TransUnion

WHITE PAPER

International Financial Reporting Standards 9: Dynamic forward looking **models** and the **impact** on the South African Banking Credit landscape

PRIVEN MOODLEY, Senior Advisor
Senior Advisor, Consulting, TU Africa

DENZEL LANDIE, Director
Director: Consulting, TU Africa

Table of Contents

Key Acronyms Explained

IFRS 9 - International Financial Reporting Standards 9. The new standard to which financial assets are measured, classified, impaired and reported, effective for annual periods beginning on or after 1 January 2018, with earlier applications permitted from 1 January 2017.

IAS 39 - International Accounting Standards 39. The standards that will be replaced by IFRS 9.

IASB - The International Accounting Standards Board is an independent, private-sector body that develops and approves International Financial Reporting Standards.

IFRS 9: Dynamic forward looking models and the impact on the South African Banking Credit landscape

1. Executive Summary

International Financial Reporting Standards 9 (IFRS 9) will become the new standard to which financial assets are measured, classified, impaired and reported. This is the culmination of the International Accounting Standards Board's (IASB) project of replacing IAS 39 pertaining to the recognition and measurement of financial assets. The change is timely, albeit somewhat reactive to the financial turmoil experienced in 2008/2009. It aims to afford stakeholders in the financial services sector the transparency and standardised reporting measure of financial asset quality. Were these measures in place at the time, they could have raised red flags to banks, potentially pre-empting what some may consider the worst depression of all time. One of the major requirements of IFRS 9 is that financial institutions consider macro- and micro-economic factors to create more accurate predictive models. Microeconomic influences include age, level of education, income and duration of employment while forward-looking macroeconomic factors such as expected market trends and changes to interest rates must also be taken into consideration.

IFRS 9 prescribes a mandatory effective date for annual periods beginning on or after 1 January 2018, with earlier applications permitted from 1 January 2017.

IFRS 9 prescribes a mandatory effective date for annual periods beginning on or after 1 January 2018, with earlier applications permitted from 1 January 2017. This leaves less than 18 months for full adoption of the standard from a reporting perspective meaning that all models, methodologies and processes that feed the reporting standard need to be developed, tested and implemented months prior to go live. New credit models and data sets, including those never previously considered by institutions, will need to be brought into the risk management arena in estimating the forward-looking Expected Credit Loss (ECL) required by the standard.

2. IFRS 9 Background

IFRS 9 began as a joint project by the Financial Accounting Services Board (FASB) and the IASB with the goal of aligning global reporting standards for financial instruments. These include the reporting of changes in fair value to net income and profit and loss. Given events that occurred leading up to and during the 2008 financial crisis, both Boards found the opportunity to revise standards relating to financial instruments to address deficiencies. These deficiencies were believed to have contributed to the magnitude of the crisis. There were various publications of the standard and upon many reviews the final standard was published on 24 July, 2014, mandating single reporting compliance for year-ends on and after 1 January 2018.

What are the challenges you might face in transitioning to IFRS 9?

- → Resource constraints
- → Availability or quality of data
- → Expertise
- → Integration

What are the benefits of a robust IFRS 9 solution?

- → Being compliant
- → Make better informed strategic decisions
- → Enhanced loss forecasting
- → Maximisation of capital use

