Risk publications

IFRS 9/CECL

Risk.net October 2017

Special report

Risk.net

Sponsored by

ORACLE FINANCIAL SERVICES

sas THE POWER TO KNOW.

20 of the 20 Top Banks

Get Better Results With Oracle

oracle.com/banking
or call 1.800.ORACLE.1

Copyright © 2013, Oracle and/or its affiliates. All rights reserved. Oracle and Java are registered trademarks of Oracle and/or its affiliates.

Credit where it's due

Implementation of International Financial Reporting Standard 9 (IFRS 9) on January 1, 2018 will mark a sea change in centuries-old accounting conventions, and will force banks to dramatically increase provisioning against loans at risk of turning sour.

The regime and its US analogue, the current expected credit loss (CECL) rule, usher in a shift to expected credit loss (ECL) accounting in favour of the current incurred losses approach – in which a loan is recorded as healthy on a bank's books up until the point of impairment. Under IFRS 9, dealers will be required to calculate ECL for all loans over a 12-month period, and over the entire lifetimes of loans that have deteriorated in credit quality.

For some banks, the jump in loan-loss provisioning under the regime could be as much as 30% versus current levels according to some estimates – potentially forcing banks to divert retained earnings or dip into their own capital buffers. The result could be a hit to Common Equity Tier 1 capital of up to 45 basis points, according to one study.

IFRS 9 buckets loans into three stages – stage 1 for healthy loans, stage 2 for underperforming loans and stage 3 for impaired loans. Where a loan's probability of default (PD) rises between reporting periods, banks must increase provisioning accordingly. Banks fear that, should a sudden sustained economic downturn affecting multiple sectors occur between reporting dates, they may be forced to downgrade loans by a stage *en masse*, with the attendant steep rise in provisioning potentially leading to capital shocks.

As Nimesh Verma, director in bank advisory, corporate and institutional banking at BNP Paribas, notes: "IFRS 9 significantly increases volatility and procyclicality. It amplifies provision levels and drives large shifts in regulatory capital on an ongoing basis, as changes in economic outlook mean swaths of assets move between stages 1 and 2."

Some lenders aren't waiting for a downturn in macroeconomic conditions to dictate matters for them – several are already considering pre-emptively downgrading loan books that are most at risk of a rise in PD by shifting them into the next bucket down, effectively front-loading any resultant capital hit and helping smooth profit and loss volatility.

Regulators are also cognisant of the risks incurred if banks under their watch suffer hits to their capital and earnings, and have made efforts to phase the rules in more slowly as a result. Recent moves by the Basel Committee on Banking Supervision to give local regulators more latitude in this regard have also been welcomed by the industry.

The other main cost for banks in complying with the rules has been a significant retooling of loan-loss modelling capabilities to accommodate the shift to the ECL regime. Some banks have looked to lighten their load by repurposing existing credit risk capital models to provide the point-in-time estimates required under IFRS 9, where losses are calculated across fixed time horizons – either one year or over the lifetime of the loan. In this sense, banks that have opted to use the Basel II internal ratings-based approach for calculating credit risk capital requirements will be at an early advantage.

Tom Osborn,
Desk editor, Risk management, Risk.net

Tom Osborn
Desk Editor, Risk Management
tom.osborn@incisivemedia.com

Joanna Edwards
Senior Director, Marketing Solutions
joanna.edwards@incisivemedia.com

Stuart Willes
Commercial Editorial Manager
stuart.willes@incisivemedia.com

Alex Hurrell, **Commercial Subeditor**
alex.hurrell@incisivemedia.com

Antony Chambers, **Publisher, *Risk.net***
antony.chambers@incisivemedia.com

Celine Infeld, **Managing Director**
celine.infeld@incisivemedia.com

Lee Hartt, **Group Publishing Director**
lee.hartt@incisivemedia.com

Ryan Griffiths, **Senior Production Executive**
ryan.griffiths@incisivemedia.com

Infopro Digital (UK)
Haymarket House, 28–29 Haymarket
London SW1Y 4RX
Tel: +44 (0)20 7316 9000

Infopro Digital (US)
55 Broad Street, 22nd Floor
New York, NY 10004-2501
Tel: +1 646 736 1888

Infopro Digital (Asia-Pacific)
Unit 1704-05, Berkshire House
Taikoo Place, 25 Westlands Road,
Hong Kong, SAR China
Tel: +852 3411 4888

Twitter @riskdotnet
Facebook facebook.com/riskdotnet
LinkedIn Risk.net

Cover image
Kenb/Getty

Published by Infopro Digital
© Infopro Digital Risk (IP) Limited, 2017

All rights reserved. No part of this publication may be reproduced, stored in or introduced into any retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of the copyright owners. Risk *is registered as a trade mark at the US Patent Office*

3 Sponsored feature

IFRS 9 and CECL
Measure twice and cut once

The parallel run is a critical period for institutions to evaluate and refine their IFRS 9 and CECL implementations. Unfortunately, many will find little time in their implementation schedules to accommodate it

4 Risk management

Tackling IFRS 9 loan-loss volatility

Banks are looking to counter the volatility of loss provisioning through careful calibration of loan buckets

8 Q&A

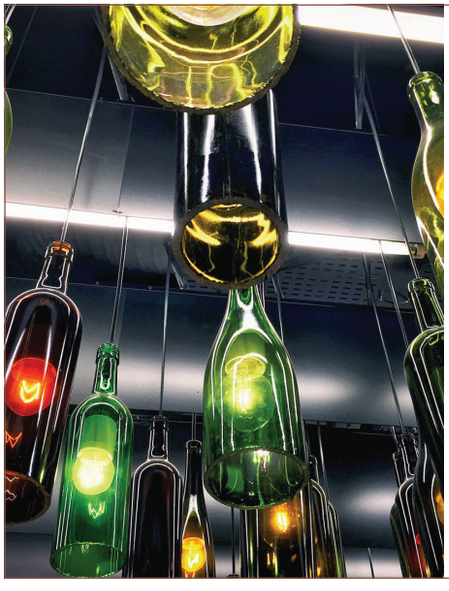
Bracing for impact
The uncertain effects of IFRS 9 that could lead to volatility

The impact of IFRS 9 is uncertain and could result in volatile financials, with a lack of both regulatory and market preparedness ahead of the January 2018 deadline. In a forum sponsored by Oracle and SAS, a panel discusses the key topics regarding the new regulation

12 Regulation

Banks not yet testing IFRS 9
Taking more risk

Banks not doing parallel runs could face an extra capital hit



14 Credit risk

Repurposing credit risk models

Dealers are adapting their credit risk models to calculate loan-loss provisions for IFRS 9. Though this shortcut eases pressure on banks by saving them having to build brand-new models, it faces a number of challenges

15 Credit risk modelling

A wild ride

IFRS 9 model outputs are proving to be more volatile than parallel calculations generated for Basel purposes, as risk modellers update the through-the-cycle approach with point-in-time estimates

IFRS 9 and CECL
Measure twice and cut once

The parallel run is a critical period for institutions to evaluate and refine their IFRS 9 and CECL implementations. Unfortunately, many will find little time in their implementation schedules to accommodate it, say Laurent Birade and Martim Rocha of SAS

Laurent Birade,
Senior risk consultant, SAS

Martim Rocha, Director,
Risk business consulting, SAS

With the impending transition to IFRS 9, and the cutover to CECL in the US starting in 2020, financial institutions worldwide are redesigning their loss allowance estimation processes to meet these new accounting standards. Those in the midst of this are finding it no easy task. Interpretations of the standards, and their lack of prescriptiveness, leave institutions to find their own way – and the impacts of implementation decisions can be massive. A recent survey by the European Banking Authority (EBA) found that banks expect an average increase of 13% in loss provisions under IFRS 9, with 72% of respondents also expecting an increase in income statement volatility under the new standard. Given this backdrop, it is critical that institutions rigorously test their new allowance models and processes prior to going live.

