

IFRS 9 Financial Instruments: Impairment challenges remain

Welcome to EY's fourth annual IFRS 9 impairment survey. This survey was undertaken to compare the impact of, continued challenges and focus areas specific to impairment programmes for major banking institutions. Overall we have observed that the impact on provisions is less than was expected, there is convergence in the application of multiple scenarios, and some of the best practices around stress testing are starting to crystallise. However, the longer term impacts are still unclear.

Change programmes have extended longer than expected and it remains a challenge to embed the extensive additional risk and finance data, processes and controls into the business. The volume of changes to a financial institution's data, systems, quantitative models, processes and control framework to calculate expected credit losses were generally underestimated.

It has become evident that the management judgment, complexity and transparent reporting will require more intensive oversight with increased stakeholder scrutiny.

Banks are focussed on the most transparent ways to explain the results of expected credit losses to stakeholders, as well as managing the competing demands for information.

Banks have past the 1 January 2018 implementation date but we are far from done with IFRS 9. Banks continue to focus on stabilising the risk and finance processes as well as optimisation of the operating model. One specific focus is the number of working days it takes to complete the calculations of expected credit losses and to pass these through the control and governance frameworks.

The impact on operational processes and financial reporting will not be limited to the transition period and first year of adoption. Impacts will be identified and adaptions will need to be made, even into 2019.

For further insights on IFRS 9, including how your institution compares to the results in the survey, please contact our survey team or your local EY contact.

We hope you find this information helpful as you continue your IFRS 9 impairment journey.



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Key highlights of the survey

A wide range of impacts on provisions



Half the respondents expect an increase in provisions over

10%

2018 change programmes

Over half the banks will continue their change programmes through the



second half

Less divergence on the impact on capital

The majority of respondents expect the day one fully loaded impact to be less than

20bps

Controls added

One-third of banks will increase their number of controls due to IFRS 9 impairment by

over 30%



Multiple economic scenarios (MES)

75% of the respondents expect an impact of MES of less than

10%



of banks will apply three scenarios:

base case, upper case and lower case

Budget

Several of the larger banks reported a business as usual yearly budget of

over €15m

Days to record expected credit losses in the general ledger

Most banks have a working

day timetable of 20-30 days

Participants profile

We surveyed 20 top-tier, global banks, of which:

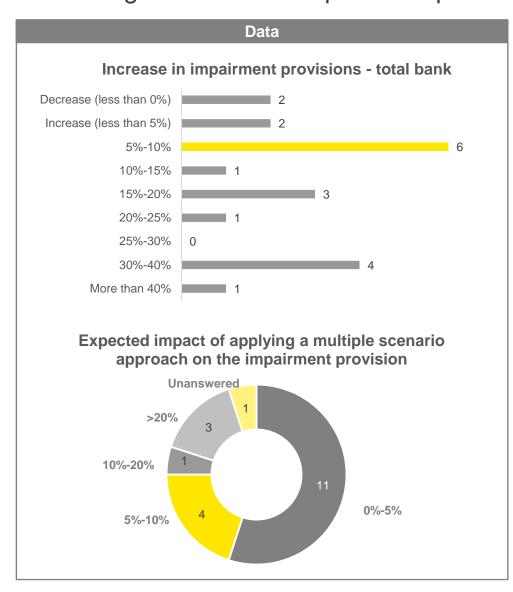
- ► All are primary IFRS reporters
- ► Eleven are global systemically important banks (G-SIBs)
- ► Twelve are under the scope of Sarbanes-Oxley Act (SOX)
- ► Fourteen use an advanced internal-rating based approach (A-IRB) for all of their portfolios



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Percentage increase in impairment provisions on transition to IFRS 9 – total bank



Commentary

The increase in impairment provisions on transition to IFRS 9 varies significantly across banks

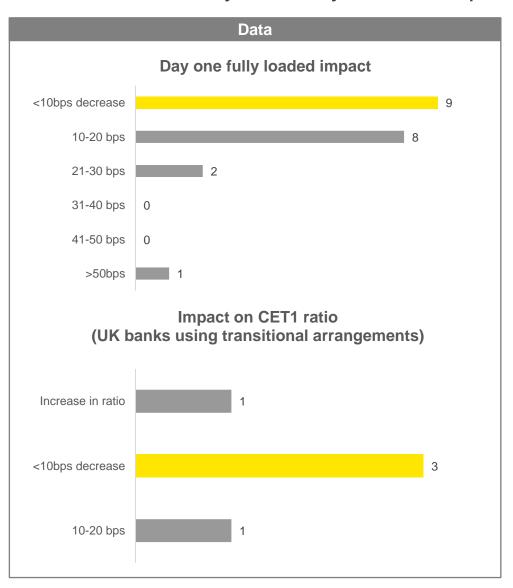
- ► The impact reported this year is less than expected before transition. Last year, fifteen banks expected an increase in impairment provisions over 10% on transition, that number has fallen to ten.
 - ▶ Most French banks are in the lower range, with a maximum increase of 15%. All UK banks have noted an increase in provisions of over 15%, with several reporting total increases of 30-40%.
 - ► Canadian banks show a wider range of outcomes from a decrease to a 40% increase.
- ▶ Write-off policies influence these percentages: UK and Canadian banks have earlier write-off policies compared to French banks resulting in lower volumes of stage 3 provisions (or IAS 39 specific allowances).
- ▶ A few banks mentioned that reclassifications to FVTPL had decreased the level of impairment allowances.

Impact of incorporating multiple economic scenarios (MES) less than 10% for the majority of respondents

- ▶ UK banks show a wide range of impacts, with a variance from 0%->20%. Most other respondents showed an impact of less than 10%.
- ▶ The impact of MES depends on the severity and probability of the scenarios as well as overlays added to reflect major uncertainties. But the diversity also reflects differences in the level of non-linearity experienced on different products in different countries and not just differences in approach.
 - ▶ Impairment on floating-rate mortgages, which are market standard in the UK, is expected to be more sensitive to macroeconomic scenarios compared to fixed-rate mortgages, which are market standard in France.
- ▶ A few banks mentioned that the incorporation of strong, forward-looking macro-economic conditions resulted in a decrease in provisions compared to IAS 39.

1. Impact assessment – capital

Estimate of the day one fully-loaded impact of IFRS 9 and impact on CET1 ratio



Commentary

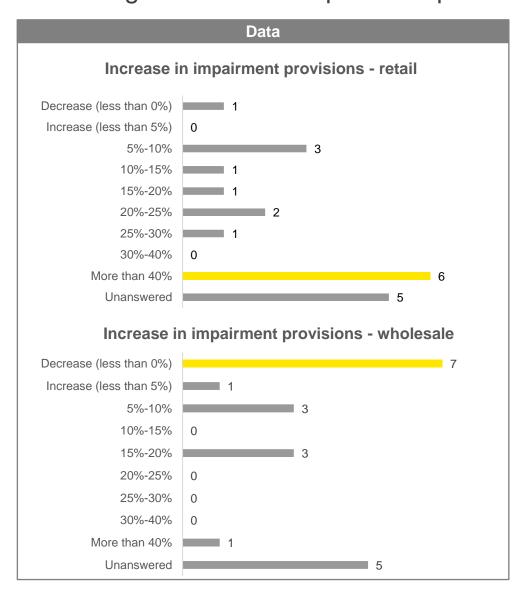
Day one fully loaded impact mostly showed a decrease of less than 10pbs

- ▶ Most banks have reported a decrease of less than 10bps or an increase of 10-20 bps as the day one fully loaded impact. Only one bank has reported an increase over 50 bps.
- ▶ There is less impact and divergence on CET1 ratio (common equity tier 1 ratio) than on provisions. This is due to the excess loss currently deducted from CET1 under IAS 39 offsetting part of the increase for IRB portfolios. Banks had diverse levels of shortfalls available to absorb the IFRS 9 impact, mainly due to diverse IAS 39 impairment approaches.
- ▶ A few banks mentioned positive impacts on reclassifications to FVTPL which substantially offset the impact of increased impairment allowances.
- Deferred tax assets also tend to decrease the effects of increased provisions on CET1 ratios.