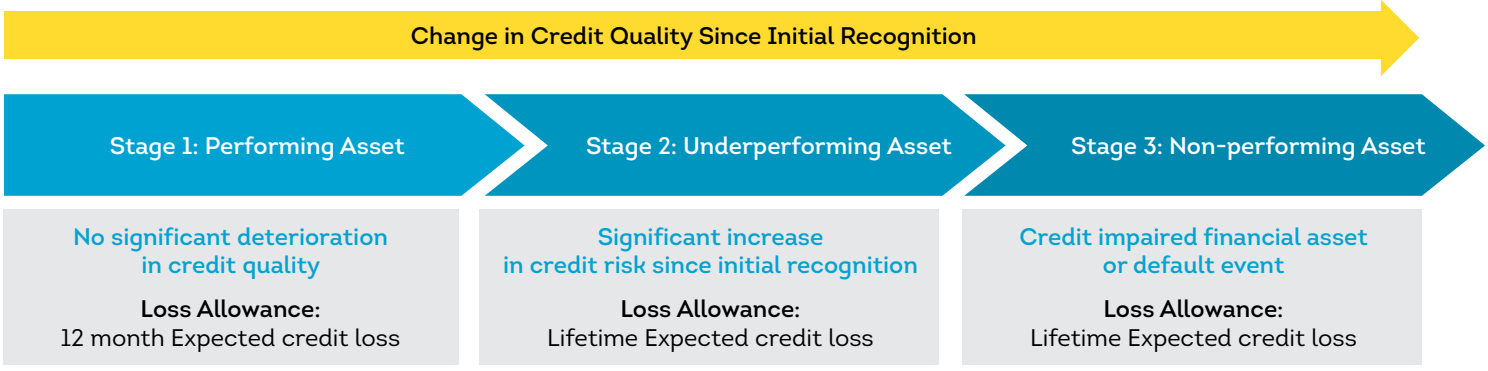
3. Impact on Impairment Models

The main change put forward by IFRS 9 comes in the form of how companies impair assets. One of the perceived shortfalls by impairment models, used during the financial crisis, was that it allowed companies to delay the recognition of credit losses as a result of asset impairments. Under IAS 39 impairment allowances were calculated as the present value of credit losses stemming from default events, which are projected over the next 12 months. The only time that lifetime expected losses were considered were when an asset moved into Stage 3 (see Figure 1) of the impairment model where an actual default event arose on the asset.

The issue related to this delayed loss recognition became clear when investment analysts struggled to assess the quality of an asset book due to the differing terms and maturities held by various financial institutions. The main issue was through Stage 2 of the impairment model when a significant increase in credit risk was recognised and only the next 12 months of credit loss was reported. This did not provide a complete view of the full extent of risk to the financial institution posed by the increase in risk on the asset. Lifetime ECL of the asset was thus only recognised at default event and specific provision raised against the asset in question.

The changes put forward by IFRS 9 thus seek to address this timing issue experienced under IAS 39, with the main aim of providing transparency and standardising asset quality representations. Under IFRS 9, the lifetime expected loss of an asset is recognised as soon as there is significant increase in credit risk on the asset. This change in Stage 2 of the impairment model requires full disclosure of the asset value at risk as soon as the risk is identified and not delayed untill Stage 3; where the asset is classified as "non-performing". The reporting requirement changes provides a clearer view of asset quality to shareholders and analysts alike; as a standardised reporting approach enables a comparative view across financial institutions regardless of lending policies and book maturity.

FIGURE 1: Lifetime Expected Credit Loss. This graph illustrates that, under IFRS 9, the lifetime expected loss of an asset is recognised as soon as there is significant increase in credit risk on the asset.



TransUnion

4. Impact on Credit Risk Modelling

The above changes to the impairment model raises some rather onerous questions to risk managers and analysts alike. This is because the financial loss that most credit risk modelling tools seek to predict are historically aimed at predicting a default event. For years the Credit Risk industry has been developing models to predict the likelihood of assets reaching Stage 3 and setting Credit Policy and risk appetite based on how their book of assets perform towards these outcomes. The 3+ arrears bad definition is widely used as the industry standard for risk management tools. Deviations from this 3+ definition do exist and are specific to an institution's portfolio, forcing earlier or later recognition of default from the 3+ standard. The changes put forward by IFRS 9 may create a unique opportunity for risk managers by providing the business case to incorporate more positive and negative data in their impairment models. Alternatively, it could force a drastic change in Credit Policy to limit the increase in credit loss that will be reported when moving over to IFRS 9. This stems from what now could be considered fairly lenient impairment allowances under IAS 39.

The changes put forward by IFRS 9 may create a unique opportunity for risk managers to incorporate more positive and negative data into asset risk classification and improve modelling methodology.

Assets residing in Stage 2 of the impairment model were previously considered indeterminate as these assets did not hold sufficient risk to be classified as "bad". This was acceptable practice under the previous reporting standards as the financial impact of not classifying these assets as "bad" were limited to ECL over the next 12 months. However, IFRS 9 no longer provides for an indeterminate category as loss has to be recognised from the time any risk is identified.