Unfortunately, planned durations of parallel runs for IFRS 9 have been shortening over time. This is a result of implementation schedules that have been slipping for a variety of reasons, including lack of management focus, unforeseen data and modelling challenges, and persistent underestimates of the time and effort required to satisfy the new standard. Unfortunately, the EBA reports that 19% of respondents to its survey will now not be performing such parallel tests at all. Post-transition, these institutions will face a heightened risk of encountering issues that require restatement. Given the importance of the loss allowance on reported financials, this could have significant market ramifications.

But the quality of the parallel run is just as important as its duration. Resources will be challenged during this time because legacy production must be maintained for financial reporting while the new procedures are learned. Here, institutions that have proactively built an efficient, production-ready IFRS 9 and CECL process – with a modular architecture, workflow automation and powerful processing capabilities – will be at a distinct advantage. Rather than struggling with a manually intensive process to produce estimates, they will be able to focus their limited resources on the outcomes. This will give them the opportunity to experiment with alternative models, calibrations and assumptions, and spend time understanding, documenting and explaining their consequences.

For example, the IFRS 9 stage-allocation rules can have a significant impact on the magnitude and volatility of allowance estimates – as movement from stage one to stage two requires the allowance to increase from a one-year to a lifetime expected loss. Both IFRS 9 and CECL require loss forecasts to be extended over an exposure's lifetime, and the method and timing of transitioning to a long-term loss rate can have a material impact on results. Given the potential consequences of these types of analytical decisions on the financial statements, it is highly advantageous to assess multiple alternatives over time, prior to the cutover date. These types of analyses will prove essential in developing the knowledge base within the institution, and ensure that the allowance process instituted at cutover is sound and sustainable.

Meanwhile, institutions with inefficient, piecemeal processes may find that the resource demands of running a parallel test strain their organisations and limit their ability to conduct rich analyses. They may also lack the ability to further refine and automate their processes, leaving them with a suboptimal workflow at the time of cutover to the new standard.

Institutions reporting under US Generally Accepted Accounting Principles can learn from the IFRS 9 experience. Though they have until 2020 to begin reporting under CECL – and this may seem far away today – they should not underestimate the task at hand, and should include a rigorous and extended period of parallel testing as a critical component of their project plans. While this compresses the implementation timeline, testing will help institutions ensure that their estimates are accurate and unbiased, and remain stable over time. It will also provide essential insights into the potential impact to capital relative to the current standard, allowing management to evaluate strategic changes in response. A production-paced parallel run will also allow the institution to assess the efficiency of the workflow and the effectiveness of its controls.

The parallel run provides a critical window of time in which to refine processes, further automation and experiment with design options away from the bright lights of investor scrutiny. Institutions should not squander this opportunity. ■

Tackling IFRS 9 loan-loss volatility

Banks are looking to counter the volatility of loss provisioning through careful calibration of loan buckets, writes Louie Woodall

When it comes to their capital ratios, dealers are no fans of volatility. A sudden downward shock could force them to rein in their balance sheets, freeze or dispose of certain business lines and scramble to raise replacement capital to stay above regulatory minimums.

When it comes into effect from 2018, IFRS 9 threatens to unleash exactly the kind of unwelcome volatility dealers are desperate to avoid, forcing them to divert retained earnings from their capital buffers to provisions for potential losses on loans where the probability of default (PD) has materially risen compared with the previous reporting period (see box: *Ratio retention*).

Need to know

- IFRS 9 will force banks to hold higher loss provisions for loans whose probability of default rises between reporting periods.
- The strict provisioning methodology could cause P&L swings and drain banks' Tier 1 capital ratios by up to 45 basis points between reporting dates.
- Eager to avoid this volatility, banks are setting out allocation methodologies to prevent large numbers of loans frequently moving between impairment stages.
- One way to skirt the problem is to push assets on the borderline into the higher reserving stage upon implementation by projecting losses using scenarios with a downside skew.
- Another could see banks segregating the reserving stages into sub-categories, and assigning provisions accordingly, to smooth the transition from one reserving stage to another.

Unsurprisingly, many are busy working out ways of ensuring this does not happen – and some think they have found one, thanks in part to the framework's innate flexibility. Banks can suppress loan-loss volatility by establishing a loan allocation strategy prior to the implementation of the regime – a plan for how their assets will be sorted into their respective buckets, and move between them, by the go-live date.

Such moves are not without controversy, however: "There are ways for firms to manage the standard," says Adrian Docherty, global head of financial institutions advisory at BNP Paribas. "This is very controversial, because accounting standards should reflect reality rather than drive reality. However, within the standard there is a huge scope for judgement, interpretation, management – and manipulation."

IFRS 9 introduces a new expected credit loss (ECL) methodology for calculating loss provisions against outstanding loans. Each reporting period, loans are checked to determine whether their PD has increased since initial recognition and are allocated to one of three buckets accordingly, each with their own loss provisioning requirement: stage 1 for healthy loans; stage 2 for underperforming loans; and stage 3 for impaired loans.

Dealers' attention is fixed on the borderline between stage 1 and stage 2 loans, since the transition between these buckets is where the effect on loss provisioning, and therefore capital, is greatest. Stage 1 assets are assigned reserves to cover ECLs from default events that could take place within 12 months of the reporting date. Stage 2 assets, meanwhile, attract reserves to match losses over the asset's entire lifetime.

A reporting date that falls in stressed market conditions, in which large numbers of loans would be expected to move from stage 1 to stage 2, would imply an average increase in loan-loss provision of 15–25% according to estimates by McKinsey – translating to a 35–45 basis point impact on Tier 1 capital. The exact amount is dependent on the regulatory approach applied to each bank and the level of existing capital resources, notes Enrico Risso, a senior expert on IFRS 9 at the consultancy.

Naturally, banks want to curtail the flow of assets from stage 1 to stage 2 from quarter to quarter, as each migration will trigger an accompanying spasm in their profit and loss (P&L). Indeed, 75% of dealers surveyed by the European Banking Authority (EBA) in November 2016 said they expected IFRS 9 to introduce greater P&L volatility.

Calibrating that strategy will be key, says one senior quant at a UK bank: "Certainly, we need more thought around where we draw the line. If it's too rigorous, we may not be correctly identifying the obligors that need to be in stage 1 and those that need to be in stage 2. If it's too loose, we are increasing the volatility of assets flowing from stage 1 to stage 2, and stage 2 to stage 1."

Each dealer will draw this line at a different point, as determined by their relative assessment of credit risk. However, some market participants anticipate setting the bar for admissible stage 1 assets higher than available credit information and forecasts would recommend – essentially, overloading the stage 2 bucket on initial adoption of the regime.

Some lenders will decide such an approach makes sense: if banks' primary aim is to minimise the volatility of their provisions from quarter to quarter, allocating those assets with a credit quality that would place them on the borderline into stage 2 on initial adoption would achieve this, at the expense of a larger, one-time P&L hit.