Day one impact with transitional arrangements

- ► European banks have the ability to apply transitional arrangements and spread the impairment impact over a five-year period. In year one, only 5% of this impact is retained for the banks which opted for these arrangements.
- ▶ UK banks all apply these measures and the majority reported an impact lower than 10bp under the transitional regime.
 - ► For a few banks, the transitional arrangements when combined with positive impacts from reclassifications (which are not in the scope of the transitional arrangements) result in nil or positive effects on CET1 ratio.
- ▶ Most countries in our survey are not applying transition arrangements, so we have included only UK banks in the chart showing the impact on CET1 ratio.

Percentage increase in impairment provisions on transition to IFRS 9



Commentary

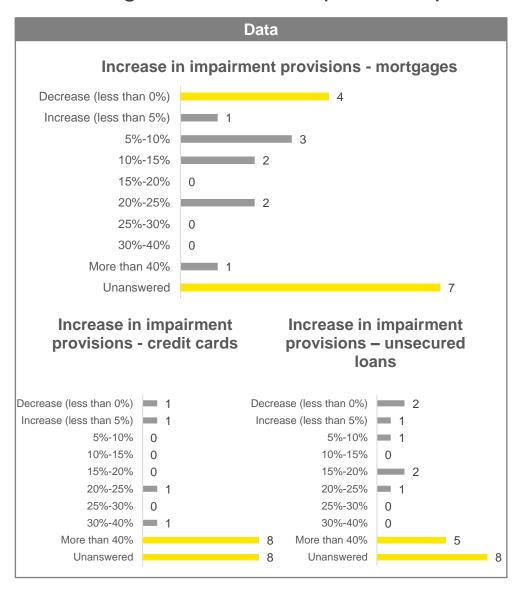
The total impairment impact is largely driven by retail portfolios

- ▶ Total impairment impact is driven mainly by retail products, with six banks mentioning an increase above 40%.
- ▶ UK and Canadian banks reported higher levels of increase.
 - ▶ UK banks reported increases of over 15% to their retail impairment provisions.
 - ▶ Three Canadian banks reported an increase in retail provisions over 40%.
- ▶ Stage 2 and resulting lifetime expected credit loss (ECL) requirements generally drive the increase on retail portfolios.
- ▶ The overall impact is also driven by different portfolio mix with the highest impact being reported on credit card portfolios. This is largely due to the requirement to calculate ECL over a modelled risk horizon for both the drawn and undrawn exposures. Similar impacts are reported on unsecured personal loan products. Mortgages tend to attract more modest impacts.

Wholesale impact less significant

- ▶ Some banks noted little change, or even a decrease, in ECL for corporates, primarily resulting from a relatively long emergence period used under IAS 39 or larger sectorial or watch list provisions under IAS 39. This is more evident for countries like France or Canada.
- ▶ UK banks generally mentioned higher increases with only one bank reporting an increase in wholesale impairment provisions lower than 15%. One bank mentioned an increase above 40%.
- ► High credit quality and/or collateralization also explains lower levels of provisions.
- ➤ Some corporate assets were also reclassified to fair value through profit and loss, which are not subject to credit impairment.

Percentage increase in impairment provisions on transition to IFRS 9 – retail products

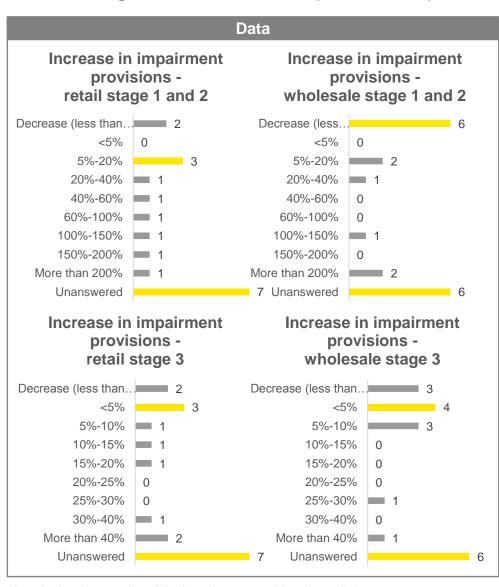


Commentary

Credit card exposures driving increase in retail provisions

- ▶ Mortgages tend to attract more modest impacts with eight banks reporting increases lower than 10%. Mortgages show diversity on the impact to impairment provisions :
 - ▶ Only one bank has reported an increase of over 40%, compared to three banks in 2017.
 - ► Four banks (mainly Canadian banks) have recorded a decrease.
- ▶ The highest impact has been reported on credit card portfolios, with eight banks reporting more than 40% increase in provisions. This doubles the number expecting a 40% increase since 2017.
 - ► Canadian banks are reporting a high impact on credit cards and revolving facilities, with all banks reporting an increase over 30%.
 - ▶ The UK banks are all reporting an increase of over 40% in credit cards, with several reporting the same impact on their unsecured loans portfolio.
- ▶ Impact on the unsecured loans portfolios shows some variance, with five banks reporting an over 40% increase in provisions and with several reporting little change or a decrease. This is driven by a shorter contractual lifetime compared to modelled credit cards risk horizons as well as different IAS 39 impairment approaches.

Percentage increase in impairment provisions on transition to IFRS 9 – by stage



Commentary

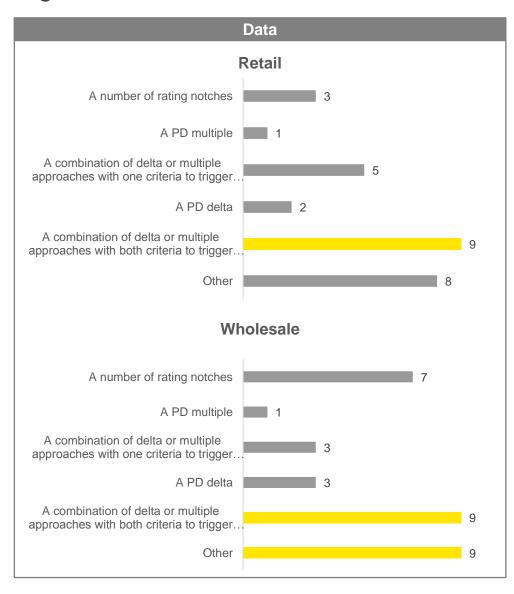
Wide variance in increase in retail impairment provisions in all stages

- ▶ Retail impairment provisions show a broad variance with a range from 5% to over 200% increase in stages 1 and 2. Stage 3 shows a similar variance, from less than 5% to over 40 %.
- ▶ The level of good book provisions under IAS 39 varied quite widely from one bank to another, with some country trends as well as more specific situations.
- ▶ Banks which calculated "incurred but not reported" provisions on their good book, using an emergence period, generally incurred a bigger impact on stage 2. The impact on stage 1 was limited to the difference between the emergence period applied under IAS 39 and the minimum 12 months required under IFRS 9.
- ▶ Banks which used a collective approach based on deteriorated exposures had more impact on stage 1 provisions, because this was the portion of the good book for which no provision had been booked at all under IAS 39.
- ▶ Banks with no retail portfolios have been removed from the retail charts.

Level of stage 3 provisions shows significant variance

- ▶ Stage 3 also shows significant variance, from less than 5% to over 40%.
- ▶ A number of banks have changed the definition of credit-impaired assets on transition. This resulted in some increases in stage 3 provisions due to a wider population of credit-impaired assets.
- ▶ Write-off policies vary significantly between banks, resulting in difficult comparisons of stage 3 provisions (with France writing off much later than UK and Canada).
- ► The level of stage 3 provisions remained fairly stable, with a slight upward trend due to the incorporation of forward-looking assumptions in relation to collateralized portfolios.

