



**Actuaries
Institute**

Banking Regulatory Update

Basel 4 and IFRS 9

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Introduction

IFRS 9 and Basel 4 are regulatory initiatives that will transform the way that banks calculate regulatory capital and provisions for credit losses

- BCBS is still working on a set of revised standards referred to as Basel 4
- Basel 4 standards cover credit risk, market risk, interest rate risk, and operational risk
- IFRS 9 specifies how banks set provisions for loan losses
- Banks will need to report on an IFRS 9 basis from 1 January 2018

In this presentation we will

1. Provide an overview of bank regulatory capital and loan loss provisioning
2. Outline what the changes are
3. Outline how banks will need to operationalising the changes

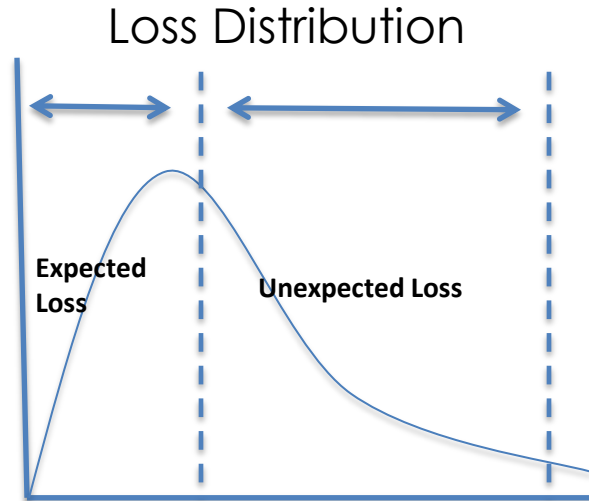
Executive summary

Provisioning and regulatory capital

Financial losses for banks are uncertain ahead of time. To manage this, banks hold provisions for the expected losses, but also hold capital in case losses are larger than expected.

Expected Loss: Provisions are set up to cover the expected loss from defaults

- Bank provisions for credit risk come through in the profit and loss statement Accounting standard IAS 39 currently specifies requirements for this
- IFRS 9 is a new accounting standard on provisioning for loan losses
- IFRS 9 will result in banks increasing provisions before default occurs.



Unexpected loss is covered by holding capital

- Banks are required by regulators to hold capital to meet unforeseen financial losses.
- Basel 4 is the colloquial term for set of proposed changes to the regulatory capital regime for banks
- The changes aim to address the current variability in capital ratios between banks. For example, it removes some of the modelling freedoms and introduces capital floors.

Executive summary

Overview of changes

Basel 4

Objectives	Overview of changes
Financial Stability	Introduction of leverage ratios, capital floors, etc.
Transparency	Greater disclosures to both markets and regulators i.e. Pillar 3
Comparability	Enhance comparability by limiting modelling choices
Simplicity	Reverting to standardised approaches, where internal models have been shown to perform poorly

IFRS 9

Objectives	Overview of changes
Forward looking	Provision increase as credit risk increases even though loan has not defaulted
Improved reporting	Increased quantitative and qualitative disclosures in financial statements
Integrated to risk management practices	Triggers used that are consistent with the credit management practices of the bank

Executive summary

Operationalisation

MODELS

Significant changes to models used

RISK MANAGEMENT

Stronger links to risk management systems

REPORTING

Greater reporting and transparency



DATA AND IT

More data elements to support modeling

STRATEGY

Optimising under a different risk return frontier

GOVERNANCE

All supported by strong oversight and governance

Bank Prudential Capital

Basel 4

Calculating a bank's capital ratio

The bank's capital ratio is a key metric for measuring capital adequacy. This slide provides an overview and uses Westpac (selected at random) as an example based on Pillar 3 disclosures as at 30 September 2015



Available capital : Equity from less Regulatory Deductions. Definition of equity can vary e.g. to include hybrid capital instruments or just common equity

Common Equity Tier 1	\$51,972m
Less deductions	17,903
CET1 after deductions	\$34,069m

$$\text{Capital ratio} = \frac{\text{Available Capital}}{\text{Risk Weighted Assets}}$$



Risk Weighted Assets: Assets from the balance sheet with risk weights as per standards.

Risk weights are also calculated for other risk types including market, interest rate risk and operational risks.

