IFRS 9 Impairment

Global insights

China Banking Association
15 November 2017

Agenda

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Introduction and high level overview of IFRS 9

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Overview of IFRS 9
Financial assets

Classification & Measurement	Impairment	Hedge Accounting
▶ Revised approach to measurement of financial assets ▶ Principle-based, unified model based on both the use of assets within entities business models and the nature of the cash flows ▶ Financial assets are reclassified between measurement categories only when the business model for managing them changes	▶ Fundamental redesign of provisioning model for financial assets ▶ Move from an "incurred loss" model to an "expected loss" model ▶ Earlier recognition of impairment. For performing assets – 12 months worth of expected losses. For non-performing assets – lifetime losses to be captured upfront	▶ New standard aimed at simplifying existing hedge accounting rules ▶ Reflects more accurately how an entity manages its risk and the extent to which hedging mitigates those risks ▶ Removes some of operational burden associated with hedge effectiveness testing ▶ More risks can be hedged

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Key challenges
Pre-implementation considerations

Programme governance	► Quality of implementation ► Systems and data landscape ► Resources and timing
Affected functions	► The whole organization: Accounting, Finance, Risk Management, Business Units, Operations, Information Technology, Compliance, Strategic Planning, etc.
Data	► Availability and collection of data ► Quality of data and data cleansing ► Controls and assurance environment
Capital impacts	► Impacts on accounting and regulatory capital ► Linkages amongst accounting policy choices, management judgments and capital

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Key challenges
Classification and Measurement

Business model	▶ Definition and aggregation of business models ▶ Interactions between selling decisions and accounting classification ▶ Processes and systems to document business model, reasons for sales and change in business model
Contractual cash flow	▶ Conduct contractual cash flow assessment ▶ Selection of benchmark financial instruments for cash flow assessment ▶ Determination of appropriate de-minimis level ▶ Cash flow and other required information not readily available
Fair value measurement	▶ Choice between amortised cost and fair value and consequential impacts to profit & loss, equity and regulatory capital ▶ Transition from historical loss to expected loss impairment model
Disclosures	▶ Reconciliation between IAS 39 measurement and new measurement categories under IFRS 9 ▶ Additional qualitative and quantitative disclosures

Key challenges
Impairment

Data, models and system availability	▶ Sufficient and reliable historical data needed for model development ▶ Disaggregation of loan and investment portfolios based on risk characteristics ▶ System support for calculation, monitoring and reporting of impairment
Expected loss modelling	▶ Determination and build-out of models for 12 months and lifetime expected loss ▶ Extension of impairment models to cover money markets, investments, off-balance sheet commitments and financial guarantees ▶ Forward-looking estimation of IFRS 9 components ▶ Consideration of contractual maturity vs behavioral maturity
Transfer criteria	▶ Determine significant deterioration criteria in credit risk ▶ Aligning stages of various facilities of the same borrower
Disclosures	▶ Reconciliation of impairment and impaired assets between IAS 39 and IFRS 9 ▶ Additional qualitative and quantitative disclosures ▶ Communication strategy with key stakeholders

Key challenges
Hedge Accounting

Qualitative and quantitative threshold for recognising effectiveness

- Require robust hedge documentation
- Emphasis on qualitative factors for prospective effectiveness assessment
- Elimination of the 80-125% quantitative threshold for recognising effectiveness
- Hedge relationship can no longer be voluntarily revoked at the will of management
- Increase in use of various hedging tools and/or strategies by peers may impose pressure on entities to explore new hedging tools and/or strategies

Disclosures

- Disclosure is more onerous than IAS 39, in particular on risk management and hedging strategies, definition of hedge effectiveness, rebalancing of risk and consequential financial impacts on financial statements
- Reconciliation between IAS 39 and IFRS 9

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EY IFRS 9 Impairment Banking Survey

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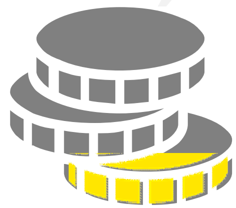
IFRS 9 Impairment Survey at a glance

A wide range of expected increases in provisions



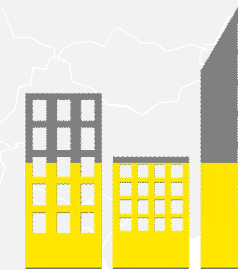
The majority of respondents expect an increase in provisions of up to 15%.

Impact on capital

The majority of respondents expect the estimated impact on the Common Equity Tier 1 (CET 1) ratio to be between 0%-0.25%.

Multiple economic scenarios (MES)

Most of the respondents expect an impact of MES of less than 10%.



40% of banks will apply three scenarios:

base case, upper case and lower case.

Parallel run

Most banks will only perform parallel runs in the second half of 2017.

Impact assessment disclosure

Only 20% of banks will disclose preliminary numbers before Q4 of 2017.

Budget

Half of the larger banks have reported an implementation budget over €60m.

Stage allocation

Approximately 90% of exposures on transition will be classified as stage 1.

Participants profile

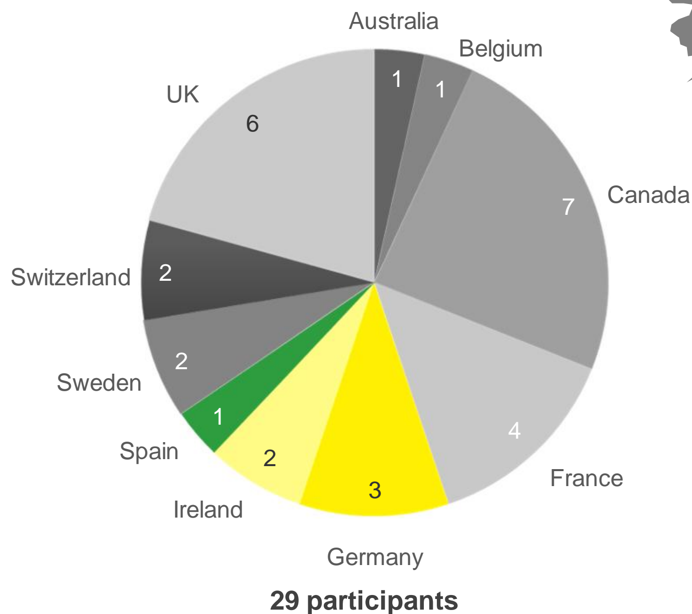
We surveyed 29 top-tier banks worldwide, of which:

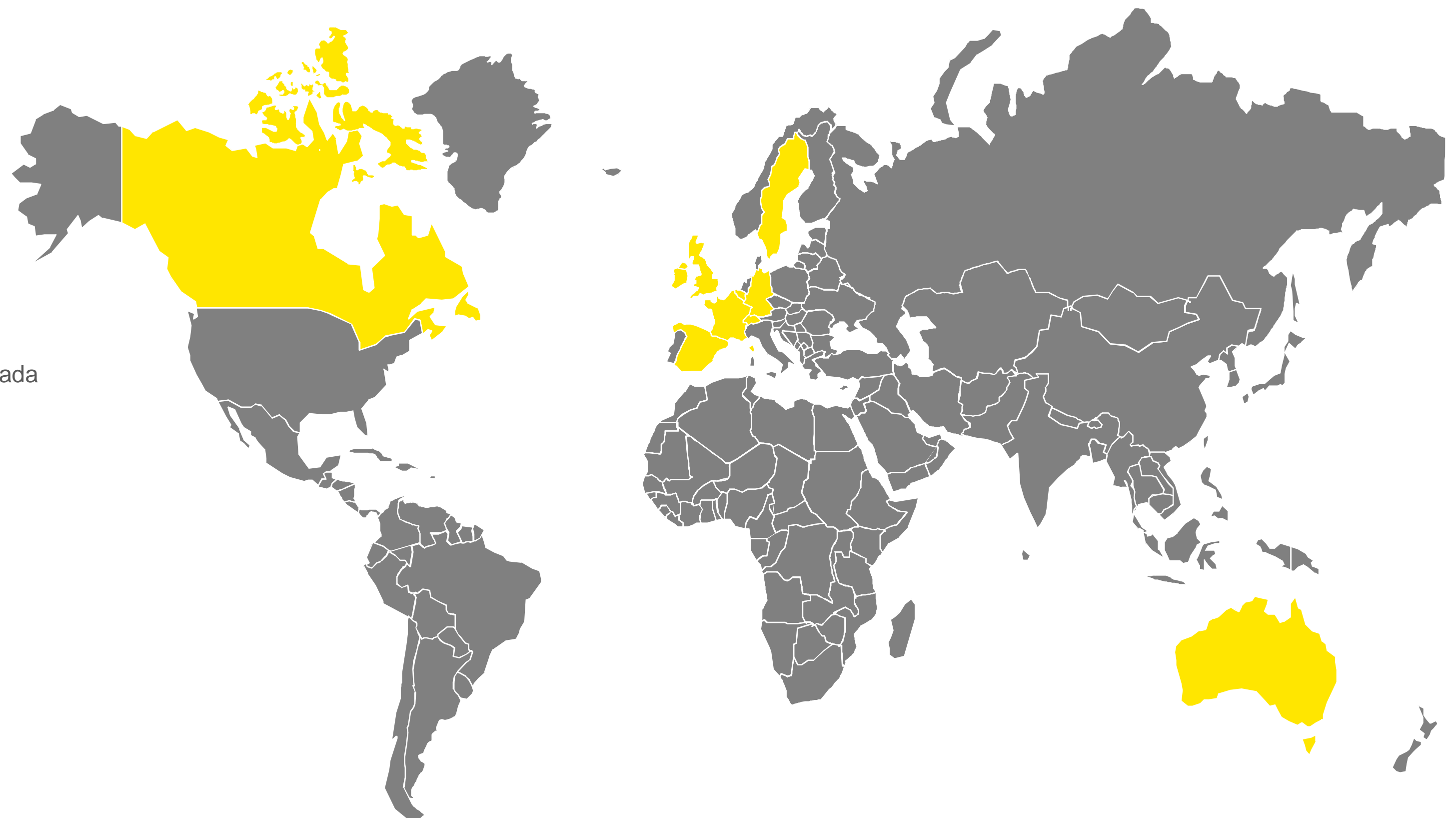
► Fifteen have a balance sheet in excess of €600b; 10 have a balance sheet between €200b and €600b, while the remaining four have a balance sheet of less than €200b.

► Eleven are global systemically important banks (G-SIBs).

► Twelve are under the scope of Sarbanes-Oxley Act (SOX).

► Seventeen use an Advanced Internal-Rating Based approach (A-IRB) for all of their portfolios.





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1. Impact Assessment

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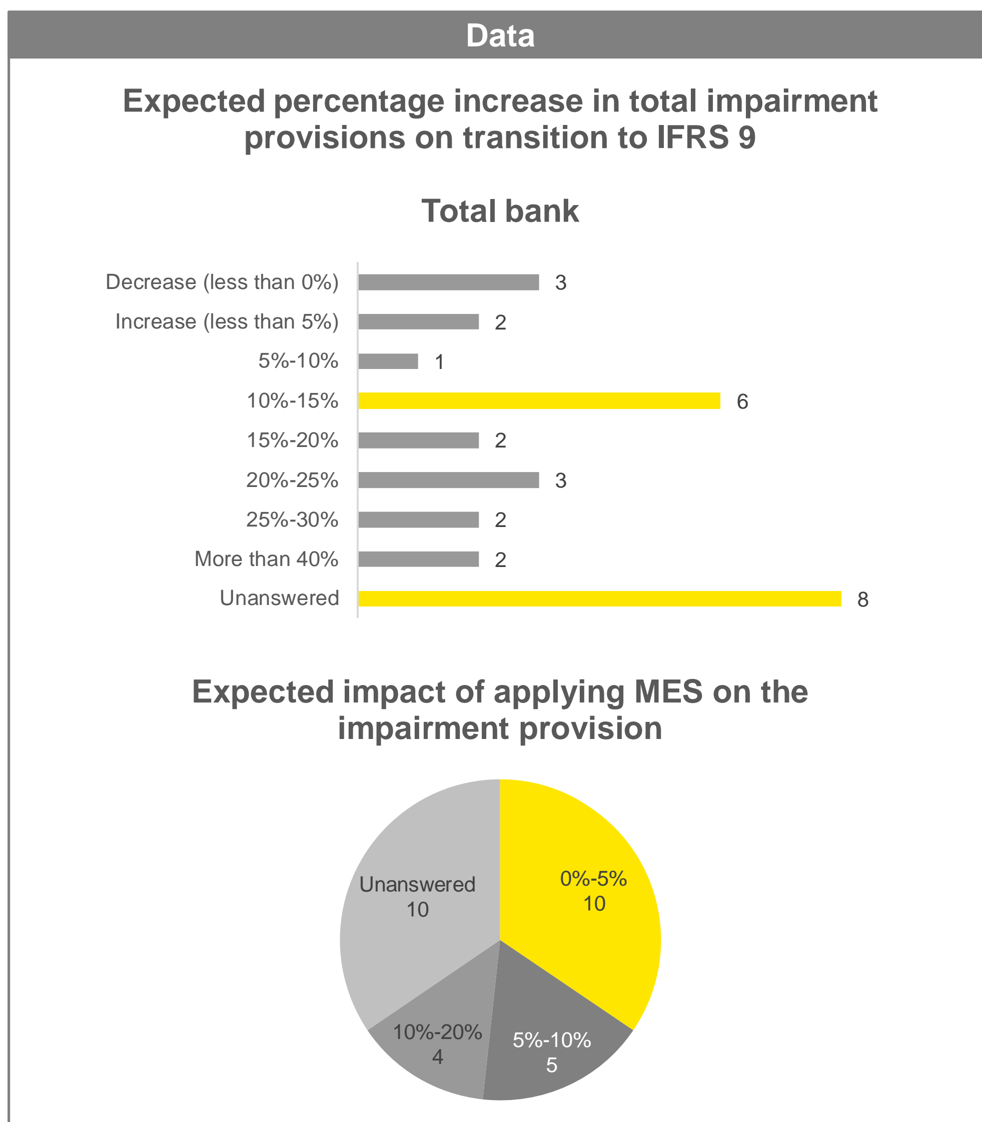
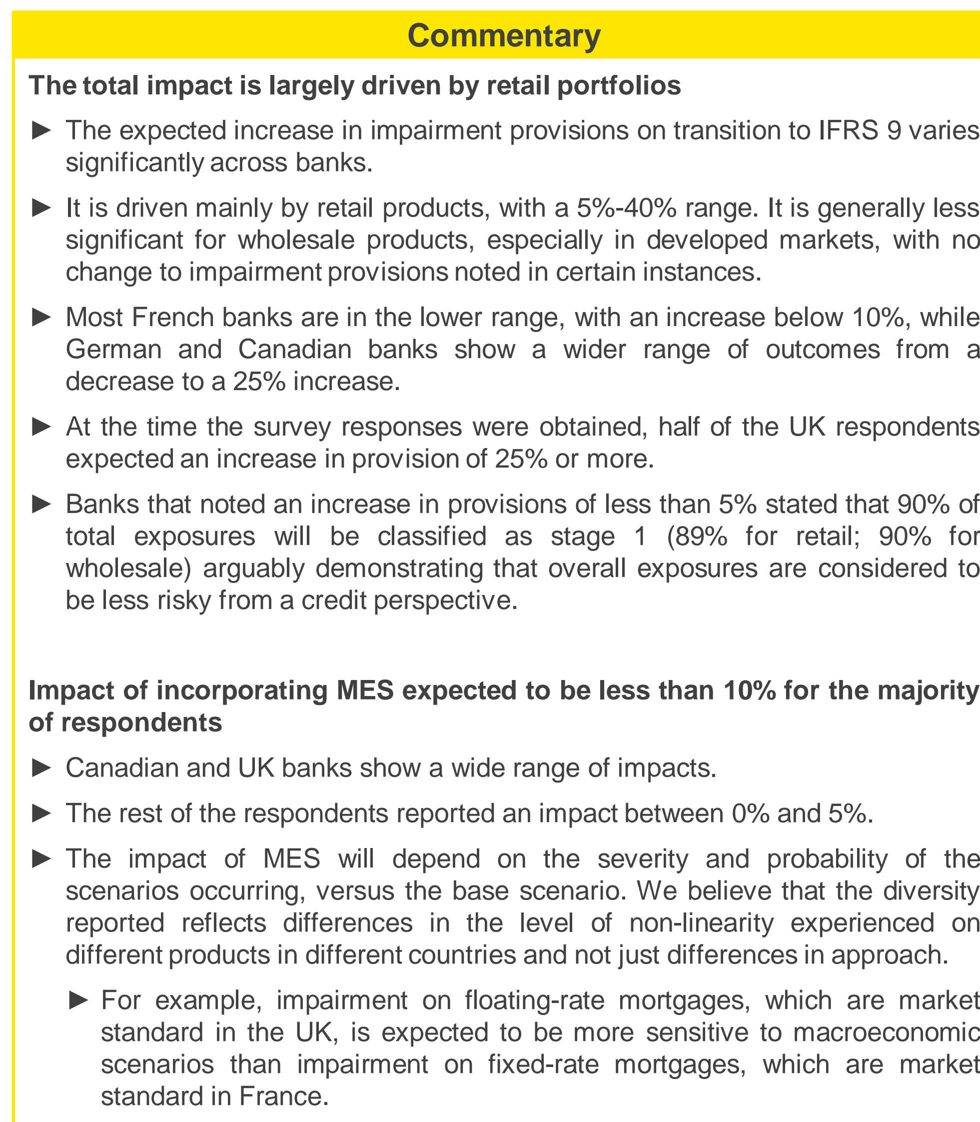
1. Impact assessment – impairment provisions

Expected percentage increase in total impairment provisions on transition to IFRS 9





Commentary

The total impact is largely driven by retail portfolios

- The expected increase in impairment provisions on transition to IFRS 9 varies significantly across banks.
- It is driven mainly by retail products, with a 5%-40% range. It is generally less significant for wholesale products, especially in developed markets, with no change to impairment provisions noted in certain instances.
- Most French banks are in the lower range, with an increase below 10%, while German and Canadian banks show a wider range of outcomes from a decrease to a 25% increase.
- At the time the survey responses were obtained, half of the UK respondents expected an increase in provision of 25% or more.
- Banks that noted an increase in provisions of less than 5% stated that 90% of total exposures will be classified as stage 1 (89% for retail; 90% for wholesale) arguably demonstrating that overall exposures are considered to be less risky from a credit perspective.

