

# IFRS 9 *Financial Instruments* impairment

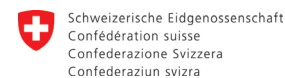
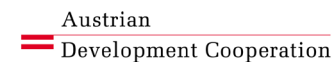
Michael Wells, Consultant, CFRR, the World Bank  
Pascal Frerejacque, Senior Operations Officer, CFRR, the World Bank

September 2017

*Practical Workshop for the National Bank of Republic of Belarus*



STAREP is co-funded by:





## Aims

- » Understand the judgements in assessing whether a significant increase in credit risk has occurred
- » Understand the judgements in measuring expected credit losses in accordance with IFRS 9
  - » the general model
  - » effects of collateral
  - » write-off
  - » simplifications and exceptions



# Financial asset accounting overview of differences between IAS 39 and IFRS 9

## Recognition and derecognition (IAS 39 and IFRS 9)

**Recognition:** when party to the contractual provisions of the instrument (principle)

**Derecognition:** an eclectic approach driven by vague notions and complex rules

## Classification and measurement

**IFRS 9:** classification on the basis of notions about cash flow characteristics and business models

**IAS 39:** an eclectic and complex rules-based classification approach

## Impairment

**IFRS 9:** point-in-time 'expected loss' model (**notion**)

**IAS 39:** point-in-time 'incurred loss' model (**notion**)

## Hedge accounting (IAS 39's and IFRS 9's override 'normal' accounting)

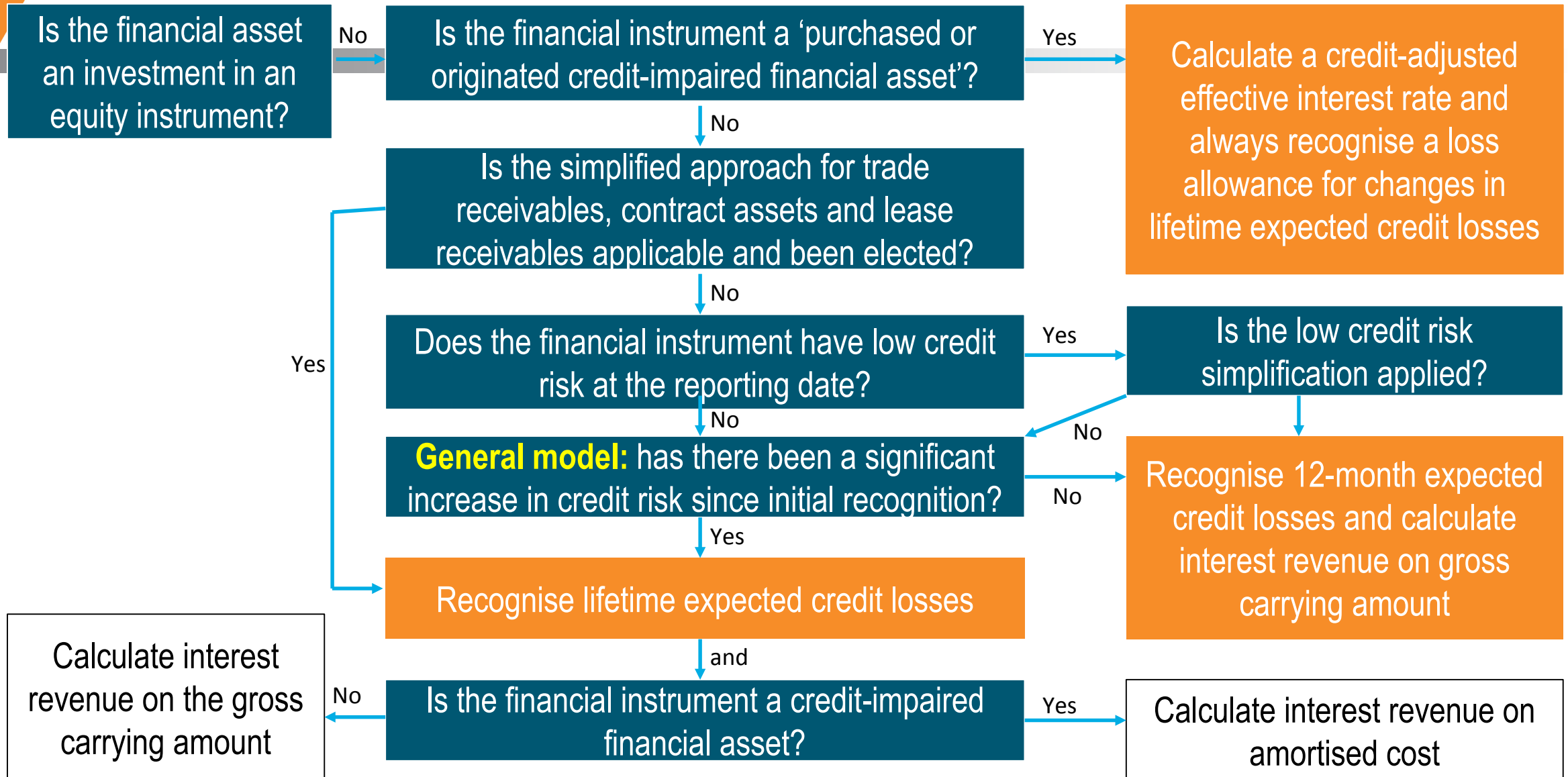
**IAS 39:** an inflexible and complex rules-based approach

**IFRS 9:** aligns accounting with risk management practices (**notion**)



# **Impairment of financial assets: overview**

# Overview of IFRS 9's impairment requirements




# IFRS 9 impairment: overview of the general model

## steadily deteriorating credit quality since initial recognition

	Stage 1: performing: insignificant increase in credit risk	Stage 2: underperforming: significant increase in credit risk	Stage 3: non-performing: credit-impaired (high credit risk not necessarily = credit impaired)
Expected credit losses recognised	12-month expected credit losses	Lifetime expected credit losses	Lifetime expected credit losses
Interest income	Gross basis	Gross basis	Net basis

However, derecognise the financial asset (or a portion thereof) when there is no longer reasonable expectations of recovering the financial asset in its entirety (or a portion thereof).