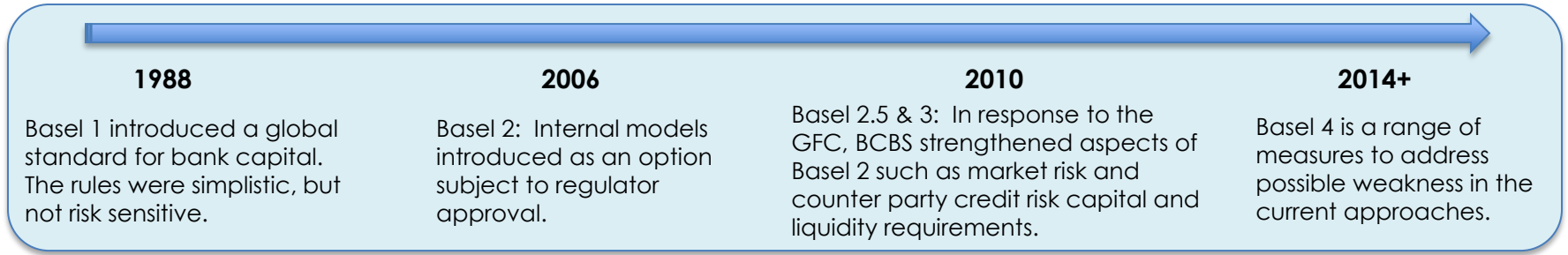
Credit Risk RWA	\$310,342m
Market Risk RWA	10,074
Operational Risk RWA	31,010
Interest Rate Risk RWA	2,951
Other Assets RWA	4,203
Total Risk Weighted Assets	\$358,580m

CET1 after deductions	\$34,069m
÷ Total RWA	358,580
= CET1 after deductions	9.5%
+ Other Tier 1 instruments	1.9%
+ Tier 2 instruments	1.9%
= Total Capital Ratio	13.5%

Risk Weight Assets for Credit

$$= \sum_{\text{bank asset}} \text{Risk Weight}_i \times \text{Exposure}_i$$

Evolution of Bank Capital Standards



"studies confirmed that there are material variances in banks' regulatory capital ratios that arise from factors other than differences in riskiness of bank's portfolios. These variances undermine confidence in capital ratios." BCBS 2014.

Basel 4 key changes

Improve Standardised Approaches

- Standardized approaches have been improved to make them more risk sensitive.
- Market risk proposals are fairly well advanced. The proposed changes increase the risk sensitivity and granularity.
- Operational risk based on a better “business indicator” as a proxy for operational risk
- Credit risk incorporates additional data where appropriate such as LVR buckets for mortgages

Capital Floors

- Capital from internal models are subject to a capital floor pegged to the standardized approach

Overhaul Advanced Approaches

- Certain classes of loans may no longer be eligible for credit model advanced treatment, and input parameters are constrained
- A number of changes to market risk internal models:
 - Use of expected shortfall rather than VaR
 - Time horizon by asset type, rather than fixed 10 day horizon

Leverage Ratio

- Introduce a minimum leverage ratio that applies at the bank level (to be calibrated)

Operationalising Basel 4

Data and IT	<ul style="list-style-type: none"> Data to support granular standardised methods: <ul style="list-style-type: none"> Use of risk factors for market risk Data to calculate business indicator in operational risk New data elements for internal models in particular market risk
Risk Management	<ul style="list-style-type: none"> Requirement to carry out due diligence on external credit rating used in standardised regulatory capital

Models	<ul style="list-style-type: none"> Internal models in particular will require significant upgrades. E.g. for market risk key changes for market risk include <ul style="list-style-type: none"> Moving to expected shortfall, Introducing multiple time horizons based on instrument type Calculation engines for standardised RWA need to change Downstream models such as business forecasting and stress testing models
Governance and Controls	<ul style="list-style-type: none"> Desk level approval of market risk internal models Model governance and control processes for increase suite of models QA for additional disclosures

Operationalising Basel 4

Business and Strategy

- Banks need to revisit segments where they operate and approach to product design and pricing for the segments they operate in.
 - Attractiveness and pricing for markets products
 - Lending to institutional lenders
- Capital management practices including buffers, triggers and tools under Basel 4
- Consider how to allocate capital under capital floors and leverage ratio to optimise shareholder value

Reporting

- Increasingly detailed reporting both qualitative and quantitative:
 - Effectiveness of internal models,
 - Desk level reporting for market risk
 - Model validation processes
 - Liquidity requirements

Provisioning for Credit Risk

IFRS 9

Credit Risk Provisioning

Banks hold provision against losses from defaults in their loan portfolios.