To ensure compliance with the new standards each asset will need to be assessed holistically with credit risk modelling built on a host of factors from an individual consumer level through to global economic influences. IFRS 9 will require integration of all these factors for predictive modelling and stress testing which, while complex, will assist to better understand the risks associated with portfolios and identify areas of growth.

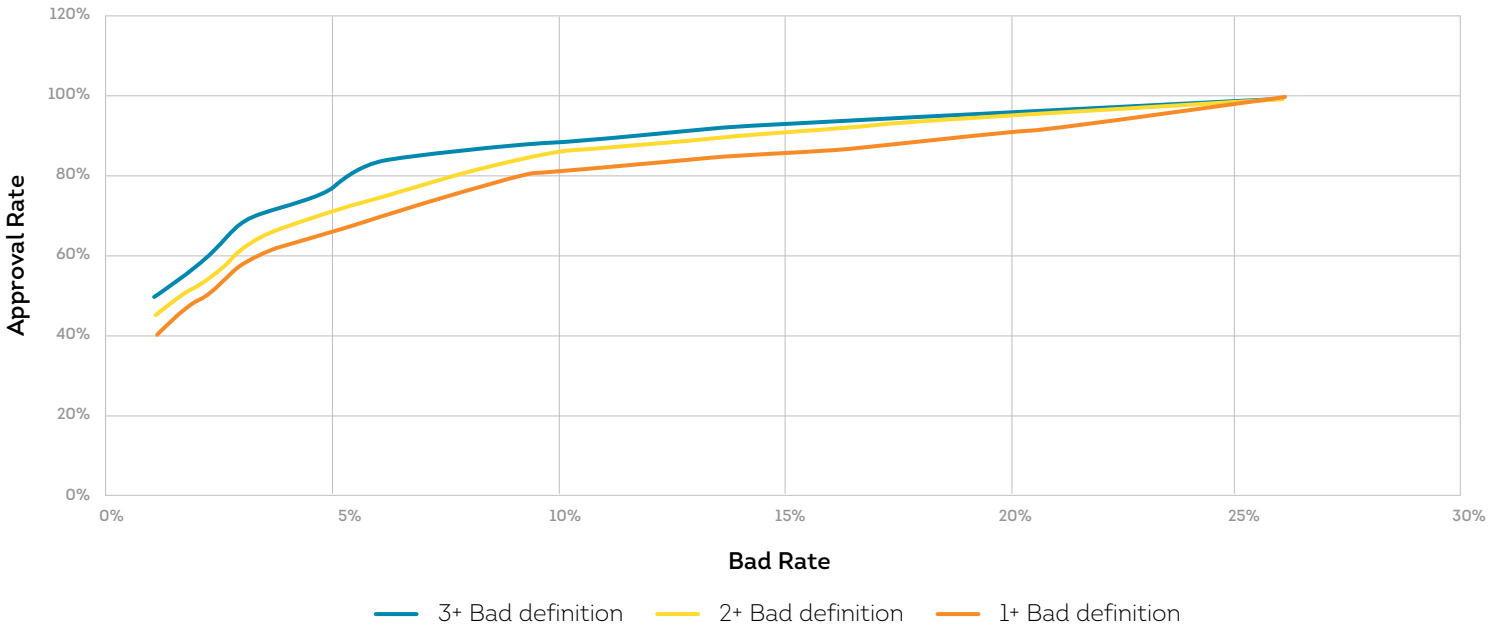
5. Model Building Analysis

A potential solution to the change in requirements regarding the indeterminate population would be to model towards a 1+ arrears status of assets. The shortfalls of adopting this approach will be well known to many seasoned risk managers as this is likely to result in an immediate drop in future asset accumulation. Higher cut-offs will ensue stemming from the model induced drop in risk appetite as shown by the illustration below.

Whether risk managers adopt this kind of thinking in reaction to IFRS 9 impairment model changes can be debated and would be completely based on whether the forward and backward roll-rates of their asset book justifies such a decision.

