ORACLE FINANCIAL SERVICES

Impairment Principles and Approach: Building an Expected Loss Model

Balancing IFRS 9 credit provisioning and maximizing profitability

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Introduction: The Development of IFRS 9

The International Financial Reporting Standards (IFRS) are a set of accounting standards that are being implemented by different countries across the world and which are gradually replacing the old International Accounting Standards (IAS). Their introduction heralds a major change in accounting procedures for financial institutions.

One of the standards that is going to have the biggest impact on banks is IFRS 9 (Financial Instruments), which replaces IAS 39 (Financial Instruments: Recognition and Measurement) and which becomes mandatory in many countries from 1 January 2018.

Implementation of the new single, integrated standard is being done in three phases:

» **Classification and measurement of financial assets**
» **Impairment**
» **Hedge accounting**

Key Changes Introduced by IFRS 9

In terms of impairment, the new standard incorporates a forward looking expected credit loss (ECL) model for the calculation of provisions. This aims to address the problem of pro-cyclicality in the traditional approach of provisioning calculations. Ultimately, this will fundamentally alter the amount of profit that a bank reports.

One of the aims of IFRS 9 is to change the pro-cyclical approach to calculating provisions to a counter-cyclical method. This will have an immediate impact on a bank's balance sheet and earnings on the day it switches over to the new standard.

The five key areas of changes introduced by IFRS 9 are:

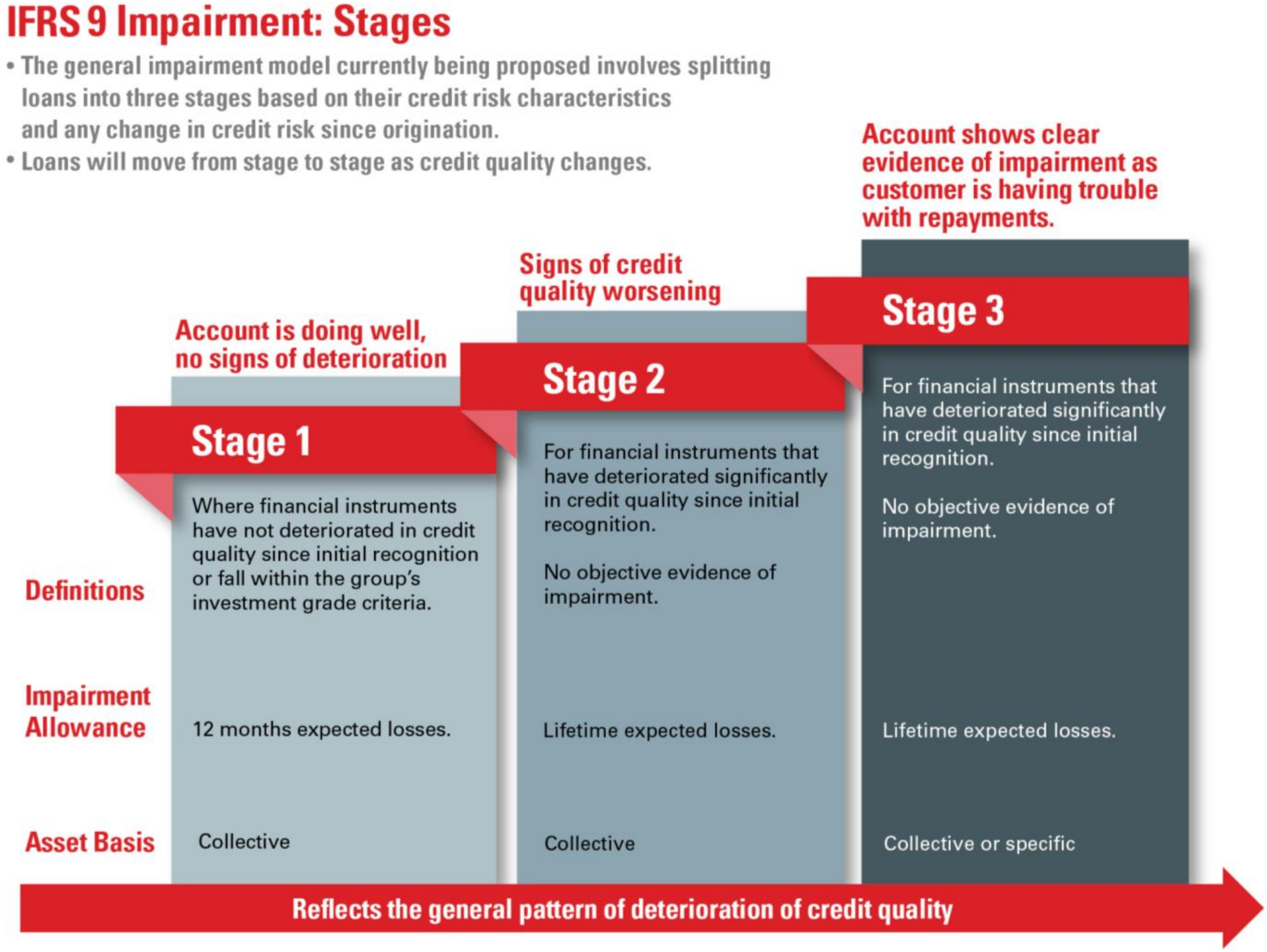
1. **Financial instrument classification**