"Upon our initial adoption of IFRS 9 – which for Canadian banks will start November 1 this year –

we will push a little more on the stage 2 so that you have built an initial buffer that is big enough to absorb some of the future shocks," says a senior accounting source at one Canadian bank. IFRS 9 permits dealers this discretion, as it does not itself define what counts as a "default" or "significant deterioration"; nor is it prescriptive on the number of macroeconomic scenarios that should be used to generate PD estimates, or how these scenarios should be probability-weighted.

"You can't just pick the scenarios that suit you and take the average, but you could fairly argue there is a skew to the downside. For example, a UK bank could argue there are significant downside scenarios attributable to Brexit, which means their weighted average view of future PDs is worse than what a base case scenario would imply," says BNP's Docherty. "You'll find that in order to smooth the volatility out, there will be an implicit bias towards conservatism in good times, and towards optimism in bad times."

A bank could engineer a so-called optimism bias by stripping out certain doomsday scenarios from its quarterly ECL assessments that take place in recessionary months, thereby preventing the trickle of deteriorating assets flowing to stage 2 from turning into a flood. Then, when the economic cycle swings upwards again, these scenarios could be reintegrated to prevent a rapid reversal of the asset flow and drawdown of loss reserves.

Banks may also look to slow the passage of a recovering loan moving automatically back into stage 1 by setting a tougher PD threshold for improving loans moving between buckets than deteriorating ones. For example, a dealer could elect to move an asset from stage 1 to stage 2 if the PD doubles between the origination and reporting dates, but only shift it back up to stage 1 if the PD then reduces by a factor of three.

"We can choose to move assets into stage 2 quickly but move out of stage 2 slowly. If I have a client that is recovering, but hasn't shown a sustained period of performance, I may want to keep that client's loan in stage 2 a little longer than strictly necessary. This is to prevent simply removing a reserve at the first sign of recovery," says the Canadian bank's accounting source.

Banks already take a similar approach when calculating their Basel III capital requirements for credit risk, which are generated using internal ratings-based (IRB) models. Applying such roadblocks could prevent assets with a seesawing PD bouncing between stages each reporting date. An alternative approach being explored by some banks is to make use of the discretion afforded in the standard to assess changes in credit risk using lifetime PDs, rather than 12-month PDs. IFRS 9 permits banks to use the latter if they are not expected to give a different result from the former – but the lifetime assessment should still result in less volatile provisions quarter to quarter, some argue.

RATIO RETENTION

Dealers have one good reason to avoid an uplift in their loss provisions: it will save their capital ratios from deterioration too.

Stage 1 loans must recognise expected credit losses (ECLs) over 12 months, stage 2 lifetime ECLs, and stage 3 lifetime ECLs plus a haircut to future interest revenues. Banks must draw these provisions from the same pool of retained earnings used to buttress Common Equity Tier 1 capital, meaning a spike in ECLs will result in an equal plunge in capital ratios.

A study by the European Banking Authority estimated the capital hit could be as much as 75 basis points. Banks also predict the volatility of provisioning, and therefore capital, will spike from quarter to quarter under the new standard.

Adrian Docherty, BNP Paribas

"There are dealers using what we call a dynamic approach. They are not only projecting [deterioration] on a 12-month basis, they are projecting out for the expected lifetime of the loans, meaning more assets are pushed from stage 1 to stage 2 on day one of the regime coming into effect. That means in subsequent quarters the projections have to be worse than they otherwise would have to be to push more assets into stage 2," the Canadian bank accounting source explains.

Reserve add-ons

Nixing volatility in loss provisioning via the conservative allocation of loans between stages may be the most straightforward option for most banks. But the same result could theoretically be achieved within stages by segregating stage 1 and applying reserve add-ons over and above those mandated by the standard to those subsections containing higher at-risk loans.

"Within stage 1, you can build in buffers – meaning there could be quantitative adjustments to the model results to accommodate certain loans that are on the verge of going from stage 1 to stage 2. So it will not be a complete falling off a cliff when the switch happens; it will be a gradual enhancement of the reserve," says the Canadian bank accounting source.

This segregation could be achieved by feeding the ECL model output through another model that measures the probability of a given asset transitioning from stage 1 to stage 2, suggests Alexandre Petrov, head of corporate credit risk models at Nordea.

"You can introduce probability of transition into the ECL model to segment your riskier exposures in stage 1. It would act as an addition to the given point-in-time PDs to help determine exactly how much their credit could deteriorate. For example, if you have a five-year exposure, the point-in-time could show for the first year it would be stage 1, but a probability of transition analysis may show high probability of moving to stage 2 from years two to five," he says.

The legitimacy of such an approach is contested, though. A stage 1 asset should be assigned reserves in proportion to expected losses over 12 months; if it is judged eligible for greater reserves, there's an argument that it should be moved to stage 2. The IFRS Foundation, which promotes the adoption of IFRS standards, declined to comment on the topic.

Playing safe

Some dealers are playing it safe, steering clear of any activity that could be construed as a manipulation of the standard. "The words 'conservatism' and 'buffer' don't feature in our forecasting framework. IFRS 9 requires modelled default and loss predictions at a 'point in time' to derive a 'best estimate' of expected loss in a given reporting period," says Martin King, IFRS 9 programme manager at Santander UK.

Others argue there is a fine line that can be trodden. "If you expect a deterioration, then the expectation is that the asset should already be in stage 2. However, we have mechanisms overlaying our ECL model that allow us to include a certain percentage of a group of exposures that belong in stage 1 in stage 2 – so we apply a percentage of lifetime expected losses to that percentage. These could be exposures to subsectors we predict will deteriorate in future," says the head of credit risk modelling at a European bank.

Adding progressive add-ons to suspect stage 1 assets would help smooth the ebb and flow of reserves between reporting dates, minimising the chance of a one-off reserving hit from a big migration of assets. However, it is unlikely the same trick could be used to reduce reserves for stage 2 assets in recovery, says Nordea's Petrov.

"You can't do it the other way around: if an exposure looks like it will move to stage 1, you cannot just diminish the reserves, which would be against the standard," he says.

Looked at through a different lens, these tools can also function as early warning systems, alerting credit managers to potential issues with client portfolios they can then work to address before they deteriorate.

"Stage 2 is the major impact on commercial banks. This could create an incentive for banks to be more proactive in the identification and 'curing' of these loans to avoid the provisions," says McKinsey's Risso.

Though IFRS 9 outlines a quantitative approach to assessing ECLs, there is certainly room for banks to factor in the effects of in-house measures taken to ameliorate credit losses. In fact, the Global Public Policy Committee of the six largest international accounting networks issued guidance to IFRS 9 firms on a 'three pillars' approach to assessing credit quality: a quantitative test; a qualitative test; and the use of 'backstops', based on how long a counterparty has been in arrears on their loan repayments.

"In addition to quantitative tests as part of the significant deterioration assessment, banks are encouraged to think about qualitative risk measures that might not be factored into PD estimates – for example, forbearance, or putting a customer on a watchlist," says Santander's King.

In rare cases concerning bespoke, illiquid commercial loans, for example, these qualitative tests could be applied to shield a stage 1 asset from stage 2 – or push them over the edge.

"One thing banks are talking about is having an internal trigger in place that requires them to conduct an additional review of certain troublesome loans. This will require the bank to determine manually whether or not to push loans to stage 2, or add additional provisioning but keep them in stage 1," says the senior quant at the UK bank.