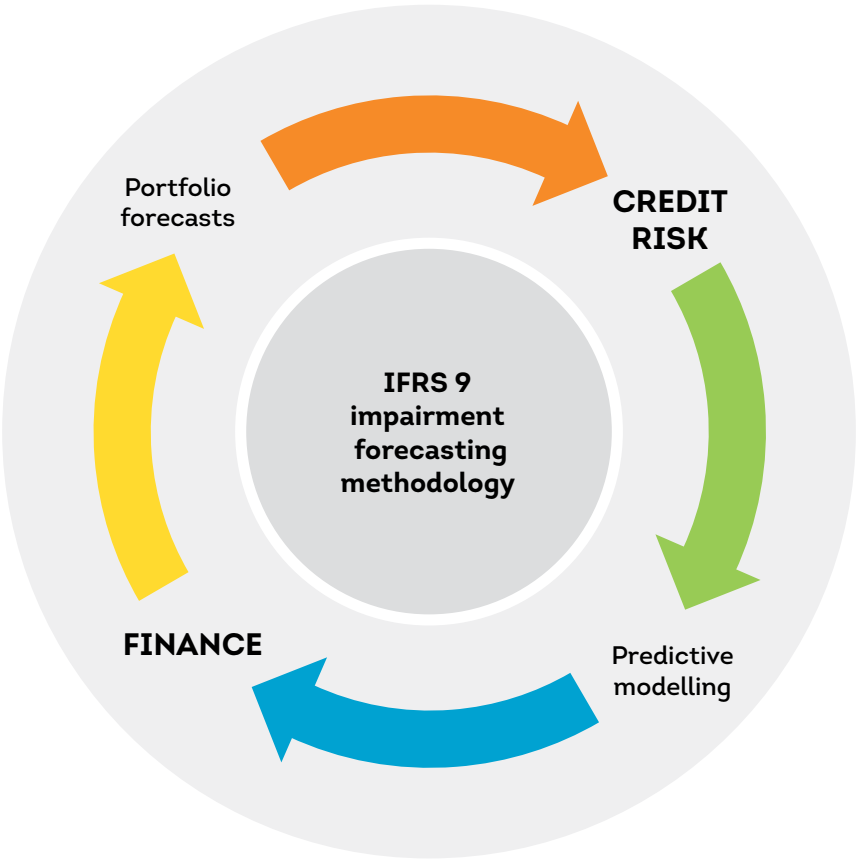
With lifetime ECL moving earlier within the impairment model, not making any changes to risk models will certainly increase impairments. This is due to current risk models predicting toward a 3+ arrears status whilst full credit loss impairment occurs at first sign of risk deterioration of the asset, under IFRS 9. Utilising a tightening of risk appetite is not advisable to reduce this impairment impact as IFRS 9 does not change portfolio roll-rates nor individual asset PD's as this is driven by behavioural characteristics of the asset, captured by existing risk models. The answer may come in model improvement through the inclusion of algorithms reading existing credit data differently or using non-credit data. One of the methods explored but rarely adopted to its full capacity is that of using longitudinal variables in deriving credit risk at take-on stage of an asset. These longitudinal variables help to provide an outlook on an asset based on its trajectory travelled towards its current risk rating. This methodology is particularly useful when accumulating assets already holding significant credit risk. Where an asset's preceding risk trajectory is upward sloping towards lower risk bands then there could be tangible evidence not to immediately classify an asset into Stage 2 and thus not incur the full lifetime expected Credit Loss at initial recognition.

FIGURE 2: Approval / Bad rate trade-off curve. The graph illustrates the impact of modelling towards 1+ arrears status of assets.



Ideally, Credit Risk and Finance departments will need to work closely to achieve a seamless transition to IFRS 9 impairment forecasting methodology. Credit Risk will be responsible for adapting predictive modelling, thereby assisting Finance to enhance portfolio forecasts related to provisioning. Since impairment levels have a critical impact on risk appetite the need for closer collaboration between departments in complying with the new standards is paramount.

FIGURE 3: This model demonstrates that Credit Risk and Finance departments will assist each other in both complying with IFRS 9 and utilising it to enhance their predictive models.