## IFRS 9 impairment: the general model classifications: performing, underperforming and non- performing

Could a bank have different loans to the same counterparty included in different stages for impairment testing purposes (for example, 'Stage 1: performing' and 'Stage 2: underperforming')?

Choose 1 of:

- 1) Yes
- 2) No

## IFRS 9: impairment some defined terms

- » **Credit loss:** the difference between all contractual cash flows that are due to an entity in accordance with the contract and all the cash flows that the entity expects to receive (ie all cash shortfalls), discounted at the original effective interest rate (or credit-adjusted effective interest rate for purchased or originated credit-impaired financial assets).
- » An entity shall estimate cash flows by considering all contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) through the expected life of that financial instrument. The cash flows that are considered shall include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.
- » There is a presumption that the expected life of a financial instrument can be estimated reliably. However, in those rare cases when it is not possible to reliably estimate the expected life of a financial instrument, the entity shall use the remaining contractual term of the financial instrument.





## IFRS 9: impairment some defined terms (continued)

- » **Expected credit losses:** the weighted average of credit losses with the respective risks of a default occurring as the weights.
- » **12-month expected credit losses:** the portion of lifetime expected credit losses that represent the expected credit losses that result from default events on a financial instrument that are possible within the 12 months after the reporting date.
- » **Lifetime expected credit losses:** the expected credit losses that result from all possible default events over the expected life of a financial instrument.
  - » Note: **default events** are not defined in IFRS 9. An entity must define default for itself consistently with its internal credit risk management taking account of qualitative indicators and a rebuttable 90-day past due quantitative limit.



## Impairment: the general model default: test your understanding

The purpose of the '90 days past due' rebuttable presumption is?  
Choose 1 of:

- 1) To ensure uniformity in defining default
- 2) To delay the default event until the financial asset becomes 90 days past due
- 3) A back-stop: to ensure that default is not defined as later than 90 days past due without reasonable and supportable information to the contrary

## IFRS 9: impairment some defined terms (continued)

**Purchased or originated credit-impaired financial asset:** a purchased or originated financial asset that is **credit-impaired** on initial recognition.

**Credit-impaired financial asset:** when one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred, including observable data about the following events in isolation or in combination:

- a) significant financial difficulty of the issuer or the borrower;
- b) a breach of contract, such as a default or **past due** event;
- c) the lender(s) of the borrower, for economic or contractual reasons relating to the borrower's financial difficulty, having granted to the borrower a concession(s) that the lender(s) would not otherwise consider;
- d) it is becoming probable that the borrower will enter bankruptcy or other financial reorganisation;
- e) the disappearance of an active market for that financial asset because of financial difficulties; or
- f) the purchase or origination of a financial asset at a **deep discount** that reflects the incurred **credit losses**.



**Impairment of financial assets  
assessing whether a significant  
increase in credit risk has occurred**



## IFRS 9 impairment: the general model when to recognise expected credit losses


Apply impairment requirements after initial recognition  
irrespective of:

- » whether the financial asset is originated by the entity or acquired by the entity (separate acquisition or in a business combination); and
- » whether the financial asset is acquired or originated credit-impaired.

# IFRS 9 impairment: the general model

## assessing significant increases in credit risk

- » Expected credit losses are updated at each reporting date for new information and changes in expectations even if deterioration (compared to credit risk at initial recognition) is not significant
  - » consider **reasonable and supportable information** that is available without undue cost or effort
  - » when **forward-looking information** is not available without undue cost or effort, may use past due information. However, when reasonable and supportable forward-looking information is available without undue cost or effort, an entity cannot ignore it..
  - » when default patterns are not concentrated at a specific point, changes in risk of default over the next 12 months may be used if they are a reasonable approximation of the changes in the lifetime risk of a default occurring
- » Change in credit risk over the life of the instrument (ie assess the risk of a default occurring rather than changes in expected credit losses)
- » Rebuttable (back-stop) presumptions:
  - » default is no later than 90 days past due
  - » more than 30 days past due then credit risk has increased significantly since initial consideration



## Impairment: the general model when assessing for a significant increase in risk remember...

- » A relative test (not an absolute threshold)
- » Assessing risk of default not risk of loss (ie collateral)
  - » Banks usually use PD when assessing risk of default but other approaches can be used (including qualitative approaches) provide the objective is met ...
- » Can assess on the basis of 12-month PD (instead of lifetime PD) only when 12-month PD is a proxy for lifetime PD



# IFRS 9 impairment: the general model

## Basel Committee Guidance for Banks

The Committee expects that the use by internationally active banks of IFRS 9 practical expedients (information set, low credit risk and >30 days past due rebuttable presumption) will be limited, particularly because – given their business – the cost of obtaining relevant information is not considered by the Committee to be likely to involve “undue cost or effort”.

- » **Information set:** “an entity shall consider the best reasonable and supportable information that is available, without undue cost and effort” and that “an entity need not undertake an exhaustive search for information” **The Committee expects that banks will not read these statements restrictively.**
- » **Low credit risk exemption:** use of this exemption by banks would reflect a low-quality implementation of the ECL model and IFRS 9.
- » **>30 days past due rebuttable presumption:** banks should have credit risk assessment and management processes in place to ensure that credit risk increases are detected well ahead of exposures becoming past due or delinquent.