Significant thresholds for retail and wholesale exposures



Commentary

Similar range in methods used to determine significant thresholds for retail portfolios

- ▶ Most banks are using a combination of PD delta or multiple approaches with both criteria to trigger stage 2. A smaller number are using multiple approaches but only one criteria is required to trigger stage 2.
- ► Three banks are using a number of rating notches to determine the threshold for retail stage 2, with one bank using a PD multiple and two using a PD delta.
- ▶ The variance is similar in wholesale portfolios, with nine banks using a number of rating notches, one using a PD multiple and three using a PD delta. Three banks are using multiple approaches with one criteria triggering stage 2 and nine banks are using multiple approaches with both criteria triggering stage 2.
- ▶ Eight banks have chosen different thresholds for retail portfolios and nine for wholesale. These thresholds include PD deterioration, forbearance, or a combination of delta and notches e.g. "rating notches for existing portfolio and combo of delta and multiple for new exposures".
- ▶ The understanding of significant thresholds has changed from last year's survey, when calibration was very much a work in progress as banks tested different sets of triggers.
 - ► Four banks were planning to use a PD multiple last year, and only one has continued with this threshold.
 - ▶ Only two banks planned to use a combination of delta or multiples approaches with one criteria triggering stage 2 five banks are now using this approach.
 - ► Fourteen banks planned to use a combination approach with both criteria triggering stage 2 only nine are now taking that approach.
 - ➤ Only three banks planned to use a different approach last year this has now risen to eight.

Expected percentage exposure in each stage

Data	
Expected exposure by stage – total bank	

	Stage 1	Stage 2	Stage 3
Bank A	92.9%	6.4%	0.7%
Bank B	95.0%	4.0%	1.0%
Bank C	93.0%	4.0%	3.0%
Bank D	94.0%	5.0%	1.0%
Bank E	74.0%	12.0%	14.0%
Bank F	89.0%	8.0%	3.0%
Bank G	90.0%	7.0%	3.0%
Bank H	95.0%	4.0%	1.0%
Bank I	96.4%	3.0%	0.6%
Bank J	92.0%	7.0%	1.0%
Bank K	94.0%	5.0%	1.0%
Bank L	96.0%	4.0%	0.0%
Bank M	93.1%	6.6%	0.3%
Bank N	93.0%	6.5%	0.5%
Bank O	91.2%	7.0%	1.8%

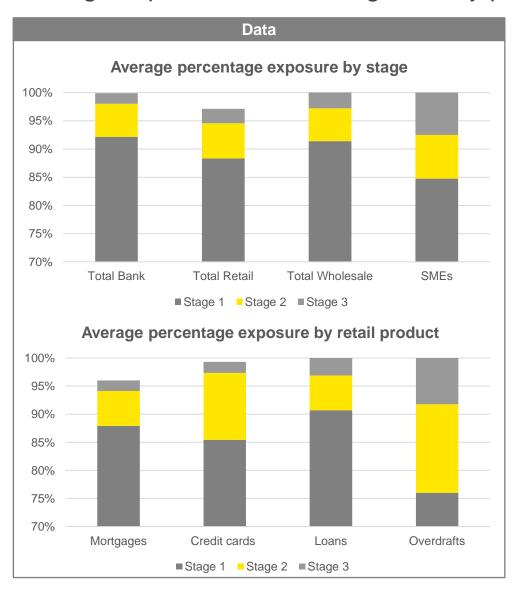
Commentary

Approximately 90% of all exposure types are classified as stage 1

- ▶ The remainder of exposures are split 8% for stage 2 and 2% for stage 3 assets, with very few exposures classified as purchased or originated credit impaired (POCI).
- ▶ This applies to both retail and wholesale exposures, and across all asset classes, with retail exposures at 88% in stage 1 and wholesale at 91%.
- ▶ Overdrafts, credit cards and small and medium enterprises (SMEs) comprise the largest proportion of stage 2 assets in the good book (stage 1 and 2), being on average 17.6%, 12.2% and 8.6% respectively.
- ▶ Most UK and Canadian banks have 1% (or under) of assets in stage three (only two UK/Canadian banks have more than 1%) both the UK and Canada tend to write-off earlier than French banks, driving the lower stage 3 provisions.
- ▶ We would expect to see higher stage 2 and 3 exposures in countries that experienced a greater impact from the global financial crisis and therefore, a higher volume of forbearance and defaults.

Stage 2 as a proportion of stage 1 and stage 2 (in percentage)						
	Average	Minimum	Maximum			
Total bank	6.17%	3.02%	13.95%			
Total retail	6.67%	1.81%	17.24%			
Mortgages	6.58%	1.40%	17.24%			
Credit cards	12.19%	4.04%	24.74%			
Unsecured loans	6.51%	3.03%	12.79%			
Overdrafts	17.60%	4.04%	25.88%			
Total wholesale	6.01%	1.01%	13.83%			
SMEs	8.56%	1.84%	15.96%			

Average exposure in each stage and by product



Commentary

Write-off policies will impact the allocations by stage

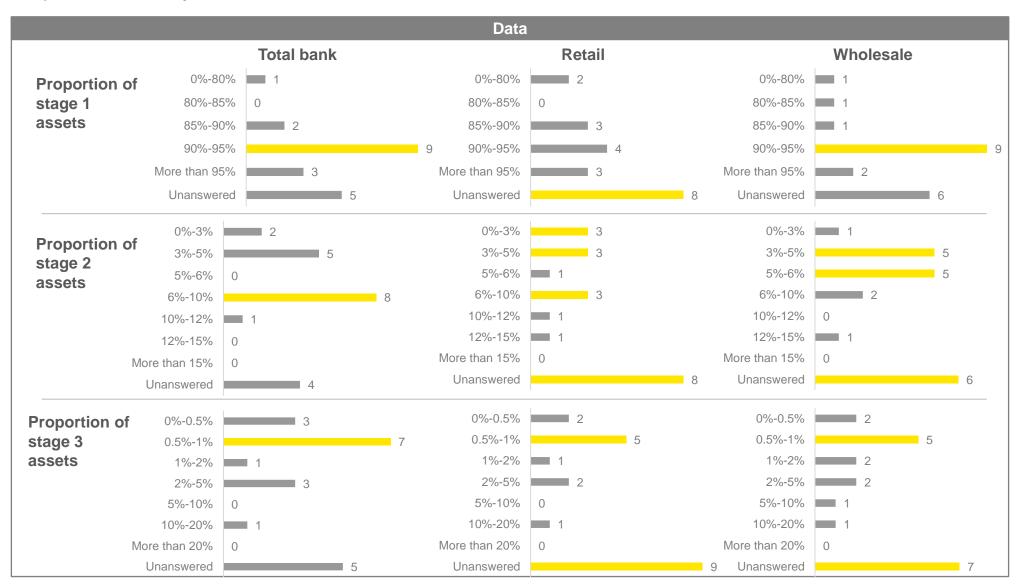
- ▶ Varying write-off policies will impact the allocations by stage as banks writing off later (i.e. French banks) expect to show larger stage 3 exposure and ECL. Due to banks in the UK and Canada applying earlier write-offs, it is more helpful to focus on the percentage of stage 2 in stage 1 and 2 (see page 14).
- ► Canadian, UK and Swedish banks tend to have a higher exposure in stage 1, closer to 95% than 90%.
- ▶ The higher stage 2 for retail products is due to the fact that stage 2 drivers in retail are more sensitive, resulting in higher stage 2 proportions of exposure.
- ▶ We would expect to see a higher exposure in stage 2 for overdrafts vs. other retail products as the triggers for default on overdrafts tend to be more sensitive than other retail products. It is worth noting that only a small number of respondents supplied data on overdraft exposures by stage with a range from 63% to 95% in stage 1.