Impact of incorporating MES expected to be less than 10% for the majority of respondents

- Canadian and UK banks show a wide range of impacts.
- The rest of the respondents reported an impact between 0% and 5%.
- The impact of MES will depend on the severity and probability of the scenarios occurring, versus the base scenario. We believe that the diversity reported reflects differences in the level of non-linearity experienced on different products in different countries and not just differences in approach.
  - For example, impairment on floating-rate mortgages, which are market standard in the UK, is expected to be more sensitive to macroeconomic scenarios than impairment on fixed-rate mortgages, which are market standard in France.

1. Impact assessment – impairment provisions

Expected percentage increase in total impairment provisions on transition to IFRS 9 (continued)

Data

Commentary

Credit card exposures driving increase in retail provisions

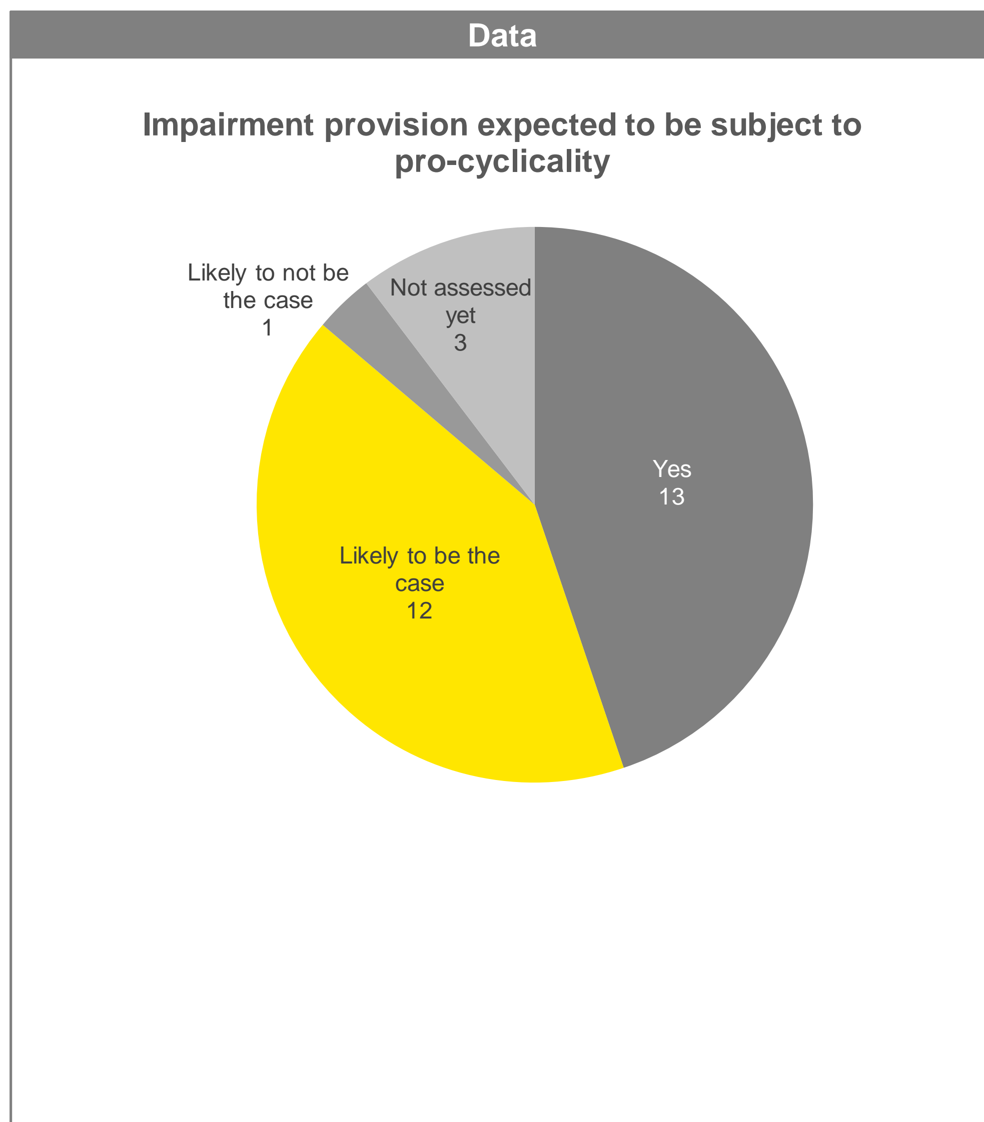
- Retail portfolios will be most impacted by the adoption of IFRS 9, in particular, because of exposures classified as stage 2, and resulting lifetime expected credit loss (ECL) requirements.
- The highest impact has been reported on credit card portfolios, with four banks expecting more than 40% increase in provisions. This is largely due to the requirement to calculate ECL for both the drawn and undrawn exposures.
- Some banks reported a significant impact on unsecured products, especially with the introduction of a 12-month expected loss for stage 1 exposures.
- There is more diversity on the impact of mortgages: four banks expect an increase of 5%-10%; three an increase of more than 40%; one a decrease.

Wholesale impact expected to be less significant

- The expected impact on wholesale portfolios is generally lower than the impact on retail portfolios, with the exception of “central governments and central banks” and “financial institutions”, where it appears more significant as they currently attract no, or only small, provisions. However, the absolute impact is expected to be small due to the high quality of these assets.
- The introduction of 12-month ECL for financial instruments that are considered to have low credit risk contributes to the increase in wholesale provisions.
- Some banks noted little change, or even a decrease, in ECL for corporates, primarily resulting from relatively long emergence period used under IAS 39, but also because of very high credit quality or significant collateral. This is more evident for countries where larger collective provisions were being booked on watch list exposures under IAS 39.
- Some corporate assets were also reclassified to fair value through profit and loss, which are not subject to credit impairment.

1. Impact assessment – pro-cyclicality

Impairment provision and pro-cyclicality



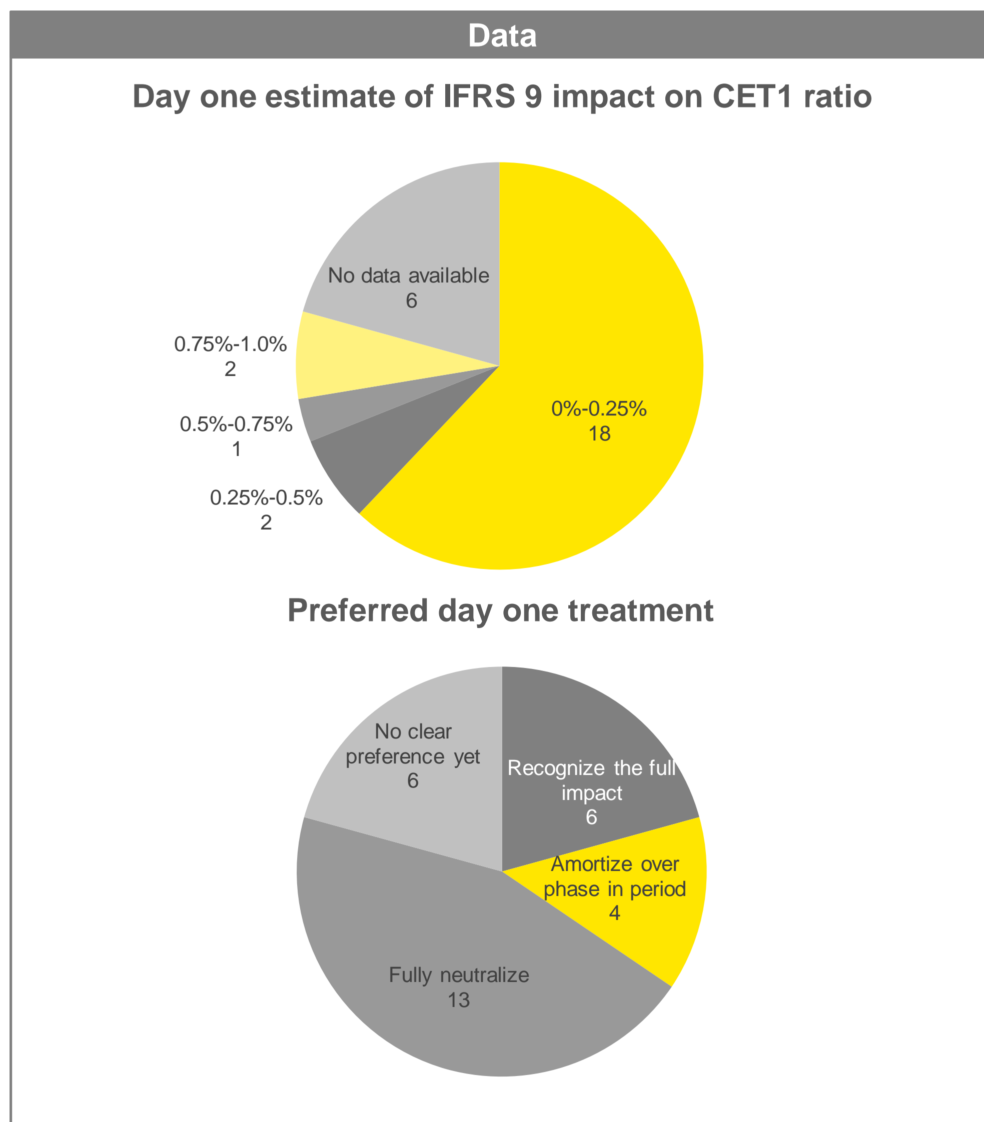
Commentary

Impairment provision and pro-cyclicality

- The majority of banks anticipate that the IFRS 9 ECL provisions will be subject to pro-cyclicality through adjusting forward-looking information, macro economic scenarios and probability weightings of those scenarios.
- **Most respondents noted that they have not yet assessed the potential drivers of pro-cyclicality**. Other banks have identified the following key drivers of pro-cyclicality:
  - The use of Point-in-Time (PiT) measures
  - The incorporation of forward-looking information, especially in the case of an economic downturn, which can be amplified by the non-linearity of the distribution of losses
- Below are extracts from responses for illustrative purposes:
  - "Pro-cyclicality has been viewed as a function of lifetime loss estimates and economic forecasts. Since IFRS 9 requires the estimate of ECL to be PiT, model outputs will be sensitive to peaks and troughs in the economic cycle. We expect the effects to be more pronounced for longer-dated portfolios."
  - "We are in the process of undertaking analysis to understand how our IFRS 9 provisions will vary under different economic assumptions. Due to the dependency on completion of the model build before carrying out the analysis, this work is still at an early stage."

1. Impact assessment – capital
CET1 ratio and preferred day one treatment

Data



Commentary

Day one estimate of IFRS 9 impact on CET1 ratio mostly 0%-0.25%

- ► There is less divergence in the responses on CET1 ratio impact than on provisions, because of the excess expected loss currently deducted from CET1 under IAS 39 offsetting part of the increase for IRB portfolios.
- ► Banks within the range of 0.75%-1.0% expect a higher increase in the ECL compared with the current IAS 39 provisions.

Preferred day one treatment

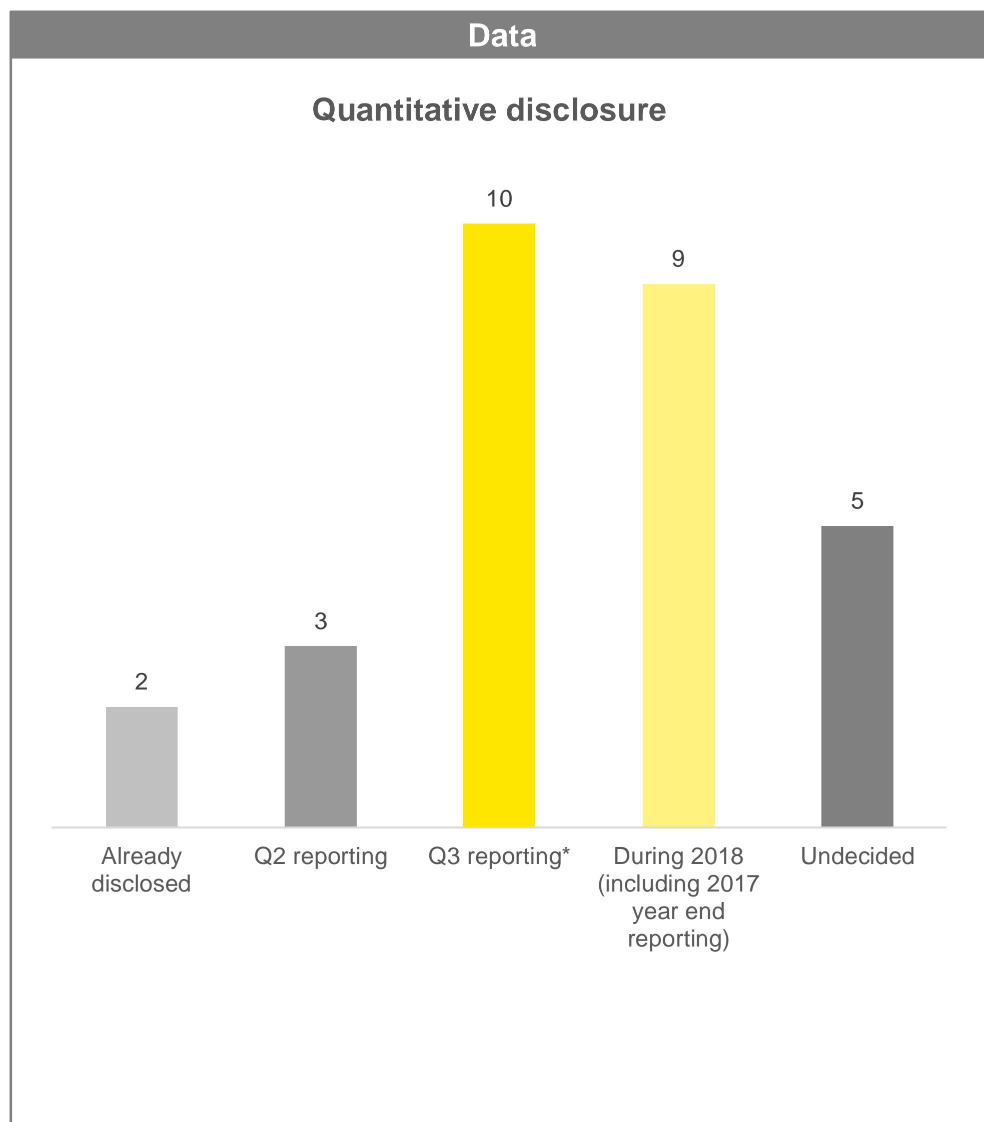
- ► The recent Basel Committee on Banking Supervision (BCBS) standard[1] provides jurisdictions with the freedom either to implement a transitional approach or to recognise the full impact on day one. However, it does not permit neutralisation.
- ► As the BCBS principles on the capital treatment were not available at the time of our survey, the majority of respondents indicated a preference for the neutralization of the impact as opposed to a periodic amortisation approach.
- ► Several respondents expressed a wish that the long-term treatment is finalized before the impact on capital is crystallized. The potential impact of IFRS 9 on regulatory stress testing was also raised by respondents.
- ► Some respondents were concerned about the implementation date difference between IFRS 9 and the US GAAP current expected credit loss (CECL) standard.
- ► Some banks reported they would prefer to recognize the full impact of IFRS 9 on capital on day one, because:
  - ► They anticipate a minimal impact on capital.
  - ► They will have to disclose the fully front loaded capital impact in any case.
  - ► This would avoid making the regulatory capital calculation more complex.
- ► The participants favoring a transitional amortization approach generally noted it could help smooth out any potential volatility in capital requirements.
- ► Note: The recently published draft European Council regulation[2] would permit a bank to amend its initial decision, subject to permission.