- Provisions flow through to profit and loss, and capital position. It is an important metric for banks, and is closely monitored e.g. by equity analysts.
- There are two types of provisions: specific and collective provisions.
- Specific provisions are held for loans that have defaulted and are in the process of being settled.

- Collective provisions are held on an expected basis for defaults that have not yet been reported or identified, and for general deterioration
- Accounting standards dictate the methodology for provisioning for financial reporting.
- APRA, however has a more prudent requirement for provisions that banks must meet (General Reserve for Credit Losses, or “GRCL”).



Collective Provisions:

- Based on a 12 month expected loss approach.
- $\text{Expected Loss} = \text{Exposure} \times \text{PD} \times \text{LGD}$
- Many banks use a roll rate methodology i.e. base on proportion of performing loans that will eventually “roll to” default.

Specific Provisions:

- Set up once the loan is flag as defaulted e.g. 90 days in arrears or flagged as bankrupt
- May be individual assessed or using model estimates

IFRS 9 Overview

- IFRS 9 deals with the treatment of assets on a bank's balance sheet
- The key asset for banks are loans which are held to maturity. The loans are held at face value less provision for defaulted amount.
- There are three components of IFRS 9. However the key area of interest particularly from a modelling point of view is impairment:

Impairment

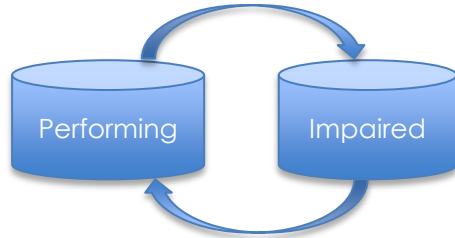
Classification
and
Measurement

General
Hedge
Accounting

	Approach	Implications
Current Provisioning (IAS 39)	Focuses on Incurred loss only, i.e. provisioning for as they occur	<ul style="list-style-type: none"> • Tends to lag economic cycle
Proposed Provisioning (IFRS 9)	Recognizes losses earlier through a trigger for significant credit deterioration trigger prior to actual default	<ul style="list-style-type: none"> • Earlier recognition of losses • Differentiates exposures that have shown deterioration • Requires a forecast of losses

