Federation of European Accountants
Fédération des Experts comptables Européens

Financial Reporting

Bank Provisioning and Reserving
A Comparison of Alternatives

FEE Paper

January 2010

Standing for trust and integrity

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About FEE

FEE (Fédération des Experts comptables Européens – Federation of European Accountants) represents 43 professional institutes of accountants and auditors from 32 European countries, including all 27 EU Member States.

In representing the profession, FEE recognises the public interest. FEE has a combined membership of more than 500.000 professional accountants working in different capacities in public practice, small and larger firms, business, public sector and education, who all contribute to a more efficient, transparent, and sustainable European economy.

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1. INTRODUCTION

The purpose of this paper is to help clarify and explain the meaning of particular terms used in the day-to-day vocabulary of policy makers, banks, regulators, accountants and others in respect of bank provisioning and reserving, since there is not yet a common understanding of what all of these terms mean. The paper aims to compare and contrast the features and challenges of employing the different approaches or models, to assist interested parties without a deep technical knowledge of the issues and thereby ensure a common understanding of the various terms used and to assist debates on this topical subject.

The paper is aimed at a wide audience that is interested in the public policy debate on financial instruments but has no profound technical knowledge or experience in relation to accounting for and reporting of financial instruments. In particular in the current environment of crisis or first signs of recovery from the crisis, this terminology is often used in relation to impairment of financial instruments. The paper is aimed to be educational and factual in nature. FEE does not express any opinion in this paper on the different models discussed.

The paper is also intended to assist the readers of the recently issued joint EFRAG/FEE paper "Impairment of Financial Assets: The Expected Loss Model" by providing background information and an outline of the key terms of the various approaches and models that are currently being debated.

2. BACKGROUND

During the last two years, a significant number of banks have had to be rescued by way of emergency capital raisings (often from government) to ensure that depositors are protected and that the banks continue to provide banking facilities and the credit essential to national, regional and global economies.

It is widely accepted that many banks failed because they were not required to have sufficient capital and had not set aside sufficient reserves (amounts retained rather than paid as dividends and share buy backs) to enable them to survive a significant economic shock.

The banking industry problems are not confined to the adequacy or otherwise of reserves. For example, the failure of the wholesale markets to properly price credit during the period of apparent stable economic growth, which led to the creation of new business models that proved incapable of surviving this economic downturn. The situation was exacerbated by poor due diligence, including self-certified loans and loans wholly dependent on securitisation markets.

3. THE ROLE OF ACCOUNTING PROVISIONS AND REGULATORY BUFFERS

Consideration is now being given at national, regional and global levels to ways to seek to ensure that history does not repeat itself, or at least that the extent of the next period of lower economic growth or recession is much less severe.

Different damping mechanisms are being considered with the intention of softening the perceived pro-cyclical effects[1] of the current accounting for loan losses or creating counter-cyclical mechanisms such that there is a robust system which naturally dampens the economic cycle and reduces market exuberance during periods of sharply growing asset prices. These mechanisms can act as a bit of a stimulus during periods when markets are unduly pessimistic.

One aspect of this debate is the role that accounting measurement and information transparency can play to support the market's and prudential regulator's understanding of the position and risks faced by certain significant institutions.
Two specific initiatives have been identified:

- Changes to the **method** through which banks provide for future loan losses in their financial statements, notably in the income statement; and

- Changes to the **basis** on which extra additional protection mechanisms, whether in the financial statements or only in regulatory returns (regulatory reserves), are required to be set aside by directors/management.

Regulatory (prudential) reporting and general purpose financial reporting have different objectives. Financial stability is primarily the responsibility of prudential regulators. The financial reporting role in financial stability is to provide and restore market confidence by providing transparency and a true and fair view on financial performance and financial position in individual reporting periods.

As part of this debate, a number of new terms related to provisioning and impairment have entered into the day-to-day vocabulary of policy makers, bankers and accountants. These terms include incurred and expected losses, expected cash flows, dynamic provisioning, fair value and economic cycle (through-the-cycle) reserves. However, it seems that there is yet no common understanding of what these terms mean and what might be their potential effects on pro-cyclicality, the reliability of information produced by banks as a whole and the role played by banks in the global economy.