[1] "Publications," *Bank for International Settlements website*, www.bis.org/bcbs/publ/d401.pdf, accessed 21 August 2017.
[2] "Publications," *European Council website*, http://data.consilium.europa.eu/doc/document/ST-9480-2017-INIT/en/pdf, accessed 21 August 2017.

1. Impact assessment – disclosures

Disclosure of the potential impact of applying IFRS 9 impairment

Data



*Year end reporting for Canadian banks

Commentary

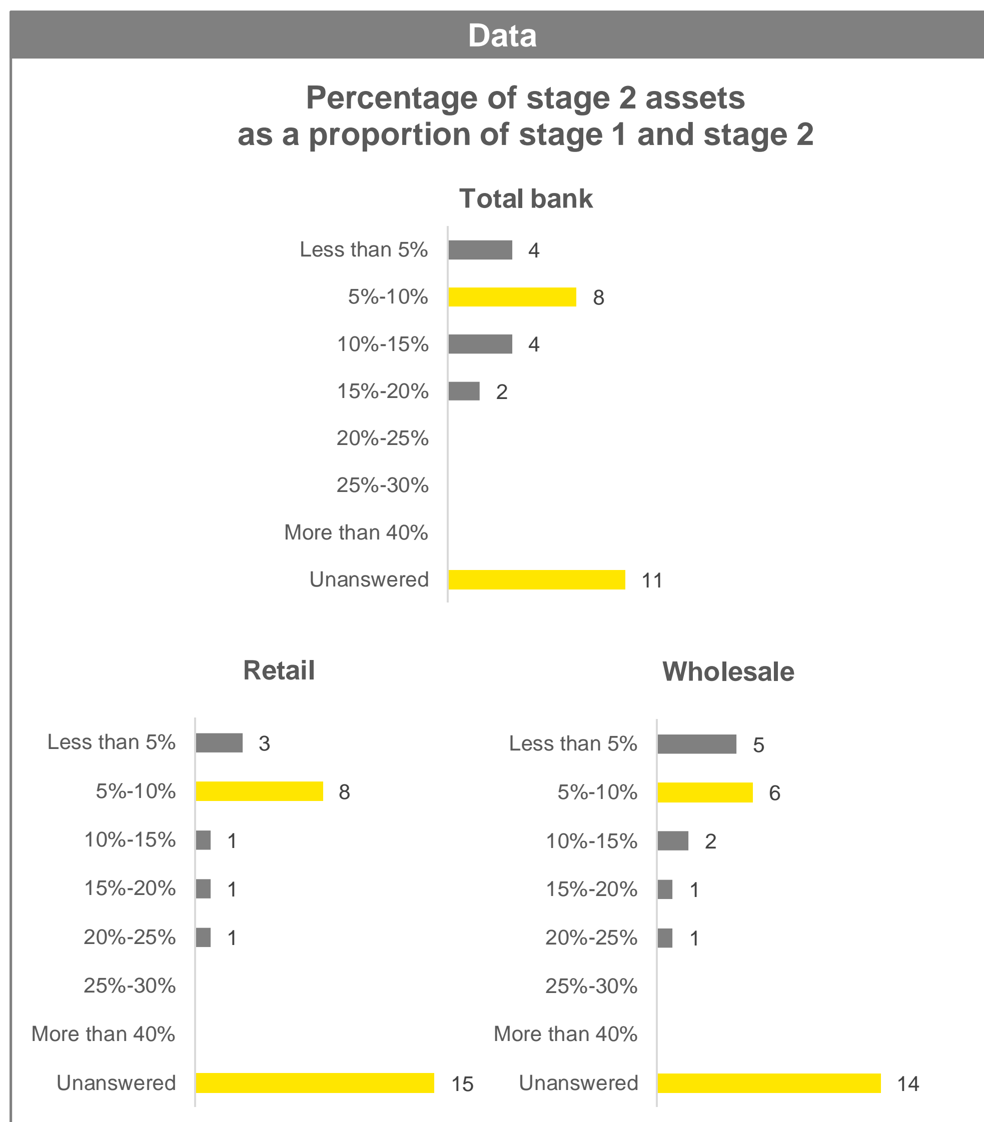
Most banks plan to wait until year end to disclose the expected impact

- By May 2017, when data was collected for purposes of the survey, only two banks, one is an early adopter, have made public disclosure of the expected impact of IFRS 9.
- Of the banks that expect to publish disclosures as part of the third-quarter reporting, the majority are Canadian with October reporting year ends, which suggests that most banks surveyed are waiting for their next financial statements to disclose the expected impact of IFRS 9. This may include reporting outside of periodic financial reporting, e.g., press releases.
- These results are similar to the findings in our last survey, except that fewer banks remain undecided and amended their answer to state that, as part of the "2017 year end reporting."
  - Our expectation was that there would have been more disclosures during 2017 and less waiting until year end 2017 or the beginning of 2018.
  - We believe this discrepancy with our initial expectations is because of the parallel runs generally starting later than expected, which result in **numbers not being deemed reliable enough for public disclosures.**

1. Impact assessment – stage allocation

Exposure analysis on transition to IFRS 9

Data



Commentary

Most exposures at transition are expected to be in stage 1

- **Approximately 90% of all exposure types will be classified as stage 1** with the remainder of exposures split 7.5% for stage 2 and 2.5% 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, and will most notably be the case for exposures to central governments, central banks and financial institutions.
- 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 20.7%, 13.1% and 11.8% respectively.

Stage 2 as a proportion of stage 1 and stage 2 (in percentage)

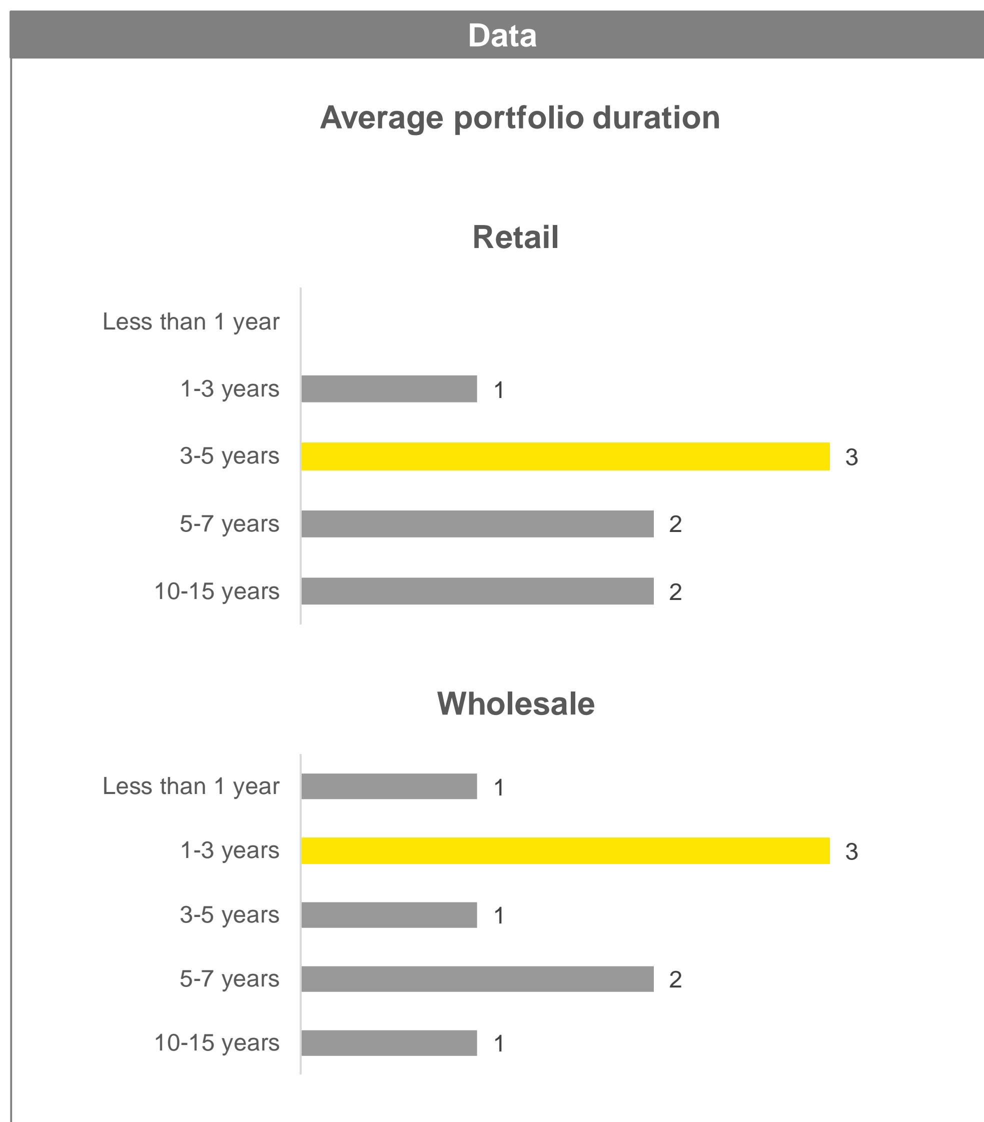
	Average	Minimum	Maximum
Mortgages	6.3%	0.8%	21.0%
Credit cards and other	**13.1%**	**0.0%**	**35.4%**
Unsecured personal	**11.7%**	**1.0%**	**42.9%**
Overdrafts	**20.7%**	**10.1%**	**42.9%**
Asset finance	6.6%	3.3%	10.2%
Central governments and central banks	0.9%	0.0%	6.1%
Financial institutions	3.7%	0.0%	22.0%
Corporates	8.5%	2.0%	29.9%
SMEs	**11.8%**	**5.1%**	**42.0%**

*The definition of SME is based on the regulatory definition of small medium enterprises, whose criteria may differ by country. For the purposes of the survey, it is included within wholesale.

1. Impact assessment – stage allocation

Duration analysis on transition to IFRS 9

Data



Commentary

Average duration

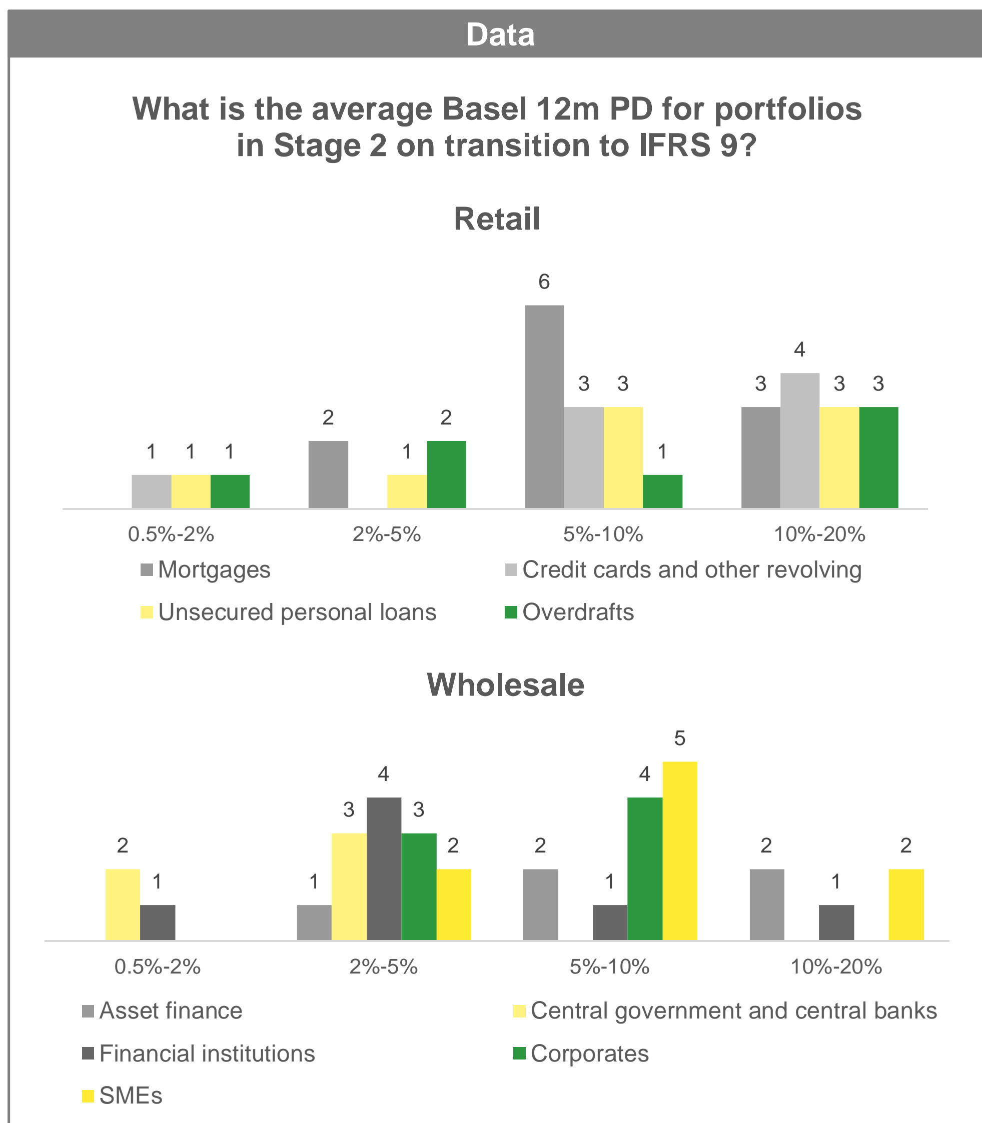
- ► **Most financial institutions expect duration to be the main driver of IFRS 9's impact on provisions**, as lifetime expected credit loss is larger for longer products.
- ► In addition, large differences would be expected across countries showing different market practices, which should be taken into account by users when comparing banks and interpreting IFRS 9 impacts.
- ► Most banks were 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. 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 an average duration of less than one year relate mostly to overdrafts and exposures to central governments and central banks.

*For the purpose of this question, we define average portfolio duration as the average life in which the bank would incur a loss.

1. Impact assessment – stage allocation

Basel 12-month Probability of Default (PD) analysis for stage 2 exposures on transition to IFRS 9

Data



Commentary

Basel 12-month PDs in stage 2 on transition

- The average Basel 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.
- Five 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 2%-20%.
- 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.
- Wholesale shows interesting trends of PDs: lower than 5% for central governments and central banks and financial institutions, suggesting that these exposures are generally subject to classification into stage 2 despite their higher quality.
- SME exposures generally show greater levels of PDs (between 5% and 10%), while corporates are more spread between 2% and 10%.