The head of credit risk modelling at one European bank says its stage allocation process is driven by its ECL model and the make-up of its own customer watchlist. It employs a conservative approach to those counterparties that find themselves on the list to safeguard against concentration risk.

"If a counterparty is placed on our watchlist, then all our exposures to that counterparty – even those which are performing – will be placed in stage 2," he says. ■

Previously published on Risk.net

>> Further reading on www.risk.net

- Volatility of IFRS 9 loss estimates alarms lenders *www.risk.net/5189526*
- Basel gives local supervisors latitude to set ECL relief *www.risk.net/4556081*
- Basel capital floor faces credit risk eclipse *www.risk.net/5292961*
- IFRS 9 to drive regulatory capital volatility, experts warn *www.risk.net/2478670*

Risk.net

7 days in 60 seconds

The best risk management, derivatives and complex finance stories from the past week in one email.

Visit newsletters.risk.net now to sign up

Bracing for impact

The uncertain effects of IFRS 9 that could lead to volatility

The impact of IFRS 9 is uncertain and could result in volatile financials, with a lack of both regulatory and market preparedness ahead of the January 2018 deadline. In a forum sponsored by Oracle and SAS, a panel discusses some of the key topics regarding the new regulation, including how banks and clients will be affected, who is best placed to ensure firms are prepared for implementation and the aspects the industry as a whole should be most concerned about

ORACLE
FINANCIAL SERVICES

Geetika Chopra
Senior Principal Product Manager, Oracle
www.oracle.com

What are the greatest financial impacts set to hit banks from the implementation of IFRS 9 and CECL?

Geetika Chopra, Oracle: The change to a forward-looking life-of-loan reserve calculation will, in most cases, lead to higher reserve allocation, affecting earnings for the transition years and thereafter. The fundamental reason for accounting bodies to adopt an incurred loss approach so far has been to dissuade earnings management. However, post-financial crisis, this viewpoint has changed.

Apart from the hit to earnings, financial institutions will have to spend money on tailoring their process and IT systems to adopt a forward-looking approach for reserving. In the case of CECL, where banks must provide for the life of the loan from its inception, the loan origination process will also undergo changes. Loans will be priced differently, considering the higher cost of capital due to enhanced reserve requirements. Data collection during loan origination will also add to the burden of doing business.

Laurent Birade, SAS: Without question, the changes in accounting standards will affect firms financially, and some initial estimates suggest the impacts will be significant, with overall reserve levels expected to increase by as much as 35–50%. Given that increased loss provisions represent the greatest impacts to balance sheets under stress scenarios, the effects of these accounting changes will likely ripple through future stress tests as well. In addition, while macroprudential stress tests have typically focused on the largest banks, these accounting standards apply to all financial institutions in their respective jurisdictions, regardless of size. But, along with these financial impacts, the changes required by IFRS 9 and CECL necessitate a much deeper level of modelling, analysis and reporting than before – and these changes are not insignificant. Firms may need to fundamentally adjust how they manage their loss allowance processes – including how they integrate their risk and financial data, design their analytics platforms and share information between departments. The scope of these changes can be substantial, depending on the complexity of firms' balance sheets.

Nimesh Verma, BNP Paribas: Under IFRS 9, the carrying value of loan assets – which has been at amortised cost for hundreds of years – will change to incorporate modelled, forward-looking, volatile expected losses. As the accounting value of loans forms a key input to regulatory solvency, banks face immediate one-off hits to regulatory solvency when expected losses and lifetime expected losses increase significantly, relative to current provisioning and regulatory deductions. Interestingly, recent bank disclosure shows one-off hits to solvency to be manageable – a fall of 45 basis points in Common Equity Tier 1 ratio in the recent European Banking Authority (EBA) impact assessment, for example. This is lower than initially expected because of continued heavy provisioning and improved economic outlooks.

More importantly, IFRS 9 significantly increases volatility and procyclicality. It amplifies provision levels and drives large shifts in regulatory capital on an ongoing basis, as changes in economic outlook mean swaths of assets move between stages 1 and 2. At the same time, given amplified provisioning, we expect stress scenario impacts to swing wildly – with much higher impact for the same stress scenarios under IFRS 9 than under current standards. As a result – and as stress tests increasingly drive capital requirements – banks will need to either hold higher levels of spare capital headroom or use mitigants to address accounting volatility in future stress tests. In addition to product design, pricing and selective classification, we see an increased focus on active credit portfolio management. In particular, we expect to see development of hedges specific to IFRS 9, which target efficient reduction of stage-2 lifetime expected loss provisions, and new types of stress capital instruments.

sas THE POWER TO KNOW.

Martim Rocha
Director, Risk Business Consulting, SAS
www.sas.com

How is the uncertainty around implementation of the new rules affecting clients' preparation?

Martim Rocha, SAS: IFRS 9 and CECL are primarily principles-based. As such, the implementation guidelines are not prescriptive, and will likely change as consensus is built and clearer guidance is provided. Given the evolutionary nature of these standards, institutions may need iterative model development cycles before transitioning to IFRS 9 and CECL reserving. That might be too narrowly

focused and could result in firms underestimating the amount of work needed to cover the full spectrum of required activities. Firms that start too slowly or become fixated on only a single aspect of the programme, with limited dedicated resources, may find their timelines for the overall implementation significantly compressed. For example, if we look at the history of regulatory stress testing as a guide, many firms initially approached implementation by simply adding head count to meet compliance requirements and deadlines, then attempted to refine their processes later. This can be a very inefficient and costly proposition for firms. In the case of IFRS 9 and CECL, with the financial-impact bottom line being more direct and transparent, it is paramount that firms are more deliberate and forward-thinking in how they approach their overall implementations.

Geetika Chopra: The standards are not prescriptive and do not recommend any single approach. Furthermore, the Financial Accounting Standards Board allows institutions to adopt approaches based on their complexity and size. There are no standard benchmarks to ascertain what constitutes a complex business model – much is left to the judgement and discretion of the auditor. Though the US Federal Reserve Board published a set of frequently asked questions on the adoption of CECL, such guidance is largely missing from central banks of most other jurisdictions.

Uncertainty has led to institutions adopting tactical solutions. Some are extending the models built for the Comprehensive Capital Analysis and Review/Dodd-Frank Act stress tests/capital calculations to meet CECL requirements. However, whether that would sufficiently meet the standards and pass the audit test is debatable.

To what extent are financial institutions prepared for the technological challenges of implementing these rules?

Geetika Chopra: Most institutions find themselves underprepared – these challenges include the computation of effective interest rates and the amortisation of fees and cost over the expected life of a loan, for example. This significantly complicates the accounting process, and institutions will need to maintain separate sets of books for actual interest accruals and effective interest rate-based accruals. This is a huge challenge, considering that computation and its reconciliations are now a pre-close activity for all institutions.

Laurent Birade: Any time a principles-based rules framework requires implementation, institutions need to be ready to evaluate alternative interpretations of the standard and consider what their peers are doing to ensure that they are not alone in their interpretations. This is the crux of the challenge institutions face – implementing a technology framework that can adapt as interpretations of rules change. The EBA, for example, recently published an impact assessment raising concerns that up to 20% of banks have either reduced or completely eliminated the parallel run from their go-live plans. After getting the right data, models and vetted outputs, the setup and implementation of a repeatable production platform and process is critical. This platform will need to support a variety of runs on a month-end basis with all required approvals and documented explanations as to why the allowance moved the way it did in a limited timeframe. Having a highly flexible yet robust platform is likely to be where institutions will face the most difficult technological challenges.

