

WHITEPAPER

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Managing IFRS 9 expected credit losses variance and forecast uncertainty

Many institutions are currently focusing on the execution of their IFRS 9 program and solution integration, including data gap analysis, macroeconomic scenario development, forecast modeling, validation, documentation and audit, as part of a collaborative framework, coordinating activities across risk management, treasury, financial planning as well as front office.

On the impairment modeling side, both point-in-time credit assessment and forward-looking credit forecasts are, by design, prone to be more responsive to the surrounding economic environment than the through-the-cycle measurements in practice so far. The quality of the institution's models will have immediate implications for its financial disclosures. The historical data leveraged to calibrate the forecast models will drive the adequacy of posted provision amounts, especially in cases where the economic outlook deteriorates to levels unseen in available historical portfolio data.

In this context, many institutions are designing their model overlay with a view to manage macroeconomic forecast uncertainty as well as model risks. The purpose for the risk management team is to provide the finance department with reasonably prudent expected credit losses measurements, aligning over time with the evolution of macroeconomic conditions, while limiting undesired volatility in earnings that forecast uncertainty may generate. From a financial reporting perspective, the intent is to display robust risk management practices whereby events taking place in the portfolio are granted sufficient time for proper analysis before being confirmed. This document discusses risk measurements that can be leveraged to achieve these objectives, setting an emphasis on the consistency and robustness of an unbiased framework, articulating repeatable assumptions over time, to address the requirements of the auditors.

Macro-Economic outlook alignment with the risk appetite statement

In terms of financial reporting, a primary consequence of the IFRS 9 forward-looking approach is the necessity for each institution to define its own macroeconomic outlook and provide clarity on the associated provision levels. To prepare for the questions from financial analysts, financial reports should present macroeconomic scenarios that articulate a fair representation of the institution's risk appetite. At the same time, the reported provision levels should vary in reasonable proportions compared to the economic trends and systemic risk characterized in the scenario assumptions.

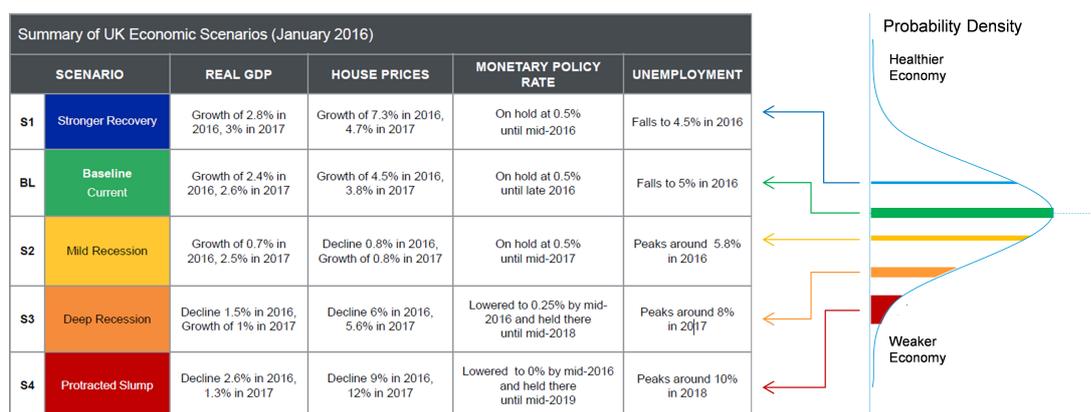
To help prepare for this communication in the financial report, the governance team should therefore assist with selecting scenario assumptions in a way that is relevant to the portfolio risk exposure in terms of geographies, industries and customer segments for each sub-portfolio

and asset class. The quality of that practice will help financial analysts formulate an opinion about the institution's governance process through the level of details provided about the economic outlook, the alternative forecast scenarios in use, their relative weight and their alignment with the institution's portfolio characteristics.

Best practices in designing macroeconomic scenarios consist in revisiting, monthly or quarterly, the consensus among economists' opinions, so as to formulate a baseline assumption. Then alternative macroeconomic scenarios can be built through the application of stress onto the baseline forecast, leveraging a global macroeconomic model. Each alternative scenario narrative selected for the purpose of the IFRS 9 exercise can then be identified within the historical distribution and, in turn, its probability evaluated (Figure 1). Expected credit losses are then computed for each scenario and aggregated according to each respective probability. So, overall, quarter on quarter, the evolution of each scenario probability provides a solid basis to the communication of trends and evolution of provision levels as the economic cycle unfolds.

The economic narrative typically identifies the trigger of the scenario taking place in any geography and articulates its impact onto the local economy, associated market forecasts and macroeconomic time series. All time series are then drilled down geographically to allow meaningful analysis of the impacts on the portfolio counterparties, associated expected credit losses, and provision levels.