Few banks have changed write-off policy under IFRS 9 compared to IAS 39

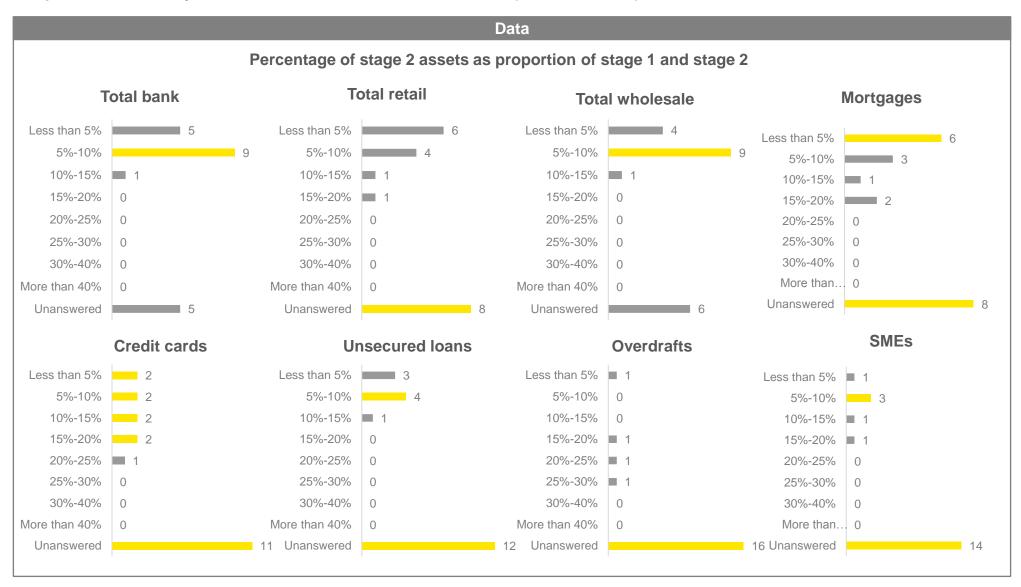
- ▶ Most banks have not changed their write-off policy under IFRS 9 compared to IAS 39, where "loans are written off when there is no realistic probability of recovery".
- ▶ Of the two banks who have changed their write-off policy, one will write-off at the point where the loan enters the legal process and the other has changed only the precision on partial write-off.
- ► Eight banks are partially writing-off non-performing loans.

Note – averages have been calculated by stage and not across total exposures and therefore will not necessarily total 100%

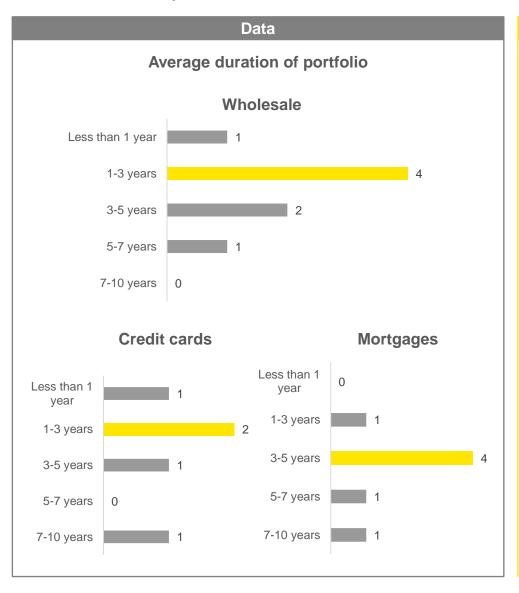
Exposure analysis on transition to IFRS 9



Exposure analysis on transition to IFRS 9 (continued)



Duration analysis on transition to IFRS 9

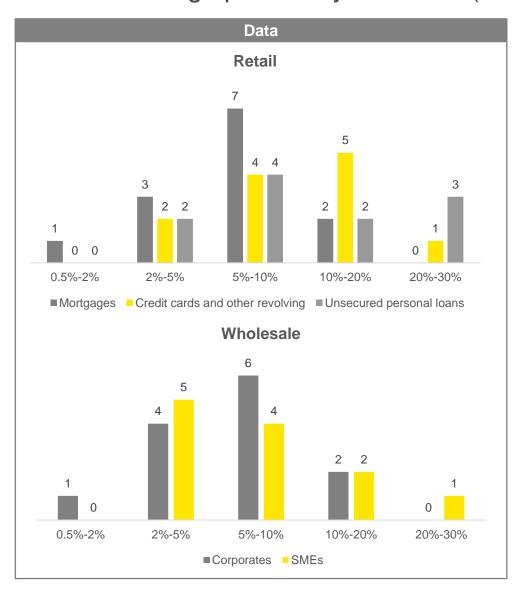


Commentary

Average duration main driver of impact on provisions

- ▶ Most financial institutions expect duration to be the main driver of IFRS 9's impact on provisions, as lifetime expected credit loss is larger for longer products.
- ▶ In addition, large differences would be expected across countries showing different market practices, which should be taken into account by users when comparing banks and interpreting IFRS 9 impacts.
- ▶ Most banks are still unable to determine the average duration for different assets classes across retail and wholesale exposures, making a meaningful geographical analysis impossible. The following apply to the banks that have been able to supply data:
 - ▶ Banks' exposures mainly have an average duration range of three to five years for retail exposures, driven by exposures to mortgages. For wholesale, the one to three years average is driven by exposures to SMEs, which generally have a duration of less than five years.
 - ▶ For mortgages, the average duration is three to five years. This is shorter than we expected and may be because of amortization or prepayments, which have been significant in some countries in recent years because of the decrease in interest rates. In addition, open rolling portfolios have a shorter maturity compared with contractual maturity.
 - ► Exposures with a duration of less than one year relate mostly to overdrafts and exposures to central governments and central banks.

Portfolio average probability of default (PD) for stage 2 on transition

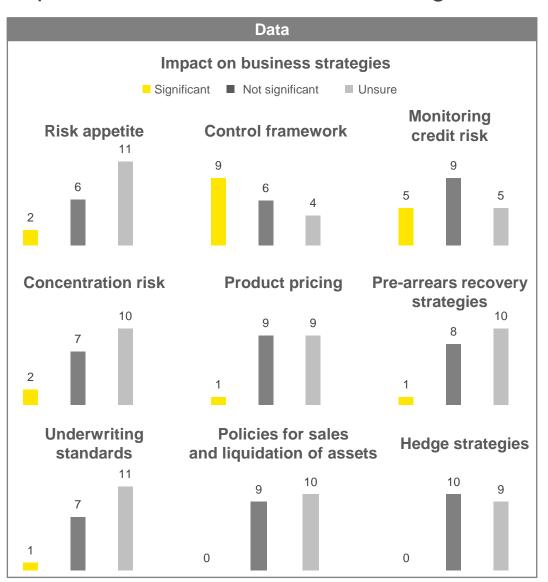


Commentary

Divergence in retail exposures with a PD range of 0%-30%

- ▶ The average 12-month PD for assets in stage 2 is a simple risk measure to compare the average level of risk sitting within this bucket across banks.
- ▶ Several banks decided not to disclose this metric and others decided to disclose the values only for certain asset classes.
- ▶ Banks that have supplied data generally noted an average of 5%-10% for wholesale exposures. There is divergence in retail exposures with a wide range of 0%-30%.
- ▶ An interesting trend can be seen for mortgages, suggesting that most institutions have similar risks within their stage 2 portfolio. Other products show more variance in the PDs and therefore different levels of risks.
- ► SME exposures generally show greater levels of PDs (between 2% and 30%), while corporates are more spread between 0.5% and 10%.
- ► Credit card exposures have the highest PDs for the most number of banks with most in the range of 2% to 20%.