Source: paragraphs A47 to A55 of Basel Committee Guidance for Banks applying IFRS 9 on credit risk and accounting for expected credit losses





## Impairment: the general model

### examples of factors to consider when assessing for a significant increase in risk

- » Significant change in what would charge for credit risk now because of changes in credit risk since initial recognition
- » Changes in external market indicators of credit risk eg CDS levels for obligor
- » Actual or expected change in internal or external credit rating
- » Actual or expected increase in the risk of default on another facility with the same obligor
- » An actual or expected significant change in the operating results of a borrower
- » Changes in how the bank manages the credit risk on the instrument
- » Past due information, including the 30 days past due rebuttable presumption

# Impairment: the general model

## when to use 12 month probability of default when assessing for a significant increase in risk

- » When default patterns are not concentrated at a specific point, changes in risk of default over the next 12 months may be used if they are a reasonable approximation of the changes in the lifetime risk of a default occurring (paragraph B5.5.13)
- » In the absence of indications to the contrary, for each performing (stage 1) loan below, can the reporting bank consider only changes in each loan's 12-month risk of default to determine whether a significant increase in credit risk has occurred?


Choose one of: (1) Yes; (2) No; or (3) it depends...

	01/01/2016	31/12/2016	31/12/2017	31/12/2018	31/12/2019	31/12/2020
Loan A	(1,000,000)	300,000	280,000	260,000	240,000	220,000
Loan B	(1,000,000)					1,610,510
Loan C	(1,000,000)	100,000	100,000	100,000	100,000	1,100,000

# Impairment: the general model

## example 1: assessing significant increases in credit risk since initial recognition

- » On 1 January 2016 Bank provides a loan to Company when Bank expects that Company:
  - » will be able to meet all of the covenants for the life of the instrument
  - » generation of income and cash flow to be stable in Company's industry over the term of the loan despite some business risk related to Company's ability to grow its gross margins within its existing businesses
  - » Bank considers that the loan is not an originated credit-impaired loan
- » In 2016:
  - » Company underperforms on its business plan for income generation and net cash flow generation for 2016 due to macroeconomic and other changes
  - » Leading Credit Rating Agency downgrades Company's credit rating two-notches
- » At 31 December 2016:
  - » Company is close to breaching its covenants and has increased leverage ratio
  - » trading prices for Company's bonds have decreased and its market spreads have increased (these changes are not explained by changes in the market environment)
  - » Bank expects a further deterioration in the macroeconomic environment



## Impairment: the general model

### example 1: assessing significant increases in credit risk since initial recognition (continued)

On the basis of your assessment of Bank's loan to Company, in 2016: (choose one of)

- 1) there is no need to assess credit risk because the low credit risk exception applies;
- 2) (the low credit risk exception does not apply) and there has been a significant increase in credit since initial recognition; or
- 3) (the low credit risk exception does not apply) and there has not been been a significant increase in credit risk since initial recognition.

Does your answer depend on whether the bank is internationally active?



# Impairment: the general model

## example 2: assessing significant increases in credit risk since initial recognition

- » On 1 January 2016 Bank provides a loan to Company when:
  - » prospects for the cyclical production industry in which Company operates are positive, albeit that a potential decrease in sales is anticipated due to the point in the cycle
  - » despite headroom on Company's coverage ratios before triggering a default being high, creditors are concerned about Company's ability to refinance its debt
  - » Bank judges the loan NOT to be originated credit-impaired despite:
    - » the loan being subject to considerable credit risk
    - » speculative elements and uncertainties affecting Company's uncertain prospects for cash generation which could lead to default



## Impairment: the general model

### example 2: assessing significant increases in credit risk since initial recognition (continued)

- » On 31 December 2016 Company announces:
  - » 3 of its 5 operating segments experienced significant reduction in sales volumes in 2016 (sales of the other two segments were stable in 2016 and are expected to grow in 2017).
  - » a restructuring to focus and to expand organically its profitable core business segments negotiations underway for disposal of non-core assets and businesses.
- » Company's share price ends on 2016 high and Bank's credit risk department judges that a change in its internal credit risk rating is NOT justified.



## Impairment: the general model

### example 2: assessing significant increases in credit risk since initial recognition (continued)

On the basis of your assessment of Bank's loan to Company, in 2016 (choose one of):

- 1) there is no need to assess credit risk because the low credit risk exception applies;
- 2) (the low credit risk exception does not apply) and there has been a significant increase in credit since initial recognition; or
- 3) (the low credit risk exception does not apply) and there has not been a significant increase in credit risk since initial recognition.

Does your answer depend on whether Bank is internationally active?



## Impairment: the general model

### example 3: assessing significant increases in credit risk since initial recognition (highly collateralised financial asset)

On 1 January 2016 Bank provides a \$100 million 5-year loan to partially finance Company's £200 million real estate assets

- » loan secured by a first-ranking security over the real estate assets
- » the loan is not considered to be originated credit-impaired

In 2016:

- » income and operating profits of Company decrease due to an unforeseen economic recession
- » expected increases in regulations have the potential to further negatively affect income and operating profit.





## Impairment: the general model example 3: assessing significant increases in credit risk since initial recognition (highly collateralised financial asset) (continued)

At 31 December 2016, it is expected that these negative effects could be significant and ongoing. Consequently:

- » Company's free cash flow is expected to be reduced to the point that the coverage of scheduled loan payments could become tight. Bank estimates that a further deterioration in cash flows may result in Company missing a contractual payment on the loan and becoming past due.
- » on the basis of third party appraisals reflecting decreased real estate values, the loan-to-fair value ratio is 75%



## Impairment: the general model example 3: assessing significant increases in credit risk since initial recognition (highly collateralised financial asset) (continued)

On the basis of your assessment of Bank's loan to Company, in 2016 (choose one of):

- 1) there is no need to assess credit risk because the low credit risk exception applies;
- 2) (the low credit risk exception does not apply) and there has been a significant increase in credit since initial recognition; or
- 3) (the low credit risk exception does not apply) and there has not been a significant increase in credit risk since initial recognition.