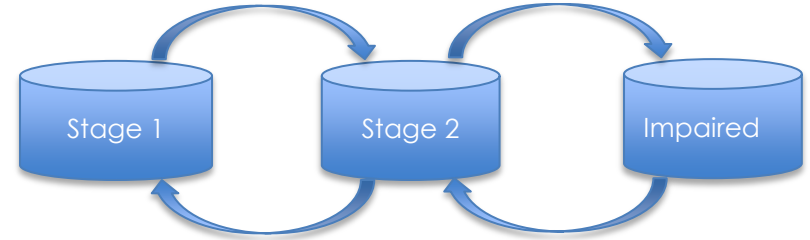
IFRS 9 Impairment Model

Under **IAS 39**, loans transition between impaired and performing



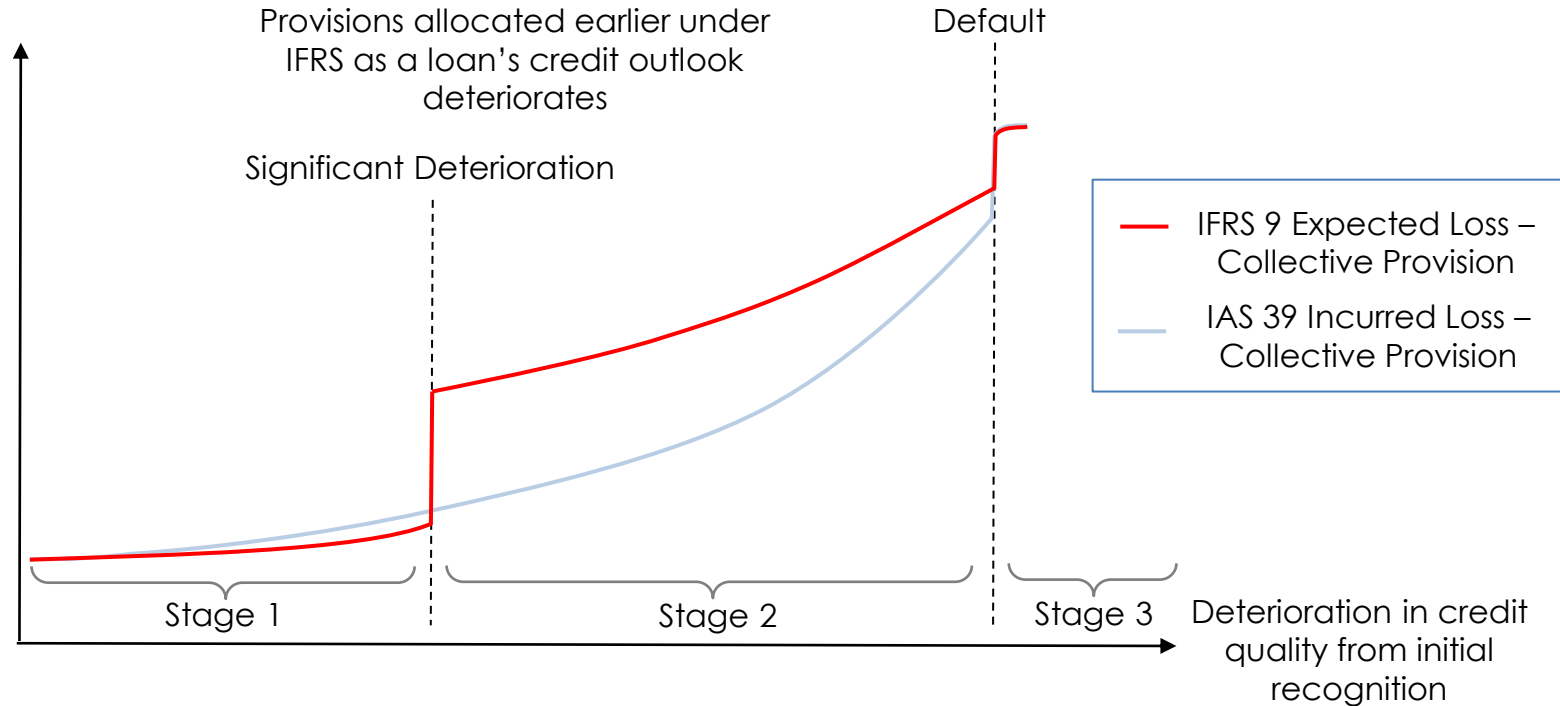
Under IAS 39, provisions are backward looking in that only defaults receive provisions.

IFRS 9 introduces an interim stage when there is significant credit deterioration, i.e. Stage 2



Criteria for transition		Significant increase in credit risk	Objective evidence of impairment
Provision calculation	12 month expected loss	Life time expected loss	Provision

Earlier “Ramp up” of provisions



Determining Significant Deterioration

Banks need to define criteria for significant deterioration for stage 1 to stage 2 transition. The broad requirements for criteria are :

- Must be forward looking and incorporate macro economic data.
- Incorporate information which can be obtained and used without undue cost or effort
- Include both portfolio level and individual loan level data

The table to the right summarises main triggers that banks are considering.¹

1. Deloitte Fifth Global IFRS Banking Survey

Trigger	Comment
Missed Payment	The standards note a 30 days past due trigger, as minimum. Used commonly for mortgages and retail loans.
Step change in grading scale	The majority of banks expect to use this for SME, corporate and securities lending.
Change in PD exceeds a trigger	This is again most likely to be applied for SME
PD exceeds a trigger	This is not as popular as only 1 in 10 respondents to the survey expected to use this trigger
Enters a watch list / specialist problem credit team	Banks have identified this trigger for corporate lending