   Under IFRS 9, banks need to classify all instruments into one of the following three categories: amortized cost, fair value through comprehensive income (FVOCI), and fair value through profit and loss (FVPTL). This classification is based on the contractual cash flow characteristics of the instrument and the business model for managing the product. Thus, there is a qualitative and quantitative aspect to this classification.

2. Stage identification

This aspect of IFRS 9 is completely new for credit provisioning. It will require banks to assign a stage to each account that has been classified for amortized cost or FVOCI. Stage assignment is based on credit risk characteristics:

- Stage 1 – the account is doing well, with no sign of deterioration
- Stage 2 – there are signs of the credit quality worsening
- Stage 3 – the account shows clear evidence of impairment as the customer is having trouble with repayments.



3. **Provision calculation**

   IFRS 9 provides fairly detailed guidelines on the calculation of items such as the effective interest rate (EIR), the credit-adjusted effective interest rate, the effective interest spread (EIS); and the expected credit loss (ECL), based on forward-looking assessments.

4. **Credit modeling**

   Banks will have to use a forward-looking approach in estimating point-in-time probability default (PD) and loss-given default (LGD) for the purpose of provision calculations. In addition, banks will have to build and calibrate point-in-time models. Alternatively, banks may adopt a hybrid approach whereby they modify the through-the-cycle (TTC) PD models being used for regulatory capital calculations. Calculation of point-in-time PD values will require significant effort.

5. **Reporting**

   Once banks have started to make all these calculations on an account level granularity, they will also need to be able to report and analyze not just point-in-time data but also trends in how the provisions have evolved across all accounts.

How Will These Changes Affect Financial Institutions?

The changes being introduced by IFRS 9 represent a major challenge to most banks across all regions.
The most pressing needs are for:

More effective risk modeling

The new standard aims to make the calculations and the methodology used by financial institutions more risk-sensitive, rather than being top-down and rules-based. As a result, much more detailed calculations are now needed at a granular level to generate the provision numbers.

To implement the changes, banks will need to review and upgrade their risk modeling capabilities so that they can adopt a more forward-looking approach that also assesses the impact of macroeconomic factors on ECL calculations.

Powerful technology systems

The underlying theme across most of the changes that the new standard imposes is that it is now vital for IFRS 9 teams to have access to clean, reconciled, granular data in a system designed to handle large volumes – not just from a storage perspective but from a processing and reporting perspective as well. This in turn means that banks will have to make major changes and improvements to their existing data management systems and processes – and finding the right software is a key element in coping with IFRS 9.

Urgent compliance with upcoming deadlines

Banks cannot afford to be complacent about IFRS 9. Although the dateline for compliance is not until January 2018, considerable preparation will be needed in the run up to it. To go-live with IFRS 9 in 2018, many banks have said that they would prefer to have “parallel runs” for a period of at least 12 months prior to the 2018 dateline.

As such, ideally, banks’ IFRS 9 implementations should be ready by end-2016 or early-2017, to be able to carry out parallel runs throughout 2017 and when 2018 comes, to start publishing numbers in line with the new standard.

Impairment Principles and Approach: Building an Expected Loss Model

Building and calibrating a lifetime expected loss model is a significant challenge requiring banks to focus on three key areas:

Credit parameter modeling

Lifetime estimates of PD and LGD are difficult to model. Methodologies are still evolving and the need to incorporate macroeconomic forecasts makes this a time-consuming and costly process.

Cash flow calculation

IFRS 9 will require cash flow calculation at an instrument level. While cash flow calculation methods are standard, the need to compute instrument level cash flows may pose some challenges for banks. Most IT systems are not designed to generate cash flows for large volumes of data and depend on aggregation for reducing the number of records. Such aggregations will not provide the granular cash flows that IFRS 9 provisioning methods require.

