn.

The following summarises the historical unemployment rate in Malaysia and the loss rate of Entity A from the year 2014 to 2019. The country's unemployment rate is expected to increase from 3.20% to 4.20% in the coming year.

Year	2019	2018	2017	2016	2015	2014
Unemployment Rate (%)	3.20	3.40	3.20	3.10	2.90	2.80
Historical Loss Rate (%)	4.00	5.00	4.00	3.50	2.50	2.00
Difference between Unemployment Rate (A)	0.20	0.20	0.10	0.20	0.10	-
Difference between Historical Loss Rate (B)	1.00	1.00	0.50	1.00	0.50	-
Difference between Historical Loss Rate / Difference between Employment Rate (B/A)	5.00	5.00	5.00	5.00	5.00	-

Entity A believes that a higher unemployment rate will proportionately drive the loss rate higher over the life of the receivables. Based on the analysis above, the calculation shown that every 0.2%-point increase in unemployment rate there is a corresponding 1%-point increase in historical loss rates. To reflect the impacts of the current conditions on the ECL rates **(Unemployment rate estimated to increase by 1%-point) and to produce reasonable as well as supportable forecasts, Entity A estimates that the loss rate will increase by 5%-point in each ageing bucket, based on its past experience when there were similar increases in the unemployment rate. On that basis, Entity A adjusts its ECL rates as per the following:

	Current	1-30 days past due	31-60 days past due	61-90 days past due	More than 90 days past due
ECL rate based on past 3 years average historical data	1.00%	2.00%	5.00%	9.00%	19.00%
Adjusted for Forward-Looking Information *	Increase in unemployment rate of 1%**-point will drive a 5%-point increase in the loss rate				
Adjusted ECL rate	6.00%	7.00%	10.00%	14.00%	24.00%

* The management will need to assess the correlation between relevant macroeconomics factors and the expected loss rates.

Based on the analysis above, the calculation shown that every 0.2%-point increase in unemployment rate there is a corresponding 1%-point increase in historical loss rates.

8.0 Example for measuring expected credit loss by incorporating forward-looking information (single scenario) (continued)

The ECL for Entity A's trade receivables amounting to RM30 million in 2019 is measured using the provision matrix as per the following: -

	Gross carrying amount (RM)	Credit loss rate	ECL (RM)
Current	15,000,000	6.00%	900,000
1-30 days past due	7,500,000	7.00%	525,000
31-60 days past due	4,000,000	10.00%	400,000
61-90 days past due	2,500,000	14.00%	350,000
More than 90 days past due	1,000,000	24.00%	240,000
Total	30,000,000	-	2,415,000

9.0 Example for measuring expected credit loss by incorporating forward-looking information (multiple scenarios)

Entity B, a retailer, sells goods to its customers which consists of large number of small clients. Entity B has a trade receivables portfolio of RM6 million in 2019.

Due to the COVID-19 outbreak, the Entity expects the domestic economy to be impacted by global and domestic preventive measures taken to contain the outbreak. Experts forecasted that Malaysia's GDP growth will be between -2.0% to 0.5% in 2020 against challenging global economic conditions.

Based on the historical trend, Entity B's historical loss rate and GDP does not have a linear relationship. Hence, Entity B develops two scenarios to reflect the possible effects of GDP on the ECLs for its portfolio of receivables as shown below:

Ageing Bracket (Current):

Scenario	GDP growth rate *	Probability of scenario	ECL rate based on past 3 years average historical data	Forward-looking information adjustment	ECL rate (after incorporating forward-looking adjustment)
A	0.50%	35%	4%	8%	4.32%
B	-2.0%	65%	4%	17%	4.68%
Weighted average ECL rate = 4.55% (35% x 4.32%) + (65% x 4.68%)					

Example for measuring expected credit loss by incorporating forward-looking information (multiple scenarios) (continued)

Ageing Bracket (1-30 days past due):

Scenario	GDP growth rate *	Probability of scenario	ECL rate based on past 3 years average historical data	Forward-looking information adjustment	ECL rate (after incorporating forward-looking adjustment)
A	0.50%	35%	7%	8%	7.56%
B	-2.0%	65%	7%	17%	8.19%
Weighted average ECL rate = 7.97% (35% x 7.56%) + (65% x 8.19%)					

[To repeat the calculation for the remaining ageing bracket]

	Gross carrying amount (RM)	Credit loss rate	ECL (RM)
Current	3,000,000	4.55%	136,620
1-30 days past due	2,000,000	7.97%	159,400
31-60 days past due	500,000	(#)%	(X)
61-90 days past due	400,000	(#)%	(X)
More than 90 days past due	100,000	(#)%	(X)
Total	6,000,000	(#)%	(X)

* Scenarios are developed based on the information obtained from Bank Negara Malaysia's Economy and Monetary Review 2019
 (Source: https://www.bnm.gov.my/ar2019/files/emr2019_en_full.pdf)

Notes:

All the numbers cited in this publication are for illustrative purposes only. Besides that, the number of forward-looking information scenarios that an entity would use in practice may differ from the illustrative examples.

10.0 Key Summary

You should consider multiple scenarios but may not always have to use them

There is no single correct approach but one clear objective

Use reasonable and supportable information available without undue cost of effort

Good quality disclosure is important

11.0 Contact our expert

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