Does your answer depend on whether the bank is internationally active?

# Impairment: the general model

## determining significant increases in credit risk

### collective and individual assessment basis

- » Lifetime expected credit losses are generally recognised before becoming past due because typically, credit risk increases significantly before then.
  - » 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.
- » To meet the objective, it may be necessary to perform the assessment of significant increases in credit risk on a collective basis by considering information that is indicative of significant increases in credit risk
  - » for example, retail loans for which there is little or no updated credit risk information that is routinely obtained and monitored on an individual instrument until a customer breaches the contractual terms
    - » In the absence (without undue cost or effort) of relevant, reasonable and supportable forward-looking information on an individual instrument basis assess changes in credit risk on a collective basis
- » However, for collective assessment must group instruments on the basis of shared risk characteristics, like: instrument type, credit risk ratings, collateral type, date of initial recognition, remaining term to maturity, industry, geographical location of the borrower, the value of collateral relative to the financial asset if it has an impact on the probability of a default occurring (for example, non-recourse loans in some jurisdictions or loan-to-value ratios).

# Impairment: the general model

## example 4: assessing significant increases in credit risk since initial (recognition on a collective basis?)

- » Bank provides mortgages to finance residential real estate in a multiple country customs Union (CU).
- » Bank segments its mortgage portfolio on the basis of the shared credit risk characteristics:
  - » (i) industries of borrowers' employment; and
  - » (ii) geographic locations (on the basis of the post code of the property that serves as collateral on the mortgage).
- » The economy in Region X of Country Y is dominated by a single international motor vehicle manufacturer's plant (MVM) that exports 80% of its production to other countries in the CU.
- » In late June 2016:
  - » Country Y unexpectedly initiates an irreversible process to exit the CU; and
  - » MVM unexpectedly decides to build the forthcoming new model of its Region X best selling export vehicle in another country in the CU, stating that uncertainty about the likelihood of tariffs being levied on its future exports to CU from Country Y as the main reason for not choosing its Region X plant for this significant retooling capital investment.

# Impairment: the general model

## example 4: assessing significant increases in credit risk since initial (recognition on a collective basis?)

At 31/12/2016, primarily because of the consequences of the events in June 2016, Bank expects default rates on Region X mortgages to increase as:

- » economic conditions in Country Y are expected to deteriorate significantly over the short term and there are increased uncertainties over its medium term economic prospects;
- » unemployment in Region X is expected to increase while the value of residential property is expected to decrease, causing the loan-to-value ratios to increase.

At 31/12/2016 Bank's credit risk assessment of its Region X mortgage asset (choose one of):

- 1) need not be performed because the low credit risk exception applies;
- 2) must be performed separately for each mortgage loan;
- 3) must be performed at the level of the portfolio as a whole; or
- 4) must be performed separately for: (i) the pre-July 2016 portfolio as a whole; and (ii) the post-June 2016 portfolio as a whole.

# Impairment: the general model assessing significant increases in credit risk of a renegotiated or modified financial asset

Did renegotiation or modification of the contractual cash flows of a financial asset result in its derecognition?

Yes ↓

Was the modified financial asset recognised as a 'new' financial asset?

Yes ↓

Treating the date of modification as the date of initial recognition of the 'new' financial asset: is the 'new' financial asset credit-impaired at its initial recognition?

Yes ↓

Measure the loss allowance at lifetime expected credit losses

No ↓

Measure the loss allowance at 12-month expected credit losses until its credit risk increases significantly

No ↓

Assess whether there has been a significant increase in the credit risk of the financial instrument by comparing:

- (a) the risk of a default occurring at the reporting date (based on the modified contractual terms); and
- (b) the risk of a default occurring at initial recognition (based on the original, unmodified contractual terms).



# Impairment of financial assets: measuring expected credit losses

# IFRS 9 impairment: the general model measuring expected credit losses (ECLs)

- » ECLs are defined (Appendix A of IFRS 9) as the weighted average of credit losses with the respective risks of a default occurring as the weights.
- » A credit loss is the present value of the **expected cash shortfalls**, ie the difference between:
  - » the contractual cash flows that are due to an entity under the contract; and
  - » the cash flows that the entity expects to receive.
- » In other words, ECLs are a probability-weighted estimate of credit losses (ie the present value of all cash shortfalls) over the expected life of the financial instrument.
- » However, **cash shortfalls are identified differently** for Stage 1 loans (ie performing loans) and loans at other stages (ie Stage 2 underperforming and Stage 3 non-performing loans)





## IFRS 9 impairment: the general model measuring expected credit losses (ECLs) (continued)

» In particular:

- » For 'Stage 1 performing loans' that use **12-month ECLs**, cash shortfalls are identified as the proportion of lifetime cash shortfalls resulting only from default events that are possible in the ensuing 12 months;
- » For **lifetime ECLs**, cash shortfalls are identified as resulting from default events that are possible over the expected lifetime of the financial instrument.

Note: default events are not defined in IFRS 9. An entity must define default for itself consistently with its internal credit risk management taking account of qualitative indicators and a rebuttable 90-day past due quantitative limit.

## IFRS 9 impairment: the general model measuring expected credit losses (ECLs) (continued)

- » The maximum period to consider when measuring ECLs is the maximum contractual period (including extension options) over which the entity is exposed to credit risk and not a longer period, even if that longer period is consistent with business practice.
  - » For example, take account of expected prepayments on mortgages
  - » However, note that there are different rules for revolving credit facilities (for example, credit cards) that provide for consideration of a longer position (but judgements needed to determine: (i) when to start assessing for significant increases in credit risk; and (ii) what is the appropriate period of future period of exposure to credit risk). Three factors specified in IFRS 9. Note: in making the judgement, take account of credit risk management actions only to the extent that they are expected to reduce or remove an undrawn facility.