Provision method

Calculation of provisions using IFRS 9 methods is rather simple and straightforward once the credit parameters and cash flows have been computed. Commonly used methods rely on either estimates of forward-balances or discounted value of expected cash flows. The challenge will be in managing large volumes of data coming from multiple sources.

Oracle’s approach provides the following benefits:

- Maximization of existing investments in risk and finance systems, allowing reutilization of existing data, business rules and technology infrastructure, reducing costs and time-to-market.
- Consolidation of technology and data repositories for risk and finance.
- The availability of a comprehensive, end-to-end solution to address IFRS 9, from data management to computations to accounting and reporting.

Oracle’s IFRS 9 solution allows banks to actively incorporate risks into their decision making, and to deliver actionable customer, business line and profitability insights. In addition, it helps the bank to promote a transparent risk management culture, as well as promotes pervasive intelligence across its departments.

Many banks are struggling to address the new requirements of the new accounting standard. IFRS 9 mandates banks to replace their traditional incurred loss model for credit exposures with an expected credit loss model, which calls for the administration of internal criteria and management judgment, followed by regulatory reporting. This requires risk and finance teams to work together to implement the new model.

Addressing the impairment challenges of IFRS 9

In migrating to IFRS 9, banks will need to assess the impact of the new standard on their current processes and procedures throughout the entire organization. They will then need to develop a robust solution to calculate provisions in addition to appropriate reporting to ensure that they are compliant with the revised standards.

Oracle's IFRS 9 solution provides a framework for making the calculations needed to ensure compliance with the standard.

The solution is designed to take data from a staging area that is common across all Oracle Financial Services Analytical Applications (OFSAA) installations and enable its reuse for analytical needs. An advanced engine computes cash flows at an instrument level, which are then used by the impairment module for provision calculations.

The solution also provides for prebuilt rules and workflows for stage assessment. These rules are based on commonly based assessment criteria such as rating migration, days-past-due migration, industry classification and PD migration. Additionally, the solution allows users to configure additional rules based on their own models for stage assessment.

The results of the provisioning calculations, along with fair valuation and hedge effectiveness calculations are then available for reporting and for usage in the accounting process. These results are also used in other OFSAA modules for RWA and credit risk reporting.

Oracle Financial Service Analytical Applications (OFSAA) allow banks to actively incorporate risks into their decision making, and to deliver actionable customer, business line and profitability insights.

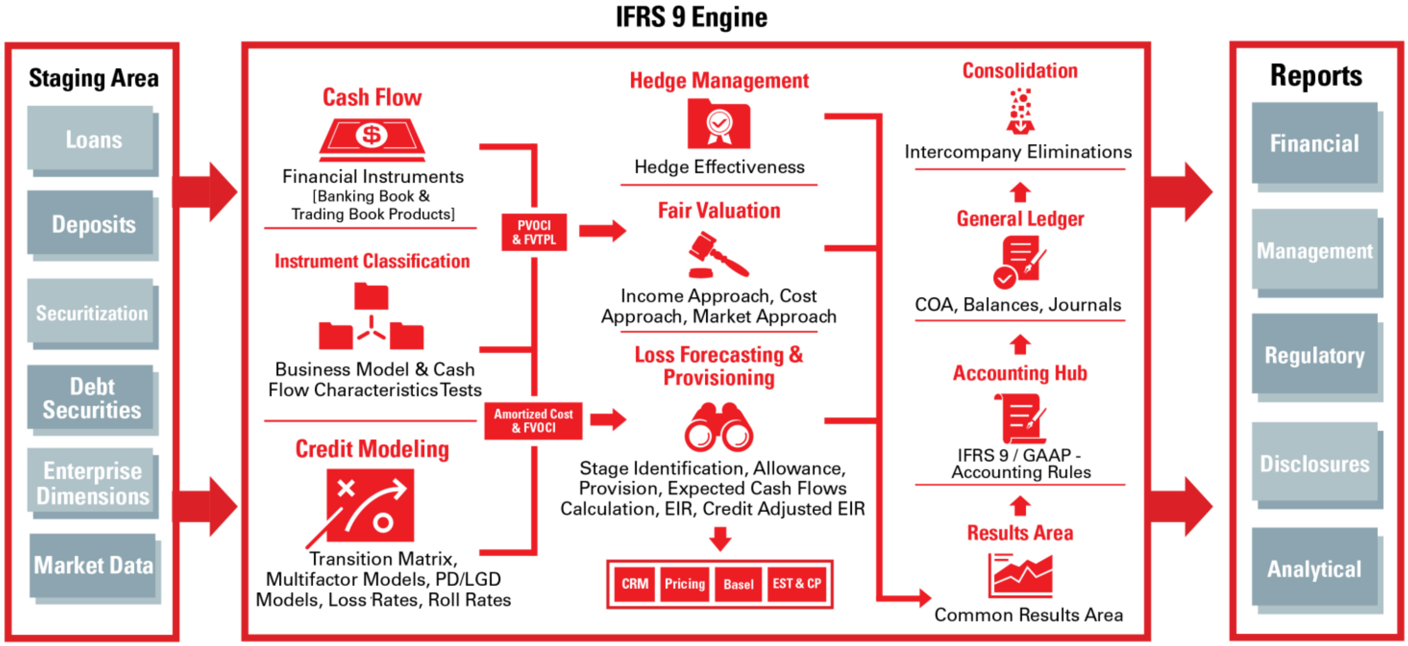
Some of the key highlights of Oracle's IFRS 9 solution include:

- » End-to-end management of complex computations and accounting, as well as financial and management reporting
- » Transparent, rules-driven classification and stage identification of financial instruments
- » Accurate, embedded, common cash flow engine for forecasting cash flows that are shared across analytical areas such as anti-money laundering, liquidity risk, and funds transfer pricing
- » Preconfigured rules and methodologies for impairment related calculations such as EIR, EIS and ECL
- » Native capability for credit modeling that can be a shared utility across risk and finance areas
- » Predefined reporting templates to monitor the provision across base and stress scenarios in detail and at aggregate levels

With Oracle's IFRS 9 solution, banks are now able to forecast credit losses under different scenarios and to compute the required provisions. Preconfigured methods for estimating loan loss provisions help to ensure compliance with IFRS 9 regulations. They include counter-cyclical methods for calculating the amortized cost for each exposure, based on its expected cash flows over its residual maturity.

The application also enables financial institutions to compute provision measures on a collective basis and to analyze provisions and trends while drilling down to the most granular level.

Oracle IFRS 9 Solution – Architecture



A strong dashboard capability also enables the delivery of advanced analytics through preconfigured reports, charts, and graphs. The risk metrics reported include provisions, contractual cash flows, expected cash flows, amortized cost, transition matrix, and stress test reports. The dashboard also allows risk measures to be compared across multiple portfolios, enabling the bank to compare the relative risk and performance of each portfolio and to devise appropriate strategies.

Case Study: Major Australian Bank Assumes Market leadership for IFRS 9 Readiness

A major Australian bank with asset size of over US$700 billion has become one of the earliest – if not the very first major bank – to attain IFRS 9 readiness, well ahead of the 1 January 2018 deadline that most banks are targeting to achieve compliance by.

One of the key factors that contributed to their early IFRS 9 readiness was that the bank had Oracle Financial Services Analytical Applications (OFSAA) already in place for RWA estimation. This allowed them to leverage existing processes and data for provision calculations.

The bank now has capabilities for forward looking, forecasting-based approaches for provision calculations (a key requirement of IFRS 9), effectively replacing their incurred loss provision models.

The solution provides built-in support for seamless generation of accounting entries for financial reporting.

Oracle's solution is used to determine the IFRS 9 stage of a facility and to calculate the associated loan loss provisioning (12-month and full-life expected credit losses) for relevant products and regions. For every account, it will also be used to calculate factors that include:

» 12-month Provision Amount
» Full Life Provision Amount with contractual rate and hurdle rate
» Final Provision Amount
» Model Risk Reserve (MRR) Value
» Provision with MRR
» Fair Value Provision
» General Reserves for Credit Losses (GRCL)

The bank's new approach uses point-in-time probability of default or unstressed risk parameters and supports MRR, scenario provision, impact analysis, stress forecasts, and economic forecasts.

Conclusion

In any situation, a relatively small change can often cause a large amount of disruption – and this certainly seems to be the case in relation to the introduction of the new IFRS 9 standard.

In response, banks will need to make some significant changes to their systems, processes, and methodologies in order to meet the new requirements for ECL assessments. The calculations involved could have a significant impact on the bottom line of financial institutions.

Banks cannot afford to delay if they want the opportunity to carry out a parallel run in 2017.

Despite the many challenges for financial institutions in the months ahead, there will also be some positive outcomes from IFRS 9. Ultimately, IFRS 9 should help financial institutions to be more well-informed and able to make more effective strategic decisions in relation to risk and its mitigation.

Forward-thinking banks are taking IFRS 9 compliance as an opportunity – to maximize investments, reduce costs, strengthen investor relations, enhance transparency, and to improve time-to-market.

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financialservices_ww@oracle.com

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