NAS Conference

Regulatory reporting and data requirements – A case study of IFRS 9

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Building a better working world

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Background to IFRS 9

The effect of the credit crisis of 2007

- IFRS 9 was borne out of the financial crisis which started in 2007
- Large losses on US subprime mortgages triggered disruptions to the global financial system.
- Led to losses on financial assets of major financial institutions
- The losses were identified as a result of the delays in the recognition of credit losses on loans and other financial instruments
- Under the incurred loss model of IAS 39, credit losses were not recognised until a credit loss event occurs.

General approach

Start here

	Stage 1	*Stage 2*	*Stage 3*
Loss allowance updated at each reporting date	**12-month expected credit losses**	**Lifetime expected credit losses**	**Lifetime expected credit losses**
Lifetime expected credit losses criterion		**Credit risk has increased significantly since initial recognition (individual or collective basis)**	**+ Credit-impaired**
Interest revenue calculated based on	**Effective interest rate on gross carrying amount**	**Effective interest rate on gross carrying amount**	**Effective interest rate on amortised cost**

Change in credit risk since initial recognition

Improvement ↔ *Deterioration*

Modelling IFRS 9 compliant framework

$$\sum_{t=1}^{n} \frac{PD_t * LGD_t * EAD_t}{(1+r)^t}$$

IFRS9 Changes
- Forward looking
- PiT
- Lifetime

IFRS9 Changes
- No down-turn
- No regulatory add-ons
- Effective interest rate discounting
- No costs and recoveries
- Discounting back to reporting date

IFRS9 Changes
- EAD estimate required for term products
- No regulatory add-ons

IFRS9 Changes
- Original EIR or approximate
- Current EIR
- Credit-adjusted EIR

In time of recession, a global increase in PD would imply:
- Higher allowance for buckets 1 and 2.
- Higher number of transfers from bucket 1 to 2.

Hence, a direct impact on the P&L, even for fully performing loans.

ECL approaches

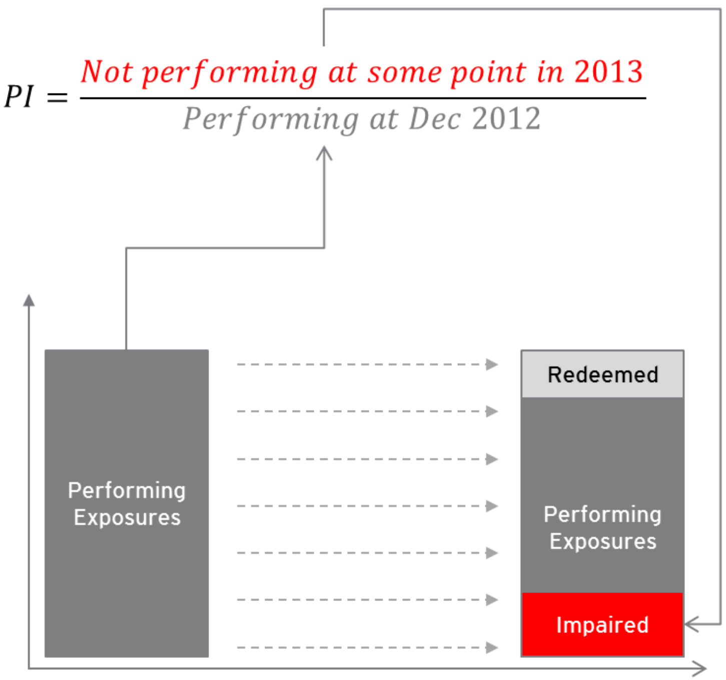
Sum of marginal losses

- The PD, EAD, LGD and the effect of discounting - reflect the expected life or period of exposure. (depending on the stage)
- The institution calculates each of these components for a series of time intervals over the period of exposure (such as monthly, quarterly or annually) and sums them to derive the 12months or lifetime ECL.
- Most sophisticated approach.
- Produces a more accurate impairment result
- Quite cumbersome to execute for each individual contract

Approaches in Estimating PD

Pooling based PD

- Estimated empirically using historical default data of a large universe of obligors
- PD under the pooling approach is the ratio of the loans which have defaulted at anytime during the period of observation to the total number of the loans in that group at the start of the period
- The universe of loans taken at the start of observation should remain the same.



Ratings based PD

- The rating categories can be either those used internally by the financial institution or those produced by rating agencies such as Moody's, S&P, or Fitch.

Approaches in Estimating LGD

Workout LGD

- This methodology involves prediction of the future cash flows that can be recovered from the company, after the company has defaulted on its payments
- The forecasted cash flows are discounted using the EIR.
- Data requirements – Cash recoveries, collateral value and type, collateral growth rate, haircut, selling cost, time to realization, EIR,

$$\frac{Total\ Outstanding\ Amount + Accrued\ Interest - Discounted\ (Recovery\ Amount - Direct\ Costs)}{Total\ Outstanding\ Amount + Accrued\ Interest}$$

Market LGD

- estimated using market prices of defaulted bonds/loans.
- observable default price of the bonds and loans that trade in the market after the firm has defaulted are used as the proxy for LGD.
- Data requirements – Sovereign default and recovery rates (e.g. Moody's)

EAD & Scenario Weights

Exposure at default - EAD

- This represents outstanding balance of a financial asset at the reporting date.
- Includes accrued interest less repayments.
- Data requirements – Outstanding principal, accrued interest, repayments to date.

Scenario Weights

- IFRS 9 ECL should be an unbiased and probability-weighted estimate
- This should consider multiple scenarios.
- Complex simulations is not a core requirement.
- Determine the likelihood of having an upturn (best case) and downturn (worst case) in the economy away from the base.
- Data requirements – Daily All Share Index or quarterly GDP growth rate (e.g. for 30years).

Glossary of Terms

- PD – Probability of default
- LGD – Loss given default
- EAD – Exposure at default
- EIR (r) – Effective interest rate
- ECL – Expected credit loss
- t - Time to maturity
- PiT – Point in time
- IFRS – International financial reporting standard
- IASB – International accounting standards board
- S&P – Standard & Poor

Thank you

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