FIGURE 1. SCENARIO DESIGN AND PROBABILITY



Reflecting sound governance practice through the disclosure of provisions

In communicating their views on the macroeconomic outlook, the governance team needs to anticipate and clarify how the evolution of the assumptions, quarter on quarter, are translated into adequate trends in provision levels. In case these trends do not align, a review of the financial reports may lead to either of two situations: unexpected movements in provision amounts would raise questions about the nature of the risks held in the portfolio, and conversely, inadequate stagnation of provision levels would raise questions about the institution's governance practice effectiveness.

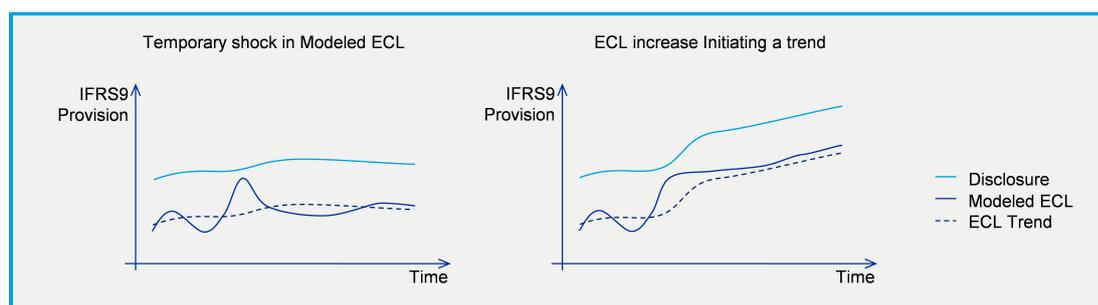
For this reason, the model overlay and the related communication between the risk management team and the finance department may benefit from incorporating a provision buffer quantifying the uncertainty in the expected credit losses forecast. The purpose of the overlay is to provide time for governance decisions and preemptive portfolio management actions to take place, while remaining compliant with the minimum requirements. This practice also has the effect of keeping the usage of risk measurements within a traditional governance framework, subject to internal management review and audit, prior to a larger communication to the market.

Even though conservatism in the overlay may seem costly in nature, it is important to note that it also reduces possible provision shortfalls deducted from the eligible regulatory capital. So the amount built into the overlay can directly improve the capital ratio. From that point of view, building a provision buffer can be seen as a sound usage of the institution's capital.

Quantifying an adequate size for the overlay

To calibrate a suitable size for the provision buffer, institutions would be required to establish a consistent, repeatable and auditable framework so as to satisfy auditors that the overlay is measured according to a robust methodology rather than judgmental considerations.

FIGURE 2. PROVISION OVERLAY IN CASE OF A TEMPORARY SHOCK IN ECL OR IN CASE OF CONFIRMED TREND



One approach is to define a time horizon over which the buffer would allow reported provision levels to “survive” unexpected shocks in modeled expected losses, providing some confidence that the expected credit losses would not be likely to overshoot the provision amount posted at the beginning of the period. For this purpose, measuring the standard deviation in the forecast loss distribution, over the given time horizon, seems a logical answer. This measurement is similar to economic capital, but addressing a lower percentile in the distribution, and therefore a less computationally intensive requirement. An important difference though, is that economic capital is a through-the-cycle measurement, whereas IFRS 9 measurement is point-in-time. As a result, the loss distribution would be computed for multiple scenario assumptions. An adequate provision overlay may therefore include a weighted average of each conditional standard deviation of losses computed under different scenarios, while each scenario weight can be derived from the macroeconomic distribution illustrated in figure 1.

The above calibration would operate adequately for a portfolio consisting of only stage 2 assets, however, aside from the calibration of the intrinsic volatility of expected credit losses, another source of provision volatility is the transition of assets from stage 1 to stage 2. To accommodate this transition, the overlay may be increased in adequate proportions, in order to absorb possible “cliff” effects, related to significant stage transitions.

A possible approach to measure this component consists in defining a time horizon over which the institution would like to absorb any possible “cliff” effect. An appropriate size for a transition-absorption buffer can then be measured as the additional expected credit loss requirement incurred for each stage 1 loan, upon potential future transition, weighted by the loan probability of transition over the given time horizon. To estimate the probability for a stage 1 asset to transition to stage 2, one can first determine the PD threshold at which a stage transition would occur in relation to the asset original PD and the stage attribution rules. Then one can locate the threshold within the statistical distribution of forecasted PD, over the required time horizon. This way, the transition-absorption buffer can act as a forward-looking smoothing function for the “cliff” between Lifetime and 1-year expected credit losses, over the associated time horizon. The resulting amount can then be incorporated into the overlay so as to build up provisions gradually, as stage transitions get increasingly probable.