6. Dynamic Loss Recognition:

With options for initial recognition presented above, risk managers then have to move their attention to monitoring and ongoing recognition of loss. The guidelines allow; similar to IAS 39; for the upgrade of an asset back to Stage 1 based on significant evidence towards improvement of asset risk (See figure 4).

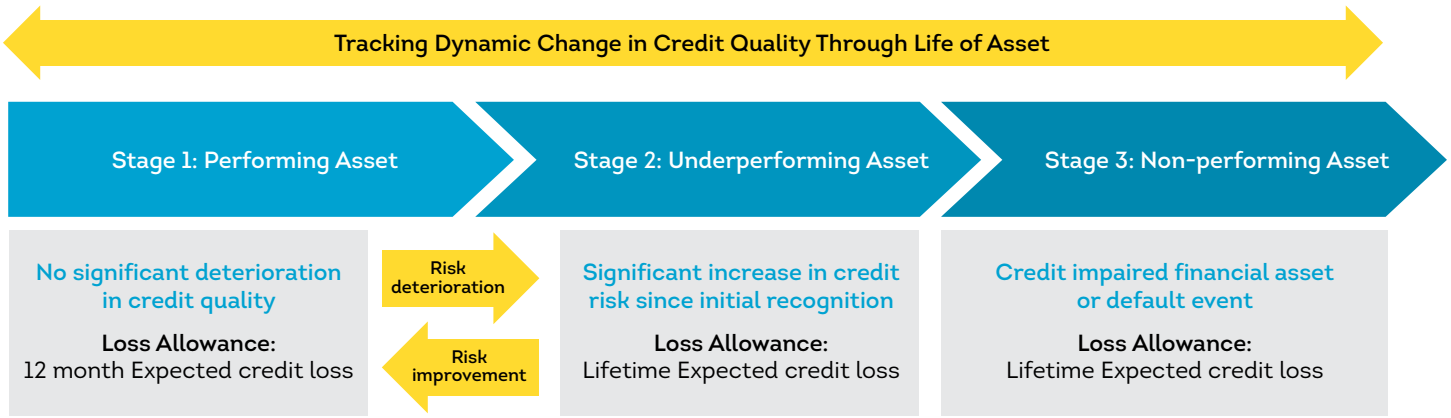
With robust monitoring methodologies and techniques in place, a financial institution can minimise reported expected loss. This can be achieved by correctly assigning stages based on current risk associated with the asset as opposed to that observed at initial recognition and annual review.

With robust monitoring methodologies and techniques in place, a financial institution can minimise reported expected loss.

Once again, a much explored but rarely adopted technique is that of using external data as opposed to internal transactional data as a stand-alone monitoring tool. Monitoring utilising internal data alone negates the impact of external factors on the risk rating of an asset thereby utilising the risk rating assigned at initial recognition as a benchmark. The use of external data has been found to assist in creating the sense of "external" trajectory of the asset risk towards internal default events or "cures" from these events. Solely utilising internal data in behavioural risk models reduces the ability to dynamically manage a portfolio of assets into the relevant stage classifications.

Employing strategies such as event management and risk triggers provides a unique opportunity for risk managers to be able to efficiently allocate assets into their relevant stages. Utilising strategies of this nature facilitates that only the required ECL is realised by taking into account a holistic view of the asset and not just internal transactional information.

FIGURE 4: Dynamic Loss Recognition. The graph demonstrates that significant evidence allows for the capability to reassess asset risks back to Stage 1 from Stage 2.



TransUnion

7. The Impact of IFRS 9 on Data and Resources:

Quality data is at the core of successfully transitioning to IFRS 9. Businesses may find that their existing historic data is lacking in the requirements for creating predictive modelling under the new standards.

Furthermore, the financial crisis of 2008/2009 may also influence predictive modelling, highlighting the need for robust models that can deal with such anomalies.