Impact of IFRS 9 on business strategies and controls framework

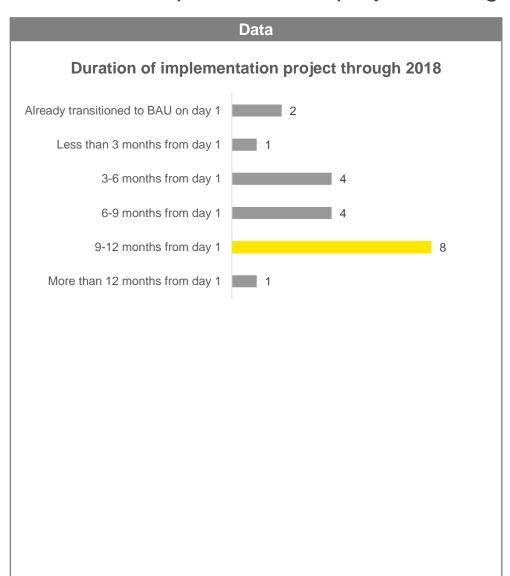


Commentary

The impact of IFRS 9 across process and controls remains a focus point for the majority of banks.

- ► The majority of banks have seen significant changes to their control frameworks as a result of IFRS 9 implementation. This includes the introduction of new processes and controls that were typically managed by Risk, as well as enhancements to Finance processes. Banks reporting an insignificant impact to control frameworks have generally had an immaterial impact as a result of adopting the standard.
- ▶ At the time the data was collected, many banks still remain unsure what the impact of IFRS 9 will be on various business strategies such as product pricing and how credit risk would be mitigated through the use of additional covenants, increased collateral and granting loans with shorter durations. We expect that as the processes matures and results stabilize, banks will be willing to determine the impact of the IFRS 9 results on these areas.
- ▶ Most banks still need to determine how IFRS 9 will impact risk appetite, underwriting standards and hedging strategies.

Duration of implementation project through 2018

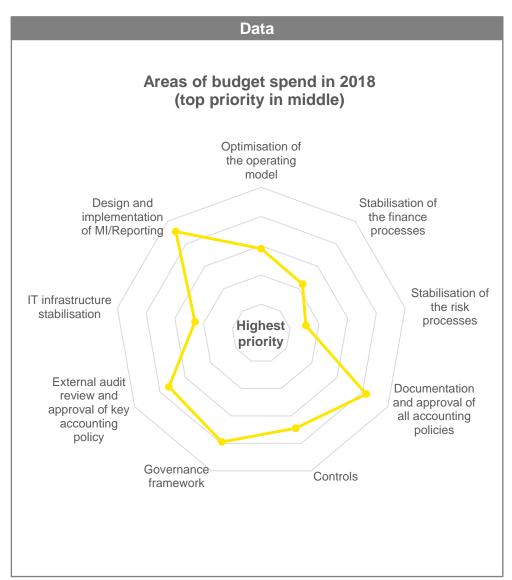


Commentary

Few banks have already transitioned to BAU on day one

- ▶ Banks have typically spent a significant portion of the 2017 fiscal year testing the IFRS 9 processes and generation of the ECL results for the implementation date. This proved to be a great challenge for a number of banks and we observed delays to the parallel run test cycles. This resulted in limited time available for transition activities to a business-as-usual (BAU) function.
- ▶ Only two banks in the survey have fully transitioned to BAU on day one of IFRS 9 implementation at the time the data was collected. Half of respondents expect the duration of the implementation project to last over six months from day one.
- ▶ Half of the large banks (over €500b in assets) expect the implementation project to last a further 9-12 months from day one.
- ▶ This remains a critical challenge for banks in 2018 as the budget for 2018 would not have incorporated the need for ongoing transition activities. As a result, we have observed a higher implementation cost in 2018 than previously anticipated.
- ▶ We expect there to be a significant amount of senior management focus in this area to minimise the ongoing cost spend on IFRS 9 in 2019 onwards.

Areas of IFRS 9 which will attract the most spending in 2018

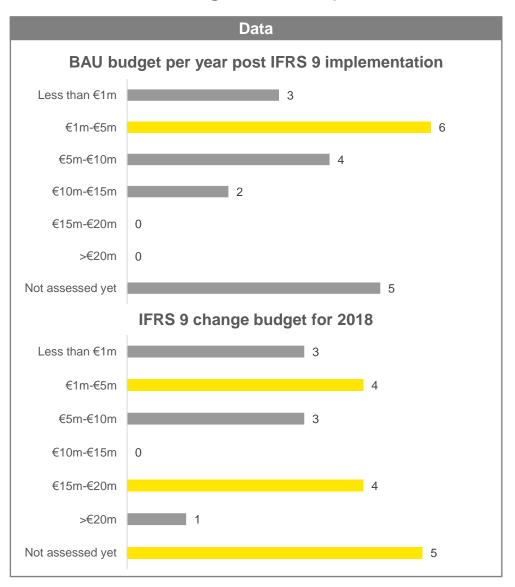


Commentary

Budget spend focused on stabilization of finance, risk and IT

- ▶ The areas of IFRS 9 that will attract the most spending in 2018 are the stabilisation of IT infrastructure, risk processes and finance processes.
- Most of the larger banks (assets over €500b) see most spend going towards stabilisation of the finance and risk processes.
- ▶ Due to the delays observed in the parallel run cycles in 2017, a number of remediation activities were deferred to the following year. The focus of most of these activities was process optimisation and stabilisation as this would not have posed a material risk to the implementation date activities.
- ▶ At this stage in the IFRS 9 implementation process, we would expect to see the majority of spend going towards the design and implementation of MI/reporting and on the documentation and approval of all accounting policies. However these areas are the ones that will attract the least budget spending in 2018 indicating that there is still a large amount of work to be done on these elements of the process.
- ▶ We anticipate that as banks start to face additional external pressure from regulators and stakeholders for increased reporting, there will be a shift towards to build of enhanced MI/reporting to meet the needs of users.
- ▶ Additionally, there will be increased pressure from external audit teams for high-quality documentation and reporting to support the 2018 audit process.

BAU IFRS 9 budget and expected 2018 change budget



Commentary

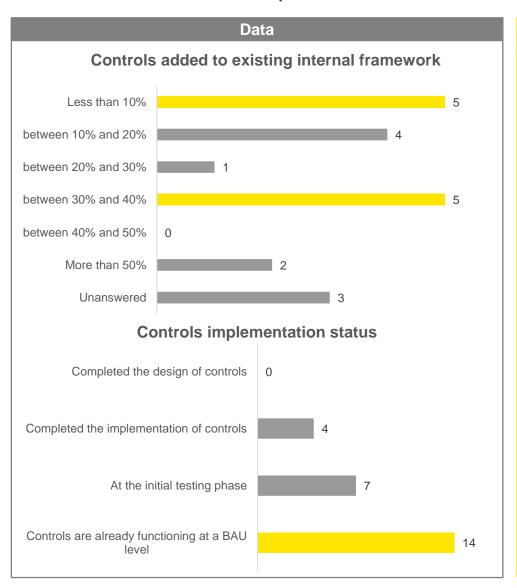
BAU budgets post IFRS 9 implementation are lower than expected

- ▶ At the time of this survey, banks reported lower than expected BAU budgets post IFRS 9 implementation, with almost half of banks expecting an annual budget less than €5m.
- ► There is a possibility that this budget will grow as banks start to understand the scope of work expected, subsequent to the first quarterly reporting process.
- ► UK banks are mostly reporting a BAU budget in the €5-15m budget range. A significant number of larger banks (assets over €500b) still have not assessed the BAU for IFRS 9.
- ▶ Due to the delays in transition to BAU observed, we expect that this activity will need to be prioritised to avoid the risk of cost overruns.

IFRS 9 change budgets for 2018 remain high

- ▶ The IFRS 9 change budget for 2018 shows more variance, with several large banks (assets over €500b) expecting a budget of over €15m to further refine methodology, strengthen governance, automate part of the process and improve MI production and visualisation.
- Most smaller banks (assets below €500b) are expecting a budget of less than €1m for IFRS 9 changes in 2018, with only one smaller bank reporting a change budget of over €15m.
- ► Canadian banks are reporting a wide variance in change budgets, ranging from €15-20m down to less than €1m.
- ► The higher change budget is in line with the view that the processes still require a degree of stabilisation and that the book of work to build a sustainable BAU operating model is not yet complete.