EY IFRS 9 Impairment Banking Survey

2. IFRS 9 Project Status

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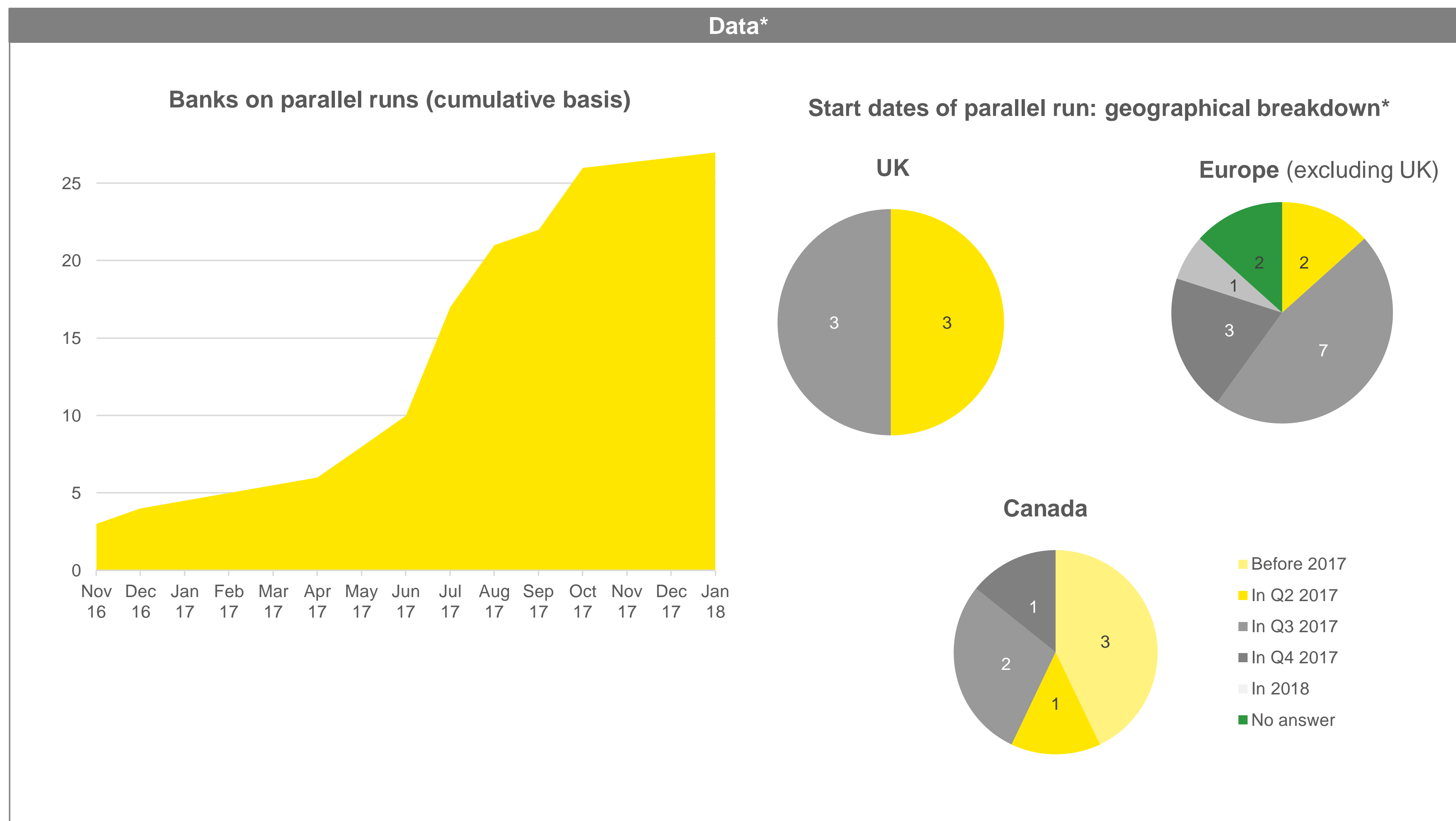
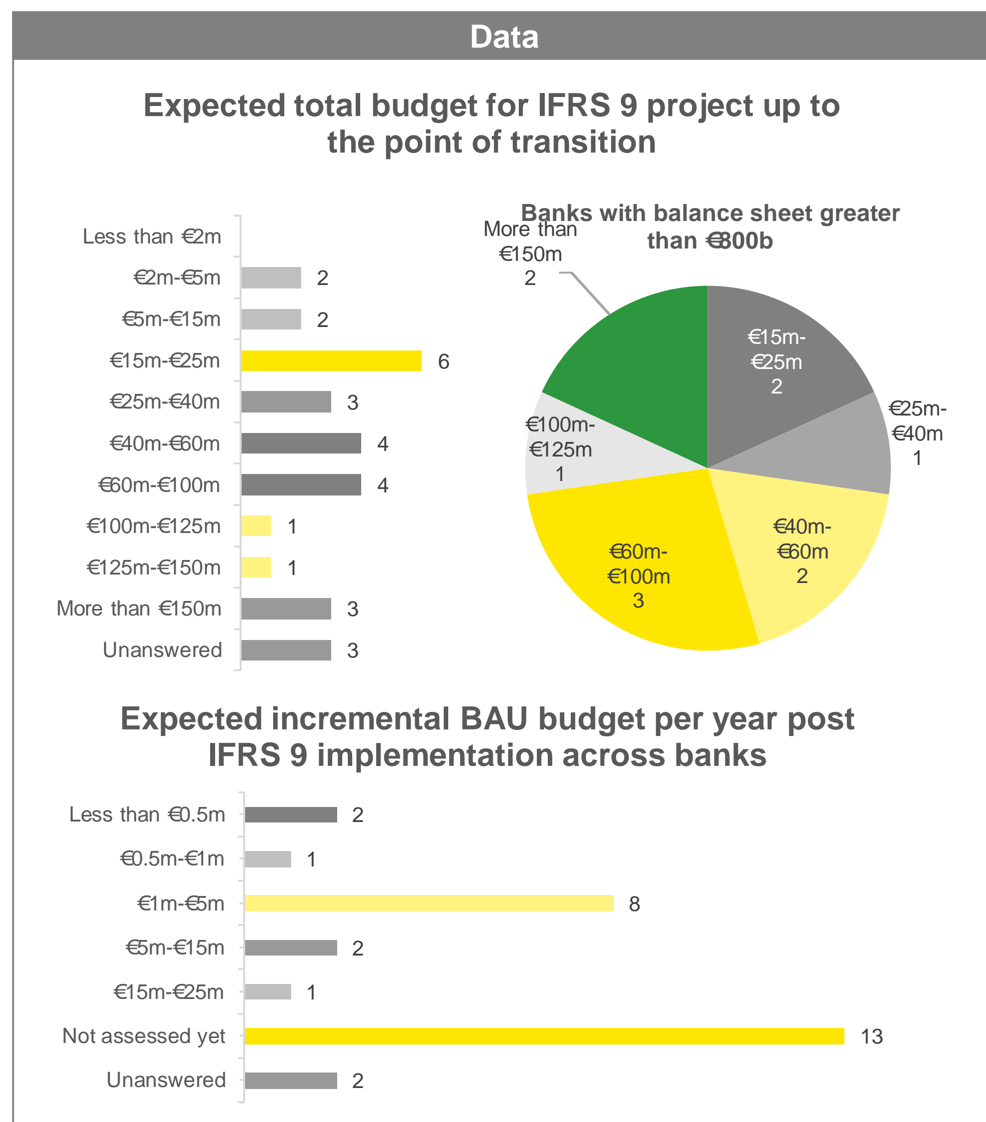
2. IFRS 9 project status
Progress on 2017 planned parallel runs (continued)

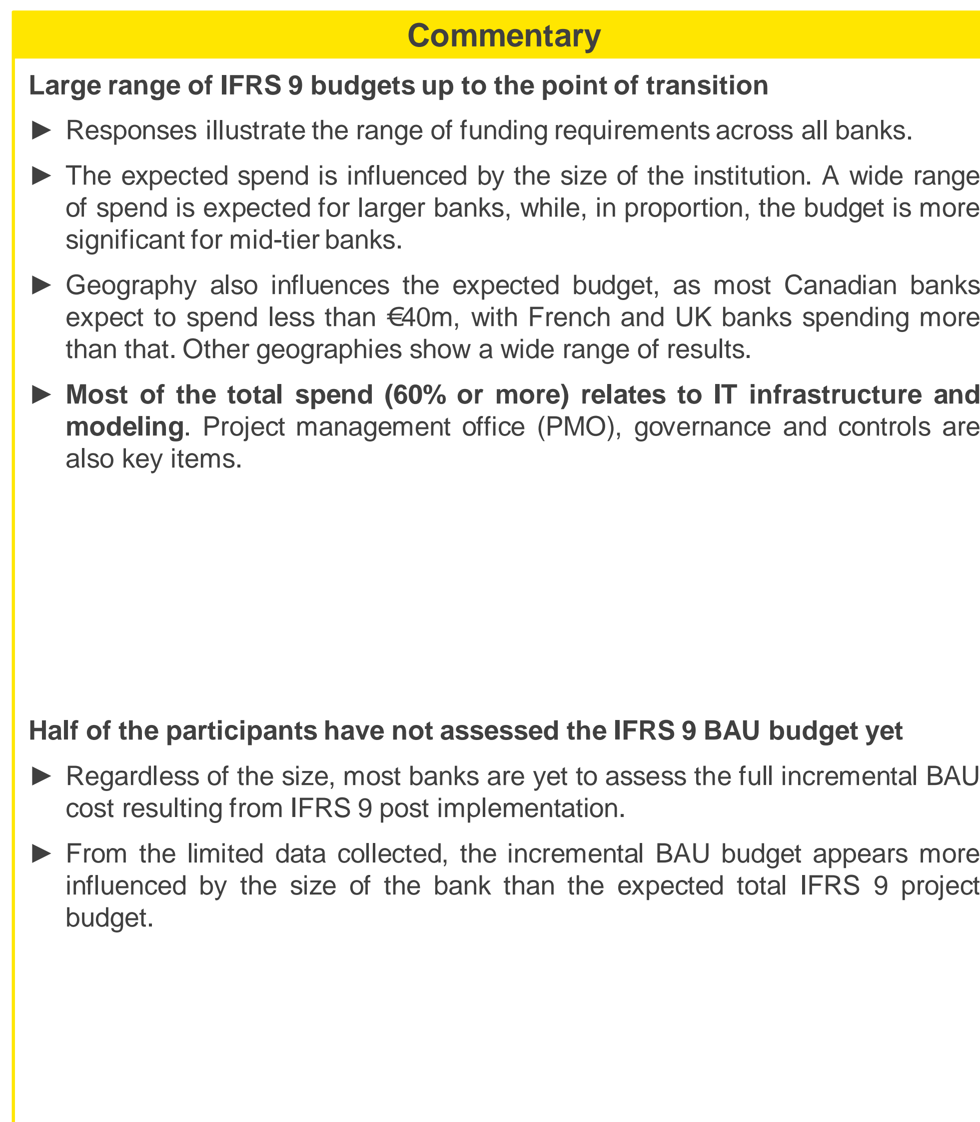


* Data collected from the Australian banks have been excluded in the geographical breakdown to keep confidentiality because of the low number of participants. Furthermore, early adopters and the count of unanswered have been removed from the cumulative count.

2. IFRS 9 project status

Point of transition and incremental business as usual (BAU) budget





Commentary

Large range of IFRS 9 budgets up to the point of transition

- Responses illustrate the range of funding requirements across all banks.
- The expected spend is influenced by the size of the institution. A wide range of spend is expected for larger banks, while, in proportion, the budget is more significant for mid-tier banks.
- Geography also influences the expected budget, as most Canadian banks expect to spend less than €40m, with French and UK banks spending more than that. Other geographies show a wide range of results.
- **Most of the total spend (60% or more) relates to IT infrastructure and modeling**. Project management office (PMO), governance and controls are also key items.

Half of the participants have not assessed the IFRS 9 BAU budget yet

- Regardless of the size, most banks are yet to assess the full incremental BAU cost resulting from IFRS 9 post implementation.
- From the limited data collected, the incremental BAU budget appears more influenced by the size of the bank than the expected total IFRS 9 project budget.

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3. Operating Model

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3. Operating model

Frequency of the BAU IFRS 9 impairment process

Data

ECL calculation and staging assessment

Frequency	ECL calculation	Staging assessment	ECL calculation with full governance	Re-assessment of significance thresholds
Monthly	22	22	5	-
Quarterly	7	7	22	2
Semiannually	-	-	-	-
Annually	-	-	1	18
Other	-	-	-	9
Unanswered	-	-	1	-

Economic scenarios and significance thresholds

Frequency	Refresh of base case economic scenario	Refresh of alternative economic scenarios	Refresh of probability weights
Monthly	2	-	-
Quarterly	20	16	16
Semiannually	5	5	5
Annually	1	3	3
Other	1	5	5

Retail and wholesale ratings, PDs and LGDs

Frequency	Update of retail ratings and PDs	Update of wholesale ratings and PDs	Update of retail LGDs	Update of wholesale LGDs
Monthly	15	9	12	6
Quarterly	7	7	8	6
Semiannually	1	1	2	2
Annually	3	11	6	11
Other	3	1	1	3
Unanswered	-	-	-	1

Commentary

ECL calculations performed monthly, but full governance process quarterly

- ► Responses show strong consistency across all banks in the frequency of main processes.
- ► Twenty-two banks indicated that the ECL calculation and staging assessment will be performed on a monthly basis. However, the ECL calculation subject to full governance (e.g., approval through respective three lines of defence) will largely be performed on a quarterly basis. This is consistent with the existing frequency of impairment review meetings under IAS 39.

Economic scenarios refresh quarterly

- ► A refresh of the base case and alternative economic scenarios as well as the associated probability weights will be performed on a quarterly basis. More frequent refreshes may result in unnecessary delay for little added benefit.

Staging thresholds revisited annually

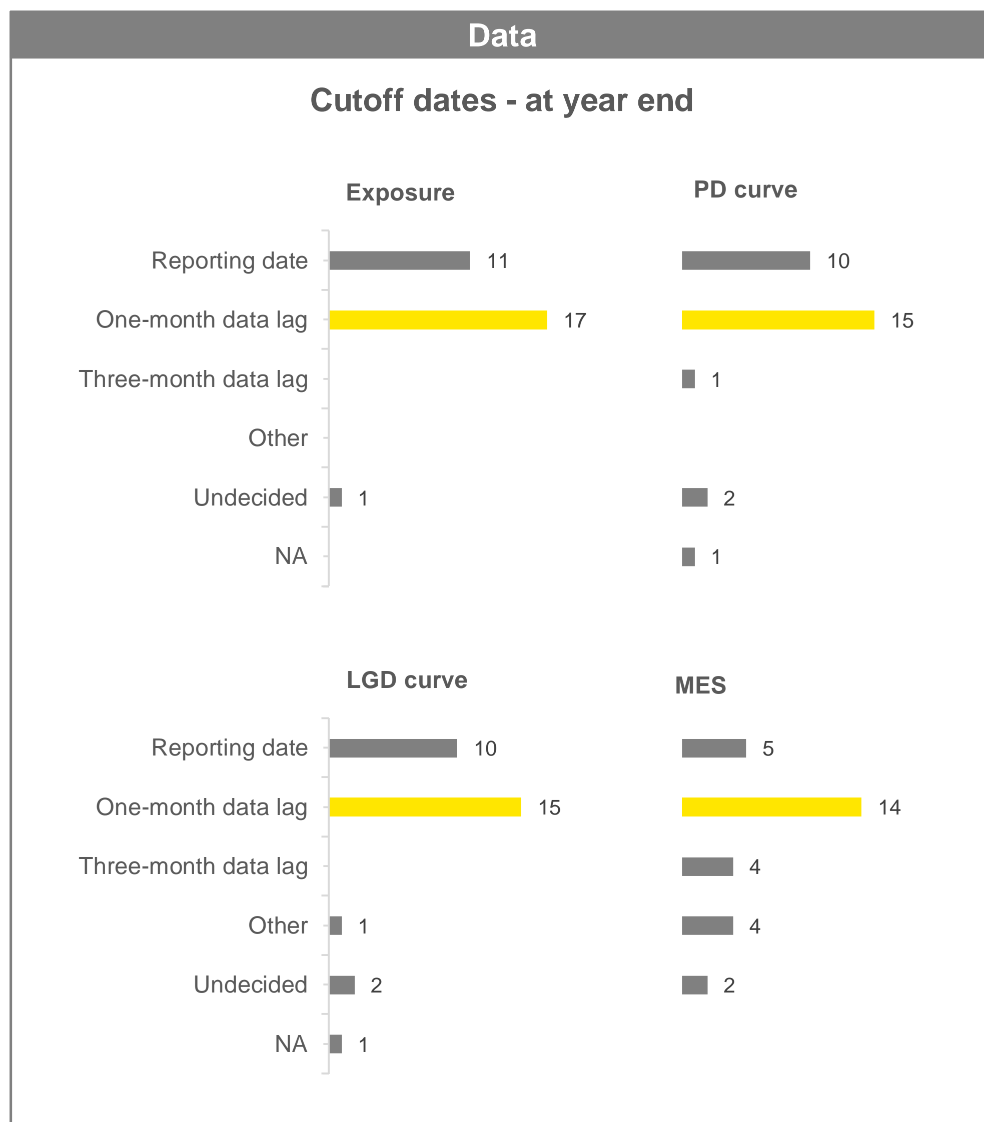
- ► More than half of the participants indicated that they will look to reassess the appropriateness of the staging thresholds on an annual basis.
- ► Some respondents indicated that this will be subject to robust governance, sensitivity analysis and will be portfolio specific.