Operationalising IFRS 9

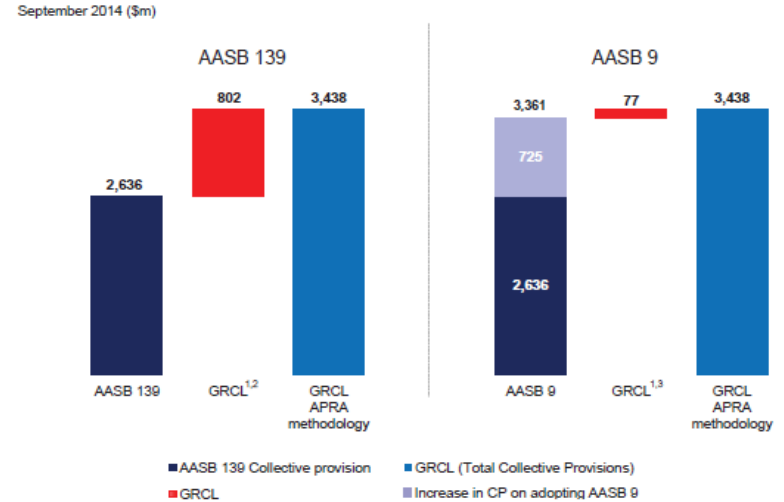
Data and IT	<ul style="list-style-type: none">• Historical data for model development• Systems to test for significant deterioration and default• Upgrades to integrate data from different sources e.g. customer databases, risk data and financial data.	Governance and Controls	<ul style="list-style-type: none">• The suite of models requiring validation and governance will increase.• Governance processes need to be in place around the application of expert judgement• Auditors need to be engaged early and involved with the development.
Models	<ul style="list-style-type: none">• Models to determine stage 2 transition• Forecast EL to the lifetime of the loan.• Macro economic modelling for lifetime expected loss.• Other related models such as those for business planning and stress testing need to be aligned.	Reporting	<ul style="list-style-type: none">• IFRS 9 introduces new disclosure requirements.• Banks need to be able to interpret and explain the data in the tables to the market.
Risk Management	<ul style="list-style-type: none">• Impairment models need to be consistent with credit risk management processes.	Business and Strategy	<ul style="list-style-type: none">• Procyclicality may require revision of capital buffers to counter additional volatility.• Upfront profitability of products will change, particularly for longer dated credit products.

NAB's experience

National Australia Bank adopted AASB 9 from 1 October 2014, becoming one of the first banks globally to report under IFRS 9. Reasons stated by NAB for early adoption included¹:

- Utilising headroom to GRCL to avoid P&L impact
- Collective provision is less volatility through cycle
- Removes restrictions on selling legacy assets previously classified as held to maturity
- The financial impacts are:
 - \$725m increase in provisions (no P&L impact)
 - Pro form reduction in CET 1 ratio of 13bps as at 30 September

AASB 9 impairment – Pro-forma transition impact on Collective Provisions



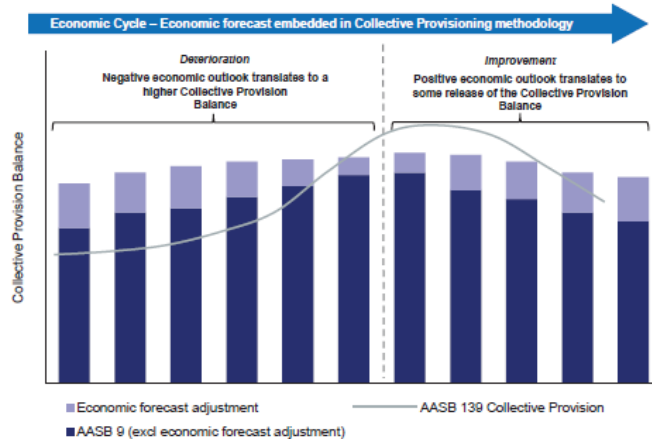
1. The general reserve for credit losses (GRCL) is an estimate of the reasonable and prudent expected credit losses over the remaining life of the portfolio and on non-defaulted assets
 2. Post tax equivalent of \$601m disclosed in 2014 Annual Financial Report
 3. Some GRCL remains as the APRA methodology is based on a lifetime expected loss and the AASB 9 collective provision is a combination of 12-month and lifetime expected credit losses

NAB's experience

AASB 9 Collective Provision less volatile through the cycle

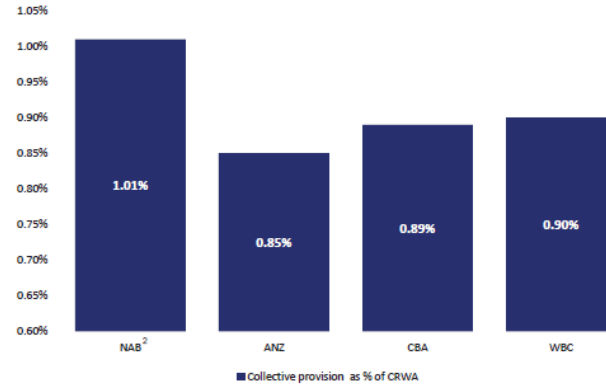
For illustrative purposes only

Economic forecast assumptions are reassessed dependent upon point in economic cycle



Collective Provision Coverage – Peer comparison¹

Collective provision to Credit-risk weighted assets (CRWA) (Dec 14)



1. December 14 data based on Pillar 3 Industry disclosures
2. Includes 8bps of derivative provisions as % of CRWA

Questions

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