## IFRS 9 impairment: the general model measuring expected credit losses (ECLs) (continued)

- » The estimate of expected cash **shortfalls reflects the cash flows expected from collateral** and other credit enhancements that are part of the contractual terms and are not recognised separately.
  - » expected cash shortfalls on a collateralised financial instrument reflects the probability of a foreclosure and the cash flows that would result from it (including any cash flows that are expected from the realisation of the collateral beyond the contractual maturity of the contract).

# IFRS 9 impairment: the general model measuring expected credit losses (ECLs)

- » IFRS 9 does not prescribe a single method for measuring ECLs.
- » However, must measure ECLs in a way that reflects:
  - » an **unbiased** and **probability-weighted** amount that is determined by evaluating a range of possible outcomes (for example, see next slides);
  - » the **time value of money** (for example, see slides after next); and
  - » **reasonable and supportable information** available without undue cost or effort at the reporting date about **past events, current conditions and forecasts** of future economic conditions. For example: borrower-specific factors (like changes in operating results of borrower, technological advances that affect future operations, changes in collateral supporting obligation) and macroeconomic factors (like unemployment rates, house price indexes, GDP, household debt ratios).



## IFRS 9 impairment: the general model example: using multiple scenarios to measure ECLs

On 31/12/2016 Bank pays \$1 million for a portfolio of performing loans. Bank develops three scenarios for the effect of the unemployment rate on the ECLs for its portfolio of loans:

- » **Scenario 1 bullish:** 30% probability of 2% unemployment
  - » 12-month PD = 5%; LGD = 40%
- » **Scenario 2 most likely outcome:** 50% probability of 3% unemployment
  - » 12-month PD = 10%; LGD = 50%
- » **Scenario 3 bearish:** 20% probability of 4% unemployment
  - » 12-month PD = 20%; LGD = 70%

# IFRS 9 impairment: the general model

## example: using multiple scenarios to measure ECLs (continued)

At 31/12/2016 Bank must measure the loss allowance at?  
Choose one of:

- 1) **Scenario 1 bullish:** \$20,000 (ie \$1 million EAD x 5% 12-month PD x 40% LGD)
- 2) **Scenario 2 most likely outcome:** \$50,000 (ie \$1 million EAD x 10% 12-month PD x 50% LGD)
- 3) **Scenario 3 bearish:** \$140,000 (ie \$1 million EAD x 20% 12-month PD x 70% LGD)
- 4) **Weighted average:** \$59,000 (ie 30% x \$20,000 Scenario 1 + 50% x \$50,000 Scenario 2 + 20% x \$140,000)



## IFRS 9 impairment: the general model measuring expected credit losses (ECLs)

- » Because ECLs consider the amount and timing of payments, a credit loss arises even if the **entity expects to be paid in full but later** than when contractually due.
- » To take into account the **time value of money**
  - » discount to the reporting date using the **effective interest rate determined at initial recognition** (except for variable interest rate instruments, for which one must use the current effective interest rate)
  - » if **purchased or originated credit-impaired financial asset**: use the credit-adjusted effective interest rate determined at initial recognition.

# IFRS 9 impairment: the general model

## example: measuring loss allowance deferred payments

- » On 01/01/2016 Bank originates a three-year \$1,000,000 loan
  - » contractual cash flows: 01/01/2016 \$1,000,000 outflow; 31/12/2016 \$100,000 inflow; 31/12/2017 \$100,000 inflow; and 31/12/2018 \$1,100,000 inflow.
- » Despite receiving \$100,000 on 31/12/2016, at 31/12/2016 Bank estimates:
  - » there has been a significant increase in credit risk on the loan since its origination; and
  - » 50% probability that each future contractual cash flow payment will be deferred 1 year.

	Contractual cash flows	Cash flows expected if the borrower defaults	Shortfall if the borrower defaults	Probability weighted expected cash flow	Probability weighted shortfall
31/12/2017	\$100,000		\$100,000	\$50,000	\$50,000
31/12/2018	\$1,100,000	\$100,000	\$1,000,000	\$600,000	\$500,000
31/12/2019		\$1,100,000	(\$1,100,000)	\$550,000	(\$550,000)



# IFRS 9 impairment: the general model

## example: measuring loss allowance deferred payments (continued)

At 31/12/2016 Bank must measure the loss allowance at? Choose one of:

	31/12/2017	31/12/2018	31/12/2019	Loss allowance at 31 December 2016
1)	-	-	-	<b>Nil</b> (ie there is no default at 31/12/2017)
2)	\$100,000; alternatively \$50,000	\$1,000,000; alternatively \$500,000	(\$1,100,000) alternatively (\$550,000)	<b>Nil</b> (ie \$100,000 + \$1,000,000 - \$1,100,000) Alternatively (\$50,000 + \$500,000 - \$550,000)
3)	\$100,000; alternatively \$50,000	\$1,000,000; alternatively \$500,000	(\$1,100,000) alternatively (\$550,000)	<b>\$45,455</b> 50% PD x (\$100,000/1.1 + \$1,000,000/1.21 - \$1,100,000/1.331) Alternatively (\$50,000/1.1 + \$500,000/1.21 - \$550,000/1.331)
4)	\$100,000; alternatively \$50,000	\$1,000,000; alternatively \$500,000		<b>\$458,678</b> 50% PD x (\$100,000/1.1 + \$1,000,000/1.21) Alternatively (\$50,000/1.1 + \$500,000/1.21)

# IFRS 9 impairment: the general model

## example: measuring loss allowance over the life of a portfolio

- » On 30 December 2016 Bank originates 1,000 \$1,000 four-year loans
  - » Management's expectation: LGD = 100%; 12-month PD = 2%; 24-month PD = 4%; 36-month PD = 6%; and lifetime PD = 8%.
  - » Bank treats the loans as a portfolio: borrowers have similar credit risk characteristics.
- Cash flow summary at 30 and 31/12/2016:

	Contractual	Expected using 12-month PD	Expected using 24-month PD	Expected using 36-month PD	Expected using lifetime PD
30/12/2016	(\$1,000,000)	(\$1,000,000)	(\$1,000,000)	(\$1,000,000)	(\$1,000,000)
31/12/2017	\$100,000	\$98,000	\$96,000	\$94,000	\$92,000
31/12/2018	\$100,000	\$98,000	\$96,000	\$94,000	\$92,000
31/12/2019	\$100,000	\$98,000	\$96,000	\$94,000	\$92,000
31/12/2020	\$1,100,000	\$1,078,000	\$1,056,000	\$1,034,000	\$1,012,000

# IFRS 9 impairment: the general model

## example: measuring loss allowance over the life of a portfolio (continued) At 31 December 2016

At 31/12/2016 Bank must measure the loss allowance at? Choose one of:

	31/12/2017	31/12/2018	31/12/2019	31/12/2020	Loss allowance at 31 December 2016
1)	-	-	-	-	<b>Nil</b> (because default is yet to occur)
2)	\$2,000	\$4,000	\$6,000	\$88,000	<b>\$69,737</b> (ie $\$2,000/1.1 + \$4,000/1.21 + \$6,000/1.331 + \$88,000/1.4641$ )
3)	\$2,000	\$2,000	\$2,000	\$22,000	<b>\$20,000</b> (ie $\$2,000/1.1 + \$2,000/1.21 + \$2,000/1.331 + \$22,000/1.4641$ )
4)	\$4,000	\$4,000	\$4,000	\$44,000	<b>\$40,000</b> (ie $\$4,000/1.1 + \$4,000/1.21 + \$4,000/1.331 + \$44,000/1.4641$ )
5)	\$6,000	\$6,000	\$6,000	\$66,000	<b>\$60,000</b> (ie $\$6,000/1.1 + \$6,000/1.21 + \$6,000/1.331 + \$66,000/1.4641$ )
6)	\$8,000	\$8,000	\$8,000	\$88,000	<b>\$80,000</b> (ie $\$8,000/1.1 + \$8,000/1.21 + \$8,000/1.331 + \$88,000/1.4641$ )

# IFRS 9 impairment: the general model

## example: measuring loss allowance over the life of a portfolio (continued) At 31 December 2017

In 2017 the twenty borrowers that default are derecognised.

At 31/12/2017:

- » stage 1 (performing loans); GCA = \$980,000 (ie 980 performing loans x \$10,000 each)
- » LGD = 100%; 12-month PD = 2.04% (20/980 loans) and lifetime PD = 6.12% (60/980)

At 31/12/2017 Bank must measure the loss allowance at? Choose one of:

	31/12/2018	31/12/2019	31/12/2020	Loss allowance at 31 December 2017
1)	-	-	-	<b>Nil</b> (ie there is no default in the remaining portfolio at 31/12/2017)
2)	\$2,000	\$2,000	\$22,000	<b>\$20,000</b> (ie \$2,000/1.1 + \$2,000/1.21 + \$22,000/1.331)
3)	\$2,000	\$4,000	\$66,000	<b>\$54,711</b> (ie \$2,000/1.1 + \$4,000/1.21 + \$66,000/1.331)
4)	\$6,000	\$6,000	\$66,000	<b>\$60,000</b> (ie \$6,000/1.1 + \$6,000/1.21 + \$66,000/1.331)

# IFRS 9 impairment: the general model

## example: measuring loss allowance over the life of a portfolio (continued) At 31 December 2018


In 2018 an additional 80 borrowers default and are written off.

At 31/12/2018:

- » GCA = \$900,000;
- » LGD = 100%;
- » 12-month PD = 11.11% (100/900 loans) and lifetime PD = 22.22% (200/900)

At 31/12/2018 Bank must measure the loss allowance at? Choose one of:

	31/12/2019	31/12/2020	Loss allowance at 31 December 2018
1)	-	-	<b>Nil</b> (ie there is no default in the remaining portfolio at 31/12/2018)
2)	\$10,000	\$110,000	<b>\$100,000</b> (ie \$10,000/1.1 + \$110,000/1.21)
3)	\$20,000	\$220,000	<b>\$200,000</b> (ie \$20,000/1.1 + \$220,000/1.21)



# IFRS 9 impairment: the general model example: measuring loss allowance over the life of a portfolio (continued) At 31 December 2018

How, if at all, would your answer change if:

- » 61 of the 80 borrowers that defaulted in 2018 and 160 of the borrowers expected to default before 31/12/2020 reside in a geographic location in which an unexpected change in government policy resulted in foreclosure of the mine at which nearly all of the working age inhabitants of that geographic location were employed; and
- » Loans to borrowers from other geographic locations continue to perform as expected at the time of granting the loan?

# IFRS 9 impairment: the general model

## example: measuring lifetime ECL using explicit PD approach

On 1 January 2016 Bank acquires a portfolio of 10,000 three-year zero coupon loans at their fair value of \$10,000 each (ie the Bank pays \$100 million in total)

- » Because the loans have no significant payment obligations in the next 12 months Bank uses lifetime probability of default (PD) to determine whether there has been a significant increase in credit risk since initial recognition
- » Because Bank assesses the loans to have similar credit risk characteristics it measures the loss allowance for the portfolio as a whole

At 31 December 2016 Bank:

- » measures the gross carrying amount of the portfolio at \$105 million (ie in 2016 \$5 million interest accretes)
- » determines that the average 12-month PD remains unchanged since initial recognition at 0.75% for the portfolio
- » estimates that on average across the portfolio 20% of the gross carrying amount would be lost in the event of default (sometimes referred to as a 20% loss given default (LGD))