Frequency of parameter refreshes largely driven by the existing credit rating and credit review process

- ► Retail ratings, PDs and loss given defaults (LGDs) are mostly updated on monthly basis.
- ► Wholesale parameters will largely be updated on an annual basis, in line with the credit review cycle, with ad hoc re-rating as new information of the borrower's financial situation comes to light.
- ► A number of banks reported that, in addition to this, IFRS 9 PDs and LGDs will be updated on a monthly or quarterly basis to incorporate information available and required under IFRS 9 (such as macroeconomic scenario scalers).

3. Operating model
Cutoff dates

Data



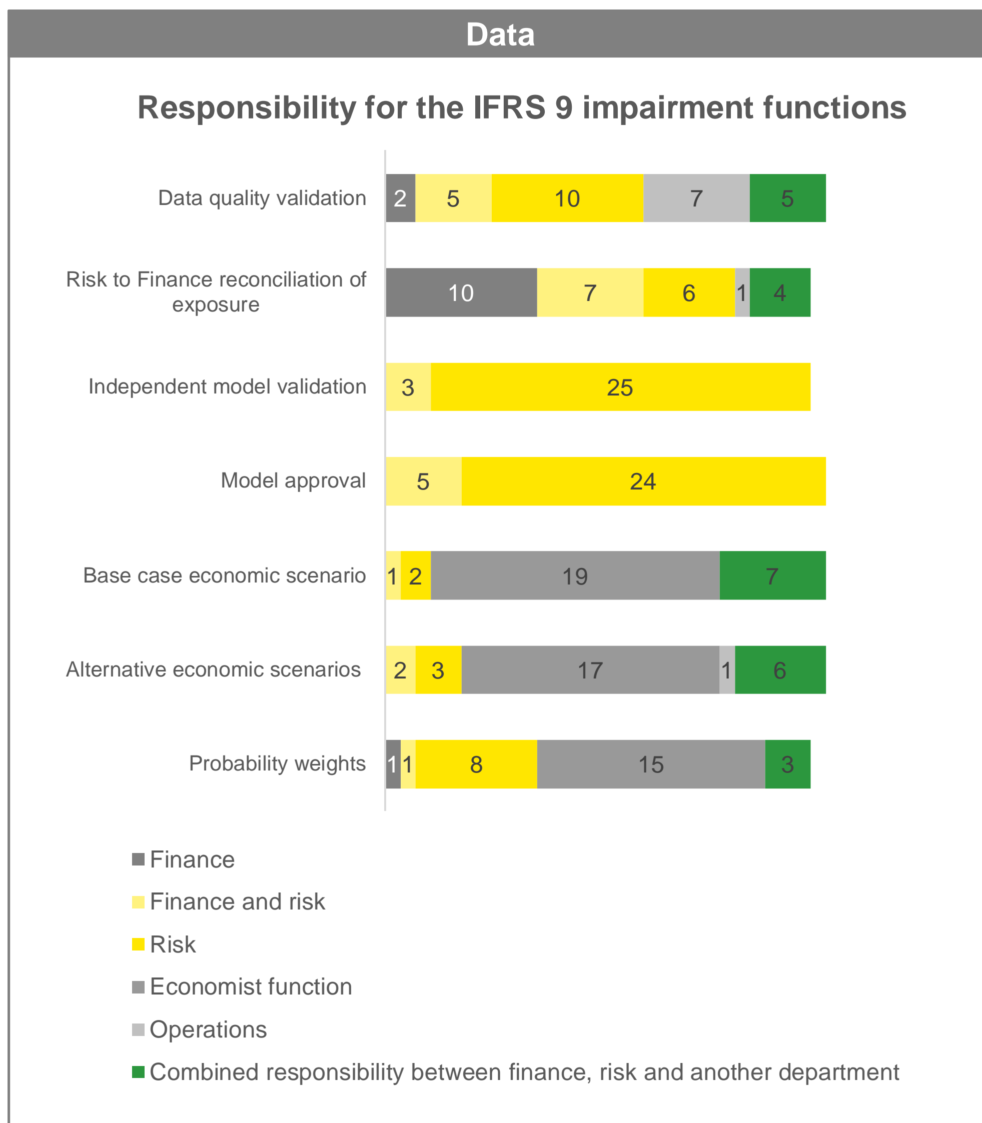
Commentary

Cutoff date to be used for ECL calculation and refresh of parameters

- Some divergence is shown. However, the majority indicate a one-month data lag .
- Results appeared almost identical for year-end and interim reporting.
- The results were similar for each component of the calculation and the majority of respondents indicated a one-month data lag across the board for exposure, PD and LGD curves, and MES:
  - Exposure: This means applying the exposure at default (EAD) as at the month-end preceding the reporting period.
  - PD: This means applying the rating or score as at the month-end preceding the reporting period. In many instances, PDs get refreshed or calibrated on a periodic basis (e.g., annually), which will result in utilized PDs that are older than one month.
  - LGD and MES: This means applying the LGD and forecasted economic conditions as at the month-end preceding the reporting period.
- At least one-third of banks stated that the reporting date would be used as the cutoff date for both the ECL calculation and stage allocation.
- True-up procedures will not be performed unless a significant difference is identified.
- **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.** In addition, the approach will impact the reconciliation of the movement table for both exposure and ECL. Banks are considering a number of adjustment processes to ensure alignment of disclosures.

3. Operating model
Responsibility

Data



Commentary

Responsibility for various components split between finance, risk, operations and economist functions

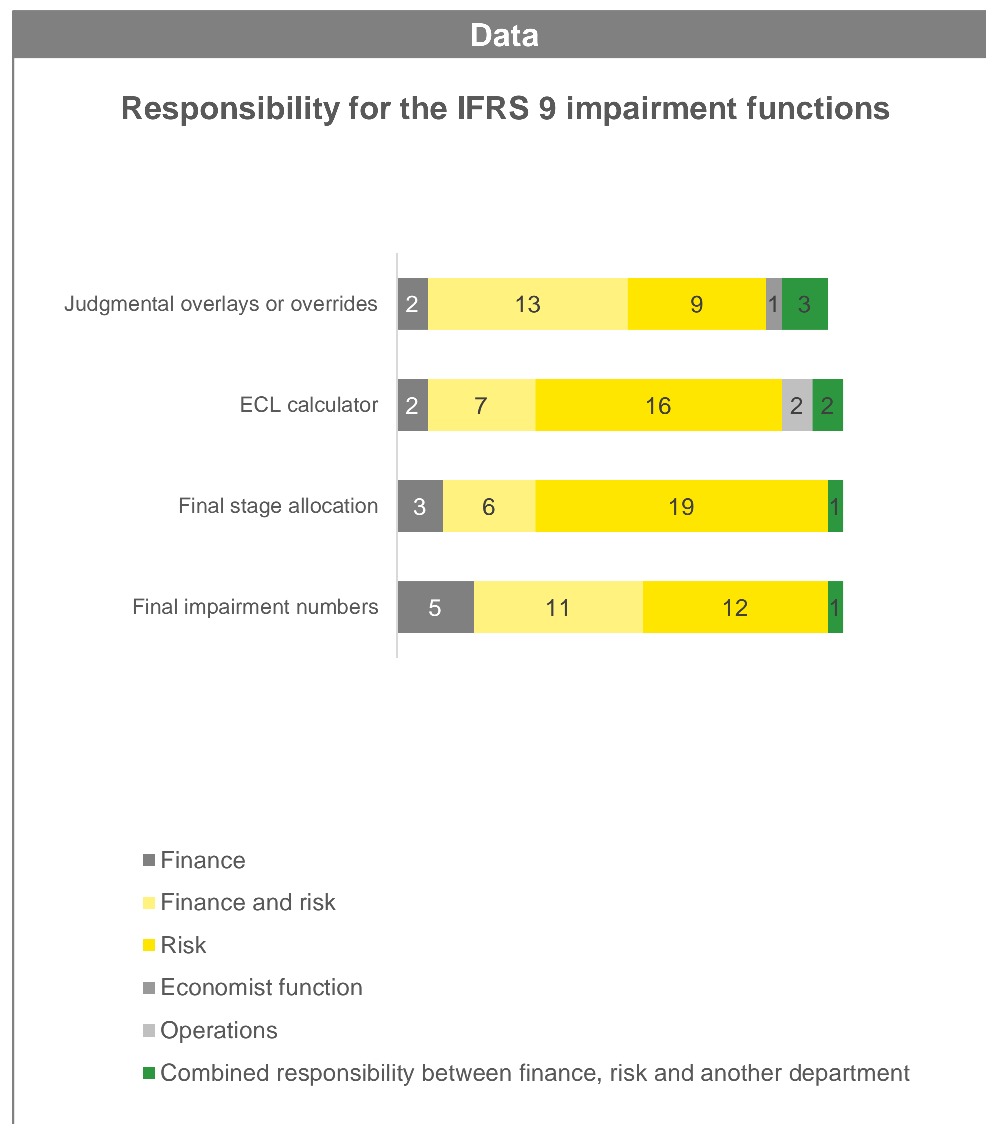
- Risk is the primary function responsible for data quality; although this will depend on the nature and source of the particular data attribute required for ECL calculation purposes. Hence, finance, economists and operations are also responsible.
- Reconciliation of exposures tends to sit with finance, which ensures that the source to report system data is complete and accurate.
- Model approval is clearly owned within risk as is independent model validation. We expect these to be segregated teams within risk functions.

Multiple economic scenarios

- The base case (most likely) economic scenario is generally the responsibility of economist functions, and in some instances, is a joint responsibility with risk.
- Ownership of alternative scenarios and probability weights follows a similar trend to that observed for the base case scenario, although risk takes more responsibility at the stage of assigning probability weights.

3. Operating model
Responsibility (continued)

Data



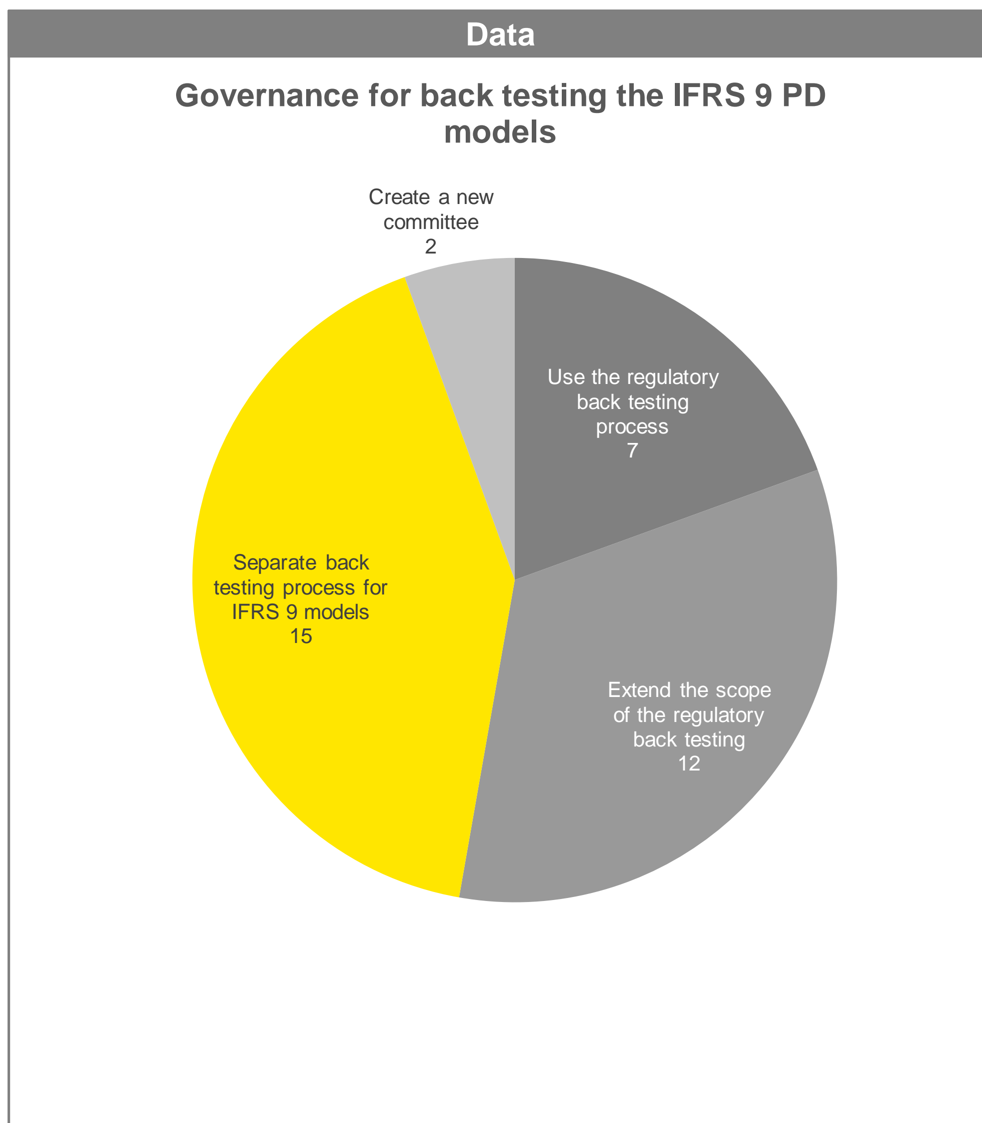
Commentary

Responsibility for IFRS 9

- Overlays are controlled by risk or finance depending on the nature of the adjustment, e.g., overlays for model underperformance, data quality or idiosyncratic factors that are not captured in the model. Most banks adopt a joint model for responsibility.
- ECL calculators are generally owned in the risk function.
- Two-thirds of banks allocate the responsibility of final stage allocation to the risk function.
- **There is a mixed responsibility model for final impairment numbers with most respondents indicating a joint model**. Approaches on governance around these areas appear to still be evolving. The purpose of the question was to consider the governance process for determining the final impairment number rather than the overall responsibility in relation to published financial statements.
- **Clear ultimate responsibility and accountability will be required at senior level.** Senior management regime in the UK, “three lines of defense” principles in Europe and SOX concepts will be important for banks to give due consideration to while allocating ownership.