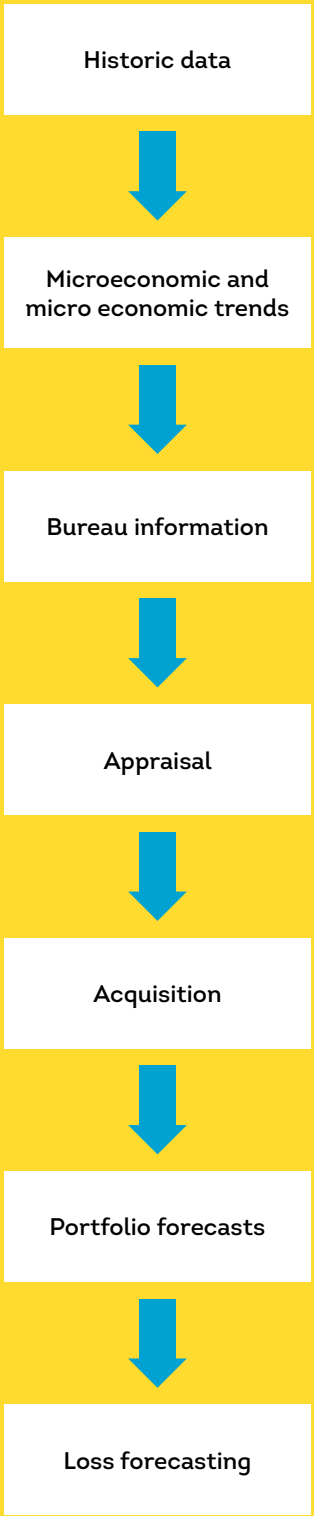
IFRS 9 requires more data, including macro- and micro-economic factors, be considered in predictive modelling and loss forecasting.

At the same time, financial institutions already face resource constraints and the transition to IFRS 9 will require resource reallocation, potentially away from revenue-generating projects.

It is recommended that businesses work with a partner who has the necessary expertise and access to quality and alternate data in order to take ownership of the transition to ensure the process is as seamless as possible, thereby allowing the business's internal resources to focus on revenue-generating projects.

The financial crisis of 2008/2009 may also influence predictive modelling, highlighting the need for robust models that can deal with such anomalies.

FIGURE 5



TransUnion

8. Conclusion

As of 1 January 2018, with earlier applications permitted from 1 January 2017, the mandatory effective date for IFRS 9 annual periods begins. The new standards aim to enhance the transparency and standardise the way financial institutions report their asset quality, in a bid to address the shortfalls of the impairment models used during the financial crisis in 2008/2009.

Whilst the new reporting standards require integration of multiple factors into predictive modelling and stress testing, which is complex, this will facilitate better understanding of risk associated with portfolios and potentially identify areas of growth.

Under IFRS 9, the lifetime expected loss of an asset is recognised as soon as there is significant increase in credit risk on the asset and at an earlier stage than under IAS 39. This aims to provide a standardised reporting method, regardless of individual lending policies and book maturities at various financial institutions.

However, access to quality external data will prove vital to financial institutions in efforts to reduce impairments. Solely utilising internal data in behavioural risk models has its shortfalls and reduces the ability to dynamically manage a portfolio of assets into the relevant stage classifications. Employing strategies such as event management and risk triggers provides a unique opportunity for risk managers to be able to efficiently allocate assets into their relevant stages. Utilising strategies of this nature facilitates that only the required ECL is realised by taking into account a holistic view of the asset and not just internal transactional information.

Solely utilising internal data in behavioural risk models reduces the ability to dynamically manage a portfolio of assets into the relevant stage classifications.

Furthermore, if institutions make use of additional data, a more granular risk view can be obtained. This approach would assist organisations in reducing impairment costs, which can free up capital to be invested in revenue-generating projects.

It is also crucial that financial institutions assess their resource capabilities to identify if the capacity exists to take on the transition and compliance with IFRS 9. Re-directing resources to work on ensuring compliance comes at the expense of diversion from existing revenue generating projects. Therefore, it may be worthwhile for financial institutions to partner with providers who are able to assist and can leverage international expertise regarding compliance to these standards, particularly from a Credit Risk modelling perspective.

At TransUnion we pride ourselves in being the market leaders in Credit Risk information solutions. We therefore look forward to embracing the challenge laid out by this landmark standard by partnering with our financial services clients to provide the relevant data, expertise and support to ensure a smooth transition into this realm that the risk management industry has long braced itself for.

TransUnion