Controls framework implementation and KPIs measuring operational performance



Commentary

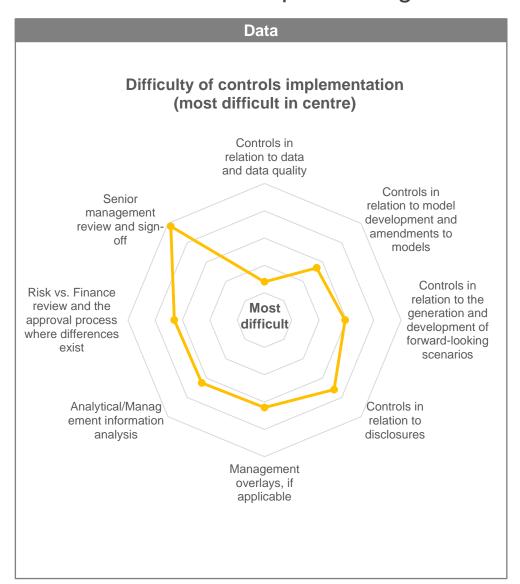
Variance in number of controls added to internal framework

- ▶ Banks are showing a variance when considering the percentage of controls adding to the existing internal framework after IFRS 9 transition. Just under a third of banks have reported adding less than 10%, while the same number have added over 30% to the controls framework.
- ▶ The UK banks have reported varied answers across the full range, from less than 10% with one bank adding more than 50%.
- ► Half of the Canadian banks however, had added less than 10% to the controls framework. This is may be due to the advanced SOX processes existing in Canada.

Most banks have IFRS 9 controls already functioning at the BAU level

- ► Almost all the banks who are still at initial testing phase for controls are larger banks (over €500b assets). Notably, French banks are still at initial testing phase.
- ▶ With the expectation that external auditors will be focusing on this area in the current year, there will likely be an increase to the level of controls reported in the next six to nine months.
- ▶ Five banks indicated that some controls are already functioning at a BAU level while others are still in the testing and implementation phases and therefore provided more than one status.

Difficult elements in implementing controls framework

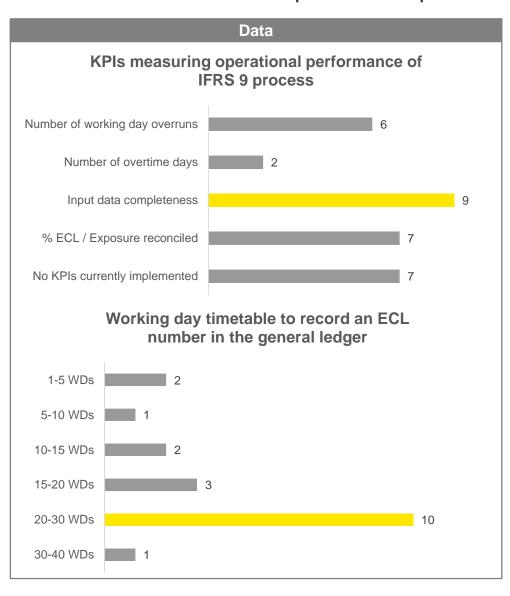


Commentary

Data controls is the most difficult element of controls implementation

- ▶ Almost all banks in the survey reported that the most difficult element in implementing the controls framework for IFRS 9 is the controls in relation to data and data quality. Due to the complexity of the standard, the level of data inputs to the calculation process is significantly higher than under previous processes.
- ▶ Establishing an approval process for the reviews by Risk and Finance is viewed as challenging by almost half the banks in the survey.
- ▶ We would have expected to see senior management review and sign-off reported as a more difficult process to implement than results indicate. Given the low priority for budget spend in the area of MI reporting design and implementation, this could indicate that most banks are yet to fully implement this area of the IFRS 9 controls framework.

KPIs used to measure operational performance of IFRS 9 processes

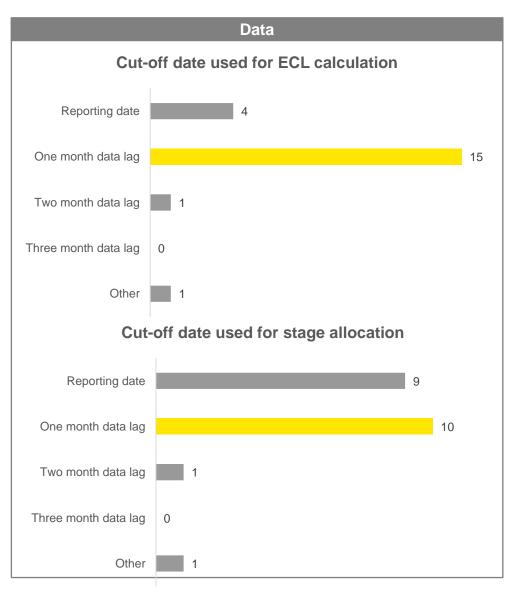


Commentary

Input data completeness is the main KPI used to measure operational performance of the IFRS 9 processes

- ▶ Several banks are using more than one KPI to measure operational performance of the IFRS 9 process.
- ▶ Most banks are using a combination of input data completeness and percentage ECL or exposure reconciled as their main KPIs to measure operational performance of the IFRS 9 processes. Seven banks currently have no KPIs implemented. This view supports the fact that data quality remains a key challenge for governance.
- ▶ Operating timelines is also a focus area as complex and time consuming risk processes are being challenged by strict financial reporting deadline.
- ► Half of the Canadian banks are using a combination of input data completeness and percentage ECL or exposure reconciled as the main KPIs.
- ▶ UK banks show more variance, with several using the number of working day overruns as the main KPI.
- ► The banks who have other KPIs in place are using the RAG status of IFRS 9 delivery and stabilization and adjustments to model runs and issues resolution.
- ▶ Despite the fact that a number of banks have yet to transition to BAU at the time the data was collected, we did not observe any banks reporting KPIs focused on cost based measures.
- ▶ As banks advance towards stabilising their processes and producing IFRS 9 results efficiently, we expect to see a higher level of KPIs around the processes and control testing results.

Cut-off dates used for ECL calculation and stage allocation

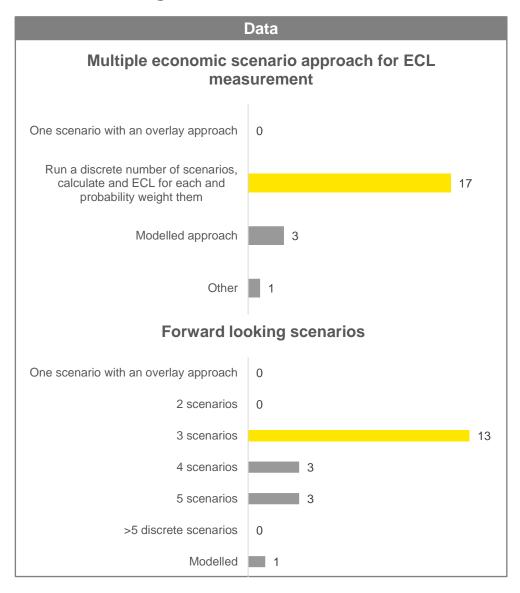


Commentary

A majority of banks continue to report using a one-month lag

- ▶ Almost all will use a one-month data lag for ECL calculation and almost half will use the reporting date for stage allocation.
- ▶ One bank plans to use a two-month data lag for both ECL calculation and for stage allocation while another plans to mix both reporting date and one-month data lag for stage allocation, depending on stage of the assets.
- ► At least one-third of banks stated that the reporting date would be used as the cut-off date for both the ECL calculation and stage allocation.
- ► The one-month-or-more data lag approaches may have a significant impact on disclosures and may result in a mismatch between disclosure of exposures versus ECL.
- ▶ Banks have made significant efforts to build a process to perform a reconciliation of the data used for exposure versus ECL. Banks are using a number of adjustment processes to ensure alignment of disclosures in the movement table.
- ➤ True-up procedures will need to be put in place to assess any material movement that is identified between the one-month lag data and actual period end.
- ► The cut-off date used and true-up process would also be subject to controls and external audit scrutiny, resulting in the need for strong governance.