3. Operating model
Governance for back testing

Data

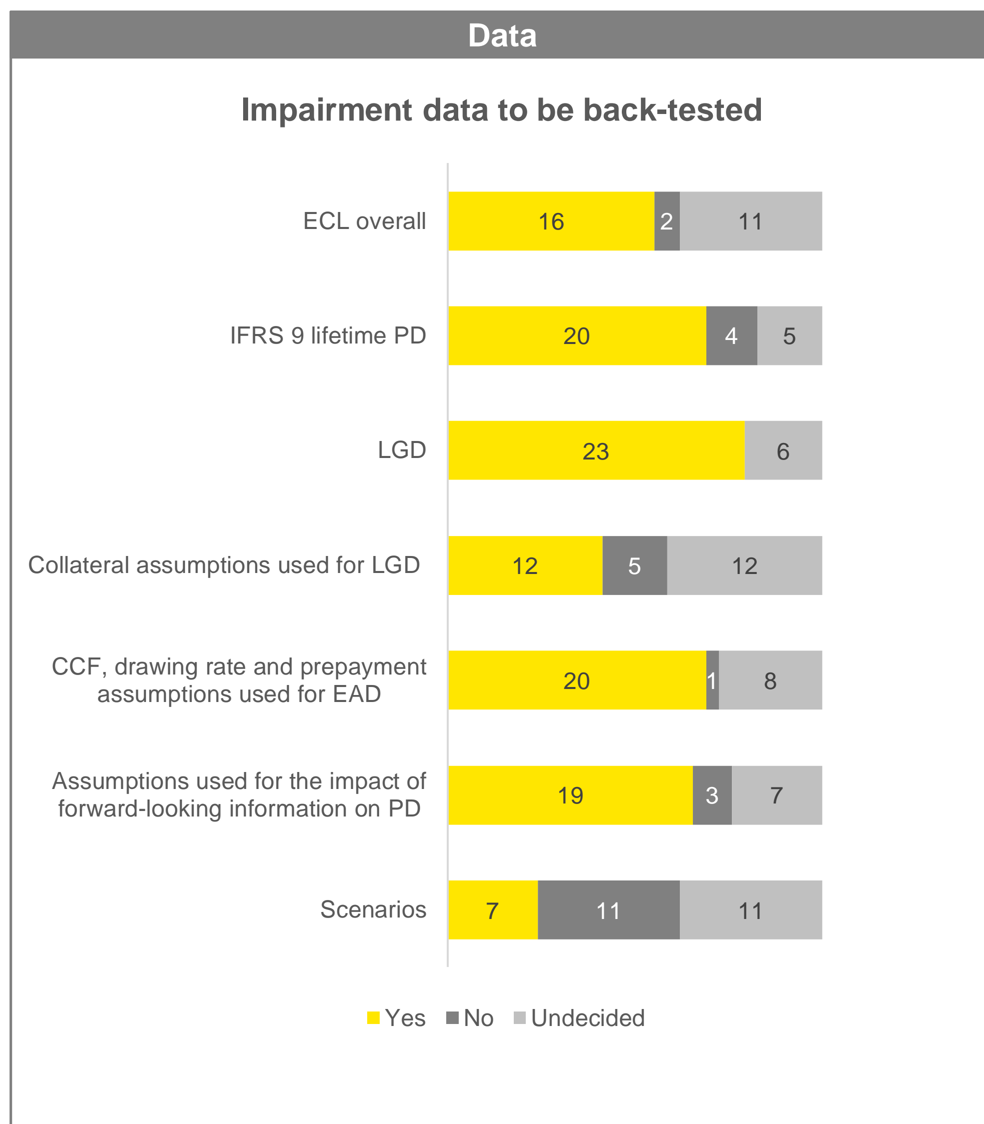


Commentary

Alignment of regulatory definitions

- More than half of the respondents indicated that they would use a **separate back testing process for IFRS 9 models using the current governance by changing the terms of reference of the existing committee**. However, some opted to use this new process, leveraging the regulatory back testing currently performed for capital adequacy.
- The remaining respondents are opting to use the existing regulatory back-testing process, with more than two-thirds stating they will look to extend its scope.
- Only two banks indicated that they would consider creating a new committee in order to govern the performance of IFRS 9 PD models.
- Responses appear to be fairly aligned for both retail and wholesale models.
- Five banks have indicated that they will use a combination of multiple approaches for the back testing process.

3. Operating model
Back testing



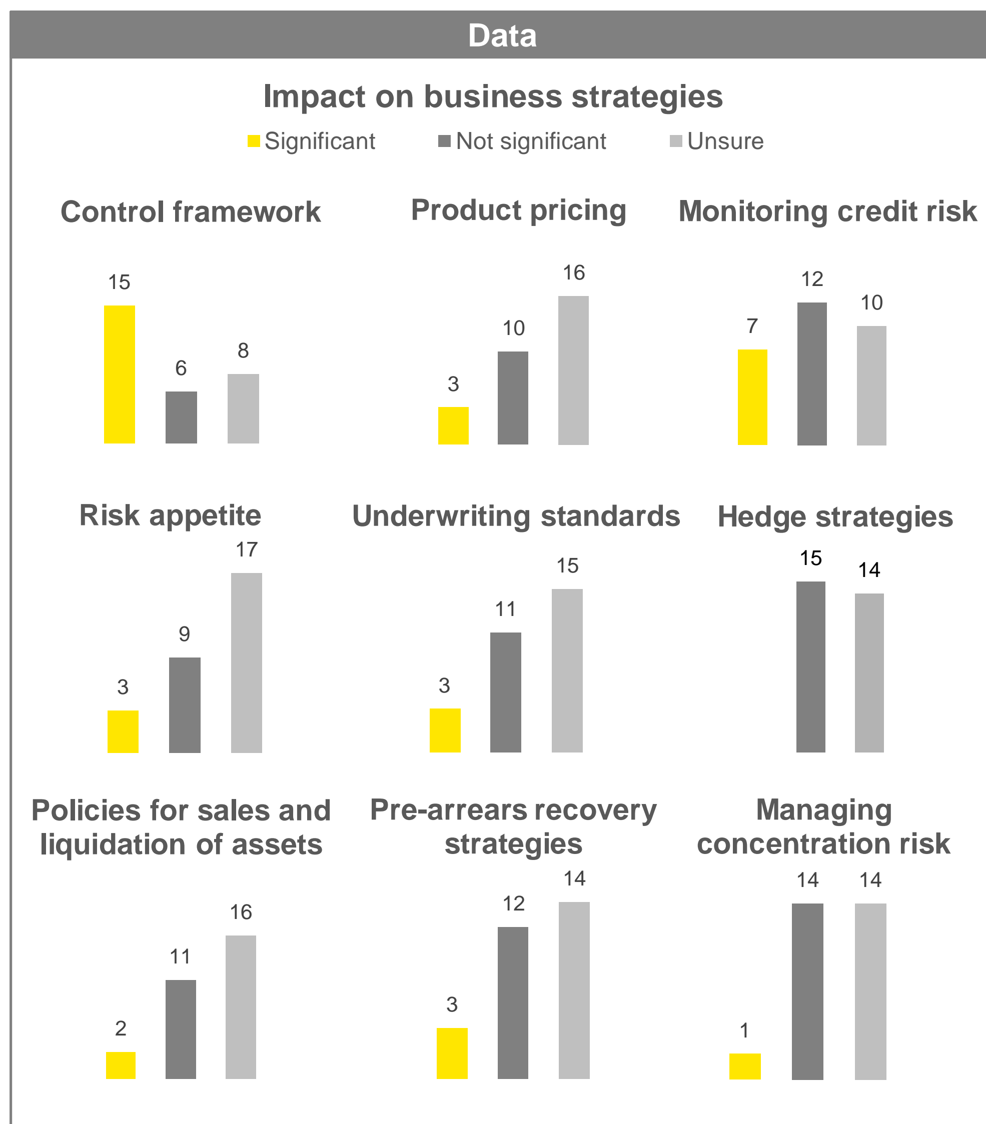
Commentary

Back testing of economic forecasts still under discussion

- While back testing methodologies have not yet been finalized, a number of respondents indicated that each component of ECL will be subject to some form of back testing.
- The largest area of consensus is around back testing of EAD and refreshing assumptions used in calculating credit conversion factors (CCF's) and prepayment rates.
- **The majority of respondents indicated that they will back-test PDs and LGDs, while the back testing of collateral assumptions used for LGD showed more diversity.**
- The largest area of diversity and uncertainty is back testing of the economic scenarios themselves. We expect banks to be able to back test the impact of the scenarios on the ECL and its sub-components, rather than the scenarios themselves.

3. Operating model
The impact of IFRS 9 on business strategies and control frameworks

Data



Commentary

Impact on business strategies

- The majority of banks expect significant changes to their control frameworks as a result of IFRS 9 implementation. This includes changes to their target operating models and risk control matrices.
- **At the time the data was collected, many banks were 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.
- The impact on pricing strategy will depend on how banks will be able to transfer the capital impact to the client, and whether the bank is a price-taker or price-maker.
- Given the neutral capital impact in Australia, little impact on pricing is expected in this country.
- Most banks still need to determine how IFRS 9 will impact risk appetite and hedging strategies.
- The front-line business areas in a number of banks are waiting to see actual numbers flow from the parallel run before making product decision. It also seems that **certain banks will take a “wait-and-see” approach to understand how the market and business will react to IFRS 9.**

EY IFRS 9 Impairment Banking Survey

4. Stage Allocation

China Banking Association

EY

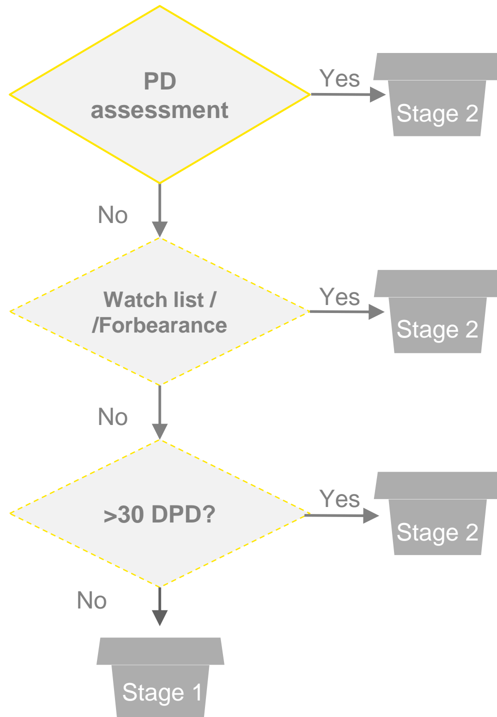
Building a better working world

Staging

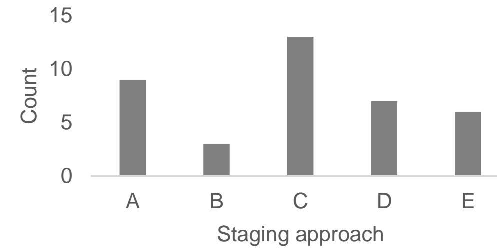
Approach simplification

Simplifications

- Use change in 12-month risk as approximation for change in lifetime risk
- Set transfer threshold by determining maximum initial credit risk
- Low credit risk – equivalent to “investment grade”



Market insight



Source: *EY IFRS 9 impairment banking Survey - 2016*

- A: PD delta (e.g. + xx bps)
- B: PD multiple (e.g. PD*xx), or a number of notches for scores or rating (e.g. x notches out of a XX scale)
- C: A combination of ‘delta’ and ‘multiple’ approaches - with both criteria to be met to trigger a transfer to stage 2
- D: A combination of ‘delta’ or ‘multiple’ approaches, with at least one criteria to be met to trigger a transfer to stage 2
- E: Other

EY

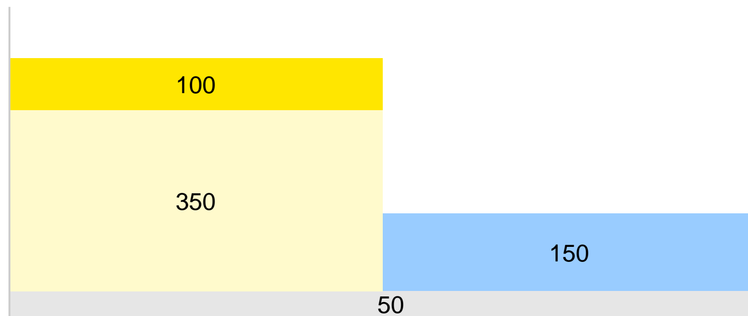
Transfer Criteria: Validation

The assessment criteria

- **Predictive:** Does the Staging approach accurately predict deterioration in credit risk (high true positive rate)?
- **Pre-emptive:** Is the Staging approach relying more on backstops or PD assessment?
- **Accurate:** Does the Staging approach correctly identify accounts that become delinquent (high sensitivity rate)?
- **Sufficiently large**: Is the size of the Stage 2 population sufficiently large to capture up-to-date accounts that deteriorate (high coverage ratio)?

Illustration of the assessment criteria:

Approach: calculate the Staging allocation as of a given snapshot and assess the performance in the subsequent 12 months.



The population can be segregated in to the following, with its associated KPIs:

- Delinquent* accounts which are captured by the backstops (ie. 100).
- Up-to-date accounts which are captured by the PD assessment but do not become delinquent in the outcome period (ie. False positives = 350).
- Up-to-date accounts which are captured by the PD assessment and subsequently become delinquent (ie. true positives = 50 and true positive rate = 50/400)
- Up-to-date accounts which are not captured by the PD assessment and subsequently become delinquent (ie. missed bads= 150 and predictive rate = 50/200)
- The coverage ratio is Up-to-date Stage 2/ Up-to-date accounts that roll to delinquency (coverage= 400/200)

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Application

The validation framework can be used to compare the Staging performance across portfolios as well as to monitor the performance of the Staging allocation across time

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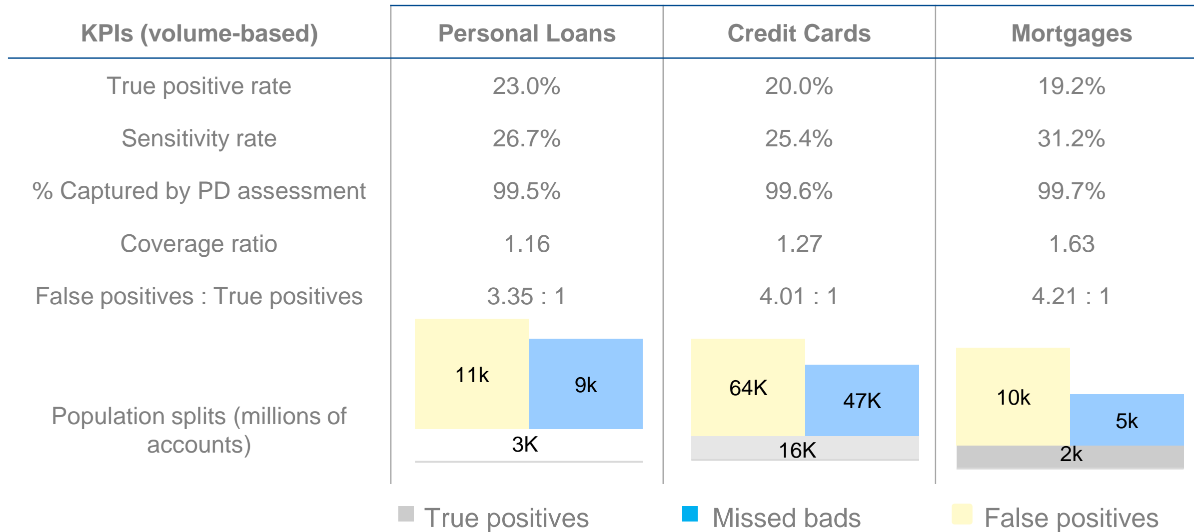


KPIs (volume-based)	Personal Loans	Credit Cards	Mortgages
True positive rate	23.0%	20.0%	19.2%
Sensitivity rate	26.7%	25.4%	31.2%
% Captured by PD assessment	99.5%	99.6%	99.7%
Coverage ratio	1.16	1.27	1.63
False positives : True positives	3.35 : 1	4.01 : 1	4.21 : 1
Population splits (millions of accounts)			