The following three concepts (with different relevance for financial reporting and the prudential reporting consequences) are the basis of the frequently used models discussed in this paper:

[1] i.e. very limited loan provisions being recognised at the top of the economic cycle whereas significant volumes of provisions are recognised in economic crisis

- "Impairment" – reduction in the recoverable amount of an asset, reflected through the income statement;

- "Provision" – difference that indirectly adjusts the contractual value of an asset to its recoverable amount, reflected through the income statement. Provision is the most common method to record impairment, whereas direct reduction of the carrying amount of the asset is rarely used ("Dynamic provisioning" as defined in Section 3.2.2.c. below is not within this concept of "Provision");

- "Reserves" – different categories of equity in the balance sheet, with restricted distribution to shareholders. Creation of, and transfers between reserves have no effect on the income statement.

Despite the potential benefits that might be delivered by damping mechanisms, there are significant dangers if the potential changes to accounting for loan provisions give rise to a lack of clarity for investors about how these businesses are affected by changes in economic circumstances. For example, it would not serve the public interest if the effect of any change was merely to delay and potentially deepen the arrival of a crisis, with consequential delay in raising more capital or curtailing inappropriate business practices. It is also argued that financial statements should reflect the economic reality: accounts "telling it like it is"; if there are losses - recognise them, if there are no losses, why pretend there are and then try to say things are not as bad as they really are, when losses do happen? It is not the role of financial statements to smooth results.

A clear distinction needs to be made between accounting and prudential treatment. A safer banking system can be achieved through more capital (or a request for more capital), independently of the accounting treatment. Regulators have many tools available to them including restricting the type of business, imposing risk management processes and inspections. However, some observe that accounting by itself may force institutions to sell financial instruments to avoid further accounting losses, thereby creating or exacerbating pro-cyclical effects.

The wider fiscal consequences, because of the interaction with accounting, also need to be considered.

3.1. Terms frequently used

There are two principal approaches for setting up provisions that need to be distinguished: incurred loss model versus an expected loss model.

Incurred loss model

A point in time assessment focused on the recoverability of the loan at the reporting date. A provision can only be made when there is objective evidence of impairment. The loan portfolio is monitored and reviewed at the reporting date to identify those loans which exhibit characteristics or evidence of impairment (per IAS 39 such as default, significant financial difficulty faced by the borrower). For these loans, the total

discounted expected cash flows associated with the exposure (these could be for instance repayments arising through the restructuring of the facility and/or expected receipts from the enforcement of charges over assets held as security) are compared with the exposure and any impairments (differences between the two) are booked. It is possible that there is objective evidence of impairment but the expected cash flows are not likely to be affected and hence there is no impairment charge.

The way in which the assessment is done can differ significantly. The incurred loss model also involves to a certain extent subjective estimates of future cash flows, but to a lesser extent than for the expected loss model. Typical examples are included in the appendix, in practice institutions may select to use a combination of these.

Expected loss model

An assessment of the expected loss is made at the time the loan is entered into and at each reporting date. Under the expected loss model no loss event is required and therefore changes in economic conditions on their own lead to changes in estimates which are recognised as gains and losses. There are a number of variations of expected loss models dealing in different ways with expected loss scenarios.

3.2. Discussion of individual models

The following different types of provisioning methodology are considered:

1) Incurred loss model
   a. Individual specific assessments
   b. Collective assessment
   c. Incurred but not identified (IBNI)

2) Expected loss model
   a. Basel II basis
   b. Over the life of the loan
   c. Dynamic provisioning
   d. Economic cycle (through-the-cycle) reserve

3) Spanish banking system model

4) General provision – method used prior to IFRS

5) Fair value

6) Hidden reserves

3.2.1.a. Incurred loss model: Individual specific assessments

What is it?

A provision is made for a specific loan when there is objective evidence of impairment.

How does it work?

Each loan is individually assessed to determine whether a loss event has taken place and for recoverability. There may be a number of different outcomes depending on negotiation with the debtor, or more fixed outcomes underpinned by valuation reports. Management have to recognise an impairment on the estimated or most likely cash flows discounted at the original effective interest rate in the loan.

Features

The most relevant characteristic of this model is that each loan is assessed individually. There must be objective evidence of impairment to trigger the impairment test. Management judgement plays an important role regardless whether or not their judgement is underpinned by valuation reports. This method forms part of the existing IAS 39 provisioning model.

Challenges

The definition of what is objective evidence of impairment can vary across entities which can lead to difficulties in comparing the results of different entities. However, whilst the method provides relatively fair and balanced reflection of provisions for individually impaired loans, unless it is combined with other methods, it is pro-cyclical since it delays the recognition of loan losses until the incurred point, i.e. to a relatively late point in the loan deterioration process.

3.2.1.b. Incurred loss model: Collective assessment

What is it?