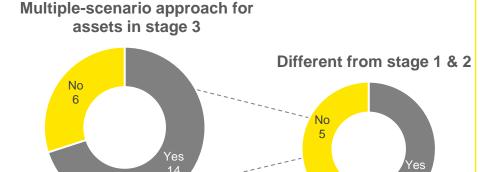
3. Multiple scenario approach MES on stage allocation and ECL measurement



Commentary

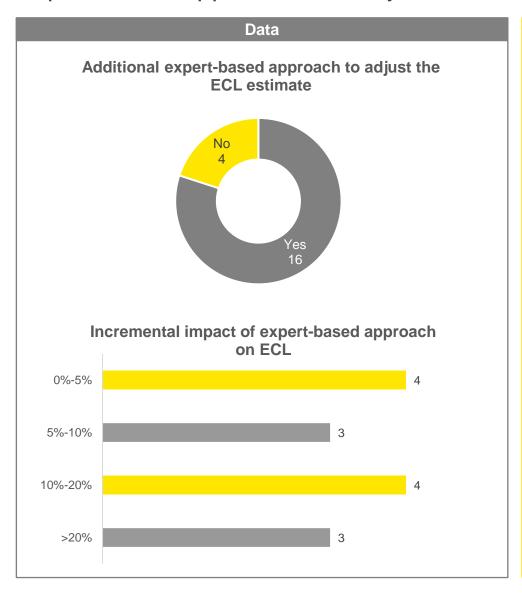
Most respondents are applying three discrete probability weighted scenarios to calculate ECL across all stages

- ▶ Integrating forward-looking information in stage 3 means that the LGD will be sensitive to macroeconomic variables as a PD equal to 100% will be used in the ECL calculation. Alternative approaches are:
 - ▶ Applying only a forward looking overlay. Four banks were considering this approach ahead of transition but are no longer taking this approach.
 - ▶ Individually assessing how the forward-looking scenarios impact the individual cash flow recoveries on material exposures.
- ▶ Of the 14 respondents using an MES approach for assets in stage 3, over half will be applying a different approach from stages 1 and 2.
- ▶ Most respondents are applying a mix of three probability weighted scenarios to assets in stage 3, but the scenarios used tend to be specific to individual borrower circumstances and the microeconomic factors relevant to the borrower.



3. Multiple scenario approach

Expert-based approaches to adjust the ECL estimate



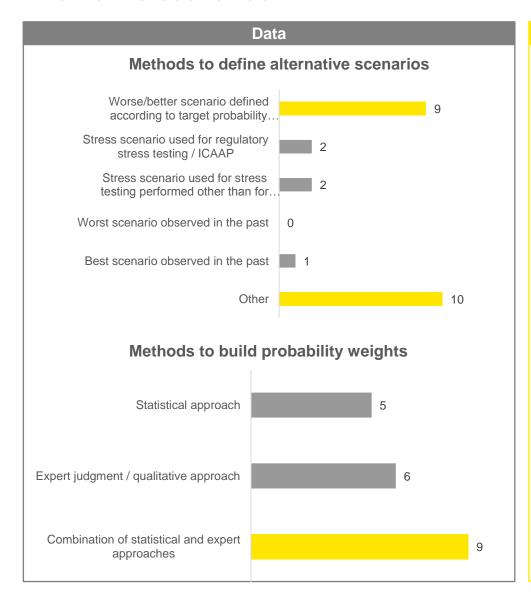
Commentary

Two-thirds of banks will take an additional expert-based approach to adjust the ECL estimate

- ▶ Most banks have designed an additional expert-based approach to adjust the ECL estimate, based on sectors, industries and general economic uncertainty.
- ▶ Almost all UK banks are not taking an expert-based approach, with only one bank opting to do this.
- ▶ Of those who are applying an additional expert-based approach to adjusting the ECL estimate, most are applying sector or country macroeconomic variables on specific local portfolios. This methodology is usually determined on a case-by-case basis.
- ▶ One bank has developed models for each major product grouping which utilise historical credit loss data, to produce PDs for each scenario. An overall weighted average PD is used to assist in determining the staging of financial assets and related ECL.
- ▶ The majority of the banks expect expert judgement adjustment to be less than 20% of the total number. We assume that this number can potentially vary in the future, depending on the severity of the economic scenarios, and when specific geo-political events are expected to take place (e.g. referendums, elections).

3. Multiple scenario approach

Alternative scenarios



Commentary

Calibration of downside and upside scenarios

- ▶ Most banks are using a base case with one upside and one downside. In most instances, the base case is aligned to internal economic views and consistent with budgeting, forecasting and stress testing. Scenarios are based upon a probable upside/downside percentile from base using a mix of historical observations, regulatory models, external data and expert judgment.
- ► Some other approaches include:
 - ▶ Defining economic conditions at high level for each scenario (e.g. modest recovery, slowdown, recession, etc.) based on the views of economists and management and then to estimate individual macro indicators (e.g. GDP growth, CPI, etc.) corresponding to those scenarios.
 - ▶ Using a greater number of upside/downside scenarios some using two up/two down. One bank is modelling fifty different scenarios under a Monte Carlo approach.
 - ▶ The approach is to consider historical changes in GDP and unemployment across each major jurisdiction. Based on the analysis, scenarios are designed to reflect 1-in-10 (positive and adverse) and 1-in-25 year (adverse only) change in GDP/unemployment.
 - ► Three banks indicated they are using more than one method to define scenarios.

Probability weighting of forward looking scenarios

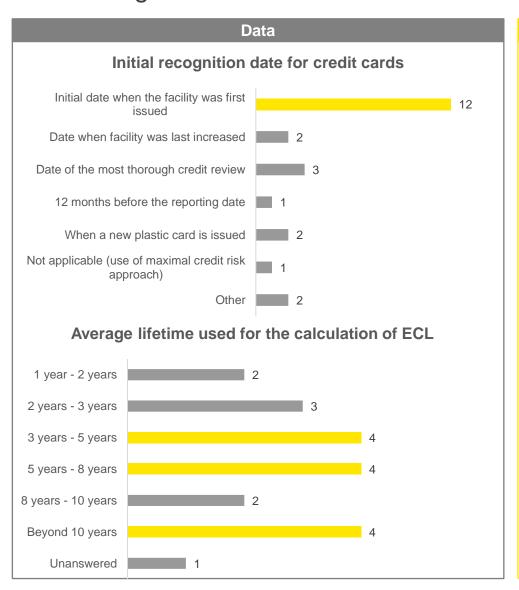
▶ Banks that will use a statistical approach are calibrating the weights on historical observations of macroeconomic variables and tend to have lower weight for stressed scenarios compared with base case scenarios.

Unexpected macro event management

Nearly all banks will add an overlay in order to be able to capture a significant macroeconomic event, which may happen shortly before a key reporting period. This will require a documented process and rigorous control framework.

4. Measurement of expected credit loss

Initial recognition date for credit cards and average lifetime used for ECL calculation



Commentary

Most banks use the date the facility was first issued for initial recognition date

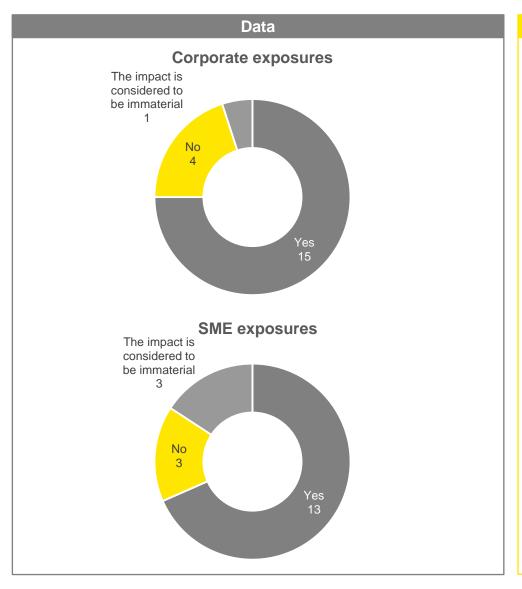
► For the remaining banks a mix of approaches are used – for example one bank is opting for the "proxy based on state in the transition matrix".