How can supervisors respond to IFRS 9, and what are the most important responses banks can expect?

David Grünberger, Austrian Financial Market Authority: Both capital markets and banking supervisors are currently responding to IFRS 9. The European Securities and Markets Authority is co-ordinating national accounting enforcements, and many topics have already been discussed and decided upon – especially those from Austria. Publication of these decisions, which concern critical areas of stage transfers and loss quantification, is in the pipeline.

Although many critical implementation issues have not yet been publicly challenged, accounting enforcers and banking supervisors are now actively pursuing these issues to pre-clear some implementation issues and prevent outlying ones. The EBA has conducted its second impact study and published its final IFRS 9 implementation study. New stress-testing methodology now focuses on IFRS 9 provisions, which are the most crucial amendment.

The most complex advancement is probably the new stress-testing methodology – the EBA has established a forward-looking simulation in which banks calculate forward-looking expected credit losses (ECLs), as per forward balance-sheet dates. The probabilistic nature of stress tests will render simulations of IFRS 9 – the staging, for example – similarly probabilistic. In addition, the 'perfect foresight assumption' aligns the specifications of stress scenarios with those of accounting scenarios.

The triggers used to determine stage transfers is another key topic. A variety of approaches has appeared recently, and auditors seem hesitant to communicate where the boundaries are set – although new commentaries from the 'Big Four' audit firms have defined some limits. Accounting enforcers have brought up key topics such as the so-called 'absolute triggers' and organised EU-wide supervisory clearance. A similar cleared topic was the future treatment of incurred but not reported losses. Banks will need to check whether their methods comply with decisions and expectations.

What is the most common mistake made by institutions trying to restructure their businesses to implement IFRS 9 and CECL?

Martim Rocha: The most common mistake is underestimating the work associated with implementing the standard – almost every bank in the world is struggling to meet the deadline. For example, when the first IFRS 9 surveys were conducted, around 70% of all firms stated they would do a parallel run for one year. Now, with the clock ticking and firms approaching the halfway point on the planned one-year run, few have been in parallel run for the first half of the year. Furthermore, many firms are considering no parallel run at all – or perhaps just in the last quarter with a limited set of portfolios. While several factors have contributed to this, underestimating the effort involved was clearly the main factor. Firms have found that developing the necessary new models proved more difficult than expected. Additionally, difficulties with collecting the necessary data – sometimes due to deficiencies in the existing systems or the maturity of the markets involved – extended the work associated with calibrating these new risk models. And now, even with many firms completing their initial-model development cycle, a new challenge is arising: how to assemble all of this into a process that can support the monthly/quarterly production demands.

Geetika Chopra: Most businesses realise that risk, finance and financial reporting now all have interdependencies, which require them to connect and communicate in the same language. Organisationally, this is a big challenge – ownership of ECL compute now lies with both of these functions, along with the overarching responsibility of model risk management.

Now that stakeholders of this process are located far and wide, it is imperative that institutions ensure there is single ownership of IFRS 9 and CECL programmes within a bank.

David Grünberger
Deputy Head of the Division
Integrated Financial Markets
Austrian Financial Market Authority
www.fma.gv.at

How will the European Commission's recent moves to reduce the capital impact on banks by phasing in the requirements help in the long run?

David Grünberger: The phasing-in period is temporary and there is no strong downturn in sight – in fact, the rules will probably expire before having a severe impact. The complexity of these rules is striking, and many implementation issues will remain unclear well beyond January 2018. One expectation is that the phasing-in period will see reduced stress-test capital requirements. However, stress tests will also include a fully fledged implementation version, and analysts and markets usually prefer fully fledged stress impact. Thus, these temporary rules are something of a regulatory safety net to protect banks' capital ratios, in case we see an unexpected credit crisis within the next few years. Therefore, the most likely scenario is that these rules will never have any real impact.

Martim Rocha: These moves aim to help banks smooth the transition to IFRS 9 in the short run and level the playing field between the internal ratings-based and standardised approaches to capital. Quite a few banks in Europe are struggling to survive and, in many cases, these moves assist particular countries with economies in slow recovery. These moves are therefore welcomed by many to help banks comply, but questions remain in the market as to their effectiveness – including the final impacts of the standard. The European Commission is opening the door to revising – during the transitional period – how IFRS 9 will be implemented in Europe. This can add to the uncertainty around the regulation going forward and can create potential misalignment with other jurisdictions, undermining the initial objective of globally harmonising the rules.

Geetika Chopra: It may not help in the long run, but it would help reduce the immediate impact of adopting the standards.

Laurent Birade
Senior Risk Consultant, SAS
www.sas.com

How much of a concern is the volatility around CECL estimates?

Laurent Birade: After the one-time hit to bank capital, volatility is the single largest financial concern banks will have. Moving from a framework that relates common metrics – such as days past due and other likely default indicators – to one where the lifetime loss estimates can vary based on multiple, less transparent factors is going to take some getting used to. For example, under the new CECL paradigm, things such as the length of the forecastable

and supportable future are key elements of the level of expected loss. And expectations for that future are partially based on whether firms are currently in a benign or an adverse environment. Outside of that forecastable period, a long-term average is used. The methods used to determine and transition to that average can have serious impacts on the expected loss. These levers, and their impacts on the lifetime losses based on current conditions, certainly create the potential for increased volatility.

Geetika Chopra: Most institutions would change their business models and loan origination processes to minimise the impact to provision and reserve, but considering that macroeconomic, qualitative and environment factors are an overlay on ECL, it could also become an instrument to ensure reduced volatility. Nonetheless, these factors would come under higher scrutiny from auditors for the same reason.

Who are best placed to implement new accounting standards – accountants, risk managers or a combination of both?

Geetika Chopra: It has to be both together. The need to converge risk management and basic accounting principles is the very foundation of the standards, and would necessitate such a world view within the organisation as well.

Laurent Birade: The new standards affect so many areas that their implementation requires a cross-functional team to address. Most commonly we find the finance department driving implementation, but it is really dependent on the organisation and can be tough to generalise. We have seen instances where risk has led the programme and perhaps focused too exclusively on the loss modelling aspect, neglecting some of the issues around controls and production efficiencies. Also, it's not enough to simply calculate ECL – the work to get losses posted to appropriate journal entries and feed the regulatory reports is also critical. On the other hand, accounting may not always be in the best position to assess the suitability of the credit loss models. It really depends on the skill and experience of the respective teams. In addition to the risk and finance teams, IT, audit and others should also be involved in the implementation process. Data, technology infrastructure and reporting, as well as appropriate governance and controls, all play a key role in addressing the standards.

Nimesh Verma
Bank Advisory, Corporate & Institutional Banking, BNP Paribas
www.bnpparibas.co.uk

What aspects of IFRS 9 or CECL are of greatest concern to you?

Nimesh Verma: For one, the lack of regulatory preparedness – no fundamental regulatory rethink is in train yet. IFRS 9 represents a sea change in key inputs to regulatory solvency, with the new expected loss provisioning having a significant impact on the carrying values of the largest component of banks' balance sheets – loans. The current regulatory capital framework is calibrated assuming inputs based on incurred loss accounting standards. This calibration incorporates one-year expected loss and one-year unexpected loss at a 99.9% confidence level. Moving to expected loss provisioning – especially beyond a one-year horizon – necessitates a recalibration or even a rethink of regulatory capital rules. This will ensure the frameworks and metrics are consistent. Otherwise, capital requirements will be double-counted by overlaying differing time horizons and confidence levels. If this double-count is not addressed, forward-looking provisions will lead to earlier and increased bank failures, which could damage system-wide stability.