Collective provisioning techniques may be followed where the pool of assets exhibiting characteristics of impairment are homogenous or can be grouped together due to their similarity. A specific model of collective assessment applied by IAS 39 is described in Section 3.2.1.c.

How does it work?

Collective loss events are changes in economic indicators, for example unemployment rates, that correlate with losses being incurred on the portfolio. The provision will be established through application of historical average loan loss data held by the lender on loans with similar characteristics. This data should in principle be adjusted to reflect current conditions, although not all banks do so. However, each bank has its own unique process to establish the collective provision. The full loss is recognised when it has occurred.

Features

The model is based on a collective assessment of a pool of assets, with application of historical experience data. It is a relatively objective method, with less management involvement than in other methods. Even though the process is unique to each bank it is more objectively verifiable.

Challenges

The model basis and the assumptions used in the collective assessment of provisions against a pool of assets can vary across entities, making comparisons difficult.

Also the historical average loan loss data might be biased by factors, which already ceased to exist and would not reflect new current factors and circumstances, which might be very relevant, although the current IAS 39 model requires to take these factor dynamics to reflect current conditions into account (see Section 3.2.1.c.).

3.2.1.c. Incurred loss model: Incurred but not indentified (IBNI)

What is it?

The IBNI model is a specific application within the collective assessment incurred loss model as described in Section 3.2.1.b. The current IAS 39 incurred loan loss provision model that is applied to financial assets accounted for on an "amortised cost basis" is a combination of the models as described in this section and in Section 3.2.1.a. The IBNI relates to a loss event that has occurred but it is not currently known or identified by the lender. Typically the loss event becomes known to the lender a short period after the event has occurred.

How does it work?

Banks are required to build systems to identify current or past events that are expected to give rise to future defaults. Where such an event exists then banks are required to estimate the revised expected cash flows and discount the amounts back to the balance sheet date to determine the recoverable amount. Impairments are then recognised to reduce assets to their recoverable amounts. It is an additional provision which complements the individual and collective provisions raised for assets where impairments have been identified.

Banks are required to calculate their provisions on individually significant loans on a case by case basis. Banks are also required to apply a portfolio approach on all other loans in order to complement the specific impairments on individually significant loans.

Features

The IBNI method accompanies and complements the individual specific assessment method described above in the existing IAS 39 provisioning model. There is judgement in estimating the period of time between the loss event happening and it being known to the lender.

Challenges

This model requires banks to build and maintain complex models to enable the provision calculations to be performed. The model basis and the assumptions used in the IBNI calculations can vary across entities making comparisons difficult.

3.2.2.a. Expected loss model: Basel II basis

What is it?

A provisioning methodology used to calculate adjustments made to gross loan balances for regulatory capital adequacy purposes. This is essentially a capital based model used for regulatory purposes, not an accounting model. Compared to the incurred loss model, it reflects expected loss during the coming 12 months and sets aside regulatory capital.

How does it work?

Banks are required to estimate the losses they expect to incur on the loan assets over the following twelve months and reduce loan assets by such amounts for regulatory capital purposes.

It requires banks to build an extensive database of key data about its loan portfolios and to use current forecasts of cash flows for the following year.

Features

It is based on specific internal information. It can create a "day one loss", where there is a probability of a loan going into default within the year. It is applied by most sophisticated banks, which use the internal rating based approach, with existing practical experience and regulatory acceptance (in place for some time). As it only deals with the probability of default in the next year, it does not estimate the ultimate expected losses on assets where the maturity extends beyond a year.

Challenges

The estimate of the probability of default in the next twelve months is judgemental, often based on data gathered in the preceding periods. Complex models and extensive data are needed to provide the inputs into the model to calculate the required provisions. As a result, it would present substantial implementation issues for smaller banking institutions; however, such banks are allowed to use simpler options with higher regulatory capital requirements. It only partially reduces pro-

cyclicality since it is not that responsive to changes in current and expected future conditions.

3.2.2.b. Expected loss model: Over the life of the loan

What is it?

In broad terms the concept is that a provision should start to be accrued over the life of the loan since its inception for all losses that are expected to arise. Usually such provisions are assessed on a portfolio basis.

An approach to measuring loans that uses the entity's cash flow forecasts for the assets held at the balance sheet date. It is the underlying model in phase II of the IAS 39 revision, IFRS 9 Exposure Draft on Financial Instruments: Amortised Cost and Impairment methodology.

How does it work?

Forecasts are made of the expected cash flows on all loans at inception and as at the balance sheet date. These cash flows are then discounted at the rate of interest calculated upon initial recognition in order to take into account estimated future credit losses.