There remains a variance in average lifetime used for the ECL calculation

- ► A wide variance can be seen in the average lifetime used in the calculation of ECL, with a range of one year to beyond ten years.
- ▶ Most banks are using a behavioural approach, looking at historic data and behavioural life of customers. One interesting method noted by a bank is as follows:
 - ▶ The bank looks "at the set of accounts that existed at a specific data and tracked the average number of months until the account closed (to a maximum of eight years). This was considered the lifetime for the segment. The segments with the highest PD had very short remaining life because the accounts in those pools were already delinquent. The highest quality segments had remaining life of approximately five years. The complete set of retail credit card accounts in stage 2 has an EAD-weighted average of approximately 42 months".

4. Measurement of expected credit loss

Have you considered corporate or SME revolving facilities to be in the scope of paragraph 5.5.20?



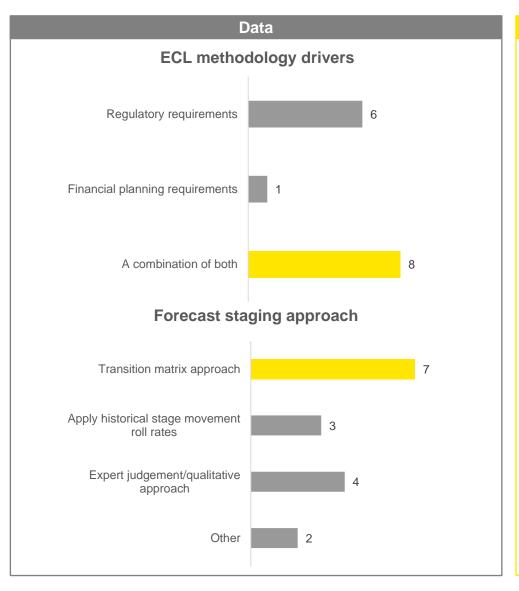
Commentary

Most banks consider corporate or SME revolving facilities to be in scope

- ▶ IFRS 9 Paragraph 5.5.20 of IFRS 9 contains an exception for certain types of financial instruments to measure expected credit losses over the period that the entity is exposed to credit risk, even if that period extends beyond the contractual period. The exception applies to some financial instruments that include both a loan and an undrawn commitment.
- ▶ Most banks are treating corporate and SME exposures as within the scope of the exception. Some examples of the application are:
 - ▶ "For the facilities where bank has the ability to demand repayment and cancel the undrawn commitment, exposure to credit losses is not limited to the contractual notice period. Next credit review date is used instead in most cases".
 - ▶ "Uncommitted corporate and SME facilities are considered to be in scope of the exemption from the contractual life as they satisfy the core requirements for exception. There are both drawn and undrawn commitment components and our contractual ability to demand repayment and cancel the undrawn commitment does not limit our exposure to the contractual notice period (in this case, one day)."
 - ▶ One of the banks who believe they are not in scope noted that "...the facility cannot be cancelled at short notice, as required by IFRS 9. Also, there is a contractual term over which the bank is committed to provide credit, which objects to the characteristic in IFRS 9 paragraph B5.5.39(a)."

5. Stress testing

ECL projection solution to support financial planning and stress-testing cycles



Commentary

Combination approach to ECL methodology

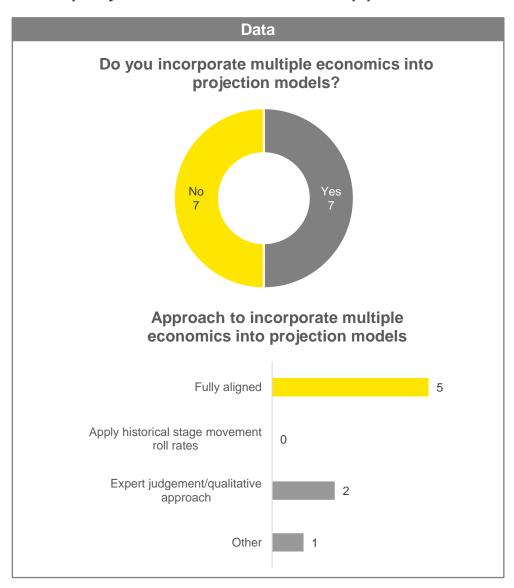
- ▶ Most banks are using a combination of both regulatory and financial planning requirements as the ECL methodology to support financial planning and stress testing cycles.
- ► Around a quarter of respondents are only using regulatory requirements, including two UK banks.
- ▶ Almost half of the banks did not respond to the questions in this section as the process is still maturing and approaches are being fully finalised.

Transition matrix the most common approach to forecast staging

- ▶ The most common approach to the forecast staging is to use a transition matrix approach.
- Several UK banks are applying historical stage movement roll rates.
- ▶ Of the two banks opting for a different approach, one is forecasting stage movements, "to the extent that the scenario updates produce different PIT PD values. Otherwise stage allocation is deemed to be flat for business planning (maturing stage 2 positions will be replaced by other transactions that have observed a SICR event)".

5. Stress testing

ECL projection solution to support financial planning and stress-testing cycles



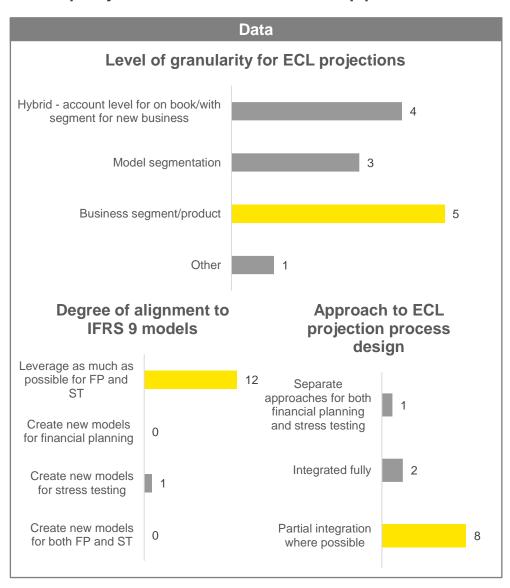
Commentary

Half of respondents are incorporating multiple economics into their projection models

- ▶ Most banks who are incorporating multiple economics are using a fully aligned approach. Banks in the Netherlands tend to opt for the expert judgment/qualitative approach.
- ► The approach consisting of not using multiple-economic scenarios may be a reflection of EBA and PRA regulatory requirements for stress testing where a perfect foresight approach was proposed. In essence, only one scenario (downturn) was used.
 - ▶ Of the banks who answered no, at least one is working towards the capacity to incorporate multiple economics into projection models.
- ▶ Given the lower number of responses, this is an area that is likely to be evolving and next years' stress testing round should bring new approaches.

5. Stress testing

ECL projection solution to support financial planning and stress-testing cycles



Commentary

Varied degree of granularity for ECL projections

- ► The most common approach is to project ECL at a business segment or product level and most UK banks are taking this approach.
- ► Ten banks are yet to determine their approach to ECL projections for financial planning and stress-testing.
- ▶ The bank taking a different approach is not currently performing ECL projection for planning or stress-testing, but is considering their approach.
- ▶ As expected, most banks are opting to leverage IFRS 9 models as much as possible for financial planning and stress-testing cycles. One UK bank has created new models for financial planning and a Canadian bank has created new stress-testing models.
- ▶ Most respondents have partially integrated the ECL projection process, but one bank has designed separate processes for both financial planning and stress-testing.
- ▶ Almost half of respondents were unable to answer the questions around degree of alignment with IFRS 9 models and the ECL projection process design. We believe this to be the case because banks have been focused on the final calculation for the adoption of IFRS 9 and will subsequently focus on the integration with other business processes.

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