# IFRS 9 impairment: the general model

## example: measuring lifetime ECL using explicit PD approach (continued)

At 31 December 2016 Bank must measure the loss allowance at? Choose one of:

- 1) \$750,000 (ie \$100 million x 0.75% 12-month PD)
- 2) \$787,500 (ie \$105 million x 0.75% 12-month PD)
- 3) \$150,000 (ie \$100 million x 0.75% 12-month PD x 20% LGD)
- 4) \$157,500 (ie \$105 million x 0.75% 12-month PD x 20% LGD)





## IFRS 9 impairment: the general model example: collateral and write-off portion of a loan

- » On 1 January 2014 Bank advances a five-year loan to Borrower.
- » Borrower's only business is a single rig deep-sea hydrocarbon extraction operation.
- » Contractual terms of the loan:
  - » 01/01/2014 bank pays \$100 million to Borrower
  - » 31/12/2018 Borrower pays \$161.051 million to Bank
  - » **Collateral:** in the event that Borrower defaults, \$100 million of Bank's claim is secured by an exclusive and most senior claim against Borrower's head office building; the collateral does not extend to the accreted interest.
- » In 2014 the oil price halves significantly impacting Borrower's cash flows.

# IFRS 9 impairment: the general model

## example: collateral and write-off portion of a loan (continued)

- » At 31 December 2014 the gross carrying amount of the loan is \$110 million and Bank assesses:
  - » there to have been a significant increase in Borrower's credit risk
  - » the lifetime probability of default (**PD**): to be 50%
  - » loss given default (**LGD**):
    - » nil on the secured portion of the loan (because the gross carrying amount of the secured loan is covered more than two times by the fair value of the collateral); and
    - » 50% on the unsecured accreted interest.

At 31 December 2014 Bank must measure the loss allowance at?

Choose one of:

- 1) \$2.5 million (ie \$10 million x 50% PD x 50% LGD)
- 2) \$25 million (ie \$100 million x 50% PD x 50% LGD)
- 3) \$27.5 million (ie \$110 million x 50% PD x 50% LGD)
- 4) another amount

# IFRS 9 impairment: the general model

## example: collateral and write-off portion of a loan (continued)

- » In late 2015 Borrower's rig ruptures causing unprecedented environmental damage and irreparable damage to its rig. Consequently, in late 2015 Borrower files for bankruptcy.
- » At 31 December 2015:
  - » Borrower's unsecured creditors are expected to receive nothing in settlement of their claims.
  - » The fair value of Borrower's head office building is reliably measured at \$200 million.

At 31 December 2015 Bank must? Choose one of:

- 1) write-off (ie derecognise) the entire loan (ie GCA = nil; loss allowance = nil)
- 2) continue to recognise both the secured and the unsecured portions of the loan (ie GCA = \$121 million; loss allowance = \$21 million)
- 3) write-off (ie derecognise) the unsecured portion of the loan and continue to recognise the secured portion of the loan (ie GCA = \$100 million; loss allowance = nil)

# IFRS 9: impairment simplifications and exceptions to the general model

- » Low credit risk
  - » choice to assume no significant increase in credit risk (remain in stage 1)
- » 30 days past due backstop
  - » rebuttable presumption => significant increase in credit risk (move to stage 2)
- » 90 days past due backstop
  - » rebuttable presumption => default has occurred (move to stage 3)
- » Lifetime ECL must be recognised for:
  - » trade receivables and contract assets that do not contain a significant financing component
  - » purchased or originated credit impaired financial assets
- » Accounting policy choice to always recognise lifetime ECL for:
  - » trade receivables assets that contain a significant financing component
  - » contract assets that contain a significant financing component
  - » lease receivables

## IFRS 9 impairment: simplifications and exceptions low credit risk (investment grade) exception

- » If a financial asset is objectively determined from the perspective of market participant to be low credit risk (ie a low risk of default because the investment is, for example, investment grade) and entity can **assume that the instrument's credit risk has not increased** significantly since initial recognition.
  - » can choose to apply this simplification on an instrument by instrument basis
- » When an instrument no longer has a low credit risk, the exception no longer applies and the entity entity reverts to the general requirements for assessing whether there has been a significant increase in credit risk since initial recognition.

# IFRS 9 impairment: simplifications and exceptions purchased or originated credit-impaired financial assets

- » from initial recognition, apply the credit-adjusted effective interest rate to the amortised cost of the financial asset
  - » (credit-adjusted effective interest rate is the rate that exactly discounts the estimated future cash payments or receipts through the expected life of the financial asset (ie the estimated contractual cash flows reduced by lifetime expected losses) to the amortised cost of a financial asset that is a purchased or originated credit-impaired financial asset)
- » at the reporting date:
  - » recognise cumulative changes in lifetime expected credit losses since initial recognition as a loss allowance
  - » recognise in profit or loss the amount of the change in lifetime expected credit losses as an impairment (recognise favourable changes in lifetime expected credit losses as an impairment gain, even if the lifetime expected credit losses are less than the amount of expected credit losses that were included in the estimated cash flows on initial recognition).

## IFRS 9 impairment: simplifications and exceptions example: purchased credit-impaired financial asset

**30 December 2016:** Bank pays \$1 million (ie fair value) to purchase, in the secondary market, a \$10 million zero-coupon 10-year corporate bond maturing on 31/12/2018.

» Because the issuer of the bond is experiencing severe financial difficulties Bank assigns probabilities to the possible outcomes (ie the amount that it expects to receive in settlement of the bond on 31 December 2018) and determines the undiscounted probability weighted expected cash inflow to be \$2,250,000 (ie the effective interest rate on the basis of the expected cash flows is 50%).