Comments

- In the example above, we compared the Staging allocation across different Retail portfolios. The Staging allocation for Retail Unsecured performs comparably whereas the Staging allocation for mortgages appears a bit more conservative (ie. higher sensitivity and lower true positive rate)
- There is a trade-off between sensitivity and true positives. Very high true positive rate suggest the Staging allocation is aggressive (ie. Stage 2 accounts are on a rapid downturn trajectory).
- All portfolios have coverage ratio bigger than 1 evidencing that the size of the Stage 2 is sufficiently large to cover future delinquency.
- % Captured by PD assessment measures what proportion of Stage 2 population is captured by the PD assessment on a standalone basis. It assesses how pre

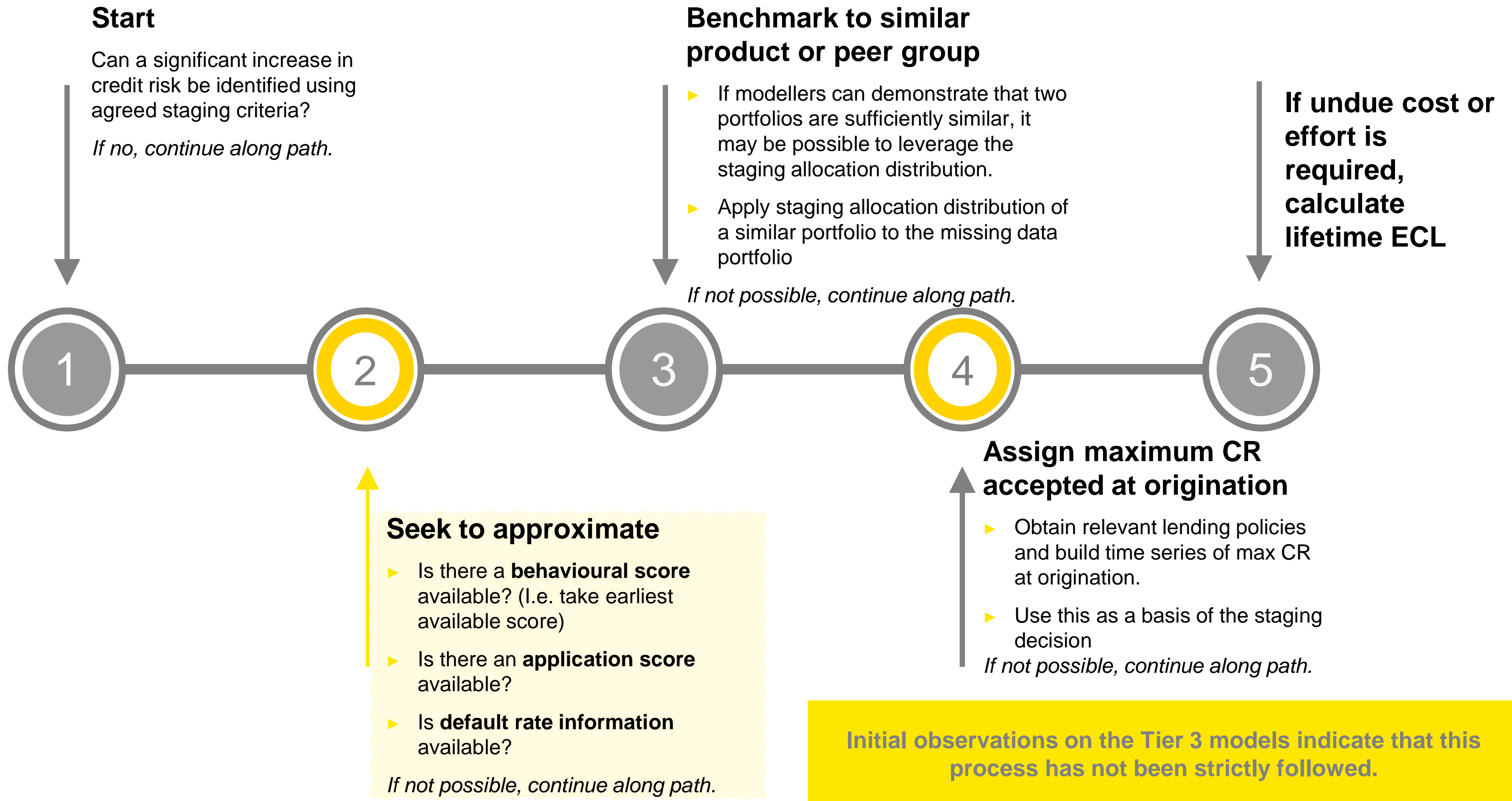
EY

Transitional Arrangements

Missing PD at origination

Dealing with missing origination data

When it is not possible to determine the PD at origination, modellers should consider the following options:



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4. Stage allocation
Overall observations

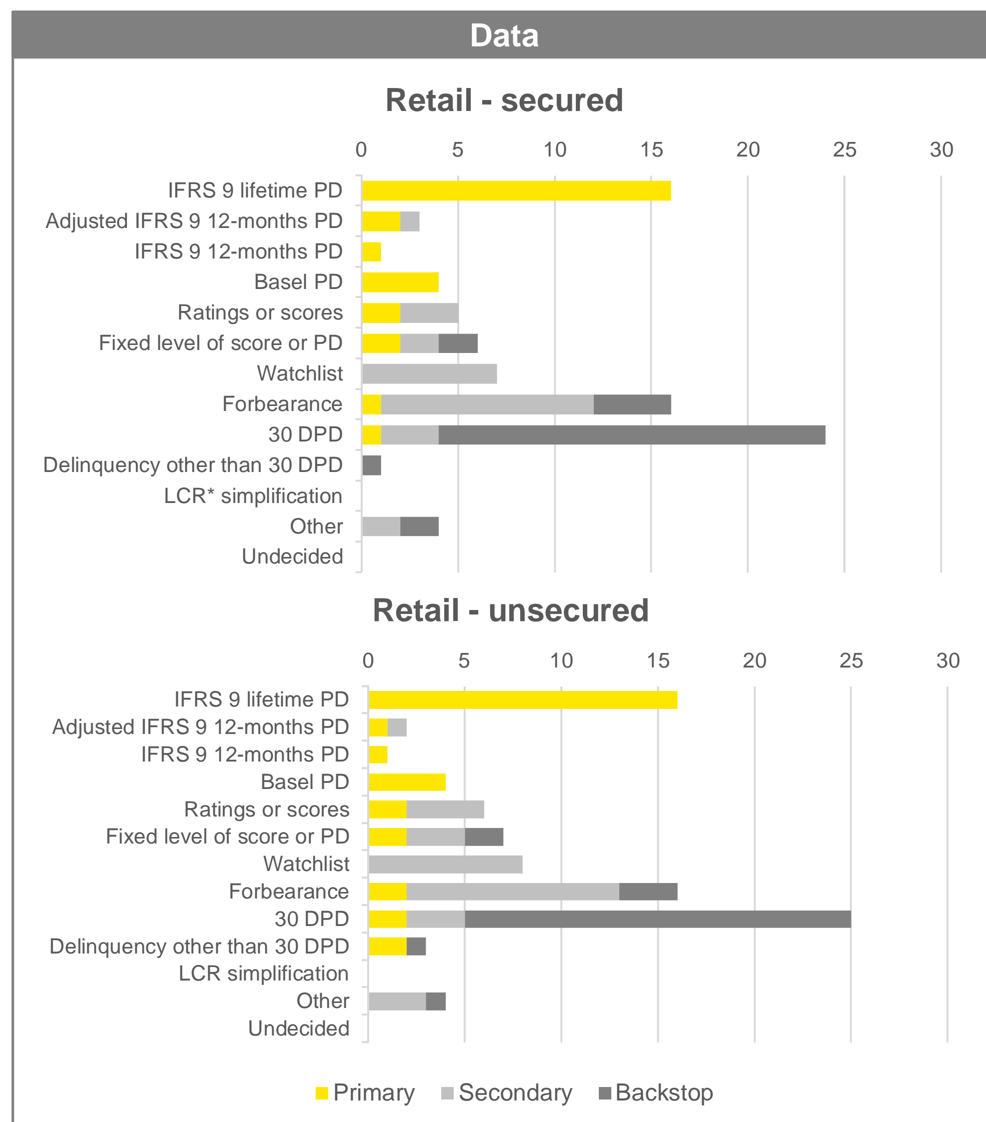
Commentary

- As already emerged in the previous survey, all banks consider using a combination of quantitative and qualitative drivers structured as primary and secondary drivers, plus backstops. The primary driver is the earliest indicator and is generally based on a relative measure, while the others cover more obvious (absolute) signs of deterioration, such as forbearance or delinquency.
- Most banks intend to use IFRS 9 lifetime PDs and rating deterioration as the primary drivers for staging. This is generally assisted by watchlists and forbearance measures as a secondary indicator for wholesale and retail, respectively.
- The use of 30 DPD as a backstop for classification into stage 2 is prominent compared with other measures across all types of exposures.
- Several banks will use a combination of different backstops in addition to the 30 DPD presumption, forbearance being one of them when not used as a secondary indicator.
- **Use of variation of 12-month PD:** Banks will have to demonstrate that they are not missing any significant increase in risk of a default beyond 12 months. This may require further adjustments on the basis of macroeconomic forecasts. However, these indicators are still considered very relevant as they are well understood and have been used and tested for some time.
- **Use of variation of lifetime PD:** The obvious challenge on transition is to have data available at the origination date for existing portfolios (including forward-looking information). Some banks mentioned that they would have to use proxies on transition (Basel scores, through the cycle (TTC) PDs, latest information available or lending policy cutoffs).
- **Use of variation of ratings:** Ratings are considered more forward looking by nature as they involve more expert judgment on the basis of a wider range of information, including more prospective information (borrower’s financials, sectorial information, etc.) and look beyond a 12-month horizon. Depending on their calibration, they may also require demonstrating that the associated PDs reflect current circumstances and reasonable forecasts.
- **Transitional vs. strategic approach:** The challenges faced at transition are obviously less significant for banks using Basel scores or PD, although some issues may still arise depending on when the IRB models were built. It remains to be seen whether, in the longer term, the development and increasing use of lifetime PD curve (including forward-looking elements) may result in more convergence toward the use of this more sophisticated quantitative measure.

4. Stage allocation

Indicators of significant deterioration in credit risk - retail

Data



*Low credit risk

Commentary

Retail – secured exposures

- **Most banks will utilize lifetime PDs as primary indicators** with fewer banks intending to use 12-month and Basel PDs as the primary indicator.
- **Many banks will utilise forbearance as the secondary indicator,** with many other utilizing behavioral scoring processes. No banks indicated forbearance as a primary indicator.
- **Most banks will not use 30 DPD as a primary indicator**, effectively showing that institutions have heard the regulators' messages about delinquency being a lagging indicator.
- **Watchlists continue to only be secondary indicators** for both secured and unsecured retail exposures, broadly in line with the observations from 12 months ago. Retail watchlists are more mechanical than for corporate exposures and tend to largely overlap with forbearance and delinquency as well as fixed levels of scores or PDs.

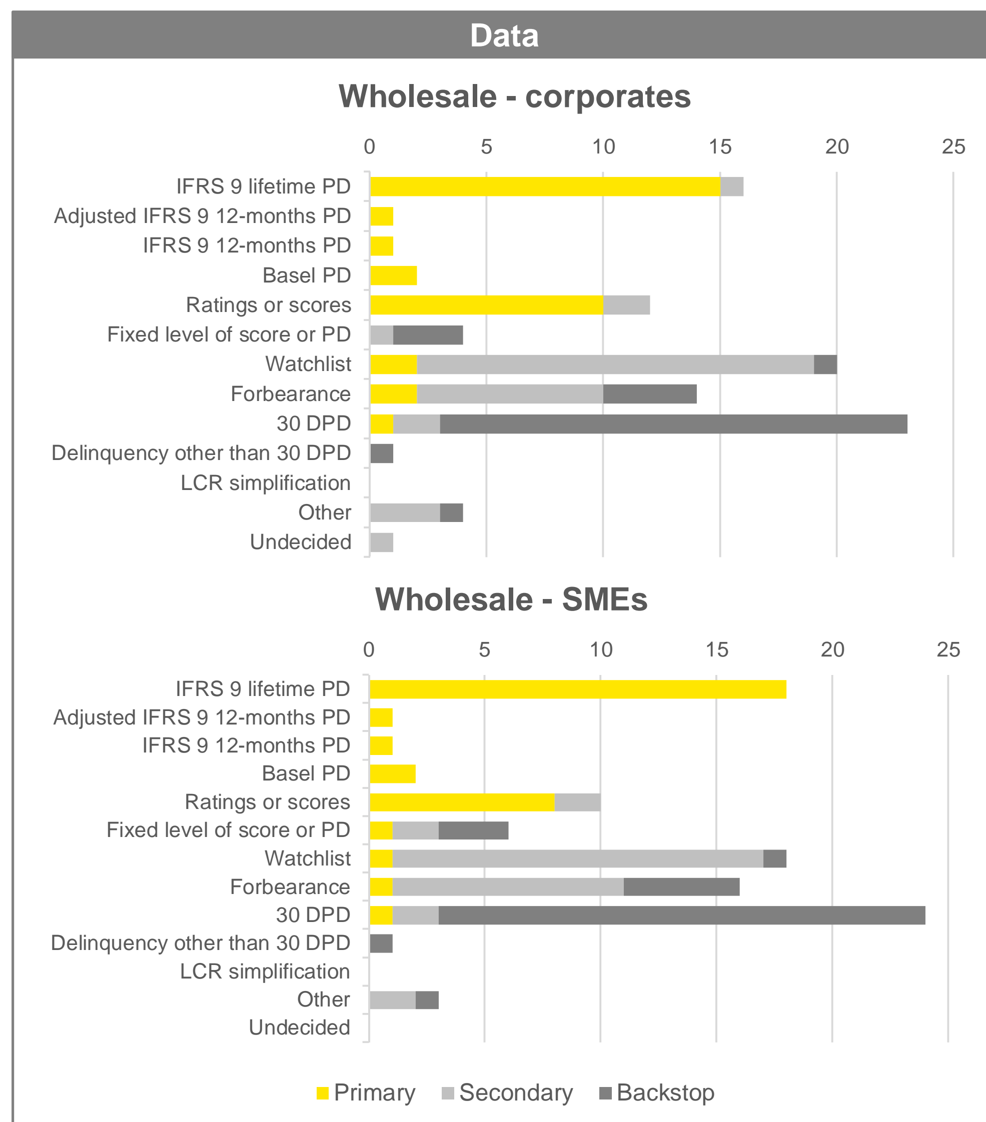
Retail – unsecured exposures

- Similar to secured retail exposures, most banks will use lifetime PDs as the primary indicator with a few banks intending to use 12-month and Basel PDs.
- Forbearance and 30 days past will again be used as backstops for transfers to stage 2. **Days past due are considered as a particularly relevant indicator for credit cards by most banks.**
- "Specific client monitoring" was generally stated as a secondary indicator within the "other" category.
- Two banks noted forbearance as a primary indicator, which was not the case during the previous survey.