It is therefore disappointing that a fundamental regulatory rethink to adapt to IFRS 9 has not yet begun. There has been insufficient study of how IFRS 9 will affect regulatory solvency – especially during stress. One would have expected at least a position paper from the Basel Committee on Banking Supervision on how accounting provisions and regulatory capital will complement each other – but this has not yet happened. As a matter of urgency, the Basel Committee needs to deliver a coherent framework that takes into account the transformative nature of the changes to the accounting standards.

Another aspect of concern is the lack of market preparedness, as investors and analysts are far from ready for IFRS 9. To date, both bank disclosure and comprehensive industry-wide studies of the impact and effects of IFRS 9 have been very limited. While data has been disclosed, this has merely been regarding the one-off impact of IFRS 9 upon implementation. There has been no focus on the ongoing challenge – how solvency will vary through the cycle and the potential level of volatility that may be experienced in profitability and solvency. Nor has the market understood how IFRS 9 will affect the meaning and relevance of key financial metrics used by investors and analysts.

Under IFRS 9, accounting profits and losses will become an even weaker proxy for value creation. Figures will not be comparable, and will be based on complex internal models (at a time when the Basel Committee is moving away from them). The reported profitability, financial statements and regulatory solvency will be completely different under IFRS 9 than previous standards. IFRS 9 is a new lens through which to view financial performance, and investors and analysts need to adapt their analytical methodologies and recalibrate their financial models. They may even need to develop an entirely new suite of analyses. However, from our discussions with market participants, it appears that this has barely begun. This is often blamed on the lack of disclosure and communication around IFRS 9 – we have to wait for bank communication and results first. Unfortunately, for many banks, this will first be forthcoming in 2018 reporting, once IFRS 9 is live. All of this gives scope for market confusion, not just next year but also when we hit the next period of stress.

Martim Rocha: IFRS 9 and CECL represent such a dramatic change to loss accounting, and the impacts are so public and meaningful to the financial statements that the transition brings a lot of uncertainty. Banks and investors will see major differences in reported numbers compared with historical financial reports and across peers, and they will collectively need to rationalise the extent to which these differences are due to accounting rule changes versus something more fundamental to the portfolio. As banks refine their modelling techniques, they introduce yet another source of volatility to the reported financials post-transition. It is going to take time to make sense of it all.

Geetika Chopra: The assumptions made of ECL models, qualitative factor adjustments and macroeconomic overlays must be adequately transparent and auditable. A non-transparent process, such as an Excel tool-based approach or a black-box solution, may be prone to errors and would become the scapegoat for any perceived earnings management by an institution. The fundamental reason for not allowing a forward-looking approach could become its own peril. ■

Banks not yet testing IFRS 9

Taking more risk

Banks failing to do parallel runs could face a 32 basis point extra capital hit, a report finds. By Philip Alexander

The European Banking Authority (EBA) has used its second impact assessment of a new accounting standard to urge banks to step up their preparations ahead of implementation next year, or face a potential capital shock.

IFRS 9 is more onerous as it requires banks to provision for expected credit losses, rather than just losses already incurred. According to the EBA report, banks that have not yet started parallel runs with the existing International Accounting Standard 39 (IAS 39) estimated that their total capital ratios would be reduced by 46 basis points on average when IFRS 9 enters into force in January 2018. In contrast, banks already in the testing phase forecast a 14bp impact on average.

> "IFRS 9 is very complex, so we would like to avoid some banks doing a big jump without being fully prepared. When you reduce or you do not do any parallel runs, you are taking more risk than when you have a longer period for the parallel runs"
>
> Delphine Reymondon, head of the capital and asset-liability management unit, EBA

"IFRS 9 is very complex, so we would like to avoid some banks doing a big jump without being fully prepared. When you reduce or you do not do any parallel runs, you are taking more risk than when you have a longer period for the parallel runs," says Delphine Reymondon, head of the capital and asset-liability management unit at the EBA.

The EBA report, published on July 13, found 19% of banks were not planning parallel runs, the same proportion as in its first impact assessment released in November. Only 17% were planning parallel runs of more than six months, with 53% using six-month runs and 11% just three months, whereas in the first assessment 19% of banks had aimed for a testing phase of one year.

Ian Tyler, head of the treasury advisory practice at consultancy Alvarez & Marsal, says: "We are gobsmacked, even now, by the variety of implementations we have seen, varying from multi-year, multi-million pound investments that have been dual-running the numbers now for some time, to other banks that don't have a clue what the number is yet, and they are only a few months away."

He adds that the EBA sample of 54 banks may also not be entirely representative. The assessment was effectively compulsory for larger banks, 40 of which were included in the sample, with only 14 having assets of less than €100 billion ($118 billion). Tyler suspects those banks that have undertaken the most limited preparations may simply have declined to take part in the survey.

The EBA's Reymondon says the first impact assessment was useful in raising awareness among banks' top management of the need to prepare for the fast-approaching IFRS 9. But the second report still found relatively limited involvement of senior management, external auditors and internal audit committees in preparations at smaller banks. According to the EBA, most banks are still building their new classification and measurement models for credit exposures.

The banks that have progressed to the testing phase tend to be at the larger end of the sample.

"With smaller banks, we will need to follow up closely. It is the same in general in terms of models: it is no big surprise the capacity they have is more limited; they will probably make some simplifications in the use of scenarios or other aspects of IFRS 9. We know that after January 1, 2018, banks will continue improving elements of the implementation of the standard, as there will still be a lot of ongoing work," says Reymondon.

In practice, the additional capital hit for banks at an earlier stage of preparation partly reflects the fact they are mostly using standardised approaches. Those using the internal ratings-based (IRB) approach are already required to provision for one-year expected losses in their regulatory capital, and can add back excess accounting provisions to their Tier 2 capital.

The EBA report finds 82% of IRB banks currently have higher regulatory provisions than accounting provisions under IAS 39, which will partly absorb the increase in accounting provisions under IFRS 9. For 40% of IRB banks, provisions under IFRS 9 will still be smaller than the existing regulatory provisions, meaning no negative impact on regulatory capital ratios.

Banks using the standardised approach should be helped by a five-year transition period approved by the European Parliament on July 11 to mitigate the impact on capital ratios. In the long run, however, the Basel Committee on Banking Supervision is discussing whether and how to alter the standardised approach to better integrate IFRS 9. The EBA sent the templates used in its impact assessment to the Basel Committee to assist its work.

"We are participating at the Basel Committee in the current discussions on next steps in terms of whether we should amend the regulatory framework," says Reymondon. "Depending on where they go, we will see if indeed we follow the same view, or if we think we should do it a little differently in the EU. But this is a very long-term work, because it is very complex to assess all the interactions. I do not believe we should change too much immediately without having a very good understanding of what would be the different implications, and seeing the first months and more implementation of the standard."

Lower impact

Overall, the EBA found a lower-than-expected impact from the introduction of IFRS 9 than in its first assessment last year. Respondents expect an average 13% increase in provisions, with an increase of 18% for 75% of the sample. By contrast, last year's exercise found an 18% increase in provisions, and a 30% increase for 86% of the sample.