## IFRS 9 impairment: simplifications and exceptions example: purchased credit-impaired financial asset

**At 31 December 2016** Bank must present its bond asset as?

Choose one of:

- 1) \$10,000,000 gross carrying amount less \$9,000,000 loss allowance
- 2) \$10,000,000 gross carrying amount less \$7,750,000 loss allowance
- 3) \$2,000,000 gross carrying amount less \$1,000,000 loss allowance
- 4) \$2,250,000 gross carrying amount (no loss allowance)
- 5) \$1,000,000 gross carrying amount (no loss allowance)



## IFRS 9 impairment: simplifications and exceptions example: purchased credit-impaired financial asset (continued)

- » In 2017 the issuer's financial **prospects improved significantly** when its researchers unexpectedly discovered a potential cure for all forms of cancer. The research must still undergo much rigorous testing before the issuer can determine whether it can develop the cure (ie significant uncertainties must still be resolved). Nevertheless, in 2017 the issuer's share price quadrupled.
- » In the light of these developments, at 31 December 2017, Bank determines the undiscounted probability weighted expected cash inflow on redemption of the bond to be \$8,250,000.

In its 31 December 2017 financial statements Bank must present its investment in the corporate bond asset as? (choose one of the alternatives presented on the next slide)

# IFRS 9 impairment: simplifications and exceptions

## example: purchased credit-impaired financial asset (continued)

	Profit or loss for 2017		Financial position at 31 December 2017	
	Finance income	'Impairment' gain income	Gross carrying amount	Loss allowance
1)	\$500,000 (ie \$1,000,000 x 50%)	\$4,000,000	\$10,000,000 (ie contractual amount)	\$4,500,000 <u>deduct</u> from GCA (ie \$10,000,000 - \$5,500,000)
2)	\$500,000	\$4,000,000	\$8,250,000 (ie expected amount)	\$2,750,000 <u>deduct</u> from GCA (ie \$8,250,000 - \$5,500,000)
3)	\$500,000	-	\$1,500,000 (ie \$1,000,000 paid + \$500,000 accreted)	Nil (because default is yet to occur)
4)	\$500,000	\$4,000,000	\$1,500,000 (ie \$1,000,000 + \$500,000 accreted interest)	\$4,000,000 <u>add</u> to GCA (ie \$5,500,000 - \$1,500,000)
5)	\$500,000	\$4,000,000	\$1,000,000 (ie per initial recognition)	\$4,500,000 <u>add</u> to GCA (ie \$5,500,000 - \$1,000,000)

Source: paragraphs 5.4.1(a), 5.5.13, 5.5.14 and B5.5.45 of IFRS 9

## IFRS 9 impairment: a practical expedient example: provision matrix

- » Manufacturer sells goods on 30 days interest free credit to a large number of small clients in the same geographic location. Categorising trade receivables by common risk characteristics manufacturer appropriately uses a provision matrix to determine the expected credit losses for the portfolio.
- » At 31 December 2016, on the basis of its historical observed default rates adjusted for relevant forward-looking information, Manufacturer estimates the following default rates for each of its two portfolios of trade receivables by aging category.

At 31 December 2016	Current	1–30 days past due	31–60 days past due	61–90 days past due	>90 days past due
Default rate Group A	0.5%	2%	5%	8%	10%
Receivables Group A	\$80,000,000	\$9,000,000	\$6,000,000	\$4,000,000	\$1,000,000
Default rate Group B	0.1%	0.25%	1%	3%	5%
Receivables Group B	\$19,000,000	\$500,000	\$250,000	\$150,000	\$100,000

## IFRS 9 impairment: a practical expedient example: provision matrix (continued)

	Receivables Group A			Receivables Group B		
	Gross carrying amount	Default rate	Lifetime expected credit loss allowance	Gross carrying amount	Default rate	Lifetime expected credit loss allowance
Current	\$80,000,000	0.5%	\$400,000	\$19,000,000	0.1%	\$19,000
1–30 days past due	\$9,000,000	2%	\$180,000	\$500,000	0.25%	\$1,250
31–60 days past due	\$6,000,000	5%	\$300,000	\$250,000	1%	\$2,500
61–90 days past due	\$4,000,000	8%	\$320,000	\$150,000	3%	\$4,500
>90 days past due	\$1,000,000	10%	\$100,000	\$100,000	5%	\$5,000
	<b>\$100,000,000</b>		<b>\$1,300,000</b>	<b>\$20,000,000</b>		<b>\$32,250</b>

Source: paragraphs 5.5.15, B5.5.35, B5.5.51 and B5.5.52 of IFRS 9

# IFRS 9 impairment: assessing significant increases in credit risk and measuring ECLs of a renegotiated or modified financial asset

Did renegotiation or modification of the contractual cash flows of a financial asset result in its derecognition?

Yes ↓

Was the modified financial asset recognised as a 'new' financial asset?

Yes ↓

Treating the date of modification as the date of initial recognition of the 'new' financial asset: is the 'new' financial asset credit-impaired at its initial recognition?

Yes ↓

Measure the loss allowance at lifetime expected credit losses

No ↓

Measure the loss allowance at 12-month expected credit losses until its credit risk increases significantly

No ↓

Assess whether there has been a significant increase in the credit risk of the financial instrument by comparing:

- (a) the risk of a default occurring at the reporting date (based on the modified contractual terms); and
- (b) the risk of a default occurring at initial recognition (based on the original, unmodified contractual terms).



# **Selected judgements: measuring expected credit losses**



## Financial assets selected impairment judgements

- » Determining whether there is a significant increase in credit risk since initial recognition
- » Measurement of expected credit losses (ECL)
  - » determining whether loans will be paid as due (if not, how much might be recovered and when)
  - » probability-weighting different scenarios
- » Appropriately incorporating forward-looking information into the assessment of changes in credit risk and measurement of loss allowances
  - » determining whether a collective or individual and collective assessment is needed for portfolios of shared risk characteristics
- » Determining the appropriate period over which to measure ECL for revolving credit facilities