4. Stage allocation

Indicators of significant deterioration in credit risk – wholesale

Data



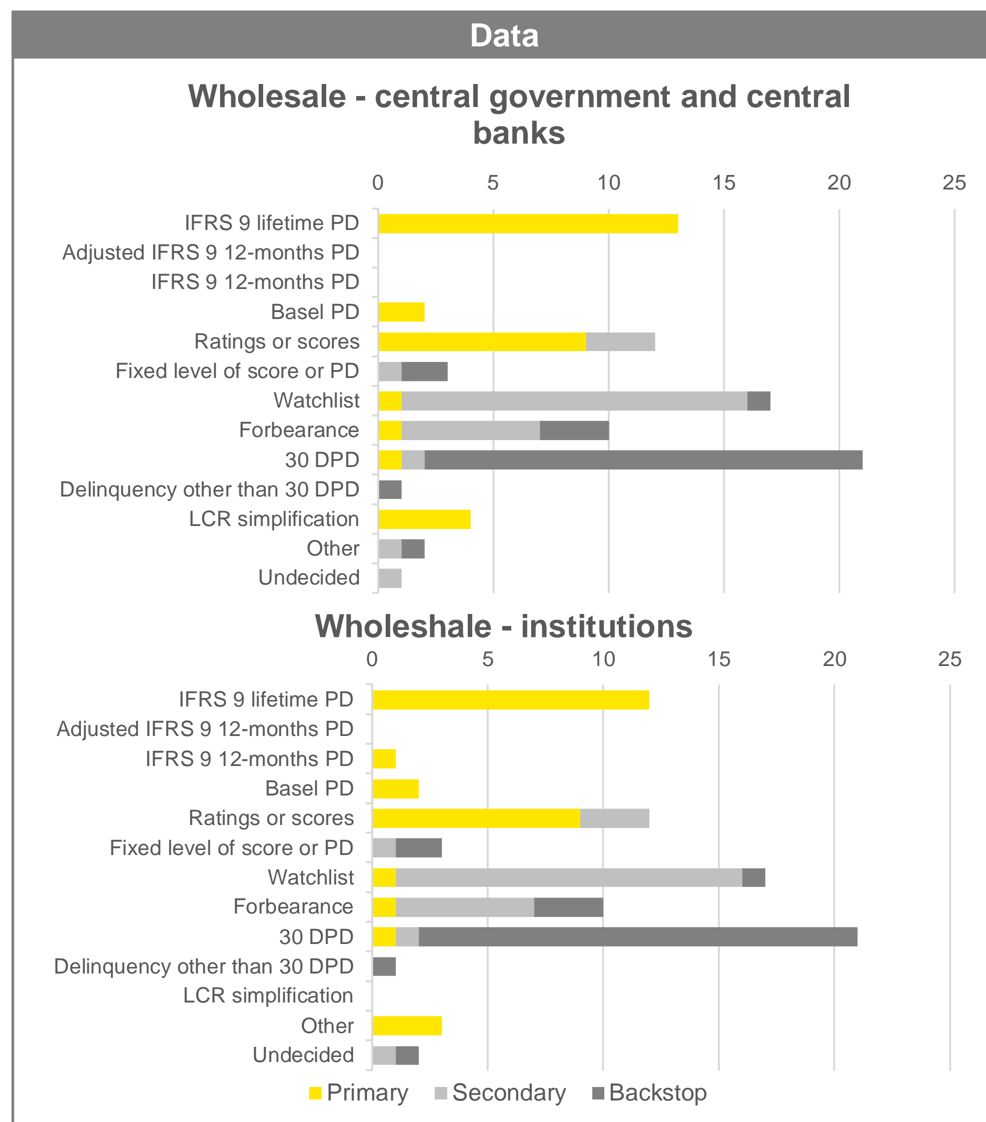
Commentary

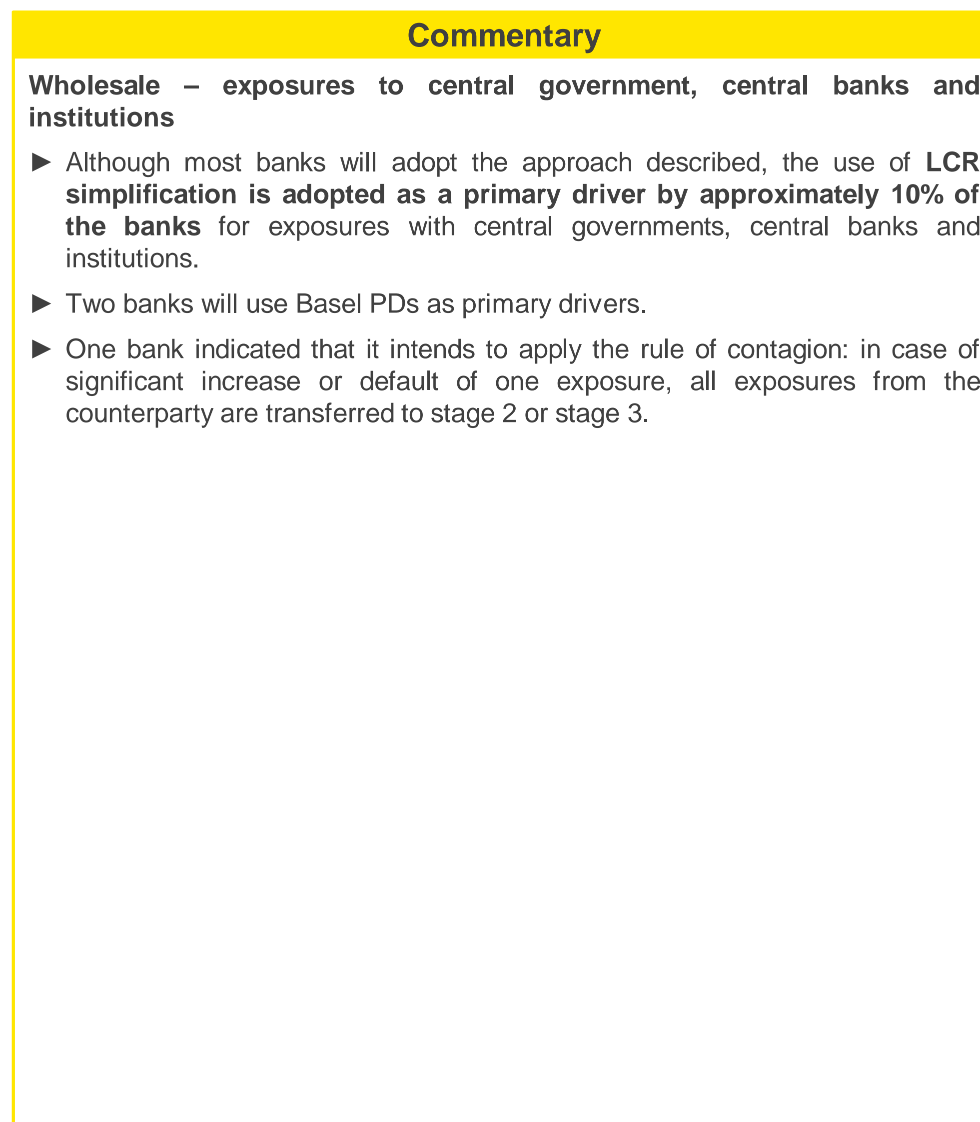
Wholesale – exposures to corporates and SMEs

- As for all other exposures, IFRS 9 lifetime PDs and rating or scores are the most common approaches used as primary indicators of increase in credit risk.
- **For both for corporates and SMEs, the use of watchlists and forbearance measures is significant,** mostly as a secondary indicator, but as a primary indicator by two banks. However, more mixed practices toward indicators utilized for retail are adopted for SMEs compared to corporates.
- Compared with 12 months ago, fewer banks will use watchlists as primary indicators.
- **Overlay adjustments will be made and the criteria will be reviewed regularly by governance committees.**
- No banks intend to use the low credit risk (LCR) simplification for corporate exposures with only one bank stating that it will use this simplification for SME exposures in combination with IFRS 9 PD lifetime.
- “Expert judgment” and “specific client monitoring” were generally noted as indicators within the “other” category.

4. Stage allocation

Indicators of significant deterioration in credit risk – wholesale (continued)





Commentary

Wholesale – exposures to central government, central banks and institutions

- ► Although most banks will adopt the approach described, the use of **LCR simplification is adopted as a primary driver by approximately 10% of the banks** for exposures with central governments, central banks and institutions.
- ► Two banks will use Basel PDs as primary drivers.
- ► One bank indicated that it intends to apply the rule of contagion: in case of significant increase or default of one exposure, all exposures from the counterparty are transferred to stage 2 or stage 3.

4. Stage allocation

Indicators of significant deterioration in credit risk – debt securities

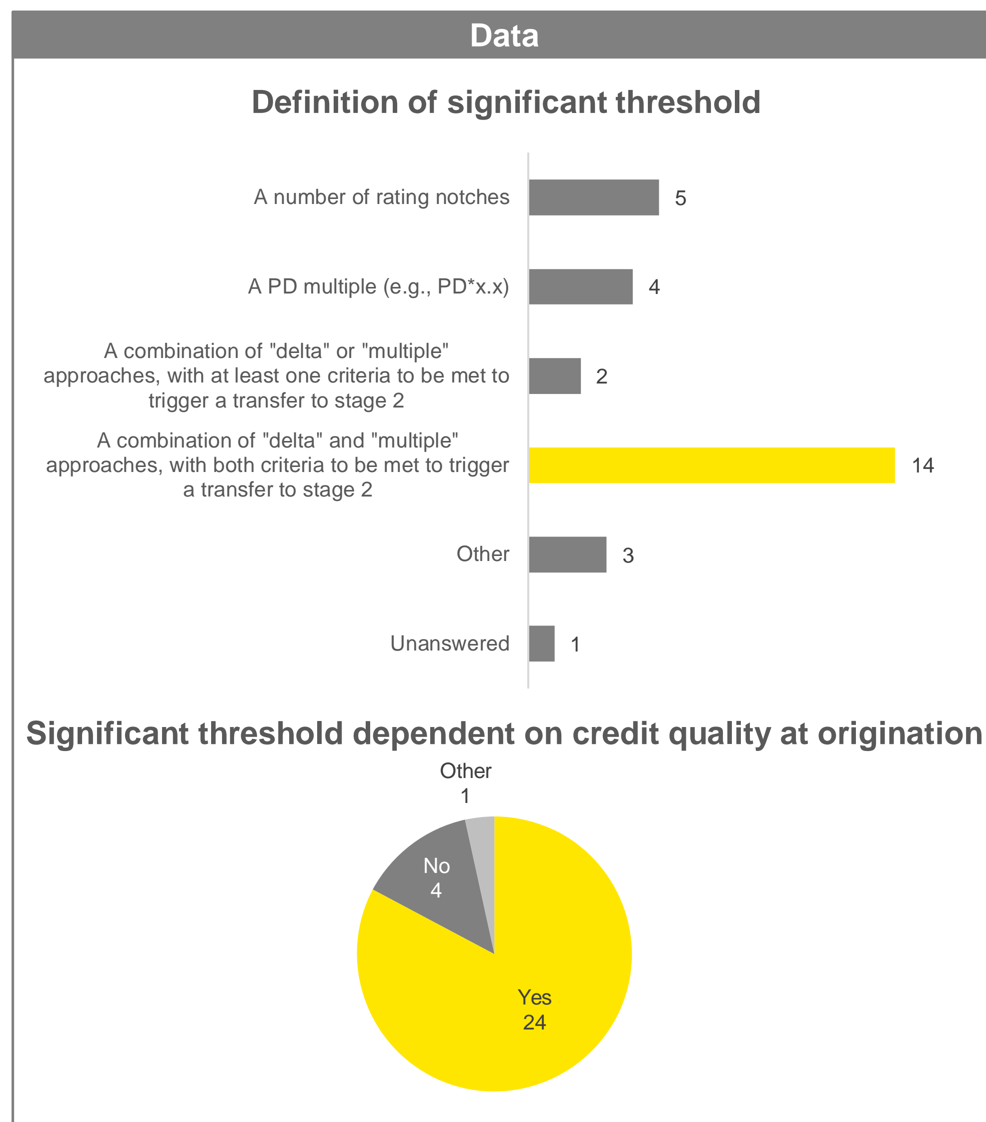
Data

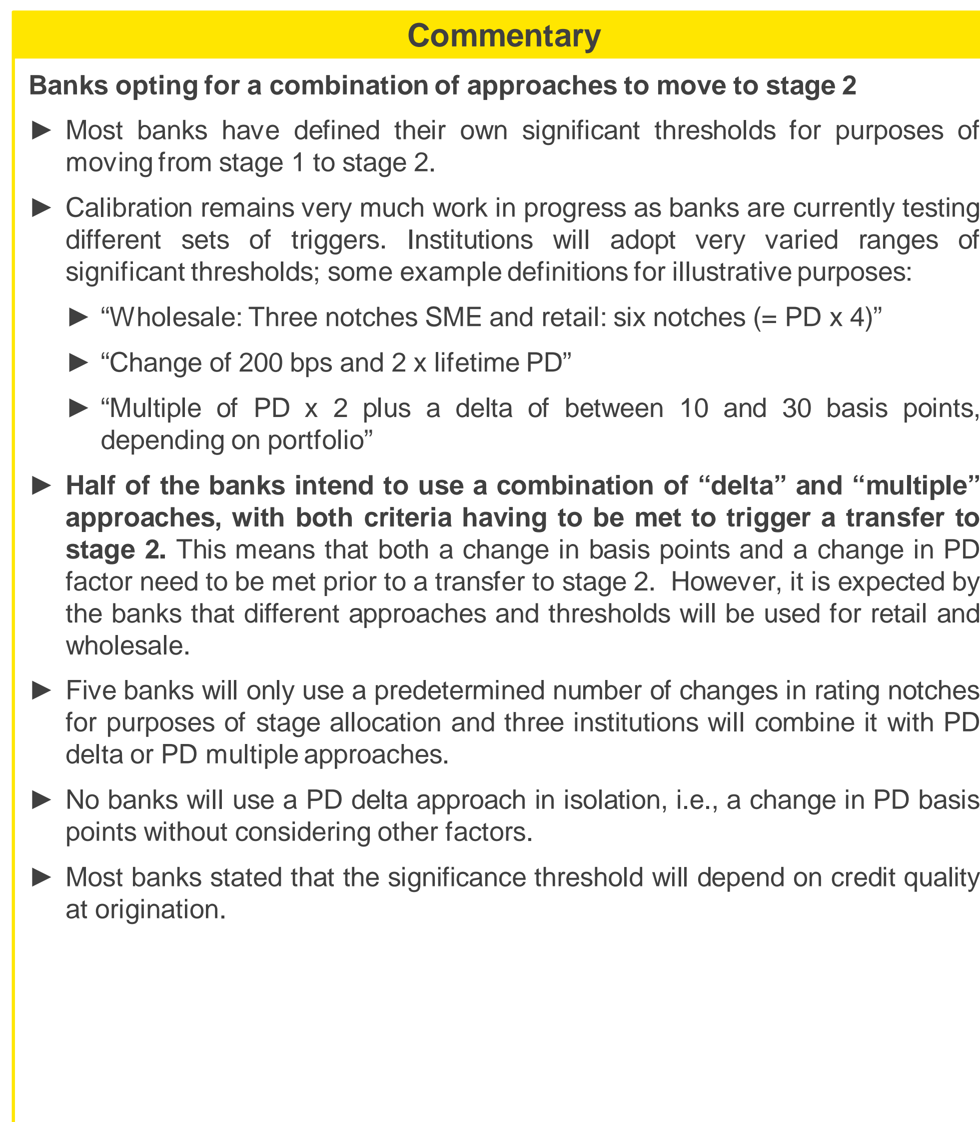
Commentary

Debt securities exposures

- A number of banks remain undecided on which primary indicators, secondary indicators and backstops they will use.
- A number of banks will use the LCR simplification as their primary indicator of deterioration in credit risk for debt securities. Other banks will utilise lifetime PDs (as opposed to 12-month or Basel PDs) as the primary indicator followed by other risk metrics like scores and ratings.
- Watchlists will generally be used as a secondary indicator. Two banks are considering adding an exposure to their watchlists as a primary indicator of deterioration in credit risk.
- A minority of the banks will use ratings and scores as a primary indicator.

4. Stage allocation
Definition of significant thresholds





Commentary

Banks opting for a combination of approaches to move to stage 2

- Most banks have defined their own significant thresholds for purposes of moving from stage 1 to stage 2.
- Calibration remains very much work in progress as banks are currently testing different sets of triggers. Institutions will adopt very varied ranges of significant thresholds; some example definitions for illustrative purposes:
  - "Wholesale: Three notches SME and retail: six notches (= PD x 4)"
  - "Change of 200 bps and 2 x lifetime PD"
  - "Multiple of PD x 2 plus a delta of between 10 and 30 basis points, depending on portfolio"
- **Half of the banks intend to use a combination of "delta" and "multiple" approaches, with both criteria having to be met to trigger a transfer to stage 2.** This means that both a change in basis points and a change in PD factor need to be met prior to a transfer to stage 2. However, it is expected by the banks that different approaches and thresholds will be used for retail and wholesale.
- Five banks will only use a predetermined number of changes in rating notches for purposes of stage allocation and three institutions will combine it with PD delta or PD multiple approaches.
- No banks will use a PD delta approach in isolation, i.e., a change in PD basis points without considering other factors.
- Most banks stated that the significance threshold will depend on credit quality at origination.

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