The IASB model discounts at the original effective interest rate, not the current market discount rate. This means that gains and losses only arise as forecast cash flows change, not as a result of movements in current market interest rates or current market credit spreads.

Features

The model closely reflects the current expected cash flows, discounted at the effective interest rate at the inception of the loan, as at the balance sheet date. The model would give rise to losses as credit spreads increase and future expected cash flow fall, however it will not be affected by changes in risk free interest rates.

In terms of market communications, it more closely aligns the accounting outcome with the facts and circumstances existing at the balance sheet date.

Where the expected losses are accounted for over the life of the loan, rather than as a day one loss, it has the advantage of matching income and loss recognition.

Challenges

It may become highly pro-cyclical during a period of benign credit losses, where lower actual losses will result in credits to the income statement, and unexpected loss events, such as a recession, are not anticipated. The extent of pro-cyclicality may depend on how the model is applied: whether conditions and trends are looked at, at the balance sheet date or whether future economic conditions are anticipated over the life of the existing loans. The latter approach could be counter-cyclical.

Estimates of future cash flows taking into account all possible future events are more subjective than the incurred loss model, since the model relies significantly on the cash flow estimates prepared by the reporting entity. These are inherently subjective based on internal, i.e. non-observable inputs.

Determining how to spread the expected loss over the life of products such as overdrafts and revolving loans needs to be resolved. Other issues include whether to isolate impaired loans from the rest of the portfolio and the significant system challenges to calculate the accounting requirements and back-test the results. A further uncertainty is how to deal with undrawn credits.

3.2.2.c. Expected loss model: Dynamic provisioning

What is it?

Dynamic provisioning has not been well defined to date and is not used for external financial reporting. The basic concept articulated in a paper published by the Bank of England in 2002 is that provisions are made against loans each year in line with an expected long run loss rate which might be longer than the current maturity of the assets.

How does it work?

The general mechanism is that banks seek to estimate a long run average loss rate based on historical data, and in any one year would make a charge to the dynamic provision if actual results under the current loan provisioning system are better than the expected long-run position and make a release from the dynamic provision if they are worse.

Features

The system would force a bank's management to be more prudent during periods of good economic conditions and permit the provision's release when needed.

Challenges

Estimating the long run default rate is very challenging. The long run default rate estimated by management in 2005/2006 would have been significantly different to 2008/2009 as evidenced by the repricing of credit spreads that has taken place over the intervening period.

The objective of the dynamic provision is to smooth the results and provide for an element of unexpected losses. This may undermine transparency of a bank's performance for investors who would naturally expect a close correlation between business health and bank results. There is also a heightened risk of a bigger market surprise when a bank finds that it has run out of all of its dynamic provision and still needs to make substantial additional provisions.

Because a long-term default rate is used this can have the effect on shorter duration portfolios of effectively including a charge for loans that have not yet been made.

3.2.2.d. Expected loss model: Economic cycle (through the cycle) reserve

What is it?

This model concerns additional reserves, not taken in the income statement, set aside by the directors and management to ensure that the bank has sufficient resources to survive a significant adverse economic shock.

How does it work?

Each year (or more often) each bank builds a credible but very pessimistic scenario for an economic shock or unexpected loss. Dynamic provisioning represents "a through the cycle" approach where the intention is to provide each year at the long term expected average credit loss. Key assumptions could include national and global GDP, unemployment rates, etc., as well as bank growth and line of business plans.

These key assumptions are then modelled to establish what would be the level of additional write-offs and write-downs a bank would have to make and this amount would be compared to existing reserves. Where the comparison indicates that additional reserves are needed, prudential supervisors would intervene to require new capital to be raised. In this way an additional prudential buffer is created.

Features

The model seems to confuse provisions actually needed for the assets that are owned at the balance sheet date with reserves (i.e. equity components) needed for unexpected downturns and other possible (perhaps remote) future events.

Transparent disclosures mean that investors are better able to participate in the debate and perhaps modify their demands for dividends and capital returns.

Challenges

Determining pessimistic but credible scenarios and risks reduces comparability between banks. It may need input from prudential regulators to address this.

The model depends on assumptions not capable of objective verification.

3.2.3. Spanish banking system model

What is it?

The Spanish model is often referred to as an example during the current financial crisis and therefore we describe it here. It is a method of using data gathered by the Spanish regulator on losses incurred on loan portfolios across the Spanish banking market. The regulator provides the loss data to banks to use in their impairment calculations.

How does it work?

Detailed national statistical analysis is prepared by the prudential supervisor supported by a close working relationship between the prudential supervisor and all banks in the market. The data used covers 15 years across six asset types and is applied to domestic Spanish branch lending. The regulator provides the loss data to the banks who then apply it in their impairment calculations.

Features

The model ensures that the data used in the impairment calculations are consistent across the banks and products covered. It may give rise to larger provisions than those calculated by individual banks because their credit approval system or data quality might be better.

The model does not rely on management judgement and it ensures comparability between banks within a country.

Challenges

The model does not differentiate between the credit processes, credit risk management and individual loss exposures of individual banks, since it uses industry averages.

The model can produce counterintuitive outcomes such as increasing loan losses during an economic boom. Furthermore, the amount in the balance sheet for loans may not represent the amount expected to be recovered from the assets at that date. This may confuse and undermine investor confidence but can be compensated by disclosure. On portfolios with a short average duration, the model can produce a provision for loans that have not yet been made.

3.2.4. General provision – method used prior to IFRS

What is it?

Loan provisions are calculated using directors/management judgement about the level of losses relating to specific loans and about losses in the portfolio as a whole. The approach does not specifically rely upon expected or incurred losses and may include an element for unexpected losses. National GAAPs were more prudent than IFRS in that they tended to never release provisions when conditions improved and provisions were often made at higher levels than strictly needed in boom times. Note that practice under National GAAPs vary geographically.

The approach was very common up until IFRS was adopted in 2005 in many countries.

How does it work?

Specific provisions are made based on evidence that a loan is impaired. However, experience suggests that portfolios contain loans that are impaired but evidence that a problem has arisen is not identifiable at the balance sheet date – there is effectively a time-lag between the event and the bank obtaining the information about this event. This notion of losses that are "incurred but not yet identified" forms the usual basis of a general provision.

In practice, provision levels are determined by drawing on the instincts, knowledge and experience of those involved in making the strategic decisions about loan loss provisions, particularly the board of directors. It is a non-specific credit provision held against the entire book, largely based on management judgement.

Features

May lead to higher provisions that those calculated under an incurred loss or expected loss approach since it may include an element for unexpected losses.

Challenges

The degree of judgement involved can be very high, so the resulting general provision could be very variable between banks and over a period of years and thereby impairing comparability over time and between banks. Such highly judgemental provisions are difficult to objectively verify so they are difficult to audit robustly in the absence of a specific framework for how such a provision is calculated and can lead to attempts to smooth the presented profits compared to reality.

History suggests that banks with excess capital (and probably more conservative business models) tend to create more than adequate provisions, whilst those with tight capital (and probably more risky business models) would seek to make the amount as small as possible – quite the reverse of the outcomes that policy makers currently wish to achieve.

3.2.5. Fair value

What is it?

An approach to measuring the value of loans based on what a bank would receive for them if it sold them at the balance sheet date to another market participant. It is not a provision model. IFRS currently requires this approach for assets held for trading and permits fair value valuation for assets in specific circumstances. IAS 39 defines fair value as the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction.

How does it work?

Banks are required to identify the best evidence available to them of the price that loans would trade at on an active market. Some loans are traded on liquid markets and so they are valued at the market price. In other circumstances, banks would need to model their likely cash flows and estimate what other market participants would demand as an interest rate.

Banks already have to estimate these numbers for disclosure purposes under existing IFRS standards.

Features

Amounts could be volatile and are based, if available, on external observable information, reflecting changes in fair value based on both credit quality and interest rate movements.

The principal benefits to investors are that the value of the assets reflects all of the economic circumstances present at the balance sheet date. This may mean that poor past investment decisions become apparent more quickly if the market identifies future losses before they are incurred or identified by management.

Challenges

Predicting what another bank would pay for a loan is inherently very subjective in the absence of any actual transactions.

In the case of volatile and illiquid markets, it may be difficult to obtain an observable measurement.

3.2.6. Hidden reserves

What is it?

It is a system whereby banks make additional provisions against assets without disclosing the details or the accumulated amounts to investors and others. Only the prudential regulator may have access to the detail. Such provisions were only used in some jurisdictions in the past.

How does it work?

Various devices are used to build-up hidden cushions in the balance sheet and reducing income by charging higher than necessary loan losses in some years or shaving net interest margins. It was very common prior to the 1980's.

Features

It has the possibility to create bigger cushions provided that the banks had good results in previous years when the hidden provisions were created, at the discretion of the banks, thus allowing to smooth profits.

Challenges

Lack of transparency leads to distrust and much higher cost of capital for banks concerned. It is more challenging for banks to raise additional capital in a crisis. There is much greater dependence on knowledge, experience and use of regulatory powers by prudential regulator.

APPENDIX: OVERVIEW OF APPROACHES TO LOAN PROVISIONS AND RESERVES

1) Incurred loss

A point in time assessment focused on the recoverability of the loan at the reporting date. A provision can only be made when there is objective evidence of impairment. The loan portfolio is monitored and reviewed at the reporting date to identify those loans which exhibit characteristics or evidence of impairment (per IAS 39 such as default, significant financial difficulty faced by the borrower). For these loans, the total discounted expected cash flows associated with the exposure (these could be for instance repayments arising through the restructuring of the facility and or expected receipts from the enforcement of charges over assets held as security) are compared with exposures and any impairment is booked. It is possible that there is objective evidence of impairment but the expected cash flows are not likely to be affected and hence there is no impairment charge.

The way in which the assessment is done can differ significantly. Typical examples are below, but in practice institutions may select to use a combination of these.

Type of loss model	In use at present	Pro-cyclical	Reliance on management judgement	Impact on profit and loss	Impact on balance sheet
1) a. Individual specific assessments Each loan is individually assessed to determine whether a loss event has taken place and for recoverability. At the time of the assessment date there may be a number of potential outcomes depending on negotiations with the debtor	Required under current IFRS, therefore used extensively.	Yes. Generally, impairments are booked later than under other methodologies.	There must be objective evidence of impairment to trigger the impairment test. Management judgement is required under the impairment test because forecasted	Full discounted loss (after accounting for the present value of forecasted cash flows) is recognised when incurred.	Only the expected recoverable amount of the asset (after accounting for the present value of forecasted cash flows) is recognised.

Type of loss model	In use at present	Pro-cyclical	Reliance on management judgement	Impact on profit and loss	Impact on balance sheet
and scenarios which will lead to a different stream of future cash flows. Where this is the case management will need to form a judgement on the most likely outcome and base their provision on this. On the other hand it is possible that the cash flows are less subject to judgement and are underpinned by valuation reports covering the assets under charge.			cash flows associated with the asset have to be estimated. The realisable value of security may also need to be estimated if market prices are not available.		
1) b. Collective assessment Where the pool of assets exhibiting characteristics of impairment are homogenous, or can be grouped together due to their similarity, a collective provisioning technique may be used. In this scenario the provision will be established via the application of historical average loan loss data – Loss Given Default (LGD) – held by the lender on	Yes. Used extensively by major retail and corporate banks.	Depending upon the LGD data used, this can result in a 'pro-cyclical' or 'through the cycle' ("TTC") outcomes. For instance if the data set is relatively recent and only covers a short period (say 2 to	Some reliance on management's judgement. For example, loans are put into categories that exhibit similar characteristics against which relevant LGD data is applied. The identification of categories is open to management's judgement. Choice of	Full loss (after accounting for the present value of forecasted cash flows) is recognised when incurred.	Only the expected recoverable amount of the asset (after accounting for the present value of forecasted cash flows) is recognised.

Type of loss model	In use at present	Pro-cyclical	Reliance on management judgement	Impact on profit and loss	Impact on balance sheet
loans with similar characteristics.		3 months) it is likely to result in a pro-cyclical outcome. Whereas data taken over a number of years is more likely to result in TTC outcomes.	which period of historical data to use and any adjustments to reflect current conditions are further areas of management judgement.		
1) c. Incurred But Not Identified ("IBNI") The IBNI model is a specific application within the collective assessment incurred loss model. IBNI is based on the assumption that management does not have complete or perfect information to identify all loans with characteristics of impairment at the reporting date. It can take a period of time for this information to emerge, a good example being a loan with a quarterly	Yes, part of IAS 39 impairment rules.	Depends on what historical loss data is used in the provision calculation. This model is moderately pro-cyclical. The need for there to be a credit event means that provisions are booked later in an economic	Less reliance on management's judgement. For example, loans will be put into categories that exhibit similar characteristics against which relevant LGD and PD data is applied. The identification of categories is open to management's judgement.	Profit and loss reflects management's estimate of losses incurred on their loan book but not identified at the reporting date.	Balance sheet reflects management's estimate of recoverable loan balances after accounting for losses incurred but not identified at the reporting date.

Type of loss model	In use at present	Pro-cyclical	Reliance on management judgement	Impact on profit and loss	Impact on balance sheet
repayment profile which straddles the reporting date. That loan may be impaired at the reporting date (for instance due to liquidity issues faced by the borrower), but, as the next receipt is not due for several weeks the lender does not yet realise that it is impaired. To cater for this issue lenders may choose to take an IBNI provision. The key components in this calculation are: - The historical average of probability of default (PD); - The historical average loss given default (LGD); and - The emergence period i.e. management's own view of how long it typically takes for an impairment to come to light. The PD and LGD are applied to the loan book at the reporting period end, excluding those items already identified as having characteristics of		cycle that say a fair value model. This defers some of the losses to periods where government and other interventions have resulted in banks increasing the operating margins in order to increase their capacity to absorb losses.			

Type of loss model	In use at present	Pro-cyclical	Reliance on management judgement	Impact on profit and loss	Impact on balance sheet
impairment. The result is then adjusted based on management's view of the emergence period. Depending upon the timeframe to which the historical PD and LGD data relates it can be pro-cyclical or TTC.					
2) Expected loss An assessment of the expected loss is made at each reporting date including at the time the loan is entered into. Under the expected loss model no loss event is required and therefore changes in economic conditions on their own lead to changes in estimates which are recognised as gains and losses. There are a number of variations of an expected loss model, for example: 1) Basel II. An impairment is based on the PD over the next 12 months (not the life of the loan if it matures after 12 months) 2) Over the life of the loan. An impairment charge is based on the expected loss over the life of the loan. The impairment can be taken as a charge: a. spread over the life of the loan b. on inception of the loan 3) Dynamic provisioning. An impairment charge based on the expected loss over the business cycle rather than the life of the loan. The effect is to build up a provision for expected or potential losses on a business cycle downturn that might happen over a period longer than the average life of loans.					

Type of loss model	In use at present	Pro-cyclical	Reliance on management judgement	Impact on profit and loss	Impact on balance sheet
2) a. Basel II basis The impairment is based on the PD and LGD data for the next 12 months regardless of what the expectation is to the end of the life of the loan.	Yes. Regulatory reporting in compliance with Basel II.	Partially. Losses are only recognised if expected within the next 12 months.	Management's judgement is required to estimate the PD and LGD of the portfolio.	If losses are recognised at inception and relate to the expected loss over the term through to maturity, it will lead to large "Day 1 losses" and potentially volatile swings in the provision charge depending on estimates of economic outlook. This will have little connection with the actual loss at reporting date.	The balance sheet value at any point in time will mean very little to the reader of the financial statements because it relates only to losses expected over the next year.
2) b. Over the life of the loan The impairment is based on the expected loss over the life of the loan. The impairment can be taken as a charge:	No. However, a form of expected loss (where the profit and loss charge is spread over the life of the	Unlikely to remove pro-cyclicality in certain situations given the fact that expectations of continued	Management judgement is required to estimate the expected loss over the life of the loan.	1) Spread over the life time of the loan: spreading the impairment cost over the life time of the loan. 2) On inception of	The balance sheet value is the present value of expected future cash flows, discounted at the effective interest rate at the inception of the loan. Whilst this

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1) spread over the life of the loan 2) on inception of the loan	loan) is included in the current IFRS ED on Amortised Cost and Impairment methodology.	strong growth are likely to be high during economic upturns and market sentiment may become pessimistic in the early phase of a recession. The extent of pro-cyclicality may depend on how the model is applied: whether conditions are looked at, at the balance sheet date or whether future economic conditions are anticipated over the life of the existing loans. The		the loan: If expected losses are recognised on initial recognition of the loan and relate to the expected loss over the term through to maturity, it will lead to large "Day 1 losses" and potentially volatile swings in the provision charge depending on estimates of economic outlook. This will have little connection with the actual loss at the reporting date and would be against the principle that loans are initially recognised at fair value.	is not the fair value, since is does not take into account changes in interest rates, market expectations of credit risk nor any liquidity premium, it is closer too fair value than an incurred basis.

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		latter approach could be counter-cyclical.			
2) c. Dynamic provisioning An impairment charge based on the expected loss over the business cycle rather than the life of the loan. The effect is to build up a provision to cover for expected or potential losses on a business cycle downturn that might happen over a period longer than the average life of loans.	No.	No. The approach could be generally counter-cyclical in effect and so may appear acceptable in that regard to policy-makers. However, in a severe recession it will provide for losses in excess of the long-run loss rate.	Depends on the model used to determine the data set i.e. will it be prescribed by the regulator or left to the bank's own discretion?	It will lead to a smoothing of results which will remove large profit and loss swings. It will give rise to Day 1 losses. However, the charge itself will not reflect the actual incurred losses at the reporting date. It will also lead to higher charges during a benign credit environment. Because a long-term default rate is used this can have the effect on shorter duration portfolios of effectively including	The balance sheet value has no link to the recoverable value of specific individual assets at the reporting date and it will include losses on assets that do not yet exist and are not on the balance sheet.

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				a charge for loans that have not yet been made.	
2) d. Economic cycle (through the cycle) reserve Additional reserves set aside by the directors/management to ensure that the bank has sufficient resources to survive a significant adverse economic shock. Annually (or more often) each bank builds a credible (but very pessimistic) scenario for an economic shock. Key assumptions would include national and global GDP, unemployment rates, etc., as well as bank growth and line of business plans. These key assumptions are then modelled to establish what would be the level of additional write-offs and write-	No.	No.	Depends on the operating framework i.e. would it be prescribed by the regulator or based on management's judgement?	The income statement would arguably report a smoother result as profits and margins are reduced to cover any potential capital shortfall under the model. Depending upon how the model is constructed it could lead to significant Day 1 charges to reserves.	The balance sheet value has no link to the recoverable value of specific individual assets at the reporting date.

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downs a bank would need to make and this amount is compared to existing reserves. Where the circumstances indicate additional reserves are needed prudential supervisors would intervene to require new capital to be raised. Avoids confusing what provisions are needed for the assets that are owned at the balance sheet date with possible (perhaps remote) future events. Transparent disclosures mean that investors are better able to participate in the debate and perhaps modify their demands for dividends and capital returns. Determining pessimistic but credible scenarios. Risks creating inconsistencies in comparability between banks. It may need input from					

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prudential regulators to address these inconsistencies.					
3) Spanish banking system model An incurred loss based provision is taken based on historical loss statistics gathered by the Bank of Spain over a prescribed period (15 years). The Bank of Spain uses data across the Spanish banking industry to calculate the incurred loss (individual and collective assessment) on six categories of asset types.	Yes. Used only for the business of Spanish banks in Spain.	Relatively lower levels of pro-cyclicality due to lengthy timespan of data used in the process. However, it can lead to counterintuitive results. For example, if there is a strong upturn in the economy this will not be reflected in a reduced provision for sometime.	Low, assuming that the modelling data is prescribed by the regulator.	Can produce a counterintuitive result as it will take time for an improvement in the economic conditions to filter through to the historical data.	The balance sheet position does not reflect the expected amount to be recovered from the assets at that date.
4) General Provision – method used prior to IFRS A non-specific credit provision	Not since the adoption of IFRS (and before in	Can be relatively counter-cyclical if a	High as completely determined by management's estimates/views.	Depends on the methodology, but pre-IFRS was widely seen as giving	The balance sheet value has no link to the recoverable value of specific

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is held against the entire book of loans. This is largely based on management's judgement and, therefore, determined using a combination of factors – for example: historic outcomes; and expected changes to the credit environment.	some jurisdictions).	combination of factors is used.		management the potential to smooth results.	individual assets at the reporting date.
5) Fair value The accounting basis for the loans is linked to their market price. Banks are required to identify the best evidence available to them of the price they could sell the loan. Some loans are traded on liquid markets and so they are valued at the market price. In other circumstances, banks would need to model their likely cash flows and estimate what other market participants would demand as an interest rate.	Yes, if the loan instrument is held for trading.	Relatively. The model would be highly pro-cyclical, since it is sensitive not only to credit risk but also to other financial risks. If properly applied, gives early warning of problems and allows for timely remedial actions.	Yes for illiquid loans (which can make up a significant portion of typical loan portfolios).	The income statement can be subject to extreme volatility in times of market turmoil.	Arguably leads to a better balance sheet result for investors. However, determining fair value can be subjective due to the illiquid nature of many loans.

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6) Hidden reserves A system whereby banks make additional reserves against assets through equity or other liabilities on the balance sheet without disclosing any of the details or the accumulated amounts to investors and others. Only the prudential regulator may have access to the detail.	No. Was used up to late 1970s in some European countries.	No. Depends on how and when the reserves are utilised at the discretion of the bank.	Depends on the operating framework i.e. would it be prescribed by the regulator or based on management's judgement?	The income statement would arguably report a smoother result as profits and margins are reduced year-on-year and taken to the hidden reserve.	The balance sheet does not disclose the reserve, hence there is no transparency.

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