The new provisioning figures translate into a core equity Tier 1 capital hit of up to 43bp on average, and 50bp for 78% of respondents. That also represents a significant improvement on the 2016 assessment, which reported a hit of 59bp on average, and 75bp for 79% of the sample.

The EBA believes more accurate provisioning estimates and a switch in the second assessment template – from percentage changes to absolute amounts of provisions – contributed to this improvement. The stronger European economic outlook is also a factor, because it should reduce the number of exposures classified as facing a "significant deterioration" in credit quality, which requires lifetime provisioning under IFRS 9.

"There will be lots of reasons, but the most significant is likely to be that the underlying economic situation has improved since the last survey, and that has even more impact, because IFRS 9 is forward-looking. You could even argue it is a good thing they are going to implement it on January 1, 2018 – they have got their timing right because it is easier to implement in a relatively benign economic environment," says Tyler at Alvarez & Marsal. ■

Previously published on Risk.net

Repurposing credit risk models

Dealers are adapting their credit risk models to calculate loan-loss provisions for IFRS 9. Though this shortcut eases pressure on banks by saving them having to build brand-new models, it faces a number of challenges. Steve Marlin reports

Banks in the midst of implementing new accounting standards are looking to lighten the load by adapting their existing credit risk models for regulatory capital to calculate loan-loss provisions under IFRS 9.

Set to be implemented in 2018, IFRS 9 introduces a new expected credit loss (ECL) regime for loans which will dramatically increase the reserves banks must hold against future losses. Dealers must calculate ECL for all loans over a 12-month period, and over the entire lifetimes of loans that have deteriorated in credit quality.

Instead of building brand-new models to handle these calculations, a number of dealers are tweaking their Basel II internal ratings-based (IRB) capital models to manage them.

"You should not develop IFRS 9 models from scratch," says Alexander Petrov, head of credit risk models at Nordea Bank in Stockholm. "Most banks are taking the approach of starting with IRB models. You have synergies if you have already developed models."

The head of credit risk analytics at an Asian bank says his firm is actively using its regulatory stress-testing and capital models to develop its IFRS 9 models, adding that he expected most mid-to-large size peers to do likewise.

Banks cite a number of other advantages to revamping existing models for IFRS 9 purposes. For example, data inputs for the regulatory capital calculation, along with the systems and processes used, can be shared to sum loan-loss provisions. In its November 2016 IFRS 9 impact assessment, the European Banking Authority also noted that the use of existing model infrastructure would allow for greater consistency between prudential and accounting frameworks – for example, in terms of the governance arrangements employed.

Streamlining the model-building process for IFRS 9 would also take some of the heat off banks' beleaguered modelling teams, which face a capacity crunch as a result of heightened model risk management standards introduced by US and European watchdogs – though banks would need to establish tailored validation processes to ensure their revamped models are suitable.

However, significant changes must be made to IRB models to make them fit for IFRS 9, dealers say. Most existing capital models apply a 'through-the-cycle' estimate for regulatory purposes, meaning potential losses are calculated over an entire economic cycle, including through a worst-case stress scenario. IFRS 9 on the other hand requires a point-in-time estimate, where losses are calculated across fixed time horizons – either one year or over the lifetime of the loan. IRB models also calculate a 12-month probability of default (PD), rather than the lifetime PD generally required under IFRS 9 for loans that suffer a material rise in credit risk.

"Existing Basel models can be a good starting point, but one needs to take that through-the-cycle output of a Basel model and convert it into a point-in-time measure of probability of default," says Anna Krayn, senior director at Moody's Analytics in New York.

IFRS 9 could significantly impact the amount of regulatory capital a bank needs to hold against credit losses. The anticipated rise in loan-loss provisioning could result in a capital hit to banks' Common Equity Tier 1 ratio in the range of 10–20%, according to some estimates.

The Basel Committee plans to keep current regulatory treatment of accounting provisions in place during the transition to ECL, during which time regulators will extend their approaches to categorising loan-loss provisions as either general provisions or specific provisions under the existing incurred loss accounting standards to the provisions calculated under ECL standards. ■

Previously published on Risk.net

A wild ride

IFRS 9 model outputs are proving to be more volatile than parallel calculations generated for Basel purposes, as risk modellers convert the through-the-cycle approach with point-in-time estimates. By Steve Marlin

A large Asian bank got a nasty surprise earlier this year when it conducted a test run of the model it had built to comply with IFRS 9.

The volatility of the model's expected credit loss (ECL) projections far exceeded historical norms, and differed markedly from the internal ratings-based (IRB) approach the bank uses to calculate its Basel III capital requirements for credit risk.

"The volatility of ECLs quarter-on-quarter was a lot higher than we expected," says the bank's head of credit risk modelling. "The key surprise was how much the numbers move up and down."

The test results confirm lenders' worst fears about the transition to the new accounting standards, which take effect on January 1, 2018. IFRS 9 requires banks to set aside reserves to cover ECLs over 12 months for performing assets, and over the lifetime of impaired loans.

Under the existing incurred loss accounting standard, IAS 39, banks only need to set aside reserves when a loan becomes impaired.

IFRS 9 loss estimates must be recalculated at quarterly intervals to reflect new information about credit and economic conditions that comes to light during each reporting period. If those numbers jump sharply from one quarter to another, lenders would need to dip into their capital buffers to bolster loss reserves. That in turn impacts capital planning and stress testing, and ultimately the profitability of lenders.

Need to know

- Large banks have begun conducting parallel runs of their expected credit loss (ECL) models for IFRS 9.
- The early results are not encouraging. "The key surprise was how much the numbers move up and down," says the head of credit risk modelling at a large Asian bank.
- Banks have had to convert the through-the-cycle risk parameters generated by Basel risk models into point-in-time estimates for IFRS 9.
- IFRS 9 models do not incorporate worst-case scenarios, which reduces the margin for error.
- The reliance on forward-looking macroeconomic forecasts is also contributing to the volatility of ECL models.

Peering over the cliff

IFRS 9 was widely expected to increase the volatility of loss provisioning due to the 'cliff effect', when loans become impaired and move from 12-month to lifetime loss provisioning.

"We expect an increase in profit-and-loss volatility under IFRS 9, due to the way IFRS 9 treats significant increases and decreases in risk, and due to the inclusion of forward-looking information," says Mark Engel, senior vice-president for risk and capital analytics at Scotiabank in Toronto.

The impact will vary from bank to bank, depending on the type and tenor of loans and the composition of the portfolio. Some banks with very high-quality loan books may even see lower volatility in loss provisions.

"We expect that IFRS 9 volatility will be lower than IAS 39 volatility," says the head of risk methodologies at a large European bank, citing internal volatility studies. "The reason is that IAS 39 requires only a small part of the portfolio to be provisioned for, whereas under IFRS 9 the whole portfolio will be provisioned for. If these assets are mostly [healthy], then they will have less volatility."

Most lenders will see the opposite effect, however: 75% of banks that participated in an impact assessment conducted by the European Banking Authority in November 2016 said they expected an increase in the volatility of loss provisions under IFRS 9.

"There is more potential volatility in the allowance basis than you had under the incurred loss model due to a number of contributing elements: stage transferring criteria, scenario choice, methodology choice and effective life of an instrument," says Anna Krayn, senior director at Moody's Analytics in New York.

Still, banks were surprised by the magnitude of the swings when they began conducting test runs of their ECL models at the start of the year.

The volatility in quarterly loss estimates is largely a function of the IFRS 9 model requirements. Most ECL models are essentially modified versions of existing regulatory capital models, which banks have been running and fine-tuning for decades. But there are some important differences. For instance, the Basel risk models are based on a through-the-cycle approach that forecasts average losses over rolling 12-month periods, while IFRS 9 relies on 'point-in-time' estimates of future loan losses based on the prevailing credit conditions at each quarter-end.

Converted to the cause

The starting point for many IFRS 9 modelling efforts was to convert the rolling 12-month risk parameters – such as probability of default (PD) and loss given default (LGD) – generated by the Basel models into forward-looking quarter-end estimates. "First, the Basel process generates through-the-cycle parameters," says the head of risk modelling at a second large European bank. "Next, we adjust these parameters in order to account for the position in the economic cycle and for information about the future."

There are various ways to perform this conversion. "Banks tend to use transition matrices and vintage curves to come up with a term structure of PDs required for IFRS 9 projections," says Stanislav Shcheredin, senior manager in credit risk modelling at PwC in London. "Availability of default data is the key."

Scott Aguais, a London-based credit risk consultant and the former head of credit risk modelling at Barclays and Royal Bank of Scotland, developed one such approach, called the Z-Risk Engine, which applies economic scenarios to obtain point-in-time versions of through-the-cycle parameters. The result is a 'dual-ratings' system that generates parameters that can be used for both Basel III and IFRS 9.

"Most external and internal ratings are through-the-cycle, so are unable to capture the short-term movements in risk that are needed for the point-in-time measures needed for IFRS 9," says Aguais. "You have capital drivers that tend toward being conservative and then you have these new accounting standards that are focused more on accuracy, not conservatism."

Aguais says a number of banks have licensed the Z-Risk Engine for their ECL models.

Alexander Petrov, head of credit risk models at Nordea in Stockholm, describes another way to extract point-in-time PDs from hybrid point-in-time/through-the-cycle risk parameters in a 2016 paper published in the *Journal of Risk Model Validation*. His approach assigns ratings grades to customers and measures their sensitivity to changing macroeconomic conditions.

"Credit models are not all point-in-time or through-the-cycle. They're in between," says Petrov. "For IFRS, you must separate point-in-time estimates from through-the-cycle estimates."

Next, the point-in-time risk parameters extracted from Basel models must be adjusted to comply with the requirements of IFRS 9. This is because the regulatory capital models incorporate 'downturn' scenarios, while ECL estimates must be based on a 'reasonable' set of macroeconomic forecasts.

"The Basel models typically have an element of conservatism embedded into them, seen in the minimum regulatory specifications for Basel PDs and LGDs" says Sandeep Maheshwari, chief analytics officer for credit risk at DBS Bank in Singapore. "These parameters are also calibrated with through-the-cycle and, where applicable, downturn assumptions. For IFRS 9 purposes, banks are revisiting these elements."

This means worst-case scenarios are not factored into ECL models, which makes them inherently more volatile when credit or economic conditions deteriorate sharply.

"We needed to remove the downturn margin of conservatism from the regulatory parameters. This is because under IFRS 9, parameters need to be point-in-time and forward-looking," says the head of credit risk modelling at a third large European bank. "We had a difference between our regulatory parameters and our IFRS parameters."

The task is further complicated by the fact that Basel models are calibrated to measure PD over 12-month periods, whereas IFRS 9 requires a lifetime horizon for loans that have experienced a deterioration in credit quality.

"If the credit quality has become bad, then the IFRS expected losses could contain multiple probability of default estimates," says the large Asian bank's modeller. "This makes Basel and IFRS expected loss comparisons less feasible and intuitive."

Probability theories

Banks use a so-called migration matrix to map the likelihood of an impaired loan defaulting over its life. "Since IFRS 9 requires expected losses over the lifetime, you need to be aware of the fact that the quality of a loan could improve or deteriorate during its lifetime, and this dynamic is captured by the migration matrix," says Peter Quell, head of portfolio analytics for market and credit risk at DZ Bank in Germany.

The quality of the migration matrix, and indeed the entire process of calculating lifetime ECLs for IFRS 9, is largely dependent on the forward-looking macroeconomic scenarios that underpin it. "The inclusion of macroeconomic forecasts should have significant impact on the impairments projected under IFRS 9," says Jimmy Skoglund, risk product manager at analytics provider SAS in Stockholm.

The IFRS 9 requirements leave little room for error. If a bank makes incorrect assumptions about the timing and shape of the credit cycle, and assigns risk parameters accordingly, the impact on ECLs could be severe. "The longer you project into the future, the more uncertain the prognosis. It's difficult to say what economic conditions will be in five years," says Petrov.

From the peak of a cycle, when losses are at their lowest, to the bottom, when losses are highest, the risk parameters used in ECL and Basel models could be off by a factor of 10, according to Aguais. "When you have objectives like IFRS 9 and CECL, which require taking into account the cyclicality of the credit cycle, these mostly through-the-cycle models are potentially far away," he says.

The final ECL numbers reported by banks are probability-weighted to a range of possible macroeconomic outcomes. Most banks are using multiple forward-looking scenarios, which are typically drawn from those developed from regulatory stress-testing purposes. However, there are still questions about the number and types of scenarios required.

"Banks use normally three to five scenarios, but some choose Monte Carlo simulations," says Shcheredin at PwC.

The largest banks have already completed the design and implementation of their ECL models and have been conducting parallel runs with their existing incurred loss models since the start of the year. Others are still putting the final touches to their models, and plan to conduct parallel runs in the third and fourth quarters, before IFRS 9 takes effect on January 1, 2018.

"We are at the end of our implementation. It's a huge effort," says Louise Lindgren, chief risk officer at Länsförsäkringar bank in Stockholm. "Most banks should be at the end of implementation by January 1."

The parallel runs will reveal the extent of the volatility in ECL projections. A high degree of variance will pose a problem for banks, which need to not only report changes in expected losses from quarter to quarter, but explain the reasons behind the changes. This is easier said than done. For instance, if losses have gone up by 20% over the past quarter, this increase could be driven by a number of factors – such as the composition of the portfolio, the bank's view on the economy, or the credit cycle – alone or in combination.

"Disaggregating the component parts that contribute to the estimated IFRS ECL is not easy," says Maheshwari at DBS Bank. "Banks will soon start to cross the bridge as they begin to analyse the numbers and separate the signal from the noise." ■

Previously published on Risk.net

Leading the way

Risk has been at the cutting edge of risk management, derivatives and complex finance since 1987.

But we're not dwelling on the past. By looking continually forward and covering these markets in unparalleled depth, we keep our readers ahead of the game.

Thanks for your support. Here's to the next 30 years.

Risk.net

Turn compliance into your competitive advantage

Achieving seamless risk compliance and reporting takes work. How do you streamline technology and eliminate organizational silos efficiently while growing business value? With a single, integrated platform, SAS® Risk Management is the proven choice to modernize your organization. From enterpris wide stress testing to IFRS 9, model risk management or FRTB compliance, we've got the solutions you need to succeed.

Learn more
sas.com/risk

sas

SAS and all other SAS Institute Inc. product or service names are registered trademarks or trademarks of SAS Institute Inc. in the USA and other countries. ® indicates USA registration.
Other brand and product names are trademarks of their respective companies. © 2017 SAS Institute Inc. All rights reserved. G59606US.0817