Managing the overlay over time

The provision overlay may not simply require offsetting the modeled expected credit losses with the calibrated buffer size. In doing so, institutions would end up reporting conservative, but still variable provision levels. In effect, aside from quantifying a nominal value for the provision buffer, the objective of the overlay framework is also to provide an indication of when the buffer should be consumed and when the buffer should be replenished, for each portfolio segment. As illustrated in Figure 2, in both cases a sudden spike in modeled expected credit losses takes place, yet the overall provision amount is not impacted immediately, as the buffer is used to absorb the shock. Then, according to the trend observed subsequently, the buffer gets replenished, either as expected credit losses reverse to initial value, or as posted provisions increase over subsequent reporting periods.

A way to define a level of provision that achieves this while also relying on a robust and easily auditable methodology, is to apply the buffer calibrated for a given time horizon, over a moving average of instantaneous expected credit losses, over the same time horizon (ECL trend in Figure 2).

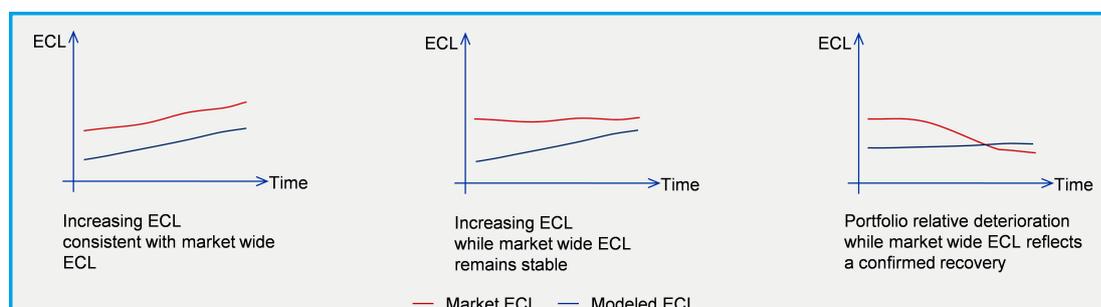
As the governance process takes place, Risk and Finance teams can anticipate, confirm and manage the occurrence of shocks in portfolio risks. In case of sudden movement in expected credit losses, the overlay provides additional time to analyze the nature of the shock, and differentiate confirmed trends from momentary events with short term reversal.

Additional reference points and portfolio management

Overall, the above methodology allows users to post smoothed provision levels, well-aligned with economic trends. This approach provides the governance team with an acceptable period of time to handle sudden increases in expected credit losses, within a defined level of confidence. Of course, the choice of time horizon and confidence level have an immediate effect on the size of the provision buffer. So the governance process may only leverage this approach within reasonable calibrations..

Aside from this framework, IFRS 9 measurements being, by design, prone to be responsive to the surrounding economic environment, the risk management committee may also want to anticipate portfolio management actions to prevent exceptional shocks, as well as protracted low performance in identified portfolio segments. A practical solution for this, is to establish benchmarks of market-wide and industry-wide credit forecasts under the same IFRS 9 scenarios as the ones applied to the institution's portfolio.

FIGURE 3. TREND IN PORTFOLIO ECL VERSUS MARKET WIDE ECL CALCULATED UNDER CONSISTENT SCENARIOS



As illustrated in Figure 3, an increasing level of expected credit loss in a portfolio segment may be consistent with a market-wide observation for the same industry and geography, indicating that the change in provision may be relevant to an overall economic deterioration. Conversely, stable levels of

expected losses may actually be interpreted as a relatively negative pattern compared to a market-wide measurement, indicating that the institution's specific exposure is lagging in leveraging a confirmed economic recovery.

Such a secondary measurement is designed to support early warnings and to confirm trends. It can help enhance the portfolio governance process through IFRS 9 measurements, whereby each reference point can be drilled down to highlight the relative patterns for each sub-portfolio segment, down to individual names. Immediate remediation can then be undertaken and in the long run, it can help optimize areas of concentration and high sensitivity that the portfolio holds, allowing to narrow the size of the management overlay, while remaining aligned with the risk appetite statement of the institution.

Conclusion

Aside from the challenges involved in producing IFRS 9-compliant expected credit losses, monitoring and managing provision levels are themselves important aspects of a disclosure framework that needs to be considered. Financial reports have to provide clarity on how risk measurements feed into the overarching governance process. They also have to provide clarity on how changes in provisions align with the evolution of systemic risk represented in the economic outlook, in accordance to the stated risk appetite of the institution. For the purpose of managing this communication, a transparent, auditable and consistent overlay framework can be put in place. While doing so, risk management and finance teams can leverage additional measurements to anticipate portfolio management actions, taking into account the economic outlook as well as market